

Sanilac County Transportation Asset Management Program FY 2019 PASER Road Survey

Project Overview:

On April 23 and April 24, 2019 East Michigan Council Of Governments Region 7 staff along with representatives of the Sanilac County Road Commission (SCRC) and the Michigan Department of Transportation (MDOT) assessed the condition of Sanilac County federal aid eligible roads using the PASER road rating system as requested by the State of Michigan Transportation Asset Management Council (TAMC). No data was available for FY 2014.

PASER Road Rating System:

The Pavement Surface Evaluation and Rating (PASER) system was developed by the University of Wisconsin-Madison Transportation Information Center to be used as the State of Wisconsin's standard road rating system. PASER is a "windshield" road rating system that uses a 1 to 10 rating scale, with a value of 10 representing a new road and a value of 1 representing a failed road. Condition ratings are assigned by monitoring the type and amount of visual defects along a road segment while driving the segment. The PASER system interprets these observations into a condition rating.

The State of Michigan Transportation Asset Management Council has requested that the information gathered in this survey be reported using the following categories:

- **Roads with PASER ratings of 8-10 require Routine Maintenance.** Routine maintenance is the day-to-day maintenance activities that are scheduled such as street sweeping, drainage clearing, shoulder gravel grading, and sealing cracks to prevent standing water and water penetration.
- **Roads with PASER ratings of 5-7 require Capital Preventive Maintenance.** Capital preventive maintenance is a planned set of cost effective treatments to an existing roadway system and its appurtenances that preserves, retards future deterioration and maintains or improves the functional condition of the system without significantly increasing structural capacity. The purpose of capital preventive maintenance fixes is to protect the pavement structures, slow the rate of pavement deterioration and/or correct pavement surface deficiencies. Surface treatments are targeted at pavement surface defects primarily caused by the environment and by pavement material deficiencies.
- **Roads with PASER ratings of 1-4 require Structural Improvements.** This category includes work identified as rehabilitation and reconstruction which address the structural integrity of a road.

Field Survey Methodology:

Equipment: Staff collected data using a laptop computer with the RoadSoft GIS Laptop Data Collector software installed. A Global Position System (GPS) unit was connected to the laptop to track position and locate road segments. RoadSoft GIS is an asset management software package created and distributed free of charge by the Michigan Technology Institute's Technology Development Group. The current version of the program was designed with a special module to collect PASER rating data.

Staff: The rating team consisted of three members. A driver and a navigator jointly rated the roads. The third team member entered rating information into the laptop computer. For the Sanilac County road-rating project there was always one Region 7 representative, one SCRC representative, and one MDOT representative present.

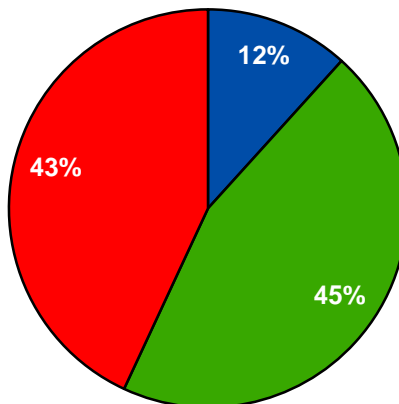
Training: All participants in the survey were required to attend a daylong training session. Participants received an overview of the project and were given instruction on how to use the RoadSoft software and the PASER road rating system for data collection. Once out in the field, experienced staff members taught new participants how to use the RoadSoft program and guided them through the rating process. Most participants felt comfortable after an hour of working the computer and rating the roads.

Results:

A total of 272.527 miles of federal aid eligible roads were rated for this project. The project was completed in approximately 10.5 hours with an average rating speed of 26 miles per hour. **Table 1** and **Figure 1** below summarize the distribution of ratings by mileage and percentage of the total for all roads rated during the project.

Table 1 – Sanilac County 2019 PASER Results			
PASER Rating	Prescribed Fix	Mileage	Percent of Total Miles Rated
8 - 10	Routine Maintenance	31.919	12%
5 - 7	Capital Preventive Maintenance	123.232	45%
1 - 4	Structural Improvements	117.376	43%

Figure 1
Sanilac County 2019 PASER Results



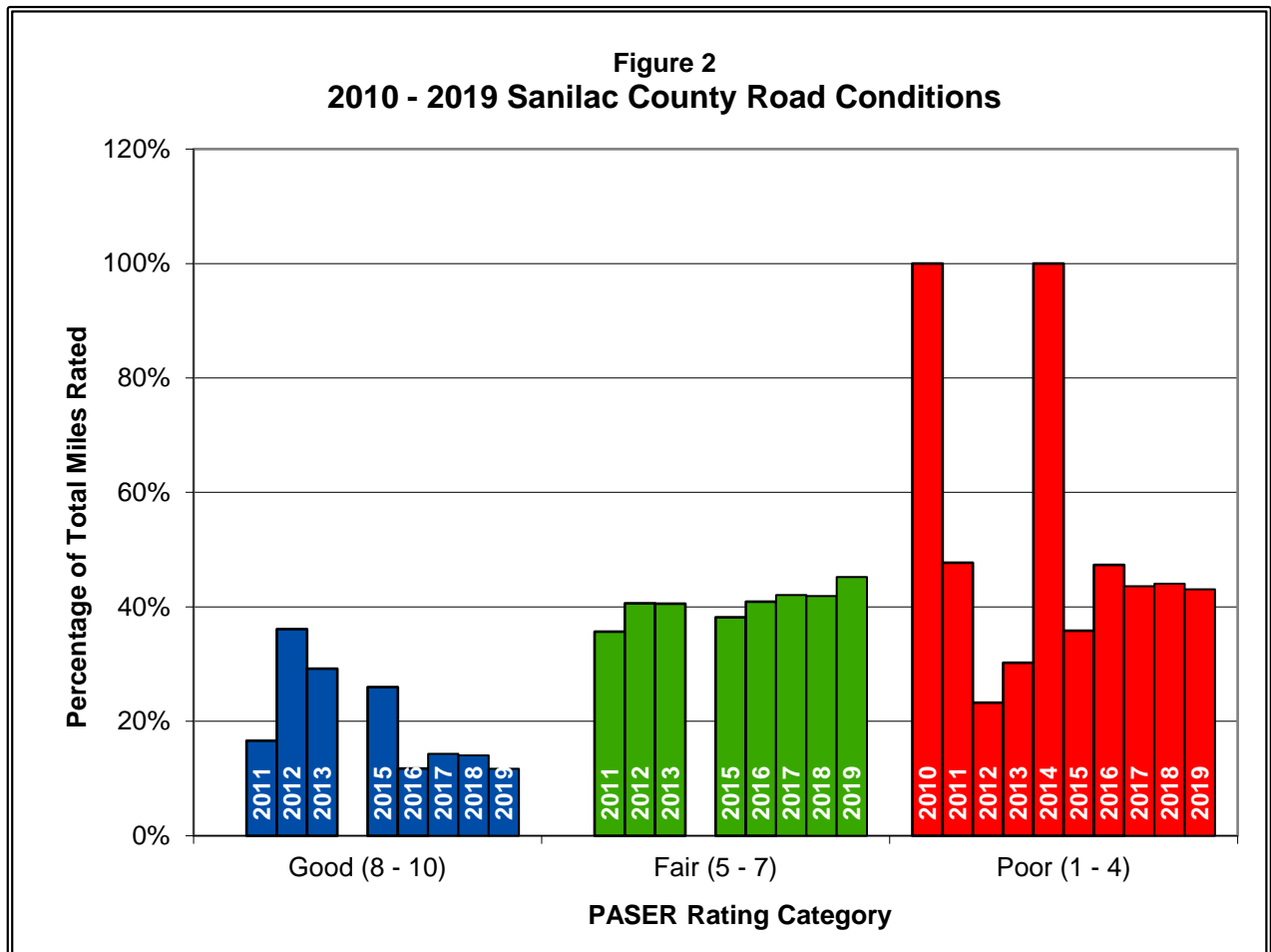
■ 8 - 10 Routine Maintenance ■ 5 - 7 Capital Preventive Maintenance ■ 1 - 4 Structural Improvements

Table 2 below summarizes the PASER ratings and total miles rated for each of the jurisdictions represented in Sanilac County, as well as Sanilac County as a whole.

Table 2 - 2019 PASER Results by Jurisdiction				
Jurisdiction	8 - 10	5 - 7	1 - 4	Total Mileage Rated
Village of Applegate	0.354	1.283	0.374	2.011
Village of Carsonville	0.000	0.496	0.500	0.996
Village of Deckerville	0.495	0.000	1.732	2.227
Village of Forestville	0.000	0.532	0.000	0.532
Village of Lexington	0.000	0.222	0.000	0.222
Village of Melvin	0.000	0.988	0.000	0.988
Village of Minden City	0.567	0.000	0.929	1.496
Village of Peck	0.000	0.000	0.497	0.497
Village of Port Sanilac	0.000	0.000	0.000	0.000
City of Brown City	0.171	0.000	0.705	0.876
City of Croswell	0.509	0.000	1.148	1.657
City of Marlette	0.000	1.150	0.162	1.312
City of Sandusky	1.012	0.000	0.497	1.509
MDOT	0.000	60.271	32.305	92.576
Sanilac CRC	28.811	58.290	78.527	165.628
Sanilac County	31.919	123.232	117.376	272.527

Multi-Year Comparison of PASER Ratings:

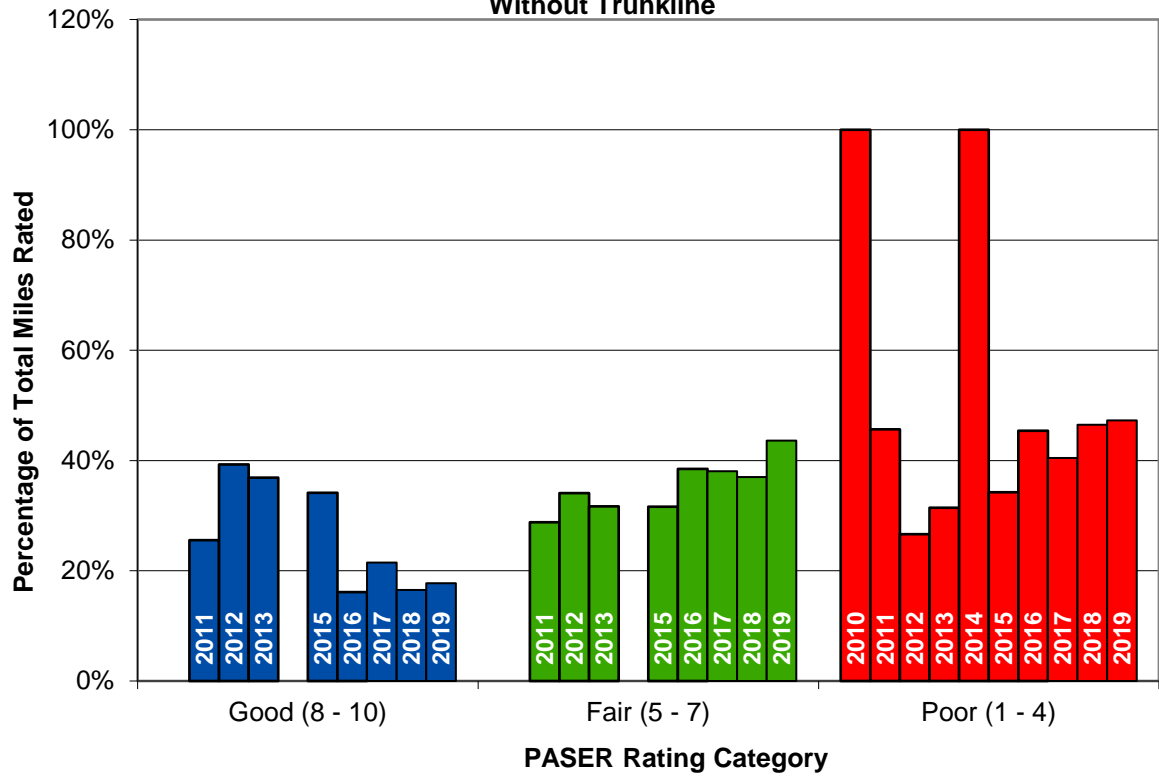
The comparison of PASER ratings from year to year provides a valuable assessment of the effectiveness of current transportation funding and maintenance activities. **Figure 2** below shows a 10-year trend analysis of the paved federal aid road conditions for Sanilac County. Due to slight variations in the mileage rated each year, the results have been reported as a percentage of the total miles rated for each given year.



As can be seen in Figure 2, road conditions within the County continue to appear to be slightly increasing in the fair category. Roads in the good category have slightly declined while those in the poor category have also slightly declined. The percentage of roads in the fair category appears to be increasing percentage wise. This may be an indication that the capital preventive maintenance program at the road commission is effective.

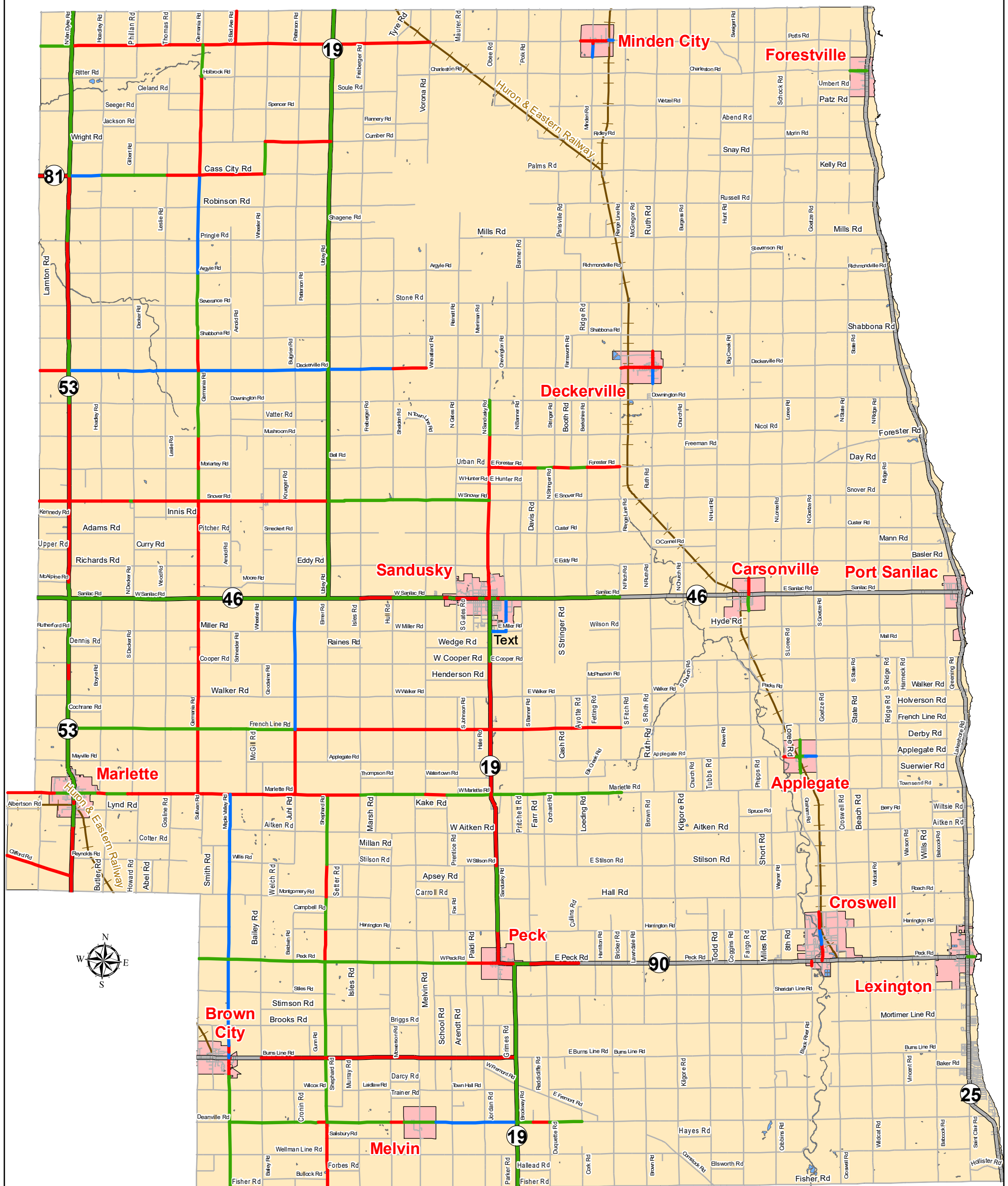
Removing the State Trunkline data from this trend analysis paints a similar picture. **Figure 3** shows the 10-year trend analysis with state trunkline data removed. There does not appear to any significant increases or decreases in either the good or fair road categories during the last 5 years of data. There does appear to be a slight increase in the poor road category, however the huge spikes of prior years are not seen. Again, this may be an indication that the preventive maintenance program is effective.

Figure 3
2010- 2019 Sanilac County Road Conditions
Without Trunkline



Sanilac County

2019 Road Surface Ratings



Legend

Surface Rating

- 1 - 4 Structural Improvements
- 5 - 7 Capital Preventative Maintenance
- 8 - 10 Routine Maintenance

Total PASER Miles: 272.527

A Cooperative Effort Between:

- Sanilac County Road Commission
- Michigan Department of Transportation
- East Michigan Council of Governments
- Transportation Asset Management Council

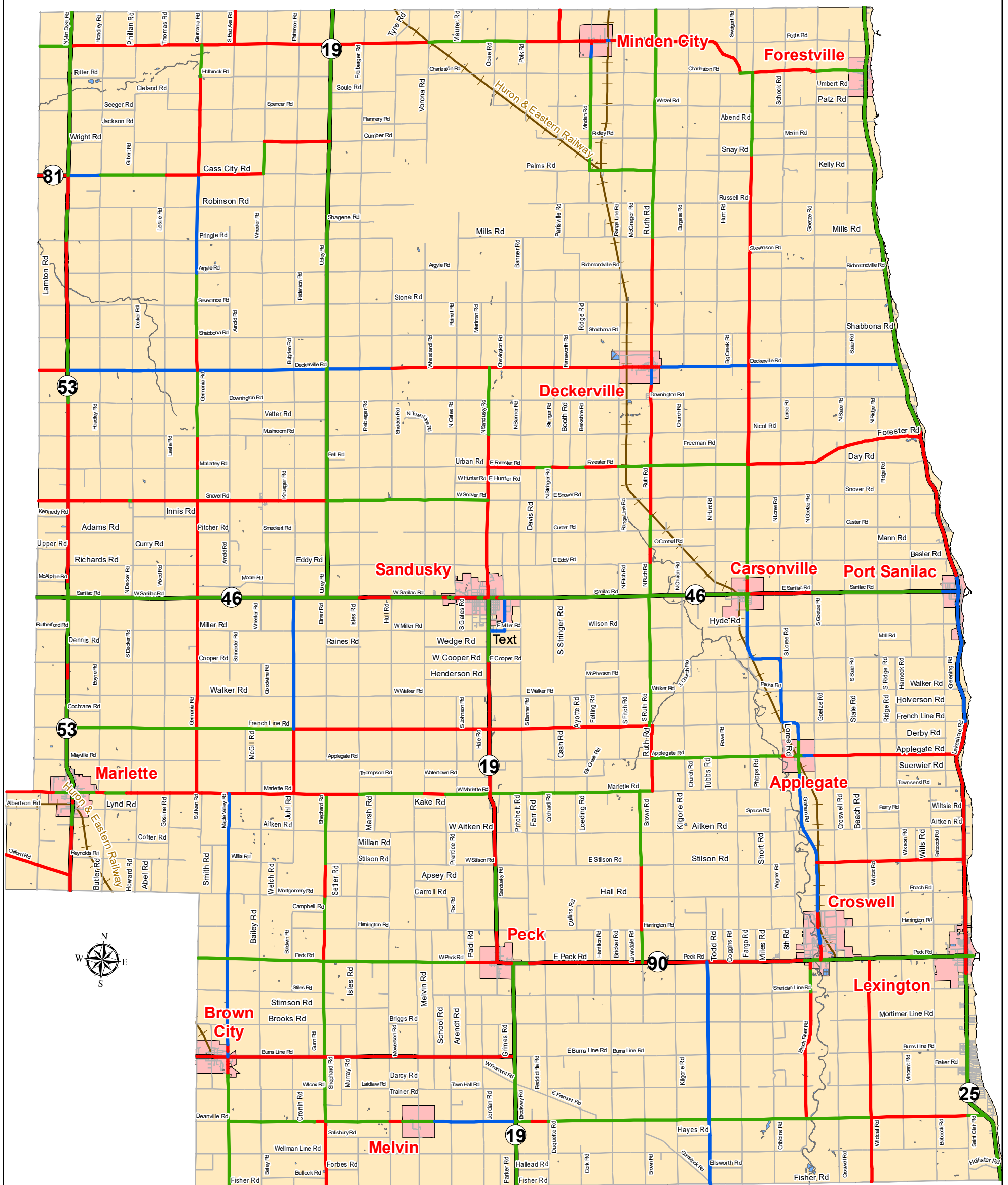
East Michigan Council of Governments
3144 Davenport Ave. Suite 200
Saginaw, MI 48602
989-797-0800 Fax 989-797-0896
www.emcog.org



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Sanilac County

2018 & 2019 Road Surface Ratings



Legend

Surface Rating

- 1 - 4 Structural Improvements
- 5 - 7 Capital Preventative Maintenance
- 8 - 10 Routine Maintenance

Total PASER Miles: 476.575

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