Akron Metropolitan Area Transportation Study
Policy Committee
Virtual Meeting

Thursday, December 17, 2020
1:30 p.m.

Agenda

1. **Call to Order**
   - A. Determination of a Quorum — Oral
   - B. Audience Participation*

2. **Minutes**
   - A. September 24, 2020 Meeting – **Motion Required** — Attachment 2A

3. **Staff Reports**
   - A. Financial Progress Report – **Motion Required** — Attachment 3A
   - B. Technical Progress Report — Oral
   - C. AMATS Federal Funds Report — Attachment 3C

4. **Old Business**
   - A. *Congestion Management Process (CMP) Report*. – **Motion Requested** — Attachment 4A
   - B. *2045 Planning Data Forecast*. – **Motion Requested** — Attachment 4B

5. **New Business**
   - A. *Transportation Planning Prospectus*. – **Motion Requested** — Attachment 5A

6. **Resolutions**
   - A. **Resolution 2020-17** – To Add ODOT and FTA Funds in FY 2021 for METRO RTA - (FY 2021-2024 TIP Amendment #4). – **Motion Required** — Attachment 6A
   - B. **Resolution 2020-18** – Connecting Communities Planning Grant. – **Motion Required** — Attachment 6B
   - C. **Resolution 2020-19** – Approving Amendment #5 to the FY 2021-2024 Transportation Improvement Program to add three new projects. – **Motion Required** — Attachment 6C
   - D. **Resolution 2020-20** – *Traffic Crashes and Safety Performance Measures (2017-2019) Report*. – **Motion Required** — Attachment 6D
   - E. **Resolution 2020-21** – Concurrence with the Revised Air Quality Conformity Analysis for the Cleveland-Akron Air Quality Non-attainment Area to Amend the CUY IR-77/Miller Rd Interchange Project to the NOACA Long Range Transportation Plan and TIP. – **Motion Required** — Attachment 6E

7. **Other Business**
   - A. 2021 Officer Nominations – **Motion Requested** — Oral
   - B. 2021 AMATS Meeting Calendar – **Motion Requested** — Attachment 7B

- MORE -

8. **Adjournment**

Next Regular Meeting:
Thursday, January 28, 2021 - 1:30 PM

* Please note that AMATS will be unable to provide an opportunity for live public comment regarding agenda items or other transportation-related issues due to technological limitations. AMATS Director Baker will instead read any email or written correspondence that the agency has received from the public regarding agenda items.

All mailout material is available on the AMATS Web Site at www.amatsplanning.org

Akron Metropolitan Area Transportation Study
Technical Advisory Committee
Virtual Meeting

Thursday, December 10, 2020
1:30 p.m.

Agenda

1. **Call to Order**
   A. Determination of a Quorum — Oral

2. **Minutes**
   A. September 17, 2020 Meeting – **Motion Required** — Attachment 2A

3. **Staff Reports**
   A. Financial Progress Report – **Motion Required** — Attachment 3A
   B. Technical Progress Report — Oral
   C. AMATS Federal Funds Report — Attachment 3C

4. **Old Business**
   A. *Congestion Management Process (CMP) Report*. – **Motion Requested** — Attachment 4A

   B. *2045 Planning Data Forecast*. – **Motion Requested** — Attachment 4B

5. **New Business**
   A. *Transportation Planning Prospectus*. – **Motion Requested** — Attachment 5A

6. **Resolutions**
   A. **Resolution 2020-17** – To Add ODOT and FTA Funds in FY 2021 for METRO RTA - (FY 2021-2024 TIP Amendment #4). – **Motion Required** — Attachment 6A

   B. **Resolution 2020-18** – Connecting Communities Planning Grant. – **Motion Required** — Attachment 6B

   C. **Resolution 2020-19** – Approving Amendment #5 to the FY 2021-2024 Transportation Improvement Program to add three new projects. – **Motion Required** — Attachment 6C

   D. **Resolution 2020-20** – *Traffic Crashes and Safety Performance Measures (2017-2019) Report*. – **Motion Required** — Attachment 6D

   E. **Resolution 2020-21** – Concurrence with the Revised Air Quality Conformity Analysis for the Cleveland-Akron Air Quality Non-attainment Area to Amend the CUY IR-77/Miller Rd Interchange Project to the NOACA Long Range Transportation Plan and TIP. – **Motion Required** — Attachment 6E

7. **Other Business**
   A. 2021 Officer Nominations – **Motion Requested** — Oral

   B. 2021 AMATS Meeting Calendar – **Motion Requested** — Attachment 7B

- MORE -

8. **Adjournment**

Next Regular Meeting:
Thursday, January 21, 2021 - 1:30 PM

All mailout material is available on the AMATS Web Site at www.amatsplanning.org.

Akron Metropolitan Area Transportation Study
Citizens Involvement Committee
Virtual Meeting

Thursday, December 10, 2020
6:30 p.m.

Agenda

1. **Welcome**

2. **Introductions and Virtual Webinar Orientation**

3. **Items**
   A. *Congestion Management Process (CMP) Report*.

   B. *Traffic Crashes and Safety Performance Measures (2017-2019) Report*.

   C. *Akron Speed Table Pilot Program Presentation*.

4. **Open Discussion**

5. **Adjournment 7:45 P.M.**
   Next Regular Meeting:
   Thursday, January 21, 2021 - 6:30 p.m.

All mailout material is available on the AMATS Web Site at www.amatsplanning.org

Akron Metropolitan Area Transportation Study
Policy Committee
Thursday, September 24, 2020 – 1:30 p.m.

Minutes of Meeting

Recordings of AMATS committee meetings are available in the Podcast section of the agency web site at www.amatsplanning.org/category/meetings/.

I. Call to Order

A. **Chairwoman Clark** called the virtual meeting to order using Zoom, the video conferencing platform. The attending members constituted a quorum.

B. **Audience Participation**

None.

II. Minutes – Motion Required

A. **Approval of Minutes**

Members were asked to approve the minutes of the May 14, 2020 meeting.

Motion
Bill Goncy *made a motion to approve the minutes and it was seconded by* ***Glenn M. Broska****. The motion was approved by a voice vote.*

III. Staff Reports

A. **Financial Progress Report**

Curtis Baker presented Attachment 3A.

Motion
Bobbie Beshara *made a motion to approve the Financial Progress Report and it was seconded by* ***Gerard Neugebauer****. The motion was approved by a voice vote.*

B. **Technical Progress Report**

Mr. Baker announced that it was "Bike-To-Work Week." The AMATS Switching Gears Program has a new Twitter handle – **AkronCycling** – and a new Facebook page – **switching.gears.92**.

Mr. Baker said that AMATS is making progress with regards to Pavement Condition Index (PCI) data for the Federal Functional Classified Roadway.

AMATS received the initial report from Pavement Management Group regarding the Greater Akron area's PCI data. Additional data files are expected soon. **Mr. Baker** noted that the average PCI for the region is 67.

Mr. Baker said that the Policy Committee is expected to continue meeting remotely through its Dec. 17 meeting.

C. AMATS Federal Funds Report

Mr. Baker presented tables concerning STBG, CMAQ and TASA Funding Program and Balances dated September 8, 2020.

IV. Old Business

None.

V. New Business

A. *2020 Transit Plan*.

Mr. Baker presented Attachment 5A.

Motion
Glenn M. Broska *made a motion to approve 2020 Transit Plan and it was seconded by* ***Paul Adamson****. The motion was approved.*

B. *2020 Freight Plan*.

Mr. Baker presented Attachment 5B.

Mr. Baker said that AMATS received a comment from David H. Mangold, a member of the AMATS Citizens Involvement Committee (CIC) regarding the *2020 Freight Plan*. **Mr. Baker** read Mr. Mangold's comment into the record.

Mr. Mangold's comments are as follows:

"*Please convey to the Policy Committee and Staff that Mr. Mangold approves of the plan with the provisions to the map and document text. Mr. Mangold is very concerned to preserve the economic completeness of our AMATS region. We must be concerned with rail line preservation recommended in the plan.*

Akron METRO RTA has considered sale of the rail lines owned by their organization if conveyed to Summit County Metro Parks must be preserved for future rail service. With both presidential candidates promoting infrastructure improvements and on-shoring of manufacturing to the U.S., we must allow our region to provide rail transportation services for our industrial activities, manufacturing and distribution facilities. Significant trails currently exist for

recreation in Summit County and rails with trails as currently exist in Portage County are possible."

Mr. Baker asked METRO Chief Executive Officer Distler whether METRO plans to sell the rail lines that it currently owns to Summit Metro Parks. **Ms. Distler** said that the transit authority intends to maintain ownership of its lines.

Mayor Neugebauer noted that a number of trails owned by Summit Metro Parks surround the city of Green. **Mayor Neugebauer** expressed interest in the development of a nearby METRO-owned trail, but he also recognized the importance of freight transit through the community. The **mayor** added that in the future, if the corridor is not used for freight purposes, he would like to see its development into a trail. **Mayor Neugebauer** added that, in the past, there have been issues regarding the use of federal funds for such purposes.

Mr. Baker said that it has been the position of AMATS to allow multiple uses for corridors along feasible rights-of-way. **Mayor Neugebauer** said that a difficulty with this particular line is that it is a single-use line.

Motion
Bill Goncy *made a motion to approve 2020 Freight Plan and it was seconded by* ***Glenn M. Broska****. The motion was approved.*

C. Draft *Congestion Management Process Report*.

Mr. Baker presented Attachment 5C.

VI. Resolutions

A. Resolution 2020-11 – Approving FY 2021 Elderly and Disabled Program Project Recommendations (FY 2021-2024 TIP Amendment #1).

Mr. Baker presented Attachment 6A.

Motion
Paul Adamson *made a motion to approve Resolution 2020-11 and it was seconded by* ***Bobbie Beshara****. The motion was approved.*

B. Resolution 2020-12 – To Add ODOT and FTA Funds in FY 2021 for PARTA - (FY 2021-2024 TIP Amendment #2).

Mr. Baker presented Attachment 6B.

Motion
Gerard Neugebauer *made a motion to approve Resolution 2020-12 and it was seconded by* ***Bill Goncy****. The motion was approved.*

C. Resolution 2020-13 – Approving Amendment #3 to the FY 2021-2024 Transportation Improvement Program to cancel one existing project, add two new projects, and revise the funding and scope of work to one existing project and one of the new projects.

Mr. Baker presented Attachment 6C.

Motion
Gerard Neugebauer *made a motion to approve Resolution 2020-13 and it was seconded by* ***Glenn M. Broska****. The motion was approved.*

D. Resolution 2020-14 – Approving the FY 2020 Year End Completion Report.

Mr. Baker presented Attachment 6D.

Motion
Gerard Neugebauer *made a motion to approve Resolution 2020-14 and it was seconded by* ***Bill Goncy****. The motion was approved.*

E. Resolution 2020-15 – Authorizing the AMATS Staff to adjust Transportation Planning Work Program and Budget element allocations.

Mr. Baker presented Attachment 6E.

Motion
Robert Finney *made a motion to approve Resolution 2020-15 and it was seconded by* ***Jim McCleary****. The motion was approved.*

F. Resolution 2020-16 – CMAQ Performance Plan Mid-Period Progress Report.

Mr. Baker presented Attachment 6F.

Motion
Bobbie Beshara *made a motion to approve Resolution 2020-16 and it was seconded by* ***Bill Goncy****. The motion was approved.*

VII. Other Business

A. METRO Chief Executive Officer Distler described the Summit County transit authority's planned framework of community outreach events for the update of its 10-year *Strategic Plan*. **Mr. Baker** said that AMATS would distribute a flyer provided by METRO to its committee members to assist the authority in the promotion of these events. **Chairwoman Clark** asked whether a planned webinar by METRO regarding the plan update would be available on YouTube. **Ms. Distler** said yes.

B. Rittman City Manager Beshara congratulated Mr. Staten for his recent appointment as service director for the city of Fairlawn.

C. **Mayor Adamson** asked Mr. Baker if there were any new developments pertaining to NOACA's efforts to consolidate the Akron and Cleveland Metropolitan Statistical Areas for the U.S. Census. **Mr. Baker** said that there has not been a response from NOACA since the AMATS Policy Committee approved **Resolution 2020-10** during its May 14 meeting. **(**The resolution stated AMATS' opposition to NOACA's efforts to consolidate the areas.) **Mr. Baker** said that AMATS is working with the Greater Akron Chamber and other partners to present the Greater Akron area's position regarding the issue.

Mr. Baker said that the U.S. Office of Management and Budget is expected to issue guidance regarding the issue by Oct. 1, which may provide clarity as to how AMATS should proceed.

D. **Mayor Broska** praised the city of Green for its landscaping and use of roundabouts. **Mayor Neugebauer** thanked Mayor Broska for his praise.

E. **Chairwoman Clark** described a situation that the Village of Mantua is encountering with Ohio Edison regarding the posting of flags on the company's utility poles. The chairwoman said that, following a citizen request to Ohio Edison, the company informed Mantua that, to permit such usage, the village must enter into a contract. The utility also requested that the village photograph pole numbers and submit these photos along with a description of the village's requested use of the poles to determine liability issues if an outage should occur. The members discussed this topic.

VIII. Adjournment

A. ***Motion***

Gerard Neugebauer *made a motion to adjourn the meeting and it was seconded by* ***Paul Adamson****. The motion was approved.*

The next regularly scheduled Policy Committee meeting is tentatively scheduled for **1:30 p.m**. on **Thursday, December 17, 2020.**

AMATS POLICY COMMITTEE
2020 ATTENDANCE

M Denotes Member Present **A Denotes Alternate Present**	**Jan 23**	**Mar 11**	**May 14**	**Sept 24**	**Dec 17**
AKRON - Mayor Dan Horrigan (Hardy) (DiFiore)	A	A	A	A	
AURORA - Mayor Ann Womer Benjamin (Stark) (Januska)	A			A	
BARBERTON - Mayor William B. Judge (Hunt) (Tracy)	M	M	M		
BOSTON HEIGHTS - Mayor Bill Goncy (Polyak)		M		M	
CLINTON - Mayor Clarissa Allega			M		
CUYAHOGA FALLS - Mayor Don Walters (Zumbo)		A	A	A	
DOYLESTOWN - Mayor Terry Lindeman (Kerr)	A				
FAIRLAWN - Mayor William Roth (Spagnuolo) (Staten)				A	
GARRETTSVILLE - Mayor Rick Patrick (Klamer)					
GREEN - Mayor Gerard Neugebauer (Wax Carr)			M	M	
HIRAM - Mayor Lou Bertrand (J. McGee)	M	M	M	M	
HUDSON - City Mgr. Jane Howington (Comeriato) (Hannan) (Sheridan)	A	A	A	A	
KENT – City Mgr. David Ruller (Baker) (Bowling)		A	A		
LAKEMORE – Mayor Rick Justice (Fast)		A			
MACEDONIA - Mayor Nick Molnar (Gigliotti) (Sheehy)					
MANTUA - Mayor Linda Clark (Iafelice) (Trew)	M	M	M	M	
METRO – Dawn Distler (Shea)	A	M	M	M	
MOGADORE - Mayor Michael Rick					
MUNROE FALLS - Mayor James W. Armstrong (Bowery)					
NEW FRANKLIN - Mayor Paul Adamson (Kepler) (Kochheiser)	M	M	M	M	
NORTHFIELD – Mayor Jesse Nehez (Magistrelli)					
NORTON - Mayor Mike Zita (Fowler)		A			
ODOT – Gery Noirot (Rebillot) (Root)	M	A	A	M	
PARTA – Dave Gynn (Amrhein) (Baba) (Popik) (Schrader)	A	A	M	M	
PENINSULA - Mayor Douglas Mayer					
PORTAGE COUNTY COMM. - Kathleen Clyde (Hairston)	A	A	M		
PORTAGE COUNTY COMM. – Vicki Kline (Long)		A			
PORTAGE COUNTY COMM. - Sabrina Christian-Bennett (Hlad)	A	A	A	A	
PORTAGE COUNTY ENGINEER - Michael Marozzi (Jenkins)	M	M	M	A	
RAVENNA - Mayor Frank Seman (Finney)	A	A		A	
REMINDERVILLE - Mayor Sam Alonso (Krock)					
RICHFIELD - Mayor Michael Wheeler (Darwish) (Papp)	M	M	A		
RITTMAN – City Mgr. Bobbie Beshara (Robertson)	M		M	M	
SILVER LAKE - Mayor Bernie Hovey (Housley)					
STOW - Mayor John Pribonic (Kurtz) (McCleary)	A		A	M	
STREETSBORO - Mayor Glenn M. Broska (Cieszkowski)		M		M	
SUGAR BUSH KNOLLS - Mayor John Guidubaldi					
SUMMIT COUNTY ENGINEER-Al Brubaker (Fulton) (Paradise)	A	A	A	A	
SUMMIT COUNTY EXECUTIVE - Ilene Shapiro (Miller-Dawson)	A				
SUMMIT COUNTY COMM. & ECON. DEV. - Connie Krauss			M	M	
SUMMIT COUNTY COMM. & ECON. DEV. – Stephen Knittel			M		
TALLMADGE - Mayor David G. Kline (Kidder)	M	M	M	A	
TWINSBURG - Mayor Ted Yates (Mohr) (Finch)	A	A	A	A	
WAYNE COUNTY COMM. BOARD - Dominic Oliverio (Broome)					
WAYNE COUNTY ENGINEER – Scott A. Miller		M			
WINDHAM - Mayor Deborah Blewitt					

AMATS POLICY COMMITTEE
2020 ATTENDANCE

OBSERVERS AND STAFF MEMBERS PRESENT

NAME	REPRESENTING
Mr. Curtis Baker	AMATS
Mr. Kerry Prater	AMATS
Mr. Dave Pulay	AMATS
Mr. Chuck Hauber	Summit County Engineer
Ms. Carmen Stemen	FHWA

Akron Metropolitan Area Transportation Study
Technical Advisory Committee
Thursday, September 17, 2020 – 1:30 p.m.

Minutes of Meeting

Recordings of AMATS committee meetings are available in the Podcast section of the agency web site at www.amatsplanning.org/category/meetings/.

I. Call to Order

A. **Chairman John H. Cieszkowski, Jr.** called the virtual meeting to order using Zoom, the video conferencing platform. The attending members constituted a quorum.

II. Minutes – Motion Required

A. Approval of Minutes

Members were asked to approve the minutes of the May 6, 2020 meeting.

Motion
Jim Bowling *made a motion to approve the minutes and it was seconded by* ***Jim McCleary****. The motion was approved by a voice vote.*

III. Staff Reports

A. Financial Progress Report

Curtis Baker presented Attachment 3A.

Motion
Jim Bowling *made a motion to approve the Financial Progress Report and it was seconded by* ***Joe Paradise****. The motion was approved by a voice vote.*

B. Technical Progress Report

Mr. Baker said that the TAC is expected to continue meeting remotely through its Dec. 10 meeting.

The city of Munroe Falls is hosting a Bike-N-Brainstorm event with AMATS on Sept. 20. **Mr. Baker** noted that Bike-to-Work Week is scheduled for the week of Sept. 21.

The AMATS Switching Gears Program has a new Twitter handle – **AkronCycling** – and a new Facebook page – **switching.gears.92**.

Mr. Baker said that AMATS is making progress with regards to Pavement Condition Index (PCI) data for the Federal Functional Classified Roadway. AMATS received the initial report from Pavement Management Group regarding the Greater Akron area's PCI data. Additional data files are expected soon. **Mr. Baker** noted that the average PCI for the region is 67.

C. AMATS Federal Funds Report

Mr. Baker presented tables concerning STBG, CMAQ and TASA Funding Program and Balances dated September 8, 2020.

IV. Old Business

None.

V. New Business

A. *2020 Transit Plan*.

Mr. Baker presented Attachment 5A.

Motion
Jim Bowling *made a motion to approve 2020 Transit Plan and it was seconded by* ***Bobbie Beshara****. The motion was approved.*

B. *2020 Freight Plan*.

Mr. Baker presented Attachment 5B.

Motion
Joe Paradise *made a motion to approve 2020 Freight Plan and it was seconded by* ***Claudia Amrhein****. The motion was approved.*

C. Draft *Congestion Management Process Report*.

Mr. Baker presented Attachment 5C.

Dave Pulay said that the Draft *Congestion Management Process (CMP) Report* includes an appendix that lists all roadway segments by community.

Chairman Cieszkowski asked that, while the Draft *CMP Report* does not reflect the impacts of the COVID-19 Pandemic, does the Staff intend to include references to the outbreak within the report in the future. **Mr. Baker** said that there are references in the document, primarily with regards to such strategies and topics as telework. **Mr. Baker** said that the Staff plans to update the *CMP Report* on an annual basis starting next summer with the most recent congestion data available.

Chairman Cieszkowski asked which staff members that committee members should direct their questions to regarding the Draft *CMP Report*. **Mr. Baker** said that questions should be relayed to himself or Mr. Pulay.

VI. Resolutions

A. Resolution 2020-11 – Approving FY 2021 Elderly and Disabled Program Project Recommendations (FY 2021-2024 TIP Amendment #1).

Mr. Baker presented Attachment 6A.

Motion
Jim Bowling *made a motion to approve Resolution 2020-11 and it was seconded by* ***Bobbie Beshara****. The motion was approved.*

B. Resolution 2020-12 – To Add ODOT and FTA Funds in FY 2021 for PARTA - (FY 2021-2024 TIP Amendment #2).

Mr. Baker presented Attachment 6B.

Motion
Jim Bowling *made a motion to approve Resolution 2020-12 and it was seconded by* ***Valerie Shea****. The motion was approved.*

C. Resolution 2020-13 – Approving Amendment #3 to the FY 2021-2024 Transportation Improvement Program to cancel one existing project, add two new projects, and revise the funding and scope of work to one existing project and one of the new projects.

Mr. Baker presented Attachment 6C.

Motion
Joe Hadley, Jr. *made a motion to approve Resolution 2020-13 and it was seconded by* ***Joe Paradise****. The motion was approved.*

D. Resolution 2020-14 – Approving the FY 2020 Year End Completion Report.

Mr. Baker presented Attachment 6D.

Motion
Jim Bowling *made a motion to approve Resolution 2020-14 and it was seconded by* ***Bradley Kosco****. The motion was approved.*

E. Resolution 2020-15 – Authorizing the AMATS Staff to adjust Transportation Planning Work Program and Budget element allocations.

Mr. Baker presented Attachment 6E.

Motion
Bobbie Beshara *made a motion to approve Resolution 2020-15 and it was seconded by* ***Jim Bowling****. The motion was approved.*

F. Resolution 2020-16 – CMAQ Performance Plan Mid-Period Progress Report.

Mr. Baker presented Attachment 6F.

Motion
Joe Paradise *made a motion to approve Resolution 2020-16 and it was seconded by* ***Jim Bowling****. The motion was approved.*

VII. Other Business

A. **Mr. Baker** said that the current state law permitting governmental bodies such as AMATS to conduct remote business is scheduled to expire Dec. 1. The Ohio General Assembly is reportedly considering stopgap legislation to permit governmental entities to conduct business online throughout the duration of the COVID-19 Pandemic. New legislation must be approved to continue virtual meetings. **Chairman Cieszkowski** asked if the Staff would provide updates to the membership regarding the status of online meetings. **Mr. Baker** said yes.

B. **Mr. Prater** asked about the status of NOACA's attempts to consolidate the Akron and Cleveland Metropolitan Statistical Areas for the U.S. Census. **Mr. Baker** said that there has not been a response from NOACA since the AMATS Policy Committee approved **Resolution 2020-10** during its May 14 meeting. **(**The resolution stated AMATS' opposition to NOACA's efforts to consolidate the areas.) **Mr. Baker** said that AMATS is working with the Greater Akron Chamber and other partners to present the Greater Akron area's position regarding the issue. **Mr. Baker** said that the U.S. Office of Management and Budget is expected to issue guidance regarding the issue by Oct. 1, which may provide clarity as to how AMATS should proceed.

VIII. Adjournment

A. ***Motion***
Jim Bowling *made a motion to adjourn and it was seconded by* ***Jim McCleary****. The motion was approved.*

The next regularly scheduled TAC meeting will be at **1:30 p.m**. on **Thursday, December 10, 2020.**

AMATS TECHNICAL ADVISORY COMMITTEE
2020 ATTENDANCE

M Denotes Member Present **A Denotes Alternate Present**	**Jan** **16**	**Mar** **5**	**May** **6**	**Sept** **17**	**Dec** **10**
AKRON ENGINEERING BUREAU- Michael J. Teodecki (Jonke)		M	M	M	
AKRON PLANNING DEPT. – Mark Moore (Tomic)					
AKRON TRAFFIC ENGINEERING - Michael Lupica		M	M	M	
AURORA - Harry Stark (Czekaj)(Cooper)					
BARBERTON – Trevor Hunt (McFadden)				M	
BARBERTON – Greg Tracy					
CUYAHOGA FALLS - Fred Guerra (Paul)				M	
CUYAHOGA FALLS - Tony V. Demasi (Marko)		M	M		
DOYLESTOWN - Eng. Assoc. - Ronny Portz					
FAIRLAWN - Nicholas Spagnuolo (Staten)	A			A	
GREEN - Wayne Wiethe (Haring)	M		M		
GREEN - Paul Pickett (Schemansky)			M		
HUDSON – Nick Sugar (Hannan)	M	M	M	A	
HUDSON – Nate Wonsick (Kosco)	M	M	M	A	
KENT - Jim Bowling	M	M	M	M	
KENT - Jon Giaquinto (Baker)					
LAKEMORE – Mayor Richard Cole, Jr. (Fast)			A		
MACEDONIA - Joseph Gigliotti (Sheehy)			M	M	
METRO - Dawn Distler (Baarson) (Shea)	A	A	A	A	
MOGADORE – Vacant					
MUNROE FALLS – Vacant					
NEFCO - Joe Hadley, Jr. (Lautzenheiser)	A	A	A	M	
NEW FRANKLIN - Bryan Kepler (Ganoe)	M		M	M	
NORTHFIELD - Richard S. Wasosky					
NORTON – Josh Slaga (Hess)					
ODOT – Chad Root (Phillis) (Rebillot)	M	A	A	A	
PARTA – Claudia Amrhein (Baba) (Popik) (Schrader)	A	A	M	M	
PORTAGE COUNTY ENGINEER – Larry Jenkins (Kusner)		M	M	M	
PORTAGE CO. REG. PLANNING COMM. - Todd Peetz (McGee)					
PORTAGE COUNTY SMALL VILLAGES – John Trew					
PORTAGE COUNTY TOWNSHIP ASSOC – John Kovacich (Greener)	M	M			
RAVENNA - Robert Finney (Jeffers)	M	M	M	A	
RICHFIELD - Chris Papp (Frantz) (Neumeyer)		M	M	M	
RITTMAN – Bobbie Beshara (Robertson)			M	M	
SILVER LAKE – John Tutak					
STOW – Jim McCleary (Donovan)	M	M	M	M	
STOW – Mike Jones (Sisson)	M				
STREETSBORO – John H. Cieszkowski, Jr. (Broska)	M	M	M	M	
SUMMIT CO. COMM. & ECON. DEV. – Connie Krauss (Tubbs)			M		
SUMMIT COUNTY ENGINEER - Alan Brubaker (Fulton) (Paradise)	A	A	A	A	
SUMMIT COUNTY SMALL VILLAGES – Brian Gorog					
SUMMIT COUNTY TOWNSHIP ASSOC. - Richard Reville (Funk)					
TALLMADGE - Andrea Kidder (Kline)			M		
TWINSBURG - Amy Mohr (Muter)	M		M	M	
WAYNE COUNTY ENGINEER – Scott A. Miller					
WINDHAM – Deborah Blewitt (Brown)					

AMATS TECHNICAL ADVISORY COMMITTEE
2020 ATTENDANCE

M Denotes Member Present A Denotes Alternate Present	Jan 16	Mar 5	May 6	Sept 17	Dec 10
NON-VOTING MEMBERS					
AKRON CANTON AIRPORT - Renato Camacho					
AKRON REG. AIR QUALITY MGT. DISTRICT – Sam Rubens		M			
AMATS - Curtis Baker	M	M	M	M	
CUYAHOGA VALLEY NATIONAL PARK – Vacant					
ENVIRONMENTAL COMMUNITY REP. - Kurt Princic					
GREATER AKRON CHAMBER - Gregg Cramer					
OHIO TURNPIKE COMMISSION – Anthony Yacobucci					
PORTAGE COUNTY PORT AUTHORITY – Vacant					
PORTAGE PARK DISTRICT - Christine Craycroft					
PRIVATE TRANSPORTATION PROVIDER (CYC) – Deb Stolfo (Posten)					
RAILROAD INDUSTRY REP. - William A. Callison (Davis)					
SUMMIT COUNTY PORT AUTHORITY – Vacant					
SUMMIT METRO PARKS – Mark Szeremet (King)	M	M	M	M	
TRUCKING INDUSTRY – Vacant					

OBSERVERS AND STAFF MEMBERS PRESENT

NAME	REPRESENTING
Mayor Clarissa Allega	Village of Clinton
Ms. Leah Weinrick	

STAFF MEMBERS PRESENT

Mr. Seth Bush	AMATS
Mr. Jeff Gardner	AMATS
Mr. Kerry Prater	AMATS
Mr. Dave Pulay	AMATS

FINANCIAL PROGRESS REPORT
AKRON METROPOLITAN AREA TRANSPORTATION STUDY
October 31, 2020

	Description	Annual Budget	Year-to-Date Expenses	% Budget Expended	October Expenses
I.	**Short Range Planning**	**$289,700**	**$56,605**	**20%**	**$4,656**
	FY2020 Carryover	14,700	14,683		0
	FY2021	275,000	41,921		4,656
II.	**Transportation Improvement Program**	**$340,100**	**$94,750**	**28%**	**$29,672**
	FY2020 Carryover	65,100	65,078		0
	FY2021	275,000	29,672		29,672
III.	**Continuing Planning & Data Collection Transportation System Update**	**$187,600**	**$81,308**	**43%**	**$0**
	FY2020 Carryover	7,600	6,874		0
	FY2021	180,000	74,433		0
IV.	**Long Range Plan Activity**	**$536,000**	**$195,815**	**37%**	**$61,756**
	FY2020 Carryover	136,000	134,060		0
	FY2021	400,000	61,756		61,756
V.	**Service**	**$463,500**	**$155,677**	**34%**	**$24,630**
	FY2020 Carryover	113,500	112,270		0
	FY2021	350,000	43,407		24,630
VI.	**OhioRideshare and AQ Advocacy**	**$347,000**	**$47,537**	**14%**	**$11,911**
	FY2020 OhioRideshare Carryover	47,000	16,423		3,718
	FY2021 OhioRideshare	80,000	0		0
	FY2020 Air Quality Carryover	100,000	31,113		8,193
	FY2021 Air Quality	120,000	0		0
VII.	**Local**	**$25,000**	**$0**	**0%**	**$0**
	AMATS local Costs	25,000	0		0
VIII.	**AMATS Transportation Quarterly**	**$73,488**	**$19,938**	**27%**	**$5,149**
	FY2020 Carryover	14,900	14,789		0
	FY2021	58,588	5,149		5,149
IX.	**GRAND TOTAL AMATS BUDGET**	**$2,262,388**	**$651,629**	**29%**	**$137,774**

Attachment 3C

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

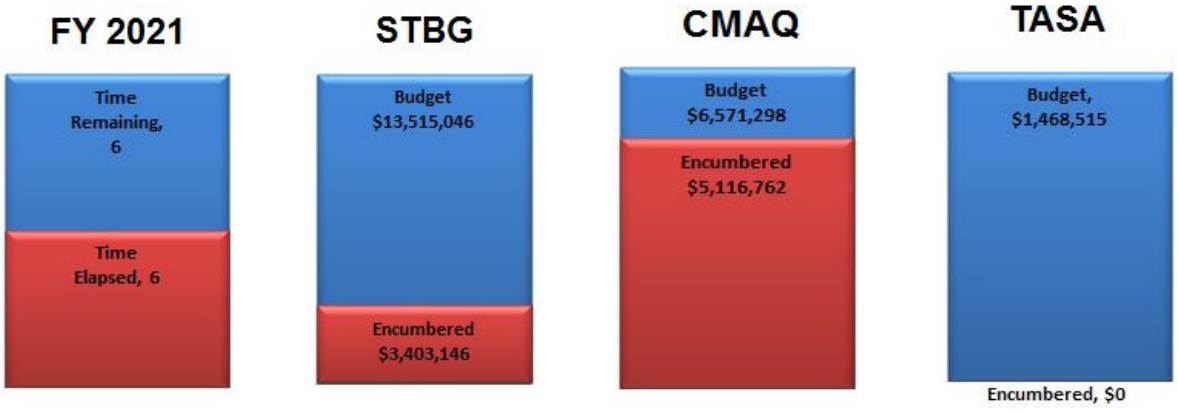
FROM: **AMATS Staff**

RE: **AMATS Federal Funds Report**

DATE: **December 3, 2020**

As we approach the half-way point in FY 2021 there are still over $11.5 million of projects remaining to sell. Three large projects: Aurora Signals, SR 14 Widening, and the Tallmadge Road/I-76 Interchange account for over $7.2 million of the remaining funds in FY 2021. Please let us know if you have any issues with your projects that could cause them to be delayed.

AMATS has an STBG balance of nearly $3.2 million in FY 2021. We believe that this is a result of how ODOT disperses carryovers. In the past carryovers were spread over upcoming years but now it appears that it is carried over to the following year. This amount surpasses the allowed carryover and we are subject to having nearly $372,000 of STBG funds recalled by ODOT. We are attempting to move projects into FY 2021 so this does not happen. If your community has a project that could take advantage of this balance please let us know as soon as possible. Please keep working diligently on your resurfacing projects because after projects move into FY 2021 that will leave voids in future years to fill.



AMATS TRANSPORTATION IMPROVEMENT PROGRAM

STBG Funding Program and Balances

November 9, 2020

ODOT PID	STBG PROJECT NAME	SPONSOR	PHASE	FY 2021	Quarter	FY 2022	FY 2023	FY 2024	FY 2025
	Sold								
103293	**Cleveland Massillon Rd**	**Fairlawn**	**(R)C**	**$477,000**	1				
101264	**SR 18-4.91/7.98 curb ramps**	**Akron**	**C**	**$82,991**	1				
84397	**Seiberling Way Ph 1**	**Akron**	**P(R)(C)**	**$48,808**	1				
103172	**Massillon Rd (SR 241) Ph 2/Corporate Woods**	**Green**	**R**	**$1,398,346**	1				
102904	**W. Steels Corners Rd-phase 1 resurfacing**	**Cuy Falls**	**C**	**$616,081**	1				
108132	**South Hawkins Rd resurfacing**	**Akron**	**C**	**$700,000**	2				
	Pending								
102701	E. Exchange St-complete street	Akron	R(C)	$240,000					
107761	Aurora Citywide Signal Improvement	Aurora	R(C)	$60,000					
107761	Aurora Citywide Signal Improvement	Aurora	(R)C	$2,658,720					
108372	2nd St SW/Wooster Rd North/Norton Rd resurfacing	Barberton	C	$1,175,602					
108498	Wooster Rd resurfacing	Norton	C	$237,594					
107689	Mill Rd/S. Diamond St Resurfacing	Ravenna	C	$268,000					
102234	SR 14 widening	Streetsboro	C	$2,282,005					
102701	E. Exchange St-complete street	Akron	(R)C			$3,600,000			
108370	Wooster Rd/State St reconstruction	Barberton	C			$1,930,644			
108098	Chestnut Blvd Resurfacing	Cuy Falls	C			$392,000			
108200	White Pond Dr resurfacing	Summit Co Eng	C			$600,000			
108454	Olde Eight Road Resurfacing	Summit Co Eng	C			$700,000			
108467	Cleveland Massillon Rd Part 1 Resurfacing	Summit Co Eng	C			$700,000			
108468	Cleveland Massillon Rd Part 2 Resurfacing	Summit Co Eng	C			$700,000			
108140	Ravenna Rd Part 1 Resurfacing	Summit Co Eng	C			$700,000			
108865	Smith Rd Resurfacing	Summit Co Eng	C			$700,000			
108240	Wooster Rd West Reconstruction	Barberton	C				$5,507,836		
108084	Portage Trail Extension Turn Lane	Cuy Falls	C				$3,649,197		
107886	North River Rd Resurfacing	Munroe Falls	C				$558,590		
106416	SR 43 Widening	Streetsboro	C				$731,225		
108453	Akron Cleveland Rd Resurfacing	Summit Co Eng	C				$700,000		
108141	Valley View Rd Resurfacing	Summit Co Eng	C				$300,000		
84397	Seiberling Way Ph 1	Akron	(P)(R)C					$4,118,390	
112741	Hopocan Av Resurfacing	Barberton	C					$281,696	
112735	Snyder Av Resurfacing	Barberton	C					$611,976	
112740	Wooster Rd W Resurfacing	Barberton	C					$231,808	
112743	Terex Rd Resurfacing	Hudson	C					$506,000	
112487	Romig Rd BRT Study	METRO	P					$80,000	
112745	Gilchrist Rd Ph 1 Resurfacing	Mogadore	C					$356,264	
112754	Johnson Rd Resurfacing	Norton	C					$443,869	
112753	Norton Av Resurfacing	Norton	C					$390,008	
112755	New Milford Rd Resurfacing	Portage Co Eng	C					$590,882	
112757	Riddle St Resurfacing	Ravenna	C					$200,000	
112756	S Chestnut St Resurfacing	Ravenna	C					$192,000	
112549	S Main St (CR 57-2.62) Resurfacing	Rittman	C					$336,588	
112543	E Ohio Av (CR 57-3.91) Resurfacing	Rittman	C					$459,662	
112583	Ravenna Rd Resurfacing	Twinsburg	C					$432,000	
112716	N Main St Complete Streets	Akron	(R)C						$6,000,000
113168	W Steels Corners Rd Ph 2 Resurfacing	Cuy Falls	C						$700,000
112026	SR 59-2.14 (E Main St)	Kent	C						$3,600,000
113169	Munroe Falls Av Resurfacing	Munroe Falls	C						$261,190
113171	Tallmadge Rd Ph 1 Resurfacing	Portage Co	C						$700,000
113175	Ravenna Rd Part 2 Resurfacing	Summit Co	C						$600,000
113176	Swartz Rd Resurfacing	Summit Co	C						$500,000

		2021	2022	2023	2024	2025
P = Engineering	Annual STBG Expenditures	$10,322,041	$10,022,644	$11,446,848	$9,231,143	$12,361,190
R = Right-of-Way	Annual STBG Allocations	$13,515,046	$10,633,414	$10,633,414	$10,633,414	$10,633,414
C = Construction	Balance	$3,193,005	$610,770	-$813,434	$1,402,271	-$1,727,776

AMATS TRANSPORTATION IMPROVEMENT PROGRAM

CMAQ Funding Program and Balances

November 9, 2020

ODOT PID	CMAQ PROJECT NAME	SPONSOR	PHASE	FY 2021	Quarter	FY 2022	FY 2023	FY 2024	FY 2025
	Sold								
100692	**Air Quality Advocacy Program**	**AMATS**		**$120,000**	1				
100691	**Rideshare Program**	**AMATS**		**$80,000**	1				
103293	**Cleveland Massillon Rd**	**Fairlawn**	**(R)C**	**$4,462,924**	1				
103173	**Massillon Rd (SR 241) Ph 3/Boettler**	**Green**	**R(C)**	**$445,500**	1				
	Pending								
93433	Canton Rd/East Market St	Akron	(R)C	$788,320					
102992	CNG Bus Replacement (2 buses)	PARTA	C	$832,000					
98585	Tallmadge Rd Interchange	Portage Co Eng	(R)C	$2,125,760					
111426	Air Quality Advocacy Program	AMATS				$100,000			
111431	Rideshare Program	AMATS				$80,000			
103173	Massillon Rd (SR 241) Ph 3/Boettler	Green	(R)C			$2,827,675			
103172	Massillon Rd/Corporate Woods Cir PH 2	Green	C			$2,606,199			
106445	SR 91-13.53 (SR 91 South Widening Project)	Hudson	C			$2,500,000			
111777	CNG Bus Buy 2022 (2 buses)	PARTA	C			$920,000			
111428	Air Quality Advocacy Program	AMATS					$100,000		
111432	Rideshare Program	AMATS					$80,000		
108084	Portage Trail Extension Turn Lane	Cuy Falls	C				$267,202		
112270	CNG Bus Buy (3 buses)	METRO	C				$1,560,000		
106416	SR 43 Widening	Streetsboro	C				$3,300,775		
111429	Air Quality Advocacy Program	AMATS						$100,000	
111433	Rideshare Program	AMATS						$80,000	
113165	Ravenna & Shephard Improvements	Macedonia	R(C)					$80,000	
113161	Highland & Valley View Improvements	Macedonia	R(C)					$104,000	
112245	METRO CNG Replacements (3 buses)	METRO	C					$1,260,000	
112244	PARTA 2 replacement clean diesel buses	PARTA	C					$779,253	
112797	Valley View & Olde Eight Improvements	Summit Co Eng	R(C)					$32,000	
112797	Valley View & Olde Eight Improvements	Summit Co Eng	(R)C					$228,000	
112716	N Main St Complete Streets	Akron	C						$900,000
112026	SR 59-2.14 (E Main St)	Kent	C						$6,000,000
113165	Ravenna & Shephard Improvements	Macedonia	(R)C						$1,289,288
113161	Highland & Valley View Improvements	Macedonia	(R)C						$1,704,811
				2021		2022	2023	2024	2025
P = Engineering		nnual CMAQ Expenditures		$8,862,841		$9,033,874	$5,307,977	$2,663,253	$9,894,099
R = Right-of-Way		Annual CMAQ Allocations		$6,571,298		$5,591,127	$5,591,127	$5,591,127	$5,591,127
C = Construction		Balance		-$2,291,543		-$3,442,747	$283,150	$2,927,874	-$4,302,972

AMATS TRANSPORTATION IMPROVEMENT PROGRAM

TASA Funding Program and Balances

November 9, 2020

ODOT PID	TASA PROJECT NAME	SPONSOR	PHASE	FY 2021	Quarter	FY 2022	FY 2023	FY 2024	FY 2025
	Pending								
103834	Portage Hike and Bike-Brady's Leap Connection	Kent	C	$700,000					
107814	Darrow Rd (SR 91) Sidewalks	Stow	(R)C	$516,050					
106539	Wooster Rd/Robinson (Towpath Trail connector)	Barberton	C			$380,376			
99729	Raber Rd sidewalks	Green	C			$500,000			
102796	Freedom Trail/Portage Trail Connector	MetroParks/Tallmadge	C			$700,000			
105556	The Portage Trail - Ravenna Rd Bridge	Portage Parks	(P)C			$313,600			
107797	CVNP Ped Bridge & Trail	Summit Co Eng	C			$700,000			
107930	Freedom Trail Phase 4	MetroParks	C				$700,000		
112788	Cleveland Massillon Rd sidewalk	Summit Co Eng	P(R)(C)				$120,000		
112788	Cleveland Massillon Rd sidewalk	Summit Co Eng	(P)R(C)					$32,000	
113160	Rubber City Heritage Trail East Side Seg B	Akron	C						$700,000
113016	Stow Silver Lake Cuyahoga Falls Bike Connector	Stow	C						$700,000
112788	Cleveland Massillon Rd sidewalk	Summit Co Eng	(P)(R)C						$368,000

		2021	2022	2023	2024	2025
P = Engineering	Annual TASA Expenditures	$1,216,050	$2,593,976	$820,000	$32,000	$1,400,000
R = Right-of-Way	Annual TASA Allocations	$1,468,515	$1,063,342	$1,063,342	$1,063,342	$1,063,342
C = Construction	Balance	$252,465	-$1,530,634	$243,342	$1,031,342	-$336,658

Attachment 4A

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Draft Congestion Management Process Report**

DATE: **December 3, 2020**

The AMATS Congestion Management Process Report (CMP) identifies existing congestion on our region's freeways, arterials and intersections. It also examines public transit levels of service availability, freight needs, and the impact that crashes have on congestion. The report discusses performance measures for travel time reliability, truck travel time reliability, peak hour excessive delay and non-single occupancy vehicle travel. It identifies demand and supply-side strategies to manage regional congestion. In the final sections, it defines specific recommendations to address congested locations and evaluates strategy effectiveness based on past projects.

This is the first AMATS CMP that uses GPS device tracking technology to calculate congestion. Historically, traffic congestion was measured using a volume-to-capacity (V/C) ratio. This ratio is based on the volume of traffic during peak hours versus the capacity of the roadway. New technology has enabled traffic engineers and planners to obtain traffic data through tracking actual vehicle movement using cell phone and other GPS devices in vehicles. Traffic data collected in this manner is done over months or years and is more representative than data collected over just one or two days.

In September, a draft version of the CMP report was brought before the AMATS committees, seeking their comments and input. No comments were received.

The CMP includes highway recommendations and various transit, freight, and system-wide recommendations. These recommendations will be considered for inclusion in the upcoming 2045 Regional Transportation Plan based on fiscal constraint, cost benefit ratio, and the changing demand for transportation.

The staff recommends approval of this document.

2020 Congestion Management Process

2020 Congestion Management Process

DRAFT

September 2020

Akron Metropolitan Area Transportation Study
161 South High Street, Suite 201
Akron, Ohio 44308

This report is the product of a study financed (in part) by the U.S. Department of Transportation's Federal Highway Administration, Federal Transit Administration and the Ohio Department of Transportation.

Cooperative transportation planning by the Village, City and County governments of Portage and Summit Counties and the Chippewa and Milton Township areas of Wayne County; in conjunction with the U.S. Department of Transportation and the Ohio Department of Transportation.

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Introduction

In 2020, the COVID-19 pandemic rapidly altered future transportation assumptions. In the opening months of the pandemic, many businesses were forced to temporarily close or radically change their operations. Statewide stay-at-home orders encouraged people to stay home, schools shifted to virtual classes and employees worked from home if they were able.

Data collected during the first half of 2020 indicated that traffic volumes fell over 40 percent. Transit ridership fell 60 percent. Demand for bicycles left stores with empty shelves and park usage increased. Many normally congested highways flowed smoothly as adjacent parking lots for malls, plazas, schools, and office buildings were nearly empty. While most stay-at-home orders have expired, the question has become what does the future look like? Many businesses have committed to keeping employees home for the foreseeable future. Others have returned to business as usual. What will be the long term impacts of the COVID-19 pandemic on transportation?

The Akron Metropolitan Area Transportation Study (AMATS) is the Metropolitan Planning Organization (MPO) for the Akron metropolitan area. One of the primary duties of AMATS is to identify congestion in the region, as well as to provide solutions to reduce or eliminate it. More than just a daily inconvenience, congestion affects the overall economy, reducing our ability to travel reliably to work, school and to complete the timely delivery of goods and services. Idling vehicles emit unnecessary pollutants into the atmosphere and waste costly and limited fuel.

This AMATS *2020 Congestion Management Process (CMP)* identifies existing congestion on our region's arterials, intersections, freeways, freeway interchanges, and ramps. It examines public transit levels of service availability and freight needs. It also isolates and examines congestion related to traffic incidents. Later sections identify demand and supply-side strategies, as well as other strategies to manage regional congestion. In the final section, specific recommendations to address congested areas will be presented.

The Congestion Management Process

The Congestion Management Process (CMP) is a federally required effort for metropolitan areas that are designated as Transportation Management Areas (TMAs). A TMA is a Census Bureau designated urban area with more than 200,000 residents. The Federal Highway Administration (FHWA) defines a CMP as: "a systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meets state and local needs."

Each CMP is required to include the following criteria per the Congestion Management Process: A Guidebook by FHWA and CFR 450.322(a).

1. Develop regional objectives
2. Define the CMP network
3. Develop multimodal performance measures
4. Collect data and monitor system performance
5. Analyze congestion problems and needs
6. Identify and assess strategies
7. Program and implement strategies
8. Evaluate strategy effectiveness

A sound, effective CMP integrates with the entire metropolitan planning process, working to achieve the goals and objectives outlined in the long-range transportation plan and influencing the prioritization and programming of projects for the short- and medium-term. CMPs provide transparent structure and information to decision-makers by analyzing system performance and assessing alternative strategies to improve performance. Strategies are attainable policies or projects that are tailored to local, state, and regional needs.

A periodic congestion performance report is published describing the change in federal performance measures. The performance report identifies effective strategies for congestion management, enabling the region to methodically improve system performance.

Regional Objectives

The objective of the CMP is to identify and minimize congestion and delay on the transportation system. Minimizing congestion and delay will improve the efficiency of the movement of people and goods. Congestion management objectives define what the region wants to achieve regarding congestion management, and are an essential part of an objectives-driven, performance-based approach to planning for operations. Congestion management objectives should serve as one of the primary points of connection between the CMP and the Metropolitan Transportation Plan (MTP), and will serve as a basis for defining the direction of the CMP and performance measures that are used. The development of congestion management objectives should rely heavily on stakeholder participation and an understanding of the needs and desires of the public related to congestion. Traditionally, the CMP has often focused on capacity issues, and used engineering measures focused on motor vehicles, such as volume-to-capacity ratios. In defining appropriate congestion management objectives, planners and decision-makers should consider the following questions:

- What does the public really care about with regard to congestion?
- How high of a priority is traffic congestion in the region?
- What type of congestion is most problematic for the public and freight shippers?
- What aspects of congestion are most important to address to support livability, safety, and economic vitality, among other goals?

Regional objectives should ideally focus on outcomes – such as hours of delay, system reliability, and access to traveler information. However, they may also be written using output measures – such as incident clearance time or number of traffic signals retimed annually. In all cases, objectives should be stated in a way that meaningful performance measures can be derived from the objectives. An ideal objective should be **SMART**: **S**pecific, **M**easurable, **A**greed, **R**ealistic, and **T**ime restricted.

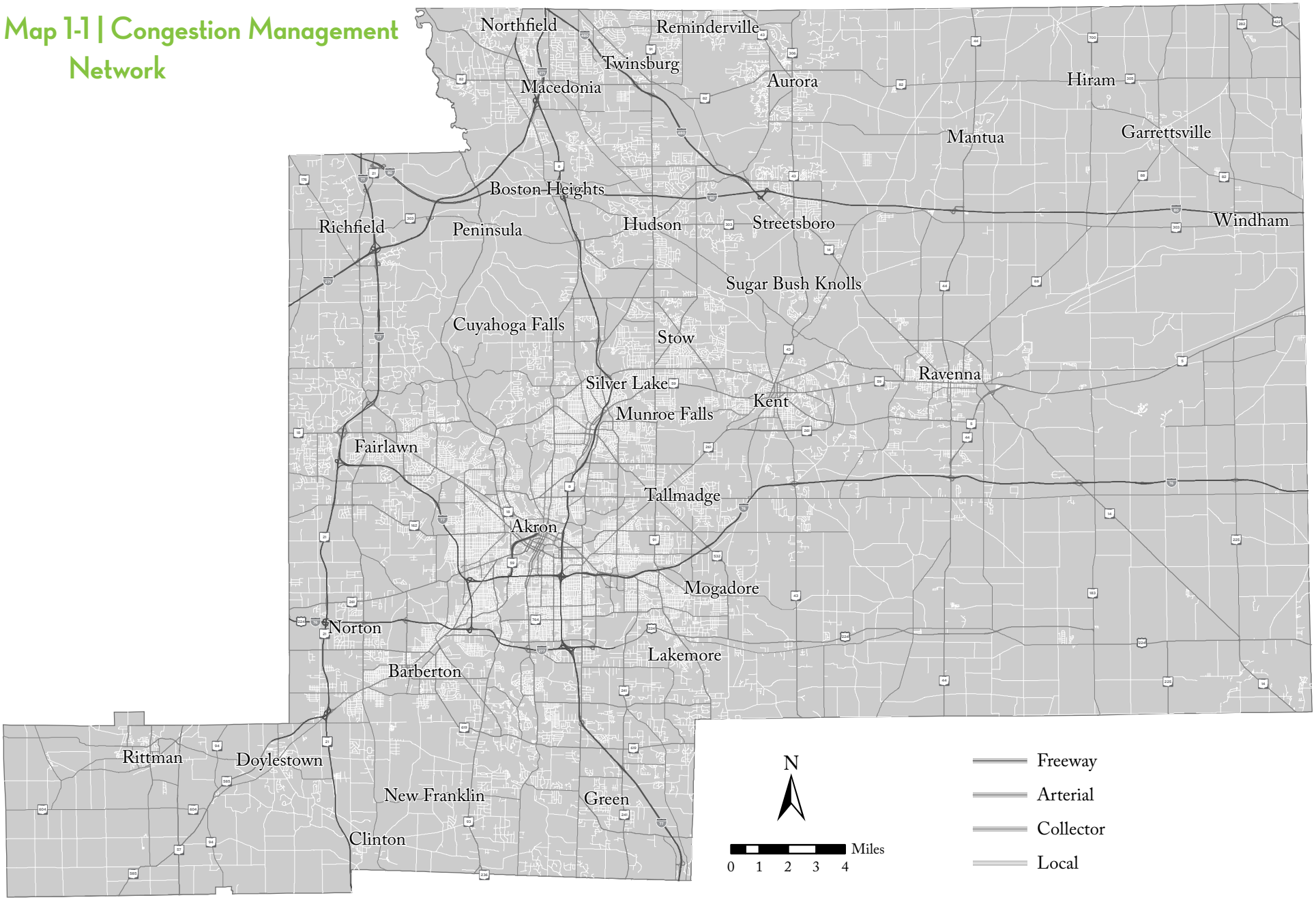
The CMP Network

The roadway network considered for the CMP analysis is made up of 540 miles of roadways in the Akron metropolitan area and is shown on Map 1-1. The following roadways are included in the network for the CMP:

- All roadways included on the National Highway System
- All roadways classified as Principal Arterials in the Federal Functional Classification System
- Major intersections that experience high traffic volumes
- All roadways identified as potential congestion problems by the AMATS Policy Committee
- Other roadways to ensure a continuous CMP highway system

Although the CMP has traditionally focused primarily on the road network, the CMP network should consider the transit, bicycle, and pedestrian networks as well as their interface with the highway network. Doing so can help take advantage of strategies that rely upon the other modes to reduce single occupancy vehicle (SOV) travel. Typically,

Map 1-1 | Congestion Management Network



collectors and local roadways are not included in the roadway analysis of the CMP since it would be time-consuming to address these roadways and they generally have relatively low traffic volumes and congestion levels; however, these facilities should still be considered as potential bicycle, pedestrian, or transit corridors.

Multimodal Performance Measures

Performance measures are a critical component of the CMP. According to Federal regulations, the CMP must include "appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods." Performance measures can be used at the regional level and the local level. At the regional level, performance measures can be used to compare plan alternatives in the development of the MTP. At the local level, performance measures are used to identify locations currently experiencing or anticipated to experience congestion problems in the future. They also are used to support assessment and selection of congestion mitigation strategies and evaluation of implemented strategies. Transit performance measures provide information on the conditions experienced by transit travelers. Aspects of transit travel conditions include:

- Passenger crowding or utilization – measured by passenger loads relative to vehicle capacities
- Reliability of performance or schedule adherence – measured by percentage of on-time performance

Freight performance measures focus on the movement of goods that generally utilize other types of performance measures but focus on roadways with a high volume of trucks or designated as freight corridors.

Collect Data and Monitor System Performance

There are many types of data that can be used as part of the CMP process. The following list is not exhaustive, but includes several common types of data that are used in the CMP.

Traffic Volume Counts – It is necessary to collect traffic data in order to measure the performance of the transportation system. Traffic counts are taken on a regular basis on the roadway network. AMATS and ODOT coordinate traffic data collection efforts to make sure all necessary highways are included. This data is then used as an input to model traffic congestion on the existing and future roadway network. Public transit information was received from both public transit agencies (METRO RTA and PARTA) within the AMATS area. This information is summarized in chapter 4. Freight analysis can be found in chapter 5. The CMP focuses on traffic congestion that is identified both at specific locations and at the system level.

Electronic Traffic Datasets – Cell phone data collected by phone companies along highway corridors can be used to report travel speeds and origin-destination data. Cellular service providers and joint ventures with other private companies have begun to offer this service to some transportation agencies. This CMP report utilized data provided through INRIX and Streetlight.

Transit Data – A wide range of transit data is available and gathered from transit agencies, including boarding and alighting statistics, total ridership, on-time performance, and transit vehicle capacity. Public transit information was received from both transit agencies (METRO RTA and PARTA) within the AMATS area.

Bicycle / Pedestrian Data – Many MPOs collect data on the location and condition of bicycle/pedestrian facilities, such as sidewalks, bicycle lanes, and off-road paths. AMATS collects count information on the use of bicycle and pedestrian facilities, either manually or through the use of Miovision technology.

Crash Data – AMATS publishes an annual report detailing traffic crashes in our region; the latest version being published in December 2019. Traffic Crashes 2016-2018 analyzed traffic crashes for arterials and intersections between 2016 and 2018, utilizing crash records provided by the Ohio Department of Public Safety (ODPS) and the Ohio Department of Transportation (ODOT) for the years 2016, 2017 and 2018. This report is useful in determining locations where non-recurring congestion due to incidents is likely to occur.

Analyze Congestion Problems and Needs

Data collected must be translated into meaningful measures of performance. Specific locations with congestion problems need to be identified along with the sources of these problems. The complexity of translating data into meaningful information for analysis varies. Sometimes it takes time to understand the data and how to process it. One example is the use of electronic cell phone data. This data is collected continuously and represents a large volume of data that must be collapsed into some form that provides useful information. While this type of data can be extremely helpful to MPOs in understanding reliability issues and sources of delay, considerable effort may be needed to convert the data into a useful format for planning purposes.

Identify and Assess Strategies

The identification and assessment of appropriate congestion mitigation strategies is a key component of the CMP. AMATS now needs to turn the data and analysis into a set of recommended solutions to effectively manage congestion and achieve congestion management objectives. One size does not fit all and congestion management strategies need to be designed according to the specific characteristics of the highway and adjacent area. These strategies are categorized into five tiers, ranked generally by efficacy of mitigating congestion:

Tier 1: Demand management
Tier 2: Traffic and roadway operational improvements
Tier 3: Public Transportation and multi-model improvements
Tier 4: ITS Strategies
Tier 5: Capacity expansion

Program and Implement Strategies

Implementation of CMP strategies occurs on three levels: system or regional, corridor, and project. Regional-level implementation of congestion management strategies occurs through inclusion of strategies in the fiscally-constrained MTP and the TIP. At the corridor level, more specific strategies such as bicycle and pedestrian improvements and operational improvements can be assessed in studies and implemented using a variety of funding sources such as Surface Transportation Block Grant (STBG) program and Congestion Mitigation and Air Quality (CMAQ) program. Scoring systems could treat projects differently based on location or strategy type according to congestion levels, or community goals. For instance, more points might be allotted to projects in very congested locations, or, specifically to certain types of projects in the urban core than to projects in areas where further development is not desired.

Evaluate Strategy Effectiveness

Evaluation of strategy effectiveness can be seen as either a sequential step within the CMP process or as an on-going process. This is an essential, required element of the CMP that is often overlooked. The primary goal of this action is to ensure that implemented strategies are effective at addressing congestion as intended, and to make changes based on the findings as necessary. Two general approaches are used for this type of analysis:

- System-level performance evaluation - Regional analysis of historical trends to identify improvement or degradation in system performance, in relation to objectives; and
- Strategy effectiveness evaluation - Project-level or program-level analysis of conditions before and after the implementation of a congestion mitigation effort

Findings that show improvement in congested conditions due to specific implemented strategies can be used to encourage further implementation of these strategies, while negative findings may be useful for discouraging similar strategies in similar situations.

What is Congestion?

One of the critical and complex tasks of the CMP is to define congestion. Studies have shown that congestion is a relative rather than an absolute condition. People "feel" roads are congested at different levels of operations. Technically, congestion occurs when the number of vehicles on a facility exceeds the maximum number of vehicles that a roadway or intersection can accommodate at that point in time, whether because of the physical limitations of the facility or because an event (such as rain) has temporarily hindered vehicular movement. Traffic congestion is characterized by slower speeds, longer trip times, vehicular queueing, travel time uncertainty, and increased traffic collisions.

Components of Congestion

While it is difficult to use a single value to describe all individuals' concerns about congestion, there are four components that interact in a congested roadway or system. These components vary among and within urban areas – smaller urban areas, for example, have shorter durations of congestion than larger areas.

Duration – this is how much time congestion affects the travel system.

Extent – this is an estimate of the number of people or vehicles affected by congestion, and by the geographic distribution of congestion.

Intensity – this is the severity of the congestion that affects travel. It is typically used to differentiate between levels of congestion on transportation systems and to define the total amount of congestion.

Reliability – this is the variation in the other three elements. Reliability is a measure of the extent to which the traveler's experience matches their expectation. The variable is the impact of non-recurrent congestion on the transportation system.

Recurring and Non-Recurring Congestion

Research into travelers' views of congestion has shown that predictable travel times are a primary concern. Having reliable travel time is a crucial factor affecting traveler behaviors, including choices of route, departure time, and mode. One commonly accepted definition of travel time reliability, given by the Federal Highway Administration, states that "Drivers are used to congestion and they expect and plan for some delay, but most travelers are less tolerant of unexpected delays. Travel time reliability measures the extent of this unexpected delay." Travelers and firms may account for the variability in their trips and transport of goods by building in time-buffers as insurance against late arrival. This implies that the consequences of late arrivals are costly. Congestion is broadly categorized as either recurring (predictable) or non-recurring (unpredictable) congestion. Congestion, both recurring and non-recurring, vary significantly depending on the season, day of the week, and even time of day. Furthermore, both recurring and nonrecurring congestion may occur at the same time, exacerbating any event.

Recurring Congestion

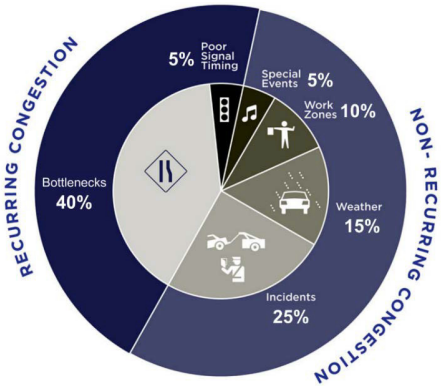
Recurring congestion is congestion that occurs repeatedly at predictable times and locations, e.g. at bottlenecks or on corridors with poorly coordinated traffic signals, usually during the peak hour periods. Simply put, recurring congestion occurs because travel demand exceeds system capacity. There are many strategies available to mitigate this type of congestion through demand management, operational improvements, and multimodal strategies. Integration of land-use and transportation decisions enables agencies to coordinate efforts to address this demand side of congestion. Elimination of all recurring congestion may not be either feasible (due to physical and financial constraints) or desirable (in terms of the implications to community of unfettered vehicular travel). Recurring congestion is generally considered the least frustrating because its effects are known and can be planned for.

Non-Recurring Congestion

In contrast, non-recurring congestion incidents can occur at any time, including during non-peak travel times, and is often associated with traffic crashes, weather events, special events, work zones, and emergencies. This is the congestion that most often frustrates people. It is especially bad when a non-recurring incident magnifies the magnitude and extent of congestion during "normal" recurring congestion. Non-recurring congestion is difficult to address without proper prior planning. The sources of non-recurring congestion are broad:

- Roadway debris
- Roadway construction and maintenance work zones
- Inclement weather
- Disabled vehicles
- Law enforcement activities
- Traffic crashes
- Special events

The chart to the right illustrates the distribution of the various types of congestion on U.S. transportation networks.



Congestion Caused by Trucks

Trucks are often slower to get moving; therefore, they can add to the length of congestion time. Once slowed down a truck will take longer to get started than a passenger car. Roadways with high volumes of truck might be more congested then those that are almost exclusively passenger cars. It is very important to recognize corridors with high percentage of trucks when analyzing congestion. Truck freight movement is very important to keep the economy thriving.

Congestion Caused by Railroad Grade Crossings

An at-grade crossing is where a railway and roadway intersect. The AMATS area has a number of at-grade crossings with significant train and vehicle volumes. This source of congestion is often overlooked when addressing congestion. When a passing train delays traffic on a busy roadway it creates a large platoon of vehicles that cause problems throughout the roadway network. Ideally, highway-rail grade crossings would be separated if feasible.

Roadway Methodology and Analysis

Historically traffic congestion in the AMATS CMP was measured by using a volume to capacity (V/C) ratio. This ratio is based on the volume of traffic during peak hours verses the capacity of the roadway. This method requires the collecting traffic volume data and knowing the physical characteristics of the highway itself. However in recent years new technology has enabled traffic engineers and planners to obtain traffic data through the collection of cell phone and other GPS device location data. Traffic data collected in this manner is done over a period of months or years and is more representative than data collected over one or two days. Once collected this data is aggregated and analyzed to provide transportation analysis.

INRIX is one such aggregator and monitors real-time traffic flow on some 260,000 miles of roadway in the United States. INRIX data is made available to AMATS through the Ohio Department of Transportation (ODOT). As real-time data is collected it is then stored and becomes historical data. The data used for this CMP Report was collected over the calendar year of 2017.

The first analysis portion of the CMP was done using data from the INRIX platform. However there were some streets and roads that needed analyzed that INRIX did not have data for. For those remaining segments AMATS used another application called Streetlight. This application uses the same principles that INRIX allowed AMATS to develop unique highway segments for analysis. The analysis process is different but the results are calculated using a similar methodology as INRIX.

The segment lengths using INRIX are predetermined and cannot be altered. In Summit and Portage counties there were 1,627 predetermined segments. The Streetlight platform allows AMATS to identify termini for segments. AMATS used segments used in previous CMP reports as a guideline when defining Streetlight segments. Once INRIX and Streetlight data was combined, AMATS further defined the segments as: Freeway Segments, Freeway Ramps, Freeway Interchanges, Arterial Segments, and Intersections.

Each segment that is bi-directional is analyzed by direction. For example, if a segment runs east and west it is analyzed in the westbound direction and the eastbound direction separately. The congestion analyses focused on three time periods:

- Morning from 5:00 AM to 11:00 AM
- Mid-day from 11:00 AM to 4:00 PM
- Evening from 4:00 PM to 10:00 PM

The daily AM peak and the PM peak were derived from the morning and evening time periods. Some areas that have a high concentration of restaurants and retail businesses may also have a mid-day peak and these were also considered. Only weekdays were used since this is when most recurring congestion occurs. The roadway network considered for the CMP analysis is made up of 540 miles of roadways in the Akron metropolitan area and is shown on Map 1-1, in Chapter 1). The following roadways are included in the network for the CMP analysis:

- All roadways included on the National Highway System
- All roadways classified as Principal Arterials in the Federal Functional Classification System
- Major intersections that experience high traffic volumes
- All roadways identified as potential congestion problems by the AMATS Policy Committee
- Other roadways to ensure a continuous CMP highway system

Next congestion was determined. According to INRIX the definition of congestion is anytime the travel speed falls below 65 percent of the free-flow speed. The free flow speed is determined by measuring what the speed is when the traffic is presumed to be flowing unrestricted. The free-flow speed is not the speed limit. The free-flow speed on a highway that has a posted speed limit of 55 miles per hour (mph) would normally be between 60 and 65 mph. The 65 percent of free-flow speed was chosen for all roadway segment type except freeway segments. AMATS decided to use 75 percent of free-flow speed on freeway segments given their higher speed and smaller changes can have a greater impact on the system.

The speeds were compiled in 15 minute periods and averaged over the entire year for the same day and time period. If an event such as an accident or construction activity slowed traffic just temporarily the other days would average out that event. In the analysis the real speed has to be less than 65 percent (75 percent for freeway segments) of the free-flow speed averaged over four consecutive 15 minute periods or one hour to be considered congested.

Based on the methodology described above, AMATS completed a roadway analysis. A comprehensive listing of all freeway segments, freeway ramps, freeway interchanges, arterial segments, and intersections analyzed is listed in Appendix A. All congested roadways are listed in the recommendations chapter sorted from most to least congested. Recommendations for improving these congested segments are in Chapter 10 of this report.

Transit Methodology and Analysis

Funding and promoting transit is a key element in a multi-modal transportation system. With a reliable and efficient transit system in place, overall roadway congestion can be relieved. Improving transit operations, improving access to transit, and expanding transit service can help reduce the number of vehicles on the road by making transit more attractive and accessible. In this chapter transit level of service has been analyzed. It is discussed more fully in the AMATS *2020 Transit Plan*.

There are two primary providers of public transportation in our region: METRO RTA, which serves Summit County, and the Portage Area Regional Transportation Authority (PARTA), which serves Portage County. Both agencies operate traditional fixed-route bus service, demand-response services for low-income, elderly and disabled passengers, and express bus service to key communities, such as Cleveland. AMATS assists these local transit agencies in providing the best possible public transportation service for the greater Akron area.

While passenger overcrowding is not a general system-wide issue in our area, on-time performance and reliability are important to effective transit service. Transit on-time performance is affected by congestion on the roadway as well as passenger loading and unloading, payment, etc. Congested transit routes can lead to poor on-time performance and unreliability of the transit network. This is an issue to those who rely on transit, especially vulnerable populations such as individuals and families living in poverty, older adults, and the disabled. When transit is efficient and reliable, it can provide an effective alternative to single occupancy vehicle travel and help reduce traffic congestion.

Transit Headway Performance Analysis

In previous reports, AMATS staff has analyzed the Level of Service of routes for both METRO RTA and PARTA. For this report, a different approach has been used that better characterizes the service that is provided by these transit agencies.

Superior Performance – Frequent service, passengers don't need schedules

Acceptable Performance – Service unattractive to choice riders, maximum desirable wait time

Potential Service Improvement – Extended wait time, service unattractive to all riders

Headway Performance Analysis

METRO's Downtown Akron Shuttle (DASH) service is listed as Superior Performance. The DASH is a recent addition to METRO's service, and provides frequent service every 10 minutes between the hours of 7 a.m. and 7 p.m. as well as 15 minute service on weekday evenings. The route quite often attracts choice riders - people who have a car or another transportation option. Attracting choice riders to transit helps alleviate traffic congestion, particularly during peak periods of travel.

METRO RTA shows the vast majority of their routes as Potential Service Improvement, which means that passengers are waiting a minimum of 30 minutes for the bus to pick them up, and many of them are waiting even longer. The majority of routes after 6 pm have extended wait times, which make them unattractive to riders, while some routes don't run at all. This creates a burden for those workers whose shift ends after this time. Retail and restaurant workers who very often return home in the evening or late at night are more likely to use transit due to low-wage jobs, and have to wait over an hour for a bus. METRO could work to improve the headways for second-shift workers by adding buses to routes in the evening; however this would require large capital and operating expenses.

METRO is in the process of collecting feedback for their Strategic Plan, which they expect to complete in the summer of 2020. Additionally, they are currently exploring the idea of adding a Bus Rapid Transit (BRT) corridor to the Akron area. This could greatly improve the overall LOS for the agency. The costs for BRT are lower than for light passenger rail service.

Characteristics of BRT may include:

- Dedicated Bus Lanes
- Signal preemption
- Increased Bus Frequency
- Off-board Fare Collection
- Platform-level boarding

METRO anticipates a decision by early 2021 regarding the feasibility of a BRT being added to their system. A consultant has already been hired and the process has commenced.

PARTA removed three routes and added one since the last time their Headway Performance was studied in 2016. About half of the routes are split between being Superior Performance and Acceptable Performance. This means that riders wait at most 15 minutes for the bus, making the service attractive to most transit riders. The other half of the routes is listed as Potential Service Improvement. Although this type of service is extremely undesirable due to its extended wait times, and choice riders would likely find another form of transportation, these routes provide the opportunity to increase bus service and attract new riders. In 2016, PARTA had more routes

operating frequently, but had some routes that didn't run at all in the evenings. Now, all routes run approximately 16 hours a day on weekdays, with limited service on the weekends. This change could mean that there are fewer buses to go around, reducing the frequency for bus service and contributing to the reduction in performance. More buses and more drivers are a costly solution, but would give the routes increased frequency.

Table 4-1 | PARTA Fixed-Route Headway Performance Analysis

ROUTE #	DESCRIPTION	AM PEAK (7-9 AM) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE	DAYTIME (9AM - 4PM) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE	PM PEAK (4-6 PM) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE	EVENING (7 PM +) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE
COUNTY SERVICE									
30	Interurban West (Kent to Stow)	30	AP	30	AP	30	AP	38	PSI
35	Interurban East (Kent to Ravenna)	30	AP	30	AP	30	AP	38	PSI
40	Suburban North (Kent)	45	PSI	45	PSI	45	PSI	65	PSI
45	Suburban South (Kent)	45	PSI	45	PSI	45	PSI	58	PSI
60	Black Squirrel	30	AP	30	AP	-	PSI	-	PSI
70	Windham / Garrettsville	105	PSI	105	PSI	105	PSI	105	PSI
80	Raven West (Ravenna)	60	PSI	60	PSI	60	PSI	60	PSI
85	Raven East (Ravenna)	60	PSI	60	PSI	60	PSI	60	PSI
90	Akron Express	90	PSI	105	PSI	90	PSI	-	PSI
100	Cleveland Express								
CAMPUS SERVICE									
51	Campus Loop	21	AP	15	AP	15	AP	30	AP
53	Reverse Loop	30	AP	15	AP	30	AP	30	AP
55	Allerton	15	AP	15	AP	15	AP	15	AP
57	Stadium Loop (Summer / KSU Breaks)	30	AP	30	AP	30	AP	-	PSI
58	Summit East / Front Campus	8	SP	8	SP	12	SP	31	PSI
59	Stadium Night Loop	-	PSI	-	PSI	-	PSI	30	AP

Table 4-2 | METRO RTA Fixed-Route Headway Performance Analysis

ROUTE #	DESCRIPTION	AM PEAK (7-9 AM) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE	DAYTIME (9AM - 4PM) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE	PM PEAK (4-6 PM) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE	EVENING (6 PM +) AVG HEADWAY (MINS)	HEADWAY PERFORMANCE
LOCAL ROUTES									
1	West Market	21	AP	21	AP	31	PSI	36	PSI
2	Arlington	22	AP	21	AP	31	PSI	38	PSI
3	Copley / Hawkins	24	AP	21	AP	29	AP	69	PSI
4	Delia / N Hawkins	33	PSI	48	PSI	29	AP	-	PSI
5	Joy Park / Gilchrist	43	PSI	51	PSI	53	PSI	-	PSI
6	East Market / Lakemore	30	AP	33	PSI	28	AP	66	PSI
7	Cuyahoga Falls Ave	32	PSI	36	PSI	37	PSI	70	PSI
8	Kenmore / Barberton	35	PSI	41	PSI	39	PSI	70	PSI
9	Vern Odom Blvd / East Ave	40	PSI	37	PSI	38	PSI	60	PSI
10	Howard / Portage Trail	32	PSI	46	PSI	51	PSI	71	PSI
11	South Akron	87	PSI	75	PSI	-	PSI	-	PSI
12	Tallmadge Hill	28	AP	38	PSI	38	PSI	57	PSI
13	Grant / Firestone Park	32	PSI	38	PSI	44	PSI	70	PSI
14	Euclid / Barberton Express	26	AP	36	PSI	34	PSI	68	PSI
17	Brown / Inman	25	AP	40	PSI	58	PSI	71	PSI
18	Thornton / Manchester	80	PSI	61	PSI	77	PSI	72	PSI
19	Eastland	46	PSI	43	PSI	46	PSI	61	PSI
21	South Main	40	PSI	40	PSI	40	PSI	40	PSI
24	Lakeshore	43	PSI	34	PSI	50	PSI	70	PSI
26	W. Exchange / White Pond	37	PSI	40	PSI	69	PSI	80	PSI
28	Merriman Valley	69	PSI	56	PSI	40	PSI	-	PSI
30	Goodyear / Darrow	40	PSI	40	PSI	43	PSI	70	PSI
33	State Road / Wyoga Lake	60	PSI	40	PSI	120	PSI	95	PSI
34	Cascade Village / Uhler	34	PSI	34	PSI	43	PSI	71	PSI
CIRCULATOR ROUTES									
50	Montrose Circulator	35	PSI	35	PSI	35	PSI	33	PSI
51	Stow Circulator	36	PSI	36	PSI	37	PSI	36	PSI
53	Portage / Graham	44	PSI	74	PSI	-	PSI	-	PSI
59	Chapel Hill Circulator	50	PSI	35	PSI	45	PSI	33	PSI
DOWNTOWN CIRCULATOR									
54	DASH	10	SP	10	SP	10	SP	14	
NORTH COAST EXPRESS COMMUTER SERVICE TO CLEVELAND									
60	NCX - Cuyahoga Falls to Cleveland	35	PSI	-	PSI	60	PSI	-	PSI
61	NCX - RKP to Cleveland	26	AP	121	PSI	33	PSI	-	PSI
TOWN CENTER ROUTES									
101	Richfield / Bath	55	PSI	104	PSI	-	PSI	-	PSI
102	Northfield	54	PSI	48	PSI	41	PSI	66	PSI
103	Stow / Hudson	113	PSI	93	PSI	94	PSI	-	PSI
104	Twinsburg / Creekside	91	PSI	101	PSI	94	PSI	68	PSI
110	Green / Springfield	55	PSI	99	PSI	53	PSI	-	PSI

On-Time Performance Analysis

Transit Reliability or schedule adherence is an important component of transit service. If transit is able to maintain acceptable levels of reliability it provides confidence to passengers that they will not miss their bus or be late to their intended destination. Both METRO RTA and PARTA maintain on time data for all of their transit routes. The table below shows that METRO RTA and PARTA maintain strong reliability and overall have improved the reliability of their system from 2018 to 2019.

Table 4-3 | PARTA On-Time Performance Analysis

ROUTE #	DESCRIPTION	2018 ON-TIME %	2019 ON-TIME%
30	Interurban West (Kent to Stow)	85.4%	85.5%
35	Interurban East (Kent to Ravenna)	73.8%	78.3%
35S	Interurban East (Kent to Ravenna) Saturday	77.1%	74.1%
40	Suburban North (Kent)	80.3%	77.7%
45	Suburban South (Kent)	85.0%	81.3%
51	Campus Loop	74.9%	77.5%
53	Reverse Loop	68.9%	79.3%
55	Allerton	37.5%	68.9%
57	Stadium Loop (Summer / KSU Breaks)	70.8%	76.0%
58	Summit East / Front Campus	60.7%	65.3%
59	Stadium Night Loop	69.8%	76.3%
60	Black Squirrel	60.0%	75.2%
70	Windham / Garrettsville	84.9%	83.4%
80	Raven West (Ravenna)	83.5%	80.1%
85	Raven East (Ravenna)	84.6%	86.8%
90	Akron Express	74.1%	75.9%
100	Cleveland Express	57.0%	49.9%
Annual System Total On-Time %		**71.9%**	**76.0%**

Table 4-4 | METRO RTA On-Time Performance Analysis

ROUTE #	DESCRIPTION	2018 ON-TIME %	2019 ON-TIME%
1	West Market	57.8%	65.6%
2	Arlington	74.1%	74.8%
3	Copley / Hawkins	72.3%	75.9%
4	Delia / N Hawkins	74.5%	75.5%
5	Joy Park / Gilchrist	67.5%	68.0%
6	East Market / Lakemore	74.8%	75.7%
7	Cuyahoga Falls Ave	79.8%	76.2%
8	Kenmore / Barberton	79.9%	80.6%
9	Vern Odom Blvd / East Ave	73.6%	74.2%
10	Howard / Portage Trail	71.8%	74.7%
11	South Akron	81.6%	83.7%
12	Tallmadge Hill	84.6%	83.3%
13	Grant / Firestone Park	84.5%	86.6%
14	Euclid / Barberton Express	83.1%	81.6%
17	Brown / Inman	74.9%	73.3%
18	Thornton / Manchester	78.1%	79.3%
19	Eastland	78.7%	81.6%
21	South Main	80.5%	89.7%
24	Lakeshore	52.4%	53.8%
26	W. Exchange / White Pond	78.9%	79.1%
28	Merriman Valley	81.9%	78.5%
30	Goodyear / Darrow	81.6%	81.7%
33	State Road / Wyoga Lake	81.4%	81.3%
34	Cascade Village / Uhler	75.0%	73.1%
50	Montrose Circulator	82.5%	83.8%
51	Stow Circulator	81.5%	79.0%
53	Portage / Graham	83.1%	79.5%
59	Chapel Hill Circulator	86.9%	87.2%
54	DASH	72.2%	67.3%
60	NCX - Cuyahoga Falls to Cleveland	61.4%	59.2%
61	NCX - RKP to Cleveland	57.7%	58.4%
101	Richfield / Bath	72.0%	66.3%
102	Northfield	58.4%	61.0%
103	Stow / Hudson	69.6%	61.3%
104	Twinsburg / Creekside	66.7%	63.4%
110	Green / Springfield	71.6%	70.0%
Annual System Total On-Time %		**75.0%**	**75.6%**

Freight Methodology and Analysis

The movement of freight is an important part of a fully functioning transportation system. The efficient movement of freight within and through a region is critically important to industry, retail commerce, agriculture, international trade and terminal operators. Metropolitan areas with their air cargo airports, freight yards, trucking terminals, and shipping facilities, are especially affected by freight movement issues. Freight congestion can include delays at airports, water ports, rail facilities, and on highways. In this CMP we mostly focus on highway-based freight congestion, where AMATS could assist in funding improvements.

The AMATS freight planning process:

- Defines those elements of the area's transportation system that are critical for the efficient movement of freight
- Identifies ways to measure system performance in terms of freight movement
- Develops freight-oriented data collection and modeling in order to identify problems and potential solutions, and ultimately
- Recommends broad strategies and specific projects designed to improve the movement of freight throughout the transportation network

The highest priority needs in the AMATS area regarding freight movement involve improvements to the highway system. The AMATS *Highway Preservation Needs* Report and the *Congestion Management Process (CMP)* Report address the needs of the AMATS area in terms of highway improvements that streamline the flow of freight in the region.

AMATS's freight planning process includes three primary strategies:

- Developing and maintaining databases and analysis tools for decision-making
- Interacting with AMATS members and freight stakeholders to better understand the freight system, identify common issues, and build consensus
- Incorporating freight into the regional transportation planning process

Trucks

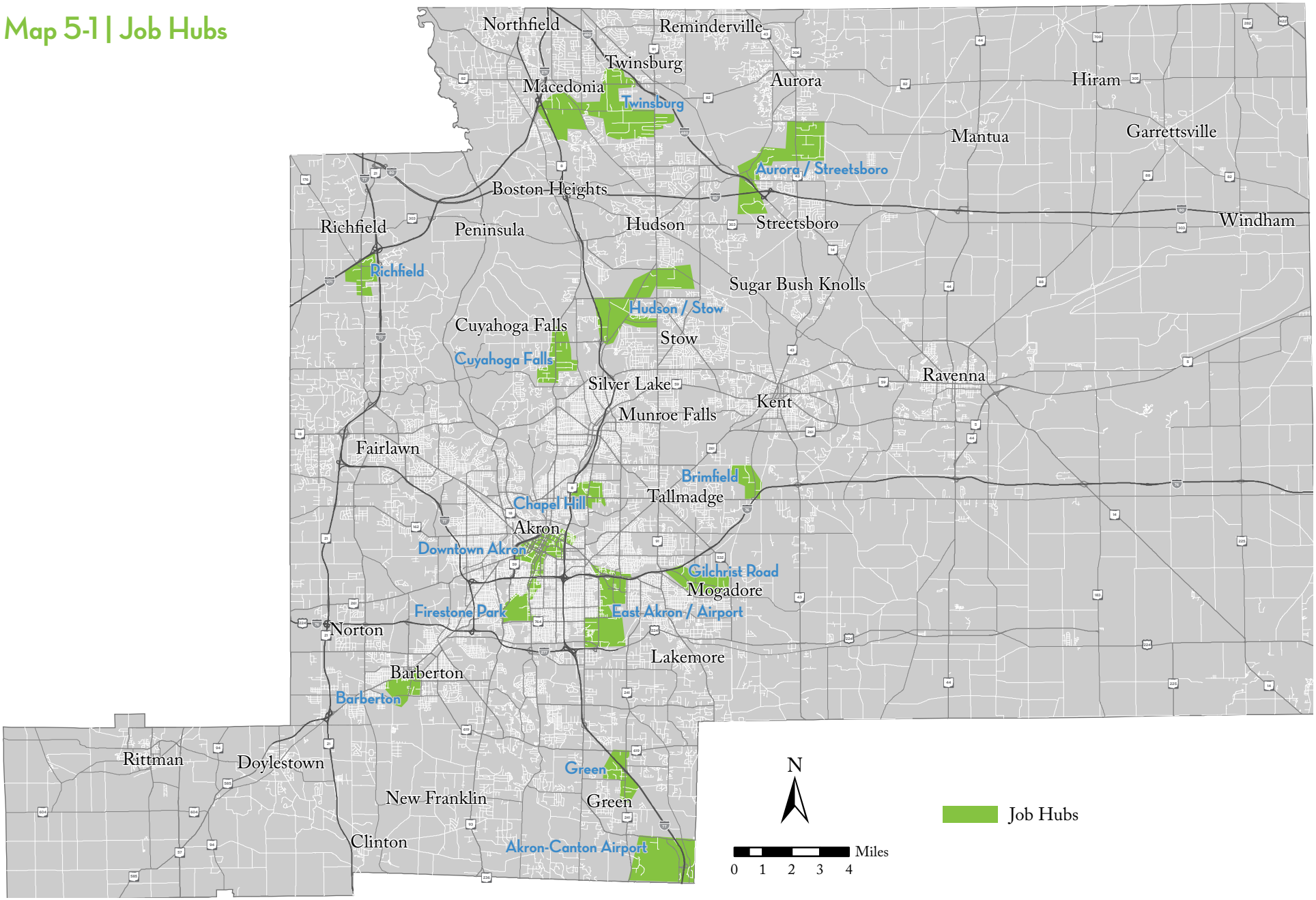
Freight movement, by way of trucks, is heavily concentrated on freeways and major state routes. The number of trucks on these roads range from 50 to 15,000 trucks per day, with I-76 through Summit and Portage counties being the busiest freeway for trucks. Highway improvements such as the widening of I-76 east of SR 21 and the improvement of the High St / Broadway St interchange along with planned improvements to the Central Interchange and widening of SR 8 and I-77 through and south of Akron will help improve the efficiency of freight movement on the area's roadways.

In its *2020 Freight Plan*, AMATS analyzed truck freight as it relates to key job hubs in the greater Akron area. Job hubs were identified based on the number of traded-sector jobs in a particular area, with a focus on places with job density in the top 5 percent in the region. The job hubs are clusters of employment in sectors of the economy like manufacturing or business consulting that can export (or trade) goods and services outside of Northeast Ohio. Table 5-1 below includes congested locations near the 14 job hubs identified in the AMATS *2020 Freight Plan*.

Table 5-1 | Job Hub Congestion Locations

LOCATION	DESCRIPTION	JOB HUB
Akron	Firestone Blvd from S Main St to Grant St	Firestone Park
Akron	Firestone Blvd from Grant St to S Main St	Firestone Park
Akron	Wilbeth Rd (SR-764) at Manchester Rd (SR-93)	Firestone Park
Akron	Euclid Ave from Rand St to Dart Ave	Downtown Akron
Akron	SR-8 SB from Forge St to E Market St (SR-18)	Downtown Akron
Akron	SR-8 SB from Perkins St Off Ramp to Perkins St On Ramp	Downtown Akron
Akron	SR-8 SB from Glenwood Ave On Ramp to Perkins St Off Ramp	Downtown Akron
Akron	W Exchange St from Paul Williams St to S Main St	Downtown Akron
Akron	Perkins St (SR-59) from Union St to SR-8 SB Ramps	Downtown Akron
Akron	SR-8 SB from Tallmadge Ave Off Ramp to Tallmadge Ave On Ramp	Chapel Hill
Akron	SR-8 SB from E Cuyahoga Falls Ave On Ramp to Tallmdage Ave Off Ramp	Chapel Hill
Akron	E Tallmadge Ave (SR-261) from Gorge Blvd to SR-8 SB Ramps	Chapel Hill
Akron	Home Ave from Annapolis Ave to Howe Ave	Chapel Hill
Akron	E Tallmadge Ave (SR-261) from SR-8 SB Ramps to Gorge Blvd	Chapel Hill
Akron	Home Ave from Howe Ave to Annapolis Ave	Chapel Hill
Cuyahoga Falls	State Rd from Marc Dr to Bath Rd	Cuyahoga Falls
Cuyahoga Falls / Stow	Steels Corners Rd from Wyoga Lake Rd to Bridgewater Pkwy	Cuyahoga Falls
Cuyahoga Falls	State Rd from Marc Dr to Steels Corners Rd	Cuyahoga Falls
Cuyahoga Falls	State Rd from Bath Rd to Graham Rd	Cuyahoga Falls
Cuyahoga Falls	State Rd from Quick Rd to Steels Corners Rd	Cuyahoga Falls
Green	Massillon Rd (SR-241) from I-77 SB Ramps to I-77 NB Ramps	Green
Green	Massillon Rd (SR-241) from I-77 NB Ramps to I-77 SB Ramps	Green
Brimfield Township	Tallmadge Rd from I-76 WB Ramps to I-76 EB Ramps	Brimfield
Brimfield Township	Tallmadge Rd from I-76 EB Ramps to I-76 WB Ramps	Brimfield
Macedonia	I-271 NB Off Ramp to SR-8	Twinsburg
Macedonia	SR-8 SB from I-271 SB On Ramp to I-271 NB Off Ramp	Twinsburg
Twinsburg	E Aurora Rd (SR-82) from I-480 WB Ramps to Darrow Rd (SR-91)	Twinsburg
Streetsboro	SR-14 from I-80 Ramps to SR-43	Aurora / Streetsboro
Streetsboro	I-480 SB Ramp to I-80	Aurora / Streetsboro
Streetsboro	Aurora Hudson Rd from I-480 SB Ramps to Frost Rd	Aurora / Streetsboro
Akron	Waterloo Rd (US-224) at George Washington Blvd (SR-241)	East Akron / Airport
Akron	Waterloo Rd (US-224) at George Washington Blvd (SR-241)	East Akron / Airport
Akron	Waterloo Rd at Arlington St	East Akron / Airport
Richfield	Wheatley Rd at Brecksville Rd	Richfield
Richfield	Brecksville Rd at Wheatley Rd	Richfield
Richfield	Brecksville Rd at Wheatley Rd	Richfield
Richfield	Wheatley Rd at Brecksville Rd	Richfield
Stow	Steels Corners Rd from Bridgewater Pkwy to SR-8	Hudson / Stow
Hudson	Terex Rd from Hudson Dr to Darrow Rd (SR-91)	Hudson / Stow
Stow	Steels Corners Rd from SR-8 to Hudson Dr	Hudson / Stow
Hudson	Terex Rd from Darrow Rd (SR-91) to Hudson Dr	Hudson / Stow

Map 5-1 | Job Hubs



Railways

There are approximately 393 at-grade crossings in the AMATS area (many are on abandoned or out of service rail lines). High volume crossings are prioritized by scoring the number of trains per day and the average daily traffic volume (ADT). The table below lists locations that have scores greater than 100. The number of trains per day varies from year to year depending on the count locations provided by ORDC and PUCO. Ideally, highway-rail grade crossings would be separated if feasible. Grade separation projects eliminate safety and delay concerns by redirecting the vehicle, pedestrian and bicycle traffic above or below the railroad tracks. Construction of overpasses and underpasses are very costly, and not always feasible due to geographic configuration.

Table 5-2 | High-Volume At-Grade Crossings

RANK	STREET (LOCATION)	TRAINS PER DAY	VEHICLE ADT	SCORE
1	Stow Rd (Hudson)	70	10,280	720
2	Broad Blvd (Cuyahoga Falls	32	15,385	492
3	S Main St (Munroe Falls)	27	16,694	451
4	E Twinsburg Rd (Macedonia)	74	5,550	411
5	Bailey Rd (Cuyahoga Falls)	27	13,315	360
6	E Hines Hill Rd (Hudson)	62	3,710	230
7	Hudson Run Rd (Barberton)	32	5,161	165
8	Fairview Ave (Barberton	29	5,251	152
9	W Summit St (Kent)	27	5,438	147
10	W Waterloo Rd (Twinsburg Township)	31	4,383	136
11	N Arlington St (Akron)	27	4,630	125
12	E Highland Rd (Twinsburg Township)	10	11,679	117
13	W Market St (Akron)	4	25,530	102

Freight recommendations are included in Chapter 9 of this report along with other highway and transit recommendations.

Incident-Related Traffic Congestion

Incident-related traffic congestion is congestion that occurs due to a non-recurring incident. In most cases, this incident is a traffic crash. While crashes can happen anywhere at any time, some locations are more prone to crashes than others. Locations with both frequent crashes and recurrent congestion will be significantly more congested. Effective transportation planning requires that incident-related congestion be analyzed.

In order to analyze incident-related traffic congestion, traffic crash data must be reviewed. AMATS publishes an annual report detailing traffic crashes in our region; the latest version being published in December 2019. *Traffic Crashes and Safety Performance Measures 2016-2018* analyzed traffic crashes for arterials and intersections between 2016 and 2018, utilizing crash records provided by the Ohio Department of Public Safety (ODPS) and the Ohio Department of Transportation (ODOT) for the years 2016, 2017 and 2018.

Arterials

Areas of incident-related congestion are determined based on a composite score which considers both number of crashes and their severity to determine locations where incident-related congestion is most likely to occur. For a complete description of how the composite score is determined, please review the methodology in the AMATS *Traffic Crashes and Safety Performance Measures 2016-2018* report. Table 6-1 and Map 6-1 displays the top 50 arterial locations.

Intersections

Similar to arterial segments, areas of incident-related intersection congestion are determined based on composite score. The top 50 high crash intersections are listed on Table 6-2 and displayed on Map 6-2.

Locations where the two previously mentioned lists coincide with areas of recurring congestion are shown on Map 6-3.

Freeways

The analysis of freeway crashes in the AMATS area is done by the central office of the Ohio Department of Transportation (ODOT) in Columbus. ODOT's analysis of freeways is done using their own methodology which is derived from the Highway Safety Manual. The freeway system is divided into rural and urban and is analyzed by examining segments that are one-tenth of a mile long.

In an effort to make data-driven decisions and determine operationally sensitive corridors throughout the state, ODOT has developed the Traffic Operations Assessment Systems Tool (TOAST). In TOAST routes are segmented into the State Priority System with breaks at the urban area boundaries, interchange center points, and road functional class changes. Multiple data categories make up TOAST. For each category, data ranges were normalized into values of 0-10, then multiplied by a weighting factor. The total score for a route is calculated as a percent based on the score for each category divided by the total possible maximum score. In general, the higher the percent, the better the route is performing; whereas, the lower the percent, the more likely a route is to benefit from improvements. The data categories that make up TOAST are listed below:

Travel Time Performance – Percent of time motorists can travel at or near (90%) of the reference speed (free-flow speed defined by data provider).

Bottlenecks – A potential bottleneck is detected when speeds on a segment drop to 65% of reference speeds and cause at least a two-minute delay.

Incident Clearance – The time from report of an incident until the entire scene is cleared.

Secondary Crashes – Percent of crashes that occurred as a result of a previous incident.

Volume Per Lane – Calculated based on a weighted average for each segment.

Freight Corridors – Weighted average of percent trucks (average daily truck volume ÷ average daily total volume).

Safety Performance – A route's potential for safety improvement by density based on its peer group.

ODOT has analyzed the freeway network in the AMATS area. The results of this analysis are shown on Map 6-4.

Table 6-1 | High Crash Roadway Segments 2016-2018

RANK	ROADWAY SECTION	FROM	TO	LENGTH (MILES)	AVERAGE DAILY TRAFFIC	TOTAL CRASHES	CRASHES PER MILE PER YEAR	CRASH RATE	SEVERITY INDEX	BIKE RELATED	PED RELATED	LOCATION
1	E Main St (SR-59)	Willow St	Luther Ave	0.41	18,195	86	69	10.46	1.53		2	Kent
2	S Cleveland-Massillon Rd	IR-77	Rosemont Blvd / Elgin Dr	0.53	21,780	65	41	5.15	1.71			Fairlawn
3	Medina Rd (SR-18)	IR-77	Cleveland-Massillon Rd (CR-17)	0.69	30,889	149	71	6.34	1.54			Copley Twp
4	W Market St (SR-18)	Cleveland-Massillon Rd	Smith Rd	0.57	24,530	95	56	6.21	1.53		2	Fairlawn
5	Copley Rd (SR-162)	St Micheals	S Hawkins Ave	0.49	9,328	39	26	7.78	1.62		1	Akron
6	S Prospect St	Ravenna SCL	Lake Ave	0.18	9,640	11	21	5.84	2.09			Ravenna
7	E Aurora Rd (SR-82)	Olde Eight Rd	SR-8	0.82	15,150	76	31	5.61	1.50			Macedonia
8	Canton Rd (CR-66)	Sanitarium Rd (CR-136)	Waterloo Rd (US-224)	1.01	14,870	85	28	5.19	1.56		2	Springfield Twp
9	Ghent Rd	W Market St (SR-18)	Smith Rd	0.38	9,230	36	31	9.31	1.44			Fairlawn
10	SR-14	SR-303 (W)	SR-303 (E)	0.36	25,578	51	48	5.10	1.47			Streetsboro
11	SR-14 / SR-44	SR-59	SR-5 (end SR-14 overlap)	0.39	17,345	34	29	4.63	1.59			Ravenna Twp
12	Arlington Rd	Turkeyfoot Lake Rd (SR-619)	Green North Corp Line	0.95	20,305	145	51	6.86	1.37		1	Green
13	W&E Main St (SR-59)	Sycamore St	Prospect St	0.26	14,100	39	50	9.81	1.36		1	Ravenna
14	Massillon Rd (SR-241)	Boettler Rd	Turkeyfoot Lake Rd (SR-619)	1.01	21,609	130	43	5.46	1.38			Green
15	Kent Rd (SR-59)	Fishcreek Rd	Stow East Corp Line	0.35	18,730	26	25	3.62	1.69			Stow
16	State Rd	Portage Trail	Graham Rd	0.27	22,210	24	30	3.70	1.50	2	2	Cuyahoga Falls
17	Howe Ave	Cuyahoga Falls Corp Line	Main St	0.27	29,263	42	51	4.77	1.38		1	Cuyahoga Falls
18	E Main St (SR-59)	Horning Rd	Kent East Corp Line	0.52	19,184	48	31	4.44	1.46		2	Kent
19	State Rd	Cuyahoga Falls Corp Line	Broad Blvd	0.70	14,700	43	21	3.83	1.70			Cuyahoga Falls
20	Graham Rd	Fishcreek Rd	Stow East Corp Line	0.66	14,750	53	27	5.00	1.45			Stow
21	SR-44	Tallmadge Rd (CR-18)	SR 5 (NB off from IR-76)	0.66	27,333	56	28	2.84	1.68			Rootstown Twp
22	Brittain Rd	Eastwood Ave	E Tallmadge Ave (SR-261)	1.19	12,350	73	21	4.55	1.62		2	Akron
23	W Market St (SR-18)	Miller Rd	Fairlawn East Corp Line	0.68	17,540	73	36	5.61	1.36			Fairlawn
24	S Arlington St	E Waterloo Rd	E Wilbeth Rd (SR-764)	0.70	12,800	49	23	4.96	1.45		3	Akron
25	Howe Ave	Main St	Buchholzer Blvd	0.69	24,551	58	28	3.13	1.52			Cuyahoga Falls
26	W Exchange St	Rhodes Ave	Dart Ave	0.54	8,040	32	20	6.67	1.44			Akron
27	E Main St (SR-59)	Freedom St (SR 88)	SR 14/SR 44	0.76	13,724	57	25	5.01	1.39			Ravenna
28	S Water St	Haymaker Pkwy (SR 59)	E Main St	0.18	5,260	14	26	13.78	1.29		1	Kent
29	Broad Blvd / Broadway East	Second St	Newberry St	0.29	16,170	36	41	6.90	1.17			Cuyahoga Falls
29	Arlington Rd (CR-15)	IR-77 / Green NCL	Killian Rd (CR-135)	0.61	18,130	55	30	4.52	1.36		1	Springfield Twp
31	Fuller Rd	7th Ave	5th Ave	0.28	1,000	14	17	45.99	1.43			Akron
32	W Streetsboro St (SR-303)	Boston Mills Rd	Main St (SR-91)	0.55	14,446	42	26	4.86	1.38	1		Hudson
33	E Tallmadge Ave (SR-261)	N Main St	Gorge Blvd	0.60	16,610	53	29	4.84	1.34		1	Akron
34	SR-14	IR-480 ramp to Turnpike	SR 303 (W)	1.18	31,551	113	32	2.77	1.48			Streetsboro
35	Goodkirk St	Buchtel Ave	E Market St (SR-18)	0.24	29,263	31	43	4.02	1.32			Akron
36	E Exchange St	S Broadway St (SR-261)	Spicer St	0.76	21,113	95	42	5.43	1.21	1	3	Akron
37	Graham Rd	Hudson Dr	Silver Lake West Corp Line	0.44	28,680	42	32	3.05	1.43			Stow
38	W Market St (SR-18)	Ghent Rd	Miller Rd	0.29	28,390	44	50	4.83	1.27			Fairlawn
39	Graham Rd	Oakwood Dr / Wyoga Lake Rd	Hudson Dr	0.72	21,205	45	21	2.70	1.67			Stow
40	E Main St	Water St	Willow St	0.27	9,070	22	27	8.20	1.18			Kent
41	Brittain Rd	E Tallmadge Ave (SR-261)	Independence Ave	0.61	12,614	45	24	5.31	1.31		2	Akron
42	Wooster Rd W	14th St NW	Wooster Rd N	0.75	10,919	35	16	3.91	1.63		1	Barberton
43	N Main St	E Tallmadge Ave	E Cuyahoga Falls Ave	0.36	10,420	17	16	4.14	1.59		2	Akron
44	Front St / Kent Rd (SR-59)	Bailey Rd	Oak Park Blvd	0.36	12,791	26	24	5.20	1.31			Cuyahoga Falls
45	Canton Rd (SR-91)	Akron SCL	Triplett Blvd	0.35	15,180	21	20	3.58	1.48			Akron
46	N Main St (SR-91)	Streetsboro St (SR-303)	Owen Brown St	0.23	20,220	25	36	4.88	1.16			Hudson
47	Darrow Rd (SR-91)	Kent Rd (SR-59)	Stow Rd	0.65	14,896	41	21	3.88	1.39			Stow
48	State Rd	Broad Blvd	Portage Trail	0.96	15,343	61	21	3.78	1.39	2	1	Cuyahoga Falls
49	S High St (SR-261)	E Exchange St	E Market St (SR-18)	0.67	7,771	46	23	8.11	1.13			Akron
50	Garfield Rd W (SR-82)	Aurora Rd (SR-43)	Chillicothe Rd (SR-306)	0.24	9,885	16	22	6.19	1.25			Aurora

Map 6-1 | Top 50 High-Crash Roadway Sections

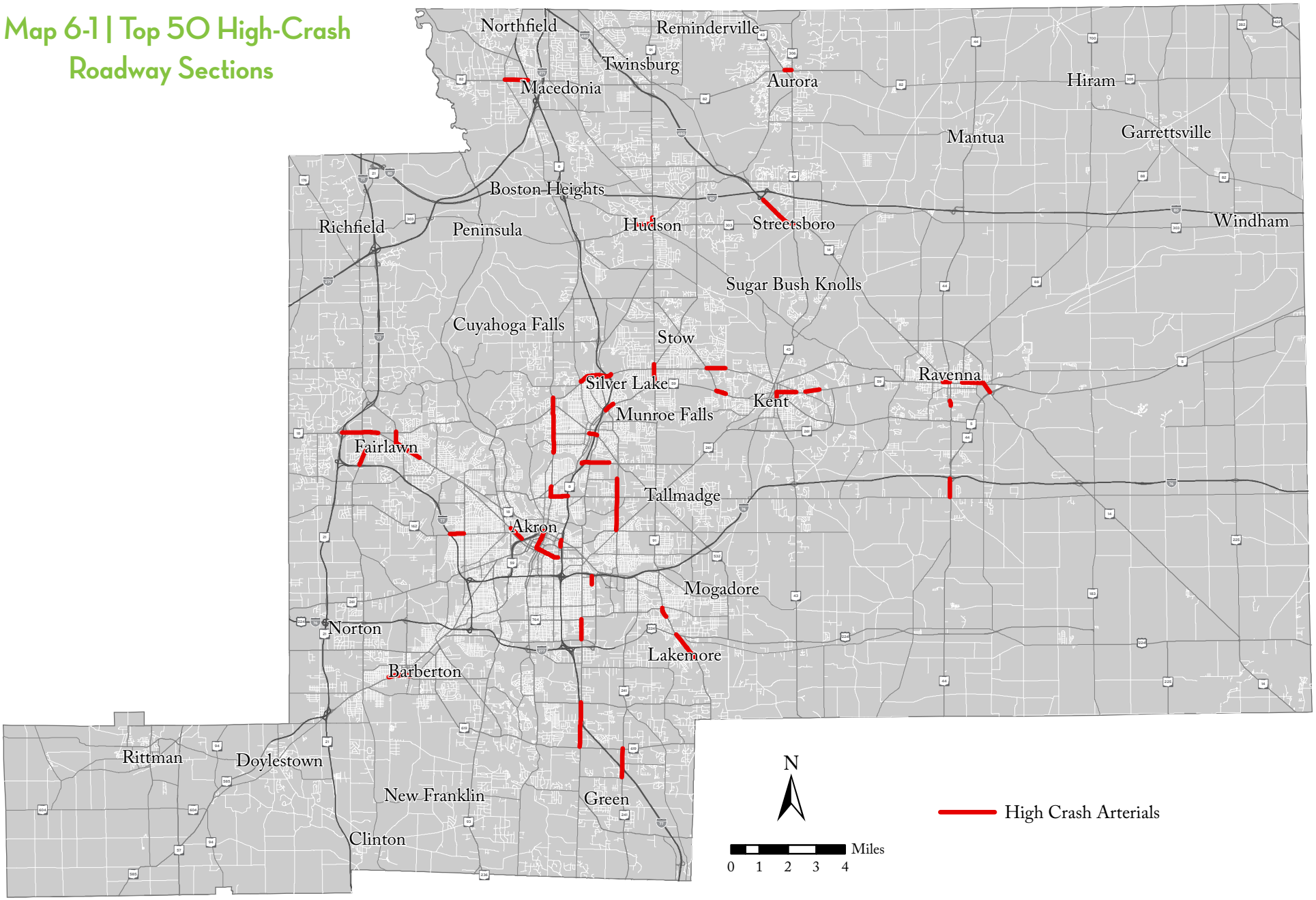
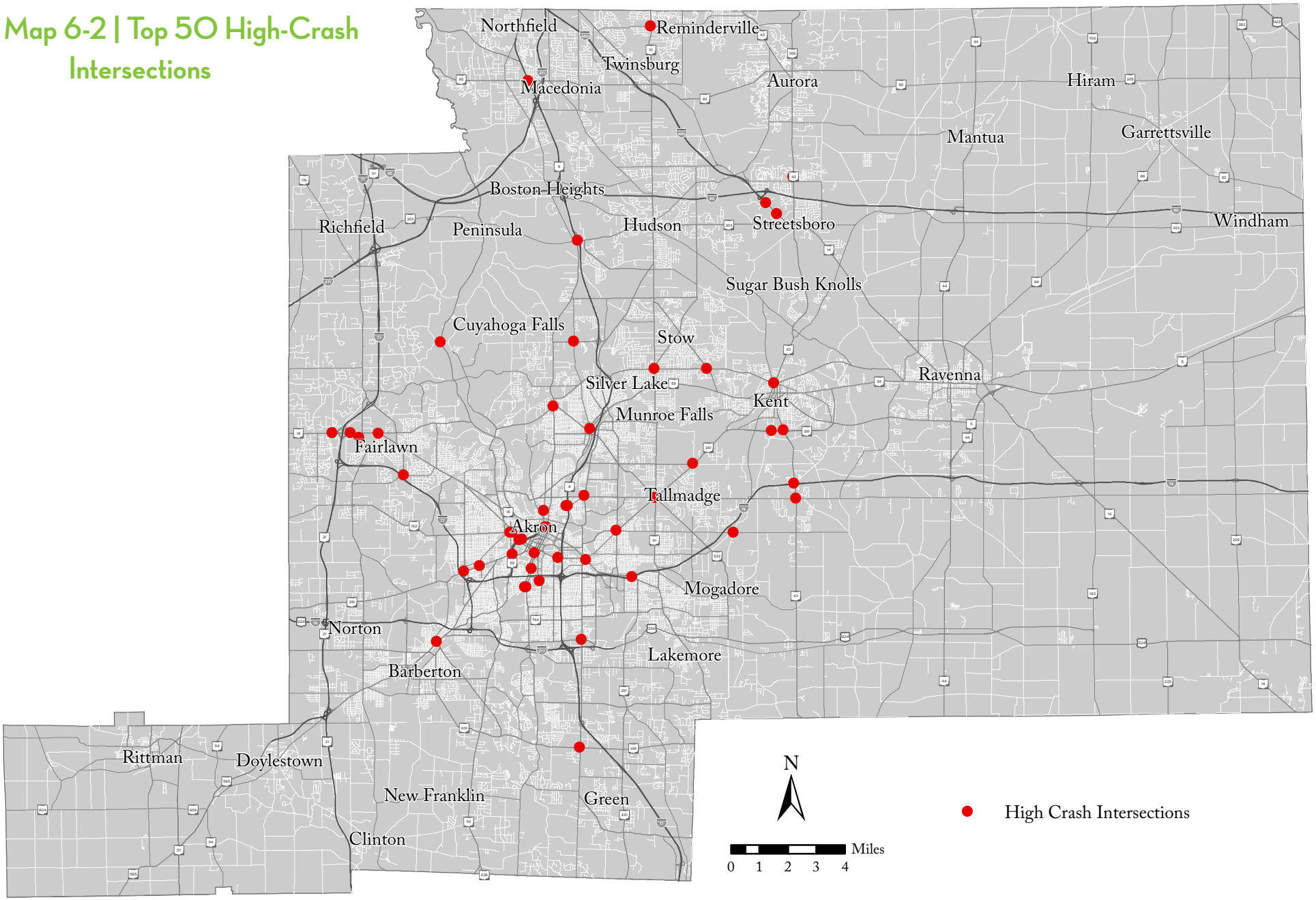


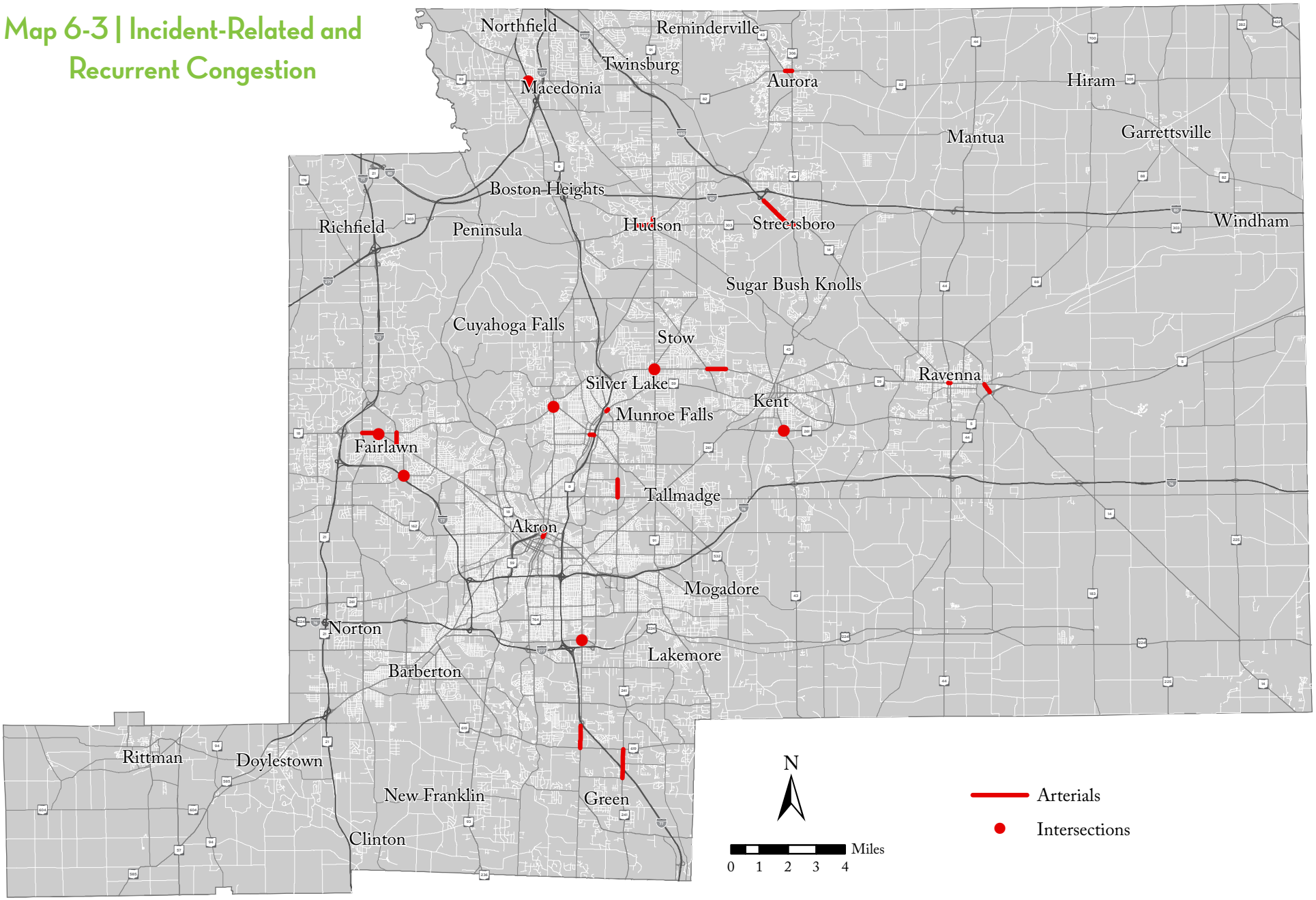
Table 6-2 | High Crash Intersections 2016-2018

RANK	STREET	INTERSECTING STREET(S)	APPROACH AVERAGE DAILY TRAFFIC	TOTAL CRASHES	CRASH RATE	SEVERITY INDEX	BIKE RELATED	PED RELATED	LOCATION
1	S Maple St (SR-162)	Rhodes Ave	13,195	43	2.98	1.84	1		Akron
2	S Maple St (SR-162)	W Cedar St	13,820	36	2.38	1.83	1		Akron
3	SR-14 / SR-303	SR-43	41,044	135	3.00	1.47			Streetsboro
4	Darrow Rd (SR-91)	Graham Rd	34,456	80	2.12	1.53			Stow
5	S Broadway St	E Miller Ave	16,680	40	2.19	1.65		2	Akron
6	Portage Trail	2nd St	29,350	61	1.90	1.56			Cuyahoga Falls
7	W Market St (SR-18)	Smith Rd	24,604	44	1.63	1.77			Fairlawn
8	Vernon Odom Blvd (SR-261)	Superior Ave	13,265	32	2.20	1.75			Akron
9	E Tallmadge Ave (SR-261)	Home Ave	29,800	57	1.75	1.56			Akron
10	SR-14	Brook Valley Trail / Shady Lake Dr	31,551	49	1.42	1.94			Streetsboro
11	S Broadway St	E Thornton St	19,670	53	2.46	1.45			Akron
12	Graham Rd	Fishcreek Rd	28,940	55	1.74	1.55	1		Stow
13	Opportunity Pkwy (SR-261)	Dart Ave	12,938	31	2.19	1.71			Akron
14	MLK Jr. Blvd (SR-59)	N Broadway St (SR-261)	22,402	46	1.88	1.57			Akron
15	S Miller Rd	Ridgewood Rd / IR-77 Ramps	28,552	52	1.66	1.58			Fairlawn
16	SR-43	Tallmadge Rd	19,640	34	1.58	2.09		2	Brimfield Twp
17	Bellows St	Crosier St	3,230	27	7.63	1.67			Akron
18	N Howard St	Glenwood Ave	10,360	25	2.20	1.80			Akron
18	SR-14	Mondial Pkwy / Singletary Dr	31,551	53	1.53	1.57			Streetsboro
20	Riverview Rd	Ira Rd	5,266	22	3.82	1.82			Cuyahoga Falls
21	MLK Jr. Blvd (SR-59)	N High St (SR-261)	25,308	40	1.44	1.75		1	Akron
22	W Exchange St	Rand Ave	14,630	31	1.94	1.65			Akron
23	Vernon Odom Blvd (SR-261)	S Hawkins Ave	18,960	45	2.17	1.44			Akron
24	E Exchange St	Spicer St	22,975	46	1.83	1.48	1		Akron
25	Darrow Rd (SR-91)	Glenwood Dr	19,320	64	3.03	1.28			Twinsburg
26	E Market St (SR-18)	Case Ave	19,260	44	2.09	1.45		2	Akron
27	SR-261	Franklin Ave / Sunnybrook Rd	10,762	23	1.95	2.22			Kent
28	Brookmont Dr	Brookwall Dr	6,020	20	3.03	1.80			Fairlawn
29	E Turkeyfoot Lake Rd (SR-619)	Arlington Rd	29,089	50	1.57	1.52			Green
30	Mantua St (SR-43)	SR-261	28,953	56	1.77	1.43			Kent
31	Steels Corners Rd	Wyoga Lake Rd	16,569	38	2.09	1.47			Cuyahoga Falls
32	Old Forge Rd	Mogadore Rd	2,320	20	7.87	1.70			Brimfield Twp
33	S Arlington St	E Waterloo Rd	21,783	40	1.68	1.50			Akron
34	SR-43	IR-76 Ramps / Edson Rd	51,626	59	3.24	1.24			Brimfield Twp
34	Portage Trail	State Rd	34,965	86	2.25	1.26		1	Cuyahoga Falls
36	Tallmadge Circle		38,034	249	5.98	1.15	1		Tallmadge
37	SR-303	Akron Cleveland Rd / SR-8 Ramps	20,971	50	2.18	1.36			Boston Heights
38	Medina Rd (SR-18)	Springside Dr	37,789	51	1.23	1.71			Bath Twp
39	Glenwood Ave	SR-8 Ramps / Gorge Blvd	10,988	38	3.16	1.37			Akron
40	N Mantua St (SR-43)	Fairchild Ave	28,500	49	1.57	1.49	1		Kent
41	E Market St (SR-18)	Mogadore Rd / IR-76 Ramps	37,408	63	1.54	1.44	1	1	Akron
41	S Main St	Miller Ave / Old Main St	10,010	29	2.65	1.52	1		Akron
43	Northeast Ave (SR-261)	E Howe Rd / N Munroe Ave	18,426	57	2.83	1.25			Tallmadge
44	W Cedar St	Rand Ave	13,120	24	1.67	2.00			Akron
45	Medina Rd (SR-18)	Crystal Lake Rd / Montrose West Ave	48,380	66	1.25	1.58			Bath Twp
46	Brittain Rd	Eastland Ave / Eastwood Ave	21,735	48	2.02	1.38		1	Akron
47	State St (SR-619)	Wooster Rd N (SR-619)	23,600	39	1.51	1.56			Barberton
48	S High St	Selle St	14,420	28	1.77	1.64			Akron
49	SR-8	Aurora Rd (SR-82)	35,035	80	2.09	1.25			Macedonia
50	Tallmadge Ave	N Howard St	16,050	33	1.88	1.48	1	1	Akron

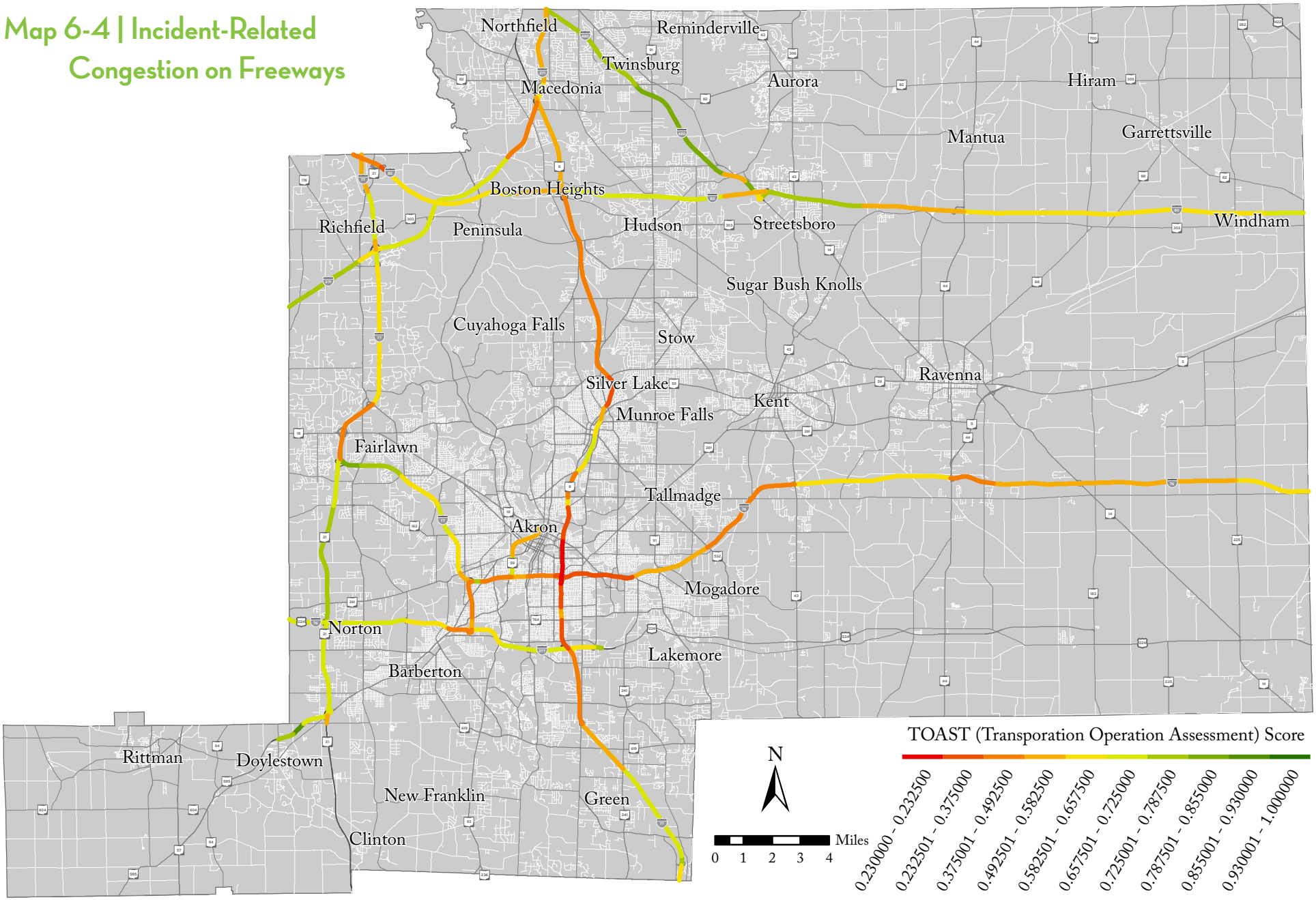
Map 6-2 | Top 50 High-Crash Intersections



Map 6-3 | Incident-Related and Recurrent Congestion



Map 6-4 | Incident-Related Congestion on Freeways



Performance Measures

Transportation Performance Management is required by MPOs as stated in MAP-21 and continued in the FAST Act. Transportation Performance Management is defined as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Within Transportation Performance Management, there are performance measures. Performance measures related to the CMP include Level of Travel Time Reliability (LOTTR) and Level of Truck Travel Time Reliability (LOTTTR), Peak Hour Excessive Delay (PHED) and Mode Share or Non Single Occupancy Vehicle (Non-SOV) travel. Each of these performance measures have their own respective targets.

Travel Time Reliability and Freight Movement Performance Measures

Federal rules 23 CFR 490.507 and 23 CFR 490.607 establish National Highway System travel time reliability and Interstate System freight reliability measures. For both personal travel time reliability and freight travel time reliability measures, ODOT is required to establish 2-year and 4-year targets within a four year performance period. The two current (2020) targets are listed in Table 7-1 below:

Table 7-1 | ODOT Travel Time Reliability Targets

Level of Travel Time Reliability		
TRAVEL TIME RELIABILITY	**2-YEAR TARGET**	**4-YEAR TARGET**
Interstate Travel Time Reliability	85%	85%
Non-Interstate NHS Travel Time Reliability	N/A	80%
Level of Truck Travel Time Reliability		
TRUCK TRAVEL TIME RELIABILITY	**2-YEAR TARGET**	**4-YEAR TARGET**
Interstate Truck Travel Time Reliability	< 1.50	< 1.50

Level of Travel Time Reliability (LOTTR) is defined as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile). The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable. If the longer travel time is greater than or equal to 1.5, the roadway segment or corridor is considered unreliable.

The variability or change in congestion on a day-to-day basis provides a measure of reliability. Recurring congestion is generally predictable, regularly occurring, and typically caused by excess demand compared to the capacity of the system. Conversely, non-recurring congestion causes unreliable travel times and is caused by transient events such as traffic incidents, weather conditions, work zones, or special events. This form of congestion is often the most frustrating for travelers. National estimates indicate that nearly 50% of all congestion is non-recurring (FHWA, October 2019).

LOTTR assesses the consistency or dependability of travel times from day to day or across different times of the day on the Interstate and Non-Interstate NHS systems. FHWA defines LOTTR as the percent of person-miles on the Interstate and NHS that are reliable. LOTTR is calculated as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile), using NPMRDS or equivalent data. Data are collected in 15-minute segments during all time periods between 6 AM and 8 PM. Reliability measures are grouped into three weekday time periods (6-10 AM, 10 AM - 4 PM, 4- 8 PM) and one weekend time period (6 AM – 8 PM). Any roadway segment or corridor that has a reliability index of 1.5 or greater during any time period is considered to be unreliable. For example, a roadway segment with a free-flow speed of 60 mph where the observed average travel speed during one of the time study periods is 40 mph, would have a LOTTR value of 1.5.

Truck Travel Time Reliability (TTTR) is the ratio generated by dividing the 95th percentile travel time by the normal time (50th percentile) for each Interstate segment. The TTTR Index is established by multiplying each segment's largest ratio of five reporting periods by its length then dividing the sum of all length-weighted segments by the total length of Interstate. If the longer truck travel time is greater than or equal to 1.5, the roadway segment or corridor is considered unreliable.

Data for TTTR are also collected in 15-minute segments during all time periods throughout the day. Reliability measures were grouped into three weekday time periods (6-10 AM, 10 AM-4 PM, 4-8 PM), one weekend time period (6 AM – 8 PM), and one overnight time period for all days (8 PM-6 AM). Any roadway segment or corridor that has a reliability index of 1.5 or greater during any time period is considered to be unreliable.

The data used to assess travel time reliability and establish targets is sourced from FHWA's National Performance Management Research Data Set (NPMRDS). ODOT is participating in FHWA's Performance Management Analytical Tool pooled fund where a contractor assists states in calculating NPMRDS travel time reliability metrics.

AMATS' current performance is documented in the following Table 7-2:

Table 7-2 | AMATS Travel Time Reliability

Level of Travel Time Reliability						
YEAR	**2014**	**2015**	**2016**	**2017**	**2018**	**AVERAGE**
Interstate TTR	97.6%	96.5%	97.6%	98.6%	98.5%	97.8%
Non-Interstate NHS TTR	60.7%	63.1%	59.8%	89.3#	90.4%	72.7%
Interstate TTTR Index	0.01	0.01	0.01	0.01	0.01	0.01

AMATS meets the performance targets for travel time reliability on the interstate system and on truck travel time. The AMATS non-interstate system meets the target as of 2017. Overall state of Ohio performance is documented in table 7-3 below:

Table 7-3 | Ohio Travel Time Reliability

Level of Travel Time Reliability						
YEAR	2014	2015	2016	2017	2018	AVERAGE
Interstate TTR	92.4%	90.3%	90.6%	90.7%	89.1%	90.6%
Non-Interstate NHS TTR	68.5%	67.4%	66.8%	90.5%	90.1%	76.7%
Interstate TTTR Index	1.46	1.48	1.45	1.34	1.38	1.42

Peak Hour Excessive Delay (PHED)

ODOT and the Ohio MPOs collectively established a single target for each applicable urbanized area for the first performance period by May 20, 2018. As part of a phased implementation approach, only four-year targets were reported in the State's baseline performance period report that was due on October 1, 2018. There is no requirement for states to report two-year targets or baseline condition for this specific measure in the report for the first performance period. With the first mid-performance period progress report, due October 1, 2020, four-year targets may be adjusted, and two-year condition/performance will be reported as baselines.

Traffic congestion will be measured by the annual hours of peak hour excessive delay (PHED) per capita on the National Highway System (NHS). The threshold for excessive delay will be based on the travel time at 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater, and will be measured in 15-minute intervals. Peak travel hours are defined as 6-10 am local time on weekday mornings and 3-7 pm on weekday afternoons, providing flexibility to state DOTs and MPOs. The total excessive delay metric will be weighted by vehicle volumes and occupancy.

For the establishment of the PHED measure, ODOT and its partner agencies reviewed data from 2017 using the RITIS Analytics Tool, which draws data from the NPMRDS. For the establishment of the Percent of Non-SOV Travel Measure, ODOT and its partner agencies used the American Community Survey data's estimates of the percentage of people that travel to work by means other than driving alone (i.e. carpooling, telework, biking, walking, or taking the bus). ODOT was able to review five years of data, noting stable travel patterns for this measure. Upon analysis, ODOT and its partner agencies adopted targets based on recent travel trends and future expected performance.

AMATS is located in part of the Cleveland urbanized area (UZA). Consequently, ODOT, NOACA and AMATS coordinated the setting of targets for the Cleveland area. The Cleveland urbanized area performance is documented in the Charts 7-1 and 7-2.

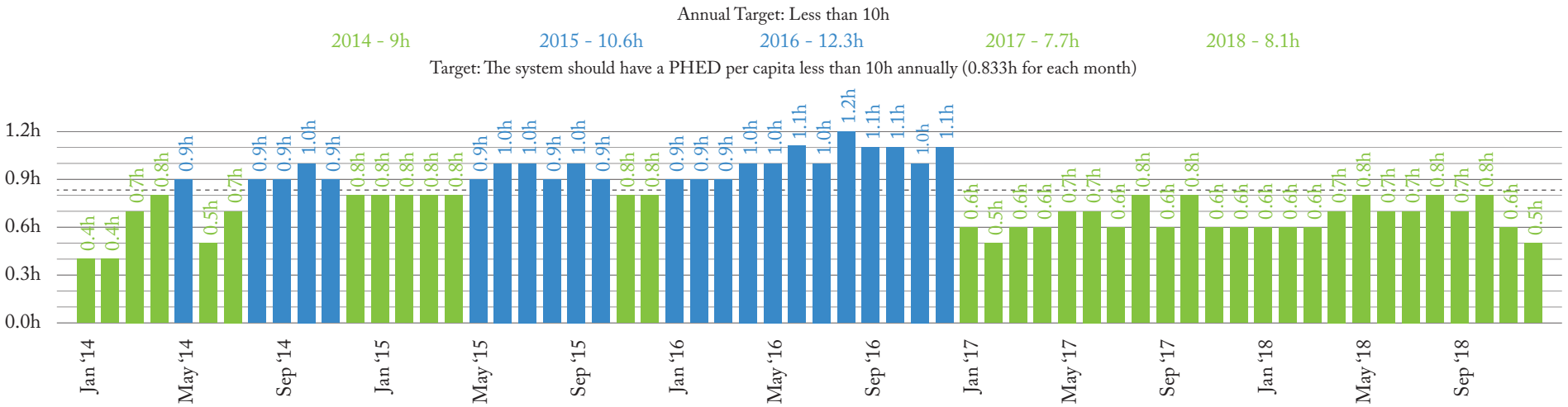
Mode Share (Non-SOV Travel)

Mode share is a measure of the percentage of each mode on all surface transportation occurring in the urbanized area. Modes of surface transportation include driving alone in a motorized vehicle (Single Occupancy Vehicle), car or van pooling, public transportation, commuter rail, walking, or bicycling as well as travel that is avoided by telecommuting. Non-SOV travel, defined by the FHWA, applies to any travel occurring on modes other than driving alone in a motorized vehicle. An analysis of mode share includes a calculation of the percent of Non-SOV travel within the urbanized area. This metric is derived from the U.S. Census Bureau's American Community Survey (ACS) data. Higher levels of Non-SOV travel can reduce an area's traffic congestion by removing additional vehicles from the roadways. The PHED and Non-SOV measures and targets are listed in Table 7-4 as follows:

Table 7-4 | Peak Hour Excessive Delay and Non-Single Occupancy Vehicle Travel

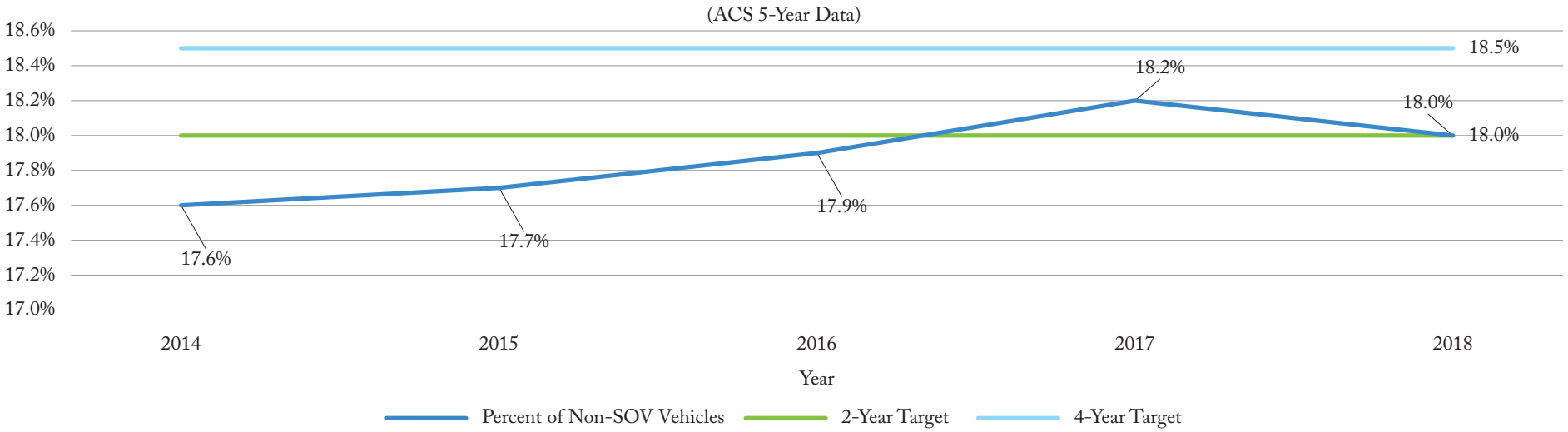
Peak Hour Excessive Delay (PHED)		
URBANIZED AREA PHED	2-YEAR TARGET	4-YEAR TARGET
Peak Hour Excessive Delay per Capita - Cincinnati	N/A	< 12 hrs / yr
Peak Hour Excessive Delay per Capita - Cleveland	N/A	< 10 hrs / yr
Peak Hour Excessive Delay per Capita - Columbus	N/A	< 12 hrs / yr
Non-Single Occupancy Vehicle (Non-SOV) Travel		
URBANIZED AREA PERCENT OF NON-SOV TRAVEL	2-YEAR TARGET	4-YEAR TARGET
Percent of Non-SOV Travel - Cincinnati	17.4%	17.4%
Percent of Non-SOV Travel - Cleveland	18.0%	18.5%
Percent of Non-SOV Travel - Columbus	18.2%	19.0%

Chart 7-1 | Cleveland Urbanized Area: MAP-21 Peak Hours Excessive Delay per Capita



Calculated using 87.93% of Miles in Cleveland
Data source: NPMRDS HERE (2014-2016) and NPMRDS INRIX (2017-2019)

Chart 7-2 | Cleveland Urbanized Area: Annual % of Non-Single Occupant Vehicles



Congestion Management Strategies and Assessments

After thoroughly scanning and assessing the defined CMP network, AMATS has established generalized strategies that best match the Code of Federal Regulations (CFR), FHWA guidance, and regional transportation planning context. A strategy or combination of strategies that are appropriate for deficient corridors and segments are selected based on the type of congestion. Effectively managing congestion over time requires a multi-faceted approach. Thus, the strategies are categorized into five tiers, ranked generally by the efficacy of mitigating congestion. The strategies in the top tiers should be given priority over the lower ones. The tiers are:

Tier 1: Demand management
Tier 2: Traffic and roadway operational improvements
Tier 3: Public Transportation improvements
Tier 4: ITS Strategies
Tier 5: Capacity expansion

Tier 1: Demand Management

Demand-side strategies represent a more modern approach to managing traffic congestion. Demand-side strategies include those that focus on reducing vehicles on the roadway either permanently or during the busiest times of the day. City rush-hours are an example of when demand exceeds supply. A highway that easily accommodates traffic throughout most of the day is congested with vehicles during morning and afternoon peak hours. Demand-side management is any strategy that reduces the number of vehicles on the road at one time. Generally, demand-side congestion strategies cost significantly less than supply-side ones do. Below are examples of potential demand management strategies:

- Telecommuting – AMATS is one of many organizations that have had employees work from home, i.e., telecommuting. Telecommuting can directly reduce work-related trips during the peak hours of the day when most congestion occurs. Another related benefit is an improvement in air quality. While in previous reports, telecommuting was not seen as being feasibly on a large scale, the COVID-19 pandemic has shown the impacts of large scale telecommuting by drastically reducing traffic.
- Flexible/Alternative Work Hours – Working outside the typical workweek and workday timeframe. It may not eliminate vehicles on the road but could eliminate vehicles on the road during peak hours when congestion is the worst.
- Carpooling – More than one person using a vehicle for a trip with similar origin or destination. Carpooling reduces SOV due to commuters sharing a ride with one or more people for trips. This reduces the number of vehicles on the road. Software makes it easier to create carpools and vanpools by matching similar trip origins, destinations, and times.
- Employer Incentive Program – Incentives may be offered by employers to encourage carpooling or public transportation. This may be financial or some other sort of perk.
- Encouraging a Shift to Alternative Modes of Transportation – using transit, bicycling, walking, or other non-motorized travel. Bicycle and pedestrian modes may also include e-bikes, scooters, skateboards, mobility-assistance devices, etc. Though buses do count as a vehicle on the road, they retain the capability to significantly reduce the total number of vehicle miles traveled. Bicycling, walking, and other modes of alternative transportation can eliminate vehicle miles traveled. However, these modes may not be feasible if trip lengths are too long. Typical trip length for a bicycle commute is up to four miles and up to one mile for a pedestrian.

Tier 2: Traffic and Roadway Operational Improvements

Tier 2 strategies play an important role in congestion management. These strategies emphasize on getting more out of the existing transportation system. The strategies include but not limited to the following:

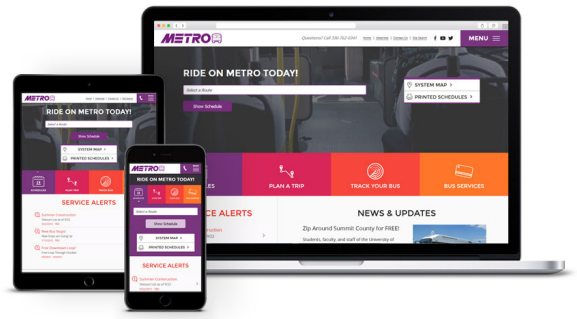
- Intersection and street improvements by adding and extending exclusive turning lanes – exclusive and safe space for vehicles waiting to turn left.
- Reversible commuter lanes on the freeways – more lanes for peak demand traffic flow without more pavement width.
- Variable speed limits – allows traffic to efficiently utilize capacity at a safe speed.
- Variable message signs – enables drivers to take alternative routes to avoid congestion.
- Exclusive shoulder lanes for buses – frequent stopping can occur outside of the flow of traffic.
- Geometric improvements to road and intersections – improves traffic flow and reduces incident related congestion by correcting geometric deficiencies.
- Channelization – facilitates the safe and orderly movement of traffic and defines the paths of traffic by physical separation.
- Median barriers (moveable) to facilitate more capacity during peak periods – more lanes for peak demand flow without adding more pavement.
- Traveler information – information given to travelers to help reduce uncertainty and stress. It also can help avoid congestion, improve safety and save time.
- Complete Streets – Designing streets to enable safe access for users of all ages

and abilities, including pedestrians, bicyclists, motorists, and transit riders.
- Overpasses or underpasses at congested intersections or railroads – provides uninterrupted traffic flow by removing intersection conflict points.

Tier 3: Public Transportation (Transit) Improvements

The public transportation improvement strategies focus on making public transportation more convenient and accessible in the AMATS region. It is worth mentioning that these strategies may be linked with tier 1 and tier 2 strategies. METRO and PARTA control the transit service strategies within the AMATS region with AMATS offering suggestions. The following strategies are included in this category:

- Expanding transit services – adds new vehicles to expand transit services.
- Optimal control of headways by realigning transit service schedules and stop locations – provides better accessibility to transit to a greater share of the population.
- Providing real-time information on transit schedules and arrivals using various ITS strategies – provides real-time information so potential transit riders can estimate wait time.
- Universal transit fare cards and incentives – may be offered to students, employees, or residents to help reduce the cost of transit to the user.
- Bus Rapid Transit – high-quality bus-service that utilizes dedicated lanes, busways, traffic signal priority, off-board fare collection and enhanced or elevated stations to make transit more efficient and reliable. These lines work best in dense urban areas.
- Prioritizing transit vehicles at traffic signals – gives transit vehicles priority at signals to help them run on schedule.



Tier 4: ITS Strategies

These strategies are strongly linked with most of the congestion management strategies. The recommended ITS strategies in the AMATS region are listed below:

- Traffic Signal Improvements – Optimizing and coordinating the timing of traffic signals to improve traffic flow through a corridor or specific intersections.
- Simulation models – Although, the AMATS has established travel demand models for predicting and evaluating the traffic in the region, simulation models may be used to analyze and evaluate the impact of operational strategies.
- Cars Connected to Cars / Cars Connected to Infrastructure – When one vehicle can communicate to another vehicle nearby—in front, behind, etc. it's the core of autonomous driving technology. Sensors detect what's going on around the vehicle and additional technology can share that data with other vehicles on the road. The vehicle is also able to send and receive information about the infrastructure that can include physical things such as traffic signals and weather alert systems. The vehicle can send that data out while simultaneously the infrastructure can send important data back to it.
- Real-time traffic feedback – The real-time traffic feedback provides information about the traffic around the city. A popular real-time feedback app used in Ohio was developed by ODOT and is called OHGO. It provides real-time information about traffic conditions, incidents, construction projects, and weather. It can be viewed on cell phones and computers.

Tier 5: Capacity Expansion

As our national road network has grown dramatically over the last several decades, only a limited amount of funding remains for new road and lane construction. Construction and right-of-way costs for new roads are very expensive. New roads and adding additional through lanes is considered a last resort as system preservation is the main objective in the AMATS region. Financial restrictions, adverse environmental impacts, and project duration also make capacity improvements less attractive and feasible.

Capacity expansion may be necessary on major arterials and freeways as most other are not congested enough to warrant such an improvement. These roadways may benefit from capacity expansion projects as it will improve flow of all vehicles including transit and freight vehicles, not just passenger vehicles. This could reduce emissions and fuel consumption, and increased productivity and economic development. However,

typically constructing new lanes is followed with additional demand for the roadway as travel times improve. More vehicles begin to use the roadway which then begins to reduce travel times. This is referred to as induced demand.

The capacity improvements include the following strategies:

- Removing bottlenecks by constructing new lanes – removes or corrects short, isolated, and temporary lane reductions and substandard design elements.
- Closing gaps in the existing network - provides more connections and means of traveling between places.
- Add travel lanes on major freeways and streets (including truck climbing lanes on grades) - allows for additional vehicles to move through an area uninhibited by congestion.

Evaluation of Strategies

Congestion management strategies were evaluated based upon their effectiveness and feasibility. The effectiveness was determined by how well each strategy would reduce congestion in the AMATS area. To make this determination, the strategies were reviewed by examining regional characteristics, previous local success of the strategies and examples from other urban areas. Decisions on the effectiveness of each strategy were made based on the data collected and staff input. Feasibility was rated by the degree to which the strategy could be realistically implemented in the region. Table 8-1 lists the strategies along with their corresponding effectiveness and feasibility.

Table 8-1 | Congestion Management Strategies

TIER	STRATEGY	BENEFITS	EFFECTIVENESS	FEASIBILITY
Tier 1: Demand Management	Telecommuting	Reduces traffic, especially during peak hours	Medium / High	Medium
	Flexible / Alternative Work Hours	Reduces traffic, especially during peak hours	Medium	Low / Medium
	Carpooling	Reduces traffic, especially during peak hours	Medium / High	High
	Employer Incentive Program	Reduces traffic, especially during peak hours	Medium / High	Low
	Alternative Modes of Transportation	Reduces traffic	Low / Medium	Low
Tier 2: Operational Improvements	Adding Exclusive Left Turning Lanes	Improves traffic flow / safety	Medium / High	Medium
	Reversible Commuter Lanes on Freeways	Improves traffic capacity / flow	Medium / High	Low
	Variable Speed Limits	Improves traffic capacity / flow	Low / Medium	Low
	Variable Message Signs	Improves traffic flow and reduces additional congestion	Low / Medium	Medium
	Exclusive Shoulder Lanes for Buses	Improves traffic flow / safety	Medium	Low
	Geometric Improvements to Road and Intersections	Improves traffic flow / safety	Medium / High	High
	Channelization	Improves traffic flow / safety	Low / Medium	Medium
	Median Barriers (Moveable) to Facilitate More Capacity During Peak Period	Improves traffic capacity / flow	Medium / High	Low
	Traveler Information	Improves traffic flow / safety	Low / Medium	High
	Complete Streets	Improves capacity for alternative modes of transportation	Low / Medium	Medium
	Overpasses or Underpasses at Congested Intersections or Railroads	Improves traffic flow / safety	High	Low / Medium
Tier 3: Public Transit Improvements	Expanding Transit Services	Encourage transit use / reduces SOV vehicles	Low	Low
	Optimal Control of Headways by Realigning Transit Service Schedules and Stop Locations	Makes transit easier to use / reduces SOV vehicles	Low	Medium
	Providing Real-Time Information on Transit Schedules and Arrivals Using Various ITS Strategies	Makes transit easier to use / reduces SOV vehicles	Low	Medium
	Universal Transit Fare Cards and Incentives	Makes transit easier to use / reduces SOV vehicles	Low	High
	Bus Rapid Transit	Makes transit easier to use / reduces SOV vehicles	Medium	Medium
	Prioritizing Transit Vehicles at Traffic Signals	Makes transit easier to use / reduces SOV vehicles	Medium	Medium
Tier 4: ITS Strategies	Traffic Signal Improvements	Improves traffic flow / safety	Medium / High	High
	Simulation Models	Helps determine and fund projects with the most impact	Medium / High	Medium
	Cars Connected to Cars / Cars Connected to Infrastructure	Improves traffic flow / safety	Medium / High	Low
	Real-Time Traffic Feedback	Improves traffic flow / reduces additional congestion	Medium / High	High
Tier 5: Capacity Expansion	Removing Bottlenecks by Constructing New Lanes	Improves traffic flow / safety	Medium	Low
	Closing Gaps in the Existing Network	Improves traffic flow / safety	Medium	Low
	Add Travel Lanes on Major Freeways and Streets (Including Truck Climbing Lanes on Grades)	Improves traffic flow / safety	Medium	Low

Congestion Management Recommendations

Roadways

In the previous chapter, 5 tiers of congestion management strategies were identified and evaluated to determine their effectiveness and political feasibility. In this chapter AMATS applies these strategies to areas of congestion within the AMATS region.

As a reminder the tiers are as follows:

Tier 1: Demand management
Tier 2: Traffic and roadway operational improvements
Tier 3: Public Transportation improvements
Tier 4: ITS Strategies
Tier 5: Capacity expansion

Freeway Segments

Each freeway segment was analyzed by direction throughout the 2017 year. Then, the peak-hour with the lowest speed percent was used to determine congestion levels for each segment. Table 9-1 and Map 9-1 includes 32 freeway segment locations that have a speed of 75 percent or lower of free-flow speed, i.e., congested. Recommendations have been listed for each congested segment. Given that the data was taken from calendar year 2017, a few locations have had projects completed or have upcoming projects soon; therefore, the recommendation for these locations is to monitor them in the future. These are still listed in the table with the project number and description included to make future monitoring easier.

Overall, the freeways within the AMATS region function well, and most will continue to do so into the future. Ohio Department of Transportation (ODOT) is in charge of maintaining freeway segments and funding improvements on these segments. ODOT coordinates with AMATS on a regular basis to define potential projects. This coordination helps maintain good traffic flow throughout the region.

Freeway Ramps

Each freeway ramp was analyzed throughout the 2017 year. Those freeway ramps that had a speed of 65 percent or less of free-flow speed are considered congested. Table 9-2 lists and Map 9-2 shows the 10 freeway ramps that were considered congested. Please note that many of these ramps are related to I-80, the Ohio Turnpike, and are therefore are controlled and maintained by their commission.

Freeway Interchanges

Each freeway interchange was analyzed throughout the 2017 year. Freeway interchange segments are typically segments on arterial roadway that are between freeway interchange ramps. The freeway interchange segments that had a speed of 65 percent or less than free-flow speed are considered congested. Table 9-3 lists and Map 9-3 displays the 15 freeway interchange segments that were considered congested. Please note that many of these segments are adjacent to congested arterial segments or intersections.

Arterial Segments

Each arterial segment on the network was analyzed by direction throughout the 2017 year. Then, the peak-hour with the lowest speed was used to determine whether a segment is congested. Table 9-4 and Map 9-4 include 89 arterial segment locations that have a speed of 65 percent or lower of free-flow speed, i.e., congested. Recommendations are listed for each congested segment. Given that the data was taken from calendar year 2017, a few locations have had projects completed or have upcoming projects soon; therefore, the recommendation for these locations is to monitor them in the future. These locations are still listed in the table with the corresponding project number and description to make future analysis easier. Some congested locations might only have a recommendation to monitor after nearby construction is complete because these segments might be impacted by other construction projects nearby and that specific location might also have limited feasibility for improvements.

Intersections

Intersections were analyzed throughout the 2017 year to determine congested approaches. Intersections were considered congested if the peak-hour speed was 65 percent or less of the free-flow speed. These congested intersections are listed in Table 9-5 and shown on Map 9-5. Each congested segment in the table includes a recommendation, even if that recommendation is to monitor the intersection in the future, similar to arterials.

Table 9-1 | Freeway Segment Recommendations

NAME	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
I-271 NB bet SR 82 and I-480	Macedonia	7:30-8:30 AM	32.04	Project 89548 complete, included adding through lanes; Monitor
SR 8 SB bet Forge St and Market St	Akron	4:45-5:45 PM	32.61	Project 102329 planned, includes added through lanes; Monitor
SR 8 SB bet Glenwood Ave and SB On-ramp	Akron	4:45-5:45 PM	33.74	Project 91710 planned, includes new bridges with auxiliary lanes; Monitor
SR 8 SB through the Perkins St interchange	Akron	4:45-5:45 PM	34.00	Project 102329 planned, includes added through lanes; Monitor
SR 8 SB bet Tallmadge On-ramp and Glenwood Ave Bridge	Akron	4:45-5:45 PM	34.68	Project 91710 planned, includes new bridges with auxiliary lanes; Monitor
SR 8 SB bet Glenwood Ave On-ramp and Perkins St Off-ramp	Akron	4:45-5:45 PM	37.56	Project 91710 planned, includes new bridges with auxiliary lanes; Monitor
SR 8 SB through the Tallmadge Ave interchange	Akron	4:45-5:45 PM	38.06	Project 91710 planned, includes new bridges with auxiliary lanes; Monitor
I-77 NB through the I-80 Interchange	Richfield	7:30-8:30 AM	40.70	Project 111405 planned, includes adding through lanes; Increased express bus service; Monitor
SR 8 SB bet Market St and the Central Interchange	Akron	4:45-5:45 PM	41.16	Project 102329 planned, includes added through lanes; Monitor
I-77 NB S of I-80 Ramps	Richfield	7:30-8:30 AM	42.96	Project 111405 planned, includes adding through lanes; Increased express bus service; Monitor
SR 8 SB bet Cuyahoga Falls on ramp and Tallmadge off ramp	Akron	4:45-5:45 PM	48.03	1 and 4
I-77 NB bet Brecksville Rd and I-80	Richfield	7:30-8:30 AM	57.66	Project 111405 planned, includes adding through lanes; Increased express bus service; Monitor
SR 8 SB bet Gorge Blvd and On-ramp from Cuyahoga Falls Ave	Akron	4:00-5:00 PM	63.53	1 and 4
SR 8 SB bet Valley View Rd and SR 82	Macedonia / Sagamore Hills Twp	5:00-6:00 PM	64.31	1 and 4
I-76/77 EB through the Main St/Broadway St interchange	Akron	4:45-5:45 PM	65.28	Project 77269 nearly complete, included reconstruction and modification of access points; Monitor
I-76/77 EB bet west of Wolf Ledges Off-ramp to Wolf Ledges Off-ramp	Akron	4:45-5:45 PM	65.59	Project 77269 nearly complete, included reconstruction and modification of access points; Monitor
I-76/77 EB bet Wolf Ledges Off-ramp and Wolf Ledges bridge	Akron	4:45-5:45 PM	65.85	Project 77269 nearly complete, included reconstruction and modification of access points; Monitor
SR 8 SB bet ramp split and I-76 mainline	Akron	5:00-6:00 PM	66.89	Project 102329 planned, includes added through lanes; Monitor
SR 8/I-77 SB bet I-76 and Lovers Lane	Akron	5:00-6:00 PM	67.1	Project 102329 planned, includes added through lanes; Monitor
I-76/77 EB bet South St On-ramp and Main St Off-ramp	Akron	4:45-5:45 PM	67.12	Project 77269 nearly complete, included reconstruction and modification of access points; Monitor
SR 8 SB bet Front St and Howe Ave On-ramp	Akron	4:00-5:00 PM	67.13	1 and 4
I-76/77 EB bet Wolf Ledges and Grant St	Akron	4:45-5:45 PM	68.08	Project 77269 nearly complete, included reconstruction and modification of access points; Monitor
I-76/77 EB bet Grant St and Grant St On-ramp	Akron	4:45-5:45 PM	69.51	Project 77269 nearly complete, included reconstruction and modification of access points; Monitor
I-77 NB bet Arlington Rd and I-277/US 224	Coventry Twp	7:30-8:30 AM	71.0	Project 106002 planned, includes add through lanes; Monitor
I-77 NB at Waterloo Rd	Akron / Coventry Twp	7:30-8:30 AM	71.87	1 and 4
I-77 NB bet Waterloo Rd and Wilbeth Rd	Akron	7:30-8:30 AM	72.09	1 and 4
SR 8 NB bet E Market St and Perkins Off-ramp	Akron	5:00-6:00 PM	72.89	Project 102329 planned, includes added through lanes; Monitor
SR 8 SB through the Portage Trail interchange	Cuyahoga Falls	7:30-8:30 AM	72.99	1 and 4
SR 8 SB through the Howe Ave interchange	Cuyahoga Falls	4:00-5:00 PM	73.34	1 and 4
SR 8 NB bet Perkins St Off-ramp and the High Level Bridge	Akron	5:00-6:00 PM	73.48	Project 91710 planned, includes new bridges with auxiliary lanes; Monitor
I-77 SB bet Lovers Lane and Cole Ave	Akron	5:00-6:00 PM	73.64	1 and 4
SR 8 SB bet Broad Blvd and the SB On-ramp	Cuyahoga Falls	7:30-8:30 AM	73.78	1 and 4

Table 9-2 | Freeway Ramp Recommendations

NAME	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
SR 8 NB to I-80 EB Connector	Boston Heights	5:00-6:00 PM	40.71	1, 2 and 4
I-271 NB to SR 8 intersection	Macedonia	7:45-8:45 AM	44.37	1, 2 and 4
I-80 WB Connector bet I-80 and SR 8	Boston Heights	5:15-6:15 PM	46.69	1, 2 and 4
Ramp from I-80 WB Connector to I-77 NB	Richfield	7:30-8:30 AM	54.98	Project 111405 planned, includes adding through lanes; Monitor
I-271 SB to SR 8 intersection	Macedonia	9:00-10:00 PM	55.33	1, 2 and 4
I-480 SWB Connector bet I-480 and I-80	Streetsboro	9:15-10:15 PM	57.22	1, 2 and 4
I-80 EB Connector bet SR 8 SB and I-80	Boston Heights	5:00-6:00 PM	57.23	1, 2 and 4
I-80 EB to I-80 WB connector (SR 8 exit)	Boston Heights	5:15-6:15 PM	59.16	1, 2 and 4
SR 21 SB to I-76 WB	Norton	9:30-10:30 AM	60.80	1, 2 and 4
I-80 WB to I-80 WB connector (SR 8 exit)	Boston Heights	5:00-6:00 PM	64.10	1, 2 and 4

Table 9-3 | Freeway Interchange Recommendations

NAME	DIRECTION	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
SR 59 Perkins St through the SR 8 interchange	EB	Akron	4:30-5:30 PM	46.68	2 and 5
Tallmadge Ave through the SR 8 interchange	WB	Akron	3:00-4:00 PM	51.79	2 and 5
White Pond Dr through the I-77 interchange	SB	Akron	4:15-5:15 PM	52.19	2 and 5
Tallmadge Rd through the I-76 interchange	WB	Por Co-Brimfield Twp	12:00-1:00 PM	53.01	Project 98585 planned, includes operational improvements; Monitor
White Pond Dr through the I-77 Interchange	NB	Akron	7:30-8:30 AM	56.31	2 and 5
SR 241 Massillon Rd through the I-77 interchange	NB	Green	3:00-4:00 PM	56.73	Project 90415 underway, includes widening and roundabouts; Projects 103172 & 103173 upcoming, includes roundabouts; Monitor
Tallmadge Rd through the I-76 interchange	EB	Por Co-Brimfield Twp	4:15-5:15 PM	57.68	Project 98585 planned, includes operational improvements; Monitor
Howe Ave through the SR 8 interchange	EB	Cuyahoga Falls	12:15-1:15 PM	57.77	2 and 5
SR 303 through the SR 8 interchange	WB	Boston Heights	7:30-8:30 AM	57.81	2 and 5
Broad Blvd through the SR 8 interchange	EB	Cuyahoga Falls	3:00-4:00 PM	57.84	2 and 5
SR 8 SB through the I-271 interchange	SB	Macedonia	7:30-8:30 AM	62.26	2 and 5
Massillon Rd through the I-77 interchange	SB	Green	4:15-5:15 PM	62.38	Project 90415 underway, includes widening and roundabouts; Projects 103172 & 103173 upcoming, includes roundabouts; Monitor
SR 261 Tallmadge Ave through the SR 8 interchange	EB	Akron	3:00-4:00 PM	62.58	2 and 5
SR 532 Southeast Ave through the I-76 interchange	SB	Tallmadge	5:15-6:15 PM	62.70	2 and 5
Ghent Rd through the I-77 interchange	NB	Sum Co-Bath Twp	5:00-6:00 PM	63.64	2 and 5

Table 9-4 | Arterial Segment Recommendations

NAME	DIRECTION	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
Brittain Rd from Independence Ave to Howe Ave	NB	Akron	7:00-8:00 AM	28.60	2, 3 and 4
SR 91 from Aurora St to SR 303	SB	Hudson	4:00-5:00 PM	30.80	4
SR 91 from Veterans Way to SR 303	NB	Hudson	7:00-8:00 AM	32.80	4
SR 91 from SR 303 to Aurora St	NB	Hudson	5:00-6:00 PM	37.80	4
SR 91 from Valley View Rd to Aurora St	SB	Hudson	5:00-6:00 PM	38.00	4
SR 59 from Union St to SR 8 SB ramps	EB	Akron	3:00-4:00 PM	40.50	2 and 4
SR 303 from Boston Mills to Atterbury Blvd	EB	Hudson	5:00-6:00 PM	41.10	4
Cedar St from Rand St to Dart Ave	EB	Akron	7:45-8:45 AM	43.48	Project PID 88990 completed, included signal interconnect and bike lanes, Monitor
SR 14 from SR 303 W Jct to SR 303 E Jct	EB	Streetsboro	5:00-6:00 PM	44.02	Project PID 99879 completed, included signal interconnect, Monitor
SR 18 from SR 59 to High St	EB	Akron	8:30-9:30 AM	44.85	3 and 4
SR 303 from Atterbury Blvd to SR 91	EB	Hudson	5:00-6:00 PM	47.10	4
SR 91 from Georgetown Rd to Terex Rd	SB	Hudson	6:00-7:00 PM	47.30	4
SR 14 from SR 5 WB ramps to SR 59	WB	Por Co-Ravenna Twp	7:15-8:15 AM	47.53	2
Firestone Blvd from S Main St and Grant St	EB	Akron	5:00-6:00 AM	48.53	Monitor after nearby construction is complete
SR 241 from Raber Rd to Boettler Rd	SB	Green	10:00-11:00 AM	49.50	Project 90415 underway, includes widening and roundabouts; Projects 103172 & 103173 upcoming, includes roundabouts, Monitor
West Ave from Brittain Rd to Tallmadge Circle	EB	Tallmadge	3:00-4:00 PM	51.44	2
SR 91 from SR 303 to Veterans Way	SB	Hudson	5:00-6:00 PM	51.50	4
SR 59 Front St from 2nd St to Hudson Dr	EB	Cuyahoga Falls	3:00-4:00 PM	51.56	2
SR 241 from Graybill Rd to Steese Rd	SB	Green	1:00-2:00 PM	51.90	Monitor after nearby construction is complete
SR 241 from SR 619 to Raber Rd	SB	Green	5:00-6:00 PM	52.20	Project 90415 underway, includes widening and roundabouts, Monitor
Steels Corners Rd from Bridgewater Pkwy to SR 8	EB	Stow	3:00-4:00 PM	52.70	4
Ravenna Rd from SR 91 to Idlewood Dr	NB	Twinsburg	6:00-7:00 PM	53.10	4
SR 303 from Akron Cleveland Rd to Terex Rd	EB	Hudson	7:00-8:00 AM	53.30	4
SR 303 from Hayden Pkwy to SR 91	WB	Hudson	4:00-5:00 PM	53.40	4
W Exchange St from Dart Ave to Rand St	WB	Akron	6:15-7:15 AM	53.76	Project 88990 completed, included signal interconnect and bike lanes, Monitor
Hudson Dr from Walmart Dr to Graham Rd	SB	Stow	12:00-1:00 PM	54.10	Monitor after nearby construction is complete
SR 14 from I-80 ramps to SR 43	EB	Streetsboro	4:45-5:45 PM	54.14	Project 99879 completed, included signal interconnect; Monitor

Table 9-4 | Arterial Segment Recommendations

NAME	DIRECTION	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
SR 82 from SR 306 to SR 43	WB	Aurora	9:15-10:15 AM	54.43	Project 107761 planned, includes signal interconnect; Monitor
State Rd from Marc Dr to Bath Rd	SB	Cuyahoga Falls	3:00-4:00 PM	55.20	Monitor after nearby construction is complete
SR 303 from Hayden Pkwy to Stow Rd	EB	Hudson	7:00-8:00 AM	55.50	4
Steels Corners Rd from Wyoga Lake Rd to Bridgewater Pkwy	EB	Cuyahoga Falls/Stow	7:00-8:00 AM	55.60	4
High St from SR 59 to SR 18	SB	Akron	7:45-8:45 AM	55.75	2 and 4
SR 241 from Boettler Rd to Raber Rd	NB	Green	4:00-5:00 PM	55.80	Project 90415 underway, includes widening and roundabouts; Projects 103172 & 103173 upcoming, includes roundabouts; Monitor
Brittain Rd from Howe Ave to Independence Ave	SB	Akron	10:00-11:00 AM	56.30	2, 3 and 4
SR 241 from Graybill Rd to Boettler Rd	NB	Green	4:00-5:00 PM	56.30	Monitor after nearby construction is complete
Ridgewood Rd from I-77 NB On-ramp to Miller Rd	EB	Fairlawn/Copley Twp	7:45-8:45 AM	56.43	4
SR 241 from SR 619 to Raber Rd	SB	Green	5:00-6:00 PM	52.20	Project 90415 underway, includes widening and roundabouts, Monitor
Steels Corners Rd from Bridgewater Pkwy to SR 8	EB	Stow	3:00-4:00 PM	52.70	4
Ravenna Rd from SR 91 to Idlewood Dr	NB	Twinsburg	6:00-7:00 PM	53.10	4
SR 303 from Akron Cleveland Rd to Terex Rd	EB	Hudson	7:00-8:00 AM	53.30	4
SR 303 from Hayden Pkwy to SR 91	WB	Hudson	4:00-5:00 PM	53.40	4
W Exchange St from Dart Ave to Rand St	WB	Akron	6:15-7:15 AM	53.76	Project 88990 completed, included signal interconnect and bike lanes, Monitor
Hudson Dr from Walmart Dr to Graham Rd	SB	Stow	12:00-1:00 PM	54.10	Monitor after nearby construction is complete
SR 14 from I-80 ramps to SR 43	EB	Streetsboro	4:45-5:45 PM	54.14	Project 99879 completed, included signal interconnect; Monitor
SR 82 from SR 306 to SR 43	WB	Aurora	9:15-10:15 AM	54.43	Project 107761 planned, includes signal interconnect; Monitor
State Rd from Marc Dr to Bath Rd	SB	Cuyahoga Falls	3:00-4:00 PM	55.20	Monitor after nearby construction is complete
SR 303 from Hayden Pkwy to Stow Rd	EB	Hudson	7:00-8:00 AM	55.50	4
Steels Corners Rd from Wyoga Lake Rd to Bridgewater Pkwy	EB	Cuyahoga Falls/Stow	7:00-8:00 AM	55.60	4
High St from SR 59 to SR 18	SB	Akron	7:45-8:45 AM	55.75	2 and 4
SR 241 from Boettler Rd to Raber Rd	NB	Green	4:00-5:00 PM	55.80	Project 90415 underway, includes widening and roundabouts; Projects 103172 & 103173 upcoming, includes roundabouts; Monitor
Brittain Rd from Howe Ave to Independence Ave	SB	Akron	10:00-11:00 AM	56.30	2, 3 and 4
SR 241 from Graybill Rd to Boettler Rd	NB	Green	4:00-5:00 PM	56.30	Monitor after nearby construction is complete
Ridgewood Rd from I-77 NB On-ramp to Miller Rd	EB	Fairlawn/Copley Twp	7:45-8:45 AM	56.43	4
SR 241 from SR 619 to Raber Rd	SB	Green	5:00-6:00 PM	52.20	Project 90415 underway, includes widening and roundabouts, Monitor
Steels Corners Rd from Bridgewater Pkwy to SR 8	EB	Stow	3:00-4:00 PM	52.70	4
Ravenna Rd from SR 91 to Idlewood Dr	NB	Twinsburg	6:00-7:00 PM	53.10	4
SR 303 from Akron Cleveland Rd to Terex Rd	EB	Hudson	7:00-8:00 AM	53.30	4
SR 303 from Hayden Pkwy to SR 91	WB	Hudson	4:00-5:00 PM	53.40	4
W Exchange St from Dart Ave to Rand St	WB	Akron	6:15-7:15 AM	53.76	Project 88990 completed, included signal interconnect and bike lanes, Monitor
Hudson Dr from Walmart Dr to Graham Rd	SB	Stow	12:00-1:00 PM	54.10	Monitor after nearby construction is complete
SR 14 from I-80 ramps to SR 43	EB	Streetsboro	4:45-5:45 PM	54.14	Project 99879 completed, included signal interconnect; Monitor
SR 82 from SR 306 to SR 43	WB	Aurora	9:15-10:15 AM	54.43	Project 107761 planned, includes signal interconnect; Monitor
State Rd from Marc Dr to Bath Rd	SB	Cuyahoga Falls	3:00-4:00 PM	55.20	Monitor after nearby construction is complete
SR 303 from Hayden Pkwy to Stow Rd	EB	Hudson	7:00-8:00 AM	55.50	4
Steels Corners Rd from Wyoga Lake Rd to Bridgewater Pkwy	EB	Cuyahoga Falls/Stow	7:00-8:00 AM	55.60	4
High St from SR 59 to SR 18	SB	Akron	7:45-8:45 AM	55.75	2 and 4
SR 241 from Boettler Rd to Raber Rd	NB	Green	4:00-5:00 PM	55.80	Project 90415 underway, includes widening and roundabouts; Projects 103172 & 103173 upcoming, includes roundabouts; Monitor
Brittain Rd from Howe Ave to Independence Ave	SB	Akron	10:00-11:00 AM	56.30	2, 3 and 4
SR 241 from Graybill Rd to Boettler Rd	NB	Green	4:00-5:00 PM	56.30	Monitor after nearby construction is complete
Ridgewood Rd from I-77 NB On-ramp to Miller Rd	EB	Fairlawn/Copley Twp	7:45-8:45 AM	56.43	4
Ravenna Rd from Chamberlin Rd to Cuyahoga Co Line	NB	Twinsburg	7:00-8:00 AM	60.60	Project 113165 planned, includes intersection improvements at Shephard; Monitor
SR 59 from Prospect St to Chestnut St	WB	Ravenna	12:15-1:15 PM	60.63	4

Table 9-4 | Arterial Segment Recommendations

NAME	DIRECTION	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
Brittain Rd from Independence Ave to Tallmadge Ave	SB	Akron	6:00-7:00 AM	60.70	2, 3 and 4
SR 59 from Chestnut St to Prospect St	EB	Ravenna	12:00-1:00 PM	60.70	4
Aurora Hudson Rd from I-480 SB Ramps to Frost Rd	EB	Streetsboro	7:00-8:00 AM	60.90	Project 92561 completed, included signal interconnect, turn lanes, bridge widening; Monitor
SR 303 from SR 91 to Atterbury Blvd	WB	Hudson	5:00-6:00 PM	60.90	4
Locust St from Exchange St to Cedar St	SB	Akron	6:00-7:00 AM	61.34	Monitor after nearby construction is complete
SR 82 from SR 91 to Cannon Rd	WB	Twinsburg	5:00-6:00 PM	61.37	4
Newberry St from Broad Blvd to Portage Trail	NB	Cuyahoga Falls	1:00-2:00 PM	61.40	2 and 4
SR 82 from SR 43 to SR 306	EB	Aurora	10:00-11:00 AM	61.48	Project 107761 planned, includes signal interconnect; Monitor
SR 303 from Atterbury Blvd to Boston Mills	WB	Hudson	12:00-1:00 PM	61.70	4
SR 91 from Hudson Dr to Terex Rd	SB	Hudson	6:00-7:00 PM	61.70	4
Terex Rd from SR 91 to Hudson Dr	WB	Hudson	4:00-5:00 PM	61.80	Monitor after nearby construction is complete
S Arlington Rd from SR 619 to I-77 SB ramps	NB	Green	5:00-6:00 PM	62.36	4
SR 91 from Terex Rd to Hudson Dr	NB	Hudson	12:00-1:00 PM	62.70	4
Ghent Rd from Smith Rd to Market St	SB	Fairlawn	5:00-6:00 PM	63.00	2 and 4
SR 18 from High St to SR 59	WB	Akron	4:45-5:45 PM	63.15	3 and 4
Cleveland Massillon Rd from Bywood Ave to Elgin Dr	SB	Fairlawn	5:00-6:00 PM	63.20	Project 103293 underway, includes widen to 5 lanes, roundabout, signal upgrade; Monitor
State Rd from Bath Rd to Graham Rd	SB	Cuyahoga Falls	3:00-4:00 PM	63.20	Monitor after nearby construction is complete
SR 18 from Union St to High St	WB	Akron	4:45-5:45 PM	63.21	3 and 4
SR 91 from Terex Rd to Georgetown Rd	NB	Hudson	12:00-1:00 PM	63.30	4
Ghent Rd from I-77 SB Ramps to Cleveland Massillon Rd	NB	Sum Co-Bath Twp	5:00-6:00 PM	63.37	Project to realign intersection and add new right turn lane underway; Monitor
Cedar St from Dart Ave to Locust St	EB	Akron	7:45-8:45 AM	63.41	Monitor
SR 91 North Ave from Howe Rd to Tallmadge Circle	SB	Tallmadge	4:45-5:45 PM	63.44	Project 93444 completed, included reconstruction with turn lanes and sidewalks; Monitor
SR 59 under the SR 18 Market St bridge	EB	Akron	7:00-8:00 AM	63.85	Project 75436 completed, included SR 59 rerouting and intersection improvements at Howard/ Main; Monitor
Graham Rd from Bath Rd to Wyoga Lake Rd	EB	Cuyahoga Falls	4:00-5:00 PM	63.90	2
Opportunity Pkwy from Cedar St to SR 59	WB	Akron	5:00-6:00 AM	63.95	Monitor after nearby construction is complete
SR 59 from River St to Water St	EB	Kent	5:00-6:00 PM	64.15	Monitor after nearby construction is complete
SR 18 Market St bridge over SR 59	EB	Akron	8:00-9:00 AM	64.21	3 and 4
N Miller Rd from Sand Run Pkwy to Market St	SB	Fairlawn	5:00-6:00 PM	64.33	2
Broad Blvd from 2nd St to SR 8 SB ramps	EB	Cuyahoga Falls	5:00-6:00 PM	64.45	2 and 4
Reimer Rd from Medina Line Rd to Cleveland Massillon Rd	EB	Norton	5:00-6:00 AM	64.56	Monitor after nearby construction is complete
SR 82 from I-480 WB ramps to SR 91	EB	Twinsburg	5:00-6:00 PM	64.74	4
State Rd from Quick Rd to Steels Corners Rd	SB	Cuyahoga Falls	2:00-3:00 PM	65.00	Monitor after nearby construction is complete

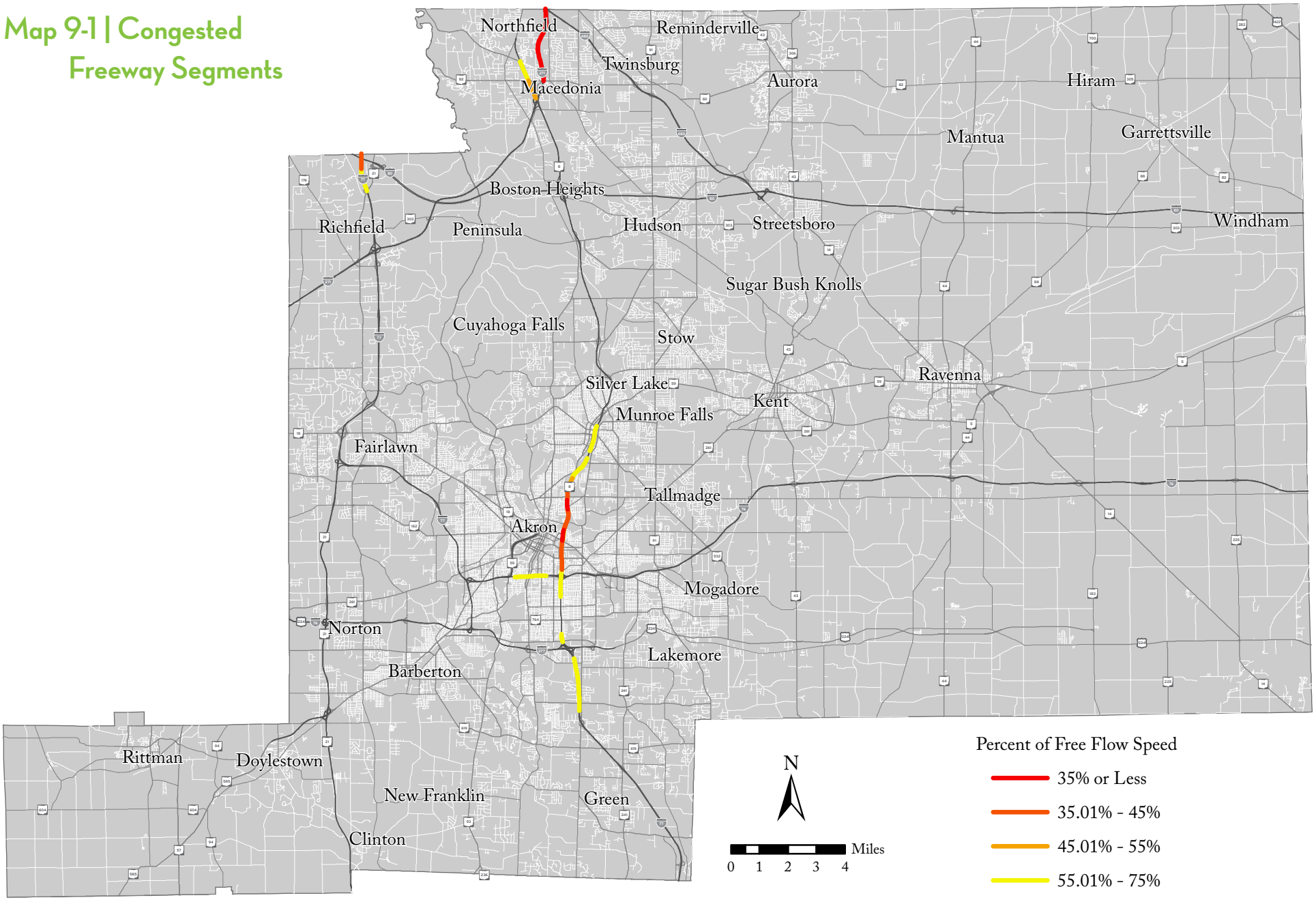
Table 9-5 | Intersection Recommendations

NAME	DIRECTION	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
SR 8 NB S of and adjacent to SR 82	NB	Macedonia	3:00-4:00 PM	33.99	4
SR 8 SB north leg of SR 82 intersection	SB	Macedonia	12:00-1:00 PM	34.57	4
SR 14/44 N of and adjacent to SR 59	EB	Por Co-Ravenna Twp	1:15-2:15 PM	47.76	Monitor after nearby construction is complete
SR 8 NB S of and adjacent to Valley View Rd	NB	Macedonia	3:00-4:00 PM	49.82	4
Southeast Ave NW of Eastwood Ave	SB	Tallmadge	4:45-5:45 PM	51.19	2
US 224 E of and adjacent to SR 241	WB	Akron	9:15-10:15 AM	52.79	Monitor after nearby construction is complete
SR 91 both legs of Graham Rd intersection	SB	Stow	5:00-6:00 PM	54.67	Monitor after nearby construction is complete
SR 18 W Market St at Ghent Rd	EB	Fairlawn	1:45-2:45 PM	54.83	4
US 224 W of and adjacent to SR 241	EB	Akron	7:15-8:15 AM	55.81	Monitor after nearby construction is complete
SR 44 through US 224 intersection	NB	Randolph Twp	5:00-6:00 PM	55.83	4
Ridgewood Rd bet I-77 NB on ramp and Miller Rd	EB	Fairlawn/Copley Twp	7:45-8:45 AM	56.43	4

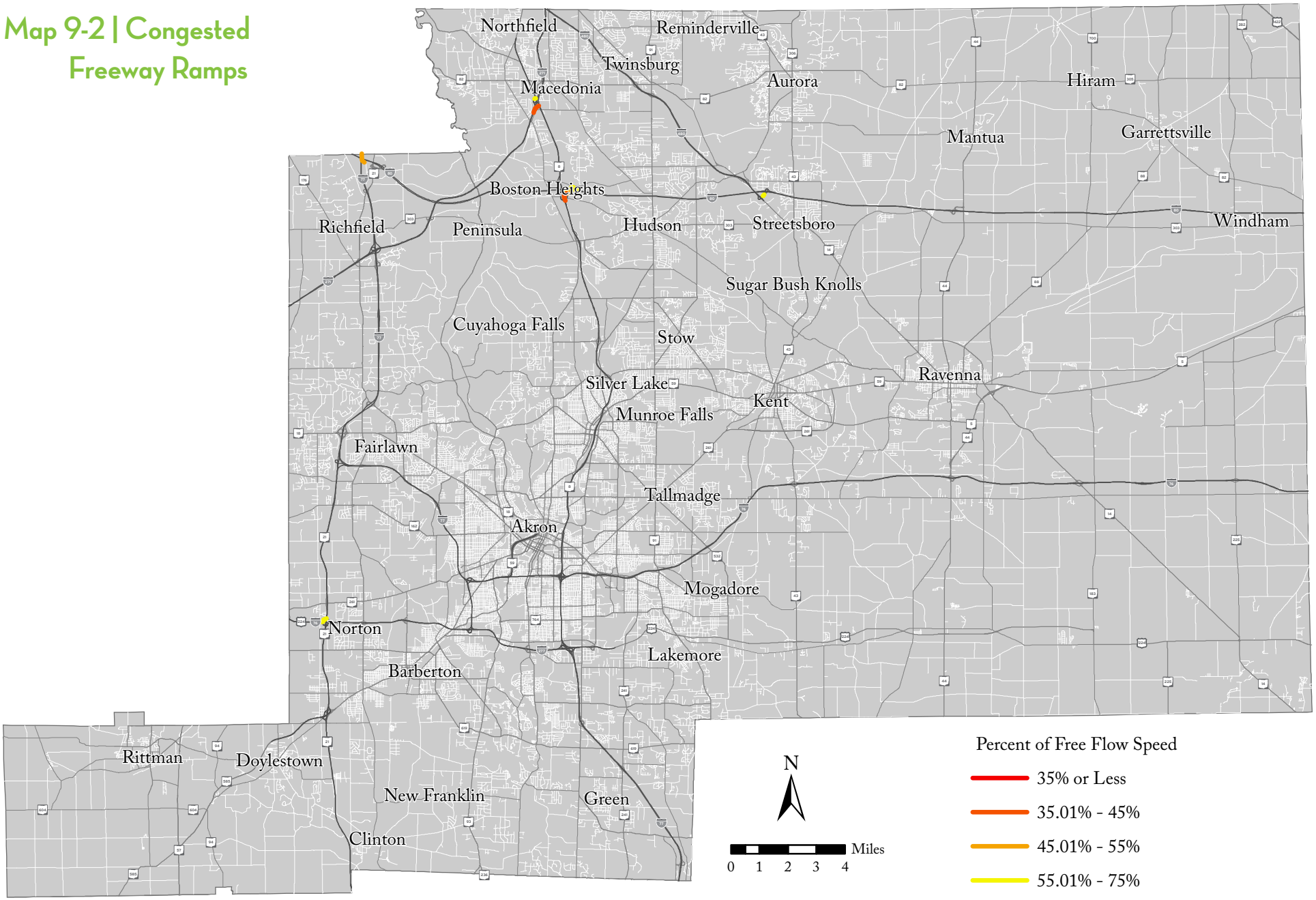
Table 9-5 | Intersection Recommendations

NAME	DIRECTION	POLITICAL UNIT	PEAK TIME	% FREE FLOW	RECOMMENDED TIER
Wheatley Rd through the Brecksville Rd intersection	NB	Richfield	5:30-6:30 PM	56.62	2
Cleveland Massillon Rd through Copley Circle	SB	Sum Co-Copley Twp	7:30-8:30 AM	57.33	Project 103171 completed, included additional turn lanes; Monitor
Brecksville Rd through the Wheatley Rd Intersection	SB	Richfield	5:15-6:15 PM	57.86	2
Broad Blvd bet RR tracks and SR 8 NB ramps	WB	Cuyahoga Falls	4:30-5:30 PM	58.04	Monitor after nearby construction is complete
Merriman Rd W of and adjacent to Portage Path	SB	Akron	5:00-6:00 PM	58.69	2
Ghent Rd N of and adjacent to W Market St	SB	Fairlawn	5:00-6:00 PM	58.89	4
SR 261 S of and adjacent to Summit Rd	EB	Kent/Franklin Twp	4:00-5:00 PM	58.96	4
SR 43 through SR 261 intersection	NB	Kent	4:45-5:45 PM	59.13	2
Portage Trail Ext W of and adjacent to State Rd	EB	Cuyahoga Falls	12:00-1:00 PM	60.10	Project 108084 planned, includes add two-way left turn lane; Monitor
SR 91 N of and adjacent to Graham Rd	NB	Stow	5:00-6:00 PM	60.87	Monitor after nearby construction is complete
Canton Rd through the US 224 Intersection	NB	Sum Co-Springfield Twp	4:00-5:00 PM	61.31	Project 89113 underway, includes concrete median and turn lanes; Monitor
Cleveland Massillon Rd through Copley Circle	NB	Sum Co-Copley Twp	7:30-8:30 AM	61.31	Project 103171 completed, included additional turn lanes; Monitor
SR 44 at the US 224 intersection	SB	Por Co-Randolph Twp	5:00-6:00 PM	61.44	4
US 224 through the SR 91 intersection	EB	Sum Co-Springfield Twp	4:45-5:45 PM	61.61	Project 89113 underway, includes concrete median and turn lanes; Monitor
Brecksville Rd through the Wheatley Rd Intersection	NB	Richfield	7:45-8:45 AM	62.03	2
SR 91 Canton Rd through the US 224 intersection	SB	Sum Co-Springfield Twp	5:00-6:00 PM	62.32	Project 89113 underway, includes concrete median and turn lanes; Monitor
Wilbeth Rd E of and adjacent to SR 93	WB	Akron	4:00-5:00 PM	62.46	Monitor after nearby construction is complete
Cleveland Massillon Rd bet the Ridgewood Roads	NB	Fairlawn/Copley Twp	3:00-4:00 PM	63.44	Project 108131 completed, included add turn lanes; Monitor
Merriman Rd at Portage Path Intersection	NB	Akron	5:00-6:00 AM	63.67	2
Waterloo Rd through the Arlington St intersection	EB	Akron	3:00-4:00 PM	63.99	Project 96359 completed, included intersection improvements; Monitor
SR 43 through US 224 intersection	NB	Por Co-Suffield Twp	8:00-9:00 PM	64.01	4
E Main St W of and adjacent to Willow/Haymaker	EB	Kent	4:00-5:00 PM	64.11	Project 112026 planned, includes reconstruction with median, roundabouts, and bus pull-outs; Monitor
Cleveland Massillon Rd through Ghent Rd intersection	NB	Sum Co-Bath Twp	7:45-8:45 AM	64.14	Project to realign intersection and add new right turn lane underway; Monitor
SR 18 E of and adjacent to Smith Rd	WB	Fairlawn	4:00-5:00 PM	64.49	4
Wheatley Rd through the Brecksville Rd intersection	SB	Richfield	5:00-6:00 PM	64.51	2
SR 82 through the SR 8 intersection	WB	Macedonia	12:15-1:15 PM	64.59	4
Portage Trail Ext E of and adjacent to Portage Path	WB	Akron/Cuyahoga Falls	11:30 AM-12:30 PM	64.63	Monitor after nearby construction is complete

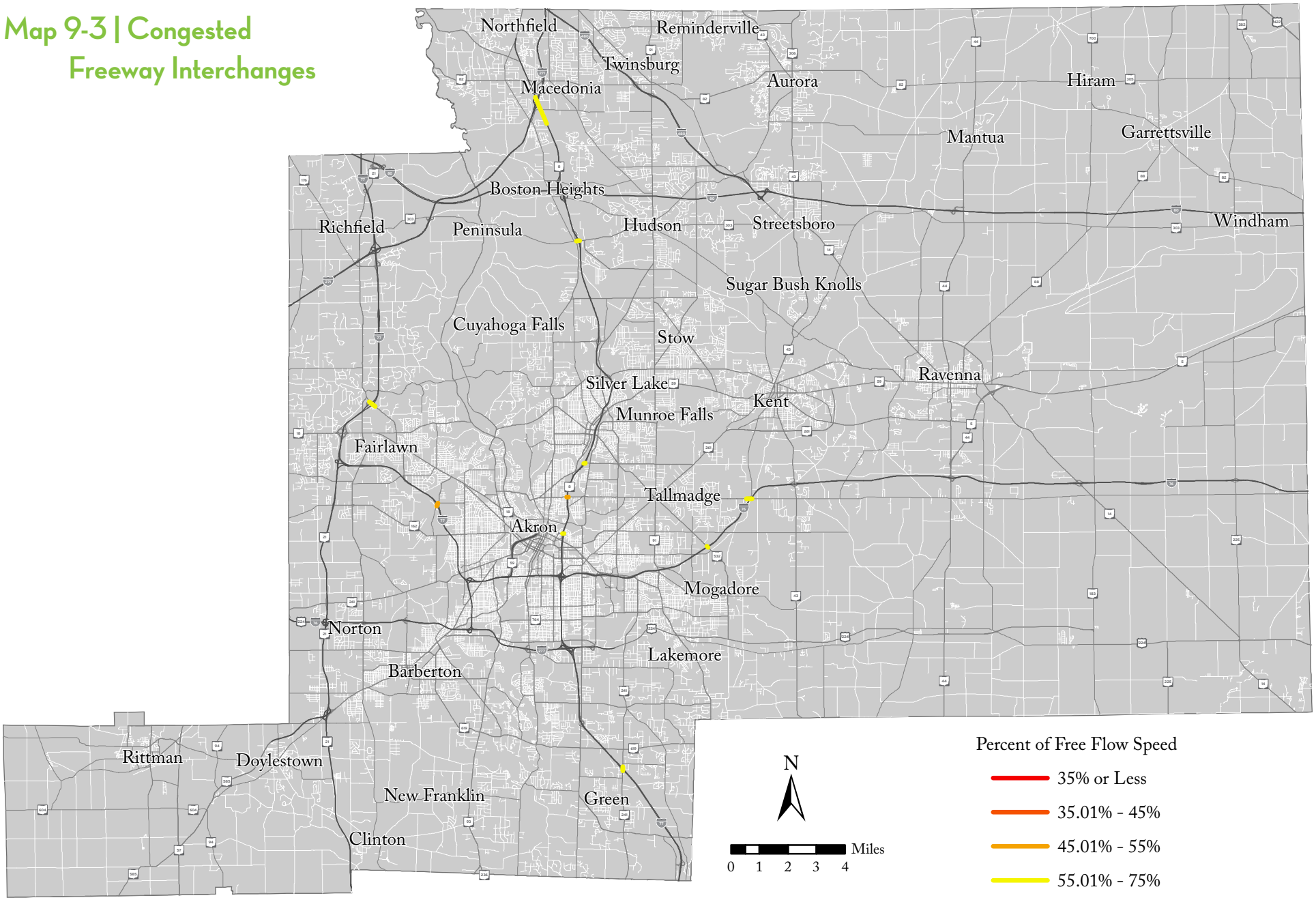
Map 9-1 | Congested Freeway Segments



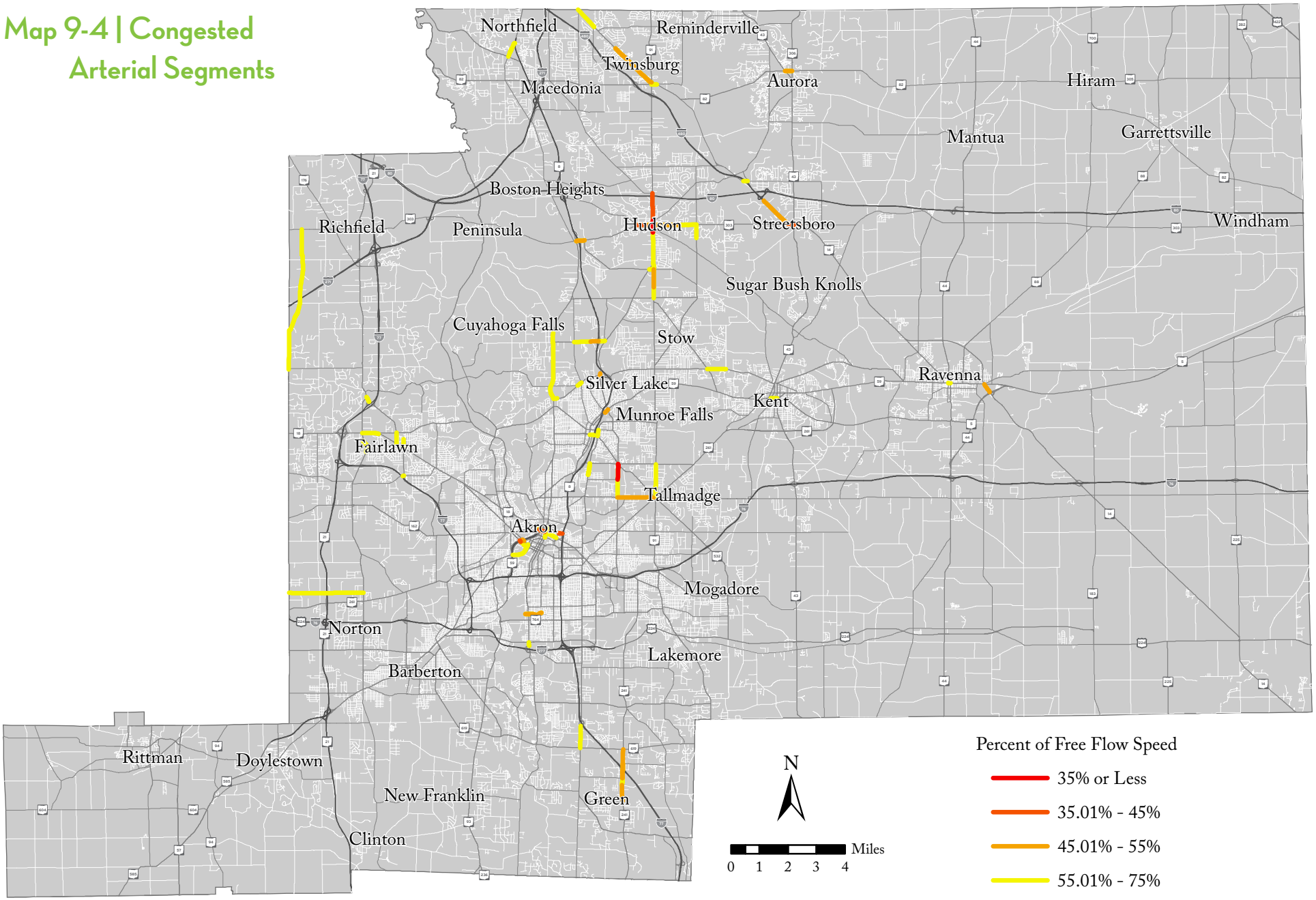
Map 9-2 | Congested Freeway Ramps



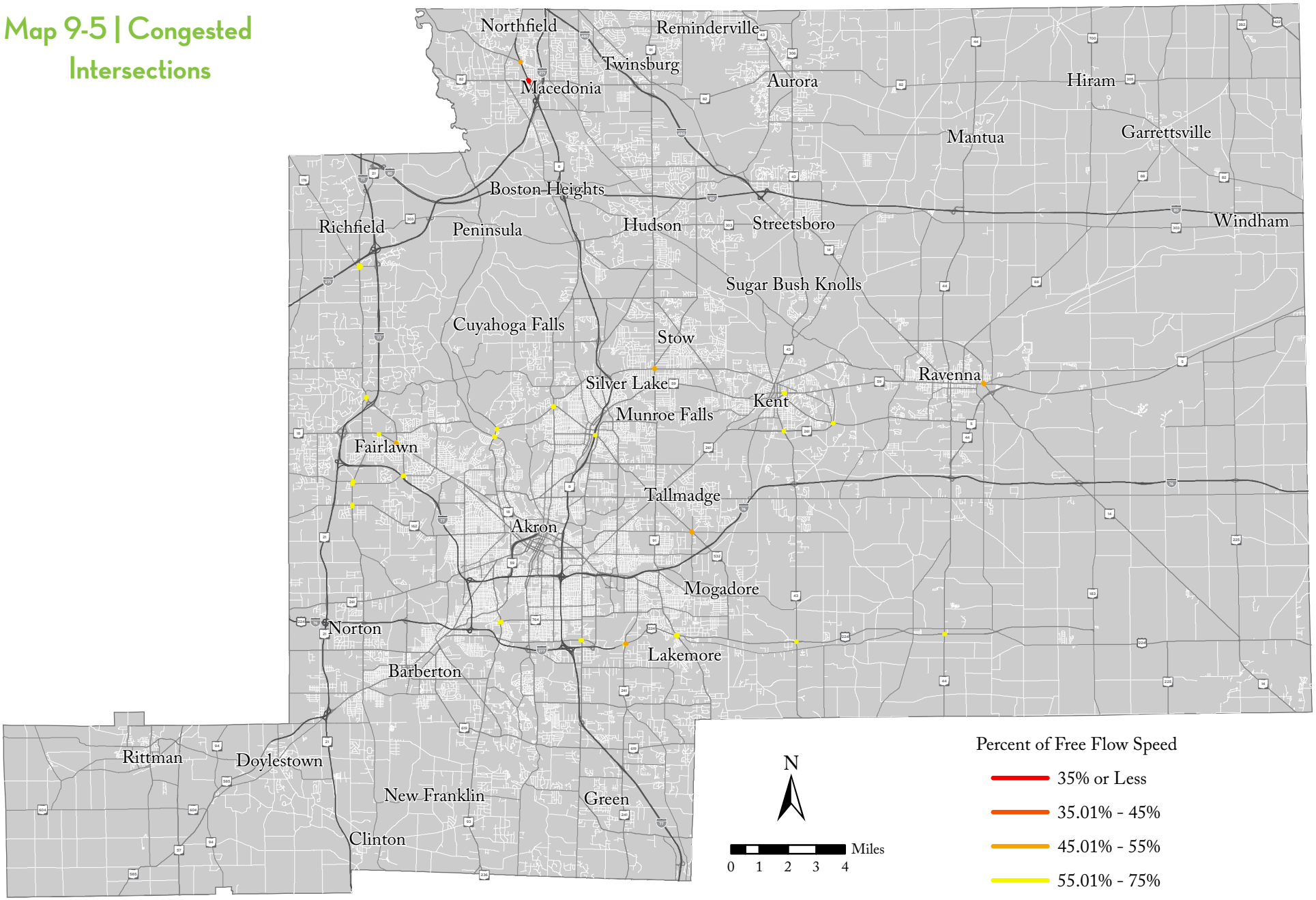
Map 9-3 | Congested Freeway Interchanges



Map 9-4 | Congested Arterial Segments



Map 9-5 | Congested Intersections



Public Transit

As part of the congestion management process, AMATS identifies potential strategies to alleviate congestion and evaluates the expected effectiveness of those strategies in improving the efficiency and safety of existing and future transportation systems. As an established method for reducing single occupancy vehicles (SOVs), strategies aimed at making transit more attractive or accessible can help to reduce the number of vehicles on the road.

The 2020 AMATS Transit Plan made a number of recommendations suited for congestion management. Specific strategies include: high frequency fixed route transit service on congested arterials, realigning routes and services to meet demographic changes, flexible fare policies and employer-based incentive programs, transit oriented land use development, integrating the scheduling and services of the region's transit agencies and improving access to multiple modes of travel (pedestrian, bicycle, vehicle).

Public transportation will never completely replace the automobile for most people. However, with a well maintained and effective public transit system, an increasing percentage of people may come to rely on transit for their transportation needs. Ultimately, any increase in transit use will reduce congestion and vehicle emissions in the AMATS area.

Increased Service Frequency (Headways)

High ridership transit routes on congested roadways have the potential to improve transportation if headways are improved. Transit has always been an affordable alternative to cars. With headways improved to the point that schedules are no longer necessary, transit becomes an easy choice in high density development areas. For this reason, it is recommended that transit agencies review their routes and consider adding more frequent service on their busiest routes.

Consider Transit Oriented Development

Certain intersections or neighborhoods are particularly viable for frequent transit service. Transit stops with characteristics such as high population and job densities, proximity to popular destinations and overall neighborhood vitality may be greatly enhanced through the establishment of transit oriented development/design (TOD) nodes.

METRO's restructured route system intends to use a number of nodes outside of the city center to connect multiple routes beyond the standard radial system. TOD at these nodes would aid in transit ridership and efficiency. Common TOD treatments include:

- Wide, pedestrian friendly sidewalks
- Buildings containing a mixture of uses, built near and facing towards the street
- Incorporation of an inviting ground-level feel: active uses, transparency, pedestrian shelters, bicycle racks, attractive signage, etc.
- Parking located behind the building, typically with alleyway access
- Well-designed bus shelters, bus stops and bus pull-offs (bus bays) for comfortable waiting and loading/unloading, developed in coordination with local communities

Continued Support for NEORide – Cross County Service and Coordination

Public transportation in Ohio has historically been funded through a dedicated portion of the county sales tax. Because of this funding structure, there has been a long-standing principle of only operating services within an agency's home county. NEORide is a Council of Governments (COG) formed originally by Akron METRO RTA, PARTA and SARTA (Stark County) in 2014 to coordinate fixed route and demand response service in northeast Ohio. This on-going transit study is examining the potential for expanded transit service linking Portage, Summit and Stark counties. Integrated services would create transit connections that are needed by transit users across the three counties, improve the efficiency and effectiveness of existing services, and would reduce the operating costs of all three agencies. The NEORide Inter-County Transit study identifies these inter-county transit needs and develops innovative approaches to improve inter-county services in the region. Cross-county service is a key strategy to growing overall transit ridership and a positive transit culture in our region. Key cross-county corridors include:

- Aurora - Streetsboro - Hudson - Stow - Cuyahoga Falls - Akron
- Akron - Cuyahoga Falls - Stow - Kent - Ravenna
- Akron - Green - North Canton - Canton
- Akron - Barberton - Norton - Wadsworth
- Solon - Aurora - Streetsboro

Please see the *2020 Transit Plan* for more specific details regarding transit recommendations.

Freight (Trucks and Railroads)

Proper freight movement can help reduce congestion on highly traveled roadways. Most truck freight movement is on interstates and state routes, so an improvement to those roadways will help both car and truck traffic. Please see the recommended highway improvements above, as many of those improvements will significantly impact freight.

Railroad-highway intersections are a source of congestion and safety concerns. Specific improvements related to rail recommendations are listed below.

- Provide support or engage in public-private partnerships to alleviate congestion on rail lines (such as CSX Lambert to Warwick section near Clinton and NS Cleveland to Pennsylvania Line that passes through Macedonia, Hudson and Ravenna on its way to Alliance)
- Improve rail lines owned by METRO RTA and make them available to local industry.
- Preserve out of service rail lines for future rail use or conversion to bike/pedestrian trails
- Consider public/private partnerships with the rail companies in order to improve freight service in the area
- Improve the Hines Hill Road crossing of the Norfolk-Southern line in Hudson
- Rail grade separation at the following locations:
  - The Stow Road crossing of the Norfolk-Southern Line in Hudson
  - The North Main Street (SR 91) crossing of the CSX Line in Munroe Falls

Please see the *2020 Freight Plan* for more detailed information regarding freight.

Evaluating Strategy Effectiveness

Performance monitoring is not a one-time event, but rather an ongoing activity that must be matched to existing and future resources. This is how the AMATS will monitor not only the ongoing performance of the region's transportation system, but also the effectiveness of the strategies and projects that are put in place. By evaluating congestion in the area, AMATS can determine which strategies worked the best in mitigating specific types of congestion, and which had the least impact. This will in turn identify the best actions in subsequent CMP updates.

The CMP provides a framework for weighing congestion relief projects against one another in terms of effectiveness but does not establish priorities for the region. To effectively monitor the performance of the system, access to good, reliable and consistent data is important. AMATS and ODOT have longstanding data collection efforts, such as traffic volumes, pavement conditions and crashes, but there are issues related to standardization of data. AMATS is committed to an effective regional transportation monitoring system. It is important for AMATS to ensure the data collection efforts are coordinated to facilitate meaningful and efficient analysis. Performance measures are applied at multiple dimensions within the AMATS planning process and include evaluation of strategies at every stage in the process:

- Regional Analysis of Performance Measures
- Project-level Analysis of Performance Measures
- Determination of progress towards regional goals and objectives

The implemented strategies will be monitored to assess their effectiveness. Monitoring techniques and schedules will be dependent on the type of improvement that is implemented, and the data availability. It may take years to assess the benefits of safety-type improvements that are intended to reduce crash rates, crash severity, or incidents. Conversely, the benefits of capacity improvements are relatively easy to measure and assess.

The benefits of the implemented strategies will be documented in a biannual report. For the improvements that may not be accurately measured in a two-year time frame, results will be presented with a description of the limitations of monitoring. Capacity projects and other improvements that are implemented through non- CMP methods will still be monitored to determine their benefits. Based upon the monitoring results, the learned facts will feedback for the CMP to verify and update the used performance measures, the applied data analysis techniques, and the considered strategies. If necessary, the CMP objectives and the CMP itself will be adjusted.

All AMATS funded projects, related to improving congestion, sold between 2016 and 2019 were evaluated for effectiveness of reducing congestion. AMATS analyzed the projects' percent free flow speed in 2016 and 2019 to try to capture the percent before and after the project. This process can help AMATS determine the effectiveness of congestion related strategies. While AMATS included projects sold in 2019 those projects will continue to be monitored because most were not operational until at least 2020. A few of the earlier projects were multi-year projects meaning that their completion date might be in 2019 or later. These projects will also need to be monitored as new data becomes available.

It is important to keep in mind that while these projects were related to congestion, the main intent of the project may not have been congestion alleviation. Some projects were designed to improve safety, sometimes not just for vehicles but also pedestrians and bicyclists. If the project's main goal was not to reduce recurring congestion, the percent free flow speed may not have changed after project completion. This is not an indictment of the project and each project must be analyzed individually while keeping in mind the goals and intent of the project.

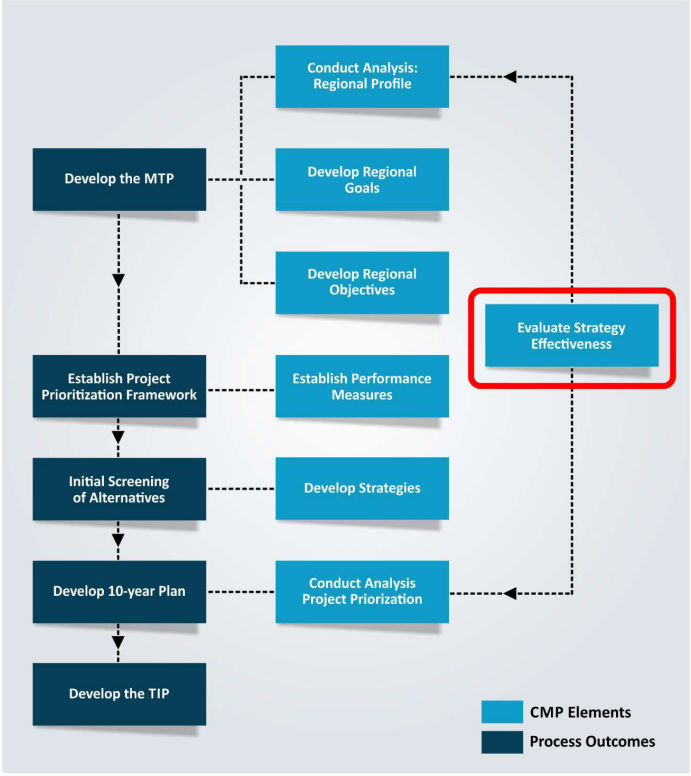


Table 10-1 | Evaluation of Strategies Effectiveness and Congestion

FY SOLD	CY COMPLETED	PID	POLITICAL UNIT	LOCATION	TYPE OF WORK	SEGMENT / DIRECTION	2016 WORST % FREFLOW	2019 WORST % FREFLOW	2016 PEAK PERIOD TRAFFIC VOL	2019 PEAK PERIOD TRAFFIC VOL	IMPROVEMENT TYPE	AFFECT ON CONGESTION AND TRAFFIC
2016	2019	84546	Kent	E Summit St from S Lincoln St to Loop Rd	Coordinated Signals, Intersection Improvements, Raised Median, Sidewalks, Bike Lanes	S Lincoln St to Risman Dr (2-way)	64	61	1,619	1,765	Operational, Bike / Ped, Safety	No significant change
						Risman Dr to Johnston Dr (EB only)	N/A	65	N/A	1,638		N/A
						Johnston Dr to Fraternity Cir (WB only)	60	61	942	1,785		No significant change in congestion / Traffic increased
						Johnston Dr to Campus Center Dr (EB only)	65	68	1,683	1,674		Congestion decreased
						Campus Center Dr to Johnston Dr (WB only)	55	67	1,502	1,568		Congestion significantly decreased / No significant change in traffic
						Campus Center Dr to Loop Rd (2-way)	65	64	2,141	2,782		No significant change in congestion/traffic increased
2016	2017	93441	Ravenna	Highland Ave & Diamond St, Highland Ave & Sycamore St, Diamond St & Cleveland Ave	Signal Coordination, Preemption, Ped Signals, Curb Ramps	N Diamond St from W Main St to Cleveland Rd (2-way)	42	79	56	N/A	Operational, Ped, Safety	Congestion significantly decreased
						Cleveland Rd from W Highland Ave to N Diamond St (2-way)	77	76	1,897	1,845		No significant change in both congestion and traffic
						W Highland Ave from Phelps St to Day St (2-way)	84	83	113	281		No significant change in congestion / Traffic increased
						N Sycamore St from W Main St to W Highland Ave (2-way)	80	69	1,047	1,747		Congestion and traffic both increased
2016	2017	88528	Coventry Twp Springfield Twp	Arlington Rd	NB Left Turn Lane at Warner Rd, Signal Interconnect, Sidewalks	Chenoweth Rd to Akron S Corp line (2-way)	74	70	2,720	1,653	Operational, Ped	No significant change in congestion / Traffic decreased
2016	2019	93432	Akron	Brittain Rd	Signal Coordination, Fiber Optics	E Market St to Eastwood Ave (2-way)	65	77	594	933	Operational	Congestion significantly decreased / Traffic increased
2016	2017	85076	Norton	Cleveland Massillon Rd	Median Turn Lane, Signal Upgrades	Pleasant Dr to Greenridge Rd (2-way)	70	76	3,505	3,063	Operational	Congestion decreased / Traffic decreased
2016	2019	88990	Akron	W Exchange St / Cedar St	Signal Interconnect, Lane Reduction, Parking, Bike Lanes	W Exchange St from S Portage Path to Rhodes Ave (2-way)	83	78	4,900	4,858	Operational, Bike, Safety	No significant change in both congestion and traffic
						W Exchange St from Rand Ave to Rhodes Ave (WB Only)	85	79	2,857	2,786		No significant change in both congestion and traffic
						W Exchange St from S Broadway St to Rand Ave (WB Only)	78	68	2,055	1,906		Congestion slightly increased
						Cedar St from Water St to Broadway St (2-way)	74	76	123	1,072		Congestion decreased / Traffic decreased
						W Cedar St from Rhodes Ave to Water St (EB only)	80	78	1,068	1,136		Congestion decreased / Traffic decreased
2016	2019	93435	Akron	W Market St	Upgrade Signals	Portage Path to S Summit St (2-way)	65	61	1,410	1,248	Operational	Congestion decreased
2016	2020	75436	Akron	SR-59 Rerouting	Reconstruct SR-59 on Rand Ave and Dart Ave	N Howard St to Exchange St (SB Only)	87	80	6,090	2,754	Reconfigure, Safety	Congestion increased / Traffic significantly decreased
						Exchange St to N Howard St (NB Only)	80	73	5,656	180		Congestion increased / Traffic significantly decreased
2016	2020	77269	Akron	Main / Broadway Interchange	Reconstruct & Modify Access to Main / Broadway Interchange, Remove Freeway Access to/from Wolf Ledges Pkwy / Grant Interchange	IR-76/77 from Princeton St to Summer St (EB Only)	87	86	8,485	12,386	Reconfigure, Safety	Congestion decreased / Traffic significantly increased
						S Main St from Thornton St to Miller Ave (SB Only)	N/A	72	N/A	2,197		Low congestion
						IR-76/77 W of Main St Interchange On-ramp (WB Only)	78	90	3,112	195		Congestion decreased / Traffic significantly decreased
						IR-76/77 W of Main St Interchange Off-ramp (WB Only)	N/A	83	N/A	4		No congestion
						Wolf Ledges Pkwy over IR-76/77 (2-way)	79	73	1,371	3,109		Congestion slightly increased / Traffic significantly increased
						Grant St over IR-76/77 (2-way)	75	81	642	1,378		Congestion decreased / Traffic significantly increased
2016	2017	93444	Tallmadge	SR-91 North Ave	Median Turn Lane, Sidewalks	Tallmadge Circle to Garwood Dr (2-way)	65	69	2,611	3,700	Operational, ped, and safety	Congestion decreased/Traffic significantly increased
2016	2017	82956	Hudson Stow Boston Heights	SR-91 Darrow Rd	Turn Lanes, New Signal, Bridge Replacement	Norton Rd from Lawnmark Dt to Sodalite Dr (2-way)	70	71	1,459	1,681	Operational, bike/ped, and safety	Congestion slightly increased / Traffic increased
						SR-91 from Fishcreek Rd to Norton Rd (2-way)	70	69	4,288	4,593		Congestion decreased / Traffic increased
						SR-303 Bridge over Hike & Bike Trail (2-way)	72	76	4,601	4,683		Congestion decreased / Traffic increased
2016	2019	88968	Akron	SR-162 Signals	Signal Interconnect	Collier Rd to Glendale Ave (2-way)	59	67	16	131	Operational	Both congestion and traffic increased
2016	2019	93439	Akron	SR-261 Signals	Signal Coordination	Home Ave to Brittain Rd (2-way)	72	72	4,119	4,333	Operational	No significant change
2017	2018	92561	Streetsboro	Frost Rd	Turn Lanes, Signal Interconnect, Bridge Widening	IR-480 to SR-43 (2-way)	77	80	1,127	1,336	Operational, Safety	No significant change
2017	2017	88548	Hudson	SR-91 / Prospect St	Signal Interconnect, Bike Lanes, Sidewalk	SR-91 (Main St) at Prospect St	60	56	5,417	5,153	Operational, Bike / Ped	No significant change

Table 10-1 | Evaluation of Strategies Effectiveness and Congestion

FY SOLD	CY COMPLETED	PID	POLITICAL UNIT	LOCATION	TYPE OF WORK	SEGMENT / DIRECTION	2016 WORST % FREFLOW	2019 WORST % FREFLOW	2016 PEAK PERIOD TRAFFIC VOL	2019 PEAK PERIOD TRAFFIC VOL	IMPROVEMENT TYPE	AFFECT ON CONGESTION AND TRAFFIC
2017	2018	93436	Akron	SR-18 Signals	Signal Coordination, Reconstruct Kenilworth / Elmdale Intersection	Hawkins Ave to Portage Path (2-way)	69	72	2,294	2,052	Operational, Safety	No significant change
2018	2018	93442	Kent	SR-43 (S Water St)	Turn Lanes, Signal Interconnect, Sidewalk Ramps	SR-261 to Summit St (2-way)	71	75	4,067	4,455	Operational, Ped	No significant change
2018	2020	104042	Akron	S Main St, Phase 1	Street and Sidewalk Replacement, Roundabout, Bike Lanes	Cedar St to Mill St (2-way)	N/A	69	N/A	642	Operational, Bike / Ped	No significant change
2018	2020	92032	Twinsburg	SR-91 (Darrow Rd)	Widen to 4 Lanes, Sidewalk, Intersection Improvements	Glenwood Dr to North Corp line (2-way)	70	73	4,805	5,265	Add Capacity, Ped	No significant change
2019	2020	99879	Streetsboro	Streetsboro Signal Upgrade	Signal Interconnect, Emergency Preemption	SR-14 from Mondial Pkwy to Diagonal Rd (2-way)	69	64	2,323	2,834	Operational, Safety	Both congestion and traffic increased
						SR-43 from Pike Pwky to Seasons Rd (2-way)	67	67	2,001	2,241		No significant change
						SR-303 From Market Sq to SR-14 (2-way)	59	71	869	1,354		Congestion significantly decreased / Traffic increased
						Streetsboro Rd from SR-14 to Root Dr (2-way)	66	67	161	315		No significant change
2019	2020	97638	Norton	Cleveland Massillon Rd	Median Turn Lane, Signal Upgrades, Sidewalk	Shannon Ave to Pleasant Dr (2-way)	76	73	1,547	1,233	Operational, Ped, Safety	Congestion slightly increased / Traffic decreased
2019	2021	108164	Akron	S Main St, Phase 2	Street and Sidewalk Replacement, Roundabout, Bike Lanes	Mill St to SR-59 (NB only)	65	49	536	688	Operational, Bike / Ped	Congestion significantly decreased / Traffic increased
						SR-59 to Mill St (SB only)	71	61	783	484		Congestion significantly decreased / Traffic decreased
2019	2022	96670	Akron Barberton	IR-76	Reconstruct IR-76 / Wooster / East Ave / State St Interchanges	Central Ave to 27th St (EB Only)	94	95	8,478	8,386	Reconfigure, Safety	No significant change
2019	2021	89113	Lakemore	SR-91 / US-224 / Canton Rd	Standard lanes, raised median, turn lanes, sidewalk	Springfield Lake Dr to Farmdale Rd (2-way)	73	65	3,151	3,613	Operational, Ped, Safety	No significant change
2019	2020	103171	Copley Twp	SR-162 (Copley Rd)	New EB Left Turn Lane, New SB Right Turn Lane	Sunset Dr to Cleveland Massillon Rd (Copley Circle) (2-way)	81	77	3,271	2,551	Operational, Safety	No significant change
						Schoolcraft Ave to Cleveland Massillon Rd (Copley Circle) (2-way)	73	83	1,846	3,096		Congestion significantly decreased / Traffic significantly increased
2019	2021	88556	Akron	SR-261 (Tallmadge Ave)	Reduce to 3 Lanes, Realign Dayton St Intersections, Signal Upgrades, Sidewalk Upgrade	N Main St to Gorge Blvd (2-way)	74	56	2,580	2,444	Operational, Ped, Safety	Congestion increased / Traffic decreased

Conclusion

Congestion management is an important element of the transportation planning process. Millions of federal, state and local transportation improvement dollars have been invested in highly effective projects all throughout the AMATS region, which has greatly reduced overall congested within the region. With limited availability of funding for transportation improvements expected into the foreseeable future, it is to our advantage to focus our resources on these most congested segments of our region's roadway network.

In summary, there are fewer extremely congested areas today than in the past. The benefit of this reduction is that we can better leverage decreasing transportation funding by focusing on only the most important regional areas of concern. Unfortunately, most of these remaining areas of concern have not yet been addressed due to their tremendous complexity and/or cost. The many communities and agencies that comprise AMATS must continue diligently working together to find unique solutions to address our remaining congested areas, and to wisely allocate available resources to implement those solutions.

The recommendations in this report will be considered for inclusion into the upcoming long-range regional transportation plan, *Transportation Outlook 2045*. If the recommendations from this report are adopted in the Plan, they will include a more detailed project description and will include costs and an estimated implementation schedule.

Appendix

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Akron	Brittain Rd from Independence to Howe Ave	28.60	7:00 - 8:00	Arterial	Northbound	PM
Akron	SR-8 SB bet Forge and Market St	32.61	4:45 - 5:45	Freeway	Southbound	PM
Akron	SR-8 SB bet Glenwood Ave and SB on Ramp	33.74	4:45 - 5:45	Freeway	Southbound	PM
Akron	SR-8 SB through the Perkins St Interchange	34.00	4:45 - 5:45	Freeway	Southbound	PM
Akron	SR-8 SB bet Tallmadge on Ramp and Glenwood Ave Bridge	34.68	4:45 - 5:45	Freeway	Southbound	PM
Akron	SR-8 SB bet Glenwood Ave on Ramp and Perkins St off Ramp	37.56	4:45 - 5:45	Freeway	Southbound	PM
Akron	SR-8 SB Through the Tallmadge Ave Interchange	38.06	4:45 - 5:45	Freeway	Southbound	PM
Akron	Exchange St bet Main St and Paul Williams St	39.97	4:00 - 5:00	Arterial	Eastbound	PM
Akron	SR-59 bet Union St and SR-8 SB Ramps	40.50	4:45 - 5:45	Arterial	Eastbound	PM
Akron	SR-8 SB bet Market St and the Central Interchange	41.16	4:45 - 5:45	Freeway	Southbound	PM
Akron	Cedar St bet Rand St and Dart Ave	43.48	7:45 - 8:45	Arterial	Eastbound	AM
Akron	SR-18 bet High St and SR-59	44.85	4:45 - 5:45	Arterial	Eastbound	PM
Akron	SR-59 Perkins St through the SR-8 Interchange	46.68	4:30 - 5:30	Freeway Interchange	Eastbound	PM
Akron	SR-8 SB bet Cuyahoga Falls on Ramp and Tallmadge off Ramp	48.03	4:45 - 5:45	Freeway	Southbound	PM
Akron	Firestone Blvd bet S Main and Grant St	48.53	5:00 - 6:00	Arterial	Eastbound	AM
Akron	US-224 E of and adjacent to SR-241	51.63	2:00 - 3:00	Intersection	Westbound	MD
Akron	Tallmadge Ave through the SR-8 Interchange	51.79	3:00 - 4:00	Freeway Interchange	Westbound	MD
Akron	White Pond Dr through the IR-77 Interchange	52.19	4:15 - 5:15	Freeway Interchange	Southbound	PM
Akron	W Exchange St bet Dart Ave and Rand St	53.76	6:15 - 7:15	Arterial	Westbound	AM
Akron	IR-76 / IR-77 EB	55.63	4:45 - 5:45	Ramp		PM
Akron	High St bet SR-18 and SR-59	55.75	4:45 - 5:45	Arterial	Westbound	PM
Akron	US-224 W of and adjacent to SR-241	55.81	7:15 - 815	Intersection	Eastbound	AM
Akron	Brittain Rd from Howe to Independence	56.30	5:00 - 6:00	Arterial	Southbound	PM
Akron / Cuyahoga Falls	Home Ave from Annapolis to Howe	57.40	12:00 - 1:00	Arterial	Northbound	MD
Akron	Broadway St bet Mill St and SR-18 Market St	57.62	4:45 - 5:45	Arterial	Eastbound	PM
Akron	Euclid Ave from Dart to Rand	58.00	8:00 - 9:00	Arterial	Eastbound	AM
Akron	Merriman Rd W of and adjacent to Portage Path	58.69	5:00 - 6:00	Intersection	Southbound	PM
Akron	Firestone Blvd from S Main St to Grant St	58.80	10:00 - 11:00	Arterial	Westbound	PM
Akron / Coventry Twp	S Main St bet Waterloo Rd and IR-277 EB Ramps	60.27	4:00 - 5:00	Arterial	Southbound	PM
Akron	Brittain Rd from Independence to Tallmadge Ave	60.30	4:00 - 5:00	Arterial	Southbound	PM
Akron	Locust St bet Cedar St and Exchange St	61.34	6:00 - 7:00	Arterial	Westbound	AM
Akron	Wilbeth Rd E of and adjacent to SR-93	62.46	4:00 - 5:00	Intersection	Westbound	PM
Akron	SR-261 Tallmadge Ave through the SR-8 Interchange	62.58	3:00 - 4:00	Freeway Interchange	Eastbound	MD
Akron	SR-18 bet Union St and High St	63.21	4:45 - 5:45	Arterial	Westbound	PM
Akron	Cedar St bet Dart Ave and Locust St	63.41	7:45 - 8:45	Arterial	Eastbound	AM
Akron / Cuyahoga Falls	Home Ave from Howe to Annapolis	63.50	12:00 - 1:00	Arterial	Southbound	MD
Akron	SR-8 SB bet Gorge Blvd and on Ramp from Cuyahoga Falls Ave	63.53	4:00 - 5:00	Freeway	Southbound	PM
Akron	Merriman Rd at Portage Path Intersection	63.67	5:00 - 6:00	Intersection	Northbound	AM
Akron	SR-59 under the SR-18 Market St bridge	63.85	7:00 - 8:00	Arterial	Eastbound	AM
Akron	Opportunity Pkwy bet Cedar St and SR-59	63.95	5:00 - 6:00	Arterial	Westbound	AM
Akron	Waterloo Rd through the Arlington St Intersection	63.99	3:00 - 4:00	Intersection	Eastbound	MD
Akron	SR-18 Market St bridge over SR-59	64.21	5:00 - 6:00	Arterial	Eastbound	PM
Akron / Cuyahoga Falls	Portage Trail Ext E of and adjacent to Portage Path	64.63	11:30 - 12:30	Intersection	Westbound	MD
Akron	Brittain Rd from Chapman to Eastwood	65.10	5:00 - 6:00	Arterial	Southbound	PM
Akron	Ramp from IR-76 WB to IR-77 SB	65.17	4:45 - 5:45	Ramp		PM
Akron	Brittain Rd from E Market St to Bauer	65.20	7:00 - 8:00	Arterial	Northbound	AM

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Akron	IR-76/77 EB through the Main St / Broadway St Interchange	65.28	4:45 - 5:45	Freeway	Eastbound	PM
Akron	Waterloo Rd through the Arlington Rd Intersection	65.29	5:00 - 6:00	Intersection	Westbound	AM
Akron	Perkins St through the SR-8 Interchange	65.30	7:30 - 8:30	Freeway Interchange	Westbound	AM
Akron	SR-93 between IR-277 EB on Ramp and Waterloo Rd	65.53	3:00 - 4:00	Arterial	Northbound	MD
Akron	Waterloo Rd bet SR-93 and IR-277 WB on Ramp	65.57	3:00 - 4:00	Arterial	Eastbound	MD
Akron	IR-76/77 EB bet South St West of Wolf Ledges off Ramp	65.59	4:45 - 5:45	Freeway	Eastbound	PM
Akron	IR-76/77 EB bet Wolf Ledges off Ramp and Wolf Ledges bridge	65.85	4:45 - 5:45	Freeway	Eastbound	PM
Akron	Brittain Rd from Bauer to E Market St	66.50	7:00 - 8:00	Arterial	Southbound	AM
Akron	Cuyahoga Falls Ave bet Riverside Dr and SR-8 SB Ramps	66.71	5:00 - 6:00	Arterial	Westbound	PM
Akron	SR-8 SB bet Ramp split and IR-76 Mainline	66.89	5:00 - 6:00	Freeway	Southbound	PM
Akron	SR-93 between IR-277 EB Ramp and Waterloo Rd	66.89	4:00 - 5:00	Freeway Interchange	Northbound	PM
Akron / Fairlawn / Copley Twp	Ridgewood Rd at Miller Rd	66.96	5:00 - 6:00	Intersection	Eastbound	PM
Akron	SR-8 / IR-77 bet IR-76 and Lovers Lane	67.10	5:00 - 6:00	Freeway	Southbound	PM
Akron	IR-76/77 EB bet South St on Ramp and Main St off Ramp	67.12	4:45 - 5:45	Freeway	Eastbound	PM
Akron	SR-8 SB bet Front St and Howe Ave on Ramp	67.13	4:00 - 5:00	Freeway	Southbound	PM
Akron	Cuyahoga Falls Ave from Riverside Dr to SR-8 SB Ramps	67.51	4:45 - 5:45	Arterial	Eastbound	PM
Akron	Arlington St bet Market St and Buchtel Ave	67.75	4:45 - 5:45	Arterial	Southbound	PM
Akron	SR-241 NB just S of and adjacent to US-224	67.75	4:00 - 5:00	Intersection	Northbound	PM
Akron	Cedar from Rand to Dart	67.80	10:00 - 11:00	Arterial	Eastbound	AM
Akron	Brittain Rd from Goodyear to Newton St	67.80	3:00 - 4:00	Arterial	Northbound	MD
Akron	Brittain Rd from Goodyear to Bauer	67.90	7:00 - 8:00	Arterial	Southbound	AM
Akron	IR-76/77 EB bet Wolf Ledges and Grant St	68.08	4:45 - 5:45	Freeway	Eastbound	PM
Akron	IR-271 NB bet SR-82 and IR-480	68.22	5:15 - 6:15	Freeway	Northbound	PM
Akron	Brittain Rd from Tallmadge Ave to Independence	68.30	2:00 - 3:00	Arterial	Northbound	MD
Akron	W Thornton St bet Dart Ave and S Main St	68.41	6:00 - 7:00	Arterial	Eastbound	AM
Akron / Fairlawn / Copley Twp	Ridgewood Rd at Miller Rd Intersection	68.48	4:00 - 5:00	Intersection	Westbound	PM
Akron	Kelly Ave bet US-224 WB Ramps and Exeter Rd	68.58	4:45 - 5:45	Arterial	Southbound	PM
Akron	Ridgewood Rd bet Miller Rd and Halifax Rd	68.68	11:00 - 12:00	Arterial	Eastbound	MD
Akron	Grant St bet Thornton St and IR-76/77	68.75	4:15 - 5:15	Arterial	Southbound	PM
Akron	High St from Cedar to Bartges	68.80	12:00 - 1:00	Arterial	Westbound	MD
Akron / Bath Twp	Smith Rd bet Revere Rd and Sand Run Rd	69.22	5:00 - 6:00	Arterial	Eastbound	PM
Akron	Kenmore Blvd bet Lakeshore Blvd and Ira Ave	69.30	5:00 - 6:00	Arterial	Eastbound	AM
Akron	IR-76/77 EB bet Grant St and Grant St on Ramp	69.51	4:45 - 5:45	Freeway	Eastbound	PM
Akron	IR-77 SB bet Lafollette St and Mckinley St	69.59	4:45 - 5:45	Ramp		PM
Akron	N Firestone Blvd bet Grant St and Coventry St	69.63	6:00 - 7:00	Arterial	Eastbound	AM
Akron	Grant St through the IR-76 Interchange	69.77	3:00 - 4:00	Freeway Interchange	Southbound	MD
Akron	Euclid Ave bet East Ave and Diagonal Rd	69.83	11:00 - 12:00	Arterial	Westbound	MD
Akron	Tallmadge Ave bet N Main St and SR-8	69.90	3:00 - 4:00	Arterial	Eastbound	MD
Akron	Brittain Rd from Bauer to Goodyear Ave	70.00	3:00 - 4:00	Arterial	Northbound	MD
Akron	Brittain Rd from Evans to Tallmadge Ave	70.00	12:00 - 1:00	Arterial	Northbound	MD
Akron	SR-261 bet SR-59 NB off ranp and Rand	70.02	5:00 - 6:00	Arterial	Westbound	AM
Akron	Tallmadge Ave bet SR-8 and N Main St	70.03	4:15 - 5:15	Arterial	Westbound	PM
Akron / Coventry Twp	S Main St bet IR-277 WB Ramps and Waterloo Rd	70.09	815 - 9:15	Arterial	Northbound	AM
Akron	SR-59 bet SR-18 and Union St	70.12	7:45 - 8:45	Arterial	Westbound	AM
Akron	SR-18 E Market St through the IR-76 Interchange	70.32	4:00 - 5:00	Freeway Interchange	Westbound	PM
Akron	Buchtel Ave bet Fountain St and Goodkirk St	70.45	11:00 - 12:00	Arterial	Westbound	MD

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Akron	SR-241 South leg of US-224 Intersection	70.51	5:00 - 6:00	Intersection	Southbound	PM
Akron	Grant St from IR-76 to E Thornton St	70.96	5:00 - 6:00	Arterial	Northbound	AM
Akron	Brittain Rd from Newton to Goodyear	71.00	5:00 - 6:00	Arterial	Southbound	PM
Akron	White Pond Dr bet Mull Ave and Frank Blvd	71.03	4:00 - 5:00	Arterial	Southbound	PM
Akron / Springfield Twp	US-224 bet Massillon Rd and Canton Rd	71.10	4:45 - 5:45	Arterial	Eastbound	PM
Akron	SR-18 bet General St and Seiberling St	71.20	7:30 - 8:30	Arterial	Westbound	AM
Akron	Thornton Ave bet East Ave and SR-93	71.28	6:00 - 7:00	Arterial	Eastbound	PM
Akron	Exchange St bet Main St and Broadway St	71.32	5:00 - 6:00	Arterial	Eastbound	AM
Akron	Thronton bet S Main and Dart Ave	71.36	5:00 - 6:00	Arterial	Westbound	AM
Akron	IR-77 / Vietnam Veterans Memorial Hwy NB	71.44	7:30 - 8:30	Ramp		AM
Akron	Grant St from Cole to IR-76/77	71.70	5:00 - 6:00	Arterial	Northbound	AM
Akron	Brittain Rd from Eastwood to Tonawanda	71.70	4:00 - 5:00	Arterial	Southbound	PM
Akron / Coventry Twp	IR-77 NB at Waterloo Rd	71.87	7:30 - 8:30	Freeway	Northbound	AM
Akron	SR-93 Manchester Rd North leg of Wilbeth Rd Intersection	71.92	1:45 - 2:45	Intersection	Southbound	MD
Akron / Coventry Twp	S Main St through the IR-277 Interchange	72.08	4:00 - 5:00	Freeway Interchange	Southbound	PM
Akron	IR-77 NB bet Waterloo Rd and Wilbeth Rd	72.09	7:30 - 8:30	Freeway	Northbound	AM
Akron	Manchester Rd bet IR-277 EB Ramps and Waterloo Rd	72.26	5:00 - 6:00	Arterial	Southbound	PM
Akron	S Arlington Rd S of and adjacent to Waterloo Rd	72.44	5:00 - 6:00	Intersection	Northbound	PM
Akron	Buchtel Ave bet E Market and N Arlington St	72.55	11:00 - 12:00	Arterial	Eastbound	MD
Akron / Fairlawn	SR-18 bet Rand St and Ghent Rd	72.55	3:00 - 4:00	Arterial	Westbound	MD
Akron	Buchtel Ave bet Union St and Goodkirk St	72.84	3:00 - 4:00	Arterial	Eastbound	MD
Akron	SR-8 NB bet E Market and Perkins off Ramp	72.89	5:00 - 6:00	Freeway	Northbound	PM
Akron	SR-59 bet Market St and Union St	72.93	7:00 - 8:00	Arterial	Eastbound	AM
Akron	Wilbeth Rd bet Allendale St and Coventry St	72.99	3:00 - 4:00	Arterial	Westbound	MD
Akron	Buchtel Ave from Arlington St to E Market	73.17	11:45 - 12:45	Arterial	Westbound	MD
Akron / Cuyahoga Falls	Portage Trail bet N Portage Path and Northampton Rd	73.29	5:15 - 6:15	Arterial	Eastbound	PM
Akron	Home Ave from Tallmadge to Independence	73.30	3:00 - 4:00	Arterial	Northbound	MD
Akron	Broadway St bet SR-18 Market St and SR-59	73.38	5:00 - 6:00	Arterial	Eastbound	PM
Akron	SR-8 NB bet E Market and the High Level Bridge	73.48	5:00 - 6:00	Freeway	Northbound	PM
Akron	Grant St from N Firestone Blvd to Cole Ave	73.60	5:00 - 6:00	Arterial	Northbound	AM
Akron	IR-77 SB bet Lovers Lane and Cole Ave	73.64	5:00 - 6:00	Freeway	Southbound	PM
Akron	Brittain Rd from Tonawanda to Newton	73.70	4:00 - 5:00	Arterial	Southbound	PM
Akron / Fairlawn / Bath Twp	Smith Rd bet Ghent Rd and Revere Rd	73.86	5:00 - 6:00	Arterial	Eastbound	PM
Akron	SR-261 bet Rand and the NB exit Ramp	74.03	7:00 - 8:00	Arterial	Eastbound	AM
Akron	Kenmore Blvd E of and adjacent to 4th St	74.23	5:00 - 6:00	Intersection	Westbound	PM
Akron	SR-18 E Market bet Seiberling St and General St	74.43	7:00 - 8:00	Arterial	Eastbound	AM
Akron	Arlington St bet Wilbeth and Triplett Blvd	74.55	7:00 - 8:00	Arterial	Northbound	PM
Akron	Arlington St bet Wilbeth Rd and Triplett Blvd	74.55	7:00 - 8:00	Arterial	Eastbound	PM
Akron	E Market bet Union St and Goodkirk Rd	74.56	4:45 - 5:45	Arterial	Eastbound	PM
Akron	Home Ave from Independence to Annapolis	74.70	4:00 - 5:00	Arterial	Northbound	PM
Akron / Springfield Twp	Hillbish Ave from Krumroy Rd to US-224	74.86	5:00 - 6:00	Arterial	Northbound	AM
Akron	N Arlington St bet E Market St and Buchtel Ave	74.92	6:45 - 7:45	Arterial	Northbound	AM
Aurora	SR-82 bet SR-43 and SR-306	54.43	5:00 - 6:00	Arterial	Westbound	PM
Barberton	Robinson Ave from SR-619 to Van Buren	65.50	3:00 - 4:00	Arterial	Westbound	MD

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Barberton	Norton Ave bet Barber Rd and Wooster Rd N	69.40	7:00 - 8:00	Arterial	Eastbound	AM
Barberton	Wooster Rd North through the IR-76 Interchange	71.82	3:00 - 4:00	Freeway Interchange	Westbound	MD
Barberton	Wooster Rd N through the IR-76 Interchange	72.51	3:00 - 4:00	Freeway Interchange	Eastbound	MD
Barberton	Robinson Ave from Van Buren to Wooster Rd W	72.70	3:00 - 4:00	Arterial	Westbound	MD
Barberton	Robinson Ave from Wooster Rd W to Van Buren	74.20	3:00 - 4:00	Arterial	Eastbound	MD
Boston Heights	SR-8 NB to IR-80	40.71	5:00 - 6:00	Ramp		PM
Boston Heights	WB Connector bet IR-80 and SR-8	46.69	5:15 - 6:15	Ramp		PM
Boston Heights	EB Connector bet SR-8 SB and IR-80	57.23	5:00 - 6:00	Ramp		PM
Boston Heights	SR-303 through the SR-8 Interchange	57.81	5:15 - 6:15	Freeway Interchange	Westbound	PM
Boston Heights	IR-80 EB to SR-8	59.16	5:15 - 6:15	Ramp		PM
Boston Heights	IR-80 WB to SR-8	64.10	5:00 - 6:00	Ramp		PM
Boston Heights / Boston Twp	Akron Cleveland Rd from Seasons Rd to SR-303	73.30	7:00 - 8:00	Arterial	Northbound	AM
Cuyahoga Falls	SR-59 Front St bet 2nd St and Hudson Dr	51.56	5:00 - 6:00	Arterial	Eastbound	PM
Cuyahoga Falls	State Rd from Marc to Bath	55.20	5:00 - 6:00	Arterial	Southbound	PM
Cuyahoga Falls / Stow	Steels Corners Rd from Bridgewater to Wyoga Lake	55.60	7:00 - 8:00	Arterial	Eastbound	AM
Cuyahoga Falls	Graham Rd from Lillis to State Rd	57.10	3:00 - 4:00	Arterial	Westbound	MD
Cuyahoga Falls / Stow	Steels Corners Rd from Wyoga Lake to Bridgewater	57.10	5:00 - 6:00	Arterial	Eastbound	PM
Cuyahoga Falls	Howe Ave through the SR-8 Interchange	57.77	4:45 - 5:45	Freeway Interchange	Eastbound	PM
Cuyahoga Falls	Broad Blvd through the SR-8 Interchange	57.84	5:00 - 6:00	Freeway Interchange	Eastbound	PM
Cuyahoga Falls	Broad Blvd bet RR tracks and SR-8 NB Ramps	58.04	4:30 - 5:30	Intersection	Southbound	PM
Cuyahoga Falls	State Rd from Marc to Steels Corners	59.00	7:00 - 8:00	Arterial	Northbound	AM
Cuyahoga Falls	Portage Trail Ext W of and adjacent to State Rd	60.10	12:00 - 1:00	Intersection	Eastbound	MD
Cuyahoga Falls	Newberry St from Broad to Portage Tr	61.40	6:00 - 7:00	Arterial	Northbound	PM
Cuyahoga Falls	State Rd from Bath to Graham	63.20	4:00 - 5:00	Arterial	Southbound	PM
Cuyahoga Falls	Graham Rd from Bath Rd to Wyoga Lake Rd	63.90	4:00 - 5:00	Arterial	Eastbound	PM
Cuyahoga Falls	Broad Blvd EB bet 2nd St and SR-8 SB Ramps	64.45	5:00 - 6:00	Arterial	Eastbound	PM
Cuyahoga Falls	State Rd from Quick to Steels Corners	65.00	2:00 - 3:00	Arterial	Southbound	MD
Cuyahoga Falls	Portage Trail through the SR-8 Interchange	65.08	7:15 - 815	Freeway Interchange	Westbound	AM
Cuyahoga Falls	Front St at the Broad Blvd Intersection	66.06	9:00 - 10:00	Intersection	Northbound	PM
Cuyahoga Falls	State Rd from Graham to Bath	68.10	4:00 - 5:00	Arterial	Northbound	PM
Cuyahoga Falls	Graham Rd from Wyoga Lake Rd to Bath Rd	68.10	2:00 - 3:00	Arterial	Westbound	MD
Cuyahoga Falls	Front St bet 2nd St and Hudson Dr	68.14	4:45 - 5:45	Arterial	Westbound	PM
Cuyahoga Falls	2nd St South and adjacent to Oakwood Dr	69.33	9:00 - 10:00	Intersection	Northbound	PM
Cuyahoga Falls	Broad Blvd EB bet 6th St and 2nd St	69.69	3:00 - 4:00	Arterial	Eastbound	MD
Cuyahoga Falls	Steels Corners Rd from State to Wyoga Lake Rd	69.90	7:00 - 8:00	Arterial	Eastbound	AM
Cuyahoga Falls	Hudson Dr from Graham to SR-8 NB Ramp	70.40	3:00 - 4:00	Arterial	Southbound	MD
Cuyahoga Falls	Portage Trail bet 6th St and SR-8	70.50	3:00 - 4:00	Arterial	Eastbound	MD
Cuyahoga Falls	State Rd from Steels Corners to Marc	70.50	3:00 - 4:00	Arterial	Southbound	MD
Cuyahoga Falls	Graham Rd from State Rd to Lillis	70.60	1:00 - 2:00	Arterial	Eastbound	MD
Cuyahoga Falls	State Rd from Steels Corners to Quick	70.80	7:00 - 8:00	Arterial	Northbound	AM
Cuyahoga Falls	Broad Blvd E of and adjacent to 2nd St	70.93	5:00 - 6:00	Intersection	Eastbound	PM
Cuyahoga Falls	Hudson Dr from SR-59 to SR-8 NB Ramp	71.10	7:00 - 8:00	Arterial	Northbound	AM
Cuyahoga Falls	Newberry St from Portage Tr to Broad	71.20	1:00 - 2:00	Arterial	Southbound	MD
Cuyahoga Falls	State Rd from Bath to Marc	71.50	4:00 - 5:00	Arterial	Northbound	PM

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Cuyahoga Falls	State Rd from Seasons to Quick	71.60	7:00 - 8:00	Arterial	Southbound	AM
Cuyahoga Falls	Hudson Dr from SR-8 NB Ramp to Graham	71.70	7:00 - 8:00	Arterial	Northbound	AM
Cuyahoga Falls	Hudson Dr from SR-8 NB Ramp to SR-59 SB	72.70	5:00 - 6:00	Arterial	Southbound	PM
Cuyahoga Falls	SR-8 SB Through the Portage Trail Interchange	72.99	7:30 - 8:30	Freeway	Southbound	AM
Cuyahoga Falls	Steels Corners Rd from Wyoga Lake to State	73.10	7:00 - 8:00	Arterial	Eastbound	AM
Cuyahoga Falls	2nd St through and N of Broad Blvd	73.13	5:00 - 6:00	Intersection	Southbound	AM
Cuyahoga Falls	Graham Rd from Bath Rd to Lillis	73.30	12:00 - 1:00	Arterial	Westbound	MD
Cuyahoga Falls	SR-8 SB through the Howe Ave Interchange	73.34	4:00 - 5:00	Freeway	Southbound	PM
Cuyahoga Falls	Portage Trail Ext bet Northampton Rd and State Rd	73.40	5:15 - 6:15	Arterial	Westbound	PM
Cuyahoga Falls	SR-8 SB bet Broad Blvd and the SB on Ramp	73.78	7:30 - 8:30	Freeway	Southbound	AM
Cuyahoga Falls	Portage Trail bet 6th St and SR-8 SB Ramps	74.07	3:00 - 4:00	Arterial	Westbound	MD
Cuyahoga Falls	Bailey Rd / Hudson Dr from Munroe Falls Ave to SR-59	74.30	7:00 - 8:00	Arterial	Northbound	AM
Cuyahoga Falls	2nd St bet Portage Trail and Oakwood Dr	74.50	5:00 - 6:00	Arterial	Southbound	PM
Cuyahoga Falls	2nd St-Portage Trail to Oakwood Dr	74.90	5:00 - 6:00	Arterial	Northbound	AM
Fairlawn	SR-18 W Market St at Ghent Rd	54.83	1:45 - 2:45	Intersection	Eastbound	MD
Fairlawn / Copley Twp	Ridgewood Rd bet IR-77 NB on Ramp and Miller Rd	56.43	7:45 - 8:45	Arterial	Eastbound	AM
Fairlawn	Ghent Rd N of and adjacent to W Market St	58.89	5:00 - 6:00	Intersection	Southbound	PM
Fairlawn / Bath Twp	SR-18 bet Smith Rd and Cleveland Massillon Rd	60.15	4:45 - 5:45	Arterial	Westbound	PM
Fairlawn	Ghent Rd bet Market St and Smith Rd	63.00	5:00 - 6:00	Arterial	Southbound	PM
Fairlawn	Cleveland Massillon Rd Bywood to Elgin	63.20	5:00 - 6:00	Arterial	Southbound	PM
Fairlawn / Copley Twp	Cleveland Massillon Rd bet the Ridgewood Roads	63.44	3:00 - 4:00	Intersection/Arterial	Northbound	MD
Fairlawn	N Miller Rd bet Market St and Sand Run Pkwy	64.33	5:00 - 6:00	Arterial	Southbound	PM
Fairlawn	SR-18 E of and adjacent to Smith Rd	64.49	4:00 - 5:00	Intersection	Westbound	PM
Fairlawn	Cleveland Massillon from IR-77 to Elgin	66.20	5:00 - 6:00	Arterial	Southbound	PM
Fairlawn	Smith Rd N of and adjacent to SR-18	66.72	1:15 - 2:15	Intersection	Westbound	MD
Fairlawn / Copley Twp	Cleveland Massillon Rd bet IR-77 and SR-18	70.13	5:00 - 6:00	Arterial	Southbound	PM
Fairlawn	Cleveland Massillon Rd from Elgin to Bywood	71.90	12:00 - 1:00	Arterial	Northbound	MD
Fairlawn	SR-18 bet Cleveland Massillon Rd and Smith Rd	73.36	1:15 - 2:15	Arterial	Eastbound	MD
Fairlawn / Copley Twp	Ridgewood Rd through the IR-77 Interchange	73.77	8:00 - 9:00	Freeway Interchange	Eastbound	AM
Fairlawn / Copley Twp	Cleveland Massillon Rd bet the Ridgewood Rd offset legs	74.19	8:00 - 9:00	Intersection/Arterial	Southbound	AM
Green	SR-241 from Boettler to Raber SB	50.50	4:00 - 5:00	Arterial	Southbound	PM
Green	SR-241 from Steese to Graybill SB	51.90	1:00 - 2:00	Arterial	Southbound	MD
Green	SR-241 from Raber to SR-619 SB	52.20	5:00 - 6:00	Arterial	Southbound	PM
Green	SR-241 from Raber to SR-619 SB	52.70	12:00 - 1:00	Arterial	Southbound	MD
Green	SR-241 from Raber to SR-619 SB	54.00	7:00 - 8:00	Arterial	Southbound	AM
Green	SR-241 from Boettler to Raber SB	54.30	12:00 - 1:00	Arterial	Southbound	MD
Green	SR-241 from Boettler to Raber NB	55.80	4:00 - 5:00	Arterial	Northbound	PM
Green	SR-241 from Graybill to Boettler NB	56.30	4:00 - 5:00	Arterial	Northbound	PM
Green	SR-241 Massillon Rd through the IR-77 Interchange	56.73	4:45 - 5:45	Freeway Interchange	Northbound	PM
Green	SR-241 from Graybill to Boettler NB	57.80	2:00 - 3:00	Arterial	Northbound	MD
Green	SR-241 from Boettler to Raber SB	59.60	10:00 - 11:00	Arterial	Southbound	AM
Green	SR-241 from Graybill to Boettler SB	60.50	4:00 - 5:00	Arterial	Southbound	PM
Green	SR-241 from Graybill to Boettler SB	61.30	12:00 - 1:00	Arterial	Southbound	MD
Green	SR-241 from Graybill to Boettler NB	62.00	10:00 - 11:00	Arterial	Northbound	AM

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Green	S Arlington Rd bet SR-619 and IR-77 SB Ramps	62.36	5:00 - 6:00	Arterial	Northbound	PM
Green	Massillon Rd through the IR-77 Interchange	62.38	4:15 - 5:15	Freeway Interchange	Southbound	PM
Green	SR-241 from Steese to Graybill SB	64.40	10:00 - 11:00	Arterial	Southbound	AM
Green	SR-241 from Graybill to Boettler SB	64.50	9:00 - 10:00	Arterial	Southbound	AM
Green	Lauby Rd NB S of exit Ramp / CAK entrance	65.35	5:00 - 6:00	Intersection	Northbound	PM
Green	S Arlington Rd through the IR-77 Interchange	65.72	5:00 - 6:00	Freeway Interchange	Southbound	PM
Green	Arlington Rd bet IR-77 SB Ramps and SR-619	66.18	5:00 - 6:00	Arterial	Southbound	PM
Green	Lauby Rd at the IR-77 Ramps / Airport Entrance Intersection	66.58	5:00 - 6:00	Intersection	Southbound	PM
Green / Coventry Twp	IR-77 NB through the Arlington Rd Interchange	71.49	7:30 - 8:30	Freeway Interchange	Northbound	AM
Green	Arlington from Greensburg to E Caston	71.90	7:00 - 8:00	Arterial	Northbound	AM
Green	Lauby Rd NB S of and adjacent to Greensburg Rd	74.27	9:00 - 10:00	Intersection	Northbound	PM
Hudson	SR-91 From SR-303 to Aurora St SB	30.80	4:00 - 5:00	Arterial	Southbound	PM
Hudson	SR-91 from Veterans Way to SR-303 NB	32.80	7:00 - 8:00	Arterial	Northbound	AM
Hudson	SR-91 From SR-303 to Aurora St SB	36.10	3:00 - 4:00	Arterial	Southbound	MD
Hudson	SR-91 From SR-303 to Aurora St NB	37.70	7:00 - 8:00	Arterial	Northbound	AM
Hudson	SR-91 From SR-303 to Aurora St NB	37.80	5:00 - 6:00	Arterial	Northbound	PM
Hudson	SR-91 from Aurora to Valleyview SB	38.00	5:00 - 6:00	Arterial	Southbound	PM
Hudson	SR-303 from Boston Mills to Atterbury EB	41.10	5:00 - 6:00	Arterial	Eastbound	PM
Hudson	SR-91 From SR-303 to Aurora St NB	41.40	12:00 - 1:00	Arterial	Northbound	MD
Hudson	SR-91 from Veterans Way to SR-303 NB	42.00	5:00 - 6:00	Arterial	Northbound	PM
Hudson	SR-91 From SR-303 to Aurora St SB	43.80	8:00 - 9:00	Arterial	Southbound	AM
Hudson	SR-303 from Atterbury to SR-91 EB	47.10	5:00 - 6:00	Arterial	Eastbound	PM
Hudson	SR-91 Georgetown to Terex SB	47.30	6:00 - 7:00	Arterial	Southbound	PM
Hudson	SR-303 from Boston Mills to Atterbury EB	49.70	12:00 - 1:00	Arterial	Eastbound	MD
Hudson	SR-91 from Veterans Way to SR-303 NB	49.90	12:00 - 1:00	Arterial	Northbound	MD
Hudson	SR-91 from Aurora to Valleyview SB	50.10	3:00 - 4:00	Arterial	Southbound	MD
Hudson	SR-91 from Veterans Way to SR-303 SB	51.50	5:00 - 6:00	Arterial	Southbound	PM
Hudson	SR-303 from Boston Mills to Atterbury EB	52.10	7:00 - 8:00	Arterial	Eastbound	AM
Hudson	SR-303 from Atterbury to SR-91 EB	52.30	3:00 - 4:00	Arterial	Eastbound	MD
Hudson	SR-303 from Akron Cleveland to Terex EB	53.30	7:00 - 8:00	Arterial	Eastbound	AM
Hudson	SR-303 from SR-91 to Hayden Pkwy WB	53.40	4:00 - 5:00	Arterial	Westbound	PM
Hudson	SR-91 from Veterans Way to SR-303 SB	53.60	3:00 - 4:00	Arterial	Southbound	MD
Hudson	SR-303 from Atterbury to SR-91 EB	55.10	7:00 - 8:00	Arterial	Eastbound	AM
Hudson	SR-303 from Hayden to Stow EB	55.50	7:00 - 8:00	Arterial	Eastbound	AM
Hudson	SR-91 from Norton to Georgetown SB	57.10	5:00 - 6:00	Arterial	Southbound	PM
Hudson	Stow Rd from Canterbury to SR-303	57.60	7:00 - 8:00	Arterial	Northbound	AM
Hudson	Terex Rd from Hudson to SR-91	57.80	4:00 - 5:00	Arterial	Eastbound	PM
Hudson	SR-91 from Norton to Georgetown SB	58.80	12:00 - 1:00	Arterial	Southbound	MD
Hudson	SR-91 from Hudson to Veterans Way NB	59.10	7:00 - 8:00	Arterial	Northbound	AM
Hudson	SR-303 from SR-91 to Hayden Pkwy EB	60.00	8:00 - 9:00	Arterial	Eastbound	AM
Hudson	SR-303 from Akron Cleveland to Terex WB	60.10	7:00 - 8:00	Arterial	Westbound	AM
Hudson	SR-303 from Hayden to Stow EB	60.20	3:00 - 4:00	Arterial	Eastbound	MD
Hudson	SR-91 from Veterans Way to SR-303 SB	60.50	8:00 - 9:00	Arterial	Southbound	AM
Hudson	SR-303 from Akron Cleveland to Terex WB	60.80	5:00 - 6:00	Arterial	Westbound	PM
Hudson	SR-303 from Atterbury to SR-91 WB	60.90	5:00 - 6:00	Arterial	Westbound	PM

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Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Hudson	SR-91 Terex to Hudson Dr SB	61.70	6:00 - 7:00	Arterial	Southbound	PM
Hudson	SR-303 from Boston Mills to Atterbury WB	61.70	12:00 - 1:00	Arterial	Westbound	MD
Hudson	Terex Rd from SR-91 to Hudson Dr	61.80	4:00 - 5:00	Arterial	Westbound	PM
Hudson	SR-303 from Atterbury to SR-91 WB	61.80	12:00 - 1:00	Arterial	Westbound	MD
Hudson	SR-91 Terex to Hudson Dr SB	62.30	8:00 - 9:00	Arterial	Southbound	AM
Hudson	SR-303 from SR-91 to Hayden Pkwy EB	62.40	3:00 - 4:00	Arterial	Eastbound	MD
Hudson	SR-91 Terex to Hudson Dr NB	62.70	12:00 - 1:00	Arterial	Northbound	MD
Hudson	SR-91 from Hudson to Veterans Way NB	63.20	5:00 - 6:00	Arterial	Northbound	PM
Hudson	SR-91 Georgetown to Terex NB	63.30	12:00 - 1:00	Arterial	Northbound	MD
Hudson	SR-303 from Boston Mills to Atterbury WB	63.70	5:00 - 6:00	Arterial	Westbound	PM
Hudson	SR-91 from Aurora to Valleyview SB	64.10	8:00 - 9:00	Arterial	Southbound	AM
Hudson	SR-303 from Hayden to Stow EB	64.10	4:00 - 5:00	Arterial	Eastbound	PM
Hudson	Hudson Dr from Terex to Norton	68.20	5:00 - 6:00	Arterial	Southbound	PM
Hudson	Stow Rd from Barlow to Norton	69.40	5:00 - 6:00	Arterial	Southbound	PM
Hudson	Stow Rd from Ravenna to Barlow	70.30	5:00 - 6:00	Arterial	Southbound	PM
Hudson	Stow Rd from Barlow to Ravenna	70.40	7:00 - 8:00	Arterial	Northbound	AM
Hudson	SR-303 bet SR-91 and Stow Rd	71.58	3:00 - 4:00	Arterial	Westbound	MD
Hudson / Twinsburg Twp	SR-91 bet SR-303 and Twinsburg Rd	72.09	5:00 - 6:00	Arterial	Southbound	PM
Hudson	Stow Rd from Norton to Barlow	72.40	7:00 - 8:00	Arterial	Northbound	AM
Hudson	Stow Rd from Canterbury to Ravenna	73.00	5:00 - 6:00	Arterial	Southbound	PM
Hudson	Terex Rd from Barlow to SR-303	73.50	5:00 - 6:00	Arterial	Westbound	PM
Hudson	Stow Rd from Ravenna to Canterbury	74.40	7:00 - 8:00	Arterial	Northbound	AM
Hudson	SR-91 bet Hudson Dr and SR-303	74.90	7:30 - 8:30	Arterial	Northbound	AM
Kent / Franklin Twp	SR-261 S of and adjacent to Summit Rd	58.96	4:00 - 5:00	Intersection	Eastbound	PM
Kent	SR-43 through SR-261 Intersection	59.13	4:45 - 5:45	Intersection	Northbound	PM
Kent	E Main St W of and adjacent to Willow / Haymaker	64.11	4:00 - 5:00	Intersection	Eastbound	PM
Kent	SR-59 bet River St and Water St	64.15	5:00 - 6:00	Arterial	Eastbound	PM
Kent	E Main St bet Willow St and Gougler Ave	67.74	5:00 - 6:00	Arterial	Westbound	PM
Kent	Fairchild from SR-43 to Hudson Dr	70.50	5:00 - 6:00	Arterial	Westbound	PM
Macedonia	SR-8 NB South of and adjacent to SR-82	33.99	3:00 - 4:00	Intersection	Northbound	MD
Macedonia	SR-8 SB North leg of SR-82 Intersection	34.57	12:00 - 1:00	Intersection	Southbound	MD
Macedonia	IR-271 NB to SR-8	44.37	7:45 - 8:45	Ramp		AM
Macedonia	SR-8 NB South of and adjacent to Valley View Rd	49.82	3:00 - 4:00	Intersection	Northbound	MD
Macedonia	IR-271 SB to SR-8	55.33	9:00 - 10:00	Ramp		PM
Macedonia	IR-271 NB just North of SR-82	57.09	7:30 - 8:30	Freeway	Northbound	AM
Macedonia	SR-8 NB South of and adjacent to Valley View Rd	57.40	7:15 - 815	Intersection	Northbound	AM
Macedonia	SR-8 SB through the IR-271 Interchange	62.26	7:30 - 8:30	Freeway Interchange	Southbound	AM
Macedonia / Sagamore Hills Twp	SR-8 SB bet Valleyview and SR-82	64.31	5:00 - 6:00	Arterial	Southbound	PM
Macedonia	SR-82 through the SR-8 Intersection	64.59	12:15 - 1:15	Intersection	Westbound	MD
Macedonia	SR-82 through the IR-271 Interchange	65.45	12:15 - 1:15	Freeway Interchange	Westbound	MD
Macedonia / Sagamore Hills Twp	SR-82 bet SR-8 and Boyden Rd	67.46	5:00 - 6:00	Arterial	Westbound	PM
Macedonia	SR-82 at the SR-8 Intersection	70.60	7:45 - 8:45	Intersection	Eastbound	PM
Macedonia	SR-8 through the IR-271 Interchange	70.94	7:30 - 8:30	Freeway Interchange	Northbound	AM
Macedonia	SR-8 to IR-271 SB	72.13	5:00 - 6:00	Ramp		AM

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Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Macedonia / Sagamore Hills Twp	SR-82 bet Boyden Rd and SR-8	72.15	5:15 - 6:15	Arterial	Eastbound	PM
Macedonia	SR-8 SB to IR-271 SB	72.53	4:45 - 5:45	Ramp		PM
Macedonia	SR-8 SB South leg of Valleyview Intersection	72.68	5:00 - 6:00	Intersection	Southbound	PM
Macedonia / Sagamore Hills Twp	SR-8 NB bet SR-82 and Valley View Rd	73.32	5:15 - 6:15	Arterial	Northbound	PM
Northfield / Sagamore Hills Twp	Olde Eight Rd from SR-8 to Valleyview	67.10	5:00 - 6:00	Arterial	Southbound	AM
Northfield / Sagamore Hills Twp	Olde Eight Rd from Valleyview to SR-8	71.20	5:00 - 6:00	Arterial	Northbound	PM
Norton	SR-21 SB to IR-76 WB	60.80	9:30 - 10:30	Ramp		AM
Norton	Reimer Rd bet Medina Line and Cleve Mass Rd	64.56	5:00 - 6:00	Arterial	Eastbound	AM
Norton	IR-76 WB to SR-21 SB	65.62	9:00 - 10:00	Ramp		AM
Norton	SR-21 NB to IR-76 WB	67.36	9:00 - 10:00	Ramp		AM
Norton	Cleveland Massillon Rd through the IR-76 Interchange	69.92	3:00 - 4:00	Freeway Interchange	Southbound	MD
Norton	Barber Rd bet Clark Mill and Summit Rd	73.37	5:00 - 6:00	Arterial	Northbound	PM
Norton	SR-21 SB to IR-76 EB	73.46	12:15 - 1:15	Ramp		MD
Norton	SR-261 through the SR-21 Intersection	74.44	7:15 - 815	Freeway Interchange	Eastbound	AM
Portage Co - Ravenna Twp	SR-14 bet SR-5 WB Ramps and SR-59	47.53	7:15 - 815	Arterial	Westbound	AM
Portage Co - Ravenna Twp	SR-14/44 N of and adjacent to SR-59	47.76	1:15 - 2:15	Intersection	Eastbound	MD
Portage Co - Ravenna Twp	SR-14/44 North leg of SR-59 Intersection	48.07	1:15 - 2:15	Intersection	Southbound	MD
Portage Co - Brimfield Twp	Tallmadge Rd through the IR-76 Interchange	53.01	4:00 - 5:00	Freeway Interchange	Westbound	PM
Portage Co - Randolph Twp	SR-44 through US-224 Intersection	55.83	5:00 - 6:00	Intersection	Northbound	PM
Portage Co - Randolph Twp	SR-44 at the US-224 Intersection	61.44	5:00 - 6:00	Intersection	Southbound	PM
Portage Co - Suffield Twp	SR-43 through US-224 Intersection	64.01	8:00 - 9:00	Intersection	Northbound	PM
Portage Co - Ravenna Twp	SR-14/44 North of and adjacent to SR-59	64.20	4:00 - 5:00	Intersection	Northbound	PM
Portage Co - Rootstown Twp	SR-44 bet Tallmadge Rd and IR-76 EB Ramps	65.17	4:45 - 5:45	Arterial	Southbound	PM
Portage Co - Suffield Twp	SR-43 through the US-224 Intersection	65.97	10:00 - 11:00	Intersection	Southbound	AM
Portage Co - Suffield Twp	SR-43 through the SR-261 Intersection	66.31	4:45 - 5:45	Intersection	Southbound	PM
Portage Co - Ravenna Twp	SR-59 W of and adjacent to SR-14/44	66.61	5:00 - 6:00	Intersection	Westbound	AM
Portage Co - Rootstown Twp	SR-44 NB through the IR-76 Interchange	67.19	4:45 - 5:45	Freeway Interchange	Northbound	PM
Portage Co - Rootstown Twp	SR-44 bet Tallmadge Rd and IR-76	67.34	7:15 - 815	Arterial	Northbound	AM
Portage Co - Ravenna Twp	SR-14/44 bet SR-5 and SR-59	70.33	3:00 - 4:00	Arterial	Northbound	MD
Portage Co - Rootstown Twp	SR-44 bet Prospect St and IR-76 WB Ramps	71.11	5:15 - 6:15	Arterial	Southbound	PM
Portage Co - Franklin Twp	SR-261 South leg of Intersection with Summit St	73.19	4:45 - 5:45	Intersection	Westbound	PM
Portage Co - Edinburg Twp	SR-14 bet IR-76 EB Ramps and Rock Spring Rd	73.63	5:00 - 6:00	Arterial	Eastbound	PM
Portage Co - Ravenna Twp / Ravenna	SR-14 bet Infirmary Rd and SR-44 / Chestnut St	74.55	4:00 - 5:00	Arterial	Eastbound	PM
Ravenna	SR-59 bet S Prospect St and N Chestnut St	60.63	12:15 - 1:15	Arterial	Westbound	MD
Ravenna	SR-59 Main St bet Chestnut St and Prospect St	60.67	4:00 - 5:00	Arterial/Intersection	Eastbound	PM
Ravenna	SR-59 bet Diamond St and Chestnut St	67.25	3:00 - 4:00	Arterial	Eastbound	MD
Richfield	IR-77 NB Through the IR-80 Interchange	40.70	7:30 - 8:30	Freeway	Northbound	AM
Richfield	IR-77 NB South of IR-80 Ramps	42.96	7:30 - 8:30	Freeway	Northbound	AM
Richfield	Ramp from IR-80 to IR-77 NB	54.98	7:30 - 8:30	Ramp		AM
Richfield	Wheatley Rd through the Brecksville Rd Intersection	56.62	5:30 - 6:30	Intersection	Northbound	PM
Richfield	IR-77 NB bet Brecksville Rd and IR-80	57.66	7:30 - 8:30	Freeway	Northbound	AM
Richfield	Brecksville Rd through the Wheatly Rd Intersection	57.86	5:15 - 6:15	Intersection	Southbound	PM

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Richfield	Brecksville Rd through Intersection with Wheatly Road	62.03	7:45 - 8:45	Intersection	Northbound	AM
Richfield	Wheatly Rd through the Brecksville Rd Intersection	64.51	5:00 - 6:00	Intersection	Southbound	PM
Richfield / Richfield Twp	Wheatly Rd through the IR-77 Interchange	69.80	4:45 - 5:45	Freeway Interchange	Southbound	PM
Richfield	WB Connector bet IR-80 and SR-21	72.48	8:45 - 9:45	Ramp		PM
Richfield	Bet IR-80 Connector Rd WB to SR-21	72.71	8:45 - 9:45	Ramp		PM
Richfield	Brecksville Rd at IR-80 Interchange	74.29	7:45 - 8:45	Freeway Interchange	Northbound	AM
Stow	Steels Corners Rd from Bridgewater to SR-8	52.70	5:00 - 6:00	Arterial	Eastbound	PM
Stow	Hudson Dr from Walmart Dr to Graham	54.10	5:00 - 6:00	Arterial	Southbound	PM
Stow	SR-91 North Leg of Graham Rd Intersection	54.67	5:00 - 6:00	Intersection	Southbound	PM
Stow	Graham Rd from Portage Co Line to Fishcreek	57.70	2:00 - 3:00	Arterial	Westbound	MD
Stow	Steels Corners Rd from SR-8 to Hudson	58.80	5:00 - 6:00	Arterial	Eastbound	PM
Stow	SR-91 N of and adjacent to Graham Rd	60.87	5:00 - 6:00	Intersection	Northbound	PM
Stow	Graham Rd from Baird to Fishcreek Rd	66.00	7:00 - 8:00	Arterial	Eastbound	AM
Stow	SR-91 bet SR-59 and Graham Rd	66.36	5:00 - 6:00	Arterial	Southbound	PM
Stow	Steels Corners Rd from SR-8 to Bridgewater	66.50	5:00 - 6:00	Arterial	Eastbound	PM
Stow	Stow Rd from Fishcreek to SR-91	66.60	3:00 - 4:00	Arterial	Southbound	MD
Stow	Hudson Dr from Graham to Walmart Dr	67.50	8:00 - 9:00	Arterial	Northbound	PM
Stow	Graham Rd from Fishcreek to Portage Co Line	67.70	7:00 - 8:00	Arterial	Eastbound	AM
Stow	Steels Corners Rd from Hudson to SR-8	68.20	5:00 - 6:00	Arterial	Eastbound	PM
Stow	Hudson Dr from Steels Corners to Springdale	69.40	12:00 - 1:00	Arterial	Southbound	MD
Stow	Stow Rd from SR-91 to Fishcreek	70.70	4:00 - 5:00	Arterial	Northbound	PM
Stow	Graham Rd from Fishcreek to Baird	71.30	3:00 - 4:00	Arterial	Westbound	MD
Stow	Hudson Dr from Springdale to Steels Corners	72.80	12:00 - 1:00	Arterial	Northbound	MD
Stow	Graham Rd from SR-91 to Charring Cross	73.10	5:00 - 6:00	Arterial	Eastbound	PM
Stow	Graham Rd from Charring Cross to SR-91	74.30	3:00 - 4:00	Arterial	Westbound	MD
Streetsboro	SR-14/303 bet W jct and E jct	44.02	5:00 - 6:00	Arterial	Eastbound	PM
Streetsboro	SR-14 bet IR-80 Ramps and SR-43	54.14	4:45 - 5:45	Arterial	Eastbound	PM
Streetsboro	SWB Connector bet IR-480 and IR-80	57.22	9:15 - 10:15	Ramp		PM
Streetsboro	Aurora Hudson Rd from IR-480 SB Ramps to Frost Rd	60.90	7:00 - 8:00	Arterial	Eastbound	AM
Streetsboro	NEB Connector bet IR-480 and IR-80	67.12	9:15 - 10:15	Ramp		PM
Streetsboro	SR-14/303 bet West Junction and East Junction	72.19	3:00 - 4:00	Arterial	Westbound	MD
Streetsboro	SR-14 bet SR-43 and the IR-80 Ramps	73.60	12:15 - 1:15	Arterial	Westbound	MD
Streetsboro	SR-303 E of and adjacent to SR-14 (East)	73.86	7:00 - 8:00	Intersection	Westbound	AM
Summit Co - Copley Twp	Cleveland Massillon Rd through Copley Circle	57.33	7:30 - 8:30	Intersection	Southbound	AM
Summit Co - Northfield Center Twp	Olde Eight Rd from Valleyview to SR-82	58.70	12:00 - 1:00	Arterial	Southbound	MD
Summit Co - Richfield Twp	Medina Line Rd bet Bath Rd and SR-303	59.89	6:00 - 7:00	Arterial	Southbound	AM
Summit Co - Copley Twp	Cleveland Massillon Rd through the circle	61.31	7:30 - 8:30	Intersection	Northbound	AM
Summit Co - Springfield Twp	Canton Rd through the US-224 Intersection	61.31	4:00 - 5:00	Intersection	Northbound	PM
Summit Co - Springfield Twp	US-224 through the SR-91 Intersection	61.61	4:45 - 5:45	Intersection	Eastbound	PM
Summit Co - Springfield Twp	SR-91 through the US-224 Intersection	62.32	5:00 - 6:00	Intersection	Southbound	PM
Summit Co - Bath Twp	Ghent Rd bet Cleveland Mass Rd and IR-77 SB ent Ramp	63.37	5:00 - 6:00	Arterial	Northbound	PM
Summit Co - Bath Twp	Ghent Rd through the IR-77 Interchange	63.64	5:00 - 6:00	Freeway Interchange	Northbound	PM
Summit Co - Bath Twp	Cleveland Massillon Rd through Ghent Rd Intersection	64.14	7:45 - 8:45	Intersection	Northbound	AM

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

Table A-1 | CMP Final Analysis Segments

POLITICAL UNIT	NAME	% FREEFLOW	TIME	TYPE	DIRECTION	TIME PERIOD
Summit Co - Northfield Center Twp	Olde Eight Rd from SR-82 to Valleyview	65.50	3:00 - 4:00	Arterial	Northbound	MD
Summit Co - Bath Twp / Copley Twp	SR-18 bet Cleveland Massillon Rd and IR-77 NB Ramps	67.03	12:30 - 1:30	Arterial	Westbound	MD
Summit Co - Coventry Twp	S Main St bet Swartz Rd and N Turkeyfoot Rd	67.47	7:30 - 8:30	Arterial	Northbound	AM
Summit Co - Coventry Twp	S Main St at the Killian Rd Intersection	68.58	9:00 - 10:00	Intersection	Northbound	PM
Summit Co - Copley Twp	SR-162 Copley Rd through the SR-21 Interchange	68.69	7:45 - 8:45	Freeway Interchange	Eastbound	AM
Summit Co - Bath Twp / Copley Twp	SR-18 E of and adjacent to Medina Line Rd	68.87	5:15 - 6:15	Intersection	Westbound	PM
Summit Co - Bath Twp / Copley Twp	SR-18 bet IR-77 NB Ramps and Cleveland Massillon Rd	69.60	5:15 - 6:15	Arterial	Eastbound	PM
Summit Co - Coventry Twp	IR-77 NB bet Arlington Rd and IR-277 / US-224	70.96	7:30 - 8:30	Freeway	Northbound	AM
Summit Co - Bath Twp	Cleveland Massillon Rd through the Ghent Rd Intersection	71.36	5:00 - 6:00	Intersection	Southbound	PM
Summit Co - Copley Twp	Cleveland Massillon Rd bet Copley Rd and Ridgewood Rd	72.86	4:45 - 5:45	Arterial	Southbound	PM
Summit Co - Bath Twp	Ghent Rd bet IR-77 SB Ramps and Cleveland Massillon Rd	73.16	5:00 - 6:00	Arterial	Southbound	PM
Tallmadge	SouthEast Ave NW of Eastwood Ave	51.19	4:45 - 5:45	Intersection	Southbound	PM
Tallmadge	West Ave bet Brittain Rd and Tallmadge Circle	51.44	4:45 - 5:45	Arterial	Eastbound	PM
Tallmadge	SR-532 SouthEast Ave through the IR-76 Interchange	62.70	5:15 - 6:15	Freeway Interchange	Southbound	PM
Tallmadge	SR-91 North Ave bet Tallmadge Circle and Howe Rd	63.44	4:45 - 5:45	Arterial	Southbound	PM
Tallmadge	SouthEast Ave through the IR-76 Interchange	70.42	3:00 - 4:00	Freeway Interchange	Northbound	MD
Tallmadge	NorthWest Ave bet Howe Rd and Tallmadge Circle	70.52	4:00 - 5:00	Arterial	Southbound	PM
Tallmadge	SouthEast Ave bet Eastwood / Munroe and IR-76	71.58	5:00 - 6:00	Arterial	Northbound	PM
Tallmadge	SouthEast Ave NW and adjacent to Eastwood / Munroe Intersection	74.57	11:15 - 12:15	Intersection	Northbound	MD
Twinsburg	Ravenna Rd from SR-91 to Idlewood	49.90	2:00 - 3:00	Arterial	Northbound	MD
Twinsburg	Ravenna Rd from Idlewood to SR-91	57.60	6:00 - 7:00	Arterial	Southbound	AM
Twinsburg	Ravenna Rd from Chamberlin to Cuyahoga Co Line	60.60	7:00 - 8:00	Arterial	Northbound	AM
Twinsburg	SR-82 bet SR-91 and Cannon Rd	61.37	5:00 - 6:00	Arterial	Westbound	PM
Twinsburg	SR-82 bet IR-480 WB Ramps and SR-91	64.74	5:00 - 6:00	Arterial	Eastbound	PM
Twinsburg	SR-91 NB through the IR-480 Interchange	68.13	4:45 - 5:45	Freeway Interchange	Northbound	PM
Twinsburg	Ravenna Rd from Cuyahoga Co Line to Chamberlin	69.30	5:00 - 6:00	Arterial	Southbound	PM
Twinsburg	SR-91 bet Twinsburg Rd and IR-480	71.64	4:45 - 5:45	Arterial	Northbound	PM
Twinsburg	SR-82 EB through the IR-480 Interchange	72.17	4:45 - 5:45	Freeway Interchange	Eastbound	PM
Twinsburg	Ravenna Rd from Chamberlin to Idlewood	72.40	7:00 - 8:00	Arterial	Southbound	AM

*Table sorted alphabetically by Political Unit, then by Percent Free Flow Speed.

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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 governemtns of Portage and Summit Counties and a portion of Wayne County.

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee

FROM: **AMATS Staff**

RE: **Planning Data Forecast 2045**

DATE: **December 2, 2020**

As an input to the AMATS Long Range Transportation Plan, Transportation Outlook 2045, staff has developed the Planning Data Forecast. The purpose of the forecast is to project socio economic data from a base year of 2010 to 2045. The data forecasted in the report will be used to update AMATS' transportation model and will be used to forecast air quality emissions and future traffic patterns.

The AMATS Planning Data Forecast is the formal report in which forecasted variables and underlying methodologies are presented. AMATS reviewed these methodologies with the committees in 2018 and since has been working to distribute data to the traffic zone (TAZ) level. Traffic zones are the smallest unit of geography used in AMATS transportation model. The 2010 and 2045 data are presented at different geographic levels:

- The AMATS region
- The county level
- Select larger cities
- 8 subareas, grouped by geographic proximity and similarity

Overall, the AMATS region is projected to see a 2.4% growth in population and a 17.0% growth in employment. For population: Summit County is expected to remain status quo, with an expected 0.2% growth, Portage County is expected to grow by an impressive 9.8%, and the AMATS portion of Wayne County is expected to see 1.2% growth. High population growth areas include Northwest Portage (12.0%), Northeast Portage (9.9%), and Southern Summit (3.0%). In contrast, employment growth is expected to be similar across the AMATS Counties: Summit County anticipates 21.5% growth, Portage County anticipates 21.3%, and Wayne County anticipates 18.3% growth. High employment growth areas include Northern Summit (25.6%), Cuyahoga Falls (25.1%), and Southwest Portage (19.9%).

Employment sectors expected to see the biggest changes across the region are Health Care and Social Assistance (52.7%), Construction (46.8%), Utilities (-14.9%), and Manufacturing (-16.6%).

The Planning Data Forecast provides one vision of what the future of the AMATS region may hold, however, it is anything but certain. It is a planning tool that helps illustrate potential future planning challenges. AMATS staff recommend approval of the 2045 Planning Data Forecast.

AMATS 2045 Planning Data Forecast

DRAFT

December 2020

Akron Metropolitan Area Transportation Study
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Akron, Ohio 44308

This report is the product of a study financed (in part) by the U.S. Department of Transportation's Federal Highway Administration, Federal Transit Administration and the Ohio Department of Transportation.

Cooperative transportation planning by the Village, City and County governments of Portage and Summit Counties and the Chippewa and Milton Township areas of Wayne County; in conjunction with the U.S. Department of Transportation and the Ohio Department of Transportation.

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Executive Summary

The Akron Metropolitan Area Transportation Study Planning Data Forecast is a useful tool to understand what the greater Akron area could possibly look like in 2045. The forecast is based on existing data and projects this data into the future based on current trends. While it is truly impossible to accurately predict the future, current trends can give us some expectation of what the future holds. The forecasting of planning variables provides insight to what needs our transportation system may require and it is a critical part of the long range planning process.

Greater Akron area's population is expected to grow by 2.4 percent between 2010 and 2045. Areas of population growth are anticipated in western Portage County and southern Summit County.

Employment is also expected to grow between now and 2045. Greater Akron area employment is forecasted to increase by 17 percent. High growth job sectors include healthcare, construction and transportation and warehousing.

Introduction

One of the most fundamental steps in the regional transportation planning process is the collection, organization and analysis of existing planning-related data. Using this data, the Akron Metropolitan Area Transportation Study (AMATS) can determine where we have been (from a social-economic standpoint), the greater Akron region's current conditions, and perhaps most critical to any planning effort, in what direction we are heading.

Although the most commonly used data items (ex. population or employment data) are gathered and analyzed on an ongoing basis, a greatly expanded effort is undertaken in preparation for each upcoming long-range regional transportation plan. For this reason, the AMATS *2045 Planning Data Forecast* has been completed as a necessary precursor to the upcoming long-range plan, *Transportation Outlook 2045*.

AMATS analyzes the base year of 2010 and the planning period year of 2045. 2010 data generally comes from either the most recent U.S. census or from American Community Survey (ACS) data. Using forecasting methodology, this 2010 data is forecasted out to the plan year of 2045. Projection methodologies vary depending on the nature of each variable and is described below.

The AMATS *2045 Planning Data Forecast* projects a number of variables, each of which has a direct impact on local traffic and is therefore required for input into the regional traffic demand model. These variables include:

Population
Households
Population Under 18
Vehicles
Workers
Employment (25 categories)
School Enrollment (K-12)
University Enrollment
Group Quarters
Hotel Rooms
Median Household Income

The AMATS region is divided into 837 traffic analysis zones (traffic zones or TAZ). These traffic zones are used by the regional traffic demand model to generate traffic volumes and to determine where trips begin and end. The model requires that each of the variables be provided for each traffic zone – for the base year 2010 and plan year 2045.

The AMATS *2045 Planning Data Forecast* places the over 30 planning variables into three categories: population-based, employment-based and stand-alone variables. For each variable, this report will explain the sources of the underlying data and the methodology used to generate 2045 forecasts. In Part IV of this report, the data representing each of the planning variables will be presented by subarea.

Future Projections

Although AMATS makes its best attempt to project future data based on recent historic trends, there is no "crystal ball" to perfectly ascertain future growth. With a long, 25 year time horizon, even minor fluctuations in any given historic year can significantly affect the expected future outcome at the individual community level. Major fluctuations can *dramatically* alter the projected totals.

To smooth out these data fluctuations, as well as to resolve problems of redundancy (i.e. where census tracts or TAZs include portions of more than one municipality), AMATS has aggregated TAZ-level data - for every variable - into eight different subareas. These subareas reflect the shared growth characteristics of the political units within the same geographic area. In addition, data has been presented at the regional and county levels, as well as for three specific larger cities: Akron, Barberton and Cuyahoga Falls. The data from these three communities *is not* included in the subarea data. The following is a breakdown of the levels in which data has been presented for this analysis:

Forecasting Levels Breakdown	
REGIONAL	
AMATS Region	
COUNTY	
Summit County, Portage County	
SELECT CITIES	
Akron, Barberton, Cuyahoga Falls	
SUBAREAS	
Northern Summit	Boston Heights, Boston Township, Hudson, Macedonia, Northfield Village, Northfield Center Township, Sagamore Hills, Twinsburg Township
Central Summit	Bath Township, Copley Township, Fairlawn, Munroe Falls, Silver Lake, Stow, Tallmadge
Southern Summit	Clinton, Coventry Township, Green, Lakemore, Mogadore, New Franklin, Norton, Springfield Township
Northwest Portage	Aurora, Mantua Village, Mantua Township, Shalersville Township, Streetsboro, Sugar Bush Knolls
Northeast Portage	Freedom Township, Garrettsville, Hiram Village, Hiram Township, Nelson Township, Windham Village, Windahm Township
Southwest Portage	Brimfield Township, Franklin Township, Kent, Mogadore (Portage), Randolph Township, Ravenna, Ravenna Township, Rootstown Township, Suffield Township, Tallmadge (Portage)
Southeast Portage	Atwater Township, Charlestown Township, Deerfield Township, Edinburg Township, Palmyra Township, Paris Township
Northeast Wayne	Chippewa Township, Doylestown, Milton Township, Norton (Wayne), Rittman

While performing the various data analyses required for the Planning Data Forecast, AMATS generally allows historic data points to paint the picture of what may be expected in 2045. AMATS solely uses these projections for planning purposes only and in no way does it impact current project selection or funding.

Part I: Population-Based Variables

Population

Data Sources

To analyze the AMATS region's population growth over the 25 year planning horizon, three primary data sources were used:

- Historic data gathered from the last two U.S. Census periods (2000 and 2010) for Portage County
- American Community Survey (ACS) 2011-2016 for Summit and Wayne Counties

Methodology

AMATS used a logarithmic mathematical model to project population in 2045. The logarithmic model fits the greater Akron region well, as the model shows more gradual change. AMATS used two different data sets for the projections based on best fit. In Portage County, AMATS used the actual census counts for the years 1960-2010. Typically ACS data has under represented Portage County's growth, which has been fairly linear over the past 50 years. In Summit and Wayne Counties were growth is slower, AMATS used the ACS data. The only exception is the City of Green, which used raw census counts due to its higher growth.

At the TAZ level population loss or gain was distributed based on the county control total and likely development patterns.

Households

Data Sources

To project the number of households anticipated by 2045 in the AMATS region, three primary data sources were used:

- 2010 U.S. Census Data
- Ohio Development Services Cohort Projections Data 2045
- 2045 AMATS Population Projections

Methodology

According to the U.S. Census Bureau, a household is defined as a group of people who occupy a housing unit as their usual place of residence. The number of households within an area has a direct impact on local traffic volumes, and is therefore an important input into the regional traffic demand model.

At the County Level, AMATS used Census Householder Data by age for 2010, Ohio Development Services 2045 Population Cohorts and the AMATS 2045 Population Projections to project the number of households in 2045. Households were distributed to TAZs based 2010 household distribution and development trends throughout the region.

Population Under 18

Data Sources

To forecast the population under the age of 18 expected by 2045 in the AMATS region, two primary data sources were used:

- 2010 U.S Census
- Previously calculated 2045 population by TAZ figures, which were based on U.S. Census data

Methodology

The 2010 U.S Census provided population in each TAZ that was under the age of 18 – a necessary input into the regional traffic demand model. Using the total 2010 population for each TAZ, the percentage of each TAZ's under 18 population was calculated. Assuming that the percentage of under 18 population would remain constant through 2045, the 2010 rate was multiplied by the previously calculated 2045 forecasted total population by TAZ to determine the 2045 under 18 population for each TAZ. The TAZ-level data was then aggregated into the appropriate subareas.

Number of Vehicles

Data Sources

To forecast the number of household-based (i.e. non-commercial) vehicles expected by 2045 in the AMATS region, two primary data sources were used:

- 2010 U.S Census
- Previously calculated 2045 number of households by TAZ figures, which were based on U.S. Census and CTPP data

Methodology

U.S. Census data provided the raw numbers for the number of household-based vehicles by TAZ in 2010, which is an important input into the regional traffic demand model. For each TAZ, this number of vehicles was divided by the 2010 number of households (also using CTPP data) to determine a rate for the number of vehicles per household. It was assumed that the number of vehicles per household rate would remain constant through 2045, so the rate was multiplied by the previously calculated 2045 number of households by TAZ to derive an expected number of 2045 vehicles for each TAZ. Similar to all other variables, TAZ-level data was then aggregated into the appropriate subareas.

Number of Workers

Data Sources

To project the number of workers expected by 2045 in the AMATS region, two primary data sources were used:

- 2010 U.S Census
- Previously calculated 2010 and 2045 population by TAZ figures

Methodology

The Census Bureau defines workers as people who reside within a community, are 16 years or older and who did any work for pay. Workers may be employed in a community other than the one in which they live. CTPP data provided the raw numbers of workers by TAZ in 2010. For each TAZ, the 2010 number of workers was divided by the 2010 total population of the TAZ to determine the percentage of the population within that TAZ that could be classified as "workers". Assuming that this rate would hold steady through 2045, this 2010 rate of workers per TAZ was multiplied by the previously calculated 2045 population by TAZ to determine the number of workers in each TAZ in 2045. This TAZ-level data was then aggregated into the appropriate subareas.

Part II: Employment-Based Variables

Employment

Data Sources

To analyze the AMATS region's employment growth over the 25 year planning horizon, the following data sources were used:

- 2018 Quarterly Census of Employment and Wages (QCEW)
- Ohio Department of Jobs and Family Services Industry Employment Projection Report 2016-2026

Methodology

As an input into the upcoming long-range regional transportation plan, AMATS has forecasted the region's employment to the year 2045, using a base year of 2018. While 2018 is the most recent data set, AMATS still compares 2045 data to the 2010 base year employment in the attached tables.

The first step in the process was gathering recent historic employment data, by industry. Employment industry data is differentiated by its North American Industry Classification System (NAICS) code, as identified in the following table:

NAICS Industry Codes	
Code #	**Industry Description**
NAICS 11	Agriculture, Forestry and Hunting
NAICS 21	Mining
NAICS 22	Utilities
NAICS 23	Construction
NAICS 31-33	Manufacturing - Aggregated
NAICS 42	Wholesale Trade
NAICS 44-45	Retail Trade - Aggregated
NAICS 48-49	Transportation and Warehousing - Aggregated
NAICS 51	Information
NAICS 52	Finance and Insurance
NAICS 53	Real Estate and Rental and Leasing
NAICS 54	Professional Scientific and Technical Services
NAICS 55	Management of Companies and Enterprises
NAICS 56	Administrative Support, Waste Management and Remediation Services
NAICS 61	Education Services
NAICS 62	Health Care and Social Assistance
NAICS 71	Arts, Entertainment and Recreation
NAICS 72	Accommodation and Food Services
NAICS 81	Other Services (except Public Administration)
NAICS 92	Public Administration
NAICS 99	Other*

**Note - the source provided no data for the NAICS 99 "Other" category. The number of jobs within this industry code has typically been negligible in previous analyses*

To project future employment, AMATS used the Ohio Department of Jobs and Family Services employment projections from 2016 to 2026 to develop growth rates for NAICS job codes out to 2045. AMATS used its 2018 QCEW data to project to 2045. It was assumed that most employment centers would remain employment centers between 2010 and 2045. The employment growth assumed in the AMATS region was distributed to TAZs where NAICS employment was already located or distributed to zones where economic development was deemed likely.

Part III: Stand-Alone Variables

School Enrollment (K-12)

Data Sources

The State of Ohio publishes comprehensive enrollment reports for both public and private schools. To forecast the number of students expected in 2045, the following sources were used:

- Ohio Department of Education 2010 public and non-public school enrollment reports
- U.S. Census Bureau – population under age 18 by community
- Various school and board of education websites for verification purposes

Methodology

To begin the data forecasting process, 2010 enrollment data was gathered using reports published by the Ohio Department of Education. The street address for each school was determined and overlayed with the AMATS traffic zones in GIS to allocate enrolled students by TAZ.

Many school districts in the region are in the midst of closing, consolidating and/or constructing new school facilities. Research was completed to determine which schools were affected, and how best to re-allocate 2010 students to these new facilities.

Once 2010 data had been established for public schools, each school building's enrollment was multiplied its corresponding community's "under age 18" growth rate between 2010 and 2045. This resulted in a 2045 enrollment figure at the TAZ level. The TAZ level data was then aggregated and presented at the subarea level.

Group Quarters

Data Sources

To project the number of residents living in group quarters by 2045, the following data sources were used:

- 2010 U.S. Census
- Various institutional websites and reports for resident count and verification purposes

Methodology

Group quarters include college dormitories, jails and similar detention centers, and nursing homes. 2010 data was not available at the TAZ level, so it had to be manually calculated. As a first step, ACS data was utilized to determine the number of people residing in group quarters, as of 2010, by census tract. Most census tracts contain multiple traffic zones, so the total number of residents within each tract needed apportioned to the traffic zones within that tract. To accomplish this, aerial photos and online mapping programs were used to identify all group quarters facilities, which were then overlayed in GIS to determine which TAZ the facility fell in. Using university student housing reports, inmate population reports and nursing home websites, the populations were distributed among the traffic zones. If a tract contained a group quarters population (usually very small ones) and no group quarters facility could be identified, the total census tract population was divided evenly among all traffic zones within the tract.

Since group quarters populations are not related to the surrounding local community (i.e. students, inmates and nursing home residents may come from anywhere), AMATS assumed that group quarters populations would remain the same for existing facilities. However, areas where new group quarters have been built in the region between 2010 and 2020 have been added.

Hotel Rooms

Data Sources

To forecast the number of hotel room available in the AMATS region by 2045, the following data sources were used:

- Various hotel and travel industry websites to identify hotels and their room inventories
- Press releases regarding planned and/or pending hotel construction

Methodology

AMATS conducted research to identify every hotel in the region, as well as to determine the total number of rooms at each of these hotels – a required input into the regional traffic demand model. Once hotels and their addresses were identified, they were overlayed in GIS to determine which traffic zone housed each hotel. All hotels and room inventories existing as of 2010 were assumed to exist unchanged through 2045 (unless closed between 2010 and the 2020 update).

In addition to existing hotels, hotels that were under construction or in the planning phases were included in the 2045 totals.
Finally, AMATS added rooms (based on the average number of rooms in recently completed hotel projects) to certain high-growth traffic zones in which future hotel development seems likely. These areas include:

- Northern Summit
- Southern Summit
- Northwest Portage
- Southwest Portage

Median Household Income

Data Source

To determine the median household income by census tract, the following data source was used:

- 2010 U.S. Census

Methodology

The 2010 median household income was determined for every census tract within the AMATS region, using data provided by the American Community Survey. This median household income was assumed to be consistent among every traffic zone within that census tract. For traffic zones that crossed into multiple census tracts, an average was calculated, and that average of median household incomes was assigned to that particular TAZ. In areas where new growth is anticipated median household income was increased assuming that new housing units would most likely increase the TAZ median household income.

Part IV: Forecast Results

The following tables present the results of the various analyses conducted as part of the Planning Data Forecast process. All 35 variables have been forecasted for the AMATS region, at the county level, for three significant cities and eight subareas. Employment data has been summarized by NAICS code.

Each table includes 2010 base year data, as well as the data forecasted through the plan year of 2045. Although full details regarding data sources and methodology are available for each variable in the previous sections of this report, nearly all 2010 data has been collected from various sources and tools published by the U.S. Census Bureau. The State of Ohio provided important base year data as well.

Although data has been cross-checked for as much consistency as possible, certain situations prevent the perfect reconciliation of totals between different variables and/or subareas. Some of these situations include, but are not limited to:

- Rounding error
- Overlap between geographical boundaries (municipal/TAZ/census tract/etc.)
- The necessity of using different data sources within the same analysis due to data gaps or unavailability
- Internal efforts to smooth untenable forecasted totals

The following pages include a map illustrating the political units, subareas and traffic analysis zones that were considered as part of this analysis, as well as a presentation of the variables for each of these geographic areas.

AMATS 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	722,788	739,885	2.4%
Households	292,444	299,340	2.4%
Population Under 18	161,858	165,342	2.2%
Vehicles	523,128	534,506	2.2%
Workers	343,133	344,603	0.4%

Employment				
NAICS 11	371	338	-8.9%	Agriculture, Forestry and Hunting
NAICS 21	426	473	11.0%	Mining
NAICS 22	1,815	1,545	-14.9%	Utilities
NAICS 23	10,305	15,124	46.8%	Construction
NAICS 31-33	38,432	32,048	-16.6%	Manufacturing - Aggregated
NAICS 42	15,671	16,674	6.4%	Wholesale Trade
NAICS 44-45	35,243	40,791	15.7%	Retail Trade - Aggregated
NAICS 48-49	10,617	14,087	32.7%	Transportation and Warehousing - Aggregated
NAICS 51	4,987	4,817	-3.4%	Information
NAICS 52	9,438	13,184	39.7%	Finance and Insurance
NAICS 53	3,191	3,498	9.6%	Real Estate and Rental and Leasing
NAICS 54	14,766	16,913	14.5%	Professional Scientific and Technical Services
NAICS 55	14,358	18,841	31.2%	Management of Companies and Enterprises
NAICS 56	16,785	20,374	21.4%	Administrative Support, Waste Management and Remediation
NAICS 61	29,860	29,801	-0.2%	Education Services
NAICS 62	50,443	77,007	52.7%	Health Care and Social Assistance
NAICS 71	4,149	5,976	44.0%	Arts, Entertainment and Recreation
NAICS 72	25,111	26,920	7.2%	Accomodation and Food Services
NAICS 81	9,793	10,154	3.7%	Other Services (except Public Administration)
NAICS 92	9,685	8,999	-7.1%	Public Administration
NAICS 99	98	7	-92.9%	Other
Total Employment	305,544	357,571	17.0%	

K-12 School Enrollment	111,906	114,668	2.5%
University Enrollment	56,186	46,526	-17.2%
Group Quarters	18,186	18,422	1.3%
Hotel Rooms	6,391	6,620	3.6%
Median Household Income	57,851	57,900	0.1%

Summit County 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	541,781	542,799	0.2%
Households	222,781	223,374	0.3%
Population Under 18	123,575	123,462	-0.1%
Vehicles	390,395	386,964	-0.9%
Workers	256,808	254,646	-0.8%

Employment				
NAICS 11	86	47	-45.3%	Agriculture, Forestry and Hunting
NAICS 21	68	121	77.9%	Mining
NAICS 22	1,698	1,434	-15.5%	Utilities
NAICS 23	8,650	12,579	45.4%	Construction
NAICS 31-33	28,467	22,976	-19.3%	Manufacturing - Aggregated
NAICS 42	13,065	13,360	2.3%	Wholesale Trade
NAICS 44-45	29,146	32,727	12.3%	Retail Trade - Aggregated
NAICS 48-49	9,238	11,883	28.6%	Transportation and Warehousing - Aggregated
NAICS 51	4,563	4,270	-6.4%	Information
NAICS 52	8,662	12,370	42.8%	Finance and Insurance
NAICS 53	2,634	2,974	12.9%	Real Estate and Rental and Leasing
NAICS 54	13,387	15,076	12.6%	Professional Scientific and Technical Services
NAICS 55	13,527	17,919	32.5%	Management of Companies and Enterprises
NAICS 56	15,659	18,952	21.0%	Administrative Support, Waste Management and Remediation
NAICS 61	20,585	19,976	-3.0%	Education Services
NAICS 62	44,235	67,785	53.2%	Health Care and Social Assistance
NAICS 71	3,652	5,494	50.4%	Arts, Entertainment and Recreation
NAICS 72	20,338	21,242	4.4%	Accomodation and Food Services
NAICS 81	8,100	8,350	3.1%	Other Services (except Public Administration)
NAICS 92	7,760	7,229	-6.8%	Public Administration
NAICS 99	71	5	-93.0%	Other
Total Employment	253,591	296,769	17.0%	

K-12 School Enrollment	56,820	57,042	0.4%
University Enrollment	29,251	19,500	-33.3%
Group Quarters	9,967	10,084	1.2%
Hotel Rooms	5,056	5,135	1.6%
Median Household Income	53,964	54,000	0.1%

Portage County 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	161,419	177,266	9.8%
Households	62,222	68,308	9.8%
Population Under 18	33,678	37,226	10.5%
Vehicles	118,930	133,551	12.3%
Workers	78,844	84,003	6.5%

Employment				
NAICS 11	143	140	-2.1%	Agriculture, Forestry and Hunting
NAICS 21	344	283	-17.7%	Mining
NAICS 22	96	96	0.0%	Utilities
NAICS 23	1,494	2,244	50.2%	Construction
NAICS 31-33	9,422	8,682	-7.9%	Manufacturing - Aggregated
NAICS 42	2,475	3,194	29.1%	Wholesale Trade
NAICS 44-45	5,756	7,696	33.7%	Retail Trade - Aggregated
NAICS 48-49	1,347	2,160	60.4%	Transportation and Warehousing - Aggregated
NAICS 51	385	526	36.6%	Information
NAICS 52	722	752	4.2%	Finance and Insurance
NAICS 53	538	508	-5.6%	Real Estate and Rental and Leasing
NAICS 54	1,313	1,751	33.4%	Professional Scientific and Technical Services
NAICS 55	831	922	11.0%	Management of Companies and Enterprises
NAICS 56	1,087	1,380	27.0%	Administrative Support, Waste Management and Remediation
NAICS 61	8,826	9,348	5.9%	Education Services
NAICS 62	5,728	8,457	47.6%	Health Care and Social Assistance
NAICS 71	470	432	-8.1%	Arts, Entertainment and Recreation
NAICS 72	4,645	5,533	19.1%	Accomodation and Food Services
NAICS 81	1,537	1,658	7.9%	Other Services (except Public Administration)
NAICS 92	1,840	1,687	-8.3%	Public Administration
NAICS 99	27	2	-92.6%	Other
Total Employment	49,026	57,451	17.2%	

K-12 School Enrollment	15,749	17,415	10.6%
University Enrollment	26,935	27,026	0.3%
Group Quarters	7,914	8,025	1.4%
Hotel Rooms	1,335	1,485	11.2%
Median Household Income	61,349	61,300	-0.1%

Akron 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	202,443	199,153	-1.6%
Households	84,799	84,021	-0.9%
Population Under 18	46,211	45,177	-2.2%
Vehicles	140,505	136,963	-2.5%
Workers	90,746	88,386	-2.6%

Employment				
NAICS 11	9	6	-33.3%	Agriculture, Forestry and Hunting
NAICS 21	17	19	11.8%	Mining
NAICS 22	1,161	799	-31.2%	Utilities
NAICS 23	2,504	3,698	47.7%	Construction
NAICS 31-33	7,971	6,304	-20.9%	Manufacturing - Aggregated
NAICS 42	3,485	2,842	-18.5%	Wholesale Trade
NAICS 44-45	7,952	7,514	-5.5%	Retail Trade - Aggregated
NAICS 48-49	3,281	4,361	32.9%	Transportation and Warehousing - Aggregated
NAICS 51	2,319	1,925	-17.0%	Information
NAICS 52	2,106	2,922	38.7%	Finance and Insurance
NAICS 53	1,142	1,078	-5.6%	Real Estate and Rental and Leasing
NAICS 54	5,550	5,250	-5.4%	Professional Scientific and Technical Services
NAICS 55	9,150	11,331	23.8%	Management of Companies and Enterprises
NAICS 56	4,446	6,069	36.5%	Administrative Support, Waste Management and Remediation
NAICS 61	9,739	9,282	-4.7%	Education Services
NAICS 62	24,784	36,184	46.0%	Health Care and Social Assistance
NAICS 71	1,081	1,470	36.0%	Arts, Entertainment and Recreation
NAICS 72	5,256	5,401	2.8%	Accomodation and Food Services
NAICS 81	2,902	2,751	-5.2%	Other Services (except Public Administration)
NAICS 92	4,444	3,989	-10.2%	Public Administration
NAICS 99	17	0	-100.0%	Other
Total Employment	99,316	113,195	14.0%	

K-12 School Enrollment	17,573	17,198	-2.1%
University Enrollment	29,251	19,500	-33.3%
Group Quarters	6,199	6,214	0.2%
Hotel Rooms	441	658	49.2%
Median Household Income	32,298	32,300	0.0%

Barberton 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	26,341	25,742	-2.3%
Households	11,000	10,730	-2.5%
Population Under 18	6,182	6,031	-2.4%
Vehicles	17,666	17,069	-3.4%
Workers	11,833	11,415	-3.5%

Employment				
NAICS 11	45	0	-100.0%	Agriculture, Forestry and Hunting
NAICS 21	0	0	0.0%	Mining
NAICS 22	0	0	0.0%	Utilities
NAICS 23	1,029	416	-59.6%	Construction
NAICS 31-33	3,221	1,663	-48.4%	Manufacturing - Aggregated
NAICS 42	233	367	57.5%	Wholesale Trade
NAICS 44-45	750	699	-6.8%	Retail Trade - Aggregated
NAICS 48-49	131	132	0.8%	Transportation and Warehousing - Aggregated
NAICS 51	42	53	26.2%	Information
NAICS 52	111	125	12.6%	Finance and Insurance
NAICS 53	48	11	-77.1%	Real Estate and Rental and Leasing
NAICS 54	99	112	13.1%	Professional Scientific and Technical Services
NAICS 55	74	156	110.8%	Management of Companies and Enterprises
NAICS 56	322	161	-50.0%	Administrative Support, Waste Management and Remediation
NAICS 61	708	653	-7.8%	Education Services
NAICS 62	2,236	2,714	21.4%	Health Care and Social Assistance
NAICS 71	40	20	-50.0%	Arts, Entertainment and Recreation
NAICS 72	647	569	-12.1%	Accomodation and Food Services
NAICS 81	409	453	10.8%	Other Services (except Public Administration)
NAICS 92	199	160	-19.6%	Public Administration
NAICS 99	0	0	0.0%	Other
Total Employment	10,344	8,464	-18.2%	

K-12 School Enrollment	2,102	2,049	-2.5%
University Enrollment	0	0	0.0%
Group Quarters	371	374	0.8%
Hotel Rooms	0	0	0.0%
Median Household Income	39,968	40,000	0.1%

Cuyahoga Falls 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	50,021	49,941	-0.2%
Households	22,357	22,521	0.7%
Population Under 18	10,488	10,433	-0.5%
Vehicles	39,452	39,319	-0.3%
Workers	24,943	24,709	-0.9%

Employment				
NAICS 11	3	0	-100.0%	Agriculture, Forestry and Hunting
NAICS 21	3	0	-100.0%	Mining
NAICS 22	74	67	-9.5%	Utilities
NAICS 23	299	359	20.1%	Construction
NAICS 31-33	3,357	3,067	-8.6%	Manufacturing - Aggregated
NAICS 42	473	648	37.0%	Wholesale Trade
NAICS 44-45	2,600	2,986	14.8%	Retail Trade - Aggregated
NAICS 48-49	176	267	51.7%	Transportation and Warehousing - Aggregated
NAICS 51	201	146	-27.4%	Information
NAICS 52	342	391	14.3%	Finance and Insurance
NAICS 53	224	205	-8.5%	Real Estate and Rental and Leasing
NAICS 54	866	736	-15.0%	Professional Scientific and Technical Services
NAICS 55	532	895	68.2%	Management of Companies and Enterprises
NAICS 56	758	1,585	109.1%	Administrative Support, Waste Management and Remediation
NAICS 61	1,775	1,845	3.9%	Education Services
NAICS 62	2,599	5,289	103.5%	Health Care and Social Assistance
NAICS 71	278	381	37.1%	Arts, Entertainment and Recreation
NAICS 72	1,902	2,179	14.6%	Accomodation and Food Services
NAICS 81	746	689	-7.6%	Other Services (except Public Administration)
NAICS 92	568	513	-9.7%	Public Administration
NAICS 99	6	1	-83.3%	Other
Total Employment	17,782	22,249	25.1%	

K-12 School Enrollment	5,047	5,033	-0.3%
University Enrollment	0	0	0.0%
Group Quarters	527	534	1.3%
Hotel Rooms	318	318	0.0%
Median Household Income	52,802	52,800	0.0%

Northern Summit 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	88,088	89,717	1.8%
Households	33,995	34,511	1.5%
Population Under 18	22,055	22,483	1.9%
Vehicles	68,209	68,555	0.5%
Workers	43,466	43,726	0.6%

Employment				
NAICS 11	10	14	40.0%	Agriculture, Forestry and Hunting
NAICS 21	34	33	-2.9%	Mining
NAICS 22	89	89	0.0%	Utilities
NAICS 23	1,826	3,079	68.6%	Construction
NAICS 31-33	6,946	5,882	-15.3%	Manufacturing - Aggregated
NAICS 42	5,687	5,873	3.3%	Wholesale Trade
NAICS 44-45	5,328	6,194	16.3%	Retail Trade - Aggregated
NAICS 48-49	2,834	3,589	26.6%	Transportation and Warehousing - Aggregated
NAICS 51	1,178	1,620	37.5%	Information
NAICS 52	3,199	5,022	57.0%	Finance and Insurance
NAICS 53	324	747	130.6%	Real Estate and Rental and Leasing
NAICS 54	2,440	2,505	2.7%	Professional Scientific and Technical Services
NAICS 55	1,503	2,499	66.3%	Management of Companies and Enterprises
NAICS 56	1,740	2,947	69.4%	Administrative Support, Waste Management and Remediation
NAICS 61	2,911	3,107	6.7%	Education Services
NAICS 62	3,540	6,058	71.1%	Health Care and Social Assistance
NAICS 71	1,364	2,607	91.1%	Arts, Entertainment and Recreation
NAICS 72	3,644	4,040	10.9%	Accomodation and Food Services
NAICS 81	1,332	1,880	41.1%	Other Services (except Public Administration)
NAICS 92	845	975	15.4%	Public Administration
NAICS 99	26	2	-92.3%	Other
Total Employment	46,800	58,762	25.6%	

K-12 School Enrollment	10,978	11,203	2.0%
University Enrollment	0	0	0.0%
Group Quarters	939	989	5.3%
Hotel Rooms	1,532	1,319	-13.9%
Median Household Income	94,631	94,350	-0.3%

Central Summit 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	92,130	93,000	0.9%
Households	37,281	37,276	0.0%
Population Under 18	20,715	20,748	0.2%
Vehicles	69,285	68,549	-1.1%
Workers	44,537	44,385	-0.3%

Employment				
NAICS 11	7	11	57.1%	Agriculture, Forestry and Hunting
NAICS 21	9	7	-22.2%	Mining
NAICS 22	297	398	34.0%	Utilities
NAICS 23	1,267	2,070	63.4%	Construction
NAICS 31-33	2,619	2,426	-7.4%	Manufacturing - Aggregated
NAICS 42	1,502	1,780	18.5%	Wholesale Trade
NAICS 44-45	8,719	10,235	17.4%	Retail Trade - Aggregated
NAICS 48-49	739	1,163	57.4%	Transportation and Warehousing - Aggregated
NAICS 51	603	411	-31.8%	Information
NAICS 52	1,835	2,605	42.0%	Finance and Insurance
NAICS 53	549	544	-0.9%	Real Estate and Rental and Leasing
NAICS 54	2,965	4,440	49.7%	Professional Scientific and Technical Services
NAICS 55	920	1,333	44.9%	Management of Companies and Enterprises
NAICS 56	5,579	3,647	-34.6%	Administrative Support, Waste Management and Remediation
NAICS 61	3,028	2,726	-10.0%	Education Services
NAICS 62	8,066	12,318	52.7%	Health Care and Social Assistance
NAICS 71	658	751	14.1%	Arts, Entertainment and Recreation
NAICS 72	5,558	5,784	4.1%	Accomodation and Food Services
NAICS 81	1,722	1,386	-19.5%	Other Services (except Public Administration)
NAICS 92	750	703	-6.3%	Public Administration
NAICS 99	21	0	-100.0%	Other
Total Employment	47,413	54,738	15.4%	

K-12 School Enrollment	10,603	10,628	0.2%
University Enrollment	0	0	0.0%
Group Quarters	1,494	1,501	0.5%
Hotel Rooms	1,725	1,725	0.0%
Median Household Income	73,018	73,000	0.0%

Southern Summit 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	82,758	85,246	3.0%
Households	33,349	34,315	2.9%
Population Under 18	17,924	18,590	3.7%
Vehicles	55,278	56,509	2.2%
Workers	41,283	42,025	1.8%

Employment				
NAICS 11	12	16	33.3%	Agriculture, Forestry and Hunting
NAICS 21	5	62	1140.0%	Mining
NAICS 22	77	81	5.2%	Utilities
NAICS 23	1,725	2,957	71.4%	Construction
NAICS 31-33	4,353	3,634	-16.5%	Manufacturing - Aggregated
NAICS 42	1,685	1,850	9.8%	Wholesale Trade
NAICS 44-45	3,797	5,099	34.3%	Retail Trade - Aggregated
NAICS 48-49	2,077	2,371	14.2%	Transportation and Warehousing - Aggregated
NAICS 51	220	115	-47.7%	Information
NAICS 52	1,069	1,305	22.1%	Finance and Insurance
NAICS 53	347	389	12.1%	Real Estate and Rental and Leasing
NAICS 54	1,467	2,033	38.6%	Professional Scientific and Technical Services
NAICS 55	1,348	1,705	26.5%	Management of Companies and Enterprises
NAICS 56	2,814	4,543	61.4%	Administrative Support, Waste Management and Remediation
NAICS 61	2,424	2,363	-2.5%	Education Services
NAICS 62	3,010	5,222	73.5%	Health Care and Social Assistance
NAICS 71	231	265	14.7%	Arts, Entertainment and Recreation
NAICS 72	3,331	3,269	-1.9%	Accomodation and Food Services
NAICS 81	989	1,191	20.4%	Other Services (except Public Administration)
NAICS 92	954	889	-6.8%	Public Administration
NAICS 99	1	2	100.0%	Other
Total Employment	31,936	39,361	23.2%	

K-12 School Enrollment	10,517	10,931	3.9%
University Enrollment	0	0	0.0%
Group Quarters	437	472	8.0%
Hotel Rooms	1,040	1,115	7.2%
Median Household Income	66,351	66,400	0.1%

Northwest Portage 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	43,044	48,198	12.0%
Households	16,873	18,776	11.3%
Population Under 18	9,938	11,123	11.9%
Vehicles	32,412	36,817	13.6%
Workers	20,815	22,625	8.7%

Employment				
NAICS 11	23	45	95.7%	Agriculture, Forestry and Hunting
NAICS 21	52	64	23.1%	Mining
NAICS 22	17	18	5.9%	Utilities
NAICS 23	406	478	17.7%	Construction
NAICS 31-33	4,580	4,113	-10.2%	Manufacturing - Aggregated
NAICS 42	1,759	2,227	26.6%	Wholesale Trade
NAICS 44-45	2,486	2,972	19.5%	Retail Trade - Aggregated
NAICS 48-49	617	1,051	70.3%	Transportation and Warehousing - Aggregated
NAICS 51	27	249	822.2%	Information
NAICS 52	194	230	18.6%	Finance and Insurance
NAICS 53	256	158	-38.3%	Real Estate and Rental and Leasing
NAICS 54	567	898	58.4%	Professional Scientific and Technical Services
NAICS 55	83	75	-9.6%	Management of Companies and Enterprises
NAICS 56	441	713	61.7%	Administrative Support, Waste Management and Remediation
NAICS 61	1,243	1,209	-2.7%	Education Services
NAICS 62	1,470	2,553	73.7%	Health Care and Social Assistance
NAICS 71	220	201	-8.6%	Arts, Entertainment and Recreation
NAICS 72	1,500	1,726	15.1%	Accomodation and Food Services
NAICS 81	545	523	-4.0%	Other Services (except Public Administration)
NAICS 92	306	366	19.6%	Public Administration
NAICS 99	25	0	-100.0%	Other
Total Employment	16,817	19,869	18.1%	

K-12 School Enrollment	5,113	5,731	12.1%
University Enrollment	0	0	0.0%
Group Quarters	633	633	0.0%
Hotel Rooms	665	740	11.3%
Median Household Income	69,298	69,300	0.0%

Northeast Portage 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	16,074	17,664	9.9%
Households	5,783	6,354	9.9%
Population Under 18	3,589	3,918	9.2%
Vehicles	11,267	12,759	13.2%
Workers	7,531	8,008	6.3%

Employment				
NAICS 11	47	38	-19.1%	Agriculture, Forestry and Hunting
NAICS 21	0	0	0.0%	Mining
NAICS 22	0	0	0.0%	Utilities
NAICS 23	53	158	198.1%	Construction
NAICS 31-33	464	419	-9.7%	Manufacturing - Aggregated
NAICS 42	37	10	-73.0%	Wholesale Trade
NAICS 44-45	288	334	16.0%	Retail Trade - Aggregated
NAICS 48-49	74	102	37.8%	Transportation and Warehousing - Aggregated
NAICS 51	66	49	-25.8%	Information
NAICS 52	32	35	9.4%	Finance and Insurance
NAICS 53	27	12	-55.6%	Real Estate and Rental and Leasing
NAICS 54	65	34	-47.7%	Professional Scientific and Technical Services
NAICS 55	0	0	0.0%	Management of Companies and Enterprises
NAICS 56	18	80	344.4%	Administrative Support, Waste Management and Remediation
NAICS 61	713	627	-12.1%	Education Services
NAICS 62	120	189	57.5%	Health Care and Social Assistance
NAICS 71	34	26	-23.5%	Arts, Entertainment and Recreation
NAICS 72	510	331	-35.1%	Accomodation and Food Services
NAICS 81	87	59	-32.2%	Other Services (except Public Administration)
NAICS 92	187	138	-26.2%	Public Administration
NAICS 99	0	0	0.0%	Other
Total Employment	2,822	2,641	-6.4%	

K-12 School Enrollment	1,499	1,637	9.2%
University Enrollment	1,259	1,259	0.0%
Group Quarters	828	828	0.0%
Hotel Rooms	12	12	0.0%
Median Household Income	58,530	58,500	-0.1%

Southwest Portage 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	87,749	95,852	9.2%
Households	34,048	37,169	9.2%
Population Under 18	16,766	18,553	10.7%
Vehicles	64,862	72,358	11.6%
Workers	43,217	45,682	5.7%

Employment				
NAICS 11	52	47	-9.6%	Agriculture, Forestry and Hunting
NAICS 21	231	174	-24.7%	Mining
NAICS 22	79	78	-1.3%	Utilities
NAICS 23	845	1,407	66.5%	Construction
NAICS 31-33	4,318	4,074	-5.7%	Manufacturing - Aggregated
NAICS 42	575	872	51.7%	Wholesale Trade
NAICS 44-45	2,836	4,215	48.6%	Retail Trade - Aggregated
NAICS 48-49	477	877	83.9%	Transportation and Warehousing - Aggregated
NAICS 51	292	228	-21.9%	Information
NAICS 52	496	485	-2.2%	Finance and Insurance
NAICS 53	239	325	36.0%	Real Estate and Rental and Leasing
NAICS 54	655	816	24.6%	Professional Scientific and Technical Services
NAICS 55	748	847	13.2%	Management of Companies and Enterprises
NAICS 56	608	564	-7.2%	Administrative Support, Waste Management and Remediation
NAICS 61	6,542	7,110	8.7%	Education Services
NAICS 62	4,108	5,679	38.2%	Health Care and Social Assistance
NAICS 71	205	195	-4.9%	Arts, Entertainment and Recreation
NAICS 72	2,568	3,369	31.2%	Accomodation and Food Services
NAICS 81	878	1,064	21.2%	Other Services (except Public Administration)
NAICS 92	1,247	1,134	-9.1%	Public Administration
NAICS 99	0	2	0.0%	Other
Total Employment	27,999	33,562	19.9%	

K-12 School Enrollment	7,091	7,848	10.7%
University Enrollment	25,676	25,767	0.4%
Group Quarters	6,447	6,558	1.7%
Hotel Rooms	658	733	11.4%
Median Household Income	57,851	57,900	0.1%

Southeast Portage 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	14,552	15,552	6.9%
Households	5,518	6,009	8.9%
Population Under 18	3,385	3,632	7.3%
Vehicles	10,389	11,617	11.8%
Workers	7,281	7,688	5.6%

Employment				
NAICS 11	21	10	-52.4%	Agriculture, Forestry and Hunting
NAICS 21	61	45	-26.2%	Mining
NAICS 22	0	0	0.0%	Utilities
NAICS 23	190	201	5.8%	Construction
NAICS 31-33	60	76	26.7%	Manufacturing - Aggregated
NAICS 42	104	85	-18.3%	Wholesale Trade
NAICS 44-45	146	175	19.9%	Retail Trade - Aggregated
NAICS 48-49	179	130	-27.4%	Transportation and Warehousing - Aggregated
NAICS 51	0	0	0.0%	Information
NAICS 52	0	2	0.0%	Finance and Insurance
NAICS 53	16	13	-18.8%	Real Estate and Rental and Leasing
NAICS 54	26	3	-88.5%	Professional Scientific and Technical Services
NAICS 55	0	0	0.0%	Management of Companies and Enterprises
NAICS 56	20	23	15.0%	Administrative Support, Waste Management and Remediation
NAICS 61	328	402	22.6%	Education Services
NAICS 62	30	36	20.0%	Health Care and Social Assistance
NAICS 71	11	10	-9.1%	Arts, Entertainment and Recreation
NAICS 72	67	107	59.7%	Accomodation and Food Services
NAICS 81	27	12	-55.6%	Other Services (except Public Administration)
NAICS 92	100	49	-51.0%	Public Administration
NAICS 99	2	0	-100.0%	Other
Total Employment	1,388	1,379	-0.6%	

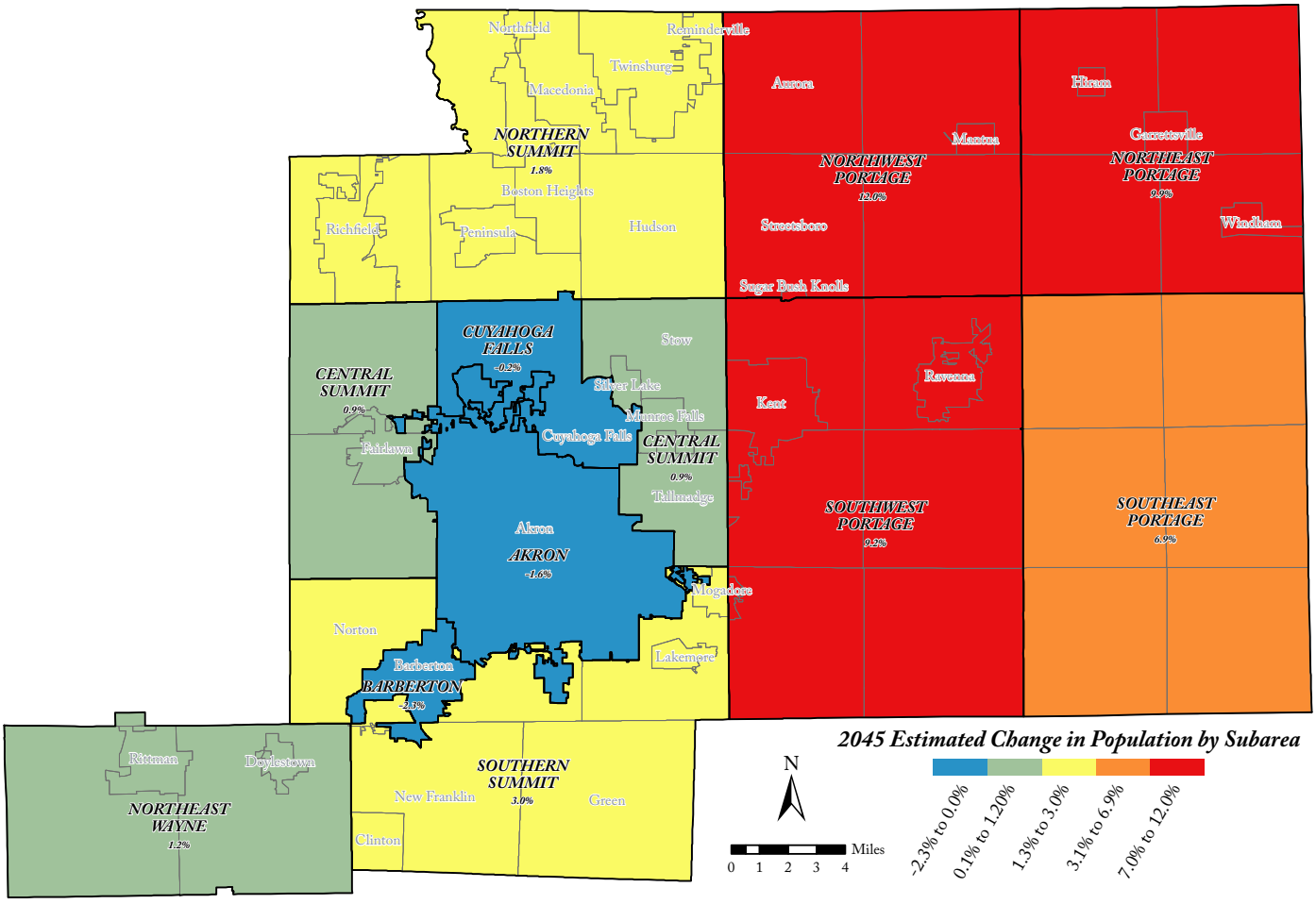
K-12 School Enrollment	2,046	2,199	7.5%
University Enrollment	0	0	0.0%
Group Quarters	6	6	0.0%
Hotel Rooms	0	0	0.0%
Median Household Income	64,636	59,300	-8.3%

Northeast Wayne 2045 Forecast Characteristics

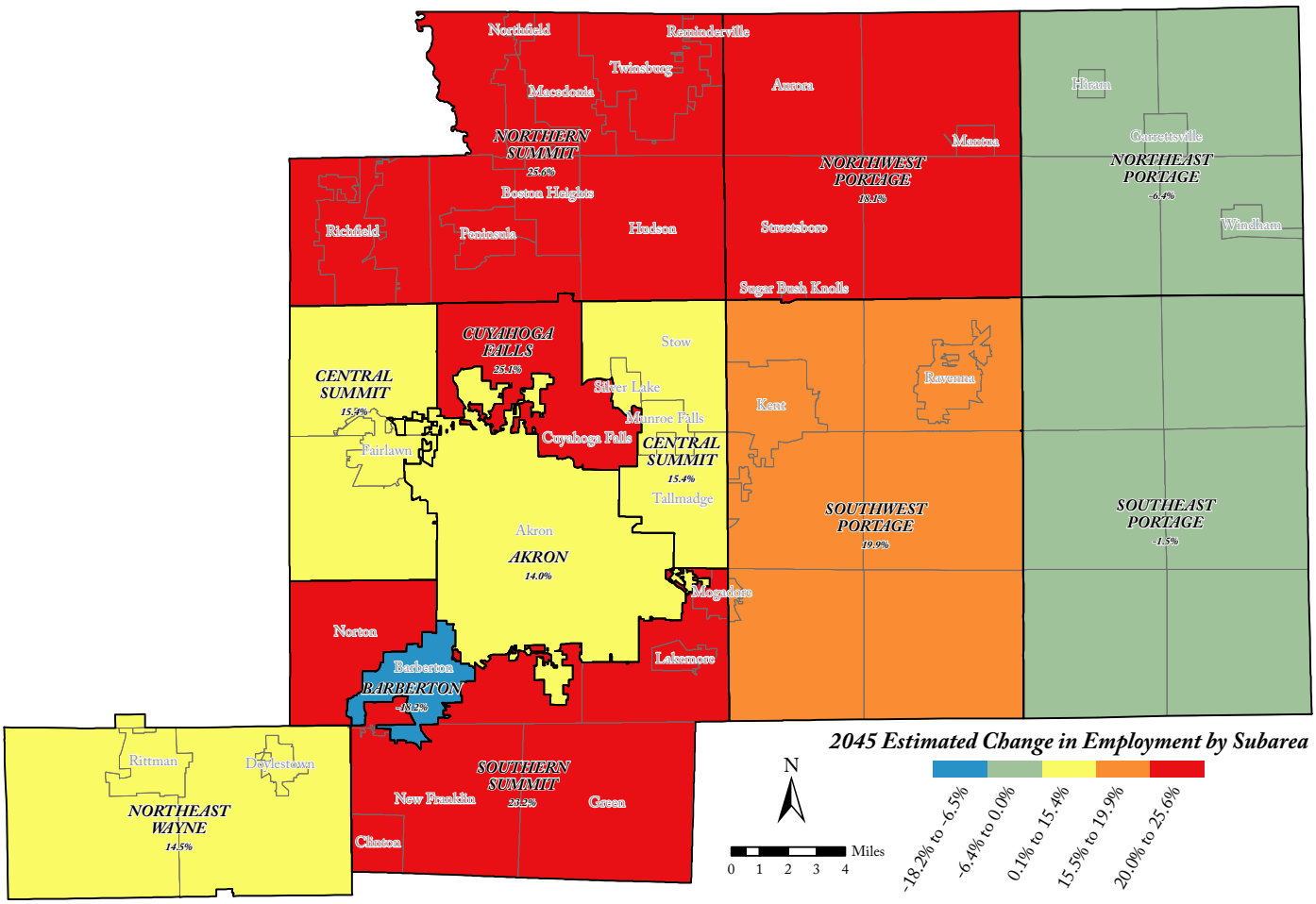
	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE
Population	19,588	19,820	1.2%
Households	7,441	7,658	2.9%
Population Under 18	4,605	4,654	1.1%
Vehicles	13,803	13,991	1.4%
Workers	7,481	7,742	3.5%

Employment				
NAICS 11	142	151	6.3%	Agriculture, Forestry and Hunting
NAICS 21	14	69	392.9%	Mining
NAICS 22	21	15	-28.6%	Utilities
NAICS 23	161	301	87.0%	Construction
NAICS 31-33	543	390	-28.2%	Manufacturing - Aggregated
NAICS 42	131	120	-8.4%	Wholesale Trade
NAICS 44-45	341	368	7.9%	Retail Trade - Aggregated
NAICS 48-49	32	44	37.5%	Transportation and Warehousing - Aggregated
NAICS 51	39	21	-46.2%	Information
NAICS 52	54	62	14.8%	Finance and Insurance
NAICS 53	19	16	-15.8%	Real Estate and Rental and Leasing
NAICS 54	66	86	30.3%	Professional Scientific and Technical Services
NAICS 55	0	0	0.0%	Management of Companies and Enterprises
NAICS 56	39	42	7.7%	Administrative Support, Waste Management and Remediation
NAICS 61	449	477	6.2%	Education Services
NAICS 62	480	765	59.4%	Health Care and Social Assistance
NAICS 71	27	50	85.2%	Arts, Entertainment and Recreation
NAICS 72	128	145	13.3%	Accomodation and Food Services
NAICS 81	156	146	-6.4%	Other Services (except Public Administration)
NAICS 92	85	83	-2.4%	Public Administration
NAICS 99	0	0	0.0%	Other
Total Employment	2,927	3,351	14.5%	

K-12 School Enrollment	1,891	1,910	1.0%
University Enrollment	0	0	0.0%
Group Quarters	305	313	2.6%
Hotel Rooms	0	0	0.0%
Median Household Income	69,164	69,200	0.1%



2045 Estimated Change in Population by Subarea



2045 Estimated Change in Employment by Subarea

Conclusion

Understanding where current trends could be taking the AMATS region in the long-term future is an important part of the regional transportation planning process. The analyses contained within this report give us a glimpse into the potential future of the greater Akron region, in regards to many important transportation planning variables. Each of these variables has a varying degree of impact on the local transportation system. In addition to providing important planning insight, the massive amount of TAZ-level data generated during the Planning Data Forecast process will be input directly into the regional traffic demand model. Using this data, the model will be able to generate future traffic volumes, congestion and air quality data with the greatest possible accuracy.

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Transportation Planning Prospectus**

DATE: **December 3, 2020**

As part of its agreement with the Ohio Department of Transportation, AMATS commits to maintaining a Prospectus document. The Prospectus presents an overview of the Akron area MPO, its organizational structure and responsibilities for conducting the transportation planning process, member agreements, and transportation-related air quality planning. The Prospectus may be updated at any time following the formal adoption of or revisions to MPO plans and programs by the Policy Committee. The AMATS Prospectus was last updated in 1997.

The AMATS Transportation Planning Prospectus also provides a summary of other agencies involved in regional planning activities and includes the Organizational Bylaws of the AMATS governing body known as the Transportation Policy Committee. The AMATS Policy Committee Bylaws were updated and approved by the Policy Committee in December 2019. In order to provide an effective transportation planning process, AMATS secures working agreements with a number of agencies and the communities it serves. The purpose of the agreements includes administration of the agency and to describe a continuing, comprehensive, and cooperative multimodal planning process with member communities.

The Transportation Planning Prospectus addresses:

- AMATS Metropolitan Planning Area
- Mission, Guiding Principles, Regional Goals and Objectives
- Transportation Issues
- Transportation Planning and Programming
- AMATS Organizational Structure
- Sources of Funding
- Public Participation Process
- Applicable Agreements
- AMATS Committee Bylaws
- AMATS Public Participation Plan

The complete AMATS Transportation Planning Prospectus is available on the AMATS website at www.amatsplanning.org.

The staff recommends approval of this document.

AMATS Transportation Planning Prospectus

December 2020

Akron Metropolitan Area Transportation Study
161 South High Street, Suite 201
Akron, Ohio 44308

This report is the product of a study financed (in part) by the U.S. Department of Transportation's Federal Highway Administration, Federal Transit Administration and the Ohio Department of Transportation.

Cooperative transportation planning by the Village, City and County governments of Portage and Summit Counties and the Chippewa and Milton Township areas of Wayne County; in conjunction with the U.S. Department of Transportation and the Ohio Department of Transportation.

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Introduction

About the MPO

The Akron Metropolitan Area Transportation Study (AMATS) is the federally designated transportation planning agency for the Greater Akron area. Specifically, AMATS covers Summit and Portage counties and the Chippewa and Milton Township areas of Wayne County. Since the 1960's, the federal government has required that metropolitan areas undertake a continuing, comprehensive, and cooperative transportation planning process. Legislation requires that all modes of surface transportation be considered during the planning process including vehicles, public transit, bicycle and pedestrian travel, and freight movement for people and goods.

Metropolitan Planning Organizations (MPOs) exist throughout the United States in all urbanized areas of more than 50,000 people and have the authority to prioritize, plan, and program transportation projects in urban/metropolitan areas for federal funding. In Ohio, seventeen MPOs work in partnership with the Ohio Department of Transportation (ODOT) in their respective planning areas. AMATS role in transportation is to:

- Monitor the conditions of the existing transportation network.
- Identify existing capacity or safety problems through detailed planning studies to develop transportation improvements.
- Forecast future population and employment growth for the region.
- Develop alternative growth scenarios to evaluate the affects that land use and transportation choices made today will have on the region's future.
- Help plan road and bridge repairs, bicycle and pedestrian facilities, and public transportation investments that will move goods and people safely and efficiently throughout the region.
- Estimate the impact that an expanding transportation system will have on air quality.
- Develop a financial plan that identifies the costs and revenues associated with the continued operation, maintenance, and future expansion of the region's transportation system.
- Work with the public and stakeholders to determine the region's priorities for improving the transportation system with the anticipated revenue.

AMATS leads the development of the region's Long Range Transportation Plan and the Transportation Improvement Program (TIP). Each fiscal year, AMATS publishes its anticipated planning activities and funding sources for the coming year in its Transportation Planning Work Program and Budget (WP). The agency also contributes to ongoing conversations about issues such as land use, economic development, safety and security, the environment, and public health. AMATS serves as a regional forum for discussion and cooperation between elected officials, the public, planners and engineers in working together to set transportation policies and implement transportation improvements that meet the needs and challenges of the region.

AMATS is governed by the Policy Committee, whom is responsible for directing the transportation planning process, policy and funding decisions. It is comprised of elected representatives from municipalities, counties, villages, townships, regional transit authorities, and ODOT. AMATS partners also include some non-governmental members represented from colleges, businesses, special districts and other groups who share in our goal to maintain and promote our region's strong assets.
The AMATS staff serves all the committees, is responsible for carrying out the technical work of the agency, and compiles and analyzes information that local elected officials need to set priorities and make plans. The staff is made up of individuals primarily from engineering and planning disciplines.

About the Transportation Planning Prospectus

AMATS Transportation Planning Prospectus presents an overview of the Akron area MPO, its organizational structure and responsibilities for conducting the transportation planning process, the procedures used to carry out the federally-mandated transportation planning process in the Greater Akron area, and transportation-related air quality planning. The prospectus also provides a summary of other agencies involved in regional planning activities, documents interagency agreements, and includes the Organizational Bylaws of the AMATS governing body known as the Transportation Policy Committee. AMATS serves to concentrate transportation planning activities on critical issues and problems that affect quality of life for everyone in our region.

The Prospectus may be updated at any time following the formal adoption of or revisions to MPO plans and programs by the Policy Committee. Amendments to the bylaws of the AMATS Policy Committee, contained in this Prospectus, must be adopted by the Policy Committee according to the procedures outlined in said Bylaws. The AMATS Policy Committee bylaws were updated and approved by the Policy Committee in December 2019.

The 3-C Transportation Planning Process

AMATS is one of 17 Metropolitan Planning Organizations (MPOs) in Ohio. These organizations, along with their counterparts throughout the United States, were established as a result of the 1962 Federal Aid Highway Act. One of the provisions of this piece of legislation is to require MPOs to establish a continuous, cooperative, and comprehensive (or "3-C") transportation planning process in order to receive federal funds for transportation improvements.

Definition of the 3-C's

- *Continuous* – Planning must be maintained as an ongoing activity and should address both short-term needs and the long-term vision for the region.
- *Cooperative* – The process must involve a wide variety of interested parties through a public participation process.
- *Comprehensive* – The process must cover all transportation modes and be consistent with regional and local land use and economic development plans.

The 3-C transportation planning process also provides for the safe and efficient movement of people and goods, consistent with the region's overall economic, social and environmental goals. AMATS places special emphasis on providing equal access to a variety of transportation choices and effective public involvement in the transportation planning process.

The Metropolitan Planning Area

The Akron metropolitan area is located in Northeast Ohio and encompasses Summit County, Portage County, and the Chippewa and Milton Township areas of Wayne County. It is comprised of 18 cities, 17 villages, and 29 townships. The area is home to a large number of manufacturing facilities, trucking terminals, two major universities, a regional airport, and a wide variety of historic, cultural, and recreational attractions. A map of the AMATS Planning Area is shown in **Appendix A**.

Mission, Guiding Principles, Regional Goals and Objectives

Mission Statement

AMATS' role in the Greater Akron area is to provide quality transportation planning for an effective and efficient transportation system to improve quality of life in the region. To achieve a sustainable intermodal transportation system, AMATS makes sure that federal funds spent in the Greater Akron area are used strategically with the region's best interests in mind. AMATS promotes all forms of transportation including the automobile, transit, bicycle and pedestrian travel. AMATS is committed to ensuring public input received is considered in all transportation planning decisions.

Regional Goals and Objectives

AMATS goals and objectives promote the transparency of public data and decision making and seeks to improve the accountability of public spending by better linking investments to outcomes. The goals and objectives address key desired outcomes that shape planning priorities.

- Maintain the existing transportation system
- Maintain a safe, secure, efficient and integrated transportation system
- Integrate all modes of the transportation system where appropriate
- Increase mobility for all persons
- The transportation system should support the economic vitality of the region
- Encourage smart regional land use strategies and development patterns

Performance-Based Planning and Transportation Goals

Recent federal legislation (MAP-21 and the FAST Act) features a new federal emphasis on performance measurement. Performance measures are central to implementing a Performance-Based Planning Process (PBPP) that guides decision making. How performance is defined and measured can significantly affect the types of projects and strategies that are advanced by decision makers. Performance measures aim to answer questions about whether the performance of the transportation system is getting better or worse over time.

Performance measures also aim to demonstrate whether transportation investments are correlated or linked to stated goals and whether they produce desired outcomes.

Currently, US DOT has established performance measures. MPOs must incorporate these performance measures and targets into their TIPs and Long Range Regional Transportation Plans (LRPs).

The US DOT has established seven areas for national performance goals:

- Safety
- Infrastructure Condition
- Congestion Reduction
- System Reliability
- Freight Movement and Economic Vitality
- Environmental Sustainability
- Reduced Project Delivery Delays

To implement performance measure goals, US DOT has developed measures and minimum standards for states to follow for the various core programs established in federal legislation. US DOT has issued performance measure goals for each of the above areas individually.

In addition to federal-aid highway goals, federal-aid public transportation goals must also be considered in performance-based planning. The federal-aid transportation goals include:

1. Provide funding to support public transportation.
2. Improve the development and delivery of capital projects.
3. Establish standards for the state of good repair of public transportation infrastructure and vehicles.
4. Promote continuing, cooperative, and comprehensive planning (3-Cs) that improves the performance of the transportation network.
5. Establish a technical assistance program to assist recipients under this chapter to more effectively and efficiently provide public transportation service.
6. Continue Federal support for public transportation providers to deliver high quality service to all users, including individuals with disabilities, seniors, and individuals who depend on public transportation.
7. Support research, development, demonstration, and deployment projects dedicated to assisting in the delivery of efficient and effective public transportation service.
8. Promote the development of the public transportation workforce.

Transportation Issues

Providing a comprehensive, well-maintained transportation network is one of the most important functions of government. Essentially all economic activity is facilitated in some manner, by the existing transportation infrastructure network. AMATS examines the current and future needs of Greater Akron's transportation system and develops policy and project recommendations through maintaining its long range regional transportation plan.

In order for transportation projects to receive federal funding they must be consistent with AMATS LRP, the most recent being *Transportation Outlook 2040 (TO2040)*. Federal funds may only be invested on roadways that are contained in the Federal Functional Classification of Highways. Local roadways are not eligible for funding. The plan includes long term highway, transit, bike and pedestrian project recommendations. These transportation issues specific to AMATS are described below.

Highway System

Highways are the most critical element of the region's transportation system. The goal of AMATS is to maintain and preserve the existing highway system as well as improve its safety and efficiency. Highway improvements are funded through federal transportation dollars and these funds can be used for many types of projects including resurfacing, turn lanes and traffic signals, and major widening projects.

Highway considerations include the following:

- Preservation
- Operational and Safety Projects

- Asset Management Planning
- Reduce Congestion by Promoting Alternative Modes of Transportation
- Complete Streets
- Future Technology
- Highway Transportation Infrastructure Investments

Transit System

The availability of a comprehensive, reliable transit network is vital to helping those who lack or are unable to use reliable transportation to get to work, have access to shopping and services, and complete other important daily tasks. A convenient transit network can also draw riders who have access to automobiles, but choose to use transit for reasons of ease, affordability and convenience.

AMATS is working with transit providers to preserve the existing transit system, provide enhanced service in key high-volume corridors and allow for strategic expansion into new communities that contain high densities of jobs, retail and other attractions.

Transit considerations include the following:

- Fix-It-First
- Service Enhancement
- Cross County Service
- Coordination
- Rail Portfolio Preservation
- Public Transit Investment

Bicycle and Pedestrian Alternatives

Biking and walking are integral parts of daily life, as well as vital components of a first-class, multi-modal transportation system. Many Greater Akron area communities recognize the growing role of biking and walking as transportation options and are incorporating bicycle and pedestrian infrastructure into their future plans. Through various public outreach initiatives, AMATS has determined that many residents consider biking and walking to be desirable and vibrant modes of travel, but not convenient or – in some cases – safe modes.

The *Active Transportation Plan (ATP)* presents the various strategies and recommendations that the agency will pursue to improve the Greater Akron area's bicycle and pedestrian networks. A basic principle of the ATP is to ensure that there will be transportation choices for people of all ages and abilities within the Greater Akron area.

Existing Biking Network

The Greater Akron area's bike network currently encompasses over 122 miles of shared-use paths and 50 miles of bike lanes, as well as 12 miles of mountain bike trails. Significant elements of this regional network include The Ohio & Erie Towpath Trail, the Summit Metro Parks Bike and Hike Trail, The Portage Hike and Bike Trail, and the Headwaters Trail. The region's network will likely continue to grow in the future as these shared-use paths present many opportunities for nearby communities to link to the current bike network.

Existing Pedestrian Network

Despite the Greater Akron area's overall walkability, the presence, quality, and connectivity of its pedestrian networks vary greatly throughout the region from community to community. The AMATS region boasts 2,860 miles of sidewalks. A number of the region's older established communities have extensive sidewalk networks that also provide access to available transit service. Unfortunately, many of these older networks also lack newer amenities and facilities that would encourage additional pedestrian travel such as crosswalks, mid-block crossings, plazas, signs, signals, illumination, benches and connections to shared-use paths.

AMATS has made considerable progress in promoting pedestrian accessibility in both its older, established and newer, suburban communities through its Connecting Communities Program. The program was launched in 2011, which helps communities strike a balance between their land use decisions and transportation investments. The Program provides financial grants for the development of plans and studies that promote vibrant, livable communities.

Transportation Planning and Programming

One of the goals in carrying out the regional transportation planning process for the Greater Akron area is to encourage the development of a balanced and integrated transportation system that will increase mobility for all persons and support the economic vitality of the region. The primary purpose of AMATS is to provide coordinated long and short-term transportation planning within the Greater

Akron area. AMATS completes a number of transportation planning and programming activities for the region that are aimed at these goals.

Transportation Planning Work Program and Budget

Each year, AMATS adopts a Transportation Planning Work Program and Budget (WP) that identifies all federally-funded regional transportation planning activities or studies that will be carried out by the MPO staff, consultants, or partnering agencies during the upcoming federal fiscal year. The WP also serves as the MPO's annual operating budget and provides the schedule for membership dues. It supports the maintenance of effective and ongoing long-range and short-range elements of the transportation planning process. This process will ensure that project sponsors in the AMATS area will be eligible to receive federal financial assistance to implement projects.

The AMATS WP identifies specific planning activities and receivables that are reviewed and approved by ODOT, the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA). The WP reflects the planning requirements and goals of the Fixing America's Surface Transportation (FAST) Act, signed into law on December 4, 2015, and contains many of the same provisions of the previous law, the Moving Ahead for Progress in the 21st Century Act (MAP-21).

The AMATS Transportation Planning Work Program and Budget is available online at:
http://amatsplanning.org/wp-content/uploads/FY-2021-Work-Program-Final.pdf

Transportation Improvement Program

AMATS prepares the TIP on a biennially basis. The TIP is a comprehensive and financially-constrained listing of regional transportation projects that are scheduled to receive federal funds within the next four years. The program includes projects from all modes of transportation including highways, public transportation or transit, bicycles and pedestrians.

The TIP is important because it provides a schedule by which to coordinate projects among jurisdictions and transportation agencies; is used as a guide for implementation of short and long range transportation planning; is an aid to financial programming and administration; and is a source of information for the public. No project can be implemented with federal transportation funds unless it is included in the TIP. Because of this provision, the AMATS Policy Committee has considerable control on the use of federal transportation funds in the AMATS study area.

The TIP is developed in a continuing, cooperative and comprehensive manner with ODOT and area transit operators. The project listings are regularly monitored and updated to reflect implementation of programmed projects, additions of new projects, major changes in projects and deletions of canceled projects. Once the TIP is adopted by the AMATS Policy Committee, it is then included in ODOT's Statewide Transportation Improvement Program (STIP) and subsequently approved by the Governor of Ohio.

AMATS is the program manager for several federal funding programs in which sponsors apply for project funding. In order to provide a systematic method for developing and modifying the TIP for projects that utilize AMATS sub allocated federal funds, the Policy Committee has adopted the *AMATS Funding Policy Guidelines*, which provides the criteria to evaluate submitted projects.

Long Range Regional Transportation Plan

The LRP examines the current and future needs of greater Akron's transportation system and develops policy and project recommendations to ensure our system remains an asset to the region from now and into the future. The Plan is prepared by AMATS every four years. In order for transportation projects to receive federal funding they must be consistent with the LRP.

The plan includes long term highway, transit, bike and pedestrian project recommendations, as well as performance measures for the transportation system. Project recommendations from the plan must be fiscally constrained, meaning that the cost of the recommendations cannot exceed the estimated funding that the region anticipates receiving over the life of the plan.

Congestion Management Process

The objective of the Congestion Management Process (CMP) is to minimize congestion and delay on the transportation system. Minimizing congestion and delay will improve the efficiency of the movement of people and goods. The CMP identifies existing and projected future congestion on our region's freeways, arterials and intersections. It examines public transit levels of service availability and freight needs. It also isolates and examines congestion related to traffic incidents; demand and supply-side strategies to manage regional congestion; and it includes specific recommendations to address congested areas.

Data Collection and Analysis

Traffic data must be collected in order to measure the performance of the transportation system. Traffic counts are taken on a regular basis within the roadway network. This data is then used as an input to model traffic congestion for the existing and future roadway network. From the modeling output, the roadway network is analyzed to determine areas of high traffic congestion. Public transit

information is received from both transit agencies (METRO RTA and PARTA) within the AMATS area.

Assess Congestion Management Recommendations

To effectively understand how past congestion management projects have impacted roadway congestion, an assessment program has been developed that is applied to future CMP reports. This program analyzes the level of service of the roadway before the project was completed against the level of service of the roadway after project completion. The analysis determines if the recommended project was effective in alleviating congestion. The assessment program helps to identify types of projects that are particularly successful in reducing traffic congestion.

Traffic Crash Studies

AMATS is committed to following a planning process that recognizes the importance of safety. This is accomplished by incorporating the results of safety studies into the development of transportation recommendations for the Regional Transportation Plan and used as evaluation criteria for selecting projects for funding. Additionally, AMATS also prepares a crash report every few years by reviewing crash records obtained from ODOT. It includes crash data for vehicles, bicycles and pedestrians.

Air Quality Coordination

The AMATS region is required to participate in air quality conformity to attain the National Ambient Air Quality Standards (NAAQS) for various criteria pollutants. Summit and Portage counties are part of the eight-county Cleveland-Akron-Lorain Combined Statistical Area (CSA). This area includes: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage and Summit counties.

The MPOs and ODOT must reestablish conformity for the ozone standards and fine particulate matter ($PM_{2.5}$) standards as a result of adopting a new TIP and LRP amendments. The conformity analysis demonstrates that emissions from vehicles traveling on the planned transportation system are less than the area's emissions budget (or other emissions target in the absence of an approved budget). AMATS updates its travel demand model to conduct this analysis taking into account the latest planning assumptions.

As the United States Environmental Protection Agency (USEPA) continues to tighten the current ozone and $PM_{2.5}$ standards, the region may be required to implement more control measures on ozone and $PM_{2.5}$. While more controls may be necessary, much of the area's pollution originates outside the area and is carried by wind patterns into the region. AMATS provides the work necessary to support the Clean Air Act Amendments of 1990 and to satisfy any changes resulting from the newly proposed air quality standards.

The Federal Clean Air Act Amendments of 1990 require all areas to meet certain air quality standards. Based on air quality readings, the USEPA designated Cleveland-Akron-Lorain CSA as a maintenance area for the 2008 8-Hour Ozone Standard and as a nonattainment area for the 2015 8-Hour Ozone Standard. USEPA also designated several of the counties in this area as a maintenance area for the 2006 Annual $PM_{2.5}$ Standard. This area includes Cuyahoga, Lake, Lorain, Medina, Portage, and Summit counties, and a portion of Ashtabula County. USEPA designated Cuyahoga and Lorain Counties as a maintenance area under the 2012 Annual $PM_{2.5}$ Standard. Portage and Summit Counties were designated in attainment of the 2012 $PM_{2.5}$ Standard by USEPA.

Performance Measures

The former and current federal legislation (MAP-21 and the FAST Act) features a new federal emphasis on performance measurement. This focus is consistent with AMATS' goals and objectives, which promote the transparency of public data and decision-making and seeks to improve the accountability of public spending by better linking investments to outcomes. Performance measures are applied at the programmatic, rather than project level and does not generally link performance measures and targets to funding decisions by way of performance based funding.

ODOT develops performance targets in consultation with MPOs like AMATS, and others. How performance is defined and measured can significantly affect the types of projects and strategies that are advanced by decision makers. Introducing a performance management approach to planning is intended to improve project and program delivery, inform investment decision making, focus staff efforts on priorities, and provide greater transparency and accountability to the public. Presently, federal guidance imposes no financial penalty for states and MPOs that fail to make progress toward these performance goals, and funding decisions for any given project are not explicitly tied to performance criteria.

Like all planning, the performance-based planning process is cyclical. As planning cycles evolve, goals and objectives may be adjusted and performance measures and targets may be refined.

Transportation System Update

AMATS maintains various data files in order to monitor the characteristics of the transportation system. The data includes: roadway characteristics such as intersection geometrics; traffic volumes; speed and delay information; traffic crash data; signalization; road and bridge condition ratings; Federal Functional Classification; land use and zoning; population; employment; dwelling unit; Census data;

motor vehicle registrations; transit characteristics such as ridership, grants, fares and related information; and other data necessary to provide input to short and long-range planning. In addition to maintaining data files, transportation system update requires AMATS to report performance measures consistent with the FAST Act.

Gohio Commute

Gohio Commute is a unique ride-sharing program primarily designed for commuters and was launched in May 2017. It is a free, web-based program sponsored by AMATS and several other MPOs across the state.

It is the premier ride planning, matching, and logging tool available for free to anyone who lives, works, or attends school in Ohio. Users can log trips on *Gohio Commute's website* to find transportation matches for cars, biking, transit or walking. This interactive platform gives one the information needed to make smart choices – and save money, improve your health, and improve air quality.

Transit Planning

To have an efficient transportation network it is necessary to have a strong transit system. AMATS provides planning assistance to METRO RTA and PARTA, the two primary providers of public transportation in the greater Akron region. Recommendations in the LRP outline ways to preserve the existing transit system, provide enhanced service in key high-volume corridors, and allow for strategic expansion into new communities that contain high densities of jobs, retail and other attractions.

To achieve the most efficient use of the existing public transportation system, additional ridership needs to be developed. In addition to enhancing the existing service, decreasing the waiting time between buses, expanding the hours and days of service, and providing safe, attractive and comfortable waiting environments are all potential strategies to attract additional transit users. AMATS will work with METRO and PARTA to explore and implement these and other strategies, whenever practical.

AMATS is dedicated to ensuring that all of the region's transportation assets are working together, achieving maximum operational and financial efficiency. Coordination between multiple transit agencies, social service agencies and other non-profit providers of transportation is the key to realizing this goal. One example of this is NEORide, the software platform that provides passengers access to EZFare, a service that allows passengers to purchase mobile bus passes from different transit systems through one app.

Freight Planning

The movement of freight is an important part of a fully functioning transportation system and is critically important to its economy. Metropolitan areas with their higher density of development served by air cargo airports, intermodal freight yards, large trucking terminals, and shipyards, are especially affected by freight movement issues. According to FHWA, the total amount of freight tonnage that moves through the nation's transportation network is expected to double by 2040.

AMATS and ODOT are responsible for making sure that freight movement is considered in the transportation planning process. Federal legislation calls for the statewide and metropolitan planning processes to include reasonable opportunity for the public and interested parties, including freight shippers and providers of freight transportation services, to participate in the development of transportation plans and programs.

AMATS Freight Plan focuses on the region's most pressing freight needs. Transportation projects like bridge replacements, road widenings, port and rail access improvements, and grade separations help AMATS to evaluate how to improve the freight transportation network. The Freight Plan considers the following:

- Define those elements of the area's transportation system that are critical for the efficient movement of freight.
- Identify ways to measure system performance in terms of freight movement.
- Develop freight-oriented data collection and modeling in order to identify problems and potential solutions.
- Discuss critical issues and identify important bottlenecks in the freight network.

Trucking

Truck traffic originates and terminates primarily in metropolitan areas. As a result, increases in freight-truck traffic have the greatest impact in metropolitan areas in terms of congestion, deteriorating pavement and emissions. In the Greater Akron area, the highest truck volumes are on the interstates and State Route 8. Interstate 76 in Summit County has the highest volume of truck traffic in the region. Some of the region's major arterials and collector roadways also have a high volume of truck traffic due to industry on or near those roadways.

Rail

The Greater Akron area is strategically positioned along heavily utilized rail routes connecting Chicago, IL to U.S. East Coast ports. This area has both CSX and Norfolk Southern rail lines as well as the regional Wheeling and Lake Erie Railway. METRO RTA also owns

three rail lines which were purchased to be preserved for future use. METRO is currently exploring to reactivate these lines for local freight purposes. Railroad-highway intersections are a source of both congestion and safety concerns. There are approximately 393 grade crossings in the Greater Akron area. AMATS compiled a list of high volume at-grade crossings in the area. While grade separations are always desired, these projects can be expensive and difficult to construct.

Review Title VI Civil Rights and Environmental Justice

The transportation system should reflect and support the values and planning objectives of area communities and neighborhoods by ensuring that the planning process is conducted in conformance with Title VI of the Civil Rights Act of 1964 and the environmental justice requirements of Presidential Executive Order #12898 of 1994.

According to Presidential Executive Order #12898, programs or activities that use federal funds must make a meaningful effort to involve low-income and minority populations in the transportation decision making process to participate in activities that may affect their environment or health. Therefore, agencies using federal funds must attempt to identify and address any disproportionately high and adverse human health and environmental effects on minority and low income groups, which may result from the implementation of their plans and programs. The Title VI process is further described in *AMATS Title VI Plan*, June 2019.

Developing, improving and maintaining the regional transportation system is not only about moving the most vehicles as efficiently as possible. Transportation planning must also consider issues such as poverty, equal opportunity and equal access in assessing the impact of transportation plans, programs, and policies on low-income and minority populations. This is to ensure that the costs and benefits of transportation infrastructure and services are fairly distributed.

The public involvement activities conducted by AMATS ensure that low-income, minority individuals, and community groups have the opportunity to participate in the transportation planning process. Community groups and social service agencies representing minority and low income populations are included on the AMATS public notifications list. Draft planning documents and meeting notices are provided directly to AMATS members and social service agencies, and are made available on the AMATS website, amatsplanning.org. In addition, the AMATS website can be viewed in a number of different languages. AMATS has enhanced its presence on several social media platforms such as Facebook and Twitter, where public meetings are advertised and comments may be submitted.

Newsletter

AMATS prepares a newsletter on a semi-annual basis as well as an annual report. The first publication newsletter was compiled in 1993. The purpose of the newsletter is to describe the accomplishments and requirements of the transportation planning process and to document the status of the LRP and TIP.

Monthly updates on the AMATS website provide the public with more current reports on staff accomplishments and activities, which lower printing costs and lessen the lead time on publication. The annual report of AMATS describes the accomplishments and activities of the agency during the previous calendar year.

Bicycle and Pedestrian Activities

AMATS has developed a number of different bike and pedestrian activities that are used to help educate the public and AMATS members about transportation alternatives. As mentioned in the earlier section of this Prospectus under Transportation Issues - the agency has outlined various goals and strategies as well as recommendations in its *Active Transportation Plan (ATP)*. These strategies will lead toward improvements and expansion of the Greater Akron area's bicycle and pedestrian networks.

Bicycle Activities

The League of American Bicyclists has identified 5Es of Bicycling. These are principles that are fundamental to the establishment and maintenance of a safe, bicycle-friendly community. These principles are also tied to promoting a number of bike and pedestrian activities. The principles are described in detail in the ATP and include:

- Engineering
- Education
- Enforcement
- Encouragement
- Evaluation & Planning

Switching-Gears.org

AMATS provides a number of education and outreach activities through its Switching-Gears Program, the agency's regional initiative to promote cycling. *Switching-Gears.org* is a website dedicated to advocating and promoting regional cycling. The website is a clearinghouse of information about bike-related events, cycle shops, regional trails, and maintenance and safety tips.

Bike-N-Brainstorm Events
These are public meetings that were developed in 2012 to serve as an innovative tool for public outreach. This event includes a bike ride and brainstorming session among AMATS staff and participants. Cyclists share their insights on how to improve biking and pedestrian access in a community. The agency uses feedback from these events when weighing bike and pedestrian projects for the region.

Bike User Map
This is a free, comprehensive map of streets and shared-use paths in the AMATS region. The map rates cycling routes according to their respective levels of difficulty. AMATS periodically updates the map and distributes it at events, to bicycle shops, libraries, community centers, and other venues throughout the region.

Pedestrian Activities

Safe Routes to School
The Safe Routes to School (SRTS) Program, administered through ODOT, is another pedestrian related activity that officially kicked off in Akron on November 8, 2013. The SRTS Program was a new effort to create a District-Wide School Travel Plan for the Akron Public Schools (APS). The Akron Public School Travel Plan was completed in 2014 and became one of the first district-wide School Travel Plans (STP) for a large school district in Ohio as well as one of the first nationwide. It sets precedence for other communities in the AMATS area to apply to the SRTS Program.

The STP is a written document that outlines ways to make travel to and from school safer and to encourage and enable students in grades K-8 to walk or ride their bicycle to school. Projects can be either engineering (i.e. improved crossings, sidewalks, etc.) or non-engineering (education and encouragement programs).

Safe Routes to School works to raise awareness, promote pedestrian safety, create safer routes for walking and bicycling, and emphasize the importance of increasing physical activity among children to combat a growing obesity epidemic.

Bicycle and Pedestrian Accessibility

The ATP urges Greater Akron area communities to pursue complete street principles in the coming years. Changing built environments to make physical activity such as cycling and walking more appealing and accessible through sound land use practices and roadway design with all users in mind is at the core of AMATS' efforts with the plan.

People who cannot or prefer not to drive should have safe and efficient transportation choices. The more accessible a system is, the more likely that people will opt to choose active transportation for their trips to school, stores, medical care and recreational opportunities. The region's bicycle and pedestrian facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks.

AMATS Organizational Structure

AMATS is comprised of three committees that decide how the area's federal transportation funds should be spent. The committees include the Policy Committee, the Technical Advisory Committee (TAC), and the Citizens Involvement Committee (CIC) and are described below. The committee members consist of mayors, county officials, transit agencies, and ODOT.

Policy Committee

The Policy Committee guides the development and implementation of a Coordinated, Comprehensive, and Continuing (3-Cs) Urban Transportation Plan and a TIP for all of Summit and Portage Counties and Chippewa and Milton Township areas of Wayne County.

There are 44 voting members of the Policy Committee representing every community in the Greater Akron area. This Committee decides how the area's federal transportation dollars should be spent. Its basic objective is to guide the staged development of a balanced transportation system in concert with existing and future development to efficiently serve the existing and future transportation needs of the area.

The committee is composed of elected officials, county engineers, transit agencies and representatives from ODOT. Its members meet regularly six times a year to make funding decisions, discuss priorities and policies, and collaborate on regional transportation issues. The committee provides opportunities for the public to address the committee with comments.

Technical Advisory Committee (TAC)

The TAC provides technical assistance to the Policy Committee throughout the planning process. The TAC also offers general technical guidance and reviews the technical progress of AMATS, and advises and assists the Director in obtaining data for transportation projects in the region.

The TAC is made up of planners and engineers representing communities, counties and transit agencies across the Greater Akron area. The expertise of these members provides the Policy Committee with the needed "nuts-and-bolts" insights regarding the area's transportation projects.

Citizens Involvement Committee (TAC)

The CIC is the forum through which the public may weigh in directly on transportation-related matters. Through its open-meeting format, CIC members may freely discuss issues with AMATS staff members and other players in the region's planning process. This process takes into consideration all modes of transportation including both motorized and un-motorized and the needs of all citizens in an effort to create true comprehensive transportation planning. The AMATS staff works closely with the CIC members to identify potential discussion topics as well as the preparation of necessary meeting materials and the scheduling of guest speakers.

The committee meets six times a year and its membership is open to all who wish to participate. AMATS promotes CIC meetings through regularly scheduled advertisements with the *Akron Beacon Journal*. The agency also promotes CIC meetings through email and social media campaigns to committee members, interested agencies and groups, and area media.

Staff Support

The AMATS staff serves the three committees and is responsible for carrying out the technical and administrative work of the agency. They are responsible for developing the area's LRP, the four-year TIP and various other reports and recommendations for the consideration of the Policy Committee. The staff also serves as a liaison between the public and the committees of AMATS and ensures that public comment is considered throughout the region's planning process. The staff is made up of engineers, planners, and other professional disciplines.

As part of its duties to maintain the programs of AMATS, the staff is granted the discretion by the AMATS Policy Committee to implement minor revisions or administrative modifications to the LRP and the TIP, and various plan and TIP amendments, reports and studies as may be warranted. The AMATS staff is illustrated in the chart in **Appendix B**.

Sources of Funding

AMATS transportation activities are largely financed by federal and state transportation dollars, local membership dues, and local transportation assessments.

Federal and State Transportation Funds

Federal and state funds are received from the FHWA and ODOT to fund highway improvements. These funds can be used for many types of projects including: resurfacing, turn lanes and traffic signals, and major widening projects.

AMATS receives around $15 million annually for highway improvements. Other sources of funding include ODOT funds from federal and state gasoline taxes. Counties and municipalities also receive federal and state funding. Discretionary funding, also known as earmarks, can be made available for highway projects when written into federal legislation.

Any highway project using federal funding must be consistent with AMATS LRP, regardless of whether AMATS provides the funding. The Plan is important because it gives the authority to local officials to determine how federal funds are spent collectively.

The agency's annual allocations of federal funds are received through two major sources - the Surface Transportation Block Grant Program (STBG) and the Transportation Alternatives Set-Aside Program (TASA), formerly known as the Transportation Alternatives Program (TAP). AMATS also receives Congestion Mitigation and Air Quality (CMAQ) funds that are chosen through a statewide committee and can only be used on projects which improve air quality and relieve congestion. The STBG Program is the most versatile type of funding and can be used on any type of project. The TASA Program provides approximately $1 million each year than can be used for bicycle and pedestrian improvements. All TASA projects must relate to surface transportation and address a transportation need, use or benefit. Preliminary engineering, right-of-way and construction are eligible project costs. Planning is an eligible project phase only for Safe Routes to School (SRTS) District Travel Plans provided that the sponsor has first pursued and secured funding from the Ohio Department of Transportation SRTS Program.

AMATS Local Share

AMATS member communities receive approximately $20 million annually in several funding categories to be used for highway, transit and enhancement improvements. AMATS operates under the state fiscal year which is on a July 1-June 30 budget year. Annually in June, the fiscal year budget is approved and the annual dues and assessment schedules for the membership are approved by the AMATS Policy Committee.

Dues and assessments are used both for local matching share required by most state and federal grants, and for funding the staff's budget. AMATS invoices members a general membership fee in accordance with the budget approved by the AMATS Policy Committee to meet the local matching requirements of the budget. Total annual dues for FY 2021 are $169,080. Local share dues are used to match Federal Consolidated Planning Grant (CPG) funding as well as cover delayed expenses and reimbursements not immediately paid by ODOT. Local share amounts for individual members are based on the U.S. Census 2010 population figures, charged per capita, by previous agreement of the Policy Committee. CPG funds must be matched by state and local funds at a percentage rate of 80/10/10, yielding an initial budget of $1.5 million. Any remaining funds from the fiscal year (FY 2020) would be carried over on July 1, and may be used through December 31, 2020.

Congestion Mitigation and Air Quality Improvement (CMAQ) Program funds for staff air quality planning activities must now be matched with appropriate funding where applicable. Per ODOT's instructions, Toll Revenue Credit (TRC) is applied to portions of the staff CMAQ air quality planning activities. As a result, the amount of local share dues for AMATS members was less than anticipated.

Financial Plan

AMATS prepares a Financial Resources Forecast as part of the Financial Plan that estimates future transportation revenues for the current LRP. The Financial Plan ensures that the LRP is in fiscal constraint where future projects in the plan do not exceed expected revenues.

Both costs and revenues must be projected in year of expenditure dollars. This means that both costs and revenues need to be assigned inflation rates. Highway projects are assigned inflation rates based on ODOT's Construction Cost Outlook and Forecast.

Bicycle and Pedestrian improvements are funded through the estimated highway revenues. Bicycle and pedestrian project costs are inflated to year of expenditure based on the highway methodology. Only $700,000 may be used on bicycle or pedestrian projects per round of funding. Therefore, AMATS assumes that bicycle and pedestrian projects will either receive funds in multiple rounds or local or state funds will cover the remaining construction cost.

Public Participation Process

The public involvement process is designed to provide early, frequent, and ongoing opportunities for public input. Public participation provides citizens a way to voice ideas and needs, access to the decision making process, and information on the transportation planning process. It also gives the opportunity to those who are traditionally unheard, such as minority and low-income populations, a voice in the planning process.

AMATS provides many opportunities throughout the planning process for the public to participate and influence transportation policies, most notably through AMATS Citizens Involvement Committee (CIC). The CIC reviews AMATS products and provides a place to discuss transportation in a less formal, more inclusive meeting format with more engaging topics and opportunities to see local planning efforts. The agency is continually trying new outreach strategies that reach new audiences and to get the community actively involved.

The AMATS and Switching-Gears websites and use of social media are constantly evolving to try and provide the best information and ways to get feedback. One of the main goals of AMATS website has been to make it easier to inform the public about events and provide a way for the public to become more engaged and involved in the planning process.

Social media has fast become one of AMATS' most utilized tools for public outreach. The agency can interact with the public regarding transportation-related topics instantaneously. Facebook and Twitter are two of the most used social media tools with the ability to reach out easily and keep the public up to date. Bike-N-Brainstorm, Better Block, and Jane's Walk are also innovative approaches to public involvement. These strategies actively urge the public to tackle transportation issues directly through participation in unique events.

New technologies involving visualization have changed the communication process and the tools that are available to transportation professionals. AMATS uses visual representations of its work to make it easier for the public to understand complex issues. Some of these techniques include: maps, charts and graphs, photos and renderings, website graphics, GIS story maps, and YouTube videos.

AMATS maintains a *Public Participation Plan (3P)* that was completed in December 2018, to guide public involvement and is included in **Appendix E**. The 3P seeks to encourage an open planning process that supports early and sustained public involvement, timely public notice, and full public access to information regarding key transportation decisions within the Greater Akron area. Through the 3P, AMATS strives to engage the public at the earliest stages of transportation planning, especially those populations who are traditionally underserved or economically depressed such as limited-English proficiency, minority and low-income populations.

Applicable Agreements

In order to provide an effective transportation planning process, AMATS secures working agreements with a number of agencies and the communities it serves. The purpose of the agreements includes administration of the agency and to describe a continuing, comprehensive, and cooperative multimodal planning process with member communities.

The following section describes the major agreements of AMATS. **Appendix D** includes a table that identifies AMATS regional planning agreements with the communities and agencies.

Agreements with Other MPOs / NEFCO

AMATS shares common boundaries with three other MPOs. These MPOs are Eastgate Regional Council of Governments in Youngstown, Stark County Area Transportation Study in Canton (SCATS), and the Northeast Ohio Areawide Coordinating Agency (NOACA) in Cleveland. AMATS and Eastgate have an agreement to work together to improve the economy, environment, transportation systems and quality of life for the citizens within their respective planning areas. An agreement of coordination efforts with NOACA ensures that a continuing, comprehensive, and cooperative transportation planning process is conducted.

AMATS also has an agreement of cooperation with the Northeast Ohio Four County Regional Planning and Development Organization (NEFCO). NEFCO is an area wide water quality management planning agency for Portage, Stark, Summit and Wayne Counties. AMATS and NEFCO coordinate respective planning and programming activities.

Agreements with Local Communities

Since AMATS creation in 1962, it has secured agreements of cooperation and Memorandums of Understanding (MOU's) with most of the incorporated municipalities within its planning area for regional transportation planning and programming. The MOU's date back to 1970 and are renewed periodically. The MOU is in place to manage joint and sometimes overlapping planning responsibilities within the respective municipalities. It describes the continuing, comprehensive, and cooperative multimodal planning process that supports metropolitan community development and transportation programs. These plans and programs will lead to the development and operation of an integrated, intermodal transportation system that facilitates the efficient, economic movement of people and goods.

Agreements that are not secured at this time are with Doylestown in Wayne County, as well as with Macedonia and New Franklin in Summit County.

Two-Party Agreements

AMATS is housed within the City of Akron's Planning department and the City of Akron is the monetary agent for AMATS. The City of Akron and the State of Ohio have executed an agreement for urban transportation planning and transportation programs. This agreement specifies the cooperative efforts of AMATS/City of Akron and ODOT to conduct a continuing, comprehensive, and cooperative multimodal planning process (3-C) within the defined area.

AMATS has an agreement with ODOT which designates AMATS as the MPO for the Akron urbanized area. It describes the planning area and required work products and services. The agreement with ODOT also designates the Policy Board to delegate the authority and responsibility for coordination of the transportation planning process. As part of its agreement with ODOT, AMATS commits to maintaining a Prospectus document that encloses all bylaws, member agreements, and policy documents. This agreement is current and renewed every two years, consistent with Ohio's biennial budget cycle beginning July 1.

Establishing AMATS Agreements

Regional Transit Authority

AMATS has executed agreements with METRO RTA and PARTA, the two transit agencies in the Greater Akron area. METRO provides service in Summit County while PARTA provides service in Portage County. The agreements are MOU's that outline cooperative procedures for carrying out regional transportation planning.

Air Quality

The 1990 Clean Air Act Amendments (CAAA) established national ambient air quality standards for transportation conformity in several categories of air pollutants and toxins. Areas that are designated by the USEPA as nonattainment or maintenance for mobile source pollutants under the Clean Air Act are required to meet the conformity rule requirement of using the latest planning assumptions.

Portage and Summit counties are part of the U.S. Census-designated eight-county Cleveland-Akron-Lorain Combined Statistical Area (CSA) for air quality. This area includes: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties.

Two MPOs serve seven of these counties. NOACA serves Cuyahoga, Geauga, Lake, Lorain, and Medina counties. AMATS serves Summit and Portage counties. The Erie Regional Planning Commission (ERPC) serves the City of Vermilion in Lorain County. Ashtabula County is not part of a Metropolitan Planning Organization.

Appendices

Appendix A - Map of AMATS Planning Area

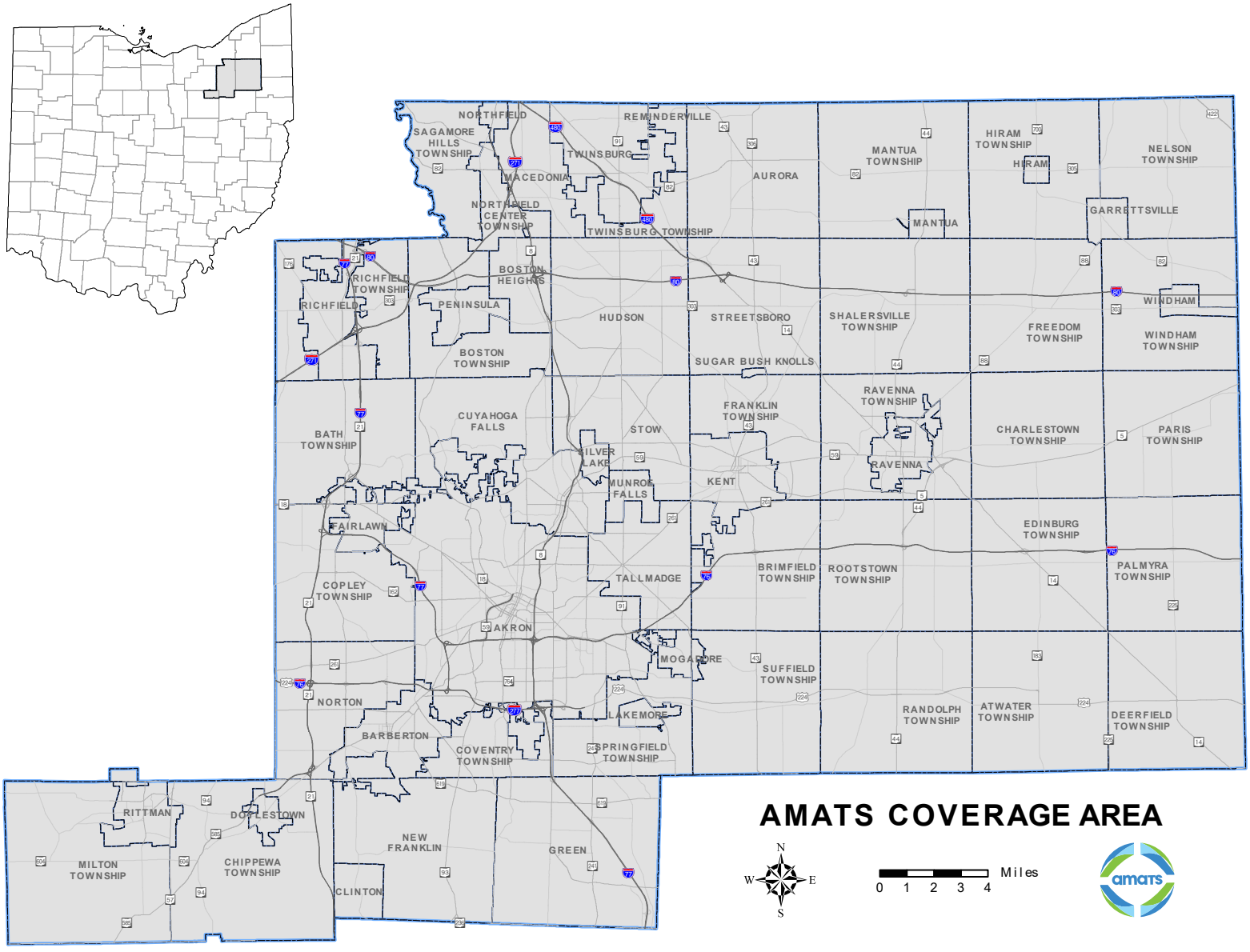
Appendix B - AMATS Staff Chart

Appendix C - Bylaws of the AMATS Policy Committee

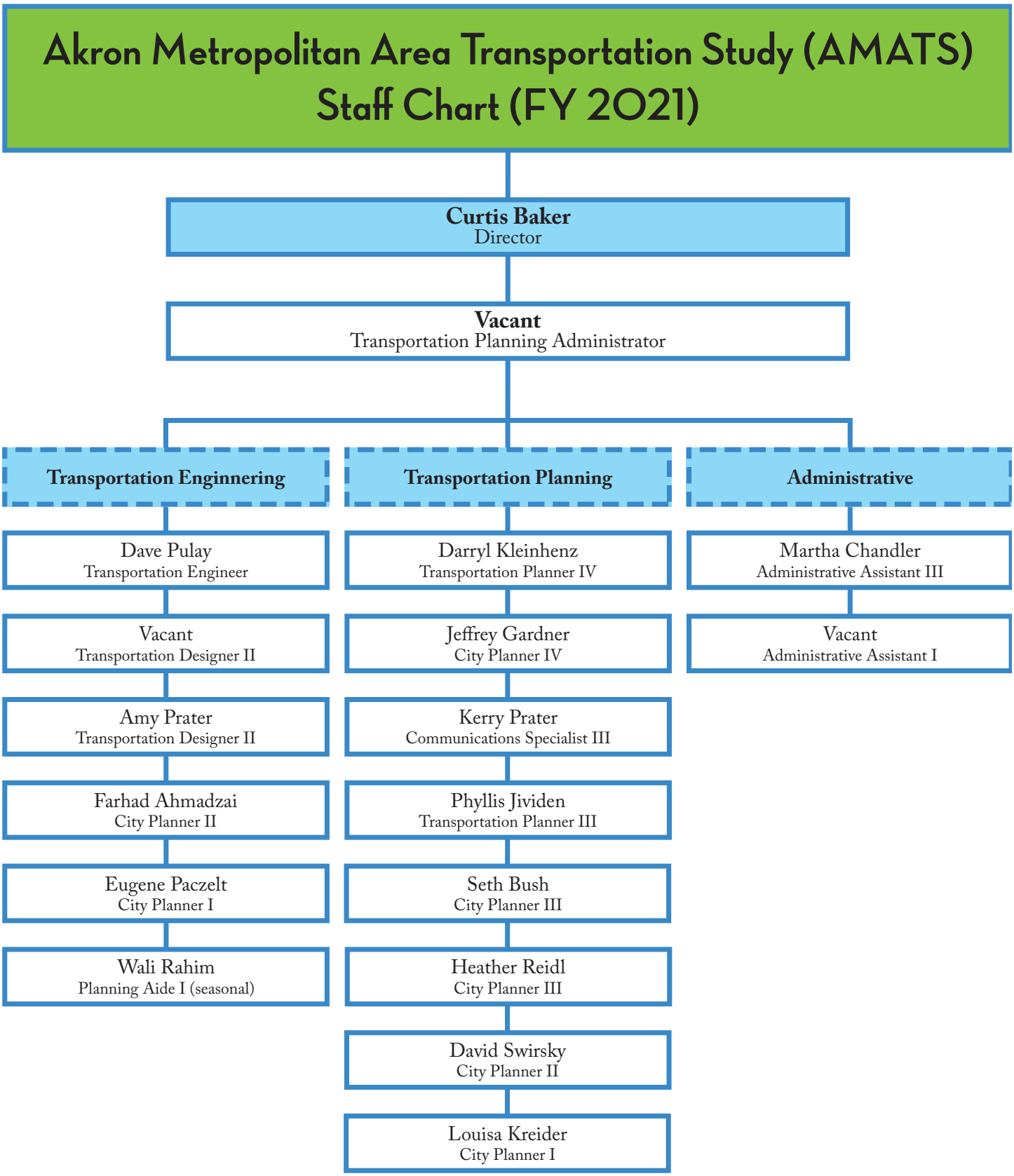
Appendix D - AMATS Regional Planning Agreements

Appendix E - AMATS Public Participation Plan

Appendix A - Map of AMATS Planning Area



Appendix B - AMATS Staff Chart



Appendix C - Bylaws of the AMATS Policy Committee

BY-LAWS
of the
METROPOLITAN TRANSPORTATION POLICY COMMITTEE
of the
AKRON METROPLITAN AREA TRANSPORTATION STUDY

ARTICLE I
METROPOLITAN TRANSPORTATION POLICY COMMITTEE

Section 1 – NAME

The name of this committee shall be the Metropolitan Transportation Policy Committee of the Akron Metropolitan Area Transportation Study (AMATS).

Section 2 – ORIGIN

The Metropolitan Transportation Policy Committee was established on December 10, 1962, in cooperation with the United States Bureau of Public Roads and the Ohio Department of Highways as a requirement of Section 134 of the Federal-Aid Highway Act of 1962.

Section 3 – PURPOSE

The purpose of this committee shall be to guide the development and implementation of a Coordinated, Comprehensive, and Continuing Urban Transportation Plan and a Transportation Improvement Program for all of Summit and Portage Counties and the Chippewa and Milton Township areas of Wayne County, Ohio, in cooperation with the Counties and Political Sub-Divisions therein, the Federal Highway Administration, the Federal Transit Administration, U.S. Department of Transportation, U.S. Environmental Protection Agency and the Ohio Department of Transportation.

Section 4 – GENERAL FUNCTION

This committee shall initiate, guide, and sanction the necessary activities required for the development of a Coordinated, Comprehensive, Continuing Urban Transportation Planning Process and a Transportation Improvement Program for the area. Its basic objective is to guide the staged development of a balanced transportation system in concert with existing and future development to efficiently serve the existing and future transportation needs of the area.

Section 5 – MEMBERSHIP

A. Voting membership shall consist of the following or their designated alternates with one vote each: The Summit County Executive and two additional members appointed by the County Executive; Summit County Engineer; the Portage County Commissioners; Portage County Engineer; the Mayors of the Municipalities of Akron, Aurora, Barberton, Boston Heights, Clinton, Cuyahoga Falls, Doylestown, Fairlawn, Garrettsville, Green, Hiram, Hudson, Lakemore, Macedonia, Mantua, Mogadore, Munroe Falls, New Franklin, Northfield, Norton, Peninsula, Ravenna, Reminderville, Richfield, Rittman, Silver Lake, Stow, Streetsboro, Sugar Bush Knolls, Tallmadge, Twinsburg and Windham and any subsequently created municipalities in the Study area; the City Manager of the City of Kent; the District Four Deputy Director of the Ohio Department of Transportation, the President of the Board of Trustees of the METRO Regional Transit Authority; and the President of the Board of Trustees of the Portage Area Regional Transportation Authority; the Wayne County Engineer and one member appointed by the Board of Wayne County Commissioners

B. Non-voting membership shall include the Director or his designated representative as the Executive Secretary of the Metropolitan Policy Committee.

Section 6 – OFFICIAL ALTERNATES

A member of the Metropolitan Transportation Policy Committee may designate two official alternates to represent the member in his absence. A letter of official designation shall be submitted to the Executive Secretary of the Committee so that the alternate may be officially accorded all the voting rights of the member.

Section 7 – AUTHORITY

The Metropolitan Transportation Policy Committee, as stated in the **State of Ohio Department of Transportation Agreement for Urban Transportation Planning and Transportation Programming (updated each biennium)** for the continuation of the Urban Transportation Planning Process, is the Metropolitan Planning Organization for the AMATS area designated by the State of Ohio acting on behalf of the Governor in cooperation with local officials of the Akron Metropolitan Area Transportation Study, and is delegated the authority and responsibility for the direction, coordination and administration of the Urban Transportation Planning Process in accordance with the terms of the AMATS Prospectus and Work Program.

Section 8 – DUTIES AND RESPONSIBILITIES

A. Exercise general management of the Study Activities in accordance with all Agreements of Cooperation, State and Federal Regulations and the AMATS Prospectus and Work Program and Budget as amended by further committee action.

B. Appoint Technical Advisory Committee members to represent municipalities. The Technical Advisory Committee is provided for in the AMATS Prospectus and **State of Ohio Department of Transportation Agreement for Urban Transportation Planning and Transportation Programming** and advises the Metropolitan Transportation Policy Committee on all technical and financial matters. The Metropolitan Transportation Policy Committee as a whole shall appoint a representative of private provider interests to serve as a non-voting member of the Technical Advisory Committee.

C. Direct the Agenda for each meeting to be distributed one week prior to the scheduled meetings. Items may be added to the published agenda, but must be approved by unanimous vote of those members in attendance.

D. Direct the Technical Advisory Committee to meet at least one day preceding the Metropolitan Transportation Policy Committee meeting to consider study progress and technical matters and to recommend action on such items to the Metropolitan Transportation Policy Committee at regular meetings.

E. Direct the AMATS Director, as Executive Secretary of the Technical Advisory Committee, to report technical progress and financial status monthly, to the Technical Advisory Committee, so that a committee representative can report such matters to the Metropolitan Transportation Policy Committee.

F. Provide direction for the regional transportation planning process to ensure that the transportation plan is developed in a Continuous, Comprehensive and Coordinated manner.

G. Provide direction for the annual development and approval of the Transportation Improvement Program to ensure that transportation projects using Federal funds are implemented in a systematic manner.

H. Each member of the Committee is expected to exercise the previous mentioned duties and responsibilities in accordance with the policies of the agency or organization he or she represents but remain cognizant of the needs of the total area.

ARTICLE II
ORGANIZATION

Section 1 – OFFICERS

The officers shall consist of a Chairman, a Vice-Chairman, and an Executive Secretary.

Section 2 - ELECTION OF OFFICERS

The Chairman and Vice-Chairman of the Committee shall be elected at a meeting during the last quarter of the year. The term of office shall start at the first meeting of the new year and shall be for one year or until a successor shall be elected and shall assume the office. The Executive Secretary of the Metropolitan Transportation Policy Committee, as a non-voting member, shall be the Director of the Akron Metropolitan Area Transportation Study

Section 3 – DUTIES OF THE OFFICERS

A. Chairman-shall preside at all meeting of the Metropolitan Transportation Policy Committee and call special meetings as required; appoint all subcommittees; and obtain committee adherence to the duties and responsibilities as delineated in Article I Section 8 of the By-laws.

B. Vice-Chairman-shall perform the duties of the Chairman in his absence.

C. Executive Secretary-shall attend meetings of the Metropolitan Transportation Policy Committee and record all proceedings of the committee action, and carry out all work necessary and incidental to the objectives of AMATS and the Metropolitan Transportation Policy Committee.

ARTICLE III
SUBCOMMITTEES

Section 1 – SUBCOMMITTEE FORMATION

Subcommittees shall be formed when necessary to carry out the various phases of the work of the Study. Members of subcommittees shall be appointed by the Chairman of the Metropolitan Transportation Policy Committee (see Article II-Section 3). Subcommittee members need not be members of the Metropolitan Transportation Policy Committee.

Section 2 – STANDING SUBCOMMITTEE

The Technical Advisory Committee Transportation Improvement Program Subcommittee (TAC TIP) shall monitor TIP funding and project activity. The TAC Chairman will direct this Subcommittee and its membership shall include: the Policy Committee Chairperson, one representative from each city with a population of over 20,000, a representative from a city with a population between 10,000 and 20,000 appointed by the Policy Committee Chairperson, a representative from a city with a population between 5,000 and 10,000 appointed by the Policy Committee Chairperson, a village representative appointed by the Policy Committee Chairperson, the Summit and Portage County Engineers, and one representative from the Portage Area Regional Transportation Authority and METRO Regional Transit Authority. Each member of the Subcommittee has one vote. The chairperson can only vote if his or her community is not otherwise represented. Policy Committee Chairperson appointments will be made before a round of AMATS funding begins. The appointees will serve for two years until the next round of funding.

ARTICLE IV
MEETINGS

Section 1 – METROPOLITAN TRANSPORTATION POLICY COMMITTEE

The Metropolitan Transportation Policy Committee shall schedule at least six (6) regular meetings annually. An annual schedule of Metropolitan Transportation Policy Committee meetings shall be adopted for the next year no later than the last regularly scheduled meeting of each calendar year. The Chairman may cancel regularly scheduled meetings of the Committee or establish special meetings as required.

Section 2 – QUORUM

A quorum shall consist of ten (10) members of the voting membership of the Committee. There shall be a roll call of the membership at the beginning of each meeting to determine if a quorum exists so that business can be conducted. A majority vote of the voting membership present shall be required for Committee action.

ARTICLE V
AMENDMENT OF ARTICLES

Section 1 – HOW AMENDED

These articles may be amended by a majority vote of a quorum of the Metropolitan Transportation Policy Committee at a regularly scheduled meeting or special meeting provided such amendments have been distributed to all members a minimum of one week in advance of the meetings.

AMENDED: December 19, 2019

Appendix D - AMATS Regional Planning Agreements

COMMUNITY / AGENCY	1963	1964	1969	1970	1975	1979	1993	1997	2003	2007	2012	2016	2018	2019	2020
Akron		X													
Ashtabula - Part of AQ Conformity Process							X								
Aurora				X											
Barberton			X												
Boston Heights				X											
Brady Lake (now unincorporated)				X											
Clinton				X											
Cuyahoga Falls				X											
Doylestown															
Eastgate*									X						
Fairlawn		X													
Garrettsville				X								X			
Green															
Hiram				X											
Hudson				X											
Kent				X											
Lakemore				X											
Macedonia															
Mantua				X											
MCPT - METRO - PARTA*											X				
METRO													X		
Mogadore				X											
Munroe Falls				X											
NEFCO*						X									
New Franklin															
NOACA*															X
Northfield				X											
Norton			X												
Ohio Department of Highways		X													
ODOT*														X	
ODOT & City of Akron - Biannual*														X	
Ohio EPA, NEFCO, & local air agencies*										X					
PARTA													X		
Peninsula				X											
Portage County			X												
Ravenna				X											
Reminderville				X											
Richfield				X											
Rittman														X	
SCATS*									X						
Silver Lake			X												
Stow				X											
Streetsboro				X											
Sugar Bush Knolls				X											
Summit County	X														
Tallmadge			X												
Twinsburg				X											
University of Akron	X														
Wayne County Engineer's Office															X
Windham				X											
	Communities without a secured agreement									*Agreements updated periodically					

AMATS

"3P"

Public Participation Plan

December 2018

AMATS
"3P"
PUBLIC PARTICIPATION PLAN

December 2018

Akron Metropolitan Area Transportation Study
161 S. High St. / Suite 201 / Akron, Ohio 44308
Phone: (330) 375-2436
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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.

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Introduction

This *Public Participation Plan* or "3P" seeks to encourage an open planning process that supports early and sustained public involvement, timely public notice, and full public access to information regarding key transportation decisions within the Greater Akron area.

The 3P ensures a continuing, comprehensive, and coordinated process among all area stakeholders while encouraging and providing opportunities for broad-based participation in the development and review of regional transportation plans, programs and policies. Through the 3P, AMATS strives to engage the public at the earliest stages of transportation planning, especially those populations who are traditionally underserved or economically depressed such as limited-English proficiency, minority and low-income populations.

The 3P reflects the realities of a changing society. AMATS seeks to foster an environment where the public feels that its insights not only matter, but are encouraged and welcomed. The 3P is updated periodically to: reflect changes in local, state or federal legislation; adjust the plan to include new technologies; and to meet the needs of the community. The agency relies on the following guiding principles when updating the 3P:

- AMATS recognizes that every major public policy decision or implemented transportation project significantly affects someone.
- If the agency's decision-making process is open, objective and considers all viewpoints, then policies, programs and projects are usually much more willingly accepted and embraced by affected communities.
- By utilizing a variety of public outreach techniques in multiple formats to provide planning information, the agency will gain a wide audience and solicit input from a greater number of people.
- Coordination and collaboration among as many as transportation stakeholders as possible during the planning process produces the most effective and balanced transportation solutions.

Because the agency relies on these principles, the 3P allows the Greater Akron area to meet unforeseen changes creatively and forcefully.

Throughout the change occurring around us, there is an old transportation adage that still holds true: *The journey of a thousand miles begins with a single step*. Our agency actively pursues strategies to encourage the public to take their first steps in getting involved in their region's transportation planning process. AMATS provides many opportunities throughout this process for the public to participate and influence transportation policies.

There are several different ways to get involved with AMATS which are presented in 3P, most notably our Citizens Involvement Committee. Please note that the public is by no means limited to the strategies detailed in these pages. The agency actively seeks new opportunities to exchange ideas with the public and welcomes ideas and suggestions on how to do so.

What is AMATS?

"AMATS" stands for the **A**kron **M**etropolitan **A**rea **T**ransportation **S**tudy. We are responsible for transportation planning within the Greater Akron area comprised of Portage and Summit counties and a portion of Wayne County. From highways to bikeways, from buses to trails, our agency plays a role in the planning of the major transportation projects within the area and the funding that makes them possible.

A Policy Committee, a Technical Advisory Committee (TAC), a Citizens Involvement Committee (CIC) and a staff are the official players that comprise AMATS with each suited to a particular role in the planning process. To learn more about each, read on.

AMATS Committees and Staff

Each Player Has a Role - Even You!

Transportation planning in the Greater Akron area is accomplished through a cast of players. Like any ensemble cast, each player performs a unique role, but their roles are intertwined. The Policy Committee, Technical Advisory Committee (TAC), Citizens Involvement Committee (CIC) and agency staff are featured players in this cast, but - like any cast - they need feedback. The feedback that they need comes from you - the public - through your participation in the planning process.

As a member of the public, you are encouraged to participate in the planning process. AMATS strives to make the Greater Akron area's transportation planning process as transparent and accessible as possible. The agency regularly:

- Posts timely notices about meeting dates and locations and meeting materials in advance on our website - **amatsplanning.org**.
- Provides podcasts of past meetings on our agency website and through our podcast subscription service.
- Schedules committee meetings in locations that are accessible for all citizens, including the disabled and transit dependent.

You are welcome to attend any of our committee meetings, all of which are open to the public. Below are descriptions regarding our committees and staff and how you may participate in the regional planning process.

Policy Committee

Currently, there are 44 voting members of the Policy Committee representing every community in the Greater Akron area. It is this body that decides how the area's federal transportation dollars should be spent. The committee is composed of elected officials, county engineers, transit agencies and representatives from the Ohio Department of Transportation. Its members

2

meet regularly six times a year to make funding decisions, discuss priorities and policies, and collaborate on regional issues.

The Policy Committee provides opportunities for the public to address the committee with the following guidelines:

- Anyone interested in making comments before the Policy Committee may do so during the public comment period at the beginning of the agenda.
- Public comments are limited to three minutes per person, but may be allowed more time by the Policy Committee chairperson.
- Organizations wishing to address the Policy Committee should select one representative to speak during the public comment period.
- Speakers will be asked to fill out an *Audience Participation Form* before addressing the Policy Committee (p. 20).
- Citizens may contact the AMATS staff at **330-375-2436** or by email at **amats@akronohio.gov** in advance to request time to speak, or may do so in person before the meeting with any AMATS staff member.

Technical Advisory Committee (TAC)

The TAC provides technical assistance to the Policy Committee throughout the planning process. The TAC is made up of planners and engineers representing communities, counties and transit providers across the Greater Akron area. The expertise of these members provides the Policy Committee with needed "nuts-and-bolts" insights regarding the area's projects.

Citizens Involvement Committee (CIC)

The CIC is the forum through which the public may weigh in directly on transportation-related matters. Through its open-meeting format, CIC members may freely discuss issues with AMATS staff members and other players in the region's planning process. The AMATS staff works closely with the CIC members to identify potential discussion topics and in the preparation of necessary meeting materials and the scheduling of guest speakers.

The committee meets six times a year and its membership is open to all who wish to participate. Regular meetings commence at **6:30 p.m.** and are usually held in the **Akron-Summit County Public Library** located at **60 South High Street** in downtown, which is centrally located and transit accessible in the Greater Akron area. Additional committee meetings may be scheduled by the CIC members if they so desire.

AMATS promotes CIC meetings through regularly scheduled advertisements with the *Beacon Journal*. Additional newspaper advertisements are occasionally purchased if deemed necessary by the staff given the regional significance of and public interest in particular agenda items and topics. The agency also promotes CIC meetings through email and social media campaigns to committee members, interested agencies and groups, and area media.

Staff

The AMATS staff assists all three committees and carries out the "day-to-day" administrative and technical work of the agency. The staff develops the area's long-range *Regional Transportation Plan* (RTP) (p. 14-p. 15) and the four-year *Transportation Improvement Program* (TIP) (p. 16-p. 17). The staff is a mix of engineers, planners and other professional disciplines.

While serving as a liaison between the public and the committees of AMATS, the staff ensures that public comment is considered throughout the region's planning process. The staff welcomes verbal and written comments and strives to respond to concerns in a timely manner. You may contact the staff at **330-375-2436** or by email at **amats@akronohio.gov**. You may contact individual staff members directly by referencing the *Staff Directory* on the AMATS web site at **amatsplanning.org**. Written correspondence should be addressed to:

AMATS
161 S. High Street / Suite 201
Akron, Ohio 44308

As part of its duties to maintain the programs of AMATS, the staff is granted the discretion by the AMATS Policy Committee to implement minor revisions or administrative modifications to the *Regional Transportation Plan* and the TIP, and various plan and TIP amendments, reports, and studies as may be warranted. Such administrative modifications are largely grammatical and typographical corrections or revisions that do not require demonstration of fiscal constraint or an air quality conformity determination. For the sake of transparency, the staff will present all changes to the *Regional Transportation Plan* and TIP to the AMATS Policy Committee regardless as to whether they are minor revisions, administrative changes or amendments. (The criteria used by the staff in making such determinations are presented in *Appendix A - Regional Transportation Plan* (RTP) (p. 14-p. 15) and *Appendix B - Transportation Improvement Program* (TIP) (p. 16-p. 17) of the 3P.)

If the staff determines that formal amendments to the *Regional Transportation Plan* or TIP are warranted, the staff will determine whether such changes constitute Minor or Major Amendments. Once such determinations are made by the staff, then the agency will pursue the appropriate public participation procedures specified in Appendices A and B of the 3P.

On the Web

Emerging technologies present AMATS with new opportunities to connect with the public. The Internet has created boundless opportunities for you and your friends to engage with our agency without the need to leave the comfort of your home.

Along with its two web sites - **amatsplanning.org** and **Switching-Gears.org** - AMATS uses web posting and social media sites such as Twitter, Facebook and YouTube to provide citizens with up-to-the-minute information. The agency also has expanded its practice of posting announcements, meeting information and news on community-oriented sites such as the Summit County Community Calendar, Zvents and other appropriate venues.

Below are some of the ways that AMATS harnesses the power of the Internet.

AMATSPLANNING.ORG

AMATS routinely updates its website to make the site even more user-friendly. The agency is working to show you how your tax dollars are being spent in a clear, easy-to-understand format. Our web site includes an easy-to-use interactive *Transportation Improvement Program* (TIP), which provides details about AMATS-funded projects and includes map images of TIP project locations.

Among the agency's goals for its site have been to make it easier to inform the public about events while providing opportunities for them to become more engaged and involved in the planning process. From the *Home* and *Meetings* pages, a visitor can check out dates and times for our next Policy Committee, Technical Advisory Committee (TAC), and Citizens Involvement Committee (CIC) meetings. A visitor can also view the most recent committee meeting packet, listen to an MP3 meeting podcast, or complete an *Audience Participation Form* (p. 20) to speak to the Policy Committee. Visitors will also find access to timely features under *What's New*, check out our Twitter feed, or search the entire site for a specific topic.

Title VI of the Civil Rights Act of 1964 requires that AMATS shall not, on the basis of race, color, religion, national origin or sex, exclude anyone from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. In the event that a member of the public believes that they are the victim of an alleged discriminatory practice by AMATS during the Greater Akron area's transportation planning process, our agency provides a *Nondiscrimination Complaint Form* on our agency web site - **amatsplanning.org**. Using this form, citizens may describe in detail why they believe that their concerns or needs are not being addressed by the agency.

Additionally, our agency web site - **amatsplanning.org** - includes a link to language interpretation software to assist those for whom English is not the first language. Using this link, visitors to our web site can translate pages into other languages including Chinese, French and Spanish. The ***AMATS Title VI - Program Procedures and Documentation*** Plan outlines other steps to include limited-English proficient persons in the planning process.

SWITCHING-GEARS.ORG

This web site provides information to people on ways to take advantage of the Greater Akron area's trails and inform them on ways to utilize cycling as a means of transportation. Switching-Gears.org also has a calendar announcing organized bike rides and events in our region and an easy-to-use Bike User Map.

Social Media

Social media has fast become one of AMATS' most utilized tools for public outreach. The agency can interact with the public regarding transportation-related topics instantaneously. Below are some of the most popular media that AMATS uses on a regular basis.

- **Twitter** is a great online tool that lets you send messages to your followers in 280 characters or less. Stay up to date with the most relevant news in transportation and

land use planning. Follow **@amatsplanning** on Twitter to receive tweets about the latest transportation news.

- **Facebook** is a popular social media tool that is increasingly being used by agencies to reach new audiences and AMATS is no exception. The agency's Facebook page is updated frequently with our latest tweets and pictures of the region. It is also linked to the AMATS website where the public can get more information.

- **YouTube** is a social media site that allows users to post videos and share them with friends. Through its channel - **AMATSPlanning** - the agency presents many special video features highlighting transportation topics. Topics range from meeting summaries to informative features.

New Approaches

AMATS continually seeks new approaches to engage the public throughout the transportation planning process. Below are descriptions of some of the newer strategies that our agency has embraced in recent years.

Public Empowerment

AMATS pursues innovative public *empowerment* strategies that present opportunities to challenge the public beyond mere dialogue. These strategies actively urge the public to tackle transportation issues directly through participation in unique events. Generally, these events entail a topic-specific activity geared to spur dialogue between participants and area policy makers. Following participation in a group endeavor, participants share their ideas and insights gained through firsthand experiences as to what can be done to improve accessibility and livability in a particular locale. Below are several examples used by the agency:

- **Active Transportation Conferences** - AMATS hosts conferences dedicated to transportation-related topics designed to provoke discussions between policy makers and the public. The intent of the conferences are to help communities address and identify needs that policymakers may have overlooked. These conferences are daylong events with featured speakers and breakout sessions.

- **Better Block** - Better Block encourages the public to take one neighborhood block at a time, start small, and actually *do* something. It could be setting up new temporary bike lanes; it could be makeshift street art or furniture; it could be a coffee shop, art gallery or beer garden for a brief period of time. These events help the public experience something new in their neighborhoods by letting them see it, live it and - perhaps most importantly – participate in actually *creating* it.

- **Bike-N-Brainstorms** - These events embark on a group bike ride along key corridors as an alternative way to get feedback about on-road biking. At the end of their ride, group members participate in a brainstorming session with agency personnel and local officials to share their ideas as to what can be done to improve bike travel within the area.

- **Jane's Walk** - Inspired by pioneering author and urban activist, Jane Jacobs, these events provide opportunities for people to engage in city planning by meeting and exploring cities through short walking tours. During these tours, participants discuss what can be done to make areas more pedestrian friendly.

The agency also welcomes invitations and suggestions from the public to participate and support community-oriented events benefitting the area's transportation systems.

Community Outreach

As part of its efforts to fashion a vibrant, livable Greater Akron area, AMATS frequently partners with various civic groups on a host of projects. Among the agency's past partners have been the Barberton Community Foundation, The Knight Foundation, Leadership Akron, Neighborhood Development Services and Torchbearers.

AMATS welcomes opportunities to work with new partners in appropriate community-oriented endeavors. Those interested in seeking the agency's involvement should contact AMATS at **amats@akronohio.gov** or at **330-375-2436**.

Speakers' Bureau

AMATS staff members are available by appointment to discuss technical and policy information with citizens and other interested parties during and outside of the agency's normal business hours. Staffers are also available by appointment to present technical and policy information to the public and to participate in a variety of forums such as panel discussions.

Individuals and groups can request a speaker by contacting AMATS at **amats@akronohio.gov** or at **330-375-2436**. Requests should be transmitted via the agency's public information coordinator.

Public Information

As part of our efforts to provide the region with a transparent planning process, AMATS goes beyond merely accommodating requests for public information - which we will gladly do! The agency disseminates all meeting materials one week prior to scheduled committee meeting dates via email and through postings on its web site - **amatsplanning.org**. The public is welcome to subscribe to these electronic mailings. All that's needed for a subscription to AMATS is a subscriber's name and their email address. Postal delivery of materials may be arranged by special request at no charge to recipients.

Many materials, such as our current and past reports, plans and studies are available for review and download on the agency web site. Please note that selected draft and interim materials may be available for viewing and downloading only for specified times, such as public comment periods.

Records of committee meetings are available in the form of minutes and MP3 podcasts on the agency web site. AMATS will gladly forward pdf or printed versions of committee minutes to the public via email or postal delivery upon request. The agency also offers a podcast subscriber service in which committee recordings can be automatically downloaded to your computer as soon as they become available.

In addition, AMATS regularly distributes press releases and other information to Greater Akron area media regarding transportation-related events and developments. The agency also provides a free annual report and a semi-annual newsletter to committee members, the media, and subscribers. Other information and services such as traffic data, project status information, accident data and more are readily available on the agency web site. The staff is available to answer questions regarding information that is not readily available on the site.

Unique Populations

AMATS strives to involve low-income and minority groups in the public participation process for the Greater Akron area. The agency relies on the definitions of these populations provided by the United States Department of Transportation (USDOT) Order 5610.2(a) on Environmental Justice, contained in the *Federal Register* (May 2, 2012). "Low-Income" is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

A "Minority" is defined as a person who is:

1) Black (a person having origins in any of the black racial groups of Africa);
2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
3) Asian (a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent);
4) Native Hawaiian or other Pacific Islander (a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands; or
5) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition)

Using 2010 U.S. Census Bureau data, the agency recognizes where these groups are located within the region (**p. 11** and **p. 12**) and seeks their involvement throughout the planning process using a mix of outreach strategies involving advertisements, community groups, press releases, social media and other available means. The aforementioned *Public Empowerment* strategies, such as Better Block and Bike-N-Brainstorms, (**p. 6-p. 7**) present valuable opportunities for the agency and members of these populations to coordinate, network and organize activities with direct participation and firsthand experiences given the targeted neighborhood scale of many of these events.

The region is also witnessing growth in its Asian and Hispanic populations. These populations have unique interests and needs which will contribute to and influence the area's transportation policies and systems. AMATS recognizes this and strives to foster a dialogue with these and other diverse communities within the area. Recently, the agency has increased its outreach efforts to these populations by initiating a dialogue with various organizations including:

- the Akron Urban League
- Asian Services in Action, Inc.
- the International Institute of Akron
- the Ohio Latino Affairs Commission
- Torchbearers
- and other community and neighborhood groups.

The agency actively pursues opportunities to collaborate on the development of transportation-related programs and projects with representatives of these populations. Each public process confronts the challenge of getting traditionally underrepresented populations involved in the planning process. These potentially underrepresented populations may include youth of the community, persons with disabilities, senior persons and others who may be too busy or unable to attend public meetings.

Long an adherent to the spirit and wording of Title VI of the landmark Civil Rights Act of 1964, Executive Orders 12898 and 13166, and the Americans with Disabilities Act of 1990 (ADA), the agency will broaden and continue its outreach to the region's many varied communities and populations. The passages below demonstrate that the agency recognizes the importance of these federal requirements throughout the regional planning process.

Title VI of the Civil Rights Act of 1964

Title 49 of the Code of Federal Regulations (49 CFR), Part 21 states that "no person in the United states shall on the grounds of race, color, or national origin be excluded from the participation in, or be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal Financial assistance." In May 2015, AMATS adopted a comprehensive ***AMATS Title VI - Program Procedures and Documentation*** Plan, which defines the agency's program, procedures and means of documentation. AMATS employees are responsible for ensuring that the agency's programs, policies, and services are developed, conducted and implemented without regard to a person's race, color, national origin (including Limited English Proficiency), sex, disability, ancestry, religion, military status or age. Employees must ensure that ethnic minorities and low-income populations are not adversely impacted, and aim to achieve full participation by these groups in the agency's programs, policies and activities.

AMATS' Public Information Coordinator/Title VI Coordinator is responsible for initiating and monitoring Title VI activities, preparing required reports, and other responsibilities as required by Title 23 Code of Federal Regulations (CFR) Part 200, and Title 49 CFR Part 21.

Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 requires that disproportionately high and adverse human health or environmental effects on minority and low-income populations be identified and addressed to achieve environmental justice. Since the establishment of Title VI, Environmental Justice has been considered in local, state, and federal transportation projects. Additionally, Title 28 CFR Section 42.104 of Title VI and related statutes require federal agencies to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion.

Executive Order 13166 - Improving Access to Services for Persons with Limited English Proficiency (LEP)

Executive Order 13166 requires federal agencies to examine the services that they provide, identify any need for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so that LEP persons can have meaningful access to them. This order also requires that recipients of federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

To assist federal agencies in carrying out their LEP responsibilities, the U.S. Department of Justice has issued a Policy Guidance Document, *2002 LEP Guidance*. This document sets the compliance standards that recipients of federal financial assistance must follow to ensure that their programs and activities normally provided in English are accessible to LEP persons and thus do not discriminate on the basis of national origin in violation of Title VI's prohibition against national origin discrimination.

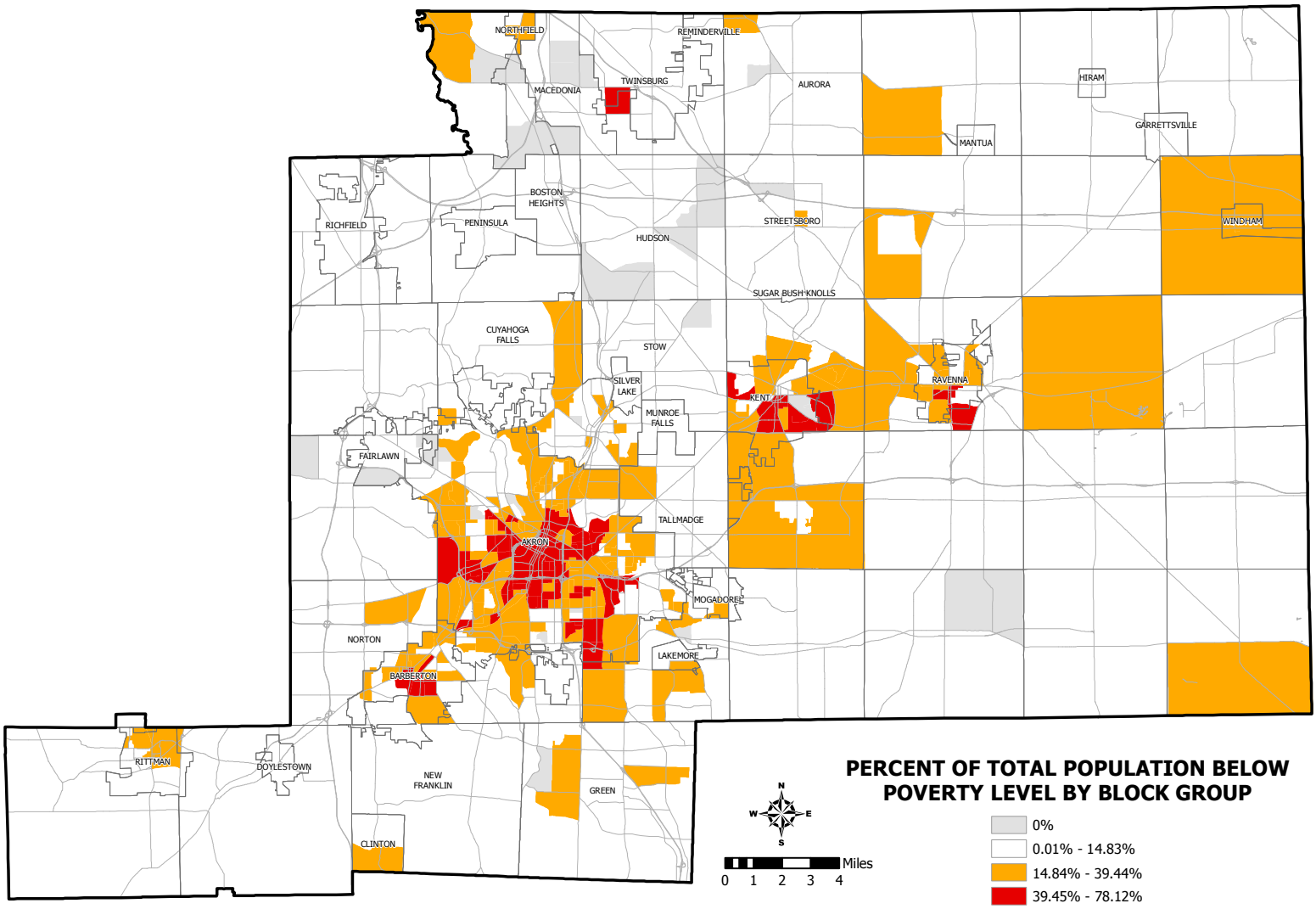
Appendix E - Language Assistance Plan for Limited English Proficient Populations (**p. 21-p. 25**) details how AMATS meets the needs of LEP populations within the Greater Akron area and evaluates the effectiveness of its efforts.

Americans with Disabilities Act of 1990

The agency prides itself on its ongoing efforts to meet and exceed the standards outlined in the Americans with Disabilities Act of 1990. AMATS will make every effort to arrange for translation, sign language and other special assistance at meetings for individuals with special needs who request them in a timely manner of at least three business days beforehand.

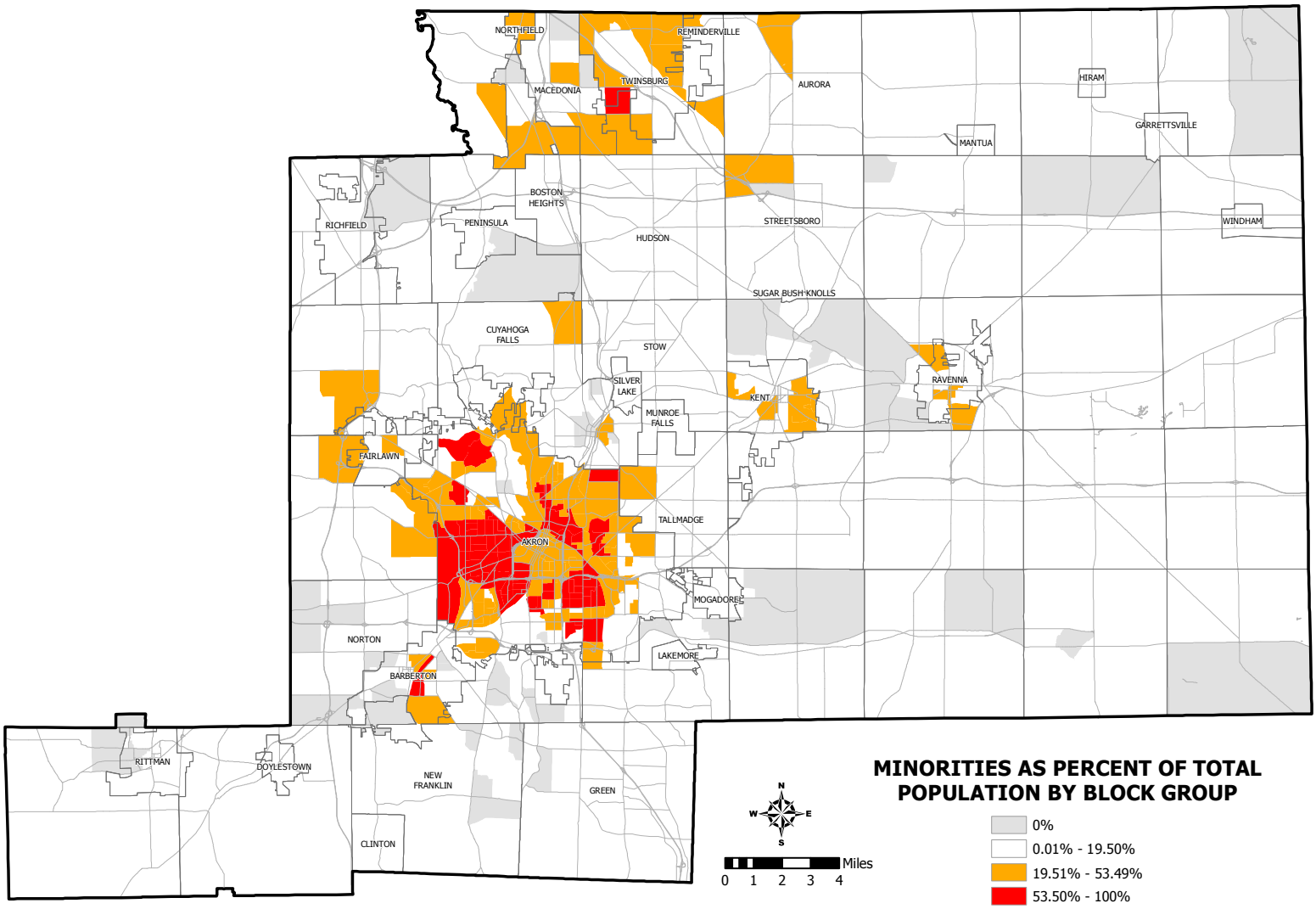
In addition, our agency web site - **amatsplanning.org** - includes a link to language interpretation software to assist those for whom English is not the first language. The ***AMATS Title VI - Program Procedures and Documentation*** Plan outlines other steps to include limited-English proficient persons in the planning process.

LOW INCOME POPULATION



DATE: October 2018
SOURCE: US Census Bureau, American Community Survey, 2016 5-Year Estimates, Table C17002

MINORITY POPULATION



DATE: October 2018
SOURCE: US Census Bureau, American Community Survey, 2016 5-Year Estimates, Table B02001

Conclusion

Our agency aims to be as open as possible when it come to sharing information and explaining why and how transportation decisions are made in the Greater Akron area.

Our *Public Participation Plan* or "3P" is intended to appeal to as many different interested people through a mix of opportunities and strategies both digital and personal.

AMATS will continue to explore new opportunities for public outreach as they become available. Outreach can be challenging and our agency is committed to receiving as much feedback as possible.

Appendix A -
Regional Transportation Plan (RTP)

A primary responsibility of AMATS is to prepare and maintain a long-term *Regional Transportation Plan* (RTP) that meets the travel needs of the region. The RTP creates a framework for the region's transportation system through the identification of needs and project recommendations. It also sets the direction for transportation decisions, policy and planning throughout the region.

Public participation is an integral part of preparing the RTP. This is your chance for your voice to be heard! Comments received during the review of the Draft RTP will be presented to the Policy Committee and other stakeholder planning agencies for consideration before final adoption of the RTP by the Policy Committee.

Once a Draft RTP has been created, AMATS will:

- Make copies of the draft available to the public at:
    - AMATS website – **amatsplanning.org**
    - AMATS office
- Tweet on **@amatsplanning**
- Post on **facebook.com/amatsplanning**
- Schedule at least one public meeting for review and comment
- Place advertisements in newspapers including the *Akron Beacon Journal*, the *Record-Courier* and *The Reporter* and other publications deemed as appropriate by the AMATS staff.
- Send news releases
- Regularly maintain and update its lists of those interested parties and transportation stakeholders that receive information pertaining to the area's transportation planning process.

Please note that AMATS will not limit itself to the activities identified above to promote awareness of the Draft RTP and will actively pursue additional opportunities to do so.

Amending the Plan

Periodically, local or state officials request that the approved RTP be modified, or that a project recommendation be added or dropped. Such requests will be identified as either a major or minor amendment. The individual amendment determines which public involvement procedures are appropriate. The procedures for Major and Minor amendments and Administrative Modifications are described below.

- **Major Amendments**

If the amendment involves a project recommendation that includes a new interchange; a new roadway or lane addition greater than one mile in length; a new major public transit project; commuter rail; or has a significant impact on air quality, then it will be considered a major amendment and public involvement for the amendment will follow the same procedures as the Draft RTP.

- **Minor Amendments**

If the amendment does not include a project such as one previously mentioned, it will be considered a minor amendment. Such amendments will be available for public consideration and comment through the appropriate *Meeting Packet* link and the *Get Involved* page of the agency website - **amatsplanning.org** - prior to Policy Committee action.

- **Administrative Modifications**

The staff is granted the discretion by the AMATS Policy Committee to implement minor revisions or administrative modifications to the *Regional Transportation Plan*, and various plan-related amendments, reports, and studies as may be warranted. Such administrative modifications are largely grammatical and typographical corrections or revisions that do not require demonstration of fiscal constraint or an air quality conformity determination.

For the sake of transparency, the staff will present all changes to the *Regional Transportation Plan* to the AMATS Policy Committee regardless as to whether they are amendments or minor administrative modifications.

If adopted by the Policy Committee, amendments and administrative modifications will be included in the RTP and will be posted on the website.

Appendix B -
Transportation Improvement Program (TIP)

The *Transportation Improvement Program* (TIP) is the Greater Akron area's four-year program of highway, public transit, and bicycle and pedestrian projects. It must be consistent with the *Regional Transportation Plan* (RTP). Through the TIP process, projects are scored and selected, providing funding for area transportation projects.

Public participation is necessary in the development of a sound TIP for the area. Comments generated during the review of the Draft TIP will be presented to the Policy Committee and other stakeholder planning agencies for consideration before adoption of the Final TIP document by the Policy Committee.

Once a Draft TIP has been created, AMATS will:

- Make copies of the draft available to the public at:
    - AMATS website – **amatsplanning.org**
    - AMATS office
- Tweet on **@amatsplanning**
- Post on **facebook.com/amatsplanning**
- Schedule at least one public meeting for review and comment
- Place advertisements in newspapers including the *Akron Beacon Journal*, the *Record-Courier* and *The Reporter* and other publications deemed as appropriate by the AMATS staff.
- Send news releases
- Regularly maintain and update its lists of those interested parties and transportation stakeholders that receive information pertaining to the area's transportation planning process.

Please note that AMATS will not limit itself to the activities identified above to promote awareness of the Draft TIP and will actively pursue additional opportunities to do so.

Amending the TIP

Periodically, state or local officials request that a project in the approved TIP be modified or cancelled or that a new project be added. Such requests will be identified as either a major or minor amendment. The individual amendment determines which public involvement procedures are appropriate. The procedures for Major and Minor amendments and Administrative Modifications are described below.

- **Major Amendments**

If the amendment involves a project that includes a new interchange; a new roadway or lane addition greater than one mile in length; a new major public transit project; commuter rail; or has a significant impact on air quality, then it will be considered a major amendment and public involvement for the amendment will follow the same procedures as the Draft TIP.

- **Minor Amendments**

If the amendment does not include a project such as one previously mentioned, it will be considered a minor amendment. Such amendments will be available for public consideration and comment through the appropriate *Meeting Packet* link and the *Get Involved* page of the agency website - **amatsplanning.org** - prior to Policy Committee action.

- **Administrative Modifications**

The staff is granted the discretion by the AMATS Policy Committee to implement minor revisions or administrative modifications to the *Transportation Improvement Program (TIP)*, and various TIP-related amendments, reports, and studies as may be warranted. Such administrative modifications are largely grammatical and typographical corrections or revisions that do not require demonstration of fiscal constraint or an air quality conformity determination.

For the sake of transparency, the staff will present all changes to the TIP to the AMATS Policy Committee regardless as to whether they are amendments or minor administrative modifications.

If adopted by the Policy Committee, amendments and administrative modifications will be included in the TIP and will be posted on the website.

Appendix C -
Involvement of Interested Parties and Public Comment

The *2018 Public Participation Plan* or "3P" describes AMATS' ongoing efforts to engage and involve the public in the metropolitan transportation planning process for the Greater Akron area. 3P is an update to the *2015 Public Participation Plan* and will be an input into the upcoming *Regional Transportation Plan* (RTP) and *Transportation Improvement Program* (TIP).

In developing 3P, AMATS is actively seeking consultation with interested parties and communities. Our agency seeks to develop a policy document that engages the public and other private and public organizations by providing ample opportunities for input and involvement in the area's planning process. It is our goal to base 3P on the insights of the area's citizens, community groups, affected public agencies and representatives of public transportation, freight shipping and pedestrian and bicycle transportation.

The Draft 3P details how the agency will provide opportunities for public comment and involvement throughout the planning process and for its most significant products, the RTP and TIP. These opportunities include posting committee meeting packets and MP3 podcasts on the AMATS website and using social media tools and non-traditional meetings and strategies to reach out to new audiences and communities.

AMATS will continue to give special consideration to making all of its public meetings convenient and accessible. Meetings of the AMATS Citizens Involvement Committee are scheduled in the evenings and in central locations. Also, all materials, plans and information can be accessed 24 hours a day on the AMATS website - **amatsplanning.org**. Additional review and involvement opportunities are provided during the development of the RTP and the TIP.

The Draft 3P was available for public comment for 45 days beginning on **October 12, 2018 through November 26, 2018**. A Public Comment Form for the Draft 3P was available as a pdf for downloading through the agency web site - **amatsplanning** - and was presented as part of *Appendix D* (**p. 19**) with this draft document. The Draft 3P was also presented to the public for review and comment during the **6:30 p.m.** meeting of the AMATS Citizens Involvement Committee (CIC) scheduled for **December 6, 2018** at the Akron-Summit County Public Library - Main Library located at 60 South Main Street in Akron. During this meeting, the Staff was informed by a CIC member that the Draft 3P incorrectly stated in the first sentence of the tenth paragraph on page 3 that the committee meets four times a year. The member noted that the CIC meets six times a year. The Staff has corrected this item.

AMATS is continually seeking new ways to engage and involve the public and other agencies. As new opportunities arise, they will be incorporated into the transportation planning process. The 3P will be updated accordingly. The public is encouraged to forward their opinions and suggestions regarding this document to **AMATS Public Information Coordinator Kerry Prater** via email at **kprater@akronohio.gov** or postal mail at the following address:

Mr. Kerry Prater
AMATS
161 S. High Street / Suite 201
Akron, Ohio 44308

Appendix D -
Comment Forms

Comment Form - 2018

Draft Public Participation Plan - "3P"

Name: _____

Email Address: _____

Comments:_____

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To learn more about transportation planning in the Greater Akron area, please visit us online at **amatsplanning.org**.

Audience Participation Form

The Policy Committee welcomes your comments.
Please keep these guidelines in mind:

- Please register by completing the application below.
- Public comments will be limited to three (3) minutes per person at the beginning of the meeting.
- Groups wishing to address the Policy Committee should select a representative to present the group's position.

Please submit this form to a staff member prior to the meeting.
Forms may also be completed online, faxed, or mailed.

Akron Metropolitan Area Transportation Study
806 CitiCenter | 146 S High Street | Akron, Ohio 44308
Phone: 330-375-2436 | Fax: 330-375-2275
Web: amatsplanning.org/get-involved/

Name: _____ **Date:** _____

Representing (optional): _____

Topic: _____

_____

Address: _____

Telephone #: _____ **Email:** _____

Would you like to receive meeting material by email? Y N

Appendix E -
Language Assistance Plan for Limited English Proficient Populations

It is the policy of AMATS to provide meaningful access to all of its programs and services to all individuals, including those who are limited in English proficiency. AMATS recognizes that there are many individuals for whom English is not their primary language. Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English can be limited-English proficient or "LEP." These individuals are entitled to language assistance with respect to a particular type or service, benefit, or encounter. By definition, the term LEP refers to any person age 5 and older who reported speaking English less than "very well" as classified by the U.S. Census Bureau. The term "English proficient" refers to people who reported speaking English only or speaking English "very well" on their Census response form. If a respondent answered that they spoke English "well,'' then they would still be considered LEP.

According to the *2013 American Community Survey*, 0.18 percent of the AMATS area population is unable to speak English. The U.S. Census Bureau – *American Fact Finder (2008-2012)* reports there are several languages spoken in the AMATS area. Some of these languages include Spanish, Russian, Chinese, Hmong, and Nepalese. Language for LEP individuals can be a barrier to: accessing important benefits or services; understanding and exercising important rights; complying with applicable responsibilities; and understanding other information provided by federally funded programs and activities.

Many individual federal programs, states, and localities have provisions requiring language services for LEP individuals. Federal laws applicable to language access include Title VI of the Civil Rights Act of 1964, as well as Title VI regulations, prohibiting discrimination based on national origin, and Executive Order 13166 issued in 2000 by then-President Bill Clinton. Executive Order 13166 is an order to federal agencies stating that people who are LEP should have meaningful access to federally conducted and federally funded programs and activities. This order requires federal agencies to examine the services that they provide, identify any need for services to those with limited-English proficiency, and develop and implement a system to provide those services so that LEP persons can have meaningful access to them. It is expected that agency plans provide for such access consistent with the fundamental mission of the agency. Executive Order 13166 also requires that the federal agencies work to ensure that recipients of federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

To assist federal agencies in carrying out these responsibilities, the U.S. Department of Justice has issued a Policy Guidance Document entitled, *Enforcement of Title VI of the Civil Rights Act of 1964 - National Origin Discrimination Against Persons With Limited English Proficiency (LEP Guidance)*. This guidance sets forth the compliance standards that recipients of federal financial assistance such as AMATS must follow to ensure that their programs and activities normally provided in English are accessible to LEP persons and thus do not discriminate on the basis of national origin.

AMATS is committed to taking measures to assure that individuals are not excluded from participating in programs simply because they face challenges communicating in English. The purpose of the LEP Plan contained in *Appendix E* is to outline the steps that AMATS follows to provide language assistance for LEP persons seeking meaningful access to AMATS programs and services. For further discussion of the

agency's LEP Plan, please consult the ***AMATS Title VI - Program Procedures and Documentation*** (May 2015). This document is available at **amatsplanning.org**.

Determining the Need

Recipients of federal funding and federal agencies are required to take reasonable steps to ensure meaningful access to their programs and activities by LEP persons. AMATS considers various factors in its pursuit to provide meaningful access to LEP communities and populations within the Greater Akron area. Following guidance from the U. S. Department of Transportation, four factors serve as the developmental foundation of this LEP Plan. These four factors and how the agency considers them are presented below:

1. **The number or proportion of LEP persons eligible in the service area or likely to encounter an AMATS-funded program, activity or service.**

This first factor is the basis of the agency's LEP Plan. It requires AMATS to review U.S. Census data to determine if a language meets the LEP "Safe Harbor" Threshold. The agency determines the Safe Harbor Threshold by initially analyzing LEP demographic data for two to three of the largest identified language groups other than English within the Greater Akron area. The threshold is then calculated by dividing the population estimate for a language group that "Speaks English not well, or not at all" by the total population of the county. The LEP Safe Harbor Threshold provision stipulates that for each LEP group that meets the LEP language threshold (5 percent or 1,000 individuals, whichever is less) AMATS must provide translation of vital documents in written format for the non-English users. Examples of written translation of vital documents include the ***AMATS Title VI - Program Procedures and Documentation*** Plan and/or public notices, Title VI Complaint Procedures and Title VI Complaint Forms.

According to data from the U.S. Census Bureau, 5.5 percent of the population of the Greater Akron area speak a language other than English at home. AMATS recognizes that this percentage is likely to increase in the future given current demographic trends.

Language Spoken At Home
(U.S. Census 2012-2016 American Community Survey)*

	Number	Percentage
Only English	646,025	94.5%
Spanish	7,343	1.1%
Other Indo-European	15,395	2.3%
Asian/Pacific Island Language	9,612	1.4%
Other	5,061	0.7%
Total	683,436	100.0%

* - Based on the U.S. Census Bureau's American Community Survey's 2016 five-year estimates (2012-2016) for "Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over." Table B16004

2. **The frequency with which LEP individuals come into contact with an AMATS-funded program.**

LEP persons are persons identified as speaking English less than very well, not well or not at all. Just because a person speaks a language other than English doesn't mean they don't speak English or are identified as LEP. AMATS and its contractors, if relevant, will be trained on what to do when they

encounter a person that speaks English less than well. AMATS or its contractor will track the number of encounters and consider making adjustments as needed to its outreach efforts to ensure meaningful access to all persons and specifically to LEP and minority populations of AMATS' programs and services.

AMATS maintains records of public meetings and phone inquiries in order to assess the frequency with which staff has possibly been in contact with LEP persons. AMATS staff has no record of receiving a request for an interpreter nor has there been any request for translated documents to the agency in its capacity as the Greater Akron area's federally designated metropolitan planning organization.

3. The nature and importance of the program, activity or service provided by AMATS to the LEP population.

AMATS understands that an LEP person with language barrier challenges also faces difficulties obtaining health care, education or access to employment. A transportation system is a key link to connecting LEP persons to these essential services. AMATS has identified activities and services which would have serious consequences to individuals if language barriers prevented access to information or the benefits of those programs. The activities and services include providing emergency evacuation instructions in our facilities and providing information to the public on security awareness or emergency preparedness.

AMATS' assessment of what programs, activities and services that are most critical include contact with community organizations that serve LEP persons, as well as contact with LEP persons themselves to obtain information on the importance of the modes or the types of services that are provided to the LEP populations.

It should be noted that AMATS does not provide any actual transportation services beyond its participation with statewide partners in the contract for Gohio Commute, a carpool matching web site. As the Greater Akron area's federally designated metropolitan planning organization, the agency is responsible for the federal transportation funding that reaches communities within its region and for ensuring that there is public participation in how that funding is spent.

4. The resources available to AMATS and overall costs to provide LEP assistance.

Translation of all AMATS plans and materials is limited due to cost restrictions. Further, the LEP population in the region is not necessarily of a significant proportion to warrant such expenses. The agency does provide translation services for information and items posted on its web site - **amatsplanning.org**. The agency will provide translation services at AMATS-hosted events in situations deemed appropriate and necessary by the staff or in those situations where a request for such assistance is relayed to the staff in a timely manner of at least three business days beforehand.

Although AMATS does not have a separate budget for LEP outreach, the agency will continue to work with the city of Akron and the Greater Akron area's transit providers - METRO RTA of Summit County and the Portage Area Regional Transportation Authority (PARTA) - to implement low cost methods of reaching LEP persons. For example, the city of Akron has a Spanish speaking person on staff, as do METRO RTA and PARTA. These resources ensure that AMATS can provide assistance to LEP Spanish-speaking persons, if needed. In addition, AMATS and our transit providers work with local advocacy groups to reach LEP populations.

With due consideration of the aforementioned four factors, the AMATS LEP Plan for the *3P*, is outlined below:

LEP Implementation Plan

AMATS will strive to accommodate those members of the public who are LEP. If an LEP individual or someone on their behalf should contact AMATS for assistance, the agency staff will take the name and contact information of the person in need of assistance. The staff will work with available interpreter/translator services to assist LEP individuals in their understanding of the transportation planning process. The staff shall promote the availability of LEP assistance upon timely request by LEP individuals through various available media prior to public meetings, comment periods and public empowerment events.

For those with limited-English proficiency, the AMATS website - **amatsplanning.org** - makes translations available of all of its pages. An automatic translation button allows the AMATS website to be made accessible in Chinese, French and Spanish with the potential for additional languages in the future.

Outreach programs, particularly in the area of bicycle and pedestrian safety education, include the distribution of educational material. The production of multilingual publications and documents and/or interpretation at meetings/events will be provided to the degree that funding permits and based on current laws and regulations. Educational material, e.g., safety brochures, provided free-of-charge from various entities, such as the National Highway Traffic Safety Administration, will be ordered and distributed at AMATS public participation events. When available, copies of brochures, pamphlets, and similar documents, in other languages will be secured and distributed at events which are held throughout the Greater Akron area.

Citizen involvement with AMATS and/or its three committees is voluntary. AMATS provides ample opportunities for the public to comment on the use of federal funds throughout the regional planning process and specifically during development of the four-year *Transportation Improvement Program* (TIP) and the long-range *Regional Transportation Plan*.

With the recognition that transportation projects impact all residents, AMATS strives to encourage an understanding of the process and promote opportunities to comment.

Monitoring and Updating the LEP Plan

The staff, in concert with the Citizens Involvement Committee (CIC), monitors the implementation of the agency's LEP Plan. The CIC meets regularly and invites anyone with an interest in regional planning to participate in their meetings and activities.

The AMATS LEP Plan is designed to be a living document that can be updated easily. Updates will examine all plan components, including:

- How to identify persons who may need language assistance.
- Examine past records from past meetings and events for requests for language assistance in order to anticipate possible need for assistance at upcoming meetings, i.e., a tracking system.

- Review to determine staff training needs.

- Address all completed *Nondiscrimination Complaint Forms* received by the staff. This form is available on the agency web site - **amatsplanning.org**. Using this form, citizens may describe in detail why they believe that their concerns or needs are not being addressed by the agency.

AMATS will post this LEP Plan and related materials on its web site at **amatsplanning.org**. Any person, including social service, non-profit, and law enforcement agencies and other community partners with internet access, will be able to access the plan. Printed copies will be made available upon request.

Any questions or comments regarding this LEP Plan should be directed to:

AMATS
161 S. High Street / Suite 201
Akron, Ohio 44308

Telephone - 330-375-2436
Fax - 330-375-2275
E-Mail - amats@akronohio.gov

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Resolution 2020-17 – To Add ODOT and FTA Funds in FY 2021 for METRO RTA - (FY 2021-2024 TIP Amendment #4).**

DATE: **December 3, 2020**

Executive Summary

This memorandum discusses a TIP amendment to the FY 2021 program of projects for METRO RTA to add recently awarded funding from ODOT and FTA.

The Ohio Department of Transportation (ODOT) has awarded METRO RTA and PARTA funding through its Ohio Transit Partnership Program (OTP2). This competitive grant program was established to provide additional capital funding to Ohio's public transit operators for projects emphasizing system preservation. In August, METRO and PARTA were both awarded funds through this program for inclusion in FY 2021 of the AMATS Transportation Improvement Program (TIP). METRO received $2,215,775. PARTA received $485,800. The source of the OTP2 funds is State of Ohio General Revenue Funds (GRF).

The Ohio Department of Transportation (ODOT) has also awarded METRO RTA and PARTA funding through its Urban Transit Program (UTP). These funds are generally used to help match federal funds. For FY 2021, ODOT awarded $1,007,281 to METRO, and $374,173 to PARTA. The source of the UTP funds is likewise state GRF funds.

The United States Department of Transportation (USDOT) has awarded METRO RTA $450,000 to improve transit service in low-income areas. The funding is being made available through the USDOT's Helping Obtain Prosperity for Everyone (HOPE) Program. Funds from this program will be used to assist in the funding of a study to examine the potential economic impact of transit-oriented development (TOD) on underutilized, publicly-owned or vacant property to leverage existing transit investment and create job and housing opportunities in areas of persistent poverty throughout the Akron area.

Consequently, METRO is requesting that these additional funds be added to the TIP to include the recently awarded OTP2, UTP and HOPE funded projects.

METRO RTA is requesting the following changes to the TIP:

- **Add New Funds for a new Transit-Oriented Development (TOD) - Planning Study (PID 114169)**

  This new project is intended to produce a study examining the potential economic impact of transit-oriented development on underutilized, publicly-owned or vacant property to leverage existing transit investment and create job and housing opportunities in areas of persistent poverty throughout the Akron area. Federal funds ($450,000) are derived from USDOT (FTA) HOPE funds. METRO's local share funding will be $50,000. The total project cost will be approximately $500,000, to be scheduled in FY 2021.

- **Add Funds for a Large Bus Replacement Project – Four CNG Vehicles (PID 104362)**

  This existing project will add recently awarded ODOT OTP2 funds ($250,000) for the purchase of four, forty-foot Compressed Natural Gas (CNG) buses. Federal funds ($2,175,867) will be derived from Federal Transit Administration (FTA) Section 5339 Bus and Bus Facilities Program funds. METRO's local share funding match will be $324,133. The total project cost will be approximately $2,750,000, to be scheduled in FY 2021.

- **Perform an Administrative Modification to several Existing Projects to Include OTP2 Funds**

  METRO RTA will add $1,965,775 in OTP2 funds to the following projects from prior fiscal years in order to replace the local share with state funds:

  - Purchase of Nine Large Buses (PIDs 99826, 99096 and 109538) – adding $1,173,689 in OTP2 (GRF) funds
  - Downtown Transit Center Building Maintenance (RKP Siding Project - PID 112804) – adding $42,000 in OTP2 (GRF) funds to replace the local share
  - Gas Tank Fueling Replacement, Electric Fueling Station, and Comprehensive Operational Analysis (PID 113728) adding $750,086 in OTP2 (GRF) funds

STAFF COMMENTS

As with all TIP amendments, considerations with respect to consistency with the Regional Transportation Plan, financial capability, air quality conformity, public involvement, and environmental justice are important.

Regional Transportation Plan

The projects proposed in this amendment are consistent with *Transportation Outlook*, the area's Regional Transportation Plan.

Financial Capability

With respect to financial capability, there are sufficient funds available for this amendment.

Air Quality

The project can be viewed as either exempt from air quality or has been analyzed as part of the air quality networks and has resulted in a finding of compliance with the Clean Air Act. Therefore, this amendment will not affect adversely the air quality conformity approval of *Transportation Outlook* or the TIP.

Public Involvement

The Staff is recommending that the Policy Committee consider this action as not regionally significant. As a result, the modified procedures in the AMATS *Public Participation Plan* are appropriate.

Environmental Justice

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations states that, "each federal agency shall make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high and adverse human health or environmental effects of its programs policies and activities on minority and low-income populations." This requirement also applies to recipients of federal funds, such as METRO RTA and PARTA.

The project that will result from this TIP amendment does not appear to impose disproportionately high and adverse human health or environmental effects on minorities and/or low-income people who reside in the METRO RTA or PARTA service areas.

STAFF RECOMMENDATION

Attached to this memo is Resolution 2020-17. This resolution approves the requested changes to FY 2021 of the TIP as described above. The Staff recommends approval.

RESOLUTION NUMBER 2020-17

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

TO ADD ODOT AND FTA FUNDS IN FY 2021 FOR METRO RTA - (FY 2021-2024 TIP AMENDMENT #4)

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County; and

WHEREAS, it is the responsibility of this Committee to develop and maintain the area's Transportation Improvement Program (TIP); and

WHEREAS, METRO RTA and PARTA provide public transportation services in the AMATS area; and

WHEREAS, METRO RTA and PARTA intend to maintain their capital assets in a state of good repair as described more fully in their Transit Asset Management (TAM) Plans; and

WHEREAS, METRO RTA and PARTA are eligible recipients of Federal Transit Administration (FTA) funds; and

WHEREAS, METRO RTA and PARTA are eligible recipients of state of Ohio General Revenue Funds (GRF); and

WHEREAS, METRO RTA is an eligible recipient of United States Department of Transportation (USDOT) Helping Obtain Prosperity for Everyone (HOPE) Program funds; and

WHEREAS, METRO RTA has requested that FY 2021 of the TIP be amended to add funds awarded through ODOT's Ohio Transit Partnership Program (OTP2) and Urban Transit Program; and

WHEREAS, METRO RTA has requested that FY 2021 of the TIP be amended to add funds awarded through USDOT's Helping Obtain Prosperity for Everyone (HOPE) Program; and

WHEREAS, METRO RTA has requested that an administrative modification be made to its program of projects in order include OTP2 funds as discussed in the attached memorandum; and

WHEREAS, this Committee has analyzed this request and found it to be consistent with *Transportation Outlook*, the area's Regional Transportation Plan; and

RESOLUTION NUMBER 2020-17 Continued

WHEREAS, this project has been determined to be in conformity with the State Implementation Plan for air quality; and

WHEREAS, this Committee has determined that the effects of this amendment are consistent with *Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee amends the FY 2021-2024 Transportation Improvement Program as previously specified in the attached memorandum.

2. That this Committee affirms that the FY 2021-2024 Transportation Improvement Program is in reasonable fiscal constraint.

3. That this Committee affirms consistency with *Transportation Outlook*, the Regional Transportation Plan.

4. That this Committee reaffirms the air quality conformity determination of *Transportation Outlook*.

5. That this Committee considers the necessary public involvement has been carried out as described in the AMATS Public Participation Plan.

6. That this Committee affirms consistency with environmental justice requirements.

7. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

_____

Mayor Linda Clark, 2020 Chairwoman
Metropolitan Transportation Policy Committee

_____

Date

Attachment 6B

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee

FROM: **AMATS Staff**

RE: **Resolution: 2020-18 Connecting Communities Planning Grant**

DATE: **December 2, 2020**

As part of the Connecting Communities Initiative, AMATS developed a grant program that made grant funding available for planning studies. In December 2019, AMATS solicited applications for the grant. AMATS received five applications by the February 28, 2020 deadline.

The AMATS staff initially scored and ranked the applications. The Connecting Communities Planning Grant Task Force met on May 27, 2020 to review the applications and recommend award recipients. The top two applications were submitted by Portage Area Regional Transportation Authority (PARTA) with Franklin Township and the City of Stow.

The Task Force recommends awarding the planning grants to PARTA/Franklin Township for "SR 59 Alternative Transportation Improvements" and to the City of Stow for "City-Wide Connectivity Plan". The Task Force based this recommendation on each application's scope and objectives and the recommendation of the AMATS staff.

Attached to this memo are scores for all of the applications and a more in-depth description of the proposals submitted by the top two applicants.

The staff and the Connecting Communities Planning Grant Task Force recommend the Policy Committee approve Resolution 2020-18 awarding the Connecting Communities Planning Grant to PARTA/Franklin Township and the City of Stow.

RESOLUTION NUMBER 2020-18

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

Approving two Connecting Communities Planning Grants to be awarded to PARTA/ Franklin Township and the City of Stow for planning studies.

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation (ODOT) and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County, and

WHEREAS, the Connecting Communities Planning Grant was included under work element 625 and approved as part of the *Transportation Planning Work Program and Budget FY 2021* and will be funded using Federal Consolidated Planning Grant monies, and

WHEREAS, the purpose of these grants is to encourage the integration of land use and transportation planning and promote livable communities,

WHEREAS, the AMATS Policy Committee, on August 11, 2010, approved the formation of a Connecting Communities Planning Grant Task Force to score applications, and

WHEREAS, AMATS received five applications requesting funding by the deadline of February 28, 2020, and

WHEREAS, the Connecting Communities Planning Grant Task Force met on May 27, 2020 to review submitted applications and the staff's preliminary scoring, and

WHEREAS, upon review of all applications, the Connecting Communities Planning Grant Task Force recommended the following two applications for funding:

1. **Portage Area Regional Transportation Authority (PARTA)/Franklin Township –** to identify where sidewalks can be extended, bicycle improvements can be made, crosswalks and crossing signals can be implemented, and better transit amenities can be added along State Route 59 between Horning Rd and State Route 261 in Franklin Township.
2. **The City of Stow –** to create a city-wide trail and widened sidewalk network that connects people to destinations, ensure the system accommodates all users, fill the gaps in the current sidewalk network, and improve the quality of life for residents, employees, and visitors.

WHEREAS, this Committee has found these applications to be consistent with the *Connecting Communities Initiative - A Guide to Integrating Land Use and Transportation*.

RESOLUTION NUMBER 2020-18 (Continued)

NOW THEREFORE BE IT RESOLVED:

1. That this Committee approves the funding of the PARTA/Franklin Township Planning Study and the City of Stow's Planning Study.

2. That this Committee affirms that sufficient federal funding is available in the *Transportation Planning Work Program and Budget FY 2021* to award these grants.

3. That this Committee affirms consistency of these two applications with *Connecting Communities – A Guide to Integrating Land Use and Transportation,* and *Transportation Outlook,* the area's long range transportation plan.

4. That this Committee authorizes the staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

_____

Mayor Linda Clark, 2020 Chairwoman
Metropolitan Transportation Policy Committee

_____

Date

PARTA & Franklin Township's ST RT 59 Alternative Transportation Improvements

State Route 59 between Horning Rd and State Route 261 is a 1-mile stretch of roadway with two travel lanes in each direction and a median left turn lane with limited facilities for alternative transportation. With residential housing, grocery stores, and students in the area, the lack of sidewalks, crosswalks, curb cuts and landing pads for pedestrians and transit riders and little visibility for cyclists creates a difficult and dangerous environment. The lack of transit amenities is a hindrance to not only transit riders, but cyclists and pedestrians alike. This study will offer solutions to extend sidewalks, add signage, crosswalks, lighting, and bike lanes. Transit improvements will include recommendations for bus stop amenities as well as landing pads and curb cuts to make transit more accessible for passengers using mobility devices.

Stow's City-Wide Connectivity Study

The City of Stow acknowledges their limited network of sidewalks and bike trails and expects this study to provide recommendations for better community connections. Although some trails exist in the city limits, they don't necessarily get people to places. This study will offer recommendations for those gaps, as well as detailed cost opinions for widened sidewalks and bicycle facilities that will increase quality of life as well as improve safety for users. Additionally, Stow would like to update their sidewalk and crosswalk inventory, and have solutions for implementation.

2020 AMATS Connecting Communities Planning Grant Applications

	Application	Sponsor	5. Purpose & Need	6. Outcomes	7. Connecting Communities Principles	8. Level of Use	Total points
			Out of 25	Out of 15	Out of 30	Out of 10	Out of 80
1	St. Rt. 59 Alternative Transportation Improvements	PARTA/Franklin Twp	25	14	30	8	**77**
2	City of Stow City-Wide Connectivity Plan	City of Stow	23	13	30	9	**75**
3	Living in Lakemore	Village of Lakemore	23	13	27	8	**71**
4	An East-West Community Connection Plan for East Avenue	City of Tallmadge	22	14	27	6	**69**
5	Market Analysis and BRT Corridor Priority for Greater Akron	METRO RTA	20	13	25	6	**64**

Attachment 6C

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Resolution 2020-19 –Approving Amendment #5 to the FY 2021-2024 Transportation Improvement Program to add three new projects.**

DATE: **December 3, 2020**

Requests have been received to add the following projects to the FY 2021-2024 Transportation Improvement Program:

I-77 Widening (Southern Section) – Is a project in Summit County-Bath Township to add one additional lane in each direction on I-77 between Ghent Road and Everett Road. This project is being added because engineering is now scheduled in FY 2022 using $800,000 of federal funds and $200,000 of state funds.

I-77 Widening (Northern Section) – Is a project in Richfield and Richfield Township to add one additional lane in each direction on I-77 between Everett Road and the Ohio Turnpike. This project is being added because engineering is now scheduled in FY 2022 using $1,200,000 of federal funds and $300,000 of state funds.

SR 21 Pavement Replacement – Is a project in Wayne County-Chippewa Township to perform a full depth pavement replacement on SR 21 from the Stark County Line to the Summit County Line. This project is in our current TIP as a Statewide Line Item (federal funding but no AMATS funding). The cost of the project has exceeded $30 million, which is the threshold for a Statewide Line Item, so it now has to be added to the traditional project listing in the TIP. Engineering is scheduled to begin in FY 2021 and construction in FY 2024. The cost estimate for the project is $33,173,100 using federal and state funds.

STAFF COMMENTS

As with all TIP amendments, considerations with respect to public participation, financial capability, air quality, environmental justice and Plan consistency are important. Sufficient funding is forecasted from federal and state sources for this amendment. The new project listed meet all amendment requirements mentioned above. Therefore this amendment does not cause any negative impact.

STAFF RECOMMENDATION

Attached to this memo is Resolution Number 2020-19. This Resolution approves the amendment to the TIP FY 2021-2024. The Staff recommends approval.

RESOLUTION NUMBER 2020-19

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

Approving Amendment #5 to the Transportation Improvement Program FY 2021-2024 to add three new projects.

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County and,

WHEREAS, it is the responsibility of this Committee to develop and maintain the Transportation Improvement Program (TIP) and,

WHEREAS, this Committee has been requested to amend the AMATS FY 2021-2024 Transportation Improvement Program to add three new projects as discussed in the accompanying memorandum:

1. **I-77 Widening (Southern Section, PID 111404)** – Is a project in Summit County-Bath Township to add one additional lane in each direction on I-77 between Ghent Road and Everett Road. This project is being added because engineering is now scheduled in FY 2022 using $800,000 of federal funds and $200,000 of state funds.

2. **I-77 Widening (Northern Section, PID 111405)** – Is a project in Richfield and Richfield Township to add one additional lane in each direction on I-77 between Everett Road and the Ohio Turnpike. This project is being added because engineering is now scheduled in FY 2022 using $1,200,000 of federal funds and $300,000 of state funds.

3. **SR 21 Pavement Replacement (PID 101439)** – Is a project in Wayne County-Chippewa Township to perform a full depth pavement replacement on SR 21 from the Stark County Line to the Summit County Line. This project is in our current TIP as a Statewide Line Item (federal funding but no AMATS funding). The cost of the project has exceeded $30 million, which is the threshold for a Statewide Line Item, so it now has to be added to the traditional project listing in the TIP. Engineering is scheduled to begin in FY 2021 and construction in FY 2024. The cost estimate for the project is $33,173,100 using federal and state funds.

WHEREAS, the necessary public involvement has been carried out as described in the AMATS Public Participation Plan and,

WHEREAS, it has been determined that the I-77 widening projects are not exempt from regional air quality conformity analysis and they have been analyzed for air quality conformity. An air quality conformity determination that addresses both ozone and $PM_{2.5}$ pollutants has been conducted and has shown that the projects will conform to air quality requirements and,

WHEREAS, the environmental justice impacts of this amendment has been considered consistent with "Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations" and,

RESOLUTION NUMBER 2020-19 (Continued)

WHEREAS, this Committee has analyzed this request and found this amendment to be consistent with Transportation Outlook, the Regional Transportation Plan, and with the availability of federal funds forecasted for the AMATS area.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee amends the Transportation Improvement Program FY 2021-2024 as previously specified.

2. That this Committee considers the necessary public involvement has been carried out as described in the AMATS Public Participation Plan.

3. That this Committee affirms that sufficient federal funding is expected to be available for the Akron Urbanized Area to maintain financial constraint.

4. That this Committee reaffirms the air quality conformity determination of Transportation Outlook, the Regional Transportation Plan.

5. That this Committee affirms conformity with environmental justice requirements.

6. That this Committee affirms consistency with Transportation Outlook, the Regional Transportation Plan.

7. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

_____

Mayor Linda Clark, 2020 Chairwoman
Metropolitan Transportation Policy Committee

_____

Date

AMENDMENT # 5 - 12/3/20

AMATS TRANSPORTATION IMPROVEMENT PROGRAM FY 2021-2024

TABLE H-3

HIGHWAY IMPROVEMENTS

PID #	CO-RTE-SECTION	LENGTH (MILES)	LOCATION & TERMINI	TYPE OF WORK	FUND TYPE	PHASE	2021	2022	2023	2024	TOTAL PROJECT COST ($000)	PROJECT SPONSOR	AIR QUALITY STATUS
111404	**SUM-IR 77**-24.12 **(NEW PROJECT)**	4.63	BATH TOWNSHIP IR-77 FROM GHENT RD TO EVERETT RD	WIDENING FROM FOUR LANES TO SIX LANES	FED STATE	P P		800.0 200.0			53,000.0	ODOT	ANALYZE
111405	**SUM-IR 77**-28.75 **(NEW PROJECT)**	4.31	RICHFIELD / RICHFIELD TOWNSHIP IR-77 FROM EVERETT RD TO THE OHIO TURNPIKE	WIDENING FROM FOUR LANES TO SIX LANES	FED STATE	P P		1,200.0 300.0			80,500.0	ODOT	ANALYZE
101439	**WAY-SR 21**-0.00 **(NEW PROJECT)**	5.86	CHIPPEWA TOWNSHIP STARK CO LINE TO SUMMIT CO LINE	MAJOR ROADWAY REHABILITATION	FED STATE FED STATE FED STATE	P P P P C C	347.0 38.0			2,320.0 580.0 23,980.0 5,603.8	33,173.1	ODOT	EXEMPT

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee Members**
Technical Advisory Committee Members
Citizens Involvement Committee Members

FROM: **AMATS Staff**

RE: **Resolution 2020-20 – Approving the AMATS Area Traffic Crash Analysis Technical Memorandum and Support for ODOT CY 2021 Safety Goals**

DATE: **December 3, 2020**

Executive Summary

The purpose of this resolution is to approve the AMATS area Traffic Crash Analysis Technical Memorandum, as well as give support for ODOT safety performance targets for calendar year (CY) 2021.

Traffic Crash Analysis Technical Memorandum

Attached please find the AMATS area Traffic Crashes and Safety Performance Measures (2017-2019) Technical Memorandum. All crashes that occurred on non-freeway roadways in the AMATS study area were considered for analysis.

The first section of the crash report focuses on all highway sections and intersections. It includes methodology for determining high crash locations. All sections and intersections that meet the minimum criteria are ranked and listed in tables. Corresponding maps are also provided for the top 50 locations. Please see the AMATS website for crash locations sorted and listed by community.

The second section of the crash memo focuses on bicycle and pedestrian crashes. These crashes tend to occur more randomly and are usually not concentrated at specific locations. Therefore, this section of the memo is *trend-oriented* and highlights some of the characteristics of bicycle and pedestrian crashes. A maps of all of bicycle and pedestrian crashes are included in this section.

The third section in the crash report is *performance-oriented*. It describes safety performance measures that MPOs are required to set and attain. In this section base values and current values are compared using five years of data.

More detailed information about crashes may be requested, including bicycle and pedestrian, at any specific location.

The Staff requests that the attached technical memorandum be approved as noted in Resolution 2020-20. Once this memorandum has been approved, local governments may use it as an initial step in the process of applying for Highway Safety Program funds through ODOT.

Background on Performance Measures

Current federal legislation and guidance features an emphasis on performance measurement. This focus is consistent with AMATS goals and objectives, which promote the transparency of public data and decision-making and seeks to improve the accountability of public spending by better linking investments to outcomes.

Performance measures are central to implementing a Performance-Based Planning Process (PBPP) that guides decision making. How performance is defined and measured can significantly affect the types of projects and strategies that are advanced by decision makers. Moreover, performance results inform agencies whether the types of projects and strategies they are implementing are in fact helping them achieve their goals. Performance measures aim to answer questions about whether the performance of the transportation system is getting better or worse over time. Performance measures also aim to demonstrate whether transportation investments are correlated or linked to stated goals and whether they produce desired outcomes.

Introducing a performance management approach to planning is intended to improve project and program delivery, inform investment decision making, focus staff efforts on priorities, and provide greater transparency and accountability to the public. Current federal guidelines apply performance measurement at the programmatic, rather than project level and link performance measures and targets to funding decisions by way of performance-based funding. The purpose of this approach is to move towards performance-based decision-making for project selection in the future.

The US DOT and ODOT continue to develop performance targets in consultation with MPOs like AMATS, and others. State investments must make progress toward these performance targets, and MPOs must incorporate these performance measures and targets into their Transportation Improvement Programs (TIPs) and long range Regional Transportation Plans. Federal guidance imposes financial penalties on states that fail to make progress toward these performance goals.

There are seven areas for which the US DOT has established national performance goals. These areas are:

- Safety
- Infrastructure Condition
- Congestion Reduction
- System Reliability
- Freight Movement and Economic Vitality

- Environmental Sustainability
- Reduced Project Delivery Delays

To implement performance measure goals, US DOT has developed measures and minimum standards for states to follow. In the transportation planning process, the public and other stakeholders articulate a strategic direction that is based on a shared vision for the future.

- **Goals and Objectives** stem from the area's vision and goals, and they address key desired outcomes. Agencies like AMATS create objectives—which are specific, measurable statements—that shape planning priorities.
- **Performance Measures** support objectives and are the basis for comparing alternative improvement strategies, investment and policy strategies, and tracking results.

Driven by data on performance, along with public involvement and policy considerations, AMATS conducts analyses that inform investment and policy priorities.

- **Identify Trends and Targets** – Trends and targets let agencies compare alternative strategies. This step relies on baseline data from past trends, tools to forecast future performance, and information on possible strategies, available funding, and other constraints.
- **Identify Strategies and Analyze Alternatives** –Scenario analysis may also be used to compare alternative strategies and funding levels, or to explore funding levels required to achieve certain performance goals.
- **Develop Investment Priorities** – To reach investment targets, AMATS will create a TIP and a Regional Transportation Plan that consider priorities and tradeoffs.

Programming involves selecting specific projects to include in the TIP. In a performance based planning approach, agencies make programming decisions based on whether those decisions support performance targets or contribute to desired trends.

Performance based planning is founded on evidence that the process leads agencies to their goals. The following evaluation activities happen throughout implementation and when needed throughout performance based planning.

- **Monitoring** – Gathering information on actual conditions.
- **Evaluation** – Conducting analysis to understand whether implemented strategies have been effective.
- **Reporting** – Communicating information about system performance and whether policymakers, stakeholders, and the public think plans and programs are effective.

In a performance based planning approach, each step in the process is clearly connected to the next so that goals translate into specific measures. Those measures then become the basis for selecting and analyzing strategies for the long range plan. Ultimately, project selection decisions

are influenced by expected performance returns. Keeping the next step in the process in mind is critical to each step along the way.

Safety Target Setting and Coordination

Federal legislation requires MPOs like AMATS to establish performance targets and set targets that demonstrate fatal and serious injury reductions on all public roads. The required performance measures for safety are:

- Number of fatalities
- Fatality rate
- Number of serious injuries
- Serious injury rate
- Number of non-motorized fatalities and serious injuries

In accordance with federal legislation, AMATS used a five-year average to calculate baseline safety statistics. These baseline figures are the benchmarks to which all future calculations will be compared. All future values will also be calculated using five years of data. This five-year rolling average is used to smooth out short-term year-to-year fluctuations. A full discussion of safety planning and the identification of safety needs for the AMATS area can be found in the attached traffic crash technical memorandum, discussed above. As noted, this memorandum also includes analyses of bicycle and pedestrian safety data.

After reviewing historical crash trends, external factors and through consultation with the state's MPOs, ODOT established a 2 percent annual reduction target across all five safety categories statewide. ODOT developed a baseline using calendar year (CY) 2014-2018 for setting the CY 2020 safety targets. The FHWA will determine whether a state DOT has met or made significant progress toward meeting its CY 2020 targets in December 2021. A state is considered to have met or made significant progress if at least four of the five targets are better than the baseline.

The CY 2020 highway safety targets for Ohio are:

- 1,055 fatalities
- 8,348 serious injuries
- 0.91 fatality rate
- 7.21 serious injury rate
- 824 non-motorized fatalities and non-motorized serious injuries

AMATS is also required to establish safety performance targets. There are two options available for satisfying this requirement: commit to a quantifiable target for each measure within the metropolitan area, or approve of ODOT's statewide targets and agree to plan and program projects so that they contribute toward the accomplishment of these targets. For CY 2020 AMATS decided to support the goals set forth by ODOT for the entire state, rather than develop separate targets for our area (See AMATS Policy Resolution 2019-22, approved in December 2019).

ODOT's Calculated Targets for CY 2021

After reviewing historical crash trends, external factors, and through consultation with ODOT's partners, the Strategic Highway Safety Plan Steering Committee recommended that Ohio set a 2 percent annual reduction target across all five categories.

Although the 2% annual target will be difficult to achieve across all five categories, the Safety Steering Committee concluded that an aspirational but achievable target is better than adopting targets that accept the status quo.

ODOT has adopted the 2% annual reduction target based on the state's commitment to safety. This commitment includes the following new initiatives:

- An additional $50 million annually for ODOT's Highway Safety Program
- The statewide implementation of centerline rumble strips
- Ohio Department of Public Safety (ODPS) young driver and driver training initiatives
- Ten million dollars for a new pedestrian safety improvement program

Below are Ohio's CY 2021 targets. The baseline years for setting CY 2021 targets are CY 2015-2019. The Federal Highway Administration will determine whether a state DOT has met or made significant progress toward meeting its CY 2021 targets in December 2021. States will be notified in March 2022.

A state is considered to have met or made significant progress toward meeting its performance targets if at least four of the five targets have been met or the actual outcome for the target is better than the baseline performance.

CY 2021 Targets for Ohio are:

- 1,084 fatalities
- 8,101 serious injuries
- 0.93 fatality rate
- 6.97 serious injury rate
- 811 non-motorized fatalities and non-motorized serious injuries

Baselines used to set targets are (CY 2015-2019):

- 1,128.8 fatalities
- 8,434.2 serious injuries
- 0.97 fatality rate
- 7.25 serious injury rate
- 844.8 non-motorized fatalities and non-motorized serious injuries

Although we have not reached the end of calendar year 2020, ODOT is anticipating a lower number of fatalities for CY 2020 due to COVID-19 limitations on travel. Actual safety data for CY 2020 will not be available until next spring (April 2021).

The staff is recommending that the Policy Committee support ODOT's statewide 2 percent annual reduction target for all five safety performance measures in CY 2021.

Staff Recommendation

Attached is Resolution 2020-20 for your review and consideration. This resolution approves the attached AMATS area Traffic Crash Analysis Technical Memorandum, as well as support for ODOT's safety performance targets. The staff recommends approval of this resolution.

RESOLUTION NUMBER 2020-20

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

APPROVING THE AMATS AREA TRAFFIC CRASH ANALYSIS TECHNICAL MEMORANDUM AND SUPPORT FOR ODOT CY 2021 SAFETY GOALS

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation (ODOT) and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County; and

WHEREAS, the federal authorization legislation: the Fixing America's Surface Transportation Act (FAST) directs state DOTs and MPOs to collectively implement performance based transportation planning processes; and

WHEREAS, AMATS is required to establish and set targets for five safety performance measures (per Title 23 CFR part 490), those measures applicable to all public roads: as the number of fatalities, number of serious injuries, fatality rate, serious injury rate, and number of non-motorized fatalities and serious injuries; and

WHEREAS, the development of performance measures is required in order to foster transparency and accountability, and help track safety progress at regional, state, and national levels; and

WHEREAS, the Ohio Department of Transportation (ODOT) has established a statewide 2% annual reduction target across all five safety performance measures; and

WHEREAS, AMATS must establish its own performance targets for the area or support the targets set by ODOT within 180 days of ODOT's establishment of targets; and

WHEREAS, the AMATS Policy Committee has determined that it will support the established Ohio Department of Transportation's statewide performance targets; and

WHEREAS, it is the responsibility of the AMATS Policy Committee to develop and maintain the Transportation Improvement Program (TIP) in accordance with current state and federal guidelines; and

WHEREAS, it is the responsibility of the AMATS Policy Committee to develop and maintain the area's Regional Transportation Plan, *Transportation Outlook,* in accordance with current state and federal guidelines; and

RESOLUTION NUMBER 2020-20 (Continued)

WHEREAS, the AMATS Policy Committee agrees to plan and program projects so that they contribute toward the achievement of ODOT's targets for safety performance as described in the attached memorandum.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee approves the attached AMATS area Traffic Crashes and Safety Performance Measures (2017-2019) Technical Memorandum.

2. That this Committee approves supporting the Ohio Department of Transportation's statewide 2% annual reduction target for all five safety performance measures in CY 2021.

3. That this Committee agrees to plan and program projects so that they contribute toward the accomplishment of the Ohio Department of Transportation's targets for safety performance as discussed in the attached memorandum.

4. That this Committee agrees to include performance-based decision-making as part of the project selection and funding process in order to contribute towards the accomplishment of those ODOT performance goals and targets.

5. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

_____

Mayor Linda Clark, 2020 Chairwoman
Metropolitan Transportation Policy Committee

_____

Date

T E C H N I C A L M E M O R A N D U M

TRAFFIC CRASHES AND SAFETY PERFORMANCE MEASURES 2017-2019

December 2020

Akron Metropolitan Area Transportation Study
161 S. High St./Akron, Ohio 44308-1423
Phone: (330) 375-2436
FAX: (330) 375-2275

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.

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Traffic Crashes
2017 – 2019

Section 1: All Crashes

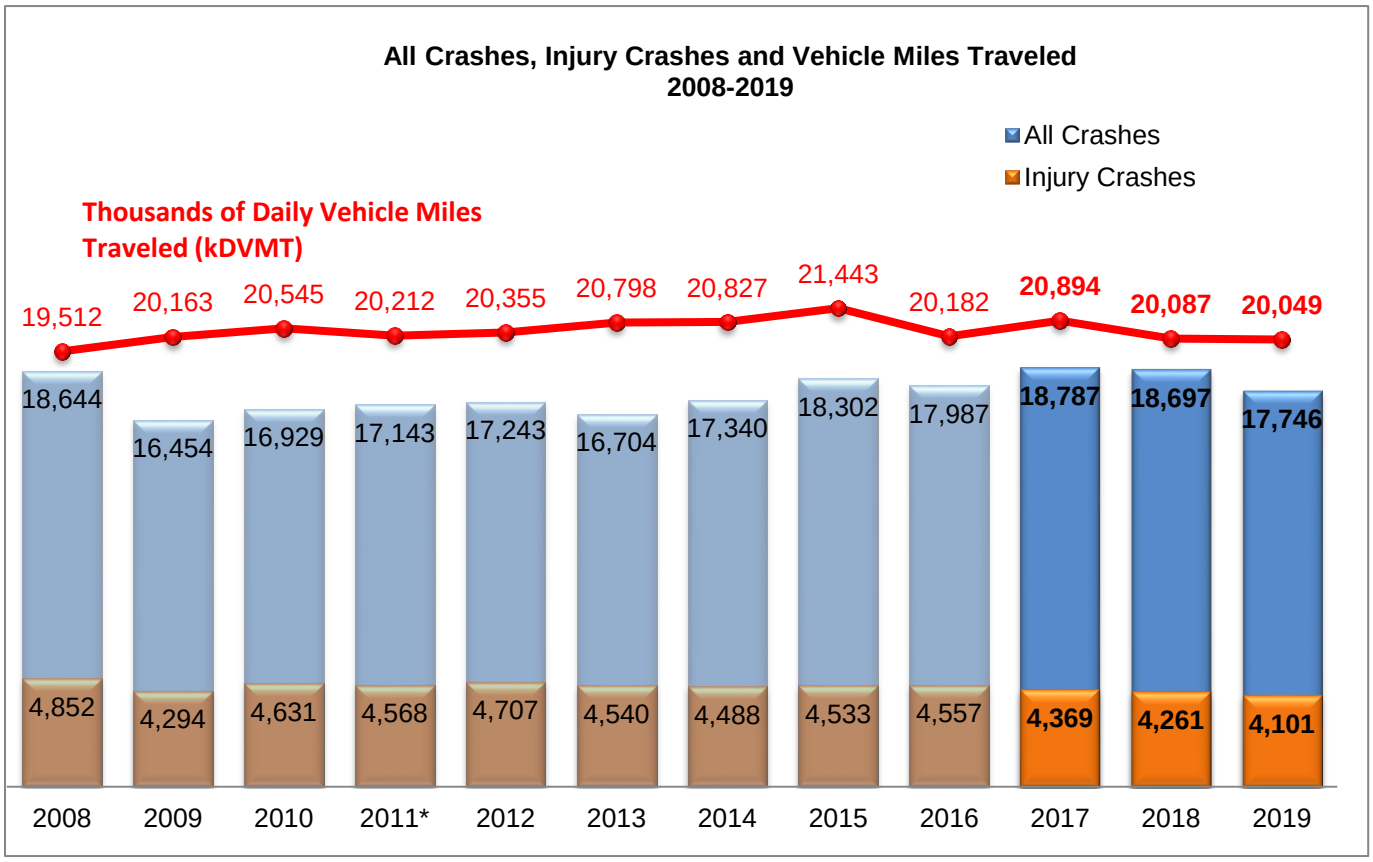
Overview

The 2017-2019 Crash Report was prepared by reviewing 55,230 crash records obtained from the Ohio Department of Transportation (ODOT). Animal crashes and construction zone crashes were removed and not included in the analysis since they do not relate to the characteristics of the roadway. The data is then imported in into GIS and plotted. It is carefully checked for location accuracy and then categorized as section or intersection crashes. In Section 1 of this report the roadway section and intersection locations are further analyzed and then ranked. In Section 2 Bicycle and Pedestrian-Related Crashes are discussed. Section 3 highlights Safety Performance Measures and Targets. Freeway crashes are not included in this report and instead are analyzed and ranked by the Ohio Department of Transportation.

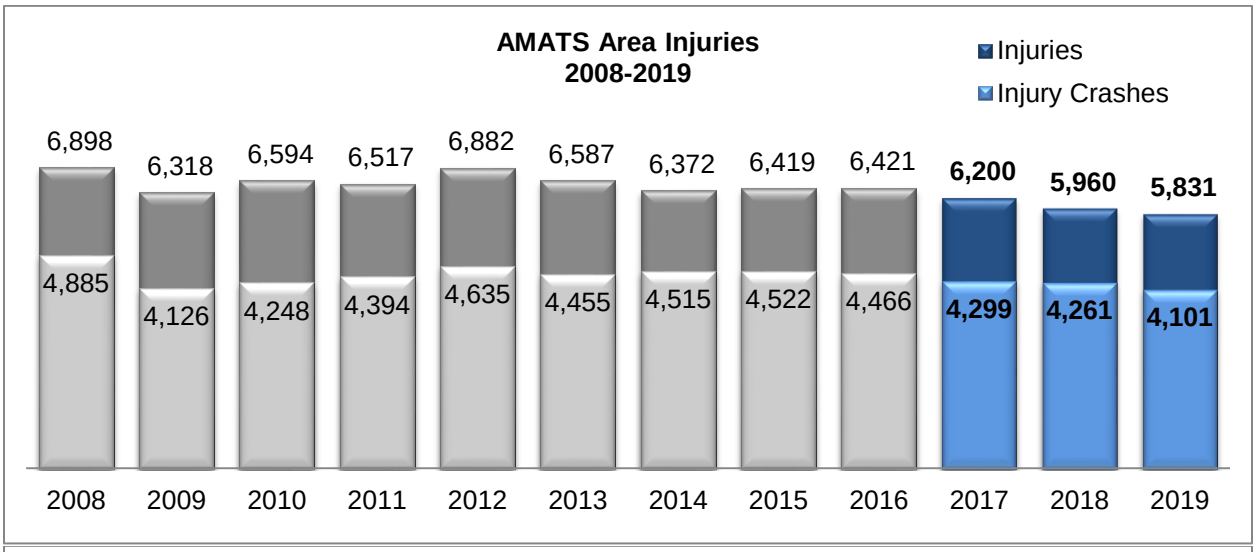
Trends

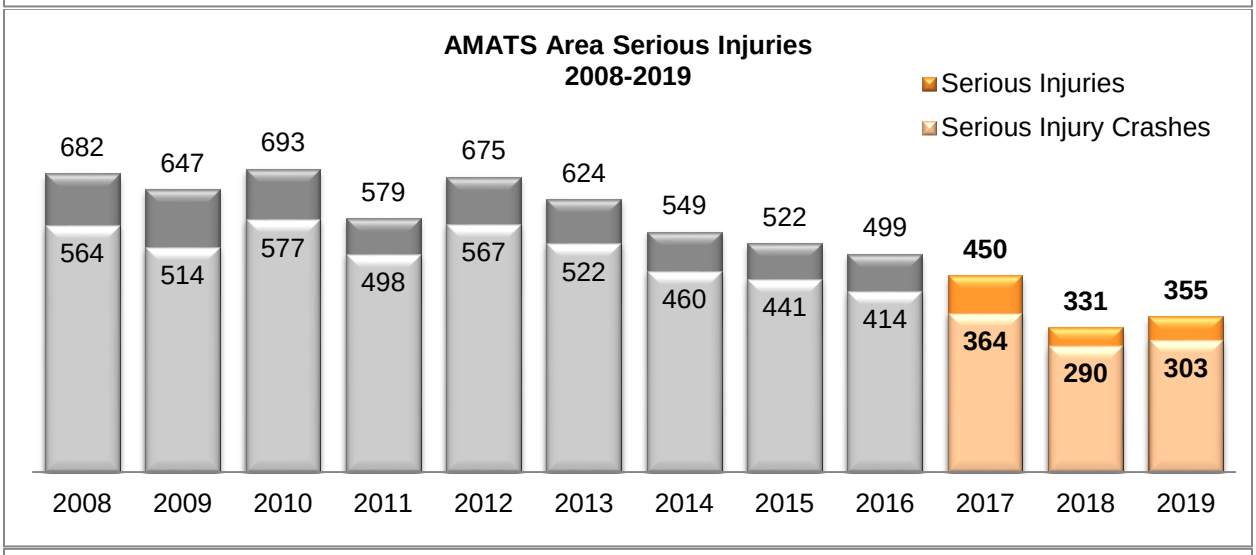
In 2019, the overall number of crashes in the AMATS area decreased by 951. This is a 5% decrease from 2018. Injury crashes decreased by 160 or 4% and fatal crashes were significantly down by 20 or 39%.

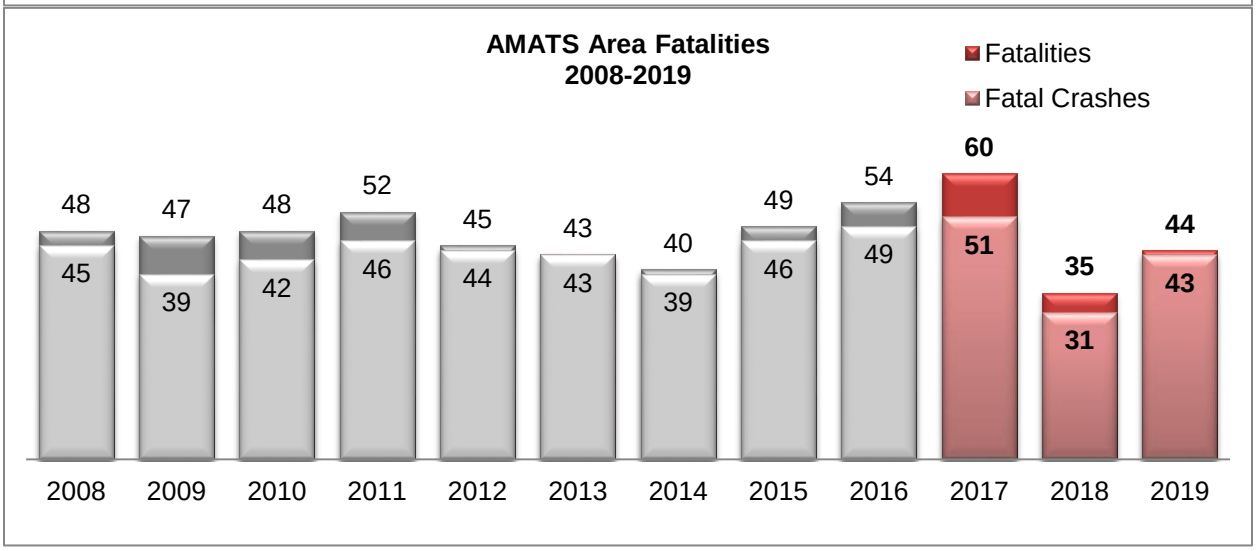
The following graph shows the number of total crashes in the AMATS area between 2008 and 2019. The red line at the top shows thousands of daily vehicle miles traveled (kDVMT) in the AMATS area. This data was obtained from the ODOT Office of Technical Services. In 2019 kDVMT decreased by 1.9% from 2018.



The following graphs show the number of injury, serious injury and fatal crashes as well as the resulting injuries, serious injuries and fatalities between 2008 and 2019. A crash is one event but it may involve multiple vehicles and result in multiple injuries or fatalities.







Methodology

The 2017-2019 Crash Report used Geographical Information System (GIS) coordinates to plot crashes. Sometimes the coordinates are not correct and crashes have to be manually moved to their proper location based on the description on the police report. This is time consuming but necessary for an accurate report.

Another challenge is determining if a crash should be considered section or intersection related. Not all crashes that occur near an intersection are classified as intersection related. An example would be a single vehicle departing the roadway and hitting a tree at a location that just happens to be near an intersection. If the intersecting street is used as a reference the crash appears to be intersection related when in reality it wasn't. Most of the time the police officer's crash report must be reviewed to gain a better understanding of these types of crashes. The final decision is based on the location of the vehicles and the nature of the crash.

Once crashes are properly identified as intersection or section related, the crash is assigned a unique identification number for sorting of the crashes. The final step in GIS is to sum up all the crashes that occur within each unique intersection or section.

Once the analysis in GIS was done, a list of high crash sections and intersections is produced.

- The high crash criterion for roadway sections is 10 or more crashes per mile per year.
- The high crash criterion for intersections is 10 or more crashes in the three-year period.

Once this initial group of high crash locations is identified based on number of crashes a crash rate is calculated. The crash rate takes into account the average daily traffic volume. For example, ten crashes per year at a location that averages 1,000 vehicles per day has a worse crash rate than ten crashes per year at a location that averages 30,000 vehicles per day. The formulas for crashes per mile and crash rate are given in Appendix A.

- A minimum crash rate of 1.0 is required for both roadway sections and intersections to be included in the list of high crash locations.

Next, the severity index is calculated for locations that meet the minimum number of crashes and crash rate.
The severity index is a ratio of how many fatal and injury crashes occur compared to total crashes. This measure is useful when determining which locations should have priority in order to not only reduce crashes but to also reduce fatalities and injuries. The formula for severity index is given in the Appendix A.

Finally, a composite score is calculated based on how a location ranks according to number of crashes, crash rate and severity index. The formula for composite score is given in Appendix A. This score defines the final rank of the location.

High Crash Sections

A "section" is defined as a length of roadway between two logical termini such as intersections with other roadways. The length of a section is usually shorter in urban areas and could be miles long in a rural area. All roads in the AMATS area were considered, including those that are not federally classified.

- AMATS identified 181 high crash roadway sections that have 10 or more crashes per mile per year and a crash rate of one or more over the three year period.

- Table 1 lists the 181 high crash roadway sections ranked by composite score. This table also notes if any crashes were bicycle or pedestrian-related. Map 1 shows the top 50 high crash roadway sections.

Table 1

HIGH CRASH ROADWAY SECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Roadway Section	From	To	Length (miles)	Average Daily Traffic	Total Crashes	Crashes per mile per year	Crash Rate	Severity Index	Bike Related	Ped Related	Location
1	Medina Rd (SR 18)	I-77	Cleveland-Massillon Rd (CR 17)	0.70	30,889	138	66	5.83	1.62	0	1	Summit Co-Copley Twp
2	SR 44	Tallmadge Rd (CR 18)	SR 5 (NB off from I-76)	0.63	12,347	51	27	5.99	1.75	0	0	Portage Co-Rootstown Twp
3	W Market St (SR 18)	Cleveland-Massillon Rd	Smith Rd	0.57	24,530	102	60	6.66	1.49	0	2	Fairlawn
4	W and E Main St (SR 59)	Sycamore St	Prospect St	0.26	14,100	35	45	8.72	1.46	0	1	Ravenna
5	SR 14	SR 303 (W)	SR 303 (E)	0.33	25,578	47	47	5.09	1.55	0	0	Streetsboro
6	E Aurora Rd (SR 82)	Olde Eight Rd	SR 8	0.82	15,150	77	31	5.66	1.57	0	0	Macedonia
7	River St (SR 43)	Haymaker Pkwy (SR 59)	W Main St	0.21	4,741	14	22	12.84	1.57	0	0	Kent
8	S Cleveland-Massillon Rd	I-77	Rosemont Blvd/Elgin Dr	0.53	21,780	55	35	4.35	1.65	0	0	Fairlawn
9	E Tallmadge Ave (SR 261)	N Main St	Gorge Blvd	0.57	16,610	65	38	6.27	1.46	0	1	Akron
10	E Main St (SR 59)	Willow St	Luther Av	0.42	18,195	62	49	7.41	1.39	0	1	Kent
11	S Water St (SR 43)	SR 261	Cherry St	0.48	17,292	37	26	4.07	1.65	0	1	Kent
12	Howe Ave	Cuyahoga Falls Corp Line	Main St	0.23	29,683	27	39	3.61	1.59	0	0	Cuyahoga Falls
13	W Market St (SR 18)	Miller Rd	Fairlawn East Corp Line	0.68	17,540	76	37	5.82	1.42	0	0	Fairlawn
14	Copley Rd (SR 162)	St Micheals	S Hawkins Ave	0.49	9,328	36	24	7.19	1.44	0	2	Akron
15	E Main St (SR 59)	Horning Rd	Kent East Corp Line	0.50	19,184	46	31	4.38	1.52	0	1	Kent
16	Arlington Rd	Turkeyfoot Lake Rd (SR 619)	Green North Corp Line	0.95	20,305	141	49	6.68	1.35	0	1	Green
17	Canton Rd (CR 66)	Sanitarium Rd (CR136)	Waterloo Rd (US224)	1.02	14,870	81	26	4.88	1.47	0	1	Summit Co-Springfield Twp
18	Arlington Rd (CR 15)	I-77/Green NCL	Killian Rd (CR135)	0.62	18,130	61	33	4.96	1.43	0	3	Summit Co-Springfield Twp
19	State Rd	Cuyahoga Falls Corp Line	Broad Blvd	0.66	14,700	44	22	4.14	1.64	1	0	Cuyahoga Falls
20	Brittain Rd	E Tallmadge Ave (SR 261)	Independence Ave	0.61	12,614	47	26	5.58	1.43	0	0	Akron
21	SR 14/44	SR 59	SR 5 (end SR 14 overlap)	0.39	17,345	28	24	3.78	1.57	0	0	Portage Co-Ravenna Twp
22	State Rd	Portage Trail	Graham Rd	0.27	22,210	23	28	3.50	1.61	1	0	Cuyahoga Falls
23	Goodkirk St	Buchtel Ave	E Market St (SR 18)	0.24	10,990	29	40	10.04	1.28	0	0	Akron
24	Crain Ave	N Mantua St	N Water St	0.09	12,240	20	74	16.58	1.20	1	0	Kent
25	Massillon Rd (SR 241)	Boettler Rd	Turkeyfoot Lake Rd (SR 619)	1.01	21,609	117	39	4.90	1.38	0	0	Green
26	SR 43	SR 303	Frost Rd	1.51	17,586	103	23	3.54	1.70	0	1	Streetsboro
27	N Main St (SR 91)	Streetsboro St (SR 303)	Aurora St	0.15	20,220	26	58	7.83	1.23	0	1	Hudson
28	S Maple St	Glendale Ave	W Market St (SR 18)	0.27	4,710	11	14	7.90	1.91	0	0	Akron
29	E Main St	Water St	Willow St	0.27	9,070	25	31	9.32	1.24	0	0	Kent
30	Graham Rd	Fishcreek Rd	Stow East Corp Line	0.66	14,750	47	24	4.41	1.43	0	0	Stow
31	E Exchange St	S Broadway St (SR 261)	Spicer St	0.76	21,317	101	44	5.69	1.26	1	5	Akron
32	Copley Rd (SR 162)	Storer Ave	East Ave	0.36	12,430	23	21	4.69	1.43	0	0	Akron
33	S High St (SR 261)	E Exchange St	E Market St (SR 18)	0.66	7,771	73	37	13.00	1.16	0	0	Akron
34	S Broadway St (SR 261)	E Exchange St	E Market St (SR 18)	0.66	10,998	37	19	4.66	1.51	0	0	Akron
35	Broad Blvd/Broadway East	Second St	Newberry St	0.29	16,170	38	44	7.40	1.16	0	0	Cuyahoga Falls
36	E Tallmadge Ave (SR 261)	Gorge Blvd	Home Ave	0.59	16,378	47	27	4.44	1.34	0	1	Akron
37	N Main St	E Tallmadge Ave	E Cuyahoga Falls Ave	0.36	10,420	18	17	4.38	1.56	0	1	Akron
37	Brittain Rd	Eastwood Ave	E Tallmadge Ave (SR 261)	1.18	12,350	64	18	4.01	1.55	0	1	Akron
39	W Market St (SR 18)	Ghent Rd	Miller Rd	0.30	28,390	50	56	5.36	1.16	0	0	Fairlawn
40	Wooster Rd N	Wooster Rd W	Hopocan Ave	0.41	9,475	21	17	4.94	1.48	0	0	Barberton
41	M.L. King Blvd (SR 59)	Market St Overpass	N Broadway St	0.35	18,439	21	20	2.97	1.76	0	0	Akron
42	E Main St (SR 59)	Freedom St (SR 88)	SR 14/SR 44	0.75	13,724	55	24	4.88	1.33	0	0	Ravenna
43	Wooster Rd N (SR 619 part)	State St	Barberton Corp Line	0.77	18,077	47	20	3.08	1.64	0	3	Barberton
44	Merriman Rd/Riverview Rd	N Portage Path	Smith Rd	0.99	15,170	60	20	3.65	1.47	0	0	Akron
45	W Main St (SR 59)	Diamond St	Sycamore St	0.37	11,540	19	17	4.06	1.53	0	1	Ravenna
46	S Chillicothe Rd (SR 43)	Aurora-Hudson Rd	Aurora Rd (SR 43)	0.43	15,734	27	21	3.64	1.44	1	0	Aurora
47	W Streetsboro St (SR 303)	Boston Mills Rd	Main St (SR 91)	0.54	17,083	40	25	3.96	1.35	0	0	Hudson
48	Kent Rd (SR 59)	Fishcreek Rd	Stow East Corp Line	0.35	18,730	23	22	3.20	1.52	0	0	Stow
49	Manchester Rd (SR 93)	Robinson Ave	Carnegie Ave	0.97	22,857	60	21	2.47	1.78	0	1	Sum Co-Coventry Twp
50	Ghent Rd	W Market St (SR 18)	Smith Rd	0.38	9,230	20	18	5.21	1.40	0	0	Fairlawn
51	Wooster Rd W	31st St	14th St NW	1.01	12,657	50	17	3.57	1.60	0	0	Barberton
52	Brittain Rd	E Market St (SR 18)	Newton St	0.74	9,157	31	14	4.18	1.65	0	2	Akron
52	W Portage Trail	State Rd	Second St	1.55	16,830	123	26	4.31	1.26	0	0	Cuyahoga Falls

Table 1

HIGH CRASH ROADWAY SECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Roadway Section	From	To	Length (miles)	Average Daily Traffic	Total Crashes	Crashes per mile per year	Crash Rate	Severity Index	Bike Related	Ped Related	Location
54	Gougler Ave (SR 43)	W Main St	N Mantua St	0.30	7,490	21	23	8.53	1.00	0	0	Kent
55	Garfield Rd W (SR 82)	Aurora Rd (SR 43)	Chillicothe Rd (SR 306)	0.24	9,885	15	21	5.77	1.27	0	0	Aurora
56	W Market St (SR 18)	Portage Path	Merriman Rd	0.59	12,360	44	25	5.51	1.18	0	0	Akron
57	E Cuyahoga Falls Ave	N Main St	Front St	0.99	13,255	53	18	3.69	1.45	3	0	Akron
58	S Water St	Haymaker Pkwy (SR 59)	E Main St	0.17	5,260	10	20	10.21	1.20	0	0	Kent
59	Manchester Rd (SR 93)	Carnegie Ave	Waterloo Rd	0.44	19,726	32	24	3.37	1.38	0	0	Akron
60	Front St/Kent Rd (SR 59)	Bailey Rd	Oak Park Blvd	0.37	12,791	22	20	4.25	1.36	0	0	Cuyahoga Falls
61	Graham Rd	Oakwood Dr/Wyoga Lake Rd	Hudson Dr	0.71	21,205	41	19	2.49	1.68	0	0	Stow
62	S Depeyster St	E Summit St	E Main St	0.25	2,793	10	13	13.08	1.40	0	0	Kent
63	Darrow Rd (SR 91)	Kent Rd (SR 59)	Stow Rd	0.63	14,896	42	22	4.09	1.29	0	0	Stow
64	E Main St (SR 59)	Prospect St	Freedom St (SR 88)	0.42	11,876	18	14	3.30	1.78	0	1	Ravenna
65	Howe Ave	Main St	Buchholzer Blvd	0.69	24,551	49	24	2.64	1.45	0	0	Cuyahoga Falls
66	SR 14	SR 303 (E)	Diagonal Rd	2.01	18,606	103	17	2.52	1.70	0	0	Streetsboro
67	S Arlington St (SR 764 part)	E Wilbeth Rd (SR 764)	E Archwood Ave	0.49	14,639	27	18	3.44	1.44	0	0	Akron
68	E Exchange St (SR 261 part)	S Main St	S Broadway St (SR 261)	0.14	9,201	8	19	5.67	1.25	0	0	Akron
69	N Main St (SR 261)	Olive St (W)	E Tallmadge Ave	0.32	8,339	14	15	4.79	1.43	1	0	Akron
69	SR 5/44	I-76	Prospect St	0.44	18,981	22	17	2.41	1.82	0	0	Portage Co-Rootstown Twp
71	Wooster Rd W	14th St NW	Wooster Rd N	0.76	10,919	33	14	3.63	1.55	0	1	Barberton
72	Graham Rd	Hudson Dr	Silver Lake West Corp Line	0.44	28,680	49	37	3.55	1.20	0	0	Stow
73	S Cleveland-Massillon Rd	Rosemont Blvd/Elgin Dr	W Market St (SR 18)	0.71	19,560	48	23	3.16	1.38	0	1	Fairlawn
74	Copley Rd/S Maple St (SR 162)	Diagonal Rd/S Portage Path	W Exchange St	0.33	8,970	12	12	3.70	1.83	0	1	Akron
75	N Portage Path	Merriman Rd	Portage Trail	0.28	16,600	18	21	3.54	1.33	0	0	Akron
76	Manchester Rd (SR 93)	State St (CR162)	Robinson Ave (CR 54)	0.89	14,406	42	16	2.99	1.62	0	1	Sum Co-Coventry Twp
77	SR 14	I-480 ramp to Turnpike	SR 303 (W)	1.62	31,551	117	24	2.09	1.48	0	0	Streetsboro
78	W Market St (SR 18)	Sand Run Rd	Hawkins Ave	1.12	20,273	75	22	3.02	1.37	1	1	Akron
78	SR 14/44	Ravenna NE Corp Line	SR 59	1.00	14,406	43	14	2.73	1.81	0	0	Portage Co-Ravenna Twp
80	S Arlington St	E Waterloo Rd	E Wilbeth Rd (SR 764)	0.70	12,800	35	17	3.57	1.40	0	3	Akron
81	Wooster Rd N	Norton Ave	State St	0.50	11,850	20	13	3.08	1.80	0	0	Barberton
82	W Exchange St	Rhodes Ave	Dart Ave	0.53	8,040	27	17	5.79	1.22	0	0	Akron
83	S Aurora Rd (SR 43)	SR 306	SR 82	0.36	9,182	13	12	3.59	1.77	0	0	Aurora
84	S Water St (SR 43)	Cherry St	Haymaker Pkwy (SR 59)	0.72	13,583	38	18	3.55	1.37	1	0	Kent
85	Home Ave/Main St	Independence Ave	Howe Ave	0.57	12,895	25	15	3.11	1.56	1	1	Akron
86	Second St	Broad Blvd	Oakwood Dr	0.38	9,700	18	16	4.46	1.33	0	1	Cuyahoga Falls
87	Canton Rd (SR 91)	Waterloo Rd (US224)	Akron SCL	0.72	15,355	30	14	2.48	2.20	0	0	Sum Co-Springfield Twp
88	Cuyahoga St/Northampton Rd	Sackett Ave	Portage Trail	0.86	5,730	28	11	5.19	1.57	0	0	Akron
89	E Aurora Rd (SR 82)	SR 8	N Bedford Rd	0.72	16,273	45	21	3.51	1.27	0	0	Macedonia
90	US0224 (Waterloo Rd)	Akron ECL	Canton Rd (SR 91 / CR 66)	1.52	20,615	74	16	2.16	1.65	0	0	Sum Co-Springfield Twp
91	E Main St (SR 59)	Luther Av	Horning Rd	0.32	25,916	22	23	2.42	1.36	0	0	Kent
92	Canton Rd (SR 91)	Akron SCL	Triplett Blvd	0.33	15,180	20	20	3.65	1.20	0	0	Akron
93	S Prospect St	Ravenna SCL	Lake Ave	0.19	9,640	7	12	3.49	1.57	0	0	Ravenna
94	W Market St (SR 18)	Smith Rd	Ghent Rd	0.71	20,490	37	17	2.32	1.49	0	0	Fairlawn
95	N Mantua St (SR 43)	Gougler Ave	Kent North Corp Line	1.02	16,994	59	19	3.11	1.34	1	0	Kent
96	Ravenna Rd	Shepard Rd	Chamberlin Rd	0.79	10,700	28	12	3.03	1.86	0	1	Twinsburg
97	W Cedar St	Dart Ave	Locust St	0.28	9,020	12	14	4.34	1.33	0	0	Akron
98	Graham Rd	State Rd	Oakwood Dr/Wyoga Lake Rd	1.18	12,774	58	16	3.51	1.34	0	0	Cuyahoga Falls
99	Manchester Rd (SR 93)	Waterloo Rd	Wilbeth Rd (SR 764)	0.59	11,740	27	15	3.56	1.37	0	1	Akron
100	Wabash Ave	Codding Ave	W Cedar St	0.12	2,820	5	14	13.49	1.00	0	0	Akron
101	W Portage Trail Ext	Northampton Rd	State Rd	1.18	18,420	57	16	2.39	1.49	0	0	Cuyahoga Falls
102	SR 14	Cleveland Rd (CR 171)	Infirmary Rd (CR 164)	0.47	13,580	18	13	2.58	1.67	0	0	Portage Co-Ravenna Twp
103	W&E Tallmadge Ave	Cuyahoga Falls Ave	N Main St	0.43	9,365	14	11	3.17	2.50	1	2	Akron
104	E Steels Corners Rd	State Rd	Cuyahoga Falls Corp Line	1.00	12,017	39	13	2.96	1.56	0	0	Cuyahoga Falls
105	S Arlington St	2nd Ave	E Market St (SR 18)	0.58	11,110	27	16	3.83	1.30	0	0	Akron
106	SR 59	SR 261	Brady Lake Rd (CR 162)	2.55	16,334	98	13	2.15	1.98	0	2	Portage Co-Ravenna Twp

Table 1

HIGH CRASH ROADWAY SECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Roadway Section	From	To	Length (miles)	Average Daily Traffic	Total Crashes	Crashes per mile per year	Crash Rate	Severity Index	Bike Related	Ped Related	Location
107	W&E Market St (SR 18)	Maple St	Main St	0.39	19,736	21	18	2.49	1.38	0	0	Akron
108	E Highland Rd	SR 8	Valley View Rd	1.25	17,565	75	20	3.12	1.24	0	0	Macedonia
109	Darrow Rd (SR 91)	Newton St	Akron Corp Line	0.85	13,883	31	12	2.40	2.00	0	1	Akron
110	Main St	Howe Ave	Newberry St	0.45	11,370	18	13	3.21	1.44	0	0	Cuyahoga Falls
111	S Mantua St (SR 43)	Haymaker Pkwy (SR 59)	W Main St	0.19	5,490	7	12	6.13	1.29	0	0	Kent
112	W Tallmadge Ave/West Ave (SR 261)	Brittain Rd	Tallmadge Circle	1.26	13,574	51	13	2.72	1.51	0	0	Tallmadge
113	Manchester Rd (SR 93)	Wilbeth Rd (SR 764)	SB ramp to old Manchester Rd	0.68	7,442	24	12	4.33	1.42	0	0	Akron
114	South St	Wolf Ledges Pkwy/Bellows St	Brown St	0.49	4,420	15	10	6.32	1.40	0	1	Akron
115	SR 43	Kent North Corp Line	Streetsboro South Corp Line	2.40	15,206	90	13	2.25	1.78	0	0	Portage Co-Franklin Twp
116	E Market St (SR 18)	Main St	Forge St	0.65	18,222	36	18	2.78	1.28	0	0	Akron
117	Main St (SR 303)	Riverview Rd	Locust St/Akron-Peninsula Rd	0.36	8,308	11	10	3.36	1.73	0	0	Peninsula
118	State Rd	Broad Blvd	Portage Trail	0.96	16,580	48	17	2.75	1.33	1	0	Cuyahoga Falls
119	Kent Rd (SR 59)	Darrow Rd (SR 91)	Fishcreek Rd	2.22	16,793	96	14	2.35	1.48	0	1	Stow
120	Kenmore Blvd	Wooster Rd N/East Ave	W Wilbeth Rd	0.57	3,860	21	12	8.72	1.19	0	0	Akron
121	South Ave (SR 91)	Tallmadge SCL	Tallmadge Circle	1.11	11,651	49	15	3.46	1.33	0	0	Tallmadge
122	W&E Portage Trail	Second St	Newberry St/Munroe Falls Ave	0.29	18,960	17	20	2.82	1.24	0	0	Cuyahoga Falls
123	Carroll St	Fountain St	E Market St (SR 18)	0.48	3,030	16	11	10.05	1.25	0	0	Akron
124	Fishcreek Rd	Graham Rd	Kent Rd (SR 59)	0.88	16,530	37	14	2.32	1.49	0	1	Stow
124	Darrow Rd (SR 91)	E Highland Rd	Aurora Rd (SR 82)	0.95	22,712	60	21	2.54	1.20	0	0	Twinsburg
126	Graham Rd	Darrow Rd (SR 91)	Fishcreek Rd	1.85	14,223	71	13	2.46	1.54	0	0	Stow
127	Rhodes Ave/Euclid Ave/Monroe	Euclid/Rhodes/Rhodes	W Exchange/SR 59/SR 59	0.64	3,970	21	11	7.55	1.29	0	0	Akron
128	W Main St (SR 59)	Spaulding Dr	Longmere Dr	0.50	19,213	24	16	2.28	1.42	0	0	Kent
129	E Market St (SR 18)	Mogadore Rd	Canton Rd (SR 91)	0.95	12,112	40	14	3.17	1.35	0	0	Akron
130	S Arlington St	E Archwood Ave	2nd Ave	1.18	12,335	41	12	2.57	1.63	1	2	Akron
131	E Thornton St	S Main St	Grant St	0.42	5,507	16	13	6.32	1.00	0	0	Akron
131	Fountain St	E Exchange St	Buchtel Ave	0.38	3,900	14	12	8.63	1.00	0	0	Akron
133	W Market St (SR 18)	Hawkins Ave	Twin Oaks Rd	0.82	13,320	40	16	3.34	1.20	0	0	Akron
134	Newberry St	Main St	Broadway East/Tallmadge Rd	0.56	9,150	18	11	3.21	1.56	0	0	Cuyahoga Falls
135	W Market St (SR 18)	Merriman Rd	Maple St	0.72	20,819	35	16	2.13	1.40	1	1	Akron
136	Medina Rd (SR 18)	S Hametown Rd (CR253)	I-77 centerline	0.89	39,415	52	19	1.35	1.35	0	0	Sum Co-Copley Twp
137	Hill St/E Buchtel Ave	University Ave	S Union St	0.33	8,403	12	12	3.95	1.33	0	1	Akron
138	E Market St (SR 18)	E Buchtel Ave	E Exchange St	0.53	12,105	25	16	3.56	1.16	0	0	Akron
139	Franklin Ave	W Summit St	E Main St	0.27	4,050	9	11	7.52	1.22	0	0	Kent
140	Fishcreek Rd	Stow Rd	Graham Rd	1.63	13,275	59	12	2.49	1.54	0	0	Stow
141	Brown St	E Archwood Ave	E South St	1.05	6,905	37	12	4.66	1.27	0	0	Akron
142	Darrow Rd (SR 91)	Stow South Corp Line	Kent Rd (SR 59)	0.50	15,720	19	13	2.21	1.53	0	0	Stow
143	W Exchange St	Work Dr/S Portage Path	Rhodes Ave	0.36	10,460	11	10	2.67	1.73	0	0	Akron
144	Sumner St	Voris St	E Exchange St	0.66	1,500	21	11	19.37	1.19	0	1	Akron
145	E Summit St	S Lincoln St	Loop Rd	1.03	10,523	39	13	3.29	1.36	0	2	Kent
145	W Aurora Rd (SR 82)	I-480	Darrow Rd (SR 91)	0.56	14,487	27	16	3.03	1.22	0	0	Twinsburg
147	E Waterloo Rd	Brown St	S Arlington St	1.00	13,000	46	15	3.23	1.22	0	1	Akron
148	5th St SE (SR 619)	Barberton Corp Line	Robinson Ave	0.81	8,401	25	10	3.36	1.48	0	1	Barberton
149	N High St (SR 261)	E Market St (SR 18)	M.L. King Blvd (SR 59)	0.16	6,873	6	13	4.98	1.00	0	0	Akron
150	W Turkeyfoot Lake Rd (SR 619)	Green West Corp Line	S Main St	0.50	11,700	15	10	2.34	1.93	0	0	Green
151	Darrow Rd / S Main St (SR 91)	Hudson Dr	Streetsboro St (SR 303)	1.22	16,969	57	16	2.51	1.32	0	0	Hudson
152	East Ave	Akron Corp Line	Iona Ave	0.90	8,493	31	11	3.70	1.32	0	0	Akron
153	E Exchange St	Spicer St	E Market St (SR 18)	0.92	13,373	37	13	2.75	1.32	0	2	Akron
154	W Exchange St (SR 261 part)	Dart Ave	S Main st	0.55	10,106	22	13	3.61	1.00	0	0	Akron
155	Graham Rd	Silver Lake West Corp Line	Englewood Dr	1.05	22,830	40	13	1.52	1.45	0	0	Silver Lake
156	SR 59	Alpha Dr	SR 261	0.41	19,184	13	11	1.51	1.77	0	0	Portage Co-Franklin Twp
157	S Frank Blvd	White Pond Dr	W Market St (SR 18)	0.44	9,420	16	12	3.53	1.25	0	0	Akron
157	Bailey Rd	Northmoreland Blvd	Munroe Falls Ave	0.62	8,590	19	10	3.26	1.42	0	0	Cuyahoga Falls
159	Smith Rd	Ghent Rd	Owasso Ave	0.53	14,630	24	15	2.83	1.17	0	0	Akron

Table 1

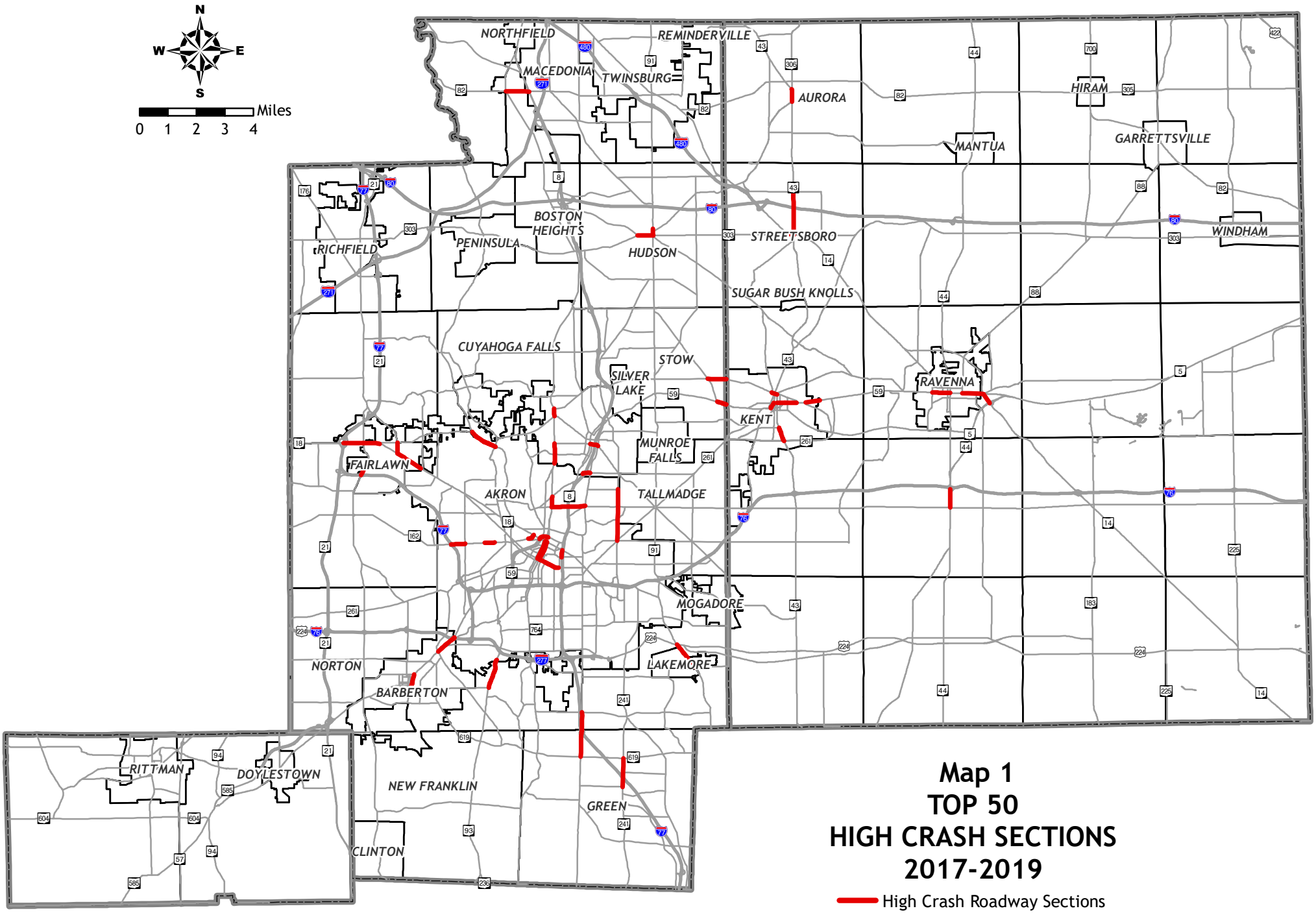
HIGH CRASH ROADWAY SECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Roadway Section	From	To	Length (miles)	Average Daily Traffic	Total Crashes	Crashes per mile per year	Crash Rate	Severity Index	Bike Related	Ped Related	Location
160	E Waterloo Rd (US 224)	Geo Washington Blvd (SR 241)	Akron Corp Line	0.51	19,189	20	13	1.87	1.40	0	0	Akron
161	S Main St	Exchange St	Bowery St	0.35	6,855	12	11	4.57	1.00	0	0	Akron
162	SR 43	I-76	Kent South Corp Line	1.61	22,905	53	11	1.31	1.57	1	0	Por Co-Brimfield Twp
163	S Cleveland-Massillon Rd	Greenwich Rd/Norton Ave	I-76	0.94	13,510	33	12	2.37	1.42	0	0	Norton
164	W Cedar St	Rhodes Ave	Dart Ave	0.57	7,055	19	11	4.31	1.11	1	0	Akron
165	Northfield Rd (SR 8)	Olde Eight Rd	Sagamore Rd/Northfield NCL	1.09	16,051	41	13	2.14	1.39	0	0	Northfield
166	W Main St (SR 59)	Kent West Corp Line	Spaulding Dr	0.28	19,960	11	13	1.80	1.36	0	0	Kent
167	E Tallmadge Ave (SR 261)	Home Ave	Brittain Rd	1.16	16,690	41	12	1.93	1.44	0	1	Akron
168	S Main St	Wilbeth Rd (SR 764)	S Broadway St	1.11	13,330	35	11	2.16	1.51	0	0	Akron
169	Bailey Rd/Hudson Dr	Munroe Falls Ave	Front St (SR 59)	0.49	12,590	20	14	2.96	1.10	0	0	Cuyahoga Falls
170	N Canton Rd/Darrow Rd (SR 91)	Mogadore Rd	Newton St	0.66	18,434	31	16	2.33	1.13	0	0	Akron
171	E Market St (SR 18)	E Exchange St	Seiberling St	1.12	9,714	34	10	2.85	1.41	0	0	Akron
172	Howe Ave	Buchholzer Blvd	Brittain Rd/Bailey Rd	0.30	13,560	10	11	2.24	1.40	0	0	Cuyahoga Falls
173	Kent Rd (SR 59)	Stow West Corp Line	Darrow Rd (SR 91)	0.57	15,330	19	11	1.99	1.42	1	0	Stow
174	Oakwood Dr/Front St (SR 59)	Second St	Bailey Rd	0.73	10,990	24	11	2.73	1.33	0	0	Cuyahoga Falls
175	Copley Rd (SR 162)	S Hawkins Ave	Storer Ave	0.69	15,170	22	11	1.92	1.45	1	0	Akron
176	SR 43	Tallmadge Rd (CR 18)	I-76	0.52	13,163	18	12	2.40	1.33	0	0	Por Co-Brimfield Twp
177	M.L. King Blvd/Perkins St (SR 59)	N Broadway St	N Adolph Ave	0.61	21,105	24	13	1.70	1.25	0	0	Akron
178	W Portage Trail Ext	Akron-Peninsula Rd	Northampton Rd	1.04	16,957	33	11	1.71	1.42	1	0	Cuyahoga Falls
179	S Miller Rd	Ridgewood Rd	W Market St (SR 18)	0.98	19,350	37	13	1.78	1.27	1	0	Akron
180	S Broadway St (SR 261)	Bartges St	E Exchange St	0.52	13,118	17	11	2.28	1.24	0	0	Akron
181	SR 8	I-271 ramps	SR 82	1.47	27,762	48	11	1.08	1.25	0	0	Macedonia

Red denotes that the segment had at least one fatality



Map 1
TOP 50
HIGH CRASH SECTIONS
2017-2019

High Crash Roadway Sections

High Crash Intersections

Crashes that occur within a radius of 250 feet from the center of an intersection and involve at least two vehicles are usually considered an intersection-related crash. Exceptions to this rule were driveway-related crashes and crashes that had non-intersection characteristics such as departing intersection. All intersections in the AMATS area were considered, including those of roads that are not federally classified.

- AMATS identified 350 intersections that have a minimum of 10 crashes and a crash rate of one or more over the three year period.

- Table 2 lists the 350 high crash intersections ranked by composite score. This table also notes if any crashes were bicycle or pedestrian related. Map 2 shows the top 50 high crash intersections. Please note that the second worst intersection, South Broadway Street and East Milller Avenue, was just south of a major freeway reconstruction project on I-76/I-77. Although crashes occurring in a construction zone are removed from our data, this location is just on the border and was probably impacted by the adjacent construction.

High Crash Freeway Locations

The analysis of freeway crashes in the AMATS area is done by the central office of the Ohio Department of Transportation (ODOT) in Columbus. ODOT's analysis of freeways is done using methodology from the Highway Safety Manual. The freeway system is divided into *rural* and *urban* and is analyzed by examining segments that are one-tenth of a mile long. ODOT only considers the top 50 rural and top 50 urban locations statewide for further study. For further information about top freeway crash locations along with other 2018 HSIP Priority Locations from ODOT please follow the following link. Please note that 2019 HSIP Priority Locations have not yet been released.

http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/HighwaySafety/HSIP/Pages/Priority-Lists-Initiatives.aspx

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
1	SR 14/SR 303	SR 43	41,044	116	2.58	1.59	0	0	Streetsboro
2	S Broadway St	E Miller Ave (Close to major fwy construction)	16,680	43	2.35	1.70	0	3	Akron
3	N Howard St	Glenwood Ave	8,775	30	3.12	1.87	0	0	Akron
4	SR 14	Mondial Pkwy/Singletary Dr	27,030	53	1.79	1.68	0	0	Streetsboro
5	S Broadway St	Rosa Paks Dr	13,618	49	3.29	1.49	0	0	Akron
6	S Maple St (SR 162)	W Cedar St	13,820	32	2.11	1.81	1	0	Akron
7	MLK Jr. Blvd (SR 59)	N Broadway St (SR 261)	22,402	51	2.08	1.55	0	0	Akron
8	US 224	SR 225	8,338	25	2.74	2.04	0	0	Portage Co-Deerfield Twp
9	S Arlington St	S Case Av/Johnston St	15,285	38	2.27	1.58	0	0	Akron
10	S Arlington Rd	Killian Rd	23,130	44	1.74	1.64	0	0	Summit Co-Springfield Twp
10	SR 585	Eastern Rd	17,404	33	1.73	1.91	0	0	Norton
12	Portage Trail	2nd St	29,350	51	1.59	1.67	1	0	Cuyahoga Falls
13	Bellows St	Crosier St	3,230	26	7.35	1.69	0	0	Akron
14	MLK Jr. Blvd (SR 59)	N High St (SR 261)	25,308	45	1.62	1.67	0	1	Akron
15	S Miller Rd	Ridgewood Rd /I-77 Ramps	28,552	50	1.60	1.64	0	0	Fairlawn
16	Graham Rd	Fishcreek Rd	28,940	55	1.74	1.51	1	1	Stow
17	Darrow Rd (SR 91)	Graham Rd	34,456	64	1.70	1.50	0	0	Stow
18	S Maple St (SR 162)	Rhodes Ave	13,195	27	1.87	1.81	0	0	Akron
19	Manchester Rd (SR 93)	W Waterloo Rd	24,013	47	1.79	1.51	0	1	Akron
20	W Cedar St	Rand Ave	13,120	27	1.88	1.74	0	0	Akron
21	Brookmont Dr	Brookwall Dr	6,020	21	3.19	1.86	0	0	Fairlawn
22	Broad Blvd	Tallmadge Rd/Newberry St	23,415	53	2.07	1.42	0	0	Cuyahoga Falls
23	Riverview Rd	Ira Rd	5,266	21	3.64	1.76	0	0	Cuyahoga Falls
24	Archwood Ave	Coventry St	8,340	24	2.63	1.67	0	0	Akron
25	E Market St (SR 18)	Mogadore Rd/I-76 Ramps	37,408	67	1.64	1.48	0	2	Akron
26	S Arlington St	E Waterloo Rd	21,783	45	1.89	1.44	0	1	Akron
27	E Tallmadge Ave (SR 261)	Home Ave	29,800	53	1.62	1.49	0	0	Akron
28	S Main St	Swartz Rd/US 224 EB Ramps	21,338	43	1.84	1.47	1	0	Akron
29	SR 82	Chamberlain Rd	7,650	20	2.39	2.10	0	0	Portage Co-Mantua Twp
30	SR 82	Mantua Center Rd	10,720	22	1.87	2.18	0	0	Portage Co-Mantua Twp
31	Broad Blvd	2nd St	20,480	34	1.52	1.71	0	0	Cuyahoga Falls
32	State St (SR 619)	Wooster Rd N (SR 619)	23,600	43	1.66	1.51	0	0	Barberton
33	Glenwood Ave	SR 8 Ramps/Gorge Blvd	10,988	35	2.91	1.40	0	0	Akron
34	SR 14	SR 44/N Chestnut St	22,175	33	1.36	1.85	0	1	Ravenna
35	W Exchange St	Dart Av	15,160	36	2.17	1.44	1	0	Akron
36	Portage Trail	State Rd	34,680	86	2.26	1.28	0	1	Cuyahoga Falls
36	N Mantua St (SR 43)	Fairchild Ave	28,500	55	1.76	1.40	0	0	Kent
38	Darrow Rd (SR 91)	Glenwood Dr	19,320	64	3.03	1.25	0	0	Twinsburg
39	Tallmadge Circle		38,034	255	6.12	1.18	2	0	Tallmadge
40	SR 43	E Howe Rd	20,970	31	1.35	2.00	0	0	Portage Co-Brimfield Twp
41	S Water St (SR 43)	SR 261	28,953	50	1.58	1.48	0	0	Kent
42	E Tallmadge Ave (SR 261)	Brittain Rd	27,066	43	1.45	1.56	0	1	Akron
43	2nd St	Northland St	5,570	24	3.93	1.50	0	0	Cuyahoga Falls
44	Medina Rd (SR 18)	Crystal Lake Rd/Montrose West Ave	48,380	67	1.26	1.57	0	0	Summit Co-Bath Twp
45	Eastern Rd	Portage St/Wooster Rd W	4,700	18	3.50	1.78	0	0	Wayne Co-Chippewa Twp
45	Brown St	E Thornton St	6,570	20	2.78	1.70	1	0	Akron

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
47	SR 8	Macedonia Commons Blvd/I-271 Ramps	20,600	49	2.17	1.33	0	0	Macedonia
48	Vernon Odom Blvd (SR 261)	Rand St/Rhodes Ave	9,069	22	2.22	1.64	0	0	Akron
49	Northeast Ave (SR 261)	E Howe Rd/N Munroe Ave	19,180	52	2.48	1.27	0	0	Tallmadge
50	SR 14/44	SR 59	15,150	27	1.63	1.67	0	0	Portage Co-Ravenna Twp
51	Opportunity Pkwy (SR 261)	Dart Ave	12,938	31	2.19	1.45	0	0	Akron
52	SR 303	Akron Cleveland Rd/SR 8 Ramps	20,971	44	1.92	1.36	0	0	Boston Heights
53	Triplett Blvd (SR 764)	Kelly Ave/Lindsay Ave	15,507	25	1.47	2.12	0	0	Akron
54	Kent Rd (SR 59)	Darrow Rd (SR 91)	22,175	32	1.32	1.81	0	0	Stow
55	E Market St (SR 18)	Arlington St	18,810	33	1.60	1.55	0	0	Akron
56	E Turkeyfoot Lake Rd (SR 619)	Arlington Rd	29,089	43	1.35	1.56	0	0	Green
57	E Market St (SR 18)	Main St	27,289	43	1.44	1.51	0	1	Akron
58	Memorial Pkwy	Merriman Rd	18,165	35	1.76	1.46	0	0	Akron
59	Merriman Rd	N Portage Path	25,935	69	2.43	1.17	0	0	Akron
60	SR 5/44	Lynn Rd	11,842	22	1.70	1.82	0	0	Portage Co-Rootstown Twp
61	SR 14	Market Square Dr	33,700	49	1.33	1.53	0	0	Streetsboro
62	W Exchange St	Rand Ave	14,630	27	1.69	1.59	1	0	Akron
63	E Waterloo Rd (US 224)	Canton Rd (SR 91/CR 66)	34,854	65	1.70	1.34	0	0	Summit Co-Springfield Twp
63	Broad Blvd	SR 8 Ramps	40,437	73	1.65	1.36	0	1	Cuyahoga Falls
65	E Market St (SR 18)	High St (SR 261)	11,405	30	2.40	1.40	0	0	Akron
66	S Arlington St	5th Ave	14,700	27	1.68	1.59	0	1	Akron
67	S Broadway St	E Thornton St	18,245	39	1.95	1.36	0	0	Akron
68	Wooster Rd N	Wooster Rd W/Robinson Ave	16,623	27	1.48	1.67	0	0	Barberton
69	W Market St (SR 18)	Smith Rd	24,604	34	1.26	1.71	0	0	Fairlawn
70	SR 261	Franklin Ave/Sunnybrook Rd	10,762	20	1.70	2.10	0	0	Kent
71	Vernon Odom Blvd (SR 261)	Superior Ave	13,265	24	1.65	1.67	0	0	Akron
72	SR 88	SR 305	4,743	14	2.70	2.43	0	0	Portage Co-Hiram Twp
73	Dart Av	W Thornton St	11,850	28	2.16	1.43	0	1	Akron
74	Massillon Rd (SR 241)	E Turkeyfoot Lake Rd (SR 619)	23,098	34	1.34	1.59	0	0	Green
75	Steels Corners Rd	Wyoga Lake Rd	16,569	38	2.09	1.32	0	0	Cuyahoga Falls
76	E Exchange St	Spicer St	22,975	38	1.51	1.47	0	0	Akron
77	Wadsworth Rd (SR 261)	S Hametown Rd	7,354	16	1.99	2.25	0	0	Norton
78	Diagonal Rd	Mennonite Rd	4,800	14	2.66	2.29	0	0	Portage Co-Mantua Twp
79	Howe Ave	Brittain Rd/Bailey Rd/Tallmadge Rd/NW Ave	25,560	54	1.93	1.22	0	0	Cuyahoga Falls
80	E Market St (SR 18)	Case Ave	19,260	37	1.75	1.38	0	1	Akron
81	Tallmadge Rd	Walmart Dr	11,580	22	1.74	1.64	0	0	Portage Co-Brimfield Twp
82	Home Ave	Independence Ave	8,339	20	2.19	1.60	0	0	Akron
83	Manchester Rd (SR 93)	W Wilbeth Rd (SR 764)	14,850	37	2.28	1.27	0	0	Akron
84	Medina Rd (SR 18)	Springside Dr	37,789	46	1.11	1.70	0	0	Summit Co-Bath Twp
85	Perkins St (SR 59)	SR 8 Ramps	35,680	62	1.59	1.32	0	0	Akron
86	E Exchange St	Brown St	9,330	27	2.64	1.37	0	3	Akron
87	Carroll St	Fountain St	12,030	32	2.43	1.31	0	1	Akron
88	Kelly Ave	E Waterloo Rd/Emmitt Rd	13,473	29	1.97	1.41	0	0	Akron
89	W Market St (SR 18)	Maple St	21,356	36	1.54	1.44	0	2	Akron
90	SR 14	Infirmary Rd	7,650	16	1.91	2.00	0	0	Portage Co-Ravenna Twp
91	Tallmadge Ave	N Howard St	15,535	32	1.88	1.38	1	0	Akron
91	SR 14	Brook Valley Trail/Shady Lake Dr	27,030	34	1.15	1.76	0	0	Streetsboro

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
93	Copley Rd (SR 162)	S Hawkins Ave	21,599	36	1.52	1.44	0	0	Akron
94	Cleveland Massillon Rd	Eastern Rd	7,182	15	1.91	2.33	0	0	Norton
95	Copley Rd (SR 162)	I-77 Ramps/St Micheals Ave	11,293	40	3.23	1.15	1	0	Akron
95	W Market St (SR 18)	Portage Path	17,525	40	2.08	1.25	0	2	Akron
97	SR 8	Aurora Rd (SR 82)	35,035	69	1.80	1.17	0	0	Macedonia
98	E Waterloo Rd/US 224	George Washington Blvd (SR 241)	29,982	56	1.71	1.25	0	0	Akron
99	S Arlington Rd	I-77 Ramps	21,220	35	1.51	1.46	0	0	Green
100	Hines Hill Rd	Valley View Rd	5,200	19	3.34	1.53	0	0	Hudson
101	E Tallmadge Ave (SR 261)	Gorge Blvd/SR 8 NB Off-ramp	25,743	48	1.70	1.29	0	1	Akron
102	East Ave	Russell Ave	4,795	17	3.24	1.59	0	1	Akron
103	E Aurora Rd (SR 82)	S Bedford Rd/Freeway Dr	16,725	40	2.18	1.20	0	0	Macedonia
104	S Arlington Rd	Arlington Ridge	22,860	33	1.32	1.55	0	0	Green
105	Grant St	E South St	11,405	27	2.16	1.37	0	0	Akron
106	Wooster Rd W	31st St	21,810	33	1.38	1.48	0	0	Barberton
107	Archwood Ave	Inman St	9,760	20	1.87	1.60	0	0	Akron
107	Darrow Rd (SR 91)	Terex Rd	25,550	32	1.14	1.75	0	0	Hudson
109	SR 8	Highland Ave	47,792	79	1.51	1.28	0	0	Macedonia
110	Manchester Rd (SR 93)	I-277/US 224 WB Off-ramp	25,883	42	1.48	1.38	0	1	Akron
111	W Market St (SR 18)	Miller Rd	35,580	62	1.59	1.26	0	0	Fairlawn
112	Wooster Rd N (SR 619)	East Ave/Kenmore Blvd/I-76 WB Ramps	17,485	33	1.72	1.36	0	0	Barberton
113	E Aurora Rd (SR 82)	Hadden Rd/Wilcox Dr	20,299	27	1.21	1.74	0	0	Twinsburg
114	N Howard St	North St	23,192	31	1.22	1.65	0	2	Akron
115	W Exchange St	Wabash Ave	12,640	32	2.31	1.25	0	0	Akron
116	E Exchange St	S Arlington St	17,960	30	1.53	1.47	1	0	Akron
117	Howe Ave	Main St	42,420	70	1.51	1.26	0	0	Cuyahoga Falls
118	E Wilbeth Rd (SR 764)	Coventry St/I-77 SB Ramp	12,909	27	1.91	1.37	0	0	Akron
119	Front St (SR 59)	Hudson Dr	26,846	45	1.53	1.31	0	1	Cuyahoga Falls
120	Vernon Odom Blvd (SR 261)	S Hawkins Ave	18,960	37	1.78	1.27	0	0	Akron
120	E Wilbeth Rd (SR 764)	Brown St	15,620	25	1.46	1.56	0	0	Akron
122	Tallmadge Rd	I-76 Ramps/Mogadore Rd (W & E Jct)	28,195	35	1.13	1.63	1	0	Portage Co-Brimfield Twp
123	Summit St	Powder Mill Rd	6,970	17	2.23	1.59	0	0	Portage Co-Franklin Twp
124	State Rd	Bath Rd	19,330	35	1.65	1.34	0	0	Cuyahoga Falls
125	Manchester Rd (SR 93)	E State St/State Mill Rd	17,969	26	1.32	1.62	0	0	Summit Co-Coventry Twp
126	W Exchange St (SR 261)	Locust St (SR 261)	12,491	30	2.19	1.27	0	0	Akron
127	State Rd	Steels Corners Rd	20,620	39	1.73	1.26	1	0	Cuyahoga Falls
127	S Main St	Killian Rd	15,720	23	1.34	1.70	0	0	Summit Co-Coventry Twp
129	Brittain Rd	Eastland Ave/Eastwood Ave	21,735	41	1.72	1.24	0	1	Akron
130	Massillon Rd (SR 241)	Boettler Rd	30,976	38	1.12	1.58	1	0	Green
131	E Glenwood Av	Dan St/Fouse Ave	6,780	21	2.83	1.38	0	0	Akron
132	W Bath Rd	Northampton Rd	9,016	19	1.92	1.53	0	0	Cuyahoga Falls
133	Wadsworth Rd (SR 57)	Easton Rd (SR 604)	7,619	14	1.68	2.43	0	0	Wayne Co-Chippewa Twp
134	Canton Rd (SR 91)	Mogadore Rd	21,399	32	1.37	1.44	0	0	Akron
135	Graham Rd	SR 8 Ramps	61,814	78	1.15	1.38	0	0	Cuyahoga Falls
136	S Broadway St (SR 261)	E Exchange St	31,166	53	1.55	1.19	0	0	Akron
137	SR 43	Tallmadge Rd	19,640	24	1.12	2.29	0	2	Portage Co-Brimfield Twp
138	Kent Rd (SR 59)	Marsh Rd	19,340	24	1.13	2.00	0	1	Stow

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
139	S Main St	Turkeyfoot Lake Rd (SR 619)	23,448	30	1.17	1.60	0	0	Green
140	Old Forge Rd	Mogadore Rd	4,280	14	2.99	1.57	0	0	Portage Co-Brimfield Twp
141	East Ave	I-76 WB Off-ramp/Rosemond Ave	6,121	27	4.03	1.15	0	0	Akron
142	Diagonal Rd	Pioneer Trail	2,640	10	3.46	1.80	0	0	Portage Co-Mantua Twp
143	Carroll St	Goodkirk St	14,630	31	1.94	1.19	0	0	Akron
144	Vernon Odom Blvd (SR 261)	Collier Rd	7,643	14	1.67	1.93	0	0	Akron
145	Wadsworth Rd (SR 261)	SR 21 Ramps	11,355	24	1.93	1.33	0	0	Norton
146	Middleton Rd	Stow Rd	9,399	16	1.55	1.75	0	0	Hudson
147	E Tallmadge Ave (SR 261)	N Main St (SR 261)	23,125	30	1.18	1.53	1	0	Akron
148	N Arlington St	Hazel St	7,445	19	2.33	1.42	1	0	Akron
149	S High St	Selle St	14,420	22	1.39	1.55	0	0	Akron
150	SR 43	I-76 Ramps/Edson Rd	43,720	58	1.21	1.31	0	0	Portage Co-Brimfield Twp
151	SR 43	Randolph Rd	10,238	17	1.52	1.71	0	0	Portage Co-Suffield Twp
152	White Pond Dr	I-77 Ramps	16,305	24	1.34	1.50	0	0	Akron
153	SR 44	SR 303	11,833	17	1.31	2.24	0	0	Portage Co-Shalersville Twp
154	SR 44	Pioneer Trail	8,140	15	1.68	1.67	0	0	Portage Co-Mantua Twp
154	E Cedar St (SR 261)	S High St	13,705	24	1.60	1.42	0	1	Akron
156	SR 14	Cleveland Rd	8,755	14	1.46	2.43	0	0	Portage Co-Ravenna Twp
157	Diagonal Rd	East Ave	7,270	13	1.63	2.08	1	0	Akron
158	E Aurora Rd (SR 82)	Darrow Rd (SR 91)	28,485	46	1.47	1.17	0	0	Twinsburg
159	Graham Rd	Hudson Dr	34,465	50	1.32	1.24	0	0	Cuyahoga Falls
160	Massillon Rd (SR 241)	I-77 Ramps	67,721	80	1.08	1.38	0	0	Green
161	Russell Ave	Boulevard St	10,430	21	1.84	1.38	0	0	Akron
162	Hudson Dr	Terex Rd	13,820	26	1.72	1.31	0	0	Hudson
163	Broadview Rd (SR 176)	Boston Rd	4,910	11	2.05	1.73	0	0	Summit Co-Richfield Twp
163	S Main St	Archwood Ave	7,258	15	1.89	1.53	0	0	Akron
165	Howe Ave	Buchholzer Blvd	20,890	30	1.31	1.40	0	1	Cuyahoga Falls
166	E Wilbeth Rd (SR 764)	Sylvan Ave	10,034	15	1.37	1.93	0	0	Akron
167	Vernon Odom Blvd (SR 261)	East Ave	13,633	20	1.34	1.60	0	2	Akron
168	SR 261	Middlebury Rd	10,385	18	1.58	1.56	0	0	Kent
169	Bartges St	Dart Ave	6,845	14	1.87	1.57	0	0	Akron
170	Rhodes Ave	W Thornton St	8,930	15	1.53	1.67	0	0	Akron
171	Dart Av	W State St	6,750	22	2.98	1.18	0	0	Akron
172	Massillon Rd (SR 241)	Steese Rd	15,897	31	1.78	1.13	0	0	Green
173	SR 14/44	N Freedom St (SR 88)	21,190	24	1.03	1.83	0	0	Ravenna
174	N Arlington St	E Buchtel Ave	10,530	20	1.73	1.40	0	0	Akron
175	Graham Rd	Wyoga Lake Rd/Oakwood Dr	25,900	33	1.16	1.42	0	0	Cuyahoga Falls
176	S Arlington St	2nd St/Martin St/I-76 WB Off-ramp	14,160	19	1.23	1.74	1	0	Akron
177	US 224	SR 43	14,150	18	1.16	2.22	0	0	Portage Co-Suffield Twp
178	Copley Rd (SR 162)	Madison Ave	14,005	18	1.17	2.00	1	1	Akron
179	Buchtel Ave	Goodkirk St	18,240	22	1.10	1.73	0	1	Akron
180	E Market St (SR 18)	Canton Rd (SR 91)/Robindale Ave	19,416	29	1.36	1.34	0	0	Akron
181	W Cedar St	Dart Ave	12,600	23	1.67	1.35	0	0	Akron
182	Rand Ave	W Center St	3,860	13	3.08	1.46	0	1	Akron
182	W Main St (SR 59)	Sycamore St	13,990	21	1.37	1.48	0	0	Ravenna
182	E Tallmadge Ave	Blaine Ave	10,880	15	1.26	2.27	0	1	Akron

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
185	E Market St (SR 18)	Broadway (SR 261)	27,825	39	1.28	1.26	0	0	Akron
186	Darrow Rd (SR 91)	I-480 Ramps	24,029	34	1.29	1.29	0	0	Twinsburg
187	Copley Rd (SR 162)	Diagonal Rd/S Portage Path	13,580	19	1.28	1.63	0	0	Akron
188	S Water St (SR 43)	Bowman Dr/Cherry St	18,298	24	1.20	1.50	0	0	Kent
188	E Market St (SR 18)	Hilbish Ave/Verdun Dr	18,442	23	1.14	1.61	0	1	Akron
190	Copley Rd (SR 162)	Frederick Blvd	10,378	16	1.41	1.63	0	1	Akron
191	State Rd	Sackett Ave	16,515	24	1.33	1.42	0	1	Cuyahoga Falls
191	Cleveland Massillon Rd	Rothrock Rd	20,440	23	1.03	1.78	0	0	Fairlawn
193	E Aurora Rd (SR 82)	Macedonia Commons Blvd/I-271 SB Ramp	26,818	37	1.26	1.27	1	0	Macedonia
194	MLK Jr. Blvd (SR 59)	Summit St	19,847	26	1.20	1.46	0	0	Akron
195	Hines Hill Rd	Olde Eight Rd	6,193	15	2.21	1.40	0	0	Boston Heights
196	Eastland Ave	Mohawk Ave	5,500	14	2.32	1.43	0	0	Akron
197	SR 14	I-76 Ramps	13,050	17	1.19	1.82	0	0	Portage Co-Edinburg Twp
198	Manchester Rd (SR 93)	Carnegie Ave	25,394	31	1.11	1.45	0	0	Akron
199	W Market St (SR 18)	Westgate Cir	10,680	21	1.80	1.29	0	1	Akron
200	Darrow Rd (SR 91)	Eastwood Ave	20,092	28	1.27	1.36	0	0	Akron
201	N Chestnut St	Loomis Pkwy	9,410	14	1.36	1.71	0	0	Ravenna
202	E Turkeyfoot Lake Rd (SR 619)	Myersville Rd	12,347	18	1.33	1.56	0	0	Green
203	W Waterloo Rd	I-277 Ramps	9,445	16	1.55	1.50	0	0	Akron
204	E Main St (SR 59)	Lincoln St	22,370	28	1.14	1.43	1	2	Kent
205	Bellows St	Archwood Ave	10,034	14	1.27	1.86	0	0	Akron
205	S Main St	Waterloo Rd	26,295	29	1.01	1.55	0	0	Akron
207	S Maple St (SR 162)	W Exchange St	18,367	22	1.09	1.64	0	0	Akron
208	Gilchrist Rd	I-76 Ramps	20,235	28	1.26	1.36	0	0	Akron
209	E Market St (SR 18)	E Exchange St	14,160	20	1.29	1.50	0	0	Akron
210	W Market St (SR 18)	Medina Rd (SR 18)/Cleveland Massillon Rd	45,676	56	1.12	1.21	0	0	Summit Co-Bath Twp
211	North Ave (SR 91)	Howe Rd	21,955	30	1.25	1.33	0	0	Tallmadge
212	S Miller Rd	Chamberlain Rd	14,970	18	1.10	2.00	0	0	Fairlawn
213	Brown St	Archwood Ave	14,010	22	1.43	1.36	1	0	Akron
214	S Main St	Wilbeth Rd (SR 764)	20,443	25	1.12	1.48	1	0	Akron
215	S Main St	Miller Ave/Old Main St	10,010	22	2.01	1.09	0	0	Akron
216	Cleveland Massillon Rd	I-77 Ramps	39,564	44	1.02	1.36	0	0	Fairlawn
217	E Main St	Depeyster St	8,900	13	1.33	1.77	0	2	Kent
218	Cleveland Massillon Rd	Brookwall Dr	22,105	25	1.03	1.56	0	0	Fairlawn
219	S Arlington Rd	Boettler Rd	18,685	23	1.12	1.52	0	0	Green
220	Hines Hill Rd	SR 8 Ramps	7,280	11	1.38	1.91	0	0	Boston Heights
221	Graham Rd	State Rd	23,191	32	1.26	1.25	0	0	Cuyahoga Falls
222	Buchtel Ave	Fountain St	8,400	17	1.85	1.35	0	2	Akron
223	S Hawkins Ave	Mull Ave	10,535	17	1.47	1.47	1	0	Akron
224	Kent Rd (SR 59)	Fishcreek Rd	22,443	27	1.10	1.44	0	0	Stow
225	Corporate Woods Cir	Corporate Woods Pkwy	5,850	17	2.65	1.24	0	0	Green
226	Tallmadge Rd	Sandy Lake Rd	6,390	10	1.43	2.00	0	0	Portage Co-Brimfield Twp
227	Broadview Rd (SR 176)	Wheatley Rd (SR 176)/Brecksville Rd	16,661	22	1.21	1.45	0	0	Richfield
228	Portage Trail	Valley Rd	20,975	25	1.09	1.48	0	0	Cuyahoga Falls
229	Broad Blvd	Front St	12,473	19	1.39	1.42	0	1	Cuyahoga Falls
230	Innovation Way (SR 241)	3rd Ave/I-76 WB ramps	9,330	13	1.27	1.77	0	0	Akron

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
231	E Aurora Rd (SR 82)	Chamberlin Rd	14,487	21	1.32	1.38	0	0	Twinsburg
232	Wooster Rd N	Burt St	11,360	15	1.21	1.67	0	0	Barberton
232	Mt Eaton Rd (SR 94)	SR 585/Easton Rd (SR 604)	12,016	15	1.14	1.80	0	0	Wayne Co-Chippewa Twp
234	Southeast Ave	I-76 Ramps	10,238	20	1.78	1.20	0	0	Tallmadge
234	Main St (SR 91)	Streetsboro Rd (SR 303)	35,205	41	1.06	1.29	0	0	Hudson
236	Bellows St	Emerling Ave	1,640	11	6.13	1.36	0	1	Akron
237	Eastland Ave	Chapman Dr	5,500	10	1.66	1.60	0	0	Akron
238	SR 261	Campus Center Dr	16,785	21	1.14	1.48	0	0	Kent
239	Cleveland Canton Rd (SR 43)	Frost Rd	22,500	25	1.01	1.48	0	0	Streetsboro
240	S Arlington Rd	Moore Rd	21,740	24	1.01	1.50	0	0	Green
241	S Broadway St	Selle St	10,535	15	1.30	1.53	0	1	Akron
242	Triplett Blvd (SR 764)	Hilbish Ave	17,046	21	1.13	1.48	0	0	Akron
243	Olde Eight Rd	Twinsburg Rd	8,755	12	1.25	1.83	0	0	Summit Co-Northfield Ctr Twp
244	Brittain Rd	Goodyear Blvd	12,700	16	1.15	1.63	0	0	Akron
245	S Arlington Rd	Chenoweth Rd/I-77 NB On-ramp	19,720	27	1.25	1.22	0	0	Summit Co-Coventry Twp
246	Greenwich Rd	Medina Line Rd	9,100	13	1.30	1.62	0	0	Norton/Wadsworth Twp
247	S Main St	Cole Ave	7,445	13	1.59	1.46	0	0	Akron
248	Graham Rd	E Bath Rd/8th St	19,395	25	1.18	1.32	0	0	Cuyahoga Falls
249	5th St NE (SR 619)	Robinson Ave	16,623	22	1.21	1.36	0	0	Barberton
249	Brittain Rd	Evans Ave	15,380	19	1.13	1.53	0	0	Akron
251	E Aurora Rd (SR 82)	I-480 Ramps	15,865	21	1.21	1.38	0	0	Twinsburg
252	Highland Rd	Valley View Rd	19,455	25	1.17	1.32	0	0	Macedonia
253	5th St SE	Snyder Ave	9,630	16	1.52	1.38	0	0	Barberton
254	MLK Jr. Blvd (SR 59)	N Main St/Howard St	23,231	27	1.06	1.37	0	0	Akron
255	SR 8	Valley View Rd	16,155	23	1.30	1.26	0	0	Macedonia
256	Aurora Rd (SR 43)	W Garfield Rd (SR 82)	20,816	26	1.14	1.31	0	0	Aurora
257	Killian Rd	Pickle Rd	9,500	13	1.25	1.62	0	0	Summit Co-Springfield Twp
258	Myersville Rd	Killian Rd	6,810	11	1.48	1.55	0	0	Summit Co-Springfield Twp
259	Dart Ave	Euclid Ave	6,830	11	1.47	1.55	0	0	Akron
259	E Streetsboro Rd (SR 303)	Oviatt St	9,700	13	1.22	1.62	0	0	Hudson
261	E Aurora Rd (SR 82)	Shepard Rd	17,985	21	1.07	1.48	0	0	Macedonia
262	E Wilbeth Rd (SR 764)	Allendale Ave/I-77 Ramp	14,689	21	1.31	1.29	0	0	Akron
263	SR 5/44	Sandy Lake Rd	7,733	10	1.18	2.20	0	0	Portage Co-Rootstown Twp
264	Eastwood Ave	Morningview Ave	8,290	11	1.21	1.73	0	0	Akron
265	Gilchrist Rd	Skeleton Rd	8,425	11	1.19	1.73	0	0	Summit Co-Springfield Twp
266	E Waterloo Rd	Coventry St/I-77 NB On-ramp	15,440	18	1.06	1.56	0	0	Akron
267	Wooster Rd N	W Hopocan Ave	11,360	17	1.37	1.35	1	0	Barberton
268	E Main St (SR 59)	Horning Rd	17,750	20	1.03	1.50	0	1	Kent
269	Smith Rd	Sand Run Rd	12,770	16	1.14	1.50	0	0	Akron
270	Twinsburg Rd	Valley View Rd	9,450	14	1.35	1.43	0	0	Macedonia
271	Russell Ave	Superior Ave/I-76/77 WB/NB Off-ramp	6,560	13	1.81	1.31	0	0	Akron
272	Streetsboro Rd (SR 303)	Mt Vernon Dr/Superior Ave	8,530	11	1.18	1.73	0	0	Streetsboro
273	E Waterloo Rd	Glenmount Ave	13,195	15	1.04	1.67	0	0	Akron
274	Carroll St	Spicer St	8,837	13	1.34	1.46	1	0	Akron
275	Newton St	Goodyear Blvd	9,640	14	1.33	1.43	0	0	Akron
276	SR 43	Old Forge Rd	12,350	14	1.04	1.71	0	0	Portage Co-Brimfield Twp

Table 2

HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
277	Lauby Rd	I-77 Ramps	5,266	10	1.73	1.40	0	0	Green
278	Sumner St	Wheeler St	3,000	11	3.35	1.18	0	0	Akron
279	S Broadway St (SR 261)	E Buchtel Ave	7,258	15	1.89	1.00	0	0	Akron
280	S Arlington St	Archwood Ave	18,480	22	1.09	1.36	0	0	Akron
281	SR 44	Tallmadge Rd	13,865	17	1.12	1.47	0	0	Portage Co-Rootstown Twp
282	W Market St (SR 18)	Frank Blvd	12,335	15	1.11	1.53	1	0	Akron
283	Dart Ave	W Center St/Locust St	7,610	15	1.80	1.13	0	0	Akron
284	S Broadway St (SR 261)	University Ave	17,870	21	1.07	1.38	0	0	Akron
285	S Arlington St (SR 764)	E Wilbeth Rd (SR 764)	19,508	23	1.08	1.35	0	0	Akron
286	Canton Rd (SR 91)	Wedgewood Rd	17,892	21	1.07	1.38	0	1	Akron
287	Massillon Rd (SR 241)	Krumroy Rd	13,305	16	1.10	1.50	0	0	Summit Co-Springfield Twp
288	S Hawkins Ave	W Exchange St	14,925	18	1.10	1.44	0	0	Akron
289	Horning Rd	Loop Rd	3,825	11	2.63	1.18	0	0	Kent
290	N Chestnut St	Highland Ave	9,050	11	1.11	1.73	0	0	Ravenna
291	Ridgewood Rd	Schocalog Rd	7,390	10	1.24	1.60	0	0	Akron
292	Wooster Rd N	Norton Ave	17,240	20	1.06	1.40	0	0	Barberton
293	E Market St (SR 18)	Fountain St	15,260	18	1.08	1.44	0	0	Akron
293	E Waterloo Rd	Brown St	17,360	20	1.05	1.40	0	0	Akron
295	Front St (SR 59)	Bailey Rd	20,266	25	1.13	1.16	0	0	Cuyahoga Falls
296	Eastern Rd	Rittman Rd	8,300	10	1.10	1.80	0	0	Chippewa Twp/Wadsworth Twp
297	Oakwood Dr	4th St/Thomas Ct	7,715	13	1.54	1.31	0	0	Cuyahoga Falls
298	Glenwood Dr	Liberty Rd	15,865	20	1.15	1.30	0	0	Twinsburg
299	S Main St	Thornton St	18,000	23	1.17	1.17	0	0	Akron
300	E Turkeyfoot Lake Rd (SR 619)	Pickle Rd	13,494	19	1.29	1.21	0	0	Green
301	W Cedar St (SR 261)	Locust St (SR 261)	12,591	19	1.38	1.00	0	0	Akron
302	E Wilbeth Rd (SR 764)	Hammel St	11,164	13	1.06	1.62	0	0	Akron
303	E Streetsboro Rd (SR 303)	Stow Rd	15,667	18	1.05	1.44	0	0	Hudson
304	Portage Trail	Northampton Rd	21,735	25	1.05	1.24	0	0	Cuyahoga Falls
305	Diagonal Rd	Superior Ave	9,140	12	1.20	1.50	0	1	Akron
306	E Tallmadge Ave (SR 261)	Dayton St	18,305	20	1.00	1.40	0	0	Akron
307	Darrow Rd (SR 91)	Beech Rd	10,417	12	1.05	1.67	0	0	Stow
308	White Pond Dr	Mull Ave	12,938	18	1.27	1.22	0	0	Akron
309	Portage Trail	SR 8 Ramps	15,390	20	1.19	1.20	0	0	Cuyahoga Falls
310	Bartges St	Rhodes Ave	5,500	11	1.83	1.18	0	0	Akron
311	S Main St	Warner Rd	11,390	14	1.12	1.43	0	0	Summit Co-Coventry Twp
312	W Exchange St (SR 261)	W Bowery St	12,394	15	1.11	1.40	0	1	Akron
313	SR 585	Fulton Rd (CR 27)	8,850	13	1.34	1.31	0	0	Wayne Co-Milton Twp
314	Smith Rd	Riverview Rd	14,690	19	1.18	1.21	0	0	Akron
315	Vernon Odom Blvd (SR 261)	I-77 SB Ramps	17,173	21	1.12	1.19	0	1	Akron
316	Mogadore Rd	I-76 SB Ramp	9,800	14	1.30	1.29	0	0	Portage Co-Brimfield Twp
317	Wooster Rd W	Hudson Run Rd	10,780	15	1.27	1.27	0	0	Barberton
318	S Hawkins Ave	Diagonal Rd	14,950	19	1.16	1.21	0	0	Akron
319	Grant St	E Thornton St	8,990	13	1.32	1.31	0	0	Akron
320	Barlow Rd	Stow Rd	7,223	13	1.64	1.00	0	0	Hudson
321	Bailey Rd	Munroe Falls Ave	19,250	21	1.00	1.29	0	0	Cuyahoga Falls
322	Seasons Rd	Wyoga Lake Rd	11,805	14	1.08	1.43	0	0	Cuyahoga Falls

Table 2

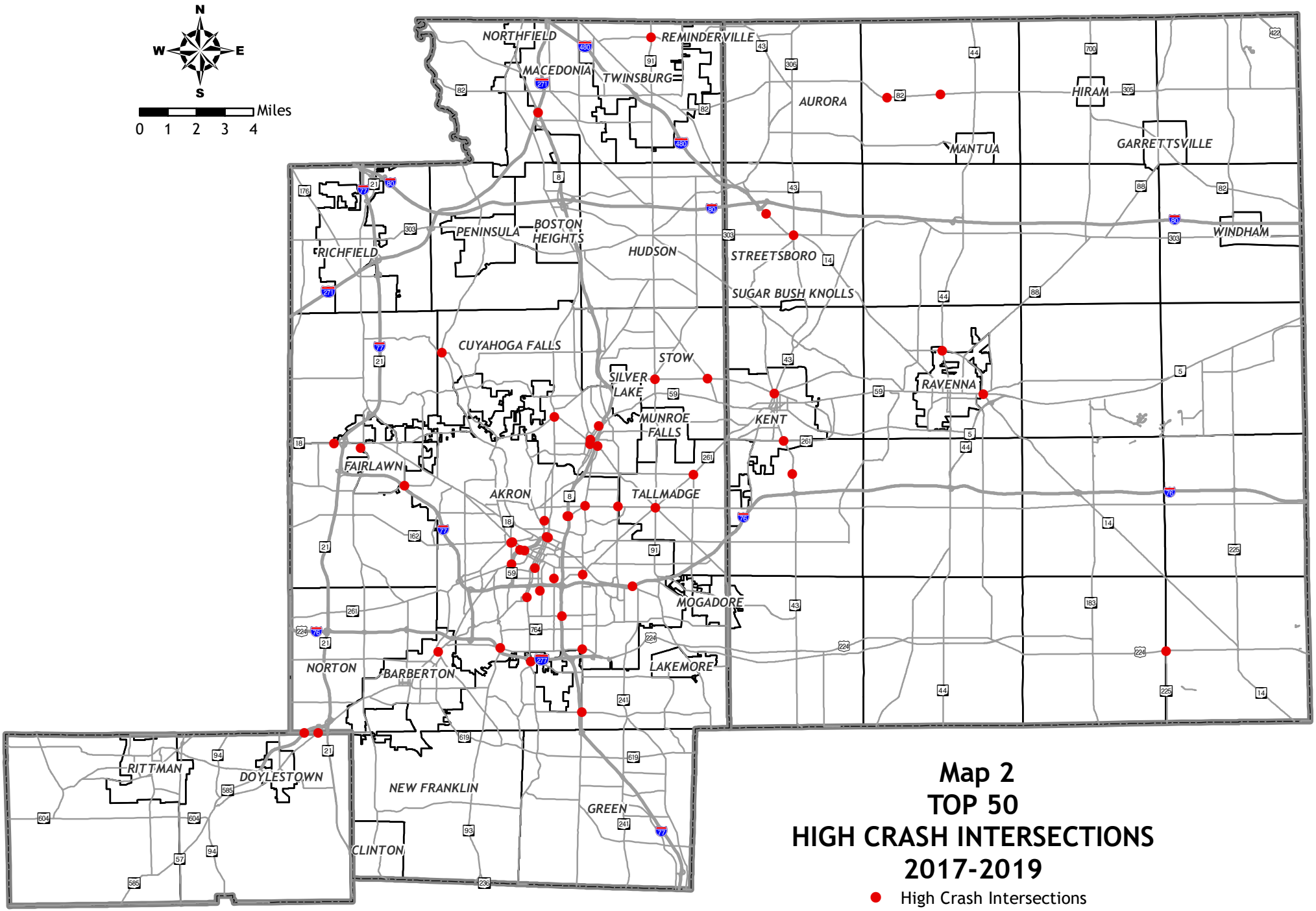
HIGH CRASH INTERSECTIONS

RANKED BY COMPOSITE SCORE

2017-2019

Rank	Street	Intersecting Street(s)	Approach Ave. Daily Traffic	Total Crashes	Crash Rate	Severity Index	Bike Related	Ped Related	Location
323	Kelly Ave	3rd Ave	11,835	14	1.08	1.43	1	0	Akron
324	Haymaker Pkwy (SR 59)	E Main St (SR 59)/Willow St	15,845	18	1.04	1.33	1	1	Kent
325	Grant St	E Voris St	9,445	13	1.26	1.31	0	1	Akron
326	3rd Ave	Fuller St	6,347	11	1.58	1.18	0	0	Akron
327	Boston Mills Rd	SR 8 Ramps	11,341	13	1.05	1.46	0	0	Boston Heights
328	East Ave	Morse Rd	11,435	13	1.04	1.46	0	0	Akron
329	E Exchange St	Goodkirk Rd	8,340	13	1.42	1.15	0	0	Akron
330	Portage Lakes Dr	N Turkeyfoot Rd	8,900	12	1.23	1.33	0	0	Summit Co-Coventry Twp
331	E Aurora Rd (SR 82)	N Bedford Rd/Valley View Rd	17,974	20	1.02	1.20	0	0	Macedonia
332	Wolf Ledges Pkwy	E Thornton St	12,145	16	1.20	1.13	0	0	Akron
333	Norton Ave	Barber Rd/4th St NW	14,530	17	1.07	1.24	0	0	Barberton
334	S High St (SR 261)	University Ave	6,782	11	1.48	1.00	0	0	Akron
335	E Tallmadge Ave (SR 261)	Oxford Ave	13,580	16	1.08	1.25	0	1	Akron
336	Grant St	Archwood Ave	8,875	11	1.13	1.36	1	1	Akron
337	Archwood Ave	Hammel St	9,000	11	1.12	1.36	0	0	Akron
338	Lakeshore Blvd	W South St/Boulevard St	9,780	13	1.21	1.15	0	0	Akron
339	Brittain Rd	Independence Ave	12,770	14	1.00	1.29	0	0	Akron
340	Seasons Rd	SR 8 SB Ramps	10,407	13	1.14	1.15	0	0	Stow
341	W Exchange St	Elmdale Ave	11,825	13	1.00	1.31	0	0	Akron
342	Gougler Ave (SR 43)	Park Ave	7,490	10	1.22	1.20	0	0	Kent
343	Tallmadge Rd	Cascades Blvd	11,615	14	1.10	1.14	0	0	Portage Co-Brimfield Twp
344	N Portage Path	Garman Rd	14,648	16	1.00	1.13	0	0	Akron
345	Barber Rd	I-76 Ramps	13,318	15	1.03	1.13	0	0	Norton
346	Wooster Rd N	W Lake Ave	9,265	12	1.18	1.00	0	0	Barberton
347	Northfield Rd (SR 8)	Olde Eight Rd/Meadow Ln	10,750	13	1.10	1.00	0	0	Northfield
348	East Ave	Clearview Ave	9,120	11	1.10	1.18	0	0	Akron
349	E Market St (SR 18)	Innovation Way (SR 241)	11,721	13	1.01	1.15	0	0	Akron
350	Cuyahoga Falls Ave	N Howard St	10,970	12	1.00	1.17	0	0	Akron

Red denotes that the intersection had at least one fatality



Map 2
TOP 50
HIGH CRASH INTERSECTIONS
2017-2019

● High Crash Intersections

Section 2: Bicycle and Pedestrian Crashes

Overview

As biking and walking becomes a more popular and viable means of transportation, there is growing concern about the safety of bicycle riders and pedestrians. Determining how and where these incidents occur can help plan for future bicycle lanes, sidewalks, lighting, and educational outreach. Bicycle and pedestrian-related crashes tend to happen more randomly and usually do not have the characteristic of being concentrated at specific locations like other vehicular crashes. Because of this it is sometimes more practical to make improvements to a corridor rather than a specific location.

The Ohio Revised Code considers a bicycle a slow moving vehicle and generally speaking is subject to the same laws and responsibilities as a motor vehicle. Bicycle riders can be issued a citation if they are guilty of breaking traffic laws. Local governments have the ability to make some of their own rules and laws which may be inconsistent between communities.

Education is an important tool to help curb bicycle and pedestrian-related crashes. Appendix B has bicycle and pedestrian safety tips to help with this education. Many bicycle riders and pedestrians, especially those under the driving age, may not be aware of the rules that they must observe. Appendix C shows School Bus Stopping Laws as this can impact many pedestrians and drivers.

Bicycle and pedestrian-related crashes have a high percentage of injuries.

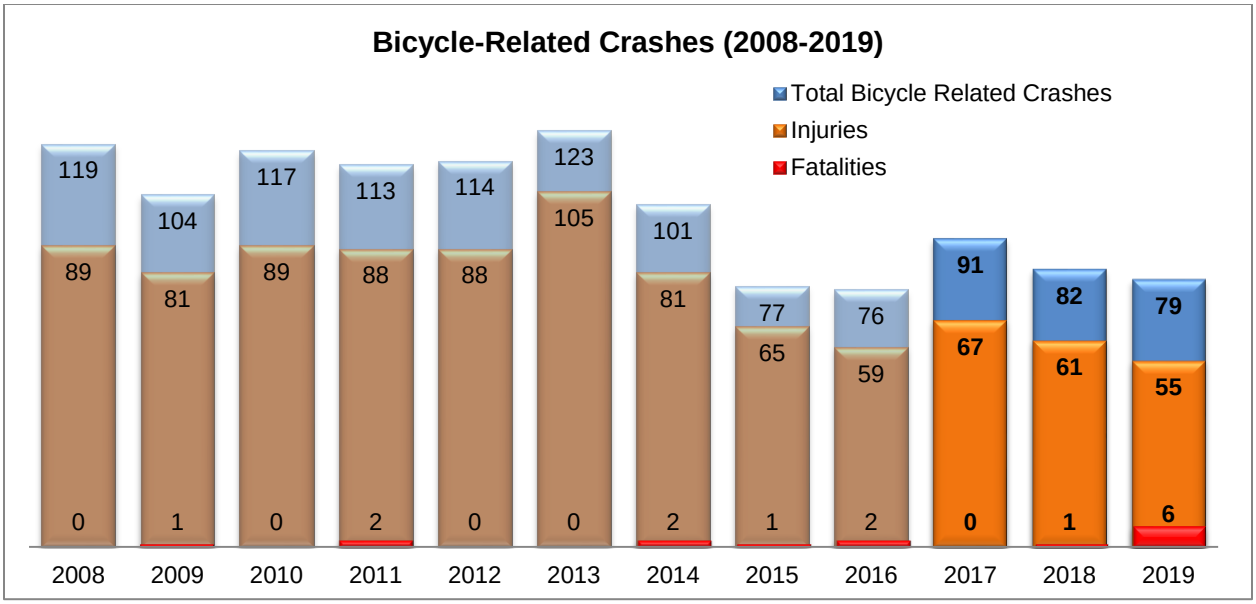
- Out of the 252 bicycle-related crashes that occurred between 2017 and 2019, 183 of them or **73%** resulted in an injury and seven of them in a fatality.

- There were 466 pedestrian-related crashes in this same time period with 385 or **83%** of them resulting in an injury and 24 of them in a fatality. Pedestrians accounted for over 19% of all fatalities that occurred between 2017 and 2019.

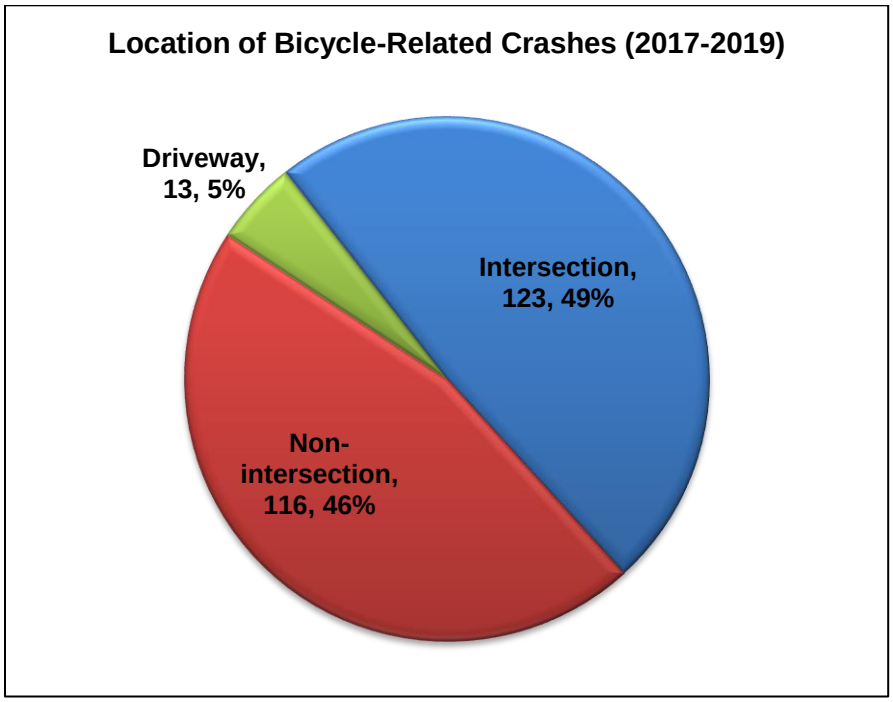
By comparison about 23% of all vehicular crashes for the same three year period resulted in an injury.

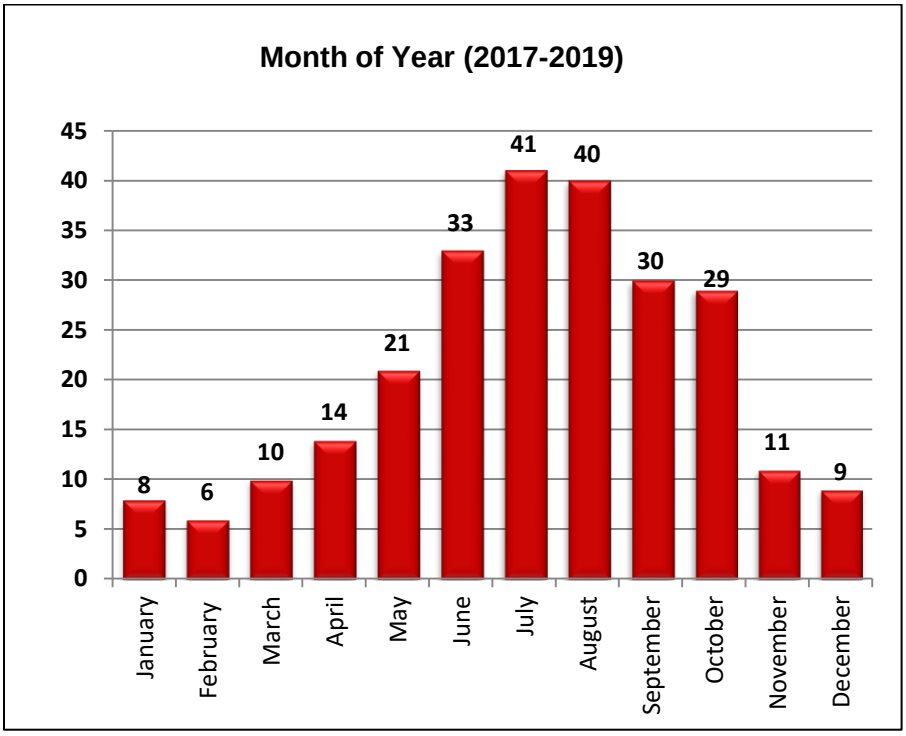
Bicycle-Related Crashes

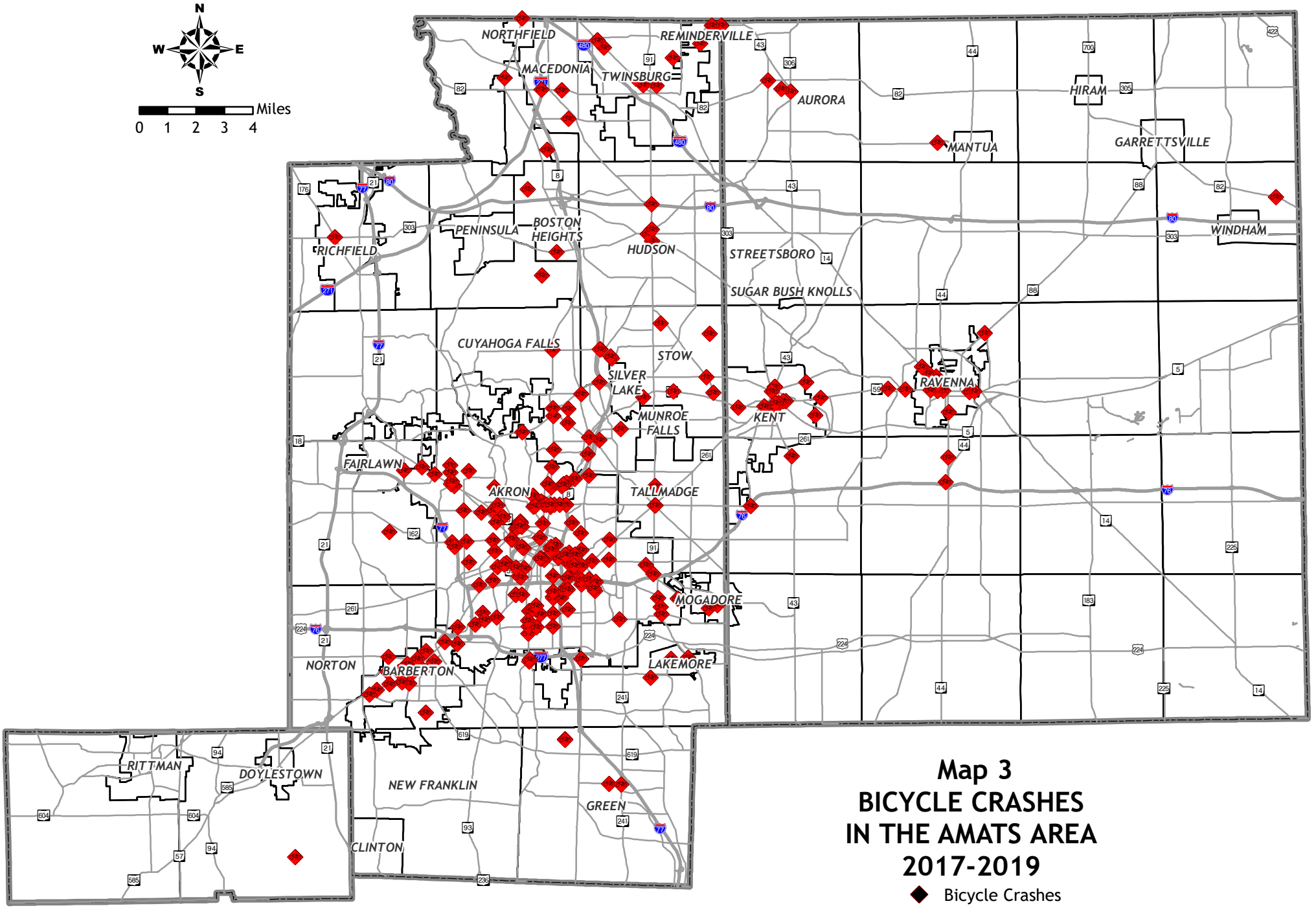
In 2019, total bicycle-related crashes decreased by 3 and injuries decreased by 6. There were 6 fatal bicycle related crashes in 2019.



Most bicycle-related crashes occur at intersections. Also, most crashes occur in summer and early fall when bicycle riding conditions are most favorable. Many bicycle riders, especially younger ones, do not obey stop signs and traffic signals. Often a vehicle does not see a bicycle because of their narrow profile and turns into it or pulls in front of it. Many times a driver is not expecting a bicycle in the crosswalk or misjudges its approach speed. If a bicycle rider is biking against traffic a driver may not look that direction when turning into or pulling out of another street or driveway. Map 3 shows where the bicycle-related crashes occurred in the AMATS area.





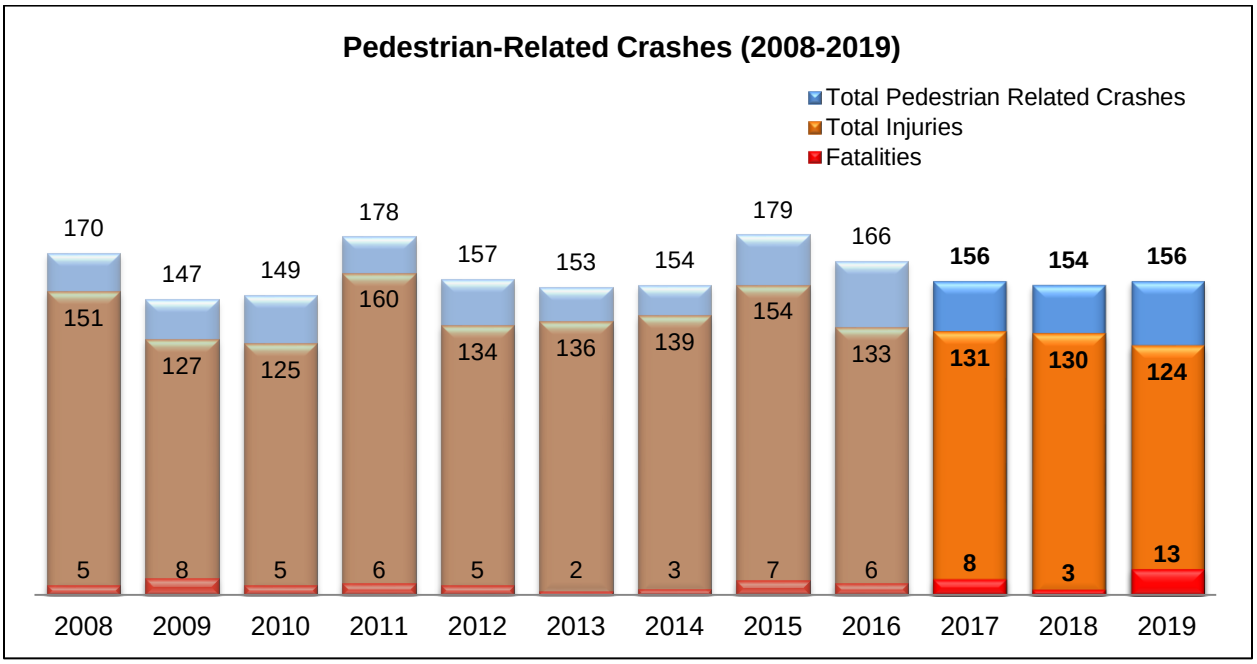


Map 3
BICYCLE CRASHES IN THE AMATS AREA 2017-2019

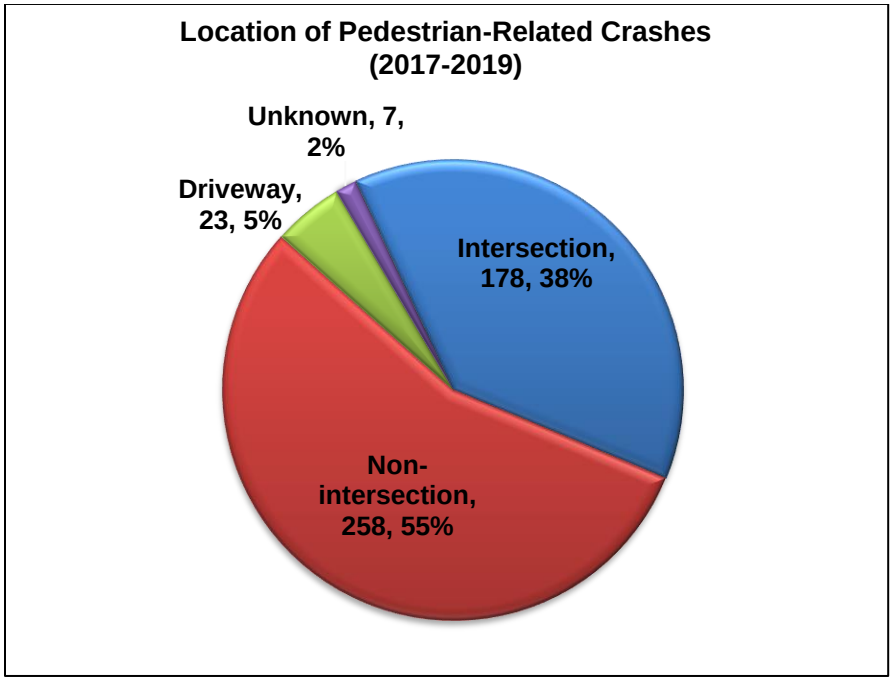
◆ Bicycle Crashes

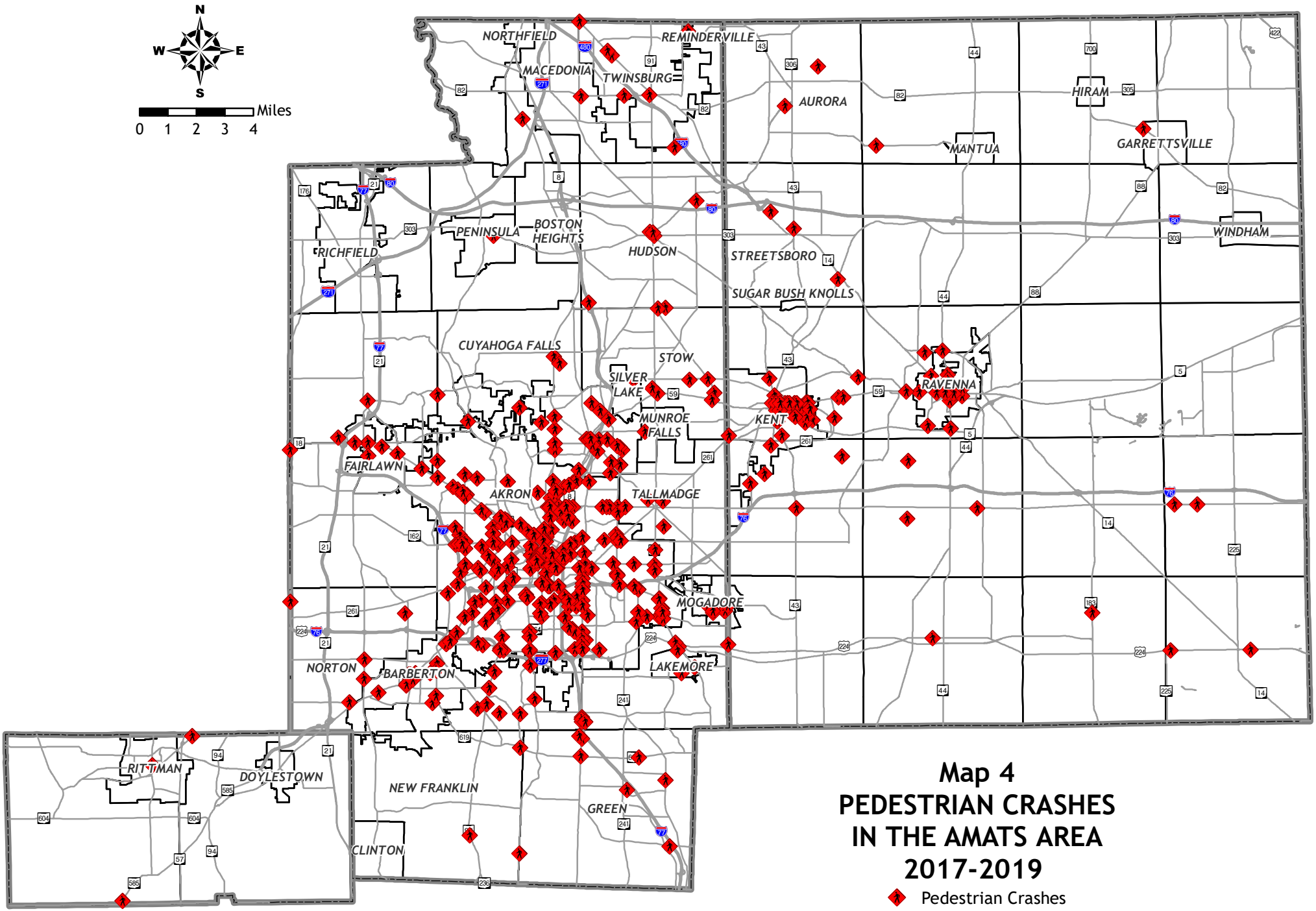
Pedestrian-Related Crashes

The number of pedestrian-related crashes, injuries, and fatalities decreased slightly in 2019. Between 2017 and 2019 there were 466 pedestrian-related crashes with 385 injuries and 24 fatalities. The following graph shows pedestrian-related crashes in the AMATS area since 2008.



Pedestrian crashes occur most often at non-intersection locations. In many crashes the pedestrian darts out in front of the vehicle. Many intersection-related pedestrian crashes occurred when a vehicle was making a turn or a pedestrian was crossing the street against the signal. Map 4 shows where pedestrian-related crashes occurred in the AMATS area.

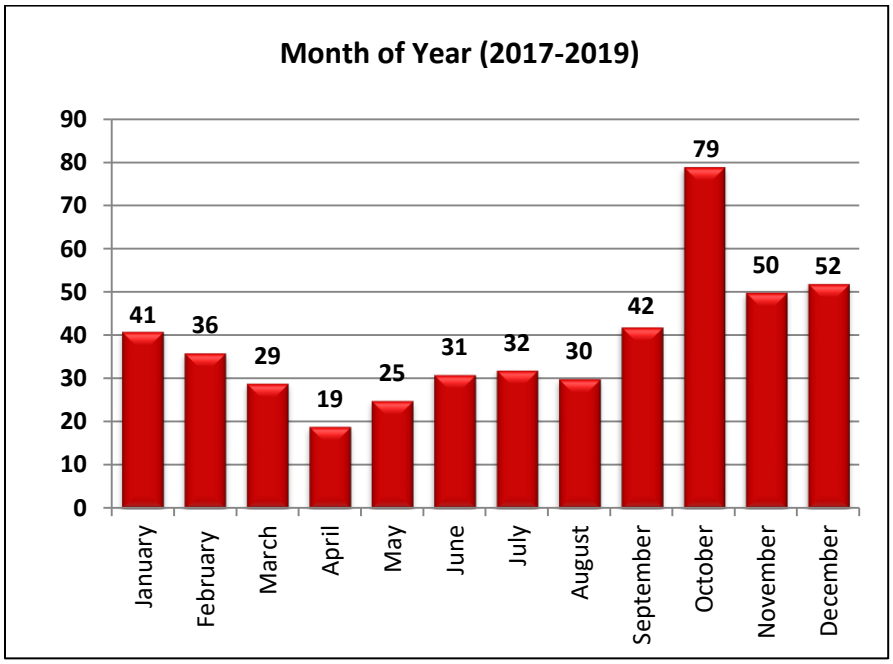




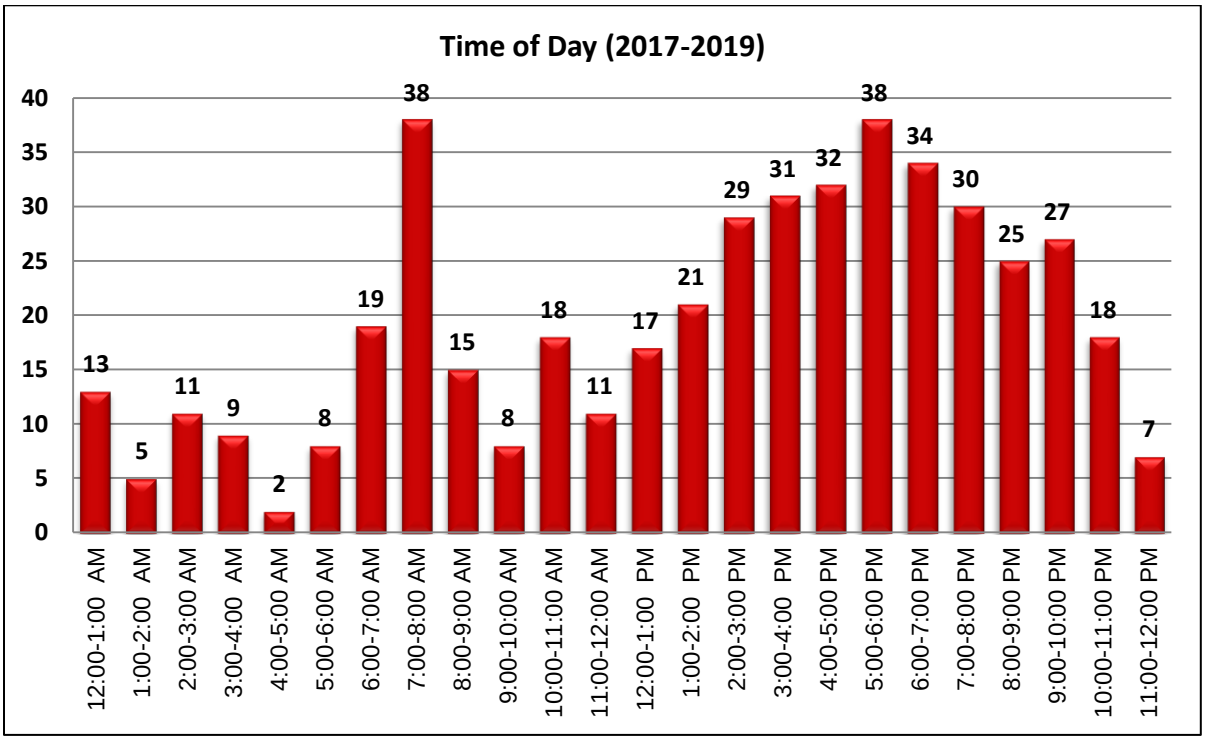
Map 4
PEDESTRIAN CRASHES IN THE AMATS AREA 2017-2019

Pedestrian Crashes

The following graph shows the month that pedestrian-related crashes occurred. October is traditionally the month with the most incidents. One might think that most of these incidents occur around Halloween; however, after examining the data closer look we found that they are spread out throughout the month. One speculation about why October has the most incidents is the decreasing amount of daylight while the weather is still reasonably nice. Pedestrians are still active but are harder to see in darkness even if streetlights are present.



There is a spike in morning pedestrian-related crashes from 7-8 a.m. This is a time period when many pedestrians are commuting to work or school. Pedestrian crashes peak again in the afternoon and evening hours as seen in the table below.



Section 3: Safety Performance Measures and Targets

Safety performance management is part of the overall Transportation Performance Management (TPM) program. The Federal Highway Administration (FHWA) is requiring state DOTs and agencies like AMATS to develop a strategic approach that uses system information to make investment and policy decisions in order to achieve national performance goals.

Recent federal legislation requires ODOT and AMATS to establish performance measures and set targets that demonstrate fatal and serious injury reductions on all public roads. The required performance measures for safety are:

- Number of fatalities
- Fatality rate
- Number of serious injuries
- Serious injury rate
- Number of non-motorized fatalities and serious injuries

AMATS is required to establish safety performance measures. There are two options available for satisfying this requirement: commit to a quantifiable target for each measure within the metropolitan area, or approve of ODOT's statewide targets and agree to plan and program projects so that they contribute toward the accomplishment of those goals. AMATS is committed to support the goals set forth by ODOT for the entire state, rather that develop separate targets and goals for our area.

After reviewing historical crash trends, external factors and through consultation with the state's Metropolitan Planning Organizations (MPOs), ODOT is recommending a 2 percent annual reduction target across all five safety categories. A state is considered to have met or made significant progress if at least four of the five targets are better than the baseline.

In accordance with federal regulations, AMATS used a five-year average to calculate the initial safety targets in 2015. These averages will become the benchmark to which all future calculations will be compared. All future values will also be calculated using five years of data. This five-year rolling average is used to smooth out short term year-to-year fluctuations in data.

The table below shows the calculation of the AMATS rolling averages for the five safety performance measures. The 2015 averages are the benchmark values that the 2019 values are compared to. In three out of the five safety performance measures AMATS has far exceeded the ODOT goal of reducing each category by two percent, when compared to 2015 averages.

Target	2015 5 Year Ave	2016 5 Year Ave	2017 5 Year Ave	2018 5 Year Ave	2019 5 Year Ave	Percent Change
Number of Fatalities	**46**	**46**	**49**	**48**	**48**	**6%**
Fatalities Per 100 Million VMT	**0.60**	**0.61**	**0.64**	**0.63**	**0.64**	**7%**
Number of Serious Injuries	**590**	**574**	**529**	**470**	**431**	**-27%**
Serious Injuries Per 100 MVMT	**7.79**	**7.58**	**6.94**	**6.20**	**5.73**	**-27%**
Number of Non-motorized Fatalities and Serious Injuries	**57.4**	**54.4**	**51.4**	**50.8**	**48.8**	**-15%**

APPENDIX A – Crash Formulas

Roadway Sections

Crashes Per Mile Per Year = $\frac{\text{(3 year crash total)}}{\text{(3 years)(section length)}}$ = crashes per mile per year

Crash Rate = $\frac{\text{(3 year crash total) 1,000,000}}{\text{(3 years)(ADT)(365 days/year)(section length)}}$

= crashes per million vehicle miles traveled

Intersections

Crash Rate = $\frac{\text{(3 year crash total) 1,000,000}}{\text{(3 years)(intersection approach volume/day)(365 days/year)}}$

= crashes per million approach vehicles

Roadway Sections and Intersections

Severity Index = $\frac{\text{12 (fatal crashes)+3 (injury crashes)+1 (property damage crashes)}}{\text{(total crashes)}}$

Composite Score (Lowest composite score = highest ranked location)

Roadway Section Composite Score =

(Crashes Per Mile Per Year Rank) 40% + (Crash Rate Rank) 30% + (Severity Index Rank) 30%

Intersection Composite Score =

(Total Crashes Rank) 40% + (Crash Rate Rank) 30% + (Severity Index Rank) 30%

Attachment 6E

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Resolution 2020-21 - Concurrence with the Revised Air Quality Conformity Analysis for the Cleveland-Akron Air Quality Non-attainment Area to Amend the CUY IR-77/Miller Rd Interchange Project to the NOACA Long Range Transportation Plan and TIP.**

DATE: **December 3, 2020**

The Northeast Ohio Areawide Coordinating Agency (NOACA) is requesting that the AMATS Policy Committee concur with an air quality conformity analysis to amend NOACA's proposed Long Range Transportation Plan - *AIM Forward 2040* (Plan) and FY 2021-2024 Transportation Improvement Program (TIP) to include an ODOT sponsored capacity project as follows:

PID 104983: CUY IR-77/Miller Rd - The proposed project involves completing the existing partial diamond interchange at IR-77 and Miller Road by adding a northbound (NB) exit ramp and a southbound (SB) entrance ramp; adding an auxiliary lane between the new SB entrance ramp and the IR-80 exit ramp; widening of Miller Rd to provide left-turn lanes including structure widening; and adding dual westbound right turn lanes onto the IR-77 NB entrance ramp.

In accordance with federal Transportation Conformity Regulations, 40 CFR Parts 51 and 93 and September 2017, clarification from EPA regarding exempt project interpretations, the planning process has determined the proposed project adds capacity and requires a conformity determination.

NOACA has prepared the necessary analyses to demonstrate that the amendment of these documents will not interfere with the Cleveland-Akron area's air quality conformity status. The summary of the conformity analyses are included in **Tables 1-4**.

In accordance with federal Transportation Conformity Regulations, 40 CFR Parts 51 and 93, the planning process has determined the revised project adds capacity and requires a conformity determination for the 2008 and 2015 8-Hour ozone standard and 2006 and 2012 fine particulate matter (PM 2.5) standards for the Plan and FY 2021-2024 TIP. A conformity finding is determined on a nonattainment area rather than a sub area basis. Therefore the analysis for each standard includes partners from an eight-county area: ERPC (covers the Lorain County portion of the City of Vermilion); NOACA (covers Cuyahoga, Geauga, Lake, Lorain, and Medina Counties); AMATS (covers Portage and Summit Counties); and the Ohio Department of Transporta-

tion (covers Ashtabula County). Each of these agencies is asked to concur with the resulting air quality conformity analyses whenever a Plan or TIP amendment for a capacity addition with air quality impacts is proposed by one of the other agencies.

Both USEPA and the Federal Highway Administration (FHWA) must then review and approve the conformity findings before they become effective. The emissions totals of the amended air quality conformity analyses demonstrate transportation conformity for the IR-77 and Miller Rd Interchange project in Cuyahoga County as part of the Cleveland-Akron air quality nonattainment area.

STAFF RECOMMENDATION

Resolution 2020-21 establishes AMATS concurrence with the results of the air quality analyses for the NOACA Plan and TIP amendment in keeping with the interagency coordination requirements for the non-attainment area. The Staff recommends approval.

Interagency Consultation

Participants:	Akron Metropolitan Area Transportation Study (AMATS) Erie County Regional Planning Commission (ERPC) Northeast Ohio Areawide Coordinating Agency (NOACA) Federal Highway Administration, Ohio Division (FHWA) Ohio Department of Transportation, Statewide Planning (ODOT) Ohio Environmental Protection Agency (Ohio EPA) United States Environmental Protection Agency (U.S. EPA)
Logistics:	Conducted via email

Purpose

A formal interagency consultation (IAC) process is required in each nonattainment and maintenance area to address technical and procedural issues related to air quality planning. The Cleveland, Akron, and Erie County, Ohio metropolitan planning organizations (MPOs) (NOACA, AMATS, and ERPC) are amending its FY 2021-2024 TIPs. The TIPs are part of the MPOs' existing long-range transportation plans (LRTPs), for which the horizon year is 2040.

Overview and Schedule

- Geographic scope of the analysis, which includes the five NOACA counties (Cuyahoga, Geauga, Lake, Lorain, and Medina), the two AMATS counties (Portage and Summit), and Ashtabula County
    - Ashtabula County not included in the nonattainment area for the 2015 ozone National Ambient Air Quality Standard (NAAQS), but it is part of the maintenance area for the 2008 NAAQS

    - All eight counties part of maintenance area for 2006 fine particulate matter ($PM_{2.5}$) NAAQS, but only Cuyahoga and Lorain are part of maintenance area for 2012 $PM_{2.5}$ NAAQS
- Applicable conformity tests and budgets
    - Ohio has not completed the State Implementation Plan (SIP) for the 2015 ozone
    - Based on U.S. EPA guidance, the MPOs will use the 2008 ozone budgets to analyze both the 2008 and 2015 ozone NAAQS
    - MPOs will use the budgets for the 2006 and 2012 $PM_{2.5}$ NAAQS for those analyses
- Analysis years
    - Ozone: 2021 (attainment year for the 2015 NAAQS), 2030 (budget year for 2008 NAAQS), and 2040 (horizon year for LRTP)
    - 2006 $PM_{2.5}$ NAAQS: 2022 (budget year), 2030 (interim year), and 2040 (horizon year)
    - 2012 $PM_{2.5}$ NAAQS: 2022 (budget year), 2030 (budget year), and 2040 (horizon year)
- MOVES2014a is the emissions model of record
- NOACA plans to bring the conformity determination to its Board and committees during second quarter of FY 2021
    - Executive Committee meeting: November 13, 2020
    - Board of Directors meeting: December 11, 2020
- AMATS, and ERPC will pass resolutions to adopt the conformity determination
    - AMATS to get approval from their Technical Advisory and Policy Committees on December 10 and 17, respectively
    - ERPC to get approval from their Technical Advisory and Policy Committees on November 19

FY2021-2024 TIP Amendment Conformity Determination Timeline

Organization	Activity	Date(s)
NOACA	Public Involvement Process	In accordance with NOACA PI process
NOACA	Executive Committee Meeting	November 13
NOACA	Board of Directors Meeting	December 11
AMATS	Public Involvement Process	In accordance with AMATS PI process
AMATS	Technical Advisory & Policy Committee Meetings	December 10 & 17
ERPC	Public Involvement Process	In accordance with ERPC PI process
ERPC	Technical Advisory & Policy Committee Meetings	November 19
U.S. DOT	Final Approval of TIP Amendment	

Air Quality Conformity Analyses Summary

8-Hour Ozone

Attainment status: 2015 8-Hour Ozone standard – marginal nonattainment area (Federal Register / Vol. 83, No. 107 / Monday, June 4, 2018)

SIP Status: Federal Register /Vol. 82, No. 4 /Friday, January 6, 2017 – direct final rule adequacy finding for Motor Vehicle Emission Simulator (MOVES) based on 2008 ozone standard MVEB.
No submittals required under 2008 8-Hour ozone standard until approved budgets are received. The budgets found adequate for the 2008 standard will satisfy the 2015 tests, per USEPA.

8-Hour Geography: Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, Summit Counties, OH

Conformity Tests: 2008 Standard 8-Hour budget tests

Analysis Years: 2021 1st Analysis year
2030 Interim and SIP Budget year
2040 Plan(s) horizon year

Table 1

Volatile Organic Compounds (VOC) (tons/day)				
2015 8-Hour Ozone Test	**2021 Emissions**	**2030 8-Hour Budget**	**2030 Emissions**	**2040 Emissions**
NOACA	16.20		9.84	6.61
AMATS	9.11		4.22	3.76
TOTALS	**25.31**	**30.80**	**14.05**	**10.37**
Nitrogen oxides (NOx) (tons/day)				
	2021 Emissions	**2030 8-Hour Budget**	**2030 Emissions**	**2040 Emissions**
NOACA	22.13		10.05	6.51
AMATS	12.21		5.29	4.21
TOTALS	**34.34**	**43.82**	**15.34**	**10.72**

8-Hour Ozone

Attainment status: 2008 8-Hour Ozone standard – maintenance area (Federal Register / Vol. 82, No. 4 /Friday, January 6, 2017)
1997 8-Hour Ozone Standard - maintenance area (Federal Register Notice Final Rule Tuesday, September 15, 2009)

SIP Status: Federal Register /Vol. 78, No. 53/Tuesday, March 19, 2013 – direct final rule adequacy finding for MOVES based 1997 Ozone standard Motor Vehicle Emissions Budget (MVEB).
No submittals required under 2008 8-Hour Ozone standard until approved

budgets are received. The budgets found adequate for the 1997 standard will satisfy both 1997 and 2008 tests for the time being per USEPA.

8-Hour Geography: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, Summit Counties, OH

Conformity Tests: 1997 Standard 8-Hour budget tests

Analysis Years: 2021 1st Analysis year
2030 Interim and SIP Budget year
2040 Plan(s) horizon year

Table 2

Volatile Organic Compounds (VOC) (tons/day)				
2008 8-Hour Ozone Test	**2021 Emissions**	**2030 8-Hour Budget**	**2030 Emissions**	**2040 Emissions**
NOACA	16.20		9.84	6.61
AMATS	9.11		4.22	3.76
Ashtabula County	1.26		0.58	0.54
TOTALS	**26.57**	**30.80**	**14.64**	**10.91**
Nitrogen oxides (NOx) (tons/day)				
	2021 Emissions	**2030 8-Hour Budget**	**2030 Emissions**	**2040 Emissions**
NOACA	22.13		10.05	6.51
AMATS	12.21		5.29	4.21
Ashtabula County	1.87		0.84	0.72
TOTALS	**36.21**	**43.82**	**16.18**	**11.43**

$PM_{2.5}$ 2006 Standard

Attainment status: 2006 Annual $PM_{2.5}$ Standard – maintenance area (Federal Register / Vol. 78, No. 144 / Friday, July 26, 2013)

SIP Status: Cleveland area to attainment for 1997 and 2006 $PM_{2.5}$ Standards – FR notice included an adequacy finding for the MOVES based MVEBs.

Geography: Cuyahoga, Lake, Lorain, Medina, Portage, Summit Counties, OH, and Ashtabula Township (Ashtabula County, OH)

Conformity Tests: Budget tests

Analysis Years: 2022 $PM_{2.5}$ Budget year
2030 Interim year
2040 Plan(s) horizon year

Table 3

Direct $PM_{2.5}$ Emissions (tons/year)				
$PM_{2.5}$ 2006 Standard Test	**2022 Budget**	**2022 Emissions**	**2030 Emissions**	**2040 Emissions**
NOACA		343.76	258.89	214.73
AMATS		133.88	108.62	108.04
Ashtabula County		2.19	1.68	1.68
TOTALS	**880.89**	**479.83**	**369.2**	**324.45**
Nitrogen oxides (NOx) Precursor (tons/year)				
	2022 Budget	**2022 Emissions**	**2030 Emissions**	**2040 Emissions**
NOACA		9,977.68	5,270.05	3,422.13
AMATS		2,736.88	1,872.30	1,664.22
Ashtabula County		50.33	35.26	32.81
TOTALS	**17,263.65**	**12,764.89**	**7,177.62**	**5,119.16**

$PM_{2.5}$ 2012 Standard

Attainment status: 2012 Annual $PM_{2.5}$ Standard – maintenance area (80 FR 2205 / January 14, 2015)
SIP Status: Federal Register /Vol. 83, No. 246 /Wednesday, December 26, 2018 – approval of SIP and finding in support of MOVES based 2012 standard $PM_{2.5}$ MVEB
Geography: Cuyahoga and Lorain County, OH
Conformity Tests: 2012 SIP Maintenance Plan tests
Analysis Years: 2022 $PM_{2.5}$ Budget year
2030 Interim and $PM_{2.5}$ Budget year
2040 Plan(s) horizon year

Table 4

$PM_{2.5}$ Test	**2022 Budget**	**2022 Emissions**	**2030 Budget**	**2030 Emissions**	**2040 Emissions**
NOACA	tons/year				
Direct $PM_{2.5}$	406.79	243.93	270.57	188.38	155.75
NOx	9,432.04	7,093.52	4,907.54	3,586.20	2,274.97

For additional detail on these topics, visit the following USEPA websites:

http://www.epa.gov/air/ozonepollution/ (general ozone information)
http://www.epa.gov/ttn/naaqs/ozone/ozonetech/ (technical ozone information)
http://www.epa.gov/air/particlepollution/fastfacts.html (fast facts on particulate matter)
http://www.epa.gov/air/particlepollution/basic.html (general particulate matter information)
http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_index.html (technical particulate matter information)

RESOLUTION NUMBER 2020-21

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

CONCURRENCE WITH THE REVISED AIR QUALITY CONFORMITY ANALYSIS FOR THE CLEVELAND-AKRON AIR QUALITY NONATTAINMENT AREA TO AMEND THE CUY IR-77/MILLER RD INTERCHANGE PROJECT TO THE NOACA LONG RANGE TRANSPORTATION PLAN AND TIP

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County and,

WHEREAS, the United States Environmental Protection Agency (USEPA) establishes air pollution standards pursuant to the Clean Air Act for the preservation of public health and the environment, and

WHEREAS, nonattainment and maintenance areas through a process called transportation conformity must demonstrate conformity between their transportation planning efforts and the adopted or interim budgets as applicable for these pollutants; and

WHEREAS, the USEPA designated the counties of Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit a maintenance area under the 2008 eight-hour ozone standard and designated the counties of Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit a marginal nonattainment area under the 2015 eight-hour ozone standard; and designated the counties of Cuyahoga and Lorain a maintenance area under the 2006 fine particles standard and designated the counties of Cuyahoga and Lorain a moderate nonattainment area under the 2012 fine particles standard; and

WHEREAS, NOACA intends to amend its Long Range Transportation Plan and 2021-2024 Transportation Improvement Program to add the CUY IR-77/Miller Rd Interchange project (PID 104983) along IR-77 and Miller Rd and the IR-80 exit ramp in Cuyahoga County, which adds capacity to the nonattainment area's roadway system; and

WHEREAS, NOACA has prepared the necessary air quality conformity analyses for both ozone and fine particulate matter ($PM_{2.5}$), in accordance with the requirements specified by the Fixing America's Surface Transportation Act (FAST) and the Clean Air Act Amendments of 1990; and

WHEREAS, the demonstration of air quality conformity has been established for the eight-hour ozone and fine particles standards for this amendment on behalf of the Cleveland-Akron nonattainment area; and

RESOLUTION NUMBER 2020-21 – Continued

WHEREAS, the necessary coordination between the Cleveland-Akron air quality area partners (Erie Regional Planning Commission for the Lorain County portion of the City of Vermilion; AMATS for Portage and Summit Counties; NOACA for Cuyahoga, Geauga, Lake, Lorain, and Medina Counties; and ODOT for Ashtabula County) has occurred to establish conformity under the eight-hour ozone and fine particles standards.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee concurs with NOACA's air quality conformity analysis for the eight county Cleveland-Akron air quality non-attainment area as necessitated by the amendment of its Long Range Transportation Plan and Transportation Improvement Program to include the CUY IR-77/Miller Rd Interchange project in Cuyahoga County.

2. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

_____

Mayor Linda Clark, 2020 Chairwoman
Metropolitan Transportation Policy Committee

_____

Date

2021 AMATS COMMITTEE MEETINGS

January

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					HOLIDAY AMATS CLOSED 1 New Year's Day	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	HOLIDAY AMATS CLOSED 18 Martin Luther King Jr.'s Birthday Observed	19	20	21 T C	22	23
24 31	25	26	27	28 P	29	30

February

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	HOLIDAY AMATS CLOSED 15 George Washington's Birthday Observed	16	17	18	19	20
21	22	23	24	25	26	27
28						

March

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18 T C	19	20
21	22	23	24	25 P	26	27
28	29	30	31			

April

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

May

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
9	10	11	12	13 T C	14	15
16	17	18	19	20 P	21	22
23 30	24 HOLIDAY AMATS CLOSED 31 Memorial Day	25	26	27	28	29

June

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

July

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4 Independence Day	HOLIDAY AMATS CLOSED 5 Independence Day Observed	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

August

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5 T C	6	7
8	9	10	11	12 P	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

September

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
5	HOLIDAY AMATS CLOSED 6 Labor Day	7	8	9	10	11
12	13	14	15	16 T C	17	18
19	20	21	22	23 P	24	25
26	27	28	29	30		

October

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7	8 ANNUAL MEETING	9
10	HOLIDAY AMATS CLOSED 11 Columbus Day Observed	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

November

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	HOLIDAY AMATS CLOSED 11 Veteran's Day	12	13
14	15	16	17	18	19	20
21	22	23	24	HOLIDAY AMATS CLOSED 25 Thanksgiving	HOLIDAY AMATS CLOSED 26	27
28	29	30				

December

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
5	6	7	8	9 T C	10	11
12	13	14	15	16 P	17	18
19	20	21	22	23	HOLIDAY AMATS CLOSED 24 Christmas	25
26	27	28	29	30	HOLIDAY AMATS CLOSED 31 New Year's Day Observed	

C - Citizens Involvement Committee (CIC) 6:30pm T - Technical Advisory Committee (TAC) 1:30pm P - Policy Committee 1:30pm