

North Dakota Department of Transportation

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Planning/Asset Management Division



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PAVEMENT PRESERVATION

▶ Currently No Formal Pavement Preservation Program

▶ Existing Treatments:

Asphalt:

Thin Overlay $\leq 2''$ (8-12 years)

Microsurface (8-12 years)

Micro Milling (8-12 years)

Slurry Seal (7-10 years)

Chip Seal (7-10 years)

Crack Sealing (2 years)

Minimac (4 years)

Concrete:

Dowel Bar Retrofit (10-15 years)

Diamond Grinding (10-15 years)

Concrete Pavement Repair (10-15 years)

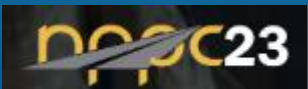
PAVEMENT PRESERVATION TEST PROJECT

- ▶ Research/Test Project Completed in 2023
 - ▶ ND 1804, District Collector
 - ▶ 25 Miles in length, 30 miles south of Bismarck
 - ▶ AADT: 260 -1020, TAADT: 30 - 65, IRI: 95 - 114
 - ▶ Project Scope
 - ▶ Roadway programmed as typical mill/overlay
 - ▶ Try 8 different test section in 3-mile segments
 - ▶ Develop plans, special provisions, and specifications
 - ▶ Construction 2023
 - ▶ Evaluate each section over time



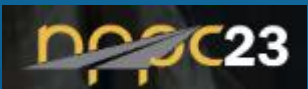
PAVEMENT PRESERVATION TEST PROJECT

- ▶ Working group with good cross section of NDDOT
 - ▶ Materials and Research
 - ▶ Construction
 - ▶ Maintenance
 - ▶ Planning/Asset Management
 - ▶ Environmental and Transportation Services
 - ▶ Contractor invited to some meetings
- ▶ Objectives
 - ▶ Evaluate constructability of different pavement preservation methods
 - ▶ Develop Specifications for these methods to be used on future projects
 - ▶ Evaluate performance
 - ▶ Find preservation methods that utilize RAP
 - ▶ Encourage Districts to use these methods on future projects

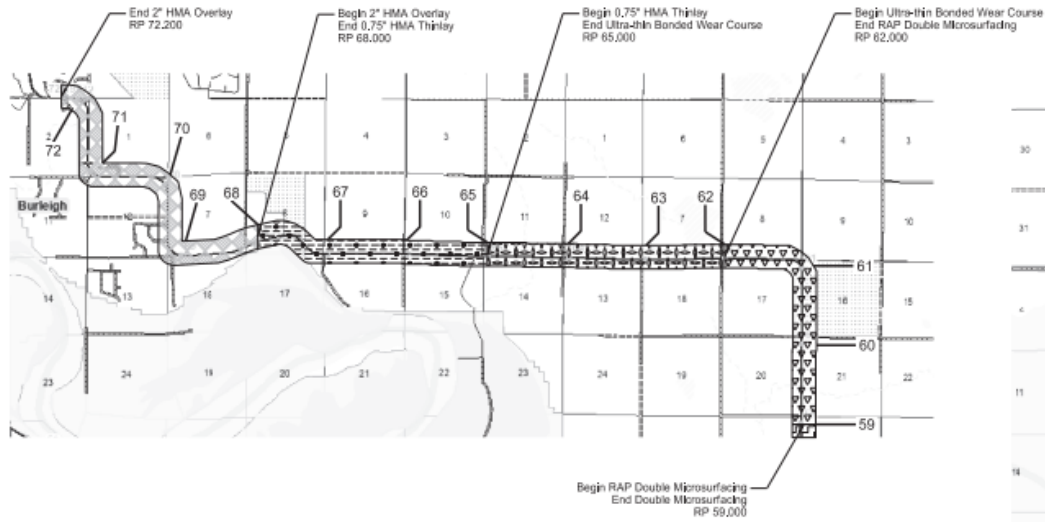


PAVEMENT PRESERVATION TEST PROJECT

- ▶ Existing Conditions
 - ▶ 3-4" Bituminous Base
 - ▶ 1.5" HBP
 - ▶ 1.0" HBP Contract Patch
 - ▶ 2.0" HBP in 2008
 - ▶ Chip Seal in 2011
- ▶ Treatments: (Micro Mill entire project)
 - ▶ 2" HMA Overlay (Control Section)
 - ▶ 0.75" HMA Thinlay with 4.75 mm NMAS
 - ▶ Ultra Thin Bonded Wearing Course (UTBWC)
 - ▶ RAP Double Microsurfacing
 - ▶ Double Microsurfacing
 - ▶ RAP Cape Seal (chip seal and microsurfacing)
 - ▶ Cape Seal (chip seal and microsurfacing)
 - ▶ Double Chip Seal

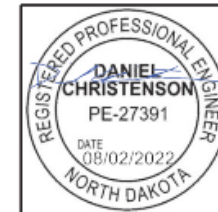
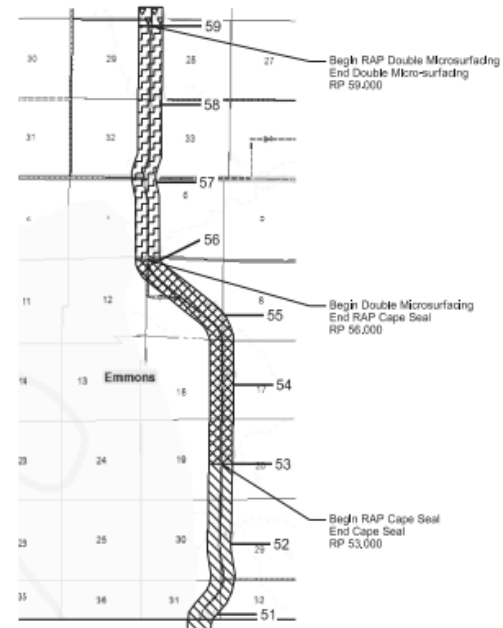
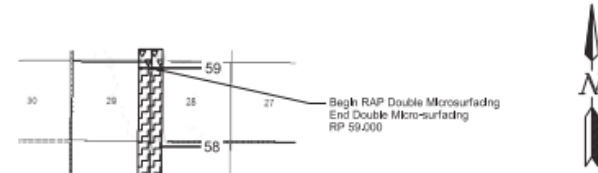


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-1-804(051)047	4	1



LEGEND

	2" HMA Overlay
	0.75" HMA Thinley
	Ultra-thin Bonded Wear Course (UTBWC)
	RAP Double Microsurfacing
	Double Microsurfacing
	RAP Cape Seal (chip seal & micro-surfacing)
	Cape Seal (chip seal & micro-surfacing)
	Double Chip Seal



Scope of Work
 ND 1804 Test Section Project
 RP 47.210 to RP 72.200





4.75 mm



RAP Chips



RAP Micro



PAVEMENT PRESERVATION TEST PROJECT

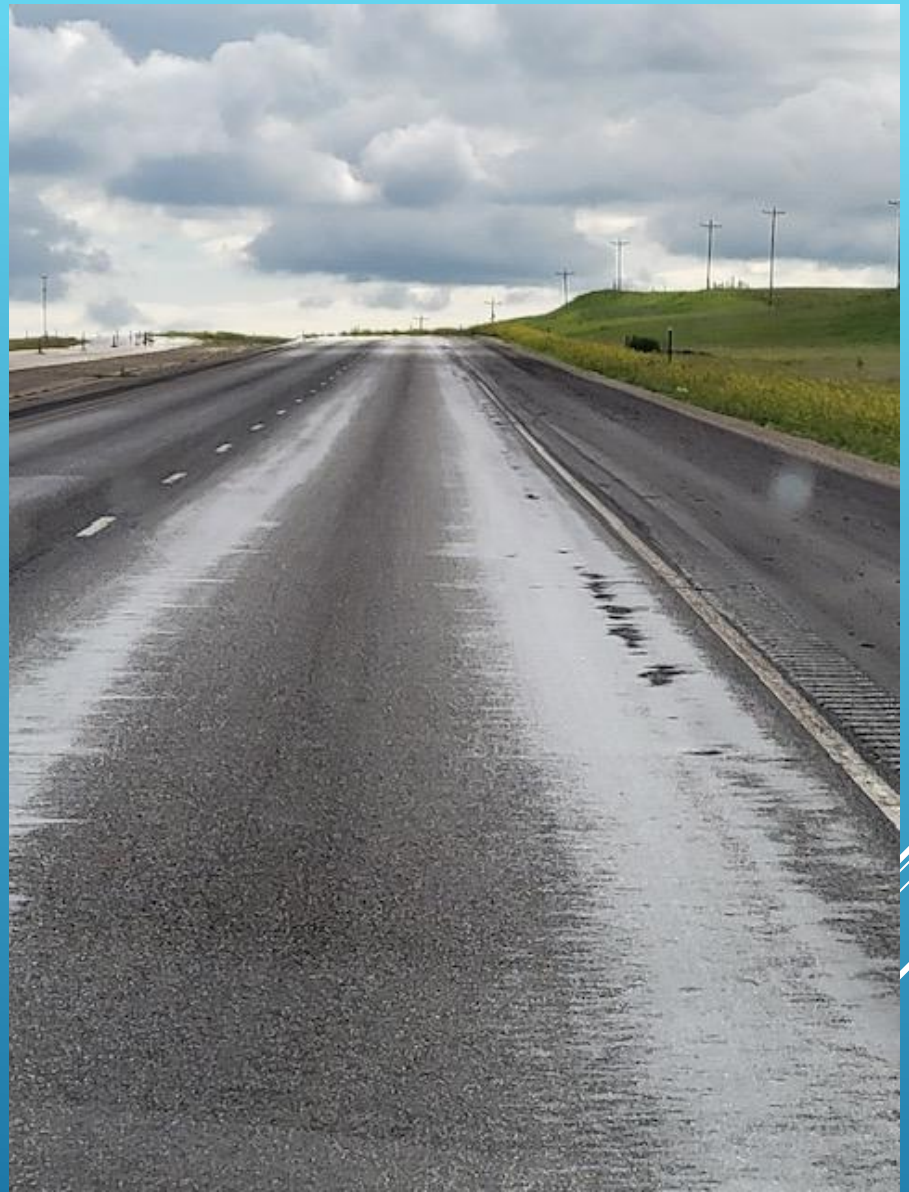
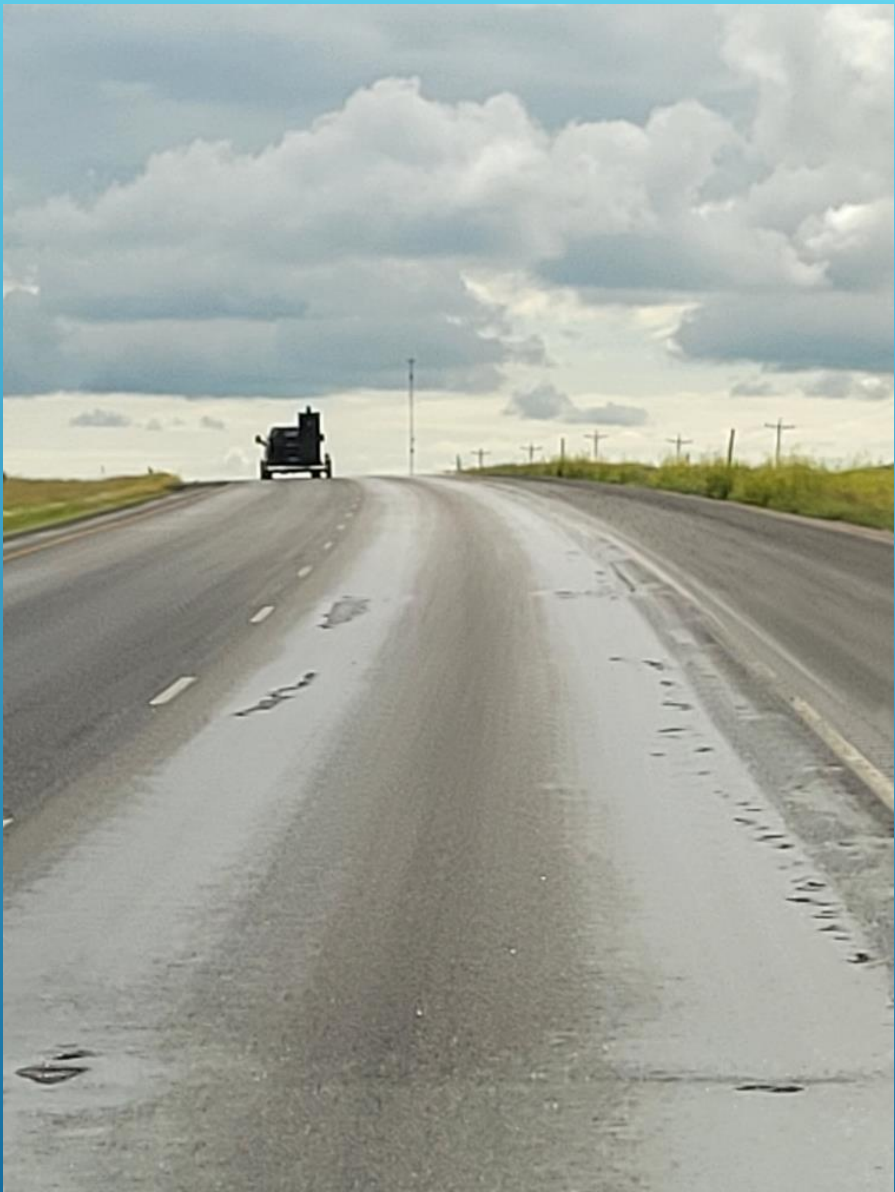
- ▶ Evaluation
 - ▶ Visual Observation
 - ▶ Condition Data Collected with NDDOT's PathRunner XP (Pathway van)

- ▶ Stay Tuned For Results...

CHIP SEAL LEARNING EXPERIENCE

- ▶ 4-Lane Interregional
- ▶ First Step: Scotch Patch in Wheel Path
- ▶ Second Step: Chip Seal





SOMETHING NEW

- ▶ Ox Claw Screed on Caterpillar Paver
- ▶ 4-Lane Interregional, 21.2 Miles in Length
- ▶ 2" HBP – Superpave – FAA 45
- ▶ Increase Density & Provide Smooth Ride (Avg Project IRI = 38)





QUESTIONS?

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