

**Kearney Township
Report of Paved Road Conditions
January 2015**

This report is provided for information on the current status of the local county paved roads in the township. For some, it is a useful tool when looking at potential road projects. It is by no means meant as a final determination of road projects. The Antrim County Road Commission has a cost share policy which allows it to share in a portion of the cost of most local road improvements that a township may decide to accomplish.

The included priorities are based on Asset Management principals. Asset Management is a systematic approach to selecting the best investment at the right time to maximize the life of the asset being measured, in this case, road pavements. The goal is to maintain a pavement in a good condition, making periodic investments in the pavement that keep it in a good condition, rather than letting it deteriorate to a level that requires a major investment to bring it back to a good condition. The periodic investments typically total less than the major investment required to rebuild a pavement.

This report uses the PASER pavement condition rating system. PASER stands for Pavement Surface Evaluation and Rating. PASER ratings range from 1, failed condition, to 10, brand new pavement. A pavement will only be a 10 the first year of its life, the second year automatically becoming a 9. Any condition of 8 or greater is considered to be a good condition, 7 through 5 is fair, with 4 and below poor.

Table 1 shows the typical pavement treatments for each PASER rating and the estimated costs per mile of roadway for each option.

Table 1

PASER Road Rating	Suggested Repair	Estimated project cost per mile
10	No maintenance - new road first year only	\$ 0
9	No maintenance - like new	\$ 0
8	Minimal routine maintenance	\$ 0
7	Crack filling - minor maintenance	\$ 4,500
6	Chip seal with crack filling	\$ 33,100
5 - 6	Ultra-thin HMA overlay (road cannot be distorted)	\$ 44,000
5	Chip seal with hot mix wedging or 1 ½" hot mix asphalt (HMA) overlay	\$ 85,000
4	wedge and 1 ½" HMA overlay or 2" HMA overlay	\$ 120,000
3	Crush and shape, 2" HMA paving	\$ 135,000
1-2	Reconstruction - very poor condition	\$160,000 +

The treatments listed in Table 1 are for general estimating purposes. A specific treatment can only be determined with a close inspection of the actual road. Using the PASER ratings and the listed treatment will give fairly accurate budgeting numbers. Different treatments than those listed in Table 1 for a given PASER rating may be appropriate in certain cases.

A hot mix asphalt (HMA) pavement will typically last from 15 to 20 years. At that point, it is usually beyond a preservation treatment and requires a major investment. Good pavement management would involve less expensive treatments earlier in the life of the pavement in order to extend the useful life. A variety of treatments and repairs are listed in this report. An emphasis is placed on early preventive maintenance treatments as suggested by the principals of asset management.

Table 2 shows the most current PASER ratings for all local county roads in the township along with the termini and length for each segment rated. Also included is the age of the pavement. The Last PM column shows the year that a preventive maintenance treatment was applied. This is typically something less than two inches of HMA and other treatments such as a chip seal. All roads were rated in 2014.

Table 2

PASER Rating	Road Name	From	To	Length (miles)	Age of HMA	Last PM
9	Burrel Rd	Stover	bridge	0.230	5	
8	Bush Rd	Skinkle	end of pavement	0.655	6	
8	McKinney Rd *	Twp Line/corner	end of pavement	1.026	8	
8	Meadowview Tr	Alpenhorn	end of pavement	0.349	10	2013
8	Aero Park Dr	Derenzy	end of pavement	0.345	12	
8	McKinney Rd	Derenzy	Twp Line/corner	0.514	13	
8	Schoolcraft Rd	Batchelder	Del Mason	1.000	14	
8	Alpenhorn Ct	N end of pavement	Matterhorn	0.057	15	2013
8	Alm Ct	Edelweiss	end of pavement	0.107	16	2013
8	Alpenhorn Ct	Matterhorn	S end of pavement	0.139	16	2013
8	Batchelder Rd	Schoolcraft	end of pavement	0.541	16	
8	Clearview Dr	Matterhorn Ln	end of pavement	0.506	16	2013
8	E Edelweiss Dr	Matterhorn	Alm	0.107	16	2013
8	E Village Dr	Twp Line	W Village	0.353	16	2013
8	Forest Ln	Clearview	end of pavement	0.088	16	2013
8	Hilltop Dr	E Village	Clearview	0.268	16	2013
8	Maromir Ct	E Village	end of pavement	0.175	16	2013
8	Matterhorn Ln	Clearview	Alpenhorn	0.270	16	2013
8	Park Ln	E Village	end of pavement	0.095	16	2013
8	Schreck Ln	E Village	Clearview	0.183	16	2013
8	W Village Dr	Twp Line	E Village	0.235	16	2013
8	Shumaker Rd	1380' SE of Graham	end of pavement	0.748	18	
8	Northlakes Rd	M 88	Fishermans Paradise	0.182	21	2012
8	Golfview Rd	Shanty Creek	end of pavement	0.243	25	2011
8	Valey View Ct	Valley View Dr	end of pavement	0.039	25	2011
8	Valley View Dr	Golfview	end of pavement	0.501	25	2011
8	Montgomery Rd	Kladder	Ritt	0.508	27	2004
8	Ritt Rd	Derenzy	Montgomery	2.065	27	2004
8	Bogey Run	Shanty Creek	end of pavement	0.117	?	
8	Northlakes Rd	Fishermans Paradise	end of pavement	0.058	?	2012

Table 2 - continued

7	Valley Rd	Derenzy	end of pavement	0.200	10	
7	S Graham Rd	Beeman	north 2100'	0.398	12	
7	Shanty Creek Rd	Schoolcraft	Batchelder	1.356	13	
7	Fishermans Paradise	M 88	Northlakes	0.660	15	
7	Montgomery Rd	Eddy School	Kladder	1.520	15	
7	Oslund Rd	1400' E of N Graham	Twp Line	1.893	15	
7	Bush Rd	Eddy School	Skinkle	1.215	16	
7	Skinkle Rd	Bush	Kladder	0.580	16	
7	Schuss Mountain Rd	Twp Line	Stover	1.875	17	
7	Stover Rd	Derenzy	1400' W of Burrel	1.271	17	
7	N Del Mason Rd	Stover	end of public road	0.750	18	
7	Kladder Rd	Montgomery	Skinkle	1.000	20	
7	N Graham Rd	Oslund	Shumaker	0.813	21	2003
7	Stover Rd	1400' W of Burrel	Schuss Mountain	1.288	?	2003
6	Shumaker Rd	N Graham	700' S of N Graham	0.133	12	
6	Oslund Rd	S Graham	1400' E of N Graham	0.812	21	2003
6	S Graham Rd	Schuss Mountain	Beeman	0.636	22	2003
6	S Graham Rd	Oslund	south 1600'	0.305	23	2003
6	Carpenter Rd	Eddy School	end of pavement	0.670	24	2003
6	Shumaker Rd	700' S of N Graham	1380' SE of Graham	0.128	?	
5	Fishermans Paradise	Northlakes	N end of public road	0.300	15	
5	Shumaker Rd	N Graham	Eddy School	0.702	22	2003
5	Oslund Rd	Eddy School	S Graham	0.822	23	2003

* township line roads

Total

31.031

These are the latest pavement condition ratings and will change over time as the pavement ages and deteriorates. A suggested fix may not be the appropriate fix the following year depending on the rate of deterioration. Repair costs are current estimates and will increase with inflation every year.

The township spent \$12,625 in 2010, \$15,669 in 2011, \$25,221 in 2012, \$98,862 in 2013 and \$72,638 in 2014 on road projects. The five year average is \$45,003 per year. A 0.5 mil road millage is levied by the township which generates approximately \$57,500. Based on these amounts, a suggested road improvement / pavement maintenance strategy is presented for the next five years.

The repair costs listed below have been adjusted for inflation for more accurate planning.

2015 Suggested Priorities

Cost per Mile	Number of Miles	Total Cost	Township Share	Selected Roads (miles)	Suggested Repair
\$ 44,000	0.300	\$ 13,200	\$ 11,880	Fisherman's Paradise (North)	Ultra-thin HMA overlay
\$ 85,000	0.702	\$ 59,670	\$ 53,703	Shumaker (620 to N Graham)	1.5" HMA overlay
Totals		1.002	\$ 72,870	\$ 65,583	

2016 Suggested Priorities

Cost per Mile	Number of Miles	Total Cost	Township Share	Selected Roads (miles)	Suggested Repair
\$ 87,000	0.822	\$ 71,514	\$ 64,363	Oslund (620 to S Graham)	1.5" HMA overlay
Totals		0.822	\$ 71,514	\$ 64,363	

2017 Suggested Priorities

Cost per Mile	Number of Miles	Total Cost	Township Share	Selected Roads (miles)	Suggested Repair
\$ 35,000	0.261	\$ 9,135	\$ 8,222	Shumaker (Graham to SE 1380')	crack fill and chip seal
\$ 35,000	1.339	\$ 46,865	\$ 42,179	S Graham (Schuss Mtn to Oslund)	crack fill and chip seal
Totals		1.600	\$ 56,000	\$ 50,400	

2018 Suggested Priorities

Cost per Mile	Number of Miles	Total Cost	Township Share	Selected Roads (miles)	Suggested Repair
\$ 36,000	0.812	\$ 29,232	\$ 26,309	Oslund (S Graham to E 4300')	crack fill and chip seal
\$ 36,000	0.670	\$ 24,120	\$ 21,708	Carpenter	crack fill and chip seal
Totals		1.482	\$ 53,352	\$ 48,017	

2019 Suggested Priorities

Cost per Mile	Number of Miles	Total Cost	Township Share	Selected Roads (miles)	Suggested Repair
Totals		0.000	\$ 0	\$ 0	

5 year cost summary

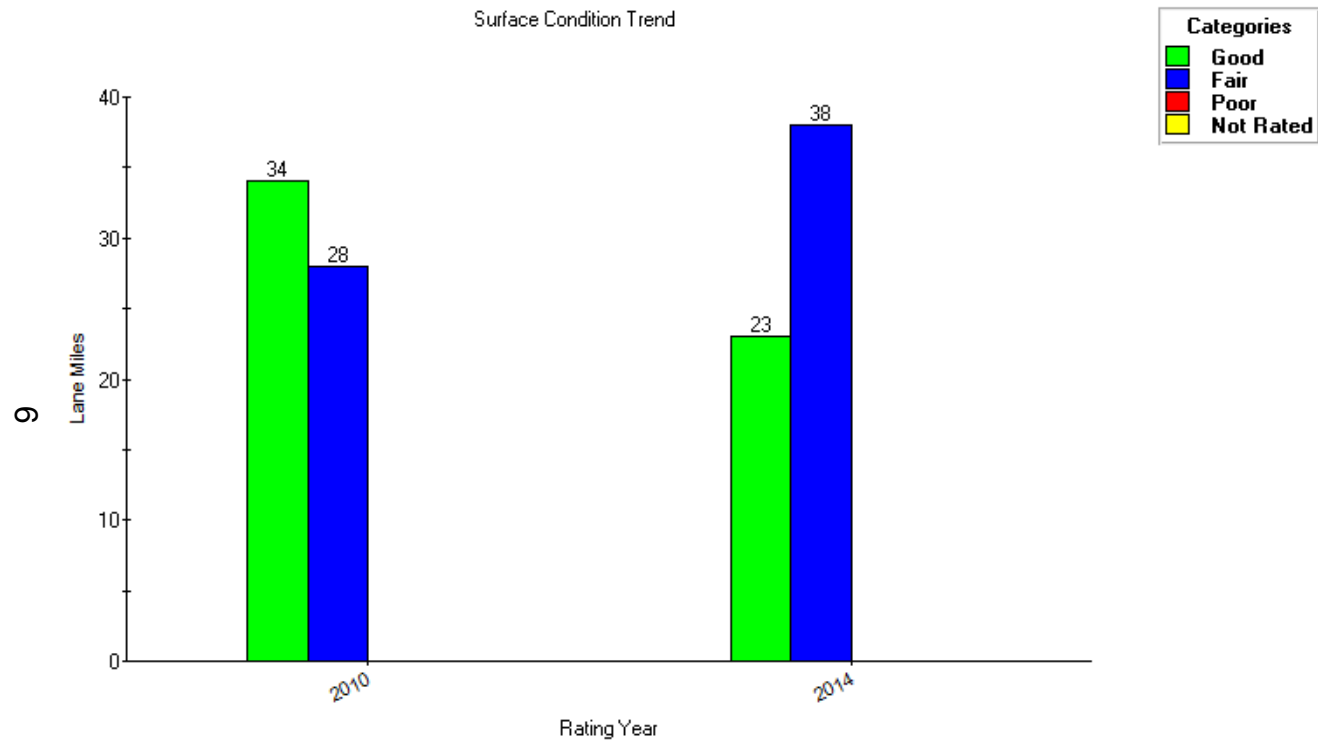
Year	Township Cost Share	Annual Average
2015	\$ 65,583	
2016	\$ 64,363	\$ 64,973
2017	\$ 50,400	\$ 60,115
2018	\$ 48,017	\$ 57,091
2019	\$ 0	\$ 45,672
Total	\$ 228,362	

The graph on page 6 shows pavement condition trends from 2010 to 2014. The numbers represent lane miles. All local county roads in the township are rated fair and good with none rated poor. However, since 2010, about about five miles of roads (10 lane miles) have deteriorated from good to fair.

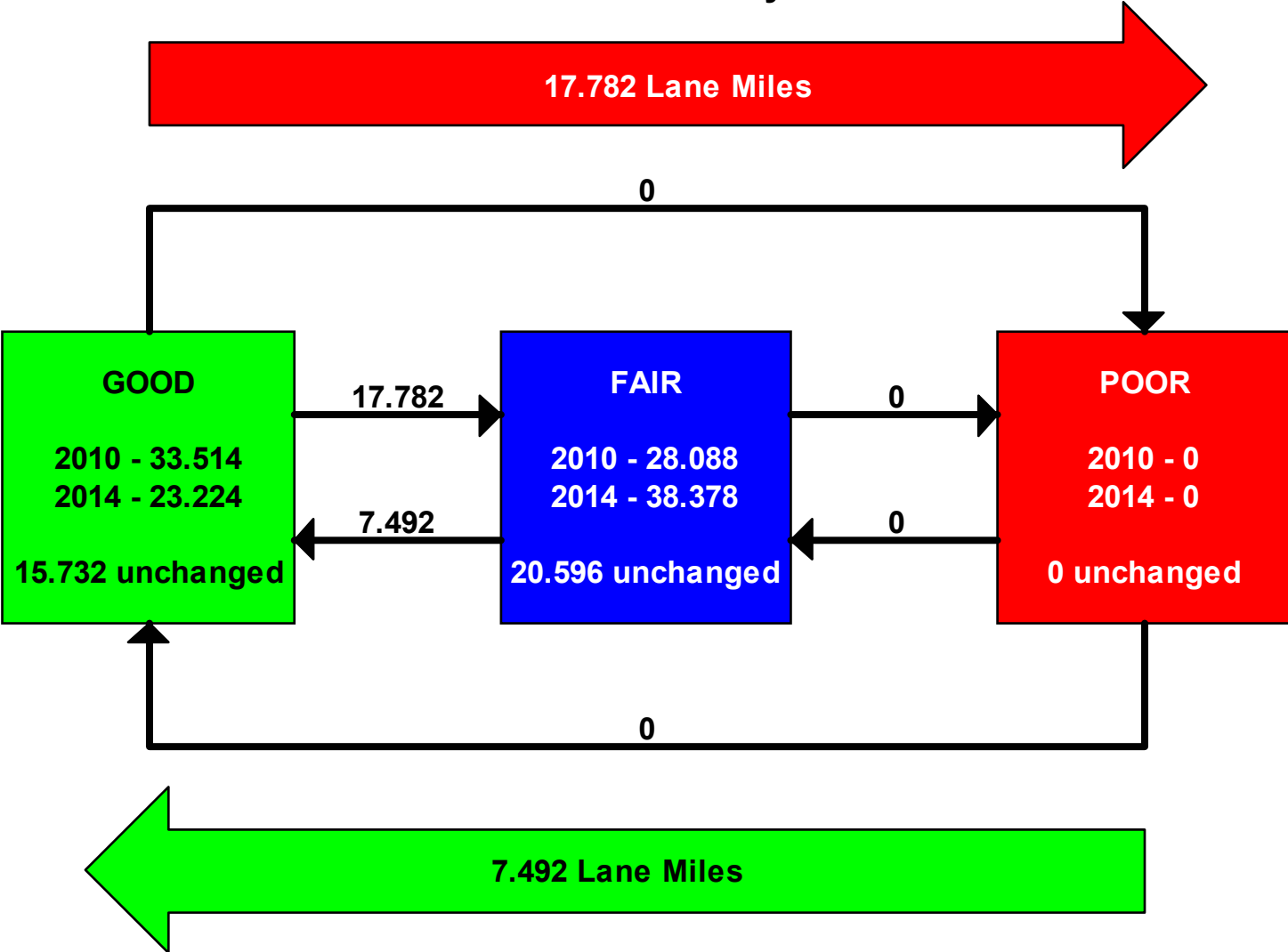
The graph on page 7 shows the change between good, fair and poor from 2010 to 2014. This again is in lane miles. This graph indicates that with the improvements made during this period, 7.5 lane miles were improved from fair to good but 17.8 lane miles deteriorated from good to fair. It is anticipated that if it is possible to accomplish the treatments suggested in the five year plan, almost five miles (10 lane miles) could be improved from fair to good condition. Certainly roads currently rated in good condition will fall to fair in that same period of time.

Page 8 is a map of all roads in the township, including county primary and state trunkline roads. The condition of all paved roads is indicated by the red, yellow and green which is poor, fair and good respectively. The roads indicated in grey are gravel, black are seasonal (not snowplowed) roads and the white are private roads.

Surface Condition Trend



Surface Condition Flow by Lane Miles



Kearney Township – 2014 Paved Road Ratings

Legend

-  Gravel
-  Seasonal (not snowplowed)
-  Poor – 1 thru 4
-  Fair – 5 thru 7
-  Good – 8 thru 10

Swiss
Village
East
Roads

