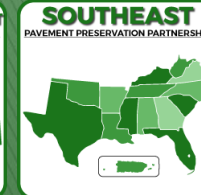


2023 NPPC “NEVADA DOT UPDATE”

Charlie Pan, Chief Materials Engineer
Nevada Department of Transportation



NDOT:

- 3 Districts/6 Operational Areas
- 1750 staff (20% vacancies)
- 13,774 lane miles/5378 centerline miles
- Annual Budget - \$900 Million (+/-)
 - 65% goes to projects
- Transportation Board (chaired by Governor)
- FHWA and Federal Funding (95/5)

Pavement Preservation Prioritization Category (limited funding)

Category	ADT & Truck Traffic	% of System
1	Controlled Access	12%
2	ESAL > 540 or ADT > 10,000	20%
3	540 > ESAL > 405 or 10,000 > ADT > 1,600 & NHS	21%
4	405 > ESAL > 270 or 1,600 > ADT > 400	16%
5	ADT < 400	31%

Maintain State Highway Pavement:

Percentage of state-maintained roadways in fair or better condition.

Current year target:

- Category 1: 95% Minimum fair or better condition
- Category 2: 90% Minimum fair or better condition
- Category 3: 85% Minimum fair or better condition
- Category 4: 75% Minimum fair or better condition
- Category 5: 50% Minimum fair or better condition

Condition	PSI Rating Scale	PSI Condition by road Prioritization Category Percentage (%) and Number of Miles						
		Road Category 1		Road Category 2	Road Category 3	Road Category 4	Road Category 5	Roadway network Totals
		A	C					
Very Good	5.00 to 4.00	73.0% 409.8	5.1% 4.9	40.4% 409.0	19.4% 210.0	5.7% 46.6	0.2% 2.6	20.9% 1082.8
Good	3.99 to 3.50	22.0% 123.5	30.4% 29.3	37.4% 378.8	45.8% 495.8	37.4% 307.8	11.4% 183.4	29.3% 1518.5
Fair	3.49 to 3.00	4.2% 23.7	39.6% 38.2	13.3% 135.0	20.6% 223.2	33.8% 277.7	28.8% 465.1	22.4% 1162.9
Mediocre	2.99 to 2.50	0.8% 4.6	22.1% 21.3	5.7% 57.8	11.4% 123.8	17.2% 141.6	33.9% 547.1	17.3% 896.1
Poor	2.49 to 2.00	0.03% 0.2	2.9% 2.8	2.0% 20.5	2.4% 26.4	4.9% 40.2	15.6% 250.9	6.6% 340.9
Very Poor	< 2.00	0.0% 0	0.0% 0	1.1% 11.3	0.4% 4.3	1.0% 8.4	10.2% 163.7	3.6% 187.7
Total Miles:		658		1012	1,086	822	1613	5189
Condition Goal: Percentage of Roads in Fair or Better Condition		95%		90%	85%	75%	50%	
Current Condition: Percentage of Roads in Fair or Better Condition (2022 Data)		95.6%		91.2%	85.7%	76.9%	40.4%	72.5%
Does the current condition meet the condition goals?		Yes		Yes	Yes	Yes	No	

Advertised Pavement Repair Work for Fiscal Year 2022

Fiscal Year	Contract Maintenance Work Expenditure and Mileage	Contract Preservation Work and Expenditure and Mileage	Contract Maintenance and Preservation Work Expenditure and Mileage
2022	\$25,295,520	\$121,555,624	\$146,851,144
	290 Centerline Miles	140 Centerline Miles	430 Centerline Miles

- Total spent on pavement maintenance and rehabilitation in 2015/2016: **\$186.6M**
- Centerline Miles of pavement maintained or rehabilitated in 2015/2016: **450 miles**

Advertised Pavement Repair Work for Fiscal Year 2023

Fiscal Year	Contract Maintenance Work Expenditure and Mileage	Contract Preservation Work and Expenditure and Mileage	Contract Maintenance and Preservation Work Expenditure and Mileage
2023	> \$25M	\$266,049,258	~\$300M
	~300 Centerline Miles	183 Centerline Miles	~500 Centerline Miles

- Total spent on pavement maintenance and rehabilitation in 2015/2016: **\$186.6M**
- Centerline Miles of pavement maintained or rehabilitated in 2015/2016: **450 miles**

Chip Seal, Slurry/Micro, AR Thin Overlay...



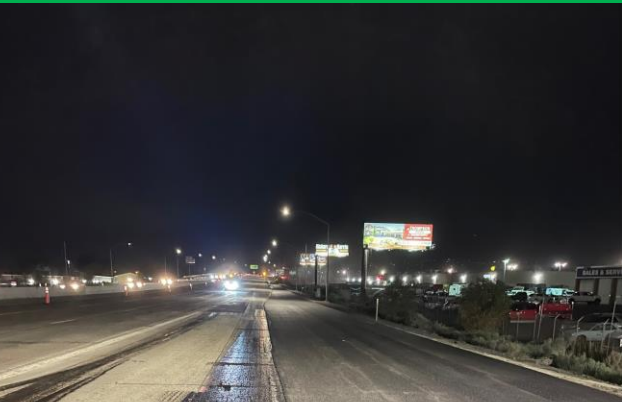
Profile Grinding, Joint Reseal, Dowel Bars Retrofit...

Assessment Stage: (may become standard practice)

Test	Test Method	Requirements
Gyratory Compaction	AASHTO T312	$N_{\text{design}} = 50$
Asphalt Binder Content (%)	Not Applicable	7.0 Min. ⁽¹⁾
Percent Air Voids of Compacted Asphalt Mixture at N_{design} (%)	AASHTO T269	0.5 to 2.5%
Voids in Mineral Aggregates, VMA (%)	AASHTO R35	16%
Dust Proportion, DP	AASHTO M323	0.6 to 1.4
Hveem Stability	Nev. T303	18 Min. ⁽²⁾
Test	Test Method	Requirements
Flexural Beam Fatigue, 2000 Micro-Strain, 10 Hz, $3 \pm 1\%$ Air Voids, 59°F (3 Replicates) ⁽¹⁾ PG64-28NV PG76-22NV	ASTM D7460	10,000 Cycles Min. 7,000 Cycles Min.
Texas Overlay Test, $7 \pm 1\%$ Air Voids, 50°F, 0.018-inch Max. (6 Replicates) PG64-28NV PG76-22NV	Tex-248-F	2,000 Cycles Min. 1,750 Cycles Min.

Crack Attenuating
Mixture, 1" Thick
80 to 100%
passing #4,
3 demonstration
projects

Demonstration Stage:



- Thin Overlay on Concrete (Ultra-Thin Bonded Wearing Course)
Done many UTBWC projects in Las Vegas with **spray paver** and **modified emulsion** tack coat
Highly Modified Asphalt (**PG70-34NV**)
Application on PCCP subjected to freeze-thaw
First project on I-80 has been awarded
Second project on I-580 in Reno has been placed!!

Questions/Comments?



Development Stage:

Chip Seal Warranty Specification

- 20M work program/FY 23, 40% State force, 60% Contractor
- 30% Vacancies Maintenance Worker & Construction Inspector
- Developed NDOT's Chip Seal Coat Warranty Guide (NCOD/COD)
- Contractor responsible to select modified emulsion, application rates & methods
- 3 projects this year (SR400 PE, US95 CH, US93 LN) Done!!