

GENESEE TRANSPORTATION COUNCIL

The Metropolitan Planning Organization for the Genesee-Finger Lakes Region of NY

Final Plan Draft

Genesee-Finger Lakes Regional Freight Plan Update

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Prepared by:



With Support From:





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Acronyms and Abbreviations

AADT	Average Annual Daily Traffic
ACS	American Community Survey
AIM	American Institute for Manufacturing Integrated Photonics
ALB	Albany International Airport
BTS	Bureau of Transportation Statistics
BUF	Buffalo Niagara International Airport
CAA	Clean Air Act
CATS	Charlotte Area Transit System
DOT	Department of Transportation
DPW	Department of Public Works
EB	Eastbound
ED	Economic Development
EIA	Energy Information Administration
EPA	Environmental Protection Agency
ETC	Equitable Transportation Community
EU	European Union
FEMA	Federal Emergency Management Agency
FGLK	Finger Lakes Railway
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FRR	Finger Lakes Railway
FTA	Federal Transit Administration
GCEDC	Genesee County Economic Development Council
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GTC	Genesee Transportation Council
HOS	Hours of Service
HPMS	Highway Performance Monitoring System
HS	Health and Safety
ID	Idaho
IL	Illinois
ITS	Intelligent Transportation Systems
JFK	John F. Kennedy International Airport
LAL	Livonia Avalon and Lakeville Railroad
LQ	Location Quotient
LRTP	Long-Range Transportation Plan

MPO	Metropolitan Planning Organization
MUTCD	Manual on Uniform Traffic Control Devices
NAICS	North American Industry Classification System
ND	Non-determined
NHFP	National Highway Freight Program
NS	Norfolk Southern
NY	New York
NYCDOT	New York City Department of Transportation
NYS	New York State
NYSAMPO	New York State Association of Metropolitan Planning Organizations
NYSDOT	New York State Department of Transportation
NYSERDA	New York State Energy Research and Development Authority
OHD	Off-Hour Delivery
OPI	Optics, Photonics, and Imaging
OSOW	Oversize Overweight
PSR	Precision Scheduled Railroading
RCTIVA	Regional Critical Transportation Infrastructure Vulnerability Assessment
RIT	Rochester Institute of Technology
ROC	Frederick Douglass Greater Rochester International Airport
ROC	Rochester International Airport
ROW	Right of Way
RSR	Rochester and Southern Railroad
RTS	Rochester Regional Transit Service
SR	State Route
STAMP	Science and Technology Advanced Manufacturing Park
SWF	New York Stewart International Airport
SWOT	Strengths, Weaknesses, Opportunities, Threats
SYR	Syracuse Hancock International Airport
TANY	Trucking Association of New York
TED	Time Excessive Delay
TIP	Transportation Improvement Plan
TSMO	Transportation System Management and Operations
TTTR	Truck Travel Time Reliability
UPWP	Unified Planning Work Program
US	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USMCA	United States-Mexico-Canada Agreement
WB	Westbound

Executive Summary

The Genesee Transportation Council (GTC) serves as the designated Metropolitan Planning Organization (MPO) for the nine-county Genesee-Finger Lakes region in New York, which includes Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates counties. GTC's primary responsibility is to guide transportation planning and investment decisions in the region. It coordinates efforts among local, state, and federal agencies, collaborates on project selection, and oversees transportation management. To ensure alignment with regional economic and social goals, GTC regularly engages key stakeholders and the public in its planning processes.

The Genesee-Finger Lakes Regional Freight Plan builds on other key planning efforts in the region and across New York State, setting a course for a regional transportation system that supports economic growth while addressing the specific needs and challenges of freight movement in the region.

Why Conduct a Regional Freight Plan?

This GTC region boasts a diverse and vital freight landscape, integral to both the regional and statewide economy. Key industries such as agriculture—particularly dairy, fruits, and wine production—and manufacturing, including food processing and advanced technologies, generate significant freight traffic. These industries, along with other businesses, depend on the regional freight system to remain competitive and support growth. Freight-dependent industries account for nearly a third of the regional workforce and about a quarter of its annual economic output.

Freight is vital to the region's economic success, as efficient freight transportation directly impacts competitiveness and growth.

A comprehensive understanding of multimodal freight flows, critical corridors, and infrastructure needs is essential to guide transportation investments, promote sustainable and reliable goods movement, minimize adverse community impacts, and align regional priorities with state and national freight goals.

Traditionally, GTC has assessed transportation infrastructure performance across four key areas: safety, mobility, condition, and environmental impact. This Regional Freight Plan adopts a modal approach to evaluate the region's freight system performance in each area, utilizing data from state, regional, and national sources. These focus areas are also aligned with the long-term goals and objectives outlined in GTC's Long Range Transportation Plan (LRTP) 2045. To ensure consistency, the needs assessment and strategy recommendations in this freight plan are also designed to align with the LRTP 2045 strategy areas: Health and Safety, Access and Equity, System Management and Maintenance, Sustainability and Resiliency, and Economic Development.

What Are the Key Freight System Assets and Operations in the GTC Region?

The GTC region's transportation system supports a wide range of goods movement across multiple modes, including trucking, rail, air, and pipelines. The region is also served by the Erie Canal, used for moving freight to, from, and through the GTC region. While there is no intermodal facility within the region, nearby hubs in Buffalo and Syracuse meet its needs for freight transfers between modes.

Figure 1 shows the region’s multimodal freight transportation system. In 2021, this system handled over 400 million tons of goods, worth over \$440 billion, with passthrough freight making up the majority of flows. Trucks move the majority of freight by both volume and value, while rail and air modes account for smaller shares. By 2050, trucking’s value share is expected to rise, while rail will see a significant increase in terms of freight volumes

The GTC region primarily relies on road and rail networks for transporting goods within and beyond the region, with both modes projected to see significant increases in volume and value by 2050.

The GTC region’s key trading partners for both inbound and outbound trade include the rest of New York State and nearby states like Pennsylvania. Bulk materials, such as scrap metal and grain, are primarily transported by truck, rail, and maritime modes, while air freight is used mainly for smaller packages and mixed shipments. Additionally, the region is home to six petroleum and natural gas terminals connected to the regional pipeline system.

Key commodities for inbound trade included waste and scrap, while outbound trade focused on agricultural products and chemicals. The specific modes used reflected the nature of the goods and the region’s diverse freight network.

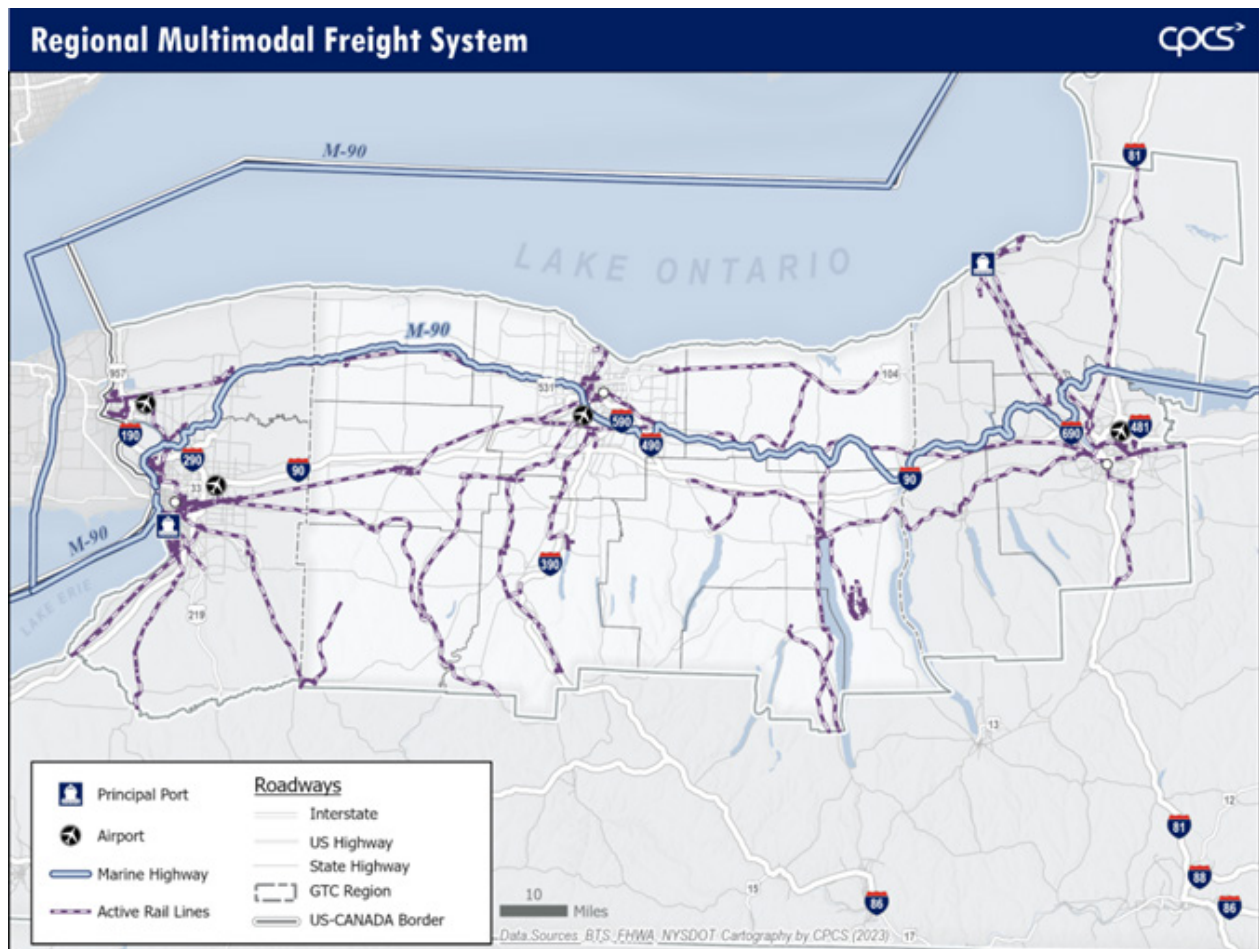


Figure 1: Regional Multimodal Freight System

What Are the Current and Future Freight Needs in the Region?

In-depth data analysis and stakeholder engagement—through consultations, an online map survey, a public meeting, and steering committee discussions—revealed current and emerging freight needs across the region. These needs summarized in Figure 2, are organized under the key strategy areas of the LRTP 2045, providing a clear framework for addressing freight challenges while aligning with GTC’s long-term investment and development objectives.

What Are the Ongoing and Future Trends That Can Impact the Regional Freight System and Operations?

Recent business investments and socioeconomic trends position the GTC region for growth in freight-dependent sectors:

- **Population Growth:** Monroe and Ontario Counties, the region’s most populous, are expected to grow in population over the coming years, presenting economic opportunities while also increasing demand for goods. Without strategic investments in the transportation system, this level of growth can lead to traffic congestion and last-mile delivery challenges, and infrastructure strain.
- **Freight-Dependent Industry Competitiveness:** Industries like utilities, transportation, warehousing, mining, agriculture, manufacturing, and retail/wholesale trade have seen increased competitiveness in the last decade. While this growth drives economic productivity, it also creates challenges for infrastructure, skilled workforce access, and the need to balance goods movement efficiency with environmental concerns.
- **E-Commerce Expansion:** While employment in wholesale and retail trade remains steady, e-commerce is rapidly expanding, as reflected in rising online spending trends. This growth will heighten

the demand for efficient first- and last-mile delivery, creating challenges in balancing the needs of delivery trucks with those of local communities.

- **Industrial Investments:** Significant manufacturing sectors, such as optics and photonics, food production, and advanced technology, continue to grow with recent investments like the \$650 million Fairlife facility in Monroe County. These developments will further impact and leverage the region’s freight infrastructure and capacity, signaling ongoing and future freight investment needs across sectors.

This Regional Freight Plan outlines the current and future needs of the regional freight transportation system, guiding GTC’s strategic planning and aligning the region’s long-term goals with anticipated market trends and evolving consumer behavior.

What Are the Strategies to Improve the Regional Freight System and Operations?

Previous freight planning efforts established a foundation for structured freight planning and investment in the GTC region. Building on this foundation, the recommendations in this updated Regional Freight Plan include relevant previously established strategies as well as additional initiatives developed to address current and future needs.

This Regional Freight Plan introduces new initiatives and incorporates established strategies to address the GTC region’s evolving freight needs

Strategies aligned with the LRTP 2045 focus areas are shown in Figure 3, with detailed explanations provided in the final chapter of this Plan.

Recommended strategies are also shown in Figure 3, with detailed explanations provided in the final chapter of this Plan.

Health & Safety Needs



- Hazardous material spills
- Low bridge clearance
- Trespasser incidents on railroads
- Traffic detouring from the Thruway

Access & Equity Needs



- Workforce access
- Disadvantaged communities affected by freight activities
- Reliance on extra-regional intermodal facilities
- Short line deactivation

System Maintenance Needs



- Warning for roadway closures
- Influx of truck traffic on critical routes
- Condition of bridges spanning the Erie Canal
- Frequency of extreme weather events

Sustainability & Resilience Needs



- Vulnerability to extreme weather
- Aging infrastructure
- Hazardous material spills

Economic Development Needs



- Workforce shortage
- Resources for grant/funding applications
- Limited utility access

Figure 2: Regional Needs Summary by LRTP Theme

Strategy Area	Strategies
Collaboration Strategies	FS01: Continue and strengthen the collaboration and coordination with public and private freight stakeholders to facilitate effective project identification, funding, and delivery
	FS02: Explore and encourage public-private partnership opportunities to address freight investment needs.
	FS03: Support training and development programs to enhance access to labor supply for key freight-reliant industries
	FS04: Advance the LRTP's regional sustainability goals and strategies to reduce freight's impact on the natural and lived environment.
	FS05: Collaborate with local and regional partners to identify and support projects that address the lack of utilities where infrastructure gaps are a barrier to logistics development.
	FS06: Provide technical assistance, training, and other resources to support the design and implementation of freight-specific zoning decisions.
	FS07: Support the development and implementation of comprehensive freight attraction and retention programs to position the region as a premier logistics hub and manufacturing center.
Operations and Maintenance Strategies	FS08: Improve first/last-mile rail access to major freight facilities.
	FS09: Preserve the right of way and make necessary infrastructure improvements to reinstate rail service along inactive lines, with higher priority given to lines where potential new customers have been identified.
	FS10: Improve roadway first/last-mile access to major freight facilities.
	FS11: Adopt a targeted regional approach to advance freight technologies that enhance efficiency, reliability, and sustainability.
	FS12: Monitor the operational performance of major freight corridors at congestion hotspots and implement freight-specific congestion management strategies to keep major freight corridors congestion-free.
	FS13: Ensure adequate curbside accommodations for commercial deliveries in urban areas while also enabling the safe operation of transit, shared mobility, and private transportation services in these areas.

Figure 3 - Regional Freight Strategy Recommendations
Source - CPCS, 2024

Strategy Area	Strategies
Planning Strategies	FS14: Reduce the impact of natural hazards and disruptions to improve the resilience of the freight transportation system.
	FS15: Investigate the feasibility of developing a multimodal logistics center or “freight village” within the region.
	FS16: Identify and address immediate safety and operational needs of local streets that serve through freight traffic.
	FS17: Expand tandem trailer access across the region along roadways that can safely accommodate them.
	FS18: Provide multimodal transportation connections to freight-reliant industry businesses not currently well-served by transit.
	FS19: Enhance airport planning integration into regional transportation planning .
System Investment Strategies	FS20: Identify and support the implementation of projects to mitigate the noise, vibration, and emissions-related impacts of freight movement.
	FS21: Address low-clearance and weight-restricted bridges on major highway freight corridors.
	FS22: Support implementation of highway project recommendations to address mobility and safety challenges on major regional freight corridors.
	FS23: Identify and implement safety improvements along highways with major truck crash hotspots.
	FS24: Enhance truck parking capacity and availability information across the region.
	FS25: Maintain and modernize railroad infrastructure to increase overall capacity and viability of short line railroads.
	FS26: Maintain and modernize key Freight Routes identified in the LRTP and analyzed in the Regional Freight Plan.



Chapter 1: Introduction and Overview

Chapter 1: Introduction & Overview

The Genesee-Finger Lakes Region overseen by the GTC is comprised of nine counties, each diverse in population, assets, and freight needs. This GTC Regional Freight Plan Update has been developed to provide the Genesee Transportation Council and its partners with a current understanding of the region's freight network and its needs, giving essential information and guidance to improve the regional freight system and operations.

Regional Freight Planning Goals

Regional freight planning goals in this plan align with the goals and objectives of established regional transportation plans. The region's 2045 Long Range Transportation Plan (LRTP) categorized its goals and strategies by five themes that address some of the key needs identified in the plan's development. The LRTP themes listed and defined below act as the key guiding principles for this plan's needs assessment and strategy recommendation:

- **Health and Safety:** Increase the safety and security of the transportation system for motorized and non-motorized users.
- **Access and Equity:** Increase accessibility and mobility of people and freight and enhance the integration and connectivity of the transportation system.
- **System Management and Maintenance:** Promote efficient system management and operation and emphasize the preservation of the existing transportation system.

- **Sustainability and Resiliency:** Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between State and local planned growth and economic development patterns.
- **Economic Development:** Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency and enhance travel and tourism.

By categorizing freight needs and opportunities by these five themes, GTC can align all freight-related strategies with other regional priorities and efforts. This would allow the GTC to leverage its resources and address needs on a broader scale. Needs and opportunities are, therefore, categorized throughout this plan by LRTP themes, describing how each element affects or supports the goal area.

Freight Planning Background of The Region

The Genesee Transportation Council (GTC) as the Metropolitan Planning Organization (MPO) for the Genesee-Finger Lakes region (referred to in this plan as the GTC region) has undertaken efforts to profile the role of freight in the region and determine what measures should be taken to preserve and improve crucial regional freight assets.

The first comprehensive freight plan conducted in the region, the 2012 Transportation Strategies for Freight and Goods Movement (2012 Strategy) laid an important freight planning foundation. It profiled existing conditions, helped to establish relationships with stakeholders, communicated the importance of freight to the public, and recommended freight investments and strategies to maximize regional economic competitiveness and growth.

Since 2012, other plans have addressed local freight topics, including the Ontario Midland Strategic Plan, the Ontario County Freight Corridor Development Plan: Area 1 (and forthcoming Area 2 Plan), and the Beh Industrial Park Traffic Optimization Study. Each provided the region with a set of strategies and potential projects for GTC and its partners to undertake over the next several years. Previous GTC plans have identified regional needs related to transportation safety, efficiency, and sustainability among other elements.

The region not only benefits from GTC's planning efforts but also planning at the county and state levels. NYSDOT recently developed its 2024 State Freight Plan which provides a broad framework for planning and funding freight-related projects. The plan included a detailed inventory of the state's freight assets, ongoing freight goals, strategies, and potential funding sources.

GTC can leverage the State Freight Plan - including its needs assessment, strategies, and truck parking study - when considering solutions to regional needs and potential partnerships for plan implementation. This Regional Freight Plan considers freight goals across all nine counties and the state while providing an updated analysis of regional needs and opportunities.

Stakeholder Involvement

Stakeholder engagement was a critical component in developing this Regional Freight Plan. By involving a diverse range of stakeholders throughout the planning process, GTC ensured that the plan accurately reflects the needs, challenges, and opportunities facing the region's freight transportation system. This collaborative approach helped identify key issues, validate technical findings, and develop implementable strategies that align with the priorities of both public and private sector stakeholders.

The stakeholder engagement process for this plan included the following key activities:

- **Steering Committee Meetings:** Between November 2023 and October 2024, a series of six meetings were held with the project's Steering Committee members to guide the development of the plan. The purpose of these meetings was to provide strategic oversight, review key deliverables, and ensure that the plan aligns with regional priorities. These sessions played a crucial role in shaping the direction and focus of the plan to meet the needs and expectations of the region.
- **One-on-One Stakeholder Consultations:** In February and March 2024, eight in-depth interviews were conducted with key stakeholders from various sectors. The purpose of these interviews was to gather detailed insights from industry experts and decision-makers on specific freight challenges and opportunities. These discussions provided valuable, sector-specific perspectives to inform more targeted and effective freight strategies.
- **Online Survey:** A comprehensive survey was distributed to stakeholders across the region, receiving 22 responses from various industries and counties. The purpose of the survey was to collect both quantitative and qualitative data on freight-related issues, ensuring that a broad range of perspectives were represented. This approach helped capture diverse insights from different sectors and regions, contributing to a more inclusive understanding of the freight challenges and opportunities across the area.
- **Public Meetings:** Two virtual public meetings were held to engage the public on the plan's progress. The first, on May 30, 2024, presented initial findings and gathered community feedback on preliminary results. The second, on October 23, 2024, provided a progress update and sought input on proposed strategic and tactical recommendations, to inform the final plan.

- **Focus Group Meetings:** In August and September 2024, a series of focus group meetings were conducted with key stakeholder groups, including public sector representatives, agricultural stakeholders, manufacturers, and climate impact researchers. These sessions aimed to facilitate in-depth discussions on specific freight-related topics and gather valuable feedback from participants. The meetings also served to validate proposed strategies by engaging stakeholders directly involved in or affected by the freight sector, ensuring that the strategies were aligned with real-world needs and challenges.
- **Ongoing Digital Engagement:** Ongoing updates and information sharing have been facilitated through the project website and other digital channels. The purpose of these efforts was to maintain transparent communication throughout the planning process and provide stakeholders with continuous opportunities to offer input and feedback, ensuring an open and inclusive approach to the plan's development.

This multi-faceted approach ensured that a wide range of perspectives were incorporated into the plan, from county planners and economic development officials to farmers, manufacturers, and environmental experts. The input gathered through these engagement efforts played a crucial role in shaping the plan's recommendations and ensuring its relevance to the diverse needs of the Genesee-Finger Lakes region. A summary of key takeaways from the various engagement activities is presented in Appendix A of this plan.

The Project's Steering Committee

The Steering Committee played a crucial role in guiding the development of the plan by providing strategic oversight and ensuring alignment with broader policy objectives and regional priorities. Composed of representatives from county planning departments, economic development agencies, short line railroads, the New York State Department of Transportation, Empire State Development, the City of Rochester, and the New York State Thruway Authority, the committee brought together a diverse range of expertise and perspectives. Their involvement helped keep the project focused on the "big picture," ensuring that strategic recommendations were well-informed, comprehensive, and aligned with the region's long-term goals.





**Chapter 2:
Freight System and Economy**

Chapter 2:

Freight System and Economy

This chapter provides an in-depth examination of the relationship between the freight system and the regional economy. It explores how freight-dependent industries contribute to economic growth and how economic shifts impact freight demand. The chapter discusses key trends in industries reliant on efficient freight movement, such as manufacturing, agriculture, and retail, and analyzes the infrastructure and logistical needs required to support these sectors. Additionally, it addresses the broader economic context, illustrating how socioeconomic factors like population changes, income levels, and education impact the region's freight system.

Regional Socioeconomic Trends

In 2022, the GTC Region had a population of 1,211,235. Population changes over the past decade have been minimal, typically fluctuating by fewer than 5,000 people each year (Figure 4).

The most significant decline occurred in 2018 when the population dropped from 1.21 million to 1.2 million.

Notably, most residents who relocate within the region tend to stay within their current county or elsewhere in the GTC area, rather than moving out of the region or state. Over the last decade, many counties in the region have experienced modest population decreases, ranging from 2% to 9% (Figure 8).

The median household income in the GTC Region in 2022 was \$67,982, which is lower than both the New York State median of \$75,157 and the national median of \$69,021. However, this discrepancy is likely influenced by the relatively lower cost of living in the region, compared to larger economic centers like New York City. Despite being lower than state and national averages, the region has seen significant growth in real income. Since 2012, income in real dollars

has increased by approximately \$16,000, or 32%, outpacing both state and national income growth rates.¹

1 American Community Survey 5-Year Estimate Data Profiles, Median Income in the Past 12 Months (In 2021 Inflation- Adjusted Dollars), 2011 – 2021.

Educational attainment across the nine counties, as shown in detail in Figure 5, also appears to be improving, with the share of individuals with a secondary degree increased by at least one percent across the region. Similarly, those without a secondary degree or a high school diploma have all fallen slightly.

Between 2012 and 2022, the GTC Region's labor force remained relatively stable, fluctuating between 554,000 and 574,000 workers.

During the same period, unemployment saw a significant drop, declining from 8% in 2012 to 3% in 2022, following broader national trends. The decrease in unemployment can be attributed to job creation and availability. However, the region faces challenges in recruiting skilled workers, particularly in trade industries, as stakeholders report difficulty in attracting talent from outside the region and staffing facilities located outside urban centers where public transportation is limited.

The region's median age of 42 exceeds the state median of 39 years, suggesting the working population may decline in the coming years (Figure 6). Still, this decade-long trend suggests that even as labor force totals change, the region is able to sufficiently and increasingly accommodate its job-seeking population.

Freight Industry Trends

While all sectors are ultimately affected by the regional transportation network and freight movement to an extent, some industries are particularly reliant on the efficient and safe movement of goods to operate. More specifically, these industries refer to sectors that rely on the transportation of material goods, maintenance of freight-related infrastructure, and warehousing or processing of freight.

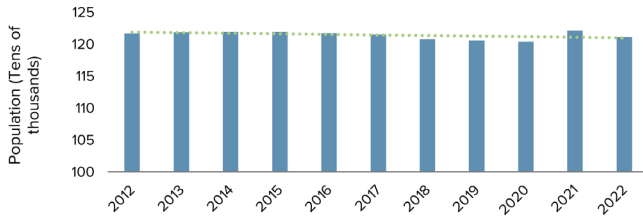


Figure 4 - Regional Population Trends, 2012 - 2022
 Source: CPCS analysis of American Community Survey 5-year Estimates, US Census Bureau, 2023.

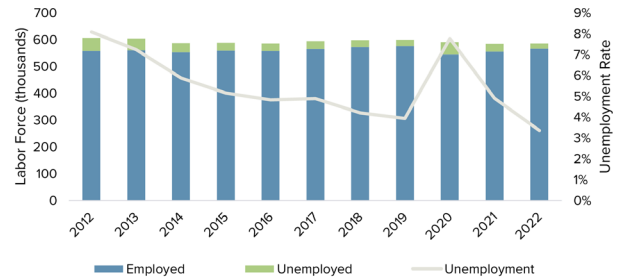


Figure 6 - Regional Labor Force and Employment, 2012 - 2022
 Source: CPCS analysis of Bureau of Labor Statistics, Employment by County, 2023

Educational Attainment Level	Regional Share in 2021	% Change since 2011
Less than 9th Grade	4.0%	-0.1%
9th to 12th Grade, no Diploma	6.6%	-2.0%
High School Graduate	32.9%	-2.1%
Some College, no Degree	17.8%	-0.3%
Associate Degree	12.7%	+1.0%
Bachelor's Degree	14.9%	+1.8%
Graduate or Professional Degree	11.1%	+1.8%

Figure 5 - Average Regional Educational Attainment, 2022
 Source: CPCS analysis of Census Bureau, ACS 5-year estimate educational attainment, 2023

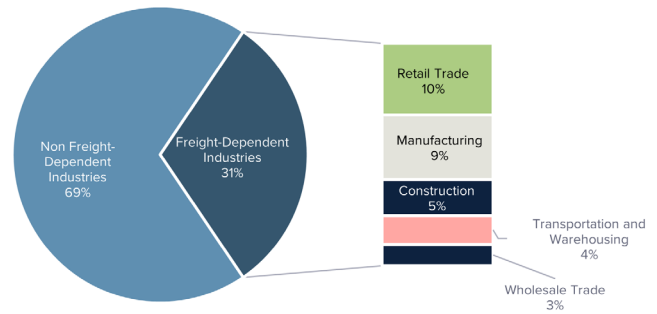


Figure 7 - Freight-Dependent Industry Share of Regional Employment, 2012 - 2022
 Source: CPCS analysis of Bureau of Economic Analysis, Total Full-Time Employment by County, 2023.

Freight-dependent industries analyzed for this plan are grouped based on the North American Industry Classification System (NAICS) and include:

- NAICS 48-49 - Transportation and Warehousing
- NAICS 23 - Construction
- NAICS 11 - Agriculture and Forestry
- NAICS 42 - Wholesale Trade
- NAICS 44-45 - Retail Trade
- NAICS 31-33 - Manufacturing
- NAICS 22 - Utilities

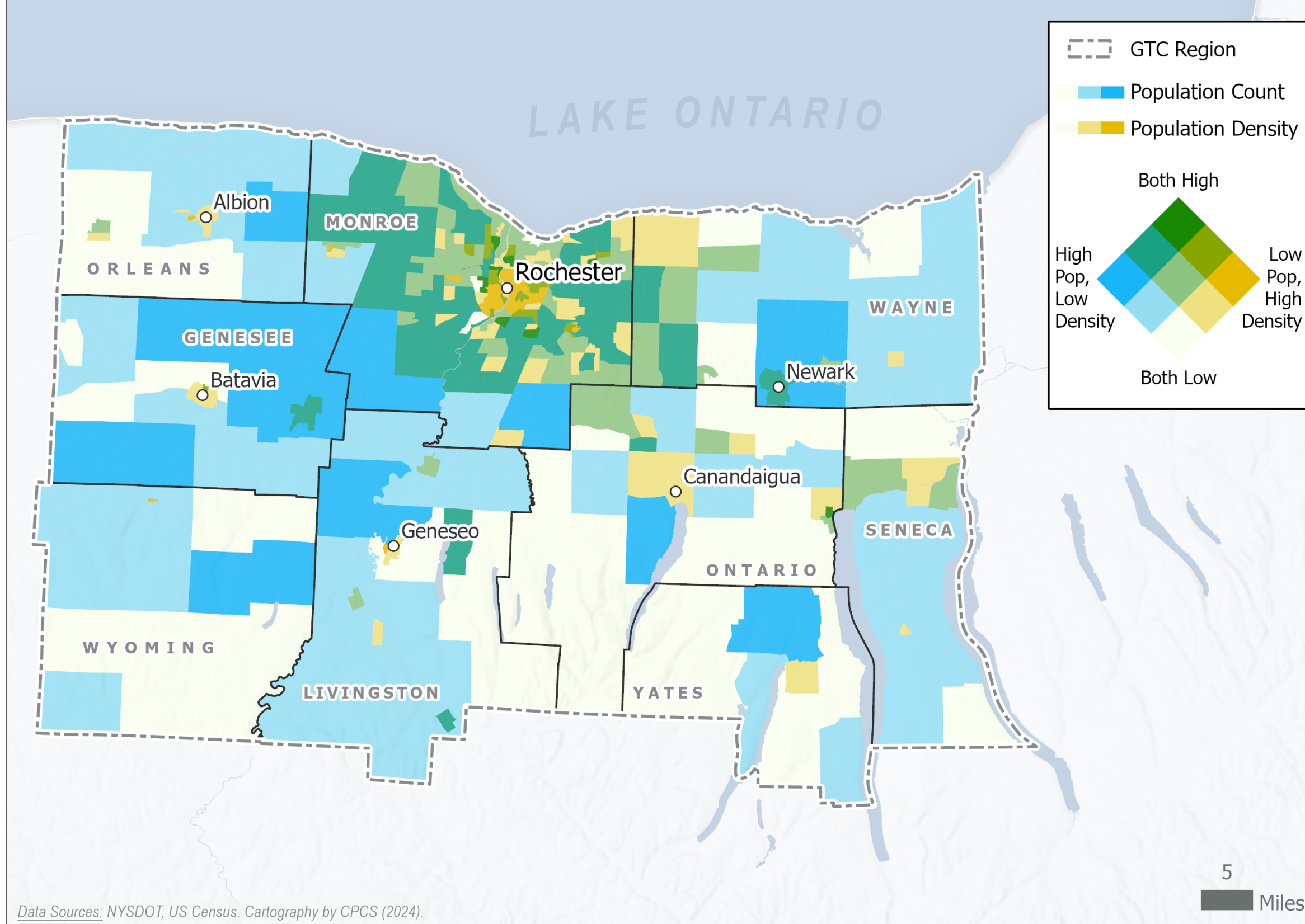
Freight-dependent Industry Trends

Of the 536,000 currently employed in the GTC region, 31 percent work within freight-dependent industries. Figure 7 shows a full breakdown of freight-dependent industry share of regional

employment. Retail trade represents the highest proportion of freight-related employment, employing 10 percent of the region as a whole. This is closely followed by manufacturing, at nine percent of the entire region. It should be noted that agriculture, utilities, and mining all represent one percent or near zero percent of employment but still play a crucial role in the region's economy. Agriculture in particular may require less labor but is among the most competitive sectors in the region.

Freight-dependent industries account for nearly a quarter of the region's annual output. Manufacturing and retail trade are again at the top of the freight-dependent industries, accounting for 11 and 4 percent of all regional output respectively (Figure 9). Again, like the proportions for regional employment, agriculture, utilities, and mining are among the freight-dependent industries with the lowest contributions to regional output.

Population Count & Density by Census Tract



Data Sources: NYSDOT, US Census. Cartography by CPCS (2024).

Figure 8 - Population Change by County, 2012 - 2022

Freight-dependent Industry Competitiveness

While GDP and employment share show the current state of the region's freight-dependent industries, evaluating competitiveness compared to national trends in industry growth can be indicative of the sector's future expansion. For example, while agriculture occupies a fairly low proportion of the region's output and employment, it is the most competitive freight-dependent industry in the GTC region. The same can be said of utilities, representing the third most competitive and fastest-growing freight-dependent industry in the region (Figure 10).

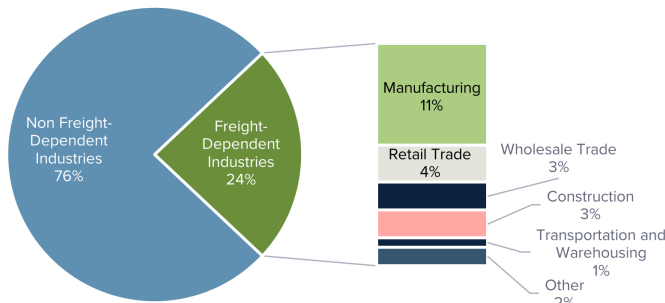


Figure 9 - Freight-Dependent Industry Share of Regional GDP, 2022

Source: CPCS analysis of Bureau of Economic Analysis Data Viewer, Annual Gross Domestic Product (GDP) by NAICS Industry: New York Counties, 2023.



Figure 10 - Freight-Dependent Industry Competitiveness, 2022

Source: CPCS analysis of Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2023

Changes in wages and competitiveness in these industries generally tell a story of growth for the region. Just as utilities is among the most competitive sectors in 2022, it has also experienced the fastest rate of competitive growth over the last decade. As shown in Figure 11, five more freight-dependent industries have increased in competitiveness in the last ten years.

For example, transportation and warehousing, and mining, while representing lower levels of output and employment, are among the fastest-growing sectors in the region. Furthermore, while the agricultural industry has slightly decreased in competitiveness since 2012, it has consistently and continues to represent the most competitive freight-dependent industry in the region.

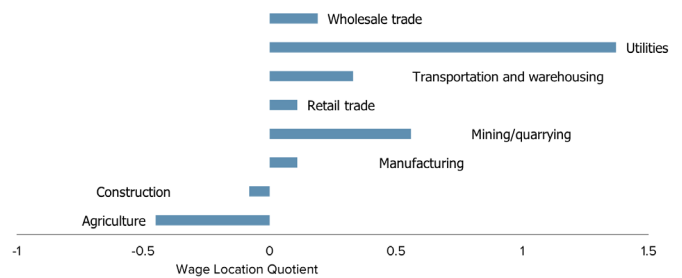


Figure 11 - Freight-Dependent Industry Competitiveness Change, 2012 - 2022

Source: CPCS analysis of Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2023.

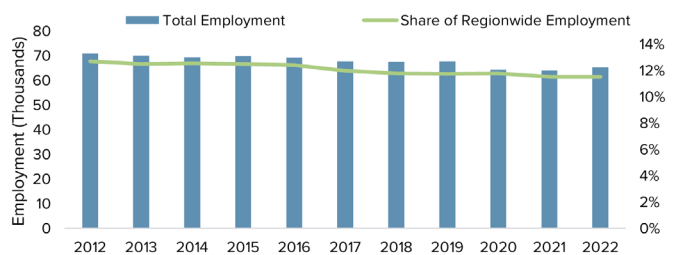


Figure 12 - Manufacturing Share of Regional Employment, 2012 - 2022

Source: CPCS analysis of Bureau of Economic Analysis (BEA) Data Viewer, Total Full Time Employment by NAICS Industry: New York Counties, 2023.

Industry Profiles

Manufacturing

The GTC Region has a strong manufacturing base, ranking third in the state with a \$10 billion real GDP contribution and representing 12% of regional employment (Figure 12). Key industries include life-science technology and electronics manufacturing, particularly in Monroe, Ontario, and Wayne counties, benefiting from partnerships with local institutions like Rochester Institute of Technology (RIT) and AIM Photonics Test, Assembly and Packaging. The region's future growth will include diversification into food industry research, agricultural sciences, and continued leadership in Optics, Photonics, and Imaging (OPI) technology.

Wholesale & Retail Trade

Wholesale and retail trade is recovering rapidly post-pandemic, with e-commerce growing by nearly 20% in 2022. In-person retail remains the largest contributor to this sector, averaging \$330 million in weekly spending in 2023, while online retail spending has surged to \$104 million weekly, particularly in Livingston and Wayne counties, which have seen over 150% growth in e-commerce since 2021.

Agriculture

Agriculture plays a vital role in the GTC Region's economy, despite employing less than 2% of the population (Figure 14). The region is a statewide and East Coast leader in dairy farming, apple production, and food processing.

Wyoming County boasts the highest number of dairy farms in New York (Figure 15), while the region is also one of the state's six major apple-growing areas. Key companies like Constellation Brands, LiDestri, Coca-Cola, and Wegmans have a strong presence in the region. Recent investments, such as Fairlife's \$650 million facility in Monroe County, are driving growth in both agriculture and manufacturing, with the new facility expected to create 250 jobs and boost

output in food processing.² However, the sector faces challenges from climate change, with rising temperatures and irregular rainfall affecting crop yields and dairy farming. Farmers are also grappling with rising costs due to international trade agreements like the United States-Mexico-Canada Agreement (USMCA) and supply chain disruptions caused by COVID-19.

Smaller farms, often family-owned, are particularly vulnerable to these pressures, as they face increasing costs for labor, milk feed, and other inputs.³ Nonetheless, with growing investment in agricultural technology and food sciences, the region's agricultural industry is expected to recover and expand beyond post-COVID losses.⁴

2 New York State Governor's Office, Governor Hochul Announces Plans for the Coca-Cola Company to Build \$650 Million Fairlife® Production Facility in Monroe County, May 2023.

3 This commodity category is identified as "FAK" in Transearch data and primarily represents miscellaneous shipments in intermodal containers.

4 USDA, Agricultural Statistics Annual Bulletin: New York, 2021

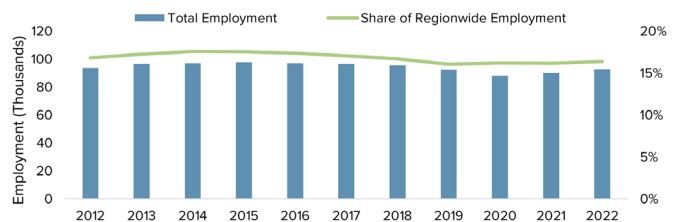


Figure 13 - Wholesale and Retail Trade Share of Regional Employment, 2012 - 2022

Source: CPCS analysis of BEA Data Viewer, Total Full Time Employment by NAICS Industry: New York Counties, 2023.

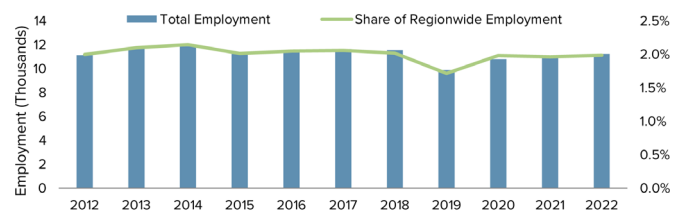
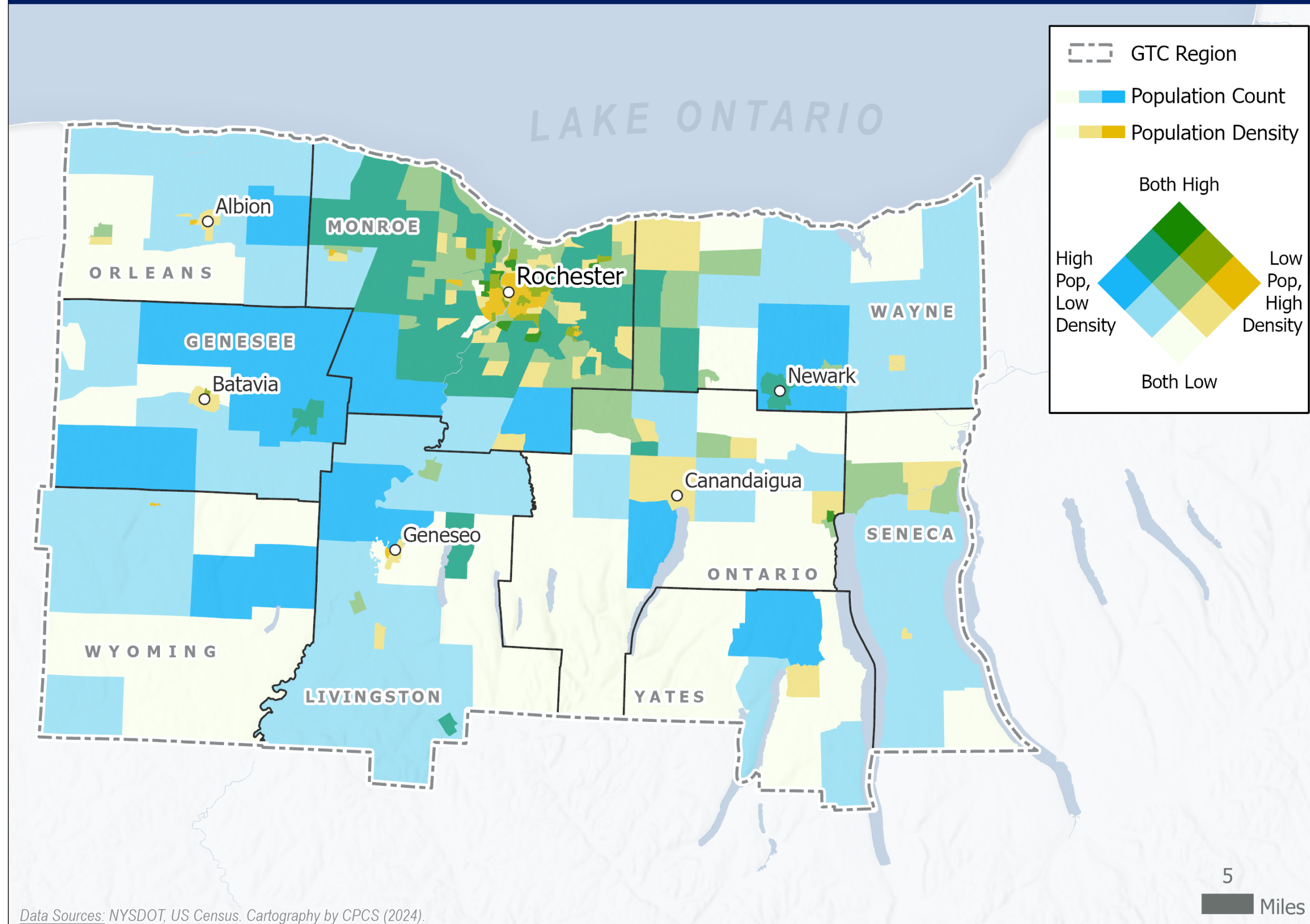


Figure 14 - Agricultural Share of Regional Employment, 2012 - 2022

Source: CPCS analysis of BEA Data Viewer, Total Full Time Employment by NAICS Industry: New York Counties, 2023.

Population Count & Density by Census Tract



Data Sources: NYSDOT, US Census. Cartography by CPCS (2024).

Figure 15 - Dairy Cow Inventory by County

Transportation and Warehousing

Like retail and wholesale trade, the transportation and warehousing industry in the GTC region is seeing rapid changes due to shifts in online versus in-person spending and related first and last-mile delivery. Though the transportation and warehousing industry represents a small portion of regional GDP, the GTC region has a wealth of new warehouse development in Monroe County and along the Thruway (Figure 17). This is evidenced by the significant growth in employment in the industry over the last ten years (Figure 16). Building footprint data was used to ascertain what building and warehouse growth occurred in the region over the last decade. Buildings in the nine counties developed since 2011 over 100 thousand square feet were determined to likely fall under the warehousing category, with other new developments with smaller areas not counted.

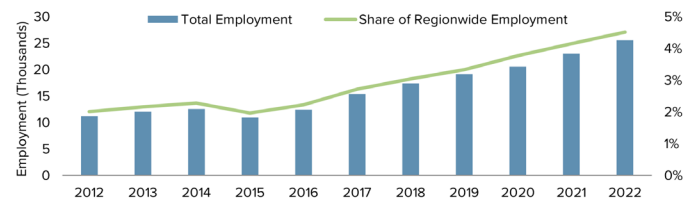
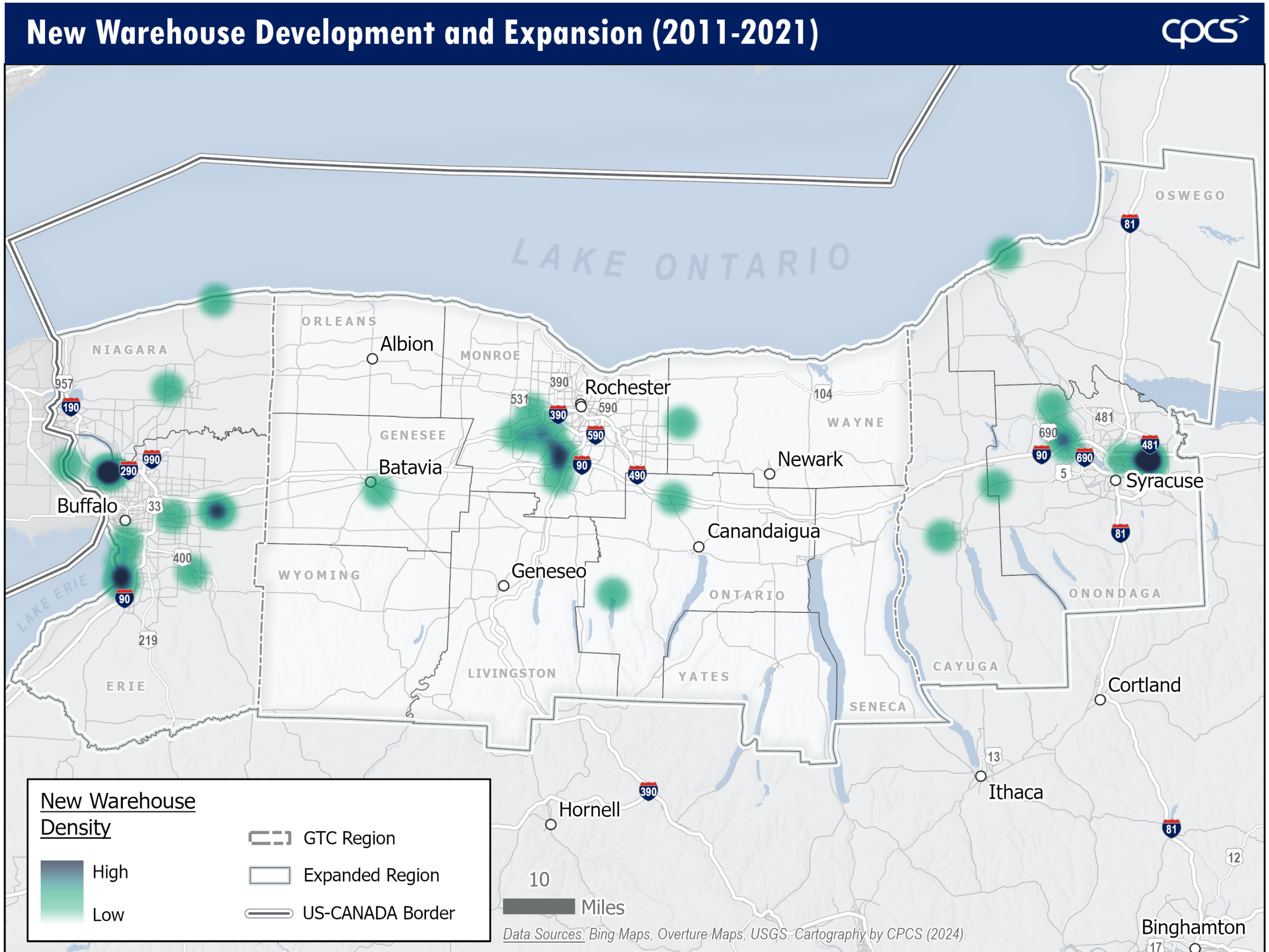


Figure 16 - Transportation and Warehousing Share of Regional Employment, 2012 - 2022

Source: CPCS analysis of BEA Data Viewer, Total Full Time Employment by NAICS Industry: New York Counties, 2023

Figure 17 - New Warehouse Development in the GTC Region and Surrounding Areas





Chapter 3: Freight System Profile

Chapter 3: Freight System Profile

This chapter investigates the GTC region's multimodal freight infrastructure and facilities. This inventory is created through a review of existing regional, state, and national resources, and the analysis of current and future freight traffic flows is based on S&P Global Transearch data provided by the New York Department of Transportation (NYSDOT).

Regional Freight System Use

Goods movement activity varies on four main factors—volume, value, time sensitivity, and origin/destination. Different freight modes serve different purposes based on the combination of these factors. For example, valuable shipments require extra security, hazardous materials must be moved safely and carefully, time-sensitive goods must be shipped quickly, and high-volume freight needs to be moved at low unit cost. An expansive and well-connected freight system is necessary to meet these diverse needs. Pipelines can carry high-volume liquids efficiently at a low cost, while maritime modes move bulk cargo at a low cost and across long distances. Railroads are

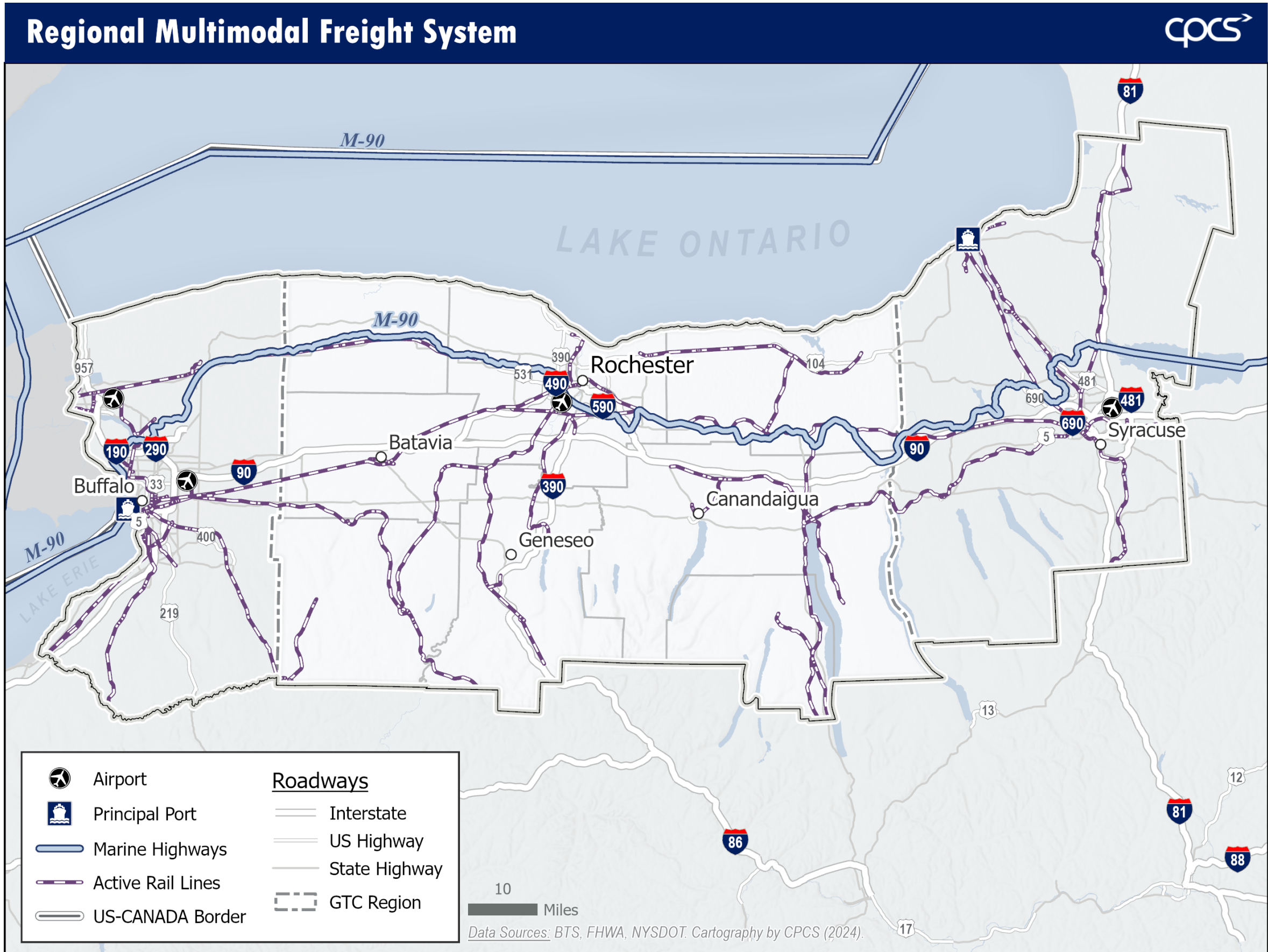


Figure 18 - GTC Region's Multimodal Freight System

effective at transporting both lower-value bulk goods and high-value containerized commodities over long distances. Trucks serve diverse needs and can move both lower- and higher-value goods between all possible origin-destination pairs at relatively high speed. Finally, air cargo is the best option for high-value goods that must reach farther distances quickly.

The GTC region’s transportation system encompasses all of these modes and, therefore, can move a diverse range of goods into, out of, within, and through the region’s borders.

About 189 miles of interstate support the region’s trucking industry. Two Class I railroads, CSX and Norfolk Southern, operate in the region, while one regional railroad and seven short lines further support the movement of goods. Freight goods must sometimes be moved between modes. While there is no intermodal facility in the region itself, sites in Buffalo and Syracuse serve the GTC region’s needs. The GTC region’s multimodal freight network can be seen in Figure 18.

In 2021, the GTC region’s diverse freight network transported over 400 million tons of goods, worth over \$440 billion. As shown in Figure 19, passthrough flows made up the highest percentage of the total commodities by tonnage handled by the region at 77 percent, followed by outbound (11%), inbound (10%), and internal (2%). By value, passthrough flows accounted for 79 percent of the total commodity flows. This was followed by outbound (10%), inbound (10%), and internal (1%).

Figure 20 shows the modal shares for the region’s freight movements in 2021 and the expected modal shares of freight movements in 2050. Including pass through flows, trucks move roughly 80 percent of the GTC region’s freight by both tonnage and value. In 2021, the air, rail, and maritime modes all together moved 11 and 7 percent by volume and value, respectively. Air and maritime did not move a statistically significant amount of freight by volume in 2021, but air did move 1 percent by value.

By 2050, trucking’s share of freight movement in the region is expected to increase by 1 percent for total tonnage but increase by 4 percent for total value (Figure 21). However, rail is expected to surpass truck flow by tonnage in 2050, experiencing a near 10 percent jump in volume share.

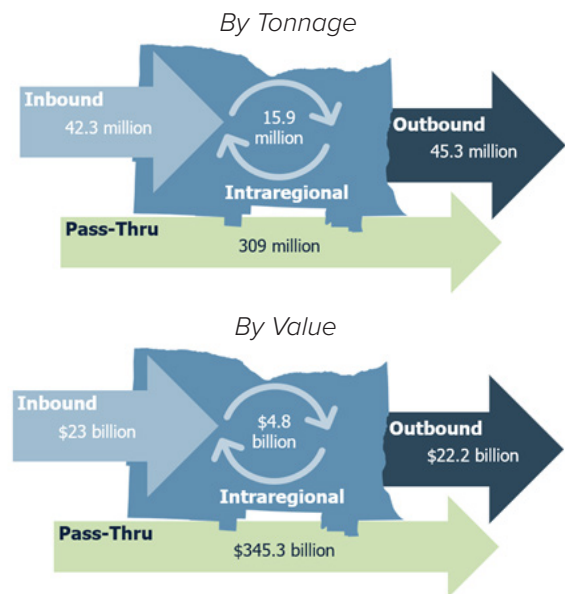


Figure 19 - Commodity Flow by Direction, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

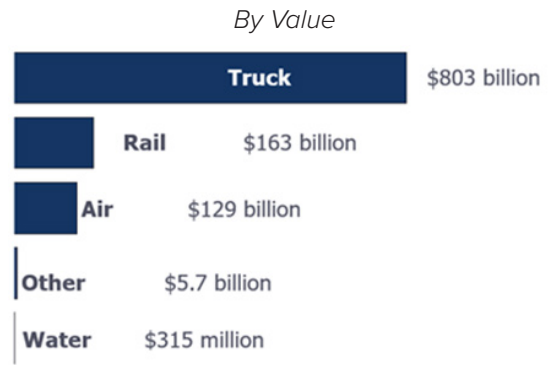
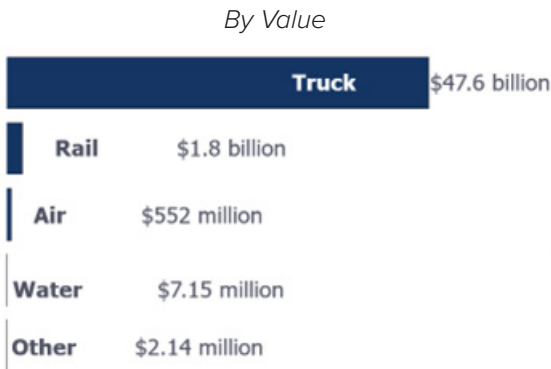
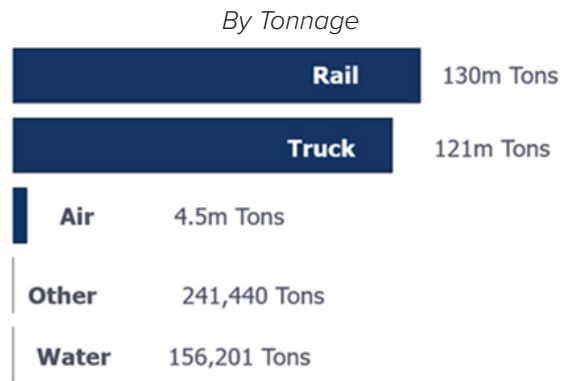
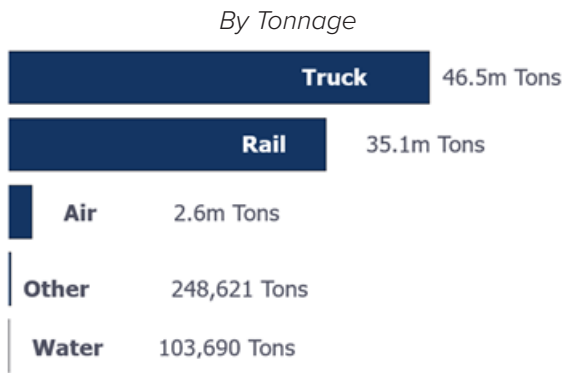


Figure 20 - Commodity Flow by Mode, 2021

Figure 21 - Forecasted Commodity Flow by Mode, 2021

Source: CPCS Analysis of S&P Global Transearch Data, 2023.

Source: CPCS Analysis of S&P Global Transearch Data, 2023



By Tonnage		
	Inbound	Outbound
Rest of New York State	7,719,085	8,639,566
Pennsylvania	3,024,603	4,648,236
Ohio	1,577,014	1,188,746
New Jersey	600,040	1,563,595
By Value (Million)		
	Inbound	Outbound
Rest of New York State	\$4,604	\$5,338
Pennsylvania	\$2,421	\$2,664
Ohio	\$2,302	\$1,184
Michigan	\$1,308	\$885

Figure 22 - Top Trading Partners for the GTC Region, 2021
 Source: CPCS Analysis of S&P Global Transearch Data, 2023.

For inbound trade, the region’s top trading partners in 2021 were the rest of New York State, Pennsylvania, and Ohio by both tonnage and value. For outbound trade, the region’s top trading partners were the rest of New York State, Pennsylvania, and New Jersey by tonnage and New Jersey, Pennsylvania, and Massachusetts by value (Figure 22).

The goods most frequently traded between the region and its trading partners differed by the mode of travel. For freight inbound to the region, trucks, and rail most often transported miscellaneous waste or scrap, water moved mixed shipments, and air transported small-packaged freight shipments (Figure 23).

For freight moving outbound from the region, trucks most often transport grain, while rail moves chemical or fertilizer, water moves mixed shipments, and air moves small, packaged freight shipments.

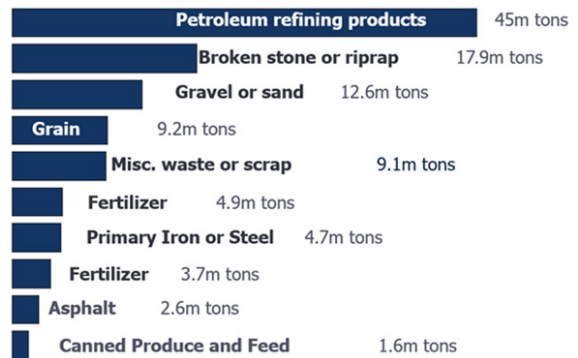


Figure 23 - Top Traded Commodities by Tonnage, 2021
 Source: CPCS Analysis of S&P Global Transearch Data, 2023.

Regional Road Network

The GTC region’s road network is made up of approximately 3,517 miles of public roadways, including 189 miles of Interstates, all of which are a part of the National Highway Freight Network. This network moves more than 46 million tons of goods, worth more than \$47 billion, excluding freight passing through the region.

In 2021, most goods (48%) moved via trucks passed through the GTC region. This is followed by goods moving outbound – 24 percent and 18 percent by tonnage and value, respectively – and inbound movements, which represented 21 percent of tonnage and 18 percent of value moved by trucks (Figure 24). Internal flows were the smallest, moving 7 percent of tons and only 3 percent of value. By 2050, through movements, it is still expected to be the greatest share.

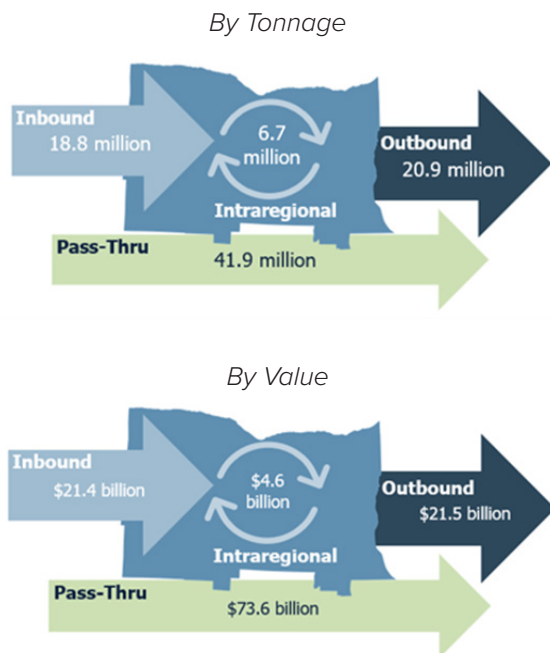


Figure 24 - Commodity Flow by Truck, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

Inbound flows will increase to 23 percent of tons moved via truck and 17 percent of the value. Outbound flows will represent 20 percent of the tonnage and 15 percent of the value moved by trucks. Internal flows will remain the smallest, with 5 percent and less than 1 percent of tonnage and value, respectively.

Trucks primarily transport miscellaneous waste or scrap, broken stone or riprap, and gravel or sand into the GTC region. Trucks carrying goods outbound from the GTC region are primarily moving grain, broken stone or riprap, and dairy farm products.

Figure 25 and 26 below, show the top ten commodities moved inbound to, and outbound from, the GTC region by truck. These represent 59 percent of the total tons moved into and 67 percent out of the region by truck.



Figure 25 - Top Ten Inbound Commodities via Truck by Tons, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

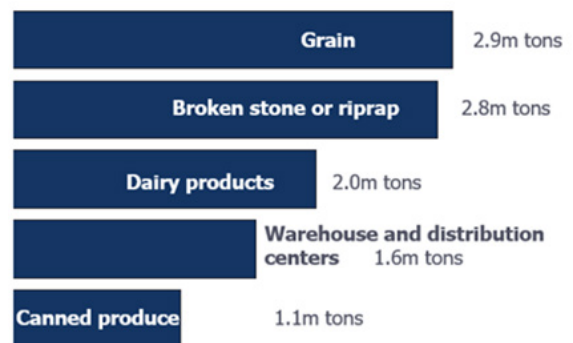


Figure 26 - Top Ten Outbound Commodities via Truck by Tons, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

Key Truck Corridors

Trucking activities in the Genesee-Finger Lakes region are served by four Interstates, I-590, I-490, I-390, and I-90. These Interstates offer access to nearby Buffalo and Syracuse, and further afield to Ontario, Canada, New York City, and surrounding states. The region is also served by several US Highways and State Routes, primarily US 20 and SR 31.

In 2021, the GTC region’s road network supported the movement of millions of tons of goods. The majority of the region’s highway freight flows are concentrated on only a few corridors. As shown in Figure 28, goods moving by truck in the region primarily move along the I-90, I-390, and I-490 corridors. These corridors connect the region’s businesses with markets in Buffalo, Syracuse, and other states, as well as internationally via border crossings with Ontario, Canada, and connections to international airports that support air cargo. Outside of New York, trucks traveling throughout the northeast to or from the GTC region often use these roadways to connect to Pennsylvania, Ohio, and New Jersey among other states (Figure 27). In 2021, goods predominantly move east to west via I-90 and

to and from Rochester via I-490. By 2050, the region’s road network is expected to experience more intense usage, as goods continue to flow along the corridors listed above.

Figure 29 illustrates the expected changes by 2050. In particular, Route 400, connecting I-390 to Buffalo via Route 20A, will go from seeing goods volume between 3 million and 10 million to over 10 million by 2050. In general, the GTC region’s major roadways will continue to primarily facilitate the movement of goods east to west, although some roadways in the southeast portion of the region will see a greater goods volume moving north-south by 2050. This can in part be associated with the expected increase in border crossing activity between New York and Canada. Both trucks and rail are projected to see significant increases in through goods flow towards the Canada border, both through Buffalo and Syracuse.

By Tonnage (Millions)		
	Inbound	Outbound
Rest of New York State	6.89	8.51
Pennsylvania	2.79	3.56
Ohio	1.47	1.03
New Jersey	0.59	1.49
By Value (Million)		
	Inbound	Outbound
Rest of New York State	\$4,355	\$5,312
Pennsylvania	\$2,353	\$2,537
Ohio	\$2,225	\$1,164
New Jersey	\$1,294	\$1,297

Figure 27 - Top Trading Partners by Truck, 2021

Source: CPCS Analysis of S&P Global Transearch Data, 2023.



Goods Volume by Truck (2021)



Figure 28 - GTC Region Goods Volume (Tonnage) by Truck, 2021

Change in Total Goods Volume by Truck (2021 - 2050)

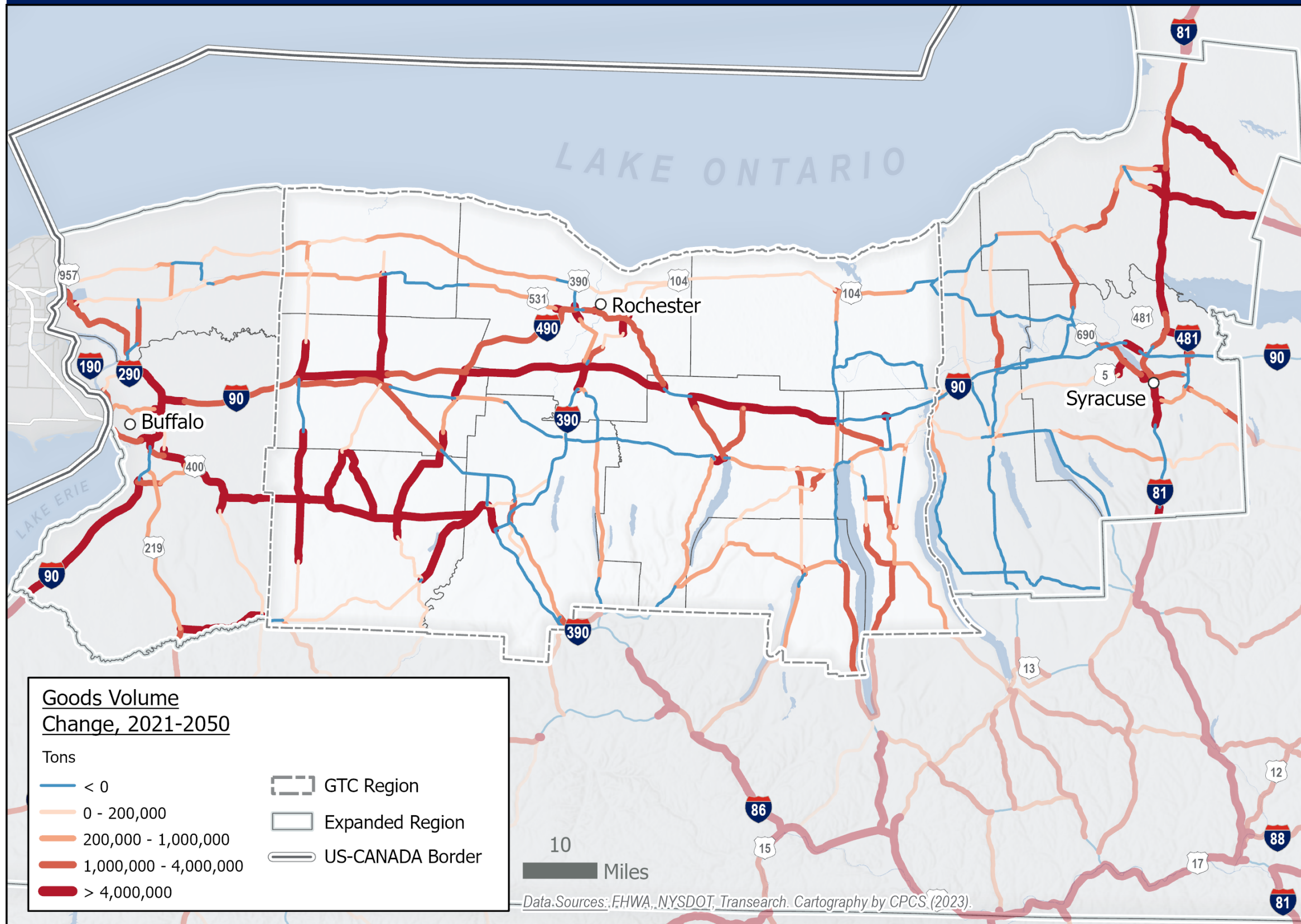


Figure 29 - GTC Region Goods Volume by Truck, 2050

Roads critical to goods movement can also be measured by annual average daily truck traffic (Truck AADT). When analyzing the amount of trucks on the different roadways in the region, on average, I-90 sees the greatest amount of truck traffic in the region (Figure 30), as it crosses the region and connects the eastern side of the GTC region to Buffalo. I-590 sees more truck traffic on segments as it nears Rochester and I-390 sees more truck traffic on its most southern section, stretching from Geneseo almost to the southern border of Livingston County. This section of I-390 sees the greatest share of truck traffic in the GTC region, followed by I-90 or the Thruway (Figure 31).

In terms of through volumes, movement is almost entirely dependent on the Thruway. Segments of the Thruway consistently moved at least 750 thousand tons of goods in 2021 (Figure 32). This exceeds the highest levels of regional tonnage along the Thruway by roughly 600 thousand tons. The high level of goods transported along the Thruway is supported by arterials like I-390 and Route 245, each carrying up to 5 million tons yearly in through trucks alone. Both tonnage

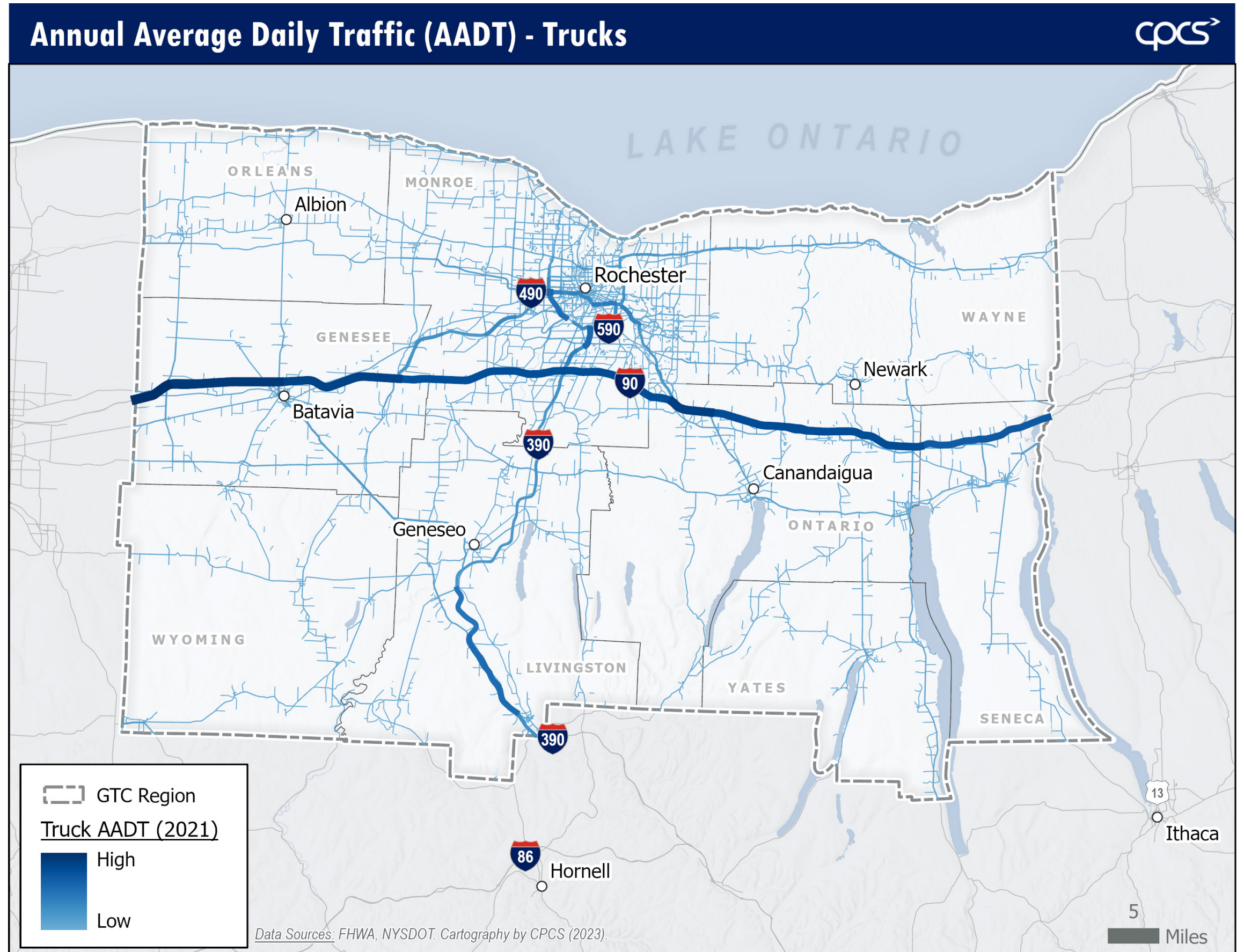


Figure 30 - Annual Average Daily Truck Traffic in the GTC Region

Through Truck Movements by Volume (2021)



Figure 32 - GTC Region Through Truck Movements by Volume, 2021

Change in Through Truck Movements by Volume (2021-2050)



Figure 33 - GTC Region Through Truck Movements by Volume, 2021 - 2050

Regional Rail Network

The GTC region’s multimodal transportation system includes a network of freight rail lines connecting the region’s businesses to rail-served facilities and markets in surrounding counties, states, and internationally. The region’s freight rail system consists of two Class I railroads, one regional railroad, and seven short lines. Class I railroads refer to lines operated by the largest carriers in the country, operating nationally and exceeding revenue thresholds set by the Surface Transportation Board (STB). Class II and III railroads, however, operate on smaller scales. Class II railroads are often regional and operate across a couple of states. Class IIIs are the lowest class, operating the smallest amount of trackage and often used as connectors to smaller communities for larger class railroads (Figure 36).

Miscellaneous waste and scrap account for the highest volume of goods transported by rail in the region, followed by canned produce and gravel. This is also true when examined by value, though petroleum products and engine parts also account for high levels of goods value traveling by regional rail (Figure 37).

Rail movements rely heavily on trade within New York State. However, Pennsylvania and Ohio are the top two trade partners for rail movements outbound from the region. New Jersey, Vermont, and Connecticut are all significant trading partners for inbound and outbound rail movements as well, showing a continuing trend in regional trade patterns in the Northeast and Mid-Atlantic (Figure 38).

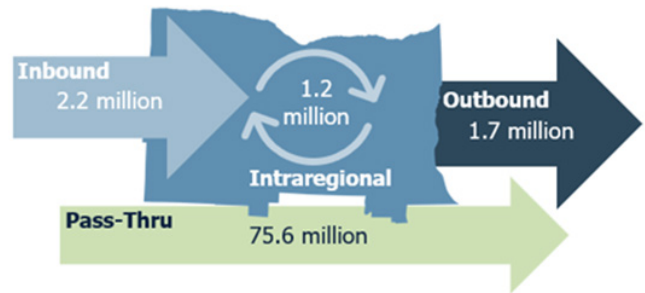


Figure 36 - Commodity Flow by Rail by Direction, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

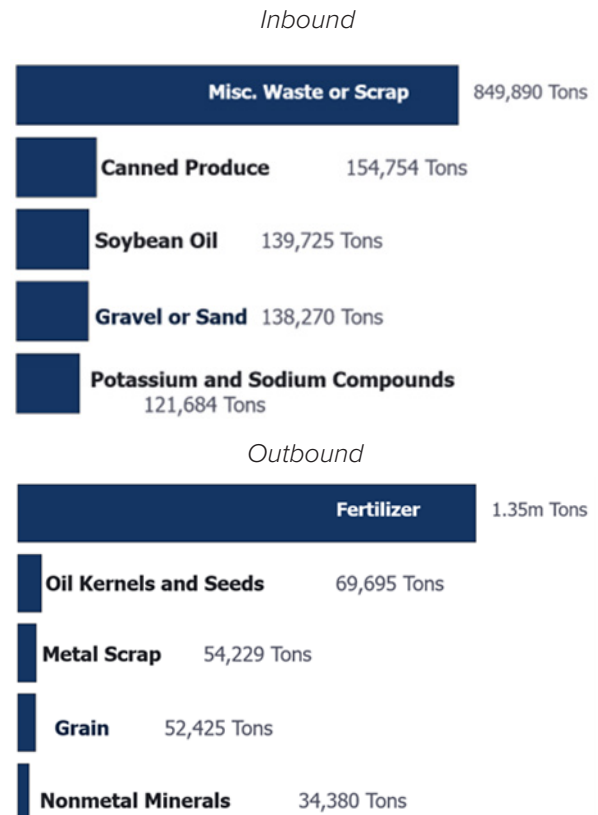


Figure 37 - Top Commodities by Tonnage, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

By Tonnage (Thousands)		
	Inbound	Outbound
Pennsylvania	225.7	1,085
Rest of New York State	225.7	124.7
Ohio	104.7	149.1
Connecticut	81.4	42.6
By Value (Millions)		
	Inbound	Outbound
Rest of New York State	\$245.7	\$22.0
Illinois	\$306.2	\$6.6
Pennsylvania	\$45.9	\$118.2
Ohio	\$74.8	\$16.9

Figure 38 - Top Trading Partners by Rail. 2021
 Source: CPCS Analysis of S&P Global Transearch Data, 2023.

In 2050, inbound and outbound flows by volume are not expected to be substantially higher than 2021 volumes. Instead, intraregional and through flows will account for the greatest increases in rail flows in the GTC region. Pass-through volumes are expected to increase by roughly 95 million tons, over 400 percent (Figure 39). Regardless of direction, rail's role in the regional freight economy is projected to expand and become a more dominant mode of freight transportation compared to truck, maritime, and air.

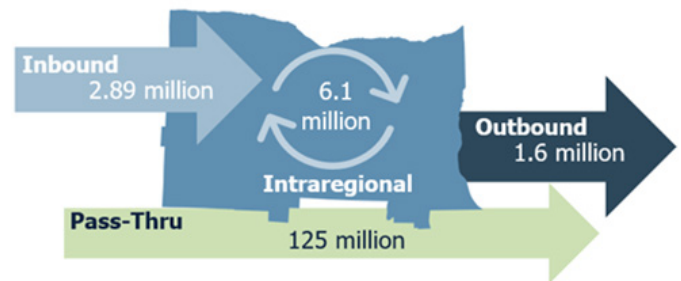


Figure 39 - Commodity Flow Tonnage by Rail by Direction, 2050
 Source: CPCS Analysis of S&P Global Transearch Data, 2023.

Rail-served Facilities

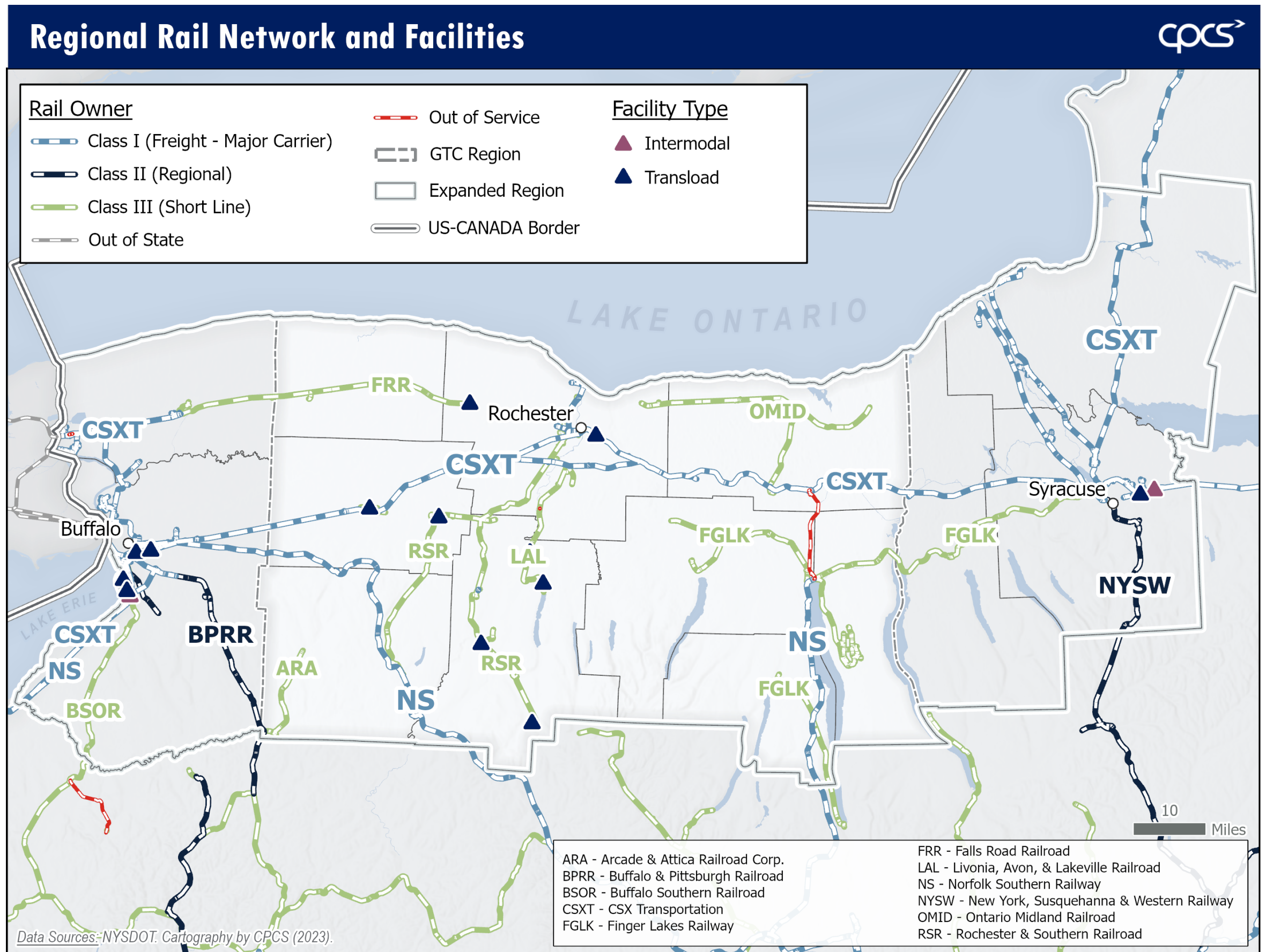
The GTC region has no intermodal freight facilities located within its boundaries, utilizing intermodal facilities in Buffalo and Syracuse instead. CSXT and NS both have an intermodal terminal that serves domestic and international intermodal freight in Buffalo. CSXT also operates an intermodal terminal in Syracuse serving both domestic and international freight. These facilities primarily connect rail with the road network. The region primarily has freight passing through it via rail.

The GTC region has several transload facilities located throughout it, shown in Figure 41. Transload facilities allow products to be transferred between trucks and trains. Access to these facilities can expand a business's market reach and improve the flow of goods. The region is also supported by transload and intermodal facilities in Buffalo and Syracuse. Figure 40 provides details on the seven transload facilities in the GTC region.

Facility Name	Location	Serving Railroad
Avon Transload	Avon	LAL
Batavia 3T Warehouse	Batavia	FRR
Empire Warehouse	Le Roy	RSR
Lakeville Transload	Lakeville	LAL
Leniage Warehouse and Cold Storage	Brockport	FRR
LMC Industrial Contractors	Dansville	RSR
Savage Services Corp	Rochester	CSX
The Farm Transload	Lakeville	LAL

Figure 40 - Rail-served Facilities in the GTC Region
Source: NYSDOT Rail Bureau, 2023

Figure 41 - GTC Region Active Railroad Operators and Facilities



Rail Crossings

There are 2,008 rail crossings across the GTC region, of which 56 percent are public and 44 percent are private. Public crossings are where rail intersects with publicly owned and publicly accessible roadways. Private crossings are those that can only be used by the roadway owner or those who have access, as they are located on private roadways. Of the region's public crossings, 833 (74%) are at-grade, meaning they cross roadways rather than going over or under them. These at-grade crossings are primarily along short lines or regional railroads.

Of the 1,130 public grade crossings in the GTC region, 67 percent are actively protected. Actively protected crossings have safety measures and signage that indicate the existence of a crossing and change when a train approaches the crossing. The remaining 33 percent of crossings are passively protected, meaning that they may have signage or safety measures, but those would be measures such as crossbuck signs, painted lines, or other fixed indicators of a crossing (Figure 42).

Type of Crossing	At-Grade	Over or Under Roadways	Total
Total Rail Crossings	1,672	336	2,008
Public	833	297	1,130
Private	839	39	878

Figure 42 - Rail Crossings in the GTC Region
Source: CPCS Analysis of FRA, Crossing Inventory, 2023.



Regional Maritime Network

In 2021, the region’s maritime network moved over 158 million tons of freight worth over \$72 billion, including freight passing through the region (Figure 43). By 2050, the region is expected to move over 166 million tons, with a value of over \$26.6 billion. Outbound and inbound flows are negligible compared to through movements, though the Port of Rochester and other regional docks still handle up to 125 thousand tons of goods a year.

Of the goods moving on the maritime network, the GTC region’s top inbound and outbound shipments by tonnage are containerized cargo, while industrial machinery and trucks are the top commodities passing through the region on water. By value, construction machinery and equipment is the top commodity group on the maritime network. When broken down by flow direction, petroleum refining products were the top commodity passing through the region by value on the maritime network (Figure 44).

Several cities can be considered top trading partners of the GTC region’s maritime network. For goods inbound and outbound on the

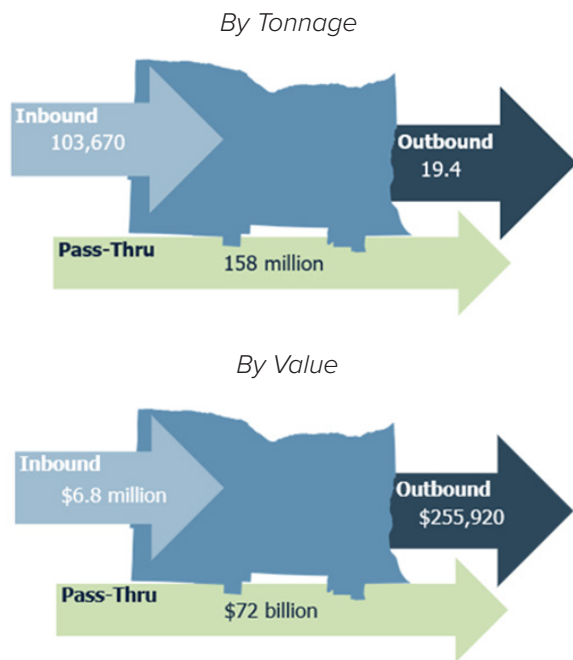


Figure 43 - Commodity Flow by Water, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

maritime network, the top trading partner is Ontario, Canada. For goods passing through the GTC region, goods are primarily coming from New Jersey or destined for Ohio (Figure 45).

Erie Canal

Historically, the Erie Canal was the centerpiece of the New York State Canal System, connecting the Great Lakes to the Atlantic Seaboard. It was constructed with the intended use of commercial shipping and thus spurred economic development across upstate New York. Today, the Erie Canal is still used for commercial purposes and moves freight to, from, and through the GTC region. The Erie Canal, in connection with New York State’s broader canal system, is particularly useful for shipping goods that are not easily shipped by truck or rail.⁵ It is dredged annually to maintain the minimum water depths of 14 feet needed for navigation.⁶



Figure 44 - Top Commodities Moved by GTC Region Maritime Network, 2021

Source: CPCS Analysis of S&P Global Transearch Data, 2023.

By Tonnage			
	Inbound	Outbound	Through
Ontario	102,906	19.4	3,875,128
New Jersey	0	0	35,080,579
Michigan	764	0	6,731,725
By Value			
	Inbound	Outbound	
Ontario	No value data available for containerized inbound cargo from Canada	\$255,920	\$542,744,133
Michigan	\$6,879,583	\$0	\$516,664,694
Ohio	\$0	\$0	\$5,670,237,852

Figure 45 - Top Trading Partners by Water. 2021

Source: CPCS Analysis of S&P Global Transearch Data, 2023.

Ports Within or Near the Region

Within the Region

Port of Rochester

Located on Lake Ontario at the mouth of the Genesee River, the Port of Rochester is primarily for recreational use, with five separate marinas and three additional yacht clubs. The Port's commercial activity in the last twenty years has been inconsistent and limited, as the main terminal was converted for retail use in 2013.⁷

Commercial vessels entering the port are now limited to a single dock located upstream at Turning Point Park and used almost exclusively by the neighboring ESSROC Cement Plant, though capable of handling both bulk freight and occasionally container cargo. Though the dock is public and maintained by the US Army Corps of Engineers (USACE), the plant serves a single shallow-draft cement carrier that serves Rochester Harbor and operates entirely on the lake, going to ports in Ontario and Toronto year-round.

Recent developments at the Port have focused solely on expanding recreational use at the eastern and western piers, and no plans exist as of yet for the expansion of cargo services at the mouth of the Genesee River.

Near the Region

Port of Buffalo

The Buffalo Harbor, located on the eastern edge of Lake Erie, offers a dock area of 2.7 thousand meters. The Harbor is owned and operated by Gateway Metroport and can accommodate up to eight large vessels, divided by the two main docks on either side of the Lackawanna Canal. The Harbor is well connected to I-90 to support truck traffic and offers connections to CSXT and NS mainlines.

One of the busiest ports in the Great Lakes, Buffalo Harbor has seen a steady increase in cargo volumes over the last five years. Buffalo is also the only major New York Great Lakes Port that consistently handles both domestic and international trade. In 2021, international trade exceeded domestic trade for the first time in five years. The majority of this was destined for Canadian ports.

Port of Oswego

The Port of Oswego, located on Lake Ontario, is the first US port of call on the Great Lakes. The Port has convenient access to SR 481, which further provides access to I-81 and I-90. The Port also offers CSXT rail service. The Port handles over one million tons of goods annually, including

aluminum, steel, mill scale, agriculture products, salt, nuclear power components, cement, petroleum products, and windmill components, all mostly destined for Canadian ports.

The Port is separated into West and East terminals. The West Terminal has silo storage for cement, bulk storage for petroleum, and liquid storage, as well as a 55 thousand-square-foot asphalt pad for bulk cargo storage. The East Terminal contains an administrative building, thousands of square footage of warehouse, and open and bulk dome storage. Cargo volumes have remained steady over the last five years, with a brief increase in 2019. However, the Port's 2021 comprehensive plans detail the Port Authority's recent efforts to construct a new grain facility and silo on the eastern terminal that will allow for over 500 thousand bushels of grain to be stored and loaded into containers.

5 New York State Canal Corporation, Report on Economic Benefits of Non-Tourism Use of the 6 NYS Canal System, accessed December 2023: <https://www.canals.ny.gov/economic-benefit-report.pdf>

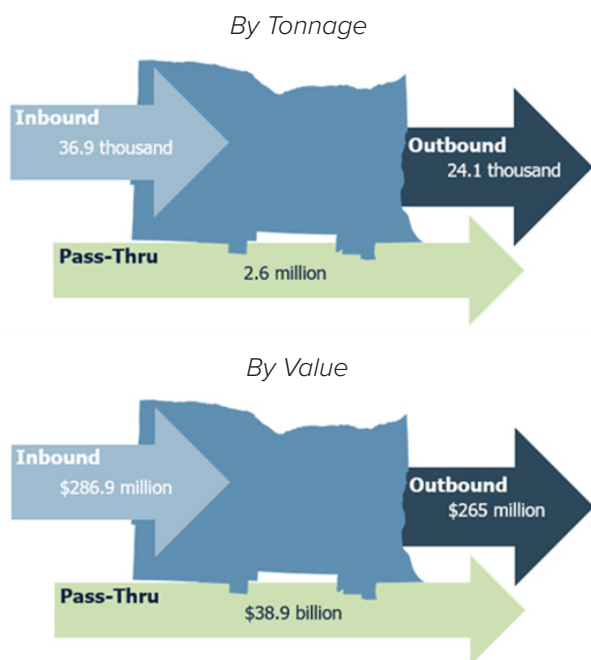


Figure 46 - Commodity Flow by Air, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

6 New York State Canal Corporation, Environmental Stewardship, accessed January 2024: <https://www.canals.ny.gov/community/environmental/>

7 Port of Rochester, Port of Rochester marina Development Project Public Scoping, 2010.

Regional Air Cargo Network

Air cargo in the GTC region primarily serves high-value goods that need to be moved quickly, often over longer distances. The region is home to the Frederick Douglass Greater Rochester International Airport (ROC), which operates air cargo out of one terminal. By weight and value, the majority of goods moving by air passed through the region in 2021, which is expected to continue in 2050 (Figure 46).

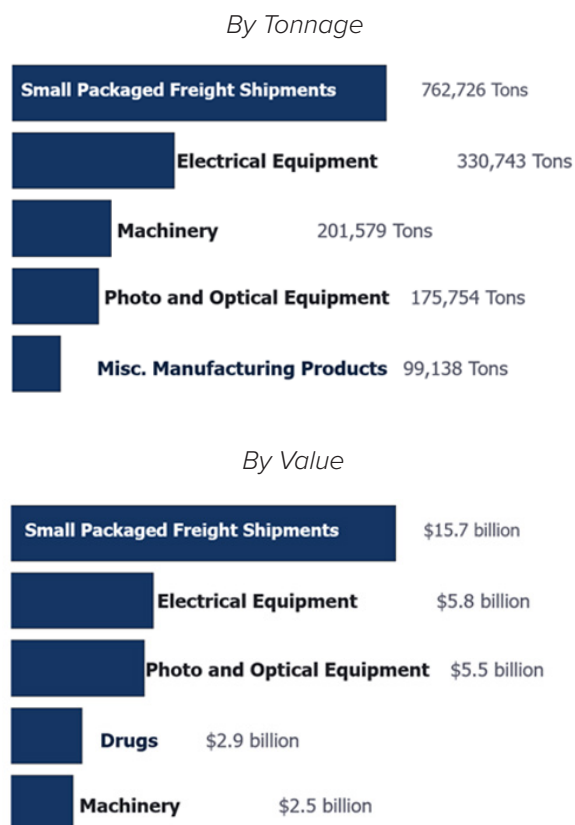


Figure 47 -Top Commodities Moved via Air, 2021
Source: CPCS Analysis of S&P Global Transearch Data, 2023.

By Tonnage		
	Inbound	Outbound
Tennessee	7,031	3,061
California	4,013	2,818
Texas	2,082	1,612
Florida	2,064	1,437
By Value (Millions)		
	Inbound	Outbound
Tennessee	\$46.8	\$40.6
California	\$15.0	\$23.7
Florida	\$13.1	\$16.0
Pennsylvania	\$22.5	\$8.9

Figure 48 - Top Trading Partners by Air, 2021

Source: CPCS Analysis of S&P Global Transearch Data, 2023.

As noted in Figure 47, air cargo primarily transports small, packaged freight shipments, machinery, and miscellaneous manufacturing products into the GTC region. Air cargo traveling outbound from the GTC region primarily moves small, packaged freight shipments, instruments, photo equipment, optical equipment, and drugs. Figure 47 shows the top ten commodities moved inbound to, and outbound from, the GTC region by air cargo. These represent 93.5 percent of the total tons moved into, and 97 percent out of the region by air.

Trading partners for the GTC region and ROC are spread across the continental US. Tennessee accounts for the highest levels of tonnage and value for both commodities inbound and outbound from the GTC region, likely due to the FedEx world hub in Memphis (Figure 48). California and Florida also see significant trade from the region, followed by high levels of flow in Texas and Pennsylvania.

Air Cargo Facilities Within and Near the Region

Within the Region

Frederick Douglass Greater Rochester International Airport (ROC)

Serving the GTC region, ROC is primarily a passenger-use airport. The airport is located four miles outside of Rochester and has access to I-390 and the Rochester & Southern Railroad. Air Cargo at the airport operates out of a terminal in the northwest corner of the airfield. With three cargo storage facilities and two hangars, DHL, FedEx, and Forward Air operate out of this airport. Outside of New York City, ROC is currently the busiest airport with air cargo services in the state.

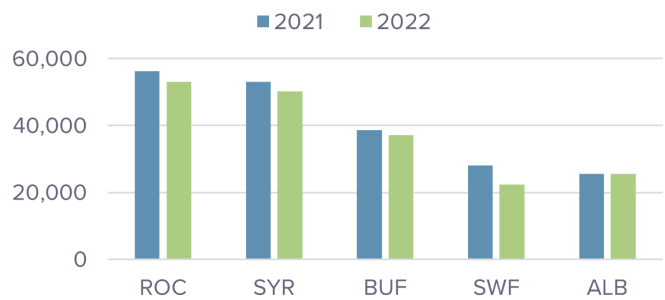


Figure 49 -Air Cargo Volume by Select New York Airport (2021 vs. 2022)

Source: CPCS Analysis of BTS T-100 Market Data, 2023.

Commodity	Length (mi)	% of Total
Petroleum Products	206	27.4%
Natural Gas	548	72.6%

Figure 50 - Regional Pipelines by Commodity, 2021

Source: CPCS analysis of EIA data, 2023.

There are five other major air cargo facilities in the State. These include Syracuse Hancock International Airport (SYR), Buffalo Niagara International Airport (BUF), Albany International Airport (ALB), John F. Kennedy International Airport (JFK), and New York Stewart International Airport (SWF). Of these, the GTC region is also served by SYR and the BUF.

Outside of JFK Airport, ROC continues to be the busiest airport with cargo operations in the state. Most airports experienced a slight decrease in cargo volumes in the last year, ROC included, though ROC still transported over 50 thousand tons in 2022 (Figure 49). SYR is closely following in tonnage, transporting slightly roughly 3 thousand tons less than ROC in 2022.

Runway lengths at each of these airports can accommodate the take-off and landing of wide-body aircraft. The pavement surfaces at both airports are rated as in either good or excellent condition.

Near the Region

Syracuse Hancock International Airport (SYR)

Syracuse Hancock's air cargo facilities are located on 22.5 acres of land and contain a 100 thousand-square-foot cargo building. FedEx, UPS, and Wiggins Airways use the facility for air mail and cargo shipments. The airport's master plan outlines potential concepts that would add cargo buildings and aprons to accommodate an expected rise in the airport's cargo air traffic in the next five years. However, no plans currently exist to expand the cargo facilities at SYR.

Buffalo Niagara International Airport (BUF)

Buffalo Niagara International Airport is Western New York's primary air cargo connection. Air cargo at the airport is located in seven buildings, amounting to just over 90 thousand square feet of storage and transloading facilities. Currently, the airport has air cargo operators such as UPS, FedEx, Delta, Worldwide Flight Services, and Southwest operating out of its facilities.

Regional Pipeline Network

Of the 94,800 miles of pipeline in the state of New York, most pipeline operations are concentrated in Western New York and the Finger Lakes. The GTC region contains the largest portion of the main petroleum pipeline in the state, roughly following the east-west route of the Thruway. As a result, Monroe County is home to all the region's petroleum product terminals.

The majority of pipelines within the GTC region are dedicated to natural gas (Figure 50). In 2021, the region conveyed 6.9 million tons and \$1.3 billion of petroleum and natural gas domestically.¹¹

Pipeline Terminals

There are six petroleum and natural gas terminals in the region. Operating half of these terminals is Buckeye Terminals LLC. Three terminals throughout Rochester are operated by Buckeye, each with roadway connections and

the ability to transport ultra-low sulfur diesel. Additionally, two Buckeye terminals handle gasoline and ethanol.

Also significant to regional pipeline movements, Sunoco operates one of the two intermodal pipeline terminals in the region. Located in west Rochester, the Sunoco terminal handles gasoline, ethanol, kerosene, and biodiesel. The terminal also connects the Energy Transfer Pipeline and Buckeye Pipeline, offering them both 238,000 barrels worth of storage, four loading bays, and ethanol and biodiesel blending. The CSX mainline runs directly by the facility as well as I-490 and I-390 for easy intermodal transport.¹²

In addition to these larger terminals, Petroleum Fuel & Terminal Co. operates a terminal in Gates, transporting gasoline, ethanol, and jet fuel for the Buckeye and Sun pipelines. This is supported by United Refining Company's operation of a petroleum terminal near ROC and connected to CSX's mainline.

11 CPCS analysis of FAF5 data. Analysis was conducted based on the FHWA Freight Analysis Framework (FAF) data compiled by FHWA. These are flows in to, out of, or within the Rochester FAF analysis region. FAF does not offer information on pass through traffic or the GTC region as a whole. This was used instead of Transearch, as Transearch does not offer pipeline flow data.

12 Sunoco, Rochester, NY Terminal, N.D. <https://www.sunocolp.com/fuel-solutions/rochester>

Pipeline System

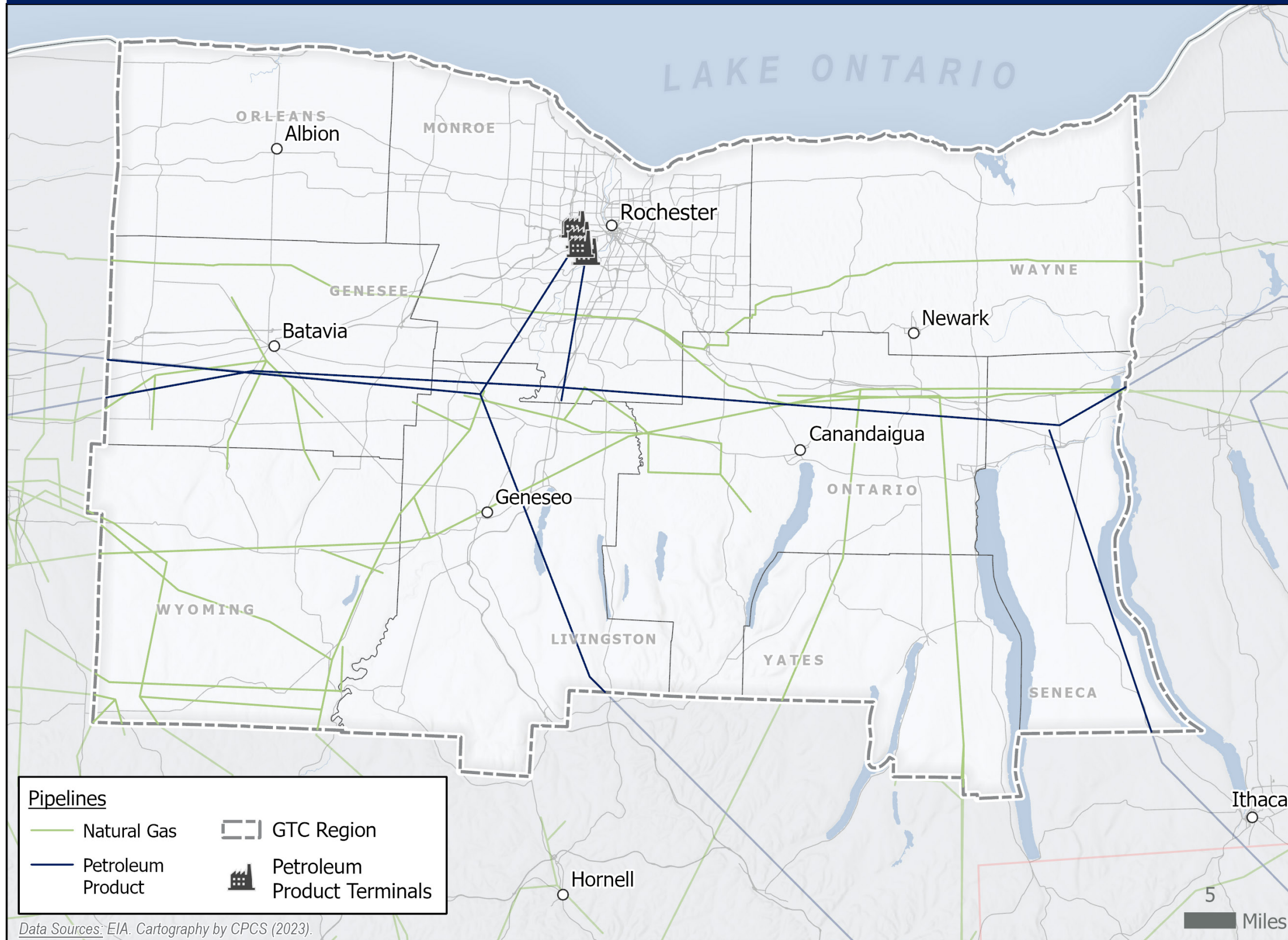


Figure 51 - GTC Pipeline System and Commodities



Chapter 4: Freight System Conditions and Needs Profile

and weather. Overall, however, the majority of crashes can be associated with driver error rather than any roadway condition. The most common cause of truck-involved crashes nearly every year is unsafe speed.

Crashes involving trucks occur all around the GTC region but are especially concentrated along the Thruway and in urban areas. As trucks enter denser freight hubs like Rochester, the severity of crashes is generally lower due to lower speed limits and congestion, while total crashes overall increase due to more traffic and smaller roadways. Higher crash frequency is also visible along major interstates like I-390 and I-490.

The Federal Railroad Administration (FRA) is responsible for tracking and enforcement of standards and regulations for all areas of railroad safety.

As shown in Figure 54, highway-rail grade crossing incidents have followed little to no trend over the last five years, recording 25 total incidents since 2018 and 12 injuries. Despite experiencing three to six incidents each year, the GTC region has maintained a zero fatality rate since 2018. Though non-fatal, these incidents still present a risk to highway motorists, railroad crews, and rail infrastructure. Nearly all of these incidents were due to a vehicle stuck or stopped on tracks, often left unoccupied by the driver.

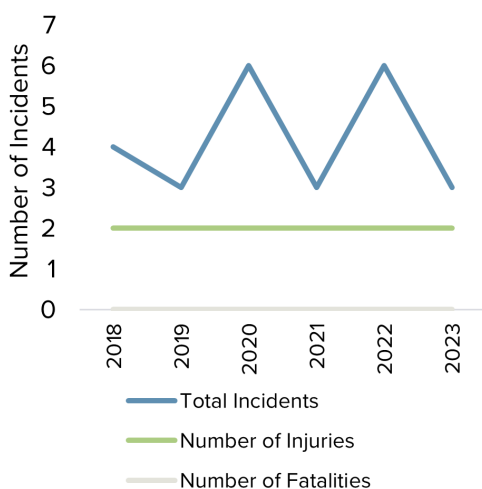


Figure 54: Highway-Rail Grade Crossing Incidents, 2018 - 2023

Source: CPCS analysis of FRA's Accident Data as Reported by Railroads, 2023

Though active warning signals are present at the majority of the region's rail crossings (Figure 55), drivers in these incidents may have disregarded or were inattentive to signage and warning signs around the crossings.

Other factors, such as roadway and rail traffic volumes, the location of a crossing concerning various land uses, and even the geometric design of the grade crossings, may have also contributed to incidents.

Trespasser incidents

Trespasser incidents account for all freight rail-related fatalities in the region since 2018. Like highway grade crossings, however, trespasser trends have varied over the last five years. Six total casualties have been recorded since 2018, with the highest number occurring in 2021 with four fatalities. Still, trespassing incidents have been less common than grade crossing incidents, with 13 total incidents over the recorded period and zero fatalities recorded in four of the six years.

Blocked Crossing Trends

The frequency and configuration of trains traveling along a railroad can also affect the safety and efficiency of movement at grade

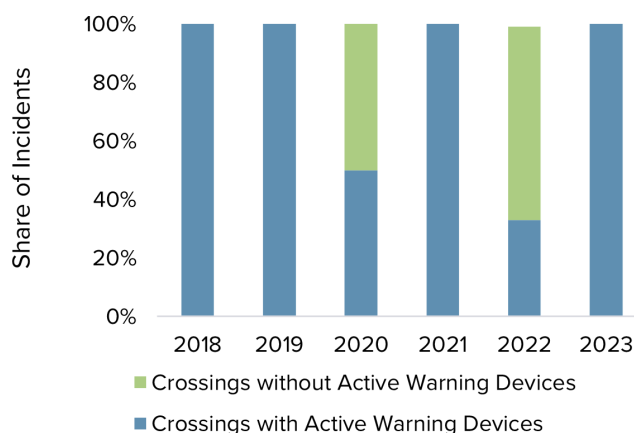


Figure 55: Share of Grade Crossings Incidents by Warning Device Type (2018 – 2022)

Source: CPCS analysis of FRA's Accident Data as Reported by Railroads, 2023

crossings. The number of trains and train lengths have consistently grown and can be attributed mostly to Precision Scheduled Railroading (PSR). This model results in shorter trains being consolidated onto busier and more profitable tracks to reduce train trips and traffic.

This growth can slow rail operations at intermodal and transload facilities where such trains must wait longer to be loaded/unloaded or reconfigured.

The majority of blocked crossings in the GTC region are due to stationary trains and last roughly half an hour (Figure 58). The region experienced a small jump in the number and duration of blocked crossings in 2022, though the primary cause remained the same.

As with grade crossing incidents, blocked crossings are most prevalent along Class I railroads, particularly on the CSX line traveling through Rochester. Closer to Rochester, the duration of these blockages also noticeably increases. This could be due to several factors, including the frequency of rail traffic, increase in roadway traffic, and rail wait times at intermodal facilities.

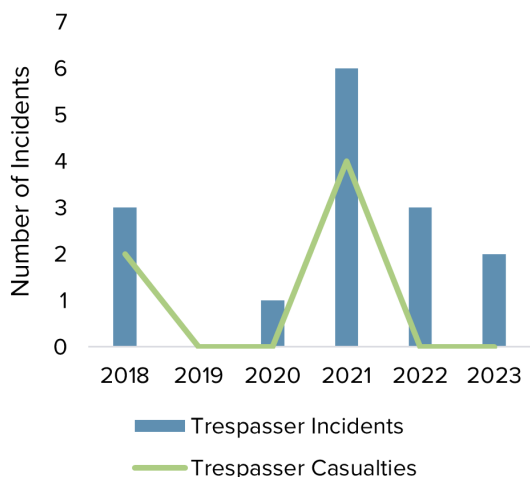


Figure 56: Rail Trespasser Incidents, 2018 - 2023
Source: CPCS analysis of FRA's Accident Data as Reported by Railroads, 2023

Truck Parking

Current utilization and undesignated parking patterns are examined to determine whether truck parking demand is being met and where improvements can be made. As part of a statewide freight planning effort, the New York Department of Transportation (NYSDOT) carried out a detailed assessment of truck parking supply and demand across the state. The analysis presented in this plan is based on interim truck parking analysis results presented at a NYSDOT Freight Working Group meeting in December 2023 and the meeting material shared with the GTC and other NYSDOT partners.

Truck Parking Utilization

Truck parking utilization measures the proportion of occupied truck parking spots compared to the total amount of truck parking spaces available at a specific location within a specific timeframe. A greater truck parking utilization reflects a higher percentage of occupied spaces, while lower utilization rates indicate fewer occupied spaces. If a truck parking facility has consistently high utilization, demand at that location consistently exceeds the available supply for parking spots.

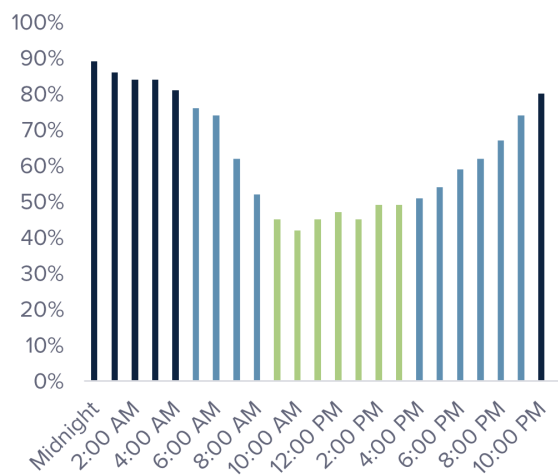
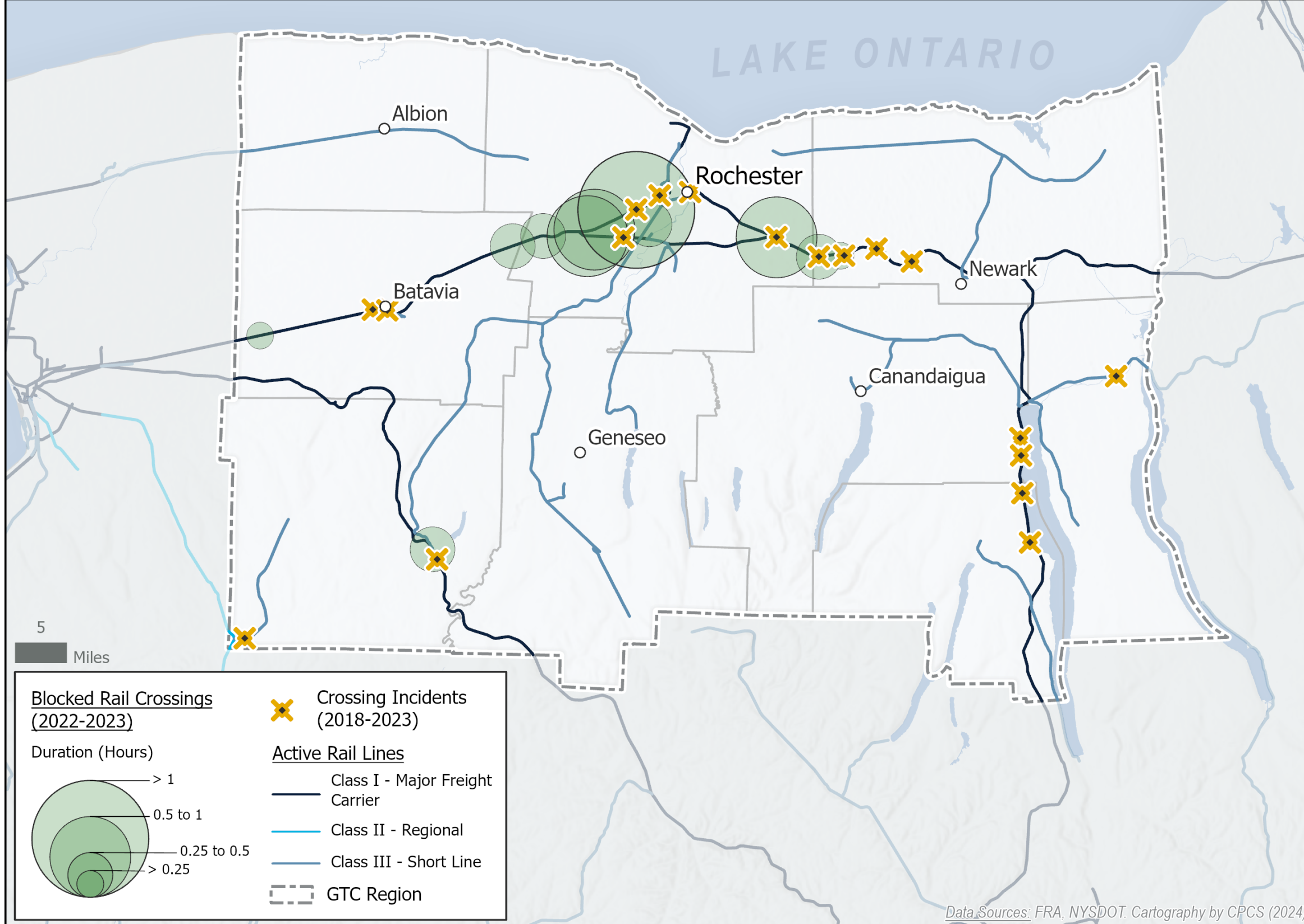


Figure 57: Statewide Truck Parking Utilization by Time-of-Day
Source: CPCS analysis of FRA's Accident Data as Reported by Railroads, 2023

Rail Safety Incidents



As shown in Figure 57, truck parking utilization across New York State peaks between 10 pm and 4 am, with the peak hour being from 12 am to 1 am. When looking regionally, the GTC region also sees a utilization peak between 12 am and 1 am daily.

Undesignated Truck Parking

Undesignated truck parking often occurs when truck drivers cannot find safe, designated truck parking. This can be due to a lack of truck or rest stops in the area, too much demand for parking in specific locations, emergency procedures causing an unusually high demand in an area, or drivers reaching the end of their hours of service (HOS).

Undesignated truck parking frequently occurs on/off-ramps, roadway shoulder, or sometimes in residential neighborhoods. These cause safety issues, as other roadway users cannot see clearly around the trucks, and the personal safety of drivers is put at risk. Additionally, there are other negative impacts on the economy, infrastructure, and quality of life.

Undesignated truck parking (Figure 59) primarily occurs along the I-90 corridor. The greatest concentration of undesignated truck parking occurs at the intersection of I-90 and I-490. This includes a cluster that encompasses the Ontario Travel Plaza (westbound side) and the Scottsville Travel Plaza (eastbound

Figure 58 - Rail Safety Incidents

side), which ranked as the 6th worst for undesignated parking in New York State. Stops in this cluster most frequently occurred at 9 pm and lasted for just over four hours on average. All clusters experience the most stops during the overnight hours, although start times vary.

Mobility

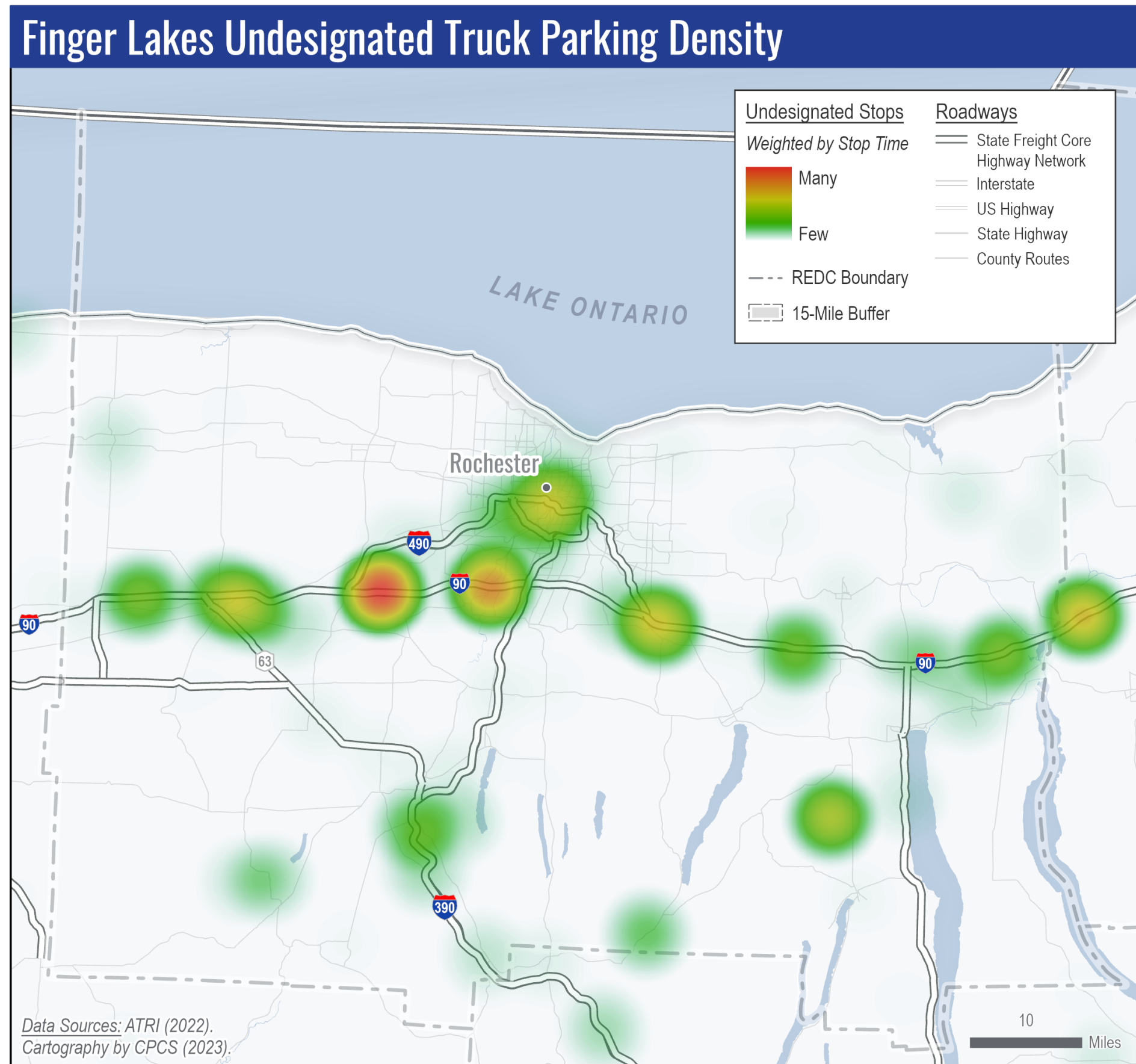
Truck Mobility and Reliability

Truck Travel Time Reliability Index

To understand the consistency and predictability of planned travel times and the impact of unexpected delays, the Truck Travel Time Reliability (TTTR) Index is used. TTTR compares the extended travel durations for specific road segments to free-flow travel times. If the TTTR Index is greater than one, then the actual travel time along that segment exceeds the free-flow travel time. Within the GTC region, TTTR index values are highest along roadways and highways clustered around urban areas, primarily Rochester. Figure 61 shows the TTTR index values for the GTC region. All interstates in the region have at least some roadway segments with an index above 1.75.

As roadways move away from Rochester, the roadway segments begin to experience better reliability. Reliability starts declining again as we approach smaller urban areas, such as Batavia and Geneseo.

Figure 59: GTC Region Undesignated Truck Parking Heat Map



Truck Travel Time Delay

Truck travel time delay measures the impact congestion has on the additional time spent by trucks in transit on specific road segments. Considered in conjunction with the TTTR index, Total Excessive Delay (TED) helps evaluate the efficiency of freight movements on highways.

As shown in Figure 62, TED correlates with areas of high TTTR in the region. Particularly, segments near Rochester and Batavia see an increase in TED. Similarly to TTTR, the TED decreases as the distance from urban areas increases. Additionally, as I-90 crosses through the region, it maintains a high TED throughout.

Truck Bottlenecks

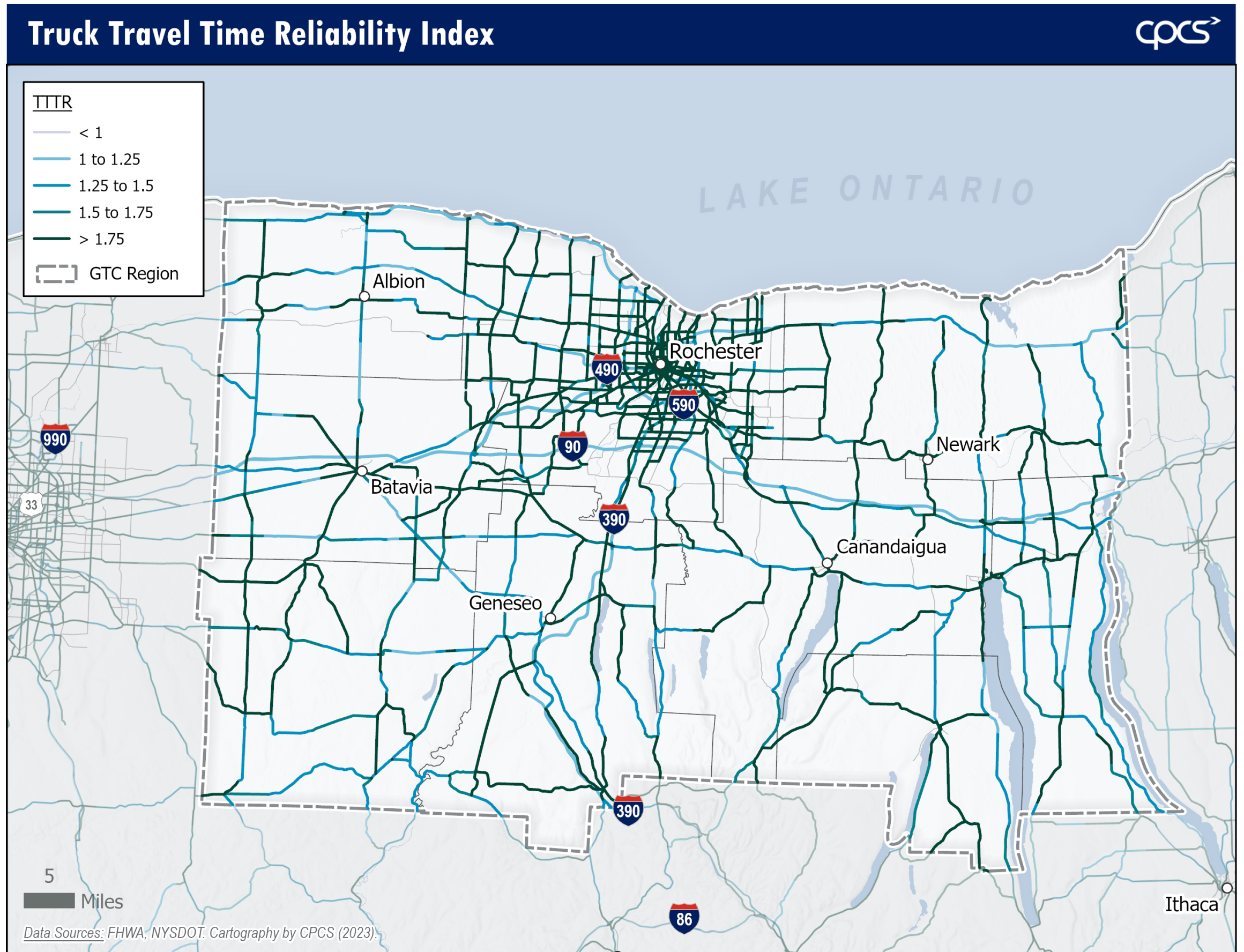
One way in which NYSDOT assesses the efficiency of freight movement in the State is by identifying bottlenecks through measures like TED, daily truck traffic, and vehicle speed. Because of how the demand for the State's freight system varies, NYSDOT



Figure 60: Top Statewide Truck Bottleneck in the GTC Region

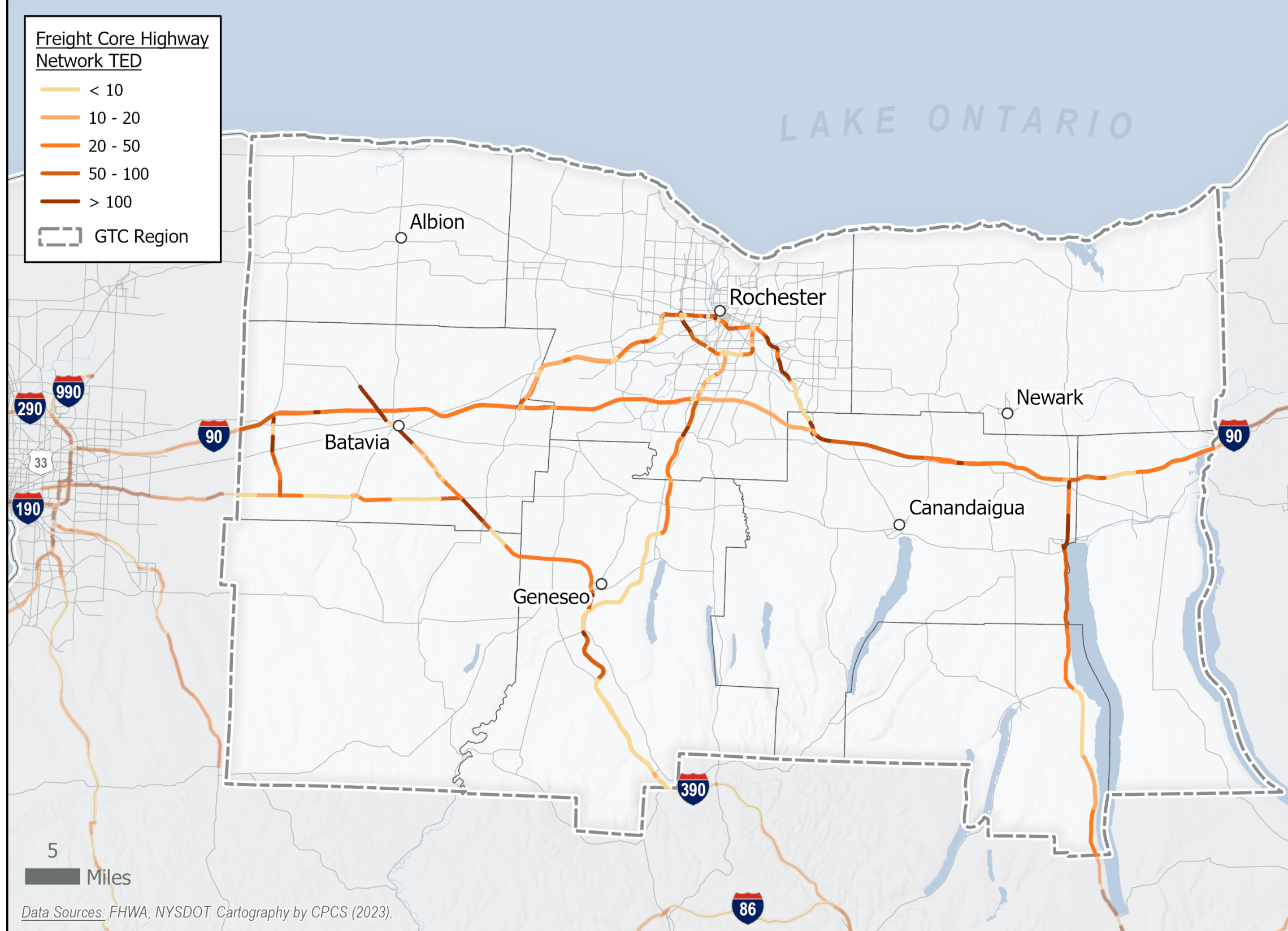
Source: NYSDOT Analysis, 2023

Figure 61: GTC Region Truck Travel Time Reliability Index



Data Sources: FHWA, NYSDOT. Cartography by CPCS (2023).

Total Excessive Delay Per Mile for Trucks



established different thresholds for the New York City area, downstate Suburban (outside of New York City), and Upstate.

Through this analysis, one bottleneck has been identified in the GTC region outside of Rochester. This bottleneck is located on eastbound I-490 between the interchanges at Fairport Rd and Palmyra Rd.

Bridge Clearance

According to FHWA guidelines, bridges must have a clearance of at least 13.5 feet, as this is the maximum allowed truck height in most states. The recommended minimum height of bridges is raised to 16 feet on interstates. On major arterials and highways, 25 bridges in the GTC region have an overhead structure, such as a rail line or roadway. None of these have a clearance that is lower than the 13.5 feet necessary for a standard truck to pass under. However, some bridges crossing over the secondary routes and connectors have a lower than 13.5 ft clearance. Older bridges near major arterials that have not been risen to accommodate modern truck heights are especially prone to these incidents.

While the state and regional agencies in NYS have invested in proper signage to alert the truck drivers

Figure 62 - Truck Time Delays on the GTC Region's Freight Core Highway Network

about such constraints, navigational apps like Google Maps, Waze, and Hammer GPS often fail to properly route trucks and do not account for restrictions such as low bridges or other considerations related to truck operations. This has resulted in trucks being routed on local roads and occasionally striking low clearance bridges that are not designed to accommodate truck movements.

Infrastructure Condition

Road and Bridge Condition

To assess roadway bridge conditions in the GTC region, bridges within one hundred feet of the region's interstates and primary arterial roads were selected. The resulting subsection includes 475 bridges, the majority of which were located in Monroe County. The FHWA considers 86 percent of these to be in good or fair condition and 11 percent in poor condition (Figure 63). These bridges

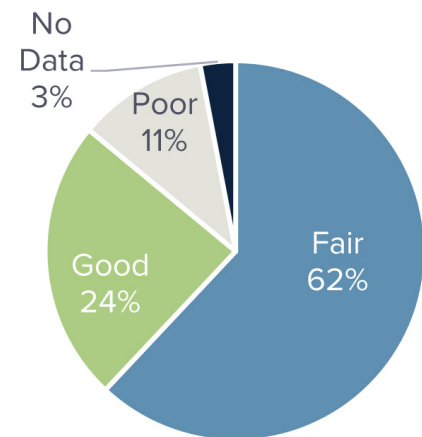
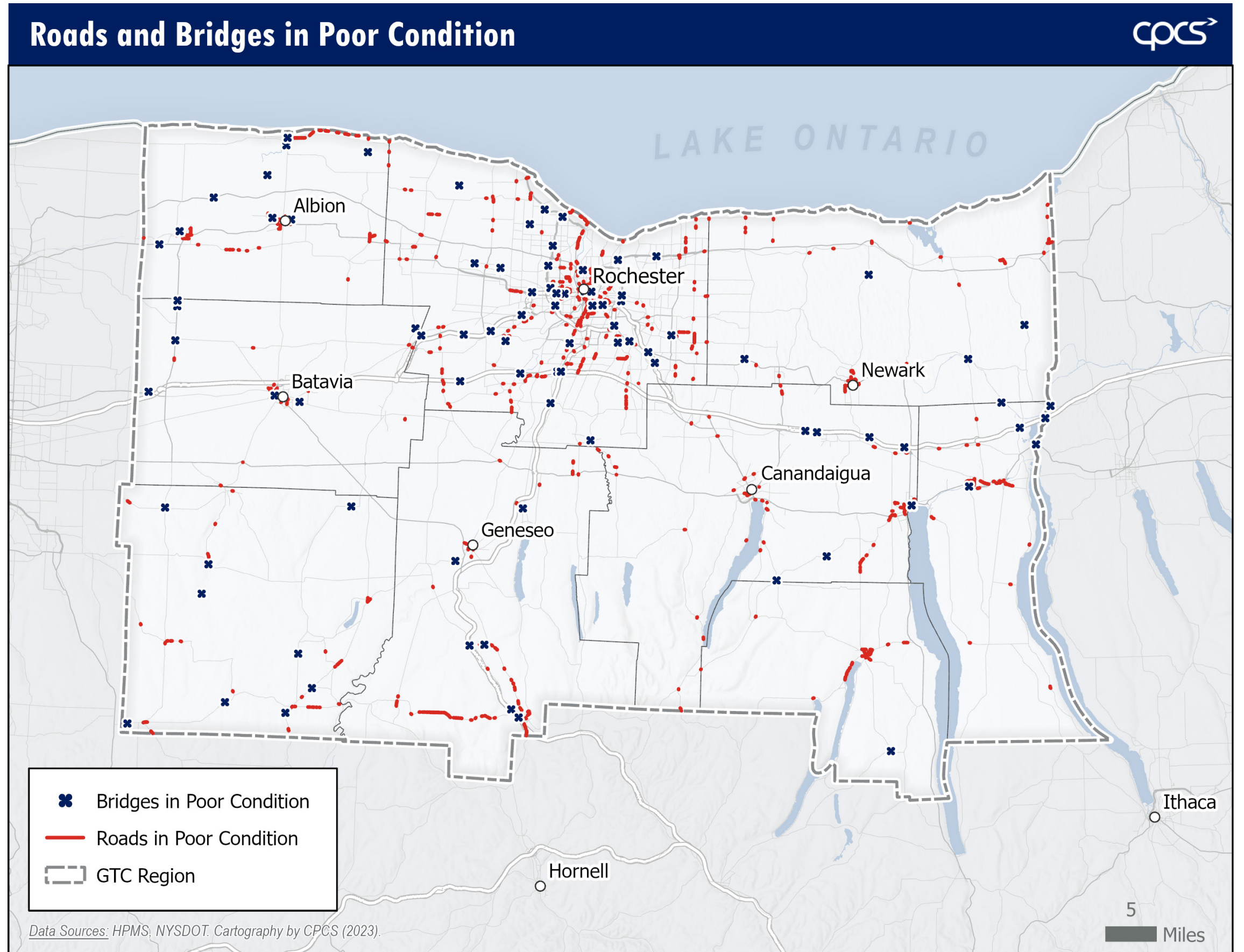


Figure 63: FHWA Bridge Condition Assessment Breakdown of Bridges in the GTC Region

Source: CPCS Analysis of New York State Department of Transportation Bridge Data, 2023.

Figure 64: Roads and Bridges in Poor Condition, 2023



are located throughout the GTC region. Figure 64 shows the FHWA Bridge Condition Assessment of this subsection of the GTC region’s bridges.

An R-Posted Bridge is a bridge that cannot accommodate most vehicles over legal weights but can still safely carry legal weights. The majority of the R-Posted bridges in the region are bridges spanning the Erie Canal, located in Orleans, Monroe, and Wayne Counties.

Railroad Track Class		I	II	III	Total
Percent of Mileage Capable of Serving Maximum Speed	Class 0: 10 mph*	5%	0%	11%	8%
	Class 1: 10 mph	9%	5%	45%	26%
	Class 2: 25 mph	35%	0%	31%	32%
	Class 3: 40 mph	2%	95%	13%	9%
	Class 4: 60 mph	48%	0%	0%	25%
	Class 5 or 6: 80 mph	<1%	0%	0%	0%

Figure 65 - Rail Network Speed Class in the GTC Region
 Source: CPCS analysis of NYSDOT rail network data, 2023. Note: maximum speed for freight trains.

Roadways in poor condition occur on small segments throughout the region (Figure 64). Clusters of segments in poor condition are found near Rochester as well as Batavia, Newark, and Canandaigua. Arterials near major interstates like US20 or Route 36 also commonly experience roadways in poor condition.

Rail Track Condition

The physical condition of the State’s rail system can be measured by two metrics:

- Percent of the railroad system that can be operated at speeds around 25 mph or higher and
- Percent of the railroad systems capable of handling heavier rail cars.

Rail track classification determines the maximum speed allowed for trains to operate.

As shown in Figure 65 nearly 60 percent of all railroads in the region can operate at 25 mph or above. This is particularly true for Class I and

regional railroads. Short lines, however, more commonly have a limit of 25 mph or less.

As with speed limits, railroads in the GTC region are generally well equipped to handle modern rail car weights. Roughly 60 percent of all railroads have a weight capacity of 286 thousand pounds or more. Only 15 percent of Class I railroads remain under this limit, restricting the type and configuration of rail cars they can transport through the region.

Generally, Class I and II railroads in the region have limits of 286 thousand pounds or more, with Class III lines trending towards 286 thousand pounds or less.

Environmental Impacts

As the transportation industry grows in the GTC Region, so does its footprint on the natural and lived environment. Trucks, rail, maritime, and air freight each influence the societal and environmental impact of regional freight through noise pollution, air pollution, water runoff, hazardous spills, or the use of land near sensitive habitats. Statewide and national standards set parameters for monitoring and mitigating the environmental impact of transportation. To ensure equitable access to the freight network and alleviate any environmental burden on disadvantaged communities, the location and severity of freight’s environmental externalities must be considered.

Railroad Class		I	II	III	Total
Percent of Mileage Capable of Serving Maximum Weights (lb)	220k	0%	0%	0.10%	<1%
	Up to 263k	0%	0%	36.54%	16.70%
	Up to 273k	15.85%	0%	5.93%	10.81%
	Up to 274k	0%	0%	16.50%	7.44%
	Up to 286k	15.71%	100%	40.91%	28.59%
	Up to 315k	68.34%	0%	0%	35.08%
	Unknown	0.10%	0%	0.03%	1.34%

Figure 66 - Rail Network Weight Limits in the GTC Region
 Source: CPCS analysis of NYSDOT rail network data, 2023.

Air Emissions

Air pollution can significantly affect the quality of life, wildlife, and climate conditions. As of January 2024, all the counties in the GTC region have been designated as attainment areas by the EPA, meaning that the levels of ozone pollution in these counties were lower than the maximum national standard. The Rochester MPO and greater GTC region regularly monitor and ensure conformity with national air quality standards. More specifically, GTC and NYSDOT collaborate to ensure that transportation-related projects comply with federal Clean Air Act (CAA) air quality targets.

In 2023, the City of Rochester released a comprehensive GHG Inventory Report detailing data and analysis regarding municipal emissions originating from various sources such as buildings, on-road vehicles, industrial activities including farms and agricultural uses, and power generation. The report estimates that the road sector accounts for over 41 percent of these emissions (this number includes freight vehicle activity).

Hazardous Material Spills

Hazardous material (or hazmat) spills can result from incidents involving pipelines, tanker trucks, freight trains, or other modes of hazmat movements. These spills can lead to the contamination of soil, water bodies, and air, causing long-lasting ecological damage. Furthermore, the exposure of communities to toxic substances can have severe health implications, ranging from respiratory issues to long-term chronic illnesses.

Figure 67 shows the number of reported hazmat spills between 2020 and 2023 within the GTC region. The New York State Spill Data provided by the State Government logs spills of petroleum, other hazardous materials, and other contaminants as required by the State law. Petroleum spills account for the highest share of the total spill incidents in the GTC region, the majority of which happened in Monroe County (40 percent of those spills in Rochester alone).

Equipment failure, crashes involving hazmat-carrying tanker trucks, and mishandling diesel and gasoline at gas stations were the primary factors contributing to these incidents.

Infrastructure Resilience

Extreme weather occurrences and shifts in long-term environmental patterns pose a threat to the GTC region’s infrastructure and disrupt the movement of both freight and people. Due to the impacts of climate change, the necessity to anticipate and address these events has grown in significance, leading agencies to strategize and prepare to prevent, adapt to, and recover from these environmental disturbances — essentially, to maintain resilience.

As figure 68 shows, Monroe County has the highest composite risk compared to the rest of the region; only 18 of the 62 counties in New York State have a composite risk index higher than Monroe County. Seneca, Orleans, and Monroe Counties also have a relatively higher social vulnerability index which indicates a higher susceptibility to impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. On the other hand, the

County	Hazardous Material	Other	Petroleum	Total
Monroe	63	311	1162	1536
Ontario	4	82	293	379
Genesee	2	67	246	315
Livingston	5	52	230	287
Wayne	5	51	182	238
Seneca	2	41	127	170
Orleans	2	29	93	124
Wyoming	1	32	90	123
Yates	1	35	61	97
Total	85	700	2484	3269

Figure 67 - Number of Hazmat Spills, 2020-2023

Source: CPCS analysis of Spill Incident Data provided by State of New York Government, 2024.

counties in the GTC region, have a relatively high community resiliency index which indicates an overall high rank for the region in terms of risk preparedness compared to the rest of the state and country.

In terms of the types of natural hazards, the GTC region experiences its greatest impact from winter-related risks, particularly cold fronts and ice storms. Monroe County stands out with a relatively high risk from winter weather impacts, while all counties in the region face a moderate to high risk of cold waves and ice storms.

Freight Activity Equity Impacts

An intricate interplay of political, economic, cultural, and social factors often influences land use planning and transportation investment decisions. Although essential for economic vitality, freight and industrial operations generate adverse effects such as air and noise pollution, which detrimentally affect nearby communities along major highways and high-volume rail corridors. These pollutants can heighten residents' susceptibility to health issues, including respiratory ailments and cancer.

Recent studies indicate that the most concentrated emissions from road traffic occur within approximately six hundred feet of the centerline of major corridors. Using this assumption and the data provided by the USDOT's Equitable Transportation Community (ETC) Explorer, we found that the communities in and around Mount Morris and Geneseo in Livingston County are most severely impacted by the adverse impacts of highway and rail activity. These towns are located between I-390 and US 20A, two corridors with significant truck traffic, and both are part of New York State's Freight Core Highway Network. These routes are also expected to see growth in truck and overall vehicle volumes in the coming decades.

The area is also served by the Rochester & Southern Railroad (RSR), which connects the railyards and industrial facilities in the area with the CSX line in Rochester. In comparison to other areas in the GTC region, disadvantaged communities in Mt. Morris and Geneseo are densely clustered along the rail line and near transload facilities, resulting in a disproportionate impact from blocked crossings.

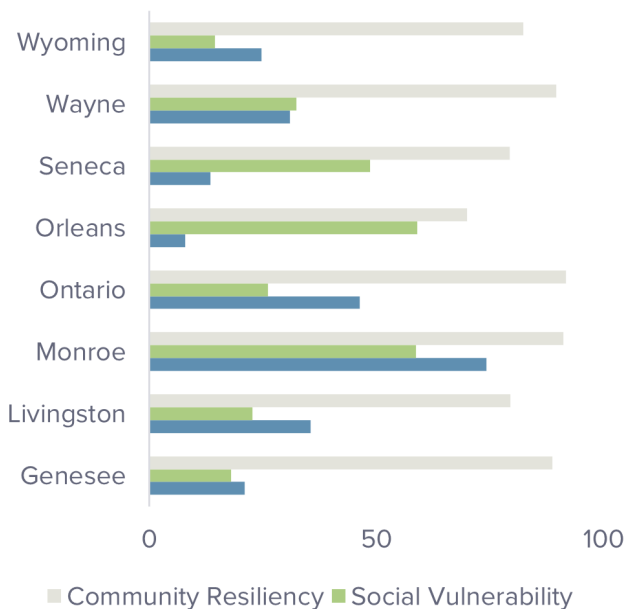


Figure 68 - Composite National Risk Indices and Component Indices for GTC Counties

Source: CPCS analysis of FEMA National Risk Index data, 2024.



Analysis of Strengths, Weaknesses, Opportunities, and Threats

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted to assess the internal and external factors that impact freight activity in the Genesee-Finger Lakes region. Findings from the system condition analysis, stakeholder consultations, and an online freight needs assessment survey are compiled. The findings are also further categorized based on goal themes established in the Genesee-Finger Lakes Region Long Range Transportation Plan (LRTP) to ensure alignment of freight needs assessments and with other regional strategic planning efforts.

The analysis organized identified freight SWOT elements considering:

- **Strengths:** Ongoing trends influenced by internal efforts that are helpful to achieving GTC’s goals.
- **Weaknesses:** Ongoing trends that can be addressed or influenced by internal efforts that are harmful to achieving GTC’s goals.
- **Opportunities:** Trends external to the region or GTC’s efforts that could assist in achieving regional goals.
- **Threats:** Trends external to the region or GTC’s efforts that are harmful to achieving GTC’s goals.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Fatal incidents decreasing • Clustered industrial land use • Extensive roadway network • Extensive railway network • GTC and NYSDOT regional support • Few regional bottlenecks • Minimal Class I and regional lines with weight restrictions • Major roads and bridges in state of good repair • Regional freight planning efforts and studies underway • High resiliency and preparedness for major weather events • Well-educated workforce with work program access • New businesses in key industries attracted to the region • GTC study on Thruway detouring traffic management 	<ul style="list-style-type: none"> • Trespasser incidents still occurring at active warning crosses • Hazmat spill frequency • Low bridge clearance • Workforce access from urban centers • Disadvantaged communities affected by freight activity • Little warning for major roadway closures • Bridges spanning the Erie Canal in worsening condition • Hazmat spills affecting utilities and the environment • High vulnerability to major weather in Monroe County • Workforce shortage in skilled trades • Lack of resources for grant/funding applications
Opportunities	Threats
<ul style="list-style-type: none"> • Meeting truck parking demand • Improving safety near highway exits • Future attraction of businesses and manufacturers • GTC sustainability goals and prioritization • Multiregional approach for freight policy and planning • Electric transit fleet deployment • GTC statewide and local partnerships • Land available for freight-related development • ROC expansion • Increased freight flows to the state • Expanding e-commerce and related facilities 	<ul style="list-style-type: none"> • Increased freight-related land use • Traffic detouring from the Thruway • Reliance on extra-regional intermodal facilities • Short line deactivation • Heavy dependence on border crossing efficiency • Increased frequency of extreme weather • Aging infrastructure increases vulnerability • High dependence on agricultural yields • Highly reliant on truck efficiency • Utility access is limited for suburban and rural development

Summary of Key Regional Freight Needs

Summarized needs here are identified based on regional weaknesses and threats, using specific examples of where these issues occur and what they affect. Opportunities were based on existing regional strengths and measures taken by other regions or organizations with similar needs.

Ultimately, these will act as a guide for the Genesee Transportation Council to better understand where action and investment is needed in the region's freight assets and how existing strengths can be leveraged to solve them. They will also lend insight to how the region and its needs have changed since the last regional freight plan was developed in 2012.

Health and Safety Needs

Health and safety are critical focuses of GTC planning processes as well as freight-related goals and strategies across the state. Safety needs within the nine-county region involve managing roadways and infrastructure not currently equipped to handle large volumes or sizes of truck shipments and ensuring the safety not only of the truck driver, but also other vehicles and pedestrians. The GTC is also considering needs around safety at rail grade crossings and hazardous material spills caused by freight infrastructure and operations.

The GTC has a number of opportunities to improve on these needs using existing strategies, research, and partnerships. A collaborative approach across private industry, county and municipal planners, as well as planning for emergency situations can address a variety of health and safety concerns expressed across the region.

- **Hazardous Materials Spills:** Over 3,000 hazmat spills have occurred in the GTC Region over the last three years. Hazmat spills are not only dangerous for individuals and infrastructure immediately affected, but also nearby resources like water supply. Equipment failure, crashes involving hazmat-carrying tanker trucks, and mishandling diesel and gasoline at gas stations were the primary factors contributing to these incidents.
- **Low bridge clearance:** Local roads bear the brunt of truck collisions with bridges due to low clearance heights. Older bridges near major arterials that have not been risen to accommodate modern truck heights are especially prone to these incidents. Navigational apps often fail to take bridge clearance into consideration on local roads and present a threat to trucks exiting interstates and state routes.
- **Trespasser incidents on railroads:** Despite a significant majority of highway grade crossings being equipped with active warning signals, the GTC Region still experiences trespasser and other incidents at grade crossings. Trespasser incidents account for all six freight rail-related fatalities in the region since 2018. These incidents are primarily found along Class I railways with more frequent traffic.
- **Traffic detouring from the Thruway:** Closures, congestion, and storms can all cause a sudden influx of traffic into communities that are not built for high levels of truck traffic or navigation. This is particularly true for communities near major truck routes and destinations. With little warning of closure or few detour options, these smaller communities may experience unpredictable and irregularly high levels of traffic. Stakeholders specifically cite trucks traveling east from Buffalo being routed onto local roads in Wyoming County and interfering with local business operations.

Access and Equity Needs

Access and equity needs in the GTC region pertain in great part to land use patterns and freight infrastructure ownership. Disadvantaged communities near freight clusters experience disproportionate impacts of freight-related activity and struggle to mitigate them without assistance. Though these freight activity clusters are found throughout the region, these are often away from urban centers, creating issues related to workforce access and economic opportunities for incoming businesses. Lastly, the region experiences challenges with rail access, both in connections between short lines and Class I operators, as well as access to rail intermodal facilities.

The region's LRTP and existing partnerships provide a pathway to resolving many of these issues. Through collaboration with intermodal facility operators, Class I railroads, and private industry looking to relocate in the region, the GTC can guide the location and clustering of future development and freight flows.

- **Workforce access:** Stakeholders expressed throughout the engagement process difficulty in finding workers able to reach more suburban or rural sites, due to a lack of transportation options and private vehicle ownership. This issue affects businesses' ability to expand outside of denser urban limits and restricts economic opportunities for workers around the region. This takes place throughout the region and may influence future business expansion or the location of freight hubs.
- **Disadvantaged communities affected by freight activity:** Industrial activity throughout the GTC Region is generally clustered, making the negative impacts of industrial development and freight activity also concentrated in a few communities. These clusters are predominantly located near poorer or more disadvantaged communities, where their ability to mitigate these impacts is reduced, requiring assistance from more regional agencies to reduce impacts. These communities,

particularly those around Mount Morris, Geneseo in Livingston County, and Rochester are most severely impacted by the adverse impacts of highway and rail activity.

- **Reliance on extra-regional intermodal facilities:** The GTC region relies entirely on facilities in Buffalo and Syracuse for intermodal services, with insufficient demand for future construction of a facility within the region. Handling all GTC volumes increases freight traffic at these facilities and increases costs for businesses needing to travel beyond the nine counties. Increased reliance on facilities beyond the GTC Region also makes the region more susceptible to changes and efficiency issues beyond the nine-county reach.
- **Short line deactivation:** The region has an extensive rail network though short lines often rely on Class I connections and continued service to reach markets outside the GTC Region. Lower levels of service have left some railroads to discontinue service or be left in disrepair. Rail-dependent businesses often rely on short line ability to connect to Class I lines or major markets. The loss of short lines in more rural communities significantly impacts their economic opportunities and connectivity. The Finger Lakes Railway (FGLK) line owned by NS between Geneva and Lyons was taken out of service in 2010, disconnecting the region from the northern CSX mainline going through Rochester.

System Maintenance Needs

Though much of the GTC's major highways and bridges remain in good condition, infrastructure throughout the nine counties requires regular and near-term attention to ensure their future resilience and reduce major costs to the region. Local and rural roadways are often at the forefront of these needs, handling heavy farming and industrial equipment while not originally built for large or frequent truck volumes.

Despite not being a major highway, these roadways still act as critical connectors for businesses and individuals throughout the region. The region's history of extreme winter weather make regular and focused system management and maintenance a priority for the GTC.

Prioritizing aging and vulnerable infrastructure previously identified by this plan's inventory, county studies, or the LRTP gives the GTC a clear approach for improving system performance on all critical routes. Further collaboration with state-level entities also allows for continued monitoring of system performance and prompt addressing of infrastructure needs.

- **Warning for roadway closures:** The GTC Region is vulnerable to closures and inefficiencies even beyond its borders. Stakeholders describe difficulty with shipping along the Thruway, particularly during major weather events. Even when a storm or closure occurs outside of the region, much of the Thruway or other connected roadways are affected. These effects can especially be seen along common Thruway detour routes, like those in Wyoming and Livingston counties. Stakeholders note that many of these closures happen with short notice or unannounced, not allowing shippers or drivers to prepare alternative routes and parking ahead of time.
- **Influx of truck traffic on critical routes:** The diverse and growing GTC regional economy is one that attracts several

large companies to relocate or expand in the region. Recently constructed dairy facilities, semiconductor manufacturing hubs, and other new supply chain facilities are all expected to generate significant amounts of truck traffic, particularly in volumes passing through the GTC region. This anticipated volume poses challenges to system condition and upkeep, requiring the GTC to ensure regional highways are equipped to handle the volume and size of trucks on common thru routes.

- **Condition of bridges spanning the Erie Canal:** Some of the infrastructure that is in the poorest condition on primary arterials can be found near the Erie Canal. These bridges act as connectors for rural communities in Wayne, Monroe, and Orleans Counties and are commonly used for movement of farm equipment. Bridges crossing the canal have generally exceeded their lifespan and are unable to accommodate larger commercial vehicles, with some vehicles requiring a waiver to pass. With most only allowing one-way traffic, movements along these routes are unreliable and risk worsening.
- **Frequency of extreme weather:** As global warming's effects are increasingly felt around the world, the GTC Region becomes more susceptible to extreme weather events year-round. Perhaps the greatest threat to the region is in the winter with ice storms, heavy snow, and cold fronts which can damage infrastructure and create challenges for the agricultural industry or others working in the natural environment. Though much of the region's system is in a state of good repair, preparing for such events will require an adapted approach to infrastructure maintenance and potentially incur higher costs for repairing or updating the network.

Sustainability and Resilience Needs

Sustainability and resilience is a continued priority for GTC, with previous plans having emphasized aims to reduce transportation-related pollution and preventing hazard impacts to infrastructure. The emphasis on resiliency is particularly on routes with aging roads and bridges as well as those heavily impacted by extreme weather. Natural hazards not only create disruptions in freight flows and connectivity, but also are a disruption to social wellbeing and livelihood.

Identifying infrastructure and communities with high vulnerability or footprint is the first step GTC can take to improving system sustainability and resiliency. Using existing data, studies, and planning will assist in identifying where improved resilience is most needed. This practice would reduce future financial and social costs to the GTC region.

- **Vulnerability to extreme weather:** Increased frequency of major weather events affects the entire region. However, only 18 of the 62 counties in New York State have a FEMA composite risk index higher than Monroe County. Seneca, Orleans, and Monroe Counties also have a relatively higher social vulnerability index which indicates a higher susceptibility to impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. Disruptions in

freight hubs, particularly in Monroe County, send shockwaves throughout the regional economy and transportation system.

- **Aging infrastructure:** Though the infrastructure on primary arterials is generally resilient and in good condition for future freight volumes, local roads and bridges are aging and more vulnerable to damaging weather events or traffic incidents. This was particularly true in rural areas, where maintenance is more irregular and less funding is set aside for roadways. Rural and local roads, however, still often handle heavy farm equipment and vehicles. If left in disrepair or not regularly maintained, vehicles relying on older and more rural roadways are left with few alternative routes.
- **Hazardous material spills:** In addition to being a safety hazard for roadway users and nearby communities, hazardous material spills can severely impact and damage the surrounding environment in the long term. The release of hazardous substances may result in soil degradation, water pollution, and harm to aquatic ecosystems among other issues. With 40 percent of all regional spills between 2020 and 2023 occurring in Rochester, there exists a common concern with hazmat spills affecting utilities and natural resources used by the regional population.



Economic Development Needs and Opportunities

Economic development needs are based on access to resources, both in people and freight assets. Much like the rest of the nation, freight-related businesses are struggling to attract or find skilled workers to meet demand. This is exacerbated by developable land for potential expansion lacking utility access. Freight-related industry in the region is then both potentially limited in expansion by staff and facility.

Transportation planning agencies in the region face a similar issue, often lacking sufficient staff or time to apply for funds and grants for local projects.

Improving on some of these needs requires a coordinated approach between the GTC and local planners, private industry, and university or research institutions. Establishing freight-related training programs and assisting county and local planners with funding needs could make a marked difference in capacity constraints across the region.

- **Workforce shortage:** While freight-reliant industries are increasingly moving to the GTC Region, companies struggle to find enough skilled labor to sustain operations. This is particularly true for trucking companies as the entire nation is experiencing a shortage of commercial vehicle drivers. This shortage in drivers affects any freight-dependent industry

relying on regular and efficient trucking of goods. Limited workforce and workplace access in any freight-reliant industry inhibits economic growth for the region as a whole and disincentivizes new companies from relocating to the GTC Region.

- **Resources for grant/funding applications:** Stakeholders at county and municipal agencies around the region remarked on the difficulty in being able to apply for funds and grants for local projects. Local agencies often lack the staff and capacity to prepare proposals promptly or on irregular deadlines. Larger local issues may rely on funds and other resources outside of the municipality or county.
- **Limited utility access:** Despite the availability of developable land throughout the region, stakeholders regularly express difficulty in accessing utilities for new developments in suburban and rural areas. Both water and electricity access have limited the development of new industrial and business parks and hindered economic growth for the more rural localities throughout the region.





Chapter 5: Improvement Strategies

Chapter 5: Improvement Strategies

The strategies presented in this chapter are developed through a systematic process that begins with a review of the recommendations from the 2012 Freight Strategy, assessing their relevance against newly identified needs and opportunities. Recommendations still applicable to the regional freight system's needs are retained and new recommendations are formulated to address any identified gaps in relation to both current needs and existing strategies. Consistent with the methodology of the 2012 Freight Strategy, the draft strategies were revised and tailored through close collaboration with the GTC, the project's Steering Committee, and focus group discussions with key regional freight industry stakeholders.

The strategies are organized in two ways:

- The policy recommendation groups outlined in the GTC's LRTP 2045. These policy groups include Health and Safety, Access and Equity, System Management and Maintenance, sustainability and Resilience, and Economic Development. This organization helps ensure a cohesive and integrated freight investment framework that supports the region's long-term regional planning goals and objectives.
- The strategies are also grouped based on the types of actions and tactics they promote, reflecting the areas of GTC's influence, including collaboration, operation and maintenance, planning, and system investment.

Strategies by Planning Theme

Figure 69 provides the strategy recommendations for addressing the GTC region's freight planning needs. Each of these strategies is described in the sections that follow the table.

Collaboration Strategies

Collaboration strategies emphasize partnerships with stakeholders and agencies and outline actions that can be taken by the GTC that involve partnership and coordination with other regional or statewide stakeholders.

FS01: Continue and strengthen the collaboration and coordination with public and private freight stakeholders to facilitate effective project identification, funding, and delivery.

The GTC has consistently engaged with regional stakeholders and planning organizations throughout previous planning processes. For this Regional Freight Plan, GTC engaged with a variety of public and private freight stakeholders throughout the region via:

- **Regional Freight Plan Steering Committee:** The GTC established a project steering committee comprised of county and statewide planners, short line rail companies, and regional planning agencies to review each step of the regional plan's progress. Regular virtual meetings were held to get the committee's feedback on regional freight needs, technical analyses, and draft recommendations.

Strategy Area	Strategies
Collaboration Strategies	FS01: Continue and strengthen the collaboration and coordination with public and private freight stakeholders to facilitate effective project identification, funding, and delivery
	FS02: Explore and encourage public-private partnership opportunities to address freight investment needs.
	FS03: Support training and development programs to enhance access to labor supply for key freight-reliant industries
	FS04: Advance the LRTP’s regional sustainability goals and strategies to reduce freight’s impact on the natural and lived environment.
	FS05: Collaborate with local and regional partners to identify and support projects that address the lack of utilities where infrastructure gaps are a barrier to logistics development.
	FS06: Provide technical assistance, training, and other resources to support the design and implementation of freight-specific zoning decisions.
	FS07: Support the development and implementation of comprehensive freight attraction and retention programs to position the region as a premier logistics hub and manufacturing center.
Operations and Maintenance Strategies	FS08: Improve first/last-mile rail access to major freight facilities.
	FS09: Preserve the right of way and make necessary infrastructure improvements to reinstate rail service along inactive lines, with higher priority given to lines where potential new customers have been identified.
	FS10: Improve roadway first/last-mile access to major freight facilities.
	FS11: Adopt a targeted regional approach to advance freight technologies that enhance efficiency, reliability, and sustainability.
	FS12: Monitor the operational performance of major freight corridors at congestion hotspots and implement freight-specific congestion management strategies to keep major freight corridors congestion-free.
	FS13: Ensure adequate curbside accommodations for commercial deliveries in urban areas while also enabling the safe operation of transit, shared mobility, and private transportation services in these areas.

Figure 69 - Regional Freight Strategy Recommendations
Source - CPCS, 2024

Strategy Area	Strategies
Planning Strategies	FS14: Reduce the impact of natural hazards and disruptions to improve the resilience of the freight transportation system.
	FS15: Investigate the feasibility of developing a multimodal logistics center or “freight village” within the region.
	FS16: Identify and address immediate safety and operational needs of local streets that serve through freight traffic.
	FS17: Expand tandem trailer access across the region along roadways that can safely accommodate them.
	FS18: Provide multimodal transportation connections to freight-reliant industry businesses not currently well-served by transit.
	FS19: Enhance airport planning integration into regional transportation planning .
System Investment Strategies	FS20: Identify and support the implementation of projects to mitigate the noise, vibration, and emissions-related impacts of freight movement.
	FS21: Address low-clearance and weight-restricted bridges on major highway freight corridors.
	FS22: Support implementation of highway project recommendations to address mobility and safety challenges on major regional freight corridors.
	FS23: Identify and implement safety improvements along highways with major truck crash hotspots.
	FS24: Enhance truck parking capacity and availability information across the region.
	FS25: Maintain and modernize railroad infrastructure to increase overall capacity and viability of short line railroads.
	FS26: Maintain and modernize key Freight Routes identified in the LRTP and analyzed in the Regional Freight Plan.

Figure 69 contd. - Regional Freight Strategy Recommendations
Source - CPCS, 2024

- **Public survey:** A survey was made available to the public via email from the GTC and a link on the project website to gather input on regional strengths, weaknesses, needs, and opportunities (SWOT). The survey asked respondents whether current findings reflected their understanding of the region and what additional SWOT elements should be considered when developing strategies.
- **One-on-one consultations:** Throughout the plan’s development, the project team met virtually with various freight stakeholders, including county and local planners, economic development agencies, private manufacturing and agricultural companies, and workforce organizations. Consultees were briefed on the project and asked what needs and strengths ought to be incorporated into the plan.
- **Focus groups:** The second phase of outreach for this project used focus groups with private and public stakeholders to review a draft set of strategies and receive their feedback on whether the strategies sufficiently addressed regional freight needs.
- **Public meetings:** The GTC will continue outreach for this plan by holding a virtual public meeting for anyone to give feedback on draft strategies and goals.

GTC will continue to strengthen its relationships with the regional freight stakeholders to improve the effectiveness of freight project planning, funding, and implementation in the region. GTC’s collaboration and coordination with the public and private stakeholders can target topics such as funding opportunities, timelines, requirements, and capacity building for freight transportation research project identification and funding application across the nine counties.

One of GTC’s priorities for overall regional transportation planning and system investment in the long term is to “facilitate partnerships in planning, financing, and the execution of transportation initiatives.” This priority will be advanced through the first freight strategy recommendation as well as all other strategy recommendations outlined in this document while fostering partnerships with public agencies across all levels of government.

The GTC can engage with freight stakeholders such as owners and operators of multimodal facilities. For example, coordination with the Niagara International Transportation Technology Coalition could enhance the efficiency and security of border crossings. Additionally, the GTC could support initiatives to improve rail border crossing facilities or pre-screening programs. With the expanding capacity of the Frederick Douglass Greater Rochester International Airport (ROC), GTC can support projects that increase air cargo service capacity, such as runway expansions or identifying potential new air cargo customers. Expanding the runway at ROC from 8,000 feet to 10,000 feet would allow for larger aircraft, and heavier cargo, and increase overall capacity. Stakeholder interviews noted that increased capacity for air cargo at ROC was needed, as at times they must travel outside of the region to access needed services. The area around the airport could be served by smart warehousing that uses automation and advanced technologies to increase output and reduce human errors. Smart warehousing facilities and their fast-processing time appeal to air cargo operators due to the time-sensitive nature of the products handled. Facilitating regular communication between ROC and other major air cargo facilities in the state could further enhance air cargo services for the entire region.

GTC's Long-Range Transportation Plan Outreach Process

The GTC's approach to developing the LRTP 2045 showcased extensive public participation and stakeholder collaboration, using multiple channels for public input, including online surveys, phone calls, text messages, emails, and traditional mail. The plan emphasizes collaboration between federal, state, and local governments to guide transportation investment decisions and stresses that successful implementation of recommended programs requires strong partnerships with public agencies and community organizations.



Source: Genesee Transportation Council, Long Range Transportation Plan 2045, June 2021

FS02: Explore and encourage public-private partnership opportunities to address freight investment needs.

To build on collaboration efforts and ensure interested parties are involved in project implementation, the GTC will seek out additional public-private partnership opportunities. GTC has already made this a priority as part of their Public Engagement Plan adopted in 2021, seeking eligible partners to assist in carrying out physical improvements to transportation

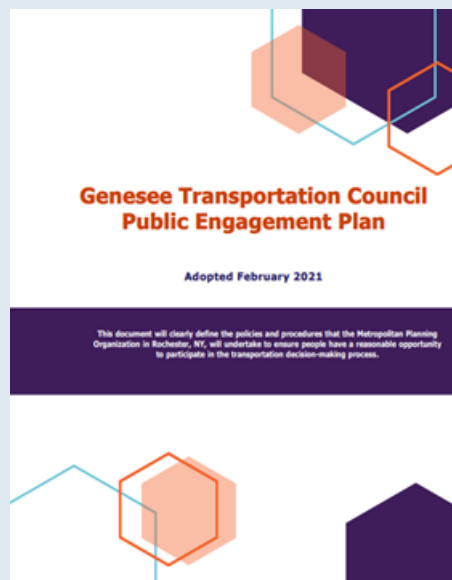
infrastructure, transportation-related programs and initiatives, and integrating land use concerns into transportation planning.

Partnerships specifically built with freight stakeholders at the local, county, state, and federal levels would assist in innovative financing, information sharing, and success monitoring of future projects while addressing the full range of concerns and needs.

GTC Public Engagement Plan

As an MPO for a diverse nine counties, the GTC ensures that public and transportation system stakeholders have an opportunity to participate in many stages of the planning process, offering input for key decisions both in person and virtually. The Public Engagement Plan adopted in 2021 outlined public engagement procedures for the GTC and its member agencies, providing a framework for meetings regarding the Unified Planning Work Program, the Long-Range Transportation Plan, planning committees, and the Transportation Improvement Plan among others.

This plan provides GTC with guidance for meeting regularly with public and private partners, potentially expanding outreach for regular meetings.



Source: GTC, Public Engagement Plan, February 2021.

FS03: Support training and development programs to enhance access to labor supply for key freight-reliant industries.

Ohio's Commercial Driver License (CDL) Student Aid Program

The Ohio Department of Higher Education recently established a commercial truck driver student aid program to encourage job growth in the commercial transport industry and reduce a shortage in truck drivers. The program awards funds to eligible education institutions are disbursed in the form of grants and loans to students enrolling in CDL training programs. Students must commit to reside and be employed in Ohio for at least a year after completing the program but may enroll in any CDL course approved by the Ohio DHE.

Source: The Times Leader, Commercial Truck Driver Student Aid Program accepting applications, July 2024.

Workforce development programs not only assist with worker shortages in the trucking and manufacturing sectors but also connect workers with living-wage jobs in communities near freight hubs. This is a continuous focus of the GTC, having collaborated with the Finger Lakes Regional Economic Development Council on the Upstate Revitalization Initiative. The initiative identified sites for potential job growth in the region including the Eastman Business Park, Rochester Downtown Innovation Zone, and the Western New York Science and Technology Advanced Manufacturing Park. By using guidance from the Upstate Revitalization Plan and advancing the LRTP's ED-14 strategy for workforce development, the GTC can focus its support on programs that make the greatest difference in freight employment.

Rochester Workforce Investment Board (RochesterWorks)

RochesterWorks is a nonprofit workforce and employment services provider partnered with the Monroe County Executive and Mayor of Rochester to administer workforce development funds. The organization has four career centers throughout the City of Rochester and provides free training referrals, career counseling, and job listings among other services. The board also provides funding for on-the-job training and recruitment events. GTC could partner with RochesterWorks to match freight-dependent businesses with skilled workers and communicate the needs of the local freight-related job market.



Source: RochesterWorks, About Us, <https://rochesterworks.org/about/about-us>

FS04: Advance the LRTP's regional sustainability goals and strategies to reduce freight's impact on the natural and lived environment.

To achieve the sustainability goals outlined in LRTP 2045, which focus on minimizing climate change and hazard impacts on infrastructure and investing in green transportation technologies, the GTC will prioritize integrating these goals into freight planning. This includes enhancing the efficient use of land available for freight activity, promoting the adoption of alternative fuels for freight vehicles, and securing funding for freight sustainability initiatives.

New York State Association of Metropolitan Planning Organizations (NYSAMPO)

NYSAMPO acts as an information-sharing organization comprised of all fourteen MPOs in the state, meeting regularly to address regional issues in collaboration with NYSDOT, FHWA, and FTA. The organization has multiple working groups focused on specific issues, including those dedicated to freight and climate change, both of which GTC is an active member. The climate change working group provides an opportunity for planners to discuss potential strategies for climate change mitigation and adaptation, providing training on technical and policy topics as well as performance-based planning as it relates to sustainability.



Source: NYSAMPO, Climate Change Working Group, <https://www.nysmpos.org/climatechange-working-group>

FS05: Collaborate with local and regional partners to identify and support projects that address the lack of utilities where infrastructure gaps are a barrier to logistics development.

A series of actions can help GTC achieve this strategy, starting with supporting local entities in conducting comprehensive utility assessments to evaluate the current state of power, water, sewer, and other essential infrastructure in rural and suburban areas. This will help identify specific gaps and bottlenecks that impede logistics development and inform targeted improvements.

GTC can collaborate with local planning and

economic development agencies to ensure that infrastructure upgrades align with areas designated for logistics and industrial growth, thus supporting broader regional economic goals. The data-driven approach used for this Regional Freight Plan will allow the GTC to identify high-priority areas for investment, ensuring that resources are allocated where they will have the most significant impact on logistics development. Providing technical assistance to smaller communities will also support those lacking the resources for large-scale projects. By connecting public agencies with private logistics companies, the GTC can help prioritize specific infrastructure needs and explore cost-sharing opportunities. Implementing these strategies will significantly enhance the efficiency and effectiveness of logistics infrastructure, supporting overall regional economic development.

Rural Economic Development Loan Programs

The US Department of Agriculture provides a series of zero-interest loans to local utilities through the Rural Economic Development Loan and Grant Programs. Local utility organizations then pass funds on to local businesses for new development and projects that create long-term job opportunities. Funds are made available to business incubators, community nonprofits, facilities that train rural residents on economic development efforts, and businesses looking to expand. The Economic Development Loan opportunity also includes the USDA's Electric Program, providing funds to rural businesses with assistance in lowering energy costs, use of renewable energy, and expanding where utilities are not available. The GTC can assist local communities in applying for these grants and increasing awareness of related funding opportunities.



Source: USDA, Rural Economic Development Loan and Grant Programs, <https://www.rd.usda.gov/programs-services/business-programs/rural-economic-development-loan-grant-programs>

FS06: Provide technical assistance, training, and other resources to support the design and implementation of freight-specific zoning decisions.

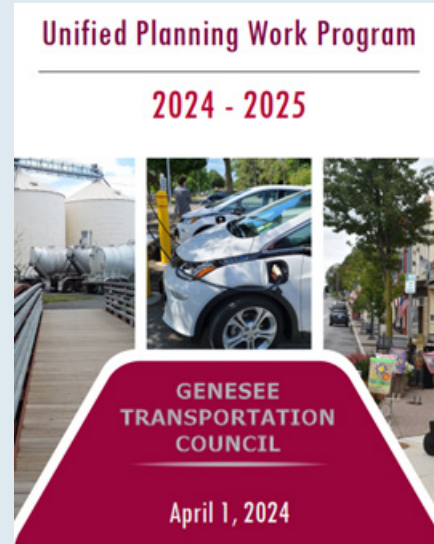
To advance the GTC's goal of clustering freight activity and enhancing freight facility access, it is crucial to offer technical assistance to local planners. The GTC can provide valuable data and technical analysis to support the integration of freight considerations into land use plans. This support will ensure that future developments make optimal use of nearby transportation infrastructure while minimizing impacts on surrounding communities and the environment, aligning with key priorities outlined in LRTP 2045.

Additionally, sharing best practice examples with smaller municipalities will guide the development process effectively. The GTC's efforts in developing and updating the region's long-range transportation plans present a key opportunity to incorporate freight system needs and considerations into land use planning.

Unified Planning Work Program (UPWP)

As New York is a home-rule state, each municipality is responsible for its own local land use planning, policies, regulation, and development. Through the federally funded UPWP, the GTC can provide support to municipalities for project concept-level planning, analysis, and design, and help them integrate local planning priorities into regional transportation and freight goals.

Recent projects and tasks under the region's UPWP include the Regional Land Use Monitoring Report, the Regional Thruway Detour Route Management Plan, and the Wyoming County Route 20A Truck Freight Corridor Study, each potentially affecting the concentration and location of freight activity and traffic.



Source: GTC, Unified Planning Work Program 2024 – 2025, April 2024.

FS07: Support the development and implementation of comprehensive freight attraction and retention programs to position the region as a premier logistics hub and manufacturing center.

The region's strategic location and expansive freight network make it well-equipped to attract and support new freight-related businesses and industry. The GTC should aid in the attraction and retention of these businesses through facilitating collaboration between local governments, transportation agencies, and private sector stakeholders to align freight strategies and investments. Updating regional plans to identify key freight corridors, infrastructure needs, and land-use considerations for freight-intensive industries could also assist in orienting planning efforts towards logistics and manufacturing improvements. These efforts should specifically target some of the region's key industries and their needs.

For example, given the region's strong agricultural and agribusiness sector, additional cold and frozen storage facilities are needed. The region's existing food processing businesses such as LiDestri Foods could benefit from increased storage capacity.

New Fairlife Facility Development in Monroe County

In 2023, the Coca-Cola Company announced it would develop a \$650 million facility in the Town of Webster, anticipated to be the largest dairy processing plant in the Northeast. The attraction of this facility relied on state investment through Empire State Development as well as collaboration between Monroe County's Industrial Development Agency, the Town of Webster, Rochester Gas and Electric, NYSDA, and Greater Rochester Enterprise. Planning and investment from each of these stakeholders make the construction and operation of this facility possible, ultimately supporting 250 new jobs and solidifying the GTC region's competitive position in the dairy industry.



Source: New York State Office of the Governor, Governor Hochul Announces Plans for the Coca-Cola Company to Build \$650 Million Fairlife Production Facility in Monroe County, May 2023. <https://www.governor.ny.gov/news/governor-hochul-announces-plans-coca-cola-company-build-650-million-fairlifer-production>

Operations and Maintenance Strategies

The following strategies are efforts the GTC can take to improve the physical condition of freight infrastructure in the region as well as the operational performance of major freight corridors through improvements in mobility and operational safety.

FS08: Improve first/last-mile rail access to major freight facilities.

To supplement first/last-mile freight connections across the nine counties, the GTC can support efforts to promote industrial development near existing short-line and regional rail lines and support projects that improve the condition of these existing rail lines or expand them to provide access to rail-dependent businesses.

Ontario County's Freight Rail Corridor Level Suitability Analysis

In 2017 the Ontario County Freight Corridor Development Plan identified opportunities for expanded rail access in the Town of Manchester, Farmington, and villages of Manchester, Shortsville, and Clifton Springs. In 2019, Leonard's Express converted the former Great Lakes Kraut facility to a warehousing space. Interest continues in the redevelopment of the historic Lehigh Valley Railroad Roundhouse. A buildings assessment was completed to determine redevelopment viability while the Environmental Protection Agency has documented contamination and needed mitigation measures.

In 2024, the project is continuing in the Towns of Phelps and Geneva, Village of Phelps, and City of Geneva. The project is specifically identified land around the FGLK railway that was well suited for large-scale industrial rail-enabled development while also developing alternative recommendations for relocating the FGLK rail yard.

Source: Ontario County, Ontario County Freight Rail Corridor Development Plan, Corridor Level Suitability Analysis, August 2024.

FS09: Preserve the right of way and make necessary infrastructure improvements to reinstate rail service along inactive lines, with higher priority given to lines where potential new customers have been identified.

As service levels decline or lines are abandoned, the potential for rehabilitation of short line infrastructure becomes more difficult. The GTC recognizes the criticality of short line rail service for businesses in more rural areas and aims to preserve rail right of way (ROW) where short line tracks have become inactive, thereby increasing transportation and relocation options for businesses. Possible lines for repair and restoration include Norfolk Southern’s Corning Secondary Line between Geneva and Lyons as well as the former Falls Road rail corridor between Brockport and Rochester. Both lines could provide nearby communities with Class I rail access to either the NS or CSX lines running through Rochester. ROW preservation and reactivation of lines, however, should be done in close collaboration with the railroads and local communities as resumed or increased rail traffic can impact natural areas, farms, and residential areas nearby.

Charlotte Area Transit System (CATS) Rail Corridor Acquisition

The City of Charlotte, North Carolina announced in September 2024 the purchase of 22 miles of a Norfolk Southern rail corridor for future light rail transit use. This is the latest rail corridor acquisition for the city as it attempts to expand rail and transit access throughout the city’s multiple counties. Norfolk Southern will still be allowed to use the tracks occasionally for freight purposes.

The purchase of lines connects northern more rural counties to the city center as well as the city’s airport, major sports stadiums, community college campuses, and other high-intensity business corridors.



Source: Charlotte Observer, Charlotte City Council backs transit tax deal, Red Line purchase, but questions remain, Mary Ramsey, 2024.

FS10: Improve roadway first/last-mile access to major freight facilities.

Efficient first and last-mile connections are essential for linking freight facilities to major freight corridors and regions. The GTC recognizes that simply being near highways or rail lines is not enough to meet the transportation needs of freight-dependent businesses. To address this, the GTC is committed to prioritizing enhancements to local road networks that connect industrial hubs with these major corridors.

One current example is Livingston County’s Livonia Gateway Park Road Project, which is developing a dedicated access road for the town of Livonia’s agri-business park. This project not only provides direct access to NYS Route 15 but also redirects truck traffic away from local roads that pass through the town center. Similar initiatives could benefit other facilities, such as Batavia’s Western New York Science and Technology Advanced Manufacturing Park (STAMP).

Additionally, the redesignation of NYS Highway 390 to I-390 north of the I-490 interchange could make nearby development parcels more appealing to national site location consultants, thereby reducing first and last-mile distances for businesses along that route.

Western New York Science and Technology Advanced Manufacturing Park (STAMP)

Established by the Genesee County Economic Development Council, the STAMP facility is a green manufacturing freight facility in the city of Batavia currently home to a hydrogen manufacturer and semiconductor equipment producer.

The facility has additional parcels available for development, each within five miles of I-90, US 77, and US 63. The GTC could encourage future development of this site by improving last-mile connections between nearby major highways and individual parcels.



Source: GCEDC, STAMP Mega-Site, <https://www.gcedc.com/stampprojects>

FS11: Explore and support testing of technologies that can enhance truck driver navigation.

The GTC will maintain its focus on exploring emerging transportation technologies and services, particularly by supporting

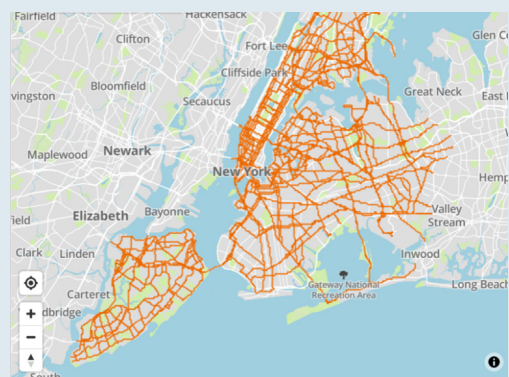
advancements in truck driver navigation systems and real-time alerts for roadway closures, parking availability, and alternative routes. To achieve this, the GTC will collaborate with NYSDOT and neighboring regions to explore enhanced truck wayfinding systems that provide more accurate information on bridge clearance heights, width, and weight restrictions.

Additionally, the GTC will assess the expanded use of dynamic messaging systems (DMS) and improved signage along local routes to guide drivers safely along appropriate pathways. These efforts aim to prevent safety risks and infrastructure damage caused by bridge strikes and other routing-related issues.

NYCDOT's Truck Route Map

New York City DOT makes truck route map data available to the public on the city's Open Data website. The data sets include through and local truck routes for drivers overlaid with the entire city's arterial street network to reference when driving in denser areas of the city. The map also includes information on truck route signage, weight limits, OSOW permitting violations, loading zones, and other restrictions to truck navigation.

A webform is available for any feedback regarding map inaccuracies or questions, allowing the map to be regularly improved and updated. This map could act as a reference for the development of a similar tool in the GTC area, providing drivers with up-to-date guidance on appropriate pathways.



Source: NYCDOT, Trucks and Commercial Vehicles, <https://www.nyc.gov/html/dot/html/motorist/trucks.shtml>

FS12: Monitor the operational performance of major freight corridors at congestion hotspots and implement freight-specific congestion management strategies to keep major freight corridors congestion-free.

To maintain the GTC region's reputation as a relatively uncongested area, the GTC will continue to monitor traffic on key freight corridors, particularly in existing congestion hotspots. As future development and business relocations, such as Micron's facility in Syracuse and other major projects, are expected to bring increased traffic to the region, new hotspots are likely to emerge.

The GTC can consider several solutions to manage congestion and ensure smooth freight movement, including:

- Advanced traffic signal control systems to optimize traffic flow.
- Real-time incident management for quick response to disruptions.
- Variable message signs to provide drivers with route guidance and travel time updates.

Additionally, the GTC can work to coordinate roadway construction schedules with local authorities to minimize impacts on freight traffic. Identifying specific local routes capable of safely accommodating truck traffic during Thruway closures, due to incidents or weather emergencies, will also be a priority.

GTC Thruway Detour Route Management Plan

The GTC is in the process of developing a plan that will identify strategies to improve traffic management and operational performance of Thruway detour routes in the region. The study is funded through the GTC's UPWP, creating a steering committee of county stakeholders, the NYS Thruway Authority, NYSDOT, state police, and fire departments along the detour routes.

The project aims to address challenges caused by Thruway closures that direct truck traffic onto local roads and routes. The study will investigate better first responder and operator response to issues on the detours as well as improving situational awareness about travel conditions on the Thruway and local routes.

Source: Genesee-Finger Lakes Regional Thruway Detour Route Management Plan, Scope of Work, 2024.

FS13: Ensure adequate curbside accommodations for commercial deliveries in urban areas while also enabling the safe operation of transit, shared mobility, and private transportation services in these areas.

Stakeholders have emphasized to the GTC the need to improve freight mobility in dense urban areas while ensuring the safety of private vehicles, cyclists, and pedestrians. The LRTP 2045 recognizes the economic significance of dedicated delivery spaces for commercial vehicles in busy corridors and city centers, establishing a policy that encourages municipalities to actively manage these spaces. This management includes coordination with shared mobility services and private transportation providers.

To further this objective, the GTC will integrate freight stakeholders into discussions on modifications to first and last-mile roadways and the availability of loading and unloading spaces in urban centers. Additionally, the GTC will collaborate with city planners to explore the development of urban consolidation centers, which can reduce the number of truck trips in highly populated areas.

New York City's Curb Management Action Plan

In response to rapid e-commerce growth and increased congestion and pollution from freight traffic, NYCDOT developed its 2023 Curb Management Action Plan that details how curb space and loading zones could be modified to improve freight-related safety and efficiency. Improvements include reclassification of loading zones in both commercial and residential areas. NYCDOT is piloting new types of loading zones that could restrict use based on time, vehicle type, or neighborhood. For example, metered parking in commercial zones would promote higher vehicle turnover while non-metered neighborhood loading zones would be implemented to reduce double parking on narrow residential streets. Reclassification and increasing the availability of loading zones dependent on corridor activity are part of a catered and active approach to managing commercial deliveries in urban areas.



Source: NYCDOT, *Curb Management Action Plan*, 2023.

Planning Strategies

Planning strategies guide the coordination of various planning activities, such as land use and freight planning across the region, optimizing the benefits of freight-related development while minimizing its environmental and social footprint. These strategies prioritize enhancing multimodal operations, strengthening the resilience of critical freight infrastructure, and improving connectivity between key freight activity hubs.

FS14: Reduce the impact of natural hazards and disruptions to improve the resilience of the freight transportation system.

The GTC has proactively identified the region's most vulnerable transportation assets through its Regional Critical Transportation Infrastructure Vulnerability Assessment (RCTIVA). LRTP 2045 further outlines goals and objectives to protect critical infrastructure by promoting cooperative planning, design, and maintenance standards that ensure system continuity across the region.

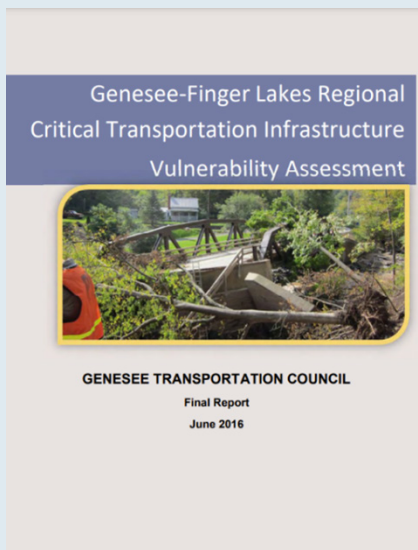
By focusing its resilience efforts on the freight infrastructure most susceptible to natural hazards, the GTC aims to implement measures that prevent incidents and adapt to long-term, foreseeable changes. The data and insights from the RCTIVA guide the adoption of resiliency-related evaluation criteria, helping the GTC prioritize projects for funding and integrate climate adaptation needs into the selection of freight infrastructure projects.

The RCTIVA will be periodically updated as new hazard information becomes available to ensure that the most sensitive and critical components of the freight network are targeted for protection and improvement.

Regional Critical Transportation Infrastructure Vulnerability Assessment

The GTC's critical transportation infrastructure assessment conducted in 2016 was the region's first effort to identify and rank critical transportation assets and establish concrete resiliency planning activities. Similar plans have followed, including an assessment of the region's bridges most vulnerable to natural and human-caused hazards as well as a Regional Resilience Improvement Plan.

The GTC is currently developing a Resilience Improvement Plan that addresses the requirements of the Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) program. This plan will update the 2016 Vulnerability Assessment with new hazards information and identify priority projects to help minimize disruption to goods movement within the region.



Source: GTC, *Genesee Finger Lakes Regional Resilience Improvement Plan Scope of Work*, 2022.

FS15: Investigate the feasibility of developing a multimodal logistics center or “freight village” within the region.

Multimodal freight facilities located at the intersection of critical freight routes, rail lines, or other transportation modes not only concentrate freight activity into smaller clusters but also offer economies of scale through shared services. These facilities provide shippers with more efficient first and last-mile access to freight corridors. The Lyons Industrial Park exemplifies this by its strategic location along the CSX mainline, the Corning Secondary rail line, the Erie Canal, and its proximity to the Thruway.

The GTC will actively encourage and explore the development of similar facilities elsewhere in the region. This approach aims to focus future investments and utilities while minimizing the environmental footprint and streamlining regional freight flows to fewer, more efficient locations.

Monroe County Intermodal Study

Monroe County is in the process of conducting a study to investigate the feasibility of various projects for improving multimodal freight in the County and the GTC region. Previous studies have noted that regional demand is insufficient to justify the construction of an intermodal facility, though stakeholders have voiced concern over relying entirely on multimodal facilities in Buffalo and Syracuse. GTC is collaborating with Monroe County to review the results of this study and discuss the potential of developing a new multimodal logistics approach that would be impactful and financially viable.



Source: CPCS consultations with the GTC and Monroe County, 2024.

FS16: Identify and address immediate safety and operational needs of connector roads that serve through freight traffic.

The GTC recognizes the safety and efficiency challenges associated with freight traffic being directed or detoured onto local connector roads near major freight routes. To address these issues, the GTC is partnering with NYSDOT Region 4, Wyoming County, and local townships on the Route 20A Truck Freight Corridor Study. This study focuses on a route that struggles to accommodate current truck traffic due to sharp curves, segments with height and weight constraints, and seasonal truck bans caused by severe winter weather. The study aims to improve truck route signage and explore additional strategies for enhancing safety along the corridor. Building on this effort, the GTC will expand its focus to other regional routes facing similar issues. This will ensure that corridors and connector streets prone to truck navigation and safety challenges can better accommodate freight traffic, while also addressing community needs and concerns.

GTC Thruway Detour Route Management Plan for Safety Improvements

In addition to studying congestion and efficiency issues on local routes near the Thruway, the Thruway Detour Route Management Plan aims to address safety issues caused by stranded trucks on local roads and unforeseen truck traffic in smaller communities. The study will investigate better first responder and operator response to issues on the detours and considers strategies for reducing hazards on and near the Thruway through Intelligent Transportation Systems (ITS) and offering guidance to all drivers on navigating common detour routes.

Source: Genesee-Finger Lakes Regional Thruway Detour Route Management Plan, Scope of Work, 2024.

FS17: Expand tandem trailer access across the region along roadways that can safely accommodate them.

Tandem trailers enable carriers to haul more cargo per trip, increasing freight efficiency, reducing shipping costs, and lowering fuel consumption and emissions. However, expanding access for tandem trucks requires careful consideration of infrastructure limitations, such as road geometry and bridge strength, as well as safety concerns, particularly close to populated areas or on roads with limited sight distances. Additionally, local traffic patterns, congestion issues, and regulatory frameworks at both the state and federal levels must be taken into account. Since improving tandem trailer access is also a statewide priority, the GTC can support this strategy by collaborating closely with NYSDOT. Together, they can carefully assess specific routes that could accommodate tandem operations with minimal investment and without compromising safety for other road users.

NYSDOT Tandem Trailer Regulations

NYSDOT's description of designated qualifying and access highways in New York State outlines specific regulations for managing tandem trailer operations, with restrictions on vehicle dimensions, weight, and routes. Two types of tandem trailer combinations are allowed in New York: 28 ft Double Tandems with a gross vehicle weight of 80,000 pounds and 48 ft double tandems with a maximum vehicle weight of 143,000 pounds on the Thruway. 48-foot tandems are limited to travel on designated Longer Combination Vehicle routes. For tandem trailer combinations with neither unit exceeding 28 feet, they are restricted to the Designated Qualifying and Access Highway System. This system, along with qualifying highways, and access highways act as safe routes for larger vehicles both on and off the FHWA's National Network.

Source: NYSDOT, Official Description Of Designated Qualifying And Access Highways In New York State, October 2022.

FS18: Provide multimodal transportation connections to freight-reliant industry businesses not currently well-served by transit.

To address workforce access challenges for both businesses and employees, the GTC will advocate for enhanced transit options, particularly near businesses located farther from residential areas or underserved by current transit services. With a significant portion of the region's urban population lacking access to a personal vehicle, expanded bus routes or scheduled shuttles provided by private businesses can greatly improve employment opportunities for the local workforce.

The GTC has already prioritized this effort through a policy established in LRTP 2045, which calls for studying the potential establishment of a Transportation Management Association (TMA) in the region.

To advance this goal, the GTC can collaborate with the Regional Transit Service (RTS), the Chamber of Commerce, and private transportation providers. Additionally, in 2024 RTS completed the Regional Rural On-Demand Service Study, for the purpose of examining the feasibility of running on demand service throughout Rochester-Genesee Regional Transportation Authority's rural regions. The study provided three service delivery frameworks including (1) local on-demand microtransit services, (2) regional on-demand services for municipal clusters, and (3) pre-booked microtransit.

Boston Community Shuttle Guidebook

The Boston MPO, responding to public feedback on first- and last-mile connectivity and workforce transportation issues, created a guidebook to help municipalities develop effective community shuttle programs.

Informed by nationwide transit best practices and existing shuttle services, the guidebook defines successful shuttles as those operable independent of demand, open to the public with a focus on disadvantaged groups, circulating on infrequent routes, and serving various trip purposes. Input from local transportation agencies, disadvantaged communities, and municipal governments was essential to ensure the guidebook accurately addresses local issues.



Source: Boston MPO, *Operating a Successful Community Shuttle Program – A Guidebook*, 2020.

FS19: Enhance airport planning integration into regional transportation planning.

To strengthen the role of airports in the regional transportation system and particularly the role of air cargo in the regional goods movement, the GTC can take steps to ensure airport-related needs are incorporated into long-range transportation planning and other relevant activities to foster overall interagency coordination.

This would involve:

- ***Incorporating airport issues into long-range transportation plans:*** GTC can highlight the airport's importance in regional mobility and economic development by expanding on LRTP strategies, such as AE-16 (intermodal connectors) and ED-8 (interregional travel). Also to build upon the LRTP 2045's support for initiatives that enhance regional air travel, GTC can support projects that improve access to key facilities such as Rochester Airport.

- **Considering collaborating on ground access projects to airports:** GTC can support projects to enhance first and last-mile roadway access to air cargo facilities to ensure effective integration of the air cargo mode with the regional multimodal freight system. For example, Brooks Avenue (Rt 204) experiences clearance issues when passing under the Rochester Southern Railroad (RSR) line north of the Rochester Airport. Occasional flooding in warmer months and ice buildup in the winter reduces the lateral clearance of the abutments and can restrict truck travel between the industrial sites located to the west and I-390 located to the east. Fixing the clearance issue will improve access to existing freight generators and development sites of regional priority, while also addressing safety and operational issues associated with freight movement.
- **Coordinating between airport sponsors and local transportation agencies:** GTC can facilitate collaboration between airport sponsors and local transportation agencies to address air cargo and airport-related needs in local planning processes. As mentioned earlier, GTC's LRTP process serves as a platform for integrating airport-focused strategies into broader regional and statewide efforts.

Enhancing Air Cargo Capacity at ROC

The Frederick Douglass Greater Rochester International Airport (ROC) Master Plan outlines key opportunities to enhance regional air cargo services. A priority investment is extending the runway from 8,000 to 10,000 feet, enabling larger aircraft, heavier cargo loads, and increased capacity. Stakeholders have highlighted the need for expanded air cargo capabilities, as current limitations often necessitate relying on out-of-region services. Additionally, smart warehousing near the airport, utilizing automation and advanced technologies, offers a solution to boost efficiency and attract time-sensitive air cargo operations. GTC can play a pivotal role by fostering collaboration between ROC and other major air cargo hubs in the state, strengthening connectivity and driving regional growth.

Source: ROC Master Plan Update, 2014 (new plan is under development as of 2024).

System Investment Strategies

System investment strategies outline how the GTC can best advise the allocation of funds to address regional needs and leverage opportunities. The GTC's strategies under this theme target investment in physical improvements to infrastructure, supporting local projects that align with regional priorities, and transportation information systems.

FS20: Identify and support the implementation of projects to mitigate the noise, vibration, and emissions-related impacts of freight movement.

Freight activity can disproportionately impact disadvantaged communities by increasing air pollution, noise, and congestion, leading to health risks and lower quality of life. GTC will continue its focus on equitable regional planning efforts and fostering the application of cleaner technologies to mitigate these effects.

This involves conducting freight corridor studies to analyze truck routes and high-impact areas for electric vehicle charging stations, leveraging existing tools such as FHWA's Traffic Noise Model and recent research conducted by local institutions to identify areas where noise, vibration, particulate matter, and other emissions exceed acceptable thresholds. GTC will also work with local transportation agencies to identify and apply for funding to invest in mitigation solutions such as noise barriers, quiet pavements, and shifting freight from trucks to more fuel-efficient modes like rail.

SmartWay Transportation Partnership

The USEPA's SmartWay Transportation Partnership is a collaboration between the EPA and freight stakeholders, encouraging businesses to practice environmentally responsible and sustainable operations. The partnership allows stakeholders to measure, monitor, and reduce their environmental footprint while advertising their company as a SmartWay partnership-compliant company. The GTC should work with SmartWay and the New York State Energy Research and Development Authority (NYSERDA) to assist freight businesses with accessing low-interest loan programs and grants for auxiliary power units, aerodynamic vehicle retrofit kits, truck stop electrification, and other measures to reduce freight transportation fuel consumption and emissions.



Source: EPA, SmartWay, accessed September 2024.

FS21: Address low-clearance and weight-restricted bridges on major highway freight corridors.

Though no bridges on major highways in the region fall below the FHWA-mandated overhead clearance height, stakeholders regularly expressed concern over trucks using local roads and bridges near major highways that are unfit to accommodate the size and weight of freight vehicles. The GTC will leverage its existing inventory of bridge height and weight restrictions from this plan to better target where infrastructure improvements or additional safety measures are needed. GTC can identify priority routes for these changes based on the statewide Freight Core Highway Network designation, Federal Intermodal Connector designation, and whether a route provides access to a current or future major freight facility. Weight, width, and clearance restrictions should also be addressed on roadway crossings of the Erie Canal to improve truck access to portions of the region located north of the canal. Many of the canal's crossings are not only aging and width-restricted but regularly act as connectors for agricultural and other freight shipments between counties.

Erie Canal Lift Bridge Revitalization Project in Albion, NY

In 2022, the town of Albion began a project to rehabilitate a one-way lift bridge spanning the Erie Canal, originally built in 1914. The bridge is a vital travel route for the village's business corridor and acts as a connector along State Route 98, a significant conduit for the area's agricultural industry. The rehabilitation improved the structure's safety and resiliency in addition to spurring similar efforts along State Route 19 on the Erie Canal in the village of Brockport. Both bridges were modernized by replacing parts of the deck with galvanized steel, installing new bridge rails, and modernizing the mechanical components of the lift system.



Source: *Westside News*, *Rehabilitation of State Route 98 bridge in Albion set to begin November 14, November 2022.*

FS22: Support implementation of highway project recommendations to address mobility and safety challenges on major regional freight corridors.

GTC can support the implementation of highway projects recommended in corridor analyses and local area studies to address mobility and safety challenges on major regional freight corridors. The following provides the potential tactics that GTC can consider for achieving this:

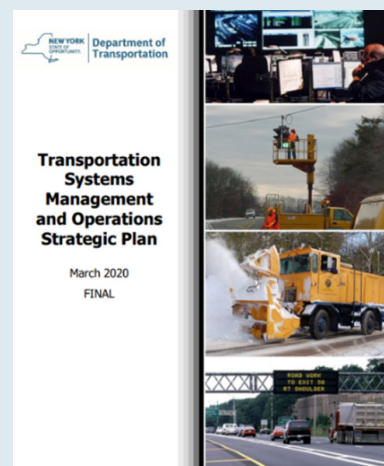
- Incorporating high-priority freight projects into regional plans and programs can help GTC allocate funding for their design and construction through the Transportation Improvement Program (TIP).
- Coordinating with NYSDOT and local transportation agencies to align regional and state freight investment priorities. In particular, GTC should work with local agencies on projects that cross municipal boundaries, to ensure a unified approach to freight system improvements.
- Pursuing and leveraging federal and state grants specific to freight projects and using GTC's planning funds to advance project development. GTC can also assist local agencies with grant applications for freight projects and offer support through data and modeling tools to aid in project development.

- Conducting detailed traffic and safety studies, benefit-cost assessments, and environmental reviews to refine project scopes, advance projects through the design and planning phases, and monitor freight performance on key corridors to showcase the benefits of completed projects.
- Continue engaging with freight stakeholders such as the members of the freight planning Steering Committee and public and private stakeholders engaged in this freight planning effort to build support and educate local officials and the public about the importance of freight projects.

NYSDOT's Transportation System Management and Operations (TSMO) Plan

NYSDOT has developed a Transportation System Management and Operations (TSMO) Plan to outline the various technologies and strategies that can be deployed for drivers to have more accurate and advanced notice of road conditions.

The plan suggests several strategies including the deployment of programs like Winter Travel Advisory (WTA) and supporting transportation management center operators to improve their collection and monitoring of road closure and traffic data. The plan further emphasizes stronger communication between local agencies and NYSDOT to effectively and (when possible) proactively reach roadway users.



Source: *NYSDOT, TSMO Strategic Plan, March 2020.*

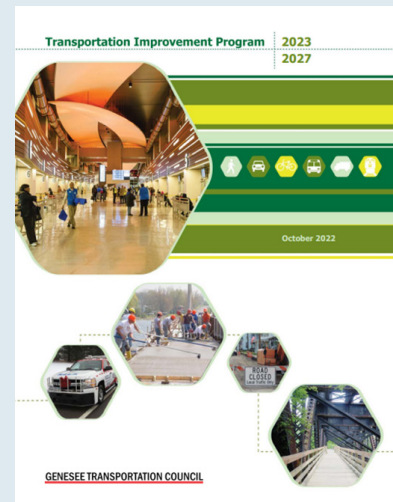
FS23: Identify and implement safety improvements along highways with major truck crash hotspots.

As part of this plan, GTC analyzed truck crash types and trends over the last five years, taking inventory of common causes, locations, and their severity. Annual safety studies are also carried out on the county level throughout the region to inform planning processes. The GTC's Transportation Improvement Program identified strategies to guide the region "towards zero fatalities or serious injuries for all roadway users." The GTC will use updated truck crash data to target highway segments where truck-involved crashes are most common, like the S curves on I-490 in Rochester near S Goodman St. Safety measures could be implemented in each of these locations like dynamic signage for speed changes, curves, or road hazards. In 2023 GTC was awarded Safe Streets and Road for All (SS\$A) grant funds from the U.S. Department of Transportation. A portion of the funding will be used to develop Local Road Safety Plans in all the of nine counties along with the City of Rochester.

GTC Transportation Improvement Plan (TIP)

The GTC's 2023-2027 TIP is updated every three years to identify the timing and funding of all transportation projects scheduled for implementation in the region using federal transportation funds. The TIP is structured based on goals identified in the region's LRTP and UPWP, supporting projects in particular that pertain to the region's health and safety goal. The 2023-2027 TIP set aside funding for projects that help the region meet Highway Safety Improvement Program Goals set by the FHWA and strive for a transportation system that works towards zero fatalities and zero serious injuries for all roadway users.

Projects identified in the TIP can act as a guide for dedicating funds for freight-related safety issues and incorporating ITS where truck crash hotspots are present.



Source: GTC, *Transportation Improvement Plan, 2022.*

FS24: Enhance truck parking capacity, amenities, and availability information across the region.

To better accommodate truck traffic needs, GTC will support projects focusing on the expansion of truck parking capacity along major truck routes and will work with NYSDOT to provide better real-time information about facility availability and improve signage directing trucks to emergency parking and rest areas. If new truck parking facilities are located in the region, consideration should be given to installing electric hookups for trucks parking overnight to reduce idling emissions.

In addition to parking, other truck services are lacking in the region. The region could consider locating a truck wash facility along the Thruway and/or major freight corridor. Currently, the closest truck wash facilities are located in Buffalo and Syracuse. A chassis yard for trailers could also provide a valuable service for truckers switching loads.

If these facilities were combined, they would help attract pass-through traffic to stop in the region and entice additional freight related businesses to locate nearby.

NYS Freight Plan Truck Parking Study

As part of the 2024 update to the New York State Freight Plan, NYSDOT conducted a truck parking assessment that provided them with an understanding and potential solutions for truck parking issues statewide. The assessment inventoried the supply and demand of truck parking, looking into the patterns of usage and capacity across critical freight routes. The study also pinpointed hotspots for undesignated truck parking and areas where truck parking demand is highest without designated parking access. The GTC can leverage information gathered by this assessment to better understand truck parking needs in the region and develop strategies for increasing capacity where it would be most impactful. NYSDOT has specifically set aside funds from the National Highway Freight Program (NHFP) for statewide investments in truck parking improvements; this can be leveraged by the GTC to improve truck parking issues.



Source: NYSDOT, Freight Working Group Meeting 3: Truck Parking Assessment, 2024.

FS25: Maintain and modernize railroad infrastructure to increase overall capacity and viability of short line railroads.

The GTC has prioritized rail infrastructure improvements, as outlined in the 2045 LRTP recommendations, with a focus on the vital role short line railroads play in connecting local businesses to Class I railroads. However, the majority of the region’s short lines fall short of the speed and weight standards required by their Class I connections, with 45 percent operating at 10 mph or less and 60 percent unable to accommodate the standard 286,000-pound load limit.

To address these challenges, GTC will continue supporting projects aimed at increasing weight capacity and operating speeds, resolving overhead clearance issues, and investing in rail sidings to boost capacity on high-volume short and regional lines.

Monroe County hopes to create a “Rail Cluster” at Eastman Business Park that would utilize existing buildings and facilities, connect the park’s internal railroad network with external railroads, and invest in electric charging infrastructure for the rail and trucking operations. The Monroe County IDA received a 3 million dollar grant to improve the rail infrastructure in the business park. Additionally, converting the existing rail to electric to serve short-haul movements within the Park would reduce emissions and improve air quality for nearby disadvantaged communities.

Rochester & Southern Railroad

A \$4.1 M grant has been awarded to the Rochester & Southern Railroad under the State's Passenger and Freight Rail Assistance Program for mainline improvements aimed at increasing capacity and fluidity. As the short line connects to Norfolk Southern's Southern Tier Line in Silver Springs, this investment is crucial for rail-dependent businesses between Rochester and Silver Springs. Enhancing the railroad's speed and weight capacity will enable it to carry traffic between its CSX intersection to the north and its Norfolk Southern connection to the south. Increased traffic and funding generate significant opportunities for businesses and communities along these lines, while better utilizing Rochester & Southern's transload facility in Genesee County.



Source: *Trains*, New York to fund more than \$110 million in rail, and port improvements, March 2024.

FS26: Maintain and modernize key Freight Routes identified in the LRTP and analyzed in the Regional Freight Plan.

The 2045 LRTP identified key non-interstate freight routes that handle a significant portion of the region's freight, pinpointing areas where targeted investments would yield the greatest benefits. The plan outlines three strategies for maintaining and modernizing this critical infrastructure, as well as other key roadways and connectors that support freight movement:

- Proactively address maintenance issues before they arise to preserve infrastructure integrity.
- Conduct repair and rehabilitation projects to extend the lifespan of transportation assets.
- Replace infrastructure assets once they reach the end of their useful life.

To implement these strategies, GTC will continue focusing on preventative maintenance, rehabilitative projects, and replacing aging infrastructure along critical freight routes, as identified in this Regional Freight Plan and other relevant studies and plans conducted by county and local agencies.

Recent State Investments in Finger Lakes Infrastructure Improvements

In early 2024, New York State announced several infrastructure investments across the State, including a \$46.9 M investment in the Finger Lakes region to rehabilitate bridges, restore road surfaces, reconfigure intersections, and implement other improvements that can help revitalize communities and boost the regional economy. Key projects include the ongoing \$26.7 M rehabilitation of pavement between exits 8 and 10 of I-390 in Livingston County, building upon a previous \$35 M investment between exits 10 and 12. Additional investments encompass a \$6 M bridge rehabilitation on I-390 over Commerce Drive, a \$4.8 M pavement project along State Route 31 in Wayne County, a \$3.6 M interchange upgrade between State Route 386 and I-390 in Monroe County, and several other enhancements across Monroe and Ontario counties.

Source: *New York State Government, Governor Hochul Announces \$46.9 Million in Infrastructure Investments Across Finger Lakes Region*, April 2024.

Implementation Considerations

As highlighted in the previous sections, the approach taken in developing this regional freight plan strategically aligns the needs assessment, opportunity evaluation, and strategy recommendations with the key focus areas outlined in GTC's 2045 LRTP. This ensures that freight planning is fully integrated into the broader regional transportation planning framework. Also, to secure stakeholder buy-in and garner public support for successful implementation, the plan emphasized extensive outreach and engagement. As highlighted in the previous sections of this report, key participants included representatives from the freight industry, local and regional transportation agencies, and infrastructure owners, among others.

However, a critical challenge for GTC in executing the freight strategies, both in the short and long term, is the effective allocation of limited funding resources to freight-related projects as well as other regional transportation needs and priorities. GTC plays a vital role in managing federal transportation funds for the Genesee-Finger Lakes region, ensuring that resources are allocated to key projects that enhance the region's transportation network. Through collaboration with local municipalities, regional stakeholders, and private sector partners, GTC secures funding for critical infrastructure and planning efforts. In addition to advocating for local needs, GTC facilitates the integration of regional objectives into state and federal funding processes, supporting long-term transportation improvements and strategic planning initiatives across the region.



Federal and State Transportation Funding Management

One of GTC's crucial roles is allocating and managing federal transportation funds for the Genesee-Finger Lakes region which is done through the following initiatives:

- The Transportation Improvement Program (TIP), which is a short-range (four-year) capital improvement program, listing all federally funded and regionally significant transportation projects, identified in partnership with local and state agencies. The 2023-2027 TIP includes approximately \$540 million in federal aid for transportation projects in the GTC region.
- The Unified Planning Work Program (UPWP), which allocates federal funds for transportation planning activities annually. For the 2024-2025 fiscal year, GTC expects to have about \$850,000 available for transportation planning projects.

Additionally, several federal funding programs are distributed to states as formula funding. States are then tasked with distributing this funding throughout the state for planning or capital projects as necessary.

Because federal formula funding is funneled through the state, GTC has limited influence on how this funding is spent. However, GTC has an important role as a regional advocate and facilitator.

Beyond coordinating the allocation of federal funds, GTC acts as a bridge between local and state governments, facilitating communication, advocating for the Genesee-Finger Lakes region, and developing plans that address regional challenges. This coordination supports bottom-up planning by integrating local needs into broader regional goals.

Funding for some of GTC's initiatives also comes from the New York State Department of Transportation (NYSDOT). On the other hand, the planning that GTC conducts often serves as a resource for NYSDOT as it prioritizes where to

spend the funding. For instance, New York State's State Transportation Improvement Program (STIP) is a federally required budget document that outlines how federal and state funds will be used to invest in surface transportation projects. While NYSDOT oversees the STIP, the decision-making process relies on recommendations from regional TIPs and other local inputs. GTC ultimately leads the contents of the regional TIP, synthesizing local interests and multimodal transportation needs into a comprehensive list of objectives.

By aligning local needs with regional objectives, GTC secures critical funding and contributes to more effective, integrated transportation planning.

Discretionary Fund Application

Discretionary funding consists of grants awarded through a competitive application process. While many are secured by the state, GTC often plays the role of a regional advocate and facilitator. However, several federal discretionary programs allow MPOs to apply directly for funding. This enables GTC to collaborate with counties, municipalities, and private sector stakeholders, such as railroads and developers, to secure funding for regional transportation investments.

For grants available to local municipalities or regional entities, GTC can assist by providing planning support, sharing relevant data, aiding in application development, and offering letters of support to strengthen grant applications.

GTC is eligible to directly apply for the following discretionary grant programs:

- **National Infrastructure Project Assistance (Mega):** MPOs are eligible applicants for Mega grants, which can be used on various highway, bridge, freight intermodal, and grade separation projects.
- **National Significant Multimodal Freight and Highway Projects Program (INFRA):** MPOs serving urbanized areas with a population greater than 200,000 are

eligible for funding. GTC is an eligible MPO. Funding can be used on projects that, as USDOT puts it, “improve safety, generate economic benefits, reduce congestion, enhance resiliency, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.”

- **Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transport (PROTECT):** MPOs are eligible for PROTECT grants to improve infrastructure resiliency against severe weather and other natural disasters. Note that there is also a separate PROTECT formula program.
- **Grants for Charging and Fueling Infrastructure (Corridor and Community):** MPOs are eligible to apply for grants to develop and install electric charging and hydrogen, propane, and natural gas fueling infrastructure.
- **Railroad Crossing Elimination (RCE) Program:** MPOs are eligible for RCE grants, which can be used on improvements to rail-highway and pathway-rail crossings.
- **Advanced Transportation Technologies & Innovative Mobility Deployment (ATTIMD or ATTAIN):** MPOs are eligible for ATTAIN grants, which can be used to “deploy, install, and operate advanced transportation technologies that improve safety, mobility, efficiency, system performance, intermodal connectivity and infrastructure return on investment.”
- **Bridge Investment Program:** MPOs are eligible for BIP grants to improve bridge and culvert condition, safety, efficiency, and reliability.
- **Congestion Relief Program:** MPOs serving urbanized areas with a population greater than 1 million are eligible for funding. GTC is an eligible MPO. Funding can be used to reduce congestion and associated economic and environmental costs.

GTC can support its partners apply for the following discretionary grant programs:

- **Consolidated Rail Infrastructure and Safety Improvements (CRISI):** CRISI grants fund safety, efficiency, and reliability improvements to passenger and freight rail. Railroads are eligible applicants.
- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE):** RAISE grants fund a wide variety of surface transportation projects that improve safety, sustainability, quality of life, mobility, economic competitiveness, infrastructure condition, and innovation. Local governments are eligible applicants.

Future Freight Planning Support

GTC can use the freight system needs and opportunities areas identified in this project in future transportation planning efforts. By making the list of needs available to local jurisdictions and to project managers across GTC, freight improvements can be considered in all aspects of transportation planning across the region.

Moreover, GTC should continue to engage the project’s Steering Committee to keep the list of freight gaps and needs updated, coordinate ongoing and future improvements, and establish a platform for ongoing collaboration on freight activities and operations.

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Appendix A: Summary of Stakeholder and Public Engagement Findings

Appendix A: Summary of Stakeholder and Public Engagement Findings

Steering Committee: Guiding the Plan's Development

The Steering Committee provided strategic guidance throughout the planning process, helping to keep "the big picture" in focus regarding policy direction and strategic recommendations.

The committee included representatives from:

- County planning departments
- Economic development agencies
- Railroads
- New York State Department of Transportation
- Empire State Development
- City of Rochester
- New York State Thruway Authority

Key Input Milestones:

The Steering Committee's ongoing input was instrumental in ensuring the plan reflects the unique needs and opportunities of the Genesee-Finger Lakes region.

- November 2023: Project kick-off and work plan review
- January 2024: Review of initial data analysis and engagement plan
- March 2024: Input on existing conditions and SWOT analysis
- May 2024: Feedback on draft recommendations
- July 2024: Review of implementation strategies
- September 2024: Final review of draft plan

Summary of Findings from Engagement Efforts

The stakeholder engagement activities yielded valuable insights into the freight-related challenges and opportunities facing the Genesee-Finger Lakes region. Key themes that emerged across the various engagement efforts include:

Name	Title	Organization
Lora Leon	Transportation Analyst	New York State Department of Transportation Region 4
Brad Gravino	Regional Rail Coordinator	New York State Department of Transportation Region 4
Joel Kleinberg	Regional Planning and Program Manager	New York State Department of Transportation Region 4
Jeff Bauman	President: Ontario Midland Railroad; Vice President: Livonia, Avon & Lakeville Railroad Corp.	B&H Rail Corp.
Bruce Habberfield	VP of Sales and Marketing	Finger Lakes Railway
Yixuan Lin	Senior Planner	Monroe County Planning
Julie Barry	Senior Planner	Ontario County Planning
Brian Pincelli	Director	Wayne County Planning
Angela Ellis	Deputy County Administrator Planning & Special Projects	Livingston County Planning
Richard Sutherland	Director	Genesee-Finger Lakes Regional Planning Council
Stephen Golding	Economic Development Specialist	Empire State Development
Greg Albert	Economic Development Specialist	Empire State Development
Rich Perrin	Commissioner of DES	City of Rochester DES
David Riley	Principal Transportation Specialist	City of Rochester DES
John Boser	Capital Program Engineer	New York State Thruway Authority

Infrastructure Challenges

- Concerns about the condition of local roads and bridges, particularly those spanning the Erie Canal
- Need for improved rail infrastructure, especially for agricultural industries
- Issues with low bridge clearances and weight restrictions impacting freight movement
- Challenges related to truck parking and loading zones, especially in urban areas

Economic Development and Land Use

- Opportunities for industrial and commercial development, increasing freight volumes on key routes
- Need for better connections between business parks and major highways
- Concerns about balancing development with the preservation of agricultural land
- Challenges in obtaining utility access (power, water, sewer) for new developments

Multimodal Transportation

- Interest in reactivating inactive rail lines to improve connectivity
- Need for more transload facilities in the region
- Desire for expanded air cargo capabilities at Rochester airport
- Exploration of opportunities for intermodal facilities

Safety and Community Impact

- Concerns about truck traffic impacts on local roads and communities, especially during highway closures
- Need for better coordination during extreme weather events that impact freight movement
- Interest in mitigating environmental impacts (noise, air quality) of freight activities on communities
- Safety concerns related to interactions between passenger vehicles and farm equipment on rural roads

Workforce and Technology

- Challenges in attracting and retaining workforce, especially for skilled trades
- Difficulties in accessing CDL training for both trucking and agricultural sectors
- Interest in leveraging new technologies (e.g., AI, autonomous vehicles) in freight planning and operations
- Need for workforce development programs to adapt to technological changes

Policy and Planning:

- Desire for better integration of freight considerations in local and regional planning processes
- Interest in exploring public-private partnerships to address freight investment needs
- Need for improved coordination between different levels of government on freight-related issues
- Suggestions for public education initiatives about sharing roads with freight and agricultural vehicles

Sustainability and Resilience:

- Interest in transitioning to cleaner freight vehicle fleets
- Concerns about the impact of climate change on infrastructure and agricultural production
- Need for strategies to mitigate stormwater impacts and improve infrastructure resilience
- Exploration of renewable energy opportunities in the freight sector

Urban Freight Challenges:

- Issues with last-mile deliveries in dense urban areas, impacting traffic flow and safety
- Need for better curbside management strategies in city centers
- Challenges in balancing the needs of different road users (trucks, passenger vehicles, cyclists, pedestrians)

These findings from the stakeholder engagement efforts have been instrumental in shaping the plan's recommendations and ensuring that the Genesee-Finger Lakes Regional Freight Plan Update addresses the most pressing needs of the region's freight transportation system.



Appendix B: Detailed Strengths, Weaknesses, Opportunities and Threats Analysis

Appendix B: Detailed Strengths, Weaknesses, Opportunities and Threats

The following sections present the detailed findings from the analysis of regional Strengths, Weaknesses, Opportunities, and Threats (SWOTs) related to the freight system and operations. The SWOT elements are organized based on 2045 LRTP strategy areas to inform needs assessment and align freight strategy recommendations with the overall regional transportation priorities.

Health and Safety

This theme intends to increase the safety and security of the transportation system for motorized and non-motorized users.

Strengths	
Fatal Safety Accidents Decreasing	
Description	Importance
Though total incidents on GTC roadways are generally higher than they were five years ago, serious injuries and fatal accidents have majorly declined, falling by nearly 100 deaths between 2020 and 2022. In short, the severity of roadway accidents involving commercial vehicles is lessening.	Commercial vehicle crashes affect truck drivers as well as all other roadway users. Unsafe speeds or driver inattention can have major consequences on the safety of pedestrians, drivers, and infrastructure alike. GTC's efforts to address these root causes could further improve roadway safety throughout the region.
Clustered Industrial Land Use	
Description	Importance
Despite high levels of growth in transportation and warehousing and new manufacturers, industrial activity generally remains in clusters around the GTC region. High density of new warehouse development can be found in the suburbs of Rochester and Batavia as well as more rural areas in Ontario and Wayne County.	Clustered industrial activity concentrates air and noise pollution in fewer locations. With industrial land use generally clustered away from major population centers, GTC's efforts can be focused on individual hubs and still maintain the Region's attainment status.
Ongoing Efforts to Monitor Safety Issues from Detouring Traffic	
Description	Importance
The GTC recently funded a UPWP study to develop a Thruway Detour Route Management Plan that aims to improve traffic management along all Thruway detours. The project will assist in interagency coordination on detour routes in the event of a closure. It will also identify ITS deployment locations to update drivers on closures and roadway conditions.	Closures and other travel disruptions or traffic can cause trucks to detour from major corridors onto more minor roadways. Without notice or guidance on appropriate detours, trucks may become stranded or cause safety issues for other drivers on more local roads. GTC's efforts plan to rectify this issue and improve safety on the Thruway as well as the corridors connected to it.

Health and Safety (cont.)

Weaknesses	
Rail Trespasser Incidents	
Description	Importance
Despite nearly all highway grade crossings are equipped with active warning signals, the GTC Region still experiences trespasser and other incidents at grade crossings. Trespasser incidents account for all freight rail-related fatalities in the region since 2018. Like highway grade crossings, however, trespasser trends have varied over the last five years. Six total casualties have been recorded since 2018, with the highest number occurring in 2021 with four fatalities.	Trespasser incidents create hazards and delays for individuals and trains alike. If occurring at areas without warning signals, additional efforts may need to be taken to prevent and alert trespassers.
Hazmat Spills	
Description	Importance
Petroleum spills account for the highest share of the total spill incidents in the GTC region, the majority of which happened in Monroe County. Equipment failure, crashes involving hazmat-carrying tanker trucks, and mishandling diesel and gasoline at gas stations were the primary factors contributing to these incidents.	Hazmat spills are not only dangerous for individuals and infrastructure immediately affected, but also nearby resources like water supply. Hazmat spills can have lasting negative affects on the natural environment and create safety issues for any nearby development in the near and long term.
Bridge Clearance	
Description	Importance
No bridges on major arterials or interstates in the region have bridges under the mandated overhead clearance of 13.5 feet. Local roads, however, experience yearly collisions with trucks. Navigational apps often fail to take bridge clearance into consideration on local roads and present a threat for trucks exiting interstates and state routes.	Local roads bear the brunt of truck collisions with bridges due to low clearance. Solutions would rely on improved routing as well as increasing overhead clearance on popular truck routes. Collisions with lower bridges can create major delays and generate high repair costs for the municipality where they're located.

Health and Safety (cont.)

Opportunities	
Meeting Truck Parking Demand	
Description	Importance
Stakeholders and truck parking utilization rates indicate that truck parking demand throughout the GTC Region is currently well met. Undesignated parking, however, is still present along the Thruway and puts a strain on communities along major truck corridors. Increases in freight flows could rely on increased designated truck parking locations and amenities.	Truck parking availability allows drivers to pull off the road when hours of service are exhausted or the driver is fatigued. They also prevent drivers from having to park on roadways and in communities not built for heavy truck traffic or parking. More options for parking would accommodate increased truck traffic and reduced undesignated parking.
Safety Near Highway Exits	
Description	Importance
Several stakeholders have expressed safety concerns related to truck speed and high levels of truck traffic exiting highways into more urban or local areas. The change in road width, speed, and turn radius all create navigational issues for truck drivers, in turn creating safety issues for drivers and pedestrians. Stakeholders are particularly advocating for roundabouts to be built near Thruway and highway exits to improve safety for all roadway users.	Local road configuration is typically not built for truck navigation, regardless of location along major corridors. Communities along major truck routes will continue to experience high levels of truck traffic at their exits and will require adjustments to ensure the safety of other drivers and pedestrians at highway exits.
Threats	
Traffic Detouring From Thruway	
Description	Importance
Some towns near major highways experience regular truck traffic as popular first/last mile routes or destinations. However, high traffic and irregular closures have caused trucks to occasionally detour onto more local roads unprepared to accommodate the increased traffic. With little warning of closure or few detour options, these smaller communities may experience unpredictable and irregularly high levels of traffic.	Closures, congestion, and storms can all cause a sudden influx of traffic into communities that are not built for high levels of truck traffic or navigation. This flow may cause additional safety issues in addition to unpredictable congestion.
Increased Freight-related Land Use	
Description	Importance
The attraction of new manufacturers and growth in transportation in warehousing could have implications on the environmental footprint of freight-related operations in the region. Though currently clustered, this kind of development not only produces its own noise and air pollution but attracts freight traffic that could add to this externality.	Freight-related land use zoning and location of industrial parks will dictate the effect this new growth will have on the GTC Region's population. Disadvantaged communities generally suffer the most from noise and air pollution from industrial activity. Location of new development will greatly influence where environmental goals are focused.

Access and Equity

This theme intends to increase the accessibility and mobility of people and freight and enhance the integration and connectivity of the transportation system.

Strengths	
Extensive Roadway Network	
Description	Importance
The region is equipped with a widespread and well-maintained roadway system, supported by major arterials like the Thruway that connect the GTC Region to major markets outside the nine counties. This includes interstate connections to Buffalo and Syracuse as well as roadway connections internationally to Canada.	The GTC Region's heavy reliance on truck movements makes roadway network connections crucial to providing all regional businesses access to major markets. The region maintains major roadways in good condition for all counties and municipalities to travel safely and efficiently throughout the region and state.
Extensive Railroad Network	
Description	Importance
The region is served by nearly a dozen rail operators, including two Class I railroads. These rail lines provide access to rail-dependent businesses in all nine counties and extend throughout the state and continent to connect the GTC Region to national and international markets.	An extensive rail network supports the attraction of rail-dependent businesses and multimodal movement. The multitude of short line operators also allows smaller or more rural areas to connect to major rail corridors and expand business beyond their locale.
GTC and NYSDOT Regional Support	
Description	Importance
Stakeholders characterize GTC and NYSDOT's involvement in more localized issues and needs is sufficient for what regional counties and towns need. Generally, stakeholders feel heard in regional decision-making and actively engaged in regional planning processes.	GTC's nine-county region is comprised of a range of voices and needs that often require resources from the region or state to address. Open support and engagement from regional entities ensure all communities are accommodated and understand what resources are available to them.

Access and Equity (cont.)

Weaknesses	
Workforce Access from Urban Centers	
Description	Importance
Stakeholders express difficulty in finding workers able to reach more suburban or rural sites, due to a lack of transportation options and private vehicle ownership. This then affects stakeholder and company ability to expand outside of denser urban limits and restricts economic opportunities for workers around the region.	Companies locating outside of urban centers generates fewer employment opportunities for workers in population centers in addition to making it harder on businesses to expand. Companies may then be forced to locate closer to population centers or outside the region.
Disadvantaged Communities Affected by Freight Activity	
Description	Importance
Industrial activity throughout the GTC Region is generally clustered, making the negative impacts of industrial development and freight activity also concentrated on few communities. These communities, particularly those around Mount Morris, Geneseo in Livingston County, and Rochester are most severely impacted by the adverse impacts of highway and rail activity.	Though clustering can reduce the sprawl of industrial environmental externalities, the location of these clusters is generally near poorer or more disadvantaged communities. Their ability to mitigate these impacts is therefore reduced, requiring assistance from more regional agencies to reduce impacts.
Opportunities	
Future Attraction of Businesses and Manufacturers	
Description	Importance
New growth grants the GTC Region the opportunity to dictate the location of industrial clusters and improve workforce access to freight hubs. This could be accompanied by improving short line access around light industrial hubs to conquer rail access and clustering needs	Further clustering of activity would reduce any sprawled environmental impact of freight activity and focus modal access improvements around those hubs.
GTC Sustainability Goals and Prioritization	
Description	Importance
In the Long Range Transportation Plan developed by GTC for 2045, GTC identifies reducing transportation emissions and fuel usage as a near and long term priority. GTC's focus on reducing the environmental impacts of the transportation system could potentially reduce freight-related emissions in freight hubs and disadvantaged communities.	GTC's focus on reducing environmental impacts on disadvantaged communities could reduce the share of impact these communities share of new growth. All GTC residents would equally benefit from region-wide pollution reduction and sustainability efforts

Access and Equity (cont.)

Threats	
Reliance on Extra-Regional Intermodal Facilities	
Description	Importance
<p>40% survey respondents still see a need for transload or intermodal connections. However, regional studies have shown that based on demand and resources, construction of additional intermodal facilities in the region is not feasible. Any business relying on intermodal connections often must travel further to Buffalo, Syracuse, or otherwise to obtain intermodal services.</p>	<p>This increases the volume of freight traffic at these facilities and increases costs for businesses needing to travel beyond the nine counties. Increased reliance on facilities beyond the GTC Region also makes the region more susceptible to changes and efficiency issues beyond the nine-county reach.</p>
Short Line Deactivation	
Description	Importance
<p>The region has an extensive rail network though short lines often rely on Class I connections and continued service to reach markets outside the GTC Region. Lower levels of service have left some railroads to discontinue service or be left in disrepair. The Finger Lakes Railway (FGLK) line owned by NS between Geneva and Lyons was taken out of service in 2010, disconnecting the region from the northern CSX mainline going through Rochester.</p>	<p>Rail-dependent businesses often rely on short line ability to connect to Class I lines or major markets. The loss of short lines in more rural communities significantly impacts their economic opportunities and connectivity.</p>

System Management and Maintenance

This theme intends to promote efficient system management and operation and emphasize the preservation of the existing transportation system.

Strengths	
Roads and Bridges in State of Good Repair	
Description	Importance
86 percent of roads and bridges on primary arterials and interstates are in good or fair condition, with mostly small segments of roadways near urban areas accounting for the roadways in poorer condition.	Well-maintained roadways not only reduce maintenance costs for the region but provide safer and more efficient passage for trucks and other motorists.
Few Regional Bottlenecks	
Description	Importance
Though all roadways experience some lower reliability or higher delays during peak times, these segments become scarcer as roadways move away from urban centers. Most delays are seen on the Thruway and around cities like Rochester, Geneseo, and Batavia. In the state's effort to locate significant bottlenecks, only one was located within the nine counties, located near Rochester on eastbound I-490 between the interchanges at Fairport Rd and Palmyra Rd.	Relatively lower truck travel time delays and better truck travel time reliability can reduce operational costs and enhance business productivity, lower emissions by improving traffic flow, and elevate the quality of life by minimizing overall traffic congestion.
Weaknesses	
Few Class I and Regional lines with Weight Restrictions	
Description	Importance
Less than ten percent of Class I and II railroads have weight limits under the 286k pound standard. An additional 60 percent of railroads can accommodate trains going 25 mph or above. These limits allow for both Class I and short line operators in the area to support businesses that require modern railcar capacity. Furthermore, as more of the region is able to accommodate modern railcars, fewer detours or route adjustments must be made for heavier shipments.	Rail dependent businesses considering moving to the GTC Region rely on the region's ability to provide regular and sufficient rail service across the network. Meeting national standards for weight restrictions on mainlines make the GTC Region a competitive location for companies relying on rail service. The more regional and short lines able to accommodate larger cars, more companies will be able to benefit from regular rail service and major connections.

System Management and Maintenance (cont.)

Weaknesses	
Little Warning for Major Roadway Closures	
Description	Importance
Stakeholders describe difficulty with shipping along the Thruway, particularly during major weather events. Even when a storm or closure occurs outside of the region, much of the Thruway or other connected roadways are affected. Stakeholders note that many of these closures happen with short notice or unannounced, not allowing for shippers or drivers to prepare alternative routes and parking ahead of time.	The GTC Region is vulnerable to closures and inefficiencies even beyond its borders. Advanced notice of major corridor closures or bottlenecks allows shippers to plan safer and more efficient routes rather than rely on undesignated stopping points or more residential detours.
Bridges Spanning Erie Canal in Worsening Condition	
Description	Importance
Some of the infrastructure that is in the poorest condition on primary arterials can be found near the Erie Canal. Bridges crossing the canal have generally exceeded their lifespan and are unable to accommodate larger commercial vehicles, with some vehicles requiring a waiver to pass. Furthermore, stakeholders describe the drainage on these roadways as poor. With most only allowing one-way traffic, movements along these routes are unreliable and risk worsening.	Bridges spanning the Erie Canal are connectors for rural communities and multiple GTC region counties. Stakeholders additionally stress the bridges' importance to farm equipment movements. Multimodal access in Wayne, Monroe, and Orleans Counties are then regularly inhibited, particularly for commercial vehicles.
Opportunities	
Multiregional Approach for Freight Policy and Planning	
Description	Importance
The region is located close to logistics facilities and freight infrastructure in Syracuse and Buffalo and border crossings to Canada. A significant majority of the GTC Region's freight flows are pass-through to these freight hubs, increasing traffic at their facilities and pressure on their infrastructure. There exists an opportunity for a coordinated multiregional approach to freight policy and planning to ensure that the GTC region and its neighbors can benefit from this pass-through value and efficiency on critical corridors.	Neighboring regions may experience similar needs and issues related to economic growth and freight efficiency as a result of their reliance on the same facilities and networks. Coordinated planning would allow resources from multiple regions to be leveraged at one time and address needs on a larger scale.

System Management and Maintenance (cont.)

Threats	
Heavy Dependence on Border Crossing Efficiency	
Description	Importance
Canada is a major trading partner for the region, with the region relying mostly on points of entry in Buffalo or Northern New York to reap the economic benefits of proximity to the border. More specifically, much of the GTC Region's freight activity is generated by through traffic destined for Canada. Freight-related industries rely greatly on the efficiency and access to these border crossings in Buffalo or Northern New York to connect with major international markets.	Crossing times and freight traffic at these crossings are increasing as trade with Canada grows and can impact value from trade and intermodal efficiency. Economic growth and through freight flows will be greatly affected by border operations.
Increased Frequency of Extreme Weather	
Description	Importance
As global warming's effects are increasingly felt around the world, the GTC Region becomes more susceptible to extreme weather events year-round. Perhaps the greatest threat to the region is in the winter with ice storms, heavy snow, and cold fronts which can damage infrastructure and create challenges for the agricultural industry or others working in the natural environment. Though much of the region's system is in a state of good repair, preparing for such events will require an adapted approach to infrastructure maintenance and potentially incur higher costs for repairing or updating the network.	Flooding and stormwater runoff can cause significant damage and delays to all freight infrastructure. Heavy snow and ice storms create similar issues with additional safety hazards. Reducing future costs and delays will require a resilient and well-maintained freight network.

Sustainability and Resilience

The intent of this theme is to protect and enhance the environment, promote energy conservation, improve the quality of life, improve transportation system resiliency, and promote consistency between State and local planned growth and economic development patterns.

Strengths	
Regional Freight Planning Efforts and Studies Underway	
Description	Importance
System maintenance across modes is a priority for several stakeholders throughout the region. Multiple counties within the GTC region have recently developed reports on rail and highway conditions and potential maintenance strategies. There exists potential for multi-county collaboration on stated goals and future projects for improving rail and roadway infrastructure.	Localized and in-depth examinations of the freight and transportation network give all stakeholders a detailed understanding of local trends and needs. Planning efforts across counties and regions can then be coordinated to achieve common goals and understand emerging trends.
High Resiliency and Preparedness for Major Weather Events	
Description	Importance
Despite some counties having higher vulnerability to natural hazards, much of the GTC region has a relatively high community resiliency index which indicates an overall high rank for the region in terms of risk preparedness compared to the rest of the state and country.	Having a higher community resiliency index, the GTC region shows its ability to mitigate the impacts of emergencies and disasters on economic activities and freight operations. This resilience protects existing businesses and supply chains and enhances the region's attractiveness for future investments and economic growth.
Weaknesses	
Hazmat Spills Affecting Utilities and Environment	
Description	Importance
Over 3,000 hazmat spills have occurred in the GTC Region over the last three years due to a variety of factors; Equipment failure, crashes involving hazmat-carrying tanker trucks, and mishandling diesel and gasoline at gas stations were the primary factors contributing to these incidents. Stakeholders express concern in these hazmat spills contaminating natural resources, particularly those closest to freight infrastructure. Rochester is particularly vulnerable to hazmat spills and experienced over 40 percent of spills since 2020.	Spills can lead to the contamination of soil, water bodies, and air, causing long-lasting ecological damage. Furthermore, the exposure of communities to toxic substances can have severe health implications. The consequences of hazmat spills underscore the critical importance of detailed data collection and reporting, stringent safety measures, and comprehensive emergency response plans to mitigate the environmental and health impacts.

Sustainability and Resilience (cont.)

Weaknesses

High Vulnerability to Major Weather in Monroe County

Description	Importance
<p>A resilient transportation network possesses the capability to mitigate, adjust to, and recover from the pressures on physical infrastructure and operations affecting both users and organizations. Monroe County has the highest FEMA composite risk compared to the rest of the region; only 18 of the 62 counties in New York State have a composite risk index higher than Monroe County. Seneca, Orleans, and Monroe Counties also have a relatively higher social vulnerability index which indicates a higher susceptibility to impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood.</p>	<p>Increased frequency of major weather events affects the entire region. However, Monroe County is the population and manufacturing center of the region, with disruptions there sending shockwaves throughout the regional economy and transportation system.</p>

Opportunities

Electric Transit Fleet Deployment

Description	Importance
<p>As part of their sustainability and resilience LRTP goals, GTC has prioritized the rollout of electric and alternative fuel transit fleets that reduce transportation-related noise and air pollution. In 2020, Rochester's RTS added ten new electric buses to their transit fleet. LRTP goals include expanding the use of alternate fuel vehicles through use by municipal DPW trucks, transit buses, and delivery vans, in public and private fleets.</p>	<p>This is one of many steps towards minimizing the environmental impact of growing freight activity and has the potential to significantly reduce commercial vehicle air and noise pollution. Expansion of electric commercial vehicle fleets necessitates adjustments to the rest of the transportation network, particularly charging infrastructure along major truck corridors.</p>

GTC Statewide and Local Partnerships

Description	Importance
<p>In order to achieve transportation goals in the near, medium, and long term, GTC has partnered with multiple statewide, county, and municipal agencies that can assist with needs assessment and project development. NYSDOT, county DOTs, regional health departments, the Thruway Authority, and NYSERDA are all part of the efforts to improve transportation and freight efficiency in the GTC region. The majority of stakeholders further considered GTC to be well-involved in and understanding of local needs.</p>	<p>Through statewide and local partnerships GTC is able to get a comprehensive view of regional needs and opportunities. Multiple funding and planning resources can then be leveraged to solve local issues.</p>

Sustainability and Resilience (cont.)

Threats	
Aging Infrastructure Increases Vulnerability	
Description	Importance
<p>Though the infrastructure on primary arterials is generally resilient and in good condition for future freight volumes, local roads and bridges are aging and more vulnerable to damaging weather events or traffic incidents. Survey respondents specify that older roads/bridges commonly used by farmers struggle with drainage and damage from use by heavy equipment. Due to their more rural nature, such roads often receive less immediate attention from the county and funding and continue to age and deteriorate without major repair.</p>	<p>System efficiency will not only be hindered by their capacity restrictions but also the time and cost of their repair. More rural businesses that depend on these roadways could also be disproportionately affected by their damage and have few alternate routes in the event of a natural disaster.</p>
High Dependence on Agricultural Yields	
Description	Importance
<p>Farms that are crucial to the region's economy generally employ fewer than 100 people and are susceptible to even small fluctuations in production costs and demand. Lingering effects of interruptions to the international supply chain during COVID-19, increasing effects of climate change, and surging labor costs threaten day to day operations and crop yields of the region's smaller farms. Though occupying a small part of the labor market, changes in the success of the regional agricultural industry could have larger implications on the regional economy as a whole.</p>	<p>Farmers often rely on the maintenance and resiliency of local roadways and bridges. Major weather events not only affect crop yields but also the ability for inputs to reach rural farms.</p> <p>Agricultural growth has major economic implications and heavily dictates growth in industries and businesses relying on agricultural outputs.</p>

Economic Development

The intent of this theme is to support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency and enhancing travel and tourism.

Strengths	
New Businesses in Key Industries Attracted to Region	
Description	Importance
<p>The GTC Region is a state and regional hub for manufacturing and agricultural goods. Wyoming County alone is home to the highest number of dairy cows and farms in the State. More specifically, the GTC Region is home to major food companies including Constellation Brands, LiDestri, Coca-Cola, and Wegmans. The diverse and growing GTC regional economy is one that attracts several large companies to relocate or expand in the region, including Fairlife, Amazon, and others.</p>	<p>The region’s strength in these industries generates significant economic value and makes the GTC region competitive relative to nearby markets. Such growth will also require a transportation system that can accommodate increasing goods flow.</p>
Well-Educated Workforce with Work Program Access	
Description	Importance
<p>Among other improving socioeconomic factors, the region is well-educated and has access to multiple high-education institutions with ongoing training programs or partnerships with freight-industry stakeholders. The Rochester Institute of Technology and private manufacturers all offer options for individuals entering the workforce to learn or advance skills in freight-related trades.</p>	<p>Though workforce access continues to be a struggle for many businesses, local training, and vocational programs could assist with connecting the skilled workforce to companies looking to expand operations.</p>
Weaknesses	
Workforce Shortage in Skilled Trades	
Description	Importance
<p>While freight-reliant industries are increasingly moving to the GTC Region, companies struggle to find enough skilled labor to sustain operations. This is particularly true for trucking companies as the entire nation is experiencing a shortage of commercial vehicle drivers. This shortage in drivers affects any freight-dependent industry relying on regular and efficient trucking of goods.</p> <p>The declining population in some counties exacerbates this issue as more rural areas struggle to attract new residents and workers.</p>	<p>Limited workforce and workplace access limit economic growth for the region and disincentivize new companies from relocating to the GTC Region that require employees in the skilled trades.</p>

Economic Development (cont.)

Weaknesses	
Lack of Resources for Grant/Funding Applications	
Description	Importance
Stakeholders at county and municipal agencies remarked on the difficulty in being able to apply for funds and grants for local projects. Local agencies often lack the staff and capacity to prepare proposals promptly or on irregular deadlines.	Larger local issues may rely on funds and other resources outside of the municipality or county. Assistance from regional or statewide entities to alert localities of available funds and assist with application may be needed to overcome this barrier.
Opportunities	
Land Available for Freight-Related Development	
Description	Importance
The Finger Lakes region presents numerous opportunities for industrial development, supported by ample land and robust infrastructure. Key sites include Eastman Business Park, a major hub for advanced manufacturing and technology, and the Science and Technology Advanced Manufacturing Park, dedicated to nanotechnology and biomanufacturing. The region hosts innovation centers like RIT's Clean Energy Incubator and Cornell's Technology Farm, which foster technology and innovation.	The ample supply of industrial lands in the regions can foster economic growth, job creation, investment attraction, and supply chain efficiency, ultimately enhancing regional economic prosperity and competitiveness.
Expanding E-commerce and Related Facilities	
Description	Importance
First and last-mile connections are becoming increasingly crucial to the movement of goods in both rural and urban areas. The GTC region especially is experiencing high levels of online spending, averaging \$104 million weekly, up 19 percent from 2022 alone. While this is a considerable opportunity for economic development in retail and warehousing, development of fulfillment centers and other supporting infrastructure may be necessary to take advantage of this growing industry.	E-commerce growth is a trend seen around the country. To remain competitive and adapt to consumer lifestyles, the GTC Region must accommodate e-commerce businesses and movements. First and last mile movements will influence traffic levels in denser and more residential areas as well as just outside of major cities.

Economic Development (cont.)

Opportunities	
High Vulnerability to Major Weather in Monroe County	
Description	Importance
The anticipated growth in the volume and value of commodities transported in New York State presents significant opportunities for the Finger Lakes region. By 2050, the volume and value of goods moved are projected to increase by about 34% and 67%, respectively. Trucks currently handle roughly 80% of the region's freight by both mode and value, and this share is expected to rise, with a 1% increase in total tonnage and a 4% increase in total value. This presents an opportunity for the region to attract investments in logistics and industrial expansion.	By leveraging its strategic location, transportation infrastructure, available land and facilities, and strong industry base, the GTC region is well-positioned to capitalize on the opportunities presented by increased freight flows, including job creation, and infrastructure improvements that benefit the entire region.
Frederick Douglass Greater Rochester International Airport Expanding	
Description	Importance
ROC is an expanding airport, ready to handle increasing levels of freight to service all parts of the US and Canada. Future planned expansion areas include approximately 730,000 sq. ft. of both building and ramp space for cargo operations. As a result, freight-dependent industries can use ROC without relying too heavily on movement to/from JFK or BUF.	ROC is a critical multimodal connection for the region, particularly with the region's lack of intermodal facilities. The airport also acts as the state's busiest air freight facility outside of New York City. Growing freight flows throughout the state will benefit from increased service at ROC.
Threats	
Highly Reliant on Truck Efficiency	
Description	Importance
48% of freight volume in the region are moved by truck, making the Region heavily reliant on the efficiency and safety of truck movements. This share of volume is expected to continue, making future economic growth also dependent on the efficiency of truck movements in all directions.	To take advantage of the projected increase in truck freight flow, monitoring roadway capacity and safety throughout the region will be crucial.
Utility Access is Limited for Suburban and Rural Developments	
Description	Importance
Despite the availability of developable land throughout the region, stakeholders often expressed difficulty in accessing utilities for new developments in suburban and rural areas. Both water and electricity access have limited the development of new industrial and business parks and hindered economic growth for the more rural localities throughout the region.	Resource access for businesses outside urban centers – workforce, utility, rail, and road access – all influence the competitiveness of the GTC region. Utility access will be necessary to take advantage of any developable land, regardless of location.



GENESEE TRANSPORTATION COUNCIL

The Metropolitan Planning Organization for the Genesee-Finger Lakes Region of NY



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