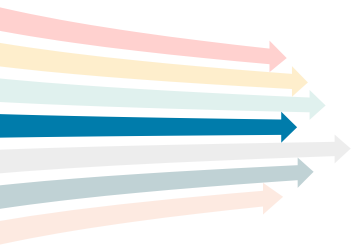




4

ECONOMIC GROWTH THROUGHOUT THE REGION



4.1 BACKGROUND

What is Economic Prosperity?

Economic prosperity refers to a state where individuals, businesses, and communities experience continued development, stable employment, and improved quality of life through increased productivity and wealth generation. It is often measured by Gross Domestic Product (GDP) growth, income levels, and access to economic opportunities, all of which contribute to long-term regional development and competitiveness.

Transportation systems support economic prosperity by enabling the efficient movement of goods and people—an essential factor for economic development in MAPA’s region of Iowa and Nebraska. Freight

traffic in the region is growing rapidly, and addressing this growing challenge will require a transformative approach that considers the needs of all transportation system users.

As freight traffic increases on highways, local streets, and railway systems, ensuring safety and preserving infrastructure will become even more critical. Meeting these needs will require close organizational-level collaboration, regional-level collaboration, and strong public support.

Why Economic Prosperity?

Economic prosperity is essential for ensuring a high quality of life for residents in MAPA’s region, fostering business growth, and maintaining vibrant communities. A strong economy depends on the well-being of people and the efficiency of transportation systems. Safe and reliable mobility allows individuals to access jobs, businesses to transport goods, and communities to thrive, all contributing to sustained economic growth.

Safety and air quality are essential to regional economic prosperity. Traffic crashes disrupt daily life,

delay business operations, and result in loss of life and property. Making safety improvements along transportation corridors is a vital strategy to enhance economic prosperity for the region. Similarly, transportation-related emissions affect air quality, which impacts public health, productivity, and regional competitiveness. To support long-term growth, MAPA works with regional partners to reduce crash incidences on our transportation system, increase awareness of ground-level ozone, and protect community health.

How is Economic Prosperity Measured?

Economic prosperity in MAPA's region is closely tied to transportation system efficiency, safety, and sustainability. To assess how well the transportation network supports economic prosperity, MAPA tracks performance metrics focusing on freight movement, infrastructure investment, transportation accessibility, and safety. These indicators help to measure the region's ability to sustain long-term economic growth through transportation planning.

Freight and Supply Chain Efficiency

Freight movement plays a critical role in the regional economy by enabling businesses to transport goods efficiently. The Omaha-Council Bluffs region relies heavily on freight and freight-related industries to sustain its economic strength. Freight-intensive sectors, including transportation, warehousing, manufacturing, and agriculture, contribute 28% of Nebraska's total economic output and support more than 20% of jobs statewide. In the Omaha metro, freight activity primarily centers around major industrial corridors and logistics hubs where manufacturing, warehousing, and distribution facilities are concentrated. Truck transportation employment in the region is more than twice the national average. The concentrations of food, plastics, and agrochemical manufacturing are 2.52x, 1.25x, and 2.56x higher, respectively, relative to the rest of the nation. Also, recent developments such as Amazon's fulfillment center in Papillion and Dollar General's distribution hub in Blair are expected to add 1,400 jobs to the freight and warehousing sector. However, congestion, bottlenecks, and unpredictable travel times increase operational costs and reduce supply chain reliability. MAPA measures freight efficiency using the key Truck Travel Time Reliability (TTTR), which assesses the consistency of freight movements along major corridors.

The Congestion Management Process (CMP) is another approach MAPA uses to identify, analyze, and

address congestion on the regional transportation network. It is designed to improve overall system performance by identifying congested locations, evaluating causes, and recommending strategies that manage traffic more effectively. In doing so, motorists and freight-related activities benefit from improved mobility and reliability. Although freight congestion is not currently a widespread or persistent issue in the region, understanding how and where it may affect goods movement is important, especially as freight volumes grow and supply chain efficiency becomes increasingly critical.

According to the Freight Analysis Framework (FAF5), freight tonnage in the region is expected to increase by 64%, and freight value by 99%, by 2050. MAPA's CMP helps identify priority corridors for operational improvements, construction coordination, and potential investments to support overall system performance. To proactively explore how this growth may affect the transportation network, MAPA will develop its first Regional Freight Plan in 2026 to better understand freight's localized impacts. This effort will also help distinguish between recurring peak-hour congestion and more random or event-driven traffic delays, thereby improving strategies for freight efficiency, roadway safety, and economic competitiveness.

Transportation System Reliability and Congestion Management

A well-functioning transportation network ensures businesses and commuters can move efficiently without excessive delays. Transportation reliability is crucial in regional economic performance because freight and commuter movement delays potentially lead to higher commuting costs and lower productivity. MAPA tracks travel time reliability using the National Performance Management Research Data (NPMRDS) to evaluate how consistently roadways support timely travel.



Another key indicator is Vehicle Hours Traveled (VHT), which measures vehicles' time on the road and helps identify high-congestion areas requiring intervention. The CMP plays a central role in congestion management by providing strategies to reduce VHT, optimize traffic flow, and enhance overall transportation efficiency. It highlights congestions and bottlenecks in locations where traffic significantly impacts business operations and workforce mobility. Through the CMP, MAPA supports business growth, workforce productivity, and regional competitiveness by improving travel reliability and minimizing congestion.

Workforce Accessibility and Economic Inclusion

Economic prosperity depends on how well transportation systems connect workers to jobs and businesses to talent. A well-connected transportation network reduces commuting times, increases labor market access, and supports business development. MAPA measures workforce accessibility by evaluating the number of jobs accessible within a 30-minute drive or a 45-minute transit ride, providing a key metric for workforce mobility and economic opportunity. Public transit accessibility is another critical measure, ensuring workers have reliable transportation options to reach employment centers.

Additionally, first-and last-mile connectivity is essential in economic inclusion, as pedestrian and bicycle infrastructure must support access to transit and job locations. Improving workforce accessibility promotes equitable economic growth by enabling residents to reach employment opportunities while allowing businesses to expand their workforce and attract skilled employees. Transit-oriented development further enhances the workforce by concentrating development around transit corridors, reducing car dependency, and fostering mixed-use communities that increase access to jobs and services.

Infrastructure Investment and Economic Resilience

The condition and quality of the transportation infrastructure directly impact economic performance. Well-maintained roads, bridges, and transit systems reduce long-term costs, improve travel reliability, and ensure the efficient movement of people and goods. MAPA tracks infrastructure conditions by assessing the percentage of roads and bridges rated as good, fair, or poor, helping decision-makers prioritize investments that enhance regional transportation resilience.

The cost-effectiveness of transportation investments is another key performance measure, as MAPA evaluates how funding contributes to job creation, freight mobility, and economic sustainability. MAPA integrates performance-based planning to align infrastructure investments with economic development goals, ensuring that the region's transportation system remains sustainable, fiscally responsible, and capable of supporting long-term growth.

Air Quality and Sustainability

MAPA tracks Vehicle Miles Traveled per capita to measure car dependency and its impact on emissions and congestion. Additionally, MAPA tracks investments in Electric Vehicle (EV) infrastructure, including expanding EV charging stations and alternative fuel corridors, as part of the region's strategy to reduce transportation emissions. MAPA's Little Steps, Cleaner Air Campaign is vital in promoting sustainable transportation choices, ensuring that economic growth does not come at the expense of public health and environmental quality.



Performance Targets

Evaluating performance at a regional level involves taking account of how things are today, setting targets for the future, and then evaluating performance in terms of achieving these targets.

Measuring performance toward economic prosperity

- Truck Travel Time Reliability Index (TTTR) on Freight Corridors
- Freight Tonnage Growth on the Regional Freight Network
- Freight Value Growth on the Regional Freight Network
- Vehicle Hours Traveled (VHT) on Major Roadways
- Vehicle Miles Traveled (VMT) on Major Roadways
- Travel Time Reliability on the Interstate System
- Travel Time Reliability on the Non-Interstate System
- Congestion Reduction on Freeways
- Congestion Reduction on Non-Freeway

will be an ongoing process that is shared with the public online. For a more detailed description of performance measures, please see Appendix E. The following metrics will be used to measure accessibility within the region:

Safety and Economic Prosperity

A safe environment fosters economic growth by attracting businesses, promoting workforce productivity, and ensuring seamless transportation of goods and services. In the MAPA region, transportation safety is a top priority to protect lives and properties and to sustain economic development and business competitiveness.

Examples of MAPA's ongoing safety efforts include the agency's participation in Safe Streets for All (SS4A), Transportation Incident Management (TIM), and the administration of the Metro Area Motorist Assistance (MAMA) program. MAPA also works to implement its safety performance measures through the project selection criteria for its regional Surface Transportation Block Grant (STBG) and Transportation Alternative Programs (TAP) funding programs. These criteria prioritize investments that improve

safety and support freight movement, workforce mobility, and regional economic resilience.

Safety of the Regional Transportation System

Ensuring traffic safety is essential to planning for the region's transportation system. Like our state and federal partners, MAPA's safety planning efforts focus on reducing fatal and serious injury crashes, recognizing that each tragic event profoundly affects lives, mobility, and the regional economy. Crashes involving motorists and other roadway users result in dozens of fatalities each year in the MAPA region, as indicated in Figure 1. The MAPA crash data was compiled from Iowa and Nebraska crash data during the development of the regional Comprehensive Safety Action Plan (MAPA, 2025).



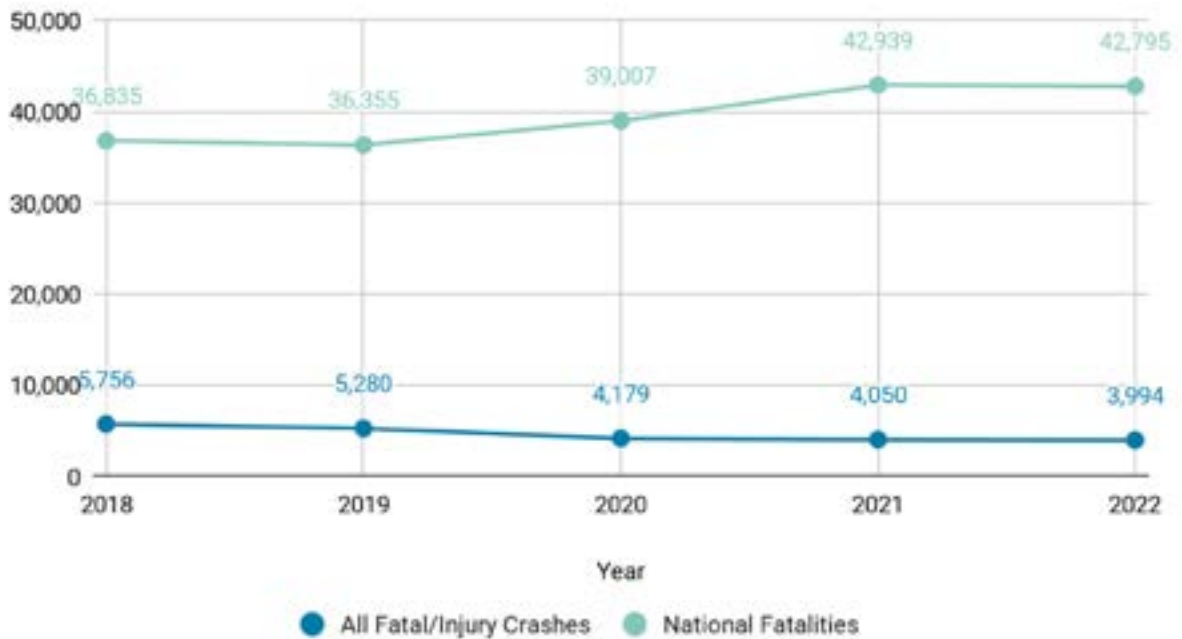
Figure 4.1: Comparison of MAPA Fatal and Serious Injury/All Injury Crashes with National Fatalities

Year	Within the MAPA SS4A Study Area		National Fatalities
	Fatal and Serious Injury Crashes	All Fatal/Injury Crashes	
2018	460	5,756	36,835
2019	404	5,280	36,355
2020	442	4,179	39,007
2021	429	4,050	42,939
2022	425	3,994	42,795
Total	2,160	23,259	197,931

According to the National Highway Traffic Safety Administration (NHTSA, 2023), 36,355 motor vehicle fatalities occurred across the United States in 2019, as shown in Figures 1 and 2. The national fatality rate fell to 1.10 deaths per 100 million vehicle miles traveled (VMT), which is the lowest since 2014 despite an increase in VMT. This demonstrates that focused safety efforts can yield measurable results nationally.

However, national progress does not automatically translate to regional improvements. Between 2018 and 2022, MAPA recorded a total of 23,259 crashes, resulting in 2,160 fatalities and serious injuries. These incidents generate substantial economic and societal costs, burdening families, businesses, and public services.

Figure 4.2: National and MAPA Fatal and Injury Crash Trends (2018–2022)



According to the NHTSA (NHTSA, 2023), the annual economic burden of motor vehicle crashes is \$513.8 billion nationwide. These include direct costs, such as emergency response, medical care, and property damage, and indirect costs, including lost productivity. Applying national cost estimates to the MAPA region suggests that crashes during 2017 and 2018 may have imposed a societal cost of approximately \$1.96 billion.

Economic studies further emphasize that crashes generate immediate financial costs and affect long-term economic productivity. They also highlight that traffic crashes contribute to workforce disruptions, absenteeism, and reduced productivity, with motor vehicle crashes alone accounting for an estimated 1.5 million lost workdays annually in the United States (Nalchadzian, 2024). Additionally, upon victims'

resumption of work, they often experience approximately 10–30% reduction in workplace productivity, further intensifying economic losses and straining regional competitiveness (OSHA, 2021).

Local factors such as roadway design, driver behavior, and enforcement practices are critical in shaping crash outcomes. In the MAPA Comprehensive Safety Action Plan, crash data indicate that 8% of crashes involved speeding, while another 2.3% resulted from driver failure to yield. These preventable behaviors contribute to lost productivity, freight delays, and increased public expenditures. Investing in safety improvements is a moral and economic priority, as safety investments consistently deliver high returns by reducing harm and supporting regional economic growth (Kittelsohn, 2010; Tandrayen-Ragoobur, 2025).

Preventable Injury-Related Deaths

197,449

in 2024

222,698

in 2023



11%

year-over-year decrease

197,449

in 2024

86,777

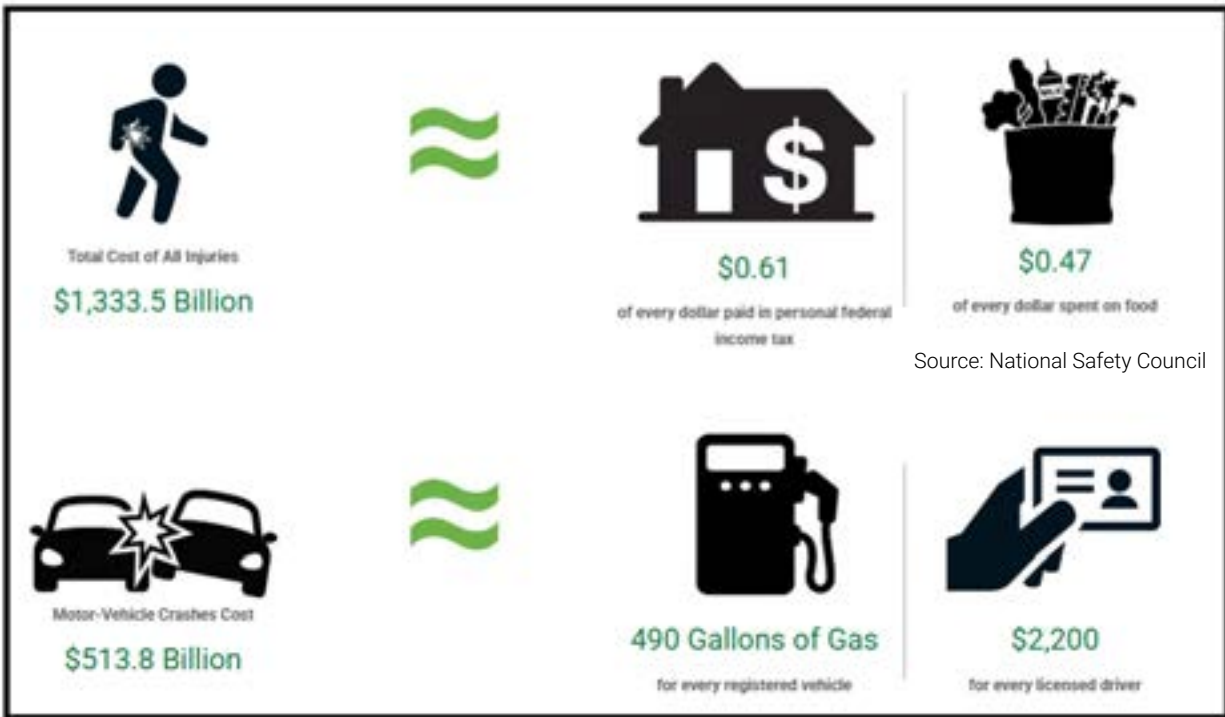
in 1992



128%

increase over 32 years

Source: National Safety Council



Source: National Safety Council

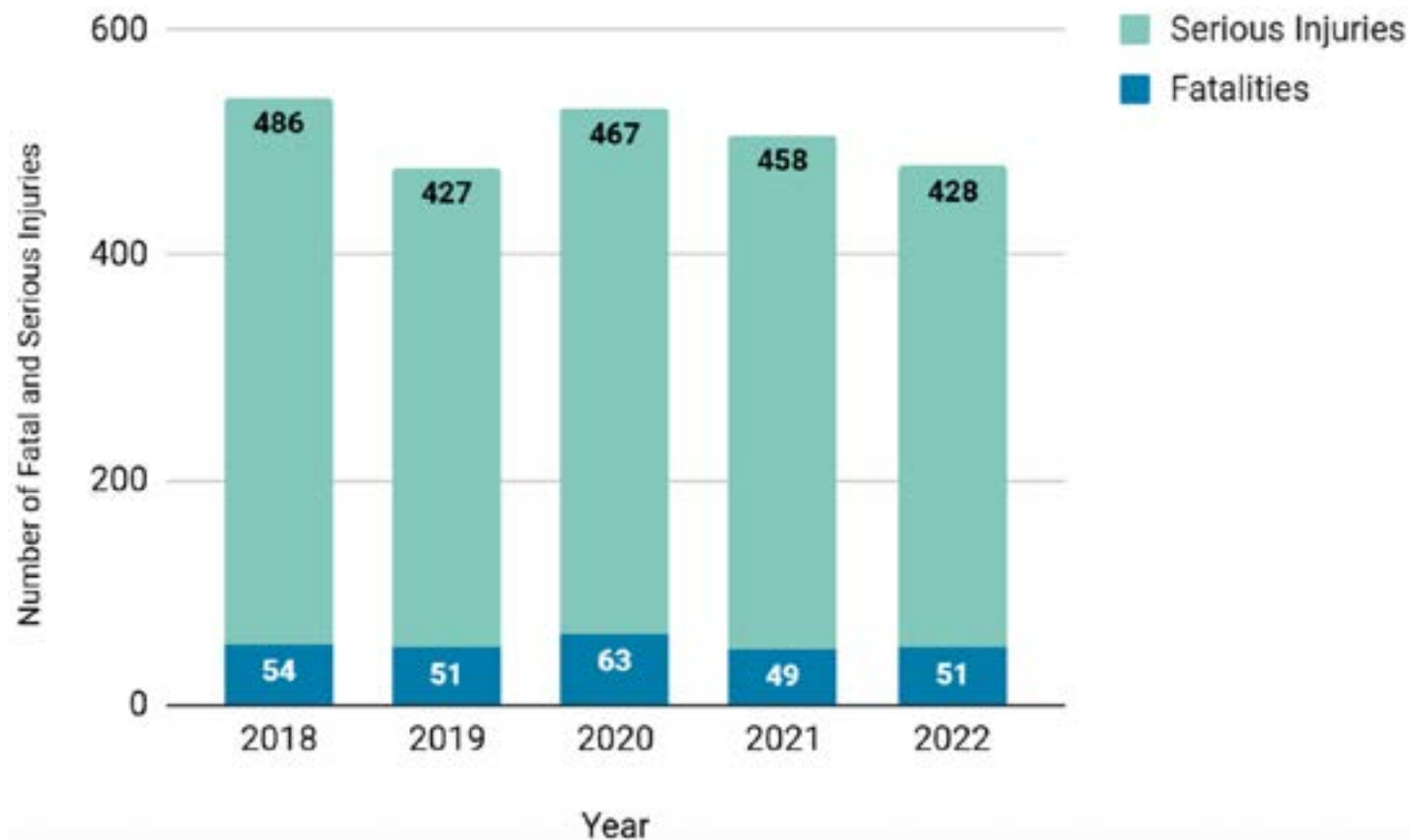
Source: National Safety Council

MAPA Regional Safety Report

MAPA developed a Regional Safety Committee to bring new perspectives to the conversation about traffic safety and to assist with MAPA’s safety performance management activities. This group brings together state DOT officials, traffic engineers, planners, and safety advocates from all parts of the MAPA region to discuss traffic safety trends and

set priorities for the upcoming year. The work of this group resulted in MAPA’s first Regional Safety Report, which summarized and visualized crash data for the MAPA region and developed new insights about reducing the number of serious injuries and fatal crashes (Figure 3) in the region and boosting economic growth.

Figure 4.3: MAPA SS4A Study Area Fatal and Serious Injuries (2018-2022)



The Omaha–Council Bluffs urbanized area faces complex safety challenges due to its diverse land uses, dense traffic, and increasing multimodal activity. According to crash data from the 2018–2022 Comprehensive Safety Action Plan (Figure 5), fatal and serious injury crashes occurred more often on Friday evenings, when traffic volumes began declining but high-risk driving behaviors became

more common. Although these crashes often occur outside of weekday peak hours, such as during Friday evenings, they can still lead to non-recurring delays, localized congestion, and substantial emergency response burdens, highlighting the need to incorporate reliability and resilience into urban safety performance evaluations.

Figure 4.4: MAPA SS4A Study Area Crash Density by Day of Week and Time of Day for All Crashes

26.7% of all crashes occurred between **4:00 p.m. and 7:00 p.m.**

26.8% of serious injuries occurred between **4:00 p.m. and 7:00 p.m.**

16.0% of fatal and serious injuries occurred on a **Friday**

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun	492	366	413	218	155	236	244	133	167	235	350	391	481	471	493	528	487	526	484	445	360	354	275	240
Mon	284	145	141	103	76	284	431	725	673	445	439	512	603	594	653	920	1002	1008	603	378	352	305	255	194
Tue	287	106	94	71	84	318	474	942	742	433	390	432	599	557	602	937	1123	1173	676	437	333	329	288	199
Wed	227	98	120	73	73	310	458	852	664	395	361	482	516	555	548	1027	1047	1080	668	424	404	329	275	207
Thu	266	130	109	102	86	313	441	850	644	401	349	468	611	554	621	945	1104	1091	670	459	327	341	345	243
Fri	319	145	176	91	89	336	498	726	614	449	449	618	662	684	697	1096	1164	1109	783	564	476	495	430	404
Sat	504	344	366	181	142	273	274	217	297	331	481	593	618	582	594	619	583	568	599	538	469	483	491	435

Figure 4.5: MAPA SS4A Study Area Crashes by Day and Time for Fatal and Serious Injury Crashes

26.7% of Fatalities occurred on a Friday, and **26.7% of Fatalities** occurred on a **Monday or Sunday**

19.9% of Friday fatalities occurred between **1:00 p.m. and 2:00 p.m.**

33.0% of bike and pedestrian fatalities and serious injuries occurred between **5:00 p.m. and 8:00 p.m.**

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun	21	16	22	18	9	2	8	5	4	7	8	10	10	7	15	27	13	15	17	17	21	17	15	10
Mon	8	8	5	7	2	6	7	18	13	9	14	12	7	13	14	16	22	25	15	14	8	16	7	7
Tue	7	8	7	6	1	5	8	10	15	13	12	12	15	12	16	12	29	24	12	16	18	8	11	8
Wed	12	3	6	5	5	3	11	15	17	6	14	10	13	19	10	21	29	18	21	24	9	13	8	10
Thu	4	9	4	5	4	5	11	9	8	14	7	16	14	11	13	25	23	25	26	23	6	8	28	11
Fri	12	7	10	6	3	10	14	12	13	12	11	11	19	20	12	17	22	30	27	16	19	22	9	18
Sat	21	16	18	8	6	6	9	9	9	6	12	14	15	16	18	22	14	19	21	19	23	16	21	18



Crash data in the region indicate that many severe crashes are tied to high-risk driver behaviors. As discussed in the CSAP, high-risk actions such as speeding, aggressive or erratic driving, failure to yield, and disregarding traffic control devices are among the leading contributing factors in severe crashes. Young licensed drivers are particularly overrepresented in these categories; they are more than four times more likely to be involved in a speed-related crash than average licensed drivers, and more than twice as likely to follow too closely or operate a vehicle erratically.

These patterns contribute to significant economic and social costs. In 2019, the total societal cost of motor vehicle crashes, including economic losses and diminished quality of life, was estimated at \$1.37 trillion (NHTSA). Further breakdowns from the Federal Highway Administration (FHWA) and NHTSA show that a single fatal crash typically carries \$1.75 million in direct economic costs, while disabling injuries average \$101,000, and property-damage-only crashes cost around \$5,700. When accounting for intangible factors, comprehensive costs rise significantly, with fatalities valued at \$12.2 million each and disabling injuries at \$1.2 million.

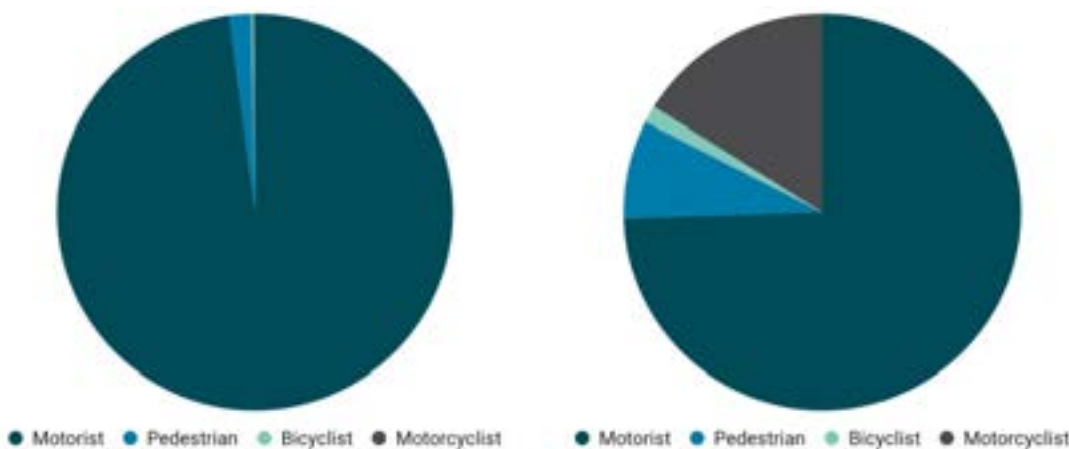
Given the scale of these costs, it is essential to orient solutions in a data-driven manner by breaking down

crash patterns by time of day, roadway type, and user vulnerability. These safety approaches will help direct and inform safety investment decisions. Safety strategies like traffic calming in residential areas, vigorous enforcement during high-risk hours, and enhanced pedestrian crossings are not just about reducing injuries but also about building a more reliable, connected, and economically resilient region.

In addition to individual and community impacts, unsafe road conditions disrupt freight delivery, increase insurance costs, and strain emergency services. Industries that rely on just-in-time delivery, such as healthcare, manufacturing, and retail, can experience increased costs and reduced competitiveness when crashes cause road closures and delays. These disruptions ripple through the economy, reducing productivity and adding pressure on local governments and taxpayers who bear the burden of emergency services and medical care.

Additionally, the (CSAP) analysis indicates that motorists account for nearly all commute trips in the region (98%), and they represent about three-quarters of all serious injury and fatal (KSI) crashes (Figure 6). Also, about one-quarter of all KSI crashes occur on roadways with posted speed limits of 50 mph or higher (Figure 7).

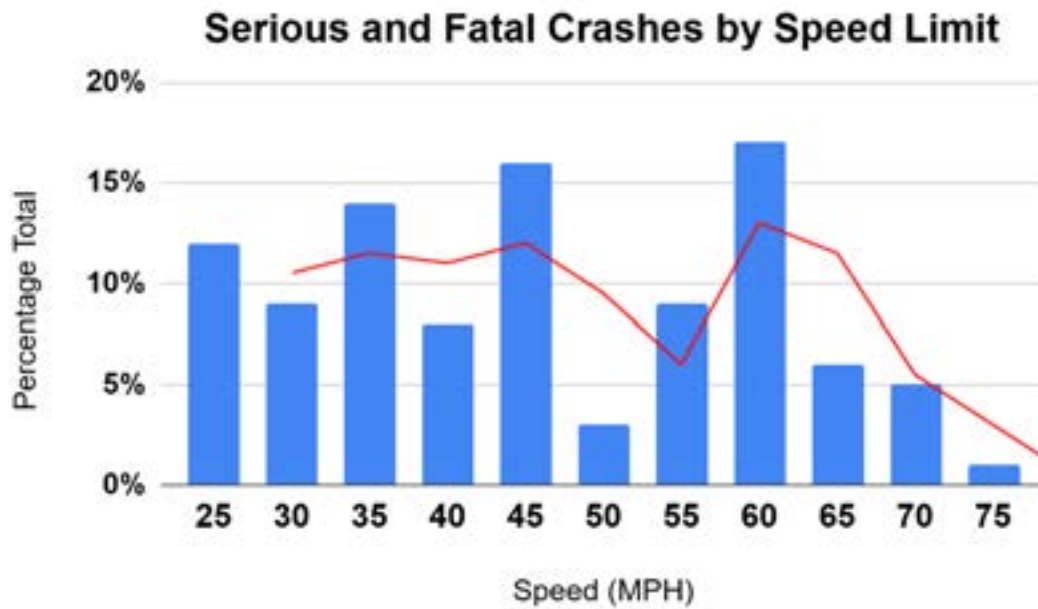
Figure 4.6: Comparison of Mode Share versus Fatal and Serious Injury Crashes by Mode



These higher-speed facilities, including freeways and major arterials, are designed for fast travel but can be deadly when crashes occur, particularly for vulnerable users. At the same time, serious crashes are not

confined to high-speed corridors; local roads also record significant KSI incidents, especially involving pedestrians and children.

Figure 4.7: Percentage of Total Fatal and Serious Injury Crashes by Speed Limit



This disproportionate impact is even more striking for vulnerable road users, pedestrians, bicyclists, and motorcyclists who make up less than 2% of commute mode share but are involved in more than one-quarter

of all KSI crashes. Addressing these risks will help save lives, reduce the economic costs of crashes, strengthen neighborhood vitality, and improve the region's overall quality of life.

Traffic Incident Management (TIM)

The Traffic Incident Management (TIM) committee serves as the Multi-Jurisdictional Safety Team for the Omaha-Council Bluffs region. TIM meetings are designed to help first responders, traffic engineers, tow trucking companies, and freight companies improve safety coordination across state lines by providing them with a space to discuss traffic crashes that have recently happened and potential improvements to future crash responses. These meetings have been critical during major construction projects in Omaha and Sarpy County and are part of the ongoing Council Bluffs Interstate System (CBIS) project. Continued coordination with these partners is an important strategy for maintaining the safety of the region's busiest roadways and managing congestion caused by crashes, as efficient crash response reduces secondary collisions, limits congestion, and ensures that goods, services, and people can move through the region reliably.

As big data grows and tools are developed to present traffic and infrastructure conditions, users and maintainers of the region's transportation network will continually stay better informed. By proactively managing incidents and planning for disruptions, TIM improves roadway safety and protects the region's economic stability. It helps reduce delays for freight and emergency vehicles, safeguards access to commercial centers, and ensures that regional infrastructure continues to support reliable travel and commerce even in times of crisis.

Nebraska Motorist Assist and Iowa DOT's Highway Helper Programs

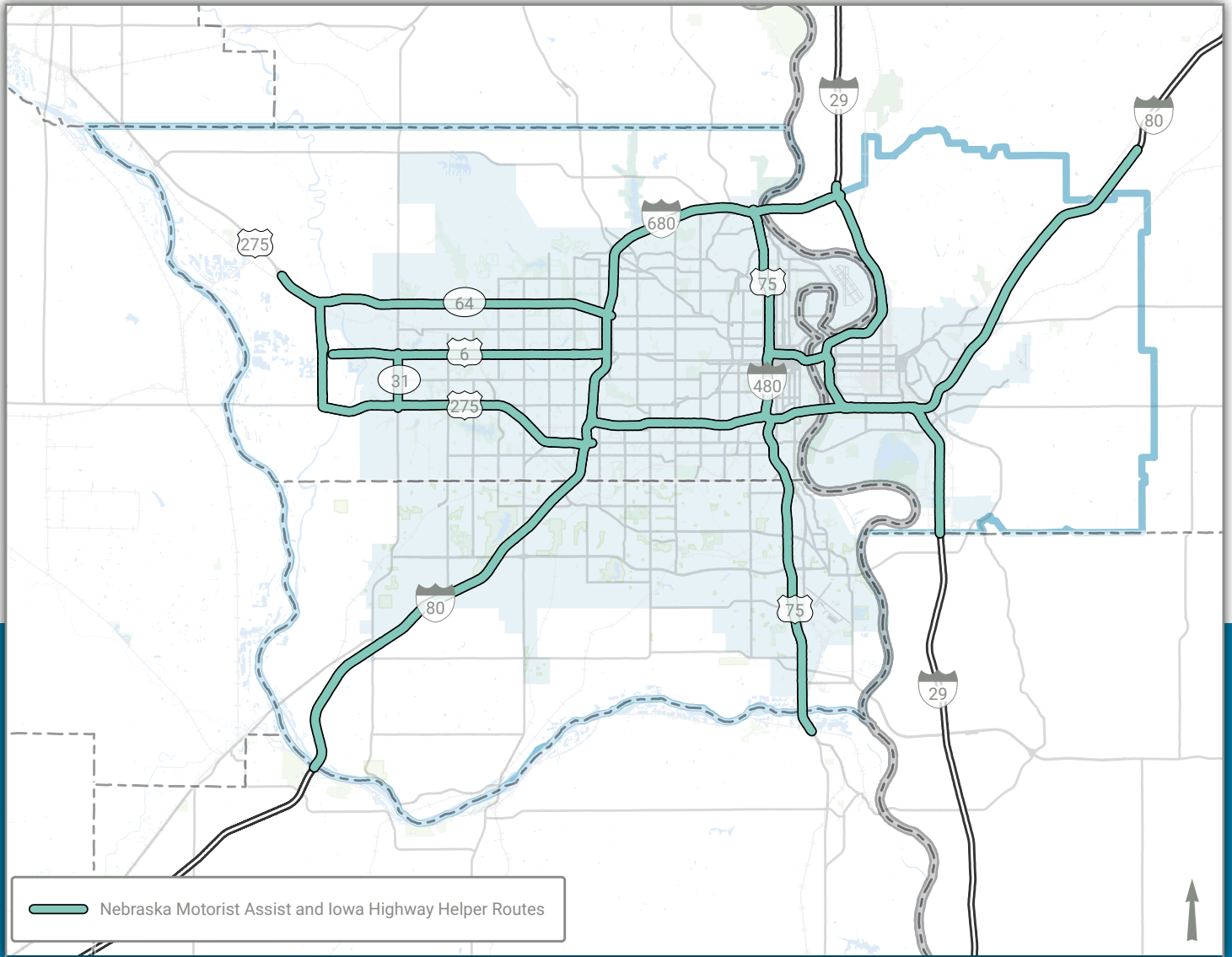
The Nebraska Department of Transportation (NDOT), in collaboration with the Nebraska State Police,

launched a new Motorist Assist Program in 2023 to serve the Omaha metro area. Replacing the former volunteer-based Metro Area Motorist Assist (MAMA) program, this initiative enhances public safety by providing dedicated patrols along important freeway and interstate routes, responding to incidents, and helping stranded motorists during peak travel hours. The program is coordinated through NDOT's State Operations Center (SOC), which uses roadway cameras and monitoring systems to direct response teams to needy areas. Assistance from these programs comes in many forms, including fuel purchase, fixing flat tires, and removing debris from the roadway. The Iowa DOT has operated a Highway Helper program throughout the construction of the Council Bluffs Interstate System to provide assistance to motorists on the interstate system in and around Council Bluffs. This service is managed by the Iowa DOT Traffic Management Center. Both services actively participate in the regional Traffic Incident Management hosted by the Nebraska and Iowa Departments of Transportation.

The Motorist Assist and Highway Helper Programs are important in supporting the regional economy. By reducing crash-related delays and improving traffic flow, the program helps keep freight moving efficiently, supports reliable commutes for workers, and minimizes lost productivity caused by congestion (Figure 8). When incidents are managed quickly and effectively, emergency services are freed up for other critical duties, businesses avoid costly delivery delays, and families save time for more important things. Investments in programs like this demonstrate how targeted safety initiatives contribute to public safety and economic prosperity by keeping the region's transportation system reliable and resilient.



Figure 4.8: Nebraska Motorist Assist and Iowa Highway Helper Routes



Block Talks

A walk audit, also referred to as Block Talk, is a facilitated walk that surveys the active transportation environment of a community for ways to make it more safe, enjoyable, and convenient for all. MAPA has conducted more than 10 Block Talks with neighborhood leaders and public officials to understand what pedestrians and cyclists face while navigating a corridor. The Block Talk Tool-Kit focuses on three key areas where community input can be gathered to support improvements to safety at the neighborhood scale. These key areas are discussed below.

Programs are community-driven efforts to raise awareness and create support for improvements in the neighborhood environment. These programs are usually quick to start and have low costs. Programs can educate neighborhood residents, city officials, local organizations, and nonprofits about an issue affecting the neighborhood's well-being and help create more concrete plans for change. Programs foster a community culture that values safer, more walkable environments by creating a sense of ownership and shared responsibility. For example, during the Benson Block Talk, participants identified the need for more education on sidewalk maintenance and tree trimming to improve visibility and safety.

Projects are neighborhood-level actions that change the behavior of residents and others who use the streets, sidewalks, and neighborhood space. Projects might have the goal of encouraging more walking and bicycling, such as completing sidewalks or improving crosswalks; making the environment safer for residents through traffic calming efforts to reduce the speeds of vehicles, adding lights and cameras in alleys to ensure safety at night, or beautifying an area by planting trees, putting up benches, and many more. At the 52nd

Street and NW Radial Hwy Block Talk, participants recommended adding pedestrian refuge islands, adjusting traffic signals, and reducing crossing distances to make intersections safer for vulnerable users. These projects reduce crashes and encourage walking, biking, and local shopping, contributing to the neighborhood's economic growth.

Policies reflect the community's long-term vision and address systemic design issues that may have contributed to unsafe conditions. This can include updating zoning codes, revising subdivision regulations, adopting new street design standards, and encouraging local businesses and organizations to implement practices that support neighborhood well-being. The Maple Village Block Talk identified the need for updated crosswalk standards, sidewalk setback requirements, and improved pedestrian amenities along Maple Street to reduce conflicts between drivers and pedestrians. These changes can promote investment and attract new businesses by creating a more walkable and vibrant environment.

A recent partnership with the City of Omaha and the Nebraska Department of Transportation has focused on the Maple Street corridor, which has several distinct clusters of pedestrian fatalities and serious injuries. These efforts have brought neighborhood leaders, state decision-makers, transit agency staff, and local leaders together to discuss ways to improve the corridor's safety. MAPA is working with other communities to identify other potential corridors that could benefit from the block talk strategy. By combining community insights with data-driven safety analysis, Block Talks support investments in projects that reduce crashes, promote local businesses, and make neighborhoods more attractive places to live and work.



Air Quality & Economic Competitiveness

Air quality is a public health concern and a critical factor in MAPA's economic development. Poor air quality can deter businesses from investing in certain areas, especially those with chronic air quality issues. Proactive measures to improve air quality can enhance the region's attractiveness to businesses and residents by supporting a healthier workforce and reducing regulatory burdens. The Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. Regions that do not meet these standards are at risk of being designated as "non-attainment" areas, which can trigger stricter regulations requirements. This designation can have several economic consequences, including increased business compliance costs, more complicated permitting processes for new industrial facilities, and delays or restrictions on transportation project funding. For a region like MAPA, maintaining air quality standards is essential to sustain and promote economic growth and keep the area attractive for future investment.

Little Steps, Cleaner Air Campaign

Transportation significantly contributes to air pollution, particularly ground-level ozone concentrations. Motor vehicle emissions release carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx), hydrocarbons, volatile organic compounds (VOC), and particulate matter (PM) into the atmosphere in addition to CO₂, a standard greenhouse gas. In hot weather, two chemicals,

such as nitrogen oxides (NOx) and volatile organic compounds (VOCs), react in sunlight to form ground-level ozone. This pollutant can impair respiratory health and reduce workforce productivity. According to the Nebraska Department of Transportation (NDOT), integrating air quality measures into transportation planning is a key to mitigating these impacts and supporting regional economic growth. For example, encouraging public transit, biking, and walking reduces vehicle miles traveled and emissions. Also, optimizing traffic flow and reducing congestion helps lower idling times and emissions while supporting cleaner vehicle technologies, contributing to healthier air quality.

MAPA has proactively integrated air quality considerations into its transportation planning efforts. Since 2011, MAPA and local health partners have monitored ground-level air during the summer months to understand the impacts of transportation on public health. Through programs like the "Little Steps, Clean Air" campaign, MAPA raises awareness about reducing vehicle emissions and promoting behavioral changes (like "switching a trip" to a non-polluting mode, mowing during the evening hours, or using cleaner biofuels), to improve air quality (Figure 9). These initiatives not only support public health but also strengthen the regional economy by ensuring that the region remains in attainment of EPA standards, thereby avoiding additional regulatory burden and maintaining transportation funding. Integrating air quality initiatives with transportation planning makes the region better prepared to meet growth and achieve a safer, healthier, and more economically prosperous future.

Figure 4.9: Example Messaging from MAPA's Little Steps, Cleaner Air Program



4.2 THE BASELINE - WHERE WE ARE TODAY

Freight Impact in the Region

Nationally, freight movement and its economic impact are traditionally measured using the Federal Highway Administration's (FHWA) Freight Analysis Framework (FAF), currently in its fifth edition (FAF5). The Omaha FAF region, established in 2012, is one of 84 non-state regions that incorporate data from the Commodity Flow Survey (CFS), the U.S. Census Bureau, and FHWA freight transportation datasets to forecast future freight flows and values. Baselined in 2017, the FAF5 Data Tabulation Tool allows planners to estimate tonnage, value, and ton-miles by origin and destination,

commodity type, mode, and evaluation year. Total flows include domestic, import, and export freight estimates to, from, and within the region.

FAF5 data shows that the total freight tonnage in the Omaha FAF region is projected to increase by 64.2%, from 133,304 million tons in 2017 to 218,860 million tons in 2050. Importantly, one-third of this increase is in regional freight tonnage, that is, the origin and destination are both within the Omaha FAF for freight moved by truck, rail, or other modes (Figure 10).

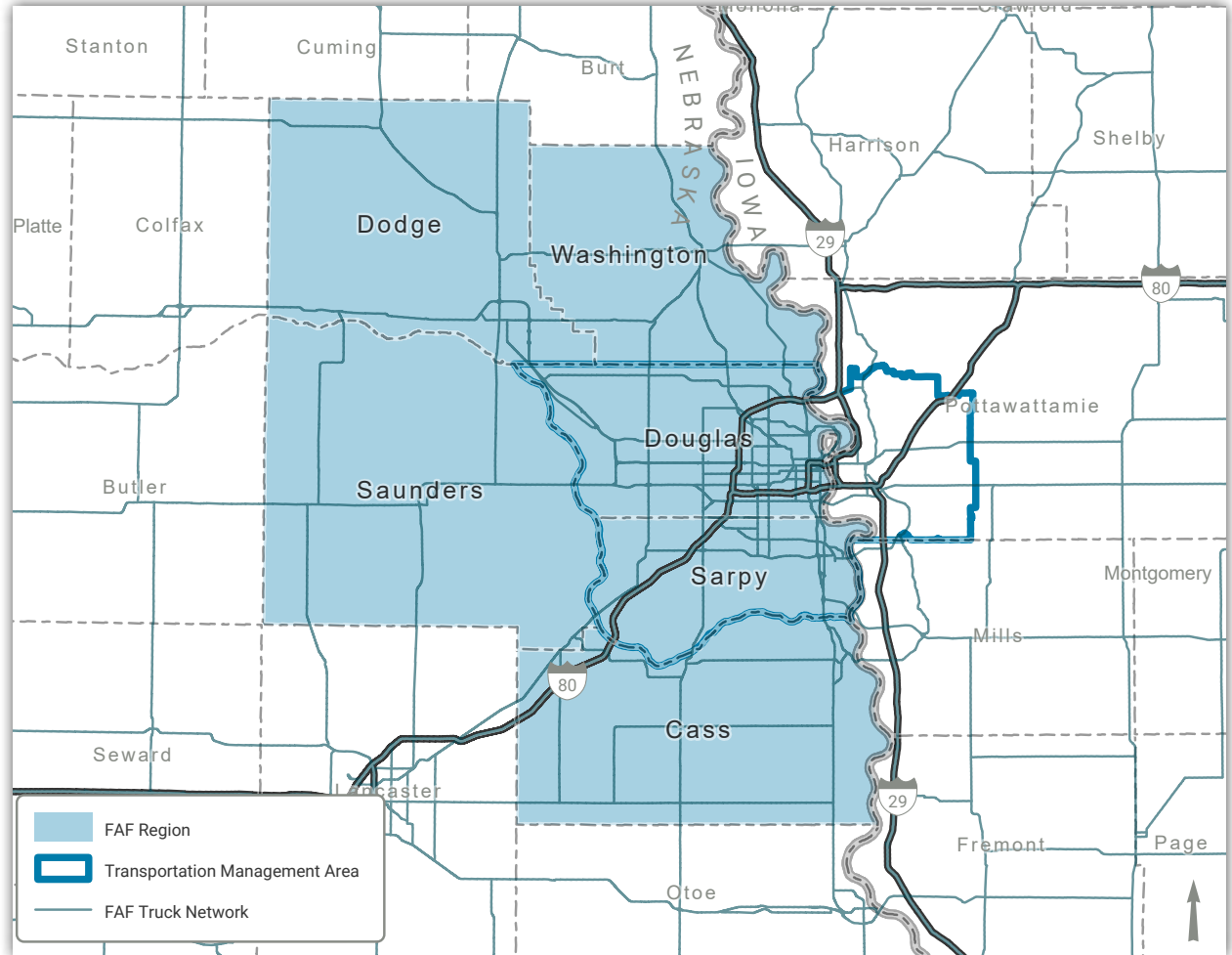
Figure 4.10: FAF5 Forecasted Freight Growth 2017-2050

Year	2017	2050	% Change
Total Flow (Tons, in thousands)	133,304	218,860	64.2%
Truck	87,046	136,958	57.3%
Rail	12,135	19,740	62.7%
Water	26	22	-17.0%
Air	13	25	90.6%
Multiple modes and mail	3,480	6,322	81.7%
Pipeline	30,581	55,738	82.3%
Others	23	55	135.7%
Origin Value (\$2017 constant, millions)	41,469	82,892	99.9%
Destination Value (\$2017 constant, millions)	57,259	118,995	107.8%

The FAF5 projections provide estimates of freight growth by transportation mode for the Omaha region from 2017 to 2050. Most freight growth is expected to move by truck, either directly to its final destination or to a multi-modal distribution center for further transit.

The FAF5 data used in the above table illustrates this growth by total flow, reported in **thousands of tons** (equivalent to millions of tons when converted). The Omaha FAF5 region is shown in Figure 11.

Figure 4.11: The Omaha-Council Bluffs-Fremont, NE-IA CFS Area (NE Part) FAF5 Region



Freight tonnage in the Omaha region has grown steadily over time. Based on the data, total freight tonnage was approximately 133.3 million tons in 2017. By 2050, it is projected to reach 218.9 million

tons, representing a 64.2% increase from 2017. These trends reflect changes in supply chain logistics, modal shifts, and economic conditions.



Figure 4.12: Freight Originating from Region by Mode from 2017 to 2050 (in \$2017, in millions)

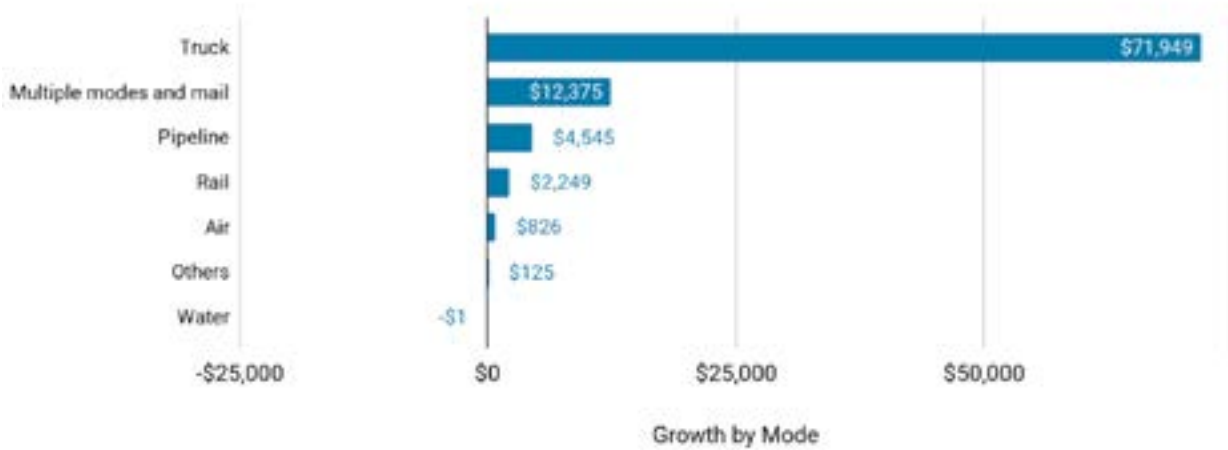
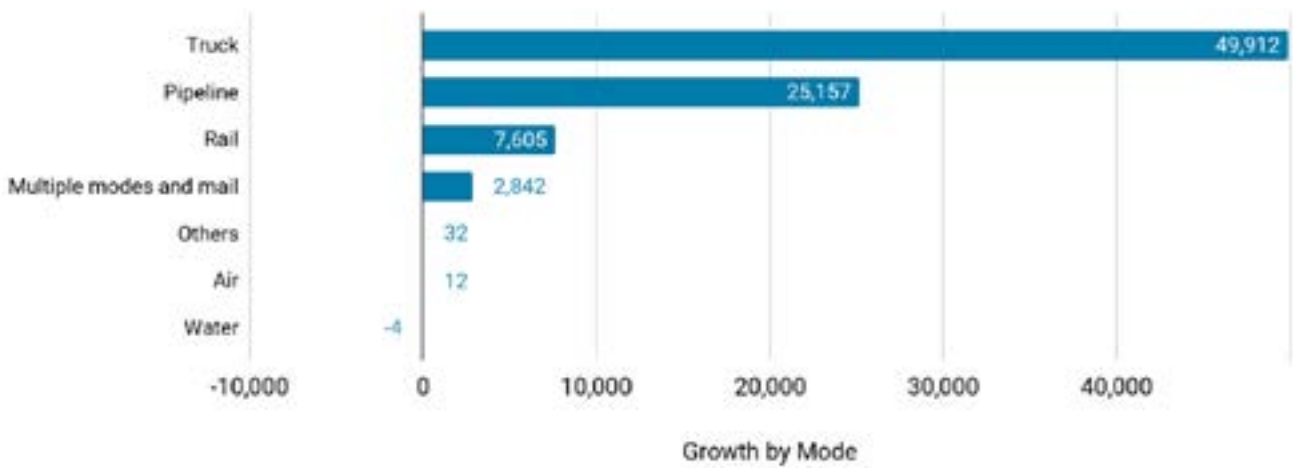


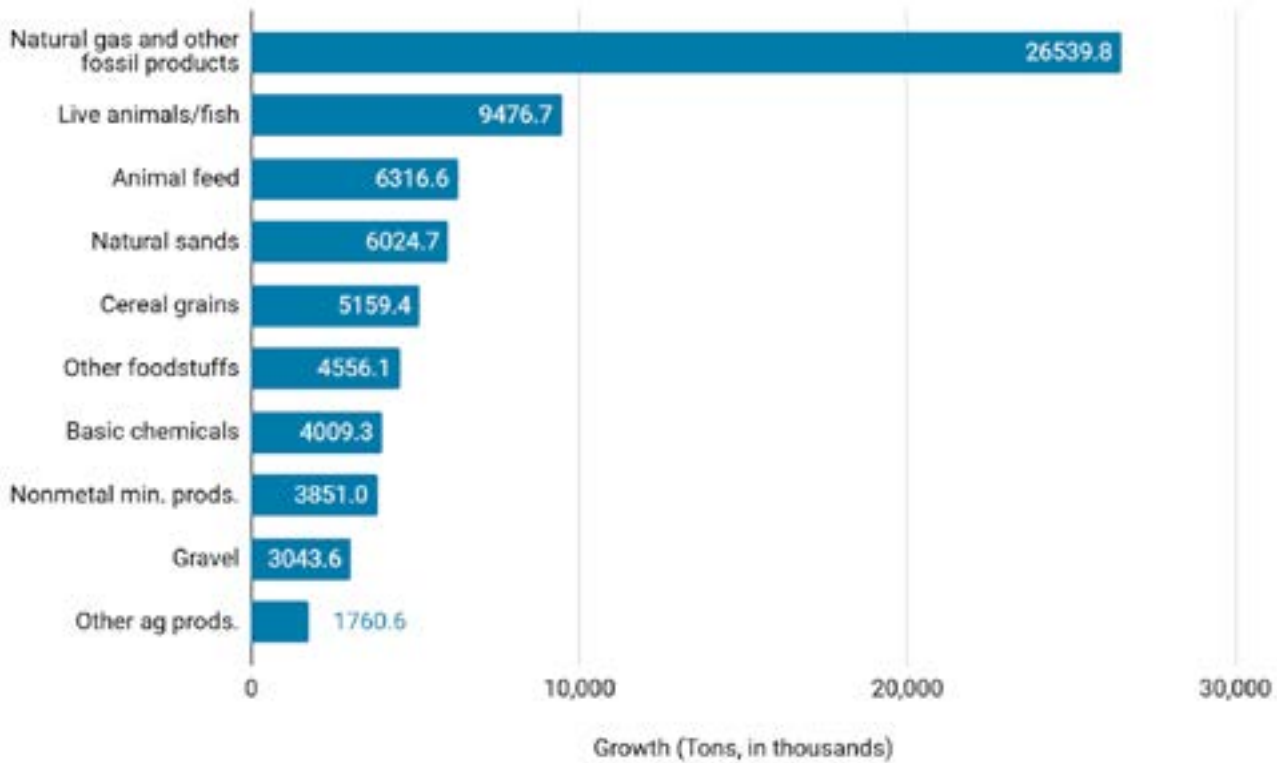
Figure 4.13: Tonnage Originating from Region by Mode from 2017 to 2050 (Tons, in thousands)



The data above highlights the projected growth of each domestic freight mode in the Omaha FAF5 region alongside the top commodities driving that growth. Truck transportation is expected to remain the dominant mode, with substantial gains in value and tonnage, which reflects its central role in meeting regional freight demand. Multiple modes and mail, and rail are also anticipated to increase. In contrast, air, pipeline, and other modes show more modest growth, and water transport volumes and values are expected to decline.

The top ten commodity projections illustrated in Figure 14 also indicate that high-value goods such as natural gas and other fossil products, animal feed, agricultural products, etc. will be key drivers of freight growth. These commodities rely heavily on trucking and intermodal connections, influencing freight movement through the region. The growing presence of natural gas, other fossil, and food products further supports a diverse and adaptable freight network. These trends indicate a continued reliance on a robust and interconnected transportation system.

Figure 4.14: Tonnage Originating from Region by Mode from 2017 to 2050 (Tons, in thousands)

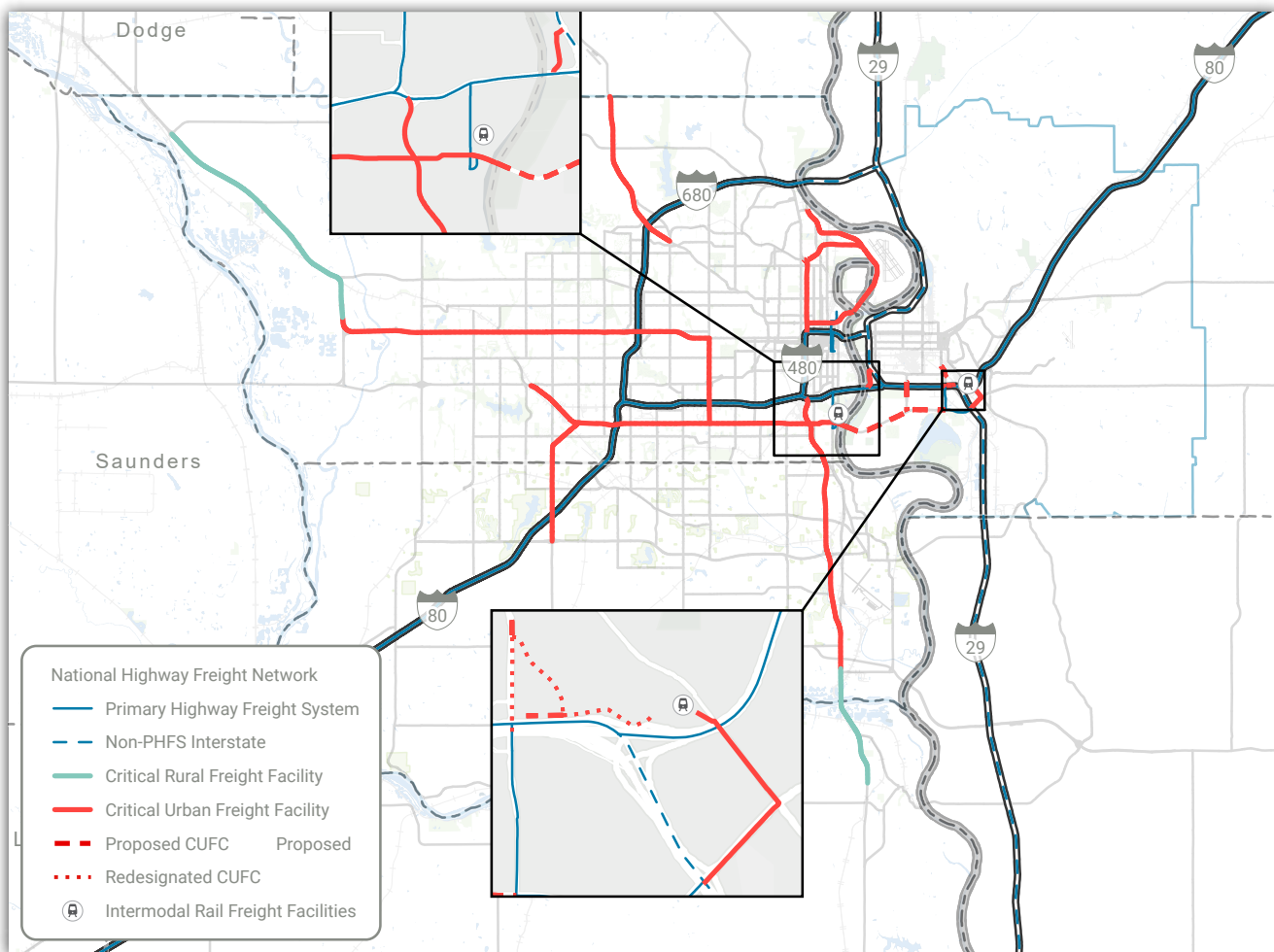


Freight Impact in the MAPA Region

The Omaha-Council Bluffs metropolitan area is located at major national freight corridors, making it one of Nebraska's and Iowa's most significant freight hubs. MAPA is enhancing its focus on freight planning by developing a Regional Freight Study, which is being conducted in partnership with the Nebraska Department of Transportation (NDOT) and the Iowa Department of Transportation (Iowa DOT). This study will evaluate freight movement patterns, infrastructure needs, and economic impacts within the region, supporting the development of a comprehensive and coordinated freight strategy.

Insights from the Nebraska and Iowa State Freight Plans provide valuable context for freight planning in the MAPA region. According to the Nebraska State Freight Plan, the Omaha area has a high concentration of food manufacturing, plastics, and chemical industries that depend on high-capacity truck and rail corridors. The region also hosts intermodal facilities that connect rail and truck networks, facilitating efficient container freight movement and reducing highway congestion. Eppley Airfield, Nebraska's largest air cargo hub, handles more than 95 percent of the state's air cargo activity, providing critical capacity for high-value and time-sensitive goods.

Figure 4.15: The National Highway Freight Network & Intermodal Facilities within MAPA



The Iowa Freight Plan also highlights Council Bluffs and western Iowa as a critical connector for agricultural exports and interstate freight flows, linking to the national Primary Highway Freight System. Figure 15 highlights critical freight corridors

in Iowa, including those serving Council Bluffs, which is part of the MAPA region. Furthermore, both state freight plans identify key priorities that have direct implications for the MAPA regions, and these include:

Nebraska State Freight Plan

- Enhancing capacity, safety, and reliability along key freight corridors, including I-80 and I-29.
- Expanding and modernizing intermodal facilities to improve rail-truck efficiency and reduce highway congestion.
- Investing in air cargo infrastructure at Eppley Airfield to support high-value and time-sensitive shipments.

Iowa State Freight Plan

- Addressing bottlenecks at the I-29/I-80 system interchange and other congested Primary Highway Freight System (PHFS) corridors serving Council Bluffs.
- Enhance freight connectivity for agriculture and manufacturing
- Expand intermodal and rail access in Council Bluffs to improve resilience, accommodate shifting commodity flows, and reduce truck dependency.

These priorities underscore the region's role as a multimodal freight hub for Nebraska and Iowa and provide a clear framework for aligning regional freight planning with broader state and national freight network goals. These priorities also reinforce the

region's position as a regional freight hub and economic driver in both states. Aligning MAPA's Regional Freight Study with these goals will ensure that local strategies strengthen Nebraska's and Iowa's broader economic and transportation networks.

Bottlenecks and Truck Travel Time Reliability

The Iowa and Nebraska State Freight Plans have identified locations where freight, especially truck traffic, experiences delays. In Nebraska, the State Freight Plan's Strategic Project List highlights congestion-prone corridors. At the same time, Iowa DOT's Infrastructure Condition Evaluation (ICE) program analyzes the Primary Highway System using metrics such as Average Annual Daily Truck Traffic (AADTT).

One of the region's most critical infrastructure efforts is the Council Bluffs Interstate System (CBIS) reconstruction, which includes dual-divided sections designed to improve reliability for freight movement.

MAPA continues to coordinate with Iowa DOT and the City of Council Bluffs to monitor and evaluate the performance of these upgrades. Additionally, I-29 near the Pottawattamie/Mills County border was previously flagged as a potential bottleneck in Iowa's Freight Plan. However, recent speed data from the National Performance Management Research Data Set suggests this segment has not posed persistent reliability issues.

Truck-involved crashes combine system challenges by increasing clearance times and reducing corridor reliability. According to the Iowa DOT Traffic Manage-



ment Center’s 2019 Annual Report, incidents involving semitrucks take 2 hours and 6 minutes to clear, which is considerably longer than the 1 hour and 14 minute average for all crashes in District 4.

Truck Travel Time Reliability (TTTR), a federal performance measure, is used to assess how consistently freight moves along the Interstate system. As shown in Figure 17, corridors such as I-80, I-29, I-680, and US-75 are key freight routes where TTTR values are actively monitored. These routes are particularly important where truck volumes and urban congestion intersect, and reliability issues are most likely to emerge.

As truck traffic is forecasted to grow, particularly along major freight corridors like I-80 and I-29, MAPA’s travel demand model anticipates that maintaining reliability will require targeted improvements and coordination with state and local partners. Investments in congestion management and freight infrastructure will be essential to support economic competitiveness and the efficient movement of goods throughout the region. Figure 16 shows the past performance of Truck Travel Time Reliability on the MAPA interstate System. Figure 17 shows the areas that experience the greatest amount of unreliability.

Figure 4.16: Truck Travel Time Reliability Index

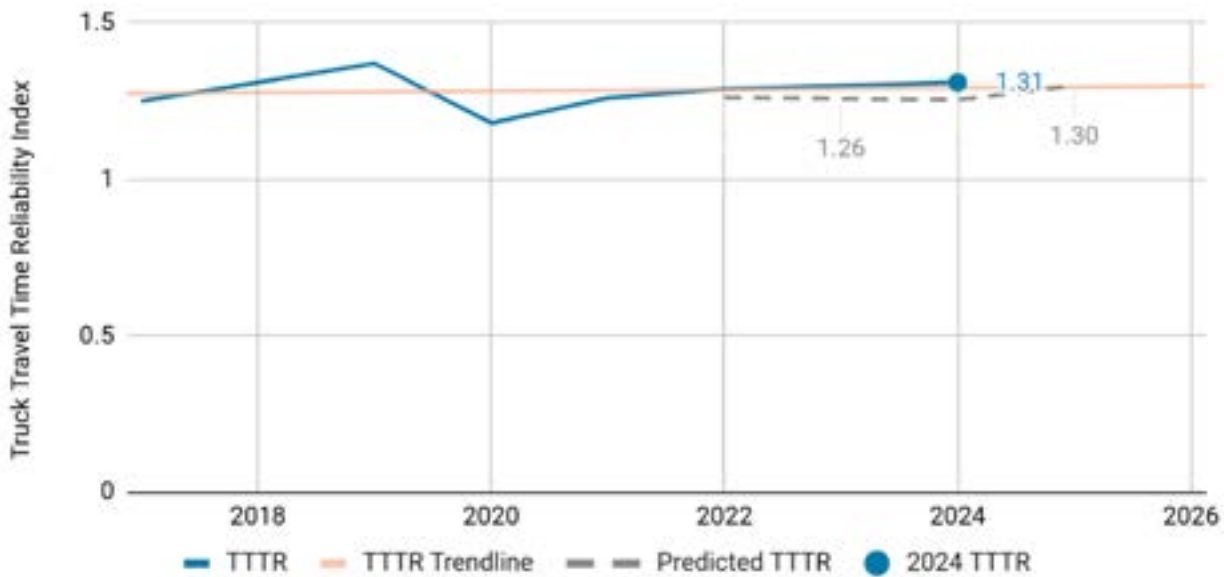
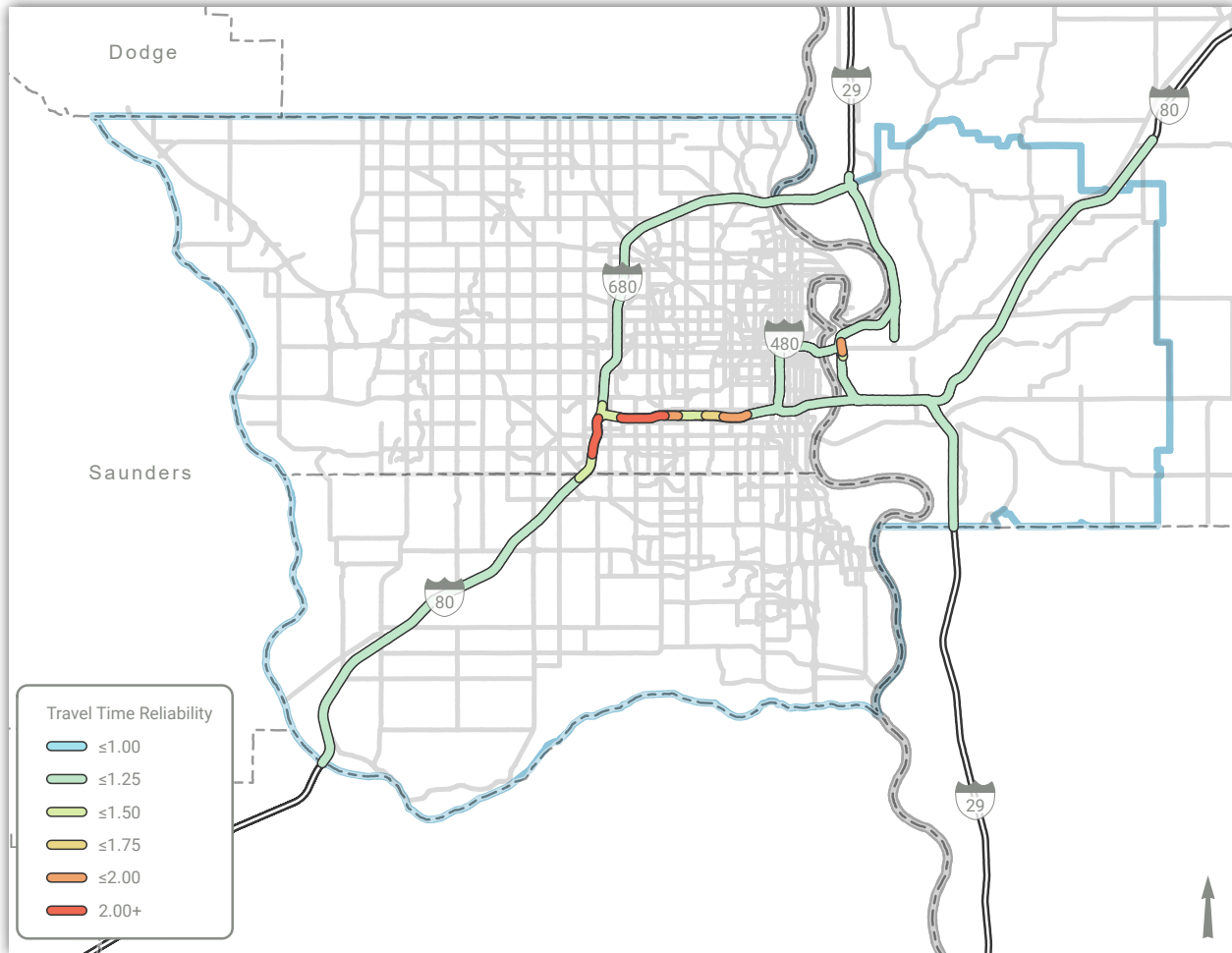


Figure 4.17: Truck Travel Time Reliability (TTTR)

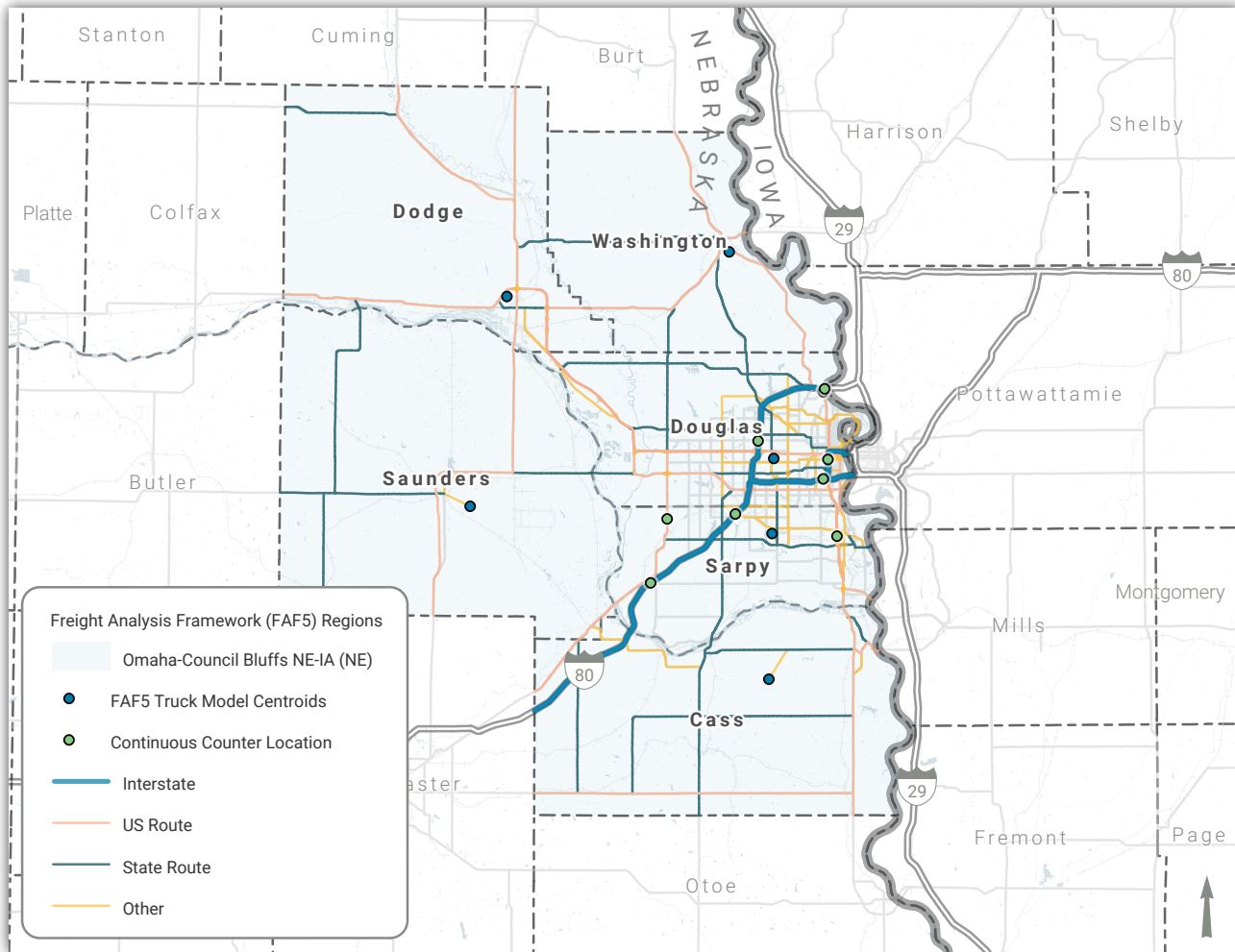


Freight Analysis Truck Flow Modeling

The Freight Analysis Framework also provides estimates of truck flows on the National Highway System (NHS) and the National Highway Freight Network (NHFN). These estimates break down total trips and tonnage by various commodity types. The

model assigns flows to the network at the county level, with each county having a centroid location. These centroids and truck flow network links for FAF Region 311 are shown in Figure 18 below.

Figure 4.18: FAF5 Truck Segments and Centroid Locations for FAF Region 311

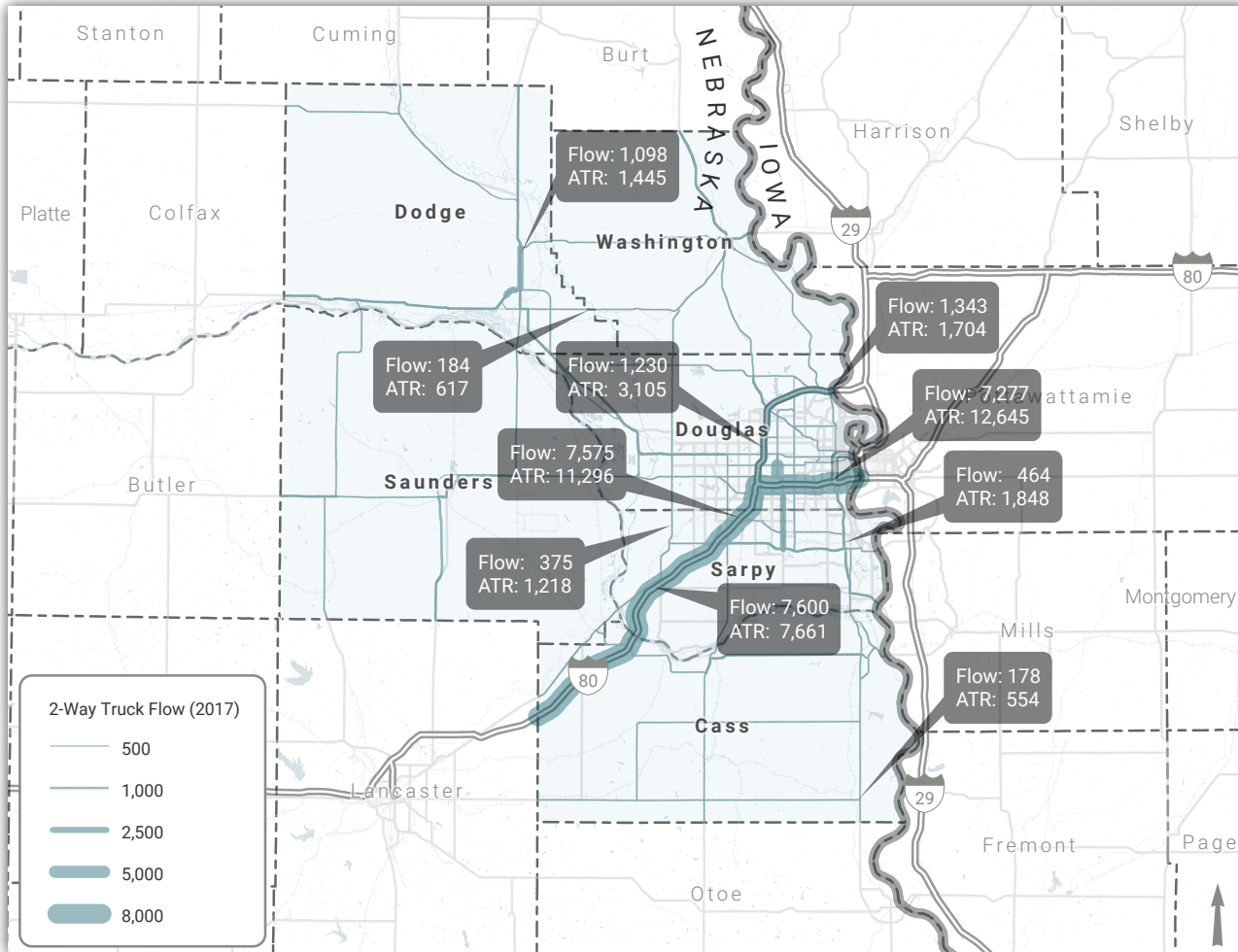


The baseline model flows for all trucks are shown in Figure 19 for 2017 freight on the highway network. These truck volumes represent all trucks traveling on the roadway regardless of origin or destination. The 2017 truck network model shows 3,928,463 thousand tons of freight crossed the FAF region 311 network roads, while only 87,046 thousand tons (2.2%) of this freight originated from, was destined to, or traveled within the region. The 2017 model flow values are compared against the measured Annual Average Daily Truck Traffic (AADTT) at ATR locations in the FAF 311 region. It is important to note that the network flow model is based upon responses to the 2017 Commodity Flow Survey, and that the

subsequent flows have incorporated a quality check against actual truck paths in the route choice portion of the model; it is not dependent upon measured truck volumes.

Additionally, the assigned routes shown in Figure 19 on the following page do not include all possible segments from Figure 18 above. Additional analysis is planned to better understand the truck model results and the appropriate application in future MAPA planning. For this report, it is important to note that all flow estimates are lower than the measured truck volumes at the ATR locations.

Figure 4.19: Daily Two-Way Truck Trips in the FAF Region

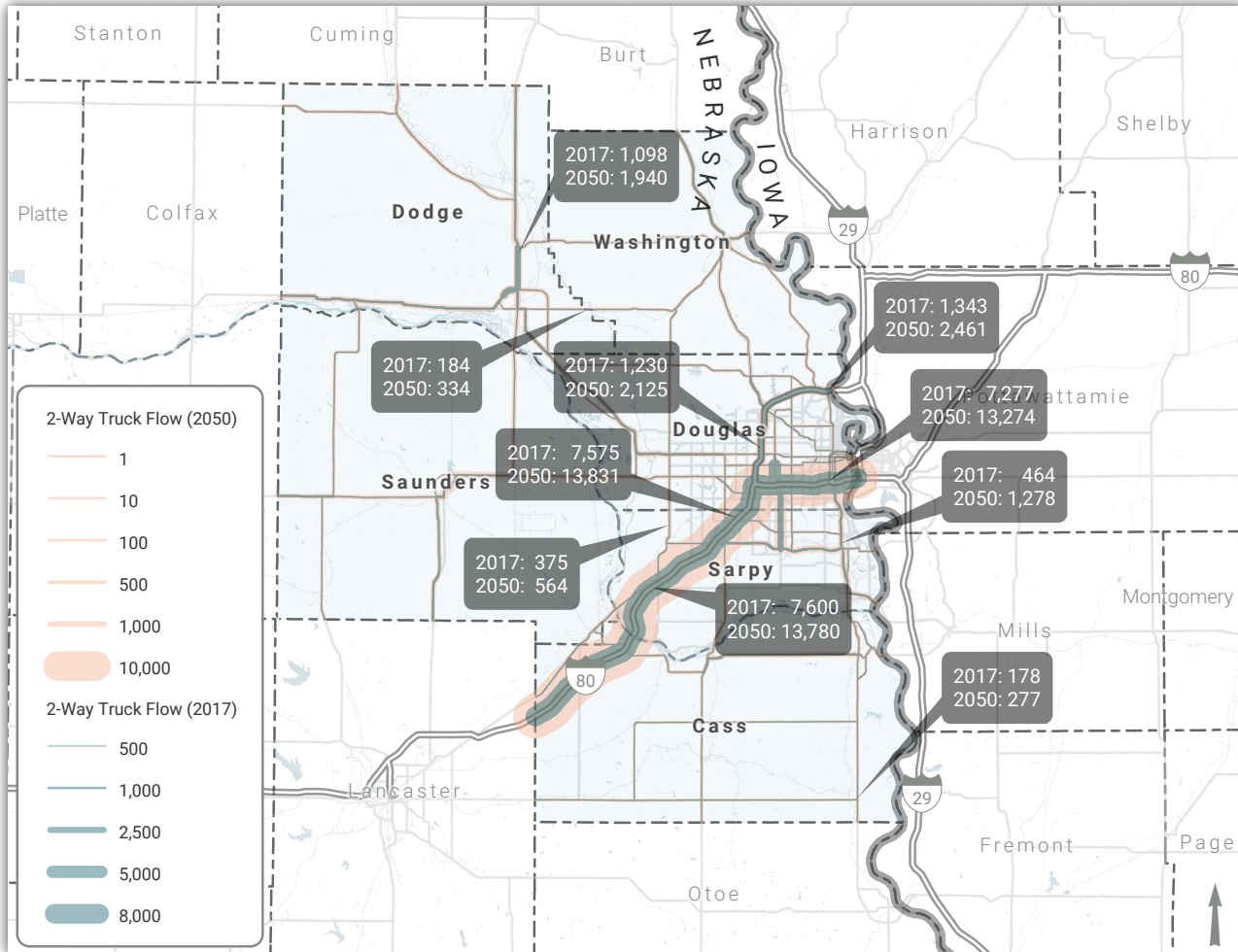


The 2050 Base truck model predicted flows are shown alongside the 2017 baseline in Figure 20. Daily

truck volumes are predicted to grow by 76% within the FAF 311 region by 2050.



Figure 4.20: Comparing 2017 to 2050 Daily Two-Way Truck Trips for the FAF Region



Goods Movement & Safety

According to MAPA's SS4A, between 2018 and 2022, there were 734 crashes in the region involving trucks, buses, or vans that resulted in a fatality or serious injury. In 2018, there were 157 heavy-truck and bus-related crashes in the MAPA region, resulting in 15 fatalities, accounting for approximately 29% of all fatal and serious injury crashes that involved heavy-truck and bus-related crashes that year. By 2022, the number of truck/bus/van crashes decreased to 149, yet fatalities remained elevated, representing about

31% of all fatal and serious injury crashes (heavy-truck and bus-related crashes). While the frequency of these crashes has declined over the past five years, their share of the most severe outcomes also decreased overall, with a slight rebound in 2022. These suggest some progress in reducing their proportional impact, though larger vehicles still represent a substantial share of the region's most serious crashes.

Figure 4.21: Percentage of Truck/Bus/Van Crashes in All Fatal and Serious Injury Crashes (2018–2022)

Year	All Crashes	Truck/Bus/Van Crashes	% Share
2018	540	157	29.10%
2019	478	149	31.20%
2020	530	145	27.40%
2021	507	134	26.40%
2022	479	149	31.10%
Total	2,534	734	29.00%

One critical freight corridor, Interstate 80, south of Honey Creek, exemplifies these challenges. According to the FAF database, this segment had a baseline Annual Average Daily Truck Traffic (AADTT) of 2,814 out of a total Annual Average Daily Traffic (AADT) of 17,800. Recent traffic log updates show that heavy truck volumes have increased by 11.7% to 3,143 AADTT, while the total AADT remained constant. Future projections estimate that by 2045, this segment will see truck traffic nearly double to 6,778 AADTT, with overall AADT reaching 42,875. Even if actual growth falls below these projections, the expected increase in freight traffic will inevitably create greater safety and efficiency challenges for the region's transportation network.

Recognizing the need to improve freight safety, ConnectGO and the MTP 2050 emphasize planning for future infrastructure that integrates safety considerations. This includes roadway improvements,

incident management strategies, and the development of planned detours and diversion routes to manage disruptions such as flooding or major crashes. Enhancing safety at key interaction points between freight and local communities, such as at-grade railroad crossings and last-mile delivery routes, will reduce conflicts between heavy trucks and other road users.

Data collection and analysis advancements will also support efforts to address freight-related crashes. Thus, modern traffic monitoring systems, predictive analytics, and real-time data feeds will enable agencies to proactively identify and mitigate potential risks rather than solely reacting to incidents. Integrating these tools into decision-making processes will help to reduce the frequency, severity, and economic impacts of secondary crashes, ultimately supporting a more resilient and efficient freight network for the MAPA region.

Growth and Development in the Omaha-Council Bluffs Region

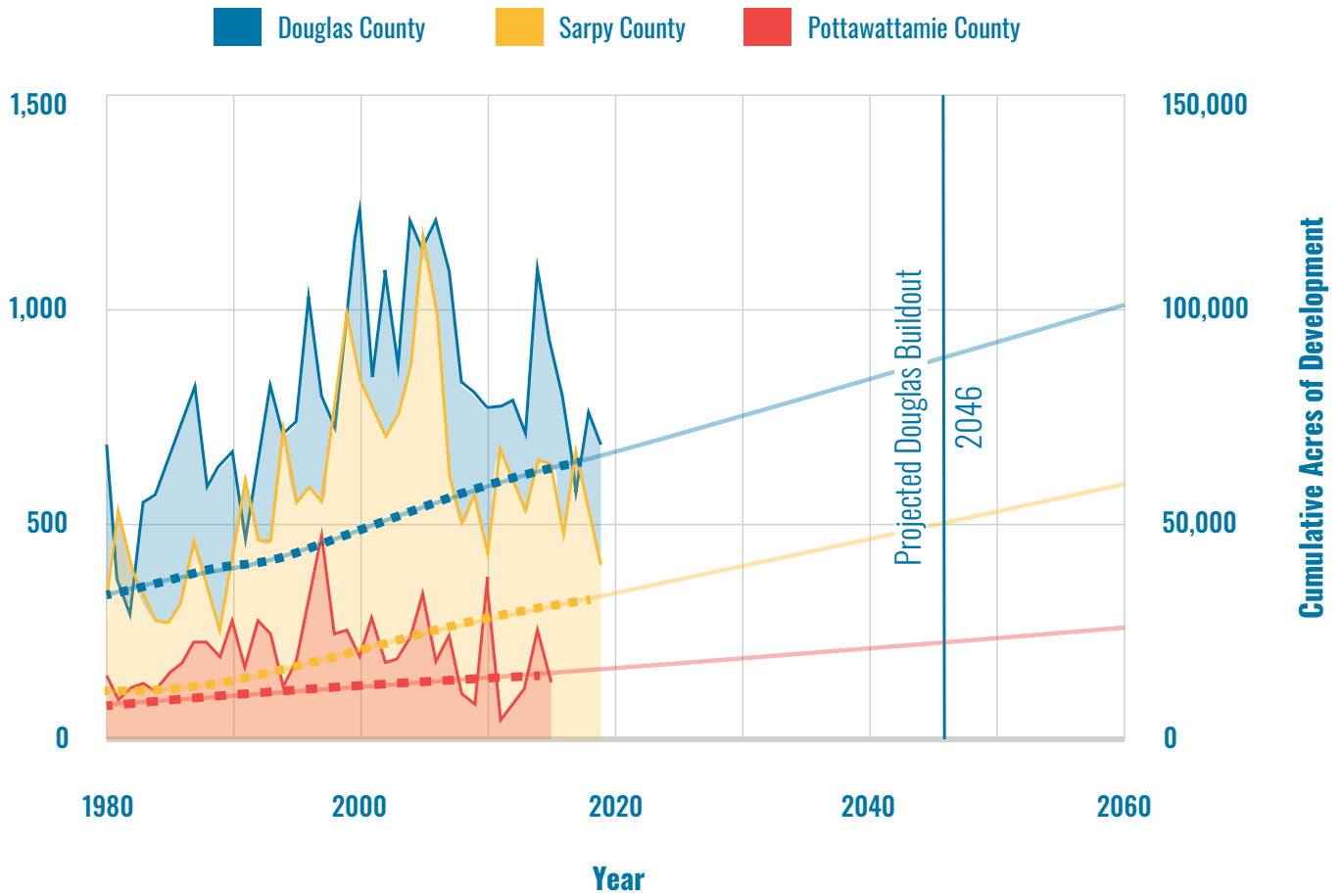
Major transportation investments have a tremendous impact on the development patterns in a region. Likewise, the development patterns of a region shape the transportation investments that are most effective in moving goods, services, and people. While MAPA is a transportation-focused agency, we recognize that these two areas of local policy go hand-in-hand, supporting the quality of life for our region's residents and our communities' economic growth. MAPA's Regional Development Report tracks growth trends in the region using building permit and parcel data to analyze where and how development is occurring, providing critical insights that help public agencies, private investors, and local communities guide growth and target investments that support long-term economic prosperity.

Since 1980, the annual level of development has fluctuated at the county level. However, these annual acres of development largely mirror

national economic trends, most notably the housing crisis in 2008. Annual development activity has not yet returned to the levels seen before the 2008 recession. Despite these fluctuations, cumulative development has seen a steady increase over time. By projecting this development outward and applying the linear trend to greenfield areas in the region, we can forecast when the available land will be consumed. If we only developed the remaining greenfield areas, Douglas County would be built out entirely by 2046. Sarpy County, the fastest developing county in the region, would reach build-out by 2078. When considering the portion of Pottawattamie County within MAPA's Transportation Management Area, this area will be fully built by 2149. However, we believe it is likely that other parts of the county would attract some of that development and that this horizon is likely even further out.



Figure 4.22: Annual Acres of Development



Freight movement in the MAPA region is projected to grow significantly by 2050, particularly along key interstate corridors such as I-80 and I-29. While overall volumes and commodity flows are important to track, the region's freight challenges are less about moving more goods and more about managing the system to ensure safe, reliable operations. MAPA serves as a data provider and aggregator, leveraging resources like FHWA's Freight Analysis Framework, state freight plans, and truck travel time reliability metrics to identify where freight volumes intersect

with congestion, bottlenecks, and crash risk. Rather than focusing solely on capacity expansion, strategies are centered on system management tools such as incident management, targeted safety improvements, and operational enhancements to reduce delays and prevent secondary crashes in the region. This approach prioritizes safety, reliability, and resilience, ensuring freight can move efficiently while minimizing conflicts with other road users and supporting the region's economic competitiveness.

Strategies to Improve Economic Prosperity

Compact Growth, Sustainable Development & Infrastructure Cost Savings

Through land use and scenario planning as part of the Heartland 2050 Vision, MAPA and regional leaders highlighted the strong relationship between the amount of infrastructure provided to neighborhoods and the number of people served by these investments. The density and design of our communities determine how effectively streets, utilities, transit, and other infrastructure support residents and businesses, ensuring that public resources are used efficiently.

Compact and well-planned growth minimizes infrastructure costs per capita, reduces the financial burden on local governments, and preserves valuable agricultural and open spaces. Strategies such as infill development, redevelopment of underutilized properties, mixed-use centers, and transit-oriented development strengthen local businesses, attract private investment, and create vibrant and walkable neighborhoods.

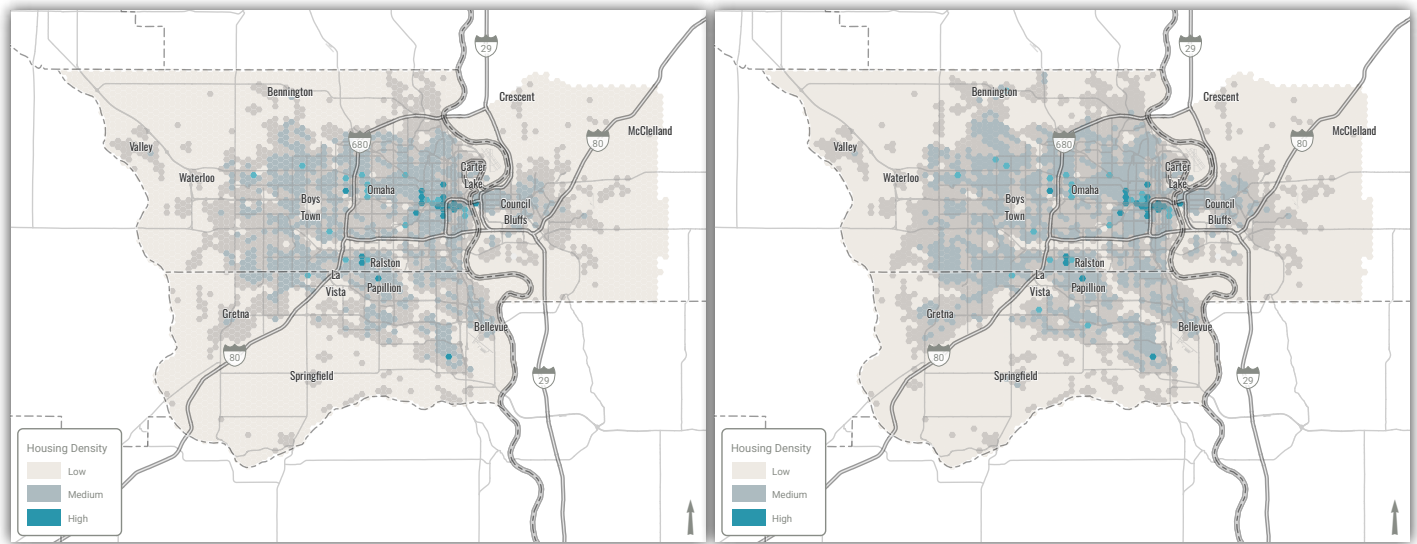
MAPA and its regional partners have made significant progress in promoting compact and sustainable development. Communities across the region are aligning land use policies and zoning with these regional goals, taking advantage of redevelopment and infill opportunities to reduce sprawl and support economic prosperity and environmental resilience.



Figure 23 below illustrates the future land use scenario's existing and forecasted residential development density over the next 30 years, with darker areas indicating higher density levels. It shows how the region's development footprint expands in

a more compact pattern compared to the sprawling trend of the past 40 years. These future land use scenarios help local governments evaluate the fiscal, environmental, and social impacts of their decisions.

Figure 4.23: Current Development vs Heartland 2050 Vision Scenario

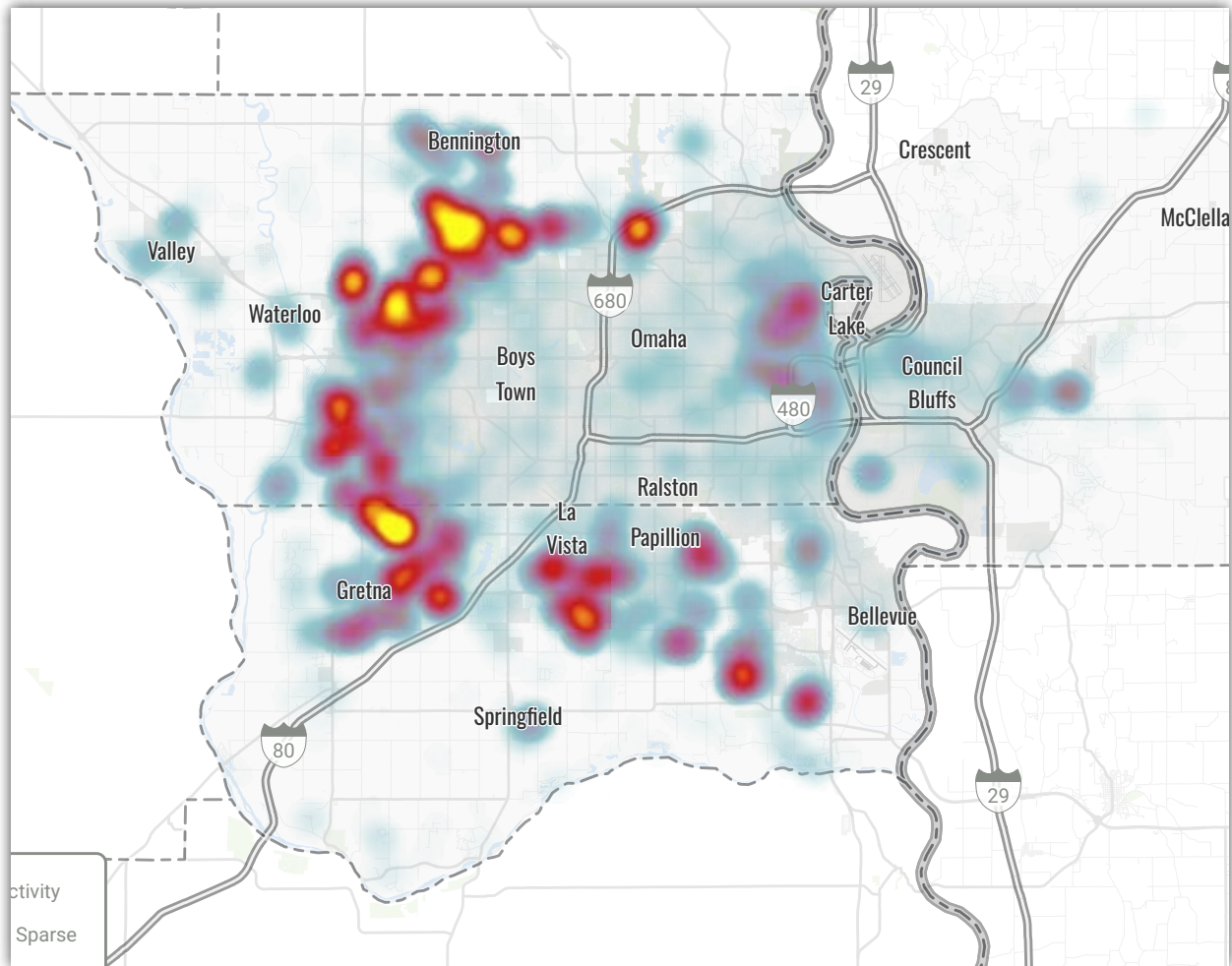


Infill development accounts for a smaller share of overall growth in the MAPA region, but in other regions with policies to encourage this kind of investment, infill can represent 20-30% of overall growth. The total permit activity shown in Figure 24 also illustrates how most of the growth in the MAPA region has occurred at the fringe of existing

development in suburban areas of the region. Managing this growth and balancing it with infill and redevelopment strategies over the next 20 years is crucial to reducing the fiscal burden of infrastructure required to support this low-density development pattern.



Figure 4.24: Regional Building Permit Activity, 2013-2023



In 2017, the City of Omaha received technical assistance from Smart Growth America to develop a market assessment to evaluate the fiscal impact of development and readiness for Transit Oriented Development (TOD). This analysis examined the infrastructure cost across typical development

densities, including roads and utilities. The findings highlighted that development only generates a net fiscal benefit in high-density, transit-oriented areas, where the revenue from new growth exceeds the infrastructure cost required to support it.

Beyond fiscal gains, Transit-Oriented Development (TOD) strengthens economic prosperity by creating well-connected, vibrant communities with greater housing, employment, and transportation choices. These high-density, mixed-use areas integrate residential, commercial, and recreational uses within walking distance of transit stations, which enhances neighborhood livability by improving access to jobs and services and boosting regional competitiveness. TOD supports inclusive, resilient communities by

fostering walkable environments that generate greater tax revenue per acre and promote sustainable, long-term growth.

More information about the City of Omaha's Transit-Oriented Development policy and Technical Assistance Report can be found at www.urbanplanning.cityofomaha.org/transportation-planning/transit-oriented-development.

Fiscal Impact Summary (\$ in millions)

Source: Smart Growth America, 2017

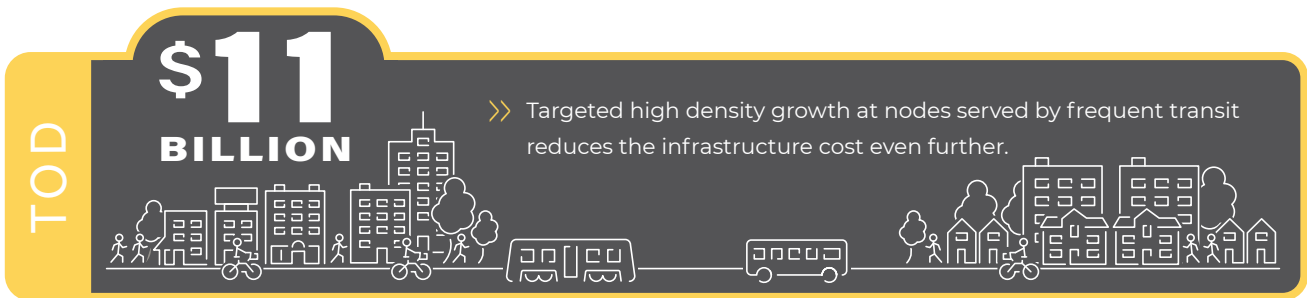
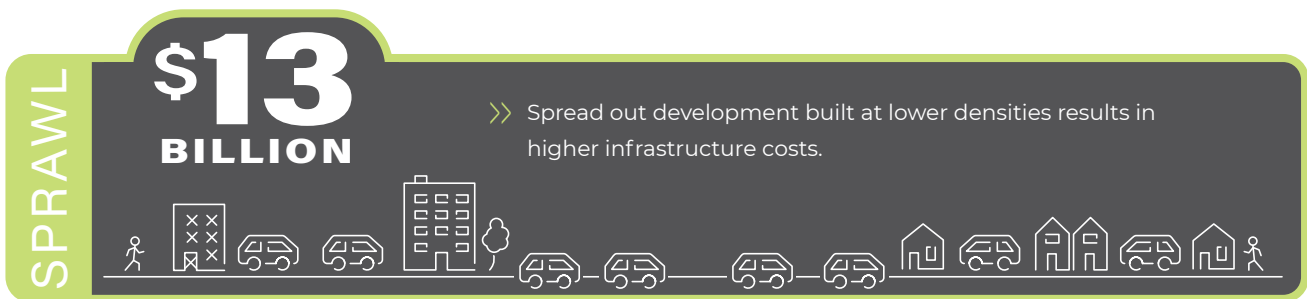
Scenario	Comparable Neighborhood	People per acre	Cost of new infrastructure	Net fiscal impact*
Low Density	Suburban	7.8	\$240.0	-\$145.7
Medium Density	Midtown	15.0	\$106.7	-\$12.4
High Density	Downtown	30.0	\$68.9	\$25.4

* Cost of new infrastructure offset with additional tax revenue



This analysis helps demonstrate how the region can promote economic prosperity by encouraging more compact and higher-density development. Using the assumptions developed for the City of Omaha, MAPA estimated the potential added infrastructure costs associated with each future land use scenario

for the region. These scenarios reflect different development densities and patterns but assume the same population. By comparing them, the region can evaluate how land use choices influence infrastructure costs and help guide decisions that foster sustainable economic growth.



Transit Return on Investment Assessment

Transit plays a key role in supporting the economy today. As the region grows, major investments in transit infrastructure and supportive land use policy realize significant economic benefits to the region and help mitigate many negative consequences of continued, low-density growth.

In 2018, MAPA launched the Transit Return on Investment (ROI) Study to evaluate the business case for expanding transit in the region. The study defines and measures ROI in ways that reflect regional values and priorities. Ultimately, it sought to answer a central question: How can our transit and land use decisions generate economic returns for the greater Omaha region? A central component to this framework is currently taking shape through the visioning and execution of MetroNEXT and the development of the City of Omaha and the Greater Omaha Chamber of Commerce Urban Core Strategy that are investing in enhancing the built environment in the region's core.

The study encompassed both qualitative and quantitative research and analysis. A key aspect of the study process was stakeholder engagement—talking with business leaders, community planners, transportation officials, and public policy experts. Interviews and focus groups with regional economic development leaders and employers provided additional insight into the current value of transit and its strategic role in the future of the Omaha region. Finally, specific transit and land use scenarios were analyzed using the MAPA travel demand model and econometric modeling to understand the long-term economic value of coordinated transit and land use strategies. The quantitative analysis in this effort noted that if the Omaha region invests in an enhanced Bus Rapid Transit (BRT) network and develops in transit-supportive ways along the route, the regional economy can add as many as 8,000 jobs and see an economic impact of \$1.8 billion in added annual business revenue by 2050.



At the time this ROI study was developed, the Omaha streetcar was being evaluated for feasibility and not yet put forward as a committed project, so the study

did not take its construction into account. Were it added to the evaluation, it would likely increase the return on investment.

Electric Vehicle Infrastructure

One important strategy for supporting economic prosperity is the reduction of harmful emissions from the transportation sector through the electrification of vehicles. Expanding electric vehicle (EV) infrastructure improves air quality and public health and boosts workforce productivity.

During the last five years, MAPA has participated in several successful efforts to expand the number of electric vehicle charging stations around the

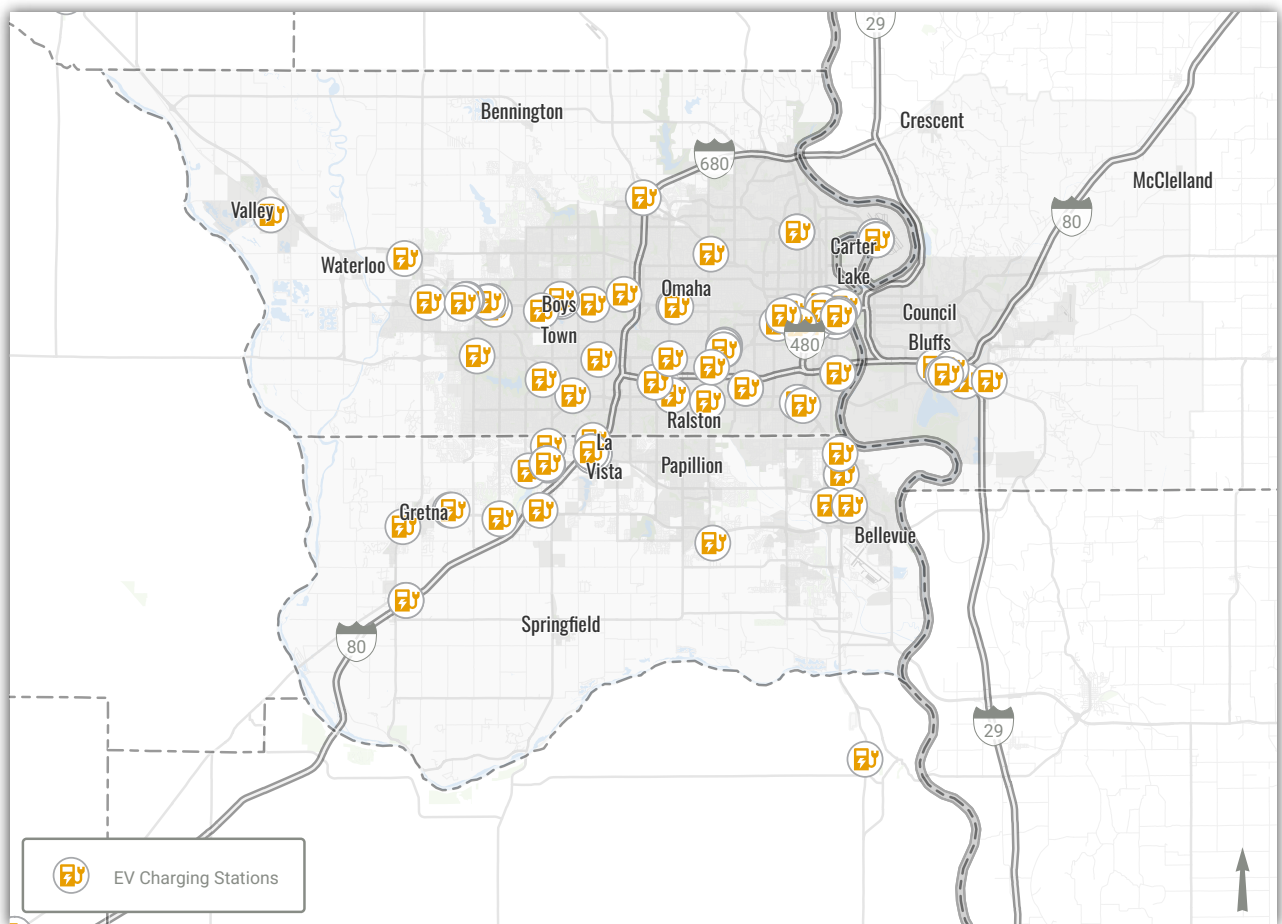
MAPA region. Many of these efforts have focused on purchasing cooperative electric vehicle charging infrastructure. Additionally, MAPA successfully secured the designation of US-6 from Council Bluffs to Gretna as an alternative fuel corridor through the FHWA. These corridors are part of the national charging infrastructure network along the National Highway System (NHS) and provide more attention to the importance of alternative fuels to the transportation system.

Since 2016, MAPA has been a member of the Nebraska Community Energy Alliance (NCEA), an interlocal cooperative agency that sponsors electric vehicle projects through the Nebraska Environmental Trust. Today, the NCEA has 35 members, including local government units, public utilities, universities, and metropolitan planning organizations interested in expanding electric vehicle infrastructure. Additionally, through its cooperative agreements, the NCEA can use participating charging stations to understand the impact of energy production on the actual benefits of EVs in the state.

MAPA has also partnered with local governments in the MAPA region to secure Congestion Mitigation and Air Quality (CMAQ) funding through NDOT to

expand the number of public charging stations available to motorists (Figure 25). Phase 1 of this project, led by the City of Omaha, was completed in 2020. The subsequent phases will expand the electric vehicle charging infrastructure to communities such as Gretna, La Vista, and Bellevue, making electric vehicles a more viable alternative for people throughout the region. These efforts could probably tie into the freight network work and the potential transition of heavy vehicles to electric power, such as Metro’s electric buses, and highlight the need to continue studying and monitoring electric truck development as these vehicles become an increasingly important segment of the region’s transportation system.

Figure 4.25: Existing Electric Vehicle Charging Stations in the MAPA Region (US Department of Energy)



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