



Kansas LTAP Fact Sheet

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When You Just Have to Close Some Bridges...

Saline County's proactive approach is making the process less painful.

By Aliza Chudnow and Lisa Harris

In Kansas there are approximately 20,500 bridges on the local road system. Out of this number, over 4,000 of them are rated as structurally deficient. A structurally deficient bridge is incapable of carrying modern traffic loads (3 tons or more), and by federal law must be closed to traffic at all times. The bridge owner must then decide whether to keep the bridge closed or authorize the funds to remove or repair it. Many deficient bridges are located on very low volume roads in rural communities, and a community may consider closing some of them permanently. However, for some farmers and landowners, these bridges maintain convenient access to their properties.

There are practical, economic and political considerations in making a decision to close a bridge. This article will highlight a proactive and systematic way Saline County has been addressing these considerations—a way that takes some of the politics and appearance of being arbitrary out of the equation.

Practical considerations

Saline County has had a lot of experience closing bridges in recent years. Their county engineer, Neil Cable, said they have closed about 30 bridges since 2008. He explained: “We had bridges from as far back as 1889 that were built during the age of horse and buggies,” he said. “Those bridges were still in use, but by much heavier vehicles, including semi-trailer trucks. The possibility of failure due to loads far in excess of the original design loads

presented an unacceptable risk of failure.”

To help the county address this situation, the Board of Commissioners approved a primary route system based on a two-mile grid. This set the stage for bridge closings in a way the majority of the public could accept. Cable explained that the county's road system was built in a one mile grid, suitable for horse-drawn vehicles to get around the county in a reasonable amount of time. But cars and trucks move much faster. “It takes a modern vehicle two minutes to travel an extra mile,” he said. “Not a big difference.”

The Engineering Division of the county's Road and Bridge Department considered different grids for the system—four miles, three miles and two miles—and settled on two miles, which was presented to the County

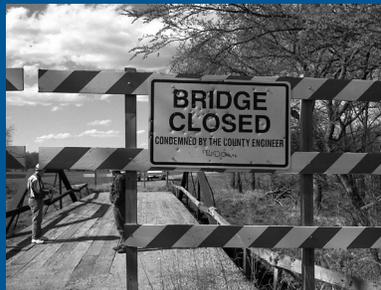
Commissioners. After the grid was established, deficient bridges not on the new primary rural road system were closed when they could no longer be certified to carry the federally required three ton minimum load.

Financial considerations

Lack of sufficient funds for bridge maintenance is a major factor in deciding to close bridges. By closing more than 30 bridges, Saline County has saved millions of tax dollars in maintenance and replacement costs. The county has also saved money on road maintenance because the roads leading to and from closed bridges receive less traffic.

The county is even making money on their closed bridges by demolishing them for salvage. “We save the timbers for other projects and sell the metal for

Authority for Closing a Bridge



Kansas Statute 68-1126 states that whenever the county engineer deems any bridge or culvert unsafe for traffic, the engineer should post signs on the bridge that it is condemned. The county engineer should also immediately report the condition of the bridge to the Board of County Commissioners (BOCC) whose job is to decide whether to repair or remove the bridge.

But what if your county is one of the 83 counties in Kansas that doesn't have a county engineer? Norm Bowers of the Kansas Association of Counties says, in that case, the BOCC will typically order the bridge to be closed to traffic. Bowers said that, by law, a bridge inspector must inspect a bridge every year, and if the inspector recommends closure, it is in the commission's best interest to agree with the bridge inspector because of the liability to the county.

Saline County, KS



scrap,” Cable said. “We can make thousands of dollars per bridge by selling the metal.”

Political considerations

A pending bridge closing can easily become a political topic as farmers in rural counties talk to their elected officials about the need to maintain convenient access to their fields. Landowners argue for their own financial well-being if a bridge is closed. It will mean higher costs for operating their vehicles to travel on new, longer routes. This must be weighed against the financial well-being of the entire county, most of whose residents will never use or even see the specific bridge. Tom Mulinazzi, professor at the University of Kansas, is currently leading a K-TRAN research project that will approximate the vehicle-related costs incurred when a bridge is closed, based on extra mileage traveled and type of vehicle driven. This will give commissioners some information for talking with their constituents when considering the pros and cons of closing a bridge.

Sensitivity to the public

To ease the public into the decision to close bridges, Saline County held extensive public meetings about the need for either bridge closures or raising taxes. They received public support from editorials in the local paper. “We expected a meltdown of the phone lines when we finally went ahead with the bridge closures,” Cable said. But there wasn’t really a big reaction; the public was understanding, he said.

Saline County’s first step in closing

The Argument for Having a Primary Rural Road System

Saline County’s primary rural road system was established as a safety and economic measure at the recommendation of the county engineer, Neil Cable. Cable said when he first started as the county engineer in late 2005, he inherited plans to replace bridges and upgrade roads. But the county didn’t have funds allocated to carry through with those plans.

“When I compared the plan to the available amount of money we had, I saw a tremendous disconnect,” Cable said. “That’s when I started playing with the idea of reducing infrastructure,” he said. “I gave some PowerPoint presentations to the Board of County Commissioners and tried to gently bring them to my thinking.” It wasn’t long before Cable’s idea became a reality.

In 2008, the primary rural road system (PRRS) was adopted in Saline County. After its adoption, deficient bridges across major streams on alternate roads were closed, leaving a two mile grid of through-roads. Not only was the PRRS in the public’s best interest, but it also enabled a logical prioritization of investment of the county’s limited funds to maintain road surfaces and repair or replace bridges. According to Cable, the PRRS didn’t change the total number of road-miles the county maintains (about 1,100 miles), but it does enable the county to direct more maintenance to some roads and less to others, and close some bridges, saving money.

Cable said Saline County’s situation is not unique. There are more roads and bridges in Kansas than can be realistically maintained with tax dollars. This illustrates the economic value of the PRRS. “The PRRS is just a logical way to prioritize the infinite number of things we have to do with very finite resources,” Cable said. “I personally think it makes tremendous sense.”

their bridges was to barricade them with wooden posts drilled into the ground on either end, to block vehicular traffic. They left the bridges intact for awhile before taking steps to demolish them. “We didn’t start right away with removing any of the bridges we closed,” Cable said. “We felt it would have been too harsh, like ‘poking people in the eye.’” But now Saline County is well along in removing bridges to eliminate liability and chances for the closed bridges to collect debris and cause water back-up.

Conclusion

Because the process of creating a primary road system and closing bridges in Saline County has been successful, other counties have started to look seriously into the same process. “Our decisions have served us well for four years,” Cable said. “It was quite a process

we went through, and we’re healthier for the weight we lost.”

For more information

Cable is happy to answer questions about Saline County’s bridge closing program and two-mile grid. He can be reached at Neil.Cable@saline.org or at (785) 826-6527. ■

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Sources:

- Interview with Tom Mulinazzi, University of Kansas, May 30, 2012.
- Interview with Neil Cable, Saline County, May 31, 2012.
- Kansas State Statute 68-1126. http://kansasstatutes.lesterama.org/Chapter_68/Article_11/#68-1126.