

WOODBURY COUNTY BOARD OF SUPERVISORS AGENDA ITEM(S) REQUEST FORM

#9c

Date: 9/6/2018

Weekly Agenda Date: 9/11/2018

ELECTED OFFICIAL / DEPARTMENT HEAD / CITIZEN: Mark J. Nahra, County ENgineer

WORDING FOR AGENDA ITEM:

Addressing gravel road improvement requests

ACTION REQUIRED:

Approve Ordinance

Approve Resolution

Approve Motion

Public Hearing

Other: Informational

Attachments

EXECUTIVE SUMMARY:

At our public outreach meetings, the Board has heard concerns expressed about the quality of our gravel road system. Spring thaw, heavy rain events, and heavier traffic on these county roads has contributed to soft conditions on the roads.

A number of causes can be attributed to the decline in condition of our gravel roads. The primary issues are thinning of the gravel base from 6"-8" in thickness to 2"-4" currently, increasing truck traffic on gravel roads due to increased crop productivity, three severe storm events since 2008 that washed county gravel roads causing further loss of aggregate, and declining replacement of gravel losses due to budget constraints. A 1940s road system built for 40-50 bushel per acre corn is now serving much greater farm productivity with corn crops averaging almost 180 bushels per acre during the past decade (according to USDA statistics). The gravel roads are showing the strain of this increased demand.

The Board has directed staff to make a recommendation for a program to improve the quality of county gravel roads. The County Engineer and Board Financial Analyst have been working on developing a gravel road improvement program, determining its cost, and offering alternatives for how to pay for the project.

BACKGROUND:

County residents have noted and expressed to the Board their concerns about gravel road quality. The perception that county road users have expressed is that the gravel the county is using is not of good quality and that the roads are not being kept in as good of shape as in the past. Residents note that gravel roads are unstable in the spring and sometimes after heavy rains as well.

The secondary road department has worked to address concerns about gravel quality by beginning a quality assurance program where daily samples are obtained during gravel production at the gravel pit. Samples are checked for gradation to assure that it meets county standards. Woodbury County standards for gravel are actually slightly coarser than state and federal recommendations for gravel surfacing (translation: we require a higher quantity of rock than fines than recommended by recognized experts). Financial penalties are included in the program for failure to meet county gradation standards. County staff feels we are seeing a better quality gravel on the road than in the past since the quality assurance program has been instituted.

While gravel quality is improved, the cost of gravel has grown greatly since 2006 resulting in the county purchasing less gravel today than 12 years ago (see accompanying chart) In 2017 the road department spent \$1.4 million for 136,500 tons of stockpiled gravel for use on county roads. In 2003, the county was able to purchase 130,000 tons of gravel for \$640,000. In that 14 year period, the county costs increased but revenue did not increase at the same rate. The county, over the last 14 years has been able to purchase up to 30,000 tons less per year, leaving many roads at a point where they do not receive enough gravel to replace losses.

Senior county road department staff members recalled that until about 30 years ago every county gravel road was regaveled every year with 200-500 tons of material per mile. Over the intervening 30 years since, the gravel replacement program evolved into a gravel stockpiling program where county staff hauled gravel placed at strategic points in the county to roads to cover thin spots rather than resurfacing gravel roads by the mile. Each year as the cost of aggregate increased, less material has been purchased. It is only in the last three years, with the increase in the lowa fuel taxes, that the county begun resurfacing roads again.

FINANCIAL IMPACT:

The cost to add enough gravel to county roads to restore the county gravel base is high and would depend entirely on property taxes. The program we will be discussing will be to provide adequate gravel to add an average of 5 inches of gravel base to each of our 938 miles of gravel roads. This would provide a 7-9 inch gravel base on all roads and greatly increase the reliability of the gravel road system. This is a multi-year program of road improvement.

The estimated costs are as follows:

Gravel production: 2,100,000 tons of gravel produced for 938 miles of county roads. Cost: \$10,000,000 to \$12,500,000.

Haul cost: 2,100,000 tons of gravel hauled to 938 miles of county roads: Cost: \$11,000,000 to \$12,500,000.

Road preparation would be done by county staff using county equipment within the county's current budget and revenue. The proposal to produce and haul the gravel to the roads would be done over a period of 9-10 years. This would give county staff adequate time to reshape and prepare the roads to receive the gravel. Dennis Butler will assist me with showing programs to pay for the cost of this program over a 10 year period.

Tax increment financing is an option for funding this project. The project can also be funded, albeit over a longer period of time, by raising county secondary road property taxes.

There is not adequate growth in road use tax funds or outside fund sources to fund this program.

Less gravel could be applied to the roads, but reduced quantities would result in less overall road reliability.

A less costly program could be reviewed with a subset of roads selected for improvement. Selection criteria could include improving gravel farm to market classified roads, roads with more than 75 to 100 vehicles per day (vpd), and/or improving roads with large livestock operations. Roads having less than 75 vpd would have no changes in their maintenance. Costs for this reduced program have not been calculated at this time.

IF THERE IS A CONTRACT INVOLVED IN THE AGENDA ITEM, HAS THE CONTRACT BEEN SUBMITTED AT LEAST ONE WEEK PRIOR AND ANSWERED WITH A REVIEW BY THE COUNTY ATTORNEY'S OFFICE?

Yes No

RECOMMENDATION:

This item is for discussion only at this time. Some guidance on how to proceed and what type of program the Board would like to consider would be appreciated coming out of this discussion.

ACTION REQUIRED / PROPOSED MOTION:

This item is for discussion at this time.

Gravel Totals			Without Hauls	With Hauls
Calendar Yr.	Contract Price	Contract Tonnage	Contract bid	Contract bid
			Average per ton cost	Average per ton cost
2002	\$ 633,830.00	129000	\$ 4.91	\$ 4.91
2003	\$ 640,750.00	130000	\$ 4.93	\$ 4.93
2004	\$ 608,020.00	140000	\$ 4.34	\$ 4.34
2005	\$ 624,100.00	125000	\$ 4.99	\$ 4.99
2006	\$ 807,330.00	140000	\$ 5.77	\$ 5.77
2007	\$ 768,180.00	130000	\$ 5.91	\$ 5.91
2008	\$ 841,240.00	126000	\$ 6.68	\$ 6.68
2009	\$ 884,935.00	124500	\$ 7.11	\$ 7.11
2010	\$ 685,240.00	100000	\$ 6.85	\$ 6.85
2011	\$ 934,250.00	108000	\$ 8.65	\$ 8.65
2012	\$ 901,800.00	108000	\$ 8.35	\$ 8.35
2013	\$ 914,225.00	107500	\$ 8.50	\$ 8.50
2014	\$ 975,530.00	109000	\$ 8.91	\$ 8.95
2015	\$ 1,141,640.50	114290	\$ 9.75	\$ 9.99
2016	\$ 1,122,033.00	100155	\$ 11.07	\$ 11.20
2017	\$ 1,422,075.00	136500	\$ 10.06	\$ 10.42

Gravel Purchases

