

MEMORANDUM



TO: MOBILITY COMMITTEE
FROM: JEFFREY HERCZEG, DIRECTOR OF PUBLIC WORKS
SUBJECT: 2025 ROAD REPORT REFRESH
DATE: MAY 15, 2025

In February 2021, the **Mobility Committee** (*fka. Roads Committee*) submitted the **Roads Committee Discoveries** document to the City Council for review, consideration, and acceptance. The Road Report created a baseline for staff and the City Council to evaluate the status and needs of all road and related projects.

Road Report Schedule

2020 – Draft Submitted to Roads Committee - **complete**
2021 – Presentation to City Council - **complete**
2023 – Refresh - **complete**
2025 – Refresh – we are here
2026 – Renew

The committee recommended a biennial refresh of the report to coincide with the PASER rating evaluations, and a renewal of the report every 5 years to capture and include improvements and modified plans. Thereby creating a perpetual “*living document*” to provide direction to staff and transparency to residents, at the discretion of City Council.

In February 2024, the first “Refresh” of the report was submitted to City Council for review and reference. The 2025 Refresh Executive summary is attached herein for consideration by the Mobility Committee.

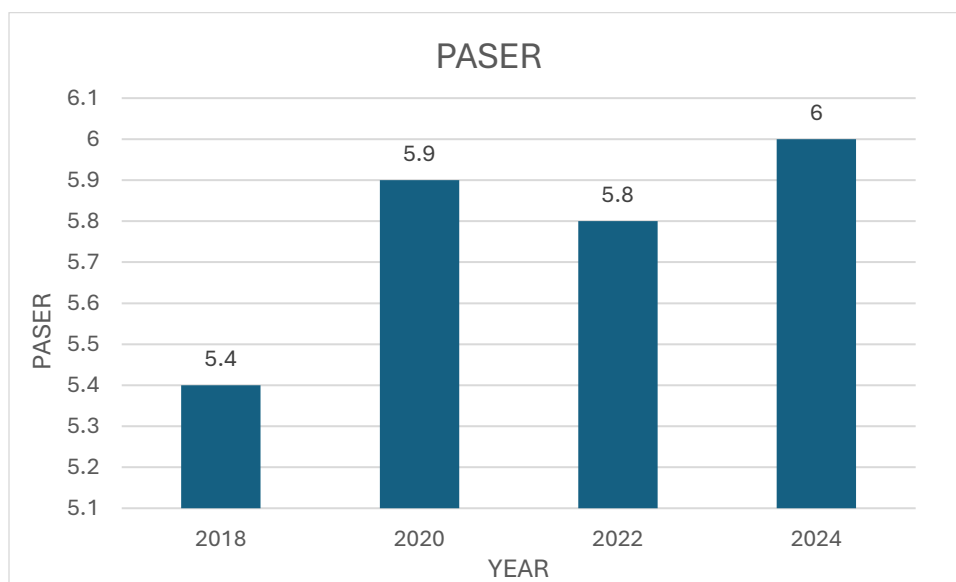
I. 2025 ROAD REPORT OVERALL EXECUTIVE SUMMARY

The data and recommendations in this report are based upon the road survey conducted by OHM in the fall of 2024. All public streets in the City were ranked “10” (excellent condition) through “1” (failed condition) based upon the PASER (Pavement And Surface Evaluation Rating) criteria formulated by the Wisconsin Transportation Information Center, which is widely used by municipalities and agencies throughout Michigan as is mandated by the State government (every two years 100% of the road network must be rated). PASER is performed biennially on even years in Novi.

Based on PASER ratings, visual inspections and assessment of the defects and potential pavement defects, staff uses road reports to generate a plan to maintain the city roads over the next 3–6-year period. While the PASER system is useful for a high-level overview of a road network, road projects must be analyzed individually for the appropriate project type to be selected. The road report is typically updated every three years (per the Road Committee Discoveries schedule). This report parallels a state required **transportation asset management plan** (TAMP), which is also updated every three years (completed 2022), but includes assets such as traffic signals, bridges, and culverts. The TAMP will be updated again at the end of 2025.

Within the city limits of Novi, approximately 198 centerline miles of roadway are owned and maintained by the City. Of these 198 miles, approximately 134 miles are asphalt or seal coated roadways (284 lane miles), concrete roads make up approximately 62 miles (124 lane miles) and the remaining 2 miles are gravel roads. Historical average PASER network rankings from previous road reports:

Historical Average PASER Rating for the City's Road Network



*updated PASER map attached

As evident by the percentages listed above, the City is currently maintaining approximately 51% of its road network at a "good" quality or above. This is an improvement of 9% from 2018. The continued goal of an asset management program **is not** to have all City roads in "excellent" and "good" condition, but rather a successful program focused on allocating the available funds in such a way to create a consistent attainable budget from year to year. There is no **"defectless road network"** and function (does the road operate?) should always prevail over aesthetic in terms of investment.

Table I
Percentage of Total (Majors & Locals) Roadway Network by PASER Rating

Year	Excellent (9-10)	Very Good (8)	Good (6-7)	Fair (4-5)	Poor (1-3)
2018	7%	8%	27%	47%	11%
2020	12%	9%	32%	40%	7%
2022	12%	7%	28%	44%	9%
2024	16%	11%	24%	42%	7%

As shown above in Table I, a portion of the City's Road network (7% - which is 4% less than 2018) has already degraded to a point where there is no option but to reconstruct those roads. Once a road has fallen into this category, there is no lasting cost-effective repair for these roads other than to be completely reconstructed. Temporary fixes can be done to make the road traversable, however they will not perform and will continue to be difficult to maintain until reconstructed. The total mileage of concrete in this portion is approximately 1 mile (at an estimated cost of \$2 million). The remaining 13 miles are asphalt (at a cost of \$25 million). The City has made significant progress on the "poor" category specifically since the introduction of the Municipal Road tax levy (1.5 mills subject to Headlee rollback). Since 2012, over ~\$44M has been invested in neighborhood roads (see Table II below):

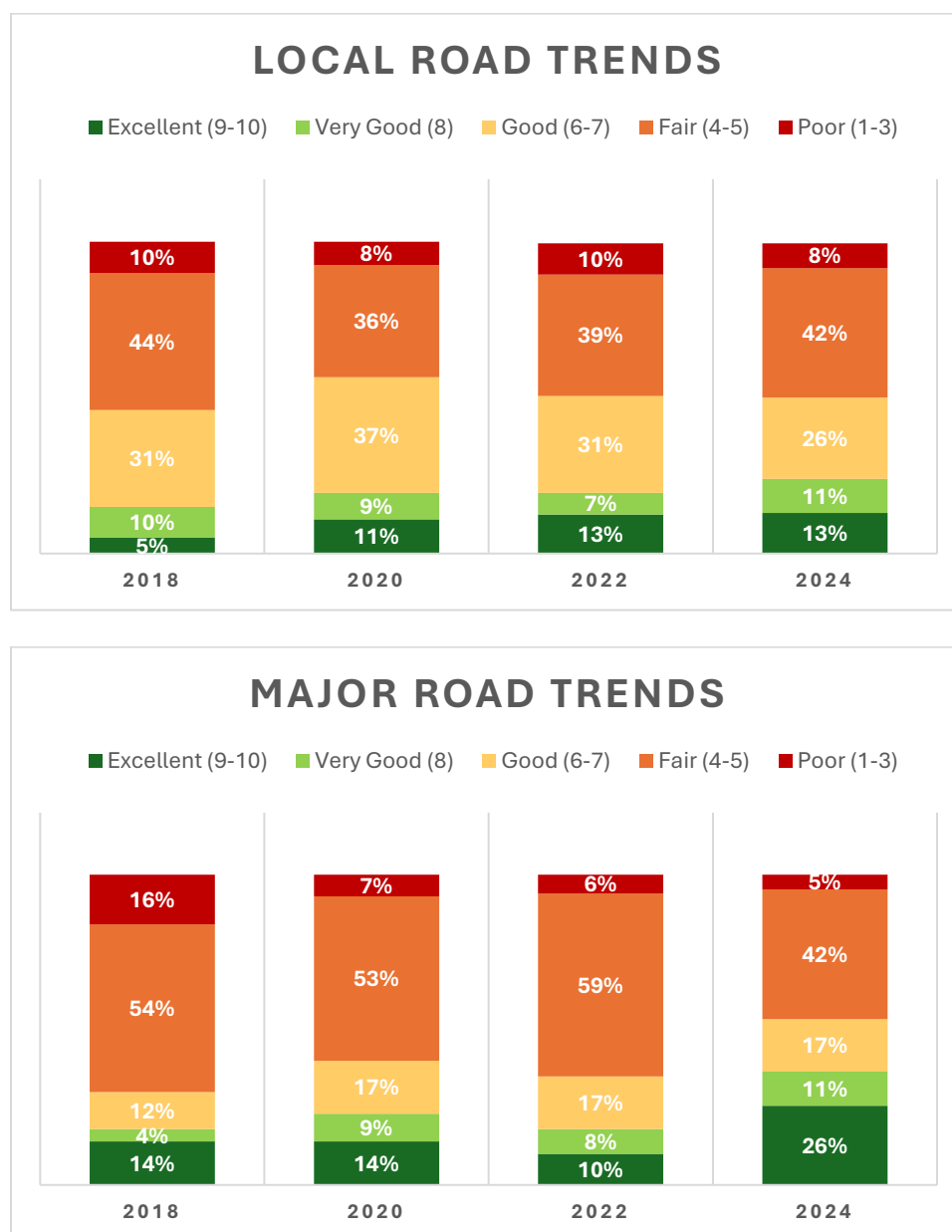
Table II
Construction Costs in Neighborhood Roads Programs (NRP, CPR & CPM)

Year	NRP+CPR+CPM Costs	Program	Notes
2012	\$1,181,611.00	NRP	Additional road millage passed
2013	\$1,632,271.00	NRP	Collection of millage begins on winter tax
2014	\$1,429,864.00	NRP	Projects planned in CIP with millage collection
2015	\$4,010,101.00	NRP	Project implemented with millage funds
2016	\$2,128,387.00	NRP	
2017	\$3,236,738.00	NRP+CPR	Initiate Concrete Panel Repair Program (CPR)
2018	\$3,563,860.94	NRP+CPR	
2019	\$3,423,724.00	NRP+CPR	
2020	\$4,998,525.00	NRP+CPR	Includes Cranbrooke Phase 1
2021	\$7,961,140.00	NRP	CPM deferred to NRP (COVID, 30% unit price increase) Includes Cranbrooke Phase 2
2022	\$3,922,463.00	NRP	CPM deferred to NRP (continued inflation and higher unit costs)
2023	\$4,025,633.00	NRP+CPM	CPM initiated ~\$1M
2024	\$2,964,628.00	NRP	2024 CPM delayed due to contractor availability
	\$44,478,946.94	Total Construction Costs from 2012 to 2024	
2025	\$5,500,000.00	NRP+CPM	FY 2025/26 Budget 4.5M NRP/Village Wood + 1M CPM
2026	\$5,000,000.00	NRP+CPM	FY 2026/27 Budget 4.5M NRP + 500K CPM
2027	\$6,500,000.00	NRP+CPM	FY 2027/28 Budget 6M NRP/Willowbrook + 500K CPM

NRP: Neighborhood Road Program, CPR: Concrete Panel Repair, CPM: Capital Preventative Maintenance

Just above the roads that are currently considered “failing”, almost 40% of the City’s Road network is in the “fair” range with much of the mileage being asphalt. The total centerline mileage of asphalt pavement in the “fair” range is approximately 54.5 miles (with an estimated cost of almost \$65 million if left untouched until reconstruction is needed). The concrete roads in the “fair” range are 24 miles long (approximately \$48 million dollars). Table II data creates a reasonable curve weighted towards “fair” indicating investment should be concentrated on moving the 40% of “fair” to “very good and good”.

Roads typically remain in “fair” range for 3-8 years, depending on surface type, drainage, and routine maintenance. It is important to note that no two roads will deteriorate at the same rate. Asphalt roads tend to age more quickly than concrete, but even two asphalt roads with the same cross section will degrade at different speeds. Traffic, drainage, and underlying soil conditions are only some of the factors that impact this. Because of this, a road that may have been a great candidate for a low cost, life extending treatment one year may fall out of that category the next. Trends from 2018 – 2024 below:



The 2020 road report provided an analysis of funding levels, and the anticipated impact those different funding levels would have on the average PASER rating. The anticipated rating was based upon an assumption that a mix of fixes would be used, from routine capital preventative maintenance, to rehabilitation, and finally reconstruction. Since 2020 the City has been spending ~\$3M on maintenance activities performed in-house by DPW or by contracted services (excluding winter maintenance). In addition to the maintenance spending, another \$6M to \$8M per year has been spent on heavy rehabilitation and reconstruction (Table III), with the **funds primarily being weighted towards reconstruction**. The level of funding is consistent with the City's steady increase in PASER average network rating from 2018 (5.4) to 2024 (6.0).

Table III
History of Capital Outlay & Operating Expense Projects

Fund	2019/20	2020/21	2021/22	2022/23	2023/24
202 Majors Recon	1,577,285	372,739	341,638	1,555,915	4,743,335
202 Majors Maintenance	1,321,017	1,325,752	1,431,444	1,582,609	1,068,746
203 Locals Recon	5,241,331	8,475,043	7,328,412	6,151,907	2,647,592
203 Locals Maintenance	1,183,134	1,276,487	1,397,659	1,823,378	2,402,508
Totals (Majors & Locals)	9,322,768	11,450,020	10,499,154	11,113,809	10,862,181

However, the focus of the 2020 report highlighted the need for an annual program of **Capital Preventative Maintenance (CPM)**. The CPM was initiated in the 2023 construction season, with the recommended additional **~\$1M/year**.

Further complicating the network needs are funding the major road projects (Table III). These are some of the lowest rated roads (approximately 66% of majors are rated fair or poor), the most expensive to recon/rehab, and are tied to federal dollars with specific fiscal years of obligation (see below Table IV). The estimates for federal aid projects are done 3 to 5 years in advance and almost always change in scope during design to leverage the funding. This means that projects cost more by the time they are constructed.

Table IV
Major Road Projects Federal Funding

Project	Obligation Fiscal Year	Limits	Federal Share	Novi Share
Taft Rd/RAB	2022	South City limits to 10 Mile Rd	\$ 3.0M	\$ 1.6M
Wixom Rd	2023	S of Grand River Ave to Ten Mile	\$ 1.5M	\$ 3.2M
Meadowbrook Rd*	2024	10 Mile Rd to 11 Mile Rd	\$ 900K	\$ 500K
9 Mile Rd*	2024	Meadowbrook Rd to Haggerty Rd	\$ 1.0M	\$ 1.5M
13 Mile Rd**	2025	M-5 to Haggerty Rd	\$ 500K	\$ 500K
West Park Dr**	2025	12 Mile Rd to Pontiac Trail	\$1.8M	\$3.2M
		Total	\$ 8.7M	\$ 10.5M

*estimated costs, construction has not occurred

**estimated costs, bid this year

Overall, it is important to note the amount spent per year and the corresponding change in ratings is based upon an ideal mix of fixes from preventive maintenance to rehabilitations to reconstructions. For example, if the City were to spend solely \$8 million annually on reconstructions with no money spent on maintenance, the average condition of the roads would decrease. **Due to the cost of reconstruction, it is critical to perform maintenance periodically on the roads prior to the asset degrading to the point that a more costly fix is required.**

While the continued upward trajectory of the overall network rating is not sustainable with the current funding analyzed herein, the current average condition rating of **6.0 is maintainable**. Even with no additional funding, the current major road projects in the queue and a combination of fixes in NRP/CPM would result in little change of the average network rating. Maintaining a level between **2018 (5.4)** and current rating of **6.0 (2024)** is still performing above or on par with regional comparable community's road networks.

Recommendation

The **Mobility Committee** should review the information presented in this report (and previous reports) and provide feedback or questions for staff. The next **TAMP** submission will be in fall/winter of 2025 and the Road Report will be renewed in 2026.

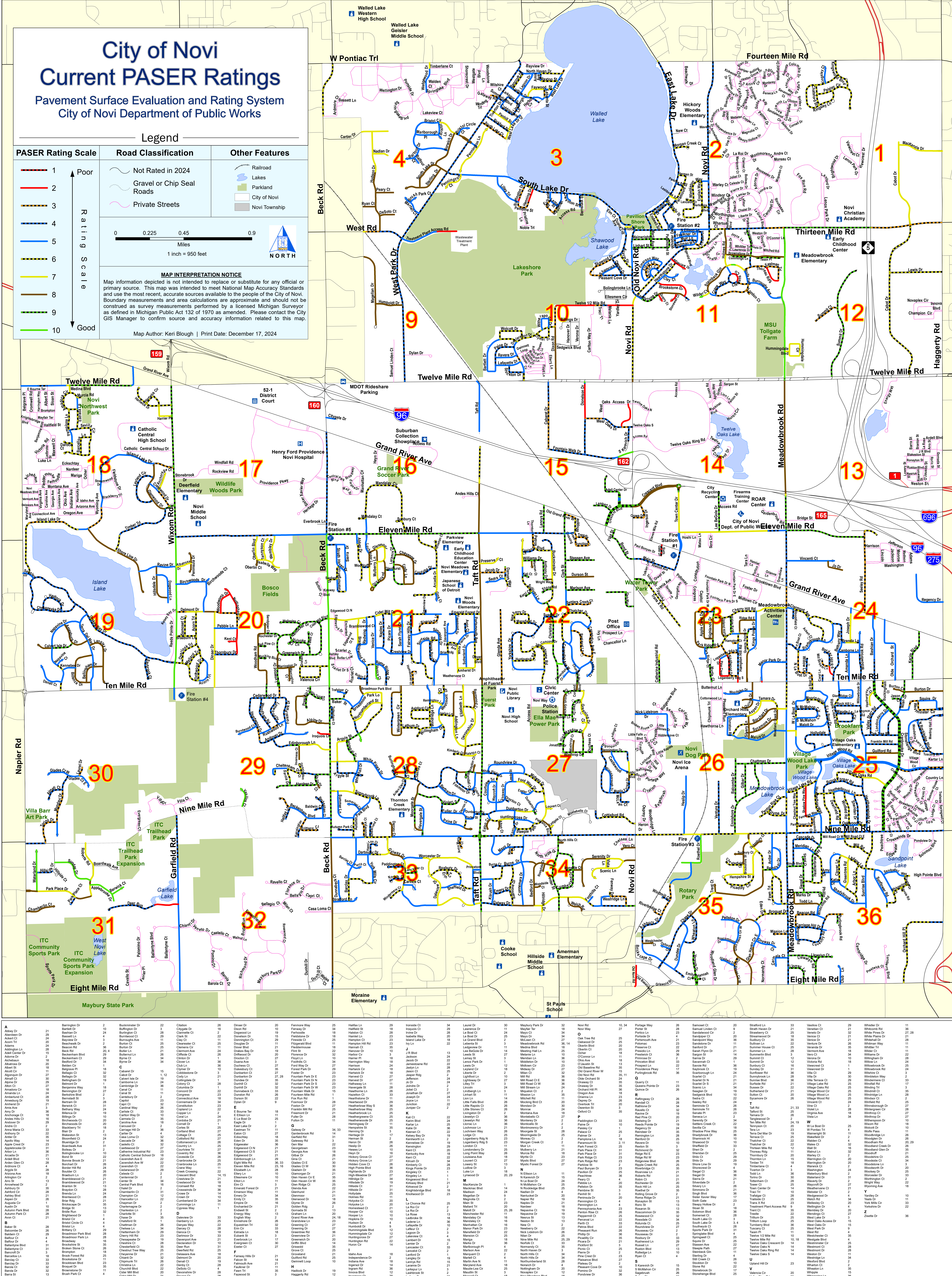
City of Novi

Current PASER Ratings

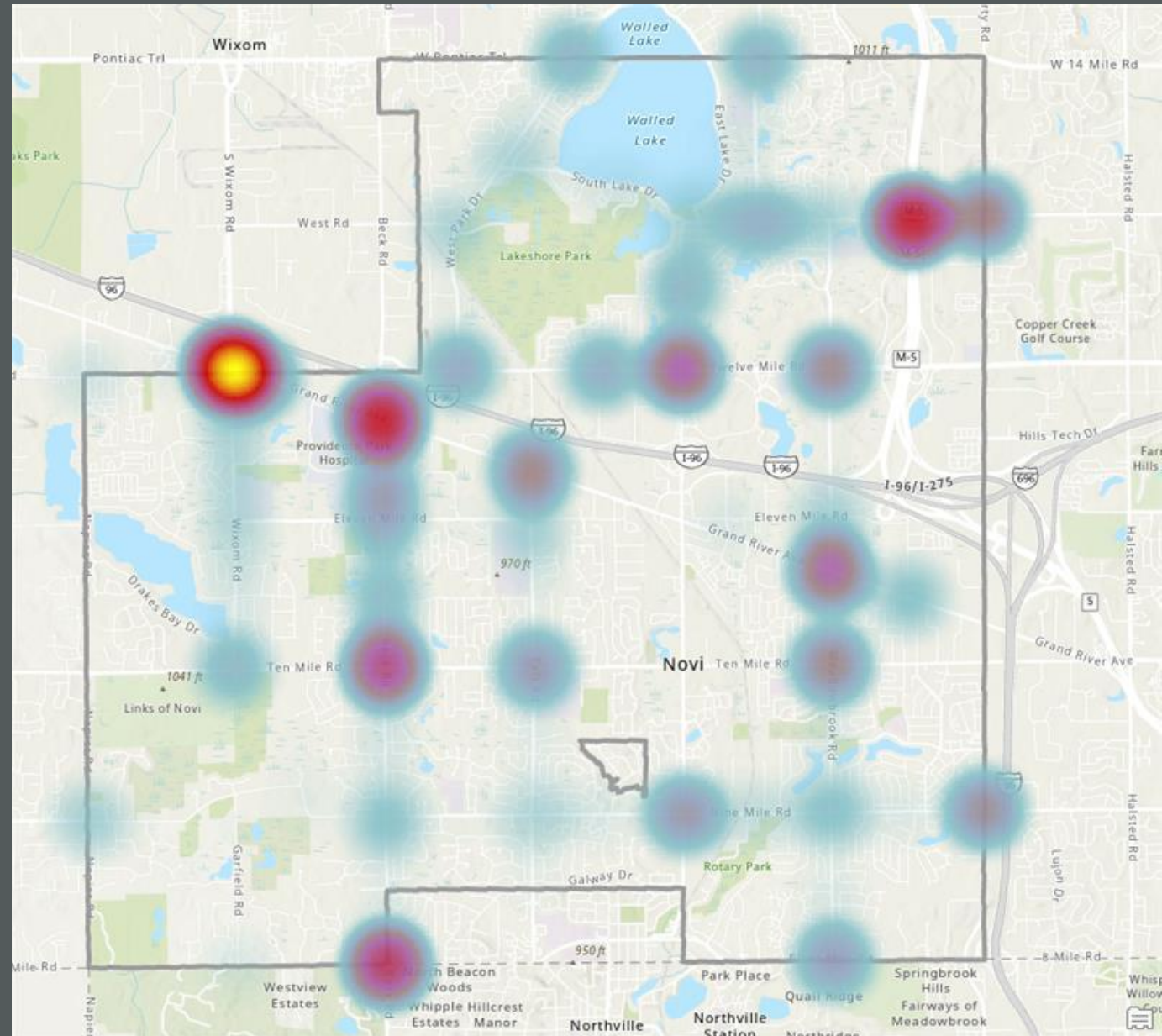
Pavement Surface Evaluation and Rating System
City of Novi Department of Public Works

Legend

PASER Rating Scale	Road Classification	Other Features
1 2 3 4 5 6 7 8 9 10	▲ Poor Not Rated in 2024 Gravel or Chip Seal Roads Private Streets 0 0.225 0.45 0.9 Miles 1 inch = 950 feet	Railroad Lakes Parkland City of Novi Novi Township
MAP INTERPRETATION NOTICE Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map. Map Author: Keri Blough Print Date: December 17, 2024		



Crashes (2022-2024)



Deliverables

1

Safety
Action Plan

2

Engagement &
Outreach Meetings

3

Years of
Crash Data

Deliverables

6

Priority
Locations



8

Systemic
Locations



Illustrative
Renderings

Opinion of
Construction
Cost



Technical
Memo



Crash Reduction
Factor
Recommendation



Crash
Analysis

12

High Risk
Locations



Priority Lists

Traffic
Improvement
Association (TIA)

High Severity

Vulnerable Road
Users

Target Crash
Type

Total Crash

High Severity
Crash Rate

Total Crash Rate

Serious Injuries
by Equity Area

Crashes Near
Schools



Timeline

Winter 24-25

- Planning Structure
- Safety Analysis
- Policy & Process Changes

Spring 25

- Engagement & Collaboration
- Equity Considerations
- Strategy & Project Selection
- Planning Structure
- Policy & Process Changes

Summer 25

- Safety Analysis
- Equity Considerations

Fall 25

- Engagement & Collaboration
- Strategy & Project Selection

