

**Forest Home Township  
Current Pavement Condition Status  
March 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	Typical Treatment	Estimated 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	Steiner Rd	340' E of Schweigen	Clam Lake Dr	1.211	6	
9	Dunson Rd	540' W of Clam Lake	Clam Lake	0.102	7	
9	Steiner Rd	Clam Lake Dr	Cottage Dr	0.897	7	
8	Honey Hollow Rd	Eckhardt	Austin Rd	0.600	8	
8	Davock Rd	East Torch Lake	seasonal portion	0.325	10	
8	Snowflake Rd	M 88	end of pavement	0.180	11	
8	Steiner Rd	East Torch Lake	340' E of Schweigen	0.182	12	
8	Eckhardt Rd	Honey Hollow	Twp Line	2.015	13	2013
8	Honey Hollow Rd	M 88	end of pavement	0.135	13	2011
8	Orchard Hill Rd	John R Rodger	Honey Hollow	2.034	13	2011
8	Austin Rd	Honey Hollow	project split	0.720	14	2011
8	Hoy Dewey cut off	Clam Lake Rd	Hoy Dewey	0.041	14	
8	Hoy Dewey Dr	Clam Lake Dr	end of pavement	0.140	14	
8	John R Rodger Rd	Orchard Hill	end of pavement	0.263	14	2011
8	Eckhardt	Bellaire Hwy	Honey Hollow	2.575	15	2013
8	Austin Rd	project split	M 88	0.866	16	2011
8	Recreation Point Rd	M 88	end of public road	0.330	16	
8	Dunson Rd	Wright	540' W of Clam Lake	0.813	17	2011
8	Wright Rd	Lynn	Pinnell	0.507	18	2011
8	Wright Rd	Pinnell	Bellaire Hwy	1.010	20	2011
8	Old Torch Lake Dr	East Torch Lake	end of pavement	0.190	21	
8	Honey Hollow Rd	project split	Orchard Hill	0.565	27	2011
7	Honey Hollow Rd	Austin Rd	project split	0.707	8	
7	Cedar Ct	Cedar		0.070	11	
7	Meadow Ln	Briar	Cedar	0.419	11	
7	Sandy Ln	Cedar	Meadow	0.370	11	
7	Briar Ln	Grass Lake	Cedar	0.648	12	
7	Cedar Ln	Briar	Bellaire Hwy	0.277	12	
7	Pinnell Rd	Wright	East Torch Lake	0.303	12	
7	Lynn Rd	Cottage Dr	end of pavement	0.090	13	
7	Deepwater Point Dr	M 88	Lakeside	0.214	14	
7	Grass Lake Rd	Briar Ln	end of pavemet	0.123	14	
7	Gorham Beach Rd	M 88	end of pavement	0.100	15	

Table 2 - continued

7	Schweigen Dr	Steiner	end of pavement	0.220	15
7	Grass Lake Rd	Bellaire Hwy	Briar Ln	0.227	16
7	Vandermark Rd	Bellaire	end of pavement	0.654	17
7	Lynn Rd	East Torch Lake	Clam Lake	1.336	18
7	Holiday Shores Rd	M 88	end of pavement	0.130	?
6	Davock Rd	seasonal portion	Eckhardt	0.712	8
6	Cleveland Ave	Deepwater Point	Lakeside	0.037	14
6	Lakeside Dr	Deepwater Point	Cleveland	0.062	14
Total				22.400	

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 \$0 in 2010 \$174,696 in 2011 \$13,296 in 2012, \$454,028 in 2013 and \$30,000 in 2014 on road projects. The average over this five year period equals \$134,404 per year. A 1 mil road millage is levied by the township which generates approximately \$193,000.

## Suggested Pavement Repairs

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
\$ 33,100	0.712	\$ 23,567	\$ 21,210	Davock (seasonal to Eckhardt)	crack fill and chip seal
\$ 33,100	1.336	\$ 44,222	\$ 39,799	Lynn (ETLD to Clam Lake Rd	crack fill and chip seal
\$ 33,100	0.350	\$ 11,585	\$ 10,427	Grass Lake	crack fill and chip seal
\$ 44,000	0.220	\$ 9,680	\$ 8,712	Schweigen	ultra-thin HMA overlay **
Total township share =			\$ 80,148		

### 2016 Suggested Priorities

Cost per Mile	Number of Miles	Total Cost	Township Share	Selected Roads (miles)	Suggested Repair
\$ 34,000	0.543	\$ 18,462	\$ 16,616	Deepwater Pt (.214), Gorham Beach (.1), Holiday Shores (.13)	crack fill and chip seal
\$ 50,000	0.099	\$ 4,950	\$ 4,455	Cleveland & Lakeside	possible ultra-thin **
\$ 34,000	1.336	\$ 45,424	\$ 40,882	Lynn (ETLD to Clam Lake Rd	crack fill and chip seal
Total township share =			\$ 61,952		

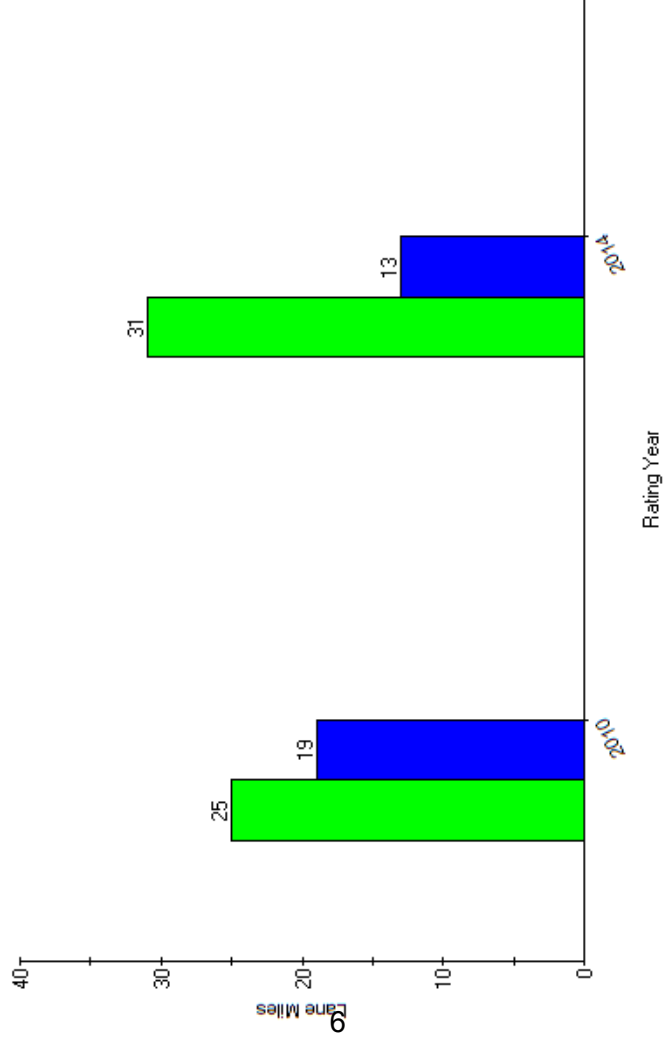
\*\* Ultra-thin HMA overlay requires an existing pavement to be relatively flat with very little distortion. Ultra-thin will also reflect cracking within a one or two years of paving and should be crack sealed within a few years.

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. This graph also shows the change in each category. The local county paved roads within Forest Home Township are in very good shape overall.

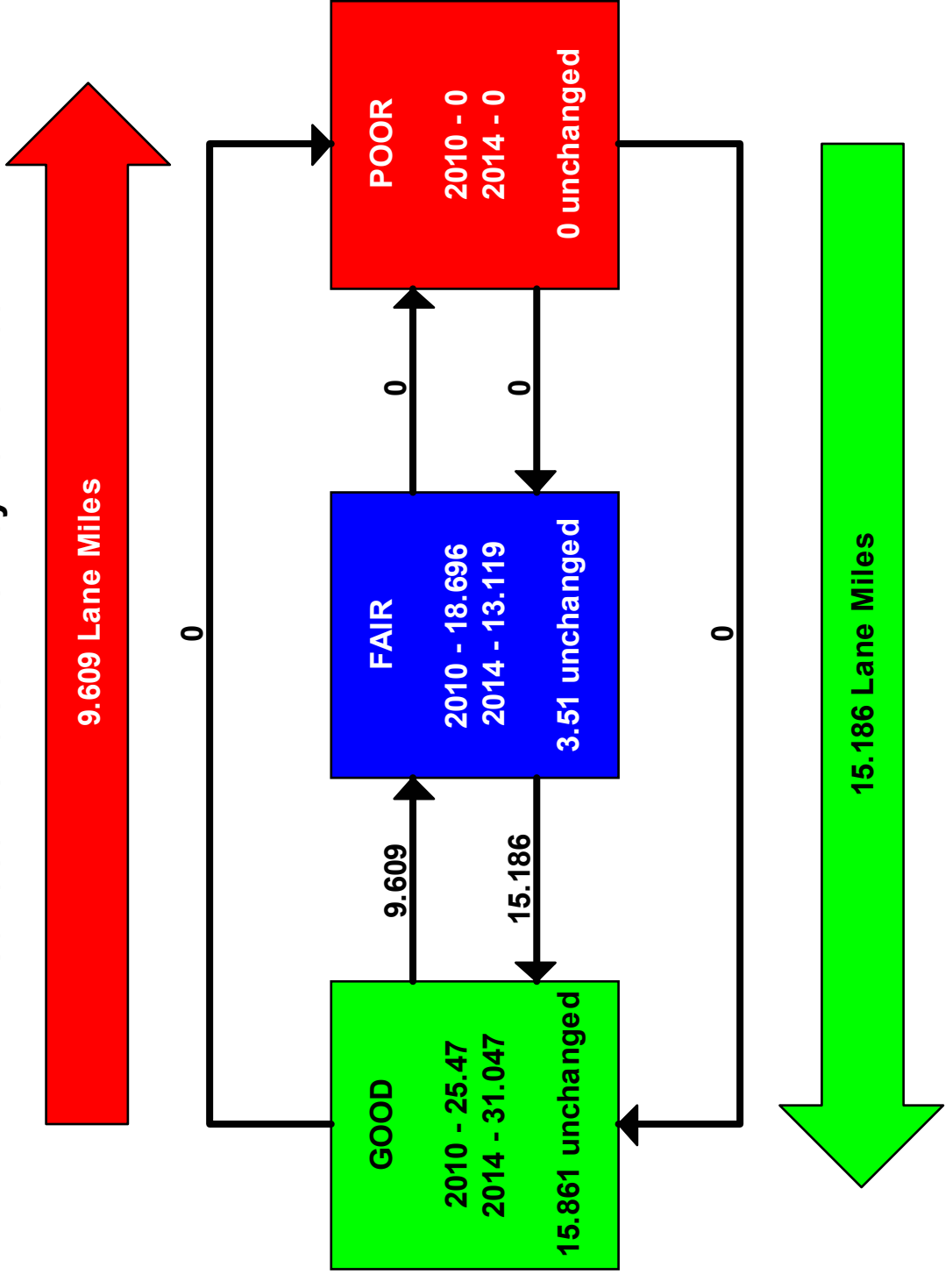
The graph on page 7 shows the change between good, fair and poor from 2010 to 2014. This again is in lane miles. This graph indicates that with the improvements made during this period, 15.2 lane miles were improved from fair to good and only 9.6 lane miles deteriorated from good to fair. This is a positive trend.

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



# Forest Home Township – 2014 Paved Road Ratings

## Legend

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

