

October 13, 2023

#2230771

Mr. Gary Hammer  
Lake Miramichi Homeowners Association

RE: Gravel Road Ratings and Project Recommendations

Dear Mr. Hammer,

Prein&Newhof (P&N) is pleased to present these recommendations for improvements to your gravel road system. We hope that the recommendations in this document will help you maintain your road system in a measured, step-wise approach.

## Road Ratings

Your roads were rated using the IBR system for rating gravel roads. Each road was scored based on the surface conditions, width, and drainage characteristics. Ratings were given for each criterium of “Good” “Fair” or “Poor” using a scoring system that was developed by statewide experts on gravel roads. These ratings were compiled and a composite score of 1-10 was developed. Maps of each rating criterium and the composite score are attached as Figures 2-5.

Surface ratings are related to how the road rides and is a good indication of gravel thickness and crowning of the road. First priority was given to roads with a surface rating of “Fair” because these roads appear to be active, but have some surface problems. In general, roads with a surface rating of “poor” did not seem to have any active traffic.

Drainage ratings are based on how well water can be shed from the road. The majority of your system was rated as “fair” because there is a drop at the shoulder, but a gravel or berm at the edge of the road prevents water from getting off of the road. Roads with a “poor” drainage rating appear to hold water on the roadway with minimal or no ditching.

Width ratings were deemed a lesser priority because most of the traffic on your road system is passenger vehicles and light trucks. Generally, if a road width was rated as “poor” this was an indicator that this road was inactive or a two-track.

## Projects

After road ratings were collected and mapped, we developed a list of practical projects to improve your system. We developed the yearly budget for these projects based on an email conversation with you. Our target budget for road improvement projects is \$50,000 to \$80,000 annually.

Criteria used to select projects are:

- Miramichi Drive is the main thoroughfare of the development. This road was given priority for projects
- Priority was given to roads that could be improved for lower costs, giving you a better value for your project expenditures
- Roads deemed as “inactive” were given a lower priority. We did include upgrades to improve the “loop” of Pawnee Trail for future development
- Routine grading/brining/snowplowing tasks were not considered in these budgets, as they are considered maintenance tasks.

Project types were broken into three categories:

- Pulling Berms: Removing the secondary ditch/roadside berms that have developed along your roads. This work can generally be done with a motor grader and is estimated to cost approximately \$10,000 per mile
- Gravel Placement: Placing new gravel on the roadway to improve the rideability of the road. The cost for this repair was estimated at \$25,000 per mile
- Ditching: Constructing new roadside ditches on both sides of the road where there is currently no means of conveyance. This work can be done with an excavator or Gradall and is estimated to cost \$30,000 per mile.

We developed a project list for the next three years that will improve the majority of your system. We chose a timeline of three years because gravel roads can change significantly year to year and three years would be a good time to re-evaluate and develop a new project list. The project list and estimated costs developed can be found in attached Table 1. Maps showing projects proposed for the next three years are attached to this letter as well.

Estimated costs of repairs for the next three years are as follows:

Year	Estimated Road Project Cost
2024	\$73,900
2025	\$80,000
2026	\$47,850

Thank you for letting P&N develop your gravel road maintenance plan. Please let me know if you have any questions or if you need assistance creating a bid package for this work. I look forward to working with you in the future.

Sincerely,

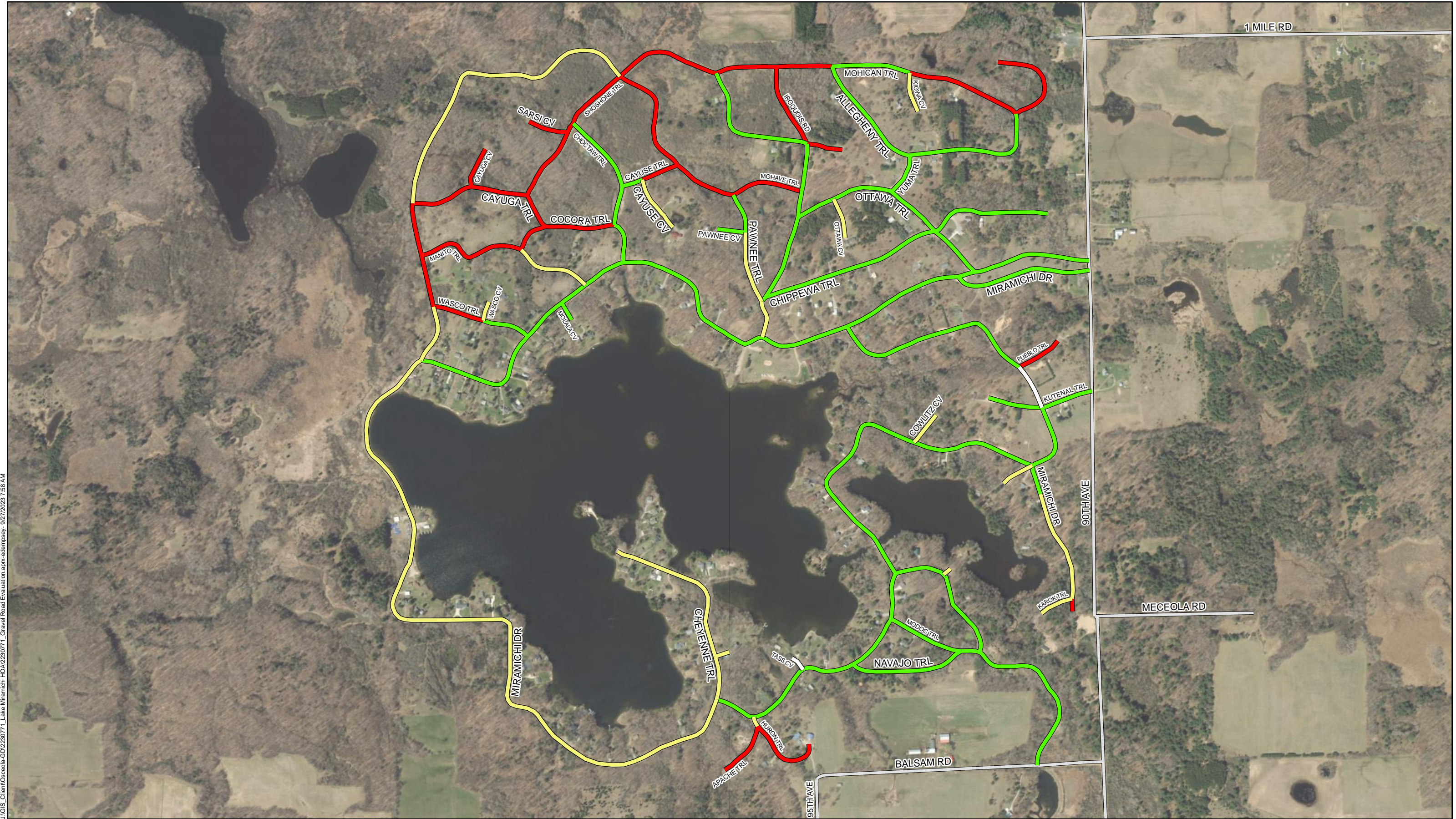
**Prein&Newhof**




Eric Seguin, P.E.

Enclosure(s): Ratings Maps, Proposed Project Table and Maps








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SCALE: 1" = 800'

LEGEND

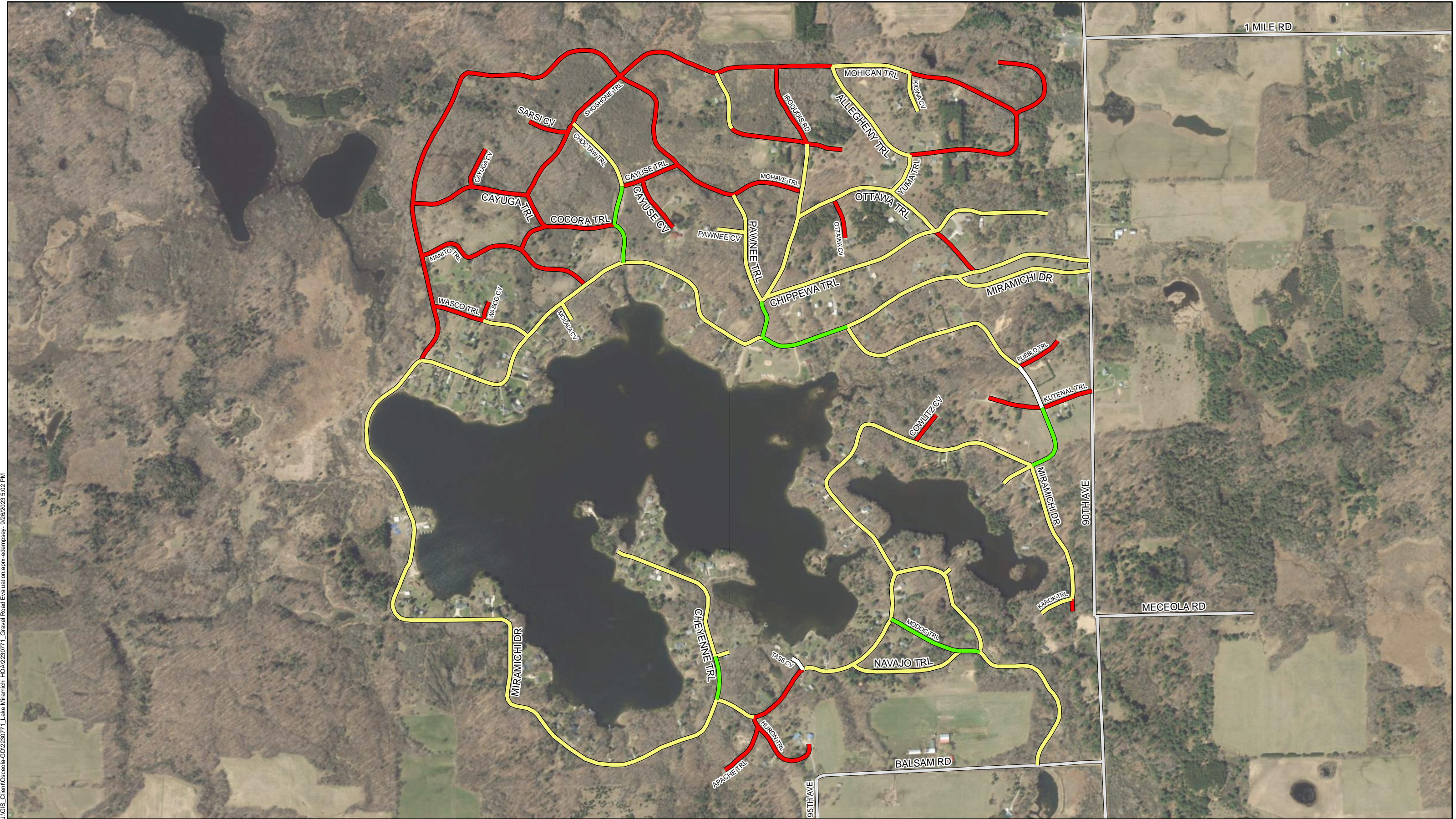
Surface Rating	— Paved Roads
 Good	
 Fair	
 Poor	

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**SURFACE RATINGS**

FIGURE 4  
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




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LEGEND

Drainage Rating	— Paved Roads
 Good	
 Fair	
 Poor	

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DRAINAGE RATING

FIGURE 2  
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LEGEND

Width Rating	— Paved Roads
 Good	
 Fair	
 Poor	

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WDTH RATINGS

FIGURE 3  
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LEGEND

Composite Rating	— Paved Roads
8-10 (Good)	
5-7 (Fair)	
1-4 (Poor)	

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COMPOSITE RATINGS

FIGURE 5  
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## Proposed Road Proejct List - 2024 to 2026

Road Name	From	To	Length (mi)	Repair	Year	Est Cost
Miramichi Dr	Pawnee Trl	Huron Trl	1.30	Gravel	2024	\$ 32,500.00
Miramichi Dr	Pawnee Trl	Huron Trl	1.30	Pull Berms	2024	\$ 13,000.00
Cheyenne Trl	Huron Trl	End	0.36	Gravel	2024	\$ 9,000.00
Miramichi Dr	Tass Ct	Balsam Rd	0.82	Pull Berms	2024	\$ 8,200.00
Miramichi Dr	Pawnee Trl	Pawnee Trl	0.76	Pull Berms	2024	\$ 7,600.00
Cheyenne Trl	Huron Trl	End	0.36	Pull Berms	2024	\$ 3,600.00
Pawnee Trl	Miramichi Dr	Cayuga Trl	0.29	Ditch	2025	\$ 8,700.00
Pawnee Trl	Miramichi Dr	Mohave Trl	0.26	Ditch	2025	\$ 7,800.00
Pawnee Trl	Miramichi Dr	Cayuga Trl	0.29	Gravel	2025	\$ 7,250.00
Miramichi Dr	90th Ave	Pontiac Trl	0.66	Pull Berms	2025	\$ 6,600.00
Pawnee Trl	Miramichi Dr	Mohave Trl	0.26	Gravel	2025	\$ 6,500.00
Miramichi Dr	Turnout by Upper Dar	Pontiac Trl	0.63	Pull Berms	2025	\$ 6,300.00
Miramichi Dr	Pontiac Trl	Karok Trl	0.25	Gravel	2025	\$ 6,250.00
Pontiac Trl	Miramichi Dr	Miramichi Dr	0.57	Pull Berms	2025	\$ 5,700.00
Chippewa Trl	Pawnee Trl	End	0.53	Pull Berms	2025	\$ 5,300.00
Ottawa Trl	Iroquois Rd	Miramichi Dr	0.38	Pull Berms	2025	\$ 3,800.00
Miramichi Dr	Huron Trl	Tass Ct	0.12	Ditch	2025	\$ 3,600.00
Miramichi Dr	Pontiac Trl	Karok Trl	0.25	Pull Berms	2025	\$ 2,500.00
Allegheny Trl	Yuma Trl	Mohican Trl	0.21	Pull Berms	2025	\$ 2,100.00
Navajo Trl	Miramichi Dr	Mococ Trl	0.20	Pull Berms	2025	\$ 2,000.00
Iroquois Rd	Chippewa Trl	Ottawa Trl	0.15	Pull Berms	2025	\$ 1,500.00
Mohican Trl	Allegheny Trl	Kiowa Ct	0.14	Pull Berms	2025	\$ 1,400.00
Yuma Trl	Ottawa Trl	Allegheny Trl	0.07	Pull Berms	2025	\$ 700.00
Pawnee Trl	Cayuga Trl	Shoshone Trl	0.55	Ditch	2026	\$ 16,500.00
Pawnee Trl	Cayuga Trl	Shoshone Trl	0.55	Gravel	2026	\$ 13,750.00
Pawnee Trl	Shoshone Trl	Mohave Trl	0.32	Ditch	2026	\$ 9,600.00
Pawnee Trl	Shoshone Trl	Mohave Trl	0.32	Gravel	2026	\$ 8,000.00