



Department of Transportation (MCDOT)

Director's Report – January 8, 2019

• **Annual Project Expenditure Plans Under Road Repair and Accountability Act of 2017:** Proposition 6 failed to pass on November 6, 2018; thus, the California State Association of Counties three year coalition effort stands and will continue to provide additional transportation investments under the “Road Repair and Accountability Act of 2017” signed into law on April 28, 2017, Senate Bill (SB) 1 (Beall). The Road Repair and Accountability Act of 2017 provides significant public benefit for every county across California. Assembly Constitutional Amendment (ACA) 5 (Frazier) became Proposition 69, and passed in June 2018. Proposition 69 prohibits the state from taking or redirecting the new transportation revenues. Mendocino County expects additional NEW funding of \$3.5 million per year starting in 2019 under the “Road Maintenance and Rehabilitation Account” (RMRA) building to \$ 7 million per year by 2033. MCDOT expects to be able to combine the previous baseline revenue of \$1 million per year by 2029 with RMRA funds and will have an average of \$5.5 million per year for the corrective maintenance program for the County’s Road System in the first 20 years.

The Mendocino Council of Governments (MCOG) sponsored Pavement Condition Index (PCI) Report shows Mendocino County’s average PCI has risen to 46 due to two factors: 1) efforts of the Board to fund corrective and preventative maintenance of the road system and 2) the consultant removing some severely degraded miles of chip-sealed road that for all practical purposes had reverted to gravel.

MCOG consultant Nichols Consulting Engineers (NCE) did scenarios applying these new funds. The Expenditure Plan below proposes the goals we set, and the standard of improvement to our road system that we will accept, given the opportunities this funding and other factors involved will create.

For example, we know the 2016 Statewide Needs Assessment listed Mendocino County Roads as having \$602 million in unmet pavement needs. We also know that for the purposes of consistency the statewide report sets this value based upon scenarios, which would bring paved systems back to a PCI of 80 or more. If Mendocino County made this our goal, and costs stay constant, it would take 109 years at \$5.5 million per year to achieve a countywide score of 80.

MCDOT believes, that based on the PCI of our road segments, by using a combination of pavement preservation and corrective maintenance activities, that a ten to twenty year plan can be devised that will meet moderate PCI improvement goals. The Mendocino County Board of Supervisors (BOS) could consider a plan that might look as follows:

Urban Collector	47 miles	PCI 70
Urban Local/ Rural Collector	<u>310 miles</u>	PCI 60
Subtotal	<u>357 miles</u>	
Rural Minor Collector	150 miles	PCI 50 – Contract & more crew effort.
Local Road Chip Seal	180 miles	PCI 40 – Involves more crew effort.
Local Road Gravel	330 miles	Add rock, shape, and grade more often.

In order to achieve a plan like the one above, MCDOT would apply the most cost effective methods possible. However, when pavement preservation strategies are exhausted and reconstruction methods are required, then costs-per-mile will be high. MCDOT believes that the projected funding will allow us to apply a combination of half pavement preservation and half-corrective maintenance (reconstruction) methods to treat the 357 miles of main roads at an estimated average cost of \$5.5 million per year, over 19 years, and achieve scores of PCI 50 to 70. Because of the major contract methods used for most of the 357 miles of main road projects, the remaining 660 miles of chip sealed gravel roads will receive additional attention from the County Maintenance Crews, and this will raise their condition as well.

Corrective maintenance includes Resurfacing, Restoration, and Rehabilitation (RRR) projects. Such projects range from "full depth reclamation" with up to a foot of grindings with hot oil injection, to thick overlays, such as, the application of new pavement at a thickness of 3 inches of Hot Mix Asphalt that proves to last up to 21 years under moderate traffic loads. A more cost effective RRR treatment includes "cold in place recycle" with only three inches grinding with cold emulsion injection topped with chip seal.

Pavement preservation includes Chip Seals, rubberized Chip Seal micro surface, multi-layer application of all types (Cape Seal).

Much can change in twenty years; roads treated recently may need retreatment before year fifteen. Costs can also change, so projections of what is achievable may vary from year to year. A twenty year plan will be specific only one year at a time. The BOS will be the decision maker for allocating these funds based upon a specific yearly plan presented at a public board meeting, which will consider specific road segments and the most effective treatment for those segments. MCDOT, as required by RMRA, will prepare yearly specific plan and bring them to the BOS. Outlined below is a long-range twenty-year guidance plan listing some 357+/- miles of main roads requiring treatment by name. The BOS may annually review and propose amendments to any long-range plan to provide for the use of additional federal, state, or local funds, and to account for unexpected revenue, or take into consideration any unforeseen circumstances. The plans will need to be submitted yearly to the California Transportation Commission where projects lists can be adjusted or extended based on cost adjustments as bid prices and treatment designs are refined.

MCDOT believes that since we now have an actual and dependable funding source (SB 1 & Prop 69) and known additional RMRA amounts on a sliding scale that will average \$5.5 million per year by 2037 with Consumer Price Index stabilizers that it is reasonable to try to map out a long-range plan for an average of \$5.5 million per year. It is difficult to pick the order and proposed treatment of a list of named roads projected out fifteen years and there will be many specific details to designate every year, on every road. However, we think such a plan can be made based on what we believe the cost to treat roads is; on average approximately 20 miles per year at an average cost of \$300,000 per mile. This cost based on the consultant's recent report "2017 Pavement Management Program Update".

The following is a possible scenario for the Mendocino County Pavement Program for each year based on distinct areas of the county in order to optimize mobilization costs. The plan could be further refined using the "Street Saver" PCI software used by NCE to generate the 2017 report and continuing to contract with NCE for current updated reports:

Year 1 (2019-20): Chip seal treatments of 8 +/- miles of salvageable road segments in a pavement preservation strategy. Cold in place recycle (CIP) treatment with chip seal of 8 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures.
(Total 16.03 miles program \$3.460 million)

<u>County Road (CR) Name</u>	<u>Beginning Milepost (MP)</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Basin View Drive, CR 447	0.00	0.16	0.16	10	104
Noyo Acres Drive, CR 415F	0.00	0.67	0.67	34	275
Benson Lane, CR 415E	0.00	0.70	0.70	18	1,072
Summers Lane, CR 415D	0.00	0.63	0.63	69	315
Hanson Road, CR 415H	0.00	0.68	0.68	42	583
Ward Avenue, CR 425B	0.00	1.36	1.36	15	514
Boice Lane, CR 413	0.00	1.26	1.26	24	759
Pearl Drive, CR 412A	0.00	0.56	0.56	22	322
Fort Bragg Sherwood Road, CR 419	0.00	4.00	4.00	38	779
Simpson Lane, CR 414	0.00	3.60	3.60	91	3,559
Mitchell Creek Drive, CR 414B	0.00	2.02	2.02	49	1,161
Ellison Way, CR 414A	0.00	0.39	0.39	25	

Year 2 (2020-21): Chip seal treatments of 15 +/- miles of salvageable road segments in a pavement preservation strategy. CIP treatment with chip seal of 7 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures.
(Total 22.16 miles program \$3.51 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Flynn Creek Road, CR 135	0.00	8.97	8.97	38	268
Albion Little River Road, CR 403	0.00	3.19	3.19	49	204
Comptche Ukiah Road, CR 223	0.00	10	10	73	1,152

Year 3 (2021-22): Asphalt overlay of 8 +/- miles in a rehabilitation strategy. Deep dig outs of all base failures. (Total 8 miles program \$3.89 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Orr Springs Road, CR 223	29.02	37.02	8.00	19	181

Year 4 (2022-23): CIP treatment with chip seal of 11 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 11.32 miles program \$4.06 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Goose Road, CR 640	0.00	1.20	1.20	30	357
Primrose Drive, CR 604	0.00	4.60	4.60	47	583
Poppy Drive, CR 623	0.00	3.24	3.24	56	124
Lilac Road, CR 605	0.00	1.43	1.43	46	502
Daphne Way, CR 608	0.00	0.85	0.85	16	1,473

Year 5 (2023-24): Chip seal treatments of 12 +/- miles of salvageable road segments in a pavement preservation strategy. CIP treatment with chip seal of 12 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 23.72 miles program \$4.18 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Philo Greenwood Road, CR 132	0.00	18.00	18.00	44	240-776
Cameron Road, CR 516	0.00	5.72	5.72	52	183

Year 6 (2024-25): Chip seal treatments of 25.68 +/- miles of salvageable road segments in a pavement preservation strategy. Deep dig outs of all base failures. (Total 25.68 miles program \$4.3 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Mountain View Road, CR 510	0.00	25.68	25.68	51	403

Year 7 (2025-26): CIP treatment with chip seal of 9 +/- miles of salvageable road segments in a pavement preservation strategy. Deep dig outs of all base failures. (Total 9.22 miles program \$4.44 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Feliz Creek Road, CR 109	0.00	3.43	3.43	80	
Hewlitt & Sturtevant Road, CR 112	0.00	0.61	0.61	34	
McDowell Street, CR 115E	0.00	0.20	0.20	7	
Sanel Street, CR 115B	0.00	0.10	0.10	25	
Harrison Street, CR 115A	0.00	0.19	0.19	9	435
Howell Street, CR 115F	0.00	0.04	0.04	12	
Mountain House Road, CR 111	6.32	9.32	3.00	29	418
East Side Rancheria Road, CR 105	0.00	0.78	0.78	5	90
Nokomis Road, CR 117	0.00	0.87	0.87		

Year 8 (2026-27): 26+/- miles chip seal as a pavement preservation strategy. Deep dig outs of all base failures. (Total 25.6 miles program \$5.57 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Casper Road, CR 569	0.00	0.94	0.94	68	2,562
Casper Street, CR 410E	0.00	0.27	0.27	18	
Fern Creek Road, CR 411A	0.00	4.00	4.00	48	1,198
Caspar Little Lake Road, CR 409	0.00	4.00	4.00	70	
Caspar Orchard Road, CR 410	0.00	0.95	0.95	39	
Point Cabrillo Drive, CR 564	0.00	2.92	2.92	81	762
Comptche Ukiah Road, CR 223	10.00	22.52	12.52		1,152

Year 9 (2027-28): Chip seal treatments of 10 +/- miles of salvageable road segments in a pavement preservation strategy. CIP treatment with chip seal of 7 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 16.86 miles program \$5.71 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
West Road, Redwood Valley, CR 237	0.00	3.77	3.77	35	1,371
Road I, CR 234	0.00	1.19	1.19	37	
Colony Drive, CR 232A	0.00	1.32	1.32	9	
Road D, CR 232	0.00	1.38	1.38	3	
Road B, CR 231A	0.00	3.00	3.00	17	
Road A, CR 231	0.00	1.42	1.42	25	
School Way, CR 236	0.00	1.14	1.14	81	3,533
Tomki Road, CR 237D	0.00	2.00	2.00	2	516
Laughlin Way, CR 238	0.00	1.64	1.64	34	

Year 10 (2028-29): CIP treatment with chip seal of 17 +/- miles of salvageable road segments in a pavement preservation strategy. Deep dig outs of all base failures. (Total 17.09 miles program \$6 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Westside Potter Valley Road, CR 248	0.00	3.83	3.83	17	926
Eel River Road, CR 240B	0.00	4.85	4.85	16	
Powerhouse Road, CR 248A	0.00	3.19	3.19	5	415
Gibson Lane, CR 246	0.00	2.76	2.76	6	308
Eastside Potter Valley Road, CR 240	0.00	2.46	2.46	36	1,690

Year 11 (2029-30): Full Depth Reclamation with Asphalt Concrete overlay of 10 +/- miles in a reconstruction strategy. Chip Seal north 3 miles with dig outs.
(Total 9.97 miles program \$6.5 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
North State Street, CR 104	0.00	5.56	5.56	80	7,888
South State Street, CR 104A	0.00	1.41	1.41	81	6,332
North State Street, Calpella, CR 104	5.56	8.56	3.00	81	6,219

Year 12 (2030-31): CIP treatment with chip seal of 21 +/- miles of salvageable road segments in a recycle strategy of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 20.95 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Old River Road, CR 201	0.00	14.44	14.44	80	743
Ruddick Cunningham Road, CR 205	0.00	3.45	3.45	69	373
Sanford Ranch Road, CR 200	0.00	1.33	1.33	45	
Watson Road, CR 204A	0.00	0.90	0.90	58	1,194
Vichy Hills Drive, CR 204I	0.00	0.83	0.83		

Year 13 (2031-32): Full Depth Reclamation with Asphalt Concrete overlay of 11 +/- miles in a reconstruction strategy. (Total 10.92 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Deerwood Drive, CR 215B	0.00	0.57	0.57	73	227
Brush Street, CR 217	0.00	0.20	0.20		
South Dora Street, CR 209	0.00	0.88	0.88	81	
Oak Knoll Road, CR 252	0.00	0.85	0.85	56	
Laws Avenue, CR 253B	0.00	0.47	0.47	78	
Tedford Avenue, CR 253	0.00	0.26	0.26	56	
Redemeyer Road, CR 215A	0.00	2.48	2.48		2,524
Wildwood Road, CR 215J	0.00	0.76	0.76		
Vichy Springs Road, CR 215	0.00	4.45	4.45		3,511

Year 14 (2032-33): Chip seal treatments of 15 +/- miles of salvageable road segments in a pavement preservation strategy. CIP treatment with chip seal of 9 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of base failures. (Total 23.77 miles, \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
East Hill Road, CR 301	0.00	1.97	1.97	29	
Center Valley Road, CR 303	0.00	2.07	2.07	58	
Bray Road, CR 305	0.00	0.21	0.21	9	
Valley Road, CR 309	0.00	1.19	1.19	60	
Hearst Willits Road, CR 306	0.00	5.83	5.83	35	1,584
Canyon Road, CR 308	0.00	4.48	4.48	40	
Tomki Road, CR 237D	9.74	11.74	2.00	2	516
Reynolds Highway, CR 310	0.00	4.94	4.94	38	19
Della Avenue, CR 312	0.00	0.27	0.27	93	2,309
Locust Street, CR 312A	0.00	0.81	0.81	29	

Year 15 (2033-34): CIP treatment with chip seal of 15 +/- miles of salvageable road segments in a pavement preservation strategy. Deep dig outs of all base failures. (Total 15.32 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Malaga Drive, CR 251A	0.00	0.25	0.25	81	
Tokay Avenue, CR 251F	0.00	0.24	0.24	80	
Chablis Drive, CR 251C	0.00	0.36	0.36	73	
Zinfandel Drive, CR 222B	0.00	0.37	0.37	69	
Despina Drive, CR 251	0.00	0.30	0.30	87	
Lovers Lane, CR 222	0.00	0.77	0.77	55	
Busch Lane, CR 247	0.00	1.21	1.21	1	
Feed Lot Lane, CR 250B	0.00	0.08	0.08	93	
Kuki Lane, CR 250A	0.00	0.20	0.20	71	
Ford Road, CR 250	0.00	0.36	0.36	91	
Tedford Avenue, CR 253	0.00	0.26	0.26	56	
Laws Avenue, CR 253B	0.00	0.47	0.47	78	
Canyon Drive, CR 253C	0.00	0.12	0.12	4	
Rosemary Lane, CR 253D	0.00	0.1	0.1	11	
Fircrest Drive, CR 210	0.45	0.65	0.65	29	
South Dora Street, CR 209	0.00	0.88	0.88	81	
Jefferson Lane, CR 267	0.00	0.17	0.17	26	
Oak Knoll Road, CR 252	0.00	0.85	0.85	56	
Meadow Brook Drive, CR 252E	0.00	0.20	0.20	8	
Plant Road, CR 142	0.00	0.21	0.21	65	
Taylor Drive, CR 143	0.00	0.47	0.47	90	
Stipp Lane, CR 124B	0.00	0.40	0.40	19	
Orr Springs Road, CR 223	22.52	29.02	6.50	19	181

Year 16 (2034-35): Chip seal treatments of 13 +/- miles of salvageable road segments in a pavement preservation strategy. CIP treatment with chip seal of 15 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 27.81 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Laytonville Dos Rios Road, CR 322	0.00	2.50	2.50	47	38
Branscomb Road, CR 429	0.00	25.31	25.31	65	2,498

Year 17 (2035-36): Chip seal treatments of 25 +/- miles of salvageable road segments in a pavement preservation strategy. CIP treatment with chip seal of 10 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 34.71 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Lansing Street, CR 500	0.00	0.94	0.94	68	2,562
Point Cabrillo Drive, CR 564	0.00	2.92	2.92	81	762
Clark Street, CR 407Q	0.00	0.27	0.27	18	
Little Lake Road, CR 408	0.00	4.00	4.00	48	1,198
Gualala Road, CR 501	0.00	1.77	1.77	60	244
Old Stage Road, CR 502	0.00	5.72	5.72	56	1,210
Old State Highway, CR 501A	0.00	0.67	0.67	87	1,468
Eureka Hill Road, CR 505	0.00	9.34	9.34	44	221
Ten Mile Road, CR 506	0.00	5.99	5.99	64	500
Pacific Woods Road, 524	0.00	1.44	1.44		
Stoneboro Road, CR 570	0.00	1.65	1.65	29	92

Year 18 (2036-37): CIP treatment with chip seal of 20 +/- miles of roads segments with delimited layers of oxidized asphalts and chip seals where emulsion and grinding is effective. Deep dig outs of all base failures. (Total 20.41 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Sherwood Road, CR 311	0.00	3.48	3.48	74	6,463
Tulip Drive, CR 649	0.00	0.46	0.46	7	430
Clover Road, CR 603	0.00	0.80	0.80	6	2,013
Clover Drive, CR 603A	0.00	0.80	0.80		
Birch Street, CR 601	0.00	0.76	0.76	74	2,017
Iris Drive, CR 651	0.00	0.83	0.83	4	78
Madrone Drive, CR 609	0.00	1.02	1.02	47	412
Lupine Way, CR 618	0.00	0.44	0.44		
Peacock Road, CR 618A	0.00	0.34	0.34		
Peacock Drive, CR 619	0.00	0.63	0.63		
Cypress Drive, CR 606	0.00	0.63	0.63		

Buckeye Road, CR 644	0.00	1.52	1.52		
Ridge Road, CR 641	0.00	3.29	3.29		
Perch Drive, CR 635	0.00	1.08	1.08		
Otter Drive, CR 631	0.00	0.47	0.47		
Bear Drive, CR 630	0.00	1.14	1.14		
Brooktrails Drive, CR 311 B	0.00	0.69	0.69		
Hawk Drive, CR 624	0.00	0.77	0.77		
Daphne Drive, CR 613	0.00	0.40	0.40		
Oriole Drive, CR 627	0.00	0.86	0.86		

Year 19 (2037-38): Chip seal treatments of 22 +/- miles of salvageable road segments in a pavement preservation strategy. Deep dig outs of all base failures. (Total 21.79 program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Crawford Road, CR 337H	0.00	2.05	2.05	70	1,101
Mina Road, CR 336	0.00	2.00	2.00	39	1,646
Hopper Lane, CR 337F	0.00	1.01	1.01	27	610
Agency Road, CR 344	0.00	1.58	1.58	33	288
Barnes Lane, CR 337G	0.00	2.18	2.18	66	200
East Lane, CR 327C	0.00	3.35	3.35	42	771
Hill Road, CR 327B	0.00	5.12	5.12	38	227
Fairbanks Road, CR 327A	0.00	2.00	2.00	36	451
Laytonville Dos Rios Road, CR 322	9.75	12.25	2.50	47	38

Year 20 (2038-39): Chip seal of 46 +/- miles of roads segments with oxidized asphalts and chip seals where emulsion is effective. Deep dig outs of all base failures. (Total 45.88 miles program \$7 million)

<u>County Road Name</u>	<u>Beginning MP</u>	<u>Ending MP</u>	<u>Total Length</u>	<u>PCI</u>	<u>ADT</u>
Philo Greenwood Road, CR 132	0.00	18.00	18.00	44	240-776
Cameron Road, CR 516	0.00	5.72	5.72	52	183
Flynn Creek Road, CR 135	0.00	8.97	8.97	38	268
Albion Little River Road, CR 403	0.00	3.19	3.19	49	204
Comptche Ukiah Road, CR 223	0.00	10	10	73	1,152