



May 2017

# PLAN AMENDMENT

## 4-2-2020

Project Amendment Highlighted within Document

**TRANSPORTATION | 20**  
**OUTLOOK | 40**

# RECOMMENDATIONS

Over the past four years, AMATS has completed a number of reports and studies analyzing the Greater Akron area's transportation system. This analysis has led to a number of recommendations to improve and strengthen the area's transportation network. Recommendations included in *Transportation Outlook 2040 (TO2040)* include infrastructure improvements and policies intended to ensure that our system remains an asset to the region from now until 2040.

*TO2040* includes highway, transit, bicycle and pedestrian infrastructure and policy recommendations. The recommendations included in *TO2040* are financially constrained and conform to federal air quality requirements.

## HIGHWAY RECOMMENDATIONS

Highways are the most critical element of the region's transportation system. The recommendations contained in *TO2040* aim to preserve the existing system and improve system safety and efficiency. The following section contains policy and highway infrastructure recommendations to improve and maintain the region's highway network.

### Funding

AMATS receives federal transportation dollars 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.

The agency's funding comes from two major sources, the Surface Transportation Block Grant (STBG) and the Congestion Mitigation/Air Quality Program (CMAQ). The STBG Program is the most versatile type of funding and can be used on any type of project. CMAQ funding can only be used on projects which improve air quality and relieve congestion.

Federal funds may only be invested on roadways that are contained in the Federal Functional Classification of Highways. Local roadways - such as streets in a residential subdivision - are not eligible for funding.

AMATS receives around \$15 million annually for highway improvements. While this funding is a substantial source of revenue for highway projects, it is not the only funding available. The Ohio Department of Transportation (ODOT) receives 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 *TO2040*, regardless of whether AMATS provided the funding. *TO2040* is important because it gives the authority to local officials to determine how federal funds are spent collectively.

## RECOMMENDATIONS

### Preservation

The importance of maintaining and preserving the existing highway system cannot be understated. Over the past 60 years, the United States has developed an incredible roadway network that has allowed the efficient movement of people and goods. In the last few years, it has become apparent that this network is beginning to deteriorate.

In 2015, AMATS estimated that to maintain the existing system through 2040 would cost \$4 billion in year of expenditure costs. These cost estimates have increased by over \$720 million since 2012. Most of the cost increase is due to the continued increase of construction costs. The longer that large preservation projects are postponed, the more expensive they become.

*TO2040* recommends a regional preservation policy. Since 2008, AMATS has devoted a minimum of 20 percent of its funds for a local resurfacing program. This program has been incredibly successful and popular throughout the region. AMATS will continue this program and recommends providing additional AMATS Surface Transportation Funds for the program.

## **Operational and Safety Projects are consistent with *Transportation Outlook 2040***

While it is important to develop a plan for the next 20 plus years, it is also necessary to provide flexibility to the planning process to allow for unseen developments. To that end, AMATS maintains its policy that projects that improve safety conditions or contain operational improvements are consistent with *TO2040*. This includes railroad grade separation projects. AMATS has set aside \$75 million over the next 23 years for unspecified safety and operation improvements.

### **Asset Management Planning**

According to AASHTO, Transportation Asset Management is a strategic and systematic process of operating, maintaining, upgrading, and expanding physical assets effectively throughout their lifecycle. As AMATS has continually recognized preservation as its most important priority, *TO2040* recommends that AMATS pursue developing a regional asset management plan focused on preserving and maintaining pavement. Asset Management planning can help communities extend the life of roadways and ensure that federal funding is used strategically for roadways most in need of major resurfacing or reconstruction.

### **Reduce Congestion by Promoting Carpooling and other Alternative Modes of Transportation**

While congestion is not the main focus of *TO2040*, it is still an important issue that can negatively impact the transportation system. In order to help reduce congestion, AMATS will continue to promote OhioRideshare.com and Switching-gears.org. *OhioRideshare.com* is a website that allows users to find carpool partners to share rides to and from work. *Switching-Gears.org* is a bicycle advocacy website that promotes bicycle commuting in the region.

### **Complete Streets**

*TO2040* recommends that communities and project sponsors continue to consider complete streets principles as they develop transportation projects. AMATS supports alternative modes of transportation and complete streets promote making roadways more accessible for automobiles, buses, bicycles and pedestrians.

## **Embrace Technology**

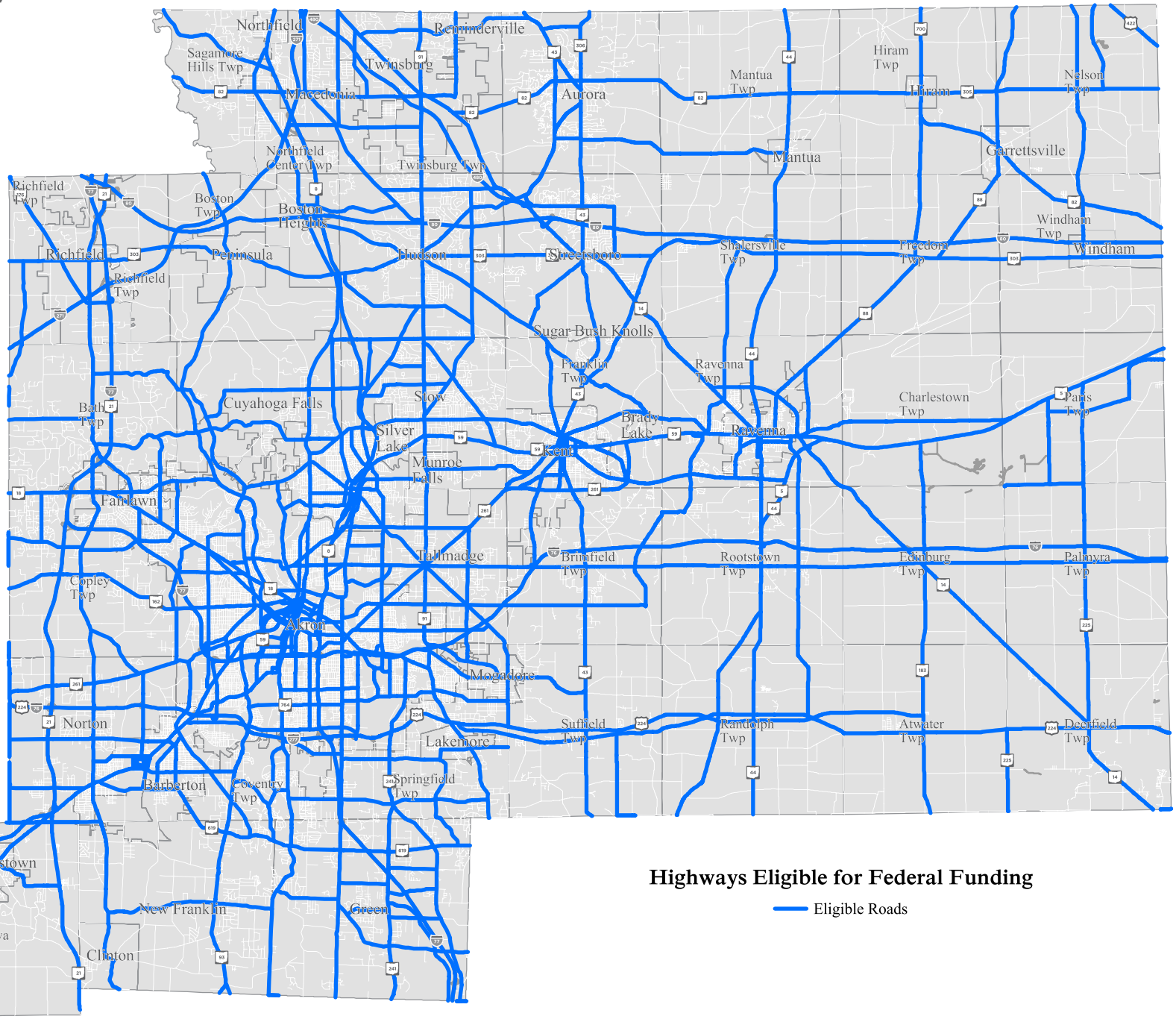
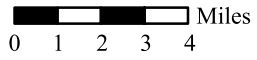
*TO2040* is a document charged to look toward the future. It is critical that the Greater Akron area embrace technology that is developing quickly in the transportation field. Phone applications like Uber, Lyft, and Waze have already changed the way people find rides and get their traffic information. AMATS anticipates that as technology continues to become more responsive it will provide additional benefits and services for transportation. New technology could include autonomous passenger vehicles, autonomous freight vehicles, technology to connect people to transportation and even more accurate transportation data. *TO2040* recommends that the region embrace new technologies and applications to better serve communities.

### **\$5 Billion of Highway Transportation Infrastructure Investments**

*TO2040* recommends over \$5 billion of highway infrastructure investments through 2040 in year of expenditure dollars. This funding includes over \$4.4 billion for preservation of the existing system, \$505 million specifically for freeway recommendations, \$150 million for specific roadway projects, and approximately \$128 million in bike/pedestrian, safety and other operational improvements in the AMATS area.

The following Long-Term Highway Recommendations table shows projects recommended in *TO2040*. Project costs are shown in current dollars, Appendix B shows costs inflated to year of expenditure. All projects are financially constrained and conform to air quality requirements.

# Highways Eligible for Federal Funding



## Highways Eligible for Federal Funding

— Eligible Roads

## LONG-TERM HIGHWAY RECOMMENDATIONS

### Freeway Recommendations

ID	Freeway	Location	Recommendation	Current Cost
1	I-77	Arlington to I-277	Add Capacity	\$50,000,000
2	I-77/76/277/SR 8	Akron Beltway Project	Reconfigure Interchanges	\$25,000,000
3	I-77	Ghent to Cuyahoga County Line	Add Capacity	\$105,000,000
4	SR 8	Perkins to Glenwood	Replace Bridge	\$110,000,000
5	I-77/SR 8	I-277 to Carroll	Reconfigure Interchanges (including SR-8 Auxiliary Lane and I-77 Lane Addition)	\$150,000,000
6	I-76/US 224	State Rd/Wooster Rd	Reconfigure Interchanges	\$26,000,000
Freeway Total Cost				\$505,000,000

### Arterial and Intersection Recommendations

ID	Community	Location	Recommendation	Current Cost
7	Akron	Brittain Rd at Eastland Ave/Eastwood Ave	Operational Improvements	\$4,000,000
8	Akron	Evans Ave	Railroad grade separation	\$8,200,000
9	Akron	N Portage Path at Merriman Rd	Operational Improvements, Enhance Transit, Improve Safety	\$2,000,000
10	Akron	W Market St (SR 18) at Hawkins Ave/W Exchange St	Operational Improvements, Enhance Transit	\$2,000,000
11	Akron	Brittain Rd from E Tallmadge Ave (SR 261) to Independence Ave	Improve Safety	\$1,500,000
12	Akron	E Market St (SR 18) & Mogadore Rd/I-76 Ramps	Improve Safety	\$3,000,000
13	Akron	Waterloo Rd (US 224) & George Washington Blvd (SR 241)	Improve Safety	\$2,000,000
14	Akron/Cuyahoga Falls	SR 8 at Howe Ave	Interchange Reconfiguration/Improvements	\$33,000,000
15	Akron/Cuyahoga Falls/Tallmadge	Howe Ave at Brittain Rd/Northwest Ave	Intersection Reconfiguration, Improve Safety	\$10,000,000
16	Akron/Fairlawn	Miller Rd from Ridgewood Rd to SR 18 (W Market St)	Operational Improvements (Add left turn lanes)	\$1,000,000
17	Barberton	Wooster Rd N (SR 619) from Waterloo Rd to I-76	Operational Improvements (Potential Road Diet)	\$800,000
18	Bath Twp/Copley Twp/Fairlawn	Medina Rd (SR 18) from Heritage Woods Dr to Cleveland-Massillon Rd	Operational Improvements, Enhance Transit, Improve Safety	\$1,500,000
19	Cuyahoga Falls	Portage Trail from Valley Rd to State Rd	Operational Improvements	\$800,000
20	Cuyahoga Falls	State Rd at Portage Trail	Operational Improvements, Enhance Transit, Improve Safety	\$500,000
21	Fairlawn	W Market St (SR 18) from Ghent Rd to Miller Av	Improve Safety	\$1,000,000
22	Green	Arlington Rd from Boettler Rd to September Dr	Widen to 4 lanes and intersection improvements	\$12,000,000
23	Green	Town Park Blvd from Greensburg Rd to Wise Rd	New Roadway	\$3,700,000
24	Green	Town Park Blvd from Wise Rd to Massillon Rd	New Roadway	\$5,700,000
25	Hudson	Darrow Rd (SR 91) from Ravenna Rd to SR 303	Add a Bypass	\$8,600,000
26	Hudson	Hines Hill Rd and Norfolk Southern Rail Line	Railroad grade separation	\$11,000,000
27	Hudson/Twinsburg Twp	Darrow Rd (SR 91) from Middleton Rd to Twinsburg Rd	Operational Improvements (Add left turn lanes)	\$1,000,000
28	Kent	E Main St (SR 59) from Willow St to Luther Av	Improve Safety	\$1,000,000
29	Macedonia	Aurora Rd (SR 82) from Olde Eight Rd to SR 8	Improve Safety	\$1,000,000
30	Northfield Center Twp	SR 82 at Olde Eight Rd/Brandywine Rd	Operational Improvements	\$1,500,000
31	Richfield	Wheatley Rd (SR 176) at Brecksville Rd	Operational Improvements	\$1,100,000
32	Rootstown Twp	SR 44 from Tallmadge Rd (CR 18) to I-76	Safety Study/Improvements	\$250,000
33	Stow	Darrow Rd (SR 91) & Graham Rd	Improve Safety	\$500,000

## LONG TERM-HIGHWAY RECOMMENDATIONS (Continued)

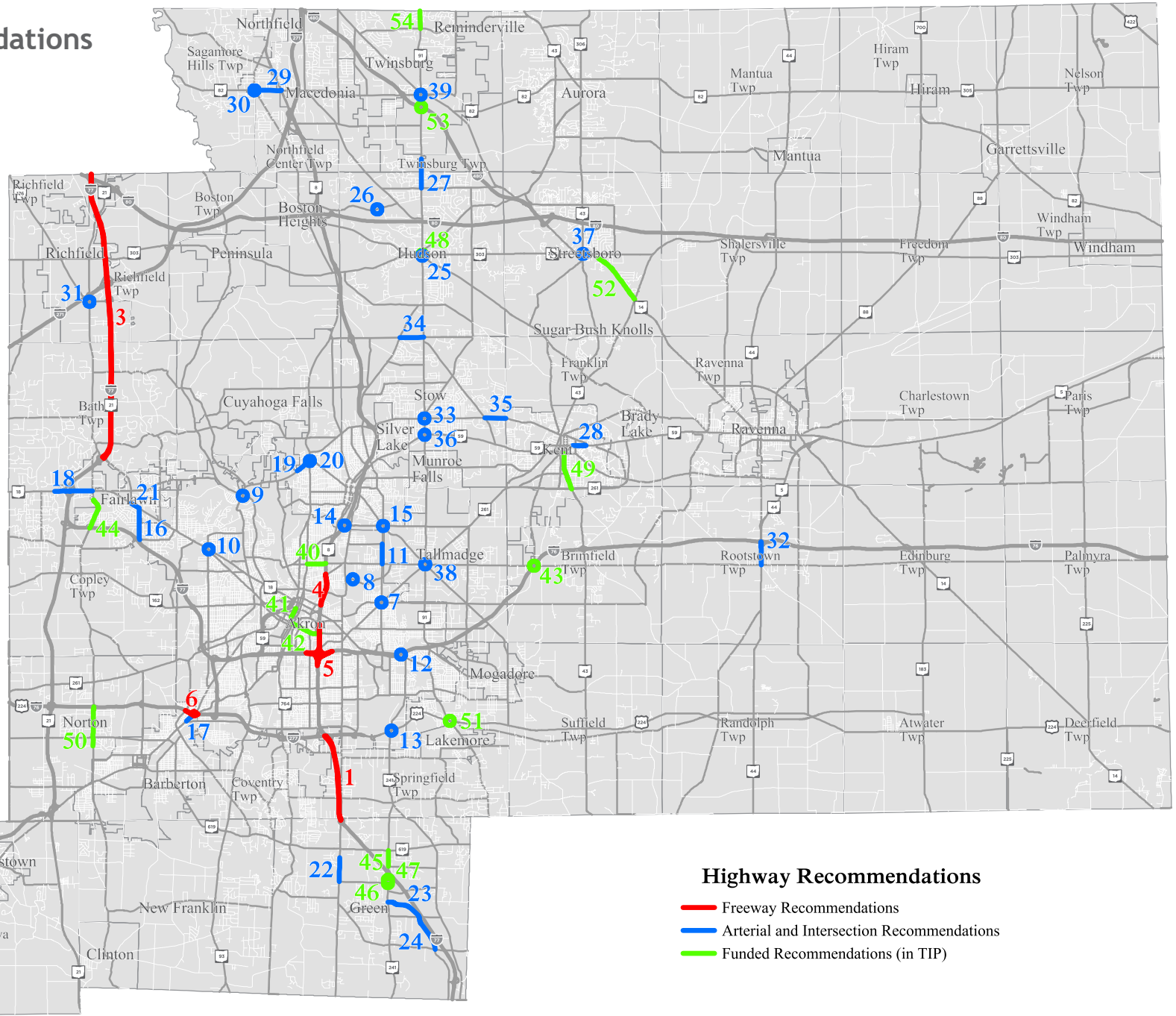
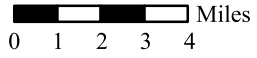
### Arterial and Intersection Recommendations (Continued)

ID	Community	Location	Recommendation	Current Cost
34	Stow	Norton Rd from Hudson Drive to SR 91	Widen to standard lane width	\$4,000,000
35	Stow	Graham Rd from Fishcreek Rd to Newcomer Rd	Improve Safety	\$2,000,000
36	Stow	Kent Rd (SR 59) at Darrow Rd (SR 91)	Additional Capacity, Operational Improvements, Traffic Study, Enhance Transit	\$1,500,000
37	Streetsboro	Streetsboro Town Center: SR 14/SR 43/SR 303 & SR 43 from SR 303 to Frost Rd	Detailed Traffic Study, Improve Safety	\$350,000
38	Tallmadge	Tallmadge Circle	Operational Improvements, Improve Safety	\$8,000,000
39	Twinsburg	Darrow Rd (SR 91) at Aurora Rd (SR 82)	Operational Improvements	\$1,000,000
	Various	Miscellaneous	Additional safety and operational projects	\$75,000,000
Freeway and Arterial Total Cost				\$210,500,000
Highway Recommendations Total Cost				\$715,500,000

### FUNDED HIGHWAY RECOMMENDATIONS (IN TIP)

ID	Community	Location	Recommendation	Current Cost
40	Akron	Tallmadge Ave (SR 261) from N. Main St to SR 8	Road Diet, Operational Improvements, realignment at Dayton	\$3,842,400
41	Akron	S. Main St from State St to Mill St	Complete Street, Street replacement, Roundabout	\$12,720,000
42	Akron	E. Exchange St from Broadway St to Fountain St	Operational Improvements, complete streets	\$5,043,000
43	Brimfield Twp	Tallmadge Rd (CR 18) at I-76	Operational Improvements, Improve Safety	\$9,921,900
44	Copley Twp/ Fairlawn	Cleveland-Massillon Rd from I-77 to Bywood Ave	Widen to 4 lanes and roundabout at rothrock	\$7,564,200
45	Green	Massillon Rd (SR 241) from Raber Rd to SR 619 (Turkeyfoot Lake Rd)	Widen to 5 lanes, Improve Safety	\$14,467,800
46	Green	Massillon Rd (SR 241) & Boettler Rd	Operational Improvements, roundabout	\$5,566,000
47	Green	Massillon Rd (SR 241) & Corporate Woods Circle	Operational Improvements, roundabout	\$1,747,900
48	Hudson	Darrow Rd (SR 91) at Steetsboro Rd (SR 303)	Operational Improvements, Improve Safety	\$2,400,500
49	Kent	S. Water St (SR 43) from SR 261 to Summit St	Operational Improvements	\$3,072,100
50	Norton	Cleveland-Massillon Rd from Weber Dr to I-76	Existing Project (Add Median Turn Lane, Intersection Improvements), Enhance Transit	\$6,086,500
51	Springfield Twp	Waterloo Rd (US 224) at Canton Rd (SR 91/CR 66)	Project: Standard Lanes, Turn Lanes, Concrete Median, Improve Safety	\$10,490,000
52	Streetsboro	SR 14 from Portage Pointe Dr to Diagonal Rd	Two way left turn lane, Improve Safety	\$7,772,400
53	Twinsburg	SR 91 & I-480	Interchange Reconfiguration/Improvements	\$3,521,300
54	Twinsburg	Darrow Rd (SR 91) from Glenwood Blvd to the north corp line	Widen to four lanes	\$4,969,600
Funded Total				\$99,185,600

# Long-Term Highway Recommendations



## Highway Recommendations

- Freeway Recommendations
- Arterial and Intersection Recommendations
- Funded Recommendations (in TIP)

# BICYCLE & PEDESTRIAN RECOMMENDATIONS

## OVERVIEW

### Importance of Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are an important part of an active transportation system throughout the Greater Akron area in providing a low-cost means of transportation and serving as a recreational amenity. Bicycling and walking are efficient transportation modes for most short trips and, where convenient intermodal systems exist, these non-motorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they provide, bicycle and pedestrian facilities should be given the same priority as is given to other transportation modes. Cycling and walking should not be an afterthought in roadway design.

Acceptance of cycling and walking as alternatives to driving has increased throughout the region. AMATS has a long history of planning for active and multi-modal transportation systems. *TO2040* will build on recent and past efforts including the *2016 Bike Plan* and *2015 Pedestrian Plan*. The goals for the region's bicycle and pedestrian network are to improve safety, increase connectivity, create a friendly bicycle network and promote quality of life throughout the region. A variety of bicycle and pedestrian facilities exist throughout the Greater Akron area with the Ohio and Erie Towpath Trail serving as the spine for the regional bicycle network. There are more than 108 miles of shared-use paths in the region with over 28 miles that have been developed since 2000. On-road facilities, such as bike lanes, are being added at a steady pace to help fill in the gaps and connect people to places. There are approximately 35 miles of bike lanes in the Greater Akron area.

The recommendations contained in *TO2040* will expand the off-road bicycle system of trails and the pedestrian system through additional facilities as well as make safety improvements to the region's bicycle and pedestrian network.

### Local Bike Plans

AMATS' *2016 Bike Plan* includes recommendations for the region that encourage cycling as an alternative mode of transportation while also continuing to promote cycling as recreation. On the local level, communities can have a greater impact by creating their own bike plan. The bike plan should

assess existing conditions, identify gaps and recommend practical solutions that fit the community's needs. A local bike plan can assist the community in prioritizing improvements that provide better connections to regional bike facilities already in place.

### Create a Minimum Grid

According to Gil Penalosa of 8-80 Cities, a minimum grid of fully connected bikeways throughout a city is essential to creating safe biking for all users, from ages 8 to 80 years old. With a minimum grid in place, communities across North America have seen a marked increase in cycling. Creating a local bike plan using a minimum grid design can help make cycling a viable transportation option, especially if this grid can connect from one community to another. A minimum grid can transform transportation in our region.

## FUNDING

AMATS receives federal funding for bicycle and pedestrian improvements through the Transportation Alternatives Set-Aside Program (TA), formerly known as the Transportation Alternatives Program (TAP). This funding provides approximately \$1 million each year that can be used for bicycle and pedestrian improvements. All TA 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.

Many bicycle and pedestrian improvements are most effectively implemented at the outset of roadway or transit project funding and construction. While all projects represent important steps for improving AMATS bicycle and pedestrian environment, limited financial resources require that most regional bicycle and pedestrian projects use a variety of federal, state and local sources. It is therefore suggested that many regional off road trails rely on local initiative and commitment where member communities seek additional funding.

Any bicycle or pedestrian project using federal funds must be consistent with *TO2040*, regardless of whether AMATS provides the funding. *TO2040* gives local officials the authority to collectively determine how federal funds are allocated.



## **BICYCLE AND PEDESTRIAN PROJECTS ARE CONSISTENT WITH *Transportation Outlook 2040***

The bicycle and pedestrian recommendations focus implementation efforts where they will provide the greatest community benefit. While it is important to develop a long-range plan, it is also necessary to provide flexibility in the planning process to allow for unseen developments. *TO2040* ensures that transportation improvements are planned and coordinated on a regional basis. It is AMATS policy that projects coupled with safety improvements, such as bicycle and pedestrian amenities, must be consistent with *TO2040*, in order to be eligible for federal funding.

## **ENCOURAGE BICYCLE AND PEDESTRIAN DESIGN STANDARDS THAT ENSURE THE SAFE AND ACCESSIBLE ACCOMMODATION FOR ALL USERS**

The creation of well-connected walking and cycling networks is an important component for livable communities and their design should be a part of federally funded project developments. Accordingly, transportation agencies and local communities are encouraged to go beyond minimum standards for these modes to provide safe, convenient, and context-sensitive facilities, and to utilize universal design characteristics when appropriate. For example, shared-use paths that have been designed to minimum width requirements will need retrofits as more people use them. It is more effective to plan for increased usage than to retrofit an older facility. Planning projects for the long-term should anticipate likely future demand for cycling and walking facilities and not preclude the provision of future improvements. Below are various programs and design techniques that can be used for bicycle and pedestrian facilities to improve the safety and accessibility for all users.

### **Road Diets**

A road diet is a technique that can be used to achieve traffic calming and improve safety. Road diets occur when numbers of lanes or lane widths are reduced to promote a slower vehicle speed and accommodate other uses such as bike lanes, bus lanes, parking, pedestrian refuge islands, or more sidewalk space. AMATS compiled the *2015 Road Diet Analysis*, which identifies 60 candidates for road diets across the Greater Akron area. The analysis is a useful planning resource that defines the road diet concept, identifies potential road diet locations, and serves as a guide to member communities to consider the design and application of road diets in certain locations.

## **Complete Streets**

When planning a street or neighborhood, it is important to consider all users of the roadway. People like to have options for getting around town. According to Smart Growth America, a complete street is one that is designed with safety in mind for all users - pedestrians, cyclists, transit riders, and vehicles. No two complete streets look alike as each neighborhood or district will have different needs. Bike lanes, bus lanes, bus shelters, sidewalks, crosswalks, refuge islands, curb bump-outs, and roundabouts are all components of a complete street that can improve safety for everyone. Making a street welcome to everyone can improve the vitality of an area and make it a place where people want to be. Communities throughout the Greater Akron area should consider complete streets when planning their transportation projects.

## **Connecting Communities Program**

In 2010, AMATS Policy Committee approved *Connecting Communities - A Guide to Integrating Land Use and Transportation*. This guide has shaped AMATS planning since its adoption, encouraging incremental, small-scale, and practical modifications to the way that our transportation system and our built environment interact with one another. The first two recommendations of the Connecting Communities plan are:

1. Improve pedestrian planning and facilities through targeted investments.
2. Improve bicycle planning and facilities through targeted investments.

The AMATS Connecting Communities Planning Grant Program developed from the Connecting Communities guide as it was also one of its recommendations. Since the program's inception in 2010, AMATS has funded over \$400,000 and leveraged an additional \$75,000 in planning studies in the AMATS region. Because of the program, multiple bike lanes, sidewalks, trails, signage and bus routes have been implemented and constructed, as well as plans that will shape communities for years to come.

## **Prioritize Pedestrian Safety and Improvements Near Schools**

Communities should place a special emphasis on providing high-quality, safe bicycle and pedestrian infrastructure near schools. The Ohio Safe Routes to School (SRTS) Program supports projects and programs that improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. SRTS programs examine conditions around schools and conduct projects and activities that work to improve safety and accessibility in

the vicinity of schools. The most successful SRTS programs incorporate the Five E's: **Engineering, Education, Enforcement, Encouragement, and Evaluation.**

The development of a School Travel Plan (STP) is a requirement of the SRTS Program in order to be eligible for infrastructure improvements. The STP outlines a community's plans for engaging students in active transportation. The STP involves key community stakeholders to identify barriers to active transportation and develop a set of solutions to address them.

In 2014, the Akron Public Schools completed its first *District-Wide Travel Plan*. Akron's plan became one of the first districtwide STPs for a large school district in Ohio and one of the first nationwide. It was created through a team-based approach in cooperation with ODOT, Akron Public Schools, City of Akron, AMATS and The University of Akron.

Prioritizing pedestrian safety and improvements near schools provides an opportunity to work closely with schools, communities, and local government to create a healthy lifestyle for children—and a safer and cleaner environment for everyone.

### **Incorporate High-Quality Bicycle and Pedestrian Design Standards**

There are various types of bicycle and pedestrian facilities that are context-sensitive to density, vehicle traffic and congestion, and improve safety for people of all ages and abilities. The following resources provide information to planners and agencies by referencing a recommended range of design values and describing alternative design approaches. The Federal Highway Administration (FHWA) supports the use of these resources to further develop non-motorized transportation networks, particularly in urban areas.

### **Mid-Block Crossings**

In 2014, AMATS completed a Mid-Block Crossing Analysis that studied the frequency of pedestrians crossing outside of crosswalks. Crosswalks are safest as they direct pedestrians where and when it's safe to cross the street, while also improving visibility of pedestrians to drivers. There are many reasons that a pedestrian might not cross in a crosswalk, be it bad weather, hurrying, or simply finding the shortest distance to a destination. AMATS identified locations where mid-block crossings are already taking place. Next, potential locations for

safe mid-block crossing solutions were recommended. Some of the solutions include bump-outs, raised crosswalks, pedestrian islands, and signage, as well as fully-signalized crossings and High Intensity Activated Crosswalk (HAWK) signals. Through careful analysis and the effective implementation of mid-block crossings, increase the safety and usefulness of the regional pedestrian network can be greatly increased.

### **Traffic Calming / Sidewalk Widening in High Pedestrian Areas**

Traffic calming measures should be considered in areas that experience high volumes of pedestrian traffic. Traffic calming is a concept that reduces the speed and volume of vehicular traffic through an area to make neighborhoods safer, more pleasant, and more livable. This can be achieved either by physical means such as reducing the number of lanes; textured pavements and bump-outs, also known as "curb extensions" that extend an intersection corner; or psychological means such as adding street trees, on-street parking and the narrowing of lanes to slow drivers down. Over decades of use, these measures have been proven to reduce accidents, collisions, noise, vibration, pollution, and crime. Traffic calming is most often found in downtowns or urban centers due to their high levels of pedestrian activity. They may also be implemented in less dense planning areas.

Sidewalks in residential areas should meet or exceed the federal minimum width guideline of 60 inches. In a downtown, a town center, an urban core or other dense planning areas, widths may vary depending on the community or block context. Wide sidewalks should be constructed in areas experiencing heavy foot traffic or for such uses as sidewalk cafes or extensive street furniture.

### **Bicycle and Pedestrian Count Program**

The purpose of conducting bicycle and pedestrian counts is to understand peak activity for these modes on a typical day. Lack of documentation on usage and demand is one of the challenges facing bicycle and pedestrian investments. It is important to have accurate and consistent data to analyze the need, enable detailed safety analyses, target locations for future facilities and measure the benefits of investments. In 2012, AMATS commenced its first year of bicycle and pedestrian counts throughout the region utilizing the standard National Bike and Pedestrian Documentation project (NBPD) method. The NBPD is an annual bicycle and pedestrian count and survey effort sponsored by the Institute of Transportation Engineers Pedestrian and Bicycle Council.

There has been a public response to back up the need for improved bicycle and pedestrian facilities with supportive data in a more efficient manner. One of the goals of AMATS count program is to engage more communities and organizations and to utilize electronic counters to improve documentation on the use and demand of bicycle and pedestrian facilities in the region.

## RECOMMENDATIONS

### **\$33 Million of Bicycle and Pedestrian Improvements**

*TO2040* recommends \$33 million of bicycle and pedestrian improvements through 2040. This funding includes bicycle trails and pedestrian improvements such as sidewalks.

The Long-Term Bicycle Recommendations table and the Long-Term Pedestrian Recommendations table on the following pages contains many recommendations for promoting bicycle and pedestrian transportation in the region. Project costs are shown in current dollars for the entire project. Appendix B shows costs inflated to year of expenditure and federal share, totaling \$33 million in federal investment. All projects are financially constrained and conform to air quality requirements.

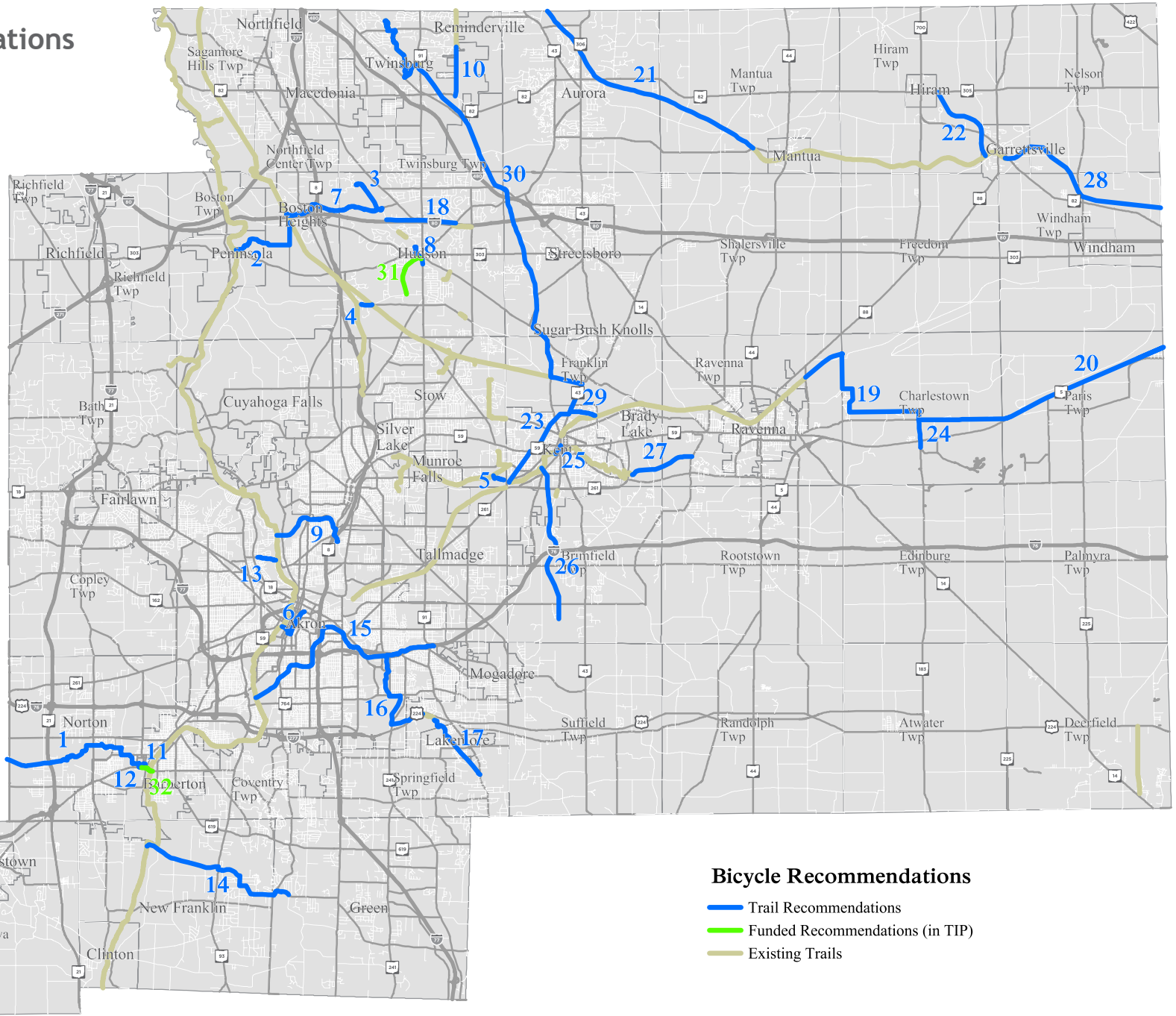
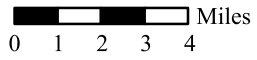
## LONG-TERM BICYCLE RECOMMENDATIONS

ID	County	Name	From	To	Current Cost
1	Summit	3 Creeks - Silver Creek Trail	Medina Line Rd	Robinson Ave (Towpath Trail)	\$5,035,018
2	Summit	Akron-Peninsula Trail	SR 303	Boston Mills Rd	\$2,605,923
3	Summit	Ashbrooke Connector	Farnham Way	Hines Hill Rd	\$1,129,194
4	Summit	Barlow Rd	Wilshire Park Dr	Bike & Hike Trail	\$333,776
5	Summit	Bike & Hike-Portage Connector	Bike & Hike Trail	Freedom Trail Connector	\$400,689
6	Summit	Freedom Trail Phase 4	Towpath Trail	Freedom Trail Phase 3 (Mill Street)	\$1,323,928
7	Summit	Heights to Hudson	Bike & Hike Trail	Prospect at Hines Hill	\$3,430,240
8	Summit	Heights to Hudson (Central Hudson Portion)	Morse / Owen Brown	Veterans Way	\$709,017
9	Summit	Highbridge Connector Trail	Towpath Trail	Front Street Connector Trail	\$2,803,056
10	Summit	Liberty Trail	Post Rd	Cannon Rd	\$1,517,327
11	Summit	Magic Mile (North)	Third St SW & Park	W Wooster Rd & Robinson Ave	\$193,785
12	Summit	Magic Mile (West)	5th St & Park Ave	4th St & W Wooster Rd	\$200,354
13	Summit	Memorial Parkway Trail	Aqueduct St	Towpath Trail	\$700,000
14	Summit	Portage Lakes Trail	Towpath Trail	Metro - Sandyville Local	\$5,313,249
15	Summit	Rubber City Heritage Trail	Towpath Trail	Englewood Ave	\$5,750,000
16	Summit	Spartan Trail (West)	Rubber City Heritage Trail	Springfield Lake	\$2,381,724
17	Summit	Spartan Trail (East)	Springfield Lake	Summit/Portage County Line	\$3,707,724
18	Summit	Turnpike	Prospect Rd	Hudson Aurora Rd	\$2,138,164
19	Portage	Arsenal S	Conrail Freedom Secondary	Rock Spring Rd	\$5,940,000
20	Portage	Arsenal S	Rockspring Rd	Portage County Line	\$8,880,000
21	Portage	Headwaters Bikeway	Aurora NCL	Mennonite Rd	\$7,925,434
22	Portage	Hiram	SR 305	Headwaters Trail	\$2,761,242
23	Portage	Lake Rockwell Trail	Middlebury Rd /Portage Hike & Bike	Mantua St / River Bend Blvd	\$2,728,767
24	Portage	Rock Spring Rd	Cable Line Rd	Newton Falls Rd	\$851,225
25	Portage	The Portage	Stow St	W Main St	\$310,386
26	Portage	Mogadore Lake	The Portage	Mogadore Lake	\$4,932,888
27	Portage	Esplanade Extension	Esplanade / Dix Stadium	Lakewood Rd	\$2,000,174
28	Portage	Headwaters Trail Extension	SR 82	Portage County Line	\$5,700,000
29	Portage	Franklin Connector Extension	Hudson Rd extension	Riverbend	\$2,200,000
30	Portage	Railroad Trail Connection	Hudson Rd	Tinker's Creek, Portage County Line	\$7,300,000
Bicycle Recommendations Total					\$91,202,286

## FUNDED BICYCLE RECOMMENDATIONS (IN TIP)

ID	County	Name	From	To	Current Cost
31	Summit	Veterans Trail	Barlow Rd	Veterans Trail	\$1,387,000
32	Summit	Magic Mile Towpath Connector	Towpath	4th St	\$500,000
Funded Total					\$1,887,000

# Long-Term Bicycle Recommendations



## Bicycle Recommendations

- Trail Recommendations
- Funded Recommendations (in TIP)
- Existing Trails

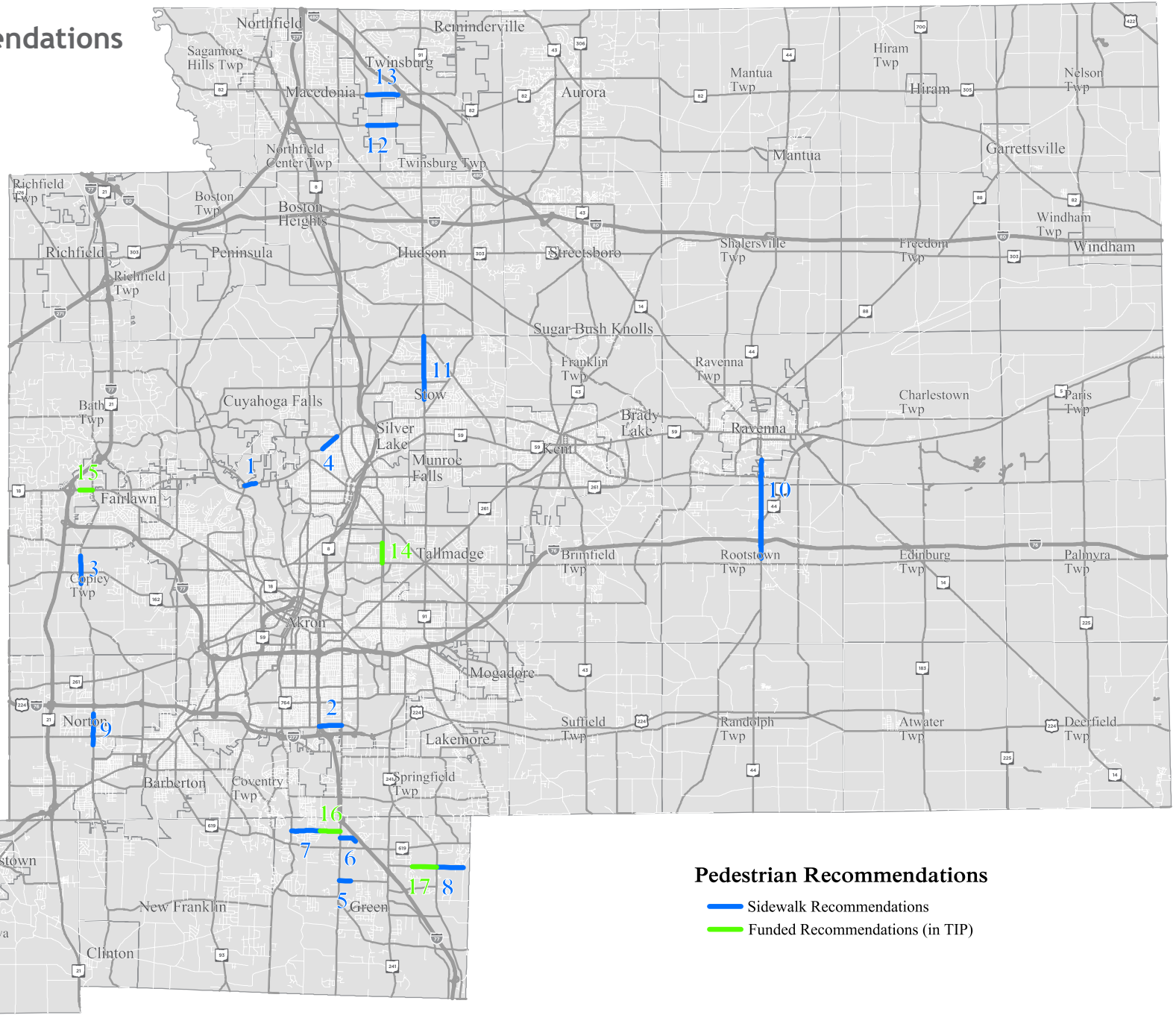
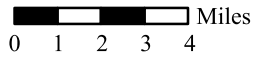
## LONG TERM PEDESTRIAN RECOMMENDATIONS

<i>ID</i>	<i>County</i>	<i>Location</i>	<i>Facility</i>	<i>Street</i>	<i>From</i>	<i>To</i>	<i>Current Cost</i>
1	Summit	Akron	Sidewalks	Portage Trail	N. Portage Path	Treetop Trail	\$169,750
2	Summit	Akron	Sidewalks	Waterloo Rd.	I-77	Arlington	\$334,650
3	Summit	Copley	Sidewalks	Cleveland-Massillon Rd	Hammond Blvd	Commerce Dr	\$417,100
4	Summit	Cuyahoga Falls	Sidewalks	Graham Rd	Prange Dr	Bath Rd	\$281,300
5	Summit	Green	Sidewalks	Boettler Rd	Arlington	Kenway Blvd	\$169,750
6	Summit	Green	Sidewalks	Interstate Parkway	Arlington	end	\$247,350
7	Summit	Green	Sidewalks	Moore Rd	S. Main	Charleston	\$446,200
8	Summit	Green	Sidewalks	Raber Rd	Mayfair	Kreighbaum	\$392,850
9	Summit	Norton	Sidewalks	Cleveland-Massillon Rd	Weber Rd	Shellhart Rd	\$460,750
10	Portage	Ravenna Twp/Rootstown Twp	Sidewalks	SR 44/Prospect St.	Rootstown Elementary	Ravenna South Corp. Line	\$1,644,150
11	Summit	Stow	Sidewalks	SR 91	Lillian Rd	Norton Rd	\$936,050
12	Summit	Twinsburg	Sidewalks	Highland Rd	Chamberlin Rd	Hadden Rd	\$421,950
13	Summit	Twinsburg	Sidewalks	SR 82	Chamberlin Rd	Wilcox Rd	\$465,600
Pedestrian Recommendations Total							\$6,387,450

## FUNDED PEDESTRIAN RECOMMENDATIONS (IN TIP)

<i>ID</i>	<i>County</i>	<i>Location</i>	<i>Facility</i>	<i>Street</i>	<i>From</i>	<i>To</i>	<i>Current Cost</i>
14	Summit	Akron	Sidewalks	Brittain Rd	Tallmadge	Independence	\$195,000
15	Summit	Bath/Copley	Sidewalks	SR 18	Springside Dr	Cleveland-Massillon Rd	\$534,450
16	Summit	Green	Sidewalks	Moore Rd	Charleston Dr	Arlington	\$1,512,000
17	Summit	Green	Sidewalks	Raber Rd	Troon	Mayfair	\$1,334,000
Funded Total							\$3,575,450

# Long-Term Pedestrian Recommendations



## Pedestrian Recommendations

- Sidewalk Recommendations
- Funded Recommendations (in TIP)

# TRANSIT RECOMMENDATIONS

## OVERVIEW

The availability of a comprehensive, reliable transit network is key 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 choice-riders: those who have access to automobiles, but choose to use transit for reasons of ease, affordability and convenience. The recommendations contained in *TO2040* will work 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.

## FUNDING

AMATS receives federal transportation dollars to fund transit projects and improvements. Most of this federal transit funding comes from programs specifically dedicated to transit, although transit may also receive a portion of the funds from certain programs designed for highway and transit funding.

Federal transit funds are typically used only for capital expenses, such as for the purchase of new buses, bus shelters and maintenance, garage or office facilities. Operating expenses, such as bus operator salaries and a portion of preventive maintenance, are typically paid for through local sources (fare box revenues, transit-dedicated sales tax, etc.). However, certain funding programs may be used to supplement operating expenses, on a limited basis.

The Federal Transit Administration's (FTA) Urbanized Area Formula Program (Section 5307), along with the Bus and Bus Facilities Program (Section 5339), are the largest sources of federal transit funding. The 5307 and 5339 programs use a formula to allocate funding to urbanized areas. AMATS receives nearly \$8 million annually for the Akron Urbanized Area, and an additional \$800,000 portion for areas lying within the Cleveland Urbanized Area. These funds are split between METRO and PARTA, generally in proportion to their respective county's share of the total regional population.

The Federal Highway Administration's (FHWA) Congestion Mitigation/Air Quality Program (CMAQ) provides funds that may be used on projects demonstrating an improvement in air quality and congestion reduction.

Although the majority of this funding is typically allocated towards regional highway projects, AMATS traditionally obtains a portion for local transit projects.

Other federal transit funding programs include the Specialized Transportation Program (Section 5310), which allocates funding to public transit agencies and non-profit providers of transportation to aid in the transportation of older or disabled individuals, and the Transportation Alternatives Program (TAP), which may be used by transit agencies to improve non-driver access to public transportation.

Other sources of transit funding are periodically made available from the federal government or the Ohio Department of Transportation, often in the form of competitive grant programs. The FTA's State of Good Repair Program is one such example, and has been used by METRO and PARTA to purchase new replacement buses in recent years.

Any transit project using federal funding must be consistent with *TO2040*, regardless of whether AMATS provided the funding.

## RECOMMENDATIONS

### Fix-It-First

The majority of federal transit funding will be used to preserve the existing transit network, assets and supporting facilities in the AMATS region. Transit service is not useful unless it is predictable and dependable. *TO2040* continues AMATS' longstanding policy of working with METRO and PARTA to ensure that they have the resources necessary to maintain their existing levels of service and to serve their existing customer base efficiently. AMATS will continue to support the preservation and maintenance of METRO and PARTA's bus fleets and other capital assets and facilities.

### Service Enhancement

To achieve the most efficient use of the existing public transportation system, additional ridership must be developed. Enhancing the existing service, particularly in corridors containing dense employment, attractions and residential areas, is one way of attracting new ridership. 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. *TO2040* recommends that AMATS work with METRO and PARTA to explore and implement these and other strategies whenever practical.

### Cross County Service

At the local level, most transit agencies are funded primarily through transit-dedicated sales taxes. Consequently, they face significant political pressure to confine service within their county borders. Philosophically, the primary role of a transit agency should be to transport their ridership to whatever destination is necessary. Northeast Ohio is a region of many counties and overlapping urban areas and the demand to travel between them is significant. METRO, PARTA and SARTA (the Stark County/Canton public transit agency) currently provide service to limited cross-county destinations. *TO2040* recommends a more integrated, regional transit network – between Summit and Portage counties and beyond. The ongoing NEORide initiative furthers this objective.

### Coordination

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. AMATS has helped to fund NEORide – an effort (initiated by PARTA) to build a software platform in which all participating agencies may coordinate the use of their individual assets to move passengers wherever they need to go and in the most efficient, cost-effective way possible. *TO2040* recommends that AMATS continue to support this important endeavor.

### Rail Portfolio Preservation

METRO currently holds a portfolio of rail corridors which connect Akron to other key cities, both within the AMATS region and beyond. Although passenger rail does not seem feasible in the foreseeable future, there has been documented interest in the implementation of freight operations within METRO’s right-of-way. Whatever the end result may be – freight rail, passenger rail or as multi-use pedestrian and bicycle trails – AMATS feels that it is important to maintain a public right-of-way in these key regional corridors. *TO2040* recommends nearly \$3 million in rail improvements to preserve these vital regional assets.

## \$2.2 Billion of Public Transit Investment

*TO2040* recommends just under \$2.2 billion of investment in the region’s public transportation system through 2040. Of that investment, \$1.8 billion will be dedicated to general operating expenses of the existing system, \$330 million will be reinvested to preserve the existing system, and approximately \$50 million will be allocated toward expansion of the regional public transportation system.

The following Long-Term Transit Recommendations table shows the projects recommended in *TO2040*. Recommendations are shown in year of expenditure dollars. All projects are financially constrained and conform to air quality requirements.

## LONG-TERM TRANSIT RECOMMENDATIONS

METRO RTA	
Operating Expenses - Base Service	\$ (1,555,033,761)
<b>Capital Costs - Base Service</b>	<b>\$ (311,303,755)</b>
Chapel Hill Turnaround	
Maintenance Facility Rehab	
Downtown Transit Facility Rehab	
Ghent Park and Ride Lot Rehab	
Fuel Facility Rehab	
Annual Bus Fleet Expenditures - Preservation	
Preventive Maintenance	
Bus Shelter and Stop Enhancements	
<b>Annual Operating Expenses - Additional Service</b>	<b>\$ (84,978,292)</b>
West Market Street - Arlington	
Copley Rd	
Kenmore	
Twinsburg - Macedonia	
Northern Summit	
Southern Summit	
<b>Capital Expenses - Additional Service</b>	<b>\$ (24,484,967)</b>
West Market Street - Arlington	
Copley Rd	
Kenmore	
Twinsburg - Macedonia	
Northern Summit	
Southern Summit	
Park and Ride Facilities	
Sandyville Rail Line Rehab	
Akron Secondary Rail Line Barlow and Seasons Road Upgrade	
<b>Total Current Cost</b>	<b>\$ (1,975,800,775)</b>

PARTA	
Operating Expenses - Base Service	\$ (143,192,125)
<b>Capital Expenditures - Base Service</b>	<b>\$ (56,586,465)</b>
Maintenance Facility Rehab	
Annual Bus Fleet Expenditures - Preservation	
Preventive Maintenance	
Bus Shelter and Stop Enhancements	
Kent Central Gateway Rehab	
CNG Fueling Facility Rehab	
<b>Annual Operating Expenses - Additional Service</b>	<b>\$ (10,860,669)</b>
Additional Saturday and Sunday Service on existing routes	
Ravenna to Streetsboro Service	
<b>Capital Expenses - Additional Service</b>	<b>\$ (3,473,736)</b>
Ravenna to Streetsboro Service	
Streetsboro Park and Ride Lot	
<b>Total Current Cost</b>	<b>\$ (214,112,996)</b>

Coordinated Public Transportation Programs	
Cross County Coordination and Service	\$ (13,457,739)
Stow-Kent Transfer Facility	\$ (1,473,009)
<b>Coordinated Public Transportation Human Services Programs</b>	
Elderly & Disabled Program/Mobility Management Program	\$ (13,508,385)
<b>Total Current Cost</b>	<b>\$ (28,439,133)</b>

Transit Recommendations	
<b>Total Current Cost</b>	<b>\$ (2,218,352,904)</b>

# APPENDIX A AIR QUALITY ANALYSIS

## Introduction

The purpose of this appendix is to document the manner in which transportation conformity is demonstrated for AMATS' *Transportation Improvement Program FY 2021-2024* and *AMATS Transportation Outlook 2040 Plan Amendment*.

Summit County and Portage County are part of the U.S. Census-designated eight-county Cleveland-Akron-Lorain Combined Statistical Area (CSA). This area includes: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties. Based on air quality readings, the United States Environmental Protection Agency (USEPA) designated this area as marginal non-attainment for the 2015 8-hour ozone standard, except for Ashtabula County which is a maintenance area. This area is designated as a maintenance area for the 2008 8-hour ozone standard.

USEPA also designated several of the counties in this area (including Summit and Portage) as maintenance for PM<sub>2.5</sub> (particulate matter) under the 2006 standard. These areas include Cuyahoga, Lake, Lorain, Medina, Portage, and Summit Counties, and Ashtabula Township in Ashtabula County.

Two Metropolitan Planning Organizations (MPOs) serve seven of these counties. The Northeast Ohio Areawide Coordinating Agency (NOACA) serves Cuyahoga, Geauga, Lake, Lorain, and Medina counties. The Akron Metropolitan Area Transportation Study (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.

New United States Department of Transportation (USDOT) conformity determinations are required every time a new Transportation Improvement Program (TIP) or Regional Transportation Plan is completed or updated. New emissions analyses are required to meet the conformity rule requirement of using the latest planning assumptions. AMATS has updated its travel demand model to conduct this analysis taking into account the latest planning assumptions.

This conformity analysis reflects the aggregate regional mobile emissions generated by vehicles using the transportation system recommended in the Regional Transportation Plan and TIP. Conformity is demonstrated when the forecasted regional emissions are below the applicable State Implementation Plan (SIP) budgets that have been established by Ohio EPA.

Before analysis began an interagency consultation call took place on October 31, 2019 and on February 4, 2020. The notes from this call are listed beginning on page C-8.

## Methodology

In order for the Cleveland-Akron-Lorain area to complete the regional emissions analysis, the overall level of pollution (both ozone and PM<sub>2.5</sub>) resulting from mobile sources must be forecasted.

The ozone-related portion of this air quality analysis has to demonstrate that daily Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) emissions from mobile sources will not exceed those established in the budget contained in the SIP for ozone, which sets the allowable limits for each pollutant in the Cleveland-Akron-Lorain area. The budgets for the 2015 ozone standard are from the 2008 SIP, which were set on January 6, 2017. The budgets for the 2008 ozone standard are from the 1997 SIP and were set on March 19, 2013. The ozone analysis is shown in **Tables 1 and 2**.

Similarly, the PM<sub>2.5</sub>-related portion of this air quality analysis has to demonstrate that annual direct PM<sub>2.5</sub> and nitrogen oxides (NO<sub>x</sub>) emissions from mobile sources will not exceed those found in the budget established by the Ohio Environmental Protection Agency (OEPA). The budgets for the 2006 PM<sub>2.5</sub> standard were set on July 26, 2013 and are shown in **Table 3**.

The AMATS and ODOT are jointly responsible for travel demand modeling and air quality analysis for the Akron area. In May 2015, forecasted variables were approved as inputs to the model. In January 2020, AMATS updated its travel demand model. The air quality analyses documented in this appendix involve the use of the travel demand and emissions models to analyze future regional mobile source emissions. Trip tables have been created using the latest planning assumptions and are based on the most recent forecasts of land use and socioeconomic data produced by AMATS.

NOACA and ODOT are jointly responsible for travel demand modeling and air quality analysis for its area. Emissions for Ashtabula County are generated using current ODOT traffic volume data and growth rates.

In order to determine mobile source impacts on regional ozone and PM<sub>2.5</sub> levels, all non-exempt (in keeping with 40 CFR 93) TIP projects have been coded into the travel demand model for the analysis years of 2021, 2030, and 2040 for ozone and 2022, 2030, and 2040 for PM<sub>2.5</sub>. The projects coded in each network are listed in Exhibit C-1 through C-4. Once the AMATS travel demand model was run for each of the analysis years described above, the traffic assignment results were post-processed and input into MOVES2014a. The output from MOVES2014a includes VOC and NO<sub>x</sub> for ozone and direct PM<sub>2.5</sub> and NO<sub>x</sub> for PM<sub>2.5</sub>.

The AMATS area results have been combined with the NOACA and Ashtabula County results to complete the conformity analysis for the entire Cleveland-Akron-Lorain ozone and PM<sub>2.5</sub> non-attainment area. The conformity analysis results for the entire region are available for public comment at the April 2, 2020 Transportation Improvement Program public meeting.

## Results

Table 1 shows the results of the MOVES2014a analysis for the 2015 8-Hour ozone standard for the Cleveland-Akron-Lorain non-attainment area. This analysis must show that VOC and NO<sub>x</sub> emissions from mobile sources will not exceed those established in the budget contained in the SIP, which sets the allowable limits for each pollutant. Table 1 confirms ozone precursor emissions do not exceed the budgets for either VOC or NO<sub>x</sub>.

**TABLE 1**  
Cleveland-Akron-Lorain Mobile Source  
Ozone Precursor Emissions Forecasts

Volatile Organic Compounds (VOC) (tons/day)				
2015 8-Hour Ozone Test	2021 Emissions	2030 8-Hour Budget	2030 Emissions	2040 Emissions
NOACA	16.20		9.77	6.58
AMATS	9.11		4.22	3.76
<b>TOTALS</b>	<b>25.31</b>	<b>30.80</b>	<b>13.99</b>	<b>10.34</b>
Nitrogen oxides (NOx) (tons/day)				
	2021 Emissions	2030 8-Hour Budget	2030 Emissions	2040 Emissions
NOACA	22.13		10.90	7.47
AMATS	12.21		5.29	4.21
<b>TOTALS</b>	<b>34.34</b>	<b>43.82</b>	<b>16.19</b>	<b>11.68</b>

Table 2 shows the results of the MOVES2014a analysis for the 2008 8-Hour ozone standard for the Cleveland-Akron-Lorain maintenance area. This analysis must show that VOC and NO<sub>x</sub> emissions from mobile sources will not exceed those established in the budget contained in the SIP, which sets the allowable limits for each pollutant. Table 2 confirms ozone precursor emissions do not exceed the budgets for either VOC or NO<sub>x</sub>.

**TABLE 2**  
Cleveland-Akron-Lorain Mobile Source  
Ozone Precursor Emissions Forecasts

Volatile Organic Compounds (VOC) (tons/day)				
2008 8-Hour Ozone Test	2021 Emissions	2030 8-Hour Budget	2030 Emissions	2040 Emissions
NOACA	16.20		9.77	6.58
AMATS	9.11		4.22	3.76
Ashtabula County	1.26		0.58	0.54
<b>TOTAL</b>	<b>26.57</b>	<b>30.80</b>	<b>14.57</b>	<b>10.88</b>
Nitrogen oxides (NOx) (tons/day)				
	2021 Emissions	2030 8-Hour Budget	2030 Emissions	2040 Emissions
NOACA	22.13		10.90	7.47
AMATS	12.21		5.29	4.21
Ashtabula County	1.87		0.84	0.72
<b>TOTAL</b>	<b>36.21</b>	<b>43.82</b>	<b>17.03</b>	<b>12.40</b>

Table 3 shows the results of the MOVES2014a analysis for the Cleveland-Akron-Lorain PM<sub>2.5</sub> maintenance area. This analysis must show that direct PM<sub>2.5</sub> and NO<sub>x</sub> emissions from mobile sources will not exceed those found in the 2022 budget. Table 2 confirms emissions do not exceed the budgets for both direct PM<sub>2.5</sub> and NO<sub>x</sub>.

**TABLE 3**  
Northeast Ohio Mobile Source PM<sub>2.5</sub> and Precursor Emissions Forecasts

Direct PM <sub>2.5</sub> Emissions (Annual Tons)				
PM <sub>2.5</sub> 2006 Standard Test	2022 Budget	2022 Emissions	2030 Emissions	2040 Emissions
NOACA		343.76	264.33	224.07
AMATS		133.88	108.62	108.04
Ashtabula County		2.19	1.68	1.68
<b>TOTALS</b>	<b>880.89</b>	<b>479.83</b>	<b>374.63</b>	<b>333.79</b>
Nitrogen oxides (NOx) Precursor (Annual Tons)				
	2022 Budget	2022 Emissions	2030 Emissions	2040 Emissions
NOACA		9,977.68	5,457.77	3,787.06
AMATS		2,736.88	1,872.30	1,664.22
Ashtabula County		50.33	35.26	32.81
<b>TOTALS</b>	<b>17,263.65</b>	<b>12,764.89</b>	<b>7,365.33</b>	<b>5,484.09</b>

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](http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_index.html) (technical particulate matter information)

EXHIBIT C-1  
2021 NETWORK

The 2021 Network includes all existing facilities plus the following projects:

PROJECT	LOCATION & TERMINI	TYPE OF WORK
Cleveland-Massillon Rd	NORTON - Weber Dr to I-76	Median turn lane
Evans Ave	AKRON - CSX Rail Line	RR Grade separation
Massillon Rd (SR 241)	GREEN - Raber Rd to SR 619	Widen to 5 lanes, Improve Safety
SR 91	TWINSBURG - North of Glenwood Blvd to Cuyahoga County Line	Widen to 4 lanes and roundabout at Meadowood/Ethan
Tallmadge Ave (SR 261)	AKRON - N. Main St to SR 8	Road diet and realign Dayton

Note: All of these projects are assumed 2021 for ozone; however for PM<sub>2.5</sub> they would move to 2022.

Please note that the following locations were added to all networks due to maintenance of traffic stripping

I-76	AKRON - US 224 to I-77 (Kenmore Leg)	6 lanes w/ interchange modifications from MOT
I-77	SPRINGFIELD TWP/AKRON - Arlington Rd to I-277	Widen to 8 lanes and interchange modifications from MOT

EXHIBIT C-2  
2022 NETWORK

The 2022 Network includes those projects in the 2021 network plus the following projects:

PROJECT	LOCATION & TERMINI	TYPE OF WORK
Cleveland-Massillon Rd	COPLEY TWP/FAIRLAWN - I-77 to Bywood Ave	Widen to 4 lanes and roundabout
I-76/US224	BARBERTON - State Rd/Wooster Rd Interchanges and widening	Reconfigure Interchanges and widen I-76 to 3 lanes
SR 14	STREETSBORO - Portage Pointe to Diagonal Rd	Median turn lane
Tallmadge Rd	BRIMFIELD TWP - At I-76 Interchange	Reconfigure Interchange

Note: All of these projects are assumed 2022 for PM<sub>2.5</sub>; however they would move to 2030 for ozone.

Please note the following location was added to 2022, 2030, and 2040 networks as a plan amendment to be approved May 2020

SR 8/I-77	AKRON - US 224 to Carroll St	Add an additional lane in each direction
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EXHIBIT C-3  
2030 NETWORK

The 2030 Network includes those projects in the 2022 network plus the following projects:

PROJECT	LOCATION & TERMINI	TYPE OF WORK
Arlington Rd	GREEN - Boettler Rd to September Dr	Widen to 4 lanes with intersection improvements
E Main St	KENT - Main/SR 59/Willow to Horning	Roundabouts, raised median, remove Terrace, Horning realignment, complete streets
I-76/I-77	AKRON - Central Interchange	Reconfigure Interchange
I-77	BATH TWP/RICHFIELD/RICHFIELD TWP - Ghent Rd to Cuyahoga County Line	Widen to 6 lanes
Massillon Rd (SR 241)	GREEN - At Corporate Woods Circle	Roundabout
Massillon Rd (SR 241)	GREEN - At Boettler Rd/Franks Pkwy	Roundabout
N Main St	AKRON - north of Y-bridge to north corp limit	Road diet, complete streets
SR 8	AKRON - Perkins St to Glenwood Ave	Reconstruct bridge, Improve Perkins St ramp operation

EXHIBIT C-4  
2040 NETWORK

The 2040 Network includes those projects in the 2030 network plus the following projects:

PROJECT	LOCATION & TERMINI	TYPE OF WORK
Darrow Rd (SR 91)	TWINSBURG - At I-480 Interchange	Reconfigure Interchange
Howe Rd	CUYAHOGA FALLS - At SR 8 Interchange	Reconfigure Interchange
Kent Rd (SR 59)	STOW - At Darrow Rd (SR 91)	Additional capacity, operational improvements, traffic study, enhance transit
Oviatt St	HUDSON - SR 91 to Ravenna Rd	Add a Bypass
Town Park Blvd	GREEN - Massillon Rd to Wise Rd	New Roadway
Town Park Blvd	GREEN - Lauby Rd to Wise Rd	New Roadway

**FY2021-2024 Transportation Improvement Program (TIP)  
Air Quality Conformity Interagency Consultation Conference Call Minutes**

**Present:** 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:** October 31, 2019, 2:00 p.m., Conference Call

**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 updating their FY2021-2024 TIPs. The TIPs are part of the MPOs' existing long-range transportation plans (LRTPs), for which the horizon year is 2040.

**Discussion**

- The IAC call began at 2:00 p.m.
- All parties agreed on the 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<sub>2.5</sub>) NAAQS, but only Cuyahoga and Lorain are part of maintenance area for 2012 PM<sub>2.5</sub> NAAQS
- Parties agreed on the 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<sub>2.5</sub> NAAQS for those analyses
- Parties settled upon the analysis years
  - NOACA recommended the following analysis years
    - Ozone: 2021 (attainment year for the 2015 NAAQS), 2030 (budget year for 2008 NAAQS), and 2040 (horizon year for LRTP)
    - 2006 PM<sub>2.5</sub> NAAQS: 2022 (budget year), 2030 (interim year), and 2040 (horizon year)
    - 2012 PM<sub>2.5</sub> NAAQS: 2022 (budget year), 2030 (budget year), and 2040 (horizon year)
  - All parties agreed that these are the appropriate analysis years
- Parties confirmed the geographic division for the analysis

- NOACA will complete the conformity analysis for Cuyahoga, Geauga, Lake, Lorain, and Medina Counties
- ODOT and AMATS would work together to run the analysis for Portage and Summit Counties
- ODOT will also do the additional analysis for Ashtabula County
- NOACA asked if ODOT will continue to do the post-processing for the NOACA region, and both agencies agreed to this
- NOACA added that once post-processing is completed, ODOT will provide the final emissions totals to NOACA, and it will complete the conformity documentation
- U.S. EPA confirmed that MOVES2014a is the version of record, and the MPOs/ODOT will use it to complete the emissions modeling
- There was a discussion about the networks for the analysis
  - NOACA noted that it is processing two ODOT sponsored major rehabilitation projects along IR-77 and IR-90 through its project review. The projects are currently scoped as major rehabilitation projects for construction in 2021 and 2024, respectively.
    - ODOT is evaluating the feasibility of incorporating hard shoulder running into each project. Based on NOACA's review of the guidance, if hard shoulder running is determined to be feasible and is incorporated into the project scopes, the projects will have to be analyzed for air quality conformity impacts.
    - This would trigger another conformity analysis if they are amended to the TIP later on
    - ODOT proposed conducting further research and holding additional discussions to determine whether or not they would be exempt; however, they will not be analyzed until next year, regardless
    - NOACA and ODOT agreed to proceed with the conformity analysis, as planned, and table this issue until later on
  - AMATS and ODOT explained that they are finalizing their travel demand model, and it will not be validated until around Thanksgiving (week of November 25, 2019)
    - NOACA explained the tight timeline for the conformity determination, given the need to get approval from the NOACA Board of Directors at their March 13, 2020 meeting
    - MPOs and ODOT need to complete emissions modeling mid-January, at the latest
    - ODOT proposed that AMATS use its existing model in order to stick to this timeline, and all parties agreed
- Once the analysis is complete, NOACA will distribute the conformity documentation to AMATS and ERPC, so they can bring it to their Technical Advisory and Policy Committees for approval
- NOACA explained that it needs to get approval from its Board of Directors at its March 13, 2020 meeting
  - This is earlier than previous TIPs, when NOACA had gotten approval at the June Board meeting
  - In order to meet this timeline, NOACA needs to get a recommendation for approval from its Planning and Programming Committee at its January 2020 meeting

- AMATS, and ERPC will pass resolutions to adopt the conformity determination after NOACA
  - ODOT advised AMATS and/or ERPC to wait until April or May to approve the conformity determination in order to abide by the public involvement process for the State TIP (STIP), which ends on April 10
  - AMATS indicated they can get approval from their Technical Advisory and Policy Committees on May 14
  - ERPC stated they can either get approval from their Technical Advisory and Policy Committees on April 23 or May 21, as appropriate
  - NOACA added that it will have its Board of Directors approve a draft TIP at its March meeting, pending major comments from the public
    - If there are major comments, NOACA would need to get approval on the revised, final TIP at the June Board of Directors meeting
    - All parties agreed to this process
- NOACA asked U.S. EPA about whether the Lake Michigan Air Directors Consortium (LADCO) had made progress on updating the model inputs for MOVES. U.S. EPA indicated they were not sure of the status of that update but would inquire
- The IAC call concluded at 2:30 p.m.

**Table 1. FY2021-2024 TIP Conformity Determination Timeline**

Organization	Activity	Date(s)
NOACA	Public Involvement Process	January 10-April 10
NOACA	Planning & Programming Committee Meeting	January 17
NOACA	Board of Directors Meeting	March 13
NOACA	Board of Directors Meeting (if necessary to approve changes based on major comments)	June 12
AMATS	Public Involvement Process	In accordance with AMATS PI process
AMATS	Technical Advisory & Policy Committee Meetings	May 14
ERPC	Public Involvement Process	In accordance with ERPC PI process
ERPC	Technical Advisory & Policy Committee Meetings	April 23 or May 21
ODOT	STIP Public Involvement Process	March 30-April 10
ODOT	Final S/TIPs Due (ODOT, MPOs, RTPs to post final S/TIPs to ODOT STIP extranet)	April 30
ODOT	S/TIPs Submitted to USDOT (USDOT 45 day review period. Approval anticipated July 1)	May 1
U.S. DOT	Approved S/TIPs Posted to Web	July 1

**FY2021-2024 Transportation Improvement Program (TIP)  
Air Quality Conformity Interagency Consultation Conference Call Minutes  
Including AMATS 2040 Plan Amendment**

Present: Curtis Baker – AMATS  
Phyllis Jividen – AMATS  
Dave Pulay – AMATS  
Amy Prater – AMATS  
Carrie Whitaker – ERPC  
Tim Kovach – NOACA  
Nino Brunello – ODOT Central Office  
Dave Moore – ODOT Central Office  
Lauren Phillis – ODOT District 4  
Steve Rebillot – ODOT District 4

Logistics: February 4, 2020, 1:30 p.m., Conference Call

Purpose

This interagency consultation call was held to clarify what conformity determination and documentation would be needed to include a minor revision to the AMATS 2040 Regional Transportation Plan.

Discussion

- The interagency consultation call began at 1:30 p.m.
- Dave Moore described that recently ODOT District 4 decided to add a capacity adding alternative to PID 102329; which would be a minor revision to the AMATS 2040 Regional Transportation Plan. The project would basically add an additional through lane in each direction on IR 77 from US 224/IR 277 to SR 8 and SR 8 from IR 77 to Perkins St in Akron.
- A new air quality conformity determination is required to include this project alternative so that the project could sell in FY 2021.
- After much discussion, it was decided that the project will be included in the AMATS 2021-2024 TIP air quality conformity determination and that the AMATS 2040 Regional Transportation Plan will be revised to include this minor revision.
- All parties agreed that the analysis years and geographic division previously determined on the last interagency call (October 31, 2019) would remain as agreed upon:
  - 2021, 2030, 2040 for Ozone
  - 2022, 2030, 2040 for PM<sub>2.5</sub>
- MOVES2014a is still the version of record, and the MPOs/ODOT will use it to complete the emissions modeling.
- ODOT District 4 agreed to send out slides of the proposed improvements to use for public involvement components.
- Once the analysis is complete, NOACA will distribute the conformity documentation to AMATS and ERPC, so they can bring it to their Technical Advisory and Policy Committees for approval.
- AMATS plans to take the project slides to their March 11<sup>th</sup> Policy committee meeting for review. Then, AMATS will take the 2021-2024 TIP, including air quality conformity determination, and plan amendment to their May 14<sup>th</sup> Policy committee meeting.

- NOACA plans to take 2021-2024 TIP including air quality conformity determination and concurrence with AMATS plan amendment to their March 13<sup>th</sup> Board of Directors meeting.
  - NOACA stipulated that approvals may be delayed until their June 12<sup>th</sup> Board of Directors meeting if significant changes need to be made to their TIP based on public comment.
- ERPC plans to take 2021-2024 TIP including air quality conformity determination and concurrence with AMATS plan amendment to their May 21<sup>st</sup> Policy Committee meeting
- The interagency consultation call concluded approximately 2:00 p.m.

After the meeting an email was sent to all participants as well as FHWA, EPA, and OEPA. FTA was accidentally omitted but later added by FHWA. All four agencies not on the call concurred via email with the approach outlined in the meeting. Email concurrences are shown below including date and time information.

**From:** Stemen, Carmen (FHWA) <[carmen.stemen@dot.gov](mailto:carmen.stemen@dot.gov)>  
**Sent:** Wednesday, February 05, 2020 11:42 AM  
**To:** Prater, Amy <[APrater@akronohio.gov](mailto:APrater@akronohio.gov)>; Baker, Curtis <[CBaker@akronohio.gov](mailto:CBaker@akronohio.gov)>; Jividen, Phyllis <[PJividen@akronohio.gov](mailto:PJividen@akronohio.gov)>; Pulay, Dave <[DPulay@akronohio.gov](mailto:DPulay@akronohio.gov)>; Carrie Whitaker <[CWhitaker@eriecounty.oh.gov](mailto:CWhitaker@eriecounty.oh.gov)> <[CWhitaker@eriecounty.oh.gov](mailto:CWhitaker@eriecounty.oh.gov)>; Tim Kovach <[TKovach@mpo.noaca.org](mailto:TKovach@mpo.noaca.org)> <[TKovach@mpo.noaca.org](mailto:TKovach@mpo.noaca.org)>; Nino Brunello <[Nino.Brunello@dot.ohio.gov](mailto:Nino.Brunello@dot.ohio.gov)> <[Nino.Brunello@dot.ohio.gov](mailto:Nino.Brunello@dot.ohio.gov)>; Dave Moore <[Dave.Moore1@dot.ohio.gov](mailto:Dave.Moore1@dot.ohio.gov)> <[Dave.Moore1@dot.ohio.gov](mailto:Dave.Moore1@dot.ohio.gov)>; Lauren Phillis <[Lauren.Phillis@dot.ohio.gov](mailto:Lauren.Phillis@dot.ohio.gov)> <[Lauren.Phillis@dot.ohio.gov](mailto:Lauren.Phillis@dot.ohio.gov)>; Steve Rebillot <[Steve.Rebillot@dot.ohio.gov](mailto:Steve.Rebillot@dot.ohio.gov)> <[Steve.Rebillot@dot.ohio.gov](mailto:Steve.Rebillot@dot.ohio.gov)>  
**Cc:** paul.braun@epa.ohio.gov; Maietta, Anthony <[maietta.anthony@epa.gov](mailto:maietta.anthony@epa.gov)>; Kane, Mark (FTA) <[Mark.Kane@dot.gov](mailto:Mark.Kane@dot.gov)>; Mehlo, Noel (FHWA) <[Noel.Mehlo@dot.gov](mailto:Noel.Mehlo@dot.gov)>  
**Subject:** RE: Updated AQ Conformity Determination conference call minutes

All,

I have contacted US EPA, OEPA and FTA (you forgot to include Mark Kane on the e-mail below) and they are going to let me know if they concur with this approach or if they feel they need a call. If they do not need a call, I would add text to the meeting summary to the effect that "the other agencies concurred via e-mail with the approach outlined in the meeting."

In the future, please include all the agencies that should be on an IAC call so we can all be on the same page together and can document, in good faith, the outcomes of the meeting.

FHWA concurs with the outlined approach. Below is FTA's concurrence. Thanks. -Carmen

*Carmen M. Stemen*  
 Carmen M. Stemen, MUP  
 Planning and Environment Specialist  
 FHWA, Ohio Division  
 200 N. High St., Rm. 328  
 Columbus, OH 43215  
 (614) 280-6848

**From:** Kane, Mark (FTA) <[Mark.Kane@dot.gov](mailto:Mark.Kane@dot.gov)>  
**Sent:** Wednesday, February 5, 2020 12:30 PM  
**To:** Stemen, Carmen (FHWA) <[carmen.stemen@dot.gov](mailto:carmen.stemen@dot.gov)>  
**Subject:** RE: [External]RE: Updated AQ Conformity Determination conference call minutes

Hi Carmen,

FTA concurs with the approach.

Thanks.

Mark

Mark Kane  
 Community Planner  
 Federal Transit Administration  
 200 West Adams Street, Suite 320  
 Chicago, IL 60606  
 312.353.1552

**From:** Maietta, Anthony <[maietta.anthony@epa.gov](mailto:maietta.anthony@epa.gov)>  
**Sent:** Wednesday, February 5, 2020 1:13 PM  
**To:** Stemen, Carmen (FHWA) <[carmen.stemen@dot.gov](mailto:carmen.stemen@dot.gov)>; Prater, Amy <[APrater@akronohio.gov](mailto:APrater@akronohio.gov)>; Baker, Curtis <[CBaker@akronohio.gov](mailto:CBaker@akronohio.gov)>; Jividen, Phyllis <[PJividen@akronohio.gov](mailto:PJividen@akronohio.gov)>; Pulay, Dave <[DPulay@akronohio.gov](mailto:DPulay@akronohio.gov)>; Carrie Whitaker <[CWhitaker@eriecounty.oh.gov](mailto:CWhitaker@eriecounty.oh.gov)> <[CWhitaker@eriecounty.oh.gov](mailto:CWhitaker@eriecounty.oh.gov)>; Tim Kovach <[TKovach@mpo.noaca.org](mailto:TKovach@mpo.noaca.org)> <[TKovach@mpo.noaca.org](mailto:TKovach@mpo.noaca.org)>; Nino Brunello <[Nino.Brunello@dot.ohio.gov](mailto:Nino.Brunello@dot.ohio.gov)> <[Nino.Brunello@dot.ohio.gov](mailto:Nino.Brunello@dot.ohio.gov)>; Dave Moore <[Dave.Moore1@dot.ohio.gov](mailto:Dave.Moore1@dot.ohio.gov)> <[Dave.Moore1@dot.ohio.gov](mailto:Dave.Moore1@dot.ohio.gov)>; Lauren Phillis <[Lauren.Phillis@dot.ohio.gov](mailto:Lauren.Phillis@dot.ohio.gov)> <[Lauren.Phillis@dot.ohio.gov](mailto:Lauren.Phillis@dot.ohio.gov)>; Steve Rebillot <[Steve.Rebillot@dot.ohio.gov](mailto:Steve.Rebillot@dot.ohio.gov)> <[Steve.Rebillot@dot.ohio.gov](mailto:Steve.Rebillot@dot.ohio.gov)>  
**Cc:** paul.braun@epa.ohio.gov; Kane, Mark (FTA) <[Mark.Kane@dot.gov](mailto:Mark.Kane@dot.gov)>; Mehlo, Noel (FHWA) <[Noel.Mehlo@dot.gov](mailto:Noel.Mehlo@dot.gov)>  
**Subject:** RE: Updated AQ Conformity Determination conference call minutes

Thanks Carmen,

EPA is ok with this approach but as a reminder to everyone the full Cleveland/Akron/Erie IAC list is in the Ohio SIP (I've attached the relevant appendix to this email) and the group consists of:



The eight parties to this MOU are as follows, hereafter referred to as "all parties":

Akron Metropolitan Area Transportation Study (AMATS)  
Erie Regional Planning Commission (ERPC)  
Federal Highway Administration-Ohio Division (FHWA-OH)  
Federal Transit Administration-Region 5 (FTA-R5)  
Northeast Ohio Area-wide Coordinating Agency (NOACA)  
Ohio Department of Transportation (Ohio DOT)  
Ohio Environmental Protection Agency (Ohio EPA)  
United States Environmental Protection Agency-Region 5 (U.S. EPA-R5)

I also agree that if all the IAC parties agree to this approach retroactively to the Feb. meeting, it should be added in the call's notes as per Carmen's suggestion.

-Tony

Anthony Maietta  
EPA Region 5  
(312) 353-8777  
[maietta.anthony@epa.gov](mailto:maietta.anthony@epa.gov)

**From:** paul.braun@epa.ohio.gov [mailto:paul.braun@epa.ohio.gov]  
**Sent:** Wednesday, February 5, 2020 1:49 PM  
**To:** Stemen, Carmen (FHWA); Prater, Amy; Baker, Curtis; Jividen, Phyllis; Pulay, Dave; Carrie Whitaker (CWhitaker@eriecounty.oh.gov); Tim Kovach (TKovach@mpo.noaca.org); Nino.Brunello@dot.ohio.gov; Dave.Moore1@dot.ohio.gov; Lauren.Phillis@dot.ohio.gov; Steve.Rebillot@dot.ohio.gov  
**Cc:** Maietta, Anthony; Kane, Mark (FTA); noel.mehlo@dot.gov  
**Subject:** [External]RE: Updated AQ Conformity Determination conference call minutes

To make it official, Ohio EPA is in concurrence with the approach as well.

# APPENDIX B FINANCIAL PLAN

It is critical that *Transportation Outlook 2040 (TO2040)* provide a vision for the future while also maintaining a realistic perspective on the costs of transportation projects and anticipated revenues. The purpose of the Financial Plan is to ensure that *TO2040* is in fiscal constraint. Fiscal constraint means that future projects in the plan do not exceed expected revenues.

The AMATS Policy Committee approved the Financial Resources Forecast in September 2016. The document estimated future transportation revenues through 2040. The Financial Plan uses the Financial Resources Forecast as a guide for the funds available for *TO2040*. Both costs and revenues must be projected in year of expenditure dollars. This means that both costs and revenues needed to be assigned inflation rates.

Overall, AMATS projects \$7,292,649,810 of funds to be available. This analysis ensures *TO2040* is in fiscal constraint.

## HIGHWAY RECOMMENDATION METHODOLOGY

In order to maintain fiscal constraint for future highway projects, AMATS first developed an estimate of highway revenues. The revenues are shown below:

### HIGHWAY REVENUES THROUGH 2040

Federal	\$2,027,363,417
State	\$1,429,161,134
Local	\$1,295,475,584
Ohio Turnpike	\$353,835,617
<b>Total Revenue</b>	<b>\$5,105,835,752</b>

The growth rates used to project federal and state funding were based on estimates provided by ODOT. These growth rates were applied to the historical average and compounded to determine the financial forecast projections for short, medium, and long term years of the Plan.

For local funds historical data from the BMV for license plate registration

fees and permissive taxes was obtained for 2013 to 2015 for Summit, Portage, and Wayne counties. Historic fuel tax data distributed to the counties, municipalities, and townships was obtained for 2010 to 2015 from the Ohio Department of Taxation. A 0 percent growth rate was applied to that historical average and all years were totaled to determine the 2040 financial forecast.

The Ohio Turnpike portion of forecasted funding was determined from the Ohio Turnpike and Infrastructure Commission's Annual Reports. The expenses for "maintenance of roadway and structures" and "traffic control, safety, patrol and communications" were added together to estimate the cost of maintaining the turnpike. The statewide total was multiplied by 34/241 since 34 miles of the total 241 miles are within the AMATS area. This adjusted total for each year from 2005 to 2015 is listed in Table 1 along with the resulting historical average.

Given that the Ohio Turnpike is a self-sustained entity, AMATS assumes a growth rate of 5.47 percent that generates at least the amount needed to maintain the Ohio Turnpike as shown in the Highway Preservation Needs report (July 2016). The Ohio Turnpike forecast is projected to be approximately \$353 million between now and 2040. Any money not used for turnpike maintenance could be used on other state projects in the future.

With revenues established, it was necessary to assign inflation costs to each project recommendation. The table below shows the rates of inflation used to forecast project costs. Highway projects were assigned inflation rates based on the Ohio Department of Transportation's (ODOT) July 2016 Construction Cost Outlook and Forecast through 2017. AMATS assumed a flat 2.5 percent per year for the out years. All projects are shown in 2017 costs so the inflation rate is 0 percent.

### INFLATION RATE PER YEAR

2017	0.0%
2018	3.7%
2019	3.8%
2020	3.7%
2021	3.5%
2022-2040	2.5% per year

With inflation rates established, the next step was to estimate what year projects would take place to get an accurate inflated cost. The table on the following page shows project cost in year of expenditure dollar and the time band for which the project is expected to occur.

Preservation funds were estimated over the life of the plan and were assumed to be distributed equally over the life of the plan. The AMATS Program is included in total and considered to be in year of expenditure dollars. Because the SR 8 bridge project is a preservation project, its costs were assumed to be part of the overall preservation funds. The plan also shows funds reserved for unspecified safety and operation projects, as well as \$33 million reserved for bicycle and pedestrian enhancements. The table above demonstrates fiscal constraint for highway recommendations in *TO2040*.

# HIGHWAY FINANCIAL CONSTRAINT ANALYSIS

## 2017-2040

Total Revenue			\$	5,105,835,752.00	\$	5,105,835,752.00		
Maintenance Recommendations		Year of Expenditure		Current Cost		Year of Expenditure Cost		
Pavement Resurfacing	Ongoing	Ongoing	\$	(1,172,518,000.00)	\$	(1,599,578,957.08)		
Pavement Replacement	Ongoing	Ongoing	\$	(148,758,250.00)	\$	(202,939,798.27)		
Bridge Preservation	Ongoing	Ongoing	\$	(1,899,537,976.00)	\$	(2,591,398,148.75)		
AMATS Program 2017-2022								
AMATS Program (Included in TIP)	2017-2021	2017-2021	\$	(94,520,000.00)	\$	(94,520,000.00)		
AMATS Ongoing Regionwide Improvements								
Bike and Pedestrian	Ongoing	Ongoing	\$	(33,000,000)	\$	(33,000,000)		
Safety and Operational	Ongoing	Ongoing	\$	(75,000,000)	\$	(75,000,000)		
Transit	Ongoing	Ongoing	\$	(20,000,000)	\$	(20,000,000)		
Freeway Recommendations								
Recommendation	Limits		Current Cost		Yr of Expenditure Cost			
I-77	Arlington to I-277		2022-2028	2024	\$	(64,000,000)	\$	(64,000,000)
I-77/76/277/SR 8	Akron Beltway Project		2022-2029	2024	\$	(50,000,000)	\$	(50,000,000)
I-77	Ghent to Cuyahoga County Line		2022-2030	2022	\$	(105,000,000)	\$	(105,000,000)
SR 8	Perkins to Glenwood		2021	2021	\$	(110,000,000)	included in preservation	
I-77//SR 8	Central Interchange Reconstruction with SR 8 SB Auxiliary Lane		2021	2021	\$	(150,000,000)	included in preservation	
I-76/US 224	State Rd/Wooster Rd		2019	2019	\$	(26,000,000)	\$	(26,000,000)
Roadway Recommendations								
Community	Limits		Current Cost		Yr of Expenditure Cost			
Akron	E. Exchange St from Broadway St to Fountain St		2022-2028	2022	\$	(5,043,000)	\$	(5,971,838.44)
Akron	Brittain Rd at Eastland Ave/Eastwood Ave		2022-2028	2025	\$	(4,000,000)	\$	(5,100,945.33)
Akron	Evans Ave		2022-2028	2022	\$	(8,200,000)	\$	(9,710,306.40)
Akron	N Portage Path at Merriman Rd		2029-2035	2030	\$	(2,000,000)	\$	(2,885,625.72)
Akron	W Market St (SR 18) at Hawkins Ave/W Exchange St		2036-2040	2037	\$	(2,000,000)	\$	(3,430,102.18)
Akron	Brittain Rd from E Tallmadge Ave (SR 261) to Independence Ave		2036-2040	2040	\$	(1,500,000)	\$	(2,770,383.66)
Akron	E Market St (SR 18) & Mogadore Rd/I-76 Ramps		2022-2028	2028	\$	(3,000,000)	\$	(4,119,870.15)
Akron	Waterloo Rd (US 224) & George Washington Blvd (SR 241)		2022-2028	2026	\$	(2,000,000)	\$	(2,614,234.48)
Akron/Cuyahoga Falls	SR 8 at Howe Ave		2022-2028	2025	\$	(33,000,000)	\$	(42,082,798.98)
Akron/Cuyahoga Falls/Tallmadge	Howe Ave at Brittain Rd/Northwest Ave		2022-2028	2028	\$	(10,000,000)	\$	(13,732,900.51)
Akron/Fairlawn	Miller Rd from Ridgewood Rd to SR 18 (W Market St)		2036-2040	2038	\$	(1,000,000)	\$	(1,757,927.37)
Barberton	Wooster Rd N (SR 619) from Waterloo Rd to I-76		2036-2040	2040	\$	(800,000)	\$	(1,477,537.95)
Bath Twp/Copley Twp/Fairlawn	Medina Rd (SR 18) from Heritage Woods Dr to Cleveland-Massillon Rd		2029-2035	2033	\$	(1,500,000)	\$	(2,330,627.46)
Cuyahoga Falls	Portage Trail from Valley Rd to State Rd		2036-2040	2039	\$	(800,000)	\$	(1,441,500.44)
Cuyahoga Falls	State Rd at Portage Trail		2036-2040	2040	\$	(500,000)	\$	(923,461.22)
Fairlawn	W Market St (SR 18) from Ghent Rd to Miller Av		2029-2035	2029	\$	(1,000,000)	\$	(1,407,622.30)

# HIGHWAY FINANCIAL CONSTRAINT ANALYSIS

## 2017-2040

Total Revenue				\$	5,105,835,752.00	\$	5,105,835,752.00	
Roadway Recommendations (continued)								
Community	Limits			Current Cost		Yr of Expenditure Cost		
Green	Massillon Rd (SR 241) & Corporate Woods Circle	2022-2028	2023	\$	(1,747,900)	\$	(2,121,580.57)	
Green	Arlington Rd from Boettler Rd to September Dr	2022-2028	2025	\$	(12,000,000)	\$	(15,302,835.99)	
Green	Town Park Blvd from Greensburg Rd to Wise Rd	2036-2040	2038	\$	(3,700,000)	\$	(6,504,331.27)	
Green	Town Park Blvd from Wise Rd to Massillon Rd	2029-2035	2032	\$	(5,700,000)	\$	(8,640,374.99)	
Hudson	Darrow Rd (SR 91) at Steetsboro Rd (SR 303)	2022-2028	2022	\$	(2,400,500)	\$	(2,842,632.99)	
Hudson	Darrow Rd (SR 91) from Ravenna Rd to SR 303	2022-2028	2024	\$	(8,600,000)	\$	(10,699,543.86)	
Hudson	Hines Hill Rail Grade Separation	2029-2035	2030	\$	(11,000,000)	\$	(15,870,941.46)	
Hudson/ Twinsburg Twp	Darrow Rd (SR 91) from Middleton Rd to Twinsburg Rd	2029-2035	2030	\$	(1,000,000)	\$	(1,442,812.86)	
Kent	E Main St (SR 59) from Willow St to Luther Av	2029-2035	2033	\$	(1,000,000)	\$	(1,592,595.43)	
Macedonia	Aurora Rd (SR 82) from Olde Eight Rd to SR 8	2029-2035	2031	\$	(1,000,000)	\$	(1,478,883.18)	
Northfield Center Twp	SR 82 at Olde Eight Rd/Brandywine Rd	2029-2035	2032	\$	(1,500,000)	\$	(2,273,782.89)	
Richfield	Wheatley Rd (SR 176) at Brecksville Rd	2022-2028	2025	\$	(1,100,000)	\$	(1,402,759.97)	
Rootstown Twp	SR 44 from Tallmadge Rd (CR 18) to I-76	2022-2028	2024	\$	(250,000)	\$	(311,033.25)	
Stow	Darrow Rd (SR 91)& Graham Rd	2022-2028	2022	\$	(500,000)	\$	(592,091.85)	
Stow	Norton Rd from Hudson Drive to Darrow Rd (SR 91)	2022-2028	2022	\$	(4,000,000)	\$	(4,736,734.83)	
Stow	Kent Rd (SR 59) at Darrow Rd (SR 91)	2036-2040	2037	\$	(1,500,000)	\$	(2,572,576.64)	
Stow	Graham Rd from Fishcreek Rd to Newcomer Rd	2022-2028	2023	\$	(2,000,000)	\$	(2,427,576.60)	
Streetsboro	Streetsboro Town Center: SR 14/SR 43/SR 303	2029-2035	2030	\$	(350,000)	\$	(504,984.50)	
Tallmadge	Tallmadge Circle	2022-2028	2025	\$	(8,000,000)	\$	(10,201,890.66)	
Twinsburg	I-480 & SR 91	2022-2028	2023	\$	(3,521,300)	\$	(4,274,112.74)	
Twinsburg	Darrow Rd (SR 91) at Aurora Rd (SR 82)	2036-2040	2040	\$	(1,000,000)	\$	(1,846,922.44)	
				Total Expenses	\$	(4,096,546,926)	\$	(5,105,835,586)
				Balance	\$	1,009,288,826	\$	166.31

## TRANSIT RECOMMENDATION METHODOLOGY

Transit revenues were projected in the *Financial Resources Forecast*. Transit funding data for both METRO and PARTA was collected over the last 10 years to estimate the amount of federal funding expected to be available. The growth rates used to forecast transit funding were assumed to be the same as highway federal assumptions, which were just over 2 percent until 2020 and then 0 percent through 2040.

Local funds were projected based on past transit budgets in the *Financial Resources Forecast*. The 2016 estimated totals for METRO and PARTA were added together and were used as the baseline for future projections. The growth rates used to forecast local transit funding were assumed to be 5 percent annually through 2020 and then 0 percent through 2040.

### REVENUE

Federal Funds	\$380,001,132
Local and State Revenue	\$1,806,812,926
AMATS Revenue	\$20,000,000

AMATS used ODOT's short-term inflation rate for transit projects through 2020. A 2 percent inflation rate was estimated for years 2022-2040. AMATS reviewed the consumer price index performance over the last 10 years from 2006-2016 to determine out-year inflation. The inflation rate applied to projects is as follows:

### INFLATION RATE PER YEAR

2017	0.0%
2018	3.7%
2019	3.8%
2020	3.7%
2021	3.5%
2022-2040	2.0% per year

With inflation rates established, the next step was to estimate what year projects would take place to obtain an accurate inflated cost. The following table shows project cost in year of expenditure dollar and the time band for which the project is expected to occur. Operating expenses to maintain the system were projected annually and operation expenses for additional new service were added when service is projected to start. With all the recommendations

included and placed in the year of expenditure, the following Transit Financial Constraint Analysis table demonstrates fiscal constraint.

## TRANSIT FINANCIAL CONSTRAINT ANALYSIS

<b>Revenue</b>			<b>\$ 2,218,364,058</b>
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Federal Funds	\$	380,001,132	
New 5310 Funds	\$	11,550,000	
Local and State Revenue	\$	1,806,812,926	
AMATS Revenue	\$	20,000,000	CMAQ

<b>METRO</b>			
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<b>Operating Expenses - Base Service</b>	\$	(1,555,033,761)	Annual
<b>Capital Costs - Base Service</b>			
Chapel Hill Turnaround	\$	(441,717)	2026-2030, 2035-2040
Maintenance Facility Rehab	\$	(2,176,119)	2025-2040
Downtown Transit Facility Rehab	\$	(3,063,748)	2030-2040
Ghent Park and Ride Lot Rehab	\$	(750,919)	2024-2029, 2035-2040
Fuel Facility Rehab	\$	(1,524,395)	2030-2035
Annual Bus Fleet Expenditures - Preservation	\$	(143,685,639)	Annual
Preventive Maintenance	\$	(157,362,057)	Annual
Bus Shelter and Stop Enhancements	\$	(2,299,161)	Annual
<b>Operating Expenses - Additional Service</b>			
West Market Street - Arlington	\$	(18,840,835)	2022-2040
Copley Rd	\$	(18,840,835)	2022-2040
Kenmore	\$	(18,840,835)	2022-2040
Twinsburg - Macedonia	\$	(11,654,541)	2025-2040
Northern Summit	\$	(8,400,623)	2030-2040
Southern Summit	\$	(8,400,623)	2030-2040
<b>Capital Expenses - Additional Service</b>			
West Market Street - Arlington	\$	(5,511,269)	2021-2040
Copley Rd	\$	(3,985,730)	2021-2040
Kenmore	\$	(2,913,059)	2022-2040
Twinsburg - Macedonia	\$	(2,687,007)	2025-2040
Northern Summit	\$	(2,201,192)	2030-2040
Southern Summit	\$	(2,201,192)	2030-2040
Park and Ride Facilities	\$	(2,532,027)	2022-2040
Sandyville Rail Line Rehab	\$	(650,528)	2025-2030
Akron Secondary Rail Line Barlow and Seasons Road Upgrade	\$	(1,802,963)	2022-2026

<b>PARTA</b>			
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<b>Operating Expenses - Base Service</b>	\$	(143,192,125)	Annual
<b>Capital Expenditures - Base Service</b>			
Maintenance Facility Rehab	\$	(2,301,050)	2018, 2025-2040
Annual Bus Fleet Expenditures - Preservation	\$	(19,116,723)	Annual
Preventive Maintenance	\$	(33,002,735)	Annual
Bus Shelter and Stop Enhancements	\$	(204,487)	Annual
Kent Central Gateway Rehab	\$	(1,327,078)	2025-2030
CNG Fueling Facility Rehab	\$	(634,392)	2035-2040
<b>Operating Expenses - Additional Service</b>			
Additional Saturday and Sunday Service on Existing Routes	\$	(5,477,573)	2018-2040
Ravenna to Streetsboro Service	\$	(5,383,096)	2022-2040
<b>Capital Expenses - Additional Service</b>			
Ravenna to Streetsboro Service	\$	(2,559,099)	2022-2040
Streetsboro Park and Ride Lot	\$	(914,637)	2030-2040
<b>METRO AND PARTA</b>			
Cross County Coordination and Service	\$	(13,457,739)	2022-2040
Stow-Kent Transfer Facility	\$	(1,473,009)	2018-2023
<b>Coordinated Public Transportation Human Services Programs</b>			
5310 Program/Mobility Management Program	\$	(13,508,385)	Annual

<b>BALANCE</b>	<b>\$</b>	<b>11,154</b>	
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## BICYCLE AND PEDESTRIAN RECOMMENDATION METHODOLOGY

Bicycle and pedestrian improvements are funded through the estimated highway revenues. AMATS reserved over \$33 million for potential bicycle and pedestrian improvements in the greater Akron area. Bicycle and pedestrian project costs are inflated based on the highway methodology. The table below demonstrates how funds reserved for bicycle and pedestrian projects will be spent and are inflated to year of expenditure. Bicycle and Pedestrian improvements are assumed to be covered mostly through additional local or state funds. According to the *AMATS Funding Policy Guidelines*, only \$700,000 may be used on each bicycle or pedestrian project per round of funding. 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.

### BICYCLE AND PEDESTRIAN RECOMMENDATIONS

AMATS Revenue	\$	33,000,000.00
Pedestrian Facilities	\$	(6,837,540.72)
Bicycle Facilities	\$	(25,892,889.16)
Balance	\$	269,570.12



# BICYCLE RECOMMENDATIONS FINANCIAL CONSTRAINT ANALYSIS

2017-2040

Bicycle Recommendations (Price Per Mile \$1,000,000)						
County	Recommendation	Distance	Cost (Current)	Time Band	Cost (Yr of Expenditure)	AMATS Funding
Summit	3 Creeks - Silver Creek Trail from Medina Line Rd to Robinson Ave	5.04	\$5,035,018.38	2029-2035	\$5,135,724.87	\$1,400,000.00
Summit	Akron-Peninsula Trail from SR 303 to Boston Mills Rd	2.61	\$2,605,922.74	2022-2028	\$3,454,762.13	\$700,000.00
Summit	Ashbrooke Connector from Farnham Way to Hines Hill Rd	1.13	\$1,129,193.64	2029-2035	\$1,851,684.26	\$700,000.00
Summit	Barlow Rd from Wilshire Park Dr to the Bike and Hike Trail	0.33	\$333,775.85	2036-2040	\$580,836.54	\$580,836.54
Summit	Bike & Hike-Portage Connector from the Bike and Hike Trail to the Freedom Trail Connector	0.40	\$400,689.01	2029-2035	\$595,120.74	\$595,120.74
Summit	Freedom Trail from the Towpath Trail to the Akron Secondary/CVS RR Junction	1.32	\$1,323,928.49	2022-2028	\$1,583,069.91	\$700,000.00
Summit	Heights to Hudson from the Bike and Hike Trail to Prospect St/Hines Hill Intersection	3.43	\$3,430,240.20	2022-2028	\$4,393,805.19	\$1,400,000.00
Summit	Heights to Hudson (Central Hudson Portion) from Morse Rd to Veterans Way	0.71	\$709,017.37	2022-2028	\$847,798.10	\$700,000.00
Summit	Highbridge Connector Trail from Valley View Bikeway to the Front Street Connector Trail	2.80	\$2,803,056.13	2036-2040	\$5,074,942.94	\$1,400,000.00
Summit	Liberty Trail from Post Rd to Cannon Rd	1.52	\$1,517,327.23	2029-2035	\$2,253,600.36	\$700,000.00
Summit	Magic Mile (North) from Third St SW and Park to W Wooster Rd and Robinson Ave	0.19	\$193,785.03	2022-2028	\$239,825.93	\$239,825.93
Summit	Magic Mile (West) from 5th St and Park Ave to 4th St and W Wooster Rd	0.20	\$200,354.41	2022-2028	\$265,616.79	\$265,616.79
Summit	Memorial Parkway Trail from Aqueduct St to the Towpath Trail	0.70	\$700,000.00	2029-2035	\$1,081,673.12	\$700,000.00
Summit	Portage Lakes Trail from the Towpath Trail to the Metro Sandyville Local	5.31	\$5,313,249.15	2029-2035	\$8,210,283.94	\$700,000.00
Summit	Rubber City Heritage Trail from the Towpath Trail to Englewood Ave	5.75	\$5,750,000.00	2029-2035	\$9,429,015.63	\$1,400,000.00
Summit	Spartan Trail (West) from the Rubber City Heritage Trail to Springfield Lake	2.38	\$2,381,723.60	2022-2028	\$3,157,533.55	\$700,000.00
Summit	Spartan Trail (East) from Springfield Lake to the Summit/Portage County Line	3.71	\$3,707,724.41	2022-2028	\$5,293,034.87	\$700,000.00
Summit	Turnpike Trail from Prospect Rd to Hudson Aurora Rd	2.14	\$2,138,163.67	2029-2035	\$3,506,222.37	\$700,000.00
Portage	Arsenal S Trail from Conrail Freedom Secondary to Rock Spring Rd	5.94	\$5,940,000.00	2036-2040	\$10,543,520.41	\$1,400,000.00
Portage	Arsenal S Trail from Rock Spring Rd to Portage County Line	8.88	\$8,880,000.00	2036-2040	\$12,676,818.56	\$700,000.00
Portage	Headwaters Bikeway from Aurora North Corp Limit to Mennonite Rd	7.93	\$7,925,433.94	2029-2035	\$11,771,199.01	\$2,100,000.00
Portage	Hiram Trail from SR 305 to Headwaters Trail	2.76	\$2,761,242.18	2029-2035	\$4,439,180.85	\$700,000.00
Portage	Lake Rockwell Trail from Middlebury Rd to Mantua St/River Bend Blvd	2.73	\$2,728,766.89	2022-2028	\$3,819,122.36	\$700,000.00
Portage	Rock Spring Rd from Cable Line Rd to Newton Falls Rd	0.85	\$851,225.38	2029-2035	\$1,289,562.48	\$700,000.00
Portage	The Portage from Stow St to W Main St	0.31	\$310,385.76	2022-2028	\$411,489.16	\$411,489.16
Portage	Mogadore Lake from The Portage to Mogador Lake	4.93	\$4,932,888.29	2029-2035	\$7,473,070.94	\$1,400,000.00
Portage	Esplanade Extension from Dix Stadium to Lakewood Rd	2.00	\$2,000,174.46	2022-2028	\$2,651,700.64	\$700,000.00
Portage	Headwaters Trail Extension from SR 82 to Portage County Line	5.70	\$5,700,000.00	2022-2028	\$7,821,171.71	\$700,000.00
Portage	Franklin Connector Extension from Hudson Rd ext to Riverbend	2.20	\$2,200,000.00	2029-2035	\$3,267,535.637	\$700,000.00
Portage	Railroad Trail Connection from Hudson Rd to Tinkers Creek, Portage County Line	7.30	\$7,300,000.00	2036-2040	\$12,957,525.079	\$1,400,000.00
		<b>82.32</b>	<b>\$82,321,411.25</b>		<b>\$122,927,649.90</b>	<b>\$25,892,889.16</b>

**PEDESTRIAN RECOMMENDATIONS FINANCIAL CONSTRAINT ANALYSIS  
2017-2040**

<b>Pedestrian Recommendations (Price Per Mile \$485,000)</b>						
<i>Community</i>	<i>Recommendation</i>	<i>Distance</i>	<i>Cost (Current)</i>	<i>Year</i>	<i>Cost (Yr of Expenditure)</i>	<i>AMATS Funding</i>
Akron	Portage Trail Sidewalk from N. Portage Path to Treetop Trail Dr	0.35	\$169,750.00	2025	\$225,043.46	\$225,043.46
Akron	Waterloo Rd Sidewalk from I-77 to Arlington Rd	0.69	\$334,650.00	2022	\$400,153.29	\$400,153.29
Copley	Cleveland Massillon Rd Sidewalk from Hammond Blvd to Commerce Drive	0.86	\$417,100.00	2030	\$619,495.05	\$619,495.05
Cuyahoga Falls	Graham Rd Sidewalk from Prange Dr to Bath Rd	0.58	\$281,300.00	2035	\$461,283.84	\$461,283.84
Green	Boettler Rd Sidewalk from Arlington to Kenway Blvd	0.35	\$169,750.00	2027	\$237,578.38	\$237,578.38
Green	Interstate Parkway Sidewalk from Arlington to terminus	0.51	\$247,350.00	2030	\$367,374.97	\$367,374.97
Green	Moore Rd Sidewalk from S. Main St to Charleston	0.92	\$446,200.00	2023	\$552,211.54	\$552,211.54
Green	Raber Rd Sidewalk from Mayfair Rd to Kreighbaum	0.81	\$392,850.00	2029	\$572,037.15	\$572,037.15
Norton	Cleveland Massillon Rd Sidewalk from Weber Rd to Shellhart Rd	0.95	\$460,750.00	2038	\$801,796.89	\$700,000.00
Ravenna Twp/Rootstown Twp	SR 44 Sidewalk from Rootstown Elementary to Ravenna South Corp. Line	3.39	\$1,644,150.00	2031	\$2,490,802.31	\$700,000.00
Stow	SR 91 Sidewalk Lillian Rd to Norton Rd	1.93	\$936,050.00	2024	\$1,198,989.32	\$700,000.00
Twinsburg	Highland Rd Sidewalk from Chamberlin Rd to Hadden Rd	0.87	\$421,950.00	2028	\$602,363.02	\$602,363.02
Twinsburg	SR 82 Sidewalk from Chamberlin Rd to Wilcox Rd	0.96	\$465,600.00	2035	\$763,504.29	\$700,000.00
		<b>13.17</b>	<b>\$6,387,450.00</b>		<b>\$9,292,633.54</b>	<b>\$6,837,540.72</b>

# APPENDIX C ENVIRONMENTAL JUSTICE ANALYSIS

## INTRODUCTION

In accord with the Goals and Objectives of the AMATS Regional Transportation Plan, *Transportation Outlook 2040 (TO2040)*, 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.

The United States Environmental Protection Agency (USEPA) Office of Environmental Justice defines environmental justice as:

*The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies.*

Consequently, programs or activities that use federal funds must make a meaningful effort to involve low-income and minority groups in the process to make decisions regarding the use of federal funds. It also means that 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.

Meaningful public involvement means that people have an opportunity to participate in decisions about activities that may affect their environment or health. The public's contribution should influence the decision-making process and their concerns considered in the decision-making process. Accordingly, the

decision-makers should seek out and facilitate the involvement of those persons potentially affected.

According to Presidential Executive Order #12898, disproportionately high and adverse effects are those that will be predominately borne by minority or low-income groups; or those which will be suffered by minority and low-income groups in a manner that is appreciably more severe or greater in magnitude than those which will be suffered by non-minority and non-low-income groups.

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 to ensure that the costs and benefits of transportation infrastructure and services are fairly distributed.

Historically, this has not always been the case. During the development of the nation's interstate highway system in the 1950s and 1960s, low-income and minority neighborhoods sometimes carried a greater social burden of these massive redevelopment projects. The physical placement of these projects cut through established, older neighborhoods, creating physical barriers and isolating them from employment, shopping and recreational opportunities. Often, these neighborhoods suffered not only from the physical placement of projects, but from the negative externalities that they produced, such as noise pollution, harmful fumes, air pollution, accidents and spills. In some cases, these consequences were unintentional. However, these areas were sometimes specifically targeted for transportation development, due to their sometimes high crime and blighted development. Eventually, neighborhood and environmental activists demanded equal access to the decision-making process and the equitable distribution of positive and negative effects of transportation projects, and thus, the concept of environmental justice emerged.

In keeping with the environmental justice requirements that the recipients of federal funds make greater efforts to involve low-income and minority populations in the decision-making process, 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. These groups are made aware of opportunities to participate in the planning process by advertising public meetings in three newspapers: 1) *The Akron Beacon Journal*; 2) *The Kent-Ravenna Record Courier*; and 3) *The Reporter* (a publication that serves the African-American community). 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](http://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.

The purpose of environmental justice principles and procedures is to improve all levels of transportation decision making. This approach hopes to:

- make better transportation decisions that meet the needs of all people;
- design transportation facilities that fit more harmoniously into communities;
- enhance the public-involvement process; and provide minority and low-income populations with opportunities to learn about and improve transportation
- improve data collection, monitoring, and analysis tools that assess the needs of, and analyze the potential impacts on minority and low-income populations;
- cooperate with other public and private programs on a continuous basis in order to achieve a comprehensive vision for communities;
- avoid disproportionately high and adverse impacts on minority and low-income populations; and
- minimize or mitigate unavoidable impacts by identifying concerns early in the planning phase and providing offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods.

Current efforts to support environmental justice are a consequence of Title VI

of the Civil Rights Act, as amended, and subsequent statutes, executive orders and federal and state guidance to promote and enforce non-discrimination and the fair distribution of benefits and burdens associated with federal programs, policies and activities. Both Title VI and environmental justice aim to ensure full and fair participation and integration of the public into the planning process. The Federal Transit Administration's (FTA) most recent release of guidance found in Circular 4703.1 (August 2012) reiterates the federal government's long-standing principles of environmental justice:

- To avoid, minimize, and mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

## METHODOLOGY

In addition to involving low-income and minority populations in the planning process, environmental justice also means assessing the impact of transportation plans, programs, and policies on low-income and minority populations. In order to accomplish this, the following questions must be considered:

- What are low-income and minority populations?
- How should these populations be identified?
- Which environmental impacts should be considered?
- What are the potential impacts of recommended projects on low-income and minority populations?
- What is the overall level of accessibility in low-income and minority neighborhoods?
- What is the overall level of investment in transportation infrastructure in areas with above average concentrations of minority and low-income populations?

## Definitions

According to the latest 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 United States Department of Health and Human Services poverty guidelines. For purposes of this analysis, the AMATS staff has expanded the definition of low-income population to include all individuals at 150 percent of the poverty level or below.

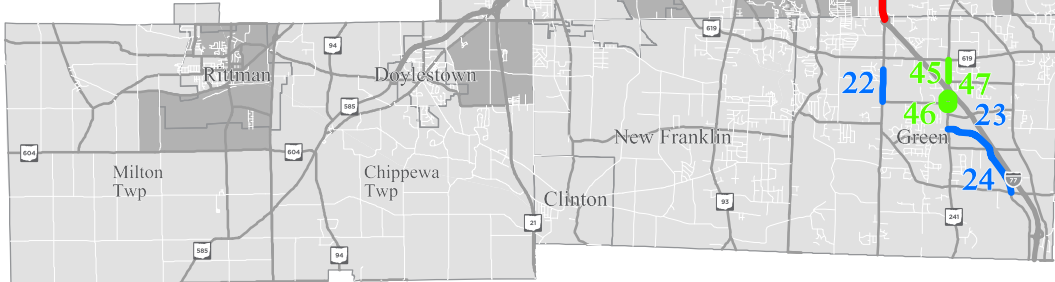
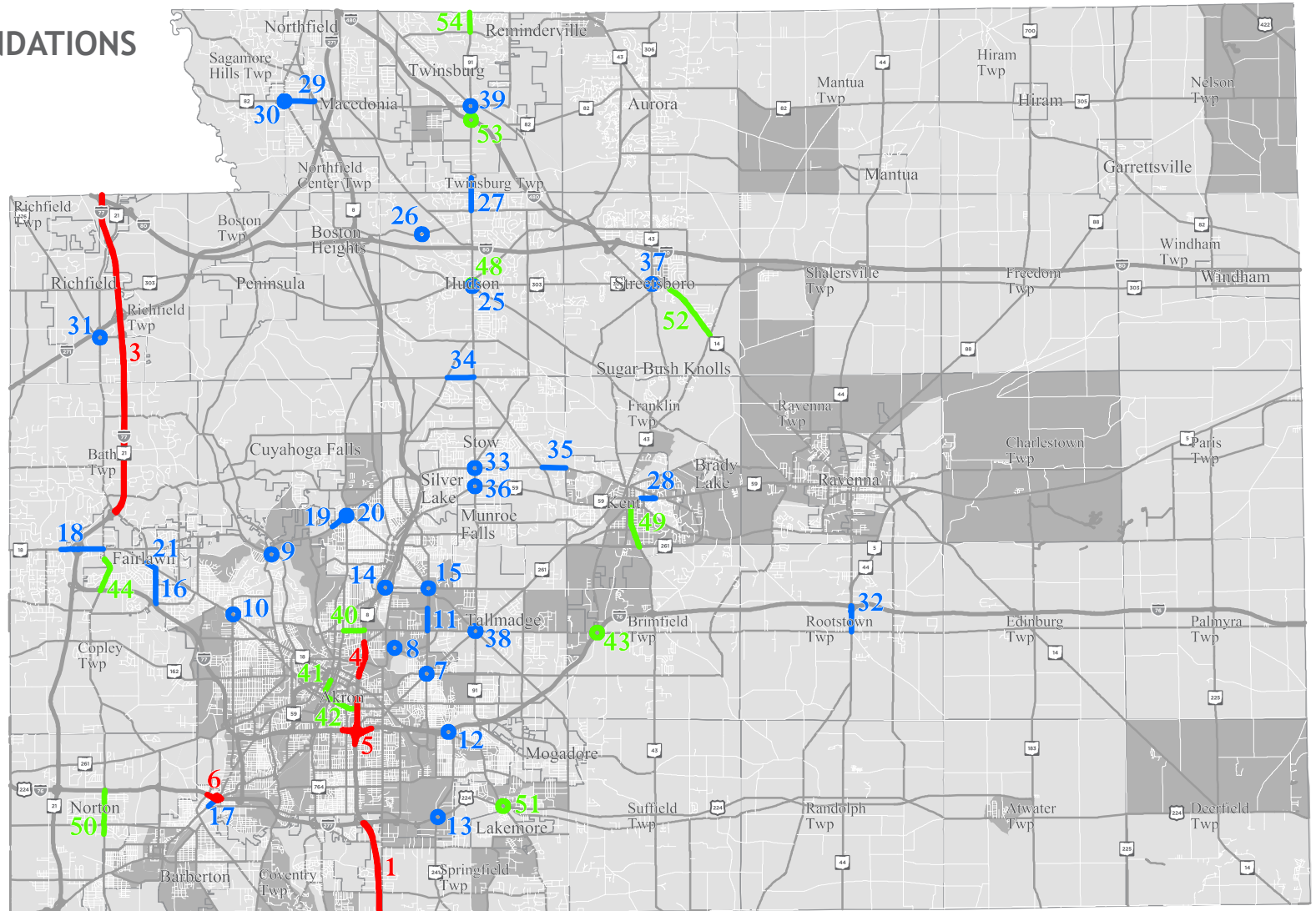
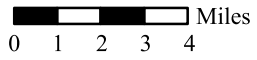
**Minority** is defined as a person who is: 1) Black (a person having origins in any of the black racial groups of Africa); 2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); 3) Asian (a person having origins in any 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 prehistoric people of North America and who maintain cultural identification through tribal affiliation or community recognition).

## Identifying Concentrations of Low-Income and Minority Population

Although low-income and minority persons live throughout the AMATS area, many are concentrated in specific locations and neighborhoods. The following methodology was used to identify above average concentrations of low-income and minority groups:

- Concentrations of low-income population were identified by comparing the percentage of the population at or below 150 percent of the poverty level in each Census block group to the percentage of the population in the entire AMATS area. The data used in this analysis were obtained from the 2010 Census. Census block groups with a percentage of population considered low-income that were at or above the regional rate of 26.8 percent were considered to be above average concentrations of low-income populations. These Census block groups are shown on Map C-1.
- Concentrations of minority population were identified by comparing the percentage of minorities living in each Census block group to the percentage of such persons living in the entire AMATS area. The data used in this analysis were obtained from the 2010 Census. Block groups with a percentage of minorities that were at or above the regional rate of 19.35 percent were considered to be above average concentrations of minority population. These census block groups are shown on Map C-2.

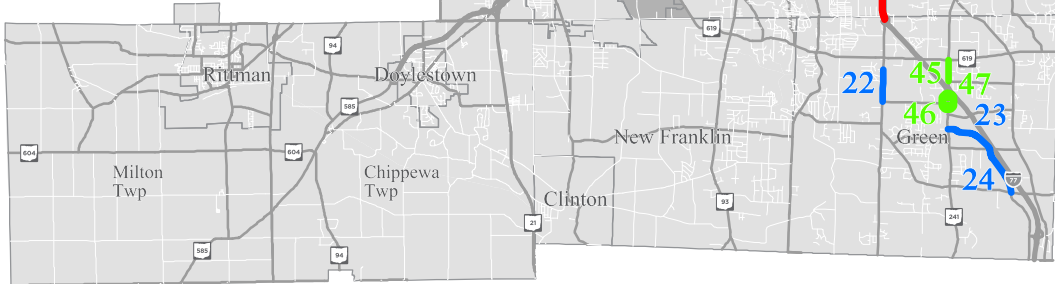
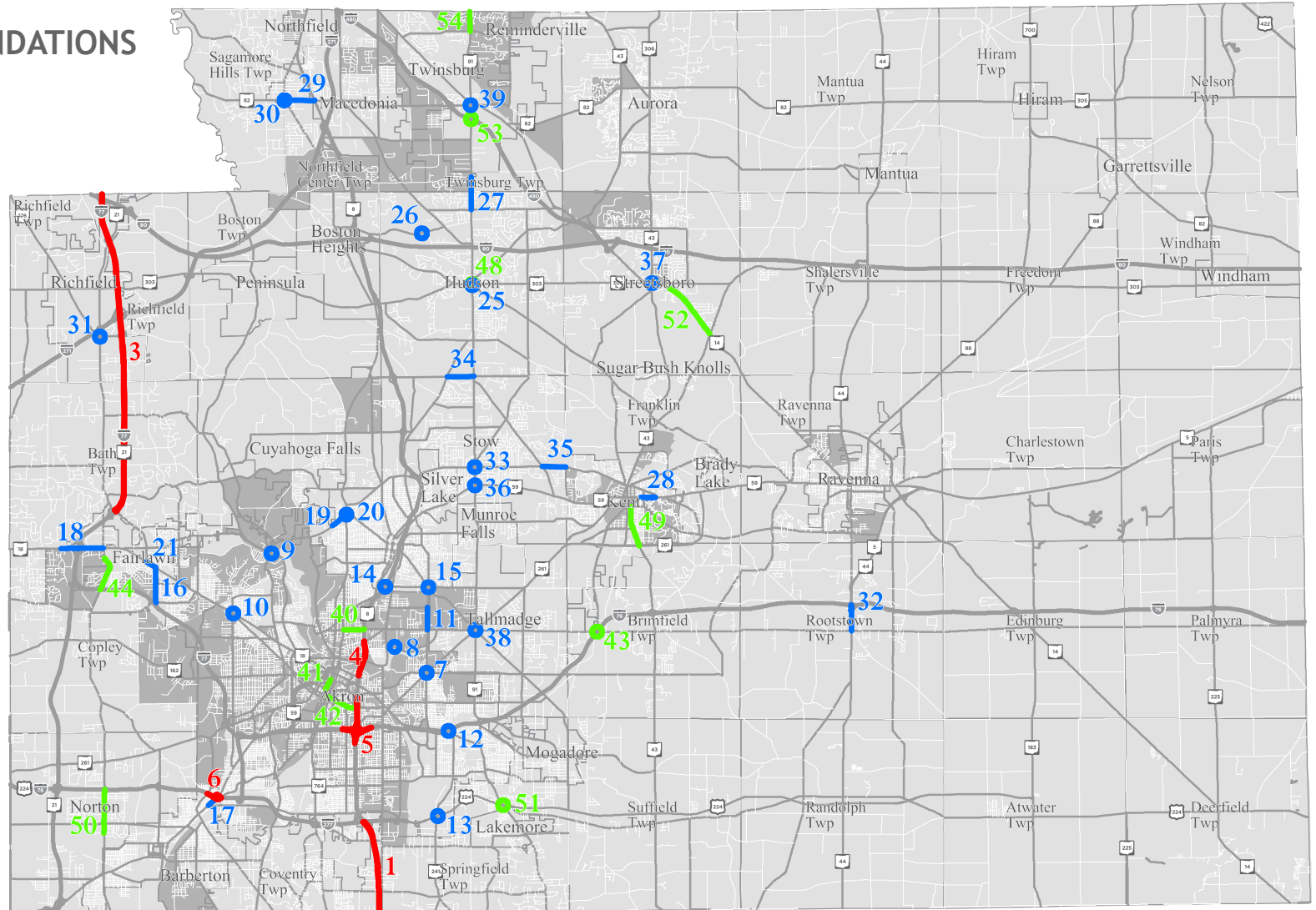
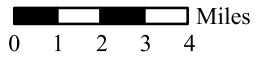
# MAP C-1 HIGHWAY RECOMMENDATIONS



## Highway Recommendations over Low Income Population by Census Block Group

- Freeway Recommendations
- Arterial and Intersection Recommendations
- Funded Recommendations (in TIP)
- Low Income Population Less than 26.80%
- Low Income Population 26.80% - 91.59%

# MAP C-2 HIGHWAY RECOMMENDATIONS



## Highway Recommendations over Minority Population by Census Block Group

- Freeway Recommendations
- Arterial and Intersection Recommendations
- Funded Recommendations (in TIP)
- Minority Population Less than 19.35%
- Minority Population 19.35% - 100%

## Environmental Impacts

According to the U.S. Department of Transportation, adverse impacts are defined as significant individual or cumulative negative human health or environmental effects, resulting from the implementation of federal, state, or local transportation policies, plans, or projects.

By reviewing environmental justice guidance developed by ODOT, the following 10 variables have been identified as a means of qualitatively evaluating the environmental impacts of projects in *TO2040* that are located in low-income or minority areas:

1. *Safety* - How will the project affect the relative safety of those using the facility and living in the target area?
2. *Pollution* - How will the project affect the overall air quality, water quality, noise level or soil quality of the target area?
3. *Natural Resources* - How will the project affect vegetation, streams, parks or other aspects of the natural environment in the target area?
4. *Aesthetics* - How will the project affect the appearance and physical attractiveness of the target area?
5. *Community Cohesion* - How will the project affect the identity and cohesiveness of the target area?
6. *Economic Vitality* - How will the project affect the economic health of the target area?
7. *Accessibility* - How will the project affect the level of access to, or from, the target area?
8. *Displacement of Businesses or Residents* - How will the project affect businesses, residents and institutions in the target area? Will it displace any of them?
9. *Traffic Congestion* - How will the project affect existing levels of traffic congestion?
10. *Equal Access to Improvement* - Will the overall benefits of the project be as available to residents of the target area as they will be to the region as a whole?

## ANALYSES

Two analyses were developed to evaluate the potential adverse human health or environmental impacts of projects in the *TO2040* upon minority population and low-income populations. These analyses examine: 1) the potential environmental impacts of projects; and 2) transportation accessibility in low-income and minority neighborhoods.

### Potential Environmental Impacts of Projects

Highway, public transportation, and transportation enhancement projects in *TO2040* were analyzed in order to determine potential impacts on low-income populations and minority populations.

AMATS has a “fix-it-first” preservation policy, focusing on preserving the existing transportation infrastructure rather than building new roads. The policy of prioritizing the preservation of the existing system is a result of deteriorating, aging infrastructure and rapidly increasing construction costs. The decrease in capacity expansion projects, such as new roads and road widenings, reduces the potential for negative adverse impacts.

The analysis of potential impacts was completed according to the following procedures:

**Step 1** - Projects were divided into two categories: 1) capacity projects; and 2) non-capacity projects. Non-capacity projects were exempted from further analysis because they are not expected to have any disproportionately high adverse human health and environmental effects on minority and low-income groups.

**Step 2** - Projects were then examined to determine whether they were located in or bordering on a census block group containing a regionally significant concentration of low-income or minority populations. Projects that were not located in or bordering on these areas were exempted from further environmental justice analysis. These block groups are shown on Maps C-1 and C-2.

The following project categories were exempted from further analysis because they are not expected to have any disproportionately high and adverse human



health and environmental effects on minority and low-income groups:

- Highway operational improvements
- Public transportation system preservation
- Pedestrian facilities / bicycle lanes
- Scenic/environmental enhancements

**Step 3** - The remaining categories were qualitatively evaluated as to their environmental impacts because they have the potential of disproportionately high and adverse human health and environmental effects on minority and low-income groups:

- Major capacity improvements
- Realignment or reconfiguration
- Public transportation system expansion
- Bikeway/Multi-purpose facilities

The potential environmental impacts of highway, public transportation and transportation enhancement projects are displayed in Table C-1. Projects that are expected to impact a variable in a positive manner are indicated by a “+.” Projects that are expected to impact a variable in a neutral manner are indicated by an “n.” Projects that could impact a variable in a negative manner are indicated by a “-.”

All of the projects shown in Table C-1 should be analyzed more closely as they move into the stages of development. Projects with potential negative impacts should be closely scrutinized as more detailed environmental analyses are completed. A determination can then be made as to whether negative impacts will be disproportionately borne by low-income or minority individuals or communities. Of the 54 highway projects recommended in *TO2040*, 29 are located in EJ areas. Seven of these highway projects must be analyzed. Of the 32 bike trail projects recommended in *TO2040*, 21 are located in EJ areas and must be analyzed.

Two analyses have been completed in order to determine the overall level of accessibility in low-income and minority neighborhoods. The first analysis focuses on the area’s highway projects. The second analysis focuses on the existing public transportation system. Transportation enhancement projects were exempted from the transportation accessibility analysis because these

projects are used mostly for recreational purposes and are difficult to analyze quantitatively.

### Highway Accessibility Analysis

The first step in the highway accessibility analysis was to identify a sample of six traffic analysis zones that represent low-income and minority neighborhoods: 1) East Akron; 2) West Akron; 3) North Akron; 4) Barberton; 5) Kent; and 6) Twinsburg.

The second step in the analysis was to identify traffic analysis zones that contain major activity centers. Altogether, 13 traffic analysis zones containing major commercial, industrial, medical, educational, transportation and recreational facilities were identified:

- |                                      |                           |
|--------------------------------------|---------------------------|
| 1. Akron-Canton Airport              | 8. Chapel Hill Mall       |
| 2. Downtown Akron Transit Center     | 9. Summit Mall            |
| 3. Akron Central Business District   | 10. Montrose              |
| 4. Akron City Hospital               | 11. Macedonia Commons     |
| 5. Akron General Hospital            | 12. University of Akron   |
| 6. Goodyear                          | 13. Kent State University |
| 7. Northeast Ohio Medical University |                           |

In the third step, the AMATS travel-demand model network, representing the highway system as it is planned to operate in 2022, was used to estimate the average travel time from each low-income and minority neighborhood to each of the 13 major activity centers. In order to provide a valid comparison, a similar analysis was conducted to estimate the average travel time to each major activity center from a sample of six traffic analysis zones, representing neighborhoods with below average concentrations of low-income and minority population: 1) Cuyahoga Falls; 2) Hudson; 3) Stow; 4) Green; 5) Macedonia; and 6) Aurora.

The results of the highway accessibility analysis are shown in Table C-2. According to this analysis, the highway projects in *TO2040* provide low-income and minority neighborhoods with slightly better accessibility to major activity centers located throughout the AMATS area, than non-low-income and non-minority neighborhoods. The average travel time to major activity centers is 16 minutes for low-income and minority neighborhoods, versus 20 minutes for non-low-income and non-minority neighborhoods.

Table C - 1  
**POTENTIAL ENVIRONMENTAL IMPACTS OF PROJECTS**

*POTENTIAL IMPACTS\**

<i>Project</i>	<i>From</i>	<i>To</i>	<i>Category</i>	<i>Location</i>	<i>Safety</i>	<i>Pollution</i>	<i>Natural Resources</i>	<i>Aesthetics</i>	<i>Community Cohesion</i>	<i>Economic Vitality</i>	<i>Accessibility</i>	<i>Displacement of Residents / Businesses</i>	<i>Traffic Congestion</i>	<i>Equal Access to Improvement</i>
I-77 / 76 / 277 / SR 8	Akron Beltway Project		Reconfiguration	Low Income / Minority	+	n	n	+	n	+	+	-	+	n
I-77 / SR 8	I-277	Carroll St	Reconfigure / Lane Add	Low Income / Minority	+	n	n	+	n	+	+	-	+	n
I-76 / US 224	State Rd / Wooster Rd		Reconfiguration	Low Income	+	n	n	+	-	n	+	-	+	n
SR 8	Howe Ave Interchange		Reconfiguration	Low Income / Minority	+	n	n	+	n	+	+	-	+	n
Cleveland-Massillon Rd	I-77	Bywood Ave	Capacity	Minority	+	-	-	n	n	+	+	n	+	n
Darrow Rd (SR 91)	Glenwood Blvd	North Corp Limit	Capacity	Minority	+	-	-	n	n	+	+	n	+	n
Howe Ave	Brittain Rd/ Northwest Ave		Reconfiguration	Minority	+	n	n	+	n	+	+	-	+	n
3 Creeks - Silver Creek Trail	Medina Line Rd	Robinson Ave (Towpath Trail)	Bike Trail	Low Income	+	+	n	+	+	n	+	n	+	n
Freedom Trail Phase 4	Towpath Trail	Freedom Trail Phase 3	Bike Trail	Low Income / Minority	+	+	n	+	+	+	+	n	+	n
Highbridge Connector Trail	Towpath Trail	Front Street Connector Trail	Bike Trail	Low Income / Minority	+	+	n	+	+	n	+	n	+	n
Liberty Trail	Post Rd	Cannon Rd	Bike Trail	Minority	+	+	n	+	+	n	+	n	+	n
Magic Mile (North)	Third St SW & Park Ave	Wooster Rd W & Robinson Ave	Bike Trail	Low Income	+	+	n	+	+	+	+	n	+	n
Magic Mile (West)	5th St & Park Ave	4th St & Wooster Rd W	Bike Trail	Low Income	+	+	n	+	+	+	+	n	+	n
Memorial Parkway Trail	Aqueduct St	Towpath Trail	Bike Trail	Low Income / Minority	+	+	n	+	+	n	+	n	+	n
Rubber City Heritage Trail	Towpath Trail	Englewood Ave	Bike Trail	Low Income / Minority	+	+	n	+	+	+	+	n	+	n
Spartan Trail (West)	Rubber City Heritage Trail	Springfield Lake	Bike Trail	Low Income	+	+	n	+	+	+	+	n	+	n
Spartan Trail (East)	Springfield Lake	Summit/Portage County Line	Bike Trail	Low Income	+	+	n	+	+	+	+	n	+	n
Arsenal S	Conrail Freedom Secondary	Rock Spring Rd	Bike Trail	Low Income	+	+	n	+	+	n	+	n	+	n
Conrail Freedom Secondary	Peck Rd	S Main St	Bike Trail	Low Income	+	+	n	+	+	n	+	n	+	n
Headwaters Bikeway	Aurora NCL	Mennonite Rd	Bike Trail	Low Income	+	+	n	+	+	+	+	n	+	n
Lake Rockwell Trail	Middlebury Rd / Portage Hike & Bike	Mantua St / River Bend Blvd	Bike Trail	Low Income/ Minority	+	+	n	+	+	+	+	n	+	n
Rock Spring Rd	Cable Line Rd	Newton Falls Rd	Bike Trail	Low Income	+	+	n	+	+	n	+	n	+	n
The Portage	Stow St	W Main St	Bike Trail	Low Income / Minority	+	+	n	+	+	+	+	n	+	n
Mogadore Lake	The Portage	Mogadore Lake	Bike Trail	Low Income / Minority	+	+	n	+	+	+	+	n	+	n
Esplanade Extension	Esplanade / Dix Stadium	Lakewood Rd	Bike Trail	Low Income	+	+	n	+	+	n	+	n	+	n
Franklin Connector Extension	Hudson Rd extension	Riverbend	Bike Trail	Low Income/ Minority	+	+	n	+	+	+	+	n	+	n
Railroad Trail Connection	Hudson Rd	Tinker's Creek, Portage Co. Line	Bike Trail	Minority	+	+	n	+	+	n	+	n	+	n
Magic Mile Towpath Connector	Towpath Trail	4th St	Bike Trail	Low Income / Minority	+	+	n	+	+	+	+	n	+	n

\* KEY: + denotes positive Impact, n denotes neutral impact and - denotes negative impact

Table C - 2  
**AVERAGE HIGHWAY TRAVEL TIME TO MAJOR ACTIVITY CENTERS**  
(in minutes)

Traffic Zone Number	Akron-Canton Airport	Downtown Akron Transit Center	Akron CBD	Akron City Summa Hospital	Akron General Hospital	Goodyear	Northeast Ohio Medical University	Chapel Hill Mall	Summit Mall	Montrose	Macedonia Commons	University of Akron	Kent State	OVERALL AVERAGE (minutes)
<b>Low Income or Minority Zones</b>	<b>22</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>22</b>	<b>14</b>	<b>17</b>	<b>18</b>	<b>23</b>	<b>13</b>	<b>19</b>	<b>16</b>
East Akron (zone 93)	14	7	7	5	8	3	17	9	15	16	24	6	17	12
West Akron (zone 181)	20	7	6	8	4	10	23	13	9	10	25	6	23	13
North Akron (zone 222)	18	6	4	5	5	9	21	6	12	14	20	5	18	11
Barberton (zone 259)	17	14	14	16	14	16	29	20	17	18	33	15	29	19
Kent (zone 718)	27	19	19	18	20	15	12	13	27	28	26	19	1	19
Twinsburg Twp (343)	38	28	26	25	28	29	27	23	23	22	7	27	23	25
<b>Non-Low Income and Non-Minority Zones</b>	<b>27</b>	<b>20</b>	<b>19</b>	<b>17</b>	<b>20</b>	<b>20</b>	<b>25</b>	<b>15</b>	<b>22</b>	<b>23</b>	<b>16</b>	<b>19</b>	<b>20</b>	<b>20</b>
Cuyahoga Falls (zone 302)	21	11	9	8	11	12	22	6	14	16	18	10	17	13
Hudson (zone 368)	32	22	20	19	22	22	25	17	25	24	11	20	17	21
Stow (zone 375)	25	15	13	12	15	16	21	10	20	22	17	14	10	16
Green (zone 447)	7	15	15	14	17	14	27	19	23	24	32	15	27	19
Macedonia (zone 568)	35	25	24	22	25	26	31	10	20	19	3	24	27	22
Aurora (zone 612)	42	32	30	29	32	33	27	27	33	32	15	31	23	30

## Public Transportation Accessibility Analysis

It is AMATS' goal that the regional transportation system provides adequate mobility for all persons. Public transportation is especially important in low-income and minority communities, which often lack adequate access to employment opportunities, retail, recreational and social/cultural activities. In 2016, the *AMATS Regional Public Transit Plan* analyzed the overall level of accessibility that the existing public transit network offered to the Greater Akron area and specifically to low-income, minority, elderly and disabled persons in the region. Those results were used to analyze public transportation accessibility in *TO2040*.

The first step in the public transportation accessibility analysis determined the percentage of the total population in Summit and Portage counties living within a 0.25 mile walking distance of existing fixed route transit service. The second step of the analysis determined the percentage of minority population and low-income population living within a 0.25 mile walking distance of existing fixed-route transit service. The third step compared the percentage of minority population and low-income population to the percentage of the total population having access to fixed-route transit service.

The definition of low-income used for the *AMATS Regional Public Transit Plan* is a household income at or below 150 percent of the poverty level. Based on 2010 Census data, this threshold would be set at \$34,999 or below. Data were collected at the block group level for low-income and minority populations. Data illustrating the distribution of those with disabilities was only available at the county level at the time of the analysis.

The results of the transit accessibility analysis are shown in Table C-3. According to this analysis, a greater percentage of minority and low-income groups in both Summit County and Portage County have access to fixed-route transit service than the general population.

In Summit County, 78.9 percent of the minority population lives within walking distance to fixed-route transit service, as compared to 52.6 percent of the total population. The total number of low-income population in Summit County within walking distance of fixed-route transit service is 72.4 percent.

In Portage County, 55.8 percent of the minority population lives within walking distance of fixed-route transit service, as compared to 21.4 percent of the total population. The total number of low-income population in Portage County that lives within walking distance of fixed-route transit service is 47 percent.

Many low-income and minority individuals rely on public transportation to access employment opportunities. Both METRO and PARTA work diligently to provide transit service to key employment zones throughout the AMATS region. Both agencies speak regularly with local employers and attempt to not only serve businesses with transit service, but to coordinate bus runs with shift start or ending times. AMATS encourages coordination between employers and local transit providers to increase the access of low-income and minority individuals to concentrated employment destinations.

Most of the areas with the greatest concentrations of employment are accessible through fixed-route transit. In Akron, the Downtown, Montrose, Market Street and South Arlington Street corridors have among the highest concentrations of employment in the AMATS region, and also enjoy the most frequent transit service available. Other cities with major employment centers, such as Barberton, Cuyahoga Falls, Hudson, Kent and Ravenna have varying degrees of fixed-route transit service.

Notable gaps in transit service to key employment areas are found in Aurora, portions of Green and Streetsboro, the Village of Mantua and Copley Township. The Village of Richfield and the cities of Streetsboro, Twinsburg and Macedonia have very large employment concentrations, but are only served by infrequent express or commuter bus routes. Each of these communities could benefit from more regular transit or new transit service to connect the region's employment base to these key employment zones. The *AMATS Regional Public Transit Plan* analyzes and discusses these issues more fully.

**Table C - 3  
TRANSIT ACCESSIBILITY ANALYSIS  
FIXED ROUTE TRANSIT COVERAGE IN THE AMATS AREA**

Population Group	Summit County			Portage County		
	Total	Total Covered by Transit	% Covered by Transit	Total	Total Covered by Transit	% Covered by Transit
Total Population	542,600	285,373	52.6%	162,235	34,735	21.4%
Minority Population	107,179	84,592	78.9%	10,082	5,624	55.8%
Low Income Population	125,606	90,908	72.4%	25,943	12,204	47.0%

Source: 2014 American Community Survey (ACS)

Notes:

A full discussion of transit coverage and performance can be found in the AMATS Regional Public Transit Plan - November 2016

Fixed route transit service in Summit County is provided by METRO RTA. PARTA provides transit service in Portage County.

### Non-Motorized Transportation Accessibility Analysis

Low-income and minority neighborhoods benefit greatly from non-vehicular modes of transportation. Walking and bicycling are free or low cost, have few negative externalities (noise, air and other pollution, congestion, etc.) and produce positive health benefits. For short-distance trips in compact neighborhoods, these modes may actually prove the most efficient. These transportation modes are available on-demand. Rather than being constrained by a bus schedule or waiting for a ride in an automobile, a person can bicycle or walk at will.

In recent years, AMATS has focused on non-motorized transportation modes and is committed to building a network that allows all residents to travel safely between key regional communities and destinations. Further discussion and analysis of non-motorized transportation can be found in the *AMATS Pedestrian Plan* (December 2015), *Bike Plan* (July 2016), *Mid-Block Crossing Analysis* (December 2014) and *Road Diet Analysis* (May 2015). It remains AMATS' policy to integrate multiple modes of travel and to develop complete streets through its Connecting Communities Initiative and funding policies.

### Bicycle

Thirty percent (10 of the 33) of the bicycle recommendations listed in *TO2040* are located in, or next to, above average low-income or

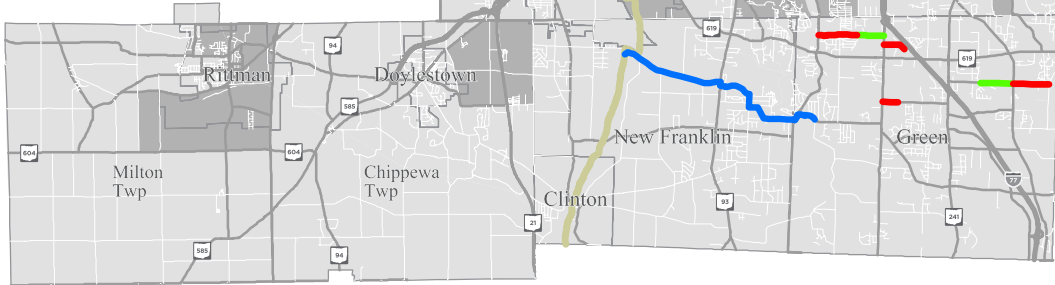
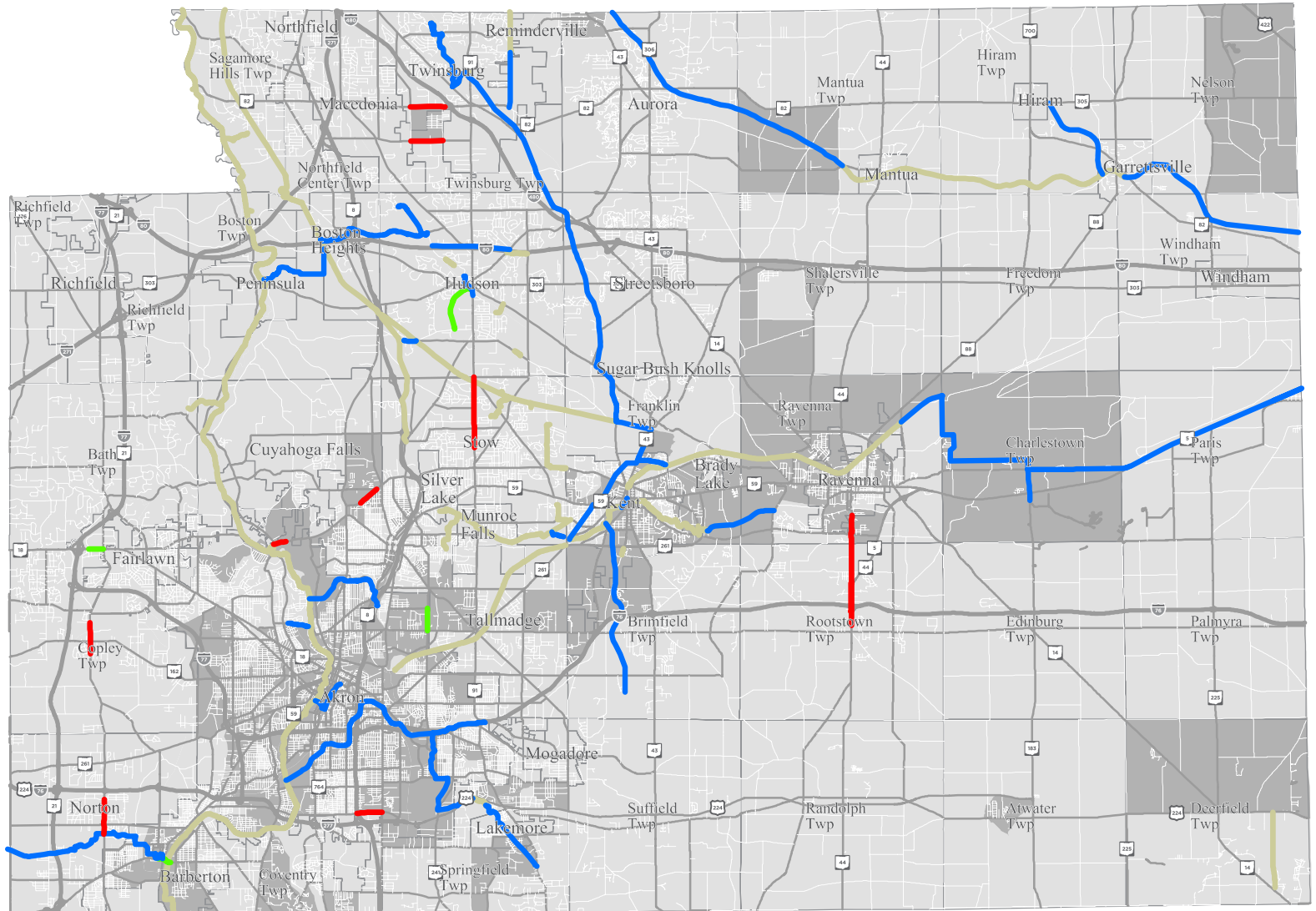
minority census block groups. Multi-purpose trails are included in the recommendations, and have the additional benefit of serving pedestrians as well as bicyclists. Maps C-3 (for low-income) and C-4 (for minority) show the bicycle recommendations in relation to these block groups.

### Pedestrian

Of the 17 total pedestrian recommendations in *TO2040*, five (29 percent) are located in, or next to, above average low-income or minority census block groups. In addition to these pedestrian recommendations and the multi-purpose trail recommendations, it should be noted that most of the above average low-income and minority block groups are located in the highest density communities within the AMATS area. These areas are currently served well by existing sidewalks, crosswalks and other pedestrian infrastructure. Maps C-3 (for low-income) and C-4 (for minority) show the pedestrian recommendations in relation to these block groups.

# MAP C-3 BIKE & PEDESTRIAN RECOMMENDATIONS

0 1 2 3 4 Miles

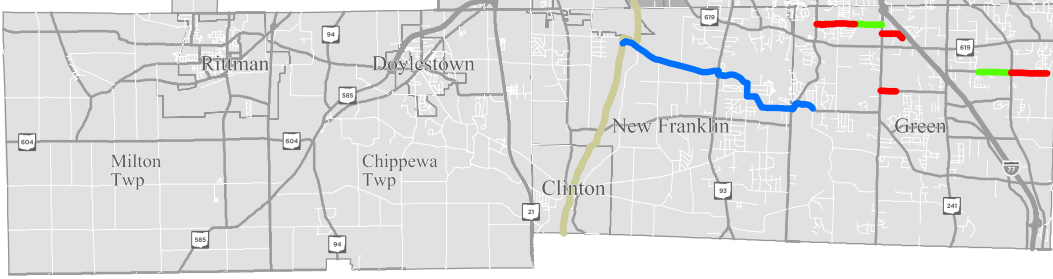
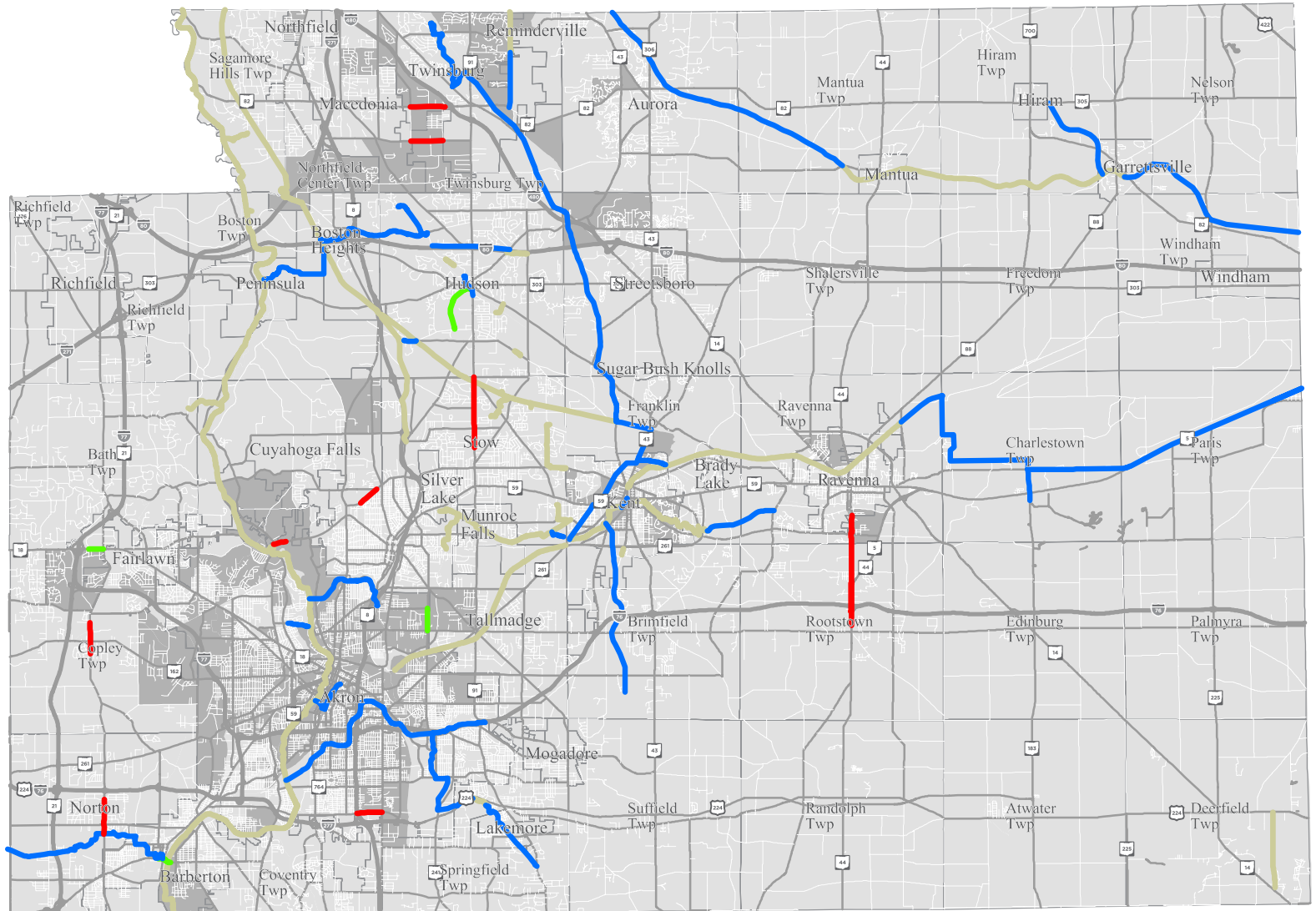


## Bicycle & Pedestrian Recommendations over Low Income Population by Census Block Group

- Sidewalk Recommendations
- Trail Recommendations
- Funded Recommendations (in TIP)
- Existing Trails
- Low Income Population Less than 26.80%
- Low Income Population 26.80% - 91.59%

# MAP C-4 BIKE & PEDESTRIAN RECOMMENDATIONS

0 1 2 3 4 Miles



## Bicycle & Pedestrian Recommendations over Minority Population by Census Block Group

- Sidewalk Recommendations
- Trail Recommendations
- Funded Recommendations (in TIP)
- Existing Trails
- Minority Population Less than 19.35%
- Minority Population 19.35% - 100%

## CONCLUSION

In keeping with the environmental justice requirements of Presidential Executive Order #12898, *TO2040* has been analyzed to ensure that the projects will not have disproportionately high and adverse effects on low-income and minority groups.

The two analyses completed for this Environmental Justice Analysis are summarized below:

### Potential Environmental Impacts of Projects

- None of the projects in *TO2040* appear to have any fatal flaws from an environmental justice standpoint.
- It is recommended that all of the projects shown in Table C-1 be analyzed more closely as they move into future stages of development.
- Projects which were shown to have potential negative impacts should be closely scrutinized as more detailed environmental analyses are completed, in order to determine whether these negative impacts will be disproportionately borne by low-income or minority individuals or communities.

### Transportation Accessibility in Low-Income and Minority Neighborhoods

- Highway projects in *TO2040* provide low-income and minority neighborhoods with adequate and equitable accessibility to major activity centers located throughout the AMATS area.
- Low-income and minority groups in both Summit and Portage counties are well served by public transportation, having greater access to fixed-route transit service than the general population.
- Low-income and minority groups in both Summit and Portage counties currently have good access to existing bicycle and pedestrian facilities, including sidewalks and crosswalks. Furthermore, *TO2040* recommends additional improvements.

## REFERENCES:

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; Federal Register, vol. 59 no. 32, February 16, 1994.

DOT Order on Environmental Justice to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2(a)); May 2, 2012.

FHWA, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, (Order 6640.23A); June 14, 2012

FTA Circular 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients, August 15, 2012

ODOT Guidance and Best Practices for Incorporating Environmental Justice into Ohio Transportation Planning and Environmental Processes, June 2016

Title VI Requirements in Metropolitan and Statewide Planning

Title VI of the 1964 Civil Rights Act

Title 23 of the U.S. Code (U.S.C.), Section 109(h)

Title 49 of the U.S. Code of Federal Regulations, part 21 (Department of Transportation Regulations for the implementation of Title VI of the Civil Rights Act of 1964

The Americans with Disabilities Act (ADA) of 1990, as amended

Title 29 of the U.S. Code of Federal Regulations, part 1605.1

Ohio Administrative Code § 123:1-49-02

Ohio Revised Code § 4112.02