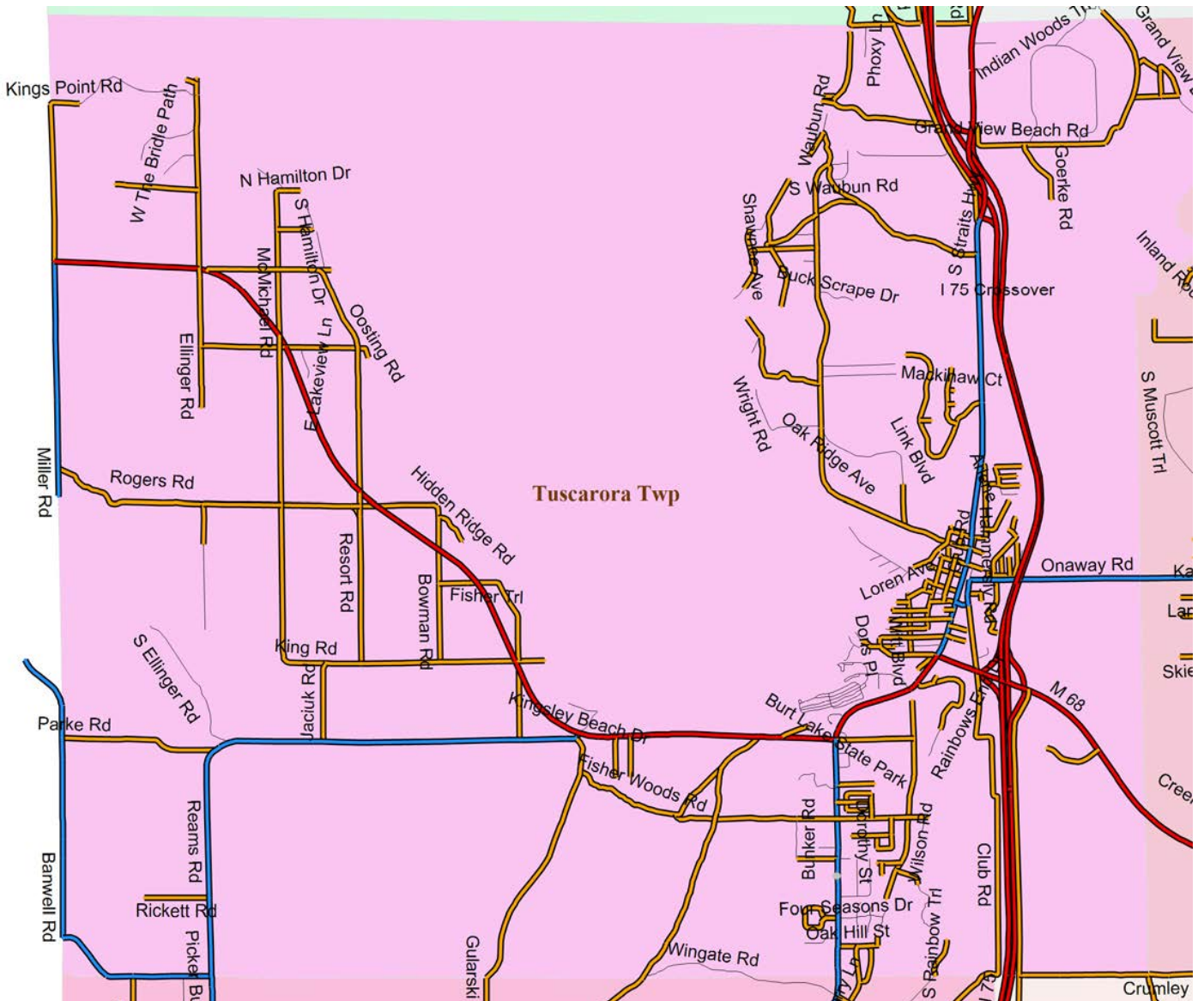


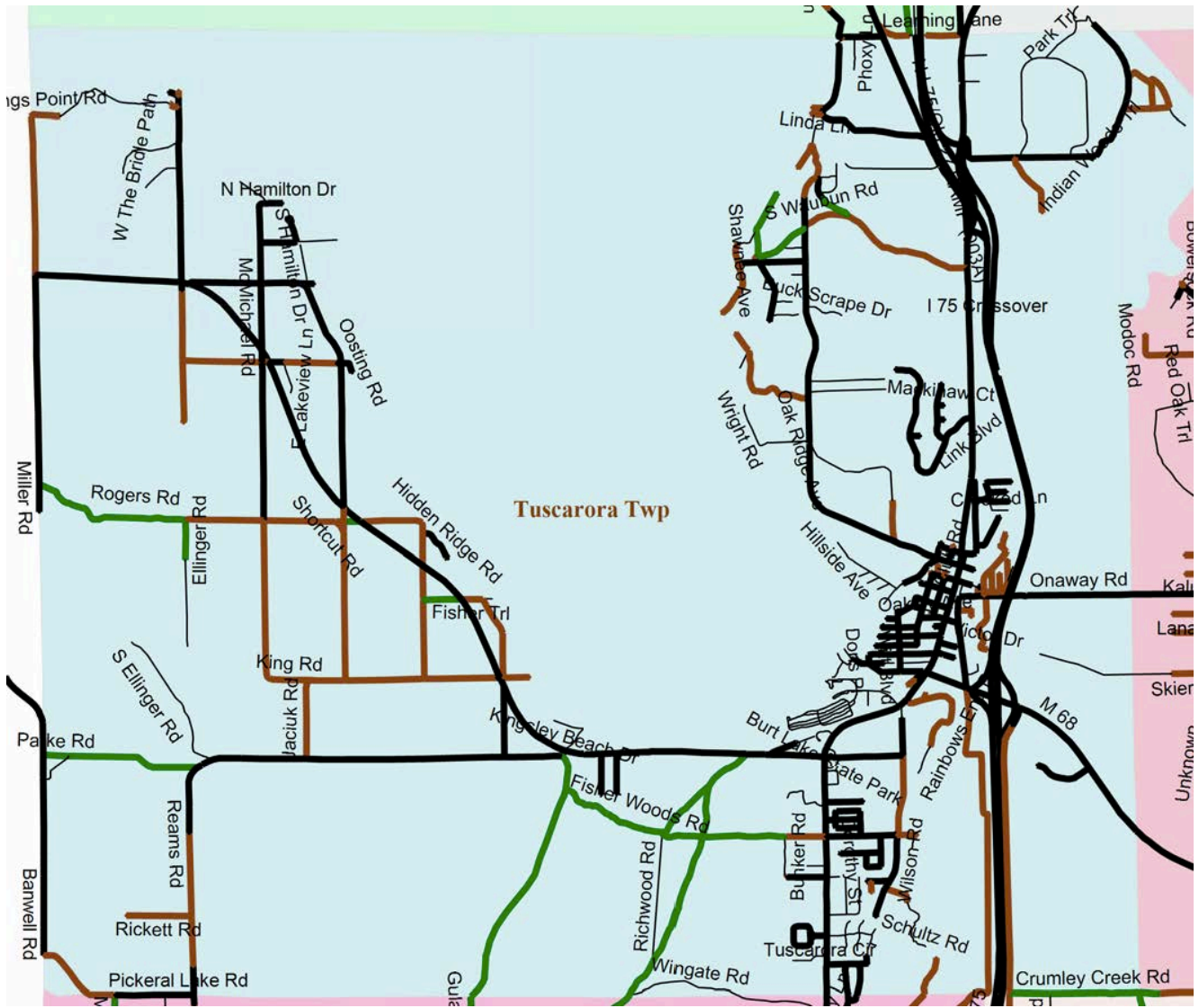
Cheboygan County Road Commission
Tuscarora Township Local Road Ratings Report for 2021

The goal of the Road Commission is to use Asset Management Strategies when planning projects for the roads under the jurisdiction of the Cheboygan County Road Commission. Asset management, as defined by Public Act 199 of 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 will allow the Road Commission and Township to invest the available road funds in a manner that will provide the greatest return.



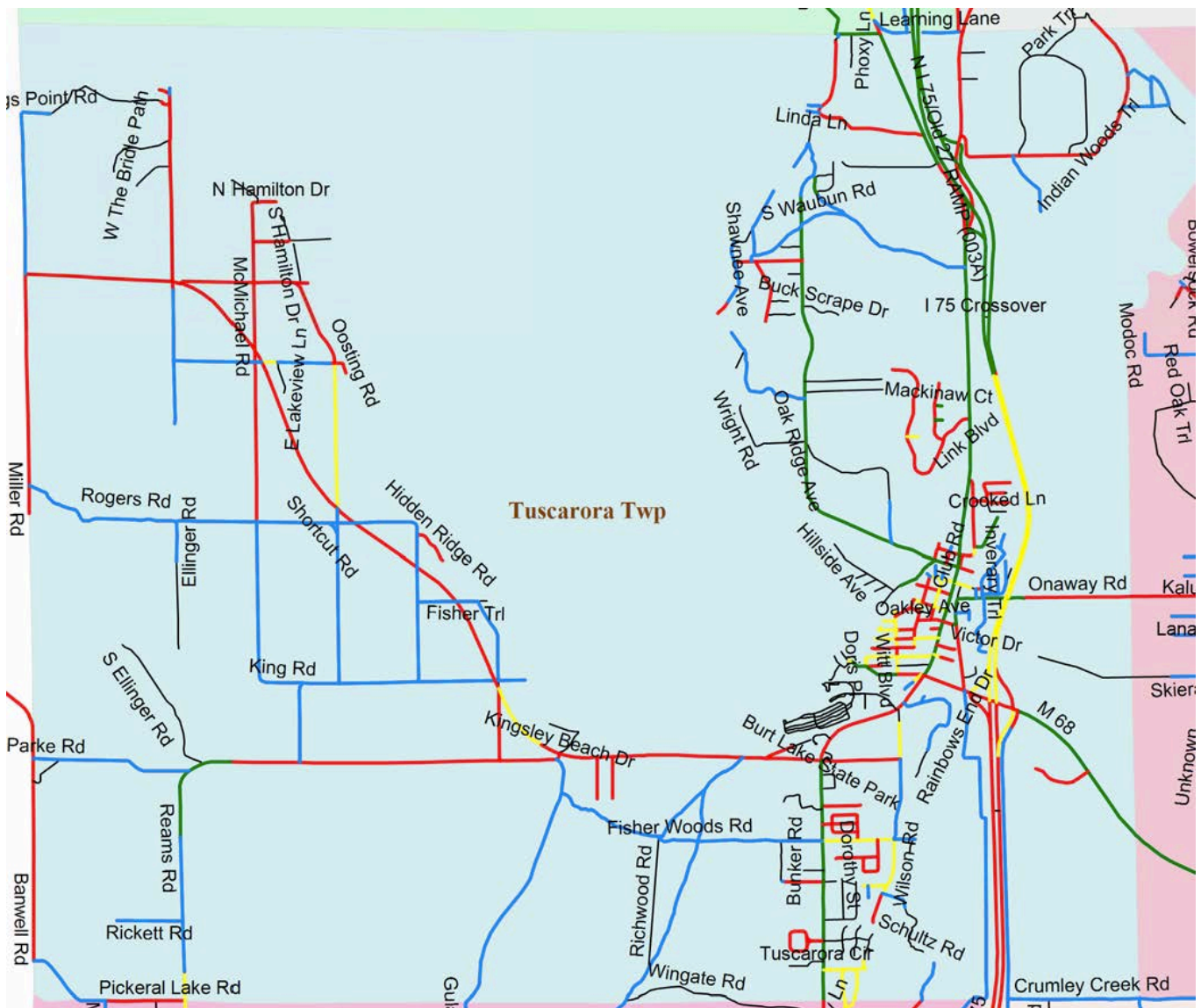
Township Roads by Legal System

Red = State Highways – Blue = County Primary Roads – Orange = County Local Roads



Roads by Surface Type

Black = Pavement – Brown = Gravel – Green = Seasonal



Good / Fair / Poor Condition

Paved Roads (primary and local)

Green = Good - Yellow = Fair - Red = Poor - Blue = Non-paved

PASER Road Rating System

All the local paved roads are rated each year using the PASER Road Rating system in the Township (seasonal roads are not included). PASER, or Pavement Surface Evaluation and Rating, is the rating system that is used in collecting data for RoadSoft. The roads are rated on a scale of 1 to 10 according to surface conditions of the pavement. The tables below show the rating and the suggested maintenance that would be required to preserve the road along with an estimated cost of repair.

PASER Rating and Treatments for Paved Roads

Road Rating	Recommended Repair	Estimated Cost per Mile
10	No maintenance necessary. New Road	\$ 0
9	No Maintenance necessary. Smooth Surface.	\$ 0
8	Minor Crack Sealing	\$ 600
7	General Crack Sealing and/or Minor Patching	\$ 3,200
6	Patching and Sealcoat	\$ 29,000
	Ultra-thin Asphalt Overlay	\$ 63,000
5	Asphalt Wedging	\$ 47,000
	Asphalt Wedging and Sealcoat	\$ 75,000
	Asphalt Wedging and Ultra-thin Asphalt Overlay	\$ 106,000
4	Asphalt Wedging and Overlay	\$ 142,000
3	Pulverize, gravel and pave	\$ 240,000
2	Reconstruction.	\$ 350,000
1	Reconstruction. Failed Road.	\$ 350,000

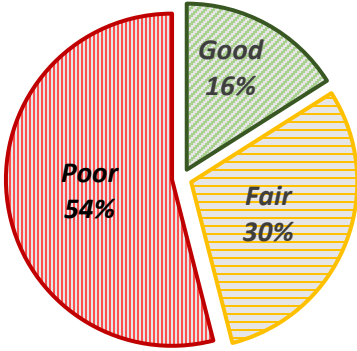
Gravel roads are rated using the Inventory-Based Rating System™ for Gravel Roads (IBR). The IBR system considers three characteristics of a road segment to determine a rating for the segment. Surface width, drainage adequacy and structural adequacy are all evaluated to determine the segment rating. From this evaluation a rating of 1 to 10 is calculated.

IBR Rating and Treatments for Gravel Roads

Road Rating	Existing Condition / Recommended Repair	Estimated Cost per Mile
10	No maintenance necessary. New Road	\$ 0
8 – 9	Good crown and drainage throughout. Adequate gravel for traffic. Maintain with grading and dust control.	\$ 500
6 - 7	Existing crown with drainage on 50% or more of roadway. Additional gravel needed in some areas along with ditching.	\$ 55,000
3 - 5	Little or no crown. Ditched on less than 50% of the road. Additional gravel needed on entire road along with ditching.	\$ 95,000
1 - 2	Failed road. Reconstruction.	\$ 250,000

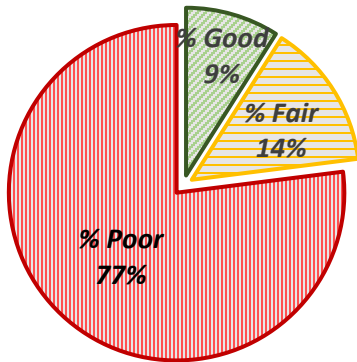
Tuscarora Township Paved Local Road Ratings

Statewide Local Roads



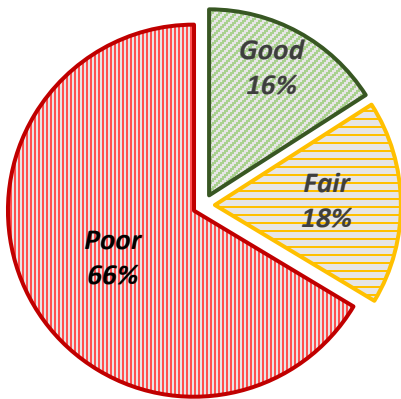
Condition of paved local roads across the State

Countywide Paved Local Roads



Condition of paved local road in Cheboygan County

Tuscarora Township Paved Local Roads



Condition of paved local roads in Tuscarora Township

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

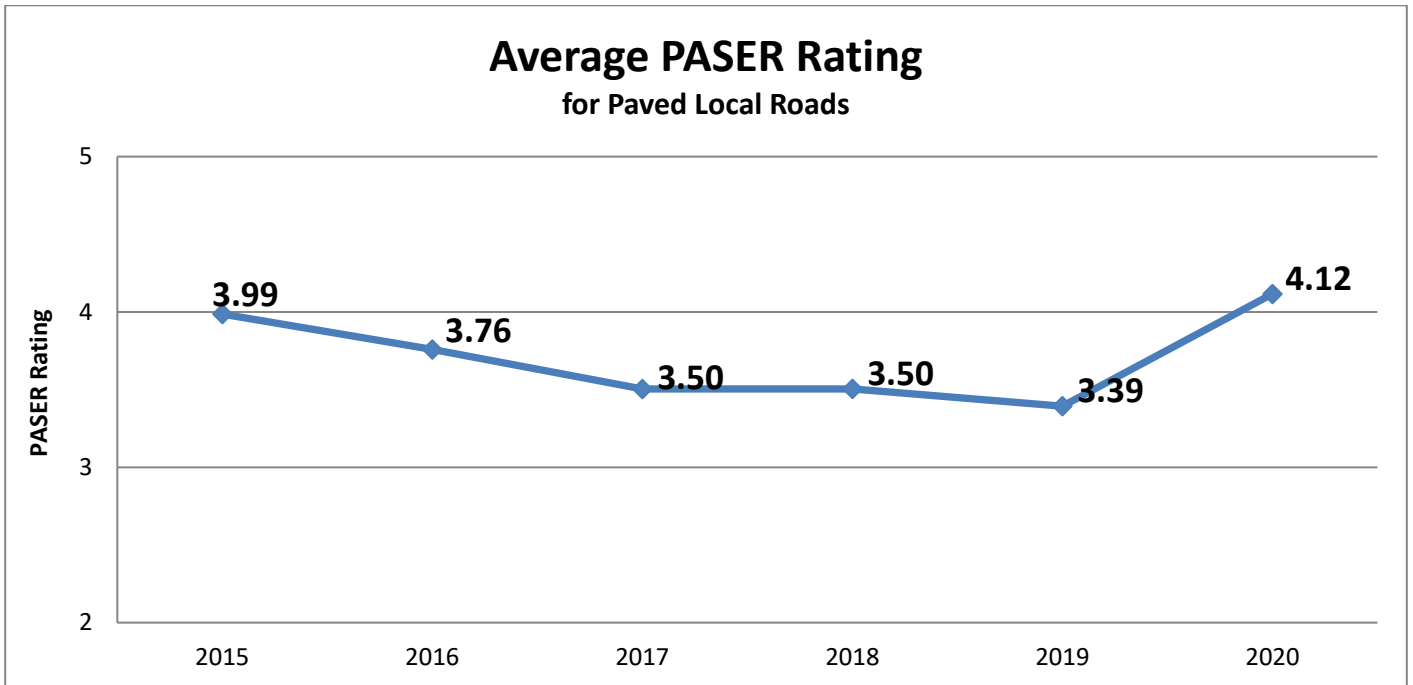
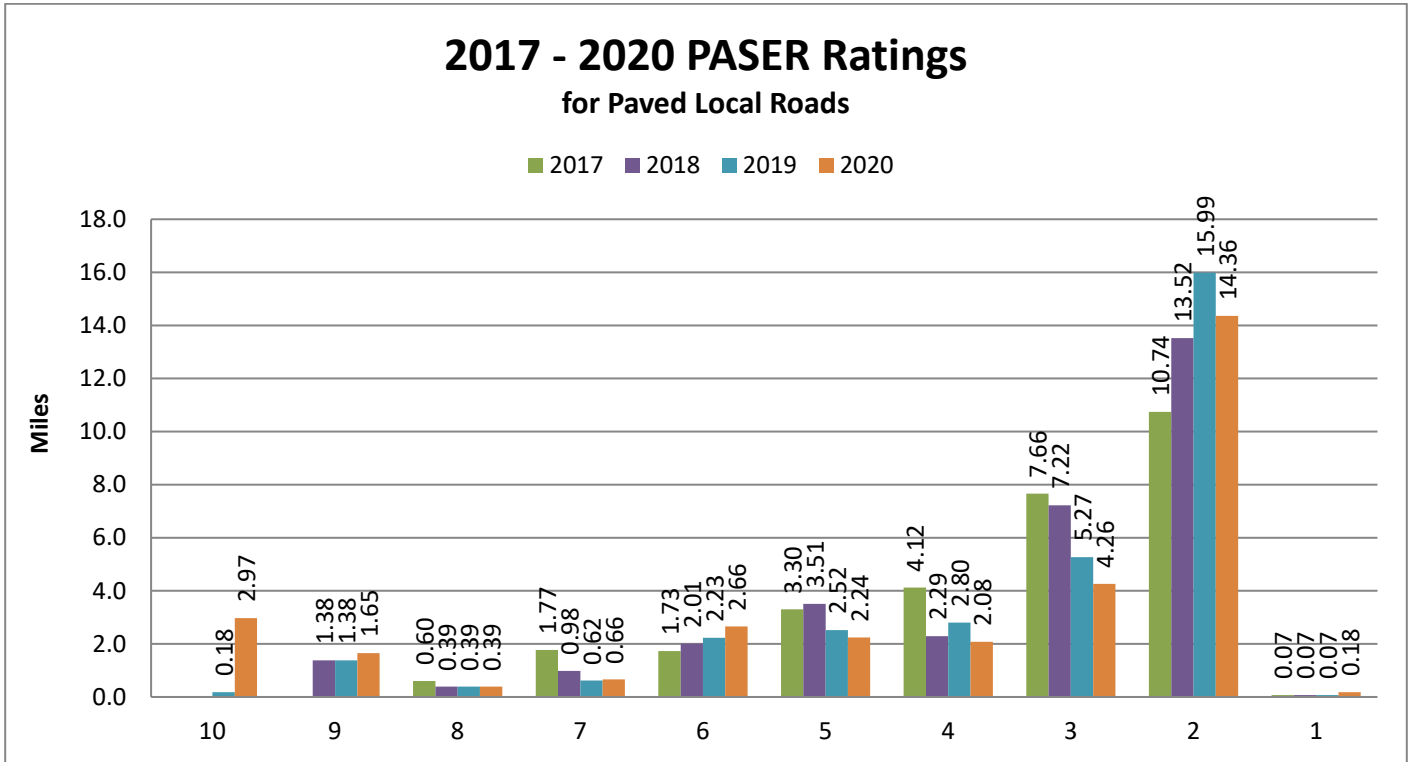
Current Paved Road Ratings

PASER Rating	Road Name	Limits	Length (miles)
10	Chippewa Beach Road	Prospect Street to end of pavement.	2.83
	Prospect Street	Chippewa Beach Road to South Straits Highway.	0.14
9	Eagles Nest Road	Straits Highway to Sturgeon Bay Drive.	1.38
	Prospect Street	Chippewa Beach Road then westerly to end of road.	0.27
8	Barbara Avenue	Witt Blvd. to Dorothy Avenue.	0.19
	Barbara Avenue	Dorothy Avenue to end of public road.	0.12
	Burt Court	Link Blvd. to end of road.	0.04
	Mackinac Court	Link Boulevard to end of road.	0.04
7	Fisher Woods Road	Eastway Road to Wilson Road	0.22
	Mack Avenue	Witt Blvd. to end of road.	0.10
	Ottawas Trail	Nabanois Trail then west to end of road.	0.03
	South Avenue	Burt Lake to Witt Blvd.	0.13
	Sturgeon Street	Barbara Street to end of public road.	0.18
6	Arthur Street	Constance Avenue to Poplar Street.	0.06
	Burchfield Avenue	Witt Blvd. to Straits Highway.	0.23
		Doris avenue to Witt Blvd	0.19
	Doris Place	Barbara Avenue to Burchfield Avenue.	0.05
	Fisher Woods Road	South Straits Highway to Eastway Road.	0.22
	Oakhill Street	Straits Highway then east to end of road.	0.27
	Poplar Street	Holden Avenue to Floyd Street.	0.29
	River Street	Straits Highway then easterly to end of road.	0.10
		Straits Highway to Poplar Street.	0.16
	South Avenue	Witt Blvd. to Straits Highway.	0.23
	Wilson Road	Fisher Woods Road to end of road.	0.55
Witt Boulevard	Holden Avenue to end of the road at the Indian River.	0.24	
Wood Hollow	Link Blvd. to end of road.	0.07	
5	Arthur Hills Street	Mona Street to Louise Drive.	0.09
	Berry Lane	Oakhill Street to Township Line.	0.20
	Daily Road	Township Line to Oak Hill Street.	0.27
	Floyd Street	Poplar Street to Straits Highway.	0.16
	Hemlock Street	Spruce Street to Straits Highway.	0.13
	Juno Street	Floyd Street to River Street	0.28

	Mack Avenue	Witt Blvd. to end of road.	0.10
	Oak Glen Street	Witt Blvd. to end of road.	0.07
	Rotter Road	M-68 Lakeview Lane.	0.10
	Spruce Street	Hemlock Street to end of road.	0.03
	Vola Road	Wilson Road to end of road.	0.15
	Waterway Street	Straits Highway to the end of road.	0.13
	Wilson Road	W Wilson Road north to end of road.	0.31
		Oakhill Street then north to end of pavement.	0.05
	Witt Boulevard	Barbara Avenue to Holden Avenue.	0.17
4	Apple Blossom Street	Gratiot St. to end of the road.	0.25
	Club Road	Prospect Street to Hemlock Street.	0.11
	Dorothy Street	Mona Street to Louise Drive.	0.09
	Ellinger Road	Hassler Creek Road to Hassler Woods Trail.	0.22
	King Road	M-68 to Fisher Trail.	0.02
	Link Boulevard	Wood Hollow Ct. to End of road.	0.54
	Louise Drive	Arthur Hills Street to end of road.	0.25
	Mona Street	Dorothy Street to Arthur Hills Street.	0.09
	Tuscarora Circle	Straits Highway to Straits Highway.	0.51
3	Arthur Hills Street	Louise Drive to Fisher Woods Road.	0.11
	Barbara Avenue	M-68 to Witt Blvd.	0.16
	Brudy Road	M-68 then south to the end of pavement.	0.12
	Commerce Boulevard	M-68 to end of the road.	0.37
	Dorothy Avenue	Barbara Avenue to end of pavement.	0.09
	Eastway Drive	Fisher Woods Road to Maplewood Road.	0.17
	Ellinger Road	The Bridal Path to end of pavement.	0.33
	Elmwood Road	Westway Road to Eastway Road.	0.17
	Hidden Ridge Road	Bowman Road to end of road.	0.23
	Holden Avenue	Poplar Street to end of road.	0.27
	Lake Street	Straits Highway to end of road.	0.22
	Link Boulevard	Link Place to Wood Hollow Ct.	0.53
	Mack Avenue	Poplar Street to Witt Blvd.	0.06
	Maplewood Road	Westway Road to Eastwood Road.	0.17
	Pembrook Road	Straits Highway to Eastwood Road.	0.21
Poplar Street	Floyd Street to River Street	0.18	
Prospect Street	Straits Highway then easterly end of road.	0.08	

	The Pike	Witt Blvd. to Poplar Street.	0.17
	Westway Road	Maplewood Road to Elmwood Road.	0.12
	W Wilson Road	Straits Highway to Wilson Road.	0.50
2	Argonaut Trail	M-68 then 0.30 miles northeasterly.	0.30
	Arlene Avenue	Bellchase Drive to Lori Drive.	0.11
	Bellchase Drive	Gratiot Road to end of the road.	0.22
	Bosserman Court	Straits Highway to end of road.	0.24
	Bunker Road	Straits Highway then 0.25 miles west.	0.25
	Club Road	M-68 to Martha Street.	0.40
	Constance Avenue	The Pike to Arthur Street.	0.06
	Cressy Street	South Straits Highway to end of road.	0.12
	Diane Drive	Arlene Drive to end of road.	0.11
	Ellinger Road	M-68 then south to the end of pavement.	0.05
		M-68 to Hassler Creek.	0.50
		Hassler Woods Trail to The Bridal Path.	0.16
	Fisher Trail	Parke Road to M-68.	0.50
	Forest Trail	M-68 to end of Road.	0.27
	Frontenac Avenue	Wahbee Avenue to Chippewa Beach Drive.	0.82
	Grandview Beach Road	South Straits Highway to Township Line	1.79
	Gratiot Street	Hemlock Street to South Straits Highway	0.49
	Hemlock Street	Straits Highway to Gratiot Street.	0.14
	Juno Street	Oakley Street to Floyd Street.	0.05
	Kings Point Resort Road	Ellinger Road then westerly to end of road.	0.06
	Link Boulevard	Straits Highway Link Place.	0.22
	Link Place	Link Boulevard to end of road.	0.37
	Lori Lane	Arlene Avenue to end of road.	0.17
	McMichael Road	Rogers Road to Hamilton Road.	2.00
	Oakley Avenue	Poplar Street to Straits Highway.	0.16
	Plymouth Beach Drive	Eagle's Nest Road to end of road.	1.29
	Resort Road (N/S)	M-68 to Resort Road (E/W).	1.47
	E/W Resort Road	M-68 to McMichael Road.	0.50
	McMichael Road to end of road.	0.33	
Shawnee Avenue	Frontenac Avenue then south to end of road.	0.39	
Sherwood Drive	M-68 to end of road.	0.27	
Springwell Road	McMichael Road to the end of road.	0.48	

	Spruce Street	Prospect Street to Hemlock Street.	0.07
1	Gatewood Avenue	Prospect Street to Hemlock Street.	0.07
	Oosting Road	Resort Road to the end of pavement.	0.11



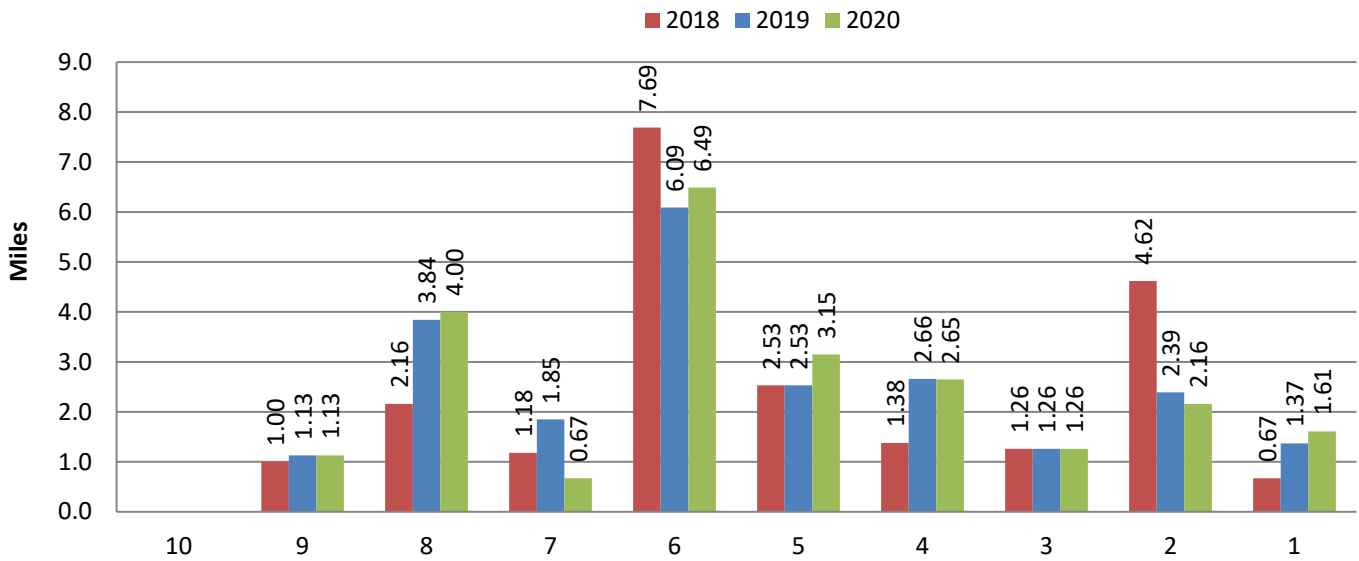
Tuscarora Township Gravel Local Road Ratings

Current Gravel Road Ratings

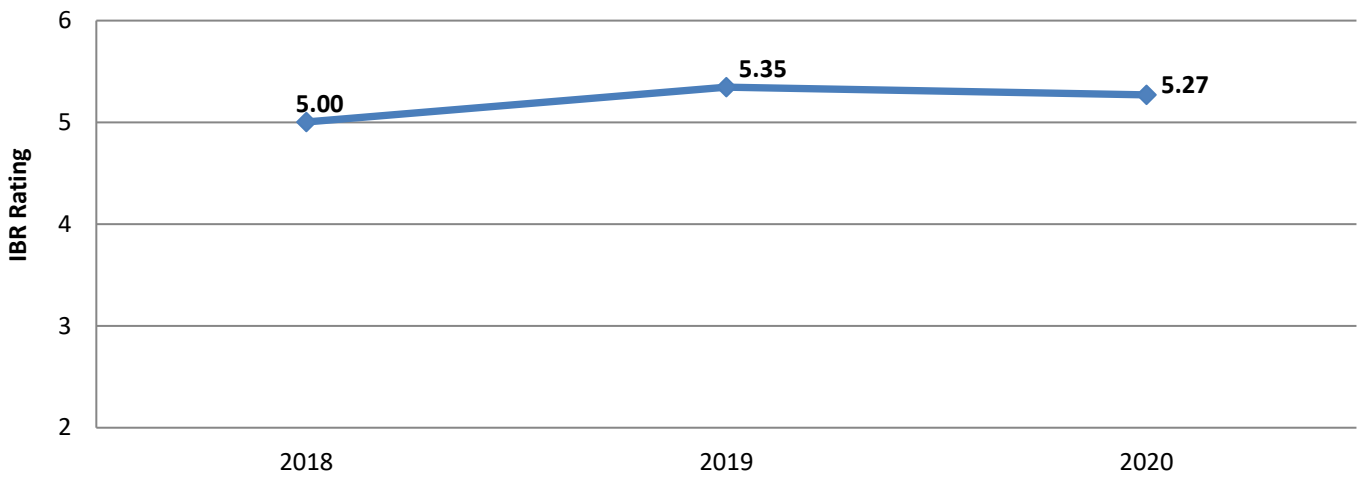
IBR Rating	Road Name	Limits	Length (miles)
10			
9	Fisher Woods Road McMichael Road	Wilson Road to river. King Road to Rogers Road.	0.13 1.00
8	Burdy Road Jaciuk Road King Road Miller Road	End of pavement then south to Township Line. Parke Road to King Road. Bowman Road to M-68. Fisher Trail to end of road. M-68 to end of road.	1.68 0.50 0.49 0.15 1.18
7	Fisher Trail	King Road to M-68.	0.67
6	Ellinger Road Fisher Woods Road Hammersly Road Inuerary Trail King Road Nabanois Trail Oak Ridge Road Rogers Road Victor Drive Wahbee Avenue Waubun Road	South end of road to M-68. Straits Highway to Bunker Road. Inueary Trail to Nababois Trail. Nabanois Trail to the end of road. McMichael Road to Bowman Road. Onaway Road to Mingo Trail. Chippewa Beach Road north to the end of road. Ellinger Road to Bowman Road. Onaway Road then south to end of road. Frontenac Avenue then north to end of road. Chippewa Beach Road to Straits Highway.	0.89 0.25 0.14 0.33 0.98 0.39 0.26 1.53 0.40 0.13 1.19
5	Bowman Road Goerke Road Mac A Vista Drive Mingo Trail Resort Road Shortcut Road Woods Trail	King Road to M-68. Grandview Beach Road then south to end of road. Chippewa Beach Road to McMillan Road. Nabanois Trail to end of road. Ellinger Road to Shortcut Road. Resort Road to Rogers Road. Onaway Road to Ottaws Trail.	0.70 0.41 0.76 0.10 1.02 0.10 0.06
4	Bowman Road Club Road Ellinger Road	M-68 to Rogers Road. M-68 then south to Township Line. End of pavement to Burt Lake.	0.20 1.85 0.04

	Shawnee Avenue	Frontenac Avenue then north to end of road.	0.05
	Wilson Road	Fisher Woods Road to W Wilson Road.	0.51
3	Ellinger Road	Rotter Road to M-68.	0.45
	Rotter Road	Ellinger Road to M-68.	0.54
	Wahbee Avenue	South of Frontenac Avenue.	0.27
2	Alden Trail	Inuery Trail to end of road.	0.12
	Chippewa Beach Road	End of pavement to end of road.	0.52
	Eden Court	Rainbows End Drive to end of road.	0.05
	Linda Lane	Plymouth Beach Road to end of road.	0.04
	Rainbows End Drive	Straits Highway to end of road.	0.67
	Rickett Road	Reams Road then west to end of road.	0.41
	Rotter Road	Resort Road then west to pavement.	0.35
1	Canal Street	North and south of Irish Drive.	0.05
	Gatewood Avenue	Hemlock Street to end of road.	0.03
	Grace Beach Road	Grandview Beach Road to S Grandview Beach Road.	0.28
	S Grandview Beach Road	Grandview Beach Road to Grace Beach Road.	0.41
	Irish Drive	Club Road to Canal Street.	0.09
	Juno Street	River Street to the end of road.	0.04
	Margaret Drive	Plymouth Beach Road to end of road.	0.04
	Milton Road	Vola Road then south to end of road.	0.08
	Pleasant Beach Court	Grace Beach Road to S Grandview Beach Road.	0.18
	River Street	Poplar Street to end.	0.03
	N River Street	River Street to end of road.	0.03
	South Rainbow Trail	Township Line to end of road.	0.25
	Sturgeon Avenue	End of pavement to end of road.	0.09

2018 - 2020 IBR Ratings for Gravel Local Roads



Average IBR Rating for Gravel Local Roads



Service Life of Treatments

Service life is the expected time that a treatment will last before needing complete reconstruction. In the table below, an expected service life for a particular treatment is listed. Before a treatment reaches the expected service life, preventative maintenance should be performed. Preventative maintenance will extend the expected service life of the pavement and treatment.

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	7
	Ultra-thin Asphalt Overlay	7 – 10
5	Asphalt Wedging	7
	Asphalt Wedging and Sealcoat	7 – 10
	Asphalt Wedging and Ultra-thin Asphalt Overlay	10
4	Asphalt Wedging and Overlay	12 – 15
3	Pulverize, gravel and pave	15 – 25
2	Reconstruction.	25 - 30
1	Reconstruction. Failed Road.	25 - 30

For example, if a road has a PASER rating of 6, a treatment of a ultra-thin asphalt overlay is recommended (see the Table titled PASER Ratings and Treatment on page 1). The expected service life for an ultra-thin asphalt overlay is 7-10 years. Preventative maintenance in the form of crack sealing may be required after 2 years.

Expected service life may be shorter if the road is on poor soils that are not addressed as part of the treatment. If a project is selected that is not the recommended treatment, the service life listed in the table above will be shorter and preventative maintenance will need to be performed sooner.

Service Life for a gravel road is difficult to predict. Gravel road conditions can change rapidly based on weather, grading and traffic effects on the roads.