



WINTER WORKSHOP 2021 THE BENEFITS OF DATA DRIVEN PAVEMENT PRESERVATION

FEBRUARY 17, 2021



TIM STYNCHULA, P.E.
ASSISTANT MAINTENANCE ENGINEER
MAINTENANCE & OPERATIONS
CENTRAL DISTRICT



AARON D. GERBER, P.E.
PRINCIPAL
THE KERCHER GROUP, INC.

OUTLINE



- Why is this important to DeIDOT?
- DeIDOT pavement preservation history and efforts to improve over time
- DeIDOT pavement management system and data collection process
- Case Study: Pavement analysis comparing OPC trends and the network backlog



WHY IS THIS IMPORTANT TO DELDOT?

IMPORTANCE OF PAVEMENT PRESERVATION



- DeIDOT continually asked to do more with less
- The pavement network is the largest infrastructure investment in the state (worth \$5 billion)
- Provides better overall network condition to traveling public



DELDOT PAVEMENT PRESERVATION HISTORY

PAVEMENT PRESERVATION DEFINITION



- Light surface treatments used to prolong the life of the underlying pavement structure
- Life extending treatments by protecting the pavement structure from age hardening, oxidizing, and water intrusion through cracks to lower layers
- Typically not considered structural treatments
- Should be applied on roads in good cracking condition, and especially no roads that are structurally deficient

PAVEMENT PRESERVATION EXAMPLES



DELDOT PAVEMENT PRESERVATION HISTORY

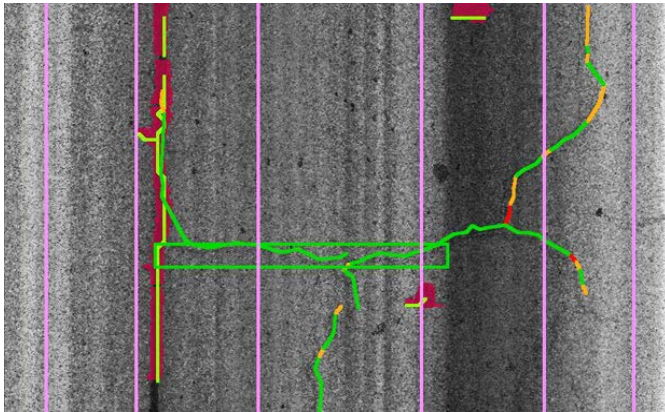


- DeIDOT is traditionally a Mill/Overlay agency
- Preservation has been used on occasion over the years with varying levels of success
- Most commonly on lower volume routes
- Common treatments used by DeIDOT:
 - Microsurfacing
 - Fog Seals
 - Thin HMA Overlays
 - Chip seal (only on existing chip seal roads)

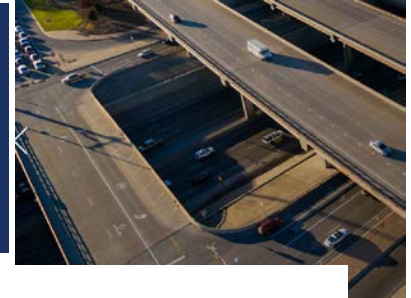


DELDOT PAVEMENT MANAGEMENT SYSTEM AND DATA COLLECTION PROCESS

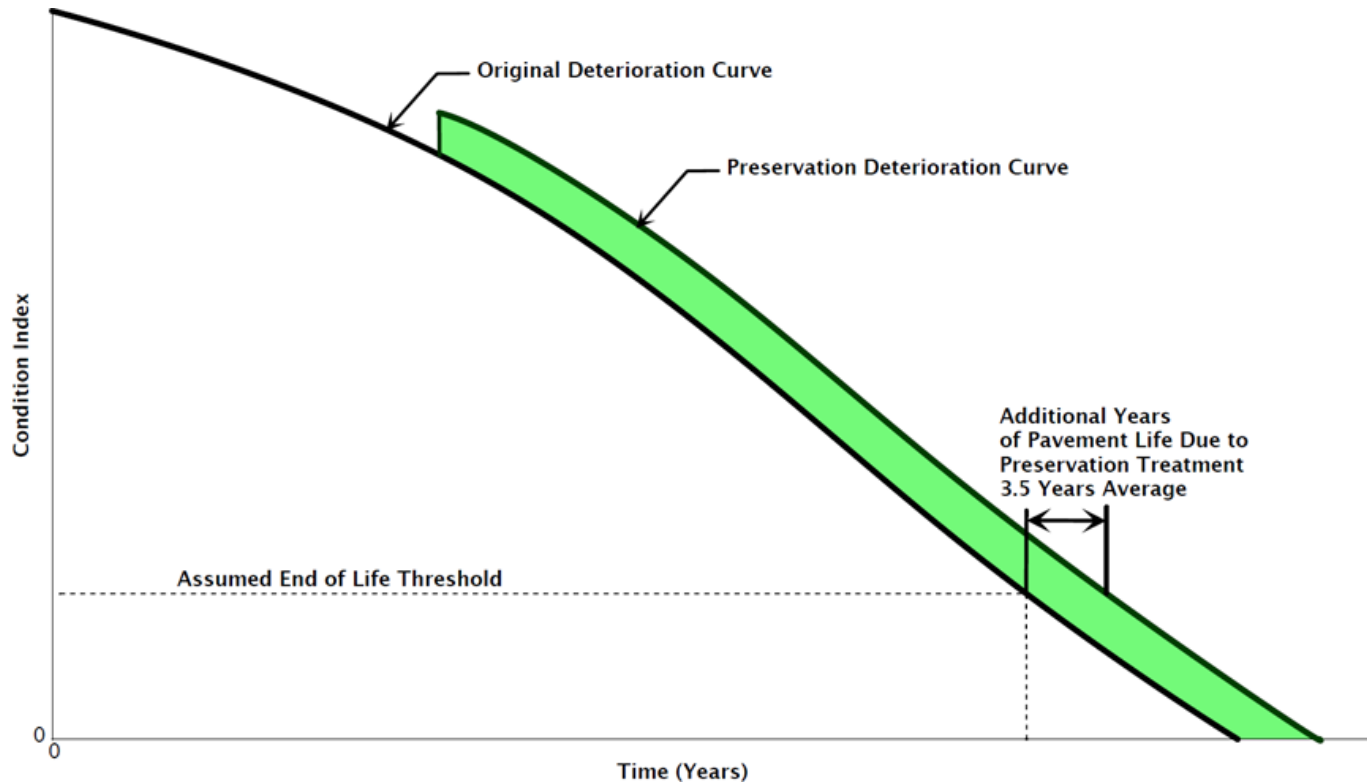
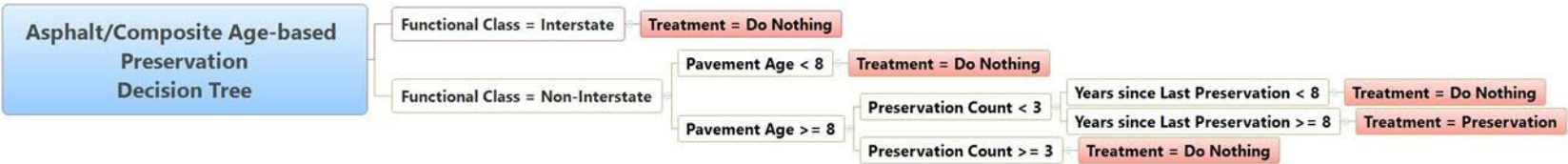
PAVEMENT CONDITION DATA COLLECTION



PAVEMENT MANAGEMENT SYSTEM



PAVEMENT MANAGEMENT SYSTEM





CASE STUDY:

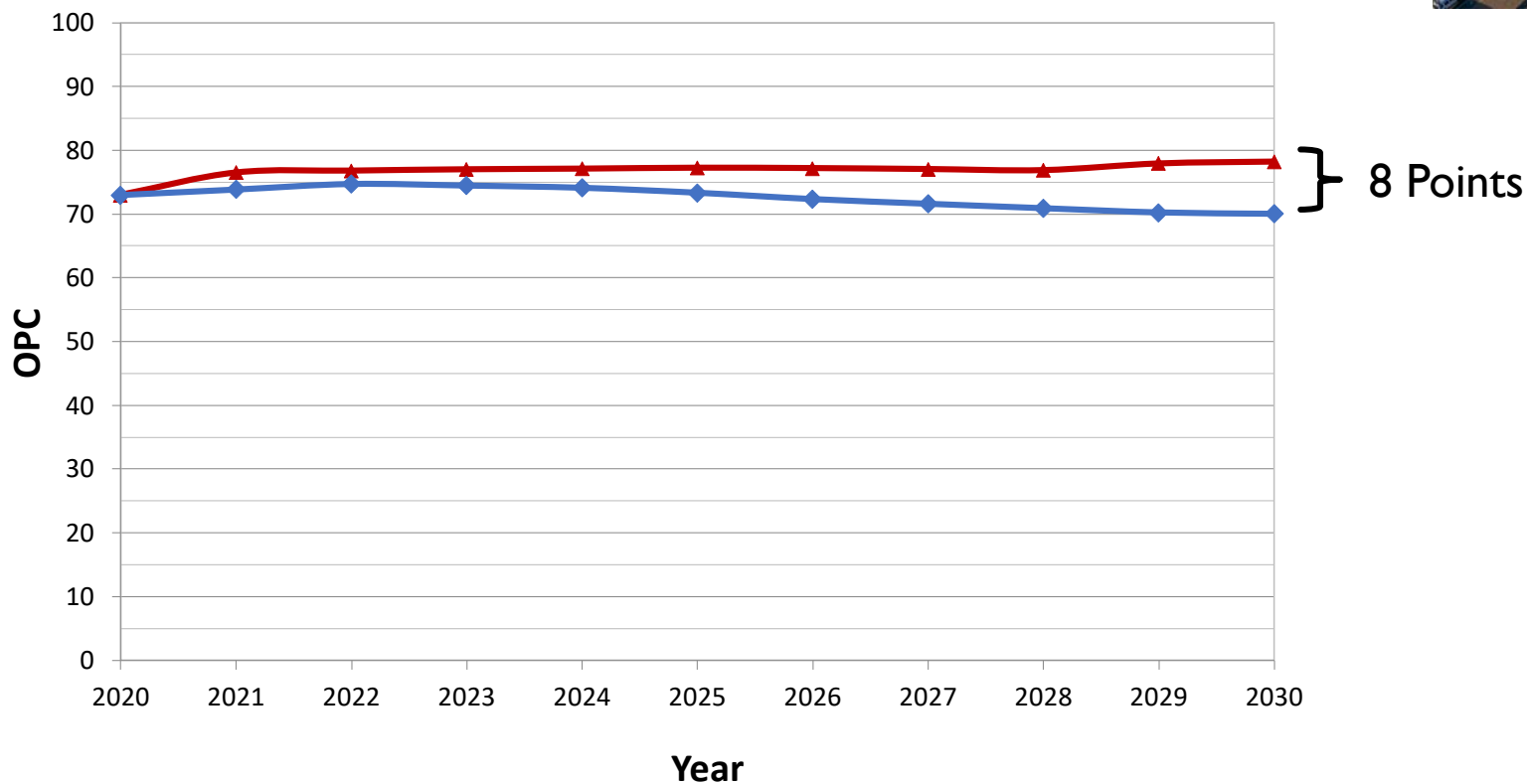
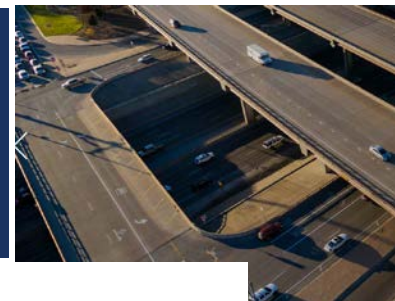
ANALYZE NETWORK PERFORMANCE
WITH AND WITHOUT PRESERVATION

ANALYSIS BUDGET: \$80 MILLION

ANALYSIS LENGTH: 10 YEARS

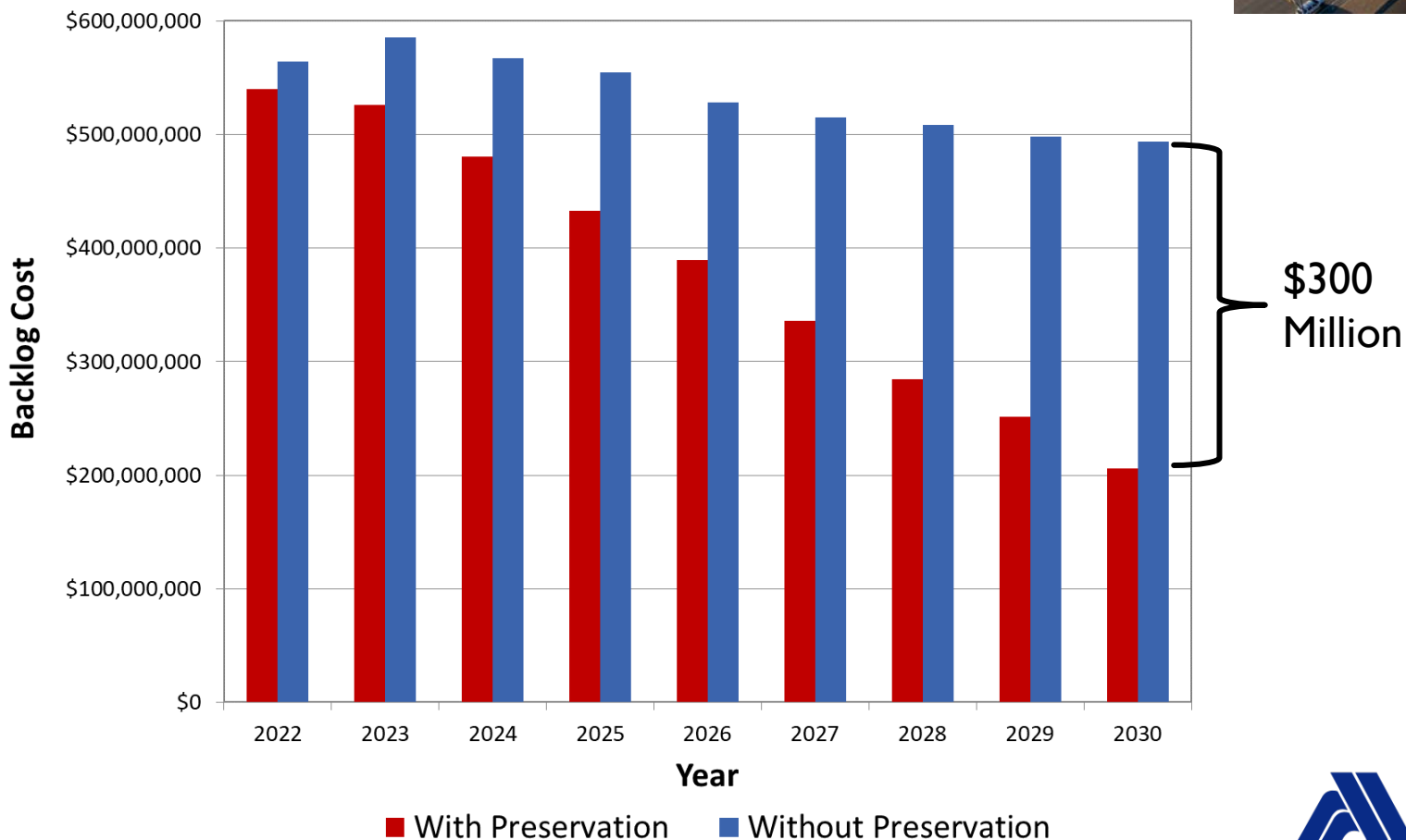
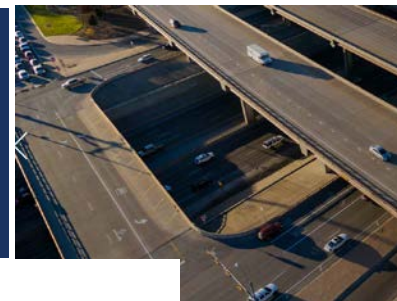
REPORTED METRICS: OPC AND BACKLOG

OVERALL PAVEMENT CONDITION OPC – TOTAL STATE NETWORK



—▲— With Preservation —◆— Without Preservation

BACKLOG COST OF UNMET NEEDS TOTAL STATE NETWORK



FINAL THOUGHTS



- Preservation is incredibly beneficial to network health
- Preservation is significantly cheaper per unit area compared to traditional mill/overlay
- DeIDOT commitment to the program is required to:
 - Gain public buy-in
 - Gain agency buy-in
 - Attract contractor competition
- Use the tools and data available to DeIDOT to assist in programming good preservation candidates

THANK YOU



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