

# **HIGHWAY PRESERVATION NEEDS REPORT**

May 2019

Akron Metropolitan Area Transportation Study  
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This report was prepared by the Akron Metropolitan Area Transportation Study (AMATS) in cooperation with the U.S. Department of Transportation, the Ohio Department of Transportation, and the Village, City and County governments of Portage and Summit Counties and Chippewa and Milton Township in Wayne County. The contents of this report reflect the views of AMATS, which is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view and policies of the Ohio and/or U.S. Department of Transportation. This report does not constitute a standard, specification or regulation.

## **Introduction**

The Akron Metropolitan Area Transportation Study (AMATS) recognizes that maintaining and preserving the existing highway system should be a priority of the transportation planning process. Therefore, the purpose of this report is to estimate the federal funds (in 2019 dollars) needed to preserve and maintain the existing highway system between now and 2045. This report will not list specific maintenance projects; however, it will describe the existing highway system and outline highway resurfacing and replacement needs as well as bridge maintenance and replacement needs.

All highway system preservation projects on the federal aid system will be considered consistent with the Regional Transportation Plan, named *Transportation Outlook 2045*, and will be eligible for federal funding as it becomes available. Highway maintenance items, such as shoulder and drainage improvements, pavement repairs, guardrail, fence replacement, pavement markings, signage, lighting and painting are included in the estimated costs for highway resurfacing and bridge maintenance. The findings of this report will be used in determining the portion of anticipated federal funding that should be reserved for highway projects to ensure maintenance and preservation of the existing highway system over the life of *Transportation Outlook 2045*.

## **Existing Highway System**

### **Roadways**

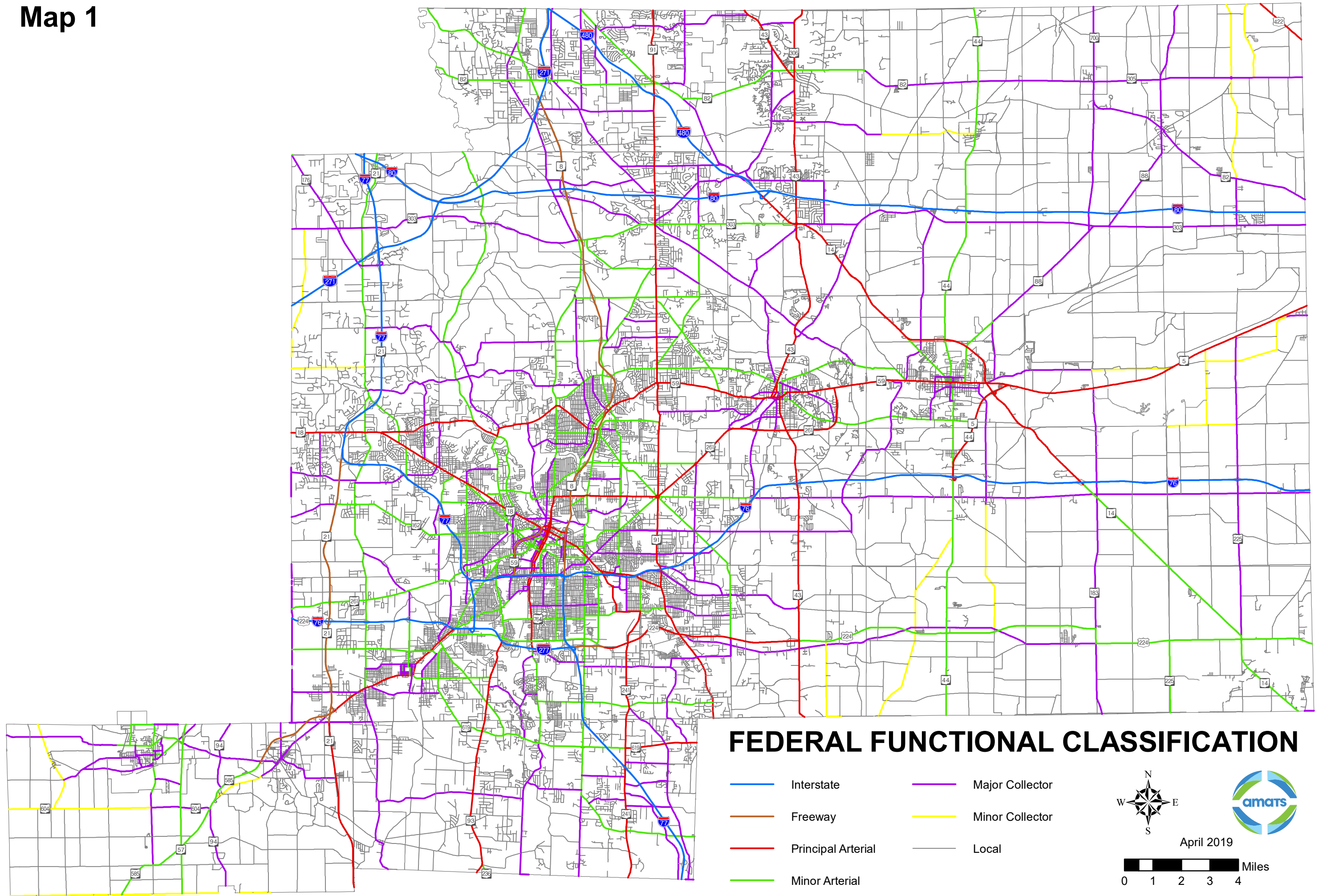
The Akron metropolitan area contains 4,774 miles of roadways. Map 1 shows the roadways by federal functional classification. Local roads are exhibited on the map for reference and are shown as thin light grey lines in the background. Table 1 shows the length in miles and lane miles for each roadway classification.

**Table 1: Mileages by Roadway Classification**

<b>Federal Functional Classification</b>	<b>Length (in Miles)</b>	<b>Number of Lane Miles</b>
Interstate	100	462
Expressway	35	171
Ohio Turnpike (I-80)	34	192
Principal Arterial	190	567
Minor Arterial	356	911
Major Collector	516	1,119
Minor Collector	64	127
Local	3,479	6,990
<b>Totals:</b>	<b>4,774</b>	<b>10,539</b>

Please note that minor collectors and local roads are not considered part of the federal aid system; therefore, they are not eligible for federal funding and will not be included in the pavement cost estimates in the subsequent sections. The local jurisdiction or the county in which they are located assumes responsibility for maintaining these roadways.

# Map 1



The Ohio Department of Transportation (ODOT) has developed a rating method in order to determine the extent and severity of pavement deterioration on roadways. This rating, known as Pavement Condition Rating (PCR), is obtained by observing settlements, the extent and frequency of pavement erosion, and measurements of cracks and faulting in asphalt or concrete pavements. Calculated by a mathematical formula using data gathered in the field, the PCR is a single numeric value between 0 and 100 that is used to describe a pavement's condition at a given point in time. The higher this value is, the better the pavement condition. When the pavement PCR value drops below 65, an overlay or rehabilitation should be considered. However, ODOT may prioritize projects for pavement rehabilitation or reconstruction depending on the availability and distribution of federal funds.

Table 2 lists the Lane Miles and percentages for National Highway System (NHS) roadways based on Good, Fair, and Poor roadway pavement condition. This table is also subdivided by interstate and non-interstate and includes a comparison of AMATS and statewide roadways. The PCR ratings for interstates generally have better PCR ratings than non-interstates for the AMATS area and statewide. Interstates have higher traffic volumes and generally are given priority over other roadways. However, non-interstates provide more access and still need to be maintained. Also, statewide roadways seem to be better maintained than those within the AMATS area.

**Table 2: PCR Ratings for Interstate and Non-interstate (AMATS and Statewide)**

<b>Interstate</b>								
<b>AMATS - Lane Miles</b>					<b>Statewide - Lane Miles</b>			
<b>Year</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Total</b>	<b>SW Good</b>	<b>SW Fair</b>	<b>SW Poor</b>	<b>Total</b>
2010	355.3	949.2	0.0	1,305	6,371	9,529	1.1	15,901
2011	397.5	903.8	2.4	1,304	5,467	10,414	56.9	15,938
2012	382.1	919.8	2.4	1,304	5,456	10,584	18.3	16,058
2013	367.0	934.8	1.8	1,304	5,701	10,423	6.4	16,131
2014	399.9	897.5	6.1	1,304	5,671	10,471	18.6	16,161
2015	164.1	1157.8	7.0	1,329	5,514	10,711	20.9	16,246
2016	567.8	753.9	0.8	1,323	9,838	6,401	14.5	16,254
2017	768.3	583.0	6.6	1,358	10,624	5,854	21.2	16,498
<b>AMATS - %</b>					<b>Statewide - %</b>			
<b>Year</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Total</b>	<b>SW Good</b>	<b>SW Fair</b>	<b>SW Poor</b>	<b>Total</b>
2010	27%	73%	0.0%	100%	40%	60%	0.0%	100%
2011	30%	69%	0.2%	100%	34%	65%	0.4%	100%
2012	29%	71%	0.2%	100%	34%	66%	0.1%	100%
2013	28%	72%	0.1%	100%	35%	65%	0.0%	100%
2014	31%	69%	0.5%	100%	35%	65%	0.1%	100%
2015	12%	87%	0.5%	100%	34%	66%	0.1%	100%
2016	43%	57%	0.1%	100%	61%	39%	0.1%	100%
2017	57%	43%	0.5%	100%	64%	35%	0.1%	100%

**Table 2: PCR Ratings for Interstate and Non-interstate (AMATS and Statewide)  
(continued)**

**Non- Interstate**

AMATS - Lane Miles					Statewide - Lane Miles			
Year	Good	Fair	Poor	Total	SW Good	SW Fair	SW Poor	Total
2010	210.7	367.1	0.0	578	7,717	8,602	1	16,320
2011	226.4	356.0	3.6	586	6,503	9,773	61	16,337
2012	240.8	669.6	20.1	930	8,544	14,835	180	23,559
2013	279.5	667.4	7.9	955	8,052	15,806	89	23,948
2014	178.8	764.7	10.1	954	8,305	15,547	119	23,972
2015	169.3	771.9	14.4	956	7,654	16,185	180	24,018
2016	317.7	757.0	32.1	1,107	11,192	13,217	311	24,719
2017	315.6	626.0	38.3	980	11,118	14,629	363	26,110
AMATS - %					Statewide - %			
Year	Good	Fair	Poor	Total	SW Good	SW Fair	SW Poor	Total
2010	36%	64%	0.0%	100%	47%	53%	0.0%	100%
2011	39%	61%	0.6%	100%	40%	60%	0.4%	100%
2012	26%	72%	2.2%	100%	36%	63%	0.8%	100%
2013	29%	70%	0.8%	100%	34%	66%	0.4%	100%
2014	19%	80%	1.1%	100%	35%	65%	0.5%	100%
2015	18%	81%	1.5%	100%	32%	67%	0.7%	100%
2016	29%	68%	2.9%	100%	45%	53%	1.3%	100%
2017	32%	64%	3.9%	100%	43%	56%	1.4%	100%

AMATS also calculated the average PCR for each community/county to determine the average condition of roadways throughout the entire AMATS area. Table 3 lists each community with its corresponding average PCR based on lane miles. Please note that the red numbers in Table 3 signify a reduction in PCR rating from 2016 to 2018. This list does not include local roadways, which could have a better PCR rating. Local roadways are not examined because they are not eligible for federal funds. In general, the average PCR ratings in the AMATS area improved from 2016 to 2018.

A full map of PCR ratings can be found on the ODOT TIMS website located at: <https://gis.dot.state.oh.us/tims/>. Please be sure to select both “PCR (state)” and “PCR (local)” for more detailed information in your community. Please note “PCR (local)” is defined as “Non-State Route” in Table 3 to avoid confusion.

The AMATS Pavement Analysis Program will start in 2019. This program will collect more detailed pavement condition data along functionally classified roadways in the AMATS area. This data will replace the ODOT PCR data and will become the standard for AMATS’s future pavement analyses.

**Table 3: Average PCR by Community**

Political Unit	State Route Average PCR			Non-State Route Average PCR			Total Average PCR		
	2016	2018	Change	2016	2018	Change	2016	2018	Change
Portage Co. Unincorporated	81.61	84.21	2.60	76.44	84.94	8.50	80.26	84.46	4.19
Aurora	88.57	81.68	6.89	68.69	82.22	13.53	82.04	81.90	0.14
Garrettsville	87.59	87.85	0.26				87.59	87.85	0.26
Hiram	80.37	93.70	13.33				80.37	93.70	13.33
Kent	80.39	81.79	1.40	73.76	78.35	4.59	77.46	79.93	2.47
Mantua	83.64	83.33	0.31				83.64	83.33	0.31
Mogadore (POR)				86.00	71.00	15.00	86.00	71.00	15.00
Ravenna	76.80	74.69	2.11	78.18	74.22	3.96	77.51	74.41	3.10
Streetsboro	77.58	77.83	0.25	68.93	80.77	11.85	74.28	79.15	4.87
Tallmadge (POR)				70.54	70.54	0.00	70.54	70.54	0.00
Windham	76.75	75.83	0.92	85.46	90.26	4.80	80.32	82.53	2.22
<b>Portage Co. Totals</b>	<b>81.58</b>	<b>83.25</b>	<b>1.66</b>	<b>75.01</b>	<b>82.69</b>	<b>7.68</b>	<b>79.61</b>	<b>83.04</b>	<b>3.43</b>
Summit Co. Unincorporated	82.92	88.01	5.09	77.34	80.24	2.89	79.19	82.78	3.59
Akron	78.61	80.17	1.56	70.26	73.40	3.14	73.11	75.54	2.43
Barberton	75.19	70.28	4.91	72.49	72.08	0.41	72.94	71.86	1.09
Boston Heights	78.00	93.61	15.61	71.64	91.81	20.17	73.22	92.67	19.45
Clinton				42.67	44.60	1.92	42.67	44.60	1.92
Cuyahoga Falls	69.54	96.04	26.49	72.40	72.44	0.03	72.34	75.61	3.27
Fairlawn	97.23	87.33	9.89	65.27	73.06	7.78	78.81	77.98	0.83
Green	82.39	74.94	7.45	75.93	77.77	1.84	78.02	76.98	1.05
Hudson	87.16	84.76	2.40	79.02	74.75	4.27	82.22	77.70	4.52
Lakemore				66.41	66.41	0.00	66.41	66.41	0.00
Macedonia	84.24	90.98	6.74	66.68	75.85	9.17	75.58	83.18	7.60
Mogadore (SUM)	75.13	73.00	2.13	76.88	73.02	3.86	76.30	73.02	3.28
Munroe Falls	81.03	79.49	1.54	74.44	65.80	8.64	77.87	71.95	5.92
New Franklin	91.78	84.58	7.20	43.00	81.73	38.73	69.92	83.16	13.24
Northfield	84.51	82.00	2.51				84.51	82.00	2.51
Norton	79.72	65.08	14.64	62.55	64.98	2.42	66.79	65.02	1.77
Peninsula	77.78	96.00	18.22	65.57	63.73	1.83	71.20	76.05	4.85
Reminderville				91.69	91.74	0.05	91.69	91.74	0.05
Richfield	94.54	87.53	7.00	79.78	84.30	4.52	90.79	86.74	4.05
Silver Lake	80.99	79.00	1.99	67.63	64.00	3.63	75.34	70.63	4.71
Stow	78.65	60.53	18.12	79.37	78.13	1.24	79.09	68.81	10.27
Tallmadge (SUM)	88.44	85.00	3.44	75.19	73.83	1.36	80.76	77.75	3.00
Twinsburg	86.96	86.04	0.92	78.08	83.78	5.70	82.55	84.74	2.19
<b>Summit Co. Totals</b>	<b>82.57</b>	<b>80.68</b>	<b>1.88</b>	<b>72.53</b>	<b>75.07</b>	<b>2.54</b>	<b>75.90</b>	<b>76.93</b>	<b>1.03</b>

**Table 3: Average PCR by Community (continued)**

Political Unit	State Route Average PCR			Non-State Route Average PCR			Total Average PCR		
	2016	2018	Change	2016	2018	Change	2016	2018	Change
Wayne Co. (AMATS)	72.90	84.13	11.23	74.56	81.27	6.71	73.35	83.46	10.12
Doylestown	99.44	84.00	15.44	74.16	85.35	11.19	80.61	84.80	4.19
Norton (WAY)				79.72	81.21	1.49	79.72	81.21	1.49
Rittman	98.00	92.00	6.00	75.96	73.96	2.00	78.68	77.72	0.97
<b>Wayne Co. (AMATS) Totals</b>	<b>74.21</b>	<b>84.59</b>	<b>10.38</b>	<b>75.17</b>	<b>79.15</b>	<b>3.98</b>	<b>74.59</b>	<b>82.51</b>	<b>7.92</b>
<b>AMATS TOTALS</b>	<b>81.34</b>	<b>82.03</b>	<b>0.69</b>	<b>73.13</b>	<b>76.65</b>	<b>3.52</b>	<b>77.02</b>	<b>78.96</b>	<b>1.95</b>

Bridges

The AMATS area contains 1,310 total bridges. Table 4 shows the number and deck area for each type of bridge based on information from ODOT.

The federal definition of a bridge is a self-supported structure equal or greater than 20 feet in length; therefore, bridges under 20 feet were excluded. These structures will not be included in bridge cost estimates because they are not eligible for federal funds. Similarly the 29 “railroad bridges,” 1 “Army bridge” and 13 “private bridges” were also excluded because they are not eligible for federal funds. The only bridges eligible for federal funds are listed as turnpike bridges and remaining bridges (20+ ft.) in Table 4 below.

**Table 4: Number and Deck Area of Bridges by County**

Bridge Type	Number of Bridges	Deck Area (sq ft)
<i>Portage County</i>		
Bridges under 20 ft	120	60,090
Railroad bridges (20+ ft)	3	12,917
Army bridge (20+ ft)	1	4,639
Turnpike Bridges (20+ ft)	27	301,542
Remaining Bridges (20+ ft)*	204	969,115
<i>Summit County</i>		
Bridges under 20 ft	178	107,431
Railroad bridges (20+ ft)	26	102,693
Private bridges (20+ ft)	13	21,643
Turnpike Bridges (20+ ft)	23	730,897
Remaining Bridges (20+ ft)*	617	6,180,842
<i>Wayne County</i>		
Bridges under 20 ft	22	10,758
Railroad bridges (20+ ft)	0	0
Remaining Bridges (20+ ft)*	76	224,289
<b>Totals:</b>	<b>1,310</b>	<b>8,726,856</b>

\* Includes non-private pedestrian and bicycle bridges



All bridges are inspected annually using a consistent statewide procedure and assigned a National Bridge Index (NBI) rating. Bridges are defined as “Poor,” “Fair” or “Good.” All poor bridges within the AMATS area are listed in Table 5 and shown on Map 2 on the following pages.

Please note for the “maint.” (maintenance column) a “1” means ODOT responsibility, “3” means county responsibility and a “4” means local responsibility. Also, “status” references to the drivability of the road where: “A” is open with no restrictions, “P” is posted with load restrictions, “B” is posted with load restrictions but not legally implemented, “X” has no vehicle traffic, and “K” is closed to all traffic. Poor bridges should be closely monitored for closure, restrictions, rehabilitation, and possible replacement in the near future.

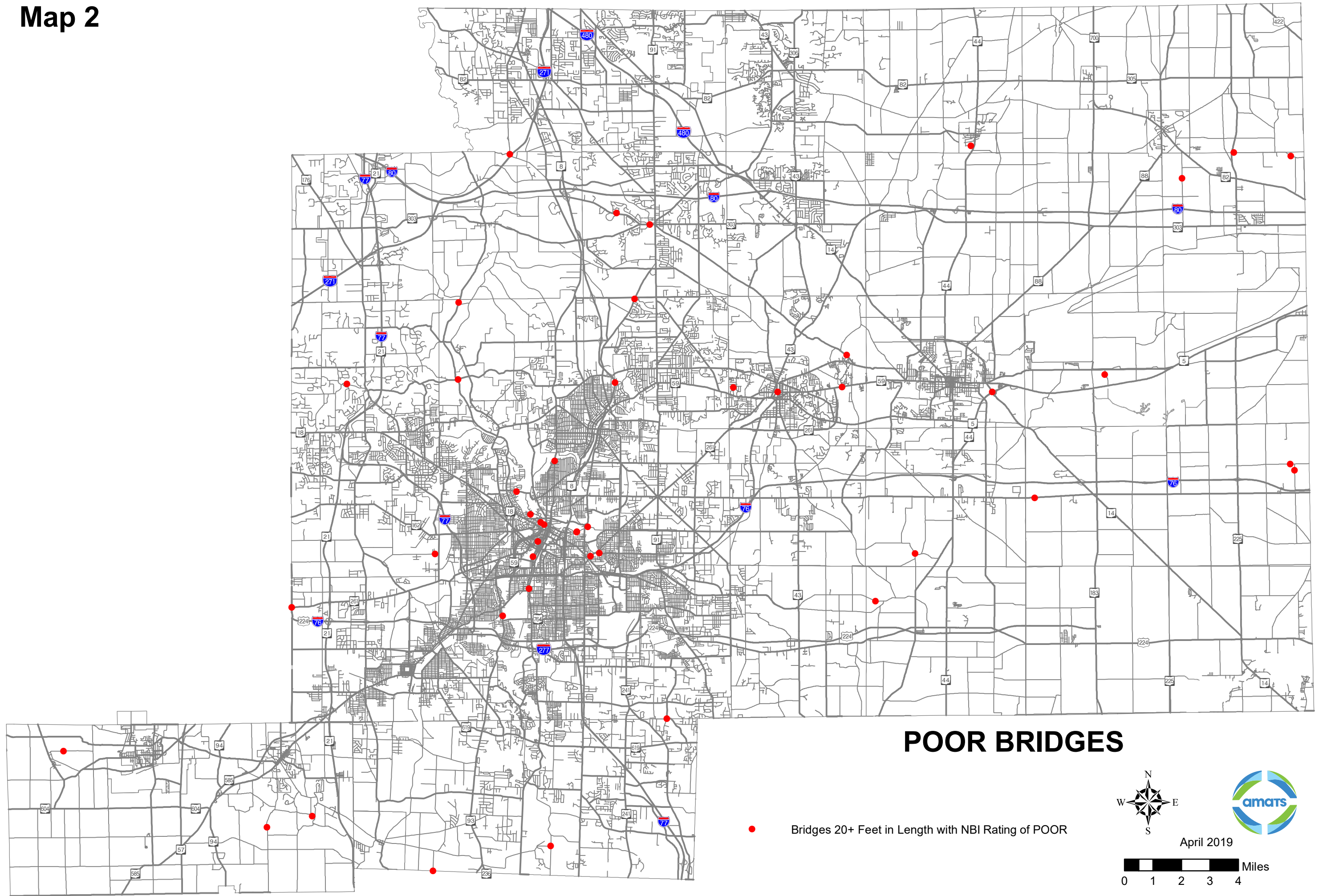
Tables containing all Poor and Fair rated bridges are listed in Appendix A by county and community/township. All information regarding bridge inventory can be found on the ODOT TIMS website located at: <https://gis.dot.state.oh.us/tims/>. Please zoom in to your area and select the bridge with the “i” (identify features) pointer for more information about a specific bridge.



**Table 5: Poor Bridges in the AMATS area**

SFN	Facility carried	Features intersected	Length	Deck Area	Maint.	Status	Latitude	Longitude
6760000	Mats Rd	Cuyahoga River	230	2783	4	K	41.277664	-81.227106
6740448	Ravenna Rd	Norfolk & Southern RR	67	1826	3	K	41.172222	-81.312778
7739109	Christman Rd	Nimisila Reservoir	43	1172	3	P	40.924522	-81.515564
6732909	Jones Rd	Kale Creek	40	640	3	P	41.110278	-81.012778
5235464	Eastern Rd	Mill Creek	21	518	3	A	40.988333	-81.728333
6734111	Old Forge Rd	Breakneck Creek	49	882	3	A	41.070833	-81.268611
6731295	Johnson Rd	Fish Creek	23	463	3	A	41.174444	-81.384167
7767811	Ingleside Dr	Brandywine Creek	25	817	4	P	41.245997	-81.466497
7745087	Riverview Rd	Furnace Run	125.3	4760	3	P	41.201339	-81.573414
7738161	Benner Rd	Nimisila Creek	44	1056	4	P	40.912497	-81.594711
8535906	Galehouse Rd	Silver Creek	27.5	407	3	P	40.9411	-81.675281
7760027	Main St	CSX & Conrail RR	234	19656	4	A	41.055519	-81.528225
7730314	N Main St	Ramp N Howard St	47.3	3327	3	A	41.120428	-81.509994
6737080	West Main St	Cuyahoga River & CSXT RR	249	17430	3	A	41.153889	-81.359444
7753047	Hudson Dr	Powers Brook	27.5	1022	3	A	41.202264	-81.454878
7761066	GOJO Ped Bridge	206 GOJO Ped Bridge	111	1286	4	A	41.071869	-81.525253
7732155	Granger Rd	Yellow Creek	65	1561	3	A	41.160647	-81.649114
7732120	Ira Rd	North Fork Yellow Creek	27.2	489	3	A	41.188886	-81.653256
7760361	State St	Garden Al & OH Canal	538	32280	4	A	41.079331	-81.521908
7745036	Riverview Rd	Yellow Creek	22	528	3	A	41.163494	-81.576261
6733840	Tallmadge Rd	Barrell Run	43	1157	3	A	41.098419	-81.187611
7752067	Pressler Rd	S Fork Tuscarawas River	42.5	1414	3	A	40.988675	-81.436586
7735189	Minor Rd	Br Wolf Creek	21	714	3	A	41.081211	-81.670214
7735138	Wright Rd	Pigeon Creek	49	1206	3	A	41.073586	-81.591083
6733646	Randolph Rd	Potter Creek	25	600	3	A	41.046906	-81.295706
6732534	Newton Falls Rd	Hinkley Creek	51	1211	3	A	41.162914	-81.1328
6730329	Pioneer Trail	Aurora Br Chagrin River	24	456	3	A	41.304167	-81.310833
6732860	Silica Sand Rd	Eagle Creek	56	1027	3	A	41.272222	-81.05
6735622	Silica Sand Rd	Eagle Creek	76	1520	3	A	41.27	-81.011667
8546959	Zigler Rd	Wald Ditch	22.3	359	3	A	40.975136	-81.841686
6735800	Yale Rd	Kale Creek Stream	22	441	3	A	41.062214	-81.046317
8535760	Coal Bank Rd	Chippewa Creek	125.5	3062	3	A	40.935531	-81.705717
7745060	Bath Rd	Cuyahoga River	210	7556	3	P	41.162378	-81.574353
6760015	Sunrise Blvd	Fish Creek	43	1473	4	P	41.15655	-81.389272
7707592	SR 93	CR7021, A&B RR & CSX RR	581	39992	1	A	41.041808	-81.546067
7746032	Brandywine Rd	Brandywine Creek	160.5	4495	3	A	41.276483	-81.537736
6730256	Esworthy Rd	Hinkley Creek	44	1074	3	A	41.160556	-81.139167
6730906	Stanley Rd	Mahoning Creek	22	477	3	A	41.259692	-81.085147
6730922	Whippoorwill Rd	Kale Creek Tributary	32	704	3	A	41.113333	-81.015556
7730225	Kent St	Little Cuyahoga River	51	1862	3	A	41.071667	-81.486667
7700679	Ped Bridge	Over SR 8, S of Graham Rd	601	6010	1	A	41.1597	-81.468772

# Map 2



National Highway System (NHS) bridges are also rated by “Good,” “Fair” and “Poor” each year to monitor performance measures. Table 6 lists both AMATS and statewide square feet and percentages for each category. In general, the amount of “Good” bridges has increased over the years both within the AMATS area and statewide. The statewide system does have a higher percentage of “Good” bridges; however, the AMATS area has a lower percentage of “Poor” bridges, which are those that are in most need of replacement.

**Table 6: Bridge ratings for AMATS and statewide**

	AMATS - Square Feet				Statewide - Square Feet			
Year	Good	Fair	Poor	Total NHS	Good SW	Fair SW	Poor SW	Total NHS
2008	1,459,777	2,968,667	120,063	4,548,507	23,981,528	39,586,919	4,739,689	68,308,136
2009	1,539,664	2,726,402	282,514	4,548,580	24,094,374	40,114,728	5,297,083	69,506,185
2010	1,735,077	2,364,024	607,898	4,706,999	25,559,661	36,314,842	5,617,638	67,492,141
2011	1,798,687	2,576,941	331,368	4,706,996	26,526,545	38,919,447	5,077,619	70,523,611
2012	1,762,581	2,804,998	139,417	4,706,996	29,236,093	36,679,871	4,679,522	70,595,486
2013	1,828,174	2,797,111	76,512	4,701,797	30,793,246	35,600,121	4,118,504	70,511,871
2014	1,825,276	2,800,523	76,512	4,702,311	33,136,010	33,926,608	3,338,336	70,400,954
2015	1,783,076	2,851,227	68,008	4,702,311	36,168,556	31,394,066	2,733,086	70,295,708
2016	1,908,358	2,764,803	54,153	4,727,314	38,162,819	30,376,005	1,729,081	70,267,905
2017	2,046,008	2,591,341	26,501	4,663,850	41,736,374	27,811,129	1,466,494	71,013,997
2018	2,721,077	2,032,695	26,502	4,780,274	45,550,758	27,605,329	1,194,471	74,350,558
	AMATS - %				Statewide - %			
Year	Good	Fair	Poor	Total NHS	Good SW	Fair SW	Poor SW	Total NHS
2008	32%	65%	2.6%	100%	35%	58%	7%	100%
2009	34%	60%	6.2%	100%	35%	58%	8%	100%
2010	37%	50%	12.9%	100%	38%	54%	8%	100%
2011	38%	55%	7.0%	100%	38%	55%	7%	100%
2012	37%	60%	3.0%	100%	41%	52%	7%	100%
2013	39%	59%	1.6%	100%	44%	50%	6%	100%
2014	39%	60%	1.6%	100%	47%	48%	5%	100%
2015	38%	61%	1.4%	100%	51%	45%	4%	100%
2016	40%	58%	1.1%	100%	54%	43%	2%	100%
2017	44%	56%	0.6%	100%	59%	39%	2%	100%
2018	57%	43%	0.6%	100%	61%	37%	2%	100%

## **Highway Resurfacing and Replacement Needs**

Resurfacing needs between 2019 and 2045 are identified for all roadways in the AMATS area that are eligible for federal funding. An inventory of highway lane miles for roadways with federal classification major collector and above is documented in Table 7 below. Roadways are typically resurfaced every 10 years; therefore we have assumed that all roads will be resurfaced twice between 2019 and 2045. To estimate resurfacing costs, the lane miles in each roadway type are multiplied by 2, the number of resurfacings within the timeframe, and then multiplied by the cost per lane mile provided by ODOT in 2019 dollars. The total resurfacing cost is estimated to be approximately \$1.25 billion.

**Table 7: Pavement Resurfacing**

<b>Road Description (Federal Functional Class)</b>	<b>Length (in miles)</b>	<b>Number of Lane Miles</b>	<b>Number of Resurfacings</b>	<b>Cost per Lane Mile</b>	<b>Total Cost</b>
Interstates/Expressways	135	633	2	\$305,000	\$386,130,000
Ohio Turnpike	34	192	2	\$305,000	\$117,120,000
Principal & Minor Arterials	546	1,478	2	\$150,000	\$443,400,000
Major Collectors	516	1,119	2	\$135,000	\$302,130,000
<b>Pavement Resurfacing</b>	1,231	3,422			<b>\$1,248,780,000</b>

Aside from periodically resurfacing the existing roads, periodically pavement needs to be completely replaced. Pavement replacement is done less frequently than resurfacing. AMATS assumed that only 5 percent of all roadways will be replaced between now and 2045. Table 8 shows the estimated pavement replacement costs in the AMATS area between now and 2045 using cost per lane mile provided by ODOT. The cost for pavement replacement is approximately \$0.16 billion. The total cost of pavement resurfacing and replacement combined is just over \$1.41 billion.

**Table 8: Pavement Replacement**

<b>Road Description (Federal Functional Class)</b>	<b>Length (in miles)</b>	<b>Number of Lane Miles</b>	<b>Lane Miles Replaced</b>	<b>Cost per Lane Mile</b>	<b>Total Cost</b>
Interstates/Expressways	135	633	31.65	\$1,125,000	\$35,606,250
Ohio Turnpike	34	192	9.60	\$1,125,000	\$10,800,000
Principal & Minor Arterials	546	1,478	73.90	\$900,000	\$66,510,000
Major Collectors	516	1,119	55.95	\$900,000	\$50,355,000
<b>Pavement Replacement</b>	1,231	3,422			<b>\$163,271,250</b>

## **Bridge Maintenance and Replacement Needs**

Bridge preservation needs are varied depending on the age and degree of usage of the bridge. The four common stages dealing with maintenance, repair, or replacement are: a) painting steel structure, b) deck overlay, c) deck replacement, and d) superstructure replacement. Table 9 shows an inventory of the bridges over 20 feet in length in AMATS area (excluding railroad, Army, and other private bridges).

**Table 9: Bridge Deck Area by County**

	Number of Bridges	Deck Area
<b>Bridges (20+ ft)</b>		
Portage Co.	204	969,115
Summit Co.	617	6,180,542
Chippewa & Milton Twp (Wayne Co.)	76	224,289
<b>Turnpike Bridges (20+ ft)</b>		
Portage Co.	27	301,542
Summit Co.	23	730,897
<b>Totals:</b>	<b>947</b>	<b>8,406,385</b>

Table 10 gives an estimate of the cost of preserving the bridges from 2019 to 2045, i.e., 27 years. The following assumptions were made with respect to the frequency of preservation of the four stages listed above: a) painting steel structure every 17 years, b) deck overlay every 17 years, c) deck replacement every 50 years, and d) superstructure replacement every 80 years.

The preservation cost for each stage of preservation was calculated by dividing 27 years by the frequency listed above and then multiplying that quantity by the total bridge deck area listed in Table 9 above. The unit costs shown on Table 10 were provided by ODOT in 2019 dollars. The total preservation cost of AMATS area bridges is approximately \$2.37 billion.

**Table 10: Bridge Preservation Costs**

State of Preservation	Serviced Deck Area (sq. ft.)	Unit Cost ( per sq.ft.)	Total Cost
Painting Steel Structure	13,351,317	\$34	\$453,944,778
Deck Overlay	13,351,317	\$47	\$627,511,899
Deck Replacement	4,539,448	\$165	\$749,008,920
Superstructure Replacement	2,837,155	\$190	\$539,059,450
<b>Bridge Preservation</b>			<b>\$2,369,525,047</b>

## Summary

It is necessary to assess the needs associated with maintaining and preserving the existing highway system at an acceptable level. Over the next 27 years, the total cost of preserving the AMATS existing highway system is estimated to be approximately \$3.78 billion, valued in 2019 dollars. This cost estimate is approximately 17 percent higher than the \$3.22 billion estimated in the last system preservation report, which was valued in 2016 dollars. There has been no increase in lane mileage and a only a 0.6 percent increase in bridge deck square footage. However, the higher preservation cost is primarily due to increased construction costs for both pavement and bridge maintenance.

The \$3.78 billion total was determined by adding the estimated costs of pavement resurfacing (\$1.25 billion), pavement replacement (\$0.16 billion) and bridge preservation (\$2.37 billion). The next step in the development of *Transportation Outlook 2045* is to determine the expected amount of revenue available over the life of the Plan. The total system preservation cost contained in this report will be subtracted from predicted revenues to determine the amount available for operational and expansion project recommendations.

Please note that this study does not account for any minor collector or local roadway preservation costs because they do not qualify for federal funds. If those roadway miles were added back into the report, then the costs would be substantially greater as they account for 74 percent of the total mileage and 67.5 percent of the total lane miles according to Table 1. This is important to note as local communities struggle to find necessary funding for their transportation infrastructure.

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>ATWATER TWP</b>									
6735630	Stroup Rd	Walborn Reservoir	77	2772	Fair	3	A	40.992861	-81.172092
6703909	US 224	Stroup Rd	125	5802	Fair	1	A	41.033014	-81.172167
6739660	Alliance Rd	Willow Creek	30	807	Fair	3	A	41.0325	-81.098611
<b>AURORA</b>									
6730329	Pioneer Trail	Aurora Br Chagrin River	24	456	Poor	3	A	41.304167	-81.310833
6704743	SR 306	Br Chagrin River	136	4975	Fair	1	A	41.343967	-81.342664
6733328	Crackel Rd	Aurora Br Chagrin River	76	1710	Fair	3	A	41.347611	-81.336925
<b>BRIMFIELD TWP</b>									
6733808	Tallmadge Rd	Plum Creek	32.6	1174	Fair	3	A	41.10015	-81.369858
6701957	IR 76 WB	W&LE RR	147	6468	Fair	1	A	41.106189	-81.369114
6701981	IR 76 EB	W&LE RR	147	6468	Fair	1	A	41.105864	-81.369144
6702031	SR 43	IR 76	224	14672	Fair	1	A	41.107133	-81.347389
<b>CHARLESTON TWP</b>									
6732534	Newton Falls Rd	Hinkley Creek	51	1211	Poor	3	A	41.162914	-81.1328
6730256	Esworthy Rd	Hinkley Creek	44	1074	Poor	3	A	41.160556	-81.139167
6735967	Knapp Rd	West Branch Reservoir	210	5513	Fair	3	A	41.135278	-81.191389
6700217	SR 5	Hinkley Creek	24	1055	Fair	1	A	41.151806	-81.167686
<b>DEERFIELD TWP</b>									
6735800	Yale Rd	Kale Creek Stream	22	441	Poor	3	A	41.062214	-81.046317
5054486	Western-Reserve	A Tributary Mahoning River	21	667	Fair	3	A	40.987797	-81.004361
6701000	SR 14	Berlin Reservoir	282	11280	Fair	1	A	41.009664	-81.045742
6703968	US 224	Willow Creek	54	1458	Fair	1	A	41.024692	-81.073575
<b>EDINBURG TWP</b>									
6733840	Tallmadge Rd	Barrell Run	43	1157	Poor	3	A	41.098419	-81.187611
6702619	IR 76	Barrell Run	135	5940	Fair	1	A	41.106422	-81.191192
6702643	IR 76 WB	SR 14	270	11880	Fair	1	A	41.105975	-81.156939
6702767	Porter Rd	IR 76	211	6506	Fair	1	A	41.105425	-81.121856
6735304	Calvin Rd	Silver Creek	93	2422	Fair	3	A	41.118889	-81.105833
6702708	IR 76 EB	SR 14	270	11880	Fair	1	A	41.105692	-81.156675
6702791	IR 76	Silver Creek	139	6179	Fair	1	A	41.105544	-81.104672
6702821	IR 76	Silver Creek	141	6254	Fair	1	A	41.105258	-81.10475
<b>FREEDOM TWP</b>									
6740448	Ravenna Rd	N & S RR	67	1826	Poor	3	K	41.172222	-81.312778
6731295	Johnson Rd	Fish Creek	23	463	Poor	3	A	41.174444	-81.384167
6731570	Lake Rockwell	Eckert Ditch	28	614	Fair	3	A	41.197222	-81.303333
6701213	SR 43	Abandoned RR	50	1950	Fair	1	A	41.1811	-81.346828
6701264	SR 43	NS RR	155	6820	Fair	1	A	41.186869	-81.347078



# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>FREEDOM TWP (Continued)</b>									
6701787	SR 59	Breakneck Creek	62	3596	Fair	1	A	41.155872	-81.318822
6740383	Judson Rd	W&LE RR	154	3692	Fair	3	A	41.193611	-81.38
<b>HIRAM TWP</b>									
6704530	SR 305	Silver Creek	33	883	Fair	1	A	41.309519	-81.129861
6731538	Hankee Rd	Eagle Creek Tributary	26	652	Fair	3	A	41.275278	-81.1125
6704883	SR 700	Eagle Creek	56	1568	Fair	1	A	41.281992	-81.144611
<b>KENT</b>									
6760015	Sunrise Blvd	Fish Creek	43	1473	Poor	4	P	41.15655	-81.389272
6737080	W Main St	Cuyahoga River & CSXT RR	249	17430	Poor	3	A	41.153889	-81.359444
6730582	Sunny Brook Rd	Plum Creek	39	848	Fair	3	A	41.126533	-81.366164
6730914	Howe Rd	Plum Creek	43	871	Fair	3	A	41.117778	-81.367222
6705103	Summit Rd	Breakneck Creek	21	527	Fair	1	A	41.140247	-81.320375
6737498	Stow Rd	Cuyahoga River	141	5006	Fair	3	A	41.150556	-81.362222
6760060	Portage Hike & Bike	CSX RR	54	756	Fair	4	A	41.166375	-81.3402
6701760	SR 59	Tallmadge Av, W&LE RR	409	28630	Fair	1	A	41.150781	-81.373478
6704964	SR 261 WB	Plum Creek & W&LE RR	538	22596	Fair	1	A	41.134858	-81.369692
6704972	SR 261 EB	Plum Creek & W&LE RR	538	22596	Fair	1	A	41.134556	-81.369653
<b>MANTUA</b>									
6760000	Mats Rd	Cuyahoga River	230	2783	Poor	4	K	41.277664	-81.227106
6730876	Canada Rd	Cuyahoga Tributary	34	678	Fair	3	A	41.275278	-81.216389
6701663	SR 44	Cuyahoga River	129	5354	Fair	1	A	41.278539	-81.224578
<b>MANTUA TWP</b>									
6703364	SR 82	Cuyahoga River	171	5785	Fair	1	A	41.310447	-81.195142
6737404	Mantua Center Rd	Black Brook Ditch	25	488	Fair	3	A	41.33	-81.245278
<b>NELSON TWP</b>									
6732860	Silica Sand Rd	Eagle Creek	56	1027	Poor	3	A	41.272222	-81.05
6732208	Hopkins Rd	Br Eagle Creek	25	398	Fair	3	P	41.276389	-81.056667
6704573	SR 305	Camp Creek	85	3057	Fair	1	A	41.31005	-81.096886
6730566	Knowlton Rd	Tinker Creek Tributary	22	377	Fair	3	A	41.296894	-81.022333
6703631	SR 88	Camp Creek	32	1173	Fair	1	A	41.312247	-81.098325
6739024	Parkman Rd	Tinker Creek	40	940	Fair	3	A	41.295833	-81.047778
<b>PALMYRA TWP</b>									
6732909	Jones Rd	Kale Creek	40	640	Poor	3	P	41.110278	-81.012778
6730922	Whippoorwill Rd	Kale Creek Tributary	32	704	Poor	3	A	41.113333	-81.015556
6732917	Cable Line Rd	Kale Creek Tributary	23	344	Fair	3	A	41.134156	-81.004111
6733891	Tallmadge Rd	Kale Creek	80	2560	Fair	3	A	41.098736	-81.014583
6702880	John Thomas Rd	IR 76	209	6372	Fair	1	A	41.106211	-81.089472

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>PALMYRA TWP (Continued)</b>									
6703186	IR 76	Kale Creek	80	3520	Fair	1	A	41.099708	-81.014425
6732895	Cable Line Rd	Kale Creek Tributary	25	500	Fair	3	A	41.134167	-81.010278
6703097	IR 76 WB	Universal Rd & ABC RR	196	8428	Fair	1	A	41.101267	-81.022667
6703127	IR 76 EB	Universal Rd & ABC RR	196	8428	Fair	1	A	41.101014	-81.022686
6703151	IR 76	Kale Creek	80	3520	Fair	1	A	41.100022	-81.014408
6703216	Mahoning Rd	IR 76	228	7072	Fair	1	A	41.100161	-81.002467
<b>PARIS TWP</b>									
6732569	Newton Falls Rd	Mahoning River	107	2996	Fair	3	A	41.171111	-81.021667
6738850	Wayland Rd	West Branch Tributary	24	514	Fair	3	A	41.169167	-81.071389
6704174	SR 225	West Br Mahoning River	105	3358	Fair	1	A	41.156797	-81.05145
6738575	Wayland Rd	West Br Mahoning River	131	3940	Fair	3	A	41.157222	-81.071389
<b>RANDOLPH TWP</b>									
6733646	Randolph Rd	Potter Creek	25	600	Poor	3	A	41.046906	-81.295706
6734626	Laubert Rd	Congress Lake Outlet	39	780	Fair	3	A	40.996519	-81.266731
6701450	SR 44	Br Congress Lake	60	2160	Fair	1	A	41.061025	-81.247328
6703879	US 224	Congress Lake Outlet	93	4092	Fair	1	A	41.029817	-81.259414
6734804	Waterloo Rd	Congress Lake Outlet	44	1434	Fair	3	A	41.033056	-81.257222
<b>RAVENNA</b>									
6700667	SR 14	Abandoned RR, Portage Bike & Hike	161	7567	Fair	1	A	41.173725	-81.228958
<b>RAVENNA TWP</b>									
6703542	SR 88	Br Mahoning River	39	1082	Fair	1	A	41.193233	-81.206289
6732518	Newton Falls Rd	Mahoning River W Branch	32	732	Fair	3	A	41.161594	-81.197461
6700691	SR 14	SR 5 & SR 44	234	15210	Fair	1	A	41.152475	-81.215142
6738303	Wall St	Conrail	199	7612	Fair	3	A	41.17	-81.271667
6700098	SR 5	CSX Transportation	194	8148	Fair	1	A	41.147875	-81.222442
<b>ROOTSTOWN TWP</b>									
6734111	Old Forge Rd	Breakneck Creek	49	882	Poor	3	A	41.070833	-81.268611
6731589	Industry Rd	Barrell Run	22	484	Fair	3	A	41.086667	-81.193889
6700039	SR 5	SR 44	259	7770	Fair	1	A	41.117728	-81.242561
6702317	IR 76 EB	SR 5 & SR 44	167	8684	Fair	1	A	41.109314	-81.242744
6731953	Industry Rd	Barrell Run	32	768	Fair	3	A	41.091111	-81.193889
6734138	Old Forge Rd	Breakneck Creek	46	1173	Fair	3	A	41.070264	-81.266261
6734650	Harriff Rd	Breakneck Creek	77	2271	Fair	3	A	41.133056	-81.260556
6735029	Rootstown Rd	Breakneck Creek	76	1824	Fair	3	A	41.105833	-81.263611
6702198	Rootstown Rd	Over IR 76	331	10097	Fair	1	A	41.110708	-81.270189

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>STREETSBORO</b>									
6732879	Elliman Rd	Cuyahoga Tributary	25	603	Fair	3	A	41.253889	-81.299167
6704778	IR 480 WB	W&LE RR	135	8696	Fair	1	A	41.265286	-81.390069
6704808	IR 480 EB	W&LE RR	135	8696	Fair	1	A	41.264875	-81.390114
<b>SUFFIELD TWP</b>									
6733301	Martin Rd	Mogadore Reservoir Outlet	27	646	Fair	3	A	41.056386	-81.382958
6703755	US 224	W&LE RR	148	5032	Fair	1	A	41.026644	-81.373767
<b>WINDHAM TWP</b>									
6735622	Silica Sand Rd	Eagle Creek	76	1520	Poor	3	A	41.27	-81.011667
6704506	SR 303	Br Eagle Creek	62	1824	Fair	1	A	41.234969	-81.024292
6730906	Stanley Rd	Mahoning Creek	22	477	Poor	3	A	41.259692	-81.085147
6739008	Parkman Rd	Mahoning Creek	26	570	Fair	3	A	41.264444	-81.050833

\* Placed bridges from adjacent counties into AMATS counties

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>AKRON</b>									
7730314	N Main Street	Ramp N Howard St	47.3	3327	Poor	3	A	41.120428	-81.509994
7745036	Riverview Rd	Yellow Creek	22	528	Poor	3	A	41.163494	-81.576261
7760027	Main St	Csx & Conrail RR	234	19656	Poor	4	A	41.055519	-81.528225
7760361	State St	Garden Al & Oh Canal	538	32280	Poor	4	A	41.079331	-81.521908
7761066	Gojo Ped Bridge	206 Gojo Pedestrian Bridge	111	1286	Poor	4	A	41.071869	-81.525253
7707592	SR 93	Cr 7021, A&B RR& CSX RR	581	39992	Poor	1	A	41.041808	-81.546067
7745060	Bath Rd	Cuyahoga River	210	7556	Poor	3	P	41.162378	-81.574353
7730225	Kent St	Little Cuyahoga River	51	1862	Poor	3	A	41.071667	-81.486667
7701799	SR 59	SR 59 NB Ramp Over IR 76	1500	62750	Fair	1	A	41.06175	-81.543153
7705581	27th St	Over US 224	223	9868	Fair	1	A	41.035267	-81.571922
7705972	IR 76 Ramp to IR 77S	IR 76 EB & IR 77 SB	240	9120	Fair	1	A	41.061864	-81.506119
7706065	IR76 Ramp to SR 8 N	Over I-76 WB	134	5091	Fair	1	A	41.061719	-81.502947
7711255	SR 764	Over Metro Rta RR	136	7616	Fair	1	A	41.041628	-81.477153
7730055	South St	Ohio Canal	55.1	3525	Fair	3	A	41.061667	-81.542192
7730136	Home Av	Little Cuyahoga River	73	4672	Fair	3	A	41.087667	-81.490708
7730306	N Main St	Cuyahoga River	909	61430	Fair	3	A	41.121914	-81.509628
7752083	Skelton Rd	Little Cuyahoga River	35	840	Fair	3	A	41.056022	-81.423144
7761708	Stuber Av	Little Cuyahoga River	51	1849	Fair	4	A	41.090694	-81.511075
7700067	Johnston St	SR 8 & Rmps To IR 76,IR 77,SR8	309	14214	Fair	1	A	41.064014	-81.5049
7700180	Caroll St	Over SR 8	118	7363	Fair	1	A	41.075325	-81.504472
7700210	Buchtel St	Over SR 8	118	7363	Fair	1	A	41.076478	-81.504033
7700369	SR 8 & SR 59	North St L Cuy Riv & Rrs	1583	131389	Fair	1	A	41.086686	-81.501953
7700423	SR 261	Over SR 8 & SR 59	119	9996	Fair	1	A	41.102197	-81.500197
7701942	SR 59	Over Ohio Canal Enclosure	67	4284	Fair	1	A	41.086517	-81.518889
7703244	IR 76	Over Broadway & CSXT RR	528	68860	Fair	1	C	41.0623	-81.5263
7703279	IR 76	IR 76 WB Off Rmp Over Bdwy	450	18150	Fair	1	A	41.062967	-81.525747
7703309	IR 76	Over Main St	167	21780	Fair	1	A	41.062258	-81.527564
7703368	Princeton St	Over IR 76/77	154	9599	Fair	1	A	41.061892	-81.534533
7703392	IR 76	Over Lakeshore Blvd	171	20249	Fair	1	A	41.062044	-81.540767
7703457	IR 76	Over Bowery St & Ohio Canal	432	67824	Fair	1	A	41.061833	-81.542886
7703481	IR 76	Over Manchester Rd	158	22502	Fair	1	A	41.061147	-81.550769
7703511	Hilcrest Ped Brdg	Over IR 76/77	262	2620	Fair	1	A	41.059908	-81.554372
7703546	East Av	Over IR 76/77	292	16571	Fair	1	A	41.059653	-81.558108
7703570	IR 76 Ramp V & Ramp W	Over IR 77	197	15366	Fair	1	A	41.060419	-81.568247
7705611	IR 76	Over IR 277-0.17	202	15352	Fair	1	A	41.035147	-81.565406
7705646	IR 76	Over CSX Transportation	221	23537	Fair	1	A	41.037428	-81.565256
7705670	IR 76	Over Wilbeth Rd	218	21364	Fair	1	A	41.039114	-81.565169

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>AKRON (Continued)</b>									
7705700	IR 76	Over Kenmore Blvd	183	19032	Fair	1	A	41.041306	-81.565228
7705735	IR 76	Over Battles Ave	132	12012	Fair	1	A	41.046472	-81.564839
7705824	East Av	Over IR 76	261	14616	Fair	1	A	41.051625	-81.565606
7705859	IR 76 & Ramp T	Over Morse St	152	11907	Fair	1	A	41.058556	-81.567619
7705883	Ramp U & IR 76 EB	Over Morse St	119	5236	Fair	1	A	41.058558	-81.567417
7705891	Sumner Ped Bldg	Over IR 76/77	170	1629	Fair	1	A	41.06235	-81.514894
7706006	IR 77 WB	Over IR 77NB & SR 8	353	22563	Fair	1	A	41.062136	-81.505664
7706030	IR 76 EB	Over IR 77NB & SR 8	466	27455	Fair	1	A	41.061531	-81.50515
7706219	Ped Bridge	Over IR 76	206	3735	Fair	1	A	41.062922	-81.496592
7706332	IR 76	Over Kelly Ave RR Canal	814	121286	Fair	1	A	41.062381	-81.482244
7706545	IR 76	Little Cuyahoga River	28	667	Fair	1	A	41.064567	-81.438144
7707568	SR 93	Ohio Canal	99	6732	Fair	1	A	41.0237	-81.549722
7707622	Kenmore Blvd	Over Kenmore Blvd	181	6305	Fair	1	A	41.045017	-81.547831
7707657	SR 162	Pigeon Creek	40	883	Fair	1	A	41.083483	-81.585522
7707797	Kelly Av	Over US 224	182.4	9849	Fair	1	A	41.025639	-81.483306
7708246	SR 18	Over CSX Transportation	69	5037	Fair	1	A	41.069669	-81.487247
7708645	SR 261D	Over L Cuy R WE&METRO RRs	3351	139067	Fair	1	A	41.0963	-81.512447
7708653	SR 261	Over L Cuy R WE&METRO RRs	3410	129577	Fair	1	A	41.087103	-81.514597
7709323	Martha Av	Over Abandoned Railroad	28	1119	Fair	1	A	41.060486	-81.477017
7711190	SR 764	Ohio Canal	107	7383	Fair	1	A	41.039967	-81.541153
7730144	White Pond Dr	Shocalog Run	29	807	Fair	3	A	41.096408	-81.588908
7730209	Emmitt Rd	CSX Railroad	97	3977	Fair	4	A	41.025528	-81.478119
7730322	Front St	Cuyahoga River	230	12400	Fair	3	A	41.118333	-81.493333
7730357	W North St	Ohio Canal	66	3864	Fair	3	A	41.091667	-81.518333
7736118	Glenmount Av	Holy Cross Inlet	53	1798	Fair	3	A	41.02485	-81.515278
7759398	Park Access Rd	Sand Run Creek	43	689	Fair	C	A	41.13775	-81.564611
7760000	E. Exchange St	Wolf Ledges and RRs	269	26630	Fair	4	A	41.075225	-81.518764
7760019	High-Main Viaduct	Garage Dr-Goodrich	982	47039	Fair	4	A	41.072481	-81.523503
7760116	University Blvd	CSX & Conrail	249	19858	Fair	4	A	41.078042	-81.516436
7760140	Waterloo Rd	Brewster Run Culvert	24	1296	Fair	4	A	41.029244	-81.503258
7760310	Thornton St	Ohio Canal	147	9151	Fair	4	A	41.066061	-81.536111
7760469	Ped Traffic	Spr-Field Lk Outlet	26	191	Fair	4	A	41.053861	-81.447169
7760604	Dart Av Ramp	Over Ohio Canal	136	5032	Fair	4	A	41.064664	-81.538489
7760949	Bike Path	Ravine 33.5 Mi No 212	246	3690	Fair	C	A	41.127686	-81.538797
7761228	Mill St	Cascade Parking Deck	107	11765	Fair	4	A	41.083	-81.519667
7761627	Miller Av	Conrail & CSX RR	166	8300	Fair	4	A	41.056481	-81.527544
7761643	Rhodes Av	Ohio Canal	56	3358	Fair	4	A	41.064714	-81.538467

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>AKRON (Continued)</b>									
7761678	Bowery St	Ohio Canal	278	17792	Fair	4	B	41.081372	-81.519978
7761759	Wedgewood Dr	Spring Lake Outlet	31	926	Fair	4	A	41.049822	-81.440511
7761775	Goodyear Blvd	W&LE RR	72	4069	Fair	4	A	41.068406	-81.475703
7700245	Forge St	Over SR 8	161	9978	Fair	1	A	41.081469	-81.503833
7700334	SR 59	Over SR 8	121	7987	Fair	1	A	41.083864	-81.503311
7700393	Glenwood Av	Over SR 8	120	7459	Fair	1	A	41.097564	-81.500267
7700989	SR 18	SR 59 & Ohio Canal Encl	226	22152	Fair	1	A	41.08575	-81.519092
7701810	SR 59	Lakeshore Oh Can Thornton	864	36144	Fair	1	A	41.063886	-81.537842
7701829	SR 59	Lakeshore Oh Can Thornton	800	33465	Fair	1	A	41.063333	-81.538333
7701934	SR 59	Conn Rmp(Mill St-Rand Av)	686	26749	Fair	1	A	41.083817	-81.519628
7701977	Bartges St	Over SR 59	196	15877	Fair	1	A	41.070364	-81.537778
7702701	IR 77	Over Waterloo Rd	202	13702	Fair	1	A	41.028856	-81.504867
7702736	IR 77	Over Waterloo Rd	206	12618	Fair	1	A	41.028933	-81.504239
7702825	Cole Av	Over IR 77	158	9585	Fair	1	A	41.051617	-81.505642
7702884	IR 77	Over Archwood Av	157	18526	Fair	1	A	41.046444	-81.505508
7702914	Lovers Lane	Over IR 77	150	9125	Fair	1	A	41.05445	-81.505611
7702949	Lafollette Av	IR 77 & SR 8	223	12525	Fair	1	A	41.058961	-81.505714
7703961	IR 77	Under Schocalog Rd	259	10943	Fair	1	A	41.10885	-81.604039
7705557	IR 76	Over CSX Transportation	379	42448	Fair	1	A	41.035639	-81.576219
7706308	IR 76	Over Fuller St	68	10540	Fair	1	A	41.062517	-81.484053
7706480	IR 76	Over SR 18	163	21842	Fair	1	A	41.061311	-81.457339
7708742	SR 261	Over CSX Transportation	117	8424	Fair	1	A	41.102478	-81.489064
7709757	IR 277	Over Glenmount Av	119	11900	Fair	1	A	41.024436	-81.515553
7711220	SR 764	Over IR 77	128	7808	Fair	1	A	41.039875	-81.505194
7760175	Brown St	Akron Barberton RR	34	2040	Fair	4	A	41.056531	-81.50995
7760329	Thornton St	CSX & Conrail RR	325	19500	Fair	4	A	41.065886	-81.523433
7700091	SR 8	Over Beacon St AB RR	130	14874	Fair	1	A	41.067836	-81.503967
7700555	SR 8	Over Gorge Blvd	126	14112	Fair	1	A	41.114286	-81.494225
7701993	Dart Av	Ramp To Opport Pkwy	158	5845	Fair	1	A	41.074281	-81.537719
7702000	Euclid Av	Over SR 59	354	19824	Fair	1	A	41.075925	-81.537572
7702760	Catawba Av	Over IR 77	163	6982	Fair	1	A	41.035678	-81.505331
7703600	IR 77	Over Hawkins Av	160	19520	Fair	1	A	41.061292	-81.569508
7703635	IR 77	Over SR 261	147	20482	Fair	1	A	41.063903	-81.5727
7703880	White Pond Dr	IR 77	196	11662	Fair	1	A	41.099058	-81.587456
7706537	SR 91	IR 76,L Cuy R,W&LE ABC RR	481	26696	Fair	1	A	41.064411	-81.43935
7707789	US 224	Over S Arlington St	147	16464	Fair	1	A	41.025828	-81.491783
7708297	SR 18	Over SR 8	126	10395	Fair	1	A	41.079953	-81.504106

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SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>AKRON (Continued)</b>									
7708629	SR 261	Over SR 59	160	12960	Fair	1	A	41.07315	-81.538006
7709609	IR 277	Over Waterloo Rd	220	24640	Fair	1	A	41.031353	-81.549311
7762275	Carey Av Pedestrian	Over Mud Run	63	415	Fair	4	A	41.041719	-81.576419
<b>BARBERTON</b>									
7705433	IR 76	Ramp C&D Over Mud Run	26	624	Fair	1	A	41.036622	-81.578356
7731124	Coventry Rd	Mud Run	34.2	1164	Fair	3	A	41.033672	-81.579625
7705344	State St	Over US 224	176	11616	Fair	1	A	41.037353	-81.583711
7711034	SR 619	Tus R CSXT & ABC RR Sts	866	63218	Fair	1	A	41.028486	-81.587992
7731000	Norton Av	Wolf Creek	65	3445	Fair	3	A	41.024672	-81.614603
7731019	Snyder Av	Tuscarawas River	61	2077	Fair	3	A	41.002844	-81.605944
7731043	W Wooster Rd	Hudson Run	67	4219	Fair	3	A	41.006797	-81.634178
7731108	Brady Av	Wolf Creek	72	2160	Fair	3	A	41.021719	-81.616042
<b>BATH TWP</b>									
7732120	Ira Rd	North Fork Yellow Creek	27.2	489	Poor	3	A	41.188886	-81.653256
7732155	Granger Rd	Yellow Creek	65	1561	Poor	3	A	41.160647	-81.649114
7732007	N Medina-Line Rd	Br Yellow Creek	23	644	Fair	3	A	41.153928	-81.686633
7732090	Yellow Creek Rd	Yellow Creek	64.8	2528	Fair	3	A	41.160122	-81.600258
7732023	Cleve-Mass Rd	Yellow Creek	77	4489	Fair	3	A	41.157636	-81.635881
7732031	Cleve-Mass Rd	Br North Fork Stream	48	2808	Fair	3	A	41.162917	-81.636897
7732058	Cleve-Mass Rd	North Fork Stream	32	1872	Fair	3	A	41.176878	-81.636567
7732112	Ira Rd	Bath Ditch	32	1077	Fair	3	A	41.188839	-81.665064
7732171	Shade Rd	North Fork	28	775	Fair	3	A	41.175564	-81.635133
7732228	Hametown Rd	Br Yellow Creek	36	1346	Fair	3	A	41.15	-81.665
7732236	N Hametown Rd	Bath Ditch	26	884	Fair	3	A	41.189203	-81.665775
7732481	Martin Rd	Br Ira Creek	23	753	Fair	3	A	41.179492	-81.589628
7704267	IR 77	Over Bath Rd	121.5	7776	Fair	1	A	41.168889	-81.626308
<b>BOSTON TWP</b>									
7733038	Riverview Rd	Columbia Run	34.7	942	Fair	3	A	41.2756	-81.568011
7709099	IR 271	Over Boston Mills Rd	191	8022	Fair	1	A	41.264081	-81.552333
7709129	IR 271	Over Boston Mills Rd	163	5868	Fair	1	A	41.263839	-81.552111
7733062	Akron-Peninsula Rd	Dickerson Run	34	1259	Fair	3	A	41.218361	-81.551975
7733070	Akron-Peninsula Rd	Salt Run	28	936	Fair	3	A	41.226014	-81.547267
7733127	Everett Rd	Furnace Run	86	3315	Fair	3	A	41.2079	-81.584953
7729545	EB Tpk	Over IR 271	406	26393	Fair	1	A	41.252681	-81.586922
7729596	IR 271 NB	Over IR 80	214.7	9106	Fair	1	A	41.252753	-81.585697
7709153	Hines Hill Rd	Over IR 271	287	8036	Fair	1	A	41.269928	-81.5438



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SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>BOSTON HEIGHTS</b>									
7700172	Bike Path	Over SR 8	251	2906	Fair	1	A	41.228378	-81.489244
7700237	SR 8	Over SR 303	214	23541	Fair	1	A	41.232161	-81.490167
7700253	SR 8	Over NB On Ramp From SR 303	127	13972	Fair	1	A	41.23435	-81.491597
<b>COPLEY TWP</b>									
7735138	Wright Rd	Pigeon Creek	49	1206	Poor	3	A	41.073586	-81.591083
7735189	Minor Rd	Br Wolf Creek	21	714	Poor	3	A	41.081211	-81.670214
5233119	Medina Line Rd	Wolf Creek	99	3025	Fair	3	P	41.087819	-81.687469
7735103	Shocalog Rd	Pigeon Creek	23	786	Fair	3	A	41.096342	-81.603108
7735146	Cleve-Mass Rd	Wolf Creek	48	1344	Fair	3	A	41.071594	-81.639314
7701500	SR 21	Over Barberton Res Inlet	112	4928	Fair	1	A	41.085422	-81.662117
7701535	SR 21	Over Barberton Res Inlet	112	4928	Fair	1	A	41.0853	-81.661742
7701756	IR 77 NB Off-ramp	To 21 SB (over SR 21)	225	7200	Fair	1	A	41.120736	-81.653642
7704046	IR 77 NB	Over SR 21 NB	238	14756	Fair	1	A	41.123139	-81.652422
7735154	Minor Rd	Wolf Creek	98	2745	Fair	3	A	41.081181	-81.656825
7735162	White Pond Dr	Pigeon Creek	34	1275	Fair	3	A	41.092086	-81.590331
7735200	Jacoby Rd	Pigeon Creek	20	670	Fair	3	A	41.106769	-81.619414
7701748	Ridgewood Rd	Over SR 21 NB	219	8322	Fair	1	A	41.111486	-81.654964
7703945	IR 77 SB On-ramp	From Miller Rd (Over IR 77)	361	13718	Fair	1	A	41.112492	-81.609911
7704038	IR 77 SB	Over SR 21 NB	238	11900	Fair	1	A	41.12295	-81.652722
<b>COVENTRY TWP</b>									
7736029	S Main St	Feeder Channel	20.5	1181	Fair	3	A	41.014158	-81.523603
7702469	Killian Rd	Over IR 77	282.5	16437	Fair	1	A	40.997336	-81.493525
7702558	IR 77	Tuscarawas River	161	9016	Fair	1	A	41.0071	-81.494458
7702647	IR 77 SB Off-ramp	To US 224 Eb (over IR 77 NB)	233	6990	Fair	1	A	41.023653	-81.498925
7709811	IR 277	Over IR 77	561	59653	Fair	1	A	41.025186	-81.502358
7736002	Arlington Rd	Tuscarawas River	73	3800	Fair	3	A	41.007194	-81.492006
7736061	Portage Lakes Dr	East Reservoir Outlet	23	1081	Fair	3	A	40.995797	-81.534769
7736088	Portage Lakes Dr	East Reservoir Outlet	29	1033	Fair	3	A	41.001011	-81.531394
<b>CUYAHOGA FALLS</b>									
7745087	Riverview Rd	Furnace Run	125.3	4760	Poor	3	P	41.201339	-81.573414
7700679	Ped Bridge	Over SR 8, S of Graham Rd	601	6010	Poor	1	A	41.1597	-81.468772
7700601	Portage Trail SB Ramp	To SR 8 SB	209	6270	Fair	1	A	41.135597	-81.481139
7700628	SR 8 NB Off-ramp	To Portage Trail	329	10528	Fair	1	A	41.135256	-81.480617
7700733	SR 8 SB Off-ramp	Relief Sidehill Struct	358	10651	Fair	1	A	41.134875	-81.4815
7763832	Bath Rd	Mudd Brook	92	3681	Fair	4	A	41.158333	-81.505
7700598	SR 8	Over Broad Blvd	80	10800	Fair	1	A	41.133464	-81.481092
7700644	SR 8 & SR 59	Cuyahoga River	150	18900	Fair	1	A	41.139939	-81.477939

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SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>CUYAHOGA FALLS (Continued)</b>									
7710828	Bailey Rd	Over SR 8	210	8820	Fair	1	A	41.146436	-81.475103
<b>FAIRLAWN</b>									
7764391	Elgin Dr	Schocalog Run	23	527	Fair	4	A	41.126303	-81.625764
<b>GREEN</b>									
7739109	Christman Road	Nimisila Reservoir	43	1172	Poor	3	P	40.924522	-81.515564
7711131	SR 619	Over IR 77	394	14542	Fair	1	A	40.974211	-81.478361
7739117	Mayfair Rd	Hekman Ditch	27	893	Fair	3	A	40.952053	-81.437033
7739125	Raber Rd	Br Tuscarawas River	54	1399	Fair	3	A	40.965347	-81.430539
7739397	Arlington Rd	Nimisila Creek	37	1485	Fair	3	A	40.908989	-81.497147
7702434	IR 77	Over S Arlington Rd	313	24727	Fair	1	A	40.987506	-81.492375
<b>HUDSON</b>									
7767811	Ingleside Dr	Brandywine Creek	25	817	Poor	4	P	41.245997	-81.466497
7740085	E. Hines Hill Rd	Brandywine Creek	32.3	1049	Fair	3	A	41.260278	-81.489186
7740093	Hines Hill Rd	Br Brandywine Creek	20	540	Fair	3	A	41.260808	-81.474831
7740107	Hines Hill Rd	Br Brandywine Creek	23	625	Fair	3	A	41.263383	-81.451242
7740115	Hines Hill Rd	Br Brandywine Creek	20	545	Fair	3	A	41.263831	-81.448189
7740220	Dillman Dr	Wagar Ditch	26	732	Fair	4	A	41.259925	-81.407069
7710593	IR 480	Tinkers Creek	245	10780	Fair	1	A	41.266053	-81.393367
<b>MACEDONIA</b>									
7700725	SR 8	Indian Creek	33	792	Fair	1	A	41.301019	-81.515947
7710143	IR 480 WB	Over Bedford Rd	145	6380	Fair	1	A	41.349803	-81.508633
7742045	Bedford Rd	Indian Creek	25	1825	Fair	3	A	41.311825	-81.509631
7710178	IR 480 EB	Over Bedford Rd	145	6380	Fair	1	A	41.349267	-81.508992
<b>MUNROE FALLS</b>									
7759339	Park Rd	Main Lake Inlet	28	567	Fair	C	B	41.129722	-81.425194
7707142	SR 91	Cuyahoga River	148	5027	Fair	1	A	41.142142	-81.438822
<b>NEW FRANKLIN</b>									
7738161	Benner Rd	Nimisila Creek	44	1056	Poor	4	P	40.912497	-81.594711
7738153	Grill Rd	Pancake Creek	34	680	Fair	4	A	40.969942	-81.623083
7711107	SR 619	Over Turkeyfoot Channel	118	4715	Fair	1	A	40.980258	-81.535378
7738188	Grove Rd	Br Tuscarawas River	23	794	Fair	3	A	40.970875	-81.591231
7738331	Ormond Dr	Turkeyfoot Lake Channel	44	1082	Fair	4	A	40.97705	-81.537794
7738366	S Main St	Nimisila Creek	49	1862	Fair	3	A	40.923019	-81.535625
7707479	SR 93	Nimisila Creek	80	5760	Fair	1	A	40.915908	-81.561383
<b>NORTHFIELD CENTER TWP</b>									
7746032	Brandywine Rd	Brandywine Creek	160.5	4495	Poor	3	A	41.276483	-81.537736
7746040	Stanford Rd	Br Brandywine Ck	20	603	Fair	J	X	41.276667	-81.548333

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SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>NORTHFIELD CENTER TWP (Continued)</b>									
7746016	Highland Rd	Brandywine Creek	77	2465	Fair	3	A	41.276667	-81.538333
7709188	Brandywine Rd	Over IR 271	263	7364	Fair	1	A	41.275675	-81.537006
7709242	IR 271 NB	Over Akron Clev Rd	135	5673	Fair	1	A	41.293335	-81.521922
7709307	IR 271	Brandywine Creek	161	6762	Fair	1	A	41.294153	-81.521556
<b>NORTON</b>									
7701322	SR 21	Br Hudson Creek	34	818	Fair	1	A	41.027681	-81.665111
7701055	SR 21 SB	Over SR 585	249	12201	Fair	1	A	40.992467	-81.663114
7701144	SR 21 NB	Over SR 585	249	9213	Fair	1	A	40.992667	-81.662706
7701179	Johnson Rd	SR 21	202	6868	Fair	1	A	41.00385	-81.661578
7701268	SR 21	Br Hudson Creek	28	667	Fair	1	A	41.017919	-81.665217
7704895	IR 76	Hudson Run	24	581	Fair	1	A	41.040136	-81.681483
7704925	Hametown Rd	US 224	246	7626	Fair	1	A	41.039689	-81.667089
7705018	IR 76	Over SR 21	259	34965	Fair	1	A	41.039931	-81.663458
7708556	SR 261	Pigeon Creek	54	2379	Fair	1	A	41.056639	-81.601983
7708580	SR 261	Pigeon Creek	54	2379	Fair	1	A	41.0574	-81.598711
7747144	Summit Rd	Wolf Creek	77	2465	Fair	3	A	41.048811	-81.599917
7747225	Hametown Rd	Hudson Run	32	1033	Fair	3	A	41.028881	-81.667272
7701209	SR 21	Over Dorothy St & ABC RR	239	8365	Fair	1	A	41.014092	-81.664389
7705042	Easton Rd	Over US 224	211	6545	Fair	1	A	41.039511	-81.648011
7708491	SR 261	Van Hyning Run	22	527	Fair	1	A	41.050086	-81.646156
7708521	SR 261	Wolf Creek	106	4661	Fair	1	A	41.055036	-81.608994
7708467	SR 261	Over SR 21	203	11165	Fair	1	A	41.049469	-81.662628
<b>PENINSULA</b>									
7709935	SR 303	Cuyahoga River	213	8520	Fair	1	A	41.241297	-81.550339
<b>REMINDEVILLE</b>									
7758022	Glenwood Blvd	Pond Brook	24	958	Fair	3	A	41.341881	-81.405183
<b>RICHFIELD</b>									
7750013	Brecksville Rd	Furnace Run	43	2501	Fair	3	A	41.257697	-81.633314
<b>RICHFIELD TWP</b>									
7749007	Everett Rd	Branch Furnace Run	23	529	Fair	3	X	41.205742	-81.592611
7749023	Wheatley Rd	Riding Run	35.3	1166	Fair	3	A	41.216217	-81.592556
7749066	Brush Rd	Furnace Run	34.3	1141	Fair	3	A	41.253156	-81.629522
7704658	IR 77	Furnace Run	161.1	7249	Fair	1	A	41.254528	-81.630972
7707711	SR 176	Over IR 77	305	16318	Fair	1	A	41.2208	-81.626064
7749015	Harter Rd	East Br Rocky River	30	721	Fair	3	A	41.21	-81.685
7749031	Townsend Rd	Furnace Run	28	952	Fair	3	A	41.268506	-81.641244
7749082	Townsend Rd	Br Furnace Run	21	714	Fair	3	A	41.261453	-81.638283

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SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>RICHFIELD TWP (Continued)</b>									
7708793	Medina Line Rd	Over IR 271	327	9810	Fair	1	A	41.203806	-81.678397
7708823	Southern Rd	Over IR 271	337	10110	Fair	1	A	41.212314	-81.661111
<b>SAGAMORE HILLS TWP</b>									
7751087	Greenwood Pkwy	Br Cuyahoga River	20	840	Fair	3	A	41.309117	-81.5667
7706871	SR 82	Cuy Riv-B&O Rr-Bike Path	1133	49288	Fair	1	A	41.321292	-81.587194
7751044	Houghton Rd	Br Sagamore Creek	22	549	Fair	3	A	41.343333	-81.551667
7751109	Holzhauser Rd	Br Cuyahoga River	20	678	Fair	3	A	41.311667	-81.558333
<b>SPRINGFIELD TWP</b>									
7752067	Pressler Rd	S Fork Tuscarawas River	42.5	1414	Poor	3	A	40.988675	-81.436586
7708076	SR 241	Over Metro Rta RR	188	8836	Fair	1	A	41.005733	-81.463633
7752008	Canton Rd	E Fork Tuscarawas River	28	1851	Fair	3	A	40.990947	-81.405614
7706669	IR 76	Over Gilchrist Rd	286	32034	Fair	1	A	41.065153	-81.434572
<b>STOW</b>									
7753047	Hudson Dr	Powers Brook	27.5	1022	Poor	3	A	41.202264	-81.454878
7700148	SR 8	Seasons Rd	689	75790	Fair	1	A	41.201525	-81.482297
7700075	SR 8	Over Hudson Dr	201	22110	Fair	1	A	41.16675	-81.476183
7700083	SR 8	Mud Brook & ABD RR Spur	219	24090	Fair	1	A	41.171608	-81.479325
7700105	Steels Corners Rd	Over SR 8	156.5	13444	Fair	1	A	41.181275	-81.47825
7700121	SR 8	Mud Brook	120	12960	Fair	1	A	41.196117	-81.479775
7702019	SR 59	Fish Creek	28	1624	Fair	1	A	41.154278	-81.396519
7753063	North River Rd	Fish Creek	29	1421	Fair	3	A	41.145	-81.396667
7753128	Fishcreek Rd	Powers Brook	28	1001	Fair	3	A	41.195	-81.433333
7700113	SR 8	Over Hampshire Rd	123	13530	Fair	1	A	41.188303	-81.477611
<b>TALLMADGE</b>									
7706693	Munroe Falls Rd	Over IR 76	266	9842	Fair	1	A	41.070681	-81.417217
7706723	Newton St	Over IR 76	399	14763	Fair	1	A	41.072272	-81.414183
<b>TWINSBURG</b>									
7755058	Glenwood Dr	Tinkers Creek	118	3897	Fair	3	A	41.3406	-81.454794
7710208	Shepard Rd	Over SR 14	325	9750	Fair	1	A	41.338503	-81.489108
7706960	SR 82	Over IR 480	330	29205	Fair	1	A	41.31145	-81.451625
7710356	IR 480 WB	Over SR 91	221	10166	Fair	1	A	41.306181	-81.440503
7710380	IR 480 EB	Over SR 91	221	9724	Fair	1	A	41.305767	-81.440575
<b>TWINSBURG TWP</b>									
7710534	IR 480	Over Stow Rd	119	4284	Fair	1	A	41.276739	-81.410017
7710445	IR 480	Over Stow Rd	119	4284	Fair	1	A	41.277094	-81.409814
7756003	Chamberlain Rd	Norfolk Southern RR	118	4484	Fair	3	A	41.305	-81.471667
7756011	Chamberlain Rd	Norfolk Southern RR	118	4489	Fair	3	A	41.302222	-81.472175

# Appendix A

SFN	Facility Carried	Features intersected	Length	Deck Area	NBI rating	Maint.	Status	Lat	Long
<b>CHIPPEWA TWP</b>									
8535906	Galehouse Rd	Silver Creek	27.5	407	Poor	3	P	40.9411	-81.675281
5235464	Eastern Rd	Mill Creek	21	518	Poor	3	A	40.988333	-81.728333
8535760	Coal Bank Rd	Chippewa Creek	125.5	3062	Poor	3	A	40.935531	-81.705717
8535825	Black Diamond Rd	Chippewa Creek	130.5	3197	Fair	3	A	40.932464	-81.685086
8504059	SR 94	Ditch	27	648	Fair	1	A	40.924475	-81.740028
8504113	SR 94 & SR 585	CSXT RR & Access Rd	223	10314	Fair	1	A	40.955161	-81.736997
8506124	SR 585	Mill Creek	93	4092	Fair	1	A	40.959289	-81.730894
8535833	Hametown Rd	Silver Creek	34.5	725	Fair	3	A	40.936131	-81.675553
8535868	Clinton Road	Silver Creek	43	1036	Fair	3	A	40.948958	-81.671656
8535922	Porr Rd	East Branch of Red Run	30.3	524	Fair	3	A	40.927158	-81.724122
8535949	Porr Rd	Chippewa Creek	125.5	3062	Fair	3	A	40.939336	-81.7244
8535981	Galehouse Rd	Mill Creek	45.6	1094	Fair	3	A	40.952517	-81.734236
8504083	SR 94	Chippewa Creek	159	6440	Fair	1	A	40.946386	-81.743233
8506213	Doylestown Rd	SR 585	247.2	7642	Fair	1	A	40.969078	-81.709394
<b>MILTON TWP</b>									
8546959	Zigler Rd	Wald Ditch	22.3	359	Poor	3	A	40.975136	-81.841686
8547149	Doylestown Rd	Chippewa Creek	59	1316	Fair	3	P	40.982347	-81.858656
8547475	Eastern Rd	River Styx	22	616	Fair	3	P	40.988206	-81.785458
8532060	Honeytown Rd	Branch Of Chippewa	25.5	469	Fair	3	A	40.927961	-81.878614
8547416	Yoder Rd	W. Branch Red Run	31.7	640	Fair	3	A	40.909453	-81.769725
8506574	SR 604	Chippewa Creek	86	3146	Fair	1	A	40.945722	-81.812372
8547041	Miller Rd	Steele Ditch	43.1	776	Fair	3	A	40.962692	-81.850631
8547068	Miller Rd	Chippewa Creek	48.8	820	Fair	3	A	40.966494	-81.850494
8547246	Eby Rd	R M Carnahan Ditch	20	400	Fair	3	A	40.968703	-81.864233
8547289	Steiner Rd	Little Chippewa Creek	61.7	1265	Fair	3	A	40.931011	-81.826331
8547343	Blough Rd	Chippewa Creek	51.6	1053	Fair	3	A	40.954939	-81.812172
8547424	Atlantic Av	Fall Creek	35	851	Fair	3	A	40.965814	-81.834744
8547440	Pleasant Home Rd	W Branch Red Run	21.6	335	Fair	3	A	40.91685	-81.76685
<b>RITTMAN</b>									
8547114	E Ohio Ave	River Styx	105.7	4281	Fair	3	A	40.974947	-81.7725
8546975	N Main St	Landis Ditch	30.7	1296	Fair	3	A	40.980228	-81.781511
5235456	Eastern Rd	River Styx	55	1647	Fair	3	A	40.98815	-81.764875