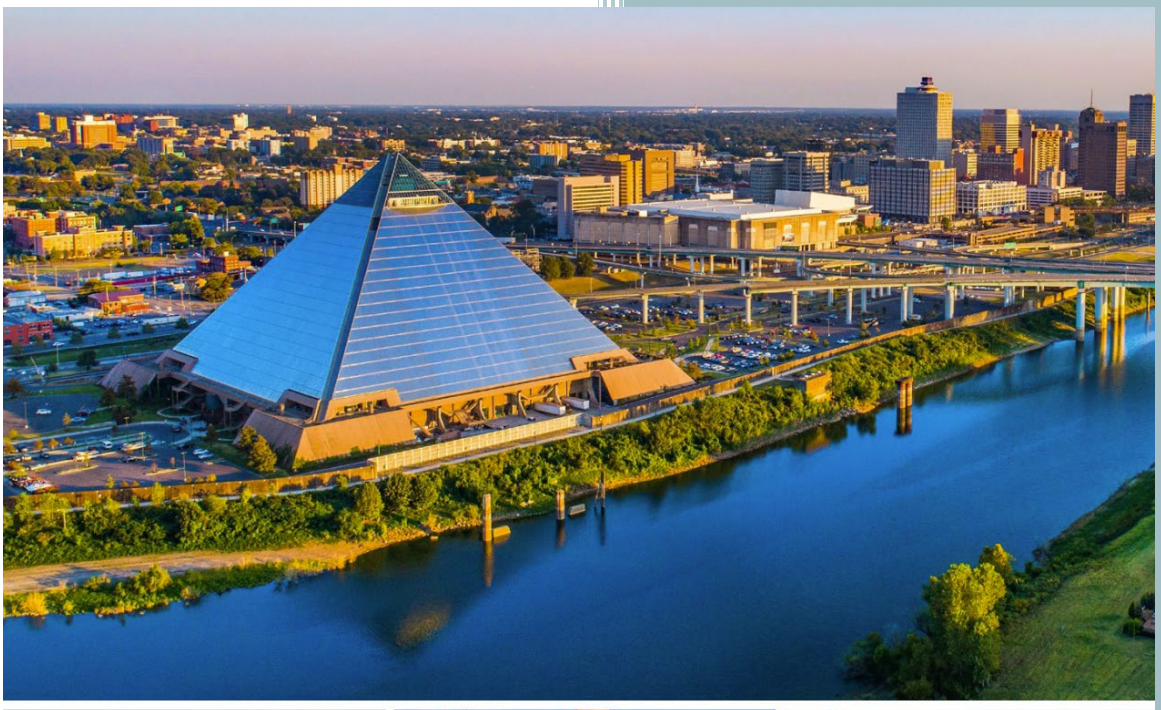
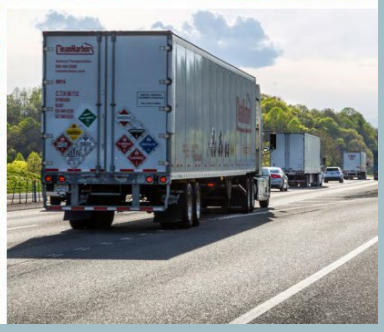
2024

Mid-South Freight Report





2024 Freight Report Summary

The Memphis Urban Area Metropolitan Planning Organization (Memphis MPO) is pleased to present the 2024 Report on the state of freight in the Mid-South. This summary provides an overview of the key statistics and insights into the freight sector's pivotal role in our regional economy, infrastructure, and planning initiatives.

This report is based on a number of different data sources, with the latest available data being between 2022 and early 2024 depending on the subject.

Importance of Freight to Memphis

Memphis is a critical nexus for freight transportation in the United States, strategically positioned at the intersection of major north-south and east-west corridors that facilitate the movement of goods across the country and beyond. Home to one of the world's busiest cargo airports, five Class I railroads, the fifth largest inland port in the United States, and a comprehensive road network, Memphis stands as a premier freight hub. The freight industry not only drives economic growth but also accounts for over one hundred thousand jobs, or 17.5% of total regional employment (per the Bureau of Labor and Statistics), reinforcing Memphis's position as a critical logistics and distribution center.

Current Statistics and Trends

- **Air Cargo:** Memphis International Airport maintained its status as the busiest cargo airport in North America, despite a 4.0% decrease in cargo volume from the previous year, handling over 3.8 million metric tons of cargo.[1]
- **Rail Freight:** Rail continues to be an important factor for the Memphis region, with national U.S. rail traffic up 2.2% through April 2024 compared to the previous year to date.[2]
- **Trucking:** Trucks account for 42% of freight tonnage in the Memphis region, and 48% of freight value. In Q1 2024, the American Trucking Association reported that national trucking tonnage decreased by 2.4% from last year.[3]
- **Inland Waterways:** Record low water levels on the Mississippi in 2022 and 2023 have reduced shipping capacity, with barge freight rates increasing as a result.[4]

Freight Infrastructure Developments

2024 has marked significant progress in upgrading and expanding the Memphis region's freight infrastructure. Key projects included enhancements to rail access routes, expansion of port facilities, and upgrades to critical highway segments. These improvements have not only increased capacity but also enhanced the safety and efficiency of freight movements across the region.

[1] https://aci.aero/2024/04/14/top-10-busiest-airports-in-the-world-shift-with-the-rise-of-international-air-travel-demand/
[2] https://www.trains.com/trn/news-reviews/news-wire/u-s-rail-traffic-up-in-april-third-straight-month-with-gains/
[3] https://www.trucking.org/news-insights/ata-truck-tonnage-index-decreased-2-march
[4] https://www.bloomberg.com/news/articles/2024-03-21/climate-driven-drought-threatens-to-shrivel-mississippi-river-for-a-third-year

Critical Freight Project Updates:

Figure 1 I-55 Memphis-Arkansas Bridge

1. **I-55 and Crump Interchange:** This interchange project will convert the existing one-lane cloverleaf, which is designed to accommodate less than half of current traffic volumes, to a roundabout for local drivers and a flyover for I-55 thru-traffic.
2. **America's River Crossing:** Right next door to the Crump Interchange, the 75-year-old I-55 bridge will soon be replaced with a new bridge that has higher capacity and meets modern seismic resistance standards. Tennessee has allocated $250 million in funding through the 2023 Transportation Modernization Act and is seeking other federal and state funding sources. The project is currently undergoing environmental assessment.
3. **Shelby Drive:** This project will extend Shelby Drive with a bridge into the southern end of the Port of Memphis, creating a second access point to the Port's water and rail connections. The project is currently in environmental review.
4. **DeSoto County I-55 Widening**: As of May 2024, Mississippi has allocated $119 for Phase I of widening I-55 from 4 to 8 lanes between Goodman and Church Road. County officials are still seeking approximately $30 million in funding to complete Phase I.
5. **Lamar Avenue**: One of the most crucial freight routes in Memphis. The southern end from Getwell Road to the MS state line is being converted into a widened freeway with interchanges. This is being constructed in three stages: the first, from the MS state line to Shelby Drive, was completed in July 2023.

Figure 2 New interchange on Lamar Ave

6. **Mississippi and Tennessee Truck Parking Studies:** MDOT is currently conducting a study to evaluate the current and expected future truck parking supply and demand across the state of Mississippi, while TDOT is working on a study to identify 20 potential truck parking locations statewide.
7. **Harbor Avenue Resurfacing:** This project about to begin construction will replace and reinforce the pavement on the Port of Memphis's access roads to better accommodate the heavy truck traffic they carry.

Safety

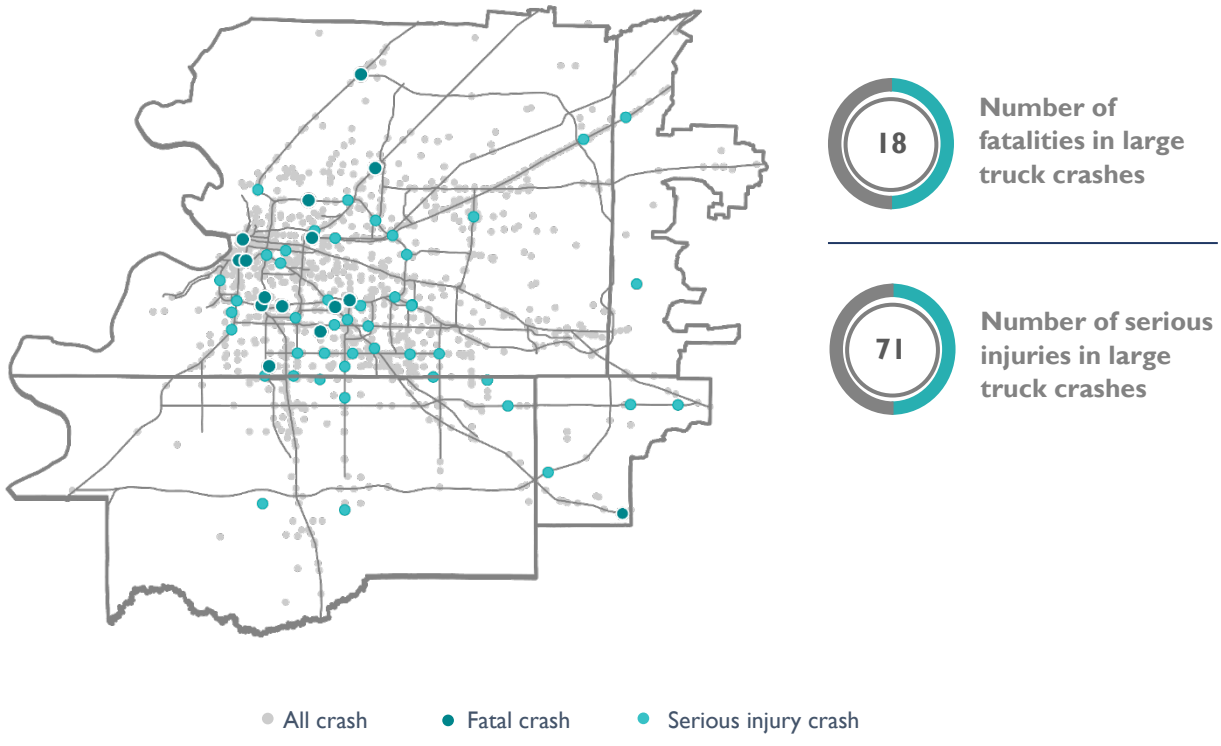
Safety is a paramount concern for the Memphis MPO. Ensuring the safe transport of goods is crucial not only for the efficiency of supply chains but also for the well-being of the community and the prevention of hazardous incidents.

The Memphis MPO integrates safety into every aspect of its freight planning strategies. This includes advocating for robust infrastructure maintenance, supporting the adoption of advanced safety technologies in vehicles and logistic operations, and fostering collaboration among regional stakeholders such as stake and local governments, freight operators, and enforcement agencies. These priorities reflect Goal 2 of the Moving Together 2050 Regional Transportation Plan, which is to "Increase the safety and security of the transportation system for all users". The 2023 Mid-South Freight Flows Study also make it a high-priority, foundational strategy to "Prioritize and invest in projects that improve freight safety". This reflects the understanding that a safe transportation network is foundational to the sustained economic vitality and quality of life in the Greater Memphis Region.

The maps and statistics shown below provide a detailed overview of the current state of freight transportation safety within the Memphis MPO planning area. By analyzing this data, stakeholders can better identify areas of concern, prioritize interventions, and measure the effectiveness of safety improvements. This information is essential for continuous enhancement of our strategic planning processes and for ensuring that our transportation network remains safe and efficient for all users.

Roadway

Figure 3 Large Truck Crash Locations in 2022



Rail

Due to safety improvements and the prioritization of systemic safety by the Federal Railroad Administration, railroad at-grade crossing incidents are relatively rare in the Memphis MPO region. As such, the map below covers approximately 4.5 years, shows incidents from 2020 through the publishment of this report in May 2024. The two railroad crossings with 5 incidents in this period are at Chelsea Ave just west of Warford St, and South Parkway just east of Willett Street.

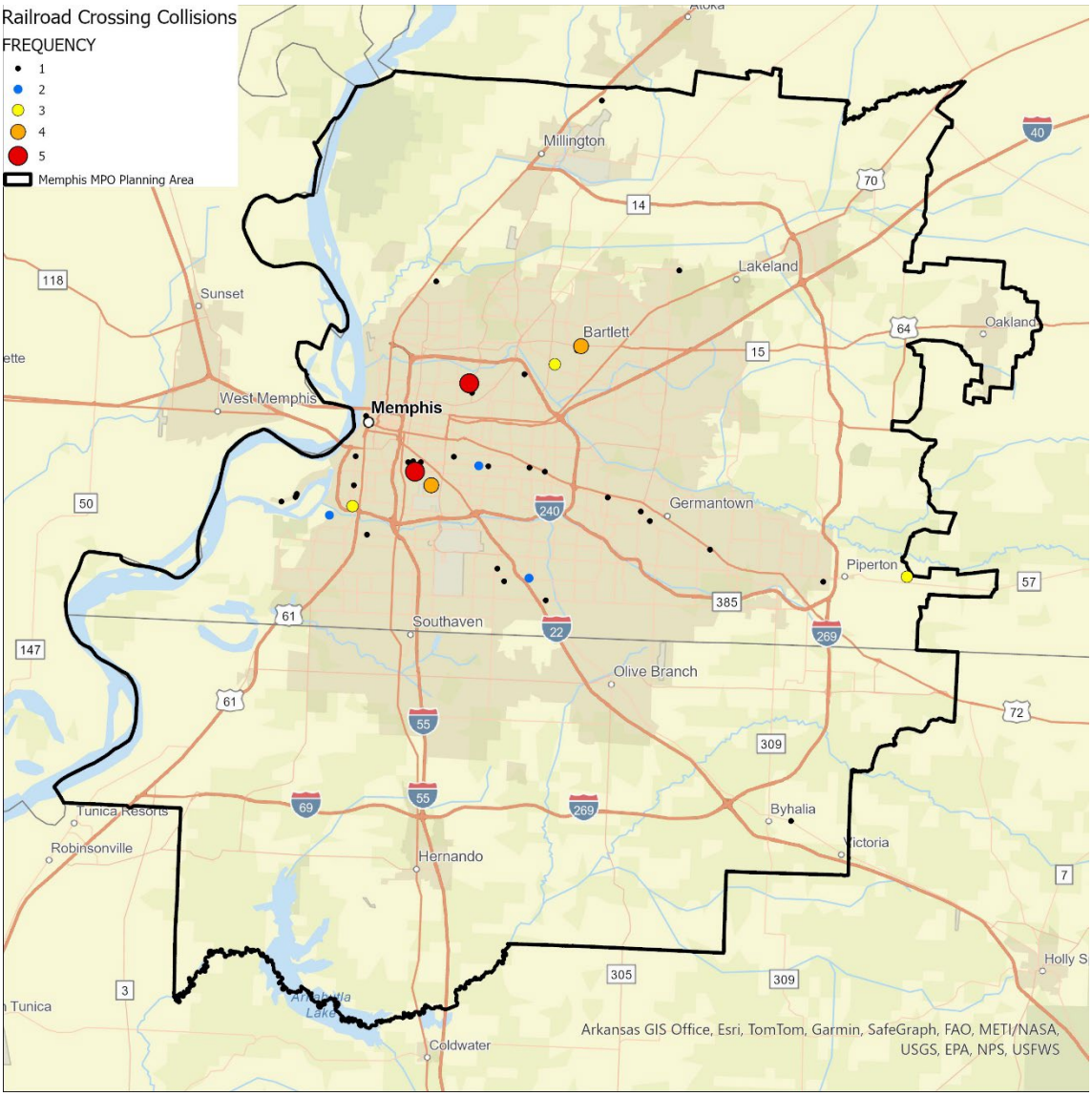


Figure 4 Railroad At-Grade Crossing Incidents, 2020-2024

Infrastructure Condition

Bridges

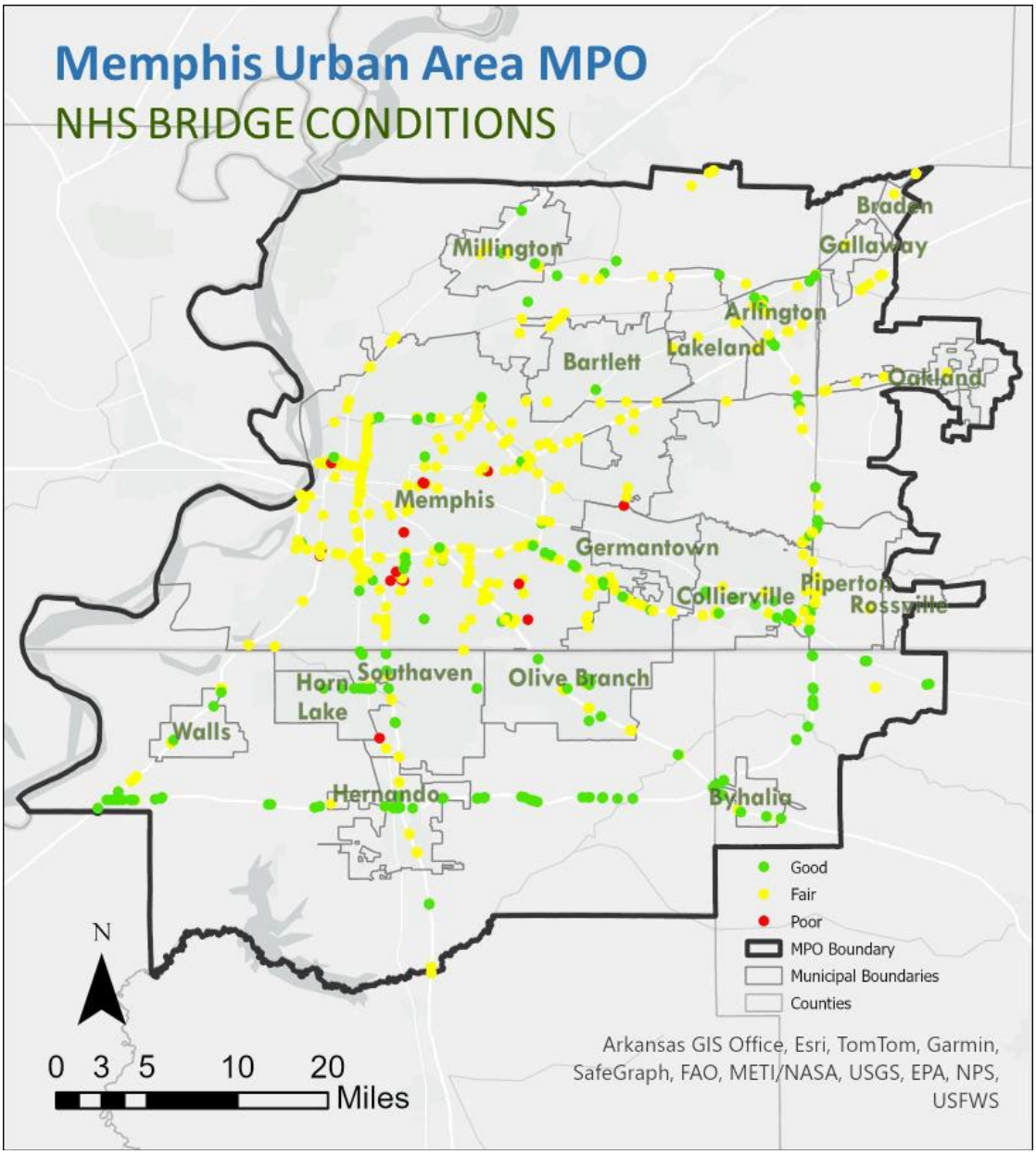


Figure 5 NHS Bridge Conditions, 2022

Percent of NHS bridges in Good condition, 2022:
Memphis MPO in TN: 17.8% **Memphis MPO in MS:** 55.7%

Percent of NHS bridges in Poor condition, 2022:
Memphis MPO in TN: 3.13% **Memphis MPO in MS:** 1.37%

Pavement

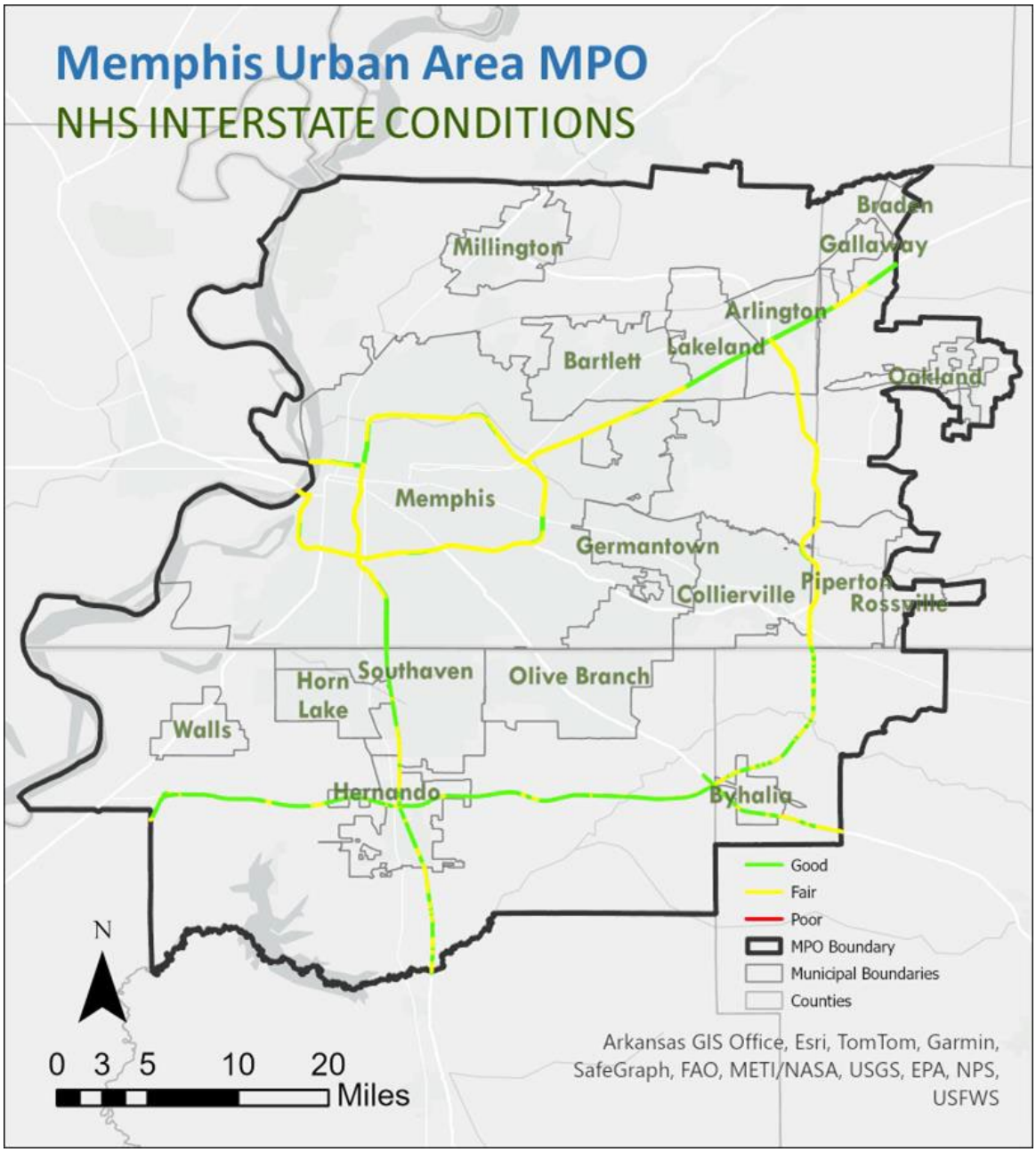


Figure 6 Interstate Pavement Condition, 2022

Percent of Interstate pavement in Good condition, 2022:

Memphis MPO in TN: 24.7% **Memphis MPO in MS:** 73.7%

Percent of Interstate pavement in Poor condition, 2022:

Memphis MPO in TN: 0% **Memphis MPO in MS:** 0%

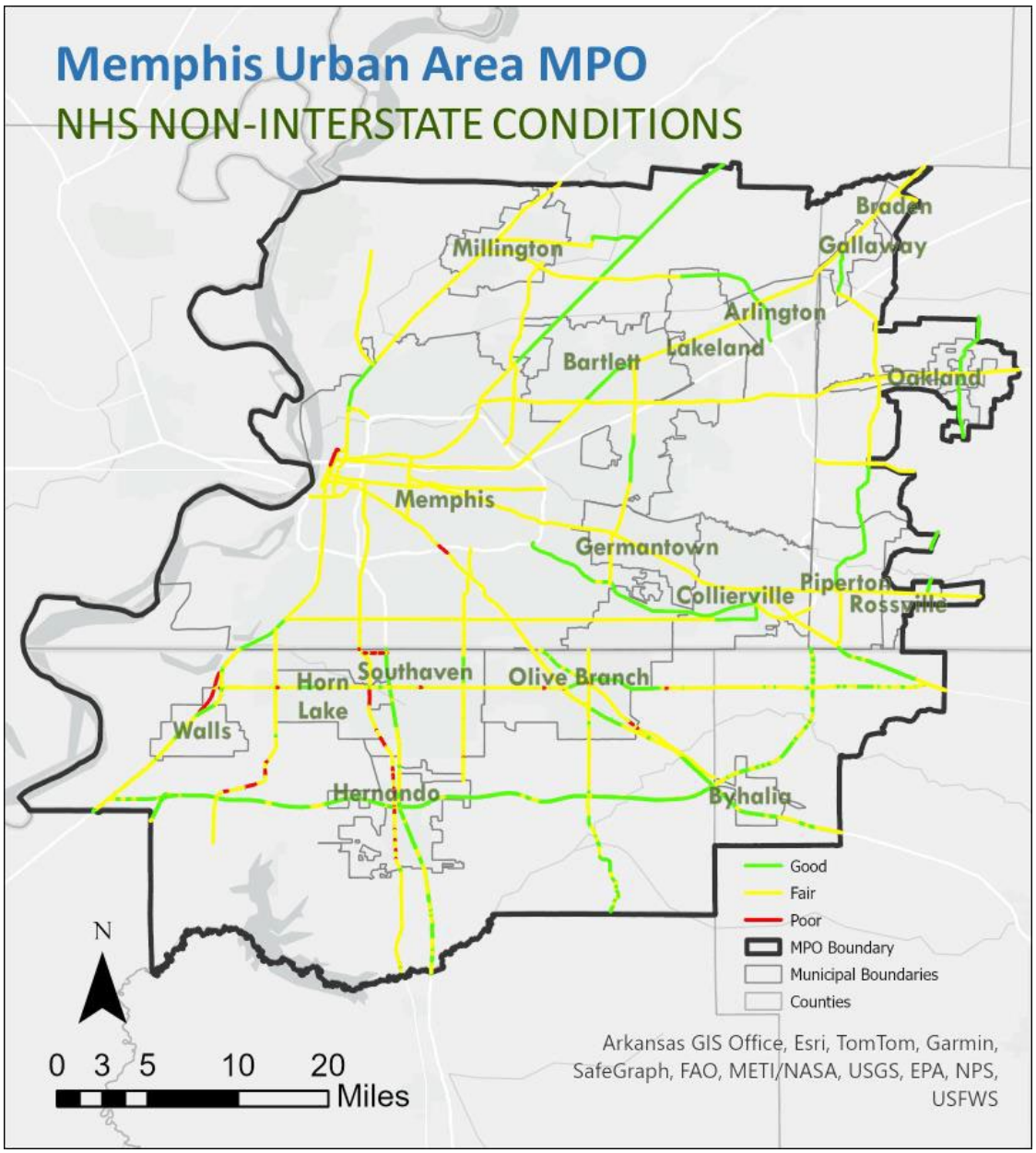


Figure 7 Non-Interstate NHS Pavement Condition

Percent of non-Interstate NHS pavement in Good condition, 2022:
Memphis MPO in TN: 21.3% **Memphis MPO in MS:** 40.7%

Percent of non-Interstate NHS pavement in Poor condition, 2022:
Memphis MPO in TN: 14.8% **Memphis MPO in MS:** 3.1

Traffic Congestion

The Memphis MPO uses the Level of Travel Time Reliability, Truck Travel Time Reliability, and Peak Hours of Excessive Delay per mile (PHED) as performance measures to understand and address road congestion affecting freight traffic. The TTR Index measures the consistency of travel times on the network, allowing the MPO to identify and prioritize improvements on unreliable corridors. The TTTR Index focuses on the reliability of truck travel times on interstates, helping to pinpoint bottlenecks and optimize freight movement through infrastructure enhancements and traffic management strategies.

PHED measures the hours during which travel speeds fall below a certain threshold during peak periods, highlighting areas with significant congestion. By analyzing these metrics, the Memphis MPO can develop long-term strategies to reduce delays and improve travel reliability for freight, ensuring efficient and timely delivery essential for the regional economy.

2022 Level of Travel Time Reliability

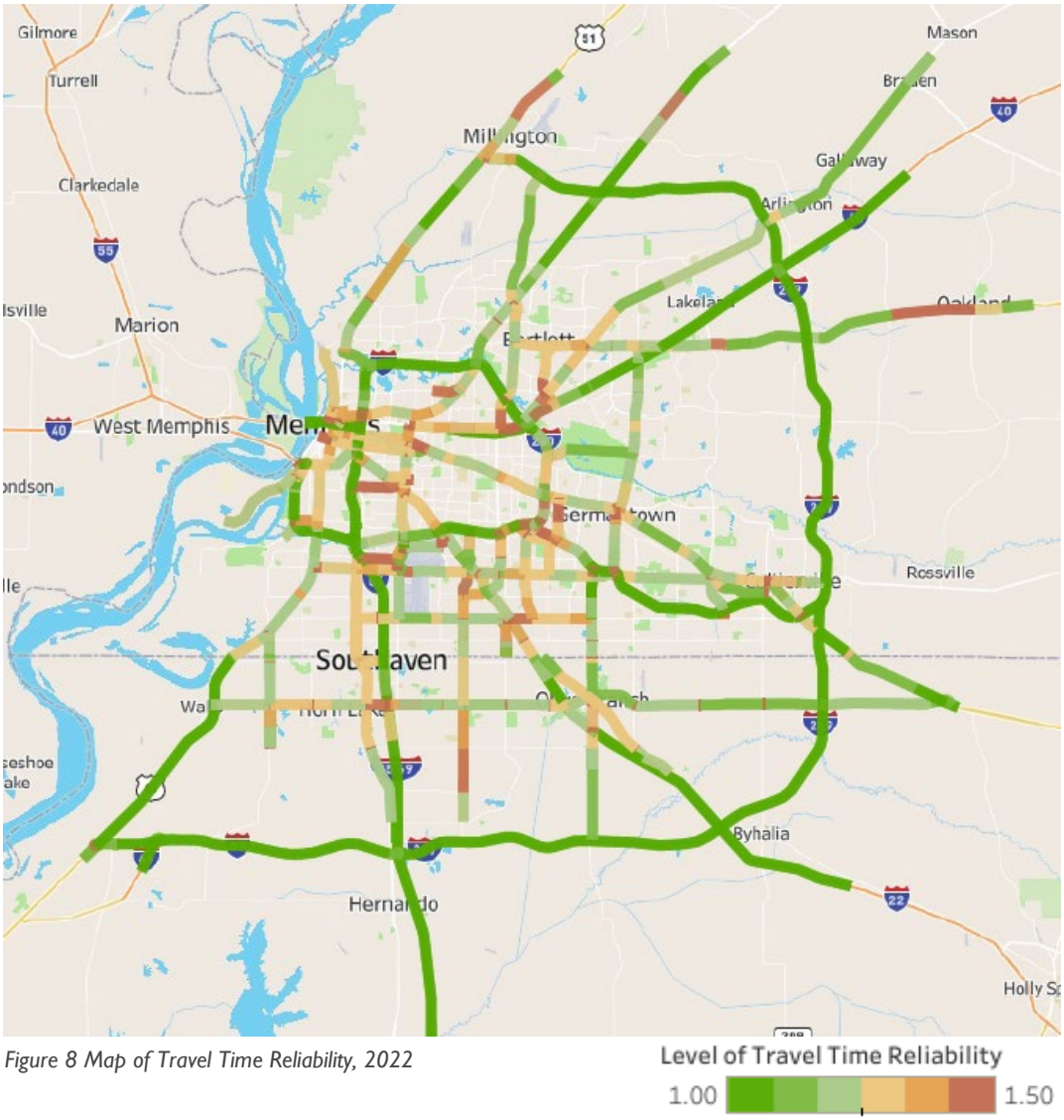


Figure 8 Map of Travel Time Reliability, 2022

2022 Level of Truck Travel Time Reliability

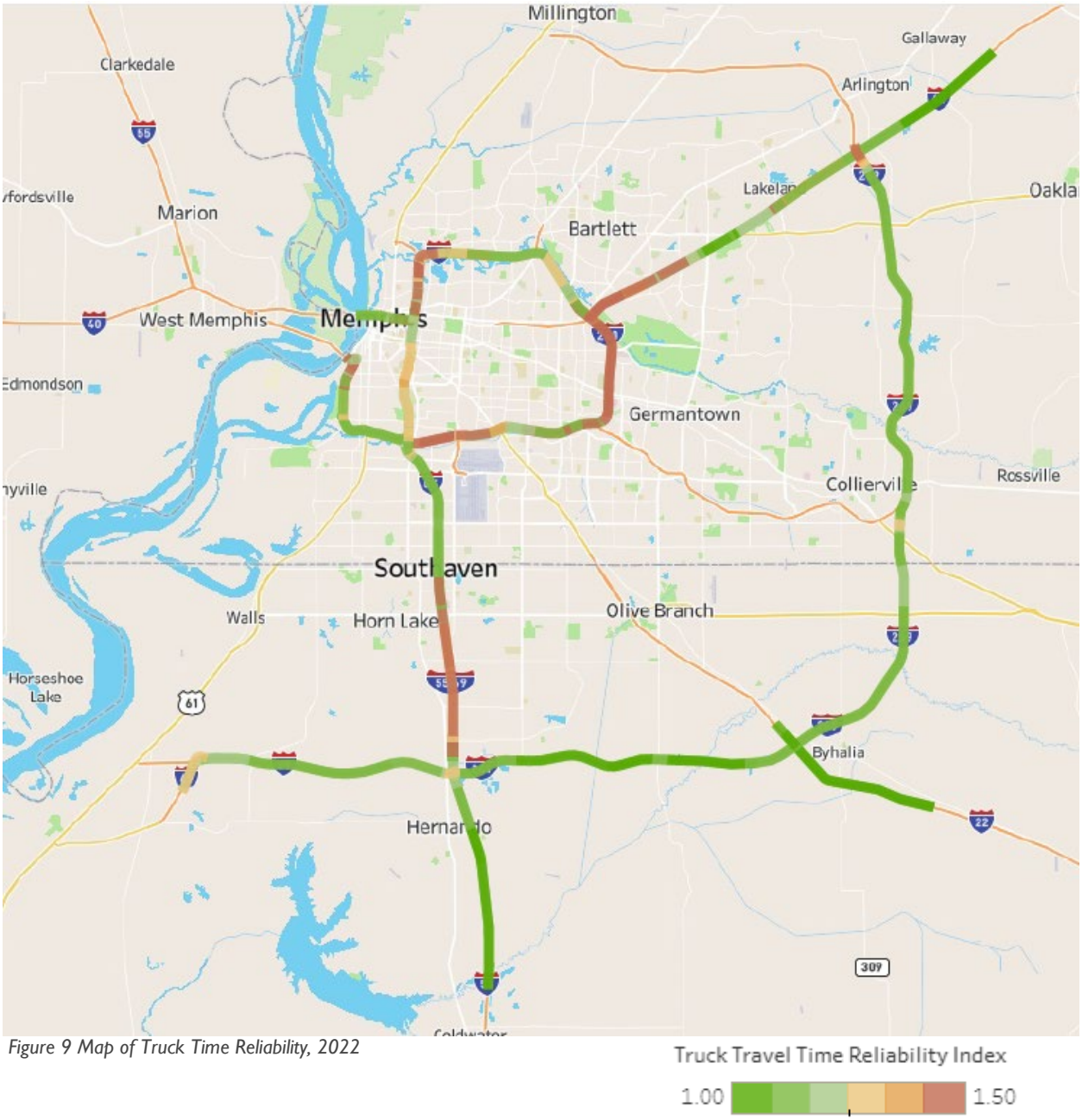


Figure 9 Map of Truck Time Reliability, 2022

2022 Peak Hours of Excessive Delay per Mile

Figure 10 Map of Peak Hours of Excessive Delay per Mile, 2022