

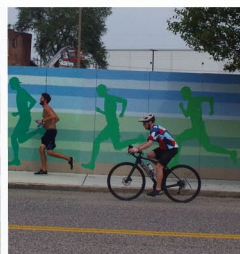
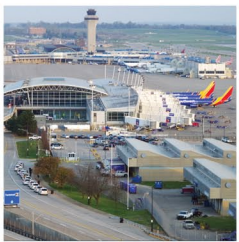
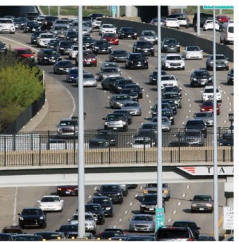
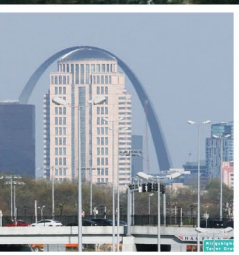
CONNECTED 2050

Long-Range Transportation Plan for the St. Louis Region

June 2023



EAST-WEST GATEWAY
Council of Governments
Creating Solutions Across Jurisdictional Boundaries



East-West Gateway Council of Governments (EWG) hereby gives public notice that it is the policy of the agency to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America, on the grounds of race, color, or national origin, shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which EWG receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with EWG. Any such complaint must be in writing and filed with EWG's Title VI Coordinator within one hundred eighty (180) calendar days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Nondiscrimination Complaint Form, please see EWG's website at www.ewgateway.org/titlevi or call (314) 421-4220 or (618) 274-2750.

This publication was supported, in part, by a grant provided from the U.S. Department of Transportation through the Missouri Department of Transportation and the Illinois Department of Transportation. The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the Missouri Highways and Transportation Commission, the Illinois Department of Transportation, the Federal Highway Administration, or the Federal Transit Administration.



To the Reader

More than a century ago, St. Louis was the nation's fourth largest city, and was a bustling Midwestern industrial hub poised to continue to grow. Since that time, despite our region's many attractive attributes such as a low cost of living, a promising job market, a multitude of quality higher education and healthcare facilities, and a robust multimodal transportation system, growth in the region has remained flat while many peer Midwest regions have continued to experience growth.

One way to ensure the St. Louis region remains competitive in the global market is by looking back at where we've come from -- what has worked and what has not. Therefore, in this iteration of the region's long-range transportation plan, we set a vision for how the transportation system can support the region in getting back on a positive growth track. This requires highlighting and reinforcing our strengths, while recognizing where we have fallen short, and how we can do better in the future.

Whether accessing basic needs like buying groceries, going to medical appointments, or enjoying the many community, arts, and sporting events the region has to offer, everyone has a different experience using the transportation system. The Transportation Equity Assessment, completed in December 2022, demonstrates that many population groups – Minority, Low Income, Senior Citizens, Persons with Disabilities, Limited English Proficiency, and No-Vehicle Households - find the current transportation system does not serve them well. In light of the findings in the Assessment, this edition of the region's Long-Range Transportation Plan (LRTP) focuses on equity and ensuring that the transportation system is working for everyone, including populations that have traditionally been underserved. This is in alignment with federal policies including USDOT's Equity Action Plan (2022), the Infrastructure Investment and Jobs Act (IIJA - 2021), the Justice40 Executive Order (2021) and the Civil Rights Act (Title VI – 1964). The IIJA and its many federal funding programs place significant emphasis on equity, and this focus will strengthen the region's ability to secure discretionary and formula transportation funding across a variety of federal programs.

Over time, as transportation investments have shifted from streetcars to highways, and development has boomed in the region's suburban areas, not all St. Louisans have been able to adapt, and many face everyday challenges with transportation. Chapter 1 provides a brief summary of the history of the region and the social, transportation, and housing policies and decisions that have built the region we call home. We do all this in an effort to position everyone in the region for a successful and prosperous future following the philosophy that “a rising tide lifts all boats.”

Over the last two years, East-West Gateway Council of Governments staff has engaged elected leaders, transportation stakeholders and the public to set a vision for the St. Louis region's future. The process for developing Connected 2050 can be found in Chapter 2 and the resulting vision is represented in the guiding principles found in Chapter 3. The guiding principles fall into three categories:

- **Our Communities and Region** – these principles focus on improving community and regional quality-of-life outcomes including the region's economy, neighborhoods, and the environment. They are **WHY** we do what we do.
- **Our Transportation System** – these principles focus on how the transportation system functions and are linked to performance measures that monitor how the system meets the needs of the region's residents. They represent **WHAT** we do.
- **Our Process** – these principles establish the framework and approach for the regional transportation planning process. They speak to **HOW** we do what we do.

The plan recognizes other federal, statewide, and regional planning efforts and supports the goals and strategies included in those plans. You will find a table showing how Connected 2050 aligns with these plans early in Chapter 3. Coordination with other plans that focus on issues such as the economy, land use, resiliency, and sustainability is a key element of the plan and ensures that transportation investments made within the framework of the LRTP will help move the region toward the goals in those plans and not impede them. This is important because while the transportation system often plays only a supporting role for regional goals like economic vitality, strong neighborhoods and communities, and a healthy and sustainable


environment, its shortcomings can severely hinder positive outcomes in these areas. There are also specific transportation system performance measures, some which are federally-required, used to assess the condition and performance of roads, bridges, transit service, and bicycle and pedestrian facilities. These can be found in Chapter 4. Chapter 5 contains the investment plan, which lists the regionally-significant projects we can reasonably expect to build under existing federal, state, and local funding assumptions between now and 2050.

The plan gives us an opportunity to look back over time – to see how far we've come as a region and where we can continue to make improvements. Throughout the document you'll find tables from *Where We Stand: The Strategic Assessment of the St. Louis Region*, which compares the St. Louis region to the 49 largest regions in the nation. A selection of maps and charts depicting the trends and data specifically discussed in the plan can also be found throughout the document. A more comprehensive collection of these can be found in the *Connected 2050 State of the System Report*, which is the technical companion document to the LRTP. It details the analysis that went into the LRTP development and provides a comprehensive report on the current performance of the transportation system. The LRTP and the State of the System Report highlight many of the region's strengths, challenges, and opportunities.

These opportunities present good timing for the region to consider changing some of the assumptions we make to determine what a different future could look like for the St. Louis region. For example, St. Louis is currently a slow-growth region, but perhaps we should examine what it would look like if we were more of a moderate or fast-growth region. How would that change the way we invest in the transportation system? What policies would need to be in place to support that vision? What kinds of local funding structures need to be in place to support that outcome? Exploration of these and other future scenarios could be beneficial as the region wrestles with how to stay competitive in a changing world. East-West Gateway staff will be working on these between now and the next LRTP update.

We invite you to read this document with optimism as to what the future holds for the St. Louis region and all of its citizens. We hope you'll agree that while there are challenges there are also a host of opportunities. We are committed to doing all we can to explore those opportunities and provide a multimodal transportation system that ensures a bright and prosperous future in the Gateway Region and supports a healthy quality of life for all who live here.

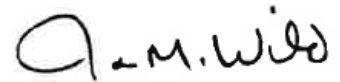
Sincerely,



Mark Kern
Chairman



Tishaura Jones
Vice Chair



Jim Wild
Executive Director

Overview

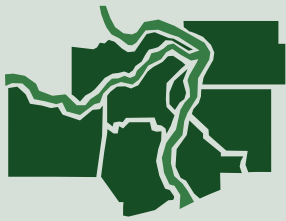
Connected 2050, the long-range transportation plan (LRTP) for the St. Louis region, guides transportation decision-making in the region over the next 26 years. East-West Gateway Council of Governments (EWG), as the St. Louis region’s federally designated Metropolitan Planning Organization (MPO), is required by federal law to develop the LRTP every four years. This plan serves to satisfy federal regulations outlined in Title 23, Part 450 of the Code of Federal Regulations (23 CFR 450) and ensures that MoDOT, IDOT, transit agencies, and local governments are eligible to use federal transportation funds to construct or implement improvements to roadways and transit routes.” Connected 2050 establishes a project- and policy-based framework that will be implemented through a variety of short-range transportation

plans and programs. The policies established by the plan will guide EWG as it prioritizes funding for all modes of transportation—including roads, public transportation, freight, bicycles, pedestrians, and paratransit.

The EWG Board of Directors oversees the development of short- and long-range transportation plans for the region and selects the federally funded capital projects and operations initiatives that will best carry out the framework created by Connected 2050. Project selection is conducted through the Transportation Improvement Program (TIP), an annually updated, four-year list of projects using federal funds. All federally funded transportation projects must be consistent with Connected 2050’s framework to be included in the Transportation Improvement Program.

Table of Contents

Regional Context	4
Provides a historical overview of transportation and other policies and their impacts on the St. Louis region and identifies a vision of how transportation can help to ensure that all people have access to opportunities.	
Plan Development	12
Summarizes key community engagement efforts to develop the policy framework and identify key projects for Connected 2050.	
Guiding Principles	16
Introduces the guiding principles and summarizes EWG’s efforts to implement a performance-driven, outcome-based planning and programming process in line with federal requirements.	
System Performance	46
Highlights key regional performance measures to track long-term progress and contains the system performance report.	
Investment Plan	58
Includes Connected 2050’s transportation investment plan outlining the project evaluation criteria, financial capacity, project list, and air quality conformity determination.	
State of the System Technical Supplement	
The data and analysis behind the development of Connected 2050.	



Chapter 1 Regional Context

In this regional context chapter, we first present a few stories of transportation challenges that St. Louisian's face. We then explore the history of federal and local investments and policies that influenced regional development patterns. Finally, we delve into the lingering effects of historical decisions and how they impact the region's transportation system today.

Travel around the St. Louis region and you'll notice a multimodal transportation network, from bridges crossing the region's numerous rivers to complex highway interchanges carrying vehicles in every direction. A network of greenways and trails enables walking and biking, while a modern transit system serves key destinations. As a critical inland port location, you'll see cargo being transferred from barges to freight trains. Our transportation system plays a key role in every St. Louisian's life, whether it's enabling a person to maintain a job or ensuring that groceries are delivered to stores for people to buy.

However, there are people in our communities who are burdened by the transportation system. Traffic injuries cause irreplaceable losses to individuals and their families. Congestion on the roadways increases pollution which impacts long-term health outcomes. A lack of affordable and reliable options to travel limits opportunities and hurts the region's economy. Many of us take for granted that if we need to go to a doctor's appointment, we can simply get in the car and be at a hospital in a matter of minutes. But for some people, a trip to the hospital could involve a multi-hour journey, with a long walk to catch a bus, waiting outside (in the heat, cold, or rain), a bus ride with multiple transfers, and sometimes the need to walk across high-speed roadways and parking lots – and then there's the long journey back.

As we look towards 2050, we seek to leverage a detailed understanding of the consequences of past investments to guide more holistic investment decisions for a stronger region moving forward. We envision a future where everyone has fair opportunities to safely access life needs, such as food, health care, jobs, and education, supporting the long term prosperity of the St. Louis region.



Lorraine | St. Charles County

Lorraine is a volunteer at a daycare center in St. Peters after retiring from a career as an employee at an airport. To travel around the county, she primarily uses a non-profit transportation service for older adults. While the service is efficient and timely, the travel cost is high. Often, Lorraine forgoes travel to places like the mall and other volunteer shifts due to the expense. Lorraine strongly believes that a public transit service within St. Charles County would help with providing lower cost travel options for her and others in the region.



Mohamad | St. Louis City

Mohamad is a recent immigrant and works as an Employment Case Worker at the International Institute of St. Louis. Mohamad supports newly arriving immigrants and refugees in obtaining jobs. Transportation is a barrier in maintaining a job because immigrants are typically unable to purchase a vehicle because they need to first build credit. Thus, many are reliant on public transportation or carpooling. He states that many jobs are located in areas without public transit service, and even when service is available, using a bus as an individual with limited English proficiency can be intimidating.



Julie | St. Louis County

Julie lives in a one-car household, is employed as a medical researcher, and is a mom of two young children. She primarily travels using a bicycle and while she loves the greenways that exist, she wishes there was more protected bike infrastructure especially because she's a mom with children on the back of her cargo bicycle. Julie is also concerned about the lack of sidewalks in her neighborhood. She lives less than a half mile from a grocery store, and there's no sidewalk for much of that stretch, which makes it challenging to maneuver a stroller safely to get to her destination.



Monica | St. Clair County

Monica is a community organizer and volunteer. She commutes to St. Louis City/County weekly and mostly uses Metro's Call-a-Ride in Missouri and Alternative Transportation System (ATS) in Illinois. She prefers to take MetroLink, but the station is a fifteen minute ride in her motorized wheelchair. In rain or extreme temperatures, this option is off the table. While Monica was working, an eight hour workday was bookended by two hours of commute, making her work day twelve hours long. For her, it is exhausting just getting places.



Historical Context

The story of St. Louis's past shows that transportation challenges faced by communities today did not arise simply as the result of free markets. The region's urban form was shaped by both federal policies and local decisions that generated wealth and mobility options for some communities while others experienced disinvestment, destruction, and lack of access to opportunities. It is critical to learn from the decisions of the past and consider the consequences of transportation policies and investments on all people in the region. Moreover, transportation policies today can play a role in helping to address the burdens on historically disadvantaged and overburdened communities and ensure that all people – regardless of race, ethnicity, income, age, and ability – have access to opportunities.

From its earliest days as a trading post to its current status as a leading freight hub, St. Louis has been shaped by transportation networks.

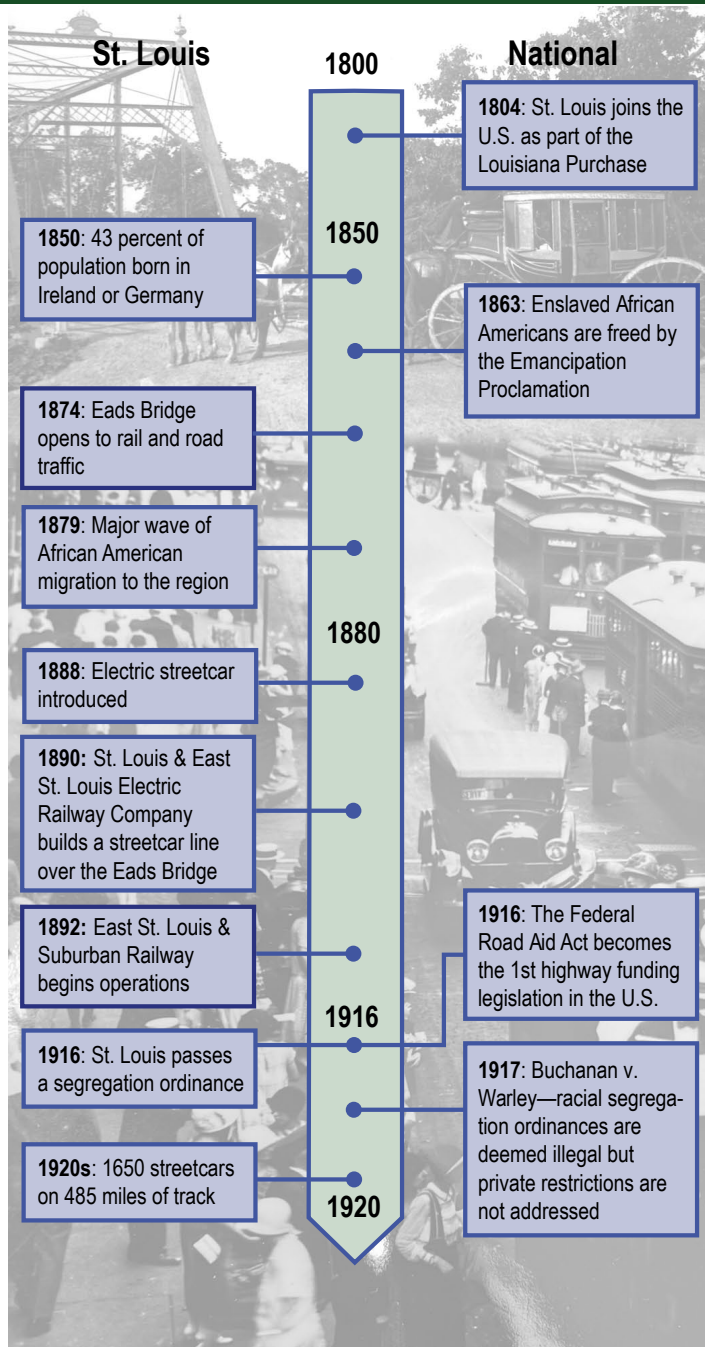
1800s to 1930s: Rapid economic growth in the region is driven by waves of immigration and the ease of transportation of goods by river and rail.

In the 1800s, the St. Louis region grew rapidly in trade and industry, first because of river commerce and then rail-based trade. By the early 1900s, the region was one of the leading manufacturing centers in the country.

Significant waves of immigration from European countries resulted in rapid population growth. African Americans also migrated from the South, seeking employment opportunities in manufacturing. Throughout this period of growth, many recent arrivals lived in ethnic Irish, German, Polish, and Italian neighborhoods. Black residents also lived in their own neighborhoods, with segregation enforced both through deed covenants and through informal means.

To support this growing population, various transportation services such as the omnibus horse-drawn service, horse-drawn street railroads, and cable cars emerged between the 1840s to the 1890s. The first electric streetcar opened to the public in 1888 and by 1900 there were over 1,400 streetcars running on 450 miles of track. In 1915, streetcars provided 357 million trips. The East St. Louis & Suburban Railway operated in the Metro East and at its peak operated 185 miles of track.

At the start of the 20th century, the development of the low-price Ford Model T in 1908 accelerated the rise of the automobile. The Federal Aid Road Act of 1916 provided federal subsidies to road-building efforts due to the demand for improved roads to support the automobile.

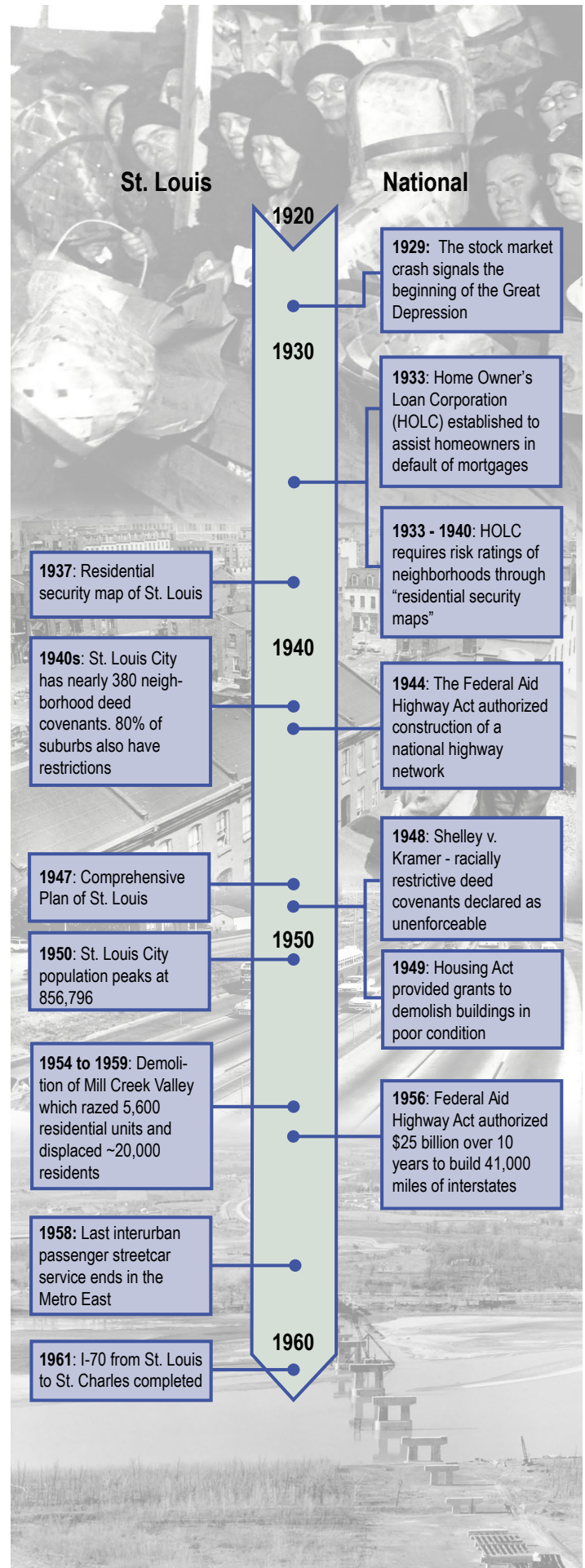


1930s to 1960s: Urban renewal, transportation, and housing policies perpetuate disparities in the region.

Federal Housing Administration (FHA) policies following the Great Depression and into the post-World War II era helped support homeownership through developer subsidies and low down payment, long-term, fixed-rate mortgages. However, FHA loans were primarily restricted to White households, and developer subsidies were provided only for all-White neighborhoods. Nationally, only 2 percent of FHA loans went to minority households. FHA appraisal standards tied property value and loan eligibility to race, with maps that graded neighborhoods into categories of risk. Neighborhoods with large Black populations received low ratings and were denied loans. This practice, known as redlining, reduced property values in predominantly Black neighborhoods, and destroyed significant amounts of Black household wealth.

Over this same period, substantial federal transportation investments created the Interstate Highway System. Although the new highways enhanced connections between and within metropolitan regions, they also displaced residents and divided communities in central cities. Federal funds for urban renewal and highway development were used to support clearance of land for new roads to serve the growing population moving to new communities outside of the city. In St. Louis, the largest of these urban renewal projects was in the Mill Creek Valley, the city's largest Black commercial district and residential neighborhood. Urban renewal planning encouraged replacement of mixed-use, dense urban development with development that was viewed as more modern and auto-oriented. These policies supported the growth of suburban areas and contributed to a large-scale exit from the city of St. Louis. Since discriminatory housing policies largely prevented Black residents from moving to suburban developments, most of the city's population loss was caused by White out-migration.

New suburban development did not have the density or street network to support public transit and could not be reached by those without a car. Over time, the transit network saw disinvestment, as the dense streetcar network was pulled out and replaced by more flexible bus services. The rise of auto travel and shifts in development turned transit from a mode that served everyone to one perceived primarily as serving those with no other choice. Transit ridership declined significantly, with transit use falling from around 340 million passenger trips in 1946 to 87 million by 1963. Communities in the region, many with large numbers of Black residents, were left in persistent poverty with limited connections to schools and jobs in areas only accessible by auto.



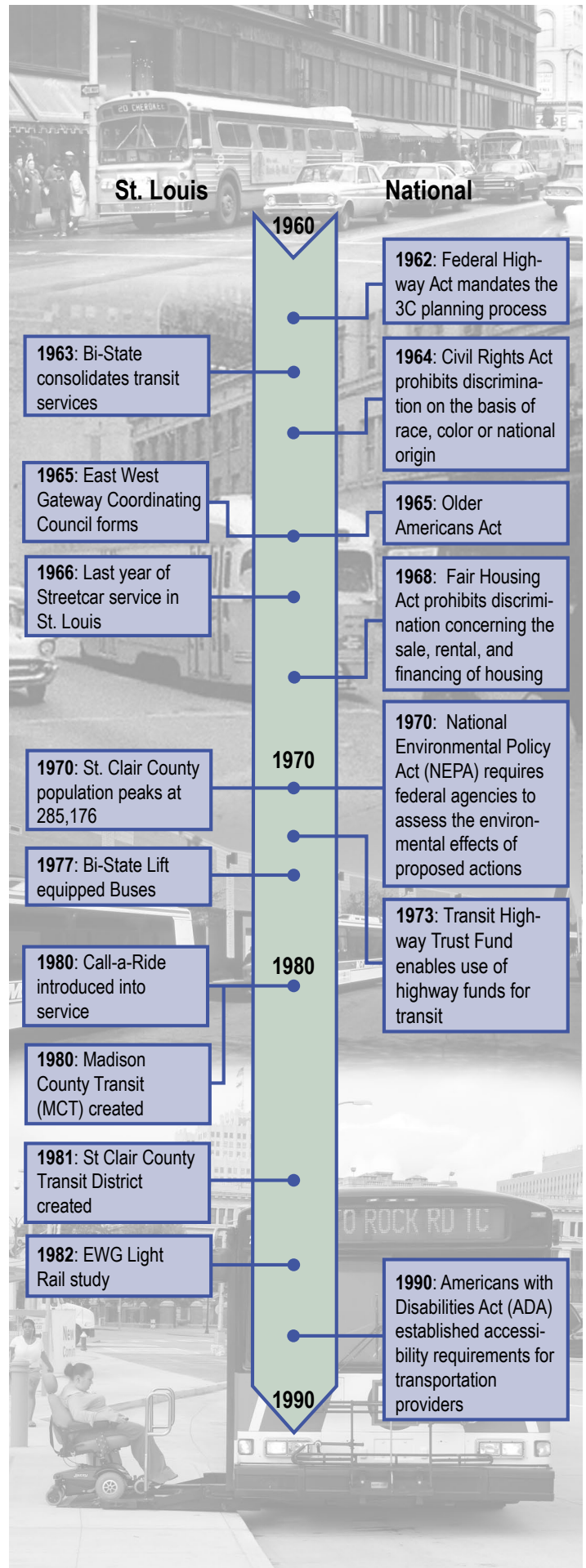
1960s to 1990s: Adverse effects of highway construction and neighborhood demolition results in some backlash.

Recognizing the negative impacts that highway development and other policies were having on some communities, the period from the 1960s onward focused on more inclusive decision-making to account for community and environmental concerns. Congress enacted legislation over time to help mitigate negative impacts caused by highway development. This included legislation to protect parks, historic districts, and other environmentally sensitive areas, as well as requiring relocation housing for anyone displaced by construction. Legislation and executive actions also addressed concerns about persons with disabilities and environmental justice for low-income communities and minority communities.

The 1962 Federal Highway Act mandated greater levels of local input into highway construction. The Act required, as a condition of receiving federal funds, that transportation planning should be “cooperative, continuous, and comprehensive,” also known as the 3C process. In response to the 1962 law, metropolitan planning organizations (MPOs) were formed across the country to meet the new conditions for federal transportation aid, and in 1965 the East-West Gateway Coordinating Council was formed in St. Louis.

Regionally, during this period, St. Louis transportation made major progress with increasing accessible transportation options for people with disabilities. The first sidewalk curb cuts in St. Louis were completed in 1972. In 1977, Bi-State became one of the first transit agencies in the country to operate wheelchair-lift equipped buses in their regular service, and in 1980, introduced Call-A-Ride, a paratransit service provided for people who are elderly and/or disabled.

Additionally, transit was a topic of interest to regional leaders. The 1973 Federal Highway Act enabled highway funding revenue to be used for rail rapid transit. Ambitious studies and plans focused on rapid transit were published in 1955 and 1971, and in 1982, East-West Gateway authorized a light rail study, with alignment and preliminary engineering completed by 1988. On the east side of the region, in 1981, St Clair County Transit District was created under the authority of the Illinois Mass Transit District Act, which levies sales tax to fund MetroLink, MetroBus and paratransit bus service in the county. In addition, Madison County Transit (MCT) was created in 1980 by the Madison County Board to improve public transportation in the county.



1990s and Onwards: State and local governments are provided flexibility in determining transportation solutions with an increased focus on multimodalism.

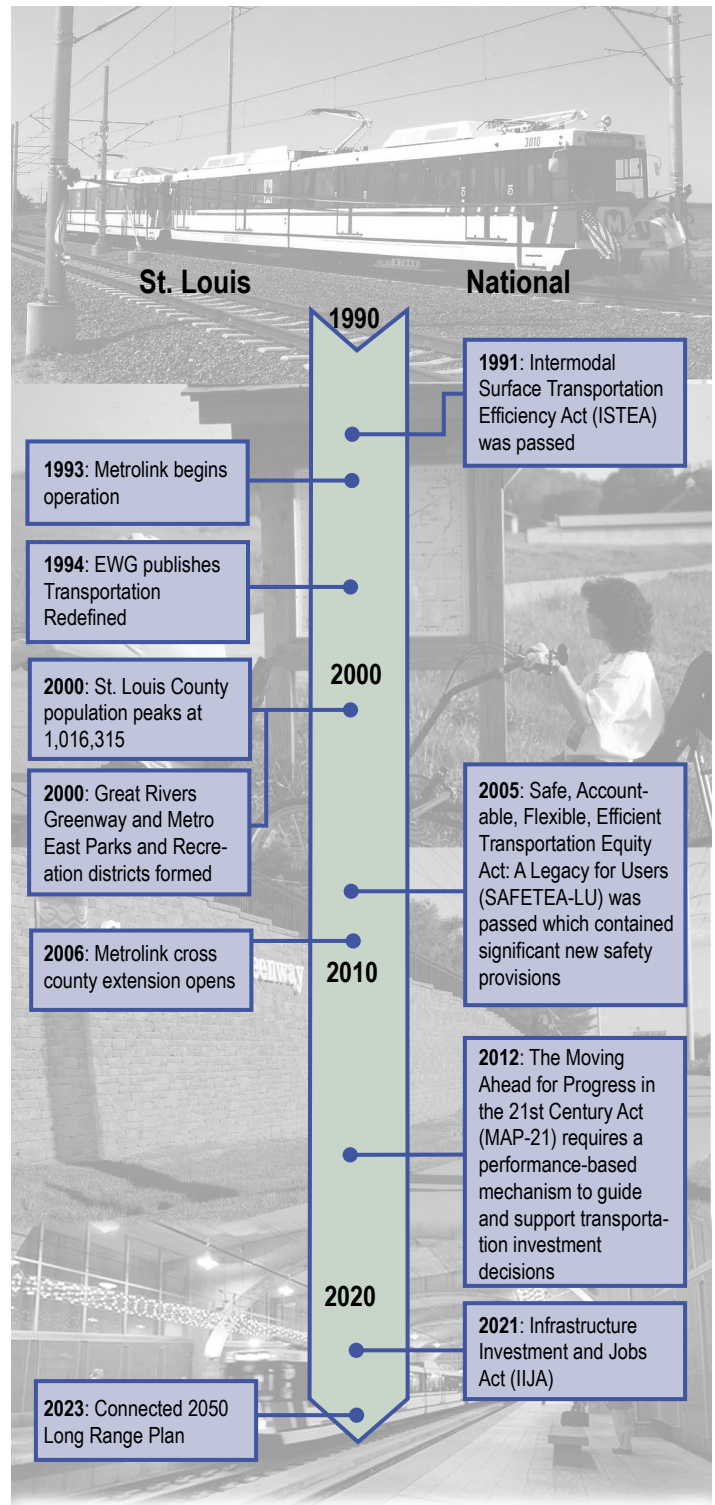
In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) was passed. Often considered a landmark legislation, ISTEA focused on promoting multimodalism — the seamless integration of all modes of transportation. ISTEA gave state and local decision-makers greater discretion in the use of federal transportation dollars through flexible funding programs.

ISTEA expanded MPO authority with new transportation planning requirements for metropolitan jurisdictions. These included the requirement that regional transportation plans have a 20-year minimum time horizon with a fiscally constrained list of regional projects. The plans must include input from public officials and citizens. In 1994, East West Gateway published Transportation Redefined: A Plan for the Region's Future. For the first time, the St. Louis region focused on a local vision of social, economic, and environmental vitality.

During this time period, there was an increased focus on rapid transit and biking which improved transportation choices for households without access to cars. MetroLink opened in 1993 with extensions in 1994, 2001, 2003, and 2006. In the early 1990s, Madison County Transit became the only transit system in the country with an integrated bus and bikeway system. In 2000, the Great Rivers Greenway and Metro East Parks and Recreation districts were created to develop a regional network of greenways.

Even with these new multimodal investments, the St. Louis region is strongly influenced by the federal and regional decisions made between the 1930s and 1990s. The population continues to shift away from the central core leaving older communities with complex infrastructure needs and a shrinking tax base to fund local improvements. As jobs have also moved outward, a spatial mismatch between low income workers and suitable jobs creates employment access issues.

With the passage of the Infrastructure Investment and Jobs Act (IIJA) in 2021, historic levels of new federal investment are now available to modernize the nation's transportation infrastructure. IIJA includes many grant programs and technical assistance activities designed to support equitable access. Connected 2050 aims to position the region to utilize IIJA funding to improve transportation for all and meet national and regional transportation equity goals.



Current Context

While new laws and approaches are designed to avoid future discrimination and redress past decisions that adversely affected communities, those past decisions and discriminatory practices have lingering effects in the St. Louis region and around the country. This section highlights existing regional disparities and the transportation challenges that arise from them.

Regional Disparities

Segregation: Over the past few decades, St. Louis has become more integrated but at a slower pace than many of the peer regions. St. Louis remains highly segregated for the two largest population groups, Black and White residents. According to one measure of segregation, St. Louis is the 6th most Black-White segregated among the peer regions. Table 1 provides the dissimilarity index scores, which range from 0 to 100 with a score of 0 meaning the community is completely integrated and a score of 100 meaning the community is completely segregated.

Concentrated Poverty: Black residents are disproportionately represented in areas of concentrated poverty. Among peer regions, St. Louis has the 5th largest gap between Black and White residents in terms of the percent of poor residents living in areas of concentrated poverty. Areas of concentrated poverty are associated with less access to jobs, higher crime, reduced opportunities to build wealth, and poorer health outcomes. A poverty rate of 40 percent or more is one of the criteria used by the U.S. Department of Housing and Urban Development to designate “concentrated areas of poverty.” As shown on Table 2, low-income Black residents in St. Louis are nine times more likely to live in an area of concentrated poverty than White low-income residents.

Unemployment Rate: As of 2021, Black residents in the St. Louis region were nearly three times (2.61) more likely to be unemployed than White residents, ranking 8th among the peer regions. The unemployment rate for White workers in St. Louis was 3.8 percent compared to 10.5 percent for Black workers

Where We Stand Tables As part of its publication series, Where We Stand (WWS), East-West Gateway ranks St. Louis among the 50 most populous regions in the country (referred to as the peer regions) on a range of topics. These comparisons use the St. Louis 15-county MSA.

Table 1

Racial Segregation

Black-White segregation scores based on the dissimilarity index, 2017-2021

1	Milwaukee	78.8
2	New York	75.7
3	Chicago	74.4
4	Cleveland	72.6
5	Detroit	72.6
6	St. Louis	71.3
7	Buffalo	69.4
8	Cincinnati	67.3
9	Philadelphia	66.9
United States		65.8
10	Los Angeles	65.8
11	Pittsburgh	65.1
12	Miami	64.9
13	Boston	64.4
14	Hartford	64.4
15	Indianapolis	64.0
16	New Orleans	63.9
17	Birmingham	63.7
18	Columbus	63.1
19	Baltimore	62.7
20	Denver	62.5
21	Memphis	61.6
22	Washington, D.C.	60.9
23	Atlanta	60.5
24	Houston	60.2
25	San Francisco	60.0
26	Sacramento	58.2
27	Kansas City	57.6
28	Louisville	57.3
29	Providence	57.2
30	Minneapolis	56.6
31	Dallas	55.8
32	Salt Lake City	55.5
33	Jacksonville	55.4
34	San Diego	55.0
35	Tampa	54.1
36	Orlando	53.6
37	Nashville	53.6
38	Charlotte	52.8
39	Seattle	52.8
40	Richmond	52.4
41	Oklahoma City	52.2
42	Portland	51.2
43	San Antonio	50.5
44	Phoenix	50.1
45	Austin	50.0
46	San Jose	49.5
47	Riverside	48.8
48	Virginia Beach	47.6
49	Raleigh	43.8
50	Las Vegas	43.0

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates (B03002)

Table 2

Racial Disparity in Concentrated Poverty

Ratio of black to non-Hispanic white residents, 2017-2021

1	Denver	30.13
2	Nashville	21.94
3	St. Louis	11.83
4	Miami	9.43
5	Providence	8.61
6	Chicago	8.60
7	Jacksonville	7.15
8	Portland	7.10
9	Kansas City	7.07
10	Tampa	6.96
11	Birmingham	6.67
12	New Orleans	6.63
13	Baltimore	6.42
14	Hartford	6.28
15	Atlanta	5.39
16	Houston	5.25
17	Virginia Beach	5.25
18	Washington, D.C.	5.22
19	Charlotte	5.16
20	Buffalo	5.15
21	Indianapolis	4.87
22	Pittsburgh	4.46
23	Philadelphia	4.39
24	Richmond	4.25
25	Milwaukee	4.06
26	Dallas	4.04
27	San Antonio	3.92
28	Cleveland	3.91
29	Memphis	3.87
30	San Jose	3.70
31	Detroit	3.62
32	Cincinnati	3.12
United States		3.07
33	Louisville	3.06
34	Oklahoma City	2.87
35	Phoenix	2.68
36	Los Angeles	2.63
37	Las Vegas	2.51
38	Riverside	2.31
39	Orlando	2.27
40	Boston	2.04
41	Minneapolis	1.76
42	Sacramento	1.66
43	Columbus	1.55
44	New York	1.34
45	Austin	1.03
46	San Francisco	0.96
47	Seattle	0.77
48	Raleigh	0.67
49	San Diego	0.59
50	Salt Lake City	0.00

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates (B17001, B17001B, B17001H)

Transportation Challenges and Barriers

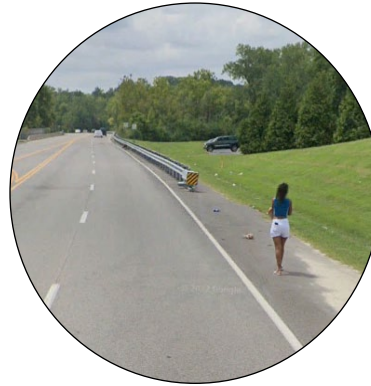
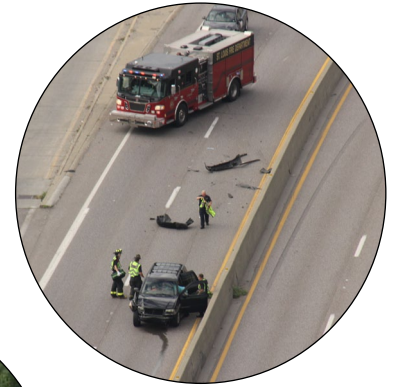
Safety: The St. Louis region has seen an increase in the on-road crash fatality rate the past several years which was accelerated due to the Covid-19 Pandemic. The increased crashes and severities are due to increased speeding and the prevalence of larger vehicles. There is a strong association between the location of crash fatalities and areas with high proportions of Black residents, high proportions of low-income households, and high poverty rates as well as a disproportionate concentration of motorist fatalities in rural areas.

Choices and Access: The cost of transportation is a barrier for some people in the region. Taking public transportation costs significantly less than owning a car, but transit in the St. Louis region does not provide people with the ability to travel to all destinations. The region has focused its limited transit investments to try to connect people of low-income areas to job centers. However, even those who live close to a transit stop still cannot reach many jobs and other destinations. For those who bike and/or walk, much of the region has fragmented bike facilities and sidewalk networks.

Seamless, Efficient, and Reliable: Compared to peer regions, St. Louis has relatively low congestion and good reliability on it's roadways. However, there are still key bottlenecks on the system that impact travel times and freight movements.

Well-Maintained and Resilient: One of the major challenges facing the region is keeping the transportation system in a state of good repair. The decades-long emphasis on system expansion in the mid to late 1900s has strained resources available for rehabilitation and repair. Failing pavement, deficient bridges, and deteriorating transit facilities create safety problems, reduce operational efficiency and negatively impact travel quality. Additionally, the entire system needs to become more resilient to increased severe weather events.

Healthy and Sustainable Environment: Many people in the St. Louis region and across the country live in close proximity to automobile traffic. While often providing convenience, living near high-traffic areas is also associated with increased noise, toxic gasses, and particulate matter including diesel particulates (DPM), which is related to increased risk of adverse health outcomes, such as asthma.





Chapter 2

Plan Development

Connected 2050 aims to increase equity in the transportation system by weaving equity considerations throughout the long-range transportation planning process. In March 2022, EWG launched technical analysis and community engagement efforts to support development of the Connected 2050 plan. The State of the System report documents the technical analysis that supported the development of the long-range transportation plan. Community engagement efforts focused on providing residents, businesses, and key stakeholders from across the St. Louis region the opportunity to drive the conversation on important transportation challenges facing the region today and in the future.

Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. A central goal of transportation is to facilitate social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved .

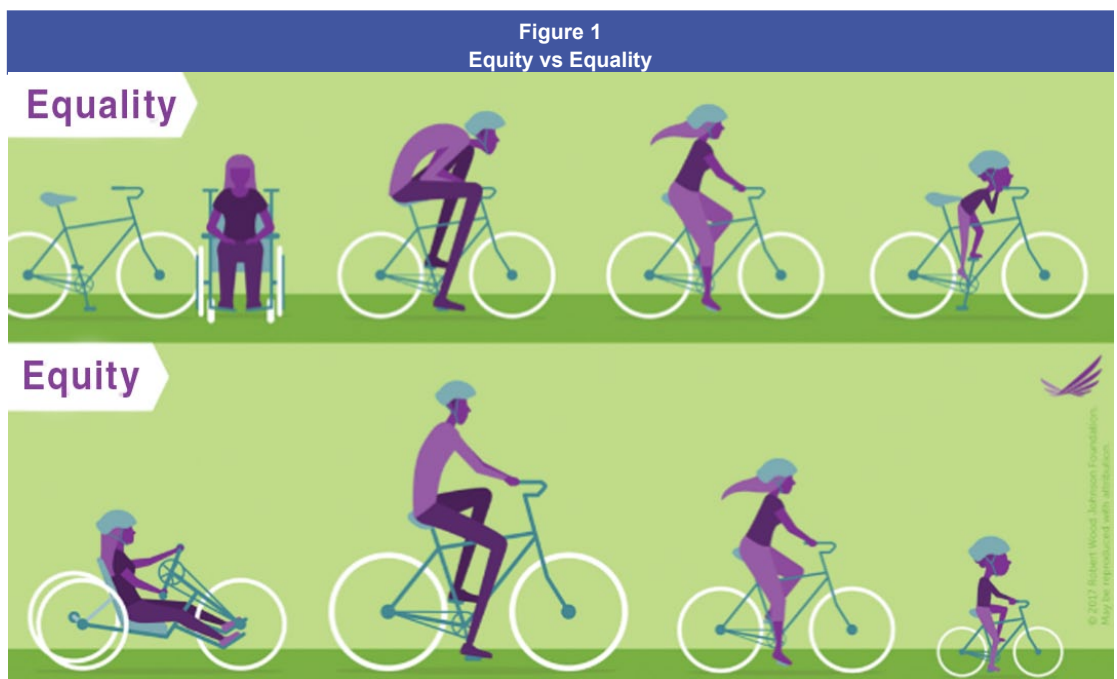
- Federal Highway Administration (FHWA)

Equity in Connected 2050

Equity in transportation is often defined to reflect a fair distribution of the benefits and burdens of transportation. This aspect of equity recognizes that minority and low-income communities have historically been most harmed by transportation investments, such as highways that disrupted and dislocated communities. These effects have been long-lasting and these communities are often disproportionately burdened with the adverse effects of living near heavy traffic with high levels of air pollution and traffic noise. The U.S. Department of Transportation (USDOT) Equity Action Plan (January 2022) notes that past investments in highways often harmed minority neighborhoods, and there was a failure to invest in transit that serves communities that most need affordable transportation options. Communities today continue to contend with the results. The equity efforts of the USDOT include actions to thoughtfully address historic inequities and positively impact historically underserved or overburdened communities.

As we look to the future, we recognize the critical role that transportation investments can play in addressing

Figure 1. Graphic on the meaning of equity from the Robert Woods Johnson Foundation. Equity is not the same as equality and does not mean providing everyone with the same solutions. As shown in the equality graphic even though each person is given the same bike, only one person is able to use the bike comfortably. When looking at equity, each person is given a bike that meets their needs. Equity recognizes that there often are different needs, barriers, or challenges facing different populations. Solutions should be tailored to provide appropriate investments to help meet these needs.



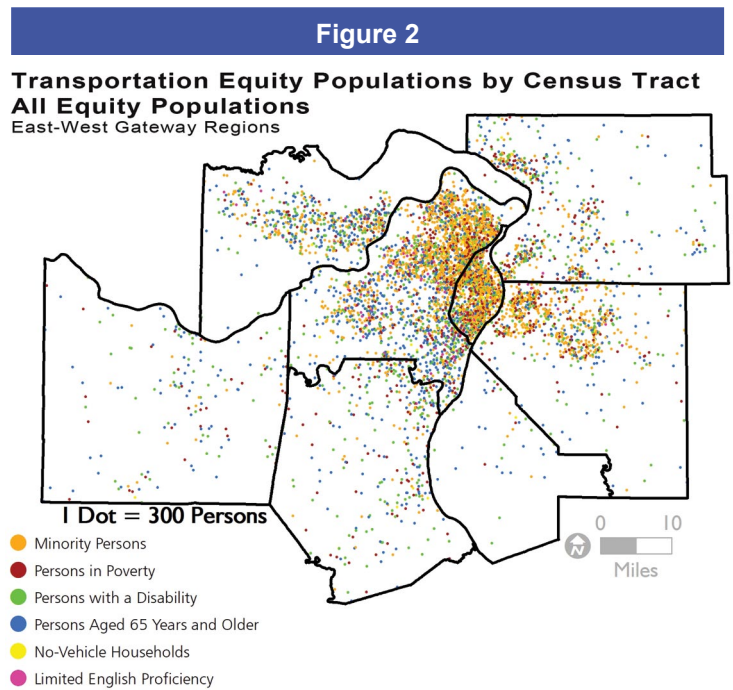
EWG focuses on six population groups that face barriers related to transportation or are disproportionately affected by the negative effects of past policies and decisions. These groups, referred to as “transportation equity populations (TEP),” deserve specific consideration when it comes to building and maintaining an equitable transportation system. They are:

- Minority persons,
- Persons in poverty,
- Seniors (aged 65 and older),
- Individuals with limited English proficiency (LEP),
- Persons with disabilities, and
- No-vehicle households.

Figure 2 shows that some of the population groups (minority persons, person in poverty, no-vehicle households, and LEP persons) are more highly concentrated in the central part of the region. The senior populations and people with disabilities are less concentrated and more spread throughout the footprint of the region.

As we look to the future, we recognize the critical role that transportation investments can play in addressing inequities in the region. These investments must be made in the context of emerging demographic and travel needs, such as supporting the aging regional population, planning for the rapid increase in teleworking due to the Covid-19 pandemic, and adapting to emerging transportation technologies and services. It is from this understanding that Connected 2050 emerges as the region strives to improve transportation for all.

Beyond the Connected 2050 long-range transportation plan, it is important to understand that considerations for equity must be included in all parts of the transportation planning and engineering process including short range planning, corridor and area studies, the environmental review process, engineering design, construction, operations, and maintenance. Throughout these processes, it is critical to understand the needs and barriers of all transportation system users including people that are traditionally underserved.



Equity Spotlights

CONNECTED 2050
 Long-Range Transportation Plan for the St. Louis Region

Throughout Connected 2050, equity spotlights show how EWG is working to weave equity considerations throughout the long-range transportation planning process. Throughout this document, you can learn about how equity has been

- Addressed in the regional goals
- Measured in long-term performance measures
- Studied in relationship to each of the regional guiding principles
- Used to evaluate projects in the investment priority list

Community Engagement and Outreach

Engagement efforts focused on developing a set of **guiding principles** to guide transportation investments and priorities, revising regional **performance measures**, identifying **equity challenges** in transportation, and selecting the final list of **investment priorities**. Robust and thoughtful feedback has been central to the process of developing Connected 2050. A summary of engagement efforts is provided in this chapter. Survey results, comments, and insights gained are provided throughout the plan document and in chapter 19 of the State of the System report.

Regional Surveys



Panel Survey

An online survey using a Census-balanced sample of adult residents in the region based on county of residence, was conducted in April 2022. Data collected from this survey was used to understand regional transportation priorities, barriers, needs, and challenges.

MetroQuest Survey

This survey, open to all residents in the region, ran from April to August 2022. This survey was designed to “meet people where they are” and was available online and at pop-up events at festivals and farmer’s markets in each county. This survey allowed for open ended response and feedback from residents.

1000

Panel Survey
Participants

1754

MetroQuest
Survey Takers



646

MetroQuest
Comments

18

Public Pop-Up
Events



700+

Pop-Up Event
Visitors

Open Houses



Public and 1st Virtual Open Houses

These open houses focused on gathering input on proposed guiding principles for the region. The in-person events were held in July 2022. The virtual open house allowed individuals to provide comments through a webpage during August 2022.

2nd Virtual Open House

This open house was focused on equity in transportation. Individuals were able to learn about current and historical equity challenges and provide feedback on inequities in the current system.

5

Public Open
Houses



53

Open House
Attendees

1800

1st Virtual Open
House Views



17

Questionnaires
Completed

1500

2nd Virtual Open
House Views



27

Questionnaires
Completed

Resident and Stakeholder Interviews



Resident Focus Groups

These groups were designed to engage residents who expressed an interest in having a more in-depth conversation about the transportation challenges residents face when traveling around the region.

Stakeholder Interviews

A community discussion guide was used to interview leaders at educational institutes, transportation providers, economic development agencies, healthcare providers, municipal officials, and social justice organizations.



Mill Creek Valley Discussion

This small group discussion was held in July 2022 as part of the regional equity assessment and included experts and former residents of Mill Creek Valley. The discussion focused on the impacts of transportation, urban renewal, and housing policies of the 1950s on this once flourishing community.

Transportation Equity Interviews

Staff conducted interviews with individuals to understand their challenges traveling around the region. Staff also interviewed organizations that support individuals with unique challenges.

2

Resident Focus Groups



10

Focus Group Participants

4

Mill Creek Valley Discussion Participants

19

Stakeholder Interviews

17

Transportation Equity Interviews

East-West Gateway Committees and Board of Directors



Equity Advisory Group (EAG)

The EAG was comprised of individuals representing diverse communities across the region. EAG members assisted in:

- Building community awareness and trust,
- Identifying engagement opportunities for the planning process, and
- Advising on issues associated with equitable transportation.

Board of Directors and Technical Committees

The EWG Board of Directors participated in a workshop in June 2022 to provide input on guiding principles based on options presented by staff. In addition, staff presented four times to the Transportation Planning Committee, and six times to the Executive Advisory Committee and the Board of Directors about various parts of the LRTP to solicit input and guidance.



25

EAG Members



3

EAG Meetings

1

EWG Board Workshop

46

Investment Priority Projects



Chapter 3 Guiding Principles

Guiding principles establish a vision to guide transportation system evaluation and decision-making over the course of the Connected 2050 plan. EWG undertook an extensive public engagement process to gather input from residents, regional leaders, and key stakeholders to develop a revised set of guiding principles. In October 2022, the EWG Board of Directors approved the new guiding principles.

Figure 2. Connected 2050 guiding principles.

Our Communities and Region

These principles focus on improving community and regional quality-of-life outcomes while prioritizing improving the region’s economy, neighborhoods, and environment. **These principles are WHY we do what we do.**



Economic Vitality



Thriving Neighborhoods and Communities



A Vibrant Downtown and Central Core



A Healthy and Sustainable Environment

Our Transportation System

These principles focus on how the transportation system functions and are linked to performance measures that monitor how the system meets the needs of the region’s residents. **These principles represent WHAT we do.**



Safe and Secure



Choices and Access for All



Seamless, Efficient, and Reliable



Well-Maintained and Resilient

Our Process

These principles establish the framework and approach for the regional transportation planning process as facilitated by East-West Gateway. **These principles speak to HOW we do what we do.**



Collaborative



Equitable



Innovative
















Performance Based

For more than a decade, EWG utilized a set of ten guiding principles as a basis for its long- and short-range planning. These principles were used in the *Connected2040* and *Connected2045* long-range transportation plans and laid a foundation for a performance-based approach to planning to support investment and policy decision-making. Much has changed over the past decade, and EWG has recognized that it is important to realign the principles to better reflect the region’s current vision and priorities.

*The Connected 2050 guiding principles increase focus on **transportation resilience** – the ability of the system to function in the face of disruptive conditions. The principles also recognize the importance of an **equitable, collaborative, and innovative** regional transportation planning process.*

East-West Gateway is required by 49 U.S. § Code 5303 to integrate goals, objectives, performance measures, and targets described in state transportation plans and plans by public transportation providers. Table 3 shows the alignment between the Connected 2050 guiding principles and the goals and objectives established in federal, state, and regional plans. Local plans were considered where appropriate but are not listed in the table.

Table 3. Federal, state and regional plan alignment with Connected 2050 guiding principles.													
		Economic Vitality	Neighborhoods and Communities	Downtown and Central Core	A Healthy and Sustainable Environment	Safe and Secure	Choices and Access for All	Seamless, Efficient, and Reliable	Well-Maintained and Resilient	Collaborative	Equitable	Innovative	Performance Based
													
EWG	Guiding Principles	x	x	x	x	x	x	x	x	x	x	x	x
	USDOT												
	FHWA Goals	x			x	x	x		x		x	x	x
	FTA Goals	x			x	x	x		x		x		
	Equity Action Plan (2022)	x	x				x			x	x		
Missouri	L RTP (2018)	x				x	x	x	x				x
	SHSP (2021)					x							x
	TAMP (2017)								x				x
	TAM (2019)								x				x
	Freight and Rail Plan (2022)	x				x	x	x	x				x
Illinois	L RTP (2019)	x	x		x	x	x	x	x		x		x
	SHSP (2022)					x							x
	TAMP (2022)								x				x
	TAM (2022)								x				x
	Freight Plan (2017)	x				x		x	x				x
Transit	MCT and Metro PTASP (2022)					x							x
	Metro TAM (2018)								x				x
	Metro Security Strategy and SPP (2020, 2022)					x							
Regional	CMAQ (2022)				x			x					x
	CMP (2021)							x					x
	OneSTL (2022)	x	x		x	x	x		x	x			x
	Freight Priority Projects (2023)	x						x					
	Airport Plan (2022)					x	x	x					
	STL Jobs Plan (2021)	x	x	x			x				x	x	

L RTP: Long-range transportation plan; SHSP: Strategic highway safety plan; TAMP: Transportation asset management plan; TAM: Transit asset management; PTASP: Public transportation agency safety plan; SPP: Secure platform plan; CMAQ: Congestion mitigation and air quality; CMP: Congestion management process.



Economic Vitality

Maximize the region’s economic competitiveness in key industries including freight and support growth in quality jobs.

Growing the region’s economy and its ability to attract and support wealth producing jobs is a key priority for the region in today’s global economy to support a high quality-of-life. Economic opportunities are likely to arise where transportation infrastructure can ensure access to markets and resources for both people and goods.

A vital part of any modern economy is an integrated transportation network. Transportation physically connects businesses to supply chains, customers, and employees and enables movement of people and goods.

Diverse Economic Base

After decades of restructuring, the region still has a vibrant manufacturing sector. St Louis is also home to companies that are leaders in the fields of biotechnology, energy, financial services, information technology, and medical technology. The 1.7 million workers in the EWG region produced \$181 billion in value-added output in 2021, and received \$118 billion in earnings.

National Freight and Logistics Leader

Because of the region’s strategic location at the confluence of the continent’s two longest rivers, St. Louis boasts both the third and eighth largest inland ports. Four major interstates, six Class I railroads, and two cargo airports contribute to the region having the third highest volume rail hub and the third highest volume multimodal hub.

Slow Economic Growth and Racial Disparities

The region lags most peer regions in both income and employment growth as it continues to grapple with racial disparities in these areas. In the five years before the pandemic, wage and salary employment in St. Louis rose by 3.7 percent, well below the national growth rate of 6.4 percent. The St. Louis region has experienced a spatial mismatch between the areas in which low-income residents live and areas of job growth. As the region looks forward, the transportation system should support improved connections between living-wage jobs and lower-income workers.

Equity Spotlight: Unemployment

Table 4

Racial Disparity in Unemployment Rate

Ratio of non-Hispanic black to non-Hispanic white unemployment rate, 2021

1	Milwaukee	4.15
2	Memphis	3.94
3	Cleveland	2.94
4	Chicago	2.93
5	Birmingham	2.77
6	Kansas City	2.64
7	Detroit	2.61
8	St. Louis	2.61
9	Oklahoma City	2.57
10	Virginia Beach	2.55
11	Richmond	2.54
12	Indianapolis	2.50
13	Minneapolis	2.49
14	Washington, D.C.	2.47
15	Buffalo	2.39
16	New Orleans	2.38
17	Houston	2.38
18	Raleigh	2.36
19	Pittsburgh	2.34
20	Louisville	2.30
21	Denver	2.11
	United States	2.10
22	Seattle	2.10
23	Dallas	2.09
24	Baltimore	2.08
25	Philadelphia	2.07
26	Atlanta	2.03
27	Charlotte	2.02
28	Cincinnati	1.95
29	Columbus	1.93
30	Sacramento	1.88
31	San Diego	1.87
32	Las Vegas	1.82
33	Nashville	1.80
34	Tampa	1.79
35	Orlando	1.78
36	Phoenix	1.78
37	Boston	1.77
38	New York	1.76
39	Hartford	1.65
40	Riverside	1.64
41	San Antonio	1.62
42	Miami	1.59
43	Los Angeles	1.53
44	San Francisco	1.51
45	Portland	1.51
46	Austin	1.49
47	Jacksonville	1.37
48	Providence	1.34

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates (S0201)

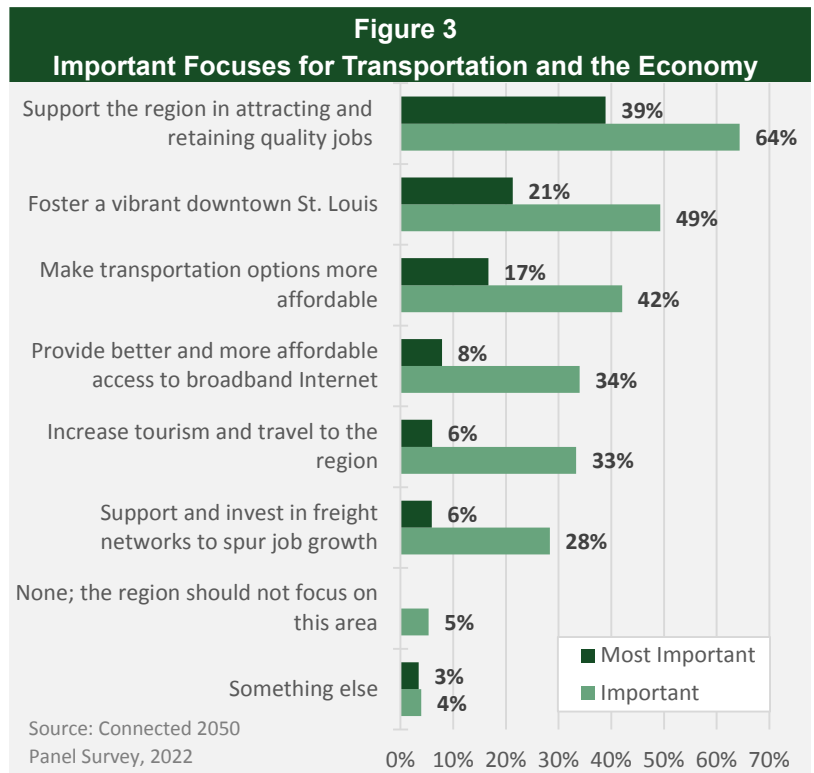
As of 2021, Black residents in the St. Louis region were 2.61 times more likely to be unemployed than White residents, ranking 8th among the peer regions (Table 4).

The unemployment rate for White workers in St. Louis was 3.8 percent compared to 10.5 percent for Black workers.

Transportation can play a role in addressing this disparity by connecting workers to jobs. Spatial mismatch describes the growing distance in many metropolitan regions between low-income residents and livable-wage jobs. The St. Louis region has experienced this phenomenon. In 1969, 42 percent of all jobs in the EWG region were in the city of St. Louis. By 2020, the percentage had shrunk to 17 percent. As jobs moved outward, the proportion of jobs accessible by transit has decreased. In 2021, only 54 percent of the jobs in the region were located within a quarter mile of a transit stop.

Community Engagement

Residents of the St. Louis region identified that attracting and retaining quality jobs as the top economic priority in the region as seen in Figure 3. The transportation network can support this by increasing access to jobs and supporting planned economic development or redevelopment. Other key priorities included “fostering a vibrant downtown St. Louis to increase the attractiveness of the city and the regional economy” and “making transportation options more affordable.” While investments in freight networks ranked lower in resident surveys, community leaders and government officials noted the importance of continuing to invest in this regional asset to enhance the region’s economy.



Regional Plan Alignment

2023 Priority Freight Projects

The **St. Louis Regional Freightway** is an enterprise of Bi-State Development, the St. Louis MO-IL region’s multi-faceted economic development agency. It provides site selection and business assistance to manufacturing, logistics and multimodal transportation companies and their service providers. The Freightway plays a critical role in the growth of the region’s manufacturing and distribution cluster within the EWG region. The St. Louis Regional Freightway’s 2023 Priority Projects List includes 25 projects representing a total investment of more than \$3.8 billion. The list, prepared by the Freightway’s Freight Development Committee, serves as an important resource for prioritizing projects in Connected 2050.



STL 2030 Jobs Plan



Greater St. Louis Inc’s STL 2030 Jobs Plan, published in May 2021, provides a 10-year roadmap for boosting economic growth. The plan, which covers the 15-county metropolitan statistical area, recommends strategies to drive inclusive growth in the region. Specific actions identified within these strategies related to the transportation system include:

- Finish the Brickline Greenway.
- Launch a Main Street STL effort to accelerate the revival of neighborhood business districts throughout the metro area.
- Invest in multimodal freight infrastructure to strengthen the metro’s advantage in manufacturing and transportation and logistics.
- Expand transit and digital access to better connect St. Louisans to opportunities no matter where they live.



Thriving Neighborhoods and Communities

Foster safe, healthy, and attractive places where people love to live, work, and play.

Supporting the growth and maintenance of safe, healthy, and attractive neighborhoods helps make St. Louis a desirable place to live, work, and play. Thriving neighborhoods are more resilient in the face of economic and social change.

Thriving communities have a sense of place, a shared culture, and amenities such as schools, green space, jobs, and grocery stores. Integral to all of this is our transportation network. How people move to, from, and throughout neighborhoods is uniquely tied to their quality-of-life.

Rooted in History

The St. Louis Region is a mix of old and new. For millennia before the founding of the United States, this region was home to bustling Native American cultures in communities like Cahokia. The preservation of historic neighborhoods like Soulard in St. Louis City and cities like St. Charles and Belleville gives the region a link to the past while standing firmly in the present. Newer developments such as Arnold, Wildwood, and Fairview Heights are driving growth and fueling local pride.

The Paths that Link Us

Highways and roads connect all parts of the region. The average travel time to work in the region is 24.4 minutes, which is lower than the national average. Public transportation serves more than 18.4 million boardings a year. On- and off-road trail systems allow cyclists and pedestrians the ability to move around the region in a way that benefits their health. As the region looks forward, centering communities around interesting, lively, and attractive streets that serve all modes of transportation can support economic and social benefits.

Unfortunate Disparities

Some neighborhoods and communities in the region are languishing. Neighborhoods that have fewer employers, quality schools, and recreation opportunities are facing increased crime and vacancy. These neighborhoods have challenges attracting and retaining the population mass that supports a thriving community. Poor transportation connections and negative consequences of transportation infrastructure exacerbate these issues.



The Cahokia/Mississippian Civilization



Historic St. Charles



The Grove, St. Louis City

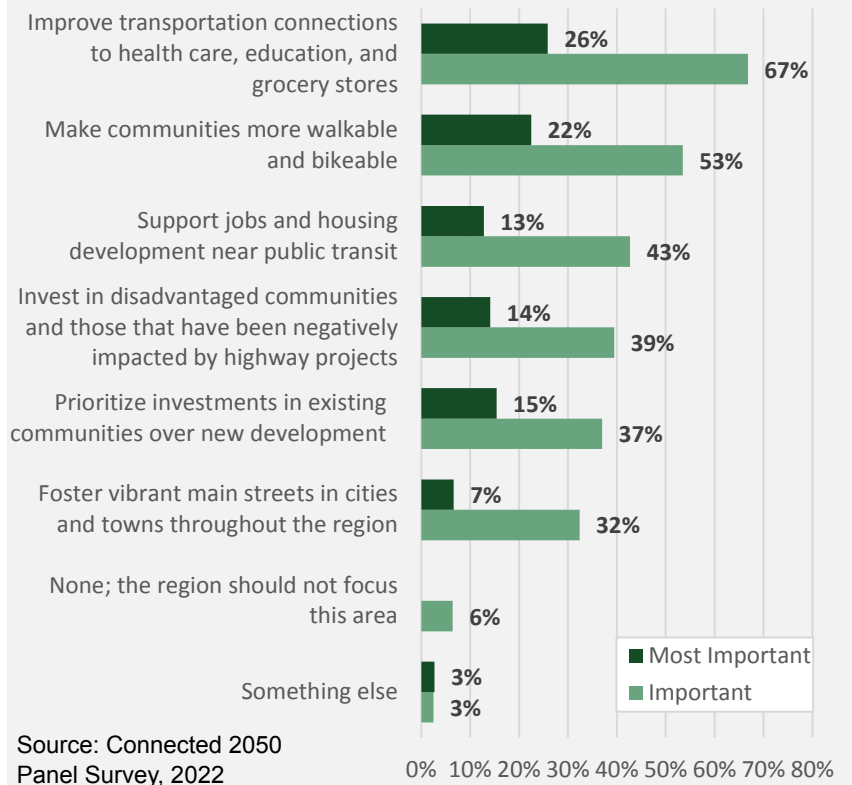


Alton

Community Engagement

Residents in the region shared ways in which their neighborhoods could become more vibrant, safe, and healthy places to live and work. Respondents to the panel survey cited safety while walking, biking, and driving as key to improving mobility. As shown in Figure 4, when asked about keys to further develop their communities, 53 percent of respondents said “make neighborhoods and communities more walkable and bikeable” and 67 percent said we should “improve transportation connections to health care, education, and grocery stores.” Residents value bustling town centers and the multimodal connections that help them get there. The transportation network can support these ends by building and maintaining sidewalks, trails, road crossings, and roadway traffic calming measures.

Figure 4. Important Focuses for Community Development and Quality-of-Life

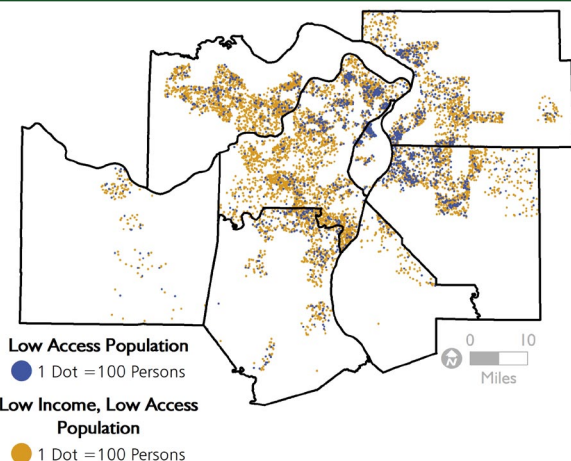


Equity Spotlight:

Access to Grocery Stores

Reliable access to grocery stores that sell fresh, healthy food is an important indicator of the vibrancy of a community. The USDA defines low access to a grocery store as one mile for urban areas and 10 miles for rural areas. Figure 5 shows the populations with low access to grocery stores, with the blue dots representing the low income subset of this population.

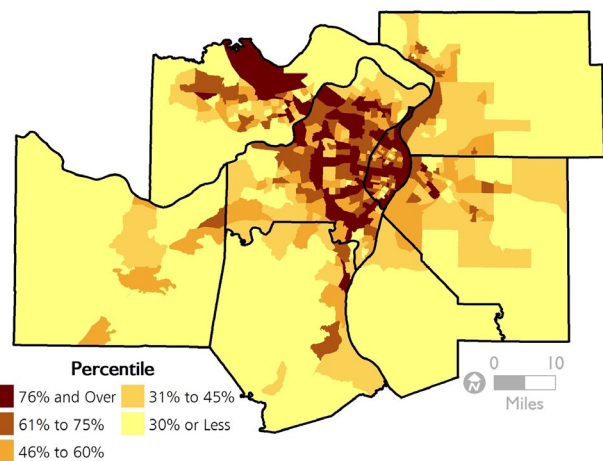
Figure 5. Access to Grocery Stores, 2019



Proximity to Traffic

Figure 6 shows census tracts with high traffic proximity scores. Traffic proximity is a measure of nearness to traffic based on average annual daily traffic counts. Populations in close proximity to traffic and near major roadways experience negative impacts such as noise and air pollution. People of racial and ethnic minority groups are 1.62 times more likely than non-minorities to reside in a high-traffic proximity census tract (defined as the 75th percentile or greater).

Figure 6. Traffic Proximity, 2019





Vibrant Downtown and Central Core

Enhance the attractiveness of downtown St. Louis and the central core to strengthen the region.

The health of St. Louis' downtown and central core is closely tied to the overall health of the region. The downtown and central core serve as the most recognizable face of the region for businesses, tourists, and people interested in relocation from across the country. The central core is also a sports, cultural, and entertainment hub for the region and a primary economic engine.

Greater St. Louis, Inc. defines the central core as shown in the map in Figure 7. The core extends from downtown St. Louis, westward to Forest Park and from Tower Grove Park, northward to Fairground Park.

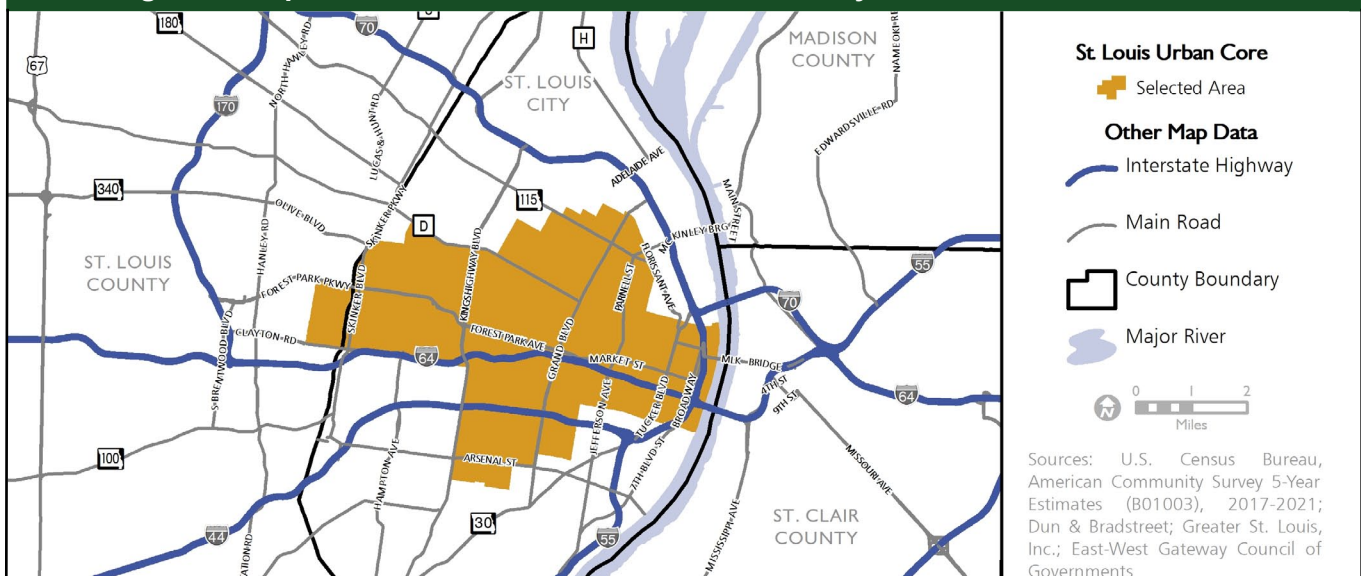
Pandemic Challenges

With the initial shock of the pandemic, downtown St. Louis, along with many major cities, largely emptied out for much of 2020. Businesses and people are trickling back as companies call employees back into the office at least part of the time. While some businesses have relocated or downsized their office footprints in favor of teleworking, others have committed to staying downtown. The St. Louis Business Journal reported that between 2019 and October 2022, downtown St. Louis saw a net loss of more than 500 businesses. To recover, the downtown may need to diversify its economy and be proactive about reimagining spaces. From a transportation perspective this could involve rethinking streets for transit, bikes, and pedestrians; improving regional access and connections, and envisioning uses for surplus parking facilities.

“The weakness of the core of St. Louis is one of the central barriers to economic growth in the bi-state metro. Decades of depopulation and deliberate disinvestment reinforced racial segregation and concentrated poverty in predominantly Black communities in the city. Too many once-vibrant neighborhoods are now hollowed-out urban spaces where vacant building, overgrown lots, unreliable public services and high poverty rates are the norm. If the metro is to prosper, the core of the St. Louis metro must become a magnet for innovation, employment density, and population growth.”

– STL2030 Jobs Plan,
Greater St. Louis Inc.

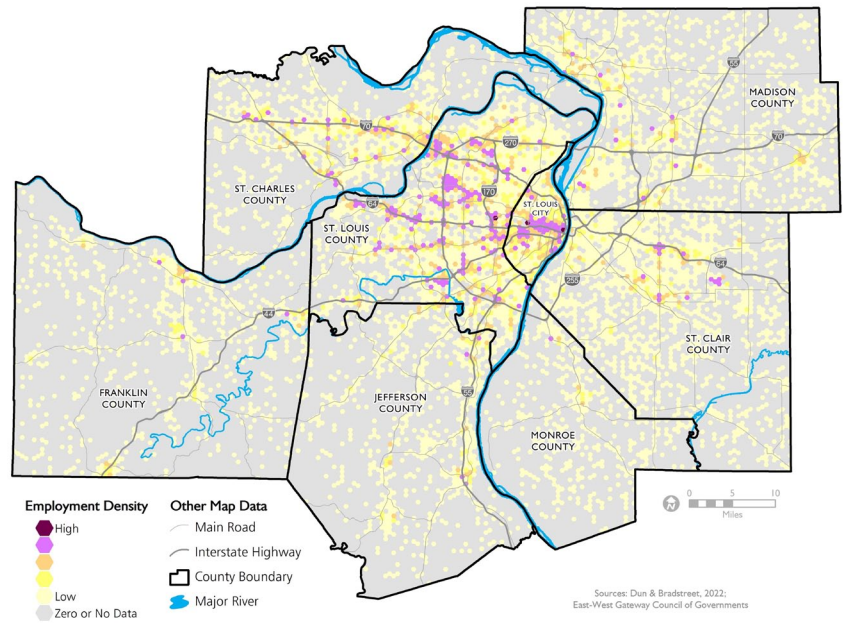
Figure 7. Map of St. Louis Central Core as informed by Greater St. Louis Inc., 2022



Regional Economic Engine

After years of disinvestment and decline, downtown St. Louis is still the region's largest economic engine, and contributes to the central core having the largest gross domestic product (GDP), share of living-wage jobs, and number of tourists in the region. Figure 8 shows employment density in the region which remains highly concentrated in the central core as shown in pink. Beyond employment, the central core has the highest concentration of educational institutes, world-class medical facilities, and arts and cultural institutions that serve as regional assets.

Figure 8. Employment Density, 2022



A Hub for Young Working-Age Adults

Each year, over the last 30 years, more people have moved out of the region than have moved in. The primary age for out-migration is the late teen years and the early 20s. To support economic growth, the region must begin to retain and attract young adults by investing in the features and amenities that attract young job seekers – quality jobs, affordable housing, and neighborhoods that are vibrant, walkable, and are served by public transportation. Table 5 shows where in the region, people aged 18-34 choose to live and how the central core acts as a hub for younger adults.

Table 5. Population Concentration of Young Adults

Geographic Region	Percent of Population in the geographic region aged 18-34
Central Core	32.8%
St. Louis City	26.0%
St. Louis	18.5%
St. Charles	18.3%
Franklin	17.1%
Jefferson	17.8%
Madison	18.5%
Monroe	15.4%
St. Clair	18.1%

Source: ACS 1-Year Estimates (S0101)



Figure 9. Equity Spotlight: Mill Creek Valley

An example of how transportation construction contributed to the demolition of a vibrant Black neighborhood in the central core can be seen in Figure 9. The overlaid parcels (in yellow) depict residential and commercial buildings that existed before the demolition of the Mill Creek Valley neighborhood, which has now been replaced with I-64 and lower density land uses.

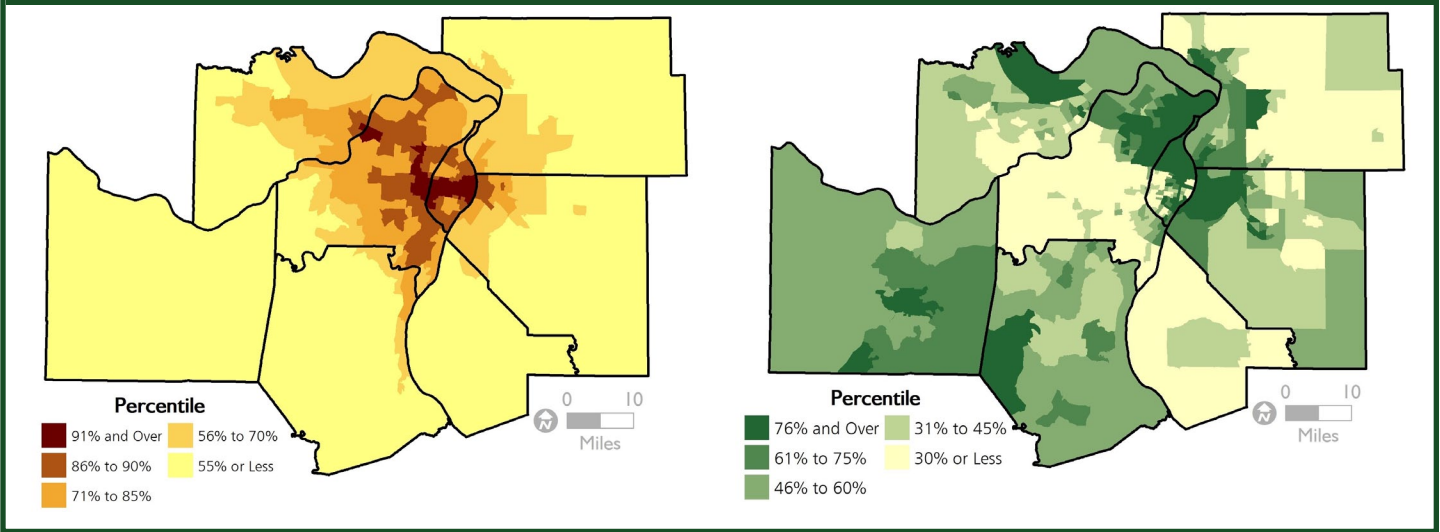
Source: EWG generated map of 2015 satellite imagery with 1950 Sanborn parcel maps overlaid in yellow: Mill Creek Valley

Equity Spotlight: Air Pollution and Public Health

The EPA has set national ambient air quality standards (NAAQS) for six common pollutants which have the most widespread threat to public health and welfare. NAAQS have been set for: carbon monoxide; lead; sulfur dioxide; nitrogen dioxide; particulate matter; and ozone. Regionally, air quality has consistently improved over the last 30 years, however, some communities still face a disproportionate burden. Figure 11 shows a map of census tracts with high concentrations of Diesel Particulate Matter (DPM). Most heavy- and medium-duty trucks are equipped with diesel engines that emit exhaust into the air that includes particulate matter. When inhaled, the particles can enter a person’s lungs and bloodstream and can cause serious health problems such as asthma. Figure 12 depicts asthma prevalence in this region. Particulate matter is one factor that increases asthma prevalence in the region. Other factors that are also associated with higher risk of asthma include allergies, genetics, poor indoor air quality, and respiratory infections.

Figure 11. Diesel Particulate Matter Exposure, 2019

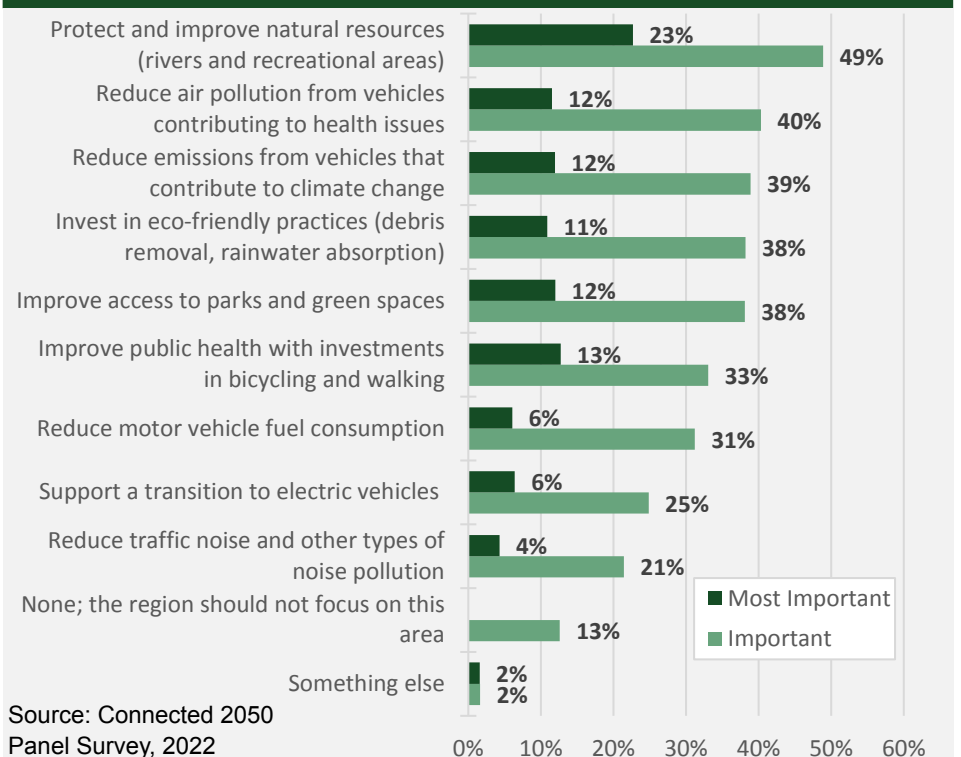
Figure 12. Asthma in Adults (Aged 18 and Older), 2019



Community Engagement

EWG’s approach to protecting and improving natural resources is consistent with the top environmental priority of residents as expressed in the panel survey. Figure 13 shows that 40 percent of residents also found it important to reduce air pollution while 39 percent support reducing emissions that contribute to climate change. One resident commented that “We have to start thinking and acting in more sustainable ways to protect ourselves, our economy, our culture and the planet. We must think long term.”

Figure 13: Important Focuses for Transportation and the Environment





Safe and Secure

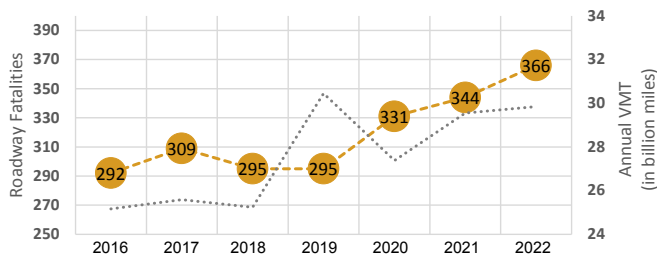
Provide safe and secure travel for all people, including pedestrians, bicyclists, transit riders, and motorists.

For decades, America’s roads were becoming safer. With better automobile design, increased seatbelt usage, and advanced safety technologies, road users have a better chance of surviving crashes now than in the 1970s. That said, the region has seen an increase in traffic fatalities since 2012. Contributing factors include roadway design, vehicle size, and driver behavior such as speeding and driving while distracted. It is critical for the region to focus on reversing this trend.

Roadway Safety

After declines in 2018 and 2019, traffic fatalities spiked in 2020 and have continued to climb in subsequent years (Figure 14).

Figure 14. Roadway Fatalities, 2016-2022

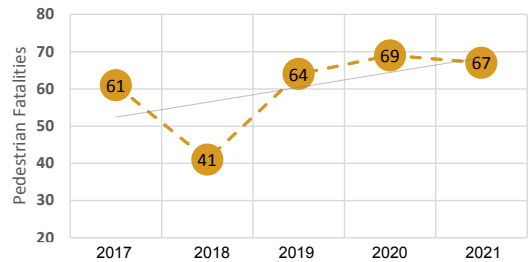


Source: FARS, IDOT, MoDOT

Pedestrian Safety

As traffic speeds increase and vehicles get larger, crashes are becoming more deadly for pedestrians. There has been a slight increase in pedestrian deaths in recent years (Figure 15).

Figure 15. Pedestrian Fatalities, 2017-2021

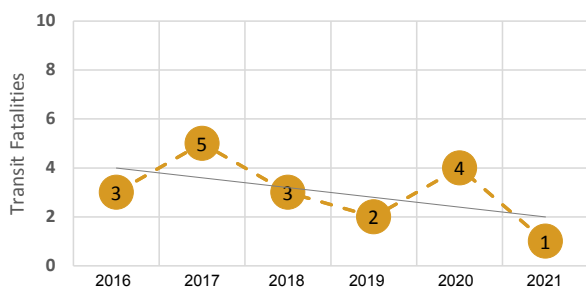


Source: FARS, IDOT, MoDOT

Transit Safety

Fatalities on the major transit systems (Metro and Madison County Transit) remain low, making transit the safest mode of travel in the region (Figure 16).

Figure 16. Transit Fatalities, 2016-2021

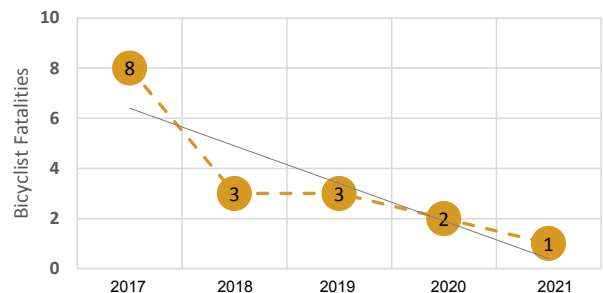


Source: National Transit Database

Bicyclist Safety

Bicyclist fatalities have declined in recent years (Figure 17). However, this measure is important to track as the region invests in more bicycle facilities.

Figure 17. Bicyclist Fatalities, 2017-2021



Source: FARS, IDOT, MoDOT

Pandemic Impacts

One of the most startling impacts on roadway safety and driver behavior was the Covid-19 pandemic. While we will continue to parse through and learn lessons from the data in years to come, 2020 marked a dramatic shift in behavior that is reflected in the data. When the region “shut down,” there was an expectation that crashes, injuries, and deaths would decrease due to fewer drivers on the roadway. This was not the case. The number of drivers and average vehicle miles traveled (VMT) did decrease. However, the tendency of drivers towards speeding and reckless driving increased and seatbelt usage decreased. Researchers also speculate that traffic enforcement declined during the pandemic.

Community Engagement

As seen in Figure 18, safety (defined as providing a safe transportation system for everyone) was noted as the most important focus area for transportation investments by a wide margin. Survey respondents were then asked to rate a range of priorities on a 1-5 scale with 5 being the most important. Figure 19 shows the results for safety related priorities. While reducing crime on public transportation rated the highest, roadway safety for motorists, pedestrians, and bicyclists also rated highly.

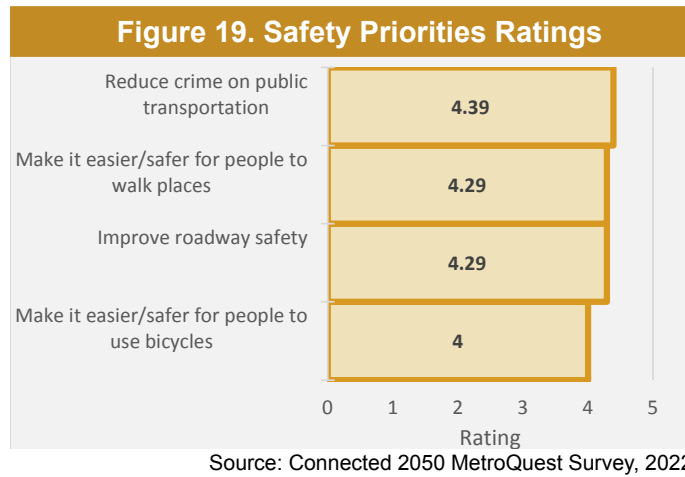
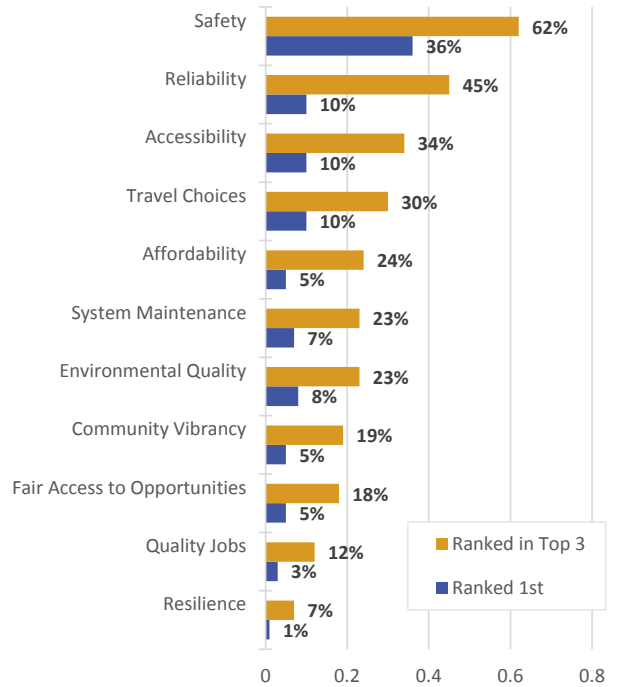


Figure 18. Most Important Investment Priorities



Source: Connected 2050 MetroQuest Survey, 2022

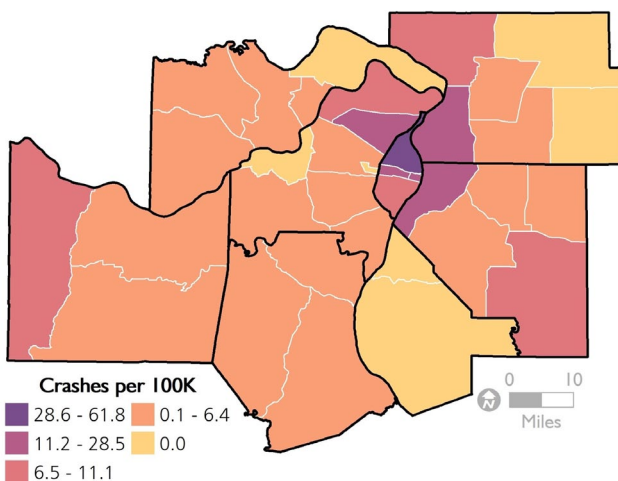
Equity Spotlight

All people in our region interact with our transportation system as drivers, pedestrians, or cyclists. All people experience the negative impacts of transportation safety, but some populations more than others.

Bicycle and Pedestrian Fatalities

Black residents account for a disproportionate number of bicycle and pedestrian fatalities. Potential causes include a higher percentage of Black zero-vehicle households and higher driving speeds in older, declining neighborhoods with wide streets.

Figure 20. Bike/Ped Fatalities, 2016-2022



Roadway Fatalities on Rural Roads

From 2016-2020, 35 percent of non-interstate motorist fatalities occurred in rural areas, more than double the number that would be expected based solely on population. People in rural households tend to drive more than people in urban households do, which may account for a portion of the difference. Even so, rural areas see a disproportionate number of traffic fatalities. Causes may include limited shoulders, risky driver behavior, and slower emergency medical services.

Table 6. Crash Fatalities by Urban Status, 2016-2022

	Rural	Urban
Percent of Population	14	86
Percent of Non-Interstate Motorist Fatalities	35	65
Percent of Bike/Ped Fatalities	9	91

Source: NHTSA, Fatality Analysis Reporting System

Initiatives to Improve Safety

Financially constrained regions have a balancing act to play when it comes to transportation investments. Miles of existing roads need constant maintenance, while new communities spring up that need safe, reliable access on new roads. Through it all, the priority of DOTs, cities, and counties remains roadway safety. Illinois and Missouri are actively working to increase roadway safety through a variety of programs described below.

Strategic Highway Safety Plans

Missouri and Illinois produce yearly highway safety plans. These plans are strategies for the states to attack the problem of roadway safety from all fronts. Strategies include highway engineering, driver education, coordination with emergency medical services, coordination with law enforcement, and continuous evaluation of safety performance.

Buckle Up, Phone Down



MoDOT continues to push initiatives to reduce distraction and increase roadway safety. In 2017, Missouri launched the “Buckle Up, Phone Down” campaign to help protect drivers, passengers, and pedestrians. Public service announcements created by MoDOT are shared through targeted display advertisements.

FHWA’s Proven Safety Countermeasures

FHWA’s Proven Safety Countermeasures are a collection of 28 countermeasures and strategies proven to be effective in reducing roadway fatalities and serious injuries. These strategies are designed for all road users and all kinds of roads. Projects in Connected 2050 are evaluated to ensure the use of safety countermeasures and strategies where appropriate.



Source: FHWA

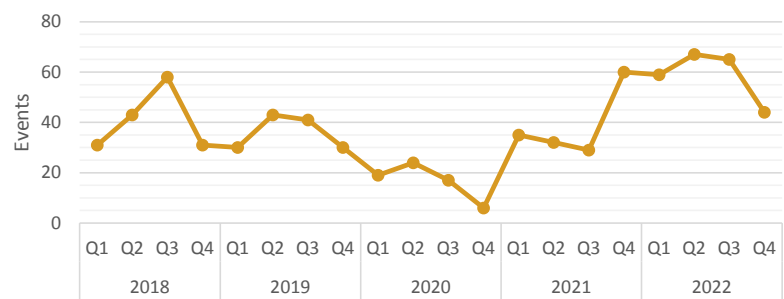
Security

Security and crime are consistently expressed as concerns in the St. Louis region. This concern is often highlighted in relation to transportation as travelers note personal security concerns while walking, biking, and taking public transit in addition to car theft and carjacking fears. A recent increase in crime during the pandemic has heightened these concerns (Figure 21). Ensuring public safety and the perception of safety, are essential to providing equal access for all people on all modes of transportation.

MetroLink Security Strategy

EWG worked with Metro and Metro’s security partners to conduct a 3rd-party assessment of security issues and develop the MetroLink Security Strategy between 2018 and 2020. Metro security staff have worked diligently to implement most of the 99 recommendations of that strategy.

Figure 21. Violent and Property Crime on MetroLink, 2018-2022



Source: MetroLink



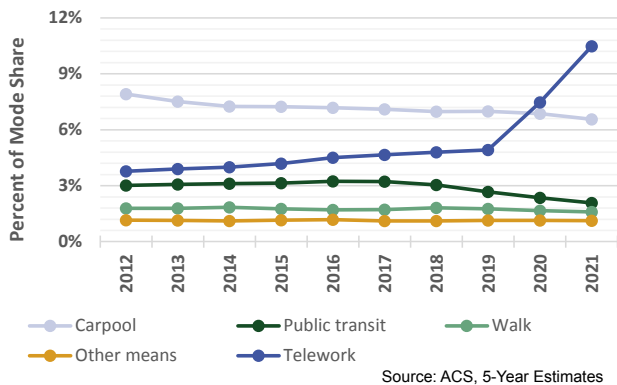
Choices and Access for All

Improve public transportation, bicycling, walking, and other alternatives to driving alone to help people of all ages, abilities, and population groups access opportunities.

A desire for transportation choices through enhanced public transit options, safe walking and bicycling, and other alternatives to driving alone was common among residents and stakeholders. More transportation choices will better serve people of all ages and abilities, including those who do not have access to a personal vehicle.

In the St. Louis region, 7.2 percent of households do not possess a vehicle. The jurisdiction with the highest percentage was the city of St. Louis at 17.7 percent and the lowest was St. Charles County at 2.8 percent. Households that only have access to one vehicle (34.1 percent) often must rely on other modes of transportation as well. Figure 22 depicts the mode share for the work commute trip for non-single occupancy vehicle (SOV) modes. In 2021, a combined 21.8 percent of work trips used modes other than driving alone.

Figure 22. Non-SOV Commute Mode Share, 2012-2021



Rise in Teleworking and Broadband Needs

The share of St. Louisans who primarily work from home rose rapidly during the pandemic from 4.9 percent in 2019 to 10.5 percent in 2021 based on 5-year estimates. This contributed to a decrease in vehicle miles traveled (VMT) and roadways becoming less congested in the morning rush hour due to flexible remote work arrangements. However, not everyone in the region has access to the internet to enable remote activities such as telehealth medical appointments or flexible employment opportunities. These individuals must physically travel to destinations. Table 7 shows that 5.4 percent of households in the region have no computer (inclusive of smart mobile phones and tablets). Table 8 shows that 7.4 percent of households in the region have no internet. For households that do have access to the internet, many lack high-speed fixed broadband options. Transportation projects can support greater broadband internet connectivity by deploying broadband infrastructure in roadway right-of-way.

Table 7. Households with No Computer

Percent of all households, 2021

1	Pittsburgh	7.0
2	New Orleans	6.7
3	Buffalo	6.7
4	Cleveland	6.5
5	Providence	5.8
6	Louisville	5.6
7	Cincinnati	5.5
8	Memphis	5.5
9	St. Louis	5.4
10	Milwaukee	5.3
United States		5.0
11	New York	5.0
12	Richmond	4.8
13	Philadelphia	4.8
14	Birmingham	4.7
15	Detroit	4.6
16	Hartford	4.4
17	Chicago	4.4
18	Oklahoma City	4.3
19	Boston	4.0
20	Baltimore	3.9
21	Jacksonville	3.8
22	Virginia Beach	3.8
23	Charlotte	3.8
24	Indianapolis	3.8
25	Tampa	3.8
26	Columbus	3.7
27	Kansas City	3.7
28	San Antonio	3.6
29	Miami	3.6
30	Las Vegas	3.5
31	Minneapolis	3.5
32	Los Angeles	3.4
33	Riverside	3.3
34	Nashville	3.3
35	San Francisco	3.0
36	Houston	3.0
37	Dallas	2.9
38	Phoenix	2.9
39	Sacramento	2.8
40	Orlando	2.8
41	Atlanta	2.8
42	Portland	2.7
43	Denver	2.7
44	San Diego	2.7
45	Raleigh	2.5
46	Washington, D.C.	2.4
47	Seattle	2.3
48	Austin	2.2
49	Salt Lake City	2.1
50	San Jose	2.1

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates (B28003)

Table 8. Households with No Internet

Percent of all households, 2021

1	New Orleans	10.3
2	Memphis	9.5
3	Pittsburgh	8.8
4	Birmingham	8.3
5	Cleveland	8.3
6	Richmond	8.1
7	Providence	7.8
8	Buffalo	7.7
9	Milwaukee	7.7
10	Louisville	7.6
United States		7.4
11	St. Louis	7.4
12	Miami	7.3
13	Cincinnati	7.1
14	Houston	7.0
15	New York	6.8
16	Oklahoma City	6.5
17	Chicago	6.3
18	Detroit	6.2
19	Virginia Beach	6.1
20	Baltimore	6.1
21	Charlotte	6.0
22	Philadelphia	6.0
23	Las Vegas	6.0
24	San Antonio	6.0
25	Indianapolis	5.9
26	Hartford	5.8
27	Columbus	5.7
28	Kansas City	5.6
29	Jacksonville	5.6
30	Tampa	5.6
31	Nashville	5.4
32	Orlando	5.4
33	Los Angeles	5.3
34	Dallas	5.2
35	Phoenix	5.1
36	Riverside	5.1
37	Atlanta	5.0
38	Boston	4.9
39	Raleigh	4.8
40	Minneapolis	4.4
41	Sacramento	4.3
42	San Francisco	4.3
43	Denver	4.0
44	Portland	3.8
45	Washington, D.C.	3.8
46	San Diego	3.7
47	Austin	3.6
48	Salt Lake City	3.4
49	Seattle	3.1
50	San Jose	2.8

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates (B28002)

Public Transportation

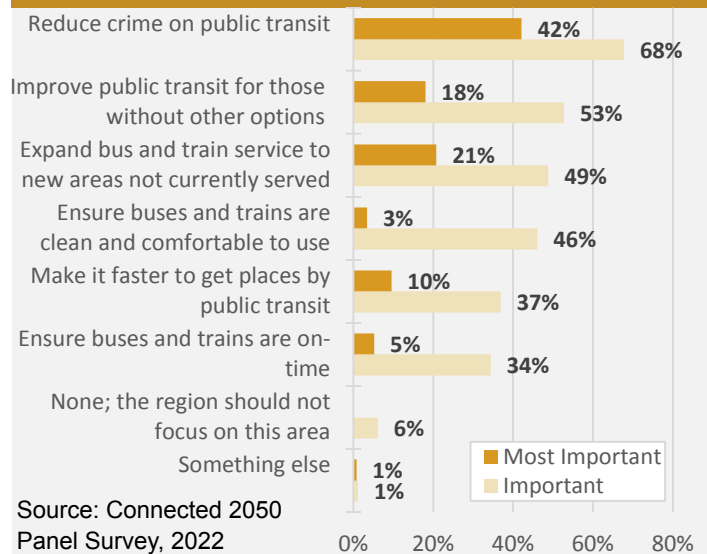
Public transportation remains a vital resource and link for many through the region. In 2020, public transit ridership plummeted due to the COVID-19 pandemic and has yet to fully recover in the St. Louis region, as well as many other areas across the country. Driver shortages, which plagued transit and human service agencies well before the pandemic, were exacerbated to extreme levels, sometimes forcing cuts to needed services impacting access needs for seniors, people with disabilities, and no-vehicle households.

As the region looks forward, residents of the St. Louis region identified the three most important focuses for public transportation as reducing crime, expanding bus and train service to new areas not currently served, and improving public transportation options for those who need it the most (Figure 23). Public transit riders identified that reliability, on-time performance, and frequency of buses on routes was critical. When asked what the most important mobility issue the region needs to focus on, 18 percent said “improve transportation options for persons with disabilities, older adults, and others with mobility limitations”. Ten percent stated “provide more options to driving, such as bike sharing, shared rides, public transportation, and telework.”

Coordinated Human Services Transportation Plan (CHSTP)

The CHSTP, updated in 2020, provides guidance for improving mobility options for seniors and individuals with disabilities. The CHSTP identifies gaps and barriers in existing transportation services and regional coordination, and provides a prioritized list of 10 high priority strategies to address the identified gaps in service.

Figure 23. Important Focuses for Public Transportation



Equity Spotlight: Job Accessibility by Automobile and Transit

Figures 24 and 25 show the percentage of jobs that can be reached by car and by transit within 45 minutes. About 63 percent of the regional population has access to 75 percent of jobs via car. Only 1.3 percent of the regional population can reach 18 to 23.8 percent of the jobs within 45 minutes via transit (shown in light purple on the map). The maps show a wide disparity in the level of jobs access between automobile and transit.

Figure 24. Job Accessibility by Automobile, 2020

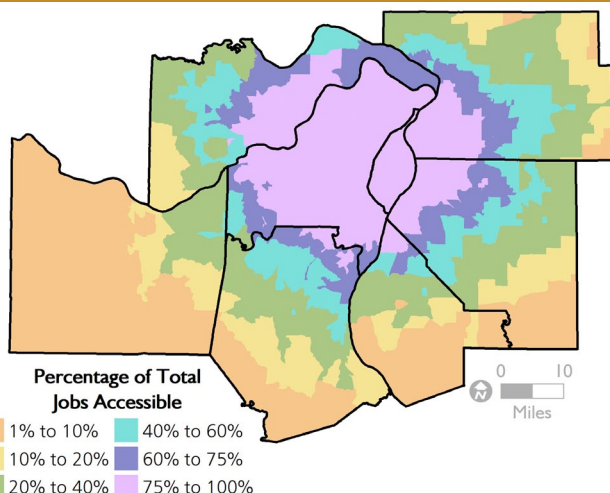
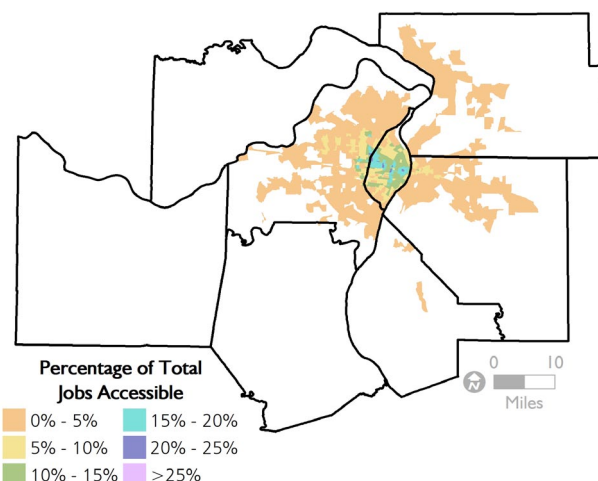


Figure 25. Job Accessibility by Transit, 2020



Biking and Walking

Walking and bicycling can be convenient for relatively short trips – about one-quarter to one-half mile for walking and between one and three miles for bicycling. A national study by the Bureau of Transportation Statistics found that in 2021, more than half of all trips taken in the United States, by all modes of transportation including public transit, were less than three miles, and 28 percent of all trips were less than one mile. This demonstrates the potential for many of these shorter trips to be made by bicycling or walking, if the proper infrastructure is in place.

Sidewalks and bikeways that are incomplete, in disrepair, or inconveniently located create barriers to walking and bicycling, even for short trips and close destinations. Wheelchair accessible sidewalks are even more important to people with disabilities, and the Americans with Disabilities Act of 1990 (ADA) requires local governments to construct accessible rights-of-way to meet their needs. Walking and biking mode share remain low in the region; however, completing and maintaining a robust network of sidewalks and bikeways is one way to improve access and increase the number of trips made by walking and biking.

In 2018, dockless electric scooters arrived to the region as form of shared micromobility. While the program has experienced some challenges, these types of services have the potential to provide a tangible solution to the last-mile transportation gap to support public transit ridership.

Carpooling

The share of St. Louisans who carpool to work has slowly decreased from 7.9 percent in 2012 to 6.6 percent in 2021. While some of this decline may be attributed to the pandemic, the declining trend was established well before the pandemic. Investing in promoting carpooling through increased advertising and/or investments in transportation facilities that support carpooling may help to reverse this trend. In Missouri, MoDOT provides 34 commuter lots across the region, at which carpoolers can meet and park for free. Across the region, RideFinders, operated by Madison County Transit, serves as the commuter rideshare program. The program is a free ride-matching service that enables commuters in the St. Louis region to find a ride in a carpool or vanpool. RideFinders helps nearly 10,000 commuters, saving millions of dollars in commuting costs, while eliminating millions of driving miles. RideFinders also works with nearly 900 participating employers and colleges to help their employees and students rideshare.

Partners that Help Us Thrive

Madison County Trails: Two decades ago, Madison County Transit (MCT) began acquiring former railroad rights-of-way for future light rail possibilities and interim trail use. These corridors form the 138-mile MCT Trails system. Extensions continue to be constructed, with the newest trails linking the city of Troy to the rest of the region.

Great Rivers Greenway: GRG was created by a vote of the people in St. Louis City, St. Louis County, and St. Charles County in the year 2000 to develop a network of greenways using a dedicated sales tax revenue. The network now has 128 mile of greenways and has plans to continue to expand. Newer initiatives like construction of the Brickline Greenway and expansions to the Centennial Greenway, St. Vincent Greenway, and Grant's Trail continue to boost equity, access, and connectivity for bicyclists and pedestrians.



View of a MetroLink train from the MetroBikeLink

Regional Case Study: MetroBikeLink

MetroBikeLink is a 14-mile shared use path that parallels the MetroLink alignment in Illinois, from the Shiloh-Scott Air Force Base to Fairview Heights stations. The project launched in 2002 with a pathway connecting the Southwestern Illinois College (SWIC) campus to the Swansea MetroLink station. The system continues to grow to connect Illinois residents to the Metro system.



Seamless, Efficient, and Reliable

Enhance connectivity, manage congestion, and improve travel time reliability to support efficient personal travel and freight movement.

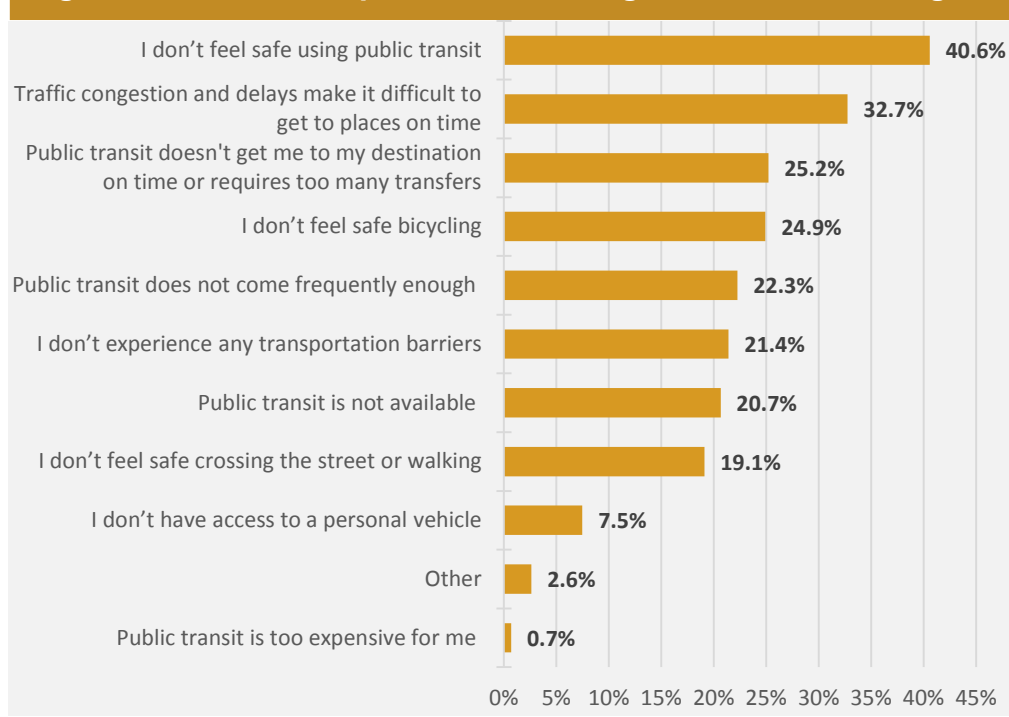
A seamless, efficient, and reliable transportation system allows for the smooth movement of people and goods from one place to another with minimal delays or disruptions independent of transportation mode choice. The system should be coordinated, integrated, and allow for intermodal transfers.

Pandemic stay-at-home orders and the implementation of telework shifted travel behaviors for individuals and freight carriers in the region. General trips and commuter traffic volume on roadways decreased. Freight experienced supply chain interruptions and bottlenecks that caused record shortages of many staple products, from household goods to electronics to automobiles. The pandemic, as well as the increased demand for e-commerce, revealed vulnerabilities in our transportation system and opportunities to plan for and invest in a more connected, resilient, and efficient transportation system that meets the needs of all industries, employers, and residents.

Community Engagement

As shown in Figure 26, traffic congestion and delays were selected by residents as one of the top barriers to traveling in the St. Louis region, with about one-third making this selection. In addition, improving connectivity and efficiency reaching destinations by transit is a priority identified by many people. Several barriers related to transit were among those most selected by residents, including lack of direct connections, lack of frequency, too many transfers, and challenges accessing transit; all of which contribute to longer commute times on transit compared with driving.

Figure 26. Barriers Experience Traveling in the St. Louis Region



Source: Connected 2050 Panel Survey, 2022



Roadway Congestion and Travel Time Reliability

Seamless, efficient, and reliable movements on the region's roadways are measured in two ways: roadway congestion and travel time reliability. Congestion is defined in terms of excess delay on a portion of a roadway resulting in travel speeds that are less than normal or "free flow" speeds. Traffic delays can be expected or unexpected. Travel time reliability (TTR) measures how much time it will take for persons, goods, or services to travel to their destination, even with unexpected delays. Unexpected delays, such as those caused by traffic incidents, weather, work zones, and special events increase travel time and can sometimes cause freight bottlenecks, create issues and disconnects within supply chain networks for freight, and increase the cost of travel for individuals and freight carriers traveling through the region

St. Louis continues to have one of the lowest levels of congestion and highest levels of travel time reliability compared to peer regions, despite having one of the highest rates of vehicle miles traveled. This is due, in part, to the extensive road network in the region as well as shifts in travel behavior during the 2020 pandemic.

Nevertheless, there are segments of freeways and local roads in the region that experience congestion, especially during peak-travel times. The 2021 Annual Regional Congestion Report by EWG reveals that congestion increased from 2017 to 2019 but declined in 2020. Congestion has since increased but has yet to reach pre-pandemic 2019 levels. While congestion is increasing, there may be factors that make the transportation system less reliable and that require travelers to plan more time to ensure on-time arrival to destinations. This time delay comes at a cost, for both individual travelers and freight carriers. Congestion mitigation remains a top priority for the St. Louis region to support and strengthen quality of life, grow the economy, and reduce air pollution.

Critical Importance of Freight

The trucking and railroad freight industry contributes to the region's economic well-being and quality of life. In Missouri, the industry supports over 120,000 jobs and \$6.4 billion in labor income, delivers consumer goods valued over \$9.4 billion, and generates over \$2 billion in total tax revenue. In Illinois, greater than 100,000 jobs are supported. In 2020, St. Louis handled the 16th largest amount of freight among the peer regions in 2020 for both the amount of freight by tonnage (369.5 million tons) and the amount of freight by value (\$329 billion). Less congested roadways can result in reduced fuel costs, improved travel time, minimized economic loss of goods stuck in traffic, and increased economic growth and development.



Congestion Management Process (CMP)

The CMP is a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative operational and demand management strategies for congestion mitigation. EWG produces an Annual Regional Congestion Report, guided by federal mobility performance goals, that identifies congested locations on the region's transportation system. The report evaluates congestion levels and provides an area-wide picture of how travel on various roadways is affected by congestion.



Congestion Cost and Delays

In Missouri, 141 intermodal facilities integrate rail, barge, truck, and air modes and offer alternative travel options so shippers can avoid bottlenecks and ensure timely deliveries. Still, in 2019, congestion cost to trucks was \$5 per 1000 vehicle miles traveled in the region (Table 9). Moreover, trucks lost 85.6 hours per 1000 vehicle miles traveled on congested roads in 2019 (Table 10). When looking at all roadway traffic, in 2019, congestion cost an average of \$986 a year per traveler, up from \$898 in 2017, but less than the peer average of \$1297 (Table 11). These travelers had an average of 46 hours lost due to congestion in 2019 (Table 12).

Table 9.

Truck Congestion Costs

Average annual costs per 1,000 vehicle miles traveled, in dollars, 2019

1	New Orleans	16.2
2	San Francisco	13.9
3	San Jose	8.7
4	New York	7.8
5	Los Angeles	7.7
6	Chicago	7.3
7	Portland	6.6
8	Phoenix	6.1
9	Oklahoma City	5.8
10	Seattle	5.8
11	Louisville	5.7
12	Nashville	5.7
13	Miami	5.5
14	Riverside	5.4
15	Washington, D.C.	5.4
16	Austin	5.3
17	Houston	5.2
18	Memphis	5.1
19	St. Louis	5.0
Peer Average		5.0
20	Dallas	4.8
21	Tampa	4.7
22	San Antonio	4.6
23	Las Vegas	4.5
24	Denver	4.5
25	Atlanta	4.5
26	San Diego	4.2
27	Cleveland	4.2
28	Sacramento	4.2
29	Baltimore	4.1
30	Detroit	4.0
31	Boston	4.0
32	Kansas City	4.0
33	Birmingham	4.0
34	Minneapolis	4.0
35	Philadelphia	4.0
36	Orlando	3.9
37	Columbus	3.9
38	Charlotte	3.9
39	Indianapolis	3.7
40	Salt Lake City	3.6
41	Cincinnati	3.5
42	Hartford	3.3
43	Pittsburgh	3.2
44	Milwaukee	3.2
45	Buffalo	3.0
46	Jacksonville	3.0
47	Providence	2.7
48	Raleigh	2.5
49	Virginia Beach	2.2
50	Richmond	2.1

Source: Texas Transportation Institute, Urban Mobility Report
Data is for urbanized areas.

Table 10.

Truck Congestion Delay Total

Total delay in hours per 1,000 vehicle miles traveled, 2019

1	New Orleans	277.9
2	San Francisco	229.1
3	San Jose	170.8
4	New York	158.3
5	Los Angeles	151.5
6	Portland	134.1
7	Chicago	122.5
8	Oklahoma City	120.0
9	Seattle	118.4
10	Nashville	116.9
11	Miami	112.2
12	Washington, D.C.	110.2
13	Austin	109.6
14	Riverside	107.1
15	Houston	106.1
16	Phoenix	102.3
17	Louisville	98.0
Peer Average		94.2
18	Atlanta	91.2
19	Denver	90.1
20	San Diego	86.2
21	Memphis	85.7
22	St. Louis	85.6
23	Baltimore	83.6
24	Kansas City	83.0
25	Boston	82.1
26	Dallas	81.7
27	Detroit	81.1
28	Philadelphia	81.1
29	Orlando	79.7
30	San Antonio	78.9
31	Tampa	78.4
32	Las Vegas	76.5
33	Indianapolis	74.4
34	Salt Lake City	73.3
35	Cincinnati	70.6
36	Cleveland	69.4
37	Birmingham	68.9
38	Sacramento	68.3
39	Hartford	67.9
40	Minneapolis	67.5
41	Pittsburgh	65.6
42	Columbus	65.6
43	Charlotte	65.3
44	Milwaukee	64.9
45	Jacksonville	61.5
46	Buffalo	60.8
47	Providence	54.9
48	Virginia Beach	43.9
49	Raleigh	42.8
50	Richmond	34.7

Source: Texas Transportation Institute, Urban Mobility Report
Data is for urbanized areas.

Table 11.

Congestion Costs

Average annual costs per auto traveler, in 2020 dollars, 2019

1	San Francisco	2,886
2	Los Angeles	2,866
3	Washington, D.C.	2,191
4	New York	2,159
5	Boston	1,805
6	Atlanta	1,775
7	San Jose	1,731
8	San Diego	1,681
9	Houston	1,635
10	Seattle	1,612
11	Miami	1,606
12	Chicago	1,587
13	Austin	1,520
14	Nashville	1,465
15	Portland	1,424
16	Dallas	1,335
Peer Average		1,297
17	Philadelphia	1,292
18	Riverside	1,272
19	Charlotte	1,271
20	Denver	1,263
21	Orlando	1,261
22	New Orleans	1,225
23	Baltimore	1,219
24	Cincinnati	1,192
25	Phoenix	1,179
26	Detroit	1,167
27	Sacramento	1,164
28	Birmingham	1,139
29	Columbus	1,126
30	Tampa	1,125
31	Minneapolis	1,119
32	Jacksonville	1,089
33	Cleveland	1,072
34	San Antonio	1,069
35	Buffalo	1,056
36	Las Vegas	997
37	St. Louis	986
38	Hartford	976
39	Kansas City	961
40	Pittsburgh	952
41	Indianapolis	941
42	Milwaukee	931
43	Salt Lake City	903
44	Oklahoma City	857
45	Providence	856
46	Louisville	835
47	Raleigh	832
48	Memphis	806
49	Virginia Beach	763
50	Richmond	693

Source: Texas Transportation Institute, Urban Mobility Report
Data is for urbanized areas.

Table 12.

Annual Delay per Auto Traveler

Average hours lost due to congestion per auto traveler, 2019

1	Los Angeles	119
2	Washington, D.C.	105
3	San Francisco	103
4	New York	96
5	Boston	86
6	San Jose	80
7	Atlanta	78
8	Seattle	77
9	Houston	76
10	Chicago	74
10	Miami	74
12	Austin	68
12	Portland	68
14	Nashville	66
15	Dallas	65
16	San Diego	64
16	Riverside	64
18	Baltimore	63
18	Philadelphia	63
20	Denver	62
Peer Average		61
21	Orlando	61
21	Phoenix	61
23	Detroit	60
24	Minneapolis	59
25	Sacramento	56
26	Memphis	54
26	New Orleans	54
28	Charlotte	53
28	Jacksonville	53
28	Tampa	53
31	Cincinnati	52
31	Hartford	52
31	Indianapolis	52
31	San Antonio	52
35	Birmingham	51
36	Kansas City	50
36	Las Vegas	50
38	Buffalo	49
38	Columbus	49
40	Louisville	48
41	Cleveland	47
41	Milwaukee	47
41	Oklahoma City	47
41	Providence	47
45	Salt Lake City	46
45	St. Louis	46
47	Pittsburgh	45
48	Virginia Beach	43
49	Raleigh	40
50	Richmond	35

Source: Texas Transportation Institute, Urban Mobility Report
Data is for urbanized areas.

Public Transit Reliability

Public transit reliability refers to the dependability of public transportation services, including buses, trains, and subways, particularly, in terms of arrival and departure times and the frequency of service. When public transit is reliable, people are more likely to use it as a mode of transportation, which can help to reduce the number of vehicles on the road. With fewer vehicles using the roads, bus and rail transit can provide more opportunities to connect more seamlessly and efficiently, and therefore move people more quickly and frequently, reducing wait times and improving the reliability of public transit.



Well-Maintained and Resilient

Ensure that the transportation system is clean, maintained in a state of good repair, and resilient to extreme weather and other disruptions.

East-West Gateway is tasked with ensuring that our transportation system is clean, well maintained, and resilient in the face of disasters and disruptions. Concrete and asphalt weaken and deteriorate with age and use. Regular maintenance is required to keep the system moving efficiently and reliably.

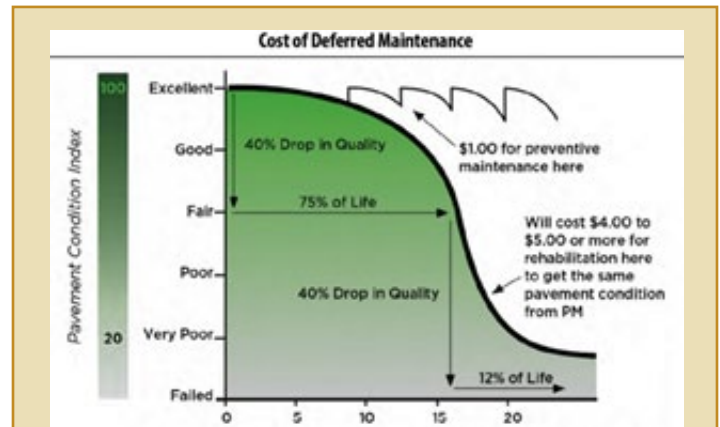
One of the major challenges facing the region is keeping the vast transportation system in good repair. The decades-long emphasis on road system expansion has limited the resources available for rehabilitating and replacing aging system components. The FHWA requires that States and MPOs track bridge and pavement conditions. States who fail to meet target condition thresholds may be mandated to increase preservation spending yearly until targets are maintained.

Long-Run Cost Savings

Investing in routine preservation saves money in the long run. This is why MoDOT and IDOT continue to place preservation and maintenance as a high priority. Prior to 2006, 45 percent of pavement in Missouri was in good condition. Since then, that number has raised to 60 percent. Since 2010, the total percentage of deficient bridge deck in the EWG region has decreased from 12 percent to less than 6 percent. However, preservation projects still top the list of unfunded needs in both states. Even with priority spending, our region struggles keep up with preservation needs, highlighting the importance of scrutinizing projects that would add to the total lane mileage our region is responsible for maintaining.

Maintenance as an Opportunity for Planning

With so many miles of roadway under the purview of MoDOT and IDOT, every maintenance activity is an opportunity for re-envisioning the roadway's use. Projects such as resurfacing or restriping give DOTs an opportunity to reengage with the community and find out if the road or highway is meeting their current needs.



Source: FHWA

Lifecycle Planning for Asset Management

Lifecycle planning is performed at the network level where the needs of all roads and structures within that particular network are considered. Both MoDOT and IDOT choose to invest regularly in less expensive preservation treatments to extend the life of pavement and bridges. This extends the amount of time between major reconstruction projects and lowers overall preservation spending. Deferring maintenance until assets are in poor or inoperable condition has greater costs than just the price of replacing the asset. A 2012 report from the National Cooperative Highway Research Program titled *Consequences of Delayed Maintenance* found that deferring maintenance can increase user cost in the form of time and income lost due to unplanned delays. Scheduling and appropriately funding preservation measures allows agencies the time to communicate and plan for expected delays well in advance. Deferring maintenance can also increase the risk of failure during both normal conditions and catastrophic events.

Bridge and Pavement Assets

St. Louis has an extensive road network with a higher density of lane miles per square mile than the average for the peer regions (ranked 12th out of 50 as shown in Table 13). St. Louis also has a relatively large percentage of bridge deck area that is in poor condition (ranked 11th out of 50 as shown in Table 14). Because the region has invested in so many freeways, maintenance costs and challenges remain high. The economic cost of poorly maintained roads is high and while estimates vary, a 2013 study by the USDOT estimated an average car repair cost of \$438 per year per person due to poorly maintained roads.

The areas of the region that have the greatest number of older and more deteriorated facilities will need the most immediate attention. Figure 27 shows that a striking 13.1 percent of bridge deck area in the city of St. Louis is in poor condition, far greater than the rest of the region. This signals that future maintenance, rehabilitation, and reconstruction efforts will likely need to be focused in the city of St. Louis.

Figure 27. Percent of Bridge Deck Area in Poor Condition

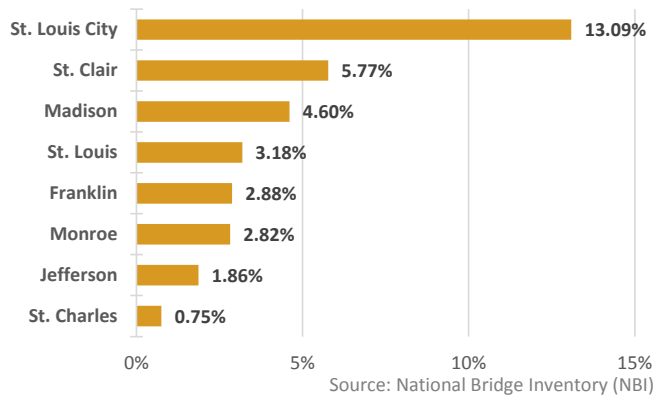


Table 13.

Road Network

Freeway lane miles per urbanized area square mile, 2020

1	Salt Lake City	4.0
2	Los Angeles	2.9
3	Baltimore	2.5
4	San Jose	2.5
5	Dallas	2.4
6	San Antonio	2.4
7	Houston	2.1
8	Washington, D.C.	2.1
9	Austin	2.0
10	San Diego	2.0
11	San Francisco	1.9
12	Cleveland	1.8
13	Miami	1.8
14	Kansas City	1.8
15	St. Louis	1.8
16	Riverside	1.7
17	Denver	1.7
18	Richmond	1.6
19	New York	1.6
20	Milwaukee	1.5
21	Sacramento	1.5
22	Seattle	1.5
Peer Average		1.4
23	Columbus	1.4
24	Orlando	1.4
25	Cincinnati	1.4
26	Phoenix	1.4
27	Birmingham	1.4
28	Hartford	1.4
29	Louisville	1.3
30	New Orleans	1.3
31	Oklahoma City	1.3
32	Jacksonville	1.3
33	Detroit	1.3
34	Minneapolis	1.3
35	Portland	1.2
36	Charlotte	1.2
37	Nashville	1.2
38	Providence	1.1
39	Indianapolis	1.1
40	Buffalo	1.1
41	Philadelphia	1.1
42	Memphis	1.1
43	Boston	1.0
44	Pittsburgh	1.0
45	Las Vegas	1.0
46	Tampa	0.9
47	Atlanta	0.8
48	Chicago	0.8
49	Raleigh	0.8
50	Virginia Beach	0.6

Source: Federal Highway Administration, Highway Statistics Data is for urbanized areas.

Table 14.

Deficient Bridges

Percent of total bridge deck area, 2019

1	Providence	19.0
2	San Francisco	14.7
3	New York	12.6
4	Boston	12.4
5	Chicago	12.2
6	San Jose	11.4
7	New Orleans	10.9
8	Hartford	10.6
9	Birmingham	9.0
10	Detroit	8.9
11	St. Louis	8.8
12	Louisville	8.5
13	Buffalo	7.5
13	Philadelphia	7.5
15	Charlotte	6.4
15	Cleveland	6.4
17	Oklahoma City	6.3
18	Kansas City	6.0
18	Pittsburgh	6.0
18	Virginia Beach	6.0
United States		5.9
21	Seattle	5.6
22	Denver	5.5
23	Riverside	5.3
24	Nashville	5.0
25	Richmond	4.8
26	Raleigh	4.7
27	Baltimore	4.6
27	Milwaukee	4.6
29	Memphis	4.5
30	Los Angeles	4.3
31	Indianapolis	3.7
31	Minneapolis	3.7
33	Portland	3.6
34	Cincinnati	3.4
34	San Diego	3.4
36	Washington, D.C.	3.2
37	Columbus	3.0
37	Sacramento	3.0
39	Dallas	2.0
40	Miami	1.5
41	Atlanta	1.4
42	Houston	0.9
42	Jacksonville	0.9
44	Orlando	0.7
44	Salt Lake City	0.7
46	Las Vegas	0.5
46	Tampa	0.5
48	Phoenix	0.4
48	San Antonio	0.4
50	Austin	0.1

Source: FHWA, National Bridge Inventory

Transit Assets

Public transportation providers that own FTA funded capital assets used in providing transit services are required to maintain an asset inventory, assess inventory conditions, and prioritize investments to improve the state of good repair of their capital assets. These asset conditions are reported in Transit Asset Management (TAM) plans. In the St. Louis region, Bi-State Development/Metro reports asset condition independently while other public transit providers (OATS Transit, Madison County Transit, and Monroe-Randolph Transit District) report asset conditions as part of IDOT and MoDOT group TAM plans. Each agency tracks the condition of revenue and non-revenue vehicles, transit facilities, and infrastructure (track, bridges, etc.).

The majority of federal funding for public transit can only be used on capital costs. Operating and maintenance costs are largely funded through state and local sources, and while the state of Illinois funds transit fairly well, Missouri allocates very little to public transportation. Contrastingly, highways are able use federal funding for their preservation and maintenance projects to cover up to 80 percent of the costs.

Transportation System Resiliency

Rich with natural waterways, our region tends to experience flooding. Not all flooding is related to high river levels. Seen in this image, Interstate 70 flooded during a rainstorm in 2022. This flooding was due to sustained heavy rain and clogged drainage systems. The storm water systems around this Interstate were unable to move the large quantity of rain water in the short time it fell, and many of the culverts were clogged with litter.



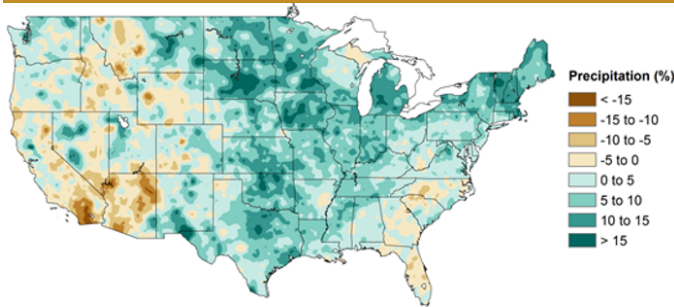
Roads, bridges, and transit assets in poor condition are less durable in the event of an extreme weather event. Fortunately, there are ways to build or reconstruct roadways to be more resilient in the face of changing weather and increased chance of flooding. Roadways can be reinforced and raised in areas at highest risk for flooding. Permeable surfaces on local roads or parking lots can help more water soak into the ground through the pavement rather than having it run off into drains, culverts, and stream beds.

Extreme Weather Trends

Precipitation

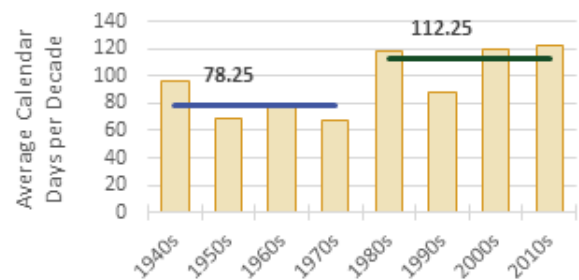
Nationally, most of the central U.S. and northeast has experienced generally wetter conditions in recent decades.

Figure 28. Observed Changes in Annual Precipitation from 1901-1960 to 1986-2015



In the St. Louis region, there has been a significant increase in the number of days per decade with more than an inch of precipitation.

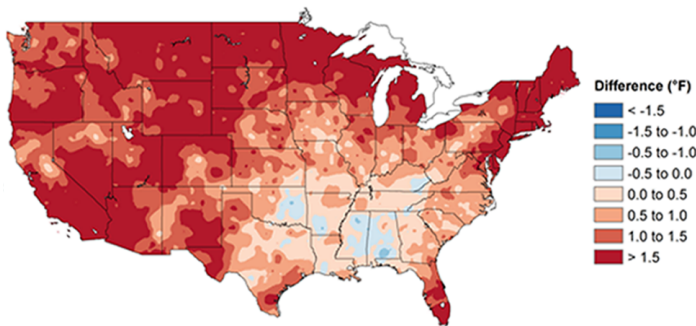
Figure 29. Average Calendar Days per Decade with over 1 inch of Precipitation, Lambert Airport, 1940-2010



Temperature

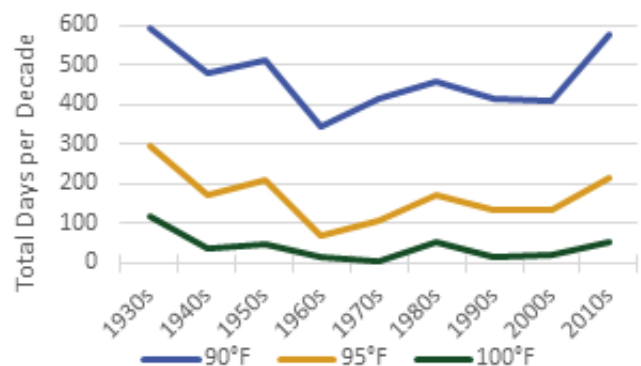
The continental U.S. has generally had increases in average annual temperatures. In most places, winter temperatures have increased more than summer.

Figure 30. Observed Changes in Annual Temperature, from 1901-1960 to 1986-2016



Locally, there is not a significant trend with respect to the number of days per year with extreme heat. However, this is an important measure to continue to track given national trends.

Figure 31. Extreme Temperature Days, Lambert Airport, 1930-2010





Collaborative

Work together across jurisdictions and communities to support the region’s overall economy, environment, and quality of life.

Since the region spans two states and many jurisdictions, it is essential to work together to support the overall well-being of the St. Louis region. East-West Gateway will foster a collaborative process so that the region’s transportation planning process looks beyond individual local interests to support investments and policies that strengthen the entire region.

The St. Louis region spans jurisdictional boundaries and includes two states, eight counties, and numerous municipalities. While political fragmentation isn’t inherently harmful, lack of regional collaboration can lead to jurisdictions competing amongst themselves for limited opportunities and financial resources. A decision that may be best for one jurisdiction in the near term may not maximize the region’s overall economy, environment, and/or quality of life.

Collaboration in transportation decision-making can reduce long term project costs, reduce redundancies, promote knowledge sharing, and ensure that projects truly meet the needs of local communities. Challenges with regional collaboration aren’t unique to the St. Louis region, however, it is clear that a collaborative process in the development of the long range transportation plan and in the planning, design, construction, operations, and maintenance of transportation projects is critical to build a transportation system that works for everyone.



Regional Case Study: Brickline Greenway

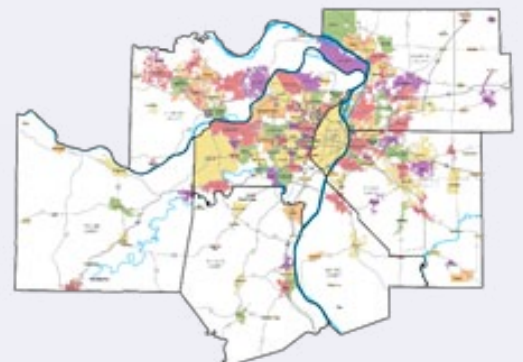
In 2017, Great Rivers Greenway (GRG) launched plans for the Brickline Greenway, which will connect countless community assets and four anchor institutions – the Gateway Arch, Forest Park, Tower Grove Park, and Fairground Park. In 2018, the first segment of the greenway was completed along with the new Cortex MetroLink station. GRG continues to plan, design, and pursue funding to complete additional segments of the project. A one-mile segment of the Greenway from Compton Ave to 20th St. will be one of the newest additions to the network. Collaboration between regional entities, including the City of St. Louis, Harris-Stowe State University, and St. Louis CITY SC has been critical when working through right-of-way challenges, construction timelines, and maintenance agreements.



2 States



8 Counties



195 Municipalities

Community Engagement

Residents have recognized the need for increased collaboration and unified leadership. A 2022 survey by the St. Louis Business Journal found that nearly 60% of the people identified “unified leadership and government structure” as one of the biggest challenges in the region. Surveys led by East-West Gateway as part of the long-range transportation plan process also found collaboration to be a top concern as residents noted a need for a regional vision.

Figure 32: Resident feedback on collaboration



Collaboration at East West Gateway

Public Involvement Plan

EWG staff, in our commitment to include all residents in regional planning discussions, has created a framework that guides our public involvement efforts. Our public involvement program includes specific strategies that welcome ideas, leverage partnerships, respect differences, embrace community, share knowledge, and foster responsive solutions that reflect the regional aspirations of residents. To help translate the mission and vision of the Public Involvement Plan into action, EWG embraces a set of six core goals.



- Articulate the process for public information and involvement from the outset of a project
- Create mechanisms that document public feedback and make it available for public consideration and report how we incorporated public input in the decision-making process
- Strengthen the Council's strategies for reaching people and communicating appropriately
- Assure that every effort will be made to ensure nondiscrimination in all of its programs and activities
- Provide access to quality information, education, and data
- Continuously evaluate the effectiveness of the EWG public involvement program

Regional Alignment in Decision Making

A Board of Directors that includes 24 voting members and 5 non-voting members governs East-West Gateway Council of Governments (EWG). The Board's Executive Committee includes the chief elected officials from the city of St. Louis and seven counties in the St. Louis region. The Board of Directors is responsible for approval of all regional transportation policies and programs at the agency, including the Connected 2050 long-range transportation plan.



Equitable

Ensure the transportation system is working for everyone in the region, and all voices are heard, including populations that are traditionally underserved.

The regional transportation planning process should proactively engage all communities in the decision-making process. The process should seek to ensure equitable outcomes by supporting fair access to affordable, reliable transportation options for all people, reflecting their unique needs, and recognizing past harmful impacts of investments to some communities.

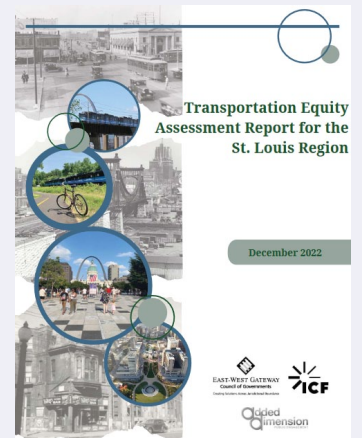
People in the St. Louis region face diverse transportation challenges, and they are exposed to different environments, elements, and pollutants. Transportation equity populations (TEP) deserve specific consideration when it comes to building and maintaining an equitable transportation system. They include:

- Minority persons
- Persons in poverty
- Seniors (aged 65 and older)
- Individuals with limited English proficiency (LEP)
- Persons with disabilities
- No-vehicle households

In past planning, EWG has considered the needs of underserved communities by identifying areas where there were high concentrations of the TEPs. The agency referred to them as “environmental justice (EJ) areas.” As part of the transportation equity assessment, EWG staff reviewed data and determined that a better approach is to consider all of the individuals in these groups. The EJ areas only captured a portion of each of the TEP groups, ranging from about 10 percent of seniors to about 50 percent of the minority population. Table 15 shows that people from each of the TEP groups live in each county in the EWG region. Some of the population groups (minority, poverty, no-vehicle households, and LEP persons) are more highly concentrated in the central part of the region. The senior and disabled populations are more spread throughout the footprint of the region.

Transportation Equity Assessment

East West Gateway seeks to ensure that the transportation system meets the needs of all residents. While this long-range transportation plan looks ahead to the year 2050, the 2023 Transportation Equity Assessment provides a look back in history over the past 100 years, exploring how investments have shaped development, affected different populations, and still reverberate today. This study included:



- A historical analysis of changes in regional demographics, federal and local policies and investments since the early 20th century;
- An analysis of current safety, access, mobility, and environmental issues facing different population groups within the region;
- A detailed exploration of the distribution of transportation investments over the past 20 years; and
- Recommendations for ways to strengthen and support an equitable planning and decision-making process for the St. Louis region.

**Table 15. Transportation Equity Population (TEP) Groups
Number of population group and percent of county population**

East-West Gateway Region by County, 2016-2020

	Madison	Monroe	St. Clair	Franklin	Jefferson	St. Charles	St. Louis	City of St. Louis	EWG Region
Total Population	264,403	34,444	261,186	103,629	224,777	398,472	996,179	304,709	2,587,799
Minority Population	40,985	1,288	101,819	5,664	16,504	53,418	350,556	170,840	741,074
Percent of County Population	15.5	3.7	39.0	5.5	7.3	13.4	35.2	56.1	28.6
Poverty Population	32,152	1,061	37,001	9,787	20,106	18,683	90,637	60,598	270,025
Percent of County Population	12.4	3.1	14.4	9.6	9.1	4.8	9.3	20.4	10.4
Disabled Population	38,647	3,356	36,331	14,350	30,608	40,265	115,442	46,061	325,060
Percent of County Population	14.8	9.8	14.2	14.0	13.7	10.2	11.7	15.3	12.6
Senior Population	45,628	6,126	41,097	17,987	33,717	60,571	179,993	41,612	426,731
Percent of County Population	17.3	17.8	15.7	17.4	15.0	15.2	18.1	13.7	16.5
Zero Vehicle Households	5,954	392	9,060	1,504	2,788	4,187	25,430	26,880	76,195
Percent of County Population	5.5	2.9	8.7	3.7	3.3	2.8	6.2	18.7	7.2
Limited English Proficiency (LEP) Population	2,751	246	4,139	483	1,833	5,878	28,409	10,407	54,146
Percent of County Population	1.1	0.8	1.7	0.5	0.9	1.6	3.0	3.6	2.1

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2016-2020 (DP05, B01001, B16004, S1810, DP04, S1701)

Community Engagement

To develop Connected 2050, EWG targeted engagement efforts by convening an Equity Advisory Group, hosting a transportation equity virtual open house, and conducting targeted interviews on equity issues. Below is a sample of what we heard.

Barriers to Operating a Vehicle

“My family has a history of Parkinson’s and there’s gonna come a day when I am still relatively young, but won’t be able to drive. Being able to live somewhere with transit and get to somewhere with transit that are walkable and safe when I get there, and not disconnected and disparate is really important.”

“To buy a car requires credit. New [immigrant] arrivals don’t have credit to buy a car. So there’s a lot of challenges here.”

Safety Challenges

“I have trouble using fixed route [services] and trying to cross streets to get to the bus stop as a blind person with hearing loss. My guide dog can’t stand in the sun for long when temps are in the 90s and there is high humidity.”

“I do feel a lot of fear for my safety and for other people who are trying to get around without a car... As a transit rider, I stand behind a pole because I’m so concerned at the reckless driving I see...”

Challenges Using Public Transit

“I had to plan a lot of my life around the public transit options I have. That’s a big part of why I chose the job I currently have, because I can walk to my job...”

“A woman in one of our grocery stores had a full cart of food. After checking out she asked if she could leave her cart there to make two trips (a 2 mile walk with groceries to her home and back was 4 miles in total). If she took the bus, it would take her 3.5 - 4 hours, so she had to choose between walking 4 miles or spending a few hours on the bus.”

Affordability Barriers

“It costs me a ton of money to get to school...I like to make sure all of the classes I’m teaching are on one day, if possible, so I don’t have to spend a huge amount of time and money getting there.”



Innovative

Bring leading-edge ideas, technologies, and approaches to address transportation challenges and position the region for growth.


An innovative planning process leads to more holistic decision-making, thereby improving overall project quality and transportation outcomes. It is critical for the region to remain on the leading edge of innovation to ensure we are meeting the present and future needs of local communities, while adapting to emerging travel trends and evolving technologies.

Innovative Community Assistance Programs

EWG plays a critical role in allocating billions in transportation spending, while ensuring that projects receiving funds are consistent with the region’s guiding principles. The agency seeks to fully and efficiently utilize all available funding mechanisms and support communities in seeking out our federal discretionary grant funds. Some communities may not have the staff capacity or technical expertise to take on transformational transportation projects. Additionally, the need to provide local match funds to access federal funding may deter some municipalities.

There is a clear need for states, counties, and EWG to implement community assistance programs to provide technical assistance and support communities in accessing transportation funding. There are several innovative efforts in our region to this end.

- Great Streets initiative managed by EWG as described in the text box to the right.
- MoDOT Cost Share Program which provides financial assistance to public and private applicants for state highway and bridge projects satisfying a transportation need.
- Illinois Transportation Enhancement Program (ITEP), which establishes a state funded set aside for pedestrian and bicycle facilities projects. A minimum of 25% of projects funded are directed to projects in high-need communities. The state funds provide federal matching funds to communities determined to be high need.



Great Streets Initiative

In 2006, EWG launched the Great Streets Initiative, a planning assistance program with the clear goals of filling a gap for communities with limited planning capacity, expanding how communities think of their streets, and ultimately helping create thriving places. Twenty-two plans have been completed throughout the region. To expand the utility of the program, EWG is adapting the approach to assess the region’s arterial network design (on the Missouri side) and piloting an approach to micro scale projects in Illinois.

Federal Discretionary Grant Programs

S | S
4 | A

Thinking about safety regionally, rather than splitting planning efforts up among smaller sponsors, helped EWG receive funding for a Comprehensive Safety Action Plan for our region through the new **Safe Streets and Roads for all Grant Program**.

The Transportation Equity Assessment provides an analysis of disparities in our region, which will strengthen local applications for funding related to equity, such as the **Reconnecting Communities Pilot Program**.



Strategic Readiness for Technology Innovations

Our transportation system is continually changing as new mobility innovations are revolutionizing the way people travel. Smartphone applications have enabled drivers to reroute around traffic incidents, provided real time public transit arrival data, and facilitated the ability to share cars, bicycles, and scooters. Self-driving cars have the potential to reduce roadway fatalities and provide more transportation choices for those who are unable to drive. The Internet-of-Things, machine learning, and connected applications are already increasing productivity in supply chains and minimizing costs and errors when moving freight. New eco-friendly infrastructure and vehicle technologies have the potential to reduce carbon emissions and improve air/water quality. With so much transformation in the industry, it is critical for public agencies to ensure transportation policies adapt to these changes, while continuing to support the region's guiding principles.

Emerging Transportation Technology Strategic Plan



In 2017, EWG developed the St. Louis Region Emerging Transportation Technology Strategic Plan in response to rapidly advancing technologies that were already disrupting the transportation industry and challenging policymakers involved in transportation planning and investment

decision-making. The strategic plan has three goals.

- Harness positive impacts from technology
- Address potential negative impacts from technology
- Support the region to be a laboratory for innovation

Regional Transportation Technology Partnerships



Electrical Industry Training Center

The Electrical Industry Training Center became the country's first registered electrical training program focused on training workers to install electric vehicle charging stations. The curriculum was developed in 2011, through a partnership of the International Brotherhood of Electrical Workers Local 1 and the St. Louis Chapter of the National Electrical Contractors Association.



Gateway Green Light

The Gateway Greenlight program, which became operational in 2015, is an effort between state and local governments to improve traffic signal coordination in St. Charles County. These entities work together on coordinating timing plans for intersections on major routes for more efficient flow of traffic. As part of the effort, new signal controllers were installed to enable traffic signals to communicate with each other and a central operations center.



Missouri Center for Transportation Innovation (MCTI)

Established in 2019, the goal of MCTI is to turn transportation research forward into real-world results. The program is a partnership between four University of Missouri campuses, MoDOT, and the FHWA. These relationships provide access to cutting-edge resources like state labs, test tracks, simulators, and machine learning. This work will help to develop new strategies to address the state's infrastructure challenges.



Performance Based

Use data-driven approaches to support wise investment decisions that maximize stewardship of limited financial resources.

Performance management is a strategic approach that uses transportation system performance data to inform decision-making and transportation outcomes. When implemented effectively, performance management can improve project and program delivery, inform investment priority decisions, and provide greater transparency and accountability.

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) required that the Federal-aid highway program include a performance-based mechanism to guide and support transportation investments across the country. The Fixing America's Surface Transportation Act (FAST Act) in 2015 and Infrastructure Investment and Jobs Act (IIJA) in 2021 continued the performance-based planning process established in MAP-21.

Federal Performance Management

Recipients of federal funding must make transportation investments that align with the national system performance goals, as described in the box to the right, and make progress towards targets for each goal. MPOs are charged with coordinating and setting targets to meet each national goal.

Federal Highway Administration (FHWA)

Transportation Performance Management final rules have been released by the FHWA. The final rules include performance measures for bridge condition, pavement condition, safety, on-road mobile source emissions, freight reliability, non-single occupancy vehicle travel, peak hour excessive delay, and travel time reliability.

Federal Transit Administration (FTA)

Final rules released by the FTA include measures for public transportation safety and transit asset management.



National System Performance Goals

Safety: to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Infrastructure condition: to maintain the highway infrastructure asset system in a state of good repair.

Congestion reduction: to achieve a significant reduction in congestion on the National Highway System (NHS).

System reliability: to improve the efficiency of the surface transportation system.

Freight movement and economic vitality: to improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

Environmental sustainability: to enhance the performance of the transportation system while protecting and enhancing the natural environment.

Reduced project delivery delays: to reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

East-West Gateway Performance Management

Connected 2050 establishes a vision and priorities for the St. Louis region's transportation system through its 12 guiding principles. EWG has established system performance measures for each of the principles. These measures will be used to monitor the region's progress in meeting the goals outlined in the guiding principles. EWG performance measures were selected based on federal requirements, as well as stakeholder input gained throughout the plan development process. The guiding principles are grouped into three categories: our communities and region, our transportation system, and our process. The criteria used for selecting performance measures for the principles differ due to EWG having varying levels of influence on each type of goal. The criteria used for each of the categories are listed below.

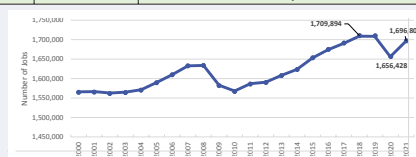
Our Communities and Region Principles	Our Transportation System Principles	Our Process Principles
Performance measures in this category focus on regional quality-of-life outcomes. Transportation investments can support these measures. Selection criteria include the following:	Performance measures in this category focus directly on the transportation system. Transportation investments directly influence these measures. Selection criteria include the following:	These principles focus on the regional transportation planning process. Thus measures in this area lend themselves to a more qualitative focus. Only the equity principle is tied to quantitative measures. Selection criteria for the equity measures include the following:
<ul style="list-style-type: none"> Data availability Easily explainable and understood Alignment with regional and local economic development, community, and environmental partners Tied to a desired community outcome 	<ul style="list-style-type: none"> Data availability Easily explainable and understood Alignment with state and federal transportation measures Tied to a desired transportation system outcome 	<ul style="list-style-type: none"> Data availability Easily explainable and understood Tied to disparities for individuals using the regional transportation system Direct link to principles within "our communities and region" and "our transportation system"

System Performance Report

Chapter 4 of Connected 2050 contains the System Performance report, which provides a summary of national and EWG performance measures. In many cases, national measures have been adopted as EWG measures. For each measure, descriptions, current status, and targets are provided where applicable. The information that is shown is the latest available at the time of the plan adoption.

M1 Regional Employment			Jobs (2021)	1,696,805
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▲	N/A	

The regional employment measure includes both full- and part-time wage- and salary-jobs, sole proprietorships, and individual general partners. It does not include unpaid family workers or volunteers.



Source: Bureau of Economic Analysis, Regional Statistics Tables, CAINC4

Transportation System Performance

An interactive dashboard featuring federally-required performance measures for the EWG region is located on the agency's website.



<https://www.ewgateway.org/transportation-planning/long-range-planning/lrp-performance-dashboard/>







Chapter 4 System Performance

The system performance chapter contains a summary of EWG’s regional and federal performance measures followed by a System Performance Report. For each measure the following are provided, where applicable: a description, current status, and the desired trend. Performance measures help EWG monitor progress towards achieving transportation goals.






Table 16 has a summary of all performance measures in the Connected 2050 System Performance Report. Data quality and availability are always changing and performance measures may be added or removed through the life of the plan. For each measure a desired long-term trend is shown (either increasing ▲ or decreasing ▼). The last two columns indicate whether a measure is a federal measure, an EWG measure, or both. The default geography used to report data is the eight-county EWG region unless otherwise stated.

- Federal measure – a performance measure required by the USDOT to be reported on by Metropolitan Planning Organizations (MPO). Each federal measure must have short-term targets that are set and adopted by the MPO. Each measure is updated and reported based on federal reporting requirements.
- EWG measure – a measure identified through the Connected 2050 planning process that measures long-term progress on the regional guiding principles. Each measure is updated and reported biennially or every four years based on data availability. There are three measures specific to the equitable guiding principle that are referred to as transportation equity indicators (EIs). These measure disparities between population groups instead of overall regional totals.

Table 16: Connected 2050 Performance Measure Summary

Guiding Principles	PM #	Performance Measure	Desired Trend	Federal Measure	EWG Measure
 Economic Vitality	M1	Regional employment	▲	No	Yes
	M2	Real gross domestic product	▲	No	Yes
 Thriving Neighborhoods and Communities	M3	Residential vacancy (percent of census tracts exceeding a vacancy threshold)	▼	No	Yes
	M4	Percent of population with housing and transportation costs over 45% of income (based on the median household income of each census tract)	▼	No	Yes
 A Vibrant Downtown and Central Core	M5	Employment in the central core	▲	No	Yes
	M6	Population living in the central core	▲	No	Yes
 A Healthy and Sustainable Environment	M7	Annual days reaching “unhealthy for sensitive groups” or above on the Air Quality Index (for ozone & PM2.5 combined)	▼	No	Yes
	M8	GHG emissions from on-road transportation	▼	No	Yes
	M9	Emissions reduction (NO _x and VOC)	-*	Yes	No

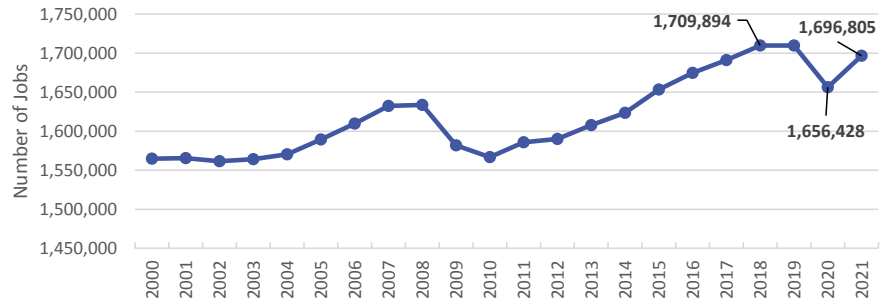
* M9 Emissions reduction does not have a desired trend because the FHWA definition of the measure which looks at the kg/day reduction of emissions is based on programmed transportation projects. Overall the goal is to reduce emissions.

Guiding Principles	PM #	Performance Measure	Desired Trend	Federal Measure	EWG Measure
 Safe and Secure	M10	Roadway fatalities	▼	Yes	Yes
	M11	Roadway fatality rate	▼	Yes	Yes
	M12	Roadway serious injuries	▼	Yes	Yes
	M13	Roadway serious injuries rate	▼	Yes	Yes
	M14	Non-motorized fatalities and serious injuries	▼	Yes	Yes
	M15	Transit fatalities	▼	Yes	No
	M16	Transit injuries	▼	Yes	No
 Choices and Access for All	M17	Transit safety events	▼	Yes	No
	M18	Non-single occupant vehicle mode share	▲	Yes	Yes
	M19	Percent of workers with a transit commute travel time under 45 minutes	▲	No	Yes
 Seamless, Efficient, and Reliable	M20	Transit ridership (annual unlinked transit trips)	▲	No	Yes
	M21	Percent of workers with commute travel time under 45 minutes	▲	No	Yes
	M22	Peak hour excessive delay per capita	▼	Yes	Yes
	M23	Percentage of person-miles traveled on the Interstate system with reliable travel time	▲	Yes	Yes
	M24	Percentage of person-miles traveled on the non-Interstate NHS with reliable travel time	▲	Yes	Yes
	M25	Truck Travel Time Reliability index	▲	Yes	Yes
	M26	On-time performance for public transit	▲	No	Yes
 Well-Maintained and Resilient	M27	Percent of Interstate pavement in good condition	▲	Yes	Yes
	M28	Percent of Interstate pavement in poor condition	▼	Yes	Yes
	M29	Percent of non-Interstate NHS pavement in good condition	▲	Yes	Yes
	M30	Percent of non-Interstate NHS pavement in poor condition	▼	Yes	Yes
	M31	Percent of NHS bridge deck area in good condition	▲	Yes	Yes
	M32	Percent of NHS bridge deck area in poor condition	▼	Yes	Yes
	M33	Percentage of vehicle met or exceeded Useful Life Benchmark for non-revenue vehicles	▼	Yes	No
	M34	Percentage of vehicle met or exceeded Useful Life Benchmark for revenue vehicles	▼	Yes	No
	M35	Percentage of track segments under performance restriction	▼	Yes	No
	M36	Percentage of facilities assets with condition rating below 3.0 on FTA TERM Scale	▼	Yes	No
 Equitable	M37	Mean distance between transit major mechanical failures	▲	Yes	Yes
	EI38	Disparity in diesel particulate matter exposure	▲ to 100	No	Yes
	EI39	Disparity in bicycle / pedestrian fatalities	▲ to 100	No	Yes
	EI40	Disparity in access to jobs	▲ to 100	No	Yes

System Performance Report

 M1 Regional Employment			Jobs (2021)	1,696,805
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▲	N/A	

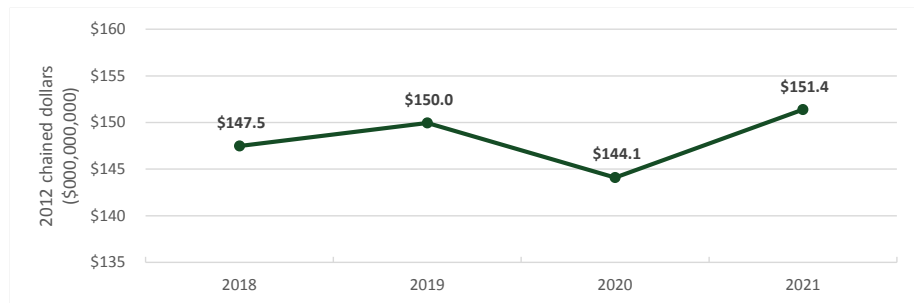
The regional employment measure includes both full- and part-time wage- and salary-jobs, sole proprietorships, and individual general partners. It does not include unpaid family work or volunteers.



Source: Bureau of Economic Analysis, Regional Statistics Tables, CAINC4

 M2 Real Gross Domestic Product (GDP)			Real GDP (2021)	\$151.4 billion
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▲	N/A	

GDP reflects the value of goods and services produced and is a measure of output and productivity of the region's economy. Real GDP, by accounting for inflation, gives an idea of how output has changed over time.

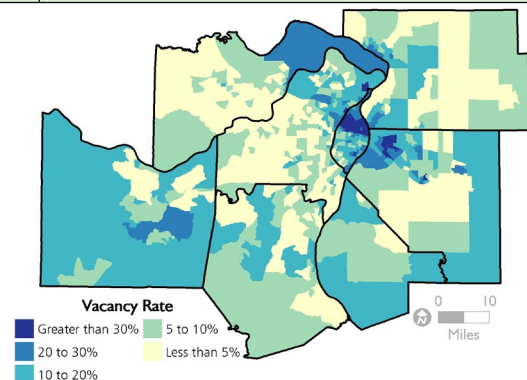


Source: Bureau of Economic Analysis, Regional Statistics Tables, CAGDP9

 M3 Residential Vacancy			% of Tracts with High Vacancy (2021)	35.9%
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▼	N/A	


Residential vacancy is measured by the percentage of census tracts exceeding the regional residential vacancy rate of 10.2%. An accumulating number of vacancies can have a detrimental effect on the vibrancy of neighborhoods. The regional map shows census tracts that exceed this threshold in shades of blue.

Vacancy Rate, 2021



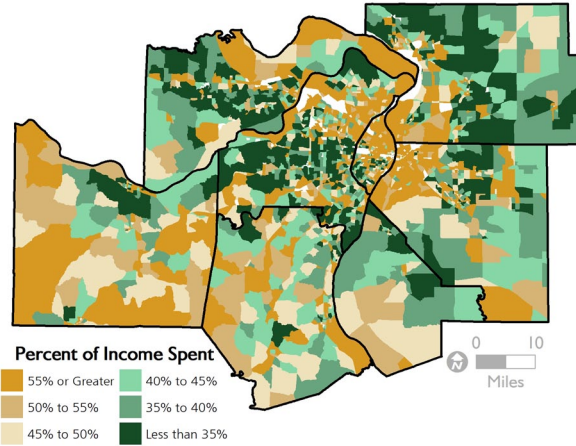
Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates (B25002), EWG

System Performance Report


 M4 Housing + Transportation Cost (H+T)			% of pop with H+T costs greater than 45% of local income (2019)	38%
Federal PM No	EWG PM Yes	Desired Trend ▼	Targets N/A	

The H+T measure identifies the average percentage of income residents pay for housing and transportation costs combined. Cost-burdened areas are identified as census tracts where average H+T costs exceed 45% of the local median income. The measure assumes a gas cost of \$3.98 per gallon. The regional map shows census tracts that exceed this threshold in shades of yellow.

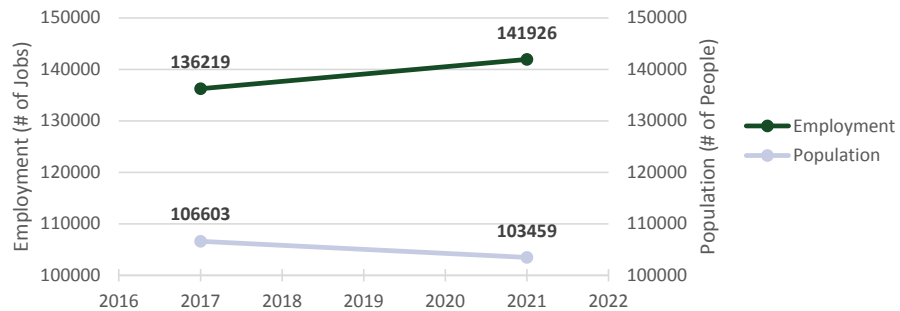
H+T Affordability Index (Tract Income), 2019



Source: ACS, BLS Consumer Expenditure Survey, MODOT, IDOT, County Property Tax Rates

 M5 Employment in the Central Core M6 Population in the Central Core			Jobs (2022) Population (2021)	141,926 103,459
Federal PM No	EWG PM Yes	Desired Trend ▲	Targets N/A	

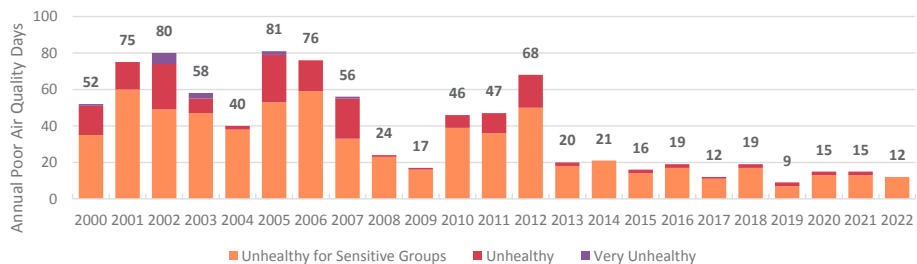
Employment and population in the central core reflect the vitality in the core of the region. The core is the economic and cultural hub of the region and a major tourist attractor. Thus, the health of the core is an indicator of the health of the entire region. A map of the central core is shown in Figure 7.



Source: US Census Bureau, ACS 5-Year estimate (B01003); Dun & Bradstreet; Greater St. Louis Inc.

 M7 Annual Days Reaching “Unhealthy for Sensitive Groups” or Above on the AQI			Poor Air Quality Days (2022)	12 days
Federal PM No	EWG PM Yes	Desired Trend ▼	Targets N/A	

The air quality index (AQI) is a color-coded index to communicate daily air pollution. Fewer unhealthy air quality days means better health, longevity, and quality of life. There is a long-term trend of decreasing unhealthy air quality days in the St. Louis region.



Source: EPA Air Quality System

System Performance Report

M8 GHG Emissions Transportation			GHG Transportation Emissions (2015)	12,057,316 mtCO ₂ e
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▼	N/A	

GHG emissions in transportation primarily arise from on-road transportation, railway, waterborne navigation, and aviation. Emissions are measured in metric tons of carbon dioxide equivalent (mtCO₂e).

Source: OneSTL

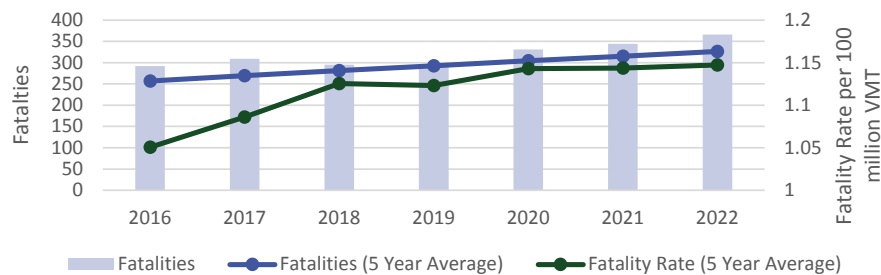
M9 Emissions Reduction			NO _x (2018-2021)	96.1 kg/day
Federal PM	EWG PM	Desired Trend	VOC (2018-2021)	18.3 kg/day
Yes	No	▼	Targets	
			NO _x ► 9.671 kg/day reduction (2021-2023) and 143.483 kg/day reduction (2021-2025)	
			VOC ► 3.308 kg/day reduction (2021-2023) and 8.673 kg/day reduction (2021-2025)	

The FHWA measures emissions reduction as the total emissions reductions for the relevant pollutants and precursors related to projects in the EWG region that receive funding from the Congestion Reduction and Air Quality program. The region is in attainment of air quality standards for carbon monoxide (CO), and particulate matter (PM_{2.5} and PM₁₀). The relevant pollutants and precursors that our region must track and set emissions reductions goals are the ozone formation precursors of nitrogen oxides (NO_x) and volatile organic compounds (VOC).

Source: CMAQ Public Access system

M10 Roadway Fatalities (5-year rolling avg)			Fatalities (2022)	326
Federal PM	EWG PM	Desired Trend	M11 Roadway Fatality Rate (5-year rolling avg)	Rate (2022)
Yes	Yes	▼	1.15 per 100 million VMT	
			Targets	
			2% Reduction for 2023 ► Fatalities: 320 Rate: 1.124	

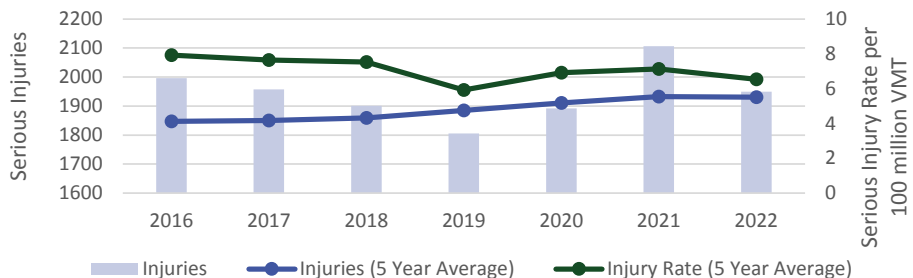
Roadway fatalities are the number of persons suffering fatal injuries in a motor vehicle crash during a calendar year. The fatality rate is the ratio of fatalities to the number of vehicle miles traveled (in 100 million VMT) in a calendar year. Each measure here is reported as a 5-year rolling average.



Source: Fatality Analysis Reporting System (FARS), IDOT, MoDOT

M12 Roadway Serious Injuries (5-year avg)			Injuries (2022)	1931
Federal PM	EWG PM	Desired Trend	M13 Roadway Serious Injury Rate (5-year avg)	Rate (2022)
Yes	Yes	▼	6.81 per 100 million VMT	
			Targets	
			2% Reduction for 2023 ► Serious Injuries: 1892 Rate: 6.67	

Serious injuries are the number of motorized vehicle serious injuries on the regional road network. The injury rate is the ratio of injuries to the vehicle miles traveled (in 100 million VMT) in a calendar year. Each measure here is reported as a 5-year rolling average.

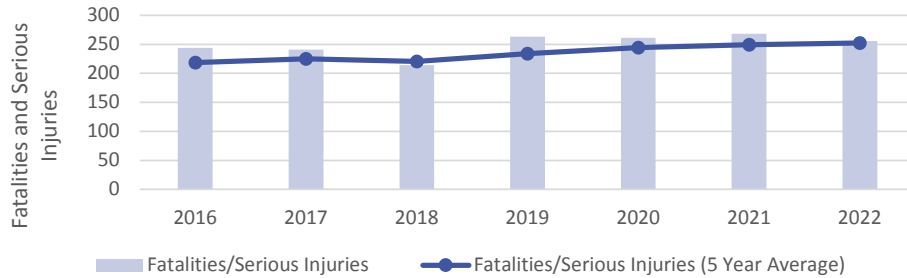


Source: IDOT, MoDOT


System Performance Report

 M14 Non-Motorized Fatalities and Serious Injuries			Non-Motorized Fatalities/ Serious Injuries (2022)	
			252	
Federal PM	EWG PM	Desired Trend	Targets	
Yes	Yes	▼	2% Reduction for 2023 ► 247	

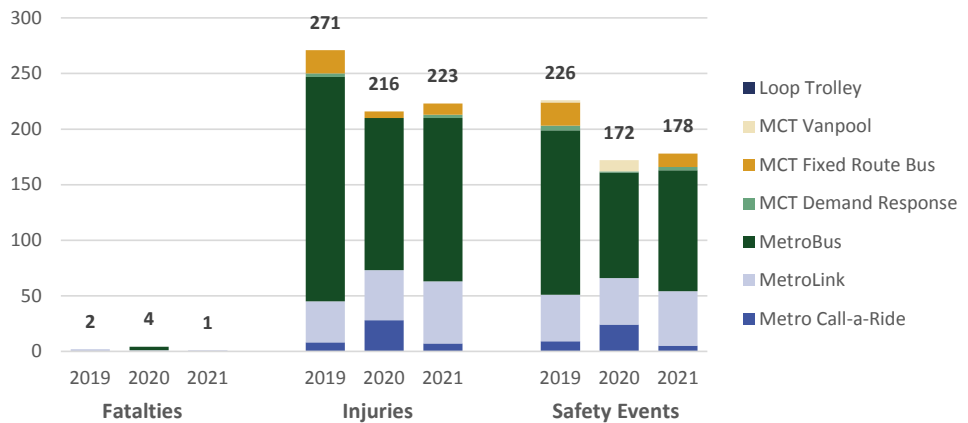
This measure is a combination of pedestrian and bicycle fatalities and serious injuries that occur on the regional road network. The measure is reported here as a 5-year rolling average.




Source: Fatality Analysis Reporting System (FARS), IDOT, MoDOT

 M15 Transit Fatalities (and rate) M16 Transit Injuries (and rate) M17 Transit Safety Events (and rate)			Fatalities (2021)	
			1	
			Injuries (2021)	
			223	
			Safety Events (2021)	
			178	
Federal PM	EWG PM	Desired Trend	Targets	
Yes	No	▼	see Metro, Loop Trolley, and MCT PTASPs on EWG website	

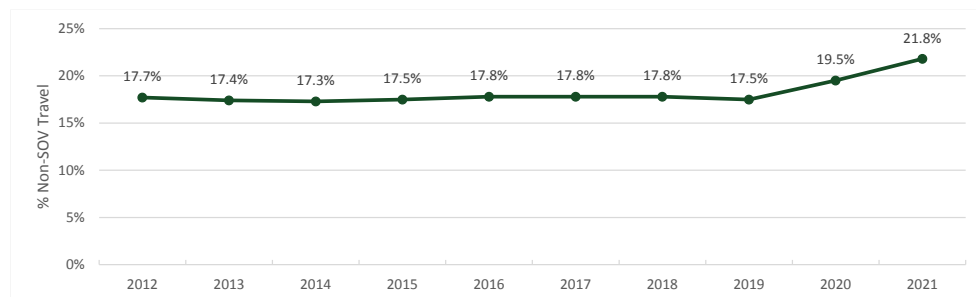
Bi-State/Metro and Madison County Transit (MCT), as recipients of Urbanized Area Formula Grant Program funds (Section 5307), are required to develop public transportation agency safety plans (PTASP), which set performance measure targets for M15-M17 and M37. EWG coordinates with these agencies to select safety targets. Across the region, transit fatalities, injuries, and safety events remain low.



Source: National Transit Database, Safety & Security Time Series

 M18 Non-Single Occupant Vehicle (Non-SOV) Mode Share			% Non-SOV (2021)	
			21.8%	
Federal PM	EWG PM	Desired Trend	Targets	
Yes	Yes	▲	2023 Target: 18.0% 2025 Target 18.2%	

Non-SOV mode share is the percentage of commuters who use any mode other than single-occupancy vehicles, including carpool, transit, bike, walk, telecommuting, and other modes. Percent non-SOV travel has increased in recent years due to an increase in telecommuting.

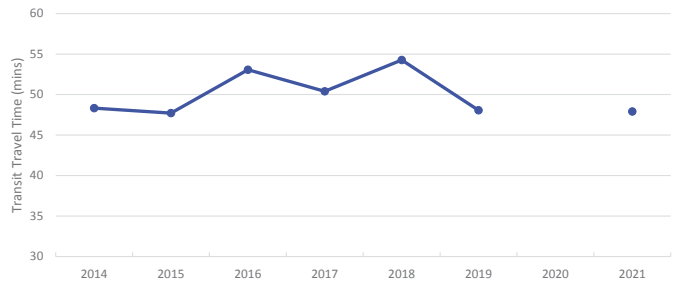


Source: American Community Survey (ACS), 5-Year Estimates

System Performance Report

M19 Average Transit Commute Time			Transit Travel Time (2021)	47.9 min
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▼	N/A	

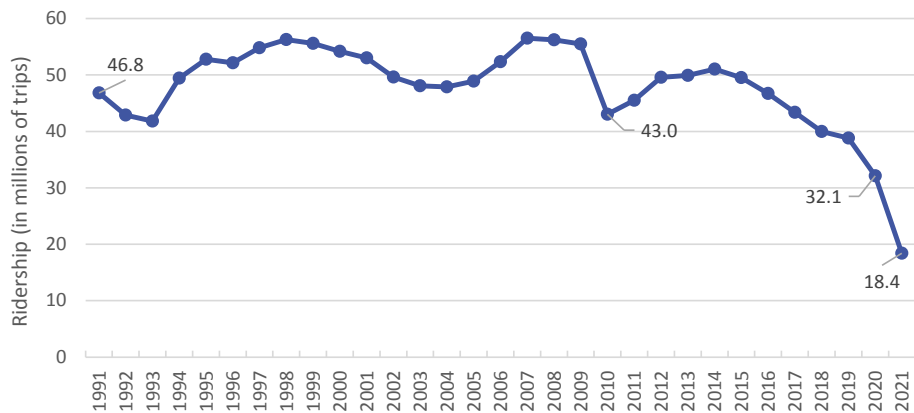
This measure is the average travel time (in minutes) to work for commuters aged 16 years and older traveling by transit. Transit travel time has fluctuated greatly and there is no discernable trend. **Data are for the St. Louis MSA.**



Note: The U.S. Census Bureau does not report data for 2020 due to data collection challenges.
Source: American Community Survey, 1-Year Estimates (B08136, B08006)

M20 Transit Ridership			Transit Ridership (2021)	18.4 million
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▲	N/A	

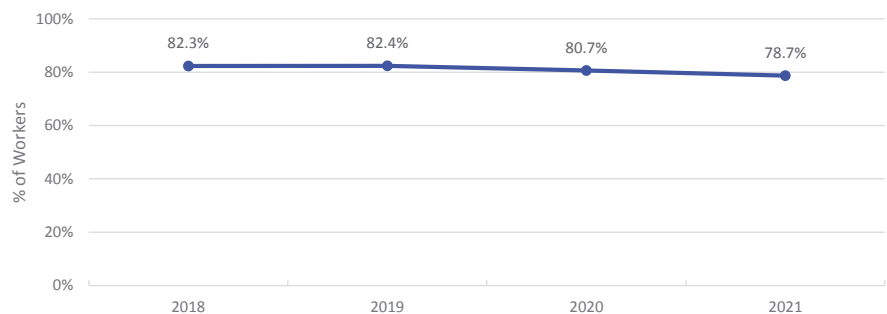
Transit ridership is measured as unlinked transit trips, which are the number of passengers who board public transportation vehicles. For this measure, we include trips on Madison County Transit, Metro Link, MetroBus, and Call-A-Ride. Transit ridership was effected strongly by the pandemic; however, ridership was already decreasing before 2020.



Source: FTA National Transit Database

M21 Percent of workers with commute travel time under 45 minutes			% of Workers (2021)	78.7%
Federal PM	EWG PM	Desired Trend	Targets	
No	Yes	▲	N/A	

This measure is the percentage of workers with a commute travel time under 45 minutes. The measure is independent of the travel mode choice. The measure has consistently decreased over a four-year period.



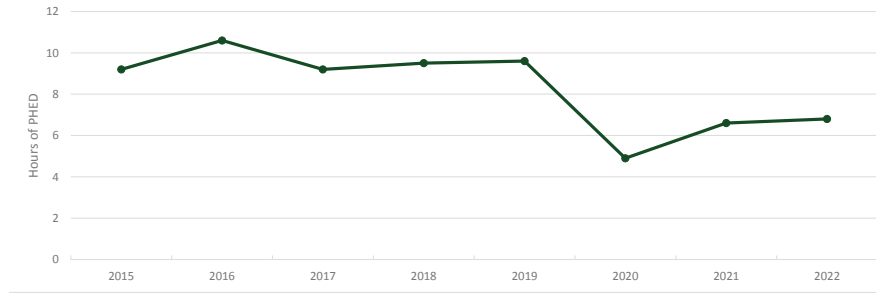
Source: ACS 5-Year Estimates (Tables B08012 & B08006)

System Performance Report


 M22 Peak hour excessive delay (PHED) per capita			PHED (2022)	6.8
--	--	--	--------------------	------------

Federal PM Yes	EWG PM Yes	Desired Trend ▼	Targets 8.4 by 2023 8.3 by 2025
--------------------------	----------------------	---------------------------	--

PHED is the peak hour excessive delay per capita on the NHS over one year. PHED decreased due to the pandemic in 2020 and although it is increasing again it remains well below pre-pandemic levels. **Data are for the St. Louis urbanized area.**

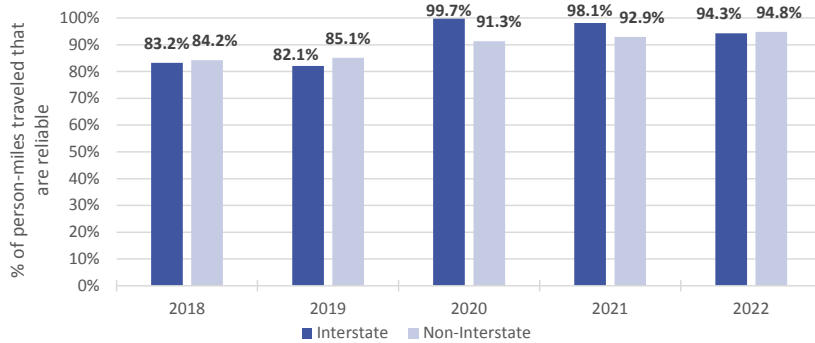


Source: National Performance Management Research Data Set (NPMRDS), peak hour 3-7pm

 M23 Percent of Person-Miles Traveled on the M24 Interstate / Non-Interstate System with Reliable Travel Time			% Interstate (2022)	94.3%
			% Non-Interstate (2022)	94.8%

Federal PM Yes	EWG PM Yes	Desired Trend ▲	Targets 95.0% by 2023 95.0% by 2025
--------------------------	----------------------	---------------------------	--

The reliability measures report the percent of person-miles traveled on roads that are considered reliable (travel times vary little between free-flow and congested times of the day). Since 2019, larger percentages of travel on both interstates and non-interstates are on reliable roads. **Data are for the St. Louis urbanized area.**

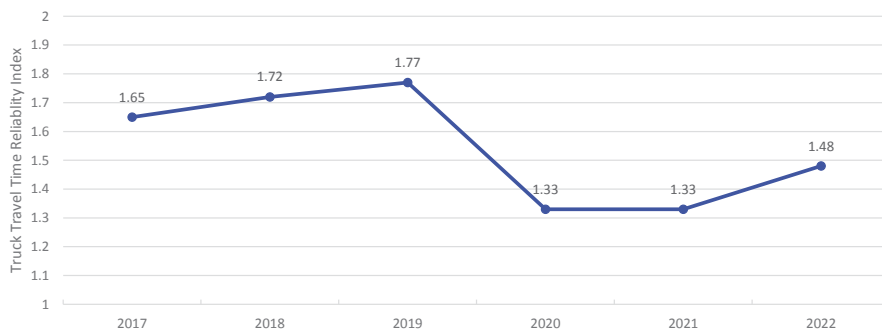


Source: National Performance Management Research Data Set (NPMRDS)

 M25 Truck Travel Time Reliability (TTTR) index			TTTR (2022)	1.48
---	--	--	--------------------	-------------


Federal PM Yes	EWG PM Yes	Desired Trend ▲	Targets 1.45 by 2023 1.42 by 2025
--------------------------	----------------------	---------------------------	--

TTTR is defined as the 95th percentile truck travel time divided by the 50th percentile time. A lower score indicates a system that is more predictable and reliable for trucks traveling in the region. In 2020, TTTR decreased due to the pandemic. In the last two years, it is trending towards pre-pandemic levels but remains lower. **Data are for the St. Louis urbanized area.**

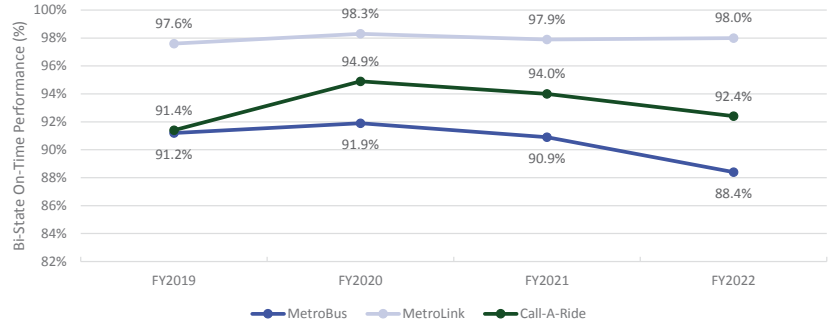


Source: National Performance Management Research Data Set (NPMRDS)


System Performance Report

 M26 On-time Performance for Public Transit (Bi-State/Metro)			MetroBus % (2022) MetroLink % (2022) Call-A-Ride % (2022)	88.4% 98.0% 92.4%
Federal PM No	EWG PM Yes	Desired Trend ▲	Targets N/A	

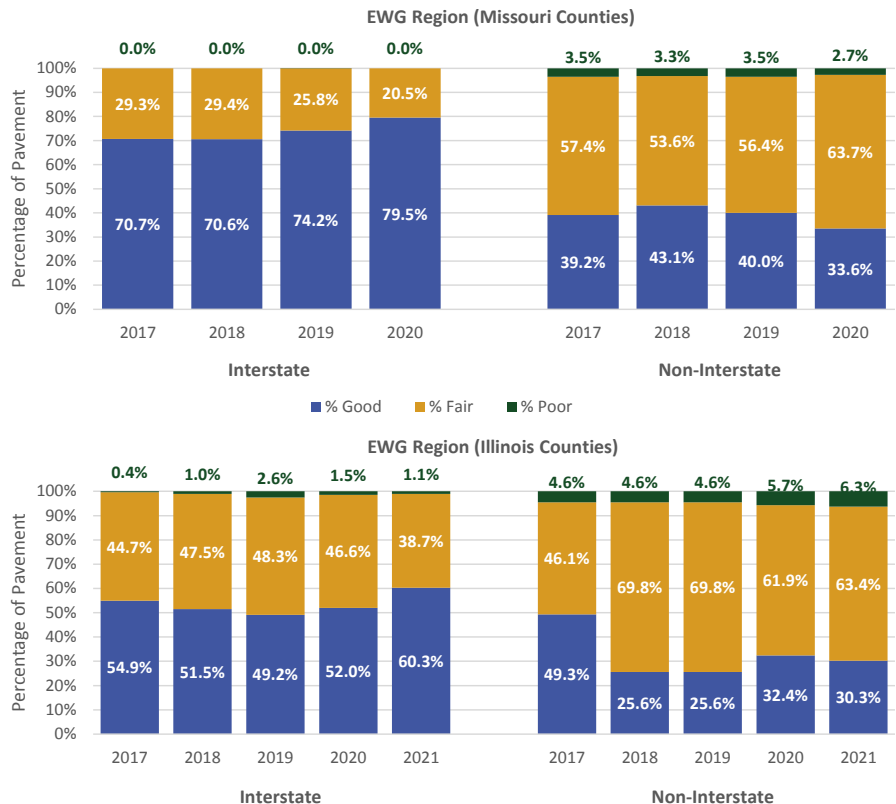
On-time performance (OTP) is a measure of the punctuality of transit services. While MetroLink OTP is steady, OTP for Call-A-Ride and MetroBus has declined since 2020. Bi-State has faced challenges in recent years, in part due to the pandemic, that have reduced OTP.



Source: Bi-State Development


 M27 Interstate Pavement in Good Condition M28 Interstate Pavement in Poor Condition M29 Non-Interstate Pavement in Good Condition M30 Non-Interstate Pavement in Poor Condition			% Good % Poor % Good % Poor	Illinois (2021) 60.3% 1.1% 30.3% 6.3%	Missouri (2020) 79.5% 0.0% 33.6% 2.7%
Federal PM Yes	EWG PM Yes	Desired Trend Good ▲ Poor ▼	% Good Targets 2023 2025 2023 2025		
			Illinois Interstate Illinois Non-Interstate Missouri Interstate Missouri Non-Interstate	58.0% 34.0% 79.5% 36.0%	61.0% 38.0% 79.5% 39.0%
				1.0% 2.0% 0.1% 1.0%	1.0% 2.0% 0.1% 1.0%

These measures consider the condition of pavement on interstates and non-interstates in the region. The charts to the right present data for MoDOT and IDOT roadways within the EWG region (excluding roadways outside the region). Overall, both states continue to keep the percentage of poor roadways low. While there is no minimum pavement condition levels for the region, at the state level, if the interstate pavement condition falls below a minimum level for any given year, the state DOT must obligate a portion of the National Highway Performance Program (NHPP) and transfer a portion of its Surface Transportation Program (STP) funds to address interstate pavement conditions. Thus both DOTs focus heavily on interstate pavements over non-interstate pavements.

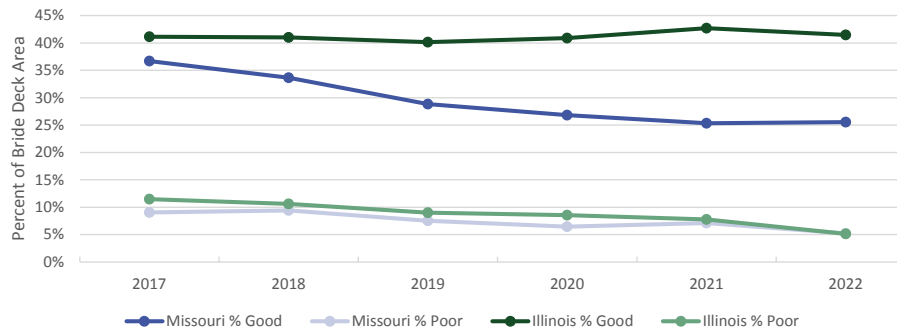


Source: IDOT, MoDOT, Highway Performance Monitoring System (HPMS)


System Performance Report

 M31 NHS bridge deck area in Good Condition M32 NHS bridge deck area in Poor Condition			% Good (2022) % Poor (2022)	Illinois 41.5% 5.1%	Missouri 25.5% 5.2%		
Federal PM Yes	EWG PM Yes	Desired Trend Good ▲ Poor ▼	Illinois Bridge Missouri Bridge	% Good Targets 2023 2025 42.5% 43.5% 26.5% 27.5%		% Poor Targets 2023 2025 5.0% 4.0% 5.0% 3.5%	

Bridge condition is classified as good, fair, or poor. This measure looks at the condition of bridges on the NHS. In the last six years, both Illinois and Missouri have reduced the percentage of bridge deck area in poor condition. However, in Missouri, much of the bridge deck in good condition has lowered to fair condition, while in Illinois the percent good has remained stable.



Source: National Bridge Inventory (NBI)

 M33 % Non-Revenue Vehicles met ULB M34 % Revenue Vehicles met ULB M35 % of track segments under restriction M36 % of Facilities below 3.0 on TERM scale			See FY 2022 performance table below
Federal PM Yes	EWG PM No	Desired Trend ▼	Targets See the TAM Plans on EWG's Performance Dashboard

Transit Asset Management (TAM) performance measures include:

- Rolling Stock: The percentage of revenue vehicles that exceed the useful life benchmark (ULB).
- Equipment: The percentage of non-revenue service vehicles that exceed the ULB.
- Infrastructure: The percentage of track segments that have performance restrictions. Track segments are measured to the nearest 0.01 of a mile.
- Facilities: The percentage of facilities that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale.

EWG adopts the targets in four TAM plans – Bi-State Development/Metro, Loop Trolley, IDOT, and MoDOT. Madison County Transit and Monroe-Randolph Transit District are covered by the IDOT TAM Plan and OATS Transit is covered by the MoDOT TAM Plan.

FY 2022 performance


	Metro	MoDOT	IDOT
Rolling Stock	26%	8%	48%
Equipment	43%	N/A	28%
Infrastructure	1.2%	N/A	N/A
Facilities	10%*	0%	13%

*For ancillary structures, Metro uses a condition rating on a scale of 0 to 9, based on AASHTO's Manual for Bridge Evaluation. "0" is defined as "Failed Condition" and "9" defined as "Excellent Condition." Metro's ancillary structures include nine pedestrian and off-system bridges, one pedestrian tunnel, eighty-five culverts, and three hundred ninety-two retaining walls. Because these structures are not reported on the TERM scale, they are not included in the facilities percentage.

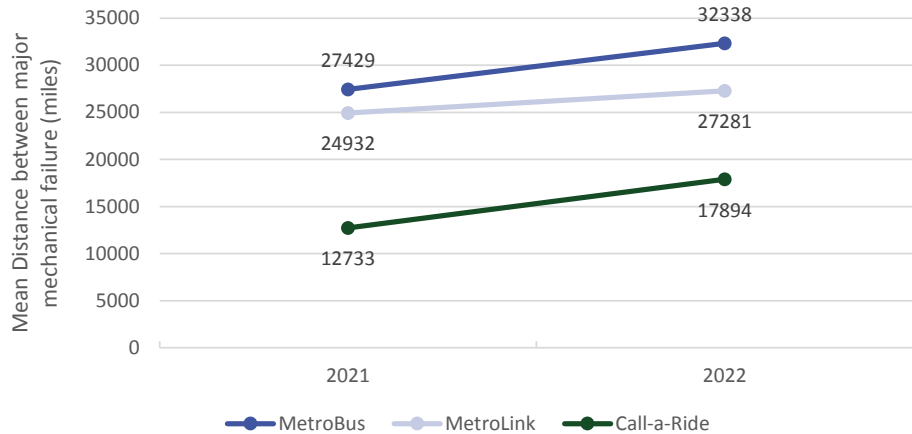
More detail on FY 2023 targets broken down by rolling stock, equipment, and facilities type can found linked on the agency's dashboard at <https://www.ewgateway.org/transportation-planning/long-range-planning/lrp-performance-dashboard/>

Source: MoDOT, IDOT, Bi-State Development

System Performance Report

 M37 Mean distance between Transit major mechanical failures			MetroBus (2022) 32,338 miles MetroLink (2022) 27,281 miles Call-A-Ride (2022) 17,894 miles
Federal PM Yes	EWG PM Yes	Desired Trend ▲	Targets TBD in June 2023

System reliability for transit is the mean distance between major mechanical failures, which is a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing or starting a scheduled revenue trip. Bi-State/Metro and Madison County Transit (MCT) must set targets for system reliability in their annual PTASPs. Data is presented for Bi-State Development.



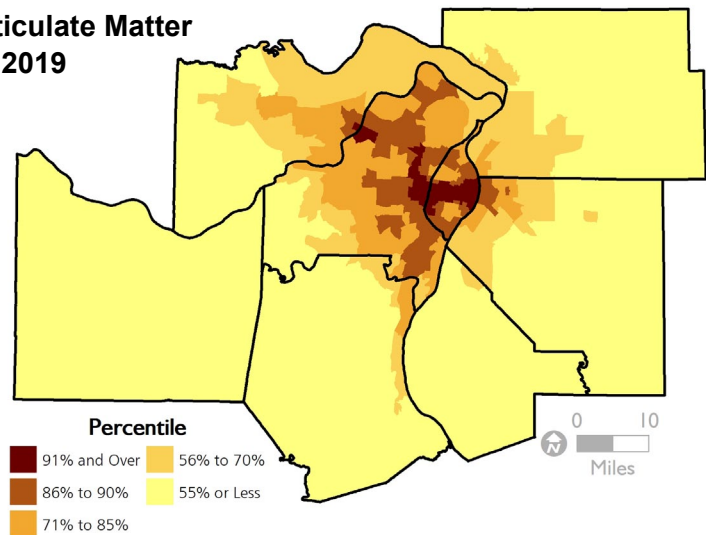
Source: Bi-State Development

Transportation Equity Indicators (EI) – Transportation Equity Populations (TEPs) face disparities in how they interact with the transportation system and how they are effected by the system. The transportation equity indicators measure some of these disparities. They specifically compare outcomes for two groups by calculating a ratio of percentages. The score can range from 0 to 100, with a score of 100 indicating no discernable disparity. Thus, the desired trend is an increasing trend. EWG has selected three transportation equity indicators to track. The selected indicators directly measure transportation disparities and are linked to the guiding principles and regional performance measures.

 EI38 Disparity in Diesel Particulate Matter (DPM) Exposure			DPM Disparity (2019) 54/100
Federal PM No	EWG PM Yes	Desired Trend ▲ to 100	Targets N/A

This measure documents disparities between households with and those without vehicles that live in communities with high DPM values. Diesel exhaust is composed of pollutants and toxins that are linked to serious health effects. No-vehicle households are more likely to live in these census tracts than households with one or more vehicle, 14.6% and 7.9%, respectively.

Diesel Particulate Matter Exposure, 2019



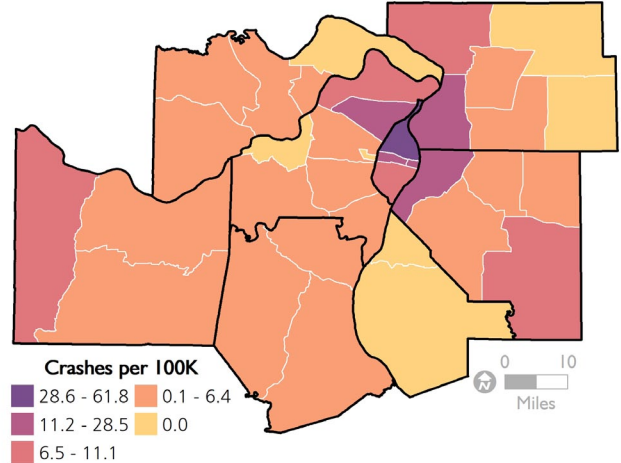
Source: Climate and Economic Justice Screening Tool and American Community Survey

System Performance Report


 EI39 Disparity in Bicycle / Pedestrian Fatalities			Safety Disparity (2016-2020)	28/100
Federal PM No	EWG PM Yes	Desired Trend ▲ to 100	Targets N/A	

This measure documents the disparities between the bicycle and pedestrian fatality rates for Black and White residents. In 2021, Black residents constituted 19.2% of the population but accounted for 45.6% of fatalities. White residents made up 68.7% of the population and 45.6% of fatalities. Black residents are 3.6 times more likely to die or be injured while walking and biking.

Bicycle and Pedestrian Crashes, 2016-2020



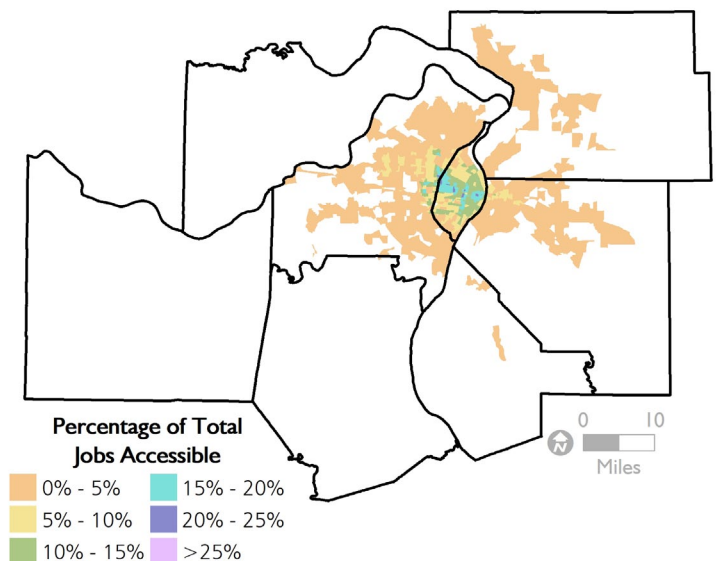
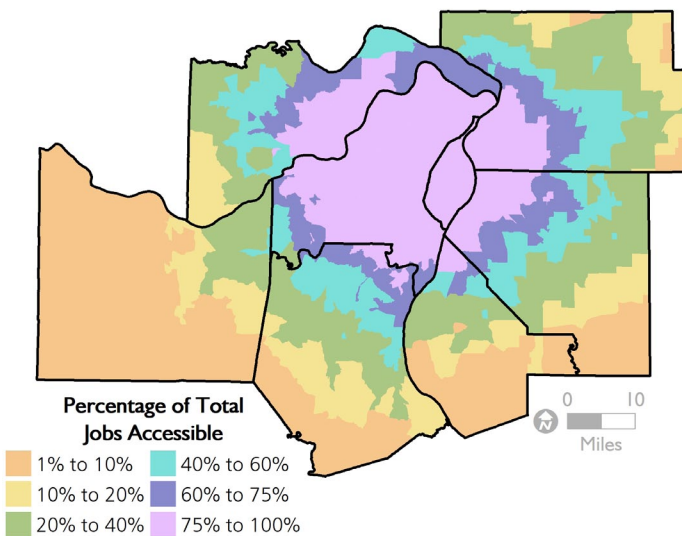
Source: NHTSA, Fatality Analysis Reporting System.

 EI40 Disparity in Access to Jobs			Job Access Disparity (2020)	4/100
Federal PM No	Regional PM Yes	Desired Trend ▲ to 100	Targets N/A	

This measure identifies the disparities between transit and automobile users in access to jobs. A larger percentage (63%) of the regional population can access 75% of jobs by car while only 1.3% of the regional population can access 75% of jobs by transit.

Job Access by Auto in 45 minutes, 2020

Job Access by Transit in 45 minutes, 2020



Source: East-West Gateway COG. Data based on modeled data.



Chapter 5: Investment Plan

The investment plan in *Connected 2050* was developed through technical evaluation and public and stakeholder input. The projects included reflect the guiding principles that are the building blocks of the document, and they serve as a blueprint for the region depicting the long-term investments necessary to provide transportation benefits to the traveling public and promote a prosperous and healthy St. Louis.

Projects using federal transportation funds must be identified in *Connected 2050*'s investment plan, or otherwise be consistent with the LRTP's priority. The transportation investment plan establishes priorities for major state highway and regional transit system projects through the LRTP's horizon year of 2050. The listing only incorporates state Departments of Transportation (DOTs) and Metro projects that are regionally significant and would be included in the modeling of the metropolitan area's transportation network. Major projects address safety, system expansion, major rehabilitation/reconstruction, bicycle/pedestrian improvements, and congestion. Decisions on local projects competing for federal funds are made through the annual Transportation Improvement Program (TIP) selection process, which evaluates projects according to the LRTP's principles and performance management framework. Projects included in the TIP are also considered to be part of the LRTP.

Transportation Funding Sources

Transportation funding comes from a variety of federal and state sources. For roadways, the bulk of these are system user fees such as motor fuel taxes, registration and licensing fees, and motor vehicle sales taxes. For transit, local sales taxes make up the majority of revenue. Many of these funding sources have seen significant increases over the last few years. The most recent federal transportation legislation, the Infrastructure, Investment and Jobs Act (IIJA), saw historic federal funding levels with sizable increases in existing funding programs and the addition of several new funding programs aimed at increasing equity in transportation, building out a robust electric charging network, and expanding broadband access across the nation. Illinois doubled its state motor fuel tax and increased other transportation user fees as part of a robust infrastructure investment program called, "Rebuild Illinois," and Missouri increased the state motor fuel tax by 12.5 cents over a 5-year period beginning in 2019. These increased revenue sources give both Illinois and Missouri an opportunity to make significant improvements to the transportation system in the coming years. Unfortunately, transit does not fare nearly as well as highways when it comes to funding. While Illinois chooses to invest in public transportation, with \$4.6 billion in state resources from the Rebuild Illinois funding going to mass transit, the state of Missouri allocated only \$8.7 million to mass transit in the governor's 2023 budget.

Fiscally Constrained Priority Investments

By federal law, both the LRTP and the annual TIP must be fiscally constrained. This means that reasonably anticipated revenues must be sufficient to cover project costs, including the costs of maintaining and operating the transportation system. Applying fiscal constraint ensures that the investment plan is more than a project wish list and provides a level of certainty concerning the nature and timing of future investments. Priority projects are those that are affordable within anticipated resources

Illustrative Projects

Projects that are beyond the region's anticipated financial ability are labeled as illustrative and should advance into the priority list if additional funding becomes available.

Corridor and Planning Studies

Projects that need further study to determine a preferred alternative are included as future corridor or planning Studies. These will likely generate future LRTP priority projects.

Project Selection

Connected 2050 consists of a four-step framework to help collect, screen, score, and prioritize projects for the long-range transportation plan. The framework builds on the previous evaluation process, with updates to reflect the new guiding principles and best practices from MPOs around the country.

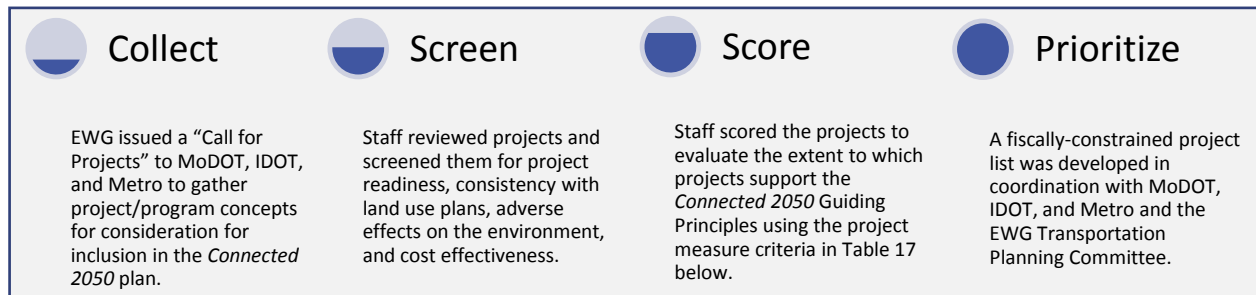










Table 17: Connected 2050 Project Scoring Methodology

Guiding Principles	Project Measures	Points
 Economic Vitality	<ul style="list-style-type: none"> supports regional freight movement and connections supports access to employment centers or tourism sites supports regional access to planned economic development opportunities supports access to jobs for Transportation Equity Populations* 	12
 Thriving Neighborhoods and Communities	<ul style="list-style-type: none"> increases access to parks, education, groceries, healthcare, or essential services* supports community life and placemaking* reduces adverse impacts of transportation on communities* improves multimodal connectivity* 	12
 A Vibrant Downtown and Central Core	<ul style="list-style-type: none"> improves access to, or travel options within, the downtown or central core 	4
 A Healthy and Sustainable Environment	<ul style="list-style-type: none"> improves air quality and/or reduces greenhouse gas emissions* supports improved water quality does not adversely affect ecologically significant areas 	8
 Safe and Secure	<ul style="list-style-type: none"> reduces traffic-related fatalities and serious injuries improves safety for people walking and biking supports crime prevention and security (including reducing terrorism risk) 	18
 Choices and Access for All	<ul style="list-style-type: none"> improves access for people with disabilities* improves transit services, transit rider experience and/or connections to transit enhances bicycling and/or walking supports other alternatives to driving alone (e.g carpool, rideshare) enhances multimodal travel options for Transportation Equity Populations* 	18
 Seamless, Efficient, and Reliable	<ul style="list-style-type: none"> improves travel time reliability supports efficient management of the system (e.g. traveler information systems) improves freight reliability improves intermodal freight connections 	12
 Well-Maintained and Resilient	<ul style="list-style-type: none"> addresses bridge preservation need addresses pavement preservation need addresses transit preservation need addresses transit preservation need improves evacuations (e.g., due to terrorism, weather, etc.) supports transportation infrastructure to withstand extreme weather 	16
		TOTAL 100



The guiding principle *Equitable* is addressed within several of the guiding principle categories. Points are embedded within the various categories to support equity, denoted with an asterisk (*). In total, 13 points are allocated for equity-related considerations. The other process-related guiding principles – *Collaborative*, *Innovative*, and *Performance-Based* – do not have specific points assigned but are addressed through the overall planning process.

Financial Capacity Analysis

EWG considered 51 projects costing more than \$5.9 billion in today’s dollars, in developing this investment plan. Many proposed projects emerged as preferred alternatives from corridor and other planning studies. Although this investment plan only incorporates regionally significant state Departments of Transportation (DOT) and Metro projects, local agency projects are also evaluated according to how well they support the region’s guiding principles.

To establish the LRTP’s fiscal constraint, or the region’s capacity to fund transportation improvements, EWG staff prepared forecasts of IDOT, Metro, and MoDOT revenues through the life of the plan. All three partner agencies provided baseline financial forecasts that EWG staff adapted for LRTP use. Estimates for available revenues over the life of the plan are approximately \$34.9 billion, much of which will be utilized for safety and preservation work. However, increased funding levels will allow for a significant increase in system improvement projects over the last LRTP. Each project’s forecasted costs and revenues are expressed in expected year of expenditure dollars.

Based on technical evaluation of the submitted projects, collaboration with MoDOT, IDOT, and Metro, and after applying the fiscal constraint, 46 priority projects costing nearly \$6.7 billion in year of expenditure dollars, were selected for inclusion in the investment plan, and were allocated to one of three funding/implementation periods: Tier I, Tier II, Tier III (Tables 20-22). In addition, \$24.5 billion in year of expenditure dollars has been allocated to preserve and maintain existing transportation assets and operations.

Projects that did not fit within the region’s financial resources were placed in an illustrative project list, which is shown in Table 23. These projects represent long-term priority projects that should advance into the priority list if additional funding becomes available.

Financial Outlook by Agency

Illinois Department of Transportation (IDOT)

IDOT will have an estimated \$6.6 billion in revenue available through 2050 to spend in the St. Louis region. Approximately \$3.7 billion of the total will be dedicated to rehabilitating, reconstructing, upgrading existing facilities, making safety improvements, and other operating costs, leaving about \$2.9 billion available for major highway projects. These figures represent an overall increase of nearly 47 percent for the Illinois portion of the region compared to the previous plan. Still, there are some projects submitted by IDOT that will not be able to be funded with existing revenue sources. These projects will be placed in the illustrative portion of the investment plan.

Figure 33. IDOT Revenue (2024-2050) \$6.6 billion

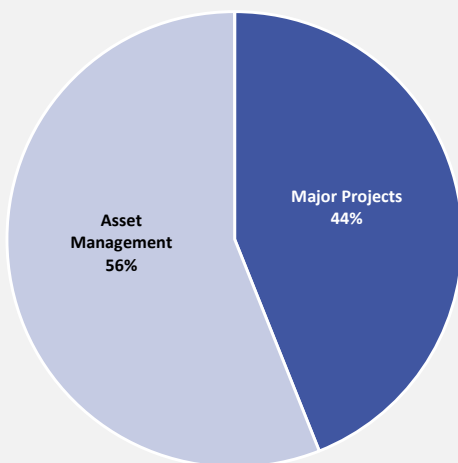


Figure 34. IDOT Spending Breakdown (in millions)



Missouri Department of Transportation (MoDOT)

MoDOT will have an estimated \$11.7 billion in revenue available through 2050 for projects in the St. Louis region. Approximately \$7.9 billion of the total will be dedicated to rehabilitating, reconstructing, upgrading existing facilities, making safety improvements, and other operating costs, leaving about \$3.8 billion available for major highway projects. These figures represent an overall increase of more than 33 percent for the Missouri portion of the region compared to the previous plan. Still, there are some projects submitted by MoDOT that will not be able to be funded with existing revenue sources. These projects will be placed in the illustrative portion of the investment plan.

Figure 35. MoDOT Revenue (2024-2050) \$11.7 billion

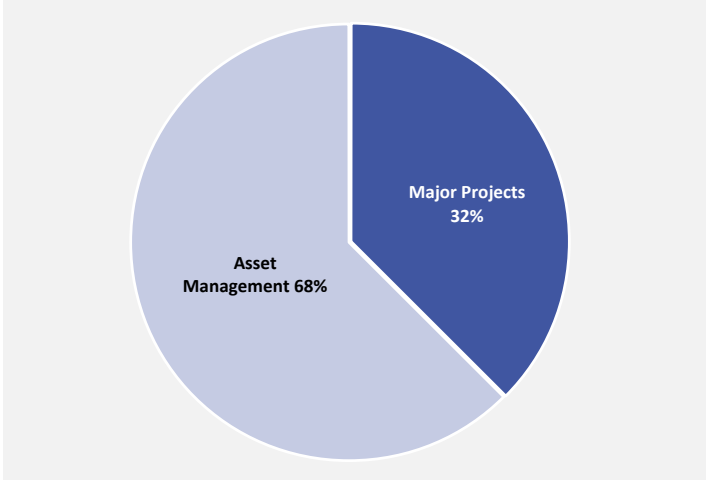
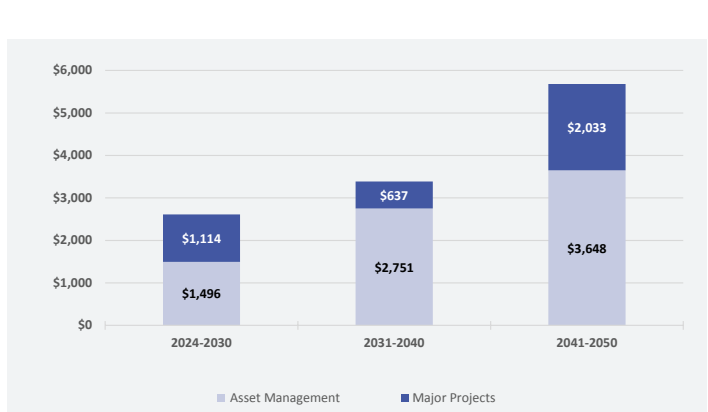


Figure 36. MoDOT Spending Breakdown (in millions)



Metro

While IDOT and MoDOT both saw significant recent funding increases, Metro is still facing some immanent budgetary issues. The majority of Metro’s funding comes from local sales taxes. State funding for Metro on the Illinois side is much higher than on the Missouri side. Metro will have an estimated \$16.6 billion in capital and operating revenue available through 2050. Assuming Metro builds the City portion of the NS/SS MetroLink extension and otherwise continues to function as it does currently, approximately \$12.9 billion of this total would need to be dedicated to operations, which is about \$1.9 billion more than current projected operating revenues.

Figure 37. Metro Revenue (2024-2050) \$16.6 billion

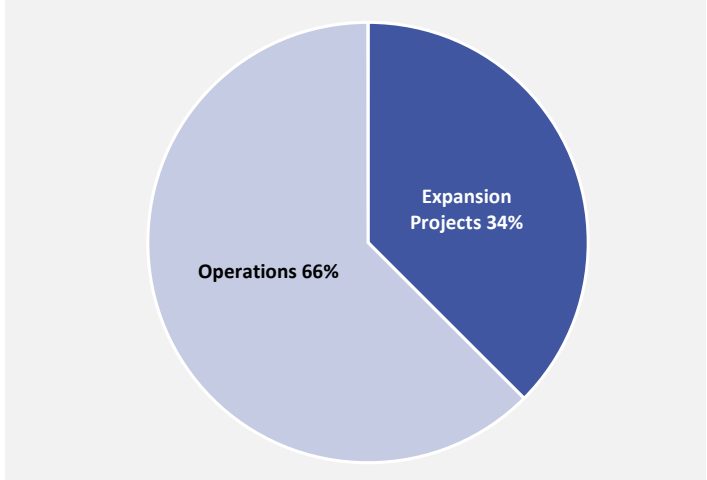
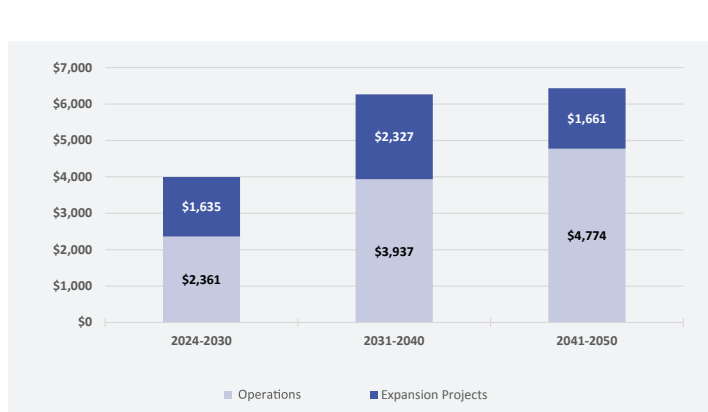


Figure 38. Metro Spending Breakdown (in millions)



The future financial outlook for Metro is somewhat challenging, as it is for many public transportation providers across the country, however the LRTP does include one MetroLink expansion project in the city of St. Louis and two corridor studies for two subsequent MetroLink extension projects in St. Louis County. These projects both have dedicated sales taxes accruing for capital project costs. A federal New Starts grant covering a minimum of 50% of capital costs is assumed, and would be required to make building these projects feasible. Funding for operating costs will need to be identified for both projects.

Transportation Improvement Program FY 2023-2026 Highlights







































The FY 2023-2026 Transportation Improvement Program as approved by the East-West Gateway Council of Governments Board of Directors in August 2022 contains 842 projects at a total cost of approximately \$3.66 billion. Table 18 includes major projects (over \$35 million) that were included in the FY 2023-2026 TIP.

Project	County	Cost (millions)	Year of Construction
I-55/US 67 – I-55: 1.5 miles north of MO Z to 1 mile south of US 67; US 67– I-55 to Buck Creek Rd – add lanes and bridge rehabilitation	Jefferson	\$234	2023
Light rail vehicle upgrades and equipment (Bi-State)	St. Clair, St. Louis City, St. Louis	\$136	2023,2024
Mid-America Airport MetroLink extension – Scott AFB to Mid-America Airport (St. Clair Co Transit District)	St. Clair	\$106	2023
I-64 at I-70 – interchange improvements	St. Charles	\$93	2025
Bus/paratransit vehicle maintenance (Bi-State)	St. Clair, St. Louis City, St. Louis	\$80	2023-2025
I-70 – Missouri River to US 67 (Lindbergh) – corridor improvements	St. Louis	\$59	2026
Bus replacement program (Bi-State)	St. Clair, St. Louis City, St. Louis	\$55	2023-2025
MO 370 over Missouri River –bridge rehabilitation	St. Charles St. Louis	\$45	2025
I-64 – I-70 to MO K – capacity improvements	St. Charles	\$44	2025
MetroLink right-of-way rehab and maintenance (Bi-State)	St. Clair, St. Louis City, St. Louis	\$39	2023-2025
I-70 – Wentzville Pkwy to MO Z –road realignment, add lanes	St. Charles	\$37	2023
I-44 – Macklind Ave to Nebraska Ave – bridge replacement (overpasses)	St. Louis City	\$37	2026

The FY 2023-2026 locally funded program includes several major projects over the next four years. Table 19 details major local program projects over the next four years that are \$10 million or greater.

Project	County	Cost (millions)	Year of Construction
Dupo – I-255 at Davis St Ferry Rd– new interchange	St. Clair	\$48	2023
St. Louis – Lindell/Union over Forest Park Pkwy – replace bridge	St. Louis City	\$25	2026
St. Louis County – West Florissant Great Streets – Stein Rd to Ferguson Ave – sidewalk, shared use path, safety improvements	St. Louis	\$25	2024
Great Rivers Greenway – Brickline Greenway North Segment, Phase 1 – Fairgrounds Park to Page along Grand/Cass/Spring – shared use path, lane reduction, two way turn lane	St. Louis City	\$23	2024
Compton Bridge – over Mill Creek railyard – replace bridge	St. Louis City	\$20	2025
Great Rivers Greenway – Brickline Greenway – Sarah St to Grand Ave – shared use path	St. Louis City	\$13	2024
St. Clair County – Frank Scott Pkwy – Cross St to Wherry Rd – new 2 lane road	St. Clair	\$13	2023







































Table 20. Tier I Connected 2050 Investment Priorities (2024 - 2030)

Project Location	Description	County	Cost [^] (millions)	Top Guiding Principles	Includes Ped/Bike Improvements
Missouri Counties	Roadway asset management / operations	Missouri Counties	\$1,496	 	
Illinois Counties	Roadway asset management / operations	Illinois Counties	\$833	 	
Metro Service Area	Transit asset management / operations	St. Louis City St. Louis St. Clair	\$2,414	  	
MetroLink Extension	Grand Blvd to Chippewa St via Downtown	St. Louis City	\$824	   	X
I-64	Vandeventer Ave to Jefferson Ave	St. Louis City	\$82	   	X
I-70	Missouri River to N. Hanley Rd	St. Louis	\$27	   	X
I-64	at I-70/US-61	St. Charles	\$44	  	
Rte. 100	St. John Rd to I-44	Franklin	\$9		
I-270	McDonnell Blvd to I-55	St. Louis	\$38		
I-64	Kingshighway Blvd to Jefferson Ave	St. Louis City	\$106		
Rte. 185	over Bourbeuse River	Franklin	\$20		
I-44*	St. Charles St to O'Fallon St	St. Louis City	\$58		
I-44 / I-55*	Park Ave to Gratiot St	St. Louis City	\$35		
Rte. 3 Connector	Collinsville Rd to Rte. 3/203	St. Clair	\$118	 	X
US-40	Formosa Rd to Bethany Dr	Madison	\$59	 	X
Rte. 13	Rte. 157 to 23rd St	St. Clair	\$130	 	X
Rte. 3	Riverpark Dr to Monsanto Ave	St. Clair	\$324	 	
I-270	Rte. 157 to Mississippi River	Madison	\$391	 	

*Greater Downtown projects are described further in Table 24 ^ Project costs are in year of expenditure dollars






























Table 21. Tier II Connected 2050 Investment Priorities (2031 - 2040)

Project Location		Description	County	Cost [^] (millions)	Top Guiding Principles	Includes Ped/ Bike Improvements
Missouri Counties		Roadway asset management / operations	Missouri Counties	\$2,751	 	
Illinois Counties		Roadway asset management / operations	Illinois Counties	\$1,339	 	
Metro Service Area		Transit asset management / operations	St. Louis City St. Louis St. Clair	\$4,483	  	
I-64	Kingshighway Blvd to Vandeventer Ave	Interchange improvements (west interchange)	St. Louis City	\$133	   	X
I-70	Missouri River to N. Hanley Rd	Reconfigure airport access and interchanges, replace bridges (partial 2 of 2)	St. Louis	\$300	   	X
I-270	Rte. 100 to I-64	Congestion mitigation improvements	St. Louis	\$59		
US-61	Rte. A to Lincoln County	Safety and Interchange Improvements (partial)	St. Charles	\$73	 	
US-67	Rte. CC to St. Francois County	Interchange & Outer Road Improvements (partial)	Jefferson	\$95		
I-70	Wentzville Pkwy to Warren County	Capacity improvements	St. Charles	\$48	 	
MO Rte. N	I-64 to Hopewell Rd / Duello Rd	Capacity Improvements (Phase I partial 1 of 2)	St. Charles	\$76	 	X
I-64*	22nd St to Poplar Street Bridge	Bridge rehabilitation	St. Louis City	\$64		
I-44	Rte. 100 W to Rte. 30	Reconstruct pavement	Franklin	\$29		
I-44	Rte. 141 to Rte. 109	Reconstruct pavement	St. Louis	\$29		
Rte. 364	over Missouri River	Bridge rehabilitation	St. Louis St. Charles	\$94		
Rte. 370	over Missouri River	Bridge rehabilitation	St. Louis St. Charles	\$82		
Rte. CC	Rte. 109 to Long Rd	Reconstruct pavement	St. Louis	\$13		
Rte. 94	Rte. H to US-67	Reconstruct pavement	St. Charles	\$18		
I-70 / I-270 ramp	at I-70 / I-270 interchange	Bridge replacement	St. Louis	\$32		
US-61	US-67 to St. Genevieve County	Rehabilitate pavement	Jefferson	\$7		
Rte. 364	over Creve Coeur Lake	Bridge rehabilitation	St. Louis	\$21		
MLK Bridge	over Mississippi River	New replacement bridge (partial 1 of 2)	St. Louis City St. Clair	\$440	 	
I-270	Rte. 157 to Mississippi River	Add capacity (partial 2 of 2)	Madison	\$34	 	
I-55 / I-70	I-255 to I-270	Add capacity (partial 1 of 2)	Madison	\$366		

*Greater Downtown projects are described further in Table 24 ^ Project costs are in year of expenditure dollars

Table 22. Tier III Connected 2050 Investment Priorities (2041 - 2050)

Project Location		Description	County	Cost^ (millions)	Top Guiding Principles	Includes Ped/ Bike Improvements
Missouri Counties		Roadway asset management / operations	Missouri Counties	\$3,648	 	
Illinois Counties		Roadway asset management / operations	Illinois Counties	\$1,557	 	
Metro Service Area		Transit asset management / operations	St. Louis City St. Louis St. Clair	6,008	  	
MLK Bridge	over Mississippi River	New replacement bridge (partial 2 of 2)	St. Louis City St. Clair	\$189	 	
I-70*	City Limits to Benton St	Safety and interchange improvements	St. Louis City	\$288	 	
I-270	Rte. 370 to US-67	Interchange improvements, replace bridges, rehabilitate pavement	St. Louis	\$40	 	
I-44 / I-55*	I-44 & I-55 Interchange from Lafayette Ave to Jefferson Ave	Reconstruct I-44 & I-55 interchange & six bridges	St. Louis City	\$106		
I-170	I-64 to I-70	Interchange and corridor improvements (partial)	St. Louis	\$360		
I-44	Murdoch Ave to Vandeventer Ave	Reconfigure interchanges	St. Louis City	\$83		
I-270	at Rte. 180 Interchange	Interchange improvements and rehabilitate bridges (partial)	St. Louis	\$80	 	
I-270	at Rte. D / Rte. 364 Interchange	Interchange improvements and rehabilitate bridges (partial)	St. Louis	\$32		
I-170	I-70 to I-270	Interchange and corridor improvements (partial)	St. Louis	\$204		
I-70	Bryan Rd and Zumbuhl Rd	Corridor and interchange Improvements	St. Charles	\$141		
US-67	Missouri River to Mississippi River	Safety and interchange Improvements (partial)	St. Charles	\$19	 	
Rte. 79	Salt River Rd to Lincoln County	Add alternating passing lanes	St. Charles	\$23		
Rte. N	Hopewell Rd / Duello Rd to Rte. Z	Capacity improvements (Phase I partial 2 of 2)	St. Charles	\$80	 	X
I-55 / I-70	I-255 to I-270	Add capacity (partial 2 of 2)	Madison	\$738		

*Greater Downtown projects are described further in Table 24 ^ Project costs are in year of expenditure dollars

Table 23. Illustrative Projects

Project Location	Description	County	
Poplar Street Bridge: I-44, I-55, I-64**	over Mississippi River	Reconstruct bridge and approach structures	St. Louis St. Clair
Stan Musial Bridge (2nd Span): I-70**	over Mississippi River	New bridge and approach structures	St. Louis St. Clair
I-70	Mississippi River to I-70	Relocate	St. Clair
I-64	Reider Rd to Rte. 4	Add capacity	St. Clair
Rte. 3	Granville St to Exchange Ave	Relocate; Construct four lane highway	Madison St. Clair

*Greater Downtown projects are described further in Table 24

Table 24. Corridor and Planning Studies

The project evaluation process identified 14 corridors where further study is warranted to develop projects that address existing or emerging transportation needs. Future long-range plans may consider projects identified during these studies.

Project Location	Description	County	
MetroLink North St. Louis County Connector Extension	This study would look at expanding MetroLink from North St. Louis into North St. Louis County.	St. Louis St. Louis City	
MetroLink South St. Louis County Connector Extension	This study would look at expanding MetroLink from South St. Louis into South St. Louis County.	St. Louis St. Louis City	
Greater Downtown	I-70, I-44, I-55, I-64 in downtown St. Louis	Greater Downtown / Eastern St. Louis City highway planning & environmental linkages study	St. Louis City
Mississippi River Bridge Crossings	I-70 and I-64, over the Mississippi River	Analysis of Mississippi River bridge crossings including usage, travel demand, replacement, and capacity. Involves preparing for replacement of Poplar Street Bridge and evaluation of need for the 2nd span of the Stan Musial Bridge	St. Louis City
I-270 / I-255	I-55 to MO 364	Congestion mitigation study	St. Louis
US-67	Rte. CC to St. Francois County	Corridor study	Jefferson
US-61	I-70 to Lincoln County	Corridor study	St. Charles
I-170	I-64 to I-270	Planning and environmental linkages Study	St. Louis
Rte. 141	I-55 to MO 370	Congestion mitigation study	St. Louis Jefferson
I-70	I-64 to Missouri River	Congestion mitigation study	St. Charles
I-64	I-270 to Kingshighway Blvd	Congestion mitigation study	St. Louis
Interstates & Major Highways		Multimodal bridge crossings analysis	Missouri Counties
Interstates & Major Highways		Environmental resilience analysis	Missouri Counties
Missouri Counties		Transportation system & scenario planning study	Missouri Counties

Air Quality Conformity Determination

EWG is responsible for conducting the transportation air quality conformity determination (AQCD) as part of the preparation of the transportation improvement program (TIP) and long-range transportation plan (LRTP). The impact of proposed transportation activities on the region's air quality is evaluated and documented. All locally-sponsored projects and transportation partner projects included in Connected 2050 must pass a series of regional emissions analysis tests for volatile organic compounds (VOCs) and nitrogen oxides (NO_x) for selected analysis years. VOC and NO_x are precursors to the formation of ground-level ozone. The purpose is to make sure that federal transportation investments are consistent with the Missouri and Illinois goals contained in their respective State Implementation Plans to attain or maintain the 2008 and 2015 ozone standards (National Ambient Air Quality Standard). EWG prepares the transportation AQCD with the input of the Inter Agency Consultation Group (IACG), a peer group with representatives from EWG as well as federal, state, and local air quality and transportation agencies. The EWG Board of Directors is to approve the AQCD.

Federal and state regulations require that projects included in Connected 2050 must pass emissions testing for each of the following analysis years: 2025, 2030, 2035, 2045, and 2050 for the 2008 ozone standard. For the regional emissions analysis for the 2015 ozone standard the analysis years are 2023, 2025, 2030, 2035, 2045 and 2050. Based on the conformity regional emission analysis for the 2008 and 2015 ozone standards conducted as part of the long-range plan development, as shown in Tables 25, 26, 27 and 28, the projects and programs included in Connected 2050 are found to be in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480. The finding along with additional information about the Conformity Determination process and documentation can be found in the AQCD report.

Table 25. Missouri Ozone Conformity Test (2008)

Based on Conformity Requirements for 2008 Eight-Hour Ozone Standard for the Maintenance Area
(U.S. tons per day)

Analysis Year	VOCs		NOx	
	Action	Budget	Action	Budget
2025	8.90	32.70	26.16	76.70
2030	7.09	22.00	21.39	40.00
2035	6.03	22.00	19.45	40.00
2045	5.33	22.00	18.89	40.00
2050	5.29	22.00	18.98	40.00

All tests have passed for all years

Table 26. Illinois Ozone Conformity Test (2008)

Based on Conformity Requirements for 2008 Eight-Hour Ozone Standard for the Maintenance Area
(U.S. tons per day)

Analysis Year	VOCs		NOx	
	Action	Budget	Action	Budget
2025	4.06	5.68	9.48	15.22
2030	2.97	9.05	6.95	16.68
2035	2.51	9.05	6.06	16.68
2045	2.15	9.05	5.82	16.68
2050	2.09	9.05	5.88	16.68

All tests have passed for all years

Table 27. Missouri Ozone Conformity Test (2015)

Based on Conformity Requirements for 2015 Eight-Hour Ozone Standard for the Four-County and One-Township Non-Attainment Area (U.S. tons per day)

Analysis Year	VOCs		NOx	
	Action	Budget	Action	Budget
2023	9.23	32.70	27.86	76.70
2025	8.34	32.70	24.34	76.70
2030	6.64	22.00	19.87	40.00
2035	5.64	22.00	18.03	40.00
2045	4.97	22.00	17.47	40.00
2050	4.93	22.00	17.52	40.00

All tests have passed for all years

Table 28. Illinois Ozone Conformity Test (2015)

Based on Conformity Requirements for 2015 Eight-Hour Ozone Standard for the Three-County Non-Attainment Area (U.S. tons per day)

Analysis Year	VOCs		NOx	
	Action	Budget	Action	Budget
2023	4.87	17.27	11.42	52.57
2025	4.06	5.68	9.48	15.22
2030	2.97	9.05	6.95	16.68
2035	2.51	9.05	6.06	16.68
2045	2.15	9.05	5.82	16.68
2050	2.09	9.05	5.88	16.68

All tests have passed for all years

USDOT Plans

- [Equity Action Plan \(2022\)](#). U.S. Department of Transportation

Missouri State Plans

- [State Freight & Rail Plan \(2022\)](#). Missouri Department of Transportation.
- [National Highway System Transportation Asset Management Plan \(2019\)](#). Missouri Department of Transportation.
- [Transit Asset Management \(2022\)](#). Missouri Department of Transportation.
- [Long Range Plan Update \(2018\)](#). Missouri Department of Transportation.
- [Highway Safety Plan \(2021\)](#). Missouri Department of Transportation.

Illinois State Plans

- [Long Range Transportation Plan \(2019\)](#). Illinois Department of Transportation
- [Strategic Highway Safety Plan \(2022\)](#). Illinois Department of Transportation.
- [Transportation Asset Management Plan Update \(2022\)](#). Illinois Department of Transportation.
- [IDOT: Group TAM Plan for Participating Tier II Agencies \(2022\)](#). Illinois Department of Transportation.
- [State Freight Plan \(2017\)](#). Illinois Department of Transportation.

Transit Plans

- [Public Transportation Agency Safety Plan \(2022\)](#). Madison County Mass Transit District.
- [Public Transportation Agency Safety Plan \(2022\)](#). Bi-State Development.
- [Transit Asset Management Plan \(2022\)](#). Bi-State Development.
- [Metro System Security Strategy \(2020\)](#). East-West Gateway Council of Governments.
- [Secure Platform Plan \(2022\)](#). Bi-State Development.

Regional Plans

- [Transportation Equity Assessment Report for the St. Louis Region \(2022\)](#). East-West Gateway Council of Governments.
- [Congestion Mitigation and Air Quality Improvement Program Performance Plan for St. Louis Metropolitan Area \(2022\)](#). East-West Gateway Council of Governments.
- [Congestion Management Process: 2021 Annual Regional Congestion Report \(2022\)](#). East-West Gateway Council of Governments.
- [OneSTL \(2013\)](#). East-West Gateway Council of Governments.
- [2023 Priority Freight Projects \(2023\)](#). St. Louis Regional Freightway.
- [STL2030 Jobs Plan \(2021\)](#) Greater St. Louis Inc.
- [Airport Layout Plan Update and Master Plan \(ALP Update/MP\) for St. Louis Lambert International Airport \(2022\)](#). St. Louis Airport Authority (STLAA) and the City of St. Louis
- [Coordinated Human Services Transportation Plan \(2020\)](#). East-West Gateway Council of Governments.
- [Public Involvement Plan \(2019\)](#). East-West Gateway Council of Governments.
- [St. Louis Region Emerging Transportation Technology Strategic Plan \(2017\)](#). East-West Gateway Council of Governments.
- [Transportation Improvement Program Fiscal Years FY 2023-2026 \(2022\)](#). East-West Gateway Council of Governments.