PHILO GREENWOOD AND CAMERON RURAL ROAD DEGRADATION

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Mendocino County Department of Transportation Rural Roads

Re: The degradation and unsafe conditions of Philo Greenwood and Cameron Roads

To California's 2nd District US Congressmen Jared Huffman, California Governor Edmund G. Brown Jr, Mendocino County Board of Supervisors and Mendocino County Department of Transportation:

We the residents and frequent drivers of Philo Greenwood (#132) and Cameron roads (#516) are deeply disturbed and concerned by the current dangerous conditions of these roads. As a forty year resident of Greenwood ridge, I know that these two roads have a reputation of being difficult to maintain, but the current conditions are downright dangerous! The horrible state of these roads is also extremely costly to both residential and commercial commerce vehicles as they are constantly battered requiring more frequent repairs or even replacement.

Although we appreciate the minimal patch work the county has done on parts of Cameron road this past summer, we do hope this work will continue in a reasonable time frame on the rest of Cameron and Philo Greenwood roads. The overall traffic (both residential and commercial) on these roads has significantly increased, including overwhelming traffic increases during HWY 128 closures, thus increasing the risk for potential accidents and wear and tear (on the road and vehicles). Even though the majority of county roads 132 and 516 are in need of reconstruction or repair the nine mile stretch of county road 132 inland from the town of Elk is especially dangerous. Below is a brief list of the hazardous conditions that are in desperate need of immediate attention.

- Large unmarked potholes that uncontrollably eject vehicles into oncoming traffic or off the roadway. Attempting to avoid these pothole, if even possible, puts drivers in unnecessary danger.
- The further narrowing of our already narrow roadways due to unattended landslides, cave-offs and unmaintained drainage diches. There are many sections along these two roads that are so narrow large vehicles have to drive into the other lane to get around debris from landslides and cave-offs with huge drops.
- Drainage ditches that haven't been properly cleared not only assist the narrowing of our roads but allow water to build up on the road surface causing vehicles to hydroplane as well as contribute to the degradation of the road surface.

We insist that the proper agencies address these safety issues before unnecessary major accidents or personal injury occur. We would like to drive our roads with a peace of mind once again. Within the subsequent pages you will find a more detailed description of the above issues, attached photos, citizen signatures and comments.

Thank you

Safety Issues:

Potholes - The primary cause of pothole formation is the structural failure of the roadway surface due to the infiltration of water entering the underlying soil structure and the presence of automobile traffic passing over the affected area. There are other possibilities that may result in pothole formation to include:

- Insufficient pavement thickness to support traffic loads
- Insufficient drainage of road surface
- Road surface defects that are left unmaintained or unsealed

The infiltration of water first weakens the supporting subsurface soil while traffic contributes to the breaking of the asphalt surface material. A longtime resident recently wrote an article that was published in our local newspaper that claimed he counted over 700 potholes on Cameron and Philo Greenwood roads. This may not seem like a great deal when the total mileage of both roads is roughly 23 miles, but that is equivalent to 30 potholes per a mile. Again many may view this as no big deal, but on these roads the potholes are in such close proximity of one another that they present a safety hazard to drivers that are completely unavoidable. Many instances drivers are forced to crossover into oncoming traffic in an attempt to avoid such holes putting both them and others in danger.

Road Degradation / Crocodile Cracking - Many of our county roads are 30-50 years old and have been patched back together year after year due to the lack of funding to properly fix them. I do remember back in the early 90's the Mendocino County Department of Transportation did resurface both Cameron and Philo Greenwood Roads with chip seal, but due to the lack of structural integrity of the original asphalt roadway much of that work is now nonexistent. With the chip seal gone there are now large tracts among the original asphalt road surface that is crocodile cracking. Anyone who is familiar with road construction knows this will soon lead to, you guessed it, more pothole as well as complete structural failure. Currently around 50 or more percent of both roads are showing signs of this effect. As mentioned above in the pothole section the cause of crocodile cracking is also structural failure of the subsoil / subbase due to water infiltration. Another cause of crocodile cracking is repeated overloading of the road surface due to higher than normal vehicle traffic and large vehicles that are heavier than the road is rated for. Both of these roads are subjected to higher than normal traffic in the winter when HWY 128 is closed due to flooding at the mouth of the Navarro River. During the summer and fall months these roads see extreme overloading cause by large logging and gravel trucks traveling back and forth all day long.

Landslides – Most of the soil texture within these mountain ranges are made up largely of clay deposits with small amounts of rock. Once the soil becomes saturated it no longer has the structural integrity to hold its form leading to landslides. Due to the lack of funding and personnel at the county level many of the landslides along our roads are left unattended unless they impede the roadway even then they are left within the roadway for several months before they are addressed. Several small landslide have been blocking our drainage ditches for many years and are still not addressed. The blockage within the drainage ditches leads to large tracts of water build up upon the road surface subjecting vehicle to the potential to hydroplane. Water that cannot drain off the road surface leads to the above mentioned safety issues of crocodile cracking and potholes.

Cave-offs – Currently there are only a couple cave-offs along these two roads that call for immediate attention. Both cave-offs located approximately two miles inland from the town of Elk along Philo Greenwood Road. The first is a portion of a previous steel I-beam / wood retaining wall that has failed. The failed section could easily be fixed due to the fact that the wood portion between the two steel I-beams are all that need to be replaced. As for the other, some major engineering will have to be done simply because the mountain side that supports the road surface is giving way. Approximately half, six feet of the 12 foot lane is severely structurally compromised. The asphalt road surface has numerous one to three inch wide cracks that are approximately 24 inches deep. The more it rains the deeper and wider

the cracks become. Soon the whole six foot wide by eight foot long section will give way possibly this year if not addressed soon.

Edging – Is the cracking or deterioration of the edge of the asphalt roadway near the shoulders. Major edging is present on both Cameron and Philo Greenwood roads. Such edging is so server along many sections of the roadway that it has protruded up to 18 inch into the inner portion of the road surface. The only way to avoid these issues is to veer into the opposite lane putting drivers into unnecessary danger. If the driver chooses to stand their ground and proceeds to drive over these areas their vehicle is automatically forced into the drainage ditch. There are large continuous tracts of edging exceeding 100 feet or more.

Drainage Ditches – Functioning drainage ditches are important for maintaining a functional road surface. They are designed to work in conjunction with a properly designed road to reduce or eliminated excessive water build up on the road surface. If drainage ditches are not regularly maintained then excessive water sits upon the road surface breaking down its structural integrity and we are left with many of the above mentioned issues. If the drainage ditches along both of our roads were annually maintained 80 percent of the deterioration that is currently present could have been prevented. In the past both shoulders of the roadway were mowed to remove vegetative material. Then the drainage ditches were cleared and reshaped to ensure functionality. After talking too many of the residents they claim this form of work has not been done in the past 15 plus years. With the county having a 10-30 foot easement on each side of the roadway it is their responsibility to maintain these areas.

Neglect:

Responsible Agency – The Commissioners Court and the County Department of Transportation are the responsible agencies for replacing, reconstructing and maintaining any roadway deemed by law as a public road.

According to the Transportation Code, Title 6, Subtitle C, **Sec. 251.002**. Public roads are defined as: A public road or highway that has been laid out and established according to law and has not been discontinued. **Sec. 251.004**. Commissioners as Road Supervisors.

(a) The county commissioners are the supervisors of the public roads in a county unless the county adopts an optional system of administering the county roads under Chapter 252.

(b) A county commissioner serving as a road supervisor shall supervise the public roads in the commissioner's precinct at **least once each month**.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 251.007. CLASSIFICATION OF COUNTY ROADS.

(a) The commissioners court of each county shall classify each public road in the county as a first-class, second-class, or third-class road.

(b) A county may not reduce a first-class or second-class road to a lower class.

(c) A first-class road must be not less than **40 feet wide** or more than 100 feet wide. The causeway on a first-class road must be at least **16 feet wide**.

(d) A second-class road and a causeway on a second-class road must meet the requirements applicable to a first-class road.

(e) A third-class road must meet the requirements applicable to a first-class road, except that:

(1) A third-class road may be less than 40 but not less than 20 feet wide; and

(2) The causeway on a third-class road may be less than 16 but not less than 12 feet wide.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

After consulting with various members of Caltrans and county workers they informed me that both Philo Greenwood and Cameron roads are classified as first-class roads. According to the specifications for a first-class road under **Sec. 251.007** the roadway must not be less than 40 feet wide that would include both drivable surfaces and shoulders. While the county rural local road standards state a 28 foot drivable width as seen in appendix b. Many sections of our road are barley 24 foot wide while some sections are far less around 18 feet. This is a problem when normal vehicle traffic passes larger commercial vehicles forcing one or both vehicles into the drainage ditch. Although many residents have come accustomed to this action it still possess a possibility for serious accidents to occur. We can go on and on blaming one person or another, but that will get us nowhere. The responsible agencies need to take action and fix these safety issues before serious injury or death occurs.

Preventive Maintenance – In the past preventive maintenance was conduct annually on all our roadways. I still see today this annual process being conducted on state highways yet our county roads which are just as important are being neglected. Back in the 90's the county transportation department would mow both sides of roadway shoulders to eliminate the clogging of the water ditching. They would then proceed to grade the water ditches to clear or reshape the ditches to bring them back to a functioning state. For many years while this preventive maintenance was being conducted the asphalt roadway stayed in a good state of condition. It wasn't until this procedure was ceased that we started to see rapid deterioration of the road surface. There was no need to consistently stick band aids on our roads because the water that now puddles up on much of the road was allowed to properly drain away. Now our roads are in such a degraded state the patch work that is being laid down lasts for only a few months. This seems more costly form labor and materials than biting the bullet and properly fixing the road the way it should be fixed.

Possible Funding & Assistance

Federal Funding / Grants – Federal funding in the form of grants can be applied for to repair roads yet we have never seen any of these applied to our county roads. I found a couple just quickly searching around but know more exist. It's hard for residents to find much of this information due to lack of access or knowledge on where to look as well as it's really not our jobs to do so. It seems like our county official have lost their motivation to seek and search for this type of support most likely due to the fact that it is time consuming. Yet they are the individuals that acquired the knowledge and are grated the access to this information. Below is one such example that I was able to acquire:

Community Facilities Grant Program

- The Department of Agriculture (USDA) provides grants to communities with less than 20,000 residents to construct, renovate and improve roads. Eligible applicants include municipalities, counties, tribal government agencies and nonprofit organizations. Up to 75 percent of the project costs can be financed by grant funds. Grant amounts are determined by the community's income and population levels; areas with the lowest levels will receive higher financial considerations.

Housing and Community Facilities Programs National Office
U.S. Department of Agriculture
Room 5014 South Building
14th Street and Independence Avenue SW
Washington, DC 20250
202-720-9619
rurdev.usda.gov

Other forms of support are available in the time of emergencies such as the server storms that we had this past season. Hopefully our county officials with buck up and fight for the residence of Mendocino County and seek out help from higher agencies (State and Federal). Example provided below:

GOVERNOR BROWN DECLARES STATE OF EMERGENCY IN COUNTIES ACROSS CALIFORNIA FOLLOWING SEVERE WINTER STORMS

1-23-2017

SACRAMENTO - Governor Edmund G. Brown Jr. today issued two emergency proclamations to secure funding to help communities respond to and recover from severe winter storms that have caused flooding, mudslides, erosion, debris flow and damage to roads and highways.

The emergency proclamations issued due to January and December storms - for the counties of Alameda, Alpine, Butte, Calaveras, Contra Costa, El Dorado, Fresno, Humboldt, Inyo, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Orange, Placer, Plumas, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba and Del Norte - direct Caltrans to formally request immediate assistance through the Federal Highway Administration's Emergency Relief Program. The proclamations also direct the Office of Emergency Services to provide assistance to local governments.

Property Tax Reassessment for Unpermitted Buildings

Due to proposition 13 we are lawfully bound to hold many property taxes in the state that they were originally bought under. To explain, property that was purchased before 1978 and still owned by the purchasing party or family member is taxed on the original purchasing price even though the current value is up to 40 times more than when originally purchased. An example would be a 20 acre parcel purchased for $20,000.00 back in the 70’s would generate approximately $200.00 annually in tax revenue. Today that same parcel if reappraised at today’s market value would be worth approximately $800,000.00 and would generate $8,000.00 annually in tax revenue. Many properties in Mendocino

County were purchased back before proposition 13 and have be passed down or trusted to family members so there is not much we can do legally to acquire more tax revenue. With the new age in technology we have access to satellite photos of pretty much anything you want to explore. I know for a fact that almost every parcel I have looked at or personally visited has newly constructed unpermitted building on them.

Why have we not sent out county assessors to document and demand payment for these illegal structures? There could be useful revenue generated from forcing residents to permit these structures or pay the fines that come with building and illegal structure without a permit. I personally have seen, due to the new marijuana boom, multiply illegal greenhouses erected. On one property I seen seven 100' x 40' greenhouse put up in the last few years not to mention garages, tool sheds and such. We need to crack down on this problem and put feet to street to capture those lost funds and hold individuals responsible which could help the county annually.

Corporate Commercial Tax or Assistance

Now I don't know if this is an option, but would like to bring it up. We have multiple businesses along Philo Greenwood and Cameron roads or businesses that utilize our roadsway constantly that use vehicles and equipment that weigh in excess of 20,000 to 60,000 lbs. These vehicles are also a leading cause to the road degradation that we see today. Yet even in the current unsafe state of the road these businesses still constantly use our roads daily. The two main businesses are Robin Birds Gravel Company which has large dump truck both single and dual trailers running up and down our roads daily during all 4 seasons and MRC which has large logging equipment and trucks running up and down our roads daily during the summer and fall months. These two companies alone have dramatically contributed to the destruction of our roadways, both generating a lot of revenue for their companies, yet they contribute nothing (material or revenues) to improve our roads. Finding a way to legally tax them for their excessive use may be beneficial to the county. Also why is our road not legally designated as a detour road? Oh I know why because Caltrans doesn't want to have to assume the responsibility to maintain the roads. Yet they know good and well there is no other way to get over to the coastal cities especially if you have already traveled as far as or beyond where our road starts. The large increase in traffic during the winter months due the closure of HWY 128 is also a great contributor to our current road conditions. By fighting to get Philo Greenwood and Cameron roads designated as official detour roads during the time of HWY 128 closure could relieve some of the pressure and costs from the County Department of Transportation.

Citizen Assistance

Many residents along both of our roads have equipment that could assist the County Department of Transportation in effectively reaching their goal of bringing our roads back into a status of good condition. Yet any time we ask if we can do something such as mow along the shoulders or clean the drainage ditches we are told it's not allowed and it's left at that. Many residents have also offered to allow the county to use large tracts of their land to permanently store debris taken from the drainage ditch and were told, "Well that's not enough space to put all the debris". This may be true, but it would be enough space to store large portions of that debris freeing up our drainage ditches allowing miles of these ditches to function properly and eliminating any further degradation due to clogged ditches. According to Transportation code **Sec. 251.019 Donations** we can help if we sign a liability wavier.

Sec. 251.019. DONATIONS.

(a) A commissioners court may accept donations of labor, money, or other property to aid in the building or maintaining of roads, culverts, or bridges in the county.

(b) A county operating under the county road department system on September 1, 2013, may use the authority granted under this section without holding a new election under Section 252.301.

(c) A county that accepts donations under this section must execute a release of liability in favor of the entity donating the labor, money, or other property.

Added by Acts 2013, 83rd Leg., R.S., Ch. 1372 (S.B. 1747), Sec. 4, eff. September 1, 2013.

In conclusion something needs to done. We cannot go on like this year after year it's unsafe and costly to both the county and residents. We have been told for the past 20 years that there is no funding. Yet I have shown other approaches we can take to generate funding and I know there is many more out there. It cost the county more to constantly patch the roads while other large tracts of the roads disintegrate than it would be to fix it properly in the first place. The residents are paying just as much in vehicle repairs as the county is spending to put band aids on our roads and that's unacceptable. We pay our property taxes, we pay the increases in fuel taxes and we pay the increases in our motor vehicle registration taxes we are doing our part it's time you do yours. All these officials in the upper echelons of our county and state department need to get off your high horses and do you jobs. We elect you and put you in these positions for a reason. Maybe we should just fire all you asses and privatize everything at least they'll produce results.

Appendix A

Photos

Examples of unmaintained drainage ditches

Appendix A

Photos

Examples of unmaintained drainage ditches

Appendix A continued

Photos

Example of potholes

Appendix A continued

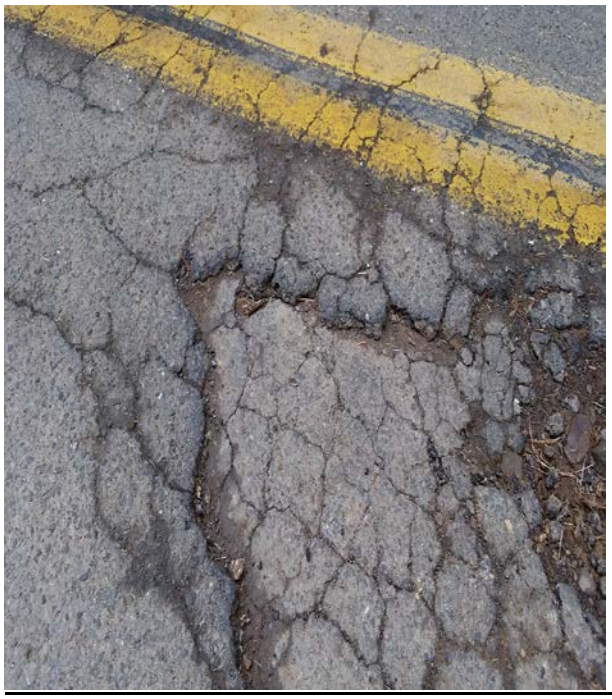
Photos

Example of potholes

Appendix A continued

Photos

Example of crocodile cracking



Appendix A continued

Photos

Example of crocodile cracking

Appendix A continued

Photos

Example of edging

Appendix A continued

Photos

Example of edging

Appendix A continued

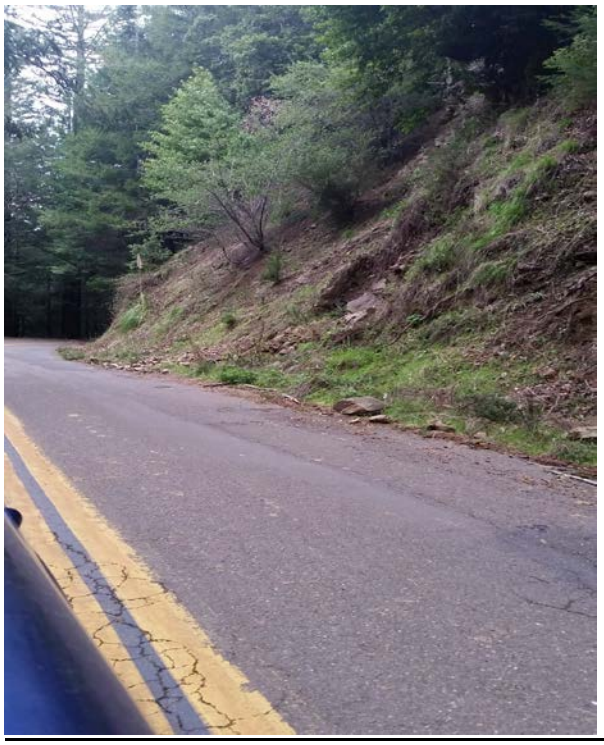
Photos

Example of landslides

Appendix A continued

Photos

Example of landslides



Appendix A continued

Photos

Example of cave offs

Appendix B

State and County road building rules and regulations / supplemental support information

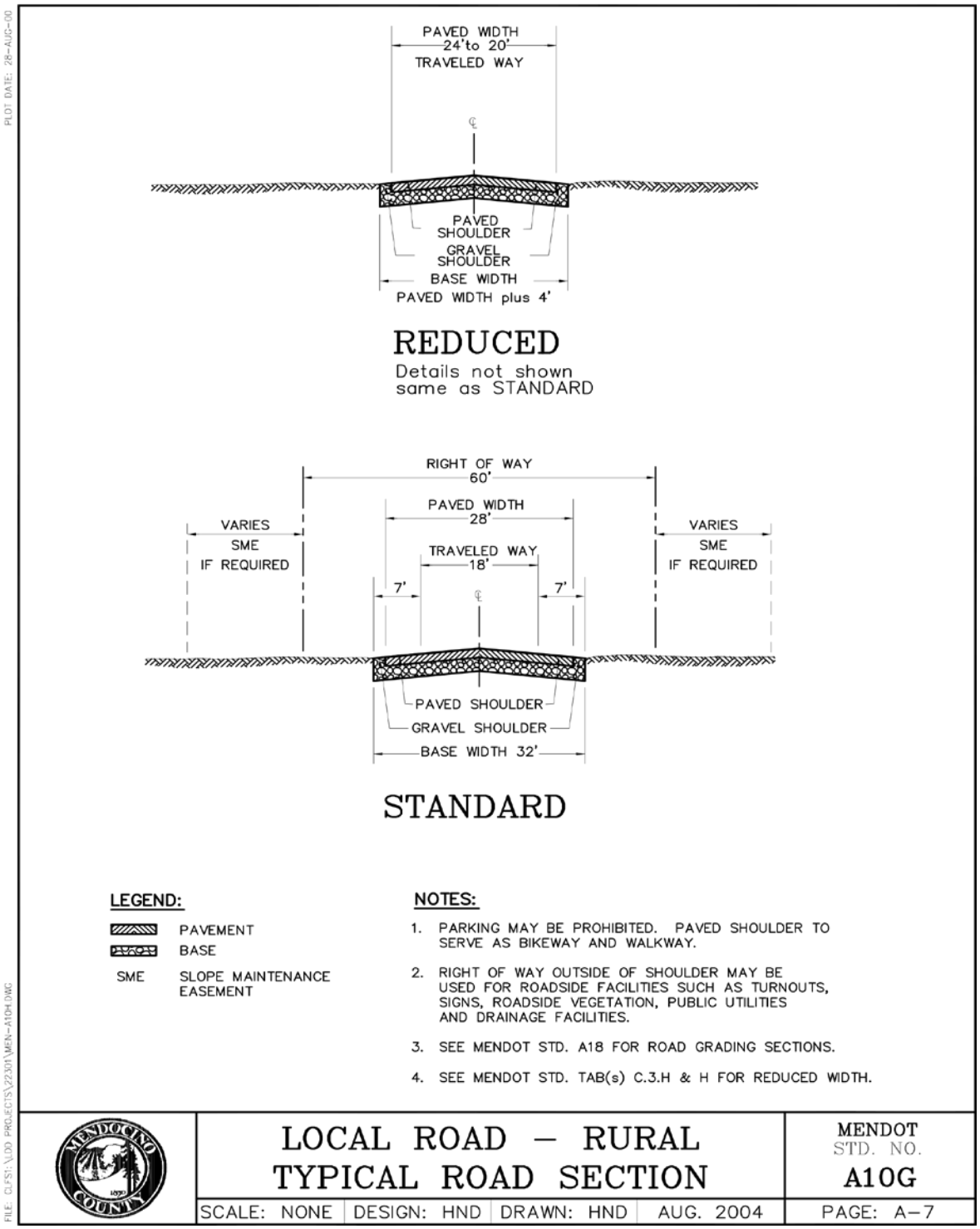


Illustration provided by: The Mendocino County Department of Transportation

Appendix B continued

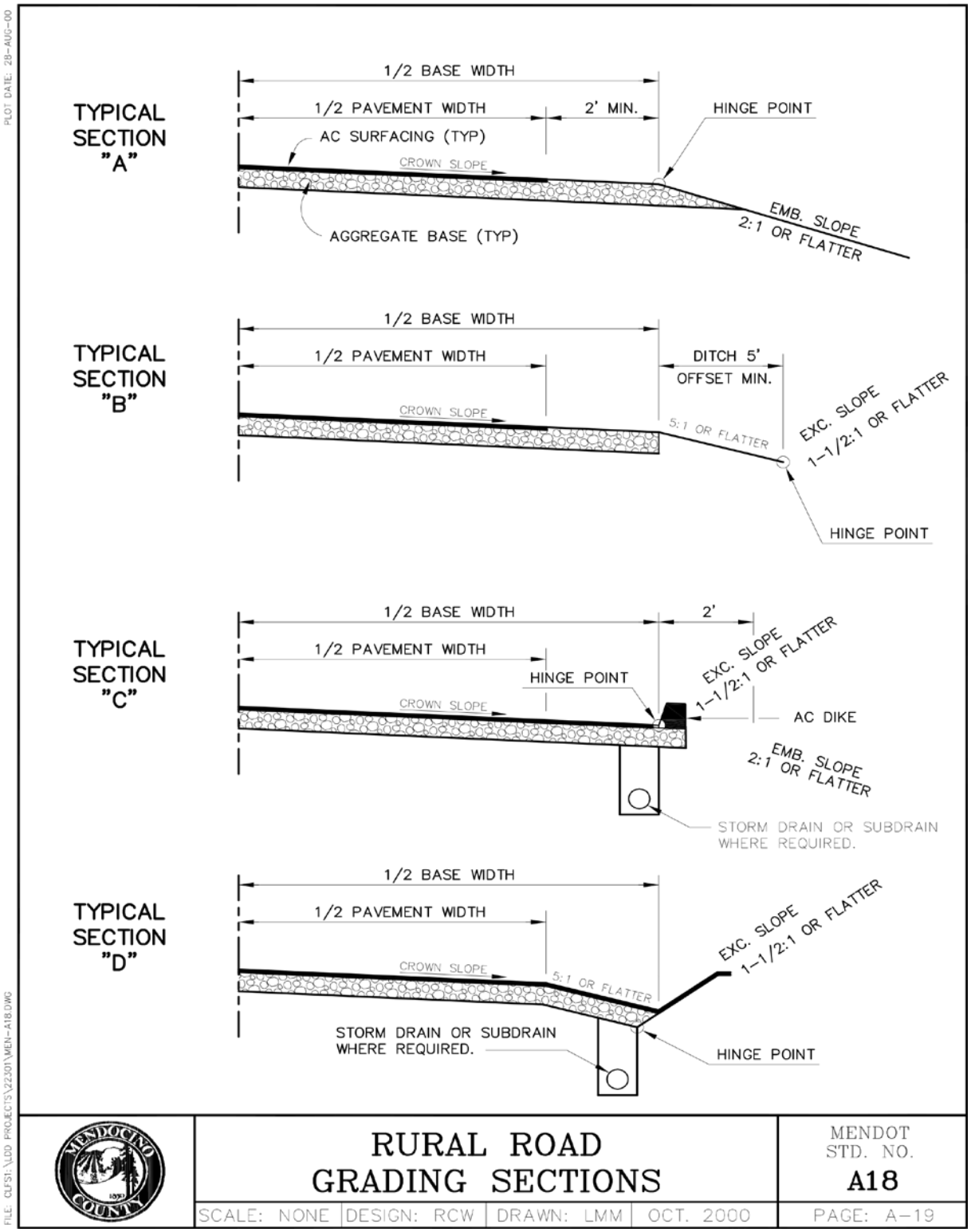


Illustration provided by: The Mendocino Department of Transportation

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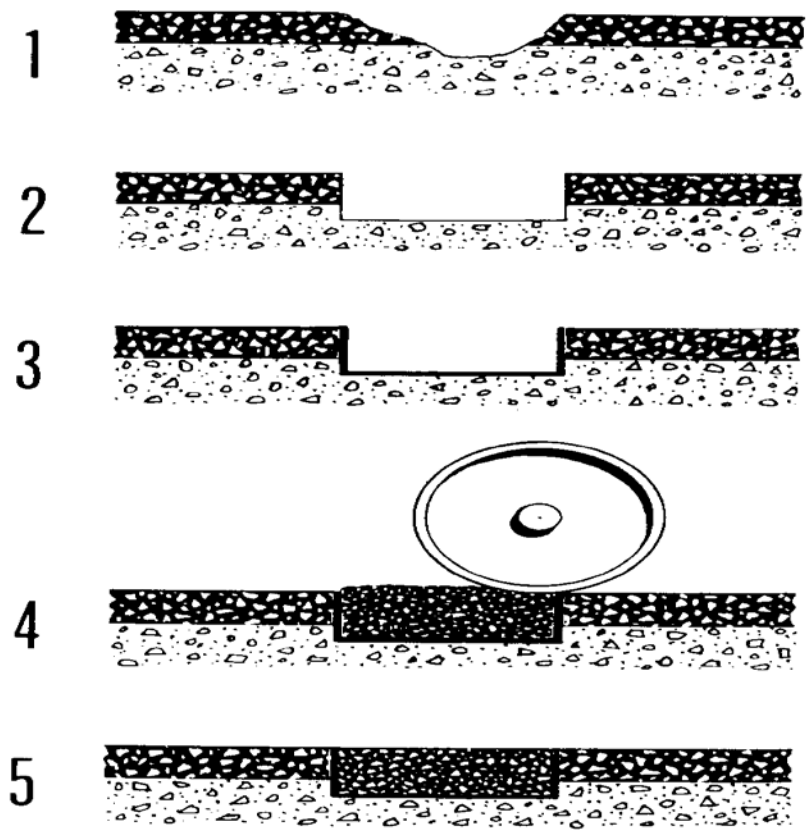

Pothole permanent repair. 1) Untreated pothole, 2) Surface and base removed to firm support, 3) Track coat applied, 4) Full-depth asphalt mixture placed and being compacted, 5) Finished patch compacted to level of surrounding pavement.

To patch potholes properly reasonably humane conditions must exist to execute the work. When such conditions prevail all of the steps illustrated above should be followed. Greatest emphasis should be placed on shaping the hole *and* compacting the mix!

Illustration provided by: *Eaton, Robert A.; Joubert, R. H.; Wright, E. A.*

Appendix B continued

Maintenance Manual

CHAPTER A FLEXIBLE PAVEMENT

A.02 Maintenance Levels The general objective of roadbed maintenance is to preserve roadbed facilities by applying pavement preservation strategies that provide a roadway that is safe and in a state of good repair. Maintenance of the roadbed covers the restoration and repair of both surface and underlying layers. Typical defects to be considered in pavement maintenance are slippery pavement, cracking, raveling, corrugations, loss of lateral support from edge of pavement, wheel rutting, potholes, settlement, heave or distortion, base failure, drip track erosion, and abrupt vertical surface differential. Defects that immediately affect safety should be given first priority in pavement maintenance. Typical defects in this category are slippery pavement, raveling, rutting, potholes, and abrupt vertical variations. Second priority should be given to the correction of defects having a long-range effect on riding quality and capital investment. Typical examples in this category are pavement cracks and traveled way and shoulder distress. The following summaries provide typical defects in pavement maintenance and actions to be taken: (A) Slippery Pavement (1) Pavement surface texture could become slippery as a result of aging, excess asphalt, wear, etc. (2) Routine surveillance of pavement texture should be made and suspected slippery areas should be promptly reported. (3) Suspected slippery areas should be promptly reported for further investigation. (4) Obvious slippery areas should be corrected to the extent feasible under the prevailing conditions. When additional corrective action is necessary, it should be initiated or scheduled promptly. (B) Cracks (1) Cracked pavement allows water and foreign material to enter the structural section and ultimately may cause failure. (2) Routine surveillance for Alligator cracking (A, B and C) should be made and corrective action taken. (3) Individual cracks ¼ inch wide or wider and any areas with extensive finer cracking should be repaired before the rainy season to protect the structural section. (C) Raveling (1) Raveling is an indication of failure of the binder or aggregate. Once started, it may develop quite rapidly. (2) Raveling should be corrected before safety is impaired or extensive pavement loss occurs. (D) Corrugations (1) Corrugations are repetitive distortions of asphalt surface resulting in poor ride quality. (2) Corrugations should be corrected before safety is impaired. (E) Settlement, Heave and Distortion (1) This type of roadbed defect often results in poor riding quality, and excessive impact loading of bridges and slabs. It does not always involve failure of structural section. Typical causes are fill-settlement, unstable cuts, expansive soils, and unconsolidated basement soil. (2) Settlement, heave, and distortion may not cause any problems at low speed, but would be objectionable at high speed. (3) Surface irregularities and vertical edges create a rough riding pavement. Many irregularities are not as obvious to a driver at high speeds as they are at low speeds. (4) An abrupt vertical differential between the traveled way and paved shoulder should be scheduled for repair when the ride quality is objectionable. (5) Corrections for surface irregularities should be scheduled when surface deviations reach 1½ inches in a length of 50 feet, or when the ride quality is objectionable. (F) Wheel Track Rutting (1) Wheel track ruts have the undesirable effect of trapping water and may cause pavement deterioration. (2) Corrections should be scheduled when the groove exceeds one (1) inch in depth when a straight edge is placed at right angles to the direction of travel, or when water is ponding. (G) Drip Track Erosion (1) This is pavement erosion caused generally by crankcase drippings. (2) Correction should be scheduled when the resulting erosion exceeds ½ inch, when water is ponding or when evidence indicates the binder is ineffective. (H) Potholes (1) Potholes are subject to rapid

enlargement and may result in considerable pavement loss and objectionable ride. (2) Potholes should be repaired promptly. (3) Potholes would be of concern for smooth ride, especially for motorcyclists. (I) Base Failures (1) There are many degrees of base failure as evidenced by cracking or distortion in the surfacing. Many corrective measures may be applied, and ultimately the base may need replacement. Base failures are those which require removal and replacement of the defective material. (2) When base material in localized areas becomes contaminated or broken to the extent that riding quality and structural integrity of the pavement cannot be restored by surface treatments, the defective base material should be removed and replaced. When necessary, temporary repairs should be made until permanent repairs can be scheduled. (J) Dikes and Berms (1) AC dikes and earth berms control roadbed runoff and protect slopes from erosion. When not maintained as built, extensive damage to the roadway may result. (2) Damaged dikes and berms, which will allow runoff to erode the roadway, should be repaired promptly or temporary repairs made until permanent repairs can be scheduled. (3) Damaged dikes and berms not falling under the above category should be routinely repaired in conjunction with other maintenance operations to minimize traffic disruption. (4) AC dikes and asphalted-treated berms in areas where asphalt material is subject to rapid oxidation or freezing conditions should be inspected annually and sealed when there is evidence of raveling, cracking or other surface deterioration.

HIGHWAY DESIGN MANUAL CHAPTER 650 PAVEMENT DRAINAGE Topic 651 - General Considerations Index 651.1 Impacts of Drainage on Pavement Saturation of the pavement or underlying subgrade, or both, generally results in a decrease in strength or ability to support heavy axle loads. Potential problems associated with saturation of the structural section and subgrade include: • Pumping action. • Differential expansion (swelling) of expansive subgrade. • Frost damage in freeze-thaw areas. • Erosion and piping of fine materials creating voids which result in the loss of subgrade support. • Icing of pavement surface from upward seepage. • Stripping of asphalt concrete aggregates. • Accelerated oxidation of asphalt binder. Water can enter the pavement as surface water through cracks, joints, and pavement infiltration, and as groundwater from an intercepted aquifer, a high water table, or a localized spring. These sources of water should be considered and provisions should be made to handle both. The structural section drainage system, which is engineered to handle surface water inflow, is generally separated from the subsurface drainage system that is engineered to accommodate encroaching subsurface water. This chapter covers surface water drainage while the subsurface drainage system is covered in Chapter 840

Appendix C

Citizen Signatures

References

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2. *Wilson, T.P.; Romine, A.R. (June 1999). Materials and Procedures for Repair of Potholes in Asphalt-Surfaced Pavements—Manual of Practice (PDF). Strategic Highway Research Program. FHWA-RD-99-168. Washington, DC: Federal Highway Administration. p. 85.*

3. *Miller, John S.; Bellinger, William Y. (June 2003). "Distress identification manual for the long-term pavement maintenance program" (PDF). FHWA-RD-0-031. Federal Highway Administration. Retrieved 2014-02-18.*

4. Mendocino County Department of Transportation, Tab C – Road Design Standards http://www.co.mendocino.ca.us/dot/pdf/4_TabC_RoadDesignStandards.pdf

5. California Statewide Local Streets and Roads Needs Assessment Report 2016 www.SaveCaliforniaStreets.org

6. Caltrans Highway Design Manual, www.dot.ca.gov/hq/oppd/hdm/pdf/.../HDM_Complete_07Mar2014.pdf

7. Philo Greenwood road photos

Philo Greenwood rd photos.pdf