

VILLAGE OF HALES CORNERS

2018-2022 PAVEMENT MANAGEMENT PLAN



Michael J. Martin, PE, PLS
Director of Public Works
February 15, 2018

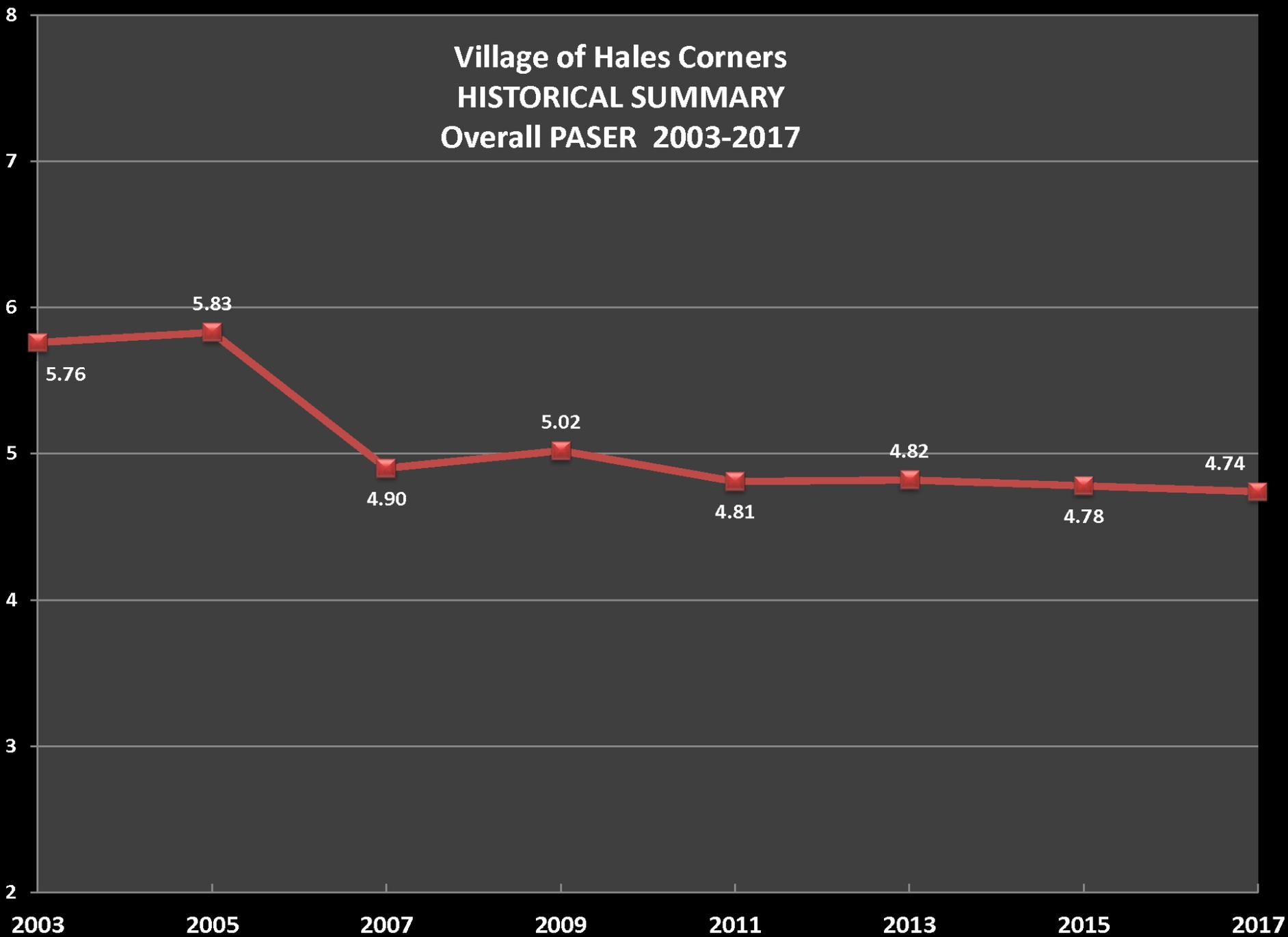
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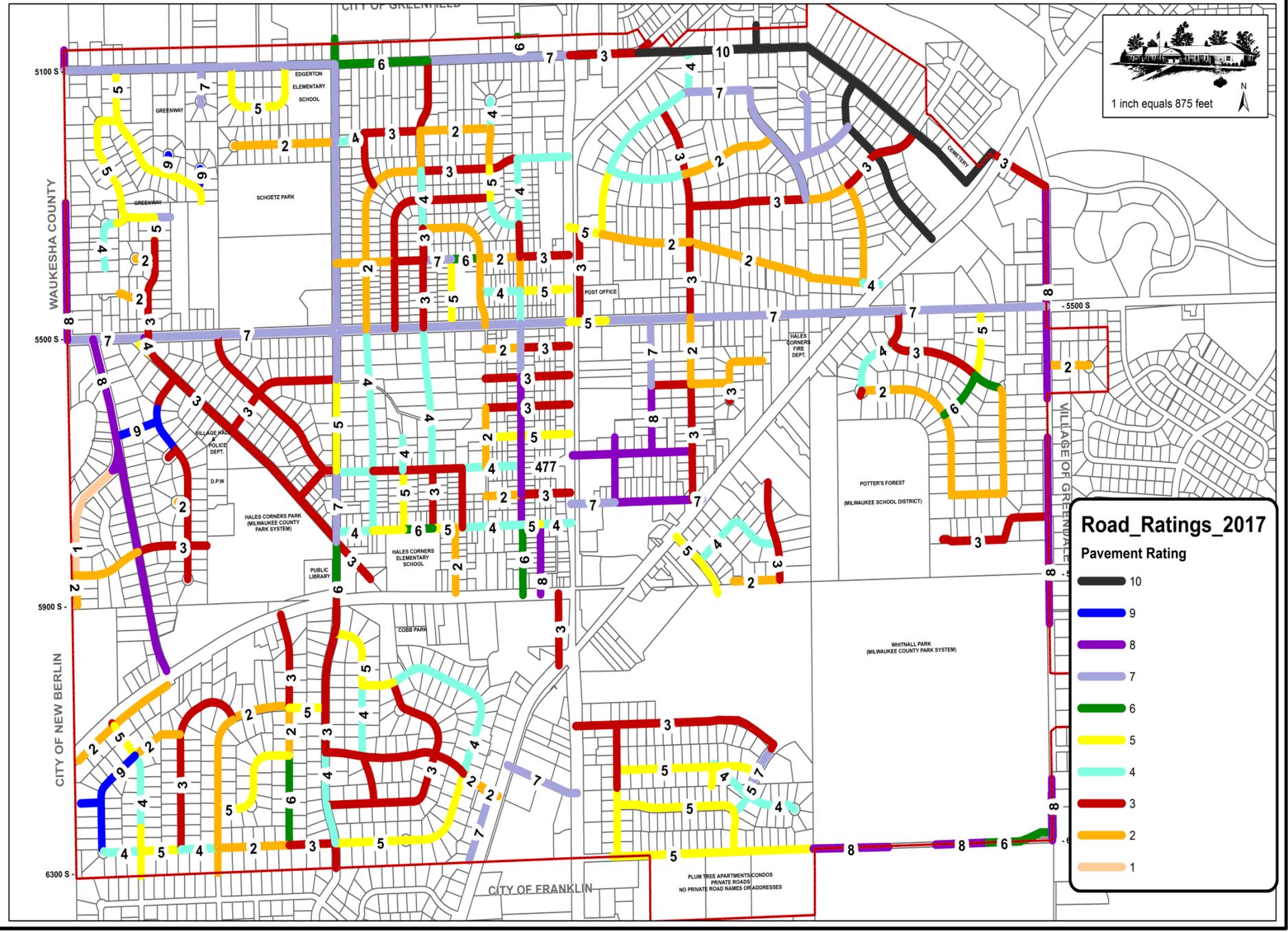
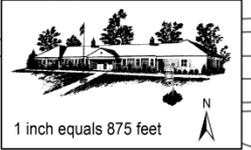
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1. 2017 PAVEMENT CONDITION

- **Per State Statute, Municipalities SHALL provide a condition rating report on their local roads every two years (odd years)**
- **PAvement Surface Evaluation and Rating**
- **PASER quickly and inexpensively provides a basis for comparing the quality of roads and aids in the prioritization and selection process**

Village of Hales Corners
HISTORICAL SUMMARY
Overall PASER 2003-2017





Road_Ratings_2017



WAUKESHA COUNTY

CITY OF NEW BERLIN

CITY OF GREENFIELD

CITY OF FRANKLIN

5100 S
5500 S
5900 S
6300 S

-5500 S

EDGERTON
ELEMENTARY
SCHOOL

SCHOETZ PARK

POST OFFICE

HALES CORNERS
FIRE DEPT.

VILLAGE MAINT.
POLICE DEPT.

HALES CORNERS PARK
(MILWAUKEE COUNTY
PARK SYSTEM)

PUBLIC
LIBRARY

HALES CORNERS
ELEMENTARY
SCHOOL

COBB PARK

POTTER'S FOREST
(MILWAUKEE SCHOOL DISTRICT)

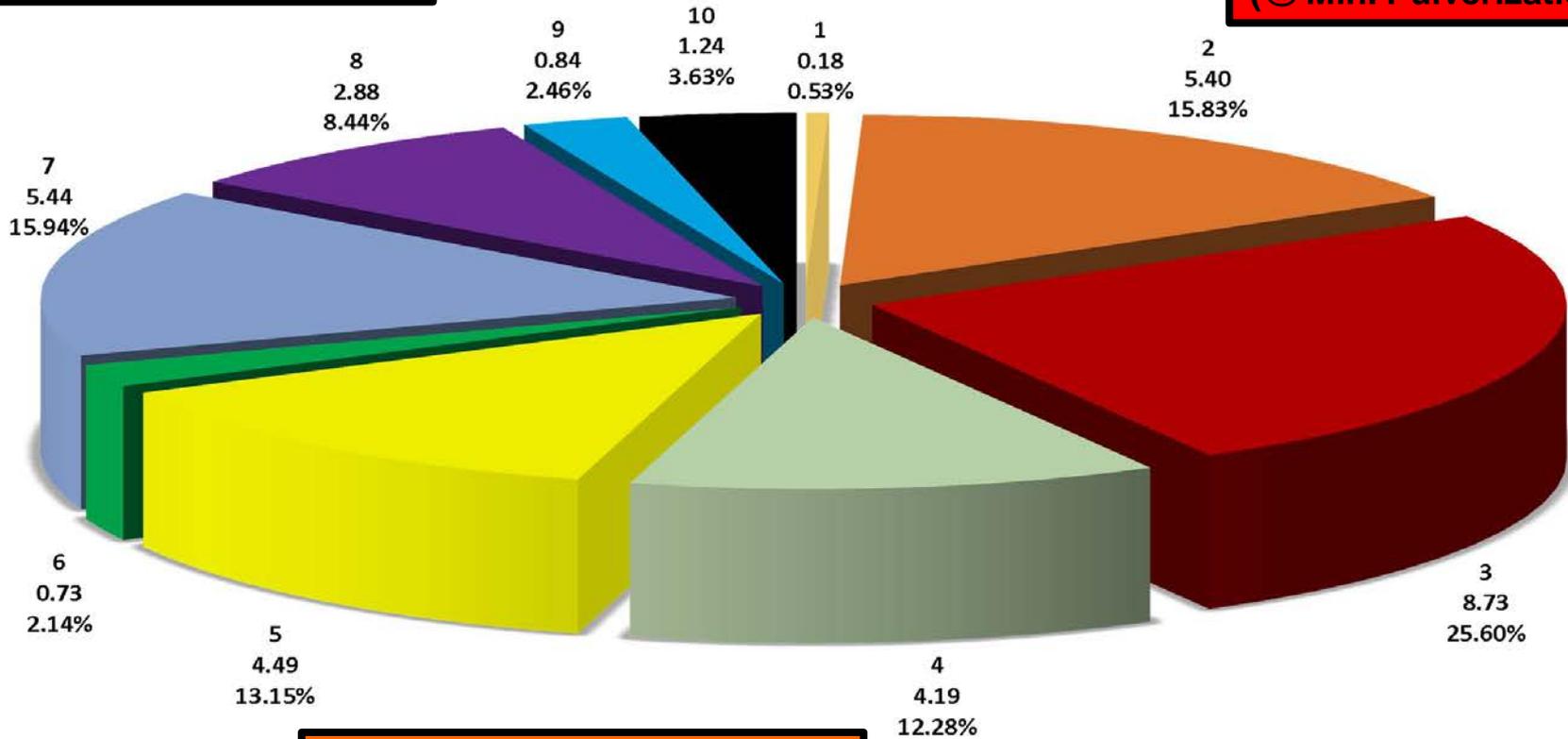
WHITNALL PARK
(MILWAUKEE COUNTY PARK SYSTEM)

PLUM TREE APARTMENTS/CONDOS
PRIVATE ROADS
NO PRIVATE ROAD NAMES OR ADDRESSES

2017 PASER

7 - 10
10.40 Miles (30.5 %)
[8.85 miles (25.9%)]
(Maintenance Only)

1 - 3
14.31 Miles (41.9 %)
[15.41 Miles (45.2%)]
Reconstruction
(@ Min. Pulverization)



4 - 6
9.41 Miles (27.6 %)
[9.87 Miles (28.9%)]
Rehabilitation
(Mill & Overlay or
Pulverization)

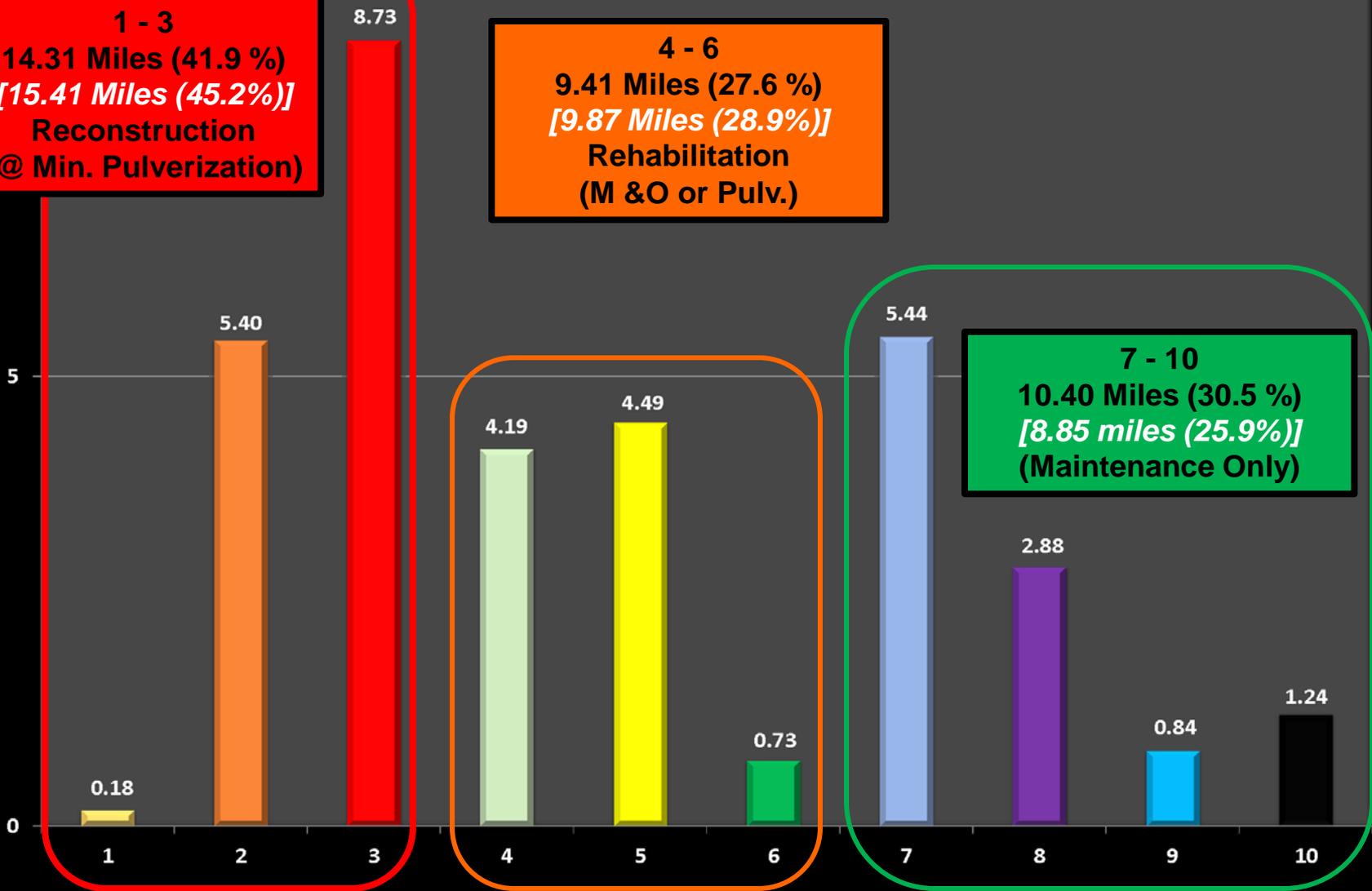
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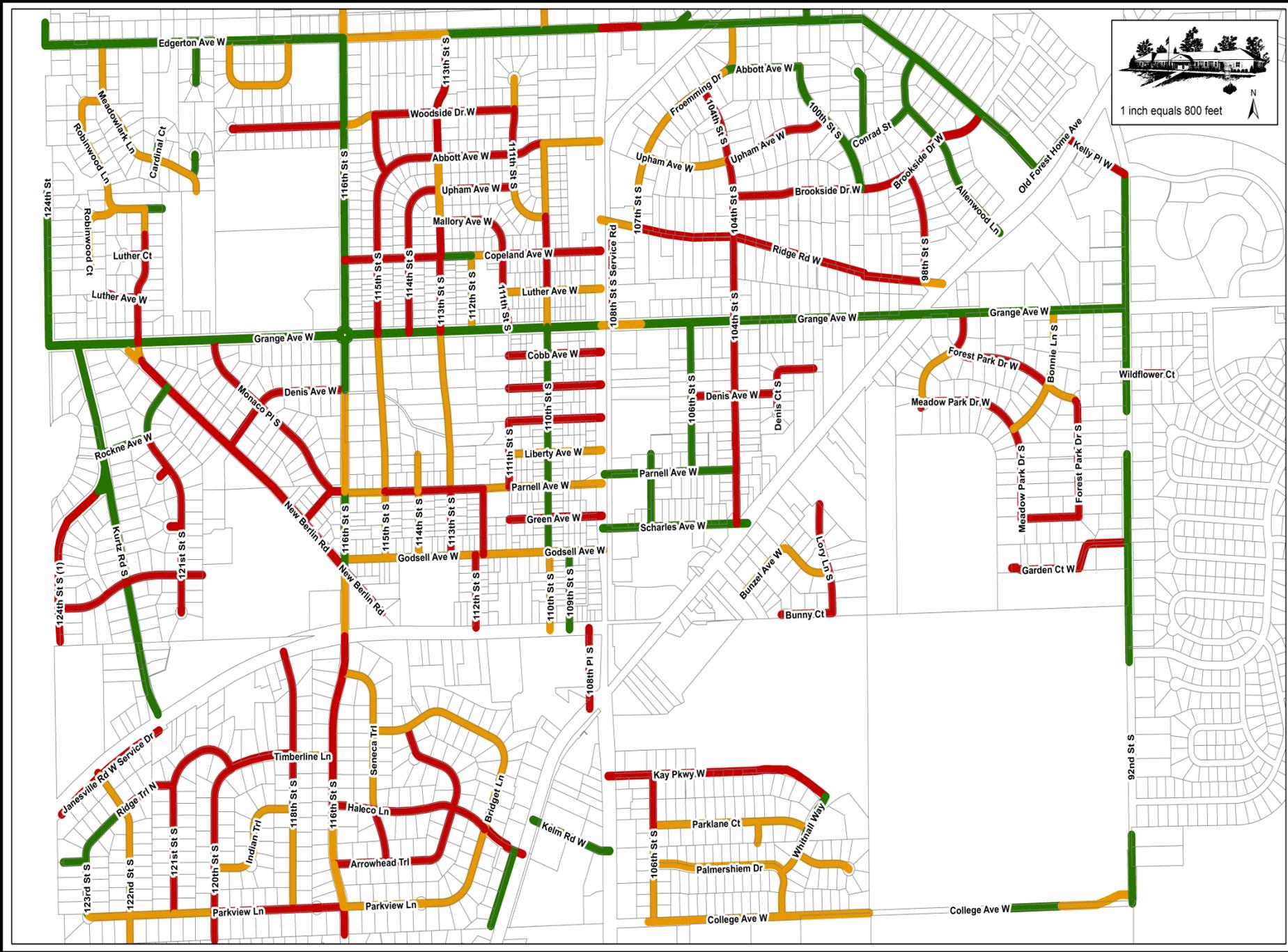
2017 PASER RATINGS

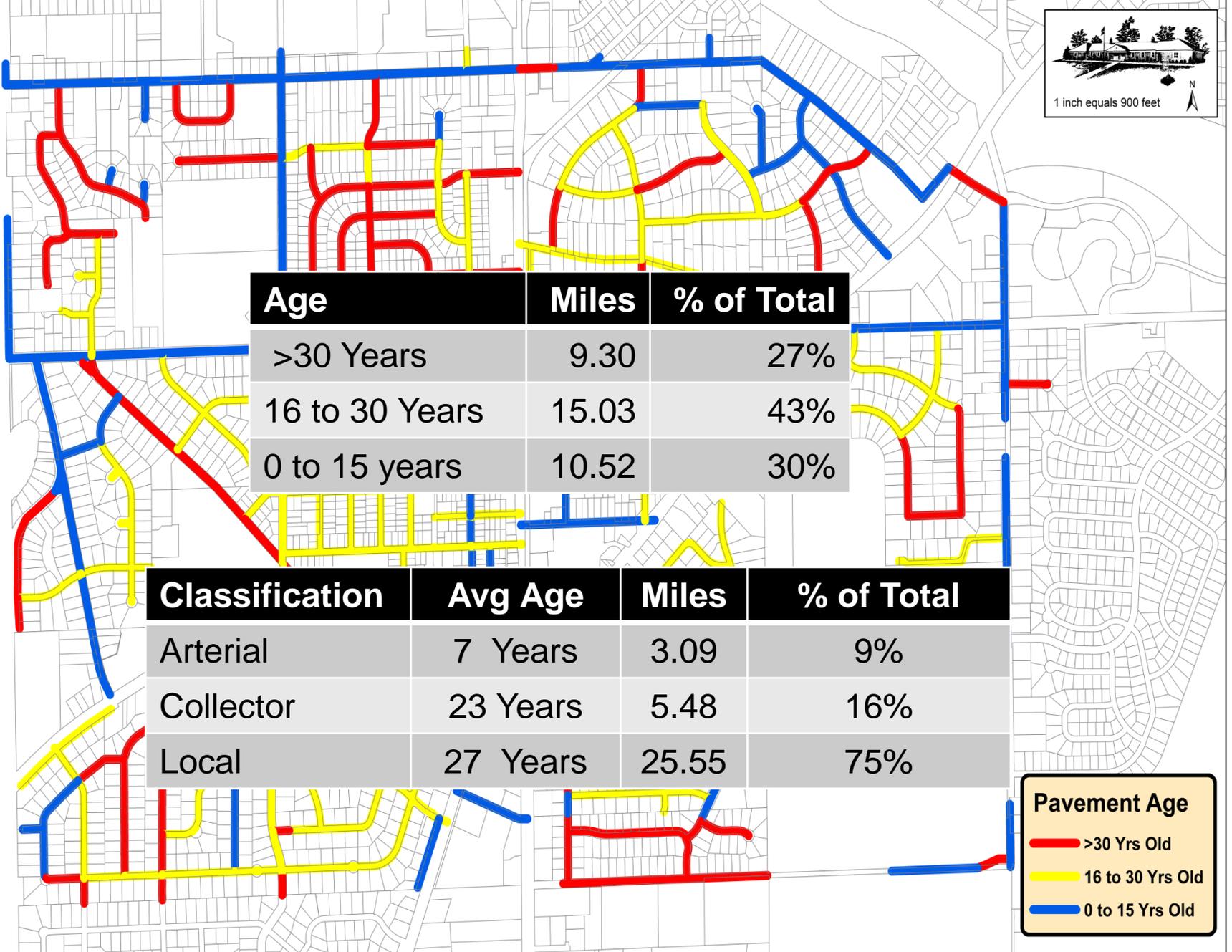
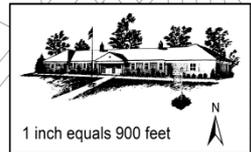
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10.40 Miles (30.5 %)
[8.85 miles (25.9%)
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Age	Miles	% of Total
>30 Years	9.30	27%
16 to 30 Years	15.03	43%
0 to 15 years	10.52	30%

Classification	Avg Age	Miles	% of Total
Arterial	7 Years	3.09	9%
Collector	23 Years	5.48	16%
Local	27 Years	25.55	75%

Pavement Age

- >30 Yrs Old
- 16 to 30 Yrs Old
- 0 to 15 Yrs Old

2. FUNCTIONAL CLASSIFICATION

- The Federal Highway Administration provides a functional classification for all roads based primarily on use and traffic volume
- Village roads are one of three (3) functional classifications:

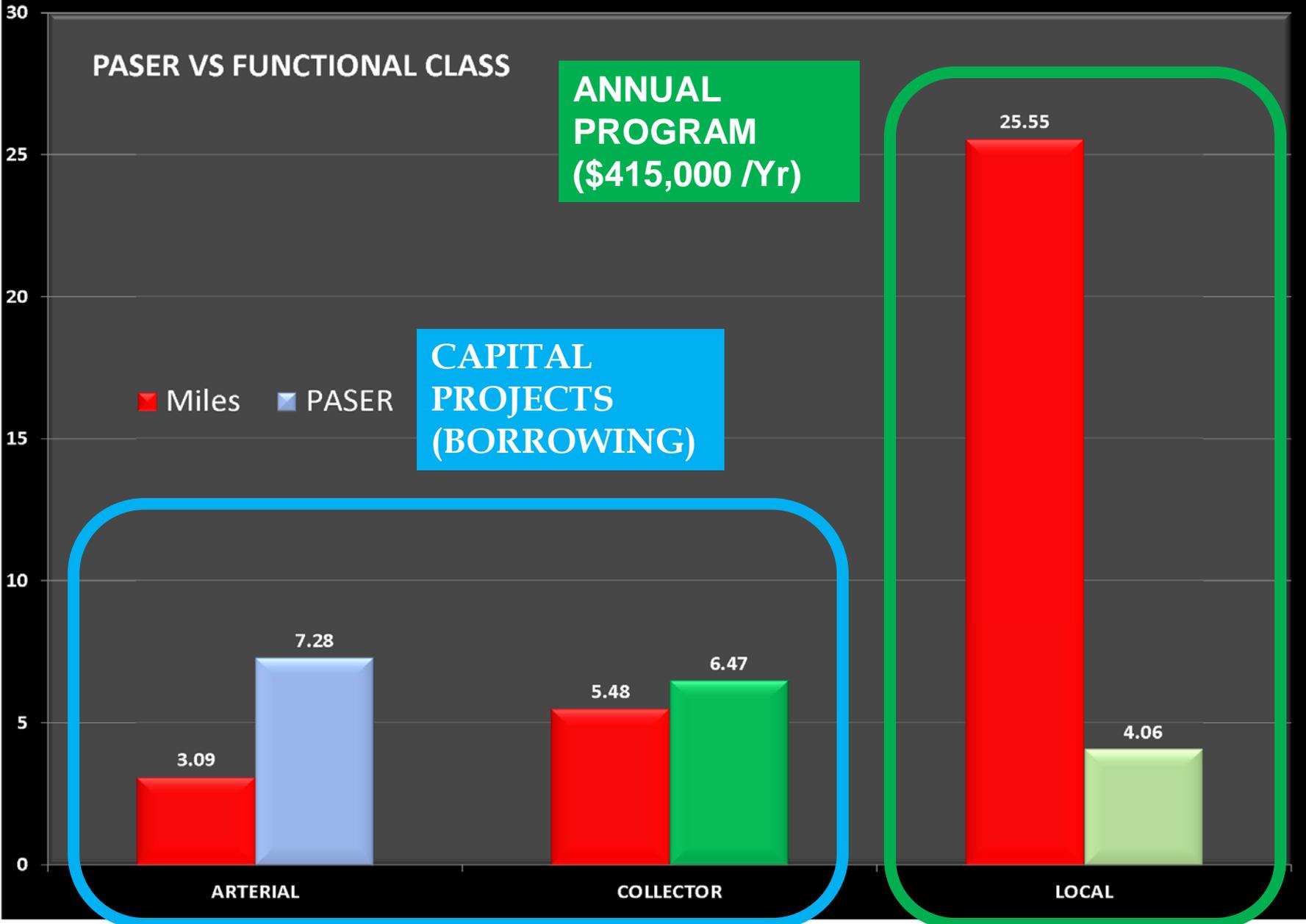
ARTERIAL, COLLECTOR, and LOCAL

PASER VS FUNCTIONAL CLASS

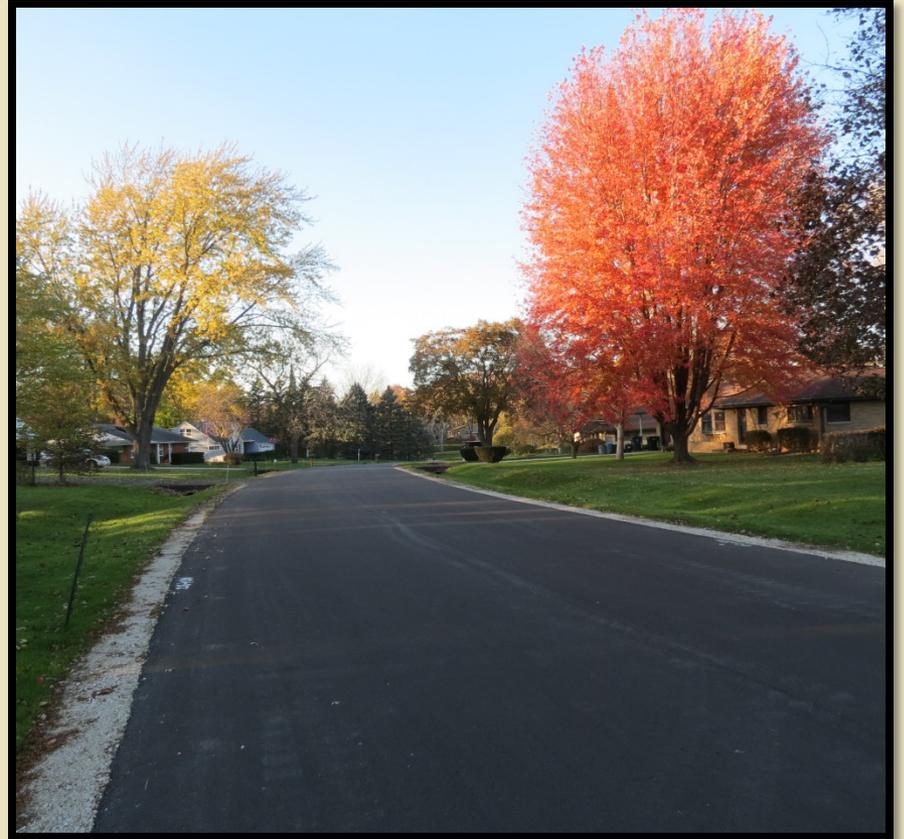
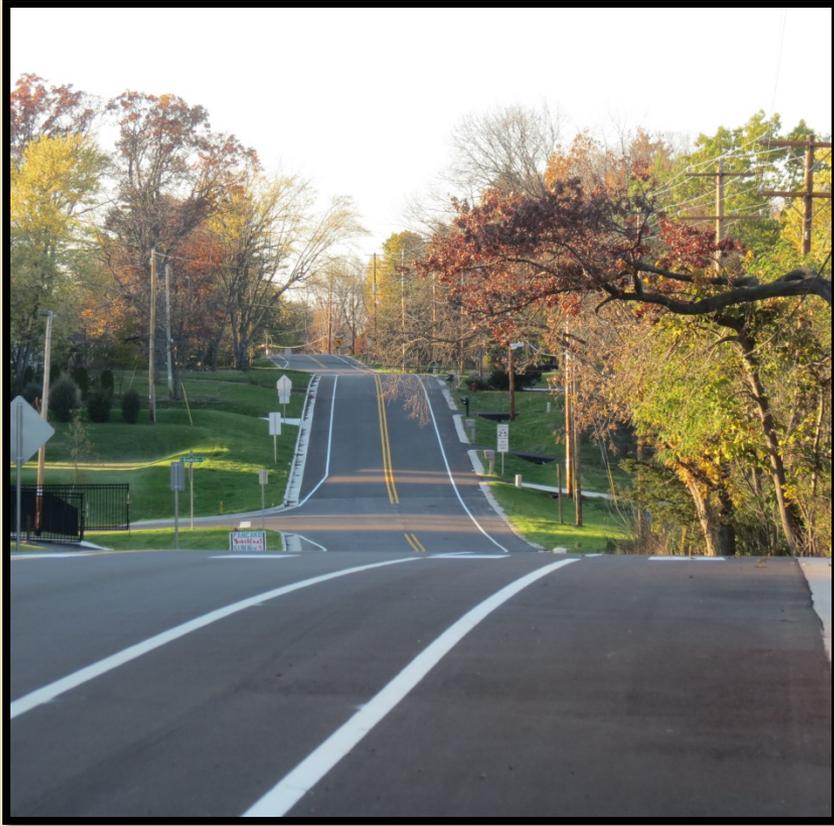
**ANNUAL PROGRAM
(\$415,000 /Yr)**

■ Miles ■ PASER

**CAPITAL PROJECTS
(BORROWING)**



3. 2018-2022 PAVEMENT MANAGEMENT PLAN



3.2 PROJECT CREATION

- **346 road segments combined into 122 Projects**
- **Segments combined by similar attributes:**
 - **PASER Rating**
 - **Pavement Management Priority Classification (PMPC)**
 - **Pavement Type (Asphalt or Concrete)**
 - **Engineering Judgement**
- **For proposed projects with dissimilar attributes; weighted values are calculated**
- **Average Project Length = 1,508 Feet**

3.3 PROJECT COST ESTIMATION

- Review past projects and determine an Average Total Cost (\$\Sq. Yd.) including Design, Construction, & Construction Inspection

- Reconstruction/Pulverization
 - \$109/Sq. Yd. (PASER 3 or Less)

- Rehabilitation (Mill & Overlay)
 - \$40/Sq. Yd. (PASER 4, 5, & 6)
 - **NO DRAINAGE IMPROVEMENTS**

- Maintenance
 - Crack Filling: \$2/Lineal Foot (Roads rated 7 or Greater)

 - Infrared Manhole Repairs: \$200 per Manhole (All Streets As Needed)

3.3 PROJECT COST ESTIMATION

Estimated Backlog of Local Road Repairs

REPAIR STRATEGY	MILES	ESTIMATED COST
Reconstruction (1-3)	14.31	\$21.5 Million
Rehabilitation (4-6)	9.41	\$4.3 Million
Crack Filling (≥ 7)	N/A	\$48,000
Infrared Manhole	N/A	\$6,000

- Reconstruction & Rehabilitation Costs above **DO NOT INCLUDE** Arterial or Collector Streets
- At current annual funding level (\$415,000) it will take **63** Years (Does not account for pavement deterioration)

3.4 PROJECT PRIORITIZATION & SELECTION



3.4 PROJECT PRIORITIZATION & SELECTION

- Selection Criteria
 - **AVAILABLE BUDGET**
 - PASER Rating
 - Pavement Management Priority Classification (PMPC)
 - Major (Arterials & Collectors ONLY)
 - Minor
 - Local
 - Low Use
 - Reviewed and approved by PWC
 - Engineering Judgement
 - Infrastructure
 - Sanitary Sewer
 - Storm Sewer
 - Water Main (Public & Private)

3.4 PROJECT PRIORITIZATION & SELECTION

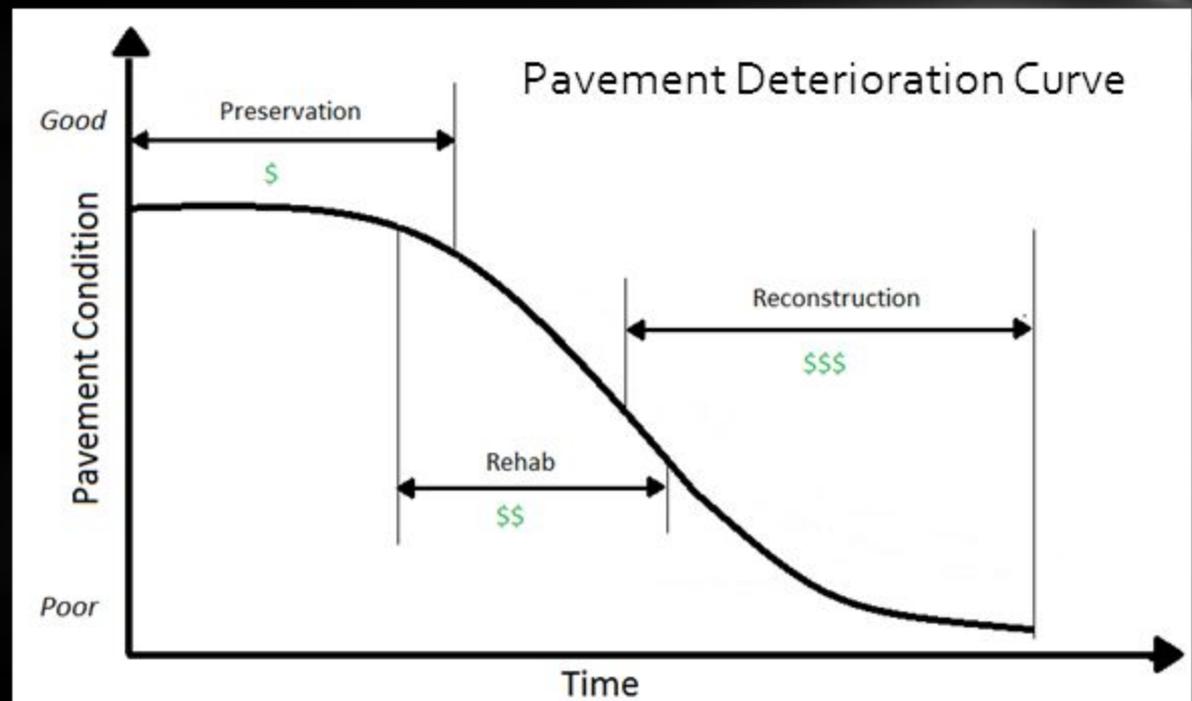
- **Selection Criteria (Continued)**
 - **Special Events**
 - **Parade Routes**
 - **Fun Runs**
 - **Pedestrian or Bicycle Use**
 - **Elections**
 - **Crash History**
 - ***Influence* of WisDOT, Milwaukee County, or other Municipalities**
 - **DPW Maintenance History**
 - **Roads requiring extensive patching or potholes**
 - **Since 2016 DPW has deposited 181 tons of HMA consuming 1873 man-hours (16% of available hours)**

LOCAL ROAD PRIORITY TABLE

PRIORITY	PMPC	PASER
1	Minor	6
2	Minor	5
3	Minor	4
4	Local	6
5	Minor	3
6	Minor	2
7	Local	5
8	Minor	1
9	Local	4
10	Local	3
11	Local	2
12	Local	1
13	Low Use	6-1

Pavement Management Basics

- Avoid a “worst first” mentality
 - Fewer miles would get done spending large amounts of money reconstructing poor pavements
 - More miles can be rehabbed for the same budget with roads that are in fair condition
- We need a mix of preservation, rehabilitation, and reconstruction to keep the overall road network in good condition



A pavement needing reconstruction is not going to get much worse...a pavement in fair condition though, can quickly deteriorate into poor

3.5 2018-2022 LOCAL PROGRAM

IN	FROM	TO	REPAIR STRATEGY	YEAR	EST. COST
113th	Godsell	Grange	Rehab	2018	\$212,000
122nd	Parkview	Janesville	Rehab	2018	\$172,000
124th	Kurtz	Terminus	Recon	2019	\$435,000
Luther	111th	108th	Rehab	2020	\$80,000
Seneca	Arrowhead	116th	Rehab	2020	\$150,000
Parkview	123rd	120th	Rehab	2021	\$137,000
98th	Brookside	Ridge	Recon	2021	\$364,000
104th	Scharles	Grange	Recon	2022	\$543,000
				TOTAL	\$2,093,000
<div style="border: 2px solid black; padding: 5px;"> 5 Rehab Projects: 7,293 feet: \$751,000 3 Recon Projects: 4,294 feet: \$1,342,000 </div>				5-YR BUDGET	\$2,109,000
				BALANCE	\$16,000



2018-2022 Local Road Program

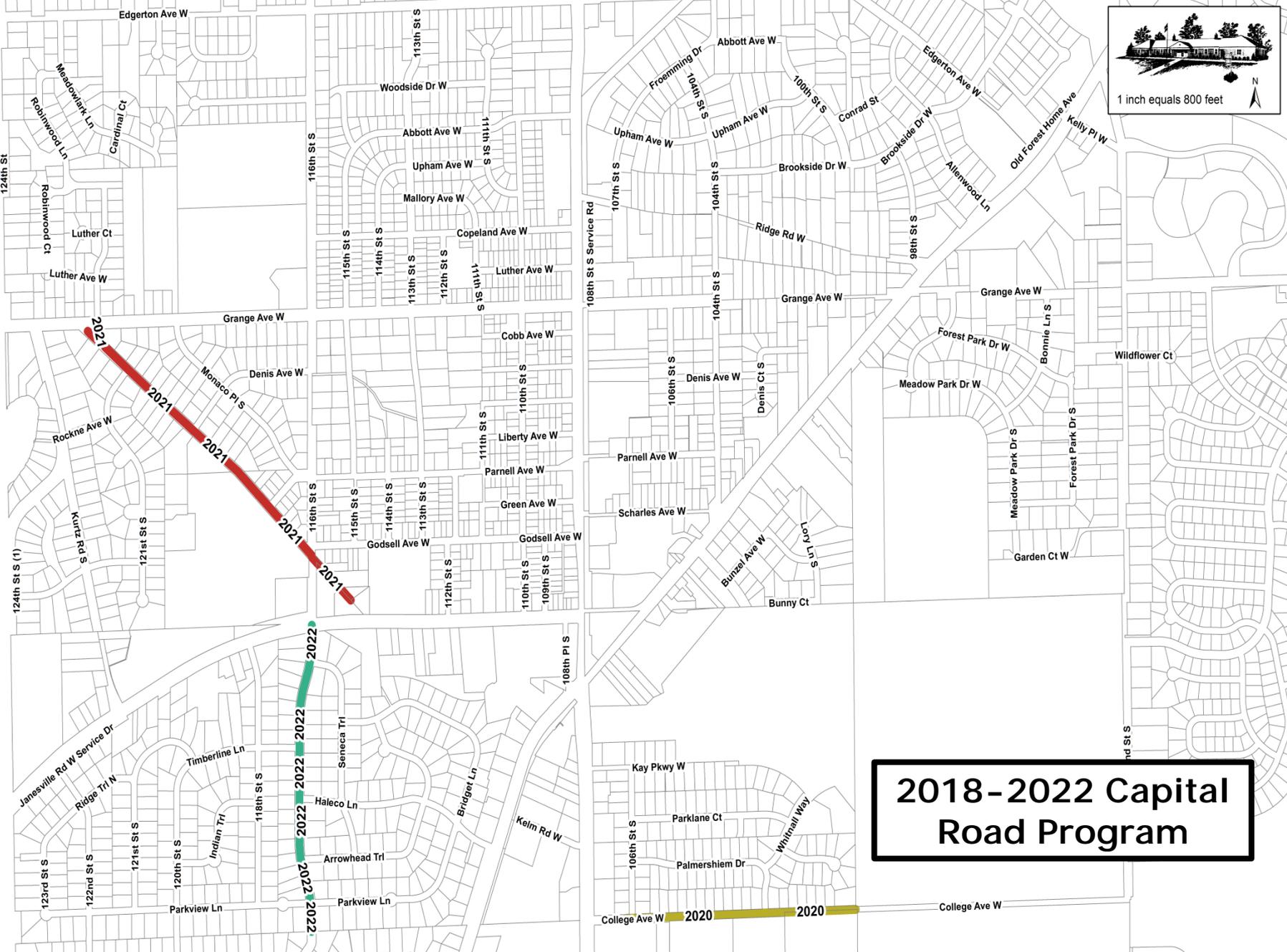
3.6 2018-2022 CAPITAL PROGRAM

SUGGESTED SCHEDULE 2018-2022

IN	FROM	TO	REPAIR STRATEGY	SUGGESTED YEAR	EST. COST
College	108th	Whitnall Way	Rehab	2020	\$361,000**
New Berlin	121St	116th	Recon	2021	\$1,322,000
116th	Janesville	Parkview	Recon	2022	\$774,000
				TOTAL	\$2,457,000**



1 inch equals 800 feet



2018-2022 Capital Road Program

4.0 FUNDING

- **Local Program**
 - **Reconstruction, Rehabilitation, and Maintenance of Local Roads are funded as part of the Annual Budget (\$415,000/Yr)**
 - **Local Road Improvement Program (LRIP), administered by WisDOT, provides approximately \$34,000 every four years**
- **Capital Program**
 - **Reconstruction & Rehabilitation of Arterials & Collectors funded through borrowing**
 - **Maintenance funded as part of the Annual Budget**
 - **MSIP-STP Funding (FHA\WisDOT)**
 - **State\Federal Funded (80/20 Split)**
 - **Regional Program – Milwaukee Urbanized Area**
 - **Highly Competitive**

4.0 FUNDING

- Capital Program
 - Highly Competitive:
 - Based on PASER Rating
 - Traffic Volume per Lane
 - Connectivity (Length)
 - Functional Classification (FHA)
 - MUST follow Strict State\Federal Design Guidelines
 - *Application is No Guarantee of Award*

4. FUNDING

- Other Potential Sources
 - Wheel Tax
 - Special Assessments
 - Referendum(s)
 - Tax Increases
- *OTHER INFLUENCES*

5. QUESTIONS

