



Existing Conditions Summary

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METROCOG

FARGO-MOORHEAD METROPOLITAN COUNCIL OF GOVERNMENTS

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I. INTRODUCTION

In 2016, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) undertook its first regional freight plan to better understand and inform regional leaders about transportation service and infrastructure needs in the Fargo-Moorhead MSA. This plan examined freight infrastructure and freight service demands across all modes in the regional transportation network. It also provided an assessment of how goods move to, from, and within the Fargo-Moorhead MSA, and included infrastructure, policy, and operational improvements to support freight-dependent industries and regional economic growth.

Eight years after the completion of this plan, Metro COG is updating its initial freight planning efforts. The new Metro COG Regional Freight Plan will address a number of logistical, infrastructure, land use, and economic impact issues that have been created due to the area's significant population and industry growth over the past two decades. These include:

- Assessing the current state of air, truck, and rail freight system operations and identifying ways to effectively prioritize and address future freight congestion issues, key regional bottlenecks (if any), infrastructure deficiencies, potential technologies to increase flow and safety, and land use requirements and policies;
- Identifying links that connect mobility of air, truck, and rail freight modalities to regional economic development goals and addressing key opportunities, gaps, and barriers to improve and promote economic development and job growth within the region's logistics and manufacturing industries as it relates to transportation and/or transportation planning; and
- Aligning recommendations and action steps for regional partners based on the Infrastructure Investment and Jobs Act (IIJA), North Dakota Department of Transportation, and Minnesota Department of Transportation requirements, including qualitative performance measurement strategies that are responsive to federal and state freight mobility and efficiency goals.

The objective of this comprehensive regional plan is to provide project partners (public and private) with a series of short-term and long-term strategies and guidance for strategic processes and policies to guide future investments to facilitate the mobility of truck and rail freight movements within and through the Fargo-Moorhead Metropolitan Statistical Area.

Purpose

The purpose of this Existing Conditions Summary document is to provide a baseline assessment of multiple factors related to the freight system in the study area. This is broken into three main areas of focus.

1. **Economic Summary:** First, this document will summarize the economic conditions of the area, specifically focusing on population growth and industry specialization. These factors drive the growth in local industry and need for freight goods and services as well as identify the local industries that are uniquely important for the local economy.
2. **Freight System:** Second, the document will summarize the freight infrastructure for highways, railroads, airports and pipelines in the region.
3. **Freight Flows:** Finally, the document will summarize freight flows to and from the study area.

II. ECONOMIC SUMMARY

The Metro COG region continues to serve as a key economic engine for the upper Midwest, supported by a diverse mix of industries and a strategic location bordering two states. As communities in the area grow and adjust to changing demographic trends, labor market conditions, and emerging economic opportunities, understanding current economic and industry conditions will provide important context for planning and supporting investments in the local freight system.

Population Growth

The estimated population in 2024 based on 5-year American Community Survey data was 259,459 compared to 228,254 in 2016. This represents an average annual increase of 1.6% which exceeds the national average for mid-sized to larger cities (0.9-1.1% annually). Recent demographic studies for the region estimate that the population will continue to grow, reaching 357,322 residents by 2050. This population growth is the result of high levels of in-migration, driven largely by strong economic opportunities and regional economic stability which continues to attract and retain a strong workforce.

Figure 1 shows the percent change in population density for block groups within Cass and Clay counties. While some of the more rural block groups have experienced slight reductions in population, the majority of urban area block groups have experienced growth. The largest increases in population density have occurred in West Fargo and Horace. Change in population has the potential to drive changes to freight employment locations and the movement of goods to freight-related businesses that serve these populations.

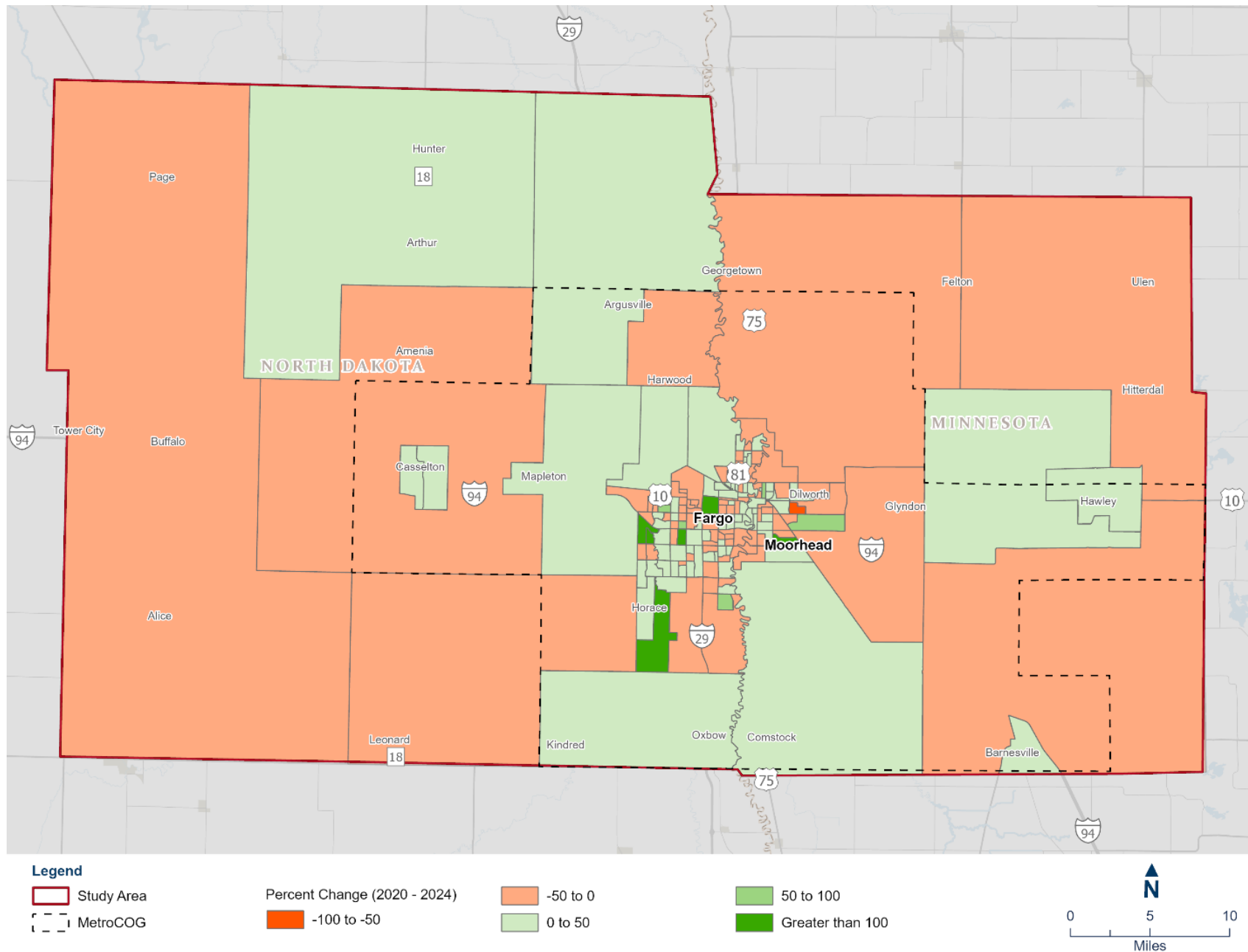


Figure 1: Percent Change in Population Density (2020-2024)
Source: US Census Bureau, ACS 5-year Estimates, Block Groups

Gross Domestic Product

Figure 2 illustrates the region's Gross Domestic Product (GDP) by industry from 2015 to 2024. Among freight related industries, wholesale trade, retail trade, and manufacturing contribute the largest to the regional GDP, with both shown overall growth during the period. Construction and transportation also contribute significantly, while agriculture, utilities, and mining generate comparatively smaller amounts of GDP.

Among non-freight industries, healthcare, real estate, government, and finance represent some of the area's larger economic sectors. Overall, the Metro COG economy is diversified across both freight related and non-freight related industries.

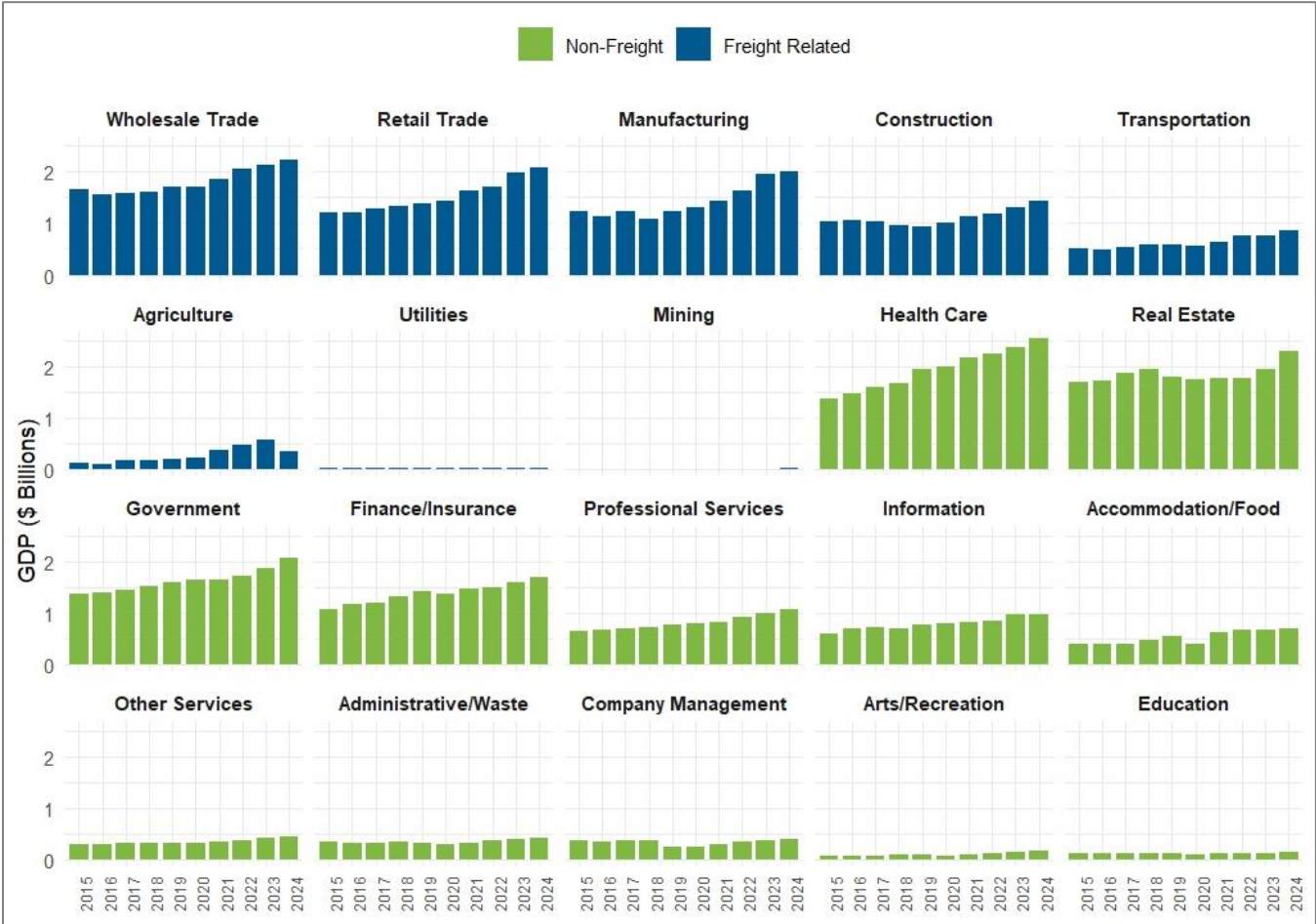


Figure 2: GDP by Industry, 2015-2024

Industry Employment

Figure 3 shows the key industries in the Fargo-Moorhead two-county region by employment. The freight industry is a key driver of the regional economy, employing 35% of the workforce in 2023. Manufacturing is the second largest employer in the area with 11% share, behind the health care industry. Retail follows close with 10% share of employment, while construction and wholesale trade account for 5% each.

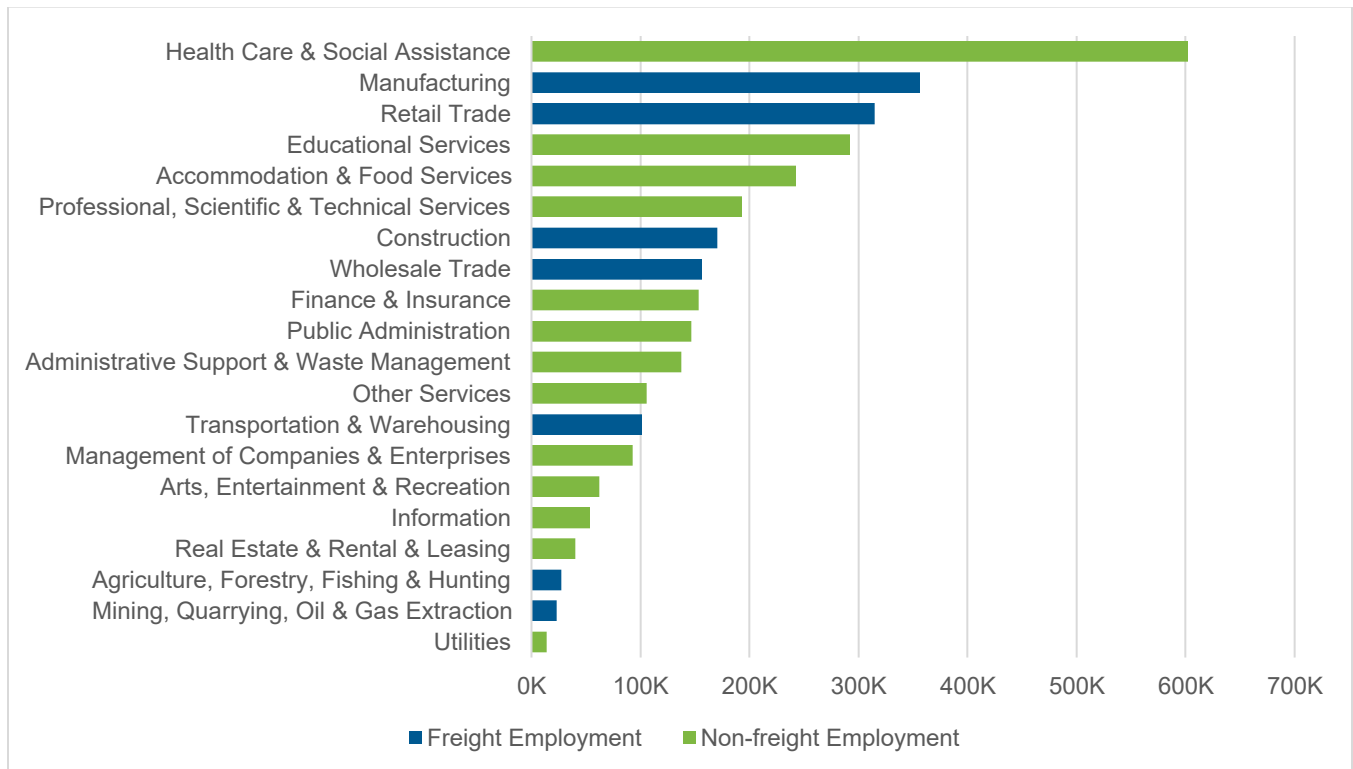
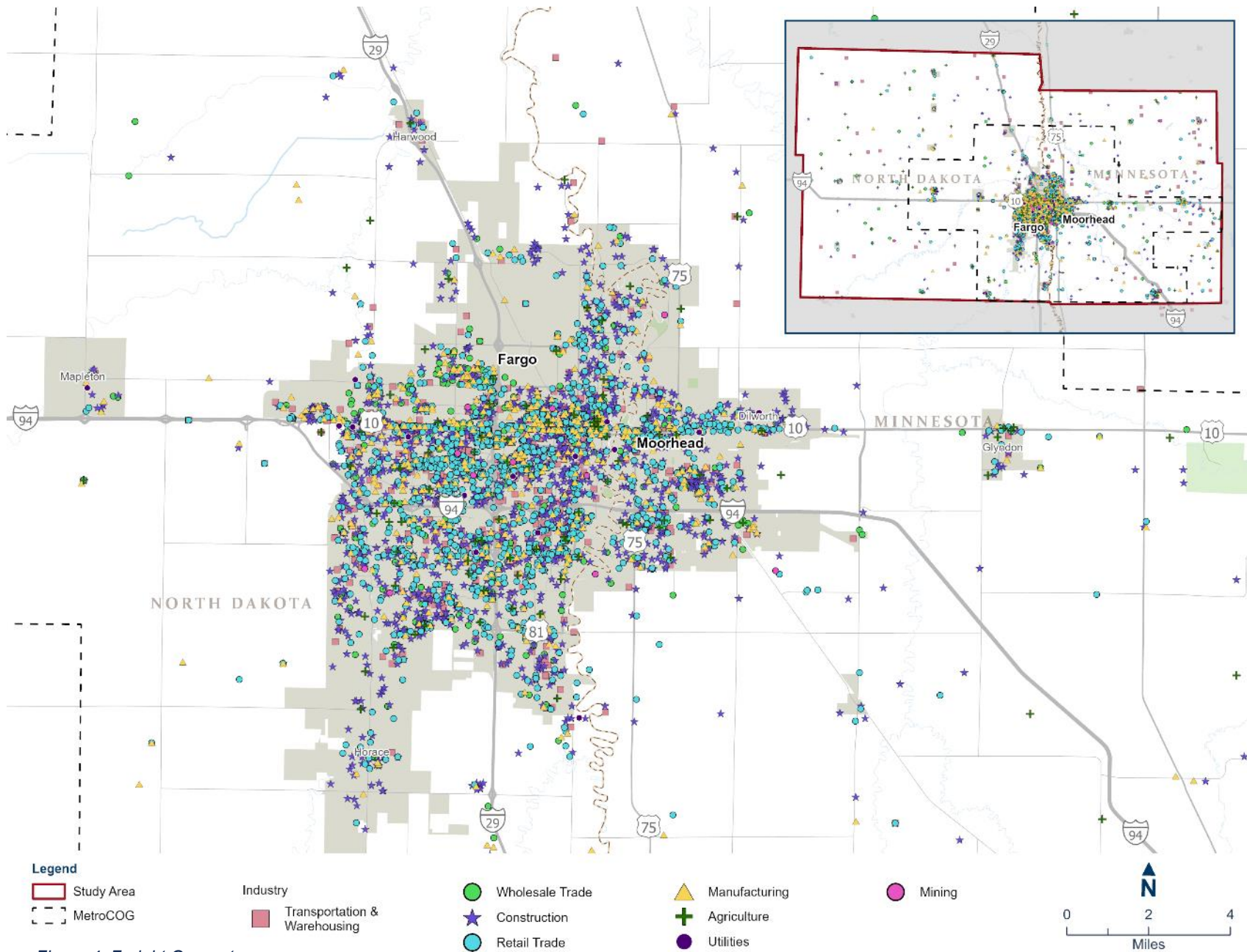


Figure 3: Employment, 2023

Source: US Census Bureau, LEHD Data

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Industry Specialization

Location Quotient (LQ) analysis measures the concentration of industry employment in a region relative to a larger area, with values above one indicating that an industry is more concentrated locally than in the reference geography. Freight industry employment in the Fargo-Moorhead area was compared to the national employment for the most recent data available (2023) and is presented in Figure 5.

Compared to the country, the region demonstrates above average concentrations in Wholesale Trade, Construction, and Manufacturing while Transportation and Retail Trade are nearly equivalent to the national average with an LQ of approximately 1.02 and 0.98 respectively. Utilities, Agriculture, and Mining have the lowest LQ of the freight industries in the region.

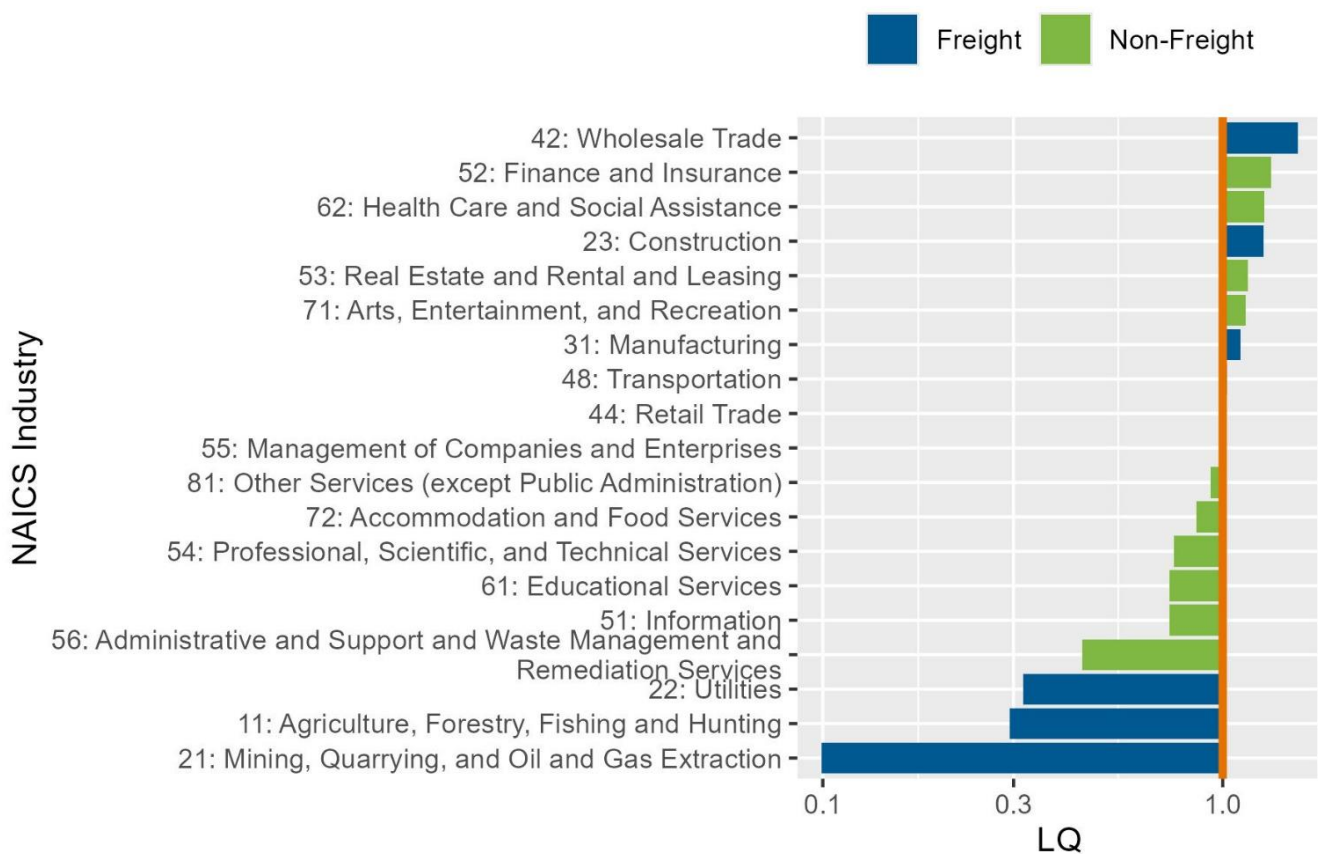


Figure 5: Metro COG Industry Location Quotients, 2 Digit NAICS
Source: US Census Bureau, Quarterly Workforce Indicators (QWI) Data

Figure 6 and Figure 7 provide a more detailed view of freight reliant industry specialization within the Metro COG region by identifying the top 10 LQs at the three-and four-digit NAICS level respectively. At the three-digit level, wood product manufacturing has the highest concentration with an LQ of approximately 3.5. Truck transportation and machinery manufacturing have also very high concentration with LQ above 1.5. Although agriculture overall has a low LQ in the region, Farm product raw material merchant wholesalers stand out as a highly specialized industry, with a LQ exceeding 10. The two county region accounts for approximately 1.3% of the national employment in this industry, indicating a concentration far greater than would be expected based on the region's overall employment base. Other highly specialized sectors include agriculture, construction, and mining machinery manufacturing, other wood product manufacturing, grain and oil seed milling, and architectural and structural metals manufacturing.



Figure 6: Metro COG Top 10 Location Quotients, 3 Digit NAICS
Source: US Census Bureau, Quarterly Workforce Indicators (QWI) Data

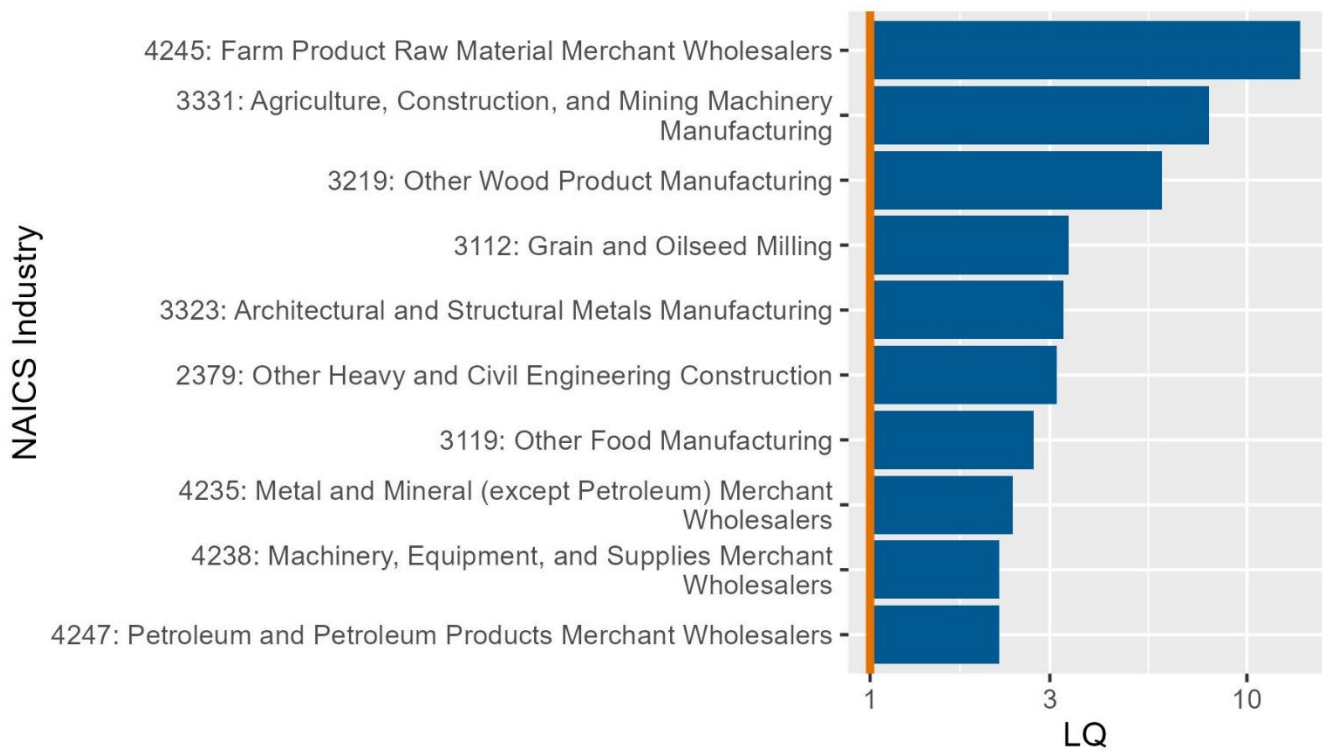


Figure 7: Metro COG Top 10 Location Quotients, 4 Digit NAICS
Source: US Census Bureau, Quarterly Workforce Indicators (QWI) Data

III. FREIGHT SYSTEM

Highways

The highway system is the backbone of freight movement, providing the main mode of transportation of goods. While rail, air, water, and pipeline transportation play important roles in the freight network, the majority of freight tonnage is transported on trucks, with a reliable and efficient highway system being essential to the movement of goods. Additionally, trucks are needed for first and last mile deliveries and connect local businesses to national supply chains.

National Highway System

The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following subsystems of roadways:

- **Interstates:** The Eisenhower Interstate System of highways.
- **Other Principal Arterials:** Highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.
- **Strategic Highway Network (STRAHNET):** A network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity and emergency capabilities for defense purposes.
- **Major Strategic Highway Network Connectors:** Highways which provide access between major military installations and highways which are part of the Strategic Highway Network.
- **Intermodal Connectors:** Highways providing access between major intermodal facilities and the other four subsystems making up the NHS.

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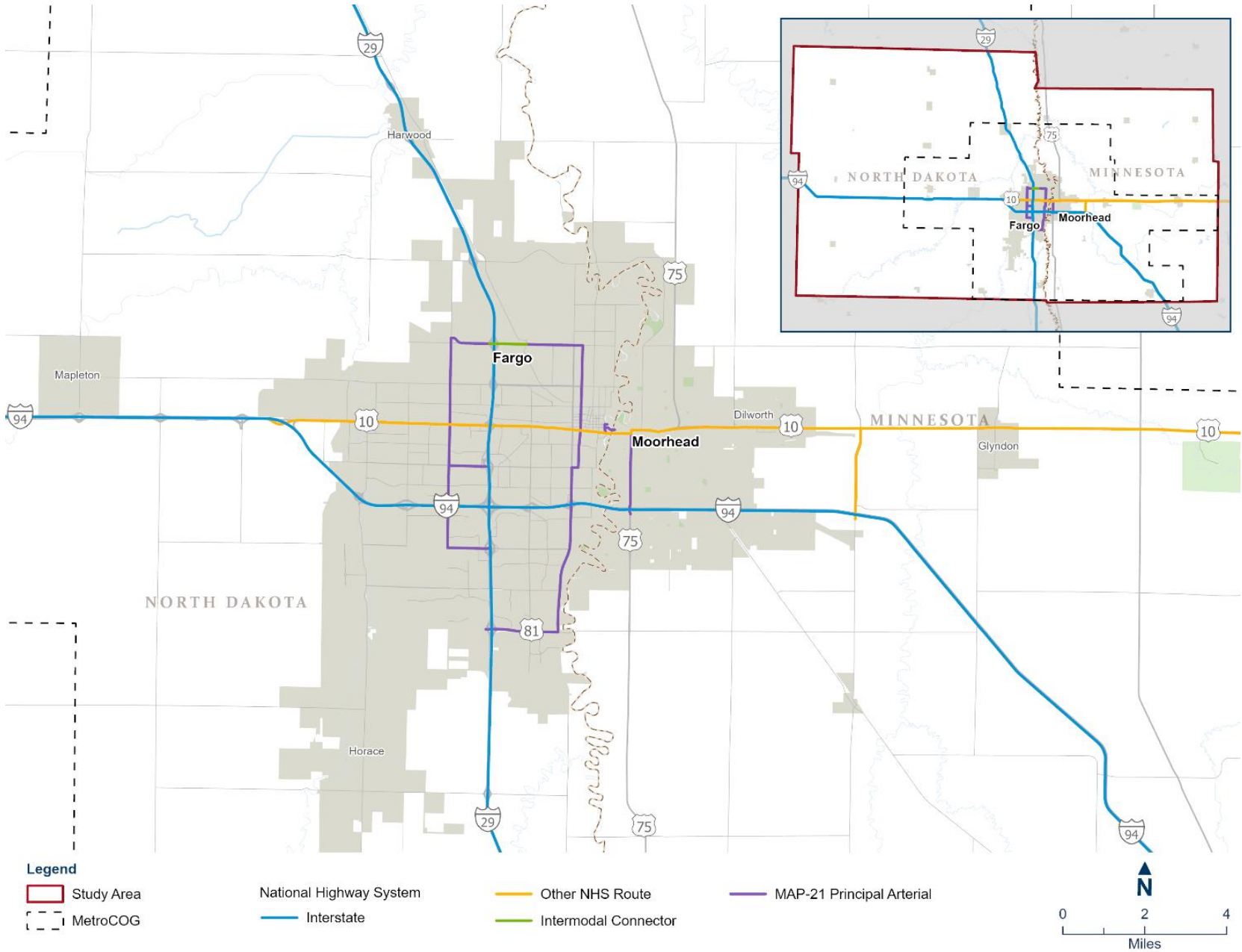


Figure 8: National Highway System

National Highway Freight Network

The FHWA has established a National Highway Freight Network (NHFN) to strategically direct Federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system.

The NHFN includes the following subsystems of roadways:

- **Primary Highway Freight System (PHFS):** This network includes highways identified as the most critical highway portions of the U.S. freight transportation system and is managed by the Office of Freight Management and Operations. There are 70.8 centerline miles of PHFS in the two county region.
- **Other Interstate portions not on the PHFS (non-PHFS):** Consists of the remaining portion of Interstate roads not included in the PHFS and provides important continuity and access to freight transportation facilities. In total, the two counties have 57.6 miles designated as non-PHFS.
- **Critical Rural Freight Corridors (CRFCs):** Public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities. Approximately 67.5 miles of CRFCs are within the Cass and Clay counties.
- **Critical Urban Freight Corridors (CUFCs):** Public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities. Only four miles in the region are part of the CUFC system.

Locally Designated Truck Routes

The designated truck routes for West Fargo and Fargo are shown in Figure 10. Designated truck routes support safe and efficient freight movement, reduce congestion, and minimize freight impacts in residential neighborhoods. These routes prioritize access to industrial areas, commercial districts, distribution centers, and major highways.

Existing Conditions Summary Metro COG Regional Freight Plan

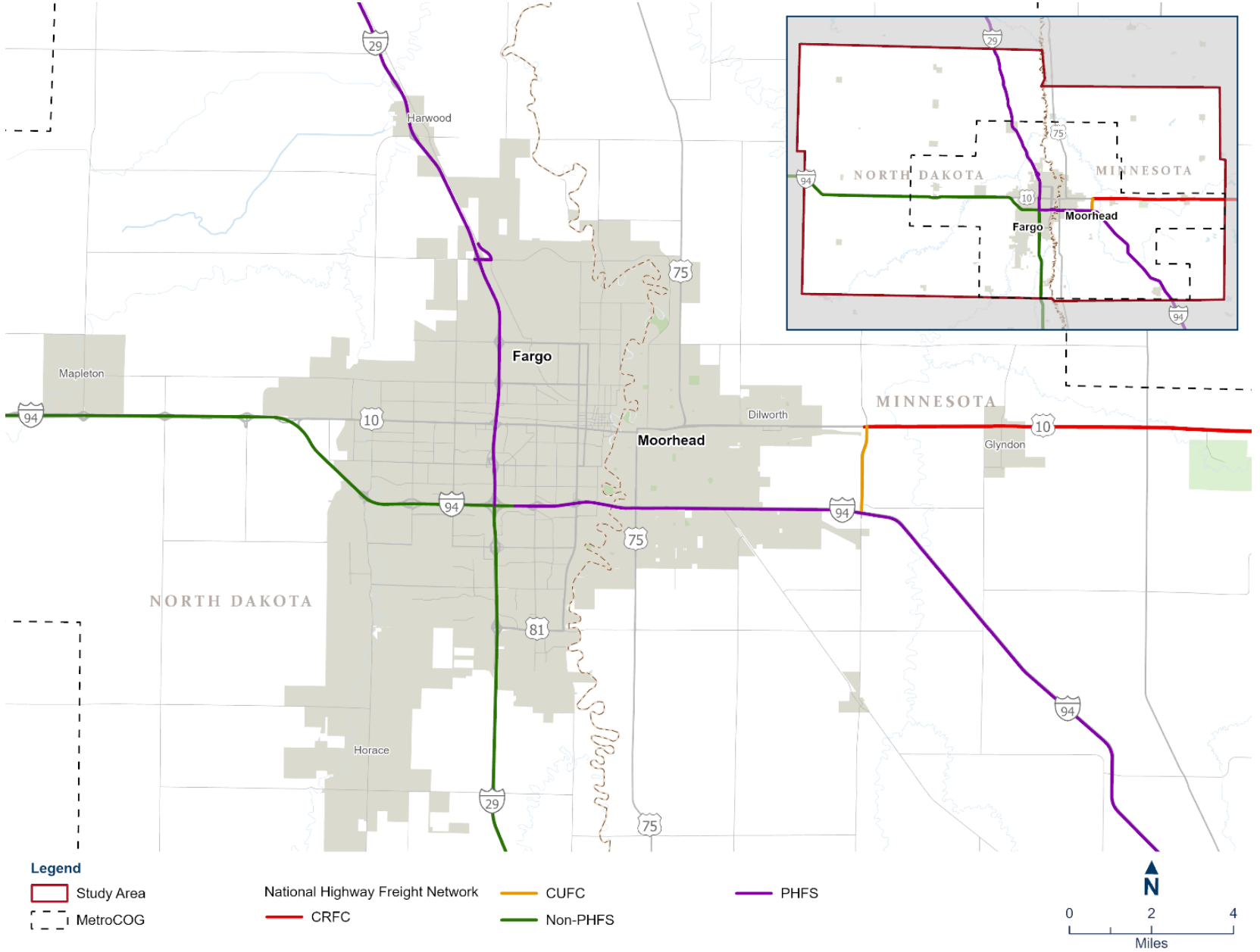
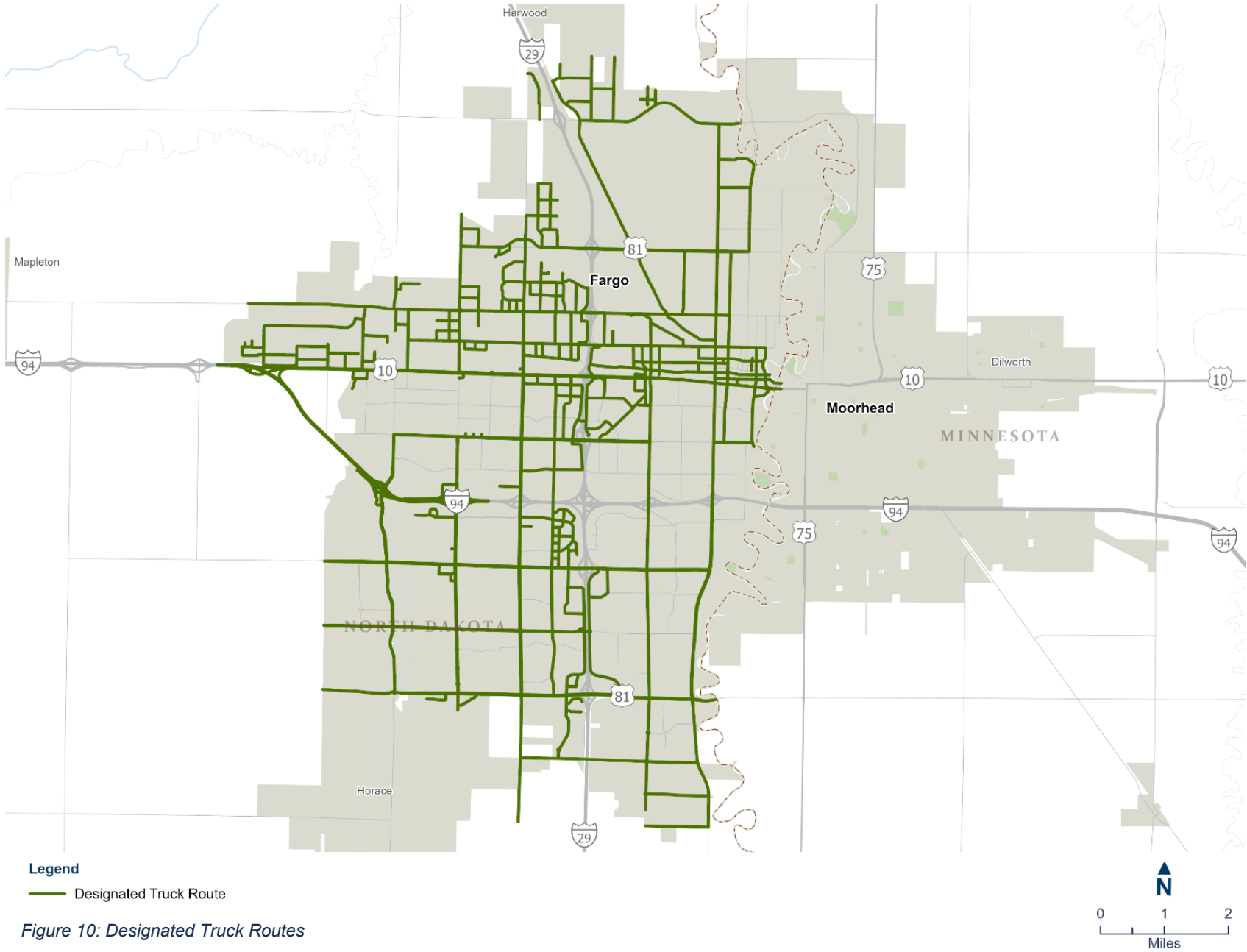


Figure 9: National Highway Freight



Legend

— Designated Truck Route

Figure 10: Designated Truck Routes

Truck Crashes

Truck crash data shows notable year to year variation between 2021 and 2024 (Table 1). Total commercial vehicle crashes increased from 672 crashes in 2021 to a peak of 1,460 crashes in 2023 before declining to 858 crashes in 2024. Property damage only (PDO) crashes accounted for the majority of incidents each year, increasing from 567 crashes in 2021 to 1,113 in 2023 before decreasing to 659 in 2024. Injury crashes followed a similar pattern, rising from 105 crashes in 2021 to 299 in 2023 before declining to 173 in 2024. No fatal truck crashes were reported in 2021; however, 14 fatal crashes were recorded in 2022, increasing to 48 in 2023 before declining to 26 in 2024. Although crash totals decreased in 2024, the continued occurrence of fatal and injury crashes underlines the need for ongoing investments in freight safety through infrastructure improvements, operational enhancements, and targeted safety strategies along key freight corridors.

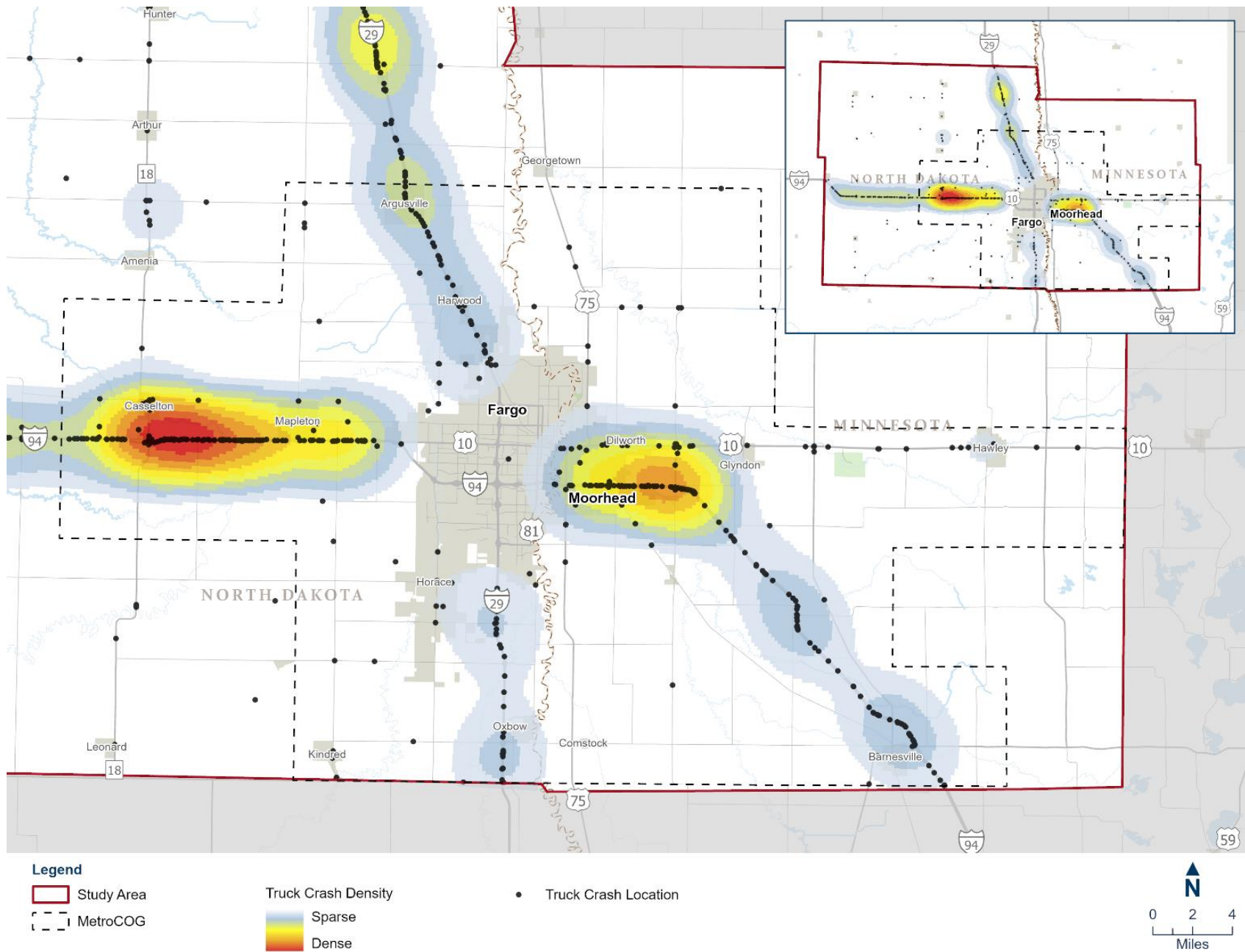
Table 1: Commercial Vehicle Crashes, 2021-2024

Year	PDO	Injury	Fatal	Total
2021	567	105	-	672
2022	958	118	14	1,090
2023	1,113	299	48	1,460
2024	659	173	26	858

Figure 12 shows the location of commercial vehicle crashes within the Metro COG area and the two-county region. There are two main hotspots, both along I-94. The last five years about 30% of the crashes at the main location west of Fargo, from Governors Dr to the Durbin Parking Area, was under blowing soil/snow conditions and over half of all truck crashes under icy road conditions. About 60% of the crashes at the second location, in the vicinity of the Moorhead Municipal airport, happened under icy road conditions.

Truck Travel Time Reliability

Truck Travel Time Reliability Index (TTTRI) values across the Fargo-Moorhead area indicate that most roadway segments provide highly reliable travel conditions, with the majority of the network having TTTRI values between one and two (Figure 14). Small, localized areas show moderately reduced reliability with values ranging from two to five, while only a few isolated locations exceed values of five. These locations are primarily concentrated near intersections, where traffic signals, turning movements, and recurring congestion contribute to increased travel time variability.



Existing Conditions Summary
Metro COG Regional Freight Plan

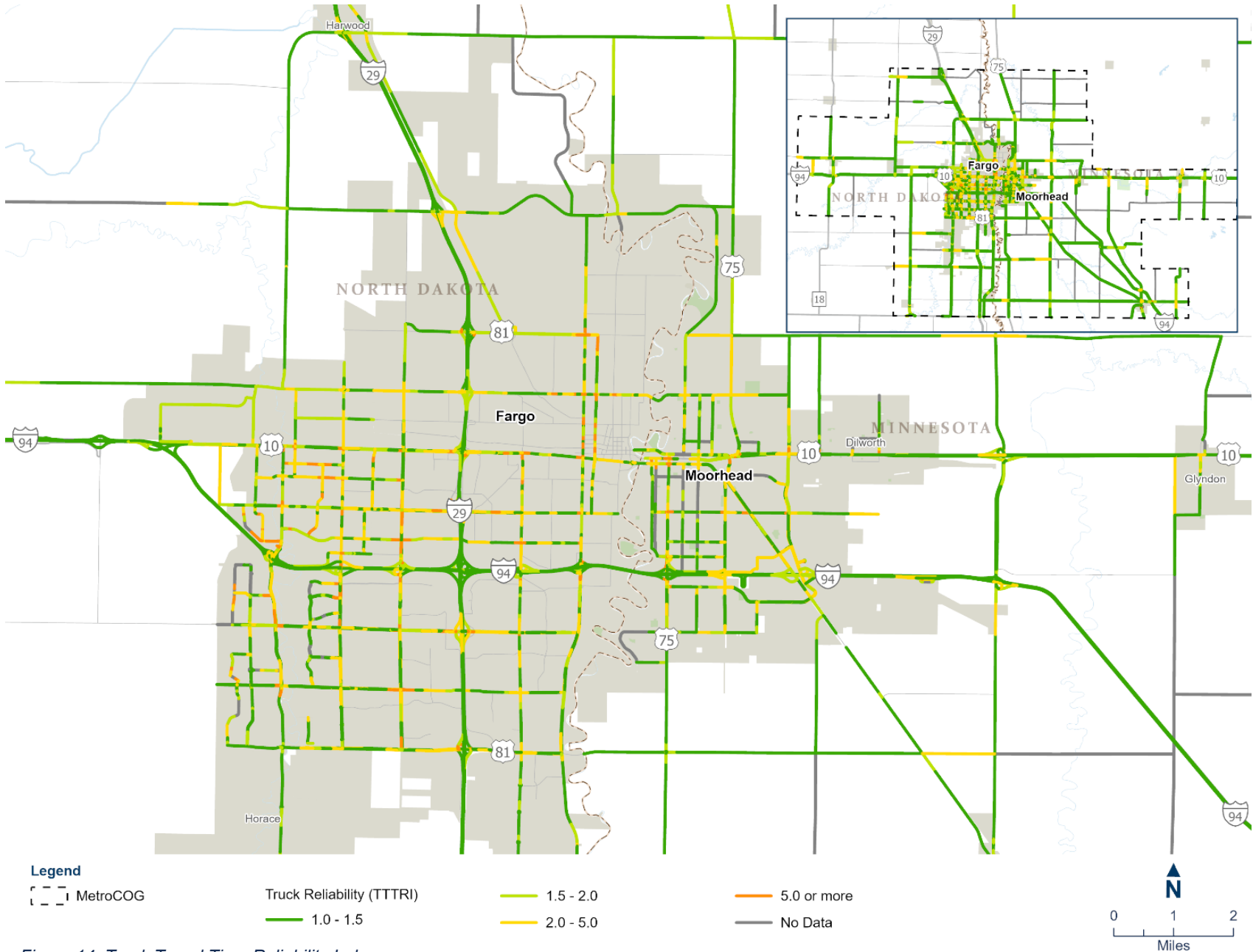


Figure 14: Truck Travel Time Reliability Index

Railroads

Rail transportation plays a critical role in supporting the regional economy, enhancing freight mobility, and providing safe and efficient movement of goods. Rail is one of the most efficient modes of transportation for large volumes of freight over long distances, moving bulk commodities, agricultural products, energy resources, and intermodal containers. By carrying large freight volumes, the rail network reduces pressure on the highway system. As freight volumes continue to grow, preserving and enhancing rail infrastructure remains an important component of a balanced multimodal system.

Regional Railroad Network

The railroad network in the Fargo-Moorhead region is illustrated in Figure 16. BNSF Railway is the Class I railroad providing the biggest service in the area. Its Great Northern Corridor, which is part of the Twin Cities Division, passes through the region and links Chicago with ports in the Pacific Northwest. In the Fargo-Moorhead area, the Staples Subdivision originating from Minneapolis connects with several key lines, including the P Line, Hillsboro Subdivision, Prosper Subdivision, and KO Subdivision, forming a critical hub for regional and long-haul rail operations.

BNSF's operations also extend beyond its primary mainline through trackage rights and partnerships with regional railroads. The railroad holds trackage rights on the Otter Tail Valley Railroad, which runs 54 miles between Moorhead, Minnesota, and Fergus Falls, Minnesota. The line is capable of handling railcars with a weight capacity of up to 286,000 pounds and is primarily used for transporting commodities such as chemicals, coal, and grain. Additionally, BNSF operates on the Red River Valley & Western (RRVW) Railroad network, located in the southwestern portion of the Fargo-Moorhead region. The RRVW manages over 517 miles of track across Minnesota and North Dakota and is largely dedicated to grain transportation. These regional connections play a critical role in supporting the movement of agricultural and industrial goods throughout the region. CPKC also crosses Cass county for 4.5 miles in the southeast.

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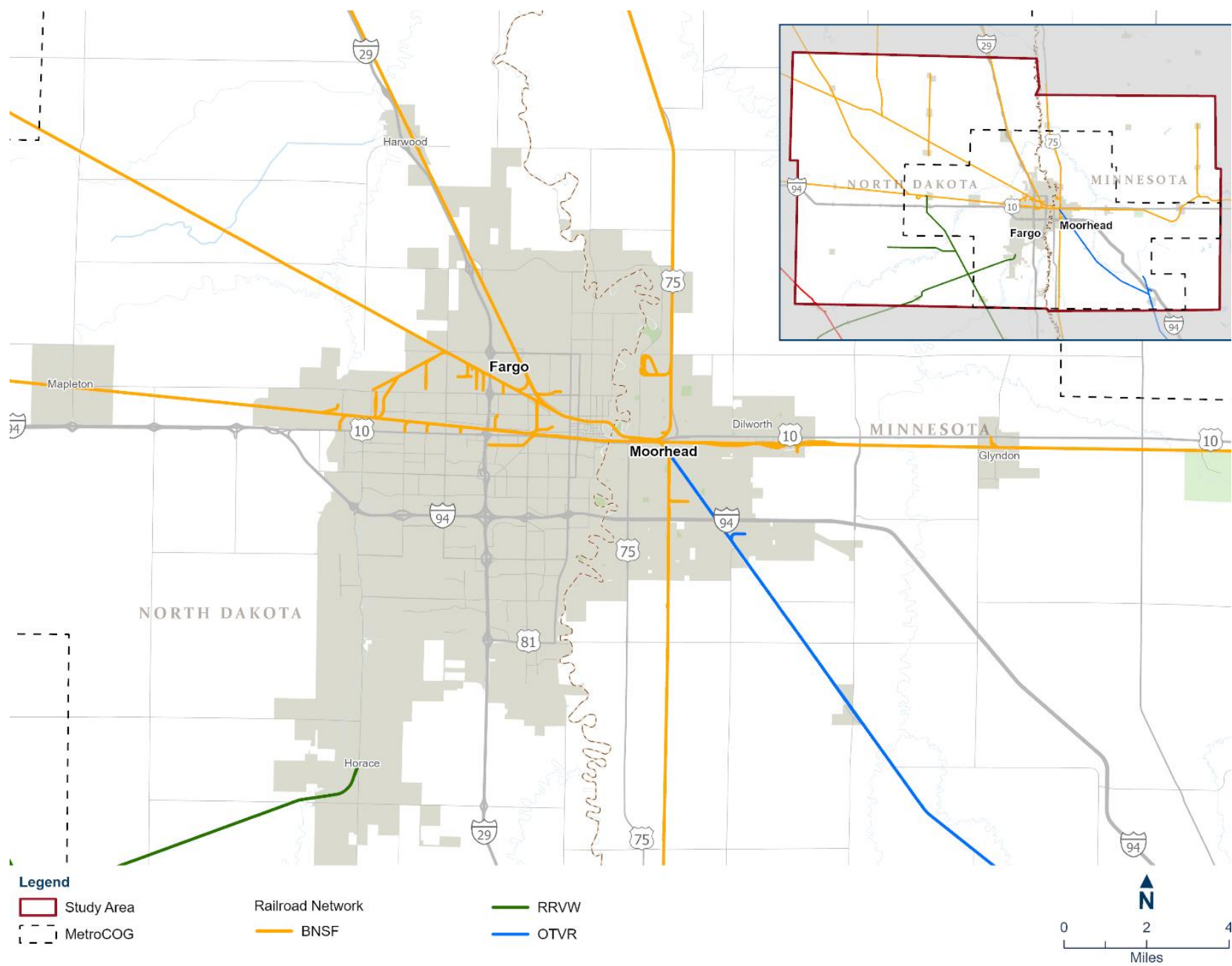


Figure 16: Railroad Network

Existing Conditions Summary
Metro COG Regional Freight Plan

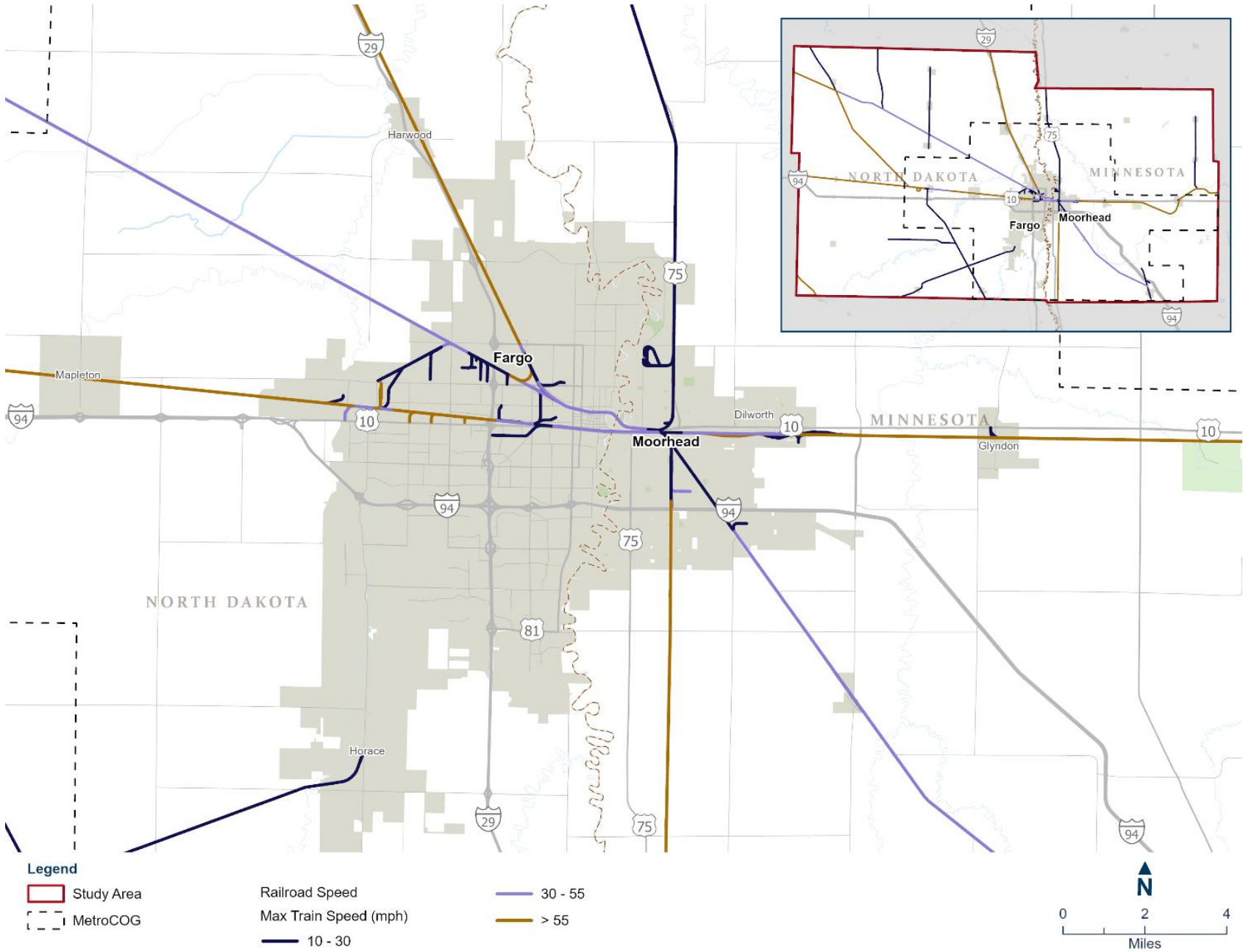


Figure 18: Railroad Speed

At-Grade Highway-Rail Crossings

Rail safety is a key consideration in transportation planning. At grade rail crossings present potential conflicts between rail and roadway users, affecting safety and traffic operations. Grade separation projects improve safety by reducing the potential of collision while enhancing mobility by minimizing delays caused by passing trains. In recent years, Minnesota DOT has prioritized funding for grade separation projects through programs aimed to reduce risks associated with crude by rail movements. As a result, in 2017, MNDOT funded one grade separation project in Moorhead at Main Avenue, between 20th and 21st Streets,¹ while another project at 11th Street is currently under development. West Fargo has also been awarded a grade separation Grant at 9th Street.

There are 482 at grade crossings in the two county region. Of these, the majority is on the BNSF line with 336 crossings. The least number of crossings, seven, are on the CPKC line, 85 on the RRVW, and 54 along OTVR.

At-Grade Crossings Incidents

Table 2 shows the number of at grade crossings incidents (crashes) in the two-county region, along with the number of fatalities and injuries from 2021 to 2025. Since 2021, where the most incidents occurred in a year (seven), the number of crashes has remained relatively stable, ranging from three to five. However, the combined number of fatalities and injuries in 2025 are the highest in the five-year time span. The two fatalities were flagged as a pedestrian and “other” and happened in the city of Page and Grandin.

Table 2: At Grade Crossings Incidents, Fatalities, and Injuries

Type	2021	2022	2023	2024	2025
Incidents	7	4	3	4	5
Fatalities	0	0	1	0	2
Injuries	2	2	1	5	3

¹ <https://www.dot.state.mn.us/ofrw/crude-by-rail/pdf/crude-oil-study.pdf>

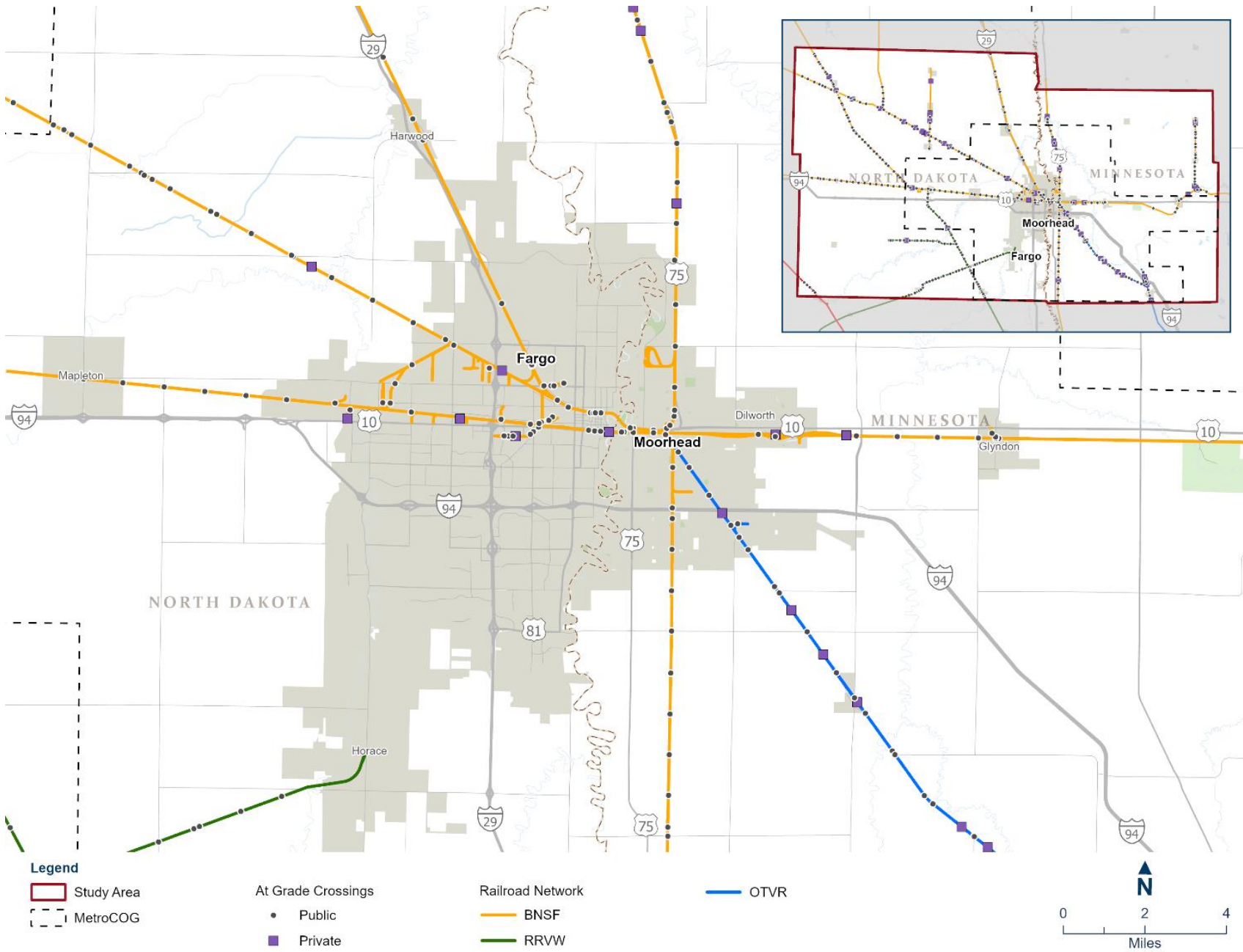


Figure 20: At Grade Crossings

Airports

Air cargo typically transports time sensitive, high value, low weight items and is an important transportation mode that supports e-commerce. The main airport in Fargo-Moorhead is the Hector International Airport (FAR) located just a few miles northwest of downtown Fargo. It serves as the primary commercial airport in the region and plays an important role as a regional air cargo hub in the Midwest.

Cargo operations at Hector International Airport are mainly handled by express carriers such as FedEx and UPS. Both companies have sorting and distribution facilities at the airport (FedEx approx. 20,000 sq ft and UPS 63,000 sq ft) that sort packages and load/unload unit load devices that containerize cargo for carriage on cargo aircraft.

Both UPS and FedEx use Hector International Airport as a mini hub. In the late afternoon/evening, small propeller cargo aircraft arrive at Hector carrying inbound packages from other airports such as Williston and Minot, with each integrator operating its own feeder network. These packages connect with the outgoing flights to FedEx's main hub at Memphis and the USP hub at Louisville. The process is reversed in the morning when packages from the inbound Memphis and Louisville flights are loaded to the feeder aircraft for onward movement to distant communities. The express carrier networks of FedEx and UPS associated with Hector Fargo International airport are shown in Figure 21.

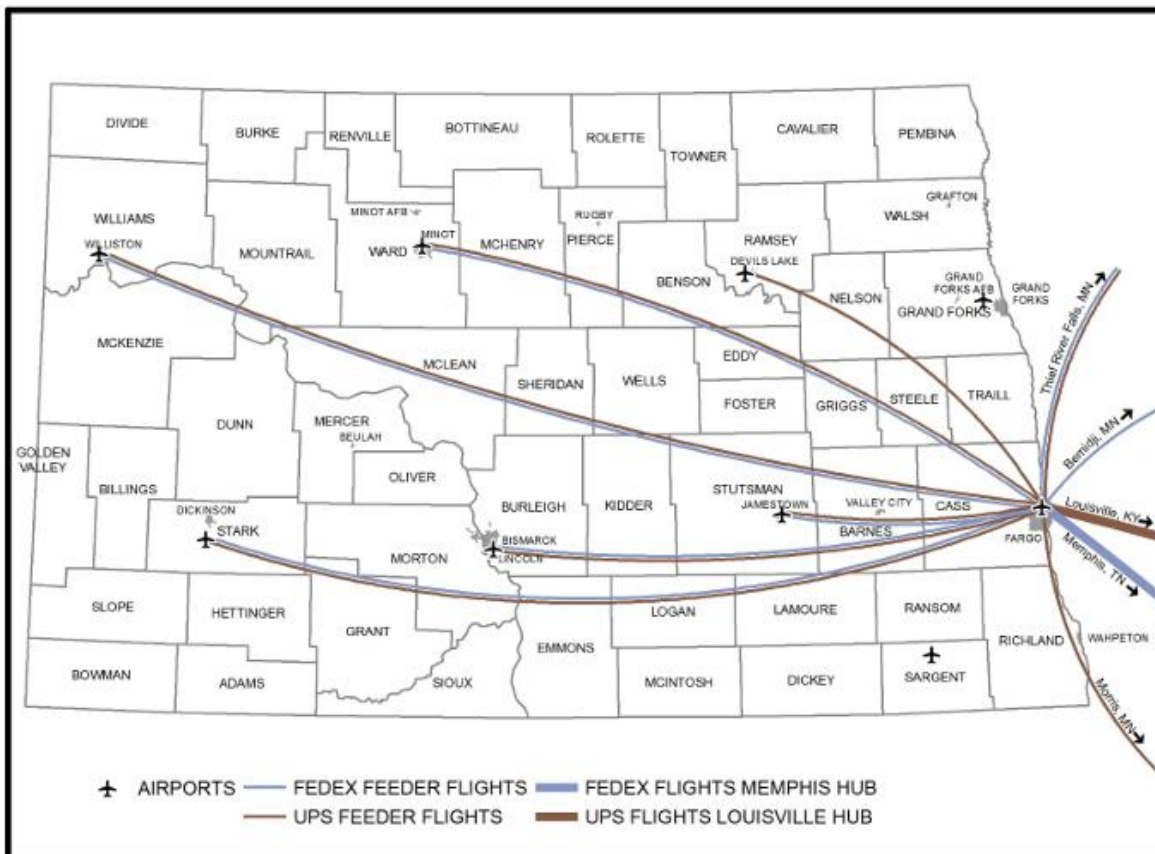


Figure 21: Express Air Cargo Networks
Source: ND State Freight and Rail Plan

In addition to dedicated freight, passenger aircrafts also carry belly cargo adding to overall freight volume. Figure 22 shows the freight carried by FedEx, UPS, and other carriers in 2025 highlighting the significance of UPS to the airport.

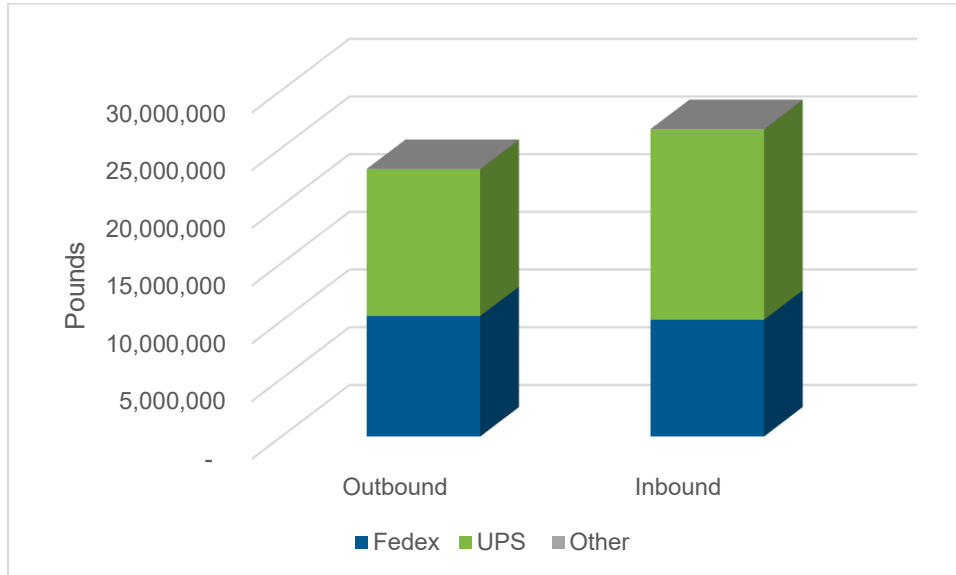


Figure 22: Air Cargo by Carrier, 2025
Source: BTS T-100

The Bureau of Transportation Statistics (BTS) aviation database shows that cargo passing through Hector International Airport in 2025 amounted to just over 50 million pounds of cargo, a 35% decline from the previous year. Since 2021 freight volumes have been declining with the sharpest decline in the last year. This decrease follows a national air cargo trend with less USPS mail and packages from Amazon being carried by the express networks, and in some sectors of e-commerce customers using slower two or three day ground based shipping services rather than more expensive, premium priced overnight, express services.

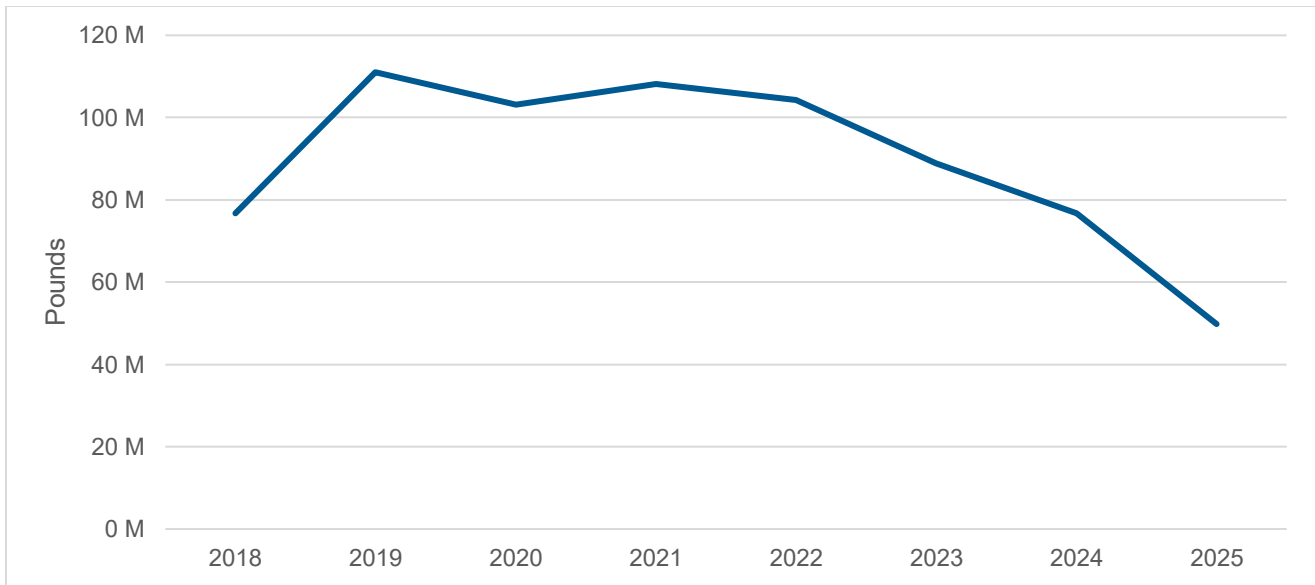


Figure 23: Air Cargo, 2018-2025
Source: BTS T-100

Pipelines

Pipelines play a critical role in the regional transportation system by providing safe, effective and reliable movement of energy products. Within the Metro COG planning area, as illustrated in Figure 25, the pipeline network consists of Petroleum Products (PP) and Natural Gas (NG) pipelines that serve customers throughout the region connecting local markets to major refining and production facilities. Additionally, there are two intermodal pipeline terminals which enable the transfer of petroleum products between pipelines and trucks or rail.

While pipelines are invisible to the general public, they carry substantial quantities of energy products every day and provide a cost effective alternative to trucks or rail for transportation of liquid bulk commodities. Additionally, pipelines help reduce freight traffic on highway and rail corridors and contribute to transportation safety, as they eliminate many of the risks associated with moving large quantities of hazardous materials by truck or rail.

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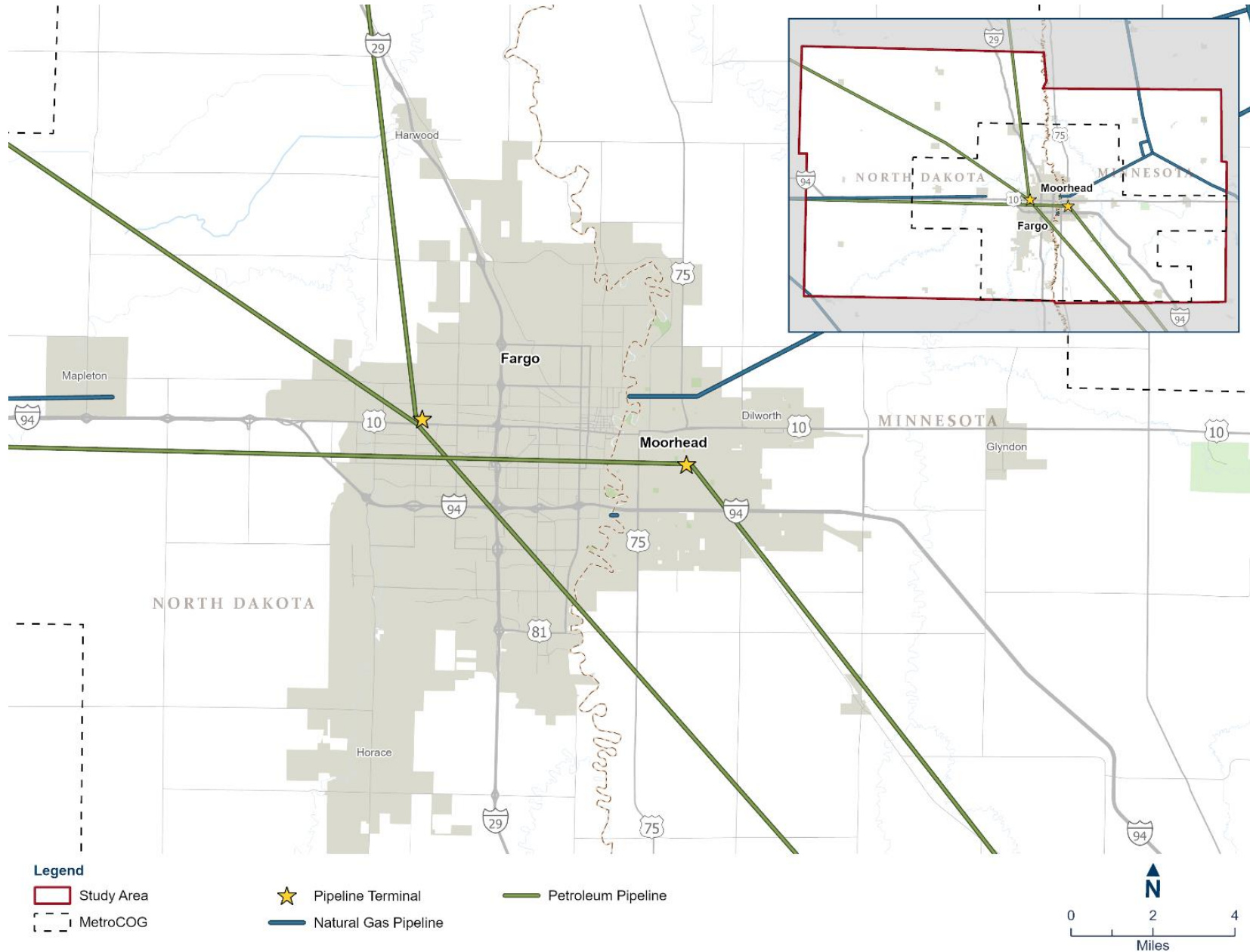


Figure 25: Pipeline Network

IV. FREIGHT FLOWS

Understanding freight movement patterns is essential for identifying current transportation system needs and future infrastructure improvements. Freight flows provide insight into the origins, destinations, commodities and transportation modes associated with goods movement within the region. For this analysis, freight flow data from the Freight Analysis Framework (FAF), developed by the Federal Highway Administration (FHWA) was used. FAF integrates data from multiple sources to estimate commodity flows by tonnage and value across the United States and provides forecasts through 2050.

While FAF data is reported at the FAF zone level, FHWA has recently developed experimental county level freight flow estimates that disaggregate FAF movements to the county level, which provide a more refined understanding of freight activity at the county level and allow regional planning agencies to better assess freight flow patterns within smaller geographic areas. The county level estimates are derived using a combination of economic activity, employment, population, and transportation network characteristics to allocate FAF flows among counties in each FAF zone.

These county level factors, which represent each county's share of freight flows within the larger FAF geography, were used to develop freight flow estimates for the two-county study area. The available 2022 disaggregation factors were applied to the most recent FAF release using the 2022 base year data. To estimate future demand, the same county level factors were applied to the FAF 2050 forecast. This approach assumes that the share of freight activity within each county will remain generally consistent over the forecast horizon. While future economic development and changes in supply chain patterns may alter these shares over time, applying the 2022 factors to the FAF forecasts provides a reasonable planning level estimate of future freight movement and supports evaluation of long-range transportation needs within the Metro COG area.

Mode Split

Based on the county level FAF estimates for 2022, trucking accounted for the largest share of freight tonnage, carrying 51% of all goods in the area by tonnage and 65% by value. The high share of truck reflects its flexibility and ability to provide direct connections between producers, distribution centers, businesses, and consumers. The region's highway network is a critical component of the freight system and supports freight activities.

Pipelines represent the second largest mode, accounting for approximately 35% of the tonnage and 19% of the value. This substantial share reflects the importance of energy related commodities in the regional economy and highlights the role of pipeline infrastructure in transporting large volumes of natural gas, petroleum products, and other commodities efficiently over long distances. Rail transportation accounted for 11% of freight tonnage and 7% of value, serving an important role in the movement of bulk commodities and other goods that benefit from the economies of scale associated with rail transportation. The remaining 3% by tonnage and 9% by value moved by multiple modes and mail.

Figure 26 and Figure 27 illustrate the distribution of freight tonnage and value by mode in the study area in 2022.

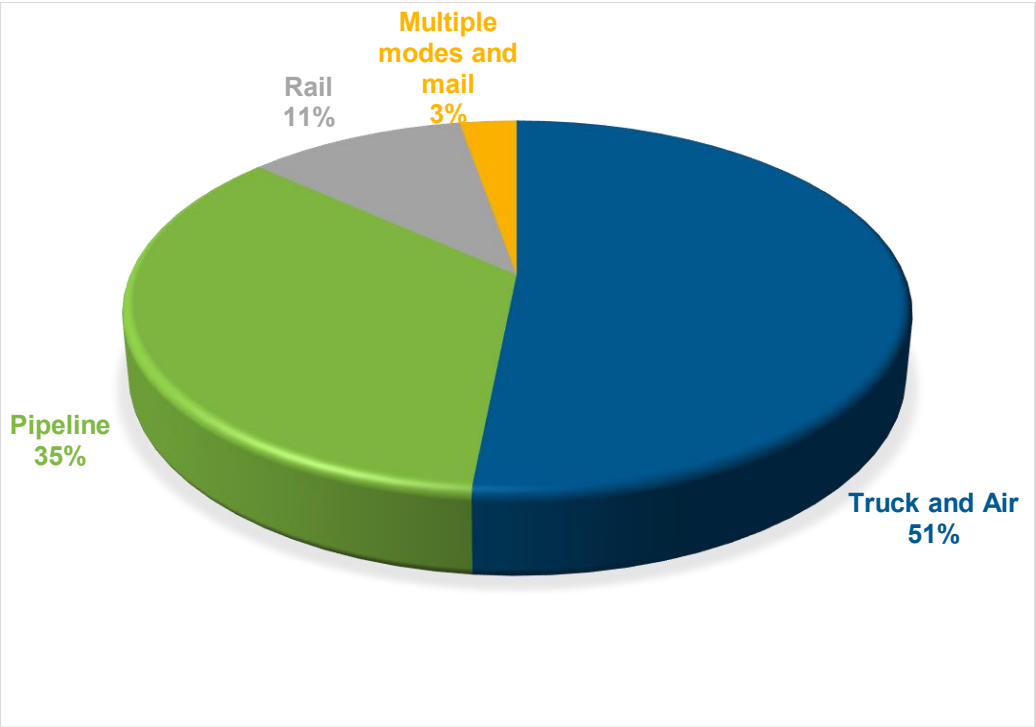


Figure 26: Modal Split by Tonnage, 2022
Source: FAF 5 County Level Data

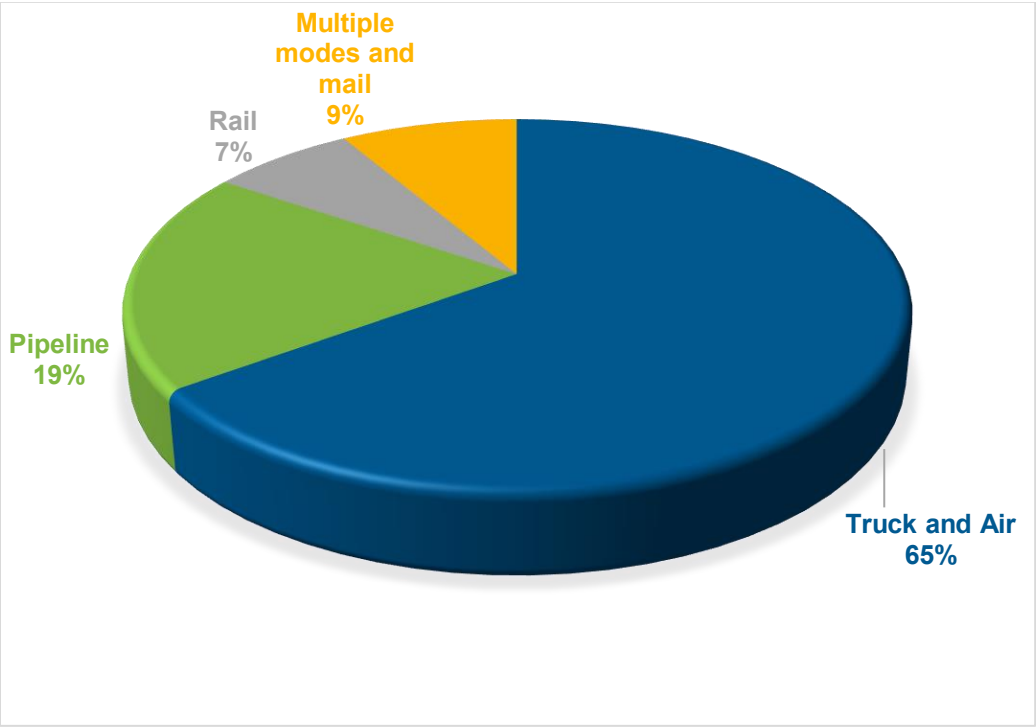


Figure 27: Modal Split by Value, 2022
Source: FAF 5 County Level Data

Commodity Flows

Commodity data in the county level version of FAF is aggregated into five groups:

- Agricultural products (SCTG 01–09)
- Gravel and mining products (SCTG 10–14)
- Coal and other energy products (SCTG 15–19)
- Chemicals, wood, and metals (SCTG 20–33)
- Manufactured goods, mixed freight, waste, and unknown (SCTG 34–99)

As illustrated in Figure 28 coal and other energy products and agricultural products remain the dominant commodities throughout the forecast period, each accounting for 39 million tons in 2022. By 2050, coal and other energy products are expected to grow to 61 million tons, while agricultural products increase to 47 million tons.

The fastest growth is projected among chemical, wood, and metal products, which nearly triple from 11 million tons in 2022 to 30 million tons in 2050. Gravel and mining products are also expected to experience significant growth, increasing from five million to 11 million tons. Manufactured goods, mixed freight, waste, and unknown commodities remain a relatively small share of total tonnage but are forecast to double from three to six million tons over the same period.

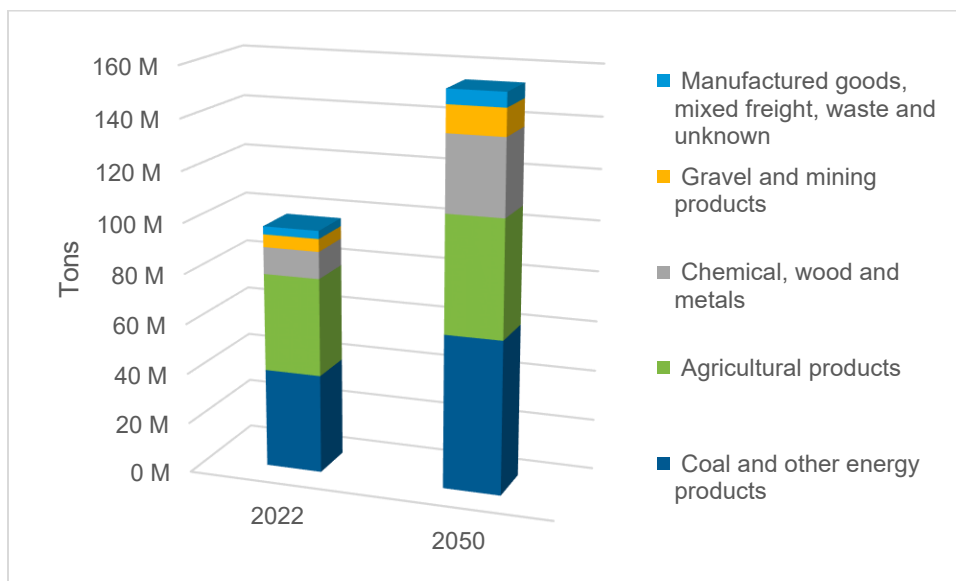


Figure 28: Tonnage by Commodity, 2022-2050
Source: FAF 5 County Level Data

The Sankey diagram in Figure 29 illustrates the top five FAF zones for inbound freight to the Metro COG area in 2022 by tonnage. North Dakota is by far the largest origin of freight moving into the region, generating approximately 15.7 million tons across the five commodity groups. Agricultural products account for the largest share of these shipments at 8.4 million tons, followed by coal and other energy products at 3.8 million tons.

The Rest of Minnesota is the second-largest origin, contributing nearly 5.9 million tons. Agricultural products represent the majority of these shipments with four million tons, while gravel and mining

products and chemical, wood, and metal products also contribute notable volumes. The Minneapolis-St. Paul metropolitan area ranks third, generating approximately 2.4 million tons, with a more diversified commodity mix that includes coal and energy products, agricultural products, and manufactured goods. Montana and South Dakota round out the top five origins, contributing 1.5 million and 1.3 million tons, respectively. Montana's shipments are dominated by coal and other energy products, while South Dakota's freight flows are heavily concentrated in agricultural products.

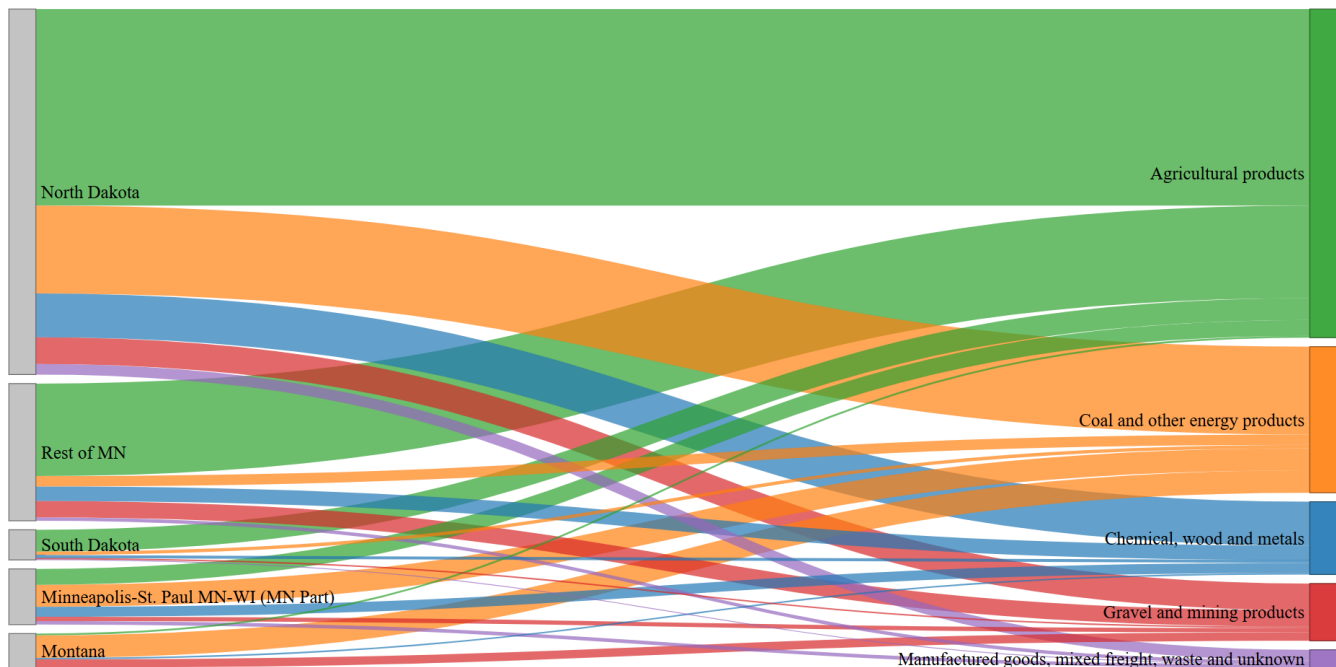


Figure 29: Top Five Trade Partners for Inbound Commodities, 2022 Tons
Source: FAF 5 County Level Data

Similarly, Figure 30 shows the top five destinations for outbound commodities by commodity group. North Dakota received the largest volume with approximately 15.7 million tons. Agricultural products accounted for the majority of these shipments with 10.3 million tons, followed by coal and other energy products at 2.5 million tons. This reflects the strong two-way freight relationship between the region and North Dakota's agricultural and energy economies.

The Chicago metropolitan area is the second largest destination, receiving nearly 9.6 million tons. Unlike other major destinations, these shipments are overwhelmingly composed of coal and other energy products, which account for 8.9 million tons of the total. The prominence of the Chicago market highlights its role as a major regional hub for energy consumption, processing, and distribution.

The Minneapolis-St. Paul metropolitan area ranks third with approximately 5.3 million tons of outbound freight from the two county area. Shipments to the Twin Cities are led by coal and other energy products and agricultural commodities. The Rest of Minnesota follows with 4.6 million tons, driven primarily by agricultural products, while South Dakota receives approximately 2.8 million tons, with coal and energy products and agricultural commodities accounting for the majority of shipments.

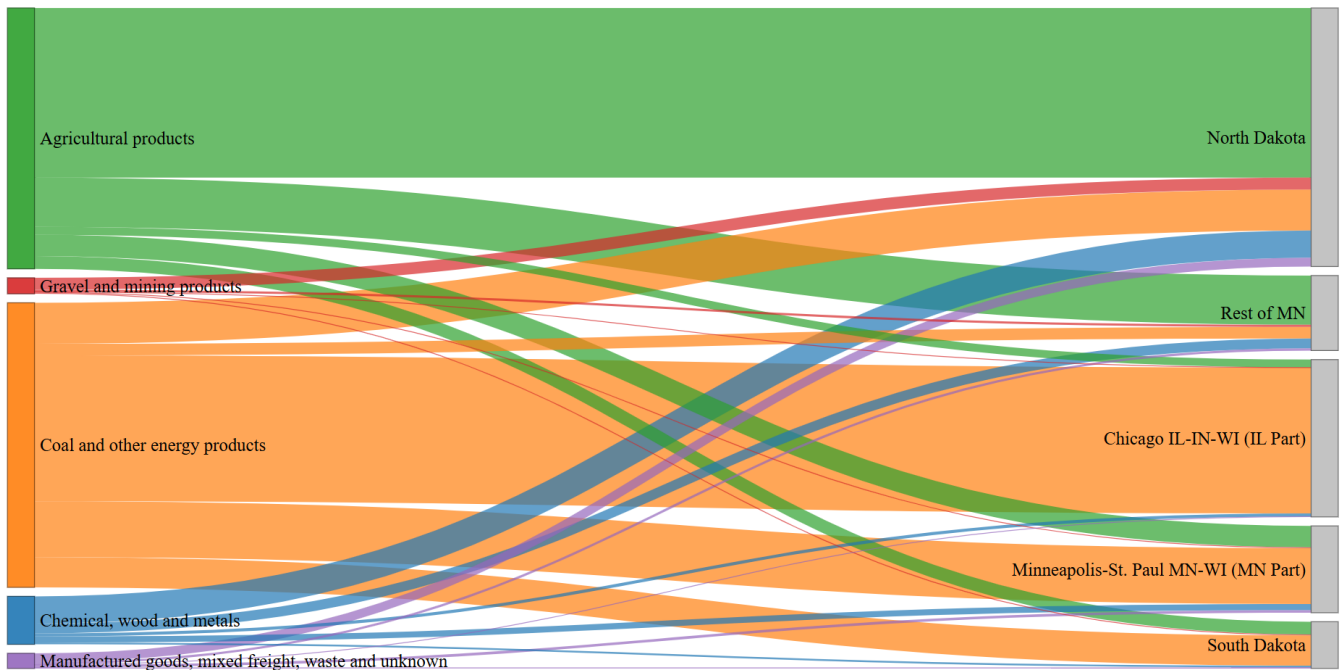


Figure 30: Ton Five Trade Partners for Outbound Commodities, 2022 Tons
Source: FAF 5 County Level Data

Figure 31 through Figure 35 show the FAF Zones that are an origin or destination for freight to and from the two-county region and the corresponding 2022 tonnage. Each set of maps corresponds to one of the five commodity groups. North Dakota and Minnesota are top trading partners for Metro COG for all commodities. Agricultural products and coal and other energy products have higher tonnage than the other three categories as shown in the maps.

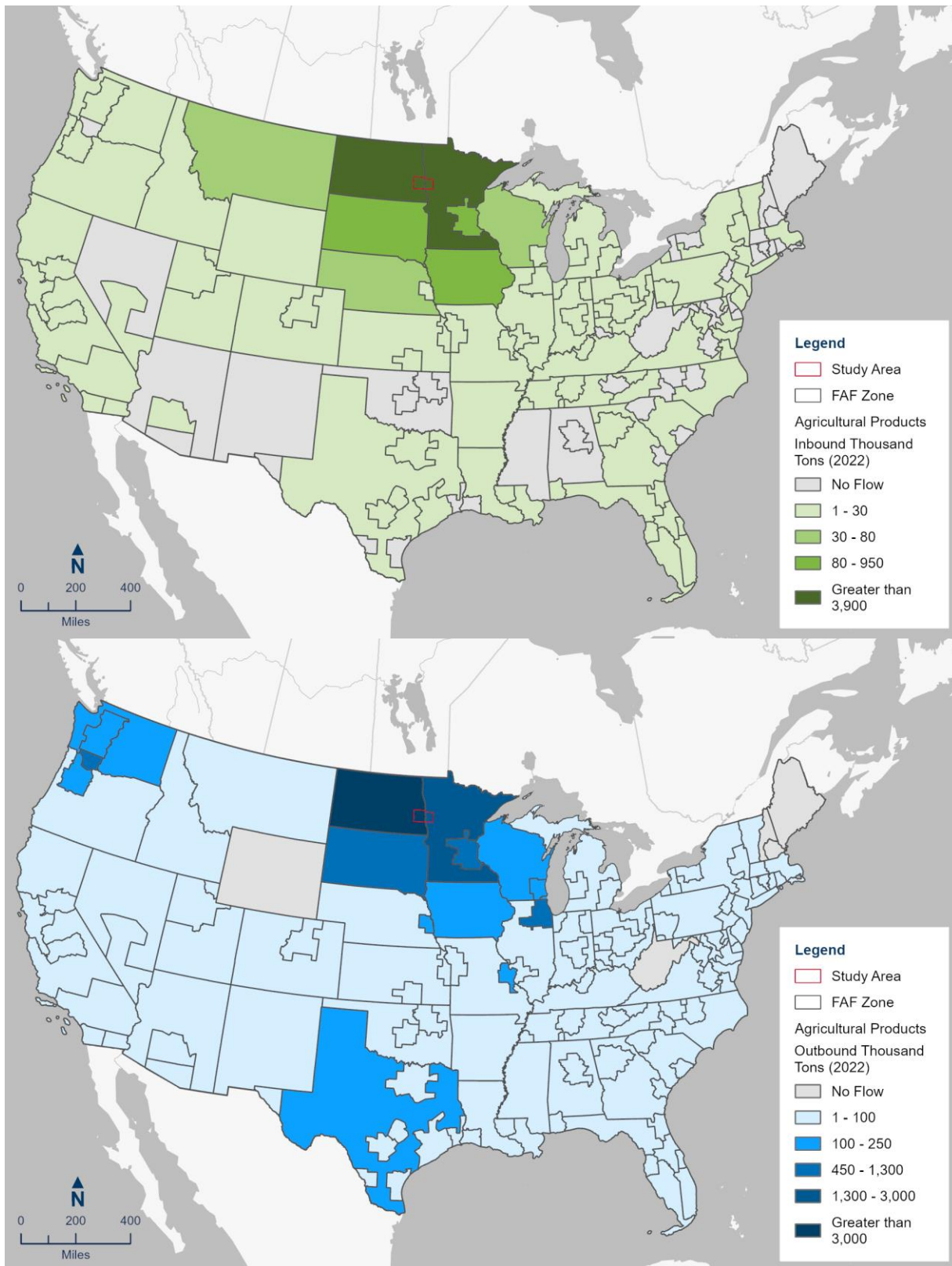


Figure 31: Agricultural Products Origins and Destinations

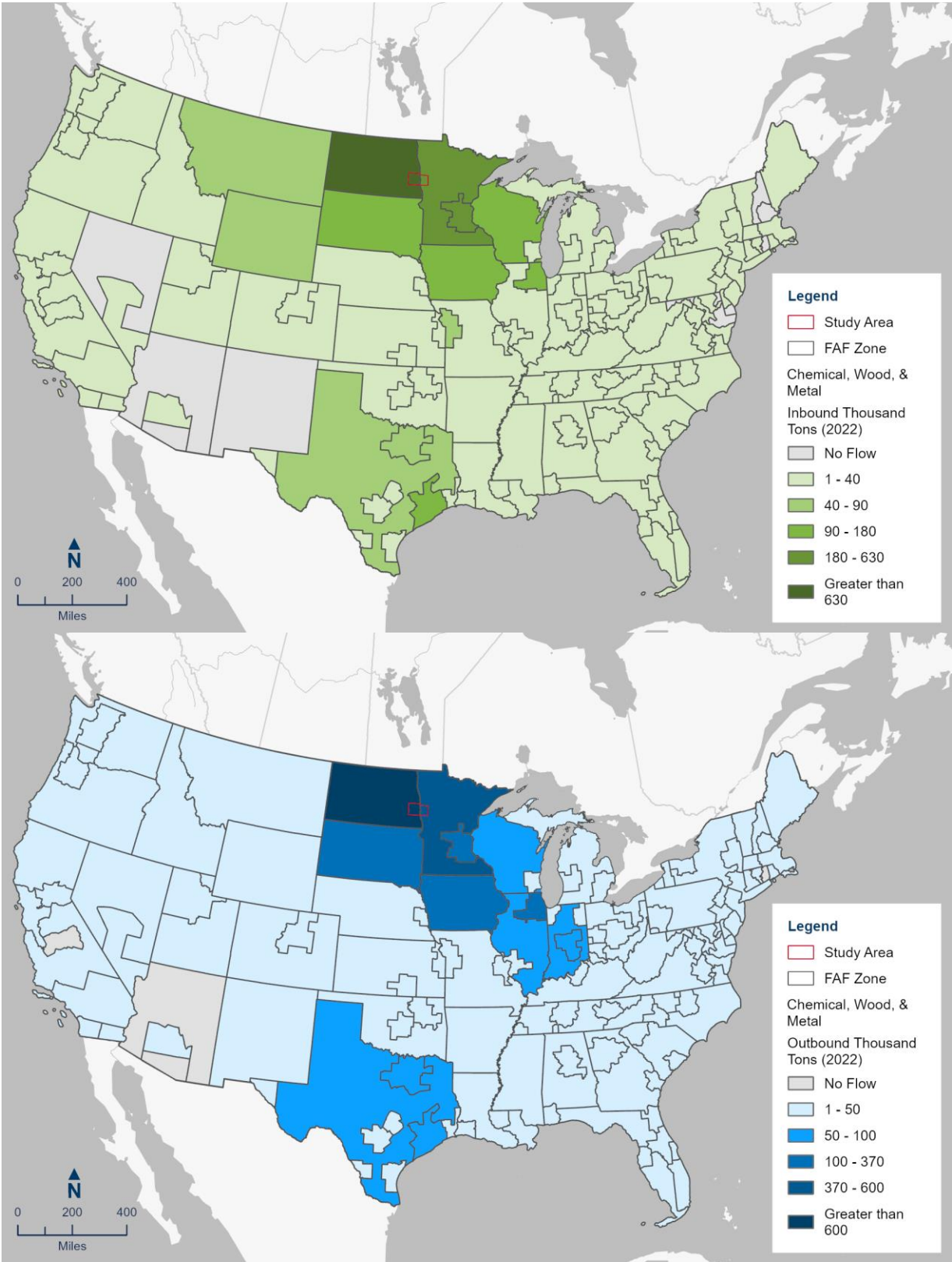


Figure 32: Chemical, Wood and Metals Origins and Destinations

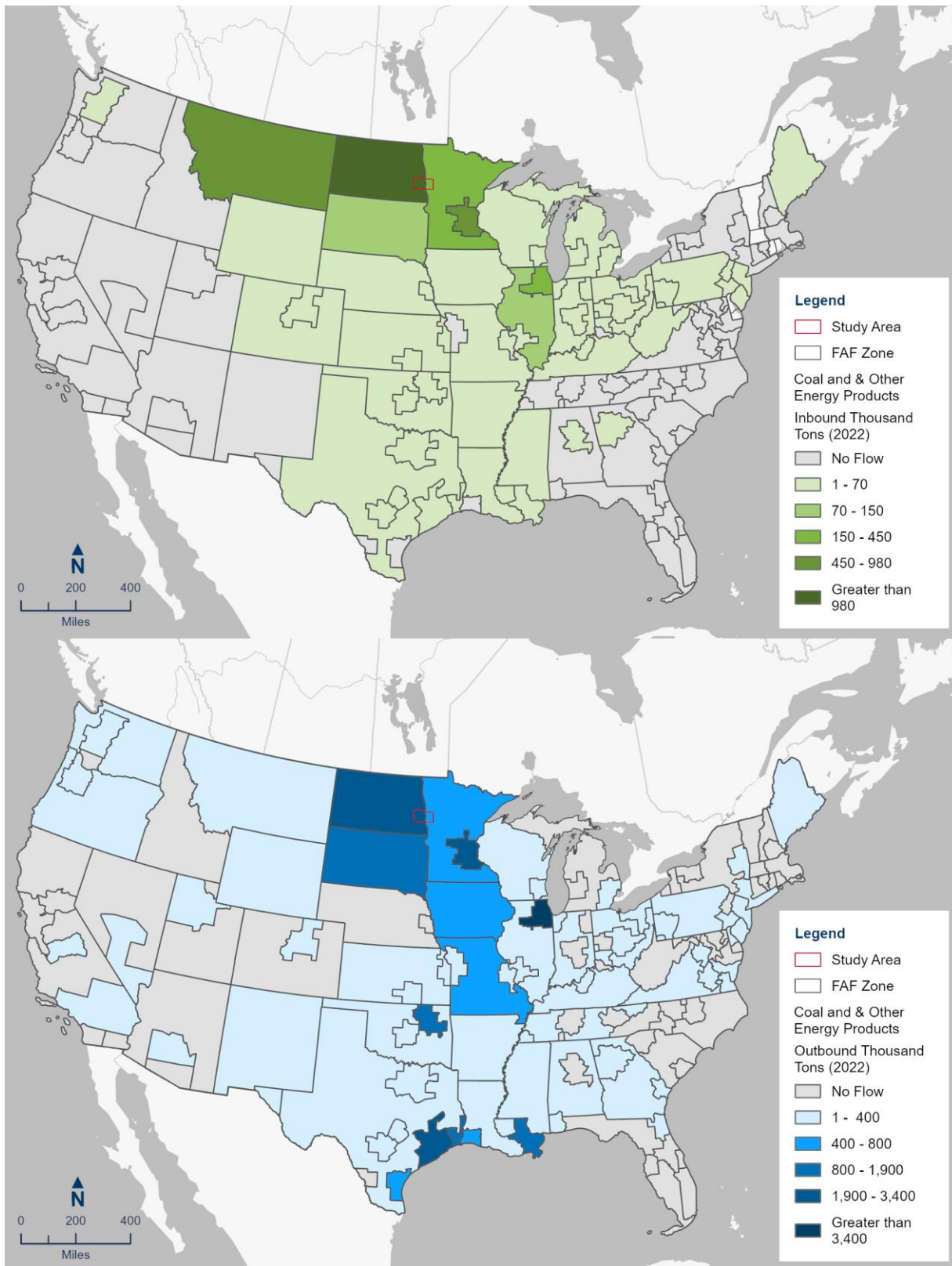


Figure 33: Coal and Other Energy Products Origins and Destinations

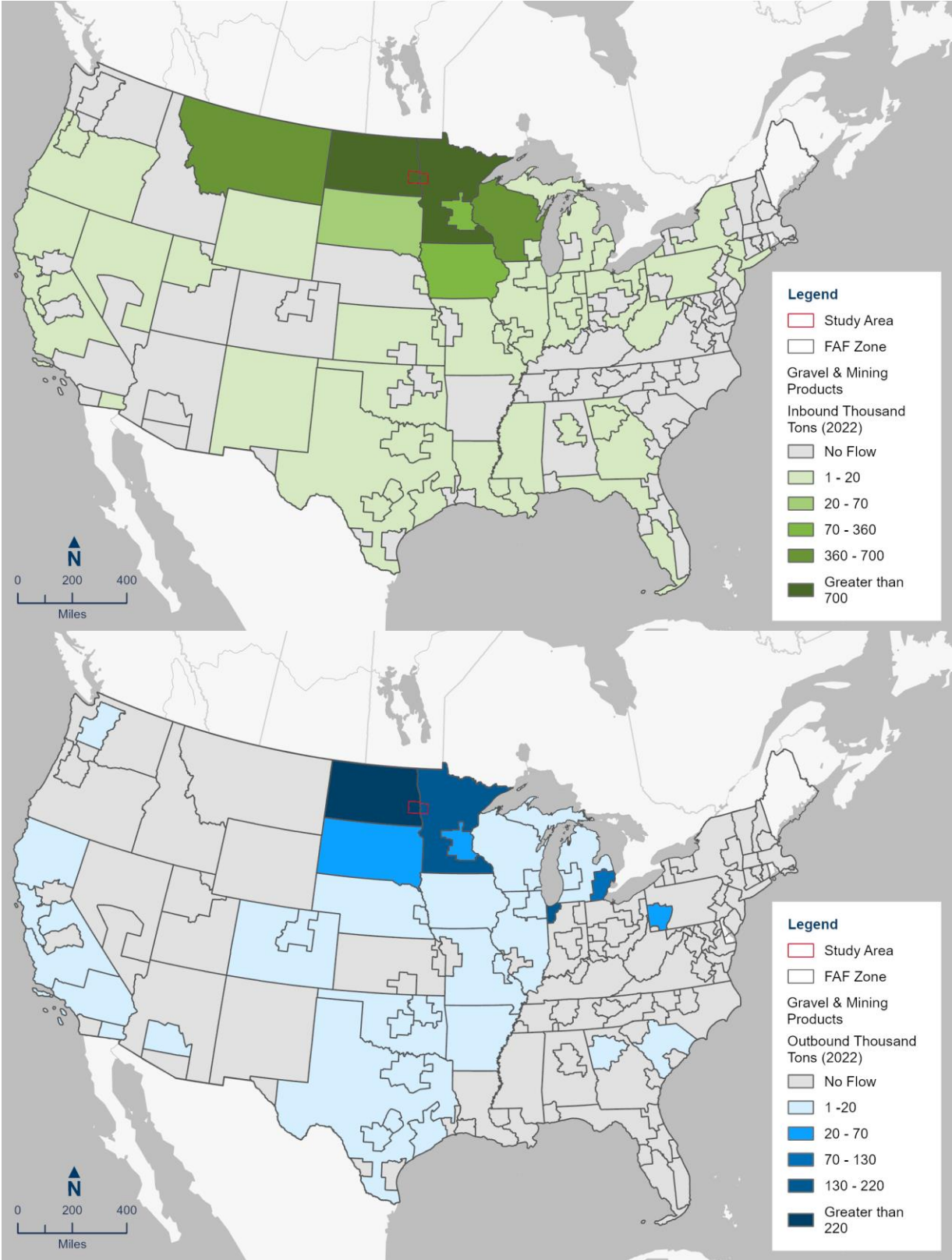


Figure 34: Gravel and Mining Products Origins and Destinations

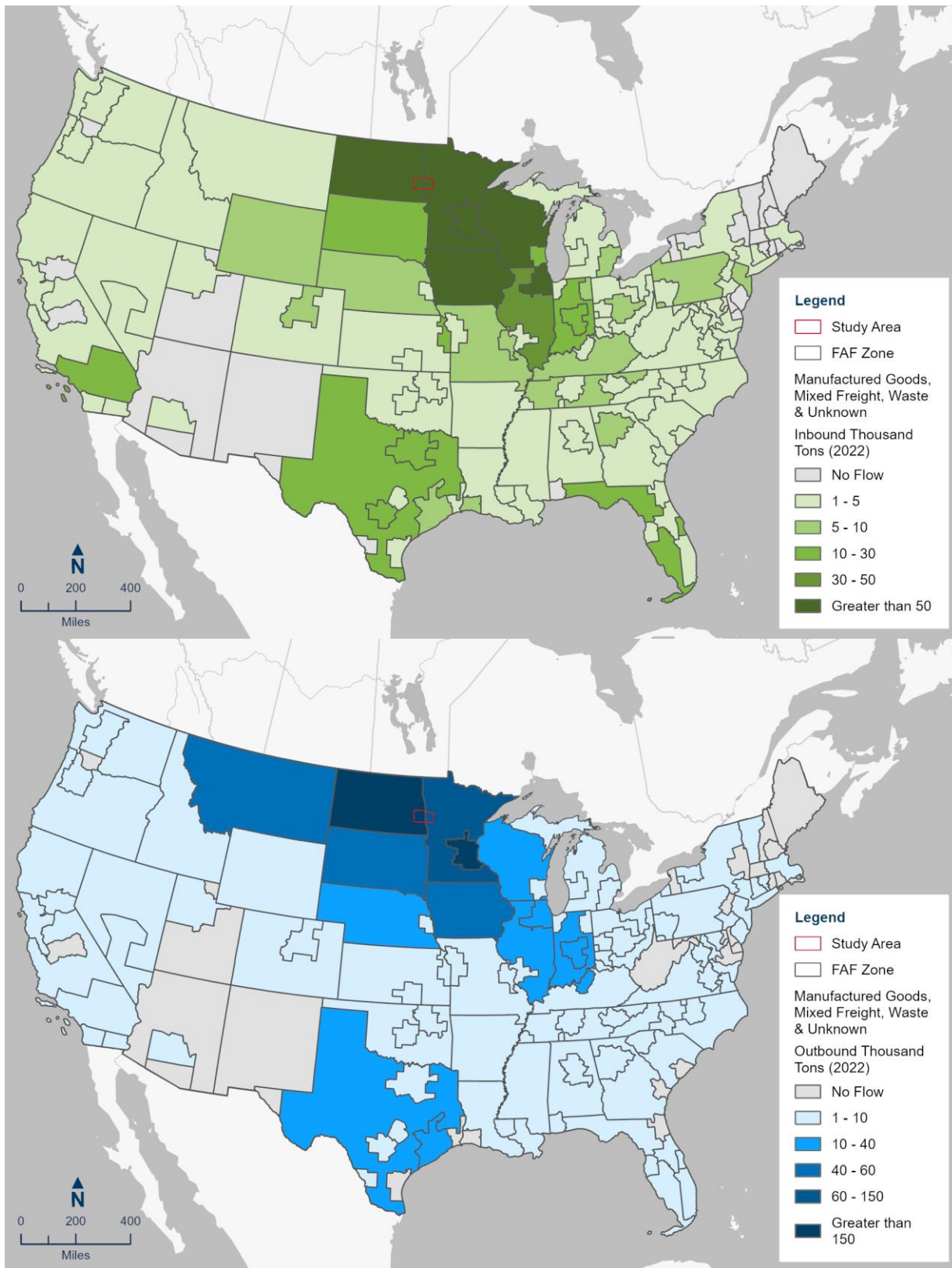


Figure 35: Manufactured Goods, Mixed Freight, Waste and Unknown Origins and Destinations

Directional Freight Flows

Freight movements can be categorized as inbound shipments destined for the study area, outbound shipments originating within the study area, and internal shipments that both originate and terminate within the study area.

In 2022, approximately 97 million tons of freight moved into, out of, or within the two county area. Outbound flows accounted for the largest share of freight activity, totaling a little over 60 million tons, or 62% of all freight tonnage. Inbound flows total approximately 32.5 million tons (33%), while intra-regional flows accounted for a little over four million tons (4%). The dominance of outbound freight flows reflects the area's role as a net exporter of goods that serve markets throughout the country.

Freight demand is expected to grow substantially through 2050. Based on FAF forecasts, total freight tonnage is expected to grow to nearly 154 million tons representing a total growth of 59% or 1.7% annually. Outbound flows are expected to grow to almost 97 million tons, while inbound tonnage is projected to increase to a little over 51 million. Internal freight movements are projected to increase to 6 million tons. The continued predominance of outbound freight activity suggests that Metro COG's economy will remain closely tied to industries that produce goods for consumption outside the region.

Freight value is projected to grow at a faster rate than tonnage to approximately \$91 billion, a 2.4% annual increase. This growth indicates a shift toward higher value products. Table 3 shows the directional distribution of freight tonnage and value in 2022 and 2050, highlighting the anticipated growth in the region.

Table 3: Directional Freight Flows, 2022-2050

Direction	Thousand Tons			Million USD		
	2022	2050	CAGR	2022	2050	CAGR
Inbound	32,438	51,429	1.7%	20,663	40,783	2.5%
Outbound	60,105	96,594	1.7%	25,026	46,972	2.3%
Intra	4,343	6,073	1.2%	1,754	3,307	2.3%
Total	96,885	154,097	1.7%	47,443	91,062	2.4%

Source: FAF 5 County Level Data

The freight activity is primarily driven by domestic trade. In 2022, domestic movements in the two county region accounted for 75% of the freight tonnage. Imports represented about 20% and the remaining 5% was exports (Figure 36). By 2050, domestic trade is expected to increase by 1% annually and the corresponding trade share is expected to decline to 61%, while import share is expected to increase to 30% and exports are expected to double their share to 9% (a 3% and 4% annual growth in tonnage respectively).

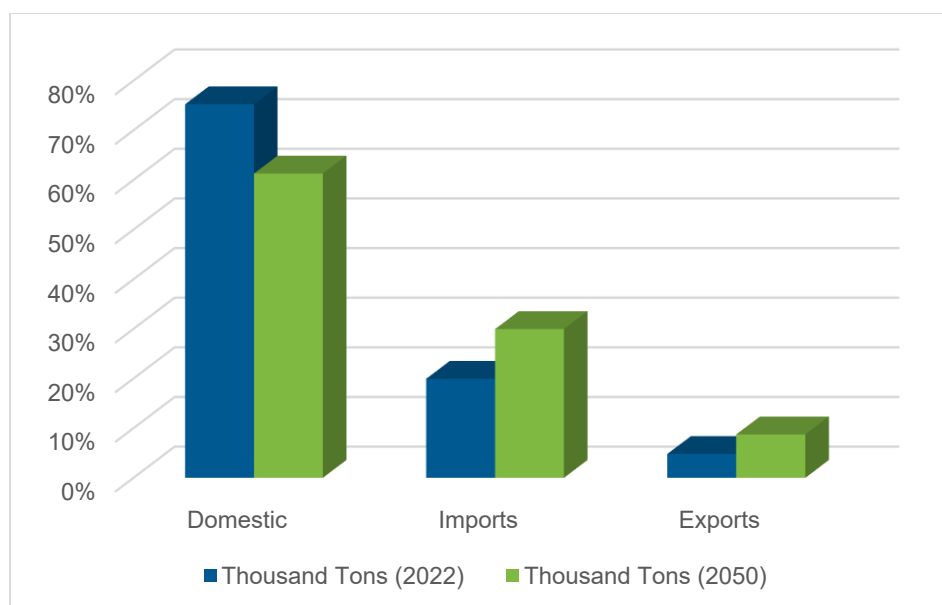


Figure 36: Tonnage Trade Share, 2022-2050
Source: FAF 5 County Level Data

Table 1Table 4 shows the top 10 destination counties within North Dakota and Minnesota for goods from the Metro COG region. Outbound commodity flows are 62% to North Dakota and 38% to Minnesota. Grand Forks County, Burleigh County, and Ward County in North Dakota received the highest tonnage in 2022. About 63% of the tonnage to Grand Forks and 68% to Burleigh County is agricultural products. Ward County receives mainly agricultural products (55%) and coal and energy products (23%). In general, 65% of the tonnage from Metro COG to North Dakota is of agricultural products, while to Minnesota is evenly split between agricultural products (43%) and coal and other energy products (42%).

Table 4: Top 10 Destination Counties in ND and MN

Outbound County	Thousand Tons
Grand Forks County, ND	1,748
Burleigh County, ND	1,704
Ward County, ND	1,495
Williams County, ND	1,105
Hennepin County, MN	1,023
Morton County, ND	978
Washington County, MN	895
Stark County, ND	873
Richland County, ND	649
Stutsman County, ND	567
Rest of MN	7,944
Rest of ND	7,163
Total	26,144

Source: FAF 5 County Level Data

Table 5 shows the top 10 origin counties within North Dakota and Minnesota for goods to the Metro COG region. Inbound commodity flows are 66% from North Dakota and 34% from Minnesota, while agricultural products are 53% of the tonnage from North Dakota and 56% from Minnesota. Williams, Burleigh, Grand Folks, and Ward counties account for about a quarter of the total outbound tonnage from the area. Goods from Williams County are mainly coal and energy products, while inbound goods from the other four counties are agricultural products.

Table 5: Top 10 Origin Counties in ND and MN

Inbound County	Thousand Tons
Williams County, ND	1,749
Burleigh County, ND	1,495
Grand Forks County, ND	1,421
Ward County, ND	1,178
Hennepin County, MN	853
McKenzie County, ND	714
Morton County, ND	708
Stark County, ND	638
St. Louis County, MN	627
Olmsted County, MN	552
Rest of MN	6,253
Rest of ND	8,169
Total	24,359

Source: FAF 5 County Level Data

Origin – Destination Travel Times

The BTS County to County Travel Time dataset provides an estimate of freight truck travel times between counties across the United States based on observed truck GPS waypoint data collected through the American Transportation Research Institute (ATRI) Freight Mobility Initiative. This dataset reflects actual freight truck movements and captures the travel conditions experienced by commercial vehicles, including roadway congestion, operational delays, and other factors affecting truck mobility. Travel times are calculated based on observed truck movements between county pairs and are summarized using percentile values to represent typical and varying travel conditions.

For this analysis, the dataset was used to evaluate freight connectivity between the Fargo-Moorhead region and counties throughout the United States. Figure 38 illustrates estimated truck travel times from and to the Fargo-Moorhead area, highlighting the region's accessibility to major freight markets and the relative time required for goods movement across the national freight network. These travel time patterns provide insight into the geographic reach of the region's freight system and help identify key markets that can be accessed within typical trucking timeframes.

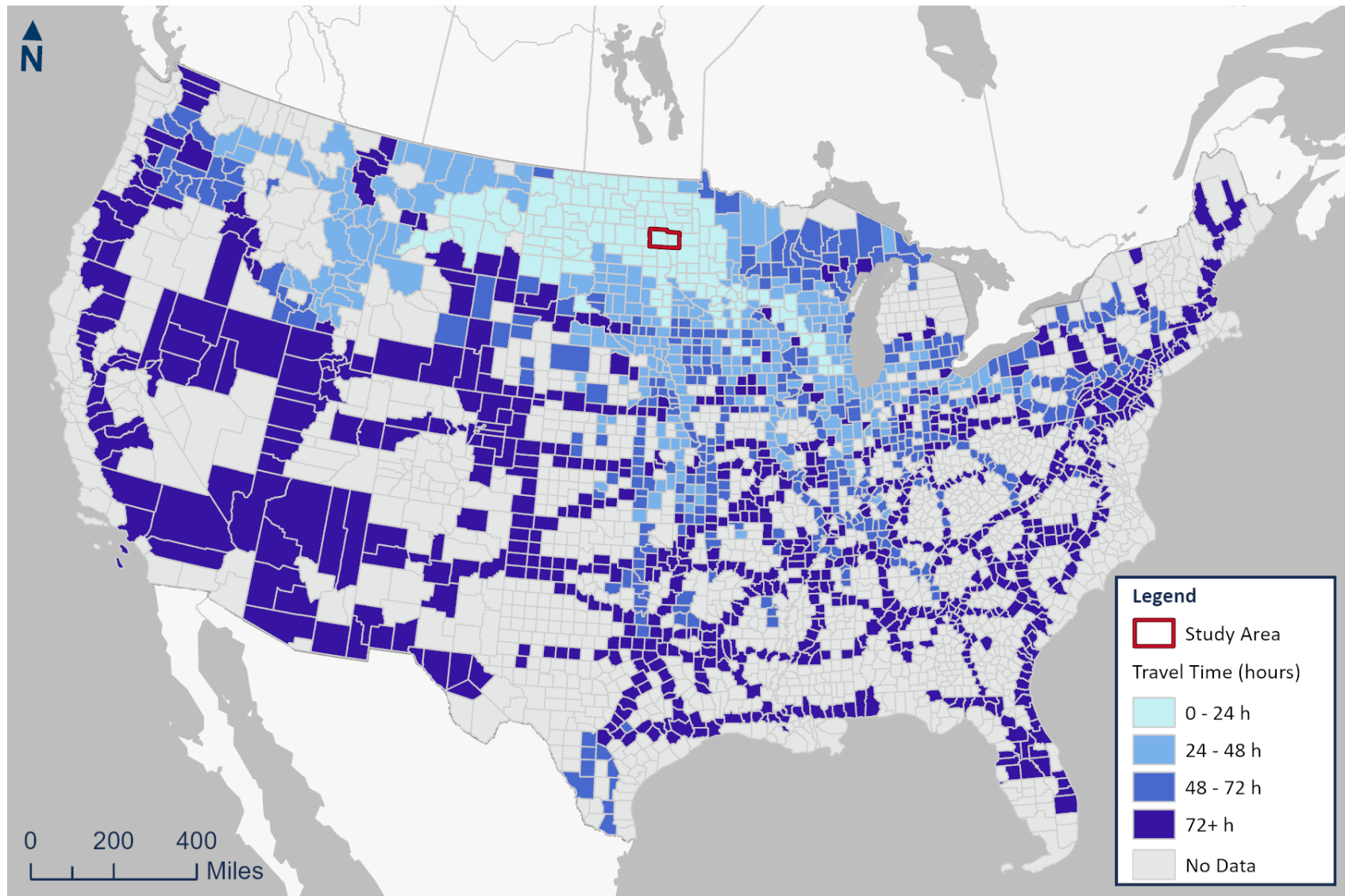


Figure 38: County to County Travel Times
Source: BTS

V.SUMMARY AND NEXT STEPS

This document summarizes the existing conditions for the Fargo-Moorhead metropolitan region from the perspectives of freight economic and employment conditions, modal freight infrastructure, and the flow of freight goods to and from the region. It provides the baseline from which key freight needs and issues will be identified and will inform the selection of recommended actions Metro COG may undertake to further improve the production and movement of freight within the region.

A companion document to this summary is the Peer Region Review and Best Practices Summary. This document reviews the population, economic, and freight planning characteristics of similarly sized metro areas around the country to identify potential best practices and strategies Metro COG may wish to implement locally. The results from both summary documents will be presented to the Study Review Committee for additional comment and feedback.

Additionally, findings from stakeholder engagement efforts will further guide and support recommendations for best practices and strategies. The findings from all of these efforts will be summarized in the final Freight Plan document.