

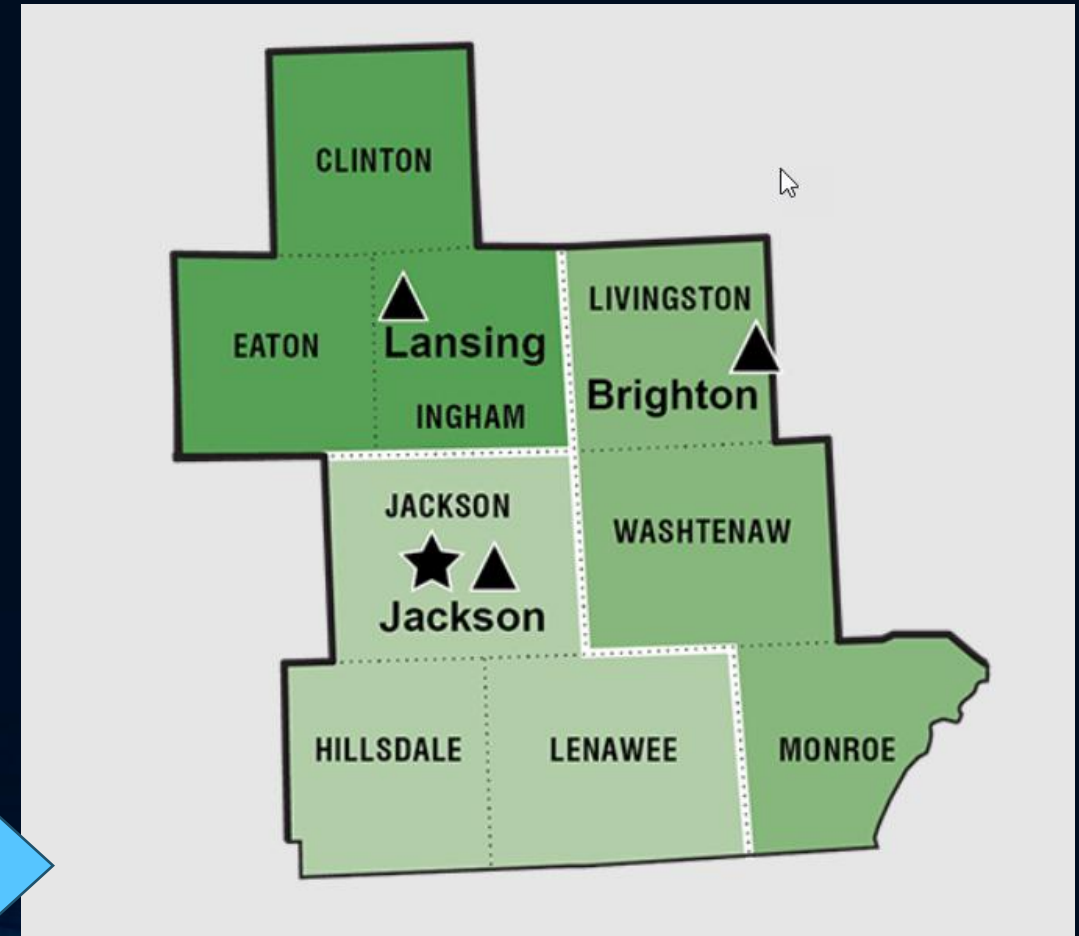
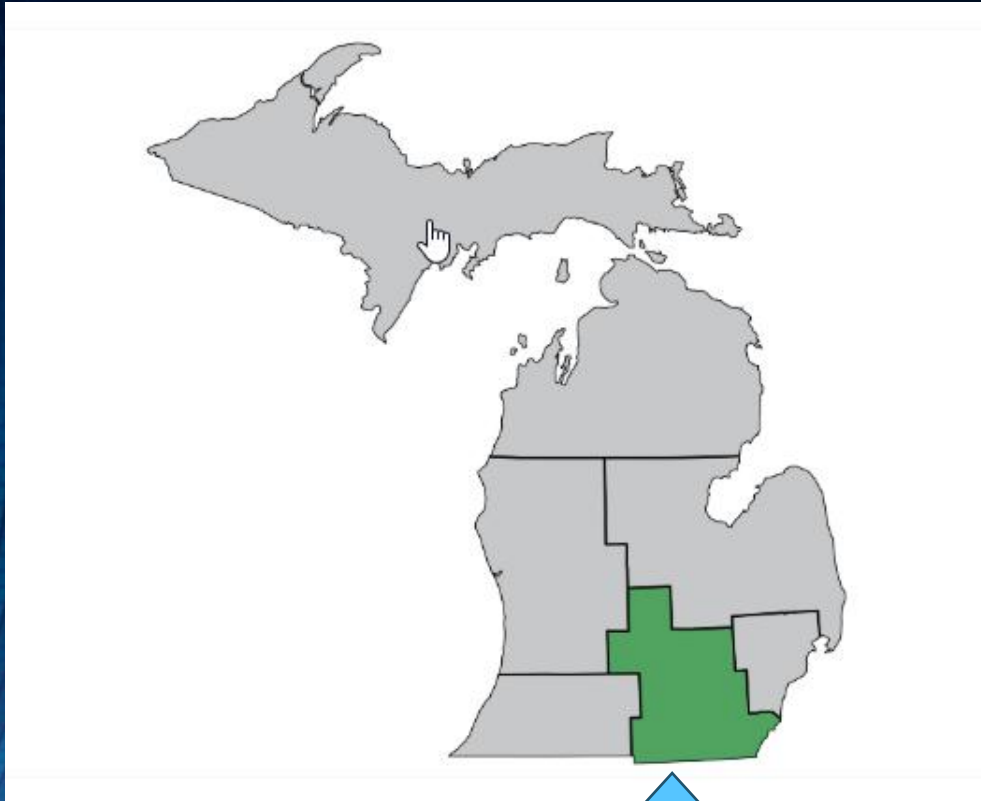
Putting Pavement Preservation to Work in the Real World

MRPA WORKSHOP
NOVEMBER 6, 2025

Overview

- Region Background
 - Network
- Project Selection – Old
- Pavement Management Strategy
- Project Selection – New
 - Implementation
- Outside of the box solutions
- Resources

University Region - Network



University Region – Network

Network Pavement Types

	Lane Miles	Percentage
Composite	1987.64	47.8%
Flexible	1075.30	25.9%
Rigid	1093.54	26.3%
<i>Total:</i>	<i>4156.48</i>	<i>100%</i>

Network Classification

	Lane Miles	Percentage
Tier I	1122.29	27.0%
Tier II	715.74	17.2%
Tier III	1041.5	25.1%
Tier IV	1276.95	30.7%
<i>Total:</i>	<i>4156.48</i>	<i>100%</i>

- Tier I – Interstates
- Tier II – Non-Interstate Freeways
- Tier III – NHS
- Tier IV – Non-NHS

University Region – Network Condition

Network Condition - RSL

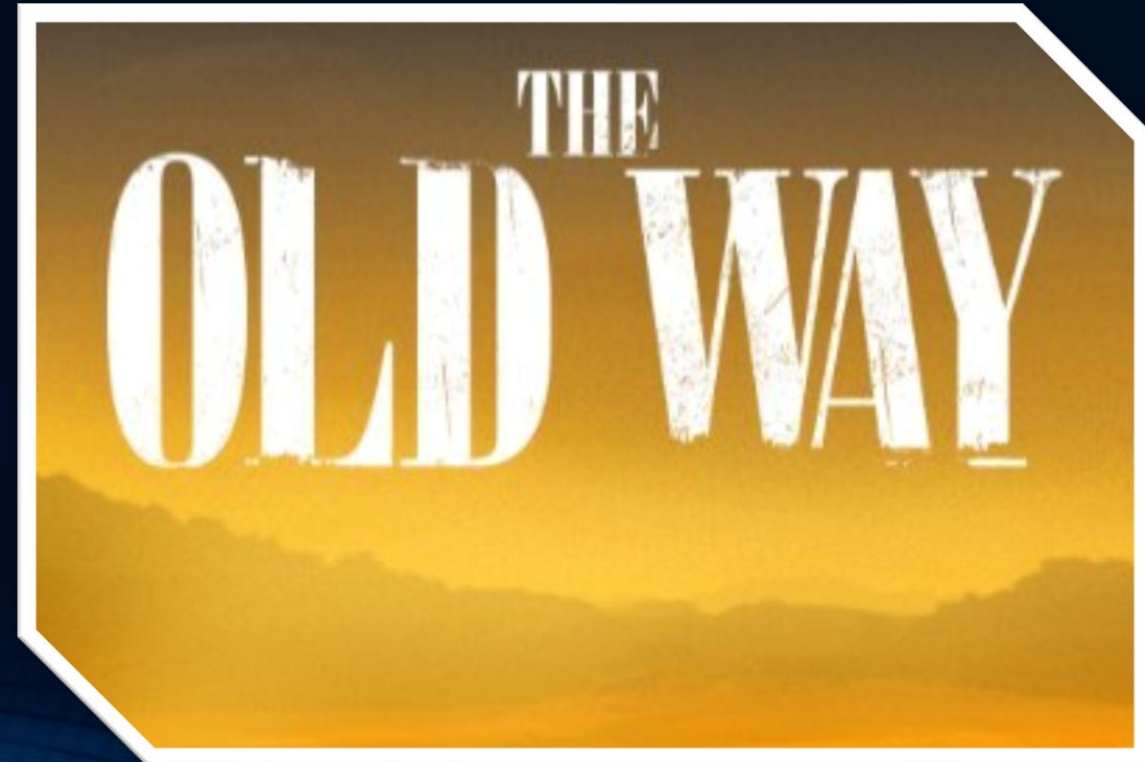
	Lane Miles	Percentage
Good	1814.81	43.7%
Fair	1422.32	34.2%
Poor	919.35	22.1%
<i>Total:</i>	<i>4156.48</i>	<i>100%</i>

Network Condition - HMPS

	Lane Miles	Percentage
Good	1640.77	39.5%
Fair	2300.67	55.4%
Poor	215.04	5.2%
<i>Total:</i>	<i>4156.48</i>	<i>100%</i>

Project Selection – Old Process

- R&R top priority
- CPM – mill and resurfacing second
- CPM – preservation third
- Methodology supports worst first
 - Acknowledge that bad roads need to be addressed
 - At what cost?
- Time for a change!



New Pavement Management Strategy



- New condition metrics
- New network stratification
- New performance goals
- Preservation first methodology
 - Preservation
 - Resurfacing
 - Rehabilitation
 - Reconstruction
- Prioritized approach within each category

HOW
DOES IT
WORK



New Condition Metrics



- Pavement Distress Score (PDS)
 - Comprehensive cracking
- Pavement Quality Index (PQI)
 - Composite condition metrics
 - Combines cracking and ride quality
 - Future incorporate structural data

New Network Stratification

Traffic Volume Stratification by Tier			
Tier	ADT (vehicles/day)		Tier
			ADT (vehicles/day)
Tier I			Tier III
A	100,000 +		A
B	99,999 - 50,000		B
C	49,999 - 10,000		C
D	9,999 - 100		D
Tier II			Tier IV
A	100,000 +		A
B	99,999 - 50,000		B
C	49,999 - 10,000		C
D	9,999 - 100		D

Lane Miles by TAMP Tier and Traffic Volume					
	Lane Miles				
Tamp Tier	A	B	C	D	Total
Tier I	23.65	542.02	547.21	9.41	1122.29
Tier II	0	296.53	396.42	22.79	715.74
Tier III	0	0	659.96	381.54	1041.5
Tier IV	0	0	206.53	1070.42	1276.95
Total Lane Miles	23.65	838.55	1810.12	1484.16	4156.48

- Tamp Tiers + Traffic Counts
- Investments impacting

New Performance Goals

Tier III C, and Tier IV

90% of lane miles with IRI < 150

90% of lane miles with PQI > 70

- Not all roads are the same
- Balance customer expectation and agency expectation

Tier I, II, and III C

95% of lane miles with IRI < 95

95% of lane miles with PQI > 80



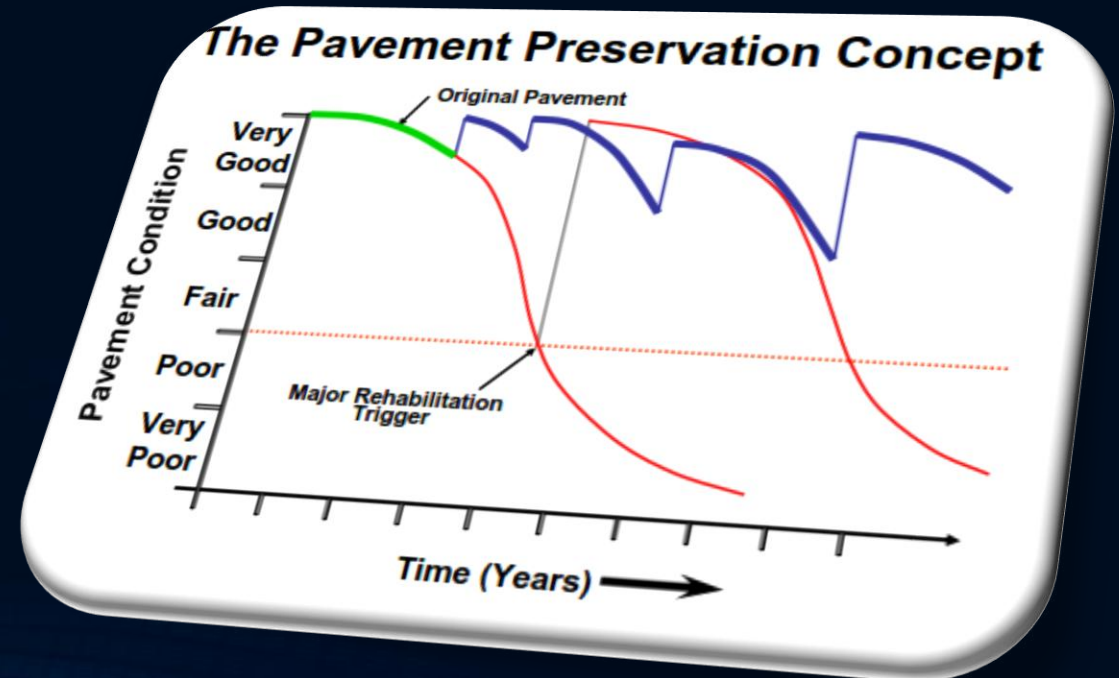
PRIORITIES



Preservation

Preservation is the key to any successful pavement management strategy. UR's pavement management strategy is no different. The region's long-term goal is to apply **60% of the CPM funding to preservation**. Preservation projects will be prioritized as follows:

1. Concrete Routes
2. Previous R&R Routes
3. Good and Fair Routes



Preservation Fixes

Primary Concrete Fixes:

- Diamond grinding and grooving
- Resealing
- Mastic
- Partial depth repairs
- Underdrain cleanout



Primary HMA Fixes:

- Crack Sealing
- Single chip seal (lower ADT and CADT)
- Microsurface
- Bonded wearing course (rural or urban, higher ADT and CADT)



Resurfacing

When the pavement condition deteriorates to where a preservation fix is no longer cost effective, the pavement typically falls into the resurfacing category. While the name resurfacing implies strictly HMA resurfacing, this is not the case, concrete work is also included. The region's long-term plan is to apply **40% of CPM funds to resurfacing**. Like preservation, resurfacing also is a prioritized approach as follows:

1. Previous R&R Routes
2. Corridors (typically urban areas)
3. Other Low Volume Routes

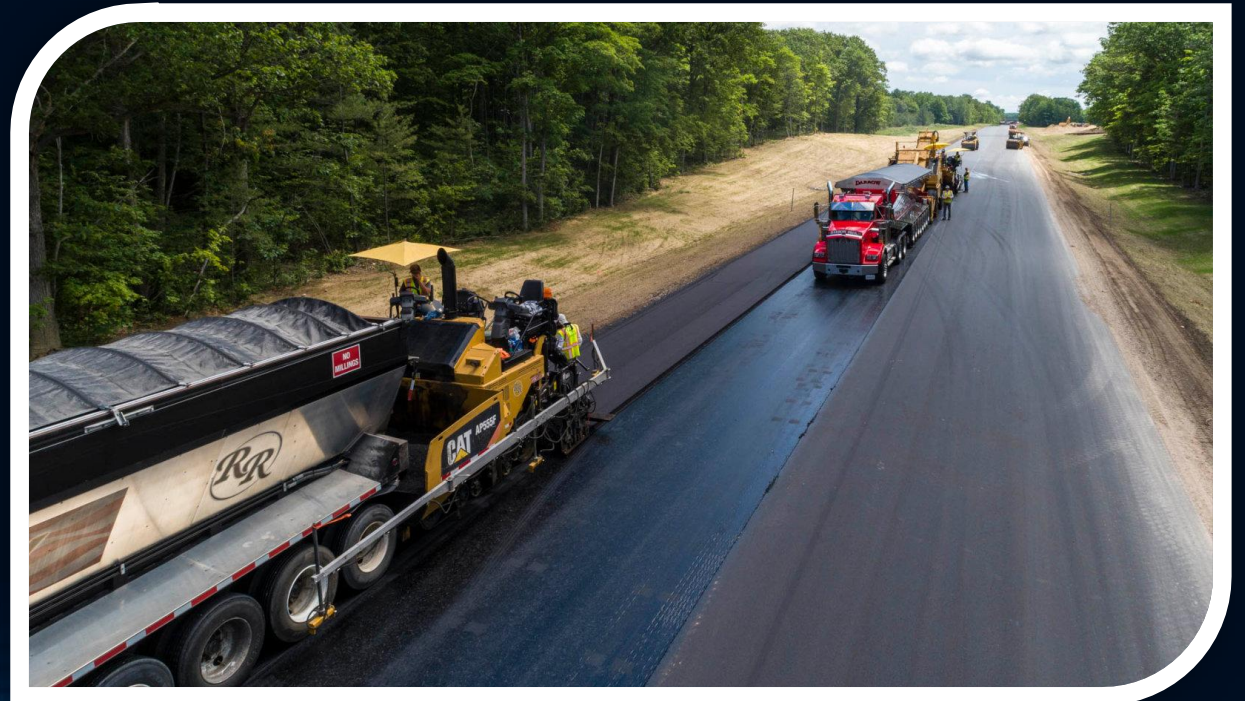
Resurfacing Fixes

Primary Concrete Fixes:

- Concrete patches / CPR
- Diamond grinding and grooving
- Underdrain cleanout

Primary HMA Fixes:

- Single course mill and resurface (1.5") (urban areas)
- Single course mill and resurface with single chip seal and fog seal the year the warranty expires (rural areas)



Rehabilitation and Reconstruction

Like the CPM template, R&R projects should be prioritized for selection. It is important to note that some R&R projects tend to be driven by political influence, leadership, and other factors. The proposed prioritization strategy that follows is for all other R&R projects.

To maximize R&R funds along with strategically investing in our other vital assets, R&R projects should be prioritized as follows:

1. Bridge and Culvert projects
2. Safety and Operational Improvements
3. Pavement Only Needs

This prioritization strategy will help the region meet its condition goals not only on the pavement side, but also the other vital assets.

Rehabilitation and Reconstruction

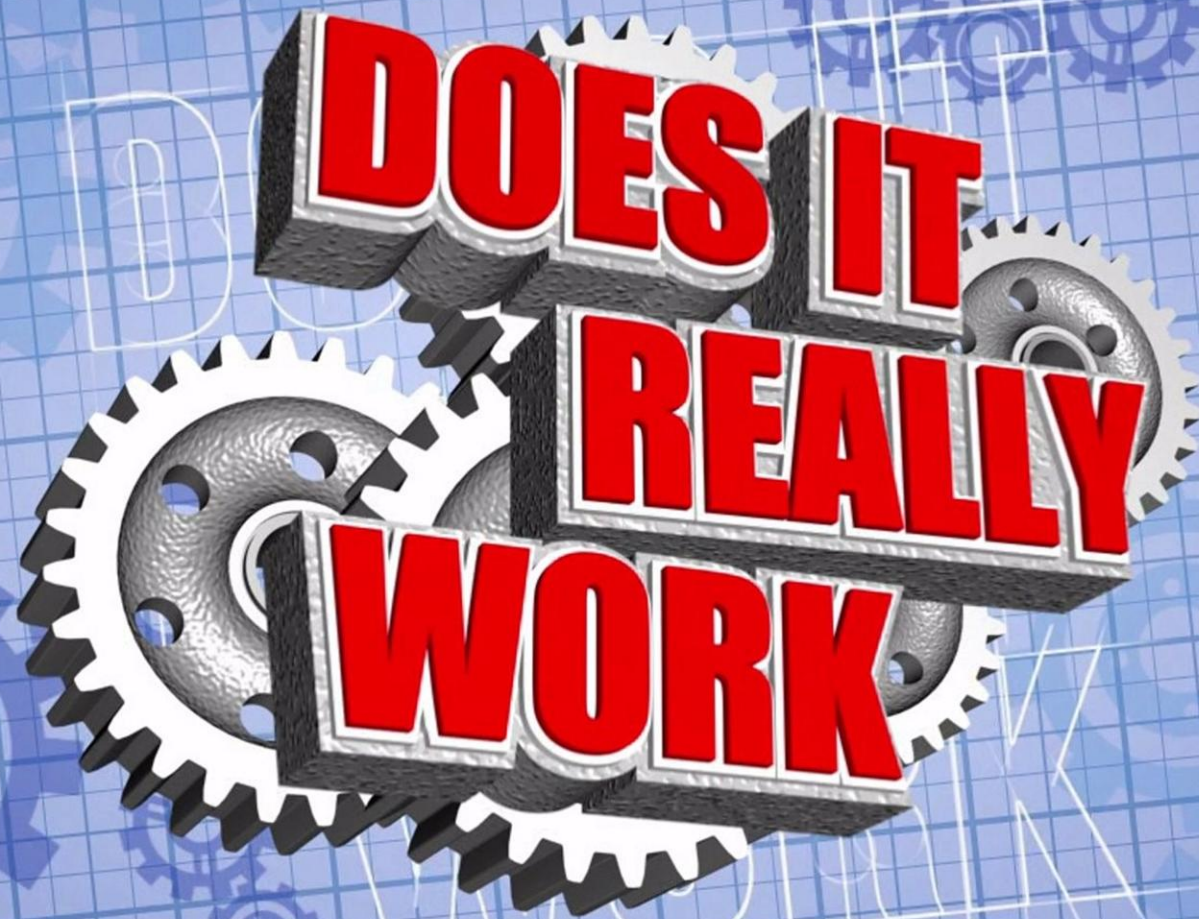
- **Rehabilitation**

- Accommodate a grade raise
- No geometric improvements needed
- Sufficient subgrade and subbase
- Little to no drainage issues
- Minimal ancillary assets impacted
- Minimal utility coordination required

- **Reconstruction**

- Grade raise not possible or cost prohibitive
- Geometric improvements needed
- Insufficient subgrade and subbase
- Drainage issues
- Significant ancillary assets impacted
- Significant utility coordination required

**DOES IT
REALLY
WORK**

The text "DOES IT REALLY WORK" is rendered in a bold, 3D, blocky font. The letters are red with a thick white outline and a dark grey shadow, giving them a three-dimensional appearance. The text is arranged in three lines: "DOES IT" on top, "REALLY" in the middle, and "WORK" at the bottom. The text is positioned over a blue background with a white grid pattern. Several grey, metallic-looking gears of different sizes are scattered around the text, some partially overlapping it. The overall composition suggests a theme of engineering, mechanics, or a technical evaluation.

Project Selection – New Process Implementation

Soft implementation 2030 CFP

Started full implementation this year with 2031 CFP

- 2027 Preservation and Resurfacing
- 2031 R&R

Huge step in the right direction

2027 CPM Program

Program	Investment (\$)	Investment (%)	Region Goal
Preservation	\$13,334,768	52.8%	60%
Resurfacing	\$11,897,372	47.2%	40%
	\$25,232,140	100.0%	

2025 CPM Program

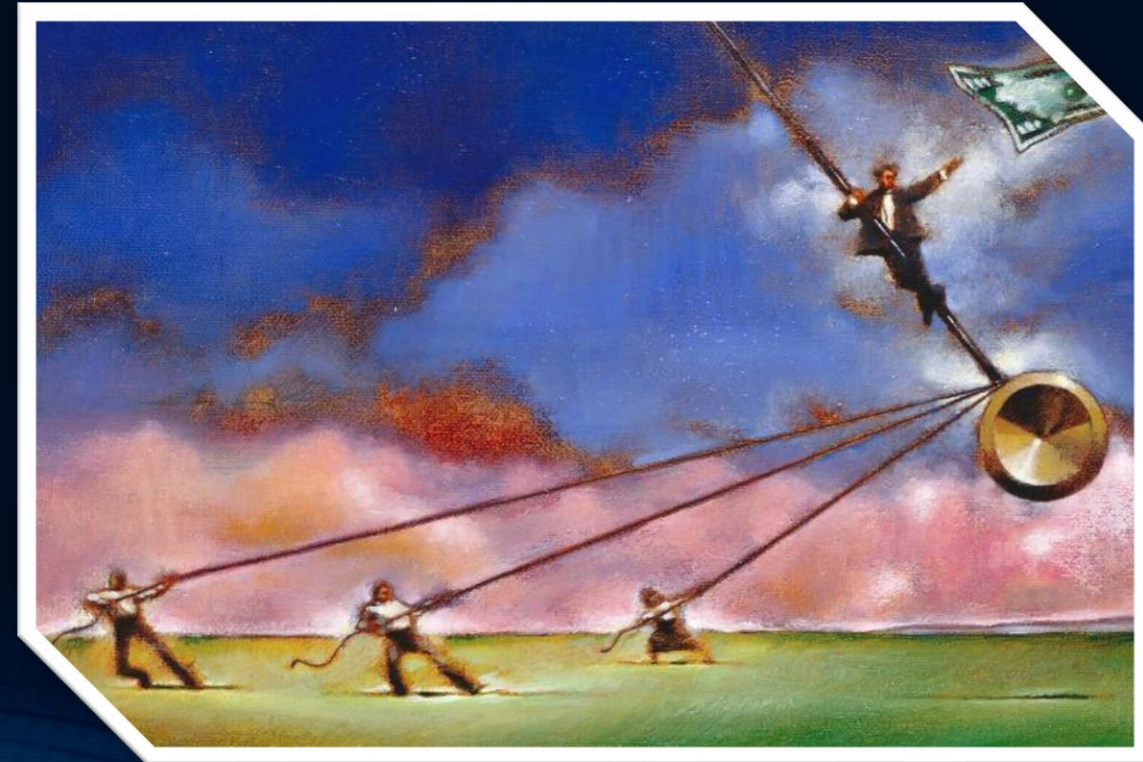
Program	Investment (\$)	Investment (%)	Region Goal
Preservation	\$7,169,941	14.4%	60%
Resurfacing	\$42,808,230	85.6%	40%
	\$49,978,171	100.0%	

2026 CPM Program

Program	Investment (\$)	Investment (%)	Region Goal
Preservation	\$6,050,000	33.4%	60%
Resurfacing	\$12,085,603	66.6%	40%
	\$18,135,603	100.0%	

Goals and Acknowledgements

- Goals:
 - Cover more lane miles
 - Right fix for roads – not having a fix fit a template
 - Make easier what some regions are already doing
- Acknowledgements:
 - Cannot Preserve our way out of current situation
 - Diminishing returns on fix lives
 - Strategy is always fluid to meet the needs and goals of the Region and Department



Outside of the Box Solutions

- Contract Delivery Method
 - Design, Bid, Build = Traditional
 - Fixed Priced Variable Scope = Innovative
- Contractors
 - Do it yourself
 - Hire contractors
 - Work with your county agency
- Fix Use
 - Try a new preservation fix
 - High volume chip seals – MN example



High Volume Chip Seals

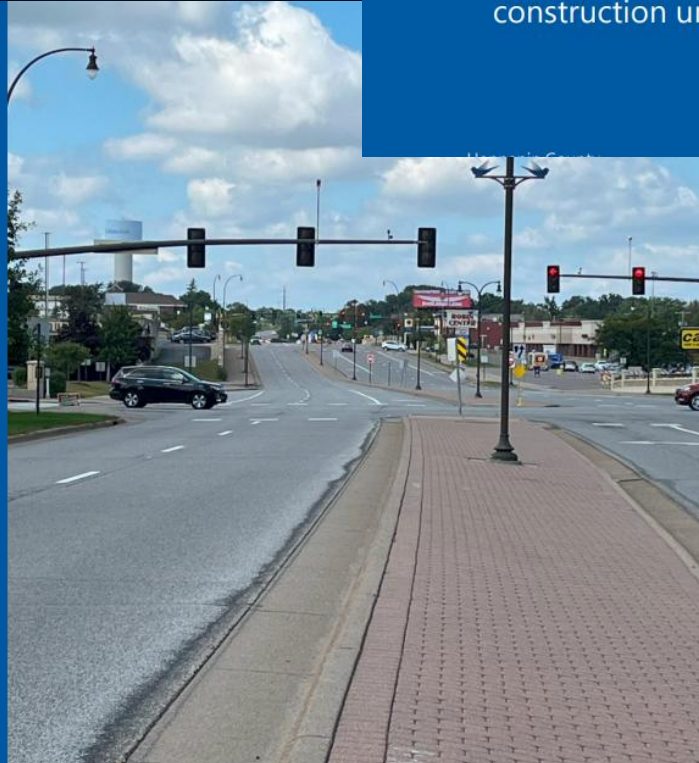
Zane Ave (CSAH 14) Brooklyn Blvd to TH 610 in Brooklyn Park

- Chip sealed in 2025
- ADT 15,100
- Last surface: M/O 2021 (Built in 1974/1999)
- Rate 0.35 gallons per SQ YD
- Issues with flushing and intersection construction under traffic



County Road 81 (CSAH 81) 36th Ave to CP rail bridge in Crystal/Robbinsdale

- Chip sealed in 2021
- ADT 21,700
- Last surface: reconstruction in 2007



Hennepin County, MN


Outside of the Box Solutions

- Contract Delivery Method
 - Design, Bid, Build = Traditional
 - Fixed Priced Variable Scope = Innovative
- Contractors
 - Do it yourself
 - Hire contractors
 - Neighboring agency
- Fix Use
 - Try a new preservation fix
 - High volume chip seals – MN example



Resources

- MRPA
- LTAP
 - Training
 - Technical content
- National Center for Pavement Preservation (NCPPE)
 - Midwest Pavement Partnership
 - Network of peers
 - Webinars



The poster for the National Pavement Preservation Conference 2027 (NPPC27) features a large QR code at the top left. The title "NATIONAL PAVEMENT PRESERVATION CONFERENCE" is at the top, followed by the "nppc27" logo. Below this, there are three smaller QR codes and logos for NCPP, NPP, and NPPC. The central text lists activities: "Networking Opportunities with Fellow Practitioners", "Three Concurrent Technical Tracks on Preservation Topics", "Live Treatment Demonstrations", "Equipment Parade", "Pre-Staged Treatment Displays", and "Much More to be Announced!". A yellow box contains the text "FOR MORE INFORMATION: WWW.NATIONALPAVEMENT2027.ORG". At the bottom, four maps of the United States represent the regional tracks: "ROCKY MOUNTAIN WEST", "MIDWESTERN", "SOUTHEAST", and "NORTHEAST". The dates "August 30 - September 3, 2027" and the location "DeVos Place - Grand Rapids, Michigan" are at the very bottom.

NATIONAL PAVEMENT PRESERVATION CONFERENCE

nppc27

ncpp
Preserving Our Transportation Assets

Networking Opportunities with Fellow Practitioners
Three Concurrent Technical Tracks on Preservation Topics
Live Treatment Demonstrations
Equipment Parade
Pre-Staged Treatment Displays
Much More to be Announced!

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ROCKY MOUNTAIN WEST
MIDWESTERN
SOUTHEAST
NORTHEAST

August 30 - September 3, 2027
DeVos Place - Grand Rapids, Michigan

QUESTIONS

THE END



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