

FREMONT COUNTY ROAD DEPARTMENT

Re: To Pave or Not to Pave

We all like to drive on a paved road, but most of the roads in Fremont County are not. As you might suspect, this has something to do with your tax dollar. According to our County Road Department, it costs between \$500,000 and \$1,000,000 per mile to properly grade and pave a new road, depending upon the lay of the land and the number of drainage structures. Paving is an expensive alternative when a well traveled rock road can be maintained for \$2,000 per year.

Throughout the state, counties maintain approximately ten times as many roads as the Iowa Department of Transportation, although less than twenty percent are paved. Most of our Fremont County roads are surfaced with limestone material that has been mined from local quarries. Limestone, although softer, is combined with silts and clays for a material that will, with proper moisture, form a crust that sheds rainwater and protects the roadway.

Since the Road Department applies 65000 ± tons of rock annually, it would seem that eventually the work would be finished. Unfortunately, part of that material is lost. While a small percentage gets scattered in the ditch from snow- plows and high-speed traffic, most of the “lost” rock becomes dust or is pushed into the sub-grade. It has been estimated that one vehicle driving over one mile of rock road once each day for one year will grind up enough rock to produce one ton of dust.

Although normal use does wear out a rock road, careful drivers can extend the life:

- Go easy on the brakes and the gas at intersections. The washboard ripples in the road are often not from the motor-grader but rather from Cousin Bubba’s heavy foot.
- Reduce normal loading on agricultural equipment during wet periods in the spring and fall. A 20,000-pound axle load will cause almost twenty times the damage of a 10,000-pound axle load, which is especially critical when the base is saturated. The road can best handle heavy loads when either dry or frozen.
- Lower your travel speed to 45 mph. Faster speeds will grind the material more rapidly and tend to throw it further.
- Check that the runoff from driveways and field entrances drains into the road ditch, not onto the roadway. The additional water softens the road longer and tends to erode the edges.
- Don’t store large hay bales on the upwind side of the roadway since snow will accumulate on and alongside the roadway which causes problems during the spring melt.

Rock road maintenance generates more input from residents than any other Department activity according to Fremont County Engineer, Dan Davis. Often, opinions conflict about the amount of time or material that is required for good maintenance. “The key to a good rock road is keeping the material on and getting the water off. One of the most important jobs that our district motor grader operators do is maintaining a good cross-slope. We try to develop a six to eight inch ‘crown’ in the center of a typical twenty-two foot wide road. That cross-slope sheds water which otherwise will weaken the roadbed and cause rutting” explained Davis.

Since a certain amount of moisture is necessary to properly blade a rock road, most activity coincides with the spring planting or the fall harvest season. Good conditions are infrequent during the drier summer months, resulting in more potholes and washboards between maintenance operations. Some of these problems are unavoidable since the dry material loses its ability to ‘stick together’ and additional blading becomes ineffective – motorists need to anticipate a rougher, dustier road and drive accordingly.

When it does rain in the summer, the heavier traveled roads are the first to get attention. The operators must prioritize their efforts since their districts typically require five days to go over and suitable moisture conditions may only last a day or two. After the roads dry again, crews are assigned to repair culvert, patch pavement, cut brush or mow.

Is it impossible to properly maintain a rock road? No, but it certainly is difficult. The Road Department works within budgetary limits to provide an important service. Cooperation and understanding from the public can go a long way towards making the job easier.