North Dakota Asphalt Conference
March 29, 2017

EDC-4 Pavement Preservation
North Dakota
EDC-4 Focused Initiatives

• Data-Driven Safety Analysis

• e-Construction and Partnering

• Pavement Preservation
Pavement Preservation: When and Where

Benefits to Using a Whole-Life Approach to Pavement Preservation Project and Treatment Selection
Why Is Pavement Preservation Important?

- Good roads are vital for our economy
- Preservation preserves the significant investment in pavements
- Preservation is six times less expensive than rehabilitation and requires fewer resources/energy
Pavement Preservation: When and Where

- FHWA is promoting a network-level approach to managing pavements that:
  - Considers economic treatment strategies over the life of the asset – including preservation
  - Combines capital and maintenance needs in life cycle planning
  - Reduces annual preservation costs without sacrificing performance
Pavement Preservation Makes Sense

Example Treatments:
- Crack seal
- Seal coats, thin overlays, diamond grinding
- Thin overlays, full-depth repairs, mill & overlay
- Slab replacements, thick overlays, cold-in-place recycling

Source: NMDOT
Planned Preservation Strategy vs. Other Strategies

Pavement Management with "Good Roads Cost Less" Preservation Strategies

Source: Utah DOT
Planned Preservation Is Cost Effective

We will seek to identify a number of strategies for each asset group and determine which provides best value for money while delivering the required service.

- Do-minimum Strategy – infrequent but major interventions
- Preventative Strategy – regular and frequent minor interventions
- Programmed Strategy – regular and frequent moderate interventions

Source: Transport Scotland
Where Does “Pavement Preservation: When and Where” Fit Into FHWA EDC-4?

• One of two pavement preservation technologies (with “Pavement Preservation: How”)
• Focuses on network-level investment strategies that consider life cycle planning
• Introduced over 3 months in 2 virtual summits and 7 in-person summits
  • Introduce technology
  • Hear from owner agencies
  • Develop Implementation Plan
• 2017 and 2018
  • Deliver Implementation Plan activities
# Implementation Team

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EDC-4 Pavement Preservation: When/Where Products

• Implementation Plan
  • Overview & Implementation Description
    o State of the practice, challenges, & benefits
  • Vision & Mission Statement
  • Goals
  • Target Audience
  • Performance Targets
  • Implementation Work Plan
EDC-4 Pavement Preservation: When/Where Draft Vision

VISION: Expand the use of network-level life cycle planning to promote the use of pavement preservation strategies.

• Why? It will enable agencies to reduce the annual cost of managing the network without negatively impacting pavement performance
• It allows agencies to maintain higher performance targets even with constrained funding
• It will enable agencies to address the requirements for a Transportation Asset Management Plan
Innovations & Improvements to Promote

- Innovative Analysis Tools
- Improved Business Processes
- Network Life Cycle Planning
- Workforce Development & Capacity Building
- Performance Measures That Reflect Benefits
Why Is This Important?
Federal Legislation Promotes:

• Performance-based investment decisions
• Development of a 10-year Transportation Asset Management Plan
  • Includes consideration of life cycle planning and risk
  • Sets minimum standards for the use of pavement management systems
  • Links investments to performance targets
State Practices Illustrate Benefits

A whole life approach reduces the annual cost of preservation, which allows agencies to redirect available funding to other agency priorities.

Increased investments

Pavement Preservation Treatments
- Crack sealing
- Chip seals
- Microsurfacing

Bridge Preservation Treatments
- Sealing of bridge decks
- Cleaning bridges

Culvert Preservation Treatments
- Debris removal
- Erosion protection

Allowed the Ohio DOT to redirect $300M over 6 years to other pavement, bridge, & culvert priorities.

Graphic: Ohio DOT
Additional Benefits

The development of a network-level preservation strategy helps ensure agencies meet performance targets.
Additional Benefits

Building workforce competencies helps ensure the success of the new way of doing business

The Knowledge Management Plan is designed to ensure that:

- Employees are prepared to identify when actions are needed
- Share what they've learned with others.

Source: Ohio DOT
ODOT Communication Plan

https://www.youtube.com/watch?v=B6jZJQBvpc0#t=12
Transportation Asset Management

https://www.youtube.com/watch?v=ep3j7f__LuM&feature=youtu.be
EDC-4 Funding Opportunities:

• Accelerated Innovation Deployment (AID) Demonstration
  • *New* Notice of Funding Opportunity under FAST Act > GOAL: $10 million per year [23 U.S.C. 503(c)(2)(B)]

• Increase Federal Share for Project Level Innovation
  • Increase federal share up to 5 percent of the total project cost [23 U.S.C. 120(c)(3)]
Good Roads Are Vital For Our Economy, And They Preserve the Substantial Investment That Has Been Made in the System.
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Thank You!

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