

ROAD RATING REPORT

LEELANAU COUNTY ROAD COMMISSION LEELANAU COUNTY, MI



LELAND TOWNSHIP 2023

June 2023
Project No. 856990

LEELANAU COUNTY ROAD COMMISSION

LELAND TOWNSHIP LOCAL ROAD RATINGS REPORT 2023

The goal of the Leelanau County Road Commission is to use Asset Management Strategies when planning upcoming projects for the roads that fall under their jurisdiction. Asset management, as defined by Public Act 199 from 2007, is an “ongoing process of maintaining, upgrading, and operating physical assets cost-effectively, based on a continuous physical inventory and condition assessment.” Using asset management strategies will allow the Road Commission and Townships within the County to invest available road funds into future projects in a manner that will provide the greatest return and most effective improvements for the Community.



Figure 1: Leland Township Roads by Jurisdiction
 Red = State Highways, Blue = County Primary, Green = County Local, Gray = Undefined (I.E. Private)



Figure 2: Leland Township Roads by Surface Type
 Green = Asphalt, Grey = Concrete, Purple = Seal Coat, Yellow = Gravel, Brown = Earth



Figure 3: Leland Township Roads by PASER Rating
 Green = Good (8-10), Yellow = Fair (5-7), Red = Poor (1-4), Blue = Unrated

Road Rating Systems

The PASER (Pavement Surface Evaluation and Rating) Road Rating System is utilized by the County to rate the existing local and primary paved roads. PASER is the rating system for paved roads that is utilized in Roadsoft to collect data on the roads. The surface condition of the road can receive a rating between 1 and 10, 1 being the worst and 10 being the best road surface condition. Tables 1 and 2 provided below show the rating as well as suggested maintenance to preserve the road and a cost estimate for the repairs. Typically, seasonal roads are excluded and should show in Roadsoft as unrated.

Table 1: PASER Ratings and Repairs for Paved Roads

Road Rating	Recommended Repair	Estimated Cost Per Centerline Mile
10	No maintenance necessary. New Road	\$0
9	No maintenance necessary. Smooth Surface	\$0
8	Minor Crack Sealing	\$2,000
7	Routine Crack Sealing and/or Minor Patching	\$5,000
6	Patching and Sealcoat Ultra-thin Asphalt Overlay	\$50,000 \$75,000
5	Asphalt Wedging Asphalt Wedging and Sealcoat Asphalt Wedging and Ultra-thin Asphalt Overlay	\$100,000 \$130,000 \$175,000
4	Asphalt Wedging and Structural Overlay	\$185,000
3	Patching and Structural Overlay Pulverize, Gravel and Pave	\$220,000 \$300,000
2	Reconstruction	\$500,000
1	Reconstruction due to failed road	\$500,000

Gravel roads are rated using a system referred to as IBR (Inventory-Based Rating) System™ for Gravel Roads. The rating for a segment of gravel road is determined by considering three separate characteristics for that segment. The three characteristics are surface width, drainage adequacy and structural adequacy, which are all evaluated to determine the segment rating. The segment rating range is 1 to 10.

Table 2: IBR Ratings and Treatments for Gravel Roads

Road Rating	Existing Condition / Recommended Repair	Estimated Cost Per Centerline Mile
10	No maintenance necessary. New Road	\$0
8 to 9	Good crown and drainage throughout. Adequate gravel for traffic. Maintain with grading and dust control.	\$2,000
6 to 7	Existing crown with drainage on 50% or more of roadway. Additional gravel needed in some areas along with ditching.	\$75,000
3 to 5	Little or no crown. Ditched on less than 50% of the road. Additional gravel needed on entire road along with ditching.	\$125,000
1 to 2	Failed Road. Reconstruction.	\$250,000

The following figures compare PASER ratings for Statewide, County, and Township roads. It is important to note that the ratings shown in Figures 5 and 6 for the County and Township are based on the current estimated rating calculated by Roadsoft based off the last time the road was field rated, and not the actual field rating that was last performed. This version of the database was obtained from the county in April 2023. The PASER system has an automatic diminishing score based on age from the last field evaluation. We understand this is the case as the roads in the County and Township have not been evaluated on a regular basis (see Figure 6 on the following page).

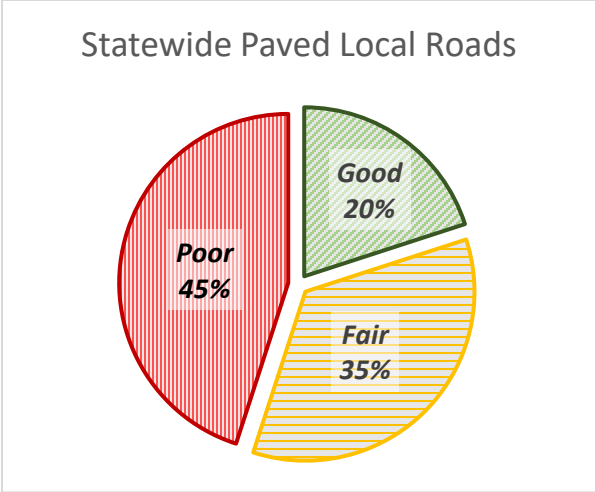


Figure 4: Condition of Paved Local Roads Across the State

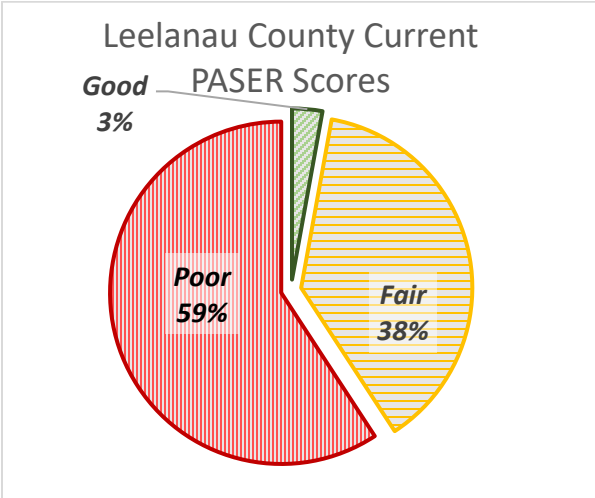


Figure 5: Condition of Paved Local Roads in Leelanau County

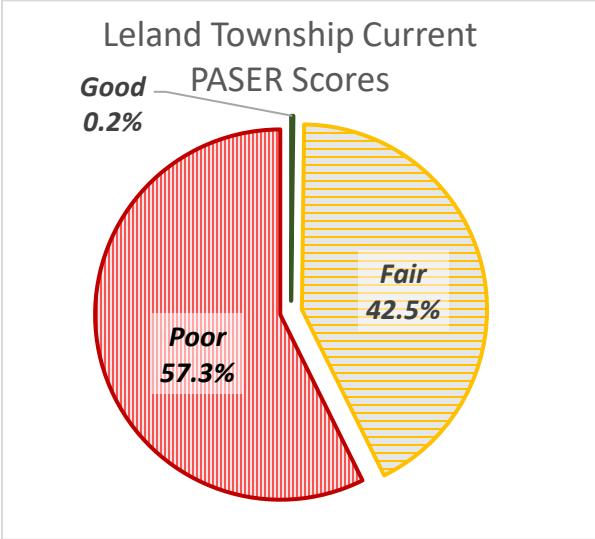


Figure 6: Condition of Paved Local Roads in Leland Township

Good = PASER Rating 10-9-8 / Fair = PASER Rating 7-6-5 / Poor = 4-3-2-1

Leland Township Paved Local Road Ratings

Service Life of Treatments

Service Life is the expected time that a roadway repair will remain effective before the road needs to be reconstructed. Table 3 below contains road repairs and the corresponding service life that can be expected from the repairs. Before repairs reach the end of their service life, preventative maintenance should be performed on a regular basis to continue to extend the life of the road. This will increase the expected service life after repairs are complete.

Table 3: Service Life of Treatments for Paved Roads

Road Rating	Recommended Repair	Expected Service Life (years)
8	Minor Crack Sealing	5
7	General Crack Sealing and/or Minor Patching	5
6	Patching and Sealcoat Ultra-thin Asphalt Overlay	7 7 to 10
5	Asphalt Wedging Asphalt Wedging and Sealcoat Asphalt Wedging and Ultra-thin Asphalt Overlay	7 7 to 10 10
4	Asphalt Wedging and Overlay	12 to 15
3	Pulverize, gravel and pave	15 to 25
2	Reconstruction	25 to 30
1	Reconstruction due to failed road	25 to 30

For road ratings that contain multiple repair types, the best suited repair should be determined by the County Engineer's field observations. Expected service life may be decreased or preventative maintenance increased if the road is constructed on unsuitable underlying soils. Such soils should be addressed prior to completing repairs.

Gravel roads are treated differently than paved roads. The service life of gravel roads is more difficult to predict. Gravel road conditions can change rapidly depending on the weather, grading layout, and the traffic the road receives.

Table 4: Current Ratings for Paved Local Roads

Current PASER Rating	Road Name	Limits	Centerline Length (miles)	Last Field Rating Date
9 to 10	None	---	---	---
8	Gertrude St.	Meinard St. to Louisa St.	0.06	2008
7	Pertner Rd. Eagle Hwy. Kolarik Rd.	Suttons Bay Twp boundary to Eagle Hwy * Dean Rd. to Alpers Rd. Eagle Hwy to CR 626	0.49 0.89 0.29	2022 2018 2018
6	Popp Rd. Popp Rd. Popp Rd. Eagle Hwy. Eagle Hwy. Horn Rd. Schomberg Rd. Juniper Trl. 1 st St.	Centerville Twp boundary to seal coat South asphalt section to north asphalt * Seal coat section to CR 645 CR 641 to Pertner Rd. 0.012 mi N of Pertner Rd. to Alpers Rd. Suttons Bay Twp boundary to CR 641 * Centerville Twp boundary to Pit Rd. * Grand Ave. to 4 th St. Cherry St. to William St.	1.02 0.52 0.52 2.56 1.01 2.34 1.17 0.06 0.14	2020 2020 2020 2019 2019 2020 2020 2008 2008

	5 th St.	Pearl St. to Cedar St.	0.16	2008
	Meinard St.	Start 0.029 mi off CR 643 to end of road	0.14	2008
	E. Lingaur Rd.	CR 643 to end of road *	1.25	2020
5	Alpers St.	Suttons Bay Twp boundary to Eagle Hwy *	0.50	2019
	Meinard St.	0.008 mi W CR 643 and 0.029 mi E CR 643	0.04	2008
4	Pine St.	Main St. to 1 st St.	0.05	2011
	River St.	Main St. to 5 th St.	0.32	2011
	Juniper Trl.	Chandler St. to Grand Ave.	0.06	2008
	Juniper Trl.	4 th St. to 5 th St.	0.06	2008
	1 st St.	Pine St. to Cedar St.	0.07	2011
	1 st St.	River St. to Pearl St.	0.07	2011
	S. Saint Joseph St.	Louisa St. to Alley St.	0.03	2008
	2 nd St.	North St. to William St.	0.07	2011
3	Dufek Rd.	CR 645 to PASER Rating 1 - 0.842 miles *	0.84	2008
	Pearl St.	Lake St. to Main St.	0.05	2009
	Pearl St.	2 nd St. to end of road	0.40	2008
	William St.	Main St. to 1 st St.	0.05	2008
	Cherry St.	Main St. to 1 st St.	0.04	2008
	Golfview Dr.	Manitou Trl to 0.008 miles from end of road	0.26	2008
	Pertner Rd.	Eagle Hwy to end of road	0.13	2008
	Eagle Hwy	Pertner Rd. to 0.012 N on Eagle Hwy	0.01	2008
	Alpers Rd.	CR 641 to 0.108 miles onto Alpers Rd.	0.11	2008
	Schomberg Rd.	Manitou Trl. to Pit Rd.	0.81	2008
	Saint Marys St.	Philip St. to end of road	0.09	2008
	Pit Rd.	Schomberg Rd. for 0.111 miles	0.11	2008
	Grand Ave.	William St. to Pearl St.	0.07	2008
	Grand Ave.	Cedar St. to Cummings St.	0.23	2008
	Cummings St.	Grand Ave to 4 th St.	0.06	2008
	Oak St.	Chandler St. to 4 th St.	0.12	2008
	Union St.	5 th St. to start of Juniper Trl.	0.33	2008
	4 th St.	Juniper Trl south 0.051 miles	0.05	2008
	4 th St.	Pearl St. to Church St.	0.07	2008
	Meinard St.	0.008 miles W of CR 643 to end of road	0.24	2008
	Popp Rd.	Duck Lake Rd. to end of road	0.54	2009
	Plamondon Rd.	Philip St. to E Willow Point Rd.	0.33	2008
	S. Saint Joseph St.	Anthony St. to Alley St.	0.04	2008
	Louisa St.	Gertrude St. to S Saint Joseph St.	0.10	2008
	Main St.	Plamondon Rd. to Philip St.	0.41	2008
	Main St.	S Saint Joseph St. to Meinard St.	0.07	2008
	Sylt Rd.	N Duck Lake Rd. start, right to end of road	0.64	2008
	Gertrude St.	Main St. to Phillip St.	0.05	2008
2	Cedar St.	4 th St. to 5 th St.	0.06	2008
	Cedar St.	Main St. to 1 st St.	0.05	2008
	William St.	Lake St. to Main St.	0.05	2008
	Hoeft Rd.	Duck Lake Rd. to end of pavement	0.48	2008
	Alpers Rd.	Eagle Hwy west for 0.719 miles *	0.72	2018
	Grand Ave.	Juniper Trl. to Cummings St.	0.08	2008
	Grand Ave.	William St. to North St.	0.07	2008
	Juniper Trl.	Union St. for 0.326 miles	0.33	2008
	Oak St.	Chandler St. to Mill St.	0.13	2008
	1 st St.	William St. to Pearl St.	0.07	2008
	4 th St.	Pearl St. to Juniper Trl.	0.45	2008
	5 th St.	Cedar St. to Juniper Trl.	0.30	2008
	A Ave.	Lake St. for 0.025 miles	0.03	2008
	Anthony St.	S Saint Joseph St. to CR 643	0.09	2008
	S. Saint Joseph St.	Philip St. to end of road	0.14	2008

	Louisa St.	S Saint Joseph St. to CR 643	0.09	2008
	Louisa St.	Gertrude St. to end of road	0.06	2008
	Chandler St.	Oak St. to end of road	0.20	2008
	Chandler St.	Boulevard Ave. N for 0.020 miles	0.02	2008
	Edward St.	Boulevard Ave. to Mill St.	0.16	2008
	Sylt Rd.	S. Duck Lake Rd. start for 0.237 miles	0.24	2008
	Gertrude St.	Philip St. to Meinard St.	0.06	2008
	Gertrude St.	Louisa St. to Anthony St.	0.06	2008
	West St.	Reynolds St. to Matheson Rd.	0.07	2008
	Matheson Rd.	West St. for 0.017 miles	0.02	2008
	2 nd St.	Pearl St. to River St.	0.03	2008
	Anthony St.	Gertrude St. to end of road	0.06	2008
1	Dufek Rd.	Schomberg Rd. for 0.627 miles *	0.63	2008
	Reynolds St.	Manitou Trl. to end of road	0.18	2008
	Main St.	Manitou Trl. to Reynolds St.	0.04	2008
	South St.	Lake St. to end of road	0.09	2008
	Pine St.	Lake St. to Main St.	0.05	2008
	Cedar St.	Lake St. to Main St.	0.05	2008
	Cedar St.	1 st St. to end of road	0.05	2008
	Cedar St.	Chandler St. to Grand Ave.	0.06	2008
	Cedar St.	Grand Ave. to 4 th St. *	0.06	2008
	River St.	Main St. to Lake St.	0.05	2008
	Pearl St.	Main St. to 2 nd St.	0.10	2008
	North St.	Lake St. to Main St.	0.05	2008
	North St.	Main St. for 0.053 miles *	0.05	2008
	North St.	End of seal coat to end of road	0.07	2008
	Lake St.	Reynolds St for 0.068 miles	0.07	2008
	Lake St.	Matheson Rd. to Reynolds St. *	0.07	2008
	Lake St.	A Ave. to Matheson Rd.	0.25	2008
	Lake St.	River St. to Main St.	0.48	2008
	Lake St.	Brooks St. to Lake St.	0.14	2008
	McLeod Dr.	Manitou Trl. to end of road *	0.31	2008
	Oxford Dr.	Manitou Trl. to end of road *	0.39	2008
	Kirt Rd.	CR 645 to end of road*	0.51	2008
	Overby Rd.	Centerville Twp boundary for 0.265 miles *	0.27	1999
	Birch Le Dr.	CR 641 for 0.212 miles*	0.21	2008
	Horn Rd.	Suttons Bay Twp boundary for 0.01 mile *	0.01	2001
	Grand Ave.	Pearl St. to Cedar St. *	0.16	2008
	Juniper Trl.	5 th St. to PASER rating 2, 0.171 miles	0.17	2008
	Oak St.	4 th St. to 5 th St.	0.06	2008
	Union St.	Grand Ave. to 5 th St. *	0.12	2008
	William St.	2 nd St. to Grand Ave. *	0.04	2011
	Alley St.	Main St. to Saint Mary's St.	0.06	2008
	A Ave.	0.025 miles onto A Ave. to end of road	0.04	2008
	S. Saint Joseph St.	Philip St. to Louisa St.	0.12	2008
	Boulevard Ave.	Chandler St. to Mill St.	0.17	2008
	Mill St.	Chandler St. to Boulevard Ave.	0.19	2008
	Chandler St.	River St. to 0.020 mi N of Boulevard Ave.	0.16	2008
	Chandler St.	Boulevard Ave. to Oak St.	0.09	2008
	Trillium Dr.	Manitou Trl. loops back to Manitou Trl. *	0.36	2008
	Valley Ln.	Trillium Dr. to end of road *	0.13	2008
	River St.	Lake St. to end of road	0.06	2008
	William St.	Saint Mary's St. to end of road	0.04	2008
	Matheson Rd.	Thompson St. to Lake St. *	0.02	2008
	Matheson Rd.	Lake St. to end of road	0.09	2008
	2 nd St.	Pearl St. to William St. *	0.07	2011

	West St.	Reynolds St. to end of pavement	0.07	2008
	Brooks St.	Lake St. to end of road	0.10	2008
Undefined	Oak St.	Juniper Trl. to end of road	0.05	
	Cummings St.	4 th St. to 5 th St. *	0.06	
	Cherry Ave.	Main St. to Lake St. *	0.13	
	1 st St.	Pine St. to end of road *	0.03	
	Thompson St.	West St. to end of road *	0.05	
	Alley St.	S Saint Joseph St. to end of road *	0.16	
	Alley	Gertrude St. to end of road *	0.06	
	Church St.	4 th St. to end of road *	0.03	

*Sealcoat Roads

*Undefined Surface

Estimated Cost to Repair Paved Roads Based on 2023 PASER Ratings			
Road Rating	Miles	Estimated Cost per Mile	Total Cost
10	0.00	\$0	\$0
9	0.00	\$0	\$0
8	0.06	\$2,000	\$1,000
7	1.67	\$5,000	\$8,000
6	10.88	\$75,000	\$816,000
5	0.54	\$130,000	\$70,000
4	0.71	\$185,000	\$131,000
3	6.24	\$300,000	\$1,872,000
2	4.18	\$500,000	\$2,090,000
1	6.55	\$500,000	\$3,275,000
Undefined (0)	0.57	---	---

Total Cost in 2023 = \$8,260,000

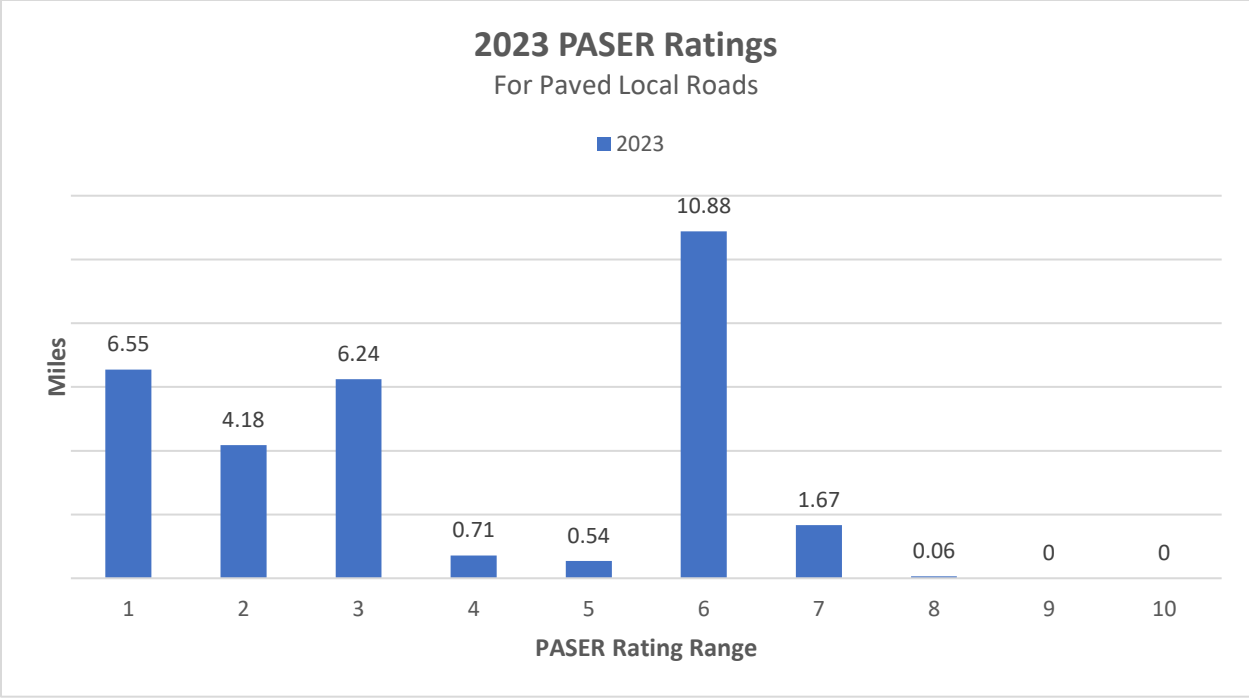


Figure 7: Current PASER Ratings



Figure 8: Average Current PASER Rating

Leland Township Gravel Local Road Ratings

Table 5: Current Ratings for Gravel Roads

IBR Rating	Road Name	Limits	Length (miles)
3-10	None	---	---
2	Overby Rd.	Where seal coat ends for 0.241 miles *	0.24
	Horn Rd.	CR 641 to end of road *	0.10
	Pit Rd.	Where asphalt ends for 0.489 miles *	0.49
	Lavassar Rd.	CR 643 along Twp boundary for 0.180 miles *	0.18
1	None	---	---
Unrated	None	---	---
Earth	Hoeft Rd.	Where asphalt ends for 0.120 miles	0.12
	Dean Rd.	CR 641 for 0.060 miles	0.06
	Main St.	Reynolds St. to end of road*	0.04
	Grand Ave.	Juniper Trl. to end of road*	0.05
	Alley St.	S Saint Joseph St. to CR 643*	0.09
	Lavassar Rd.	Popp Rd. along Twp boundary for 0.271 miles*	0.27

*Roads with no "last" PASER rating or date identified, but a current rating listed under Current PASER Rating (Should be Rated on the IBR scale).