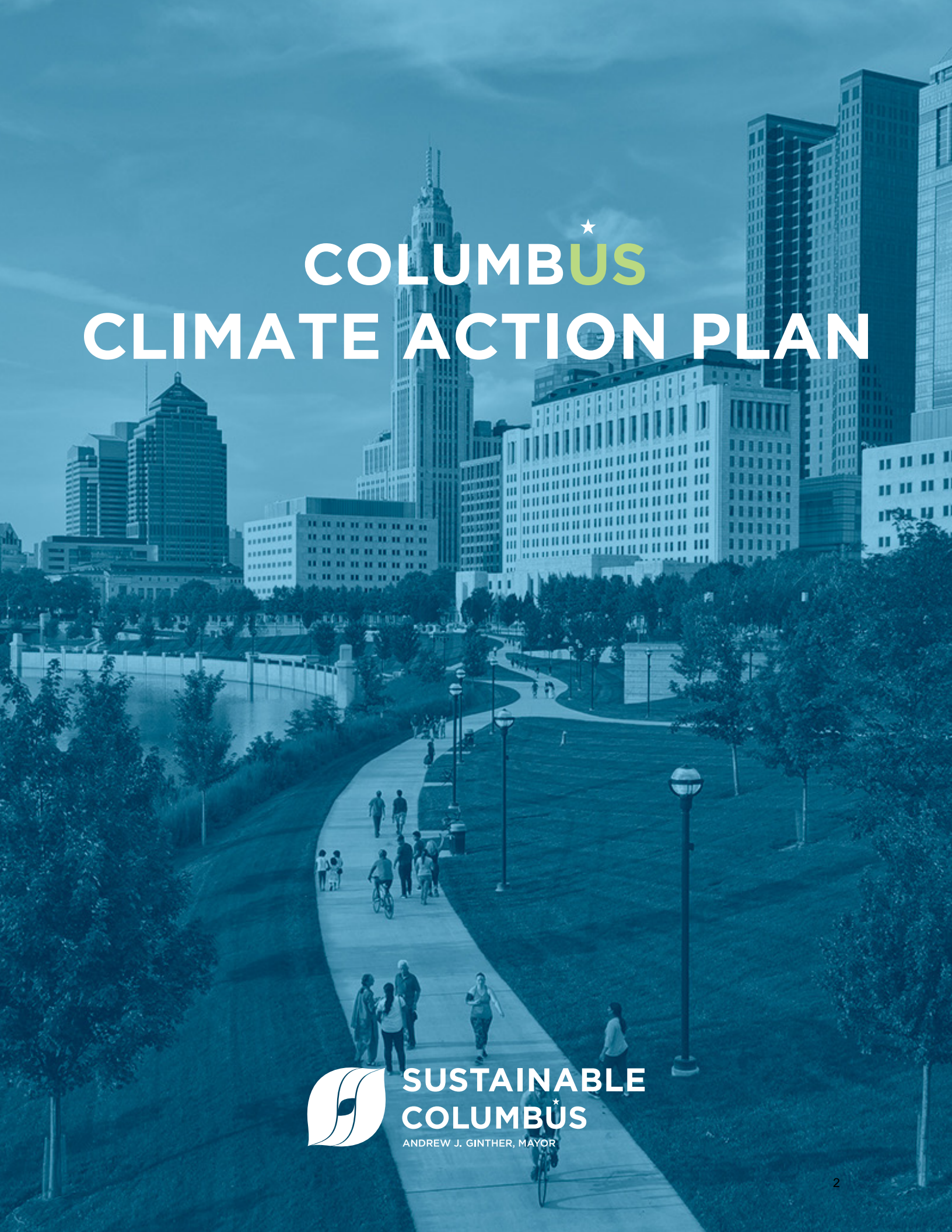
Attachment 9

- Climate Action
  - Columbus Climate Action Plan, excerpt.....2
    - Attachment includes Acknowledgments, Table of Contents, Introduction, Executive Summary, Section 5 – Implement Land Use Planning Strategies for Healthy Ecosystems, and Section 11 – Support Equitable Mode Shift
    - More information on the CAP, as well as the full document itself, is available online at: https://www.columbus.gov/sustainable/cap/
  - COTA Sustainability Plan.....28
  - MORPC Metropolitan Transportation Plan 2020-2050, excerpt.....37
    - Attachment includes Chapter 6 – System Development
    - More information on the MTP 2020-20250, as well as the full document itself, is available online at: https://www.morpc.org/2020-2050-metropolitan-transportation-plan-mtp/

Application materials are also available online at:

https://www.morpc.org/west-broad-street-brt-corridor-tod/



COLUMBUS CLIMATE ACTION PLAN

SUSTAINABLE COLUMBUS

ANDREW J. GINTHER, MAYOR

ACKNOWLEDGMENTS

This plan would not be possible without the many people and organizations whom contributed to make this a community-wide plan for a better future in Columbus.

CITY OF COLUMBUS LEADERSHIP

Mayor Andrew J. Ginther / Tracie Davies, Director, Public Utilities / Bryan Clark, Deputy Director, Sustainable Columbus / Alana Shockey, Assistant Director, Sustainability / Erin Beck, Assistant Director, Sustainable Columbus / Councilmember Emmanuel Remy

COLUMBUS CLIMATE COMMITMENTS WORKING GROUP

Mandy Bishop / Anthony Celebrezze III / Thomas Diamond / Troy Euton / Robert Ferrin / Michael Fielding / Christopher Lohr / Rory McGuiness / Jeffrey Ortega / Kathy Owens / Samantha Schneider / Robert Stewart / Jenna Tipaldi

COMMUNITY STAKEHOLDERS

All residents, business and organization representatives, regional partners, workshop participants and survey respondents.

IMAGE CREDITS

All photographs that do not list source information are the property of the City of Columbus.

CONSULTANTS

ARUP MKSK

Completed and published December 2021.

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INTRODUCTION

A MESSAGE FROM THE MAYOR

Dear Neighbors:

In 2020, I put forth the vital goal of becoming a carbon neutral Columbus by 2050, ensuring that we do our part to combat global climate change. Shortly after announcing this commitment, our community, along with the rest of the world, was dramatically impacted by the devastating effects of a historic pandemic.

COVID-19 made hardships and inequities in our systems and institutions more severe and apparent, clearly demonstrating that access to opportunity and resources is not evenly distributed. It underscored the pressing need to take thoughtful, deliberate action on climate change and to promote environmental justice across all our neighborhoods.

Our most vulnerable residents are already being affected by a changing climate. Extreme temperatures lead to higher energy bills and frequent home repairs. Heavy rains cause worse flooding, inside and out. And more 90-plus degree days create air quality concerns for children fighting asthma and increase the potential for heat stroke and other health concerns among those who lack access to cooling.

I am proud that our city has continued to pursue meaningful reforms despite the unprecedented challenges stemming from the pandemic.

We implemented Clean Energy Columbus, our city's 100% clean energy aggregation initiative, ahead of schedule. Residents are already receiving energy from Ohio-based wind and solar sources – a tremendous leap toward achieving our 2050 carbon neutrality goal.

Now, it is my pleasure to introduce the Columbus Climate Action Plan, the roadmap by which we will realize our goal of becoming fully carbon neutral. This plan would not have been possible without the input and dedication of city staff and partners, environmental specialists and advocates, business and industry leaders, and, mostly importantly, our residents.

The Columbus Climate Action Plan outlines how to reduce harmful greenhouse gas emissions and pollutants, and ensures that we eliminate the environmental racism that has plagued our most vulnerable communities for far too long. It also emphasizes the need to build a Columbus that is resilient to global climate change while mitigating future risks. The threat is clear. The stakes are high. And our obligation to our children, and their future, compels us to act now. We owe it to our city, our region, our country and, indeed, our world.

I invite you to read this plan and join our movement to build a stronger, more equitable and more sustainable Columbus.

Sincerely,

The Honorable Andrew J. Ginther
Mayor, City of Columbus

COMMUNITY PARTNER'S MESSAGE

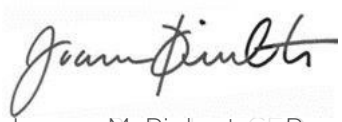
To our Columbus Community:

It's clear that fighting climate change is among the defining issues of our time. Our Columbus community is experiencing its effects and increased heat and rain is putting our health and economic prosperity at risk. In particular, it is our communities of color, low-income populations, and residents in our Opportunity neighborhoods who are being impacted by climate change and are most at risk of future impacts.
All of us will need to do our part to ensure environmental and racial justice, so we can protect the long-term vitality of our planet, and most importantly our Columbus community.

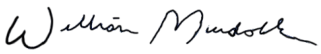
That's why we support Mayor Andrew J. Ginther's goal for our community to be carbon neutral by 2050, while making significant emissions reductions by 2030 all while imparting equity and environmental justice along the way.

As organizations that have worked with the City of Columbus on this landmark Climate Action Plan, we intend to continue our leadership on these important issues. We are committed to working in partnership with the City, along with other organizations, stakeholders, and residents to achieve the ambitious equity and climate goals.

We all need to do our part. Let's get to work.



Joanna M. Pinkerton, President/CEO
Central Ohio Transit Authority



William Murdock, Executive Director
Mid-Ohio Regional Planning Commission

Jordan Davis, Director
Smart Columbus

Ty Marsh, Executive Director
SWACO, From Waste to Resources

45%

GREENHOUSE GAS EMISSIONS REDUCTION BY 2030

100%

GREENHOUSE GAS EMISSIONS REDUCTION BY 2050

EXECUTIVE SUMMARY

Columbus' Climate Action Plan (CAP) is a coordinated, living document to ensure the City is doing its part to combat the effects of climate change while imparting equity and environmental justice to disproportionately affected community members. Summer heat emergencies, more frequent flooding, and increasingly stronger storms are stressing infrastructure, endangering human life and increasing the cost of living in Columbus.

The global climate crisis requires structural and individual changes that our future generations deserve - shifting how we produce energy, gather food, move ourselves around and construct buildings. Through cooperation, moving beyond competition and control, we must build a large, powerful team working to achieve positive outcomes for all.

Following the federal announcement that the United States was withdrawing from the Paris Climate Agreement in 2017, Mayor Ginther committed Columbus to the Global Covenant of Mayors for Climate & Energy and announced our community's **2050 carbon neutrality goal** at the February 2020 State of the City. The timeline and commitments of this Plan align Columbus to be on track with the Paris Climate Agreement. The scientific findings from the latest Intergovernmental Panel on Climate Change (IPCC) demonstrate how crucial it has become to implement climate action that will limit global temperature rise to 1.5° Celsius by 2050 from pre-industrial levels. The CAP will encompass near-term actions and more broadly defined long-term strategies to achieve carbon neutrality from municipal and community sources.

Columbus has been able to leverage progress from the Bloomberg Philanthropies American Cities Climate Challenge and U.S. Department of Transportation's first Smart City Challenge grants laying the groundwork for further engagement and successful partnerships. As a rapidly growing Midwest city and the 14th largest city in the United States, the commitment to carbon neutrality is an ambitious undertaking that must be implemented through focused acceleration.

The CAP lays out a thoughtful set of actions that the City government, private businesses, organizations and residents can implement to significantly reduce the community's greenhouse gas (GHG) footprint, while also creating a more equitable and resilient community. The five sections of the CAP outline **13 strategies** that have **32 quantifiable actions**. The leadership from Sustainable Columbus and the City's Columbus Climate Commitments Working Group appointed by the Mayor have been integral in the plan development, and continued engagement will be needed to adjust targets for technology advances, public receptivity and market conditions.

Movements are often focused on what we are against, this is Columbus' opportunity to embrace a climate change agenda centered on the *yes*. Yes to creative ideas, yes to including more diverse voices than just our own, yes to sharing all our success stories, yes to implementing equitable solutions, and yes to building local resilience. The CAP development is carefully balanced between the actions necessary to reduce GHG emissions while implementing preventative measures for vitality, livability and prosperity of the Columbus community.

LEADING WITH EQUITY

"Most people don't feel safe. It's hard to simply exist outside in our natural environment."

"All I remember is going outside every morning and smelling burnt plastic. I don't know what it was but it was terrible to breathe in day after day."

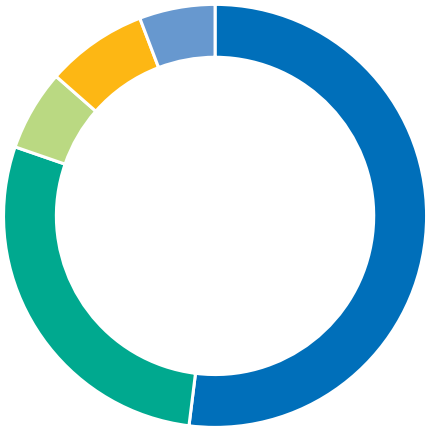
Focus Group Participants & Columbus Residents, Equity Capacity Building with CommEN Strategies

Impacts of climate change are being felt daily by residents throughout Columbus. As our community faces increasingly hotter days and stronger, more frequent rainstorms, our communities of color and marginalized communities are most at risk. A variety of terms are frequently used in reference to racially, ethnically and income diverse communities, such as communities of color, Black and Brown communities, and Black Indigenous People of Color (BIPOC). We have chosen to use the term communities of color, but recognize the importance of other inclusive terms.

A recent U.S. EPA report quantified climate change impacts, at a national level, on these marginalized communities should global temperatures continue to rise. The report showed that people of color are most likely to live in areas that will be impacted most by climate change. Black and African American individuals are 40% more likely to live in areas with the highest projected increase in mortality rates due to climate-driven extreme temperatures, and 34% more likely to live in areas with the highest projected increase in childhood asthma due to climate-driven air pollution. Hispanic and Latino individuals live in areas with the highest projected labor hour losses in weather-exposed industries due to more frequent climate-driven hot days with high temperatures.

Columbus' 2020 census population passed 900,000 residents for the first time - an increase of over 15% in the past decade. Within that growth comes significant growth in the Black, Asian, and Latino community, all of which underscores the significant urgency and need to center equity and environmental justice in how our community achieves our climate action goals. We must go beyond GHG emission reductions to ensure our marginalized communities have the resources, programming, and supports in place to improve their quality of life now and into the future.

RACIAL DEMOGRAPHICS OF COLUMBUS, OHIO



Source: U.S. Census 2020

EQUITABLE ENGAGEMENT AND TRANSPARENCY

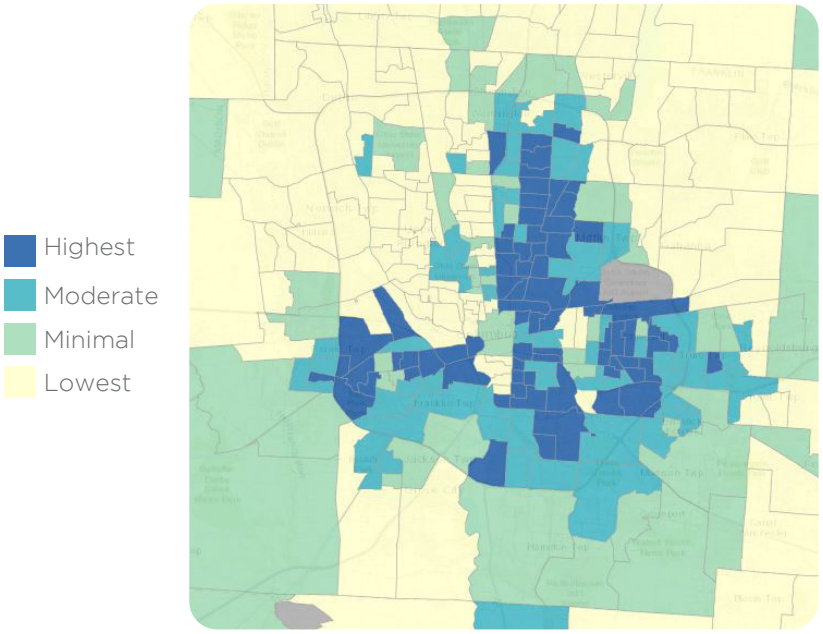
Conducting equitable engagement with diverse voices and clearly outlined procedures for input and influence is necessary in breaking down systematic inequality that is exacerbated by the impacts of climate change. Adapted from the C40 Inclusive Community Engagement global strategy, the CAP intends to strive to meet the following practices:

- Center on equity, diversity, and inclusion
- Build community capacity through engagement
- Partner with residents and community groups to deliver meaningful change

Identifying marginalized groups, and the issues most important to them is imperative to understanding the value of implementation. Assessing these sectors of the population that are at risk and working to reduce any unforeseen negative impacts from proposed actions is a direct outcome from intentional planning and proper implementation.

Teams working to implement strategies and actions from the CAP can utilize tools that may help to provide an evaluation within a local context, such as the Center for Disease Control (CDC) Social Vulnerability Index which evaluates populations that have special needs or disabilities, lack access to vehicles, have limited English proficiency and/or live in crowded housing down to census tracts.

COLUMBUS REGION SOCIAL VULNERABILITY INDEX



Source: 2018 Social Vulnerability Index Map, CDC.gov

COMMUNITY ENGAGEMENT

Due to centering equity and environmental justice, community engagement is and will be critical to the ongoing success of the CAP. Stakeholder engagement groups and community input have been coordinated throughout the CAP process. While the Covid-19 pandemic did cause a shift from in-person to virtual sessions during the first phase, additional efforts were added to increase feedback from the community.

Several methods of input were used to engage with the community. Virtual meetings, downloadable Meeting Toolkits, and a Consider.it website were avenues for residents to voice feedback and the City received nearly 850 comments. A virtual Public Hearing held with Councilmember Emmanuel Remy, Chair of the Environment Committee, also drew large engagement, with 18 public speakers.

Overwhelmingly, community feedback demonstrated care and urgency around climate action, asking for the plan to do more, and do it faster. The second phase of the project took that to heart and pushed significantly harder on the ambition and timelines of the short-term strategies and 2030 target.

Some community feedback highlights from the CAP Consider.it website-based feedback are shared here. Further details on the engagement process can be found in Appendix B.

"Sustainability can help businesses reduce costs and differentiate themselves in the market - helping them recover faster! But, paying for the technical assistance or infrastructure changes to become more sustainable isn't something many small organization can afford, especially now."

10 VIRTUAL MEETINGS

"To empower means to provide power - including residents in every step of the plan (giving them not just a seat at the table to observe but to actively participate), complete a comprehensive community needs and asset assessment to ensure our plans fit the communities priorities AND the science, and fund/ support resident-led climate initiatives to ensure resident ownership of the CAP."

18 PUBLIC HEARING SPEAKERS

"Building a wide coalition of environmentally-conscious business partners, ranging from blue chip organizations to small business owners to strengthen legitimacy. Take a similar approach with residents, mobilizing inner-city and suburban residents across demographic lines - make it deeply and abundantly visible that climate change is everyone's imperative and not the luxury of an 'elite' group that's 'not like me.' "

850 DRAFT PLAN COMMENTS

BUILDING ON EXISTING FOUNDATIONS

The City of Columbus has been working to reduce its municipal GHG emissions since 2005 with environmental policies that have been memorialized in a series of green memos updated on a five-year schedule to push future goals. The first community-scale GHG inventory tracking began in 2013.

Columbus' city limits have greatly expanded through annexation over the past century, and have created many inter-jurisdictional relationships as people live, work and play across a wider regional context. Columbus has been a signatory of Mid-Ohio Regional Planning Commission's (MORPC) Sustainable 2050 program since 2017, to spur collaboration with neighboring counties, townships and smaller incorporated cities on shared goals.

Existing plans, grant awards, studies and progress reports from City departments and community organizations were reviewed to inform emissions forecasting and climate action target development. Highlights of these findings are outlined in Energy, Transportation, Waste, and Water sections below.

HIGHLIGHTS

- Long-term political commitments to take action and set climate change goals are established.
- Short-term planning for Smart Columbus and American Cities Climate Challenge have accelerated climate action resources, particularly around buildings & transportation.
- Ensuring prioritization of equitable implementation and impact should be first and foremost in all climate policies yet to be developed.
- Current climate, environmental conditions, and socioeconomic status have previously been assessed.
- Strategic partnerships are outlined for energy and transportation.
- General education and robust outreach communication will be needed across all initiatives.

ENERGY

The American Cities Climate Challenge (ACCC) and initial Smart Columbus grant have positioned Columbus to have greater traction on the residential, commercial and industrial energy sectors. Both of these accelerator grant initiatives have provided resources such as premier technical support, funding for project implementation, and support for full-time staff to manage projects. Each has demonstrated success through this structure, expanding the impact and reach in the community.

In spite of the pandemic challenges in 2020, Sustainable Columbus was able to pass the first Energy and Water Transparency Benchmarking Ordinance in Ohio and pass a ballot measure with nearly 80% approval of residents for a 100% Ohio-based clean energy Community Choice Aggregation (CCA). These strong regulatory measures will contribute significantly to GHG reduction in the energy sectors.

Clean Energy Columbus was established in June 2021 with Columbus based AEP Energy as the program's supplier. The program provides 100% Ohio-based wind & solar to power homes and small businesses, competitive rates, and community benefits such as jobs and planned energy efficiency programming for residents impacted most by climate change.

Columbus was also able to reach a third milestone by reaching the target of 30,000 home energy audits over two years. Homes with high energy burden were prioritized to assist residents struggling with high utility costs to find solutions.

In the private sector, the expansion of Smart Columbus to focus on sustainability helped lead to the creation of Clean Energy Partners, who will now provide services to assist private businesses, non-profit organizations and other large energy users (who are not eligible for the City's aggregation program) with 100% renewable-focused custom energy solutions.

Image Source: Smart Columbus

The Smart Columbus Experience Center provided a hands on EV showroom for the Columbus community.

TRANSPORTATION

The original inception of Smart Columbus as a clean transportation initiative provided great momentum for the City to be nationally recognized for new pilots and programs. As a large city without rail or train mass transit options, the difficulty of transitioning transportation emissions is no small challenge. The continuation of Smart Columbus as a non-profit entity focused on the nexus of innovation, digitalization, sustainability, and community good, can build on previous work and will be a key partner for assisting in reaching CAP goals.

Electric vehicle (EV) purchasing has been increasing, car dealerships are engaging in electrified dealer programs and thousands of residents are test driving or riding along in EVs. Many of the pilot outreach programs will not have quantifiable impacts measured in the CAP, but provide valuable groundwork for these major behavioral changes.

Another key effort and opportunity moving forward will be the LinkUS Initiative which seeks to provide a complete mobility system along key regional corridors, including high capacity and advanced rapid transit, technology solutions, bicycle and pedestrian improvements, and land use changes. LinkUs is a collaborative initiative co-sponsored by the City of Columbus, Central Ohio Transit Authority (COTA), MORPC, and the Franklin County Board of Commissioners. Aligning this initiative with the strategies and goals of the CAP will provide a path to success in reducing transportation related emissions.

WASTE

The regional SWACO Solid Waste Management Plan (SWMP) was written before Chinese tariffs upended global recycling practices, which had an impact on plastic and glass diversion rates. Approximately 70% of all plastic recycling from the US was being sent to China prior to the ban, and the global flow of scrap commodities have disrupted prices. The SWMP had already been outlining the need for new policies to ensure waste management practices are able to keep pace with expected population growth in Columbus, and now there may be higher costs to manage the waste stream as well.

Organic waste that decomposes in a landfill emits large quantities of methane, a more intense GHG than carbon dioxide. There are locations now looking closer at energy production from waste to energy, but burning plastics can have harmful air-borne chemical releases from mercury and lead that impact surrounding communities. Prioritizing education and outreach plans collaboratively with SWACO will be mutually beneficial to the CAP and overall region.

WATER

Community feedback, specifically including engagement with our marginalized community members, has demonstrated the importance of access to safe, clean drinking water. For those reasons, protecting our watersheds and maintaining and improving water infrastructure has been a priority for the City of Columbus for many years.

Image Source: SWACO

The Sustaining Scioto regional plan outlines a strategy to mitigate threats and vulnerabilities to the watershed water quality. The plan outlines short-term (2015-2025) and mid-term (2026-2045) strategies that the CAP aligns with for implementation within the City limits.

Through the Public Utilities department, Columbus has implemented a first-of-its-kind green sanitary sewer mitigation program called Blueprint Columbus. Infrastructure for sanitary sewers are chronically stressed in cities throughout the United States, and Columbus is poised to see stronger, more frequent rain events due to climate change. Rather than continually building larger pipes, Columbus is undertaking a proactive approach to install rain gardens that naturally manage weather events, rehabilitate aging pipes for longevity, and utilize residential sump pumps to prevent unnecessary demands on the sewer system.

5

IMPLEMENT LAND USE PLANNING STRATEGIES FOR HEALTHY ECOSYSTEMS

As the city human population grows, balanced planning decisions become even more important

5.1 INCREASE DEVELOPMENT DENSITY

STRATEGICALLY MANAGE POPULATION GROWTH TO MINIMIZE CLIMATE IMPACT

Denser development of the built environment with safe multi-modal access to jobs, schools, goods and services and recreation must achieved in response to the growing population. Employment centers throughout the city must have transit connectivity and infrastructure to support safe walking and bicycling. These future developments must also ensure that a diverse representation of the community are included in early planning processes.

Redevelopment of vacant and infill properties often results in locations that already have access to transit and human powered transport options, and also will reduce pressure on undeveloped areas, preserve natural spaces and provide areas for urban farming and outdoor recreation.

Image Source: Franklinton Farms

TARGETS
Establish vacant property redevelopment targets by 2025
40% of new housing is within 1/4 mile of employment centers by 2030
60% of new housing is within 1/4 mile of employment centers by 2050

GHG IMPACT	
2030 Reduction	Low - 11,088 MT
2050 Reduction	Med - 20,284 MT

AGENCIES INVOLVED	
Lead Agency	Building and Zoning
Implementing Partners	Public Service, Planning

EXPECTED BENEFITS
Climate Justice
some
Environmental Quality
some
Human Health
moderate
Economic Prosperity
moderate

5.2 LED STREETLIGHT RETROFITS

INVESTMENT IN FIXTURE UPGRADES HAS POSITIVE ENVIRONMENTAL, SOCIAL AND FINANCIAL BENEFITS

Lighting represents a significant portion of the City's municipal greenhouse gas emissions, and provide a vital safety service for the community. New light emitting diode (LED) lamps are now available in environmentally friendly color rendering indexes, provide longer lamp life for reduced maintenance, and typically reduce energy consumption of each fixture by at least 70%.

City implementation plans will prioritization this investment as existing fixtures reach end of life. The longer useful life and reduced maintenance hours will allow resources to be redistributed.

Image Source: MKSK

TARGETS
100% LED streetlights by 2030

GHG IMPACT	
2030 Reduction	Low - 8,572 MT
2050 Reduction	Low - 129 MT

AGENCIES INVOLVED	
Lead Agency	Public Utilities
Implementing Partners	AEP Ohio, Public Service, Finance, Technology

EXPECTED BENEFITS
Climate Justice
moderate
Environmental Quality
major
Human Health
some
Economic Prosperity
moderate

5.3 INCREASE EQUITABLE ACCESS TO GREEN SPACE

ACCESS TO SAFE OUTDOOR SPACES CREATE STRONG, HEALTHY COMMUNITIES

In line with Columbus' commitment to the 10 minute walk promise, this action will track progress and inform decisions to increase access to green spaces for all communities; prioritizing areas where there are the greatest disparities first. Green spaces tracked for this measure consist of parks, natural areas and connectivity corridors or greenways.

Where development density does not align, vacant properties can be utilized as urban gardens or places of respite for improved mental health. Preserving or restoring sufficient acreage of green space is also a proven climate adaptation strategy - reducing stormwater impacts from severe weather events and increasing tree canopy to sequester CO_2.

Livingston Park adjacent to the Southern Orchards neighborhood in the South Side neighborhood.

TARGETS
430 accessible green spaces by 2030
500 accessible green spaces by 2050
Access to green space within a 10 min walk for all residents by 2050

GHG IMPACT	
2030 Reduction	Indirect
2050 Reduction	Indirect

AGENCIES INVOLVED	
Lead Agency	Rec and Parks
Implementing Partners	Planning, Building and Zoning

EXPECTED BENEFITS
Climate Justice
major
Environmental Quality
major
Human Health
moderate
Economic Prosperity
moderate

5.4 IMPLEMENT WATER ADAPTATION STRATEGIES

A RESILIENT WATER SUPPLY IS THE MOST CRITICAL HUMAN NEED FOR THE COMMUNITY

Clean water is a basic human need and must be provided to all residents, and is expected to have increased treatment demands in the future to meet growing population and development forecasts in Columbus. In addition to clean, potable water the demands on stormwater and sewage infrastructure are also projected to greatly increase.

The Sustaining Scioto regional plan outlines short-term and mid-term adaptation strategies that align with the time line of this plan. The City should work with local partners to ensure the water quality and supply will meet the growing future populations.

East Franklinton storm and sanitary pump station improvement project.

TARGETS
Implement short-term Sustaining Scioto strategies by 2025
Complete mid-term Sustaining Scioto strategies by 2050

GHG IMPACT	
2030 Reduction	Indirect
2050 Reduction	Indirect

AGENCIES INVOLVED	
Lead Agency	MORPC
Implementing Partners	Public Utilities, Public Service, Planning

EXPECTED BENEFITS
Climate Justice
major
Environmental Quality
major
Human Health
some
Economic Prosperity
moderate

11

SUPPORT EQUITABLE MODE SHIFT

Access to reliable solutions other than a passenger vehicle will be necessary for human behavior shifts

11.1 IMPLEMENT COMPREHENSIVE MULTI-MODAL NETWORK

INVEST IN TRANSFORMATIVE HIGH CAPACITY TRANSIT CORRIDORS

LinkUS seeks to provide a complete mobility system along key regional growth corridors, including high capacity and advanced rapid transit, bicycle and pedestrian connections, safety improvements, and new housing and job opportunities. The initiative is a response to the challenges facing a growing region, including managing traffic congestion, ensuring equitable access to jobs and housing, promoting economic vitality, and improved sustainability.

The City of Columbus, COTA, Franklin County and MORPC represent the lead implementation agencies. Aligning the LinkUS priorities of equity, economic development, workforce advancement, affordability, innovation, and sustainability to other existing regional efforts such Central Ohio Greenways, the Regional Housing Strategy and the Franklin County Blueprint on Poverty is key to reaching our goals. Successfully implementing the LinkUS initiative will provide Columbus a strong infrastructure foundation from which to meet other equitable mode shift goals including reducing single occupancy commuting, increasing transit usage, and implementing last mile solutions.

TARGETS
Implement 3 regional High Capacity Rapid Transit lines by 2030
Implement 8 regional High Capacity Rapid Transit lines by 2050

GHG IMPACT	
2030 Reduction	Indirect
2050 Reduction	Indirect

AGENCIES INVOLVED	
Lead Agency	Public Service
Implementing Partners	MORPC, COTA, Franklin County

EXPECTED BENEFITS
Climate Justice
moderate
Environmental Quality
moderate
Human Health
major
Economic Prosperity
some

11.2 REDUCE SINGLE OCCUPANT VEHICLE MILES TRAVELED

EMBRACE REMOTE WORK AND CARPOOLING OPPORTUNITIES

In response to the pandemic, Columbus was ranked as the top location for remote workers by Livability, and third best city by Acorns. The benefits range from affordable broadband service access to cost of living to availability of parks and green spaces. While most workers can not convert to full time remote working, flexible for applicable desk based positions where a hybrid mix of remote and in person work can significantly reduce the vehicle miles traveled (VMT) associated with commuting. Similarly, with the strong presence of higher education institutions throughout the City, virtual courses and coordinated class scheduling can reduce a commuters footprint by 20% for each day they work or learn from home.

The other significant factor to reducing VMT from single occupant driving is increasing the number of people in the vehicle. Incentives for HOV lanes and preferred carpool parking spaces can be positive reinforcement to support this transition. Companies and organizations can partner to provide guaranteed rides home for any unforeseen circumstances that may arise.

TARGETS
15% VMT reduction by 2030
40% VMT reduction by 2050

GHG IMPACT	
2030 Reduction	High - 439,011 MT
2050 Reduction	High - 1,421,539 MT

AGENCIES INVOLVED	
Lead Agency	Public Service
Implementing Partners	MORPC, Public Health, Planning, COTA, ODOT, Rec and Parks

EXPECTED BENEFITS	
Climate Justice	
	some
Environmental Quality	
	major
Human Health	
	moderate
Economic Prosperity	
	some

11.3 INCREASE TRANSIT USE

EFFICIENT MASS TRANSIT SYSTEMS WILL REDUCE TRAFFIC CONGESTION AND EMISSIONS

In 2019, COTA was one of few mass transit bus systems that saw growing ridership. This progress must continue, and further partnerships to promote ridership will usage need expanded. Working with large organizations and institutions to utilize bus services as a regular commuting option to work or school will also reduce highway congestion.

COTA should continue their ongoing work engaging with the existing rider base to refine service offerings that will reduce travel times, increase ridership and improve the perception of reliability.

Image Source: COTA

TARGETS
20% increase in passenger miles traveled by 2030
50% increase in passenger miles traveled by 2050

GHG IMPACT	
2030 Reduction	Low - 6,903 MT
2050 Reduction	Low - 18,873 MT

AGENCIES INVOLVED	
Lead Agency	COTA
Implementing Partners	Public Service, Franklin County, MORPC, ODOT, Technology

EXPECTED BENEFITS
Climate Justice
some
Environmental Quality
moderate
Human Health
moderate
Economic Prosperity
moderate

11.4 SUPPORT ACTIVE TRANSPORTATION INFRASTRUCTURE

THE LAST MILE CONNECTIVITY FROM MASS TRANSIT IS REQUIRED FOR COMMUNITY WIDE SUCCESS

Safe walking and bicycling infrastructure, and micromobility options - such as e-bikes and electric scooters - provide an important link to bridge the gap between bus service and commuter transit and the user's end destination with minimal or zero emissions. These solutions are also shown to increase overall walking and bicycling rates over time as a transportation method.

Equitable implementation of mobility hubs to increase access to these transportation options is important to address transportation injustice. Permanent docking stations and hubs, like the ones shown in the CoGo Station locator map below can be expanded into additional areas of the city, and paired with electric scooter or other future micro transit technology advances.

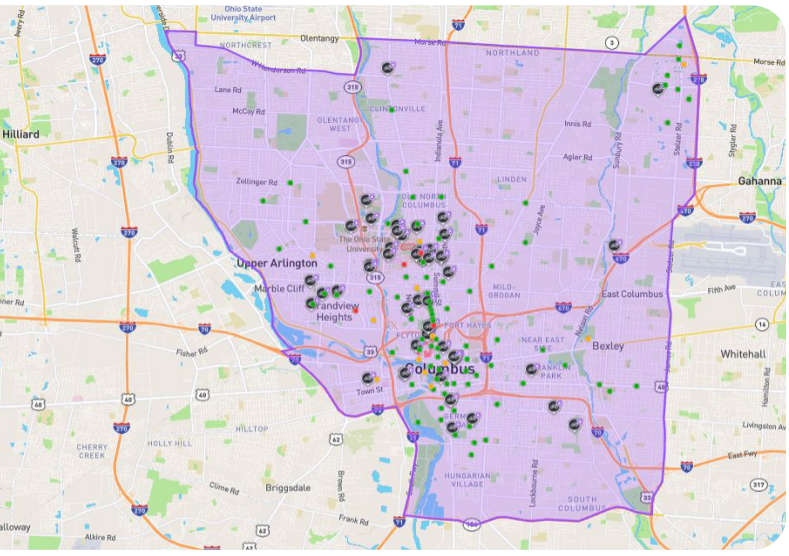


Image Source: CoGo Bike Share Station Map

TARGETS
20% increase in Walkscore and Bikescore by 2030
Mobility hubs within 1/2 mile from all residents by 2050

GHG IMPACT	
2030 Reduction	Indirect
2050 Reduction	Indirect

AGENCIES INVOLVED	
Lead Agency	Public Service
Implementing Partners	COTA, Smart Columbus, Public Health, Rec and Parks, Neighborhoods

EXPECTED BENEFITS
Climate Justice
moderate
Environmental Quality
moderate
Human Health
major
Economic Prosperity
some

COTA

reimagining SUSTAINABILITY

COTA SUSTAINABILITY PLAN 2022

IN PARTNERSHIP WITH:

go sustainable energy™

sustainability GOALS, METRICS, TIMELINE

Building off the progress already made, COTA wishes to pursue bold, ambitious goals as they move into the future.

Goals must be measurable, reportable, and relatable to facilitate real progress and broadcast achievements to stakeholders. Additionally, goals should be technically and economically achievable, and consistent with COTA's equity, diversity, and inclusion principles. The final Sustainability Plan will outline short-term targets, on a five-year cycle, and long-term (2045) targets for COTA to achieve across environmental, social and governance (ESG) areas of impact. 2013 has been selected as the baseline year because it aligns with the baseline year established by the Sustainable Columbus Climate Action Plan. Tracking for each performance category may be limited due to access to historical information.

Long term goals will provide a decision-making framework that enables navigation of changing technological opportunities and cost constraints over the next three decades. To be in alignment with external stakeholders such as the city and MORPC, goals should match or exceed goals set by these agencies.

Short term goals will act as waypoints to ensure constant progress. As milestones are met, we encourage internal and external messaging for recognition. It is important to celebrate achievements to keep teams encouraged and to bring outside awareness to improve customer, community, and government relations.

We are recommending that COTA establish performance categories in its Sustainability Plan. We recommend the following Performance Categories for COTA's consideration and feedback: EDI, emissions, ridership, waste, water, and resiliency. These performance categories will have their own set of short- and long-term goals. Key Performance Indicators (KPIs) specific to each performance category will be the metrics or unit of the goal and the measurement used to track progress toward each goal.

For each performance category, the plan will identify goal(s) to be pursued by 2045 along with KPI(s) to measure progress. In the following sections we provide descriptions of each performance category, why they are important, and the direction we plan to take in identifying goals and KPIs.

5.1. EQUITY, DIVERSITY, AND INCLUSION

Equity, diversity, and inclusion (EDI) are at the core of everything COTA does and influences culture both inside its own walls and in the greater Columbus region to serve its purpose "to move every life forward". EDI is integrated into this sustainability plan both by intentionally advancing specific EDI objectives and goals and with how COTA pursues achievement of other sustainability goals across the enterprise.

As we look to COTA's employees, operations, customers, and the communities it serves, EDI is foundational to its work and is integrated into its operations, strategic planning, procurement and hiring & human resources practices, and community investment strategies. As outlined in the COTA strategic plan, EDI is an underpinning strategy that connects everything that COTA does.

Specific measurable and actionable areas of impact include performance categories and metrics that advance EDI at COTA and align with supporting the tenants of this plan. These initiatives and goals will elevate employee engagement, health & safety, economic development, community investment and support customer satisfaction.

Developing this plan included an equitable approach to engaging with internal and external stakeholders to identify priority areas for COTA to focus on with developing the strategies, initiatives, and goals to create a more equitable and inclusive transit agency. This included meetings the with EDI leadership at COTA, Disadvantage Business Enterprises (DBE) program management, employee resource group (ERG) leaders, surveys of ERG membership and interviews with several external partner organizations. These engagements result in a more inclusive sustainability plan consistent with the values of COTA.

5.1.1. BACKGROUND AND CONTEXT

COTA and the many organizations in the greater Columbus area have been actively investing in and supporting equity & inclusion initiatives to provide greater access to prosperity for minority and underserved communities and to increase the diverse representation in their organizations. In addition, the Justice 40[3] Initiative announced by the Biden administration seeks to direct public funding to those who are affected most by climate change, which is predominately people of color (POC), low-to-moderate income (LMI) and indigenous and underserved communities. This initiative is included in Executive Order 14008[4] which outlines the Administration's approach to addressing climate change and demonstrates that equity is embedded in the Administration's approach to climate change.

COTA is investing in equity, diversity and inclusion (EDI) to support its employees, customers, suppliers and the communities where they operate. By integrating EDI into the sustainability plan, COTA is better able to align this plan with and support both COTA's and the region's efforts to create more opportunity for minority and underserved individuals, families and communities, to support creating a diverse and inclusive workforce and create economic opportunity for minority-owned and DBE businesses in the region.

[3]https://www.transportation.gov/equity-Justice40#more-about-justice-40
[4]https://public-inspection.federalregister.gov/2021-02177.pdf

The figures below present excerpts from COTA's strategic plan that lays out what EDI means and how it places EDI at the center of COTA's mission.

Figure 4: **EDI DEFINED**

Equity

Providing fair access, opportunity and advancement for all people in achieved by understanding and eliminating barriers that prevent full participation for disadvantaged groups. Employee motivation is critically contingent on the incorporation of equity.

Diversity

By seeking to attract and retain individuals of demographic diversity, such as, but not limited to race, ethnicity, gender, age, orientation, socio-economic background, physical ability and religion, COTA will derive value from individuals' differences of experiences, perspectives and thought processes. Diverse organizations are also more successful at attracting and retaining talent.

Inclusion

Organizations succeed at maintaining diversity when they focus on inclusion. Employees feel valued, respected and supported when inclusion is part of the organizational culture. In establishing a strong inclusive culture, COTA can expect job satisfaction to increase among employees, resulting in maximum productivity.

(Source: COTA Strategic Plan 2019–2024)

Figure 5: **EDI'S POSITION IN COTA**

(Source: COTA Strategic Plan 2019–2024)

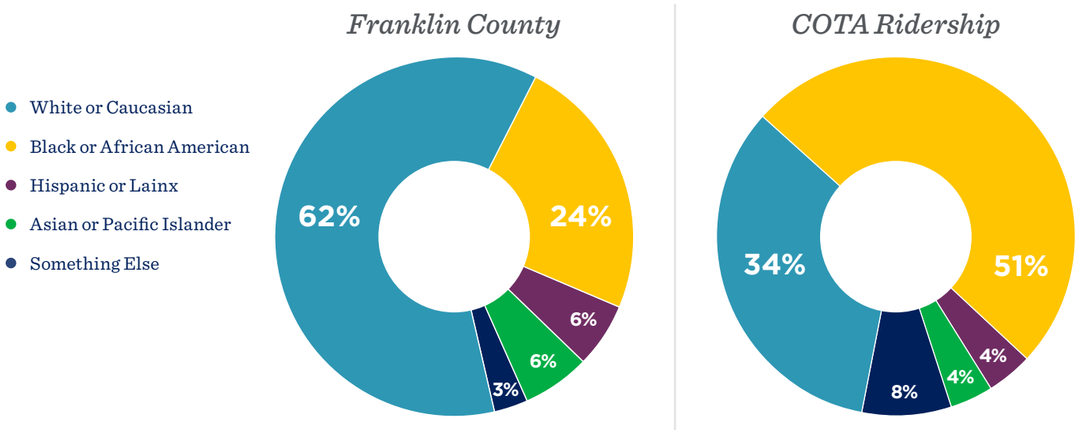
Initiatives within COTA's strategic plan support EDI within COTA and the sustainability strategy outlined within this plan specifically supports many of the initiatives that COTA is driving in its strategic plan.

Table 6: **EDI INITIATIVES IDENTIFIED IN COTA STRATEGIC PLAN 2019–2024**

INITIATIVE	EARLY OPPORTUNITY	IMPROVEMENT	TRANSFORMATION
Leverage a mobility partner to pilot a first- & last-mile solution	●		
Implement a multi-modal trip planning and payment app with options that provide access to mobile users and the un-banked			●
Ensure transportation planning supports access to jobs, healthcare, and education for disadvantaged communities	●		
Increase and expand service to capture new customer segments, including disadvantaged riders		●	
Implement programs to retain, train, and attract a diverse talent pool at all levels of the organization		●	
Establish and engage employee resource groups (e.g. Veterans, LGBTQ, African-American women, etc) within the organization	●		
Incorporate targeted recruiting to increase diversity within departments		●	
Promote the use of small, disadvantaged businesses through partners		●	

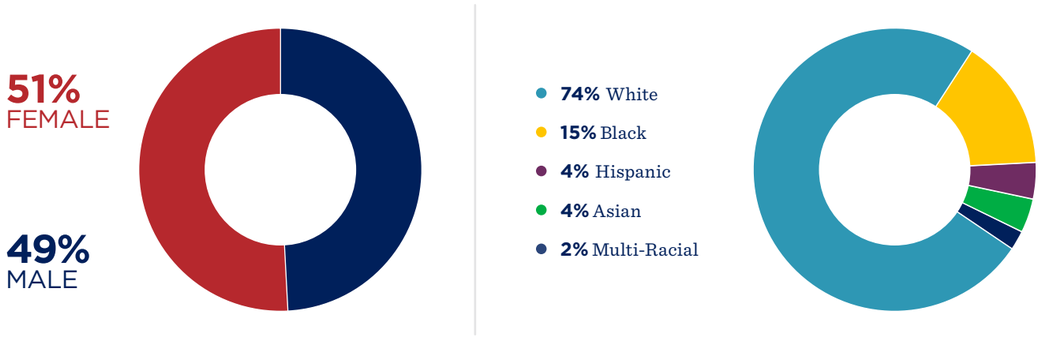
By elevating EDI and including a focus on advancing EDI into the sustainability strategy we are better able to align the plan in support of the ridership demographics of COTA. COTA's ridership is a majority minority customer base, which presents a terrific opportunity to engage with and educate on COTA's sustainability efforts and what COTA's customers can do to advance the sustainability of the region. The service to minority populations can be seen in Figure 6 which shows that while 63% of Franklin county's population identifies as white or Caucasian, COTA's riders are 33% white or Caucasian.

Figure 6: **RIDERSHIP DEMOGRAPHICS** (2021 Q4 CUSTOMER SURVEY)



Further, a breakdown of workforce diversity within Franklin County generated by COTA in January of 2022, illuminates how well county demographics are reflected within the makeup of businesses within the region.

Figure 7: **FRANKLIN COUNTY BUSINESS DEMOGRAPHICS BASED ON GENDER AND RACE**



Advancing EDI as part of this sustainability plan includes internal efforts within COTA, how COTA interacts and supports its customers and economic prosperity in the communities that COTA serves. COTA's approach to advancing EDI is still in development, but it can be categorized in three pillars in support of these areas of influence as part of this sustainability plan.

Table 7: **COTA SUSTAINABILITY EDI FRAMEWORK**

INSIDE COTA	COTA CUSTOMERS	ECONOMIC PROSPERITY
Improve employee engagement and development of EDI through higher level of participation in employee resource groups (ERGs) and in EDI activities being developed at COTA to further cultivate an inclusive working environment at COTA.	Support individuals, households and communities that are bearing the greatest burden of the impacts of climate change by prioritizing customer initiatives for POC, LMI and households with limited access to vehicles.	Invest in and support minority, female, LGBTQ, veteran, disabled owned businesses in COTA's procurement practices in both capital projects initiated by COTA and in operational needs.
Proactively monitor and continue to seek out hiring of diverse talent across the organization.	Evaluate routes and access to COTA services to communities, access to employment, services and amenities needed by the households that need COTA's services most.	Invest in community economic development and essential services that support minority, LMI and underserved individuals, households, and communities.

COTA has been supporting EDI by integrating and elevating its visibility across the enterprise including creating a Chief Equity, Diversity and Inclusion officer role and program office to align and accelerate EDI at COTA.

COTA has a Disadvantage Business Enterprise (DBE) Program that adheres to the U.S. Department of Transportation's DBE regulations, 49 CFR Part 26. This program drives COTA's DBE policy to ensure that DBE's have an equal opportunity to receive and participate in US DOT-assisted projects. COTA's Chief Diversity Officer has been delegated as the DBE Liasion Officer and is responsible for implementing the program. The DBE Liason officer has direct, independent access to the Chief Executive Officer on all matters concerning the DBE program.

DBE certified businesses are small for-profit businesses that are at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged, and whose management and daily business operations are controlled by one or more socially and economically disadvantage individuals. The DBE program seeks to provide further economic opportunities for DBE businesses in the greater Columbus region for both DOT-assisted projects and other spending at COTA. In 2021, spending within the DBE program represented 4.5–6.3% of spend at COTA.[5]

[5]B2Gnow Diverse Spend 2021—Year-End report—the range is to show certified diverse firms vs certified and non-certified diverse firms.

COTA recognizes certified MBE, WBE, VBE, EDGE, LEDE as part of its DBE program to continue to support greater supplier diversity. The tables below present the groups COTA defines as socially and economically disadvantaged and recognized DBE certification agencies.

Table 8: **SOCIALLY AND ECONOMICALLY DISADVANTAGED GROUPS** AS DEFINED BY COTA

Women (regardless of race)
African Americans
Hispanic Americans
Native Americans
Subcontinent Asian Americans
Any additional group whose members may be designated as socially and economically disadvantaged by the Small Business Administration (SBE).

Table 9: **DBE CERTIFICATION AGENCIES**

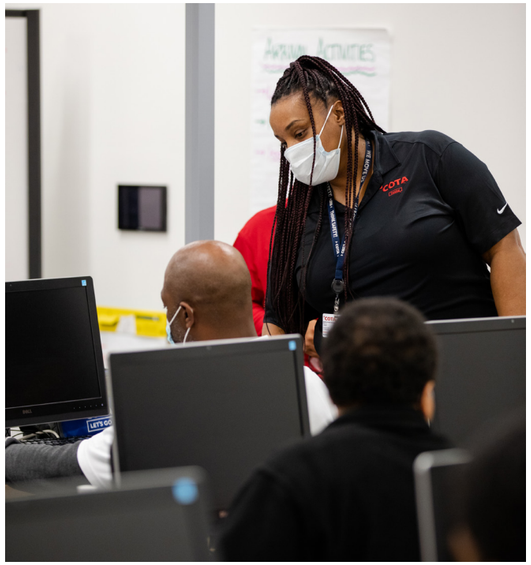
Ohio Department of Transportation

Ohio | Department of Administrative Services

The City of Columbus

Columbus City Schools

WBENC
Women's Business Enterprise National Council
JOIN FORCES. SUCCEED TOGETHER.



EMPLOYEE RESOURCE GROUPS

COTA has also made significant progress elevating EDI through engagement with employees, participation in the community, and supporting efforts to improve EDI in the region. Part of this success is demonstrated by COTA's Employee Resource Groups (ERGs). COTA has four ERGs that support and engage employees on EDI efforts across the organization. The four groups are Veterans Employee Resource Group (VERG), Parents Actively Collaborating Together (PACT), Black Employees Leading in Inclusion, Excellence, Vision & Education (BELIEVE), and Women for Inspiration, Strength and Excellence (WISE). With nearly 300 employee members of the ERGs, COTA is actively engaging its diverse workforce to better connect with and support the individual needs and interests of COTA employees and both union and administrative employees actively engaged in ERG efforts.

Figure 8: **ERG PARTICIPATION**

VERG
COTA VETERANS ERG

VETERANS EMPLOYEE RESOURCE GROUP (VERG)

VERG was formed in May of 2019 and was COTA's first ERG. In 2021, VERG had more than 120 members and a representation of 33% administration employees and 67% union employees. VERG participates in projects both internally at COTA and in the community supporting Veterans employees and families, Veteran focused organizations, and Veterans in the greater Columbus community.

VERG PURPOSE STATEMENT: "The VERG is committed to serving employees of COTA and Community Partners through innovative and diverse initiatives, programs, and activities. Members of VERG strive to provide an inclusive environment and advocate for the growth, career advancement and overall support of all COTA's employees and their families."

PACT
COTA WORKING PARENTS ERG

PARENTS ACTIVELY COLLABORATING TOGETHER (PACT)

PACT was formed in May of 2020 and was COTA's second ERG. In 2021, PACT had 24 members with representation of 75% administration and 25% union employees. PACT Participates in projects in support of parents at COTA and their collaborative education on parenting.

PACT PURPOSE STATEMENT: "To promote an inclusive environment for working parents and family structures through support, education, resources, and outreach."

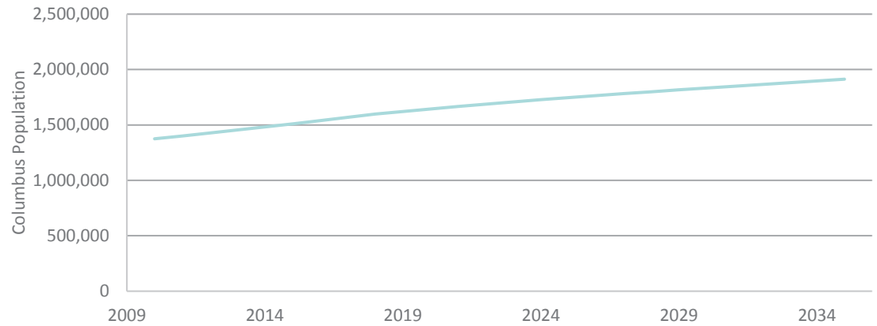
5.3. RIDERSHIP

5.3.1. BACKGROUND AND CONTEXT

Ridership encompasses the interface between passengers and their use of COTA's services. Understanding rider demographics, trip purpose, trip length, and route selection are all useful to informing planning decisions.

Ridership intersects with regional needs in a few key, ways. COTA's current contribution to regional emissions is very small. At the same time, COTA's potential to impact regional emissions, particularly by facilitating zero-emissions transit through increase ridership, will likely play a pivotal role in achievement of the City's goals. This will require strategic engagement to provide residents and communities currently choosing to use single passenger vehicles to embrace the benefits of mass transit service. As the region grows, as is projected, in the coming decades, collaboration with regional planning entities could make the difference between turning the tide on transportation emissions in the region or allowing existing practices to facilitate a continuation of current practices. Population projections for the Columbus region indicate roughly 1% annual growth between now and 2035. A trend of these forecasts can be seen in the figure below.

Figure 37: **PROJECTED COLUMBUS POPULATION GROWTH**[27]



COTA's vision is to move every life forward and its mission is to provide solutions that connect people to prosperity through innovation, dedication, and teamwork. COTA is a customer centric organization that seeks to provide the safe and efficient transportation services for its customers.

Riders of COTA are the heart of Columbus and Franklin County and backbone of the regional economy. They are a diverse set of customers, some that rely on COTA as their sole mode of transportation, some that have chosen to be a one car family and use COTA out of convenience, and some that use COTA as their primary commuting method to work weekly. Recognizing that COTA exists for its riders, and that COTA is an essential part of solving for the transportation sector's role in addressing climate change, COTA needs to retain existing and attract additional riders to support GHG emissions reductions in the region. While doing this, COTA needs to solve for challenges and changes in where people need to move to, how they hope to get there, and what they expect from their public transportation provider. In the coming post pandemic period, this will also require a greater understanding in how work location might have shifted for existing and potential riders, particularly the working core.

[27] https://www.macrotrends.net/cities/22963/columbus/population

Figure 38: **RIDERSHIP PERSONAS** (2021 Q4 CUSTOMER SURVEY)

COTA CUSTOMER PERSONAS

MARCIA
Loyal Errands

MARTIN
Working Core

DOM
Long Haul

DENISE
One-Car Convenience

JAY
9 to 5

JORDAN
Next Gen Casual

LOYAL ERRANDS: customers that take COTA for all their daily needs, likely do not have a car, likely pay with a pass or ticket and are in the middle age.

WORKING CORE: Utilize COTA to get to work and occasionally for other errands. They frequently pay with cash and have low access to a car.

LONG HAUL: Utilize COTA to get to work and usually have to transfer at least once. Generally, a longer trip.

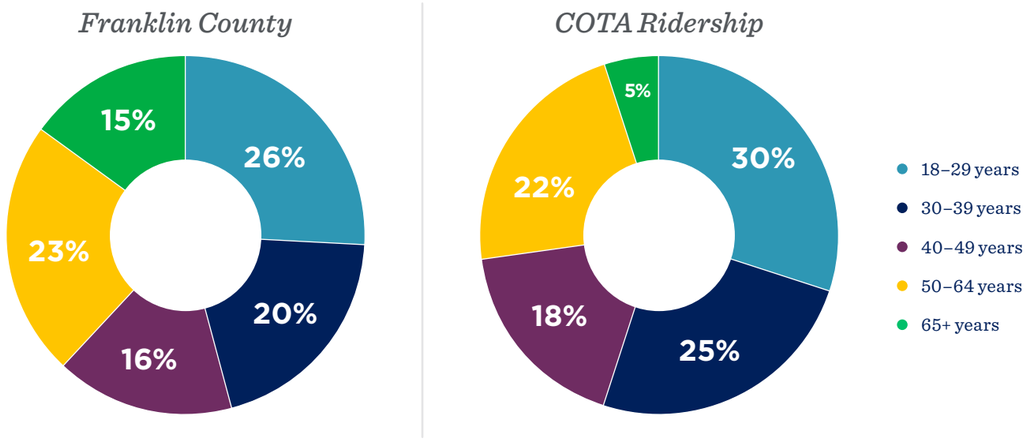
ONE-CAR CONVENIENCE: Majority use COTA to commute and pay with a pass of ticket.

9 TO 5: Majority use COTA for commuting for convenience. Most do not transfer and have vehicles. Split between cash and payment.

NEXT GEN CASUAL: Younger customers either OSU students or recent grad with high access to vehicles, majority pay with pass or ticket.

COTA's ridership demographics reflect the diversity of Central Ohio and Franklin County. Though COTA riders are majority minority and represent a higher representation of people of color (POC) than the surrounding community. This demonstrates the disparity between the 93% of Franklin County residents with access to a car as compared to COTA riders, 60% of whom have access to a car. Demographics by age reflect that diversity of purpose that public transportation is used and demonstrates that COTA is a preferred choice of transportation across all ages.

Figure 39: **FRANKLIN COUNTY AND COTA RIDERSHIP BY AGE** (2021 Q4 CUSTOMER SURVEY)



Demographics by age are distributed across all age categories. An outsized demographic of 18- to 29-year-old customers likely exists because of OSU.

Increasing ridership at COTA and more deeply engaging with current ridership will help secure a steady customer base and will provide COTA with the security to increase capacity as the population increases in Central Ohio. This coupled with replacing the fleet with zero and low-emissions vehicles will support both COTA and the region's efforts to decarbonize. A strategy to engage on policies, prepare for future development, route planning, and service increases will position COTA to increase ridership while continuing to improve service options for existing ridership.

Table 13: **RIDERSHIP STRATEGIC FRAMEWORK**

FOCUS AREA	Improve Customer Experience	Expand Service Based on Community Needs	Strategic Partnerships	Support Smart Regional Planning, Policies
INITIATIVES	Improved Service Mobility Services Expand On-board Amenities Maintain and Improve Safety within the System	Extended hours New Routes and Route Extensions Emergency response	Service Partnerships (Last mile) OSU Intel Development Downtown C-bus Economic Centers	LinkUS MORPC, City of Columbus, and Franklin County Support Policies that Expand Public Transportation

COTA's ability to influence and drive additional ridership is directly impacted by regional policies, development plans, cooperation with local governments and participation / partnerships with area employers and institutions. Aligning with and influencing the direction of regional planning efforts will shape COTA's ability to drive additional ridership. There are ongoing efforts at COTA to better understand COTA ridership, the sustainability plan is one piece of a broader strategy to drive additional ridership at COTA.

The pandemic has had a significant impact on base ridership and has significantly reduced the number of daily riders for COTA and other transit agencies. NTD data indicates a drop in unlinked passenger trips between 2019 and 2020 of roughly 45%. Short and long-term projections indicate a sustained change in working habits and behavior that will continue to impact daily rides for COTA and other public transit agencies around the country. The shift to remote working and hybrid working becoming the norm reduces the number of daily riders and results in a lower number of monthly pass holders given the corresponding changes in commuting habits. Responding to these changes in working and commuting habits is essential for COTA's future viability. Currently COTA has rebounded to 85% of pre-pandemic service hours in early 2022 and it is hoped with the return of services ridership will also rebound to previous levels.

Significant regional initiatives and development plans will dramatically impact COTA's ability to grow and increase riders including efforts such as LinkUs Columbus which strives to create more equitable, efficient, and sustainable connectivity to accelerate economic growth in Central Ohio. The LinkUs Strategic Framework highlights the need to invest in critical regional corridors that connect employment to housing and other amenities to serve the growing central Ohio region. It recognizes that with a population growth of a projected nearly 30% by 2050 that a region with 3 million people requires transportation options inclusive of a vibrant public transportation system. In the near-term, design and implementation of multiple bus rapid transit lines is expected. With these additions, more frequent service along high-capacity corridors should improve transit availability and attract increased ridership.

Another initiative that intersects with ridership is Vision Zero[28]. Vision Zero is a strategy to eliminate all traffic fatalities and server injuries, while increasing safe, healthy, equitable mobility for all. The city of Columbus has engaged with and is pursuing this vision of what could be[29]. A study from APTA indicates that cities where residents average higher annual transit trips have roughly 50% less traffic fatalities as cities with lower transit use[30]. Further, COTA continually monitors reports on this topic and has noted that a 1.5–3% shift from single occupancy vehicles to transit has been shown to reduce traffic fatalities by 10–40%.[31] This is particularly important since youths have about twice the traffic fatality rate when compared to the total population.

Participating in shaping policies and programs that help to drive additional support for and use of public transit is essential for COTA to realize its goals on increasing ridership. This requires COTA to continue to research best practices, adopt these practices by modeling them internally and promote these practices through public policy and adoption by major employers.

- **RESEARCH**—Identify strategies being successfully implemented in other regions, transit authorities and major employers to drive additional public transit use, such as employee benefit programs that include free transit passes for employees.
- **ADOPT**—Deploy where appropriate strategies and programs within COTA and / or with partners to test the strategies.
- **PROMOTE**—upon successful implementation of policies and programs, help to bring them to scale through public policy and adaption more broadly with major employers, institutional partners.

[28]https://visionzeronetwork.org/about/what-is-vision-zero/
[29]https://vision-zero-columbus.hub.arcgis.com/
[30]https://www.apta.com/wp-content/uploads/Resources/resources/reportsandpublications/Documents/APTA-Hidden-Traffic-Safety-Solution-Public-Transportation.pdf
[31]APTA, FHWA

5.3.2. GOALS—LONG AND INTERIM

Increasing ridership and expanding COTA's customer base will enable COTA to support the regional efforts to decarbonize, support regional economic development and increase access and equity for all. A strong public transportation system is an essential part of creating an equitable economy and society.

With the pandemic reducing the number of daily riders and creating long-term and sustaining changes in commuter behaviors due to the changes in working habits, COTA is resetting its expectations for ridership and how it contributes to the need to reduce carbon emissions from the transportation sector. COTA can do its part by both decarbonizing its fleet and operations and by working to increase sustained ridership in support of regional goals to decarbonize.

Currently COTA tracks ridership as total boardings divided by total payroll hours. Annually, goals are set around this Ridership Performance Incentive Compensation (PIC) metric for pursuit by the team. Consequently, we recommend adopting the existing performance metric and goals within this plan. This plan adopts an aspirational target of increasing this metric by 2% per year.

- **Pursue aspirational increase of both ridership metrics annually by 2%**

Additionally, alignment with the Columbus Climate action plan provides an opportunity for COTA to support regional efforts to decarbonize. Within that plan are three primary areas of support that COTA can implement to support reducing emissions and expanding the ridership base for COTA. It is important to note that achievement of these regional goals will require an evolution in regional planning which falls outside of COTA's jurisdiction. Consequently, while regional goals will be pursued, their success will require collaborative engagement and action of regional partners. A summary of pertinent goals from the City of Columbus Climate Action Plan can be seen below:

1. Employ Comprehensive Multi-Modal Network
    a. Initiatives—Support and implement LinkUS efforts to create high-capacity rapid transit, bicycle, and pedestrian connections.
    b. Goals
        - Implementation of 3 regional high-capacity rapid transit lines by 2030.
        - Implementation of at least 5 high-capacity rapid transit lines and up to 8 by 2050.
2. Increase Transit Use
    a. Initiatives—Continue to improve customer experience, safety, and amenities to drive additional ridership. Include expanded hours of service for high demand routes.
    b. Goals
        - Increase passenger miles traveled by 20% by 2030
        - Increase passenger miles traveled by 50% by 2050
3. Support Active Transportation Infrastructure
    a. Support micro-mobility options, safe walking and biking infrastructure surrounding public transit infrastructure to connect riders to home and office and to complete the last mile.
    b. Goals
        - 20% increase in walkscore and bikescore by 2030
        - Mobility hubs within 1/2 mile from all residents (in high density areas) by 2050

These efforts, when achieved, should increase the percentage of transit riders relative to residents using single occupancy cars. Establishing a mode shift factor, which is an action item already being pursued, quantifies how increases in ridership can be used to estimate the resulting emission reductions within the region as residents choose transit over driving.

5.3.3. METRIC

In order to support internal efforts and the City of Columbus Climate Action Plan, multiple metrics will be tracked in support of this sustainability plan. They will be:

- COTA's internal ridership Performance Incentive Compensation metric of annual unlinked passenger trips per total payroll hours.
- Climate Action Plan's target metric of annual passenger miles traveled.

Both metrics can be generated from data already being collected for submission to the National Transit Database annually. Discussions and engagement within this performance category should include any additional metrics COTA tracks that can support this initiative or inform decision making. Additionally, given the many factors outside of COTA's control that influence these metrics, aspirational objectives should be revisited regularly to ensure they are promoting improvement while not setting unreachable goals. Such metrics should be identified by the teams pursuing ridership goals within a management area.

5.3.4. SCOPE

Ridership is measured regionally and within Franklin County as well as within submission to the National Transit Database.

5.3.5. MEASUREMENT AND REPORTING

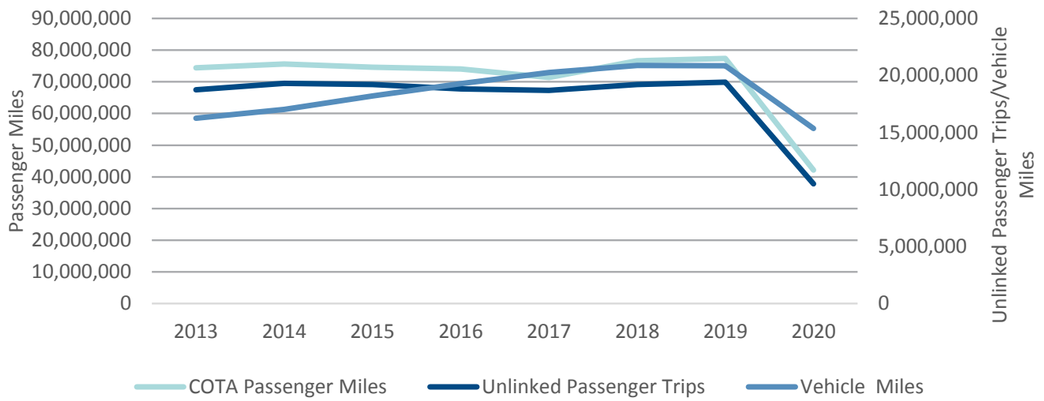
COTA measures and reports on ridership data to a variety of regulatory bodies that help to determine future funding levels for COTA with the Federal Department of Transportation as well as local and regional entities.

5.3.6. RECENT TREND AND CURRENT STATUS

Measures for ridership should capture the frequency in which people use COTA as a form of transportation and the capacity of the coaches or routes. Increasing regional ridership is a needed solution for total transportation emissions. There is a wide range of ways to capture ridership and the plan will build upon existing data and best practice measures like average daily ridership. Considering expanded capabilities resulting from internal improvements, like the new fare system, will also be considered.

Within NTD submissions, standard metrics that are reported include passenger miles, unlinked passenger trips, and vehicle miles recent trends for which can be seen in the figure below.

Figure 40: **RECENT NTD RIDERSHIP METRIC TRENDS**



From these trends the incredible impact of the pandemic is clearly illustrated.

Less quantifiable ridership measures whose importance garner consideration include convenience of use and access to values such as employment, healthcare, food, and customer satisfaction. These factors impact the desirability of public transit as an alternative to other transportation options and will be critical to achieve increases in ridership.

The LinkUS initiative is already expected to impact ridership in positive ways while at the same time fulfilling some of the goals laid out in the City of Columbus Climate Action Plan.

5.3.7. TECHNICAL AND ECONOMIC VIABILITY

Predicting the timetable of recovery from the unprecedented impact of the COVID-19 pandemic is difficult while society still struggles to transition into a new normal. Of particular importance is whether traditional work commute habits will return or whether paradigms, like work-from-home or use of distributed shared offices spaces replaces previous practices.

Regardless of what the future holds, COTA will continue to apply best practices as it always has when designing and implementing new services or revising existing offerings. Those procedures account for the necessary contingencies required in growing and evolving COTA's transit services. To do this COTA must position itself to be able to participate and acquire existing and future funding mechanisms that will be rolled out to support transit initiatives. This will include the monitoring and pursuit of grants to support further service development that will yield increased ridership and engagement.

5.3.8. ACTIONS AND RECOMMENDATIONS

Pursuit of COTA's emission goals will include the following actions:

1. Assess aspirational ridership goal for alignment with the current use of that metric and adopt or revise the targeted annual increase based upon that engagement.
2. Conduct a survey to facilitate generation of a mode shift factor for use in capturing impact of increased ridership on regional emissions goals. This process has already been initiated.
3. Contact mode shift collaborators involved in the City of Columbus Climate Action Plan, particularly Public Service and MORPC, to identify a point of contact with whom to work moving forward. These groups, leading the city's efforts, should be able to provide resources and guidance to COTA.
4. Continue engagement in collaborative engagement in regional development through LinkUS, Columbus Downtown Development Corporation, and other initiatives.
    a. Continue partnership to complete 3 regional high-capacity rapid transit lines developed within LinkUS to support City's Climate Action Plan Goals.
5. COTA cannot create transformational increases in ridership on its own, as public transit ridership is highly dependent on how a region's development is designed. Achievement of increased ridership will thus require close collaboration with the City of Columbus, Franklin County, MORPC, and other entities with control over regional planning and development. For public transit to be successful, it needs to be a priority around which regional development is built. This includes fostering strategic development of dense corridors of residential opportunities, employment, and other land use directives with a vision for their interconnection using existing or new public transit routes.

CHAPTER 6:
SYSTEM DEVELOPMENT

While Chapters 4 and 5 describe system maintenance and management activities and strategies, the expected growth and development of the region as described in Chapter 2 makes system expansion necessary

This chapter summarizes the system expansion, or development activities and strategies identified in the MTP for each mode. System development includes adding capacity to the roadway system, expansion of transit services, constructing bicycle and pedestrian facilities, and enhancing intermodal connections. Within each modal system the individual MTP strategies and projects are outlined.

6.a BICYCLE & PEDESTRIAN SYSTEM

As Central Ohio continues to grow, more people are walking and bicycling as a form of transportation. Many communities within the region are investing more in higher quality facilities to accommodate the higher volumes of people walking and bicycling, but as a region we still have more work to do. The region is working to collect data on active transportation facilities and the usage of those facilities to demonstrate their importance, identify gaps that limit the mobility of people throughout the region, build more bicycle and pedestrian facilities, and ensure that educational, enforcement and encouragement programs are available to support bicycling and walking.

BICYCLE AND PEDESTRIAN STRATEGIES AND PROJECTS

1. Collaborate to build high comfort bicycle and pedestrian infrastructure through development regulations

Most communities require developers to install appropriate bike and pedestrian facilities in new developments, but there are other strategies and tools available to local communities to advance bicycle and pedestrian infrastructure through development regulations.

insight2050

Insight2050 is one example of collaboration around land use and development regulations. The study identified the various impacts that different growth scenarios will likely have on the region. As summarized in Chapter 2, initiatives such as insight2050 and insight2050 Corridor Concepts explore how more walkable, bike-able, transit-supportive neighborhoods can positively impact transportation, infrastructure, housing, and the environment. Connected and accessible pedestrian and bicycle infrastructure links people to places, supporting better access to jobs and mobility options. High comfort bicycle and pedestrian facilities help to meet the region's growing need and preference for better-connected neighborhoods.

2. Increase the quantity and quality of data on bicycle, pedestrian, and similar modes travel behavior

Update Columbus Metro Bike Map

Minor changes have been made to the Columbus Metro Bike Map since the last major update in 2016 to account for changes in the bicycle network. In 2020, MORPC will coordinate with regional stakeholders to initiate another major update that will improve upon the previous methodology for assessing the level of comfort for bicyclists.

Complete Streets Equipment Library

MORPC maintains a library of equipment that includes professional measuring wheels, a radar gun, and three different types of devices for collecting data on pedestrian and bicycle traffic. This equipment is available to local jurisdictions interested in collecting data in order to provide the information needed to adequately accommodate non-motorized traffic in facility design decisions.

Bikeway Inventory

MORPC continuously updates bikeway data based on information from local jurisdictions. The updates track both regionally significant bikeways and local bikeways. These data are available to local jurisdictions and the public using an interactive online map. MORPC also shares these data with ODOT and other MPOs in Ohio.

Sidewalk Inventory

In 2015, MORPC partnered with the City of Columbus and the Ohio Department of Transportation (ODOT) to compile an inventory of sidewalk facilities in the MPO planning area. The inventory is available online in an interactive webmap format and includes attributes such as where sidewalks are and are not located, and the location of marked and unmarked crosswalks. The inventory is maintained by ODOT, and local jurisdictions are responsible for providing and updating data. The inventory is used to support transportation planning activities throughout the region.

Bicycle and Pedestrian Counts

Since 2005, MORPC, together with many different volunteers and regional partners, has routinely collected bicycle and pedestrian volume counts across the Central Ohio region. This includes manual counts occurring in concert with the National Bicycle and Pedestrian Documentation Project. These manual counts occur twice a year at selected locations throughout the region. In addition to manual counts, automated counting devices are being used to continuously collect counts at select locations across the Central Ohio Greenways trail system and are being supplemented with additional short-duration counts. These efforts allow MORPC to create a regional inventory of non-motorist activity, better understand the factors that impact activity levels, and observe trends over several years. MORPC is coordinating with local and state partners to enhance this regional nonmotorized data collection program by utilizing new technologies that will help to expand the locations and areas we are able to monitor.

Bicycle and Pedestrian Crash Data

MORPC regularly evaluates data on pedestrian- and bicyclist-involved crashes and identifies priority safety locations for further study. This information helps identify areas in need of physical safety improvements as well as safety education programs.

3. Expand high comfort bicycle and pedestrian networks through the implementation of complete streets

As described in section 3.b, MORPC has adopted a Complete Streets Policy. MORPC staff will continue to hold workshops and give presentations to local governments, city councils, and the public on the concepts of Complete Streets and age-friendly communities. The goal of these presentations is to encourage local communities to think differently about their community development and adopt complete streets policies and other policies that support their implementation.

In 2010, MORPC was awarded a grant from the Ohio Department of Health (ODH) to create a Complete Streets Toolkit to supplement the regional Complete Streets Policy. MORPC is coordinating with regional stakeholders to update both the regional Complete Streets Policy and the Toolkit in 2020. This update will provide clearer expectations and additional resources to aid project sponsors in meeting the requirements of the Policy.

MORPC continues to review projects that have been awarded MORPC-attributable funding to ensure that they comply with MORPC's Complete Streets Policy. A Complete Streets Review Committee consisting of MORPC staff meets regularly to review projects as they move through the project development process.

As detailed in Section 4.c, MORPC continues to facilitate efforts aimed at improving pedestrian and bicyclist safety through various safety initiatives, including road safety audits, walk and bike audits, and systemic safety improvement projects.

4. Implement the Central Ohio Greenways trail vision

Since 2005, a group of cross-sector trail planners, managers, and advocates have been meeting and partnering as the Central Ohio Greenways (COG) group to develop a regional trail network to provide recreational and transportation opportunities and protect the waterways. In 2015, MORPC's board approved the formation of a 22-member COG Board with a mission to increase the number of trail miles and number of people using the trails throughout the central Ohio region.

Based on its strategic plan, the COG Board developed a community supported Regional Trail Vision Plan to add over 500 regional trail miles to the existing 230 miles of trails in its 7-county area of interest (expanding beyond the MPO planning area). The MORPC Board adopted the Regional Trail Vision in 2018. The proposed trails will extend existing trails, fill gaps in the trail corridors, connect neighborhoods to job centers and greenspace, and create a truly interconnected network useful for both transportation and recreation. To further ensure that the Regional Trail Vision was fully supported by our region's political, business, and philanthropic leaders, the COG Board conducted a study to help understand the appetite for such a bold vision among community leaders. The consultants interviewed nearly 40 community leaders and surveyed over 1,000 individuals as part of this effort, affirming that the perception and interest in trails is extremely high among leaders and residents alike. Leaders indicated that a fully connected trail network is necessary to ensure the region remains a desirable and competitive economic center supported by high quality of life amenities. They also believed that trails are something that will benefit anyone, no matter their race, social status, or political affiliation and that its values tie back to not only the environment, but also health, economic development, and social equity.

The COG Board and its associated working groups are focused on implementing the Regional Trail Vision by addressing key regional trail issues related to trail development, operations & access, marketing, and partnerships. Working group initiatives include projects such as:

- COG Trail and Active Transportation Prioritization Study: This effort is prioritizing proposed trail project and identified on the COG Regional Trail Vision as well as bike/pedestrian access from neighborhoods to the trails based on how they are expected to impact the economy, public health, social equity, and the environment. The results of the study are expected in 2020.
- Strategic Greenspace Connectivity Framework: This is a collaboration between COG and the Urban Land Institute to create a cohesive vision for improvement, development, and connectivity of land along waterways in Franklin County. The framework is intended to reframe the connectivity of the region based on the natural geography defined by our waterways. It will provided guidance to connect all Franklin County residents to the regions natural, cultural, and economic resources for recreation, commuting, commerce, education, and relaxation.
- Wayfinding and Signage: COG developed guide to support cohesive signage and wayfinding across jurisdictional boundaries. COG is exploring ways to update the signage guidelines to reflect how trails are an important piece of the regional active transportation network.

This MTP prioritizes trail projects that are part of the proposed COG trail network. Figure 6.1 shows the specific stand-alone bicycle and pedestrian projects included in the MTP, and Chapter 8 provides a list of projects.

5. Update the Active Transportation Plan and implement it to create high comfort regional pedestrian and bicycle transportation networks

The Active Transportation Plan (ATP) provides tools to assist Central Ohio communities in the Metropolitan Planning Area with planning efforts to ensure their residents and visitors can efficiently and safely travel by foot, bike, and other similar modes of transportation. The current ATP includes an interactive Story Map with active transportation best practices, and a Cost Estimator Tool to help communities budget for the incorporation of active transportation infrastructure into an already programmed infrastructure project. The key regional corridors of the ATP are incorporated into the MTP's project evaluation criteria, as well.

MORPC staff coordinate closely with communities to encourage collaboration across jurisdictional boundaries and ensure that those regional active transportation connections are being made. Additionally, MORPC will be coordinating with regional stakeholders beginning in 2020 to update the regional Active Transportation Plan (ATP). This update will improve upon the concepts developed in the 2016 ATP for regional connectivity and implementation of best practices regarding active transportation facilities, and provide clearer guidance for local decision makers to make more informed decisions about the planning and design of their active transportation networks.

This MTP prioritizes bicycle and pedestrian projects such as multi-use paths, bicycle lanes, and sidewalks focused along the key regional corridors identified in the Active Transportation Plan. Figure 6.1 shows the specific stand-alone bicycle and pedestrian projects included in the MTP, and Chapter 8 provides a list of projects.

6. Make neighborhoods walkable and bikeable through infrastructure projects that fill gaps in the high comfort pedestrian and bicycle networks

The non-freeway projects identified in this MTP are all assumed to include appropriate complete streets elements. The stand-alone bicycle and pedestrian projects identified are focused on the 12 key regional Active Transportation Plan corridors and proposed Central Ohio Greenways trails, which are regionally significant. The financial forecast of this MTP sets aside funding for other stand-alone bicycle and pedestrian projects that local communities identify as priorities, however most of these local priorities are not mapped or specifically listed.

7. Ensure neighborhoods and employment locations have high comfort connections for pedestrians and bicyclists to the regional pedestrian, bicycle and transit networks

Shared Micromobility

Over the last few years, many new and innovative transportation options have expanded across the country and within our region. The first of these new technologies included bikeshare systems that allowed anyone to rent a bike for a short trip, then leave the bike for another user. The City of Columbus first introduced its "CoGo" bikeshare system in 2013, which has since grown to over 80 stations across Central Ohio.

Since then, a number of additional bikeshare providers and other new technologies such as electric

scooters have become available in the region. All of these technologies provide exciting new transportation options that have been shown to replace short trips that have previously been made by automobile, but have also introduced some new challenges.

In an effort to build upon the successes of these new technologies, while mitigating the associated challenges, MORPC will be available as a resource to communities who wish to explore their options with shared micromobility. Keeping in alignment with the MTP theme of collaboration, MORPC will work with communities to help guide expansion of these systems in combination with the infrastructure needed to support them, in a manner that encourages sustainable transportation and is accessible to the diverse populations of Central Ohio.

Active Transportation Hubs

MORPC's Park-and-Pedal initiative encourages commuters who live in the outlying suburbs to park their cars before arriving into congested areas such as downtown Columbus where parking is sparse, and ride a bike for their last few miles to work. Working in conjunction with the City of Columbus, MORPC has identified parking lots owned by the City that are connected to bike-friendly roads or multi-use paths that safely lead into downtown. These lots have been branded with clear signage at their entrances and indicated on MORPC's digital bike map.

Mobility Hubs are also being implemented by the City of Columbus, the Central Ohio Transit Authority (COTA), and Smart Columbus to support multimodal travel. These alternative transportation stations include CoGo Bike Share stations, scooter parking, transit stops, and ridehail pickup and drop off zones. MORPC staff will continue to collaborate with stakeholders as the Mobility Hub locations are identified and implements to best support community access to transportation resources that support active travel.

Active Transportation Events

Bike to Work Week, Bike Month, and Pelotonia are among the variety of bike events happening every year within the region. The goal of these events is to encourage more commuters and residents to bike. MORPC is involved in planning and promotion of many of these events, and is in the process of developing additional events to expand on the region's efforts around supporting active transportation .

- Taste of the Trails Toolkit: Taste of the Trails series of events are intended to deepen Central Ohioans' sense of community pride by celebrating unique local, natural, and cultural assets found along trails. The events encourage residents to experience the trails and learn more about how the trails can support a healthy lifestyle, sustainable commuting options, and equitable recreational opportunities. COG has developed an event toolkit to support communities interested in hosting an event. The toolkit provides templates for event outreach related to sponsorship, marketing, as well as a passport template to highlight community assets.
- MORPC Block Party Toolkit: MORPC is creating a second event toolkit for communities to host a public event planned for and with residents that is intended to fill gaps in understanding of MORPC's programs and services and emerging transportation. The event aims to strengthen relationships between regional partner, local municipalities, and transportation providers. The events will incorporate engaging activities and resources that will be used to educate and empower residents on why and how to use emerging transportation modes and services. These opportunities will provide age, ability, and income inclusive resources to support quality of life of residents in Central Ohio.

8. Facilitate multi-jurisdictional dialogue to improve opportunities through collaboration

Active Transportation Working Group

MORPC launched the Active Transportation Working Group (ATWG) in early 2019 with a mission of providing a forum for discussion and education in Central Ohio regarding active transportation, as well as to serve as a guide for regional project development and implementation. The ATWG engages public, private, and non-profit partners all working toward the same goal of making Central Ohio more walkable and bikeable.

Host Central Ohio Greenways (COG) Forums

Since 2005, MORPC has held COG forums three times a year to collaborate on trail planning efforts, raise awareness of the importance of the trail system, and share best practices for planning, building, and managing trails. The Forums are suited for local governments, parks and recreation groups, and local trail advocacy groups.

Assist in Community Active Transportation Plans and Committees

MORPC will participate in the development of local active transportation plans to ensure regional consistency and continuity . Communities within the MORPC MPO Planning Area also have the option to apply to the insight2050 Technical Assistance Program for active transportation planning, which would provide them with dedicated MORPC staff assistance for their planning efforts.

MORPC's Central Ohio Greenways Program also supports state and local trail efforts by providing guidance to or serving on trail committees as the Union County Greenway Working Group, ODNR's State Trail Planning Committee, Delaware County's Trail Committee, and other similar groups.

Active Transportation Professional Training Opportunities

MORPC continues to work with partners such as FHWA, the American Association of State Highway and Transportation Officials (AASHTO), the Institute of Transportation Engineers (ITE), the Association of Pedestrian and Bicycle Professionals (APBP), The League of American Bicyclists, the National Safe Routes to School Partnership, and YayBikes! – a Columbus-based bicycle advocacy group – to educate local engineers, planners and residents on bicycle- and pedestrian-related topics through a variety of webinars and trainings. Additional training opportunities are provided at conferences, such as ODOT's Ohio Transportation Engineering Conference, the Central Ohio Chapter of the American Planning Association's annual conference, and MORPC's annual Summit on Sustainability.

Encourage Bicycle-Friendly America and Bicycle-Friendly Business Applicants

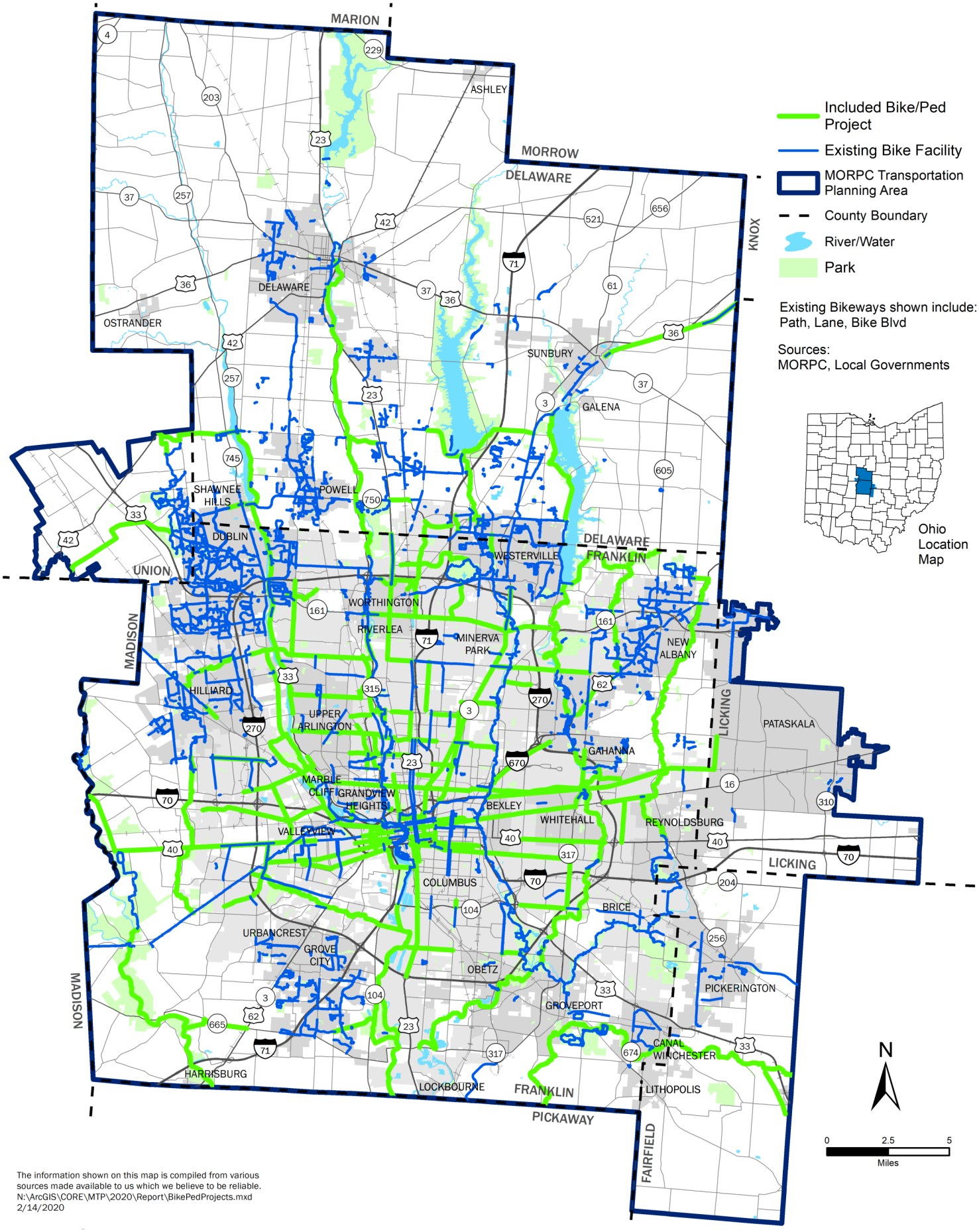
The League of American Bicyclists issues Bicycle-Friendly America and Bicycle-Friendly Business designations. The designations recognize municipalities, universities and businesses for actively supporting bicycling. The League has awarded a "Bronze" designation to the cities of Columbus (2009), Dublin (2012), and Westerville (2012). The League has also awarded a Silver designation to MORPC, Columbus Public Health, The Ohio State University, among other local organizations and businesses.

9. Develop transportation system to serve all demographic population groups.

In light of the findings of insight2050 that indicate that Central Ohio's population of 65 years or older is expected to double over the next 35 years, MORPC is identifying new ways to support older adults in the region.

MORPC's Mobility Management program is being implemented to support independence and quality of life for older adults, people with disabilities, and people with lower incomes. This program has the purpose of making transportation options for these populations easily accessible and useable for individuals themselves, their caretakers, or social service organizations. A significant part of this program supporting these populations to utilize active transportation modes safely and independently for mental and physical well-being. MORPC coordinates with Age-Friendly Communities to support their efforts around mobility for all ages. The Age-Friendly Communities program is a major step in ensuring that older adults can live an active and safe lifestyle in Central Ohio.

MORPC encourages and supports efforts to increase walking and bicycling to school among students, by coordinating with local SRTS partners and promoting their safety initiatives.



The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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Figure 6.1
Stand-alone Bike/Pedestrian Projects **Page 6-9**

6.b TRANSIT SYSTEM

The growth of the region cannot be accommodated by expansion of the highway system alone. As the costs of automobile ownership, fuel and congestion continue to grow, there is a need to provide alternative means of transportation to sustain the social and economic well-being of Central Ohio. Investment in new and expanded transit services can ease growing congestion while reducing harmful emissions and providing an equitable transportation system.

ODOT Statewide Transit Needs Study

As the demand for public transit increases and budgets shrink, the Ohio Department of Transportation has developed recommendations to bring the most efficient and cost-effective improvements to transit riders and taxpayers alike.

Travel trends show that there is a definite rise in the need for convenient, affordable public transportation to jobs, medical appointments, shopping and recreational activities. Ohio transit agencies are struggling to fund this existing service, let alone meet the increased demand.

As of January 2015, ODOT's transit spending per capita at $0.63 ranks among the lowest in the nation at 38th out of 51. The study identified nine strategies to meet needs and better position the state to strengthen services overall.

TRANSIT STRATEGIES AND PROJECTS

The regional transit service providers and their planning partners are actively working to improve transit services in Central Ohio. Specific improvements to local and express bus service are not listed in this MTP due to the frequent changes made by the service providers, however the financial plan does include funds for these types of improvements. Additionally, the following activities and strategies demonstrate other regional efforts to move transit forward.

1. Collaborate to build transit infrastructure through development regulations

MORPC has been working with a group of stakeholders to identify locations and funding for coordinating transit-oriented development in potential high capacity transit areas is association with the insight2050 Corridor Concepts Study Report in redevelopment and economically distressed areas. Multijurisdictional stakeholders are being identified that specialize in planning, housing, public service and development. As part of TOD and other efforts, MORPC will be reviewing vehicle and pedestrian crash locations in proximity to bus stop locations. MORPC COTA and DCT will work with elected leaders, developers, and community members. As growth and density increase lessons learned can be applied to the DCT service area and potential mobility center locations.

2. Increase frequency on appropriate fixed route transit routes

In May of 2017 COTA overhauled its entire bus network for the first time in 40 years. The Transit System Redesign simplified routes, increased frequency, and made connections to more people and places. The new system provided twice as many high-frequency bus routes that arrive every 15 minutes or better on major streets. These simple, frequent, easy-to-understand routes form the backbone of the new system. Routes also now operate on more consistent schedules seven days a week. Saturday service increased almost 50% and Sunday by 120%. Moving forward, it is envisioned strategically to

increase frequency where appropriate to make it more convenient and meet demand.

Like COTA, DCT will continue to explore opportunities to provide more frequent service through grants and potential other local funding sources. In addition, DCT will continue to monitor the growth and need in the county and will continue to modify its services to best meet the needs and desires of the county.

3. Implement high capacity transit service along additional corridors

As the primary provider of public transit services in Central Ohio, COTA underwent a long-range planning effort, NextGen, to identify public transportation needs and opportunities through 2050. NextGen comprehensively considered how changing growth and demographic trends will shape opportunities and demand for public transportation. NextGen was completed in Spring 2017.

NextGen goals:

- Lead the community in envisioning what our public transportation system needs to accomplish in the coming decades to ensure Central Ohioans have access to jobs, housing, education, and services.
- Prepare Central Ohio for future growth by identifying transit investments that integrate with regional plans and goals. Critical regional goals include maintaining regional competitiveness, minimizing sprawl, and responding to demographic preferences.
- Create transit investment options to support local and regional efforts to develop transit-oriented and multi-modal communities.
- Identify conventional and creative revenue options that offer potential to support the recommended plan and ensure the plan can be implemented.

In addition to the transit agencies, there are other groups that are advocating for high capacity transit in the region. These include the Columbus Street Railway Company, Transit Columbus, and others.

<u>High-Capacity Corridor Planning – insight2050 Corridor Concepts & LinkUS Mobility Initiative</u>

Coordination between the MTP project evaluation process (described in Chapter 7), and other regional transit planning initiatives resulted in 6 high-capacity transit corridors being identified in this MTP.

The 2019 insight2050 Corridor Concepts study explored how more walkable, compact neighborhoods and high-capacity transit along five key routes in Central Ohio can improve quality of life by positively impacting transportation, infrastructure, housing, and the environment.

The LinkUS Mobility Initiative began in summer 2020. This initiative builds upon COTA's vision for high capacity transit identified in NextGen and the Corridor Concepts study to advance high capacity transit and other mobility improvements in specific corridors. While all of the corridors identified in the Corridor Concepts study are included in the LinkUS Mobility Initiative, four corridors were studied first to identify the preferred mode alternatives and route alignments. As a result of these studies, Bus Rapid Transit (BRT) was identified as the preferred mode on four corridors. The corridors are described below, and shown in Figure 6.2 and in Chapter 8.

- East Rich St./Main St. from High St. to Taylor Rd.
- East Broad St. from Souder Ave. to Taylor Rd.
- West Broad St from Washington Ave. to Westwoods Blvd.
- Northwest: Connects Downtown to Dublin via Olentangy River Rd, Bethel Rd, and Sawmill Rd. corridors

Two other corridors, described below and shown in Figure 6.2, are routes that have a high potential to support high-capacity transit (HCT), but specific transit modes have not yet been identified:

- Northeast: Enhance, reinvest in, and possibly re-align CMAX service to utilize former Mt. Vernon RR line between E. 5th Ave. and Ferris Rd.
- Southeast: Connects Downtown to the Rickenbacker Area.

High-capacity transit in these corridors could include:

- Commuter Rail (connecting cities in adjacent counties with Columbus)
- Light Rail (providing service to Columbus and adjacent communities)
- Streetcar (shorter lines in denser, urban areas)
- Bus Rapid Transit (expanded bus service with light-rail-like amenities)

The BRT and HCT corridors described above are consistent with the corridors studied in the insight2050 Corridor Concepts and the LinkUS Mobility Initiative, and represent the current vision for high capacity transit in the region. Those six corridors are included in this fiscally constrained MTP.

Additionally, four other areas have been identified for further study for the need for high capacity transit service, including:

- Columbus-Delaware: Connects downtown Columbus to Delaware, the largest city in Delaware County
- Columbus-Lancaster: Connects downtown Columbus to Lancaster, the largest city in Fairfield County
- Columbus-Grove City: Connects downtown Columbus to a rapidly growing suburb
- Columbus-Chicago: Connects Port Columbus to Chicago, with potential stops in Ohio and Indiana along the way.

4. Expand geographic coverage of fixed route transit service

Although funding structures currently limit the service areas of the major transit providers in the region, ODOT, MORPC, and the transit providers are partnering to review policies and seek opportunities to to expand fixed route transit coverage. One component of expanding the geographic coverage area of fixed route transit is having logical transfer points. Mobility Centers are needed to make transit connections from suburban and outlying areas to the Columbus area. Public and private partners are identifying sites for development of mobility centers.

There are a growing number of employment centers in Central Ohio outside of Downtown Columbus. In an effort to connect inner-city residents to suburban job opportunities, COTA offers several reverse-commute express lines that travel from Downtown Columbus to outlying areas. Because these lines often end at transit centers or Park & Rides, they do not directly connect employees to their job sites.

COTA's NextGen Plan identified potential future strategic investments, including the expansion of, improvement to, and addition of park-and-ride locations and transit centers to support potential improvements to transit services. These locations are shown in Figure 6.2.

5. Implement appropriate additional/innovative service to address first/last mile needs

Building of off first/last mile efforts such as the New Albany service, GREAT and the COTA plus implementation in Grove City, more of these are envisioned throughout the region. In particular COTA is

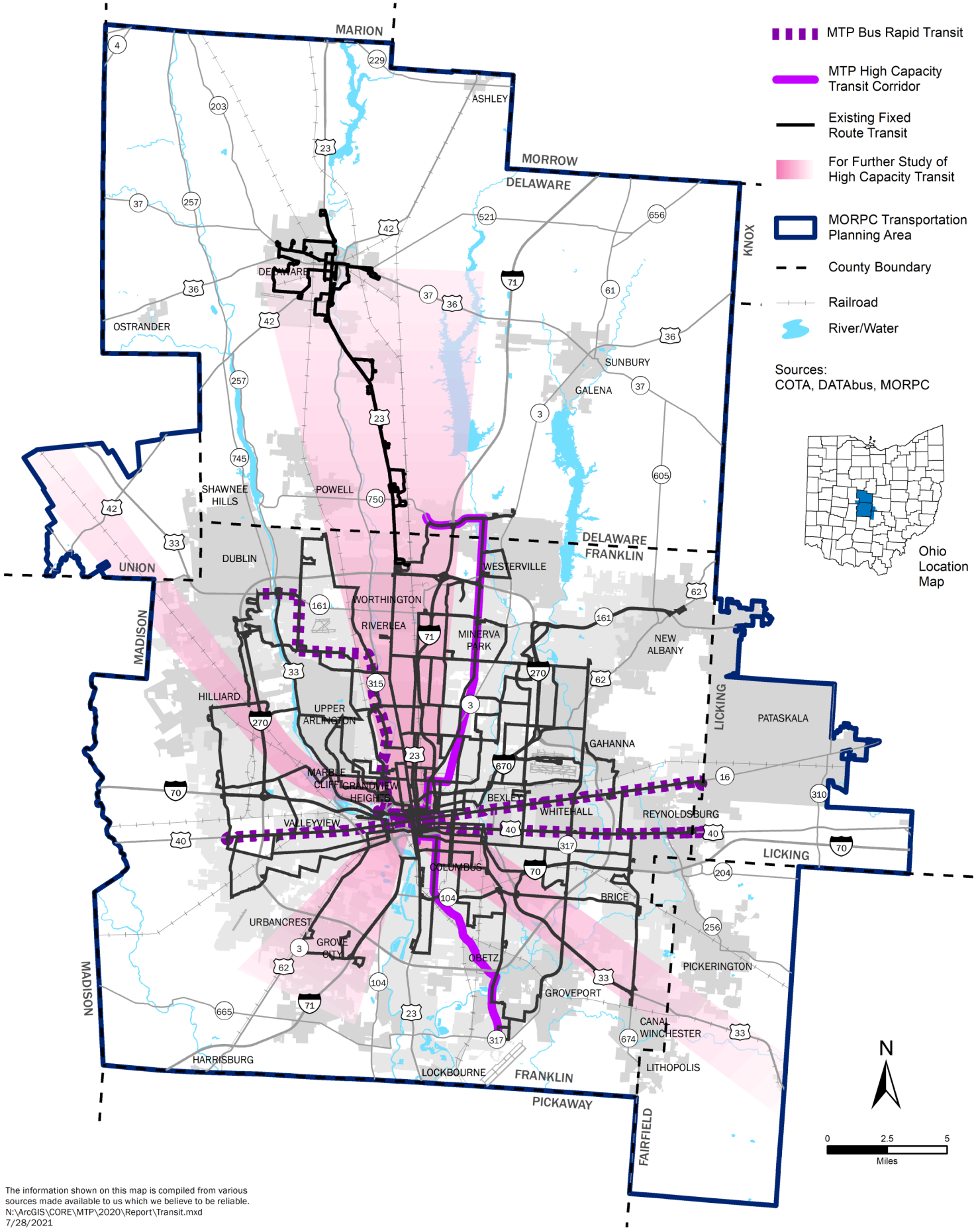

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Figure 6.2
High Capacity Transit Projects

committed to implementing the COTA plus service in Grove City to other areas of the region.

COTA Plus is an on-demand service that will provide first/last mile service in partnership with local governments. The mobility option offers customers with point-to-point service at an affordable fare and connect COTA riders to fixed route service for free. COTA Plus is an on-demand, app-based rideshare service that can book multiple passengers heading in the same direction into a shared vehicle. This microtransit solution provides customers with further access to jobs, healthcare and more, while also offering a fast, convenient and comfortable transit solution.

Some communities are piloting first/last mile service with a private provider for transit riders to and from their jobs as a service with the hopes of employers participating in funding the service.

Both COTA and DCT have bike racks mounted on the front of their fixed-route vehicles, enabling bicyclists to complete a part of their trips with transit. Lancaster Public Transit System plans to add this capacity within the next few years. This bike-bus combination helps transit riders when their origin or destination remains far from a transit stop. Where suitable, COTA continuously seeks to add other bicycle amenities, such as racks, near transit stops to improve modal connection. COTA also participates in any updates to MORPC's Columbus Metro Bike map with park-and-ride and other route information.

6. Make neighborhoods transit supportive through infrastructure projects

Walking or biking are part of all transit trips. Thus, pedestrian and bicycle infrastructure is vital in the support of transit. Thus, most of the strategies and projects that expand the pedestrian and bike system in areas that connect tor transit stops will benefit transit. COTA's plans also include the improvement of sidewalk connections that improve accessibility to passenger shelters and stops. The Franklin County Coordinated Plan also identifies these sidewalk deficiencies as a barrier to fixed-route transit, especially for the elderly and persons with disabilities. In response, COTA's Mobility Advisory Board convenes a subcommittee that advocates for sidewalk improvements, and funds limited improvements through FTA Section 5310, Enhancing the Mobility of Seniors and Persons with Disabilities. MORPC's Complete Streets Policy also encourages and, in some cases, requires the completion of such connections to transit.

COTA and DCT are involved in the development and will continue to be part of MORPC's Active Transportation Plan (ATP), described in Section 6.1. The ATP is a coordinated effort across the MPO to create interaction and integration of pedestrian, bicycle and transit facilities within the regional transportation network.

7. Facilitate multi-jurisdictional dialogue to improve opportunities for collaboration

Since FFY 2013, MORPC has grown in the role of being a designated recipient for FTA Section 5310 funds. Going forward MORPC will have more connection and contact with recipients to work toward more coordination efforts. To date and going forward, public transit, private operator, and private non-profit projects have been selected.

When MORPC updated its locally developed Coordinated Public Transit Human Services Transportation Plan for Franklin County 2018 MORPC included Delaware county to match the MPO planning area. As required by FTA Section 5310 funding to enhance the mobility of seniors and persons with disabilities, any program or projects selected must be included in the Coordinated Plan.

In January 2018, ODOT Office of Transit completed the Justification for ODOT Human Service Transportation Coordination Regions. ODOT investigated the merits of developing a regional structure for coordinated human services transportation for the state to assess the potential financial efficiencies of service provision and enhance mobility options for the urban and rural residents of Ohio. ODOT, reviewed resources, challenges, duplications, gaps, trip types, population and budgets available for

coordinated transportation and mobility management. This study recommended the regionalization of Ohio's HSTC programs in a manner that facilitates a more cost-effective use of available funding and to take advantage of regional deployment of enhanced technologies for all of Ohio's human services programs that utilize agency-sponsored and public transportation resources. As shown in the Figure below.

One of the outcomes of the Coordination Regions above is that most transit services would like to work regionally with out boarders

COTA, DCT LFPT and LCTB participate in or host the coordinating councils or boards for their counties. Such forums provide an opportunity to identify, maintain and expand human services and public transit coordination. Each seeks to implement its county's coordinated plan.

DCT, LPTS and LCTB continue to contract with human services agencies to provide transportation for human service agency clients. Such coordination eliminates potentially overlapping service and provides the transit agencies an additional source of revenue to maintain and operate their fleets.

Bus On Shoulder Program (BOS)

COTA began operating express buses on freeway shoulders in 2006. Buses traveling on I-70 between downtown Columbus and SR 256 east of Downtown are able to merge onto the freeway shoulder to avoid congestion delays. Buses may use the shoulder when traffic speeds drop below 35 mph, and buses may not exceed traffic speeds by more than 15 mph.

Utilized under bus operator discretion, the I-70 BOS project has resulted in reduced travel times and improved schedule adherence for the express routes using this freeway. The region will continue to implement BOS where appropriate. In 2015, COTA, ODOT, and MORPC partnered and implemented the region's second BOS corridor – I-670 between downtown Columbus and I-270 east of Downtown. This was discontinued in 2018 to build the SmartLane an extra travel lane that is only open during certain times when drivers need congestion relief the most.

6.c FREIGHT RAIL & MULTIMODAL CONNECTIONS

Our region's freight planning program actively supports a number of the Metropolitan Transportation Plan's goal strategies, particularly when it comes to positioning Central Ohio to attract and retain businesses that enhance our economic prosperity and position the region to compete on a global scale.

The intermodal freight and aviation industries have an impact beyond local, regional, state, and even national borders. Global trading patterns are shifting, and a competitive advantage will belong to regions that cannot only attract high skilled workers and businesses that employ them, but places that provide affordable housing options, a high quality of life, and transportation hubs that act as gateways to the global economy. Through its work in freight planning and other activities, MORPC works to position the Central Ohio region as an attractive area to workers and businesses. However, MORPC also understands its role in the larger picture, and that freight challenges span beyond regional boundaries.

INTERMODAL FREIGHT AND AVIATION STRATEGIES AND PROJECTS

Recognizing the importance that goods movement plays in the regional, state, and national economies, Central Ohio stakeholders actively collaborate to address the needs of this important sector of our economy. Strategies presented throughout the MTP seek to improve the flow of all modes of transportation, including intermodal freight and ground access to the region's passenger airports. For example, strategies and projects that address congestion not only help the commuting traffic but also the movement of goods. However, this section directly addresses four strategies related to intermodal freight and aviation ground access, and the activities and projects that implement these strategies.

1. Improve traffic and transit operations by increasing efficiency through investment in advanced technology

As a convener of public and private stakeholders, MORPC has been a key agency in the identification of traffic and transit needs in the region. This includes collaborating on testing innovative technologies to increase efficiency of traffic and transit operations. Working with COTA, Smart Columbus, ODOT, Drive Ohio and local municipalities, MORPC is facilitating pilot projects focused on autonomous shuttle services (such a the Linden self-driving shuttle), and the US-33 Smart Corridor, which involves enhancing the US-33 corridor in Union County and western Franklin County for testing of autonomous trucks.

Automated and Connected Vehicles

Along with other regional stakeholders, MORPC is working with The Ohio State University Center for Automotive Research (OSU CAR) to explore innovative transportation technologies such as automated freight vehicles. Currently, MORPC is working with OSU CAR and its partners to fund a pilot project along US 33.

2. Improve at-grade rail crossings and close or grade-separate crossings where feasible

As part of its services to our members, MORPC takes an active role in facilitating collaboration between local governments and the Ohio Railroad Development Commission (ORDC), particularly in the area or at-grade rail crossings. In 2018, MORPC worked with Prairie Township to assess the impacts of the Hillard-Rome Road south of I-70 and north of W Broad Street. This at-grade rail crossing is frequently

blocked by stalled trains due to congestion at the Buckeye intermodal rail yard. To help understand the extent of the blockage issue, MORPC provided a 7-day, 24-hour video surveillance summary that informed stakeholders of the frequency of blockages, the length of each, and what times during the day the problem was at its worst. This information was shared with ORDC, ODOT and other stakeholders to facilitate discussions with Buckeye rail yard management and private railroads using this rail crossing.

In addition, MORPC is participating in the Grade Crossing Adaptability Study's stakeholder workshops. This study, slated for completion in 2020, was funded by ODOT and ORDC with the purpose of providing an analysis tools for decision makers to prioritize safety around at-grade crossings across the state.

3. Address congestion points "bottlenecks" on the rail system

In 2019, MORPC completed components of a Tier I Environmental Impact Statement (EIS) study as part of the Rapid Speed Transportation Initiative (RSTI). This study yielded information on train frequency across various segments of the rail network in Central Ohio. This information, while collected for the purposes of the Chicago-Columbus-Pittsburgh passenger rail and hyperloop projects, yielded important information on congested rail segments, including those within downtown Columbus. This information is at hand and can help identify collaboration points between rail, highway, and local stakeholders to maximize multimodal improvement investments in Central Ohio.

4. Collect information on and analyze freight activity to identify developing trends and work to disseminate that information among partners and peers

Mid-State Freight Web Tool

In 2016, MORPC completed the Mid-State Freight web tool (http://apps.morpc.org/midstatefreight/). This tool provides an overview of the freight industry and its assets in Central Ohio, and provides information on the transportation system's travel time reliability (or system performance), freight system infrastructure improvement priorities (or MORPC's Freight Transportation Improvement Program, FTIP), and freight mode trends including air cargo (total cargo weight handled), rail (in number of intermodal lifts), and highway trends in the form of a comparison between Columbus and other metro areas in the U.S. of similar size. The highway trends used in Mid-State Freight include annual excess fuel consumed, delay per peak hour commuter, and total congestion cost.

Inventory of Railroad Operations and Right-of-Way in Central Ohio

An update to the Inventory of Railroad Operations and Right-of Way in Central Ohio is underway. Generally updated every 10 years, the report was originally released in 1968 and previously updated in 1985 and 1995, with the most recent update completed in 2007. The original purpose of this study was to examine the rail lines within Central Ohio in order to identify physical constraints and operating parameters that affect the potential use of excess right of-way for other transportation purposes. This inventory was originally intended to provide a planning tool to assist in an objective analysis of a rail line's potential in other uses, such as trails or environmental buffers, as well as assist in intermodal planning, rail crossing studies, and potential infrastructure improvements. The upcoming update intends to broaden its scope and will feature web-based mapping to increase the public's access to this information.

Freight Scanning Tours

Previous freight-scanning tours have provided policy makers opportunities to get behind-the-scenes glimpses of major companies doing business in the region. In addition, it allows business leaders to ask questions of the group of policy makers with respect to future transportation plans and funding in the

region. MORPC will continue to work with regional stakeholders to conduct at least one freight scanning tour peryear. This includes tours associated with the Conference on Freight within Central Ohio.

FHWA's Freight Professional Development Program

MORPC will continue to work with ODOT, FHWA and other U.S. Department of Transportation (USDOT) partners to help build freight planning staff capacity to ensure the long-term integration of the subject into all transportation planning initiatives.

5. Maximize the efficiency and provide needed capacity of rail terminals

6. Implement hyperloop technology for freight movement

In 2017 MORPC led a partnership of entities and won the Virgin Hyperloop One Global challenge to be one of 10 teams world wide to advance this new transportation technology. The Midwest Connect route is from Chicago to Columbus to Pittsburgh. Since 2017 MORPC has worked with Virgin Hyperloop One to advance planning of this route including completing a feasibility study and certain components of a Tier I Environmental Impact Statement. Partners have been involved in national discussions with U.S. DOT on the policies and standards needed at the national level to advance this new mode. MORPC is applying for additional funding from various sources to continue the next steps in making this technology a reality in our region.

Although the activity that jump started the technology discussion was a route to Chicago and Pittsburgh to Columbus, it is likely that a shorter route(s) exclusively for freight will be the first components as the technology is implemented. Although still in early planning stages, these could be routes that connect the major airports in our region and/or routes from these to initial destinations like Dublin or Marysville along the proposed, longer intercity route.

7. Make transportation decisions that positively impact freight movements and maximize the effectiveness of the region's integrated freight transportation system

Innovative Financing Initiatives

Traditional funding for transportation projects, including rail and roadway, is becoming increasingly more and more challenging. MORPC will work with transportation funding stakeholders, such as ODOT, counties, local agencies, and the private sector to increase knowledge and use of new innovative financing strategies for Central Ohio, such as Transportation Improvement Districts (TIDs), toll financing, automated truck corridors and other public-private partnership (P3) opportunities.

8. Forge public/private partnerships to provide resources to maintain and expand key linkages between air, rail and roadway transportation modes

Regional Policy Roundtable

The Regional Policy Roundtable is a group composed of representatives from diverse interest groups across the Central Ohio region, including local governments, businesses, non-profits and citizens. The Regional Policy Roundtable aims to sustain a strong, prosperous 15-county Central Ohio region by providing a voice on policy and legislative matters. The Roundtable's main task is to agree on the public policy initiatives that MORPC staff pursues.

MORPC will continue to monitor state and federal legislation for its impact on Central Ohio's freight transportation system. In the past, MORPC's Policy Committee has passed resolutions reacting to potential legislative and administrative decisions. Other resolutions have supported local partners'

applications for funding under various programs, such as the US 33 and I-270 Interchange project to address congestion issues at this bottleneck that affects regular as well as freight traffic flows. MORPC will monitor federal and state policy and inform the Roundtable when applicable, and, as required, pursue the Policy Roundtable's identified freight-related priorities.

FAST Act Freight Provisions

In December 2015, the FAST Act was signed into law to address funding of federal surface transportation programs for highways, highway safety and transit. The FAST Act includes funding for two new freight-specific programs. One is apportioned to state DOTs and will total $42 million per year for the State of Ohio, while the other is discretionary and provides $4.5 billion over five years for freight-significant projects. MORPC staff will work with its regional partners to capture federal freight funding for the region.

Over the past few years, several non-traditional funding sources have emerged that can address freight issues, such as TIGER I, II, III, IV (Transportation Investment Generating Economic Recovery), and the Ohio State Stimulus Logistics and Distribution program. MORPC continues to support and provide technical assistance for funding applications for area projects.

Freight TIP

MORPC will continue to refine the Freight TIP and the evaluation criteria used to identify priority freight projects while evaluating the conditions and performance of the NHS (National Highway System) connectors to move freight more effectively and efficiently through Ohio.

Rickenbacker Area Study

The Rickenbacker Intermodal Yard is Central Ohio's connection to the NS Heartland Corridor. Infrastructure connections are still necessary to maximize the value of this asset. MORPC worked withstakeholders in the area to conduct a comprehensive needs assessment that considered freight and workforce transportation needs, business attraction and retention strategies, resiliency in terms of preparedness for technology innovations and alternative fuel sources (such as solar, electric, and natural gas), and improvements in transportation safety. This study was completed in 2018.

9. Maximize efficiency of existing transit terminals and construct new transit terminals, mobility centers and park and rides with safe bike, pedestrian, and vehicle access where there is a convergence of transit routes or intercity rapid speed transportation modes

The 2018 Rickenbacker Area Study identified the need for a mobility center that would serve workers in the logistics hub. The concept and site selection are being further explored by area stakeholders.

10. Incorporate vehicle sharing needs at transit terminals, stations and major stops

11. Improve transit, bike and pedestrian connections to airports

In 2016 COTA began its AirConnect, providing regular bus service with direct connections between downtown hotels and John Glenn International Airport every 30 minutes, 7 days a week.

The 2018 Rickenbacker Area Study also identified transit, bike, and pedestrian improvements in the area that would help people move around in the area more safely.

12. Alleviate existing or anticipated congestion at roadway and rail terminal access areas

13. Alleviate existing or anticipated congestion at roadway and air terminal access areas

The maintenance, management, and expansion of the region's freeways, surface roads, last-mile facilities, and intermodal connectors is essential for efficient freight movement through and within Central Ohio. This MTP identifies funding for maintenance and preservation activities, management activities including coordinated Intelligent Transportation Systems, as well as specific freeway and surface roadway improvement projects.

14. Incorporate ground needs for flying intraregional transport such as drones for package delivery and personal transport

In 2018, MORPC provided data and transportation modeling information to a researcher from Oak Ridge National Laboratory. This information contributed to the completion of a study that focused on assessing the most energy-efficient methods for last-mile freight delivery in an urban area, including consideration of drone deliveries. The study found that drones are not as time and energy efficient in urbanized areas and are better suited for reconnaissance or for delivering medical supplies in remote areas than for delivering goods in dense urban areas. By facilitating information for this study, MORPC contributed to the advancement of understanding what land use conditions suit energy efficient drone transportation.

15.Facilitate multi-jurisdictional dialogue to improve opportunities for collaboration

OARC Freight Working Group

Through the Ohio Association of Regional Councils (OARC), MORPC coordinates the state's metropolitan areas to facilitate a statewide freight group. This group allows the state's MPOs to assist each other on freight-related issues when needed. The freight working group also enables ODOT and FHWA staff to share information on state and federal freight activities.

Ohio Conference on Freight

The Ohio Association of Regional Councils (OARC) sponsors the Ohio Conference on Freight, which is rotated between the cities of Cleveland, Columbus and Cincinnati and is held once a year. MORPC continues to support OARC and participates in conference planning efforts. MORPC represents Central Ohio's freight infrastructure interests at this annual event and utilizes knowledge gained in the development of our region's freight planning activities.

Columbus Region Logistics Council

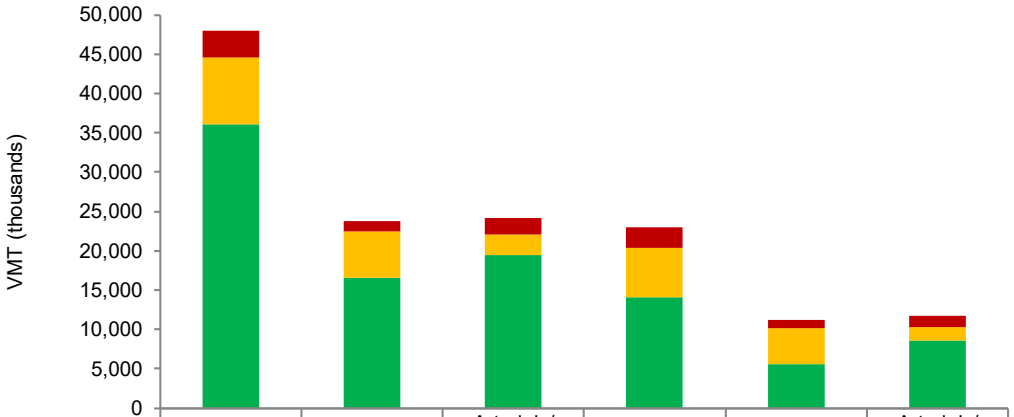
The Columbus Region Logistics Council is an industry-led group, which is an initiative of the Columbus Chamber. The group also serves on MORPC's Transportation Advisory Committee. Likewise, MORPC serves as the Logistics Council's government liaison. This relationship has led to several tactical and strategic successes for the region's freight transportation system. This close partnership will continue into the future.

6.d ROADWAY SYSTEM

As described in Chapter 3, one operational measure of how the roadway system functions is vehicle miles traveled (VMT) under congested conditions. Due to the growing travel demand resulting from the growth described in Chapter 2, it will be increasingly challenging to maintain VMT under congested conditions to no more than 5% daily and 10% during peak periods. In addition to the management strategies described in Chapters 4 and 5, it is also necessary to identify roadway capacity expansion projects to accommodate the additional travel demand. Figures 6.3 and 6.4 show expected congestion levels in 2050, should none of the projects described later in this chapter be implemented and travel behavior remains the same.

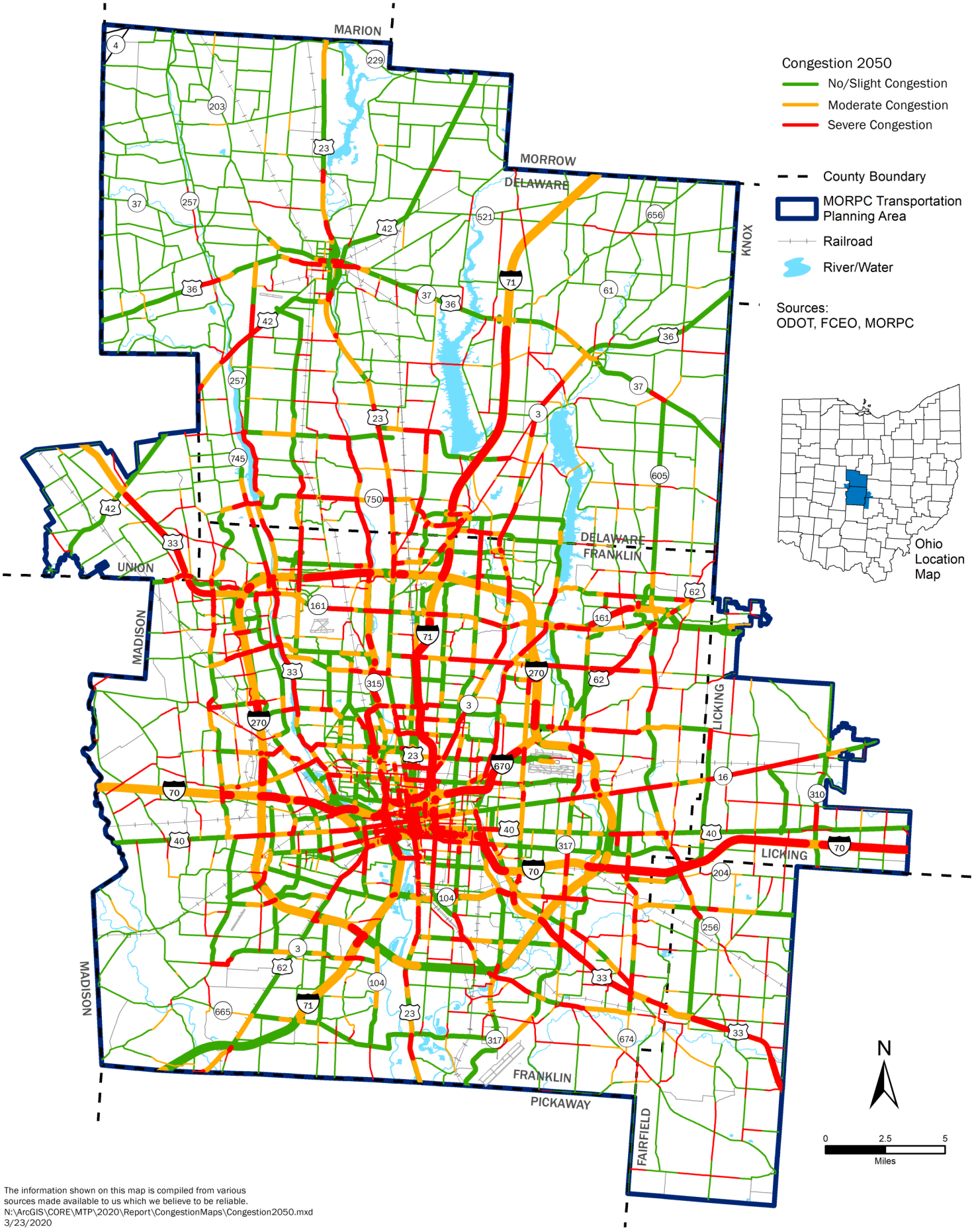
The roadway system is the primary component of the transportation system in Central Ohio. Because nearly all of the transportation systems described earlier in this chapter require access to the roadway system in order to function, MORPC's approach when identifying roadway expansion projects is to assume that the appropriate bicycle and pedestrian facilities will be included in all new roadway, roadway widening, or intersection projects. This is consistent with MORPC's Complete Streets Policy and complete street policies being adopted by communities throughout the region.

MORPC's approach when identifying roadway expansion projects is to assume that the appropriate bicycle and pedestrian facilities will be included in all new roadway, roadway widening, or intersection projects.



	Total (24hr)	Freeway (24hr)	Arterials/ Collectors (24hr)	Total (Peak)	Freeway (Peak)	Arterials/ Collectors (Peak)
Severe	3,482	1,339	2,142	2,645	1,141	1,504
Moderate	8,512	5,945	2,566	6,270	4,547	1,723
Uncongested	36,018	16,557	19,461	14,099	5,557	8,542

FIGURE 6.3 VMT by Congestion Level, 2050



The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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Figure 6.4
Congestion Levels, 2050

MID-OHIO REGIONAL PLANNING COMMISSION

ROADWAY STRATEGIES AND PROJECTS

Recommendations presented throughout the MTP will help improve conditions on the roadway system. For instance, strategies and projects that will address travel demand will also improve roadway congestion levels. One can make the same connection for any strategies and projects that improve transit, bicycle, and pedestrian systems. However, the following strategies and projects specifically address roadway system development.

All project references in the strategies listed below remain general and describe the categories of roadway projects identified in this MTP and shown in Figures 6.5 and 6.6. More detailed project descriptions of all specific projects included in the MTP can be found in Chapter 8. While these primarily relate to expanding the roadway system, Chapter 4 addresses the importance of maintaining and managing the existing system.

1. Add capacity, where appropriate, to alleviate existing or anticipated congestion along existing freeways and at interchanges

This plan identifies 26 miles of freeway to be widened and 25 interchange modifications.

MAJOR WIDENING OF FREEWAYS

Addition of travel lanes.

BEFORE

AFTER

INTERCHANGE MODIFICATION

Modification of existing interchange to improve operations and accommodate additional capacity, widen an overpass, and/or modify ramp intersections.

BEFORE

AFTER

2. Continue conversion of key divided expressways into limited access freeways

For certain facilities, whose role and function is to provide mobility through the region and not necessarily to provide access to developed areas, converting into limited access freeways can provide safety benefits, congestion relief, and preserve capacity for future growth.

This MTP identifies the following two expressways be converted to freeways:

- US-23 from I-270 (South Outerbelt) to Pickaway County
- US-33 (SE) from Hamilton Rd. to the US-33/Carroll interchange

3. Construct new interchanges, where appropriate, to alleviate congestion or support regional development goals

This plan identifies 6 new interchanges.

NEW INTERCHANGE

Adding a grade-separated interchange where an at-grade intersection or no intersection existed previously.

BEFORE

AFTER

Freeway system projects are implemented through ODOT's leadership and in partnering with local community stakeholders. These projects are typically the most expensive projects to build and usually take many years and project phases to complete.

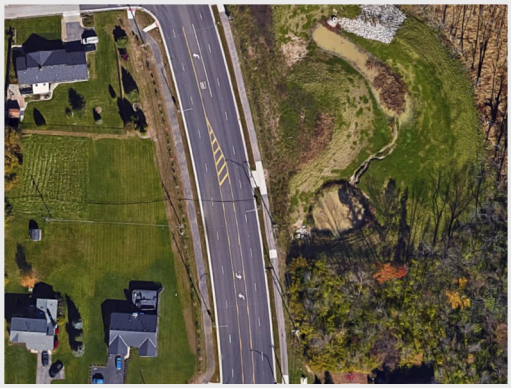
4. Add capacity, where appropriate, to alleviate existing or anticipated congestion along existing arterial and collector corridors

This plan identifies 86 miles of through travel land additions and 119 miles of turn lane additions or other safety improvements along a corridor.

MAJOR OR MINOR WIDENING OF SURFACE ROADWAYS

Addition of travel lanes and/or turn lanes along a roadway corridor.

BEFORE



AFTER

ACCESS MANAGEMENT OF ROADWAY CORRIDOR

Limiting access points to and from a roadway by consolidating driveways and/or limiting turning movement options.

BEFORE

AFTER

5. Add capacity, where appropriate, at locations such as intersections to alleviate existing or anticipated congestion

This plan identifies 152 intersection modifications.

INTERSECTION MODIFICATIONS

Addition of turn lanes or other reconfiguration such as a roundabout.

BEFORE AFTER BEFORE AFTER

6. Construct new roadways, where appropriate, to alleviate congestion or support regional or local development goals

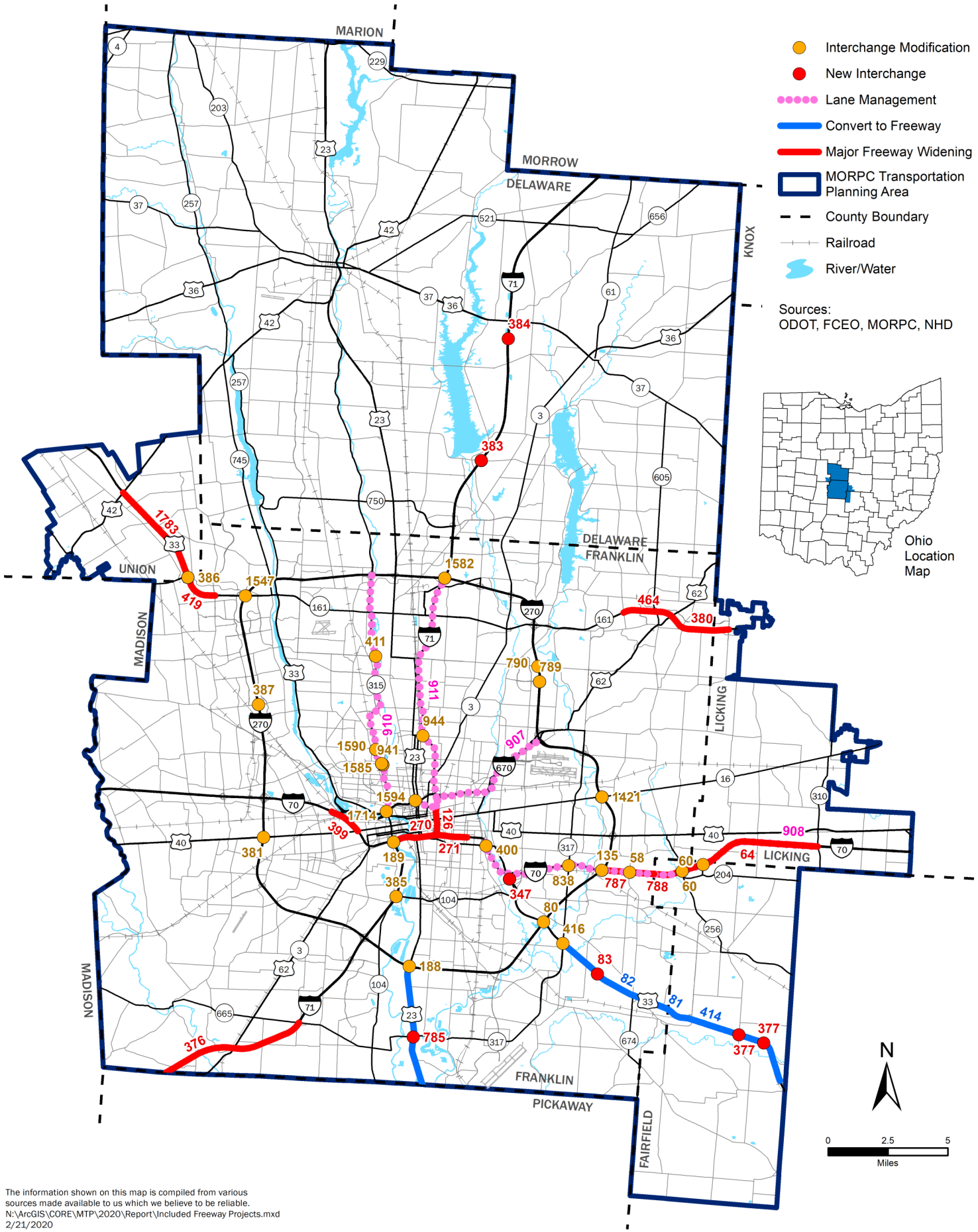
The MTP contains 109 new road projects consisting of 100 miles. Many of these will be built to support new development. However, there are also short road connections throughout the region to solve localized congestion and connectivity issues. There are also longer new road corridors to address more sub-regional travel needs.

7. Provide efficient connectivity of local roads to the arterial and collector roadway system

Although local roads do not provide for regional travel, their efficient connection to the rest of the system is vital. Improper intersection spacing or lack of appropriate intersection control not only impacts those on the local road, but those utilizing the collector or arterial facility also. Access management along the collector or arterial road, proper intersection sizing and signalization and ensure redundant connectivity from local system to the larger facilities are key ways to make good connections.

8. Facilitate multi-jurisdictional dialogue to improve opportunities for collaboration

MORPC's Committee structures are key in facilitating dialog and collaboration. Beyond the committee meetings, regional collaboration meetings are held in each quadrant of the region annually, and MORPC leadership meets individually with each member. The development of the TIP, the Paving The Way program and partnering on transportation studies are additional ways that will continue to be used to facilitate multi-jurisdictional dialogue.



The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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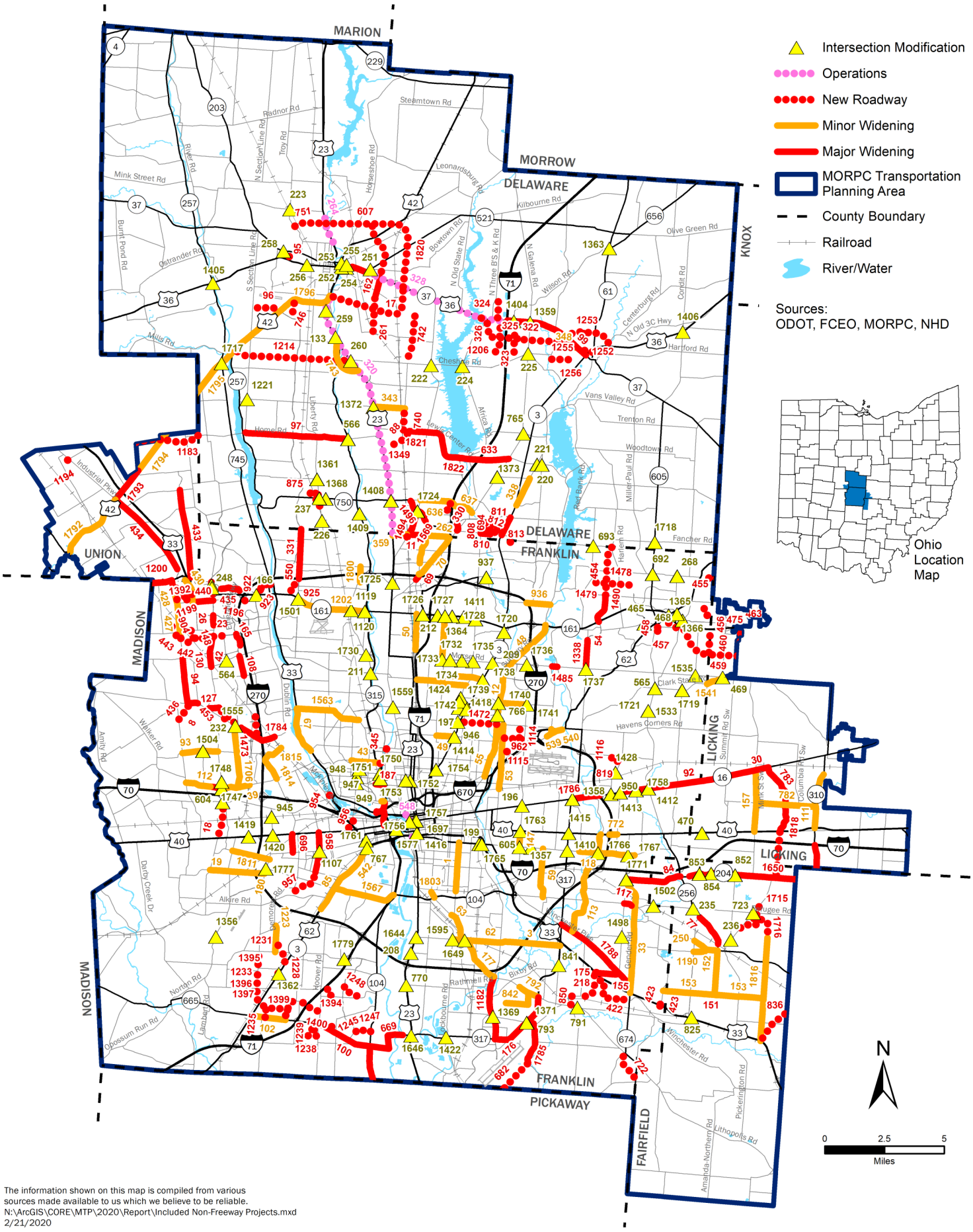
Figure 6.5
Freeway Projects



The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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Figure 6.6
Non-Freeway Roadway Projects

MID-OHIO REGIONAL MORPC PLANNING COMMISSION