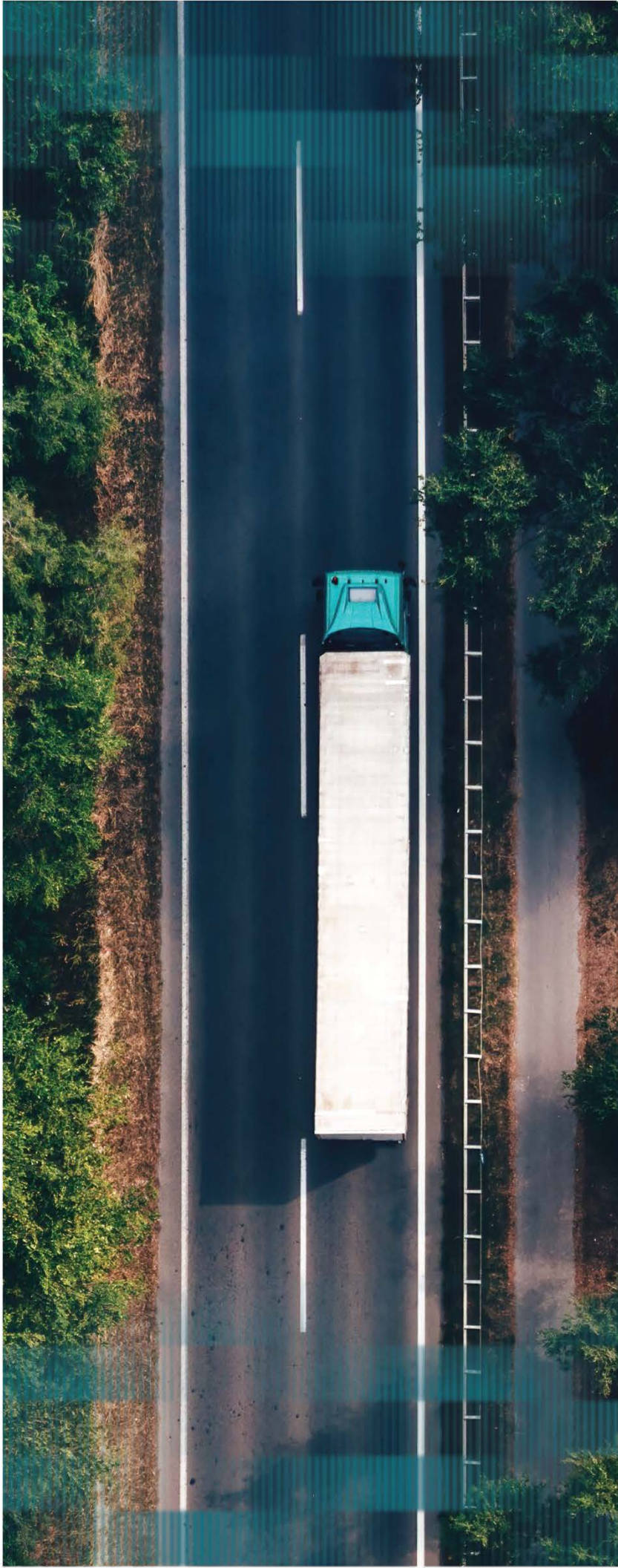
HOCTC
HERKIMER-ONEIDA COUNTIES TRANSPORTATION COUNCIL

Freight and Truck Analysis

Technical Memo



prepared for:
Herkimer-Oneida Counties Transportation Council

prepared by:
Transpo Group and Cambridge Systematics, Inc.

Tuesday, February 10, 2026

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List of Acronyms

AADTT	Average Annual Daily Truck Traffic
AI	Artificial Intelligence
BEV	Battery Electric Vehicle
BTS	Bureau of Transportation Statistics
C&D	Construction and Demolition
CAGR	Compound Annual Growth Rate
CDL	Commercial Driver's License
CFS	Commodity Flow Survey
CPI	Consumer Price Index
CS	Cambridge Systematics, Inc.
DC	Distribution Center
DTC	Direct-to-Consumer, the delivery of orders to a consumer's specified location
FC	Fulfillment Center
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GDP	Gross Domestic Product
GIS	Geographic Information System
GPS	Global Positioning System, a technology that tracks the position of vehicles over time
HOCTC	Herkimer-Oneida Counties Transportation Council
IDA	Industrial Development Agency
IMX	Intermodal
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems
LRTP	Long-Range Transportation Plan
MSW	Municipal Solid Waste
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
O-D	Origin-Destination
OHSWA	Oneida-Herkimer Solid Waste Authority
SCTG	Standard Classification of Transported Goods
STB	Surface Transportation Board
TTTR	Truck Travel Time Reliability
UAS	Unstaffed Aerial Systems

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1.0 Introduction

The movement of goods facilitates the Herkimer-Oneida Counties Transportation Council (HOCTC) region's economy and the quality of life of its residents. The region has a long and proud history of agriculture, mining, manufacturing, and distribution. Recent advancements in technology and manufacturing have presented opportunities in the semiconductor industry, food products manufacturing, other advanced manufacturing, drone and technology testing, and retail distribution sectors. These opportunities are generating investments in new manufacturing plants and warehouses. Major investments such as the new Chobani manufacturing plant in Rome and the Micron facility in Syracuse present opportunities for the HOCTC region to expand the market for its agricultural products and to attract firms that will supply or otherwise support or collaborate with those companies.

These exciting opportunities also present potential challenges. Manufacturing, agriculture, and distribution generate freight shipments that move by truck. More truck traffic can contribute to congestion and emissions, pavement wear-and-tear, and potential safety concerns.

1.1 Task Objectives

This task, a supplement to HOCTC's Going Places 2045, the region's Long-Range Transportation Plan (LRTP), aims to:

1. Analyze both current and future freight transportation needs, considering factors such as demand trends, growth projections, and evolving industry requirements.

2. Assess needs generated by the region's industrial development strategies, supply chain operations, and identify how these dynamics will influence the region's freight network; and

3. Develop actionable capital and policy recommendations to enhance the efficiency, safety, and sustainability of the region's freight network.

1.2 Study Approach and Organization

This study analyzed data from a variety of public sources on:

- The movement of goods into, out of, through, and within the HOCTC region;

- Truck volumes and bottlenecks on the region's highway network;

- The locations of freight-generating business establishments and other facilities; and
- The movement of solid waste from transfer stations to the regional landfill and other disposal locations.

Data analysis was augmented through a series of stakeholder interviews with freight carriers, economic development, and transportation agency representatives, to identify where and why freight and trucks move in the HOCTC region, the routes used, and key issues and needs related to the movement of goods on the region's highway network today and in the future.

This memorandum is organized as follows:

1. **Section 2** describes population and employment in the region, which are key freight demand drivers, a summary of the quantity and value of goods moved in the HOCTC region now and in the future, the locations of major freight-generating facilities across the region, and the travel patterns of trucks on highways in the region;
2. **Section 3** identifies and describes the performance of the region's highway network with respect to travel time, reliability, and safety, and reviews some key trends that could affect how much, where, and how goods move in the future; and
3. **Section 4** considers needs and opportunities to address current and potential future challenges through policy and project initiatives.

2.0 What Moves, Where, and Why: Freight Demand Drivers and Flows

The "what, where, and why" of freight in the Herkimer-Oneida counties region begins with the "why." Freight moves because the companies that do business in the region need supplies, and many of them produce goods that need to be transported to where the customers need them. The region is also home to nearly 300,000 residents who consume food, clothing, housing and home goods, electronics, automobiles, and a range of other "consumer goods." The region is also located on one of the busiest freight highway corridors in the State, the New York State Thruway. This highway connects the HOCTC region to other metropolitan areas across the state and beyond. It also facilitates the movement of goods between larger metropolitan areas throughout the Northeastern United States and eastern Canada. This section describes:

- **Why:** An overview of the region's population and economic composition, which are drivers of demand for shipments of goods that need to move into or outbound from the region;
- **What:** A profile of the goods that move into, out of, through, or within the HOCTC region summarized by commodity, transportation mode, and direction (i.e., inbound, outbound, through, or within the region);
- **Where:** An overview of the region's trade partners (i.e., where inbound shipments come from and outbound shipments go to), where major freight-generating facilities such as warehouses and manufacturing plants are located in the region, and the distribution of truck trips on the region's highway network.

2.1 Why: Population and Economic Composition

As described in Chapter 4 of *Going Places 2045*, HOCTC's LRTP, population in the two-county region reached a peak of 341,000 in the 1970 Census, stood at approximately 299,000 at the 2010 Census, and approximately 292,000 at the 2020 Census (see Table 1 showing the time trend). This decline can be attributed to deindustrialization and the loss of manufacturing jobs that adversely affected many of the nation's legacy industrial employment centers, particularly in the Northeast and Midwest. Notably, in the mid 1990's the Base Realignment and Closure directive was issued, and Griffiss Air Force Base in Rome, NY was closed eliminating thousands of jobs and relocating nearly 30,000 residents out of the region.

Table 1. Population Change in the HOCTC Region, 1950-2024

	Herkimer County	Oneida County	Total	Percent Change from Previous Census
2024 est.	59,585	228,347	287,932	-1.5%
2020	60,139	232,125	292,264	-2.4%
2010	64,519	234,878	299,397	-0.2%
2000	64,427	235,469	299,896	-5.3%
1990	65,797	250,836	316,633	-1.1%
1980	66,714	253,466	320,180	-6.0%
1970	67,633	273,037	340,670	3.0%
1960	66,370	264,401	330,771	16.4%
1950	61,407	222,855	284,262	n/a

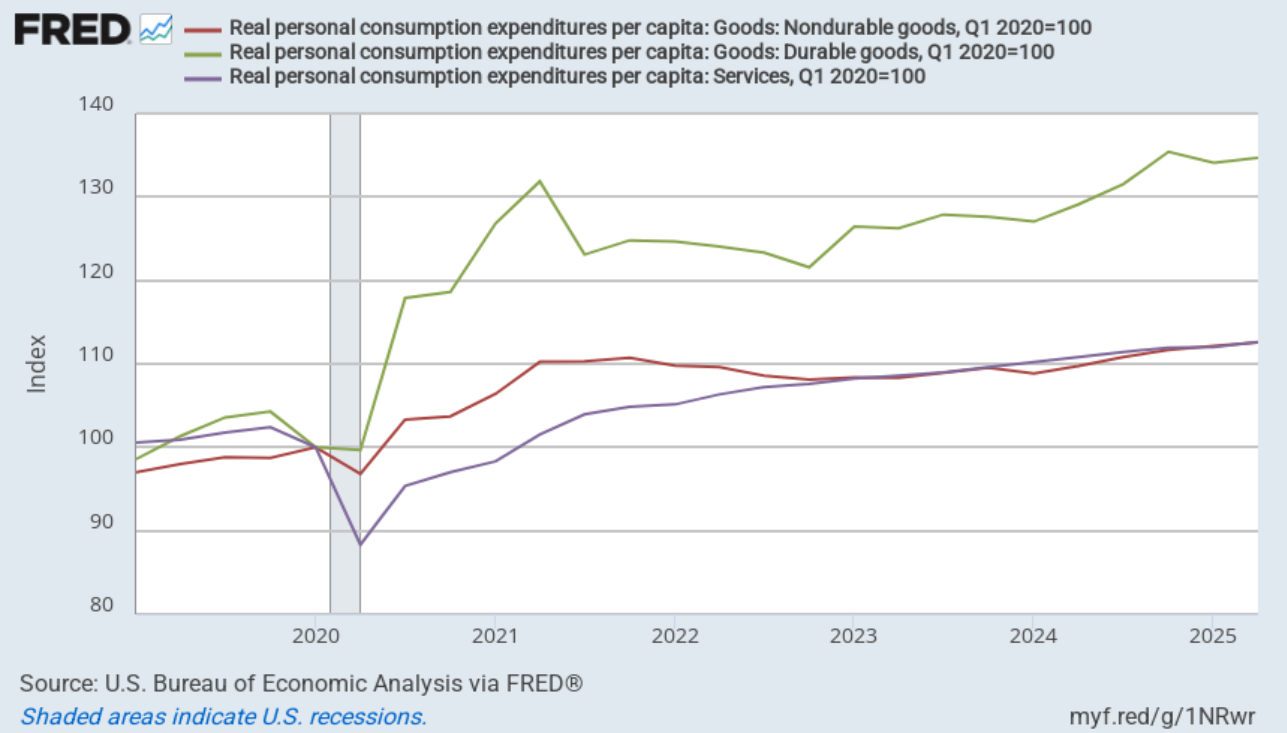
Source: *U.S. Census Bureau*[i]

Despite a steady-to-declining population, growth in personal consumption spending, at least based upon national data, is growing at a rate that outpaces the population trend. In other words, despite low-to-no growth in population, the volume of goods consumed in the region could continue to increase into the future. Figure 1 shows the national trend of real personal consumption expenditures over time, broken down by categories of goods. The categories include:

- Durable goods, including motor vehicles and parts, furnishings and durable household equipment, recreational goods and vehicles;
- Nondurable goods, including food and beverages, clothing and footwear, gasoline and other energy goods; and
- Services expenditures, including housing and utilities, health care, transportation services, recreation services, food services and accommodations, financial services and insurance.[ii]

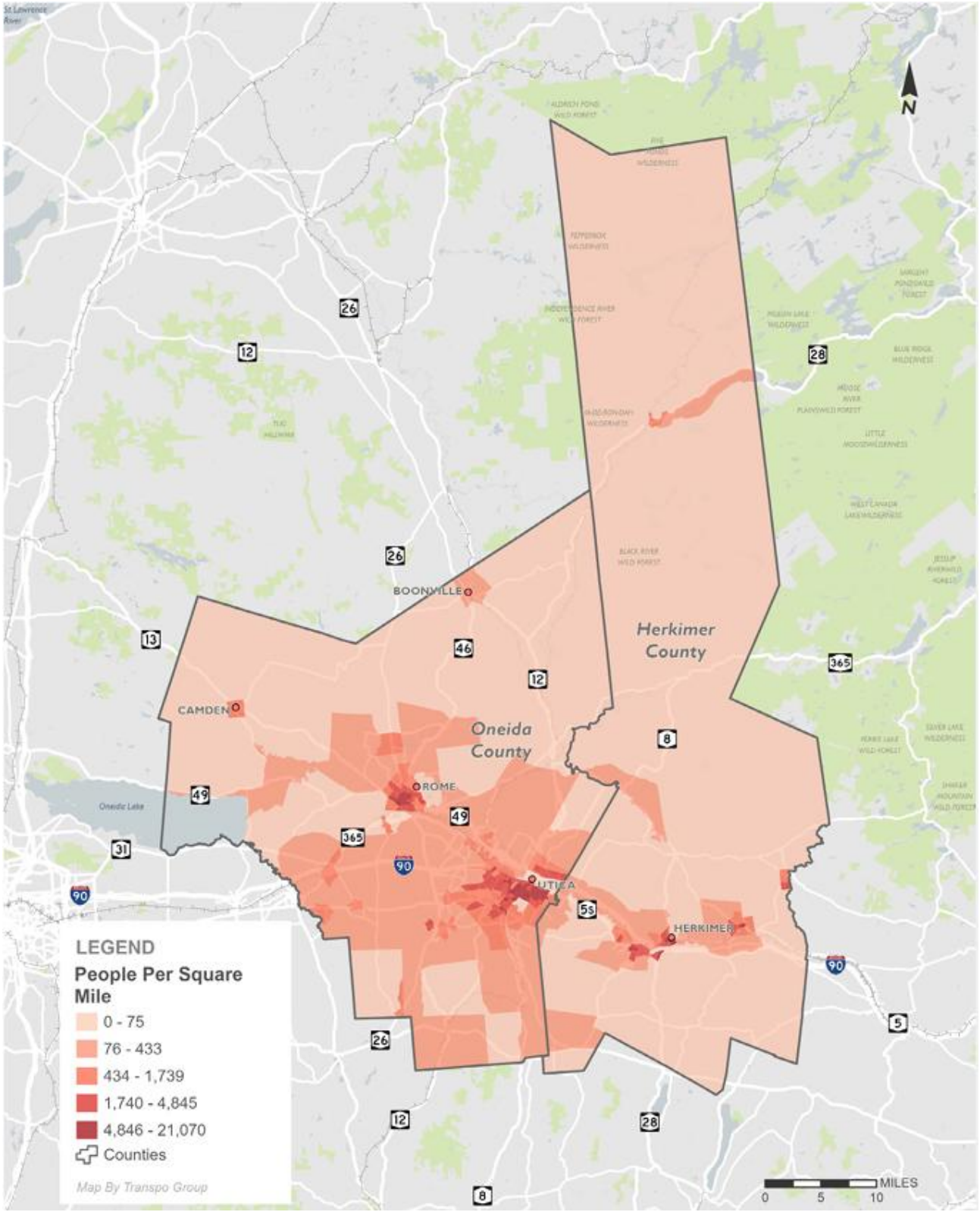
Real, per capita consumption is often cited as a good measure of consumption because it adjusts for inflation and population growth. Figure 1 illustrates real, per capita expenditures from the first quarter of 2019 through the first quarter of 2025, with each series normalized to take the value 100 in the first quarter of 2020. The graph shows a steep decline in expenditures on services during the economic recession associated with the COVID-19 pandemic in 2020, and the rapid increase in spending on durable goods in the 2020-2021 timeframe.

Figure 1. Real Personal Consumption Expenditures Per Capita, United States, Ten-Year Trend, Q2 2015-Q2 2025[iii]



The region's population is concentrated in the urbanized communities of Utica, Rome, Herkimer, and Little Falls, and in the suburban and exurban areas between those nodes. Figure 2 shows the distribution of population across the region. These are areas where there are concentrations of deliveries to consumers' homes. In addition, retail stores and other businesses that serve the population are located here and receive shipments of various goods.

Figure 2. Population Density in the HOCTC Region by Census Tract



The region's economy generates freight demand as well. Table 2 shows the employment by non-farm industry sector in the HOCTC region in 2018 and 2024. The trade, transportation, and utilities; manufacturing; and mining, logging, and construction sectors often generate significant volumes of inbound and/or outbound freight shipments. For example, manufacturing plants receive inbound shipments of raw materials or manufactured components and produce outbound shipments of finished products. These three "freight generating" sectors are among those that have been growing in employment in recent years.

Growth in advanced manufacturing, including semiconductor manufacturing, is expected in the region, through economic development investments and partnerships. Up to 25 percent of the U.S.-made chips could be produced within 350 miles of Central New York by 2034, with production at the Air Force Research Laboratory in Rome and the Wolfspeed facility in Utica being among the facilities that make that goal a reality.[iv]

Significant recent developments, including warehousing and distribution centers in several of the region's business parks, and forthcoming development, such as a 1.8 million square foot Chobani manufacturing facility in Rome, are expected to generate hundreds of new truck trips per day. These and other freight generating facilities are described in greater detail in Section 2.3.1.

While other sectors such as education and health services, leisure and hospitality, professional and business services, etc., are not typically considered to be major freight-generating industries, they often receive inbound deliveries of food products, furnishings, or office supplies, and generate waste that is picked up and taken away. Thus, to some degree, all sectors rely on a safe and efficient transportation system.

Table 2. Non-Farm Employment by Industry in the HOCTC Region

Industry	Employment		% Change from 2018
	2018	2024	
Education and Health Services	28,000	27,200	-3%
Trade, Transportation, and Utilities	20,400	21,000	+3%
Manufacturing	11,300	11,800	+4%
Leisure and Hospitality	9,800	11,100	+13%
Professional and Business Services	8,100	8,600	+6%
Financial Activities	6,900	6,900	--
Other Services	4,700	4,600	-2%
Mining, Logging and Construction	2,900	3,600	+24%
Information	1,000	900	-10%
All Private Sector	**93,100**	**95,700**	**+2.8%**
Local Government	21,800	19,900	-9%
State Government	7,400	7,100	-4%
Federal Government	2,400	2,600	+8%
Total	**124,700**	**125,300**	**+0.5%**

Source: *Going Places, 2045*

In addition to non-farm sectors, agriculture is vital to the region's economy and cultural identity. The region has over 1,300 operating farms covering 295,000 acres of land in Herkimer and Oneida counties. While the acreage of farmland in the region has decreased since 2017, annual production has increased substantially, from $158 million to $283 million between 2017 and 2022.[v]

Continued growth in agriculture, manufacturing, mining and construction, and transportation and warehousing could result in similar increases in the movement of goods that each of these sectors uses as inputs and produces as outputs.

2.2 What: Freight Commodity Flows

When investigating the quantity of goods moved in the region, two measures provide different, but useful, insights:

- **Weight,** measured in **tons,** is a measure indicative of the mass of goods moved. The top commodities moved in the region, when measured by weight, will be goods

that are heavy, bulky, often lower in value-per-ton, and they may represent large proportions of the truck traffic and associated impacts on the region's roads and bridges.

- **Value**, measured in **dollars**, is more indicative of the economic impact of goods movement in the region. Often high-value goods are lower in weight. Products like semiconductors, pharmaceutical drugs, consumer electronics, etc., are indicative of advanced manufacturing, rising affluence of the population, or other economic forces, even if the mass of goods moved is a smaller proportion of the mass or weight of goods moved.

Commodity flows in the HOCTC region are evaluated by tonnage, value, direction of travel, commodity type, origin, and destination. This evaluation uses Transearch data at the 2-digit Standard Transportation Commodity Code (STCC)[vi] level. Transearch is a comprehensive database of North American commodity flows developed by S&P Global.[vii] It is based on primary shipment data obtained from rail and truck freight carriers and information from public, commercial, and proprietary sources to generate a base-year estimate of freight flows at the county level and a future year forecast. The forecast evaluates underlying demand by commodity-trade lane mode and grows it linearly based on economic forecasts. It does not include alternative scenarios that account for the potential effects of major disruptors or structural changes in the economy.

NYSDOT acquired a Transearch database covering New York State and adjacent states for the development of the New York State Freight Plan. NYSDOT made this database available to the state's MPOs for their regional freight planning. The database includes commodity flow data for a base year of 2021 and a forecast year of 2055.

For the purpose of this analysis, the directionality of freight flows are defined as:

Figure 3. Directionality of Commodity Flows in the HOCTC Region

Inbound

- Flows moving into the HOCTC region from locations outside the HOCTC region.

Outbound

- Flows with an origin inside the HOCTC region and a destination outside the HOCTC region

Internal

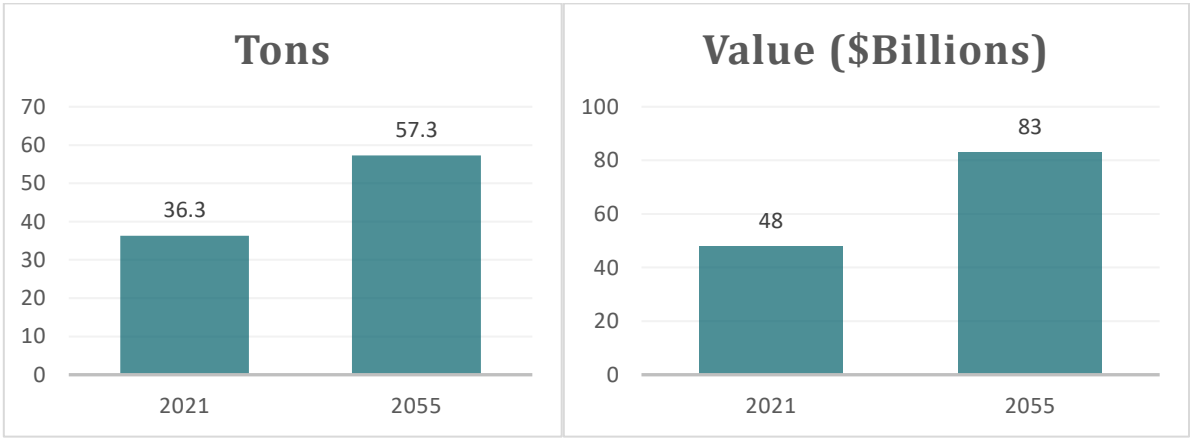
- Flows move within or between the two counties in the HOCTC region.

Through

- Flows move between an origin outside the HOCTC region and a destination outside the HOCTC region, but utilize the freight network in the HOCTC region during part of the journey.

In 2021, there were 36 million tons of freight, valued at $48 billion, moved on the multimodal freight network in the HOCTC region. Through 2055, total tonnage is expected to increase to 57 million tons, a 57 percent (1.3 percent annually) increase. The value of goods moved in the region is expected to increase 72 percent (1.6 percent annually) to $83 billion by 2055.

Figure 4. Tons and Value of Freight Moved in the HOCTC Region, 2021 and 2055



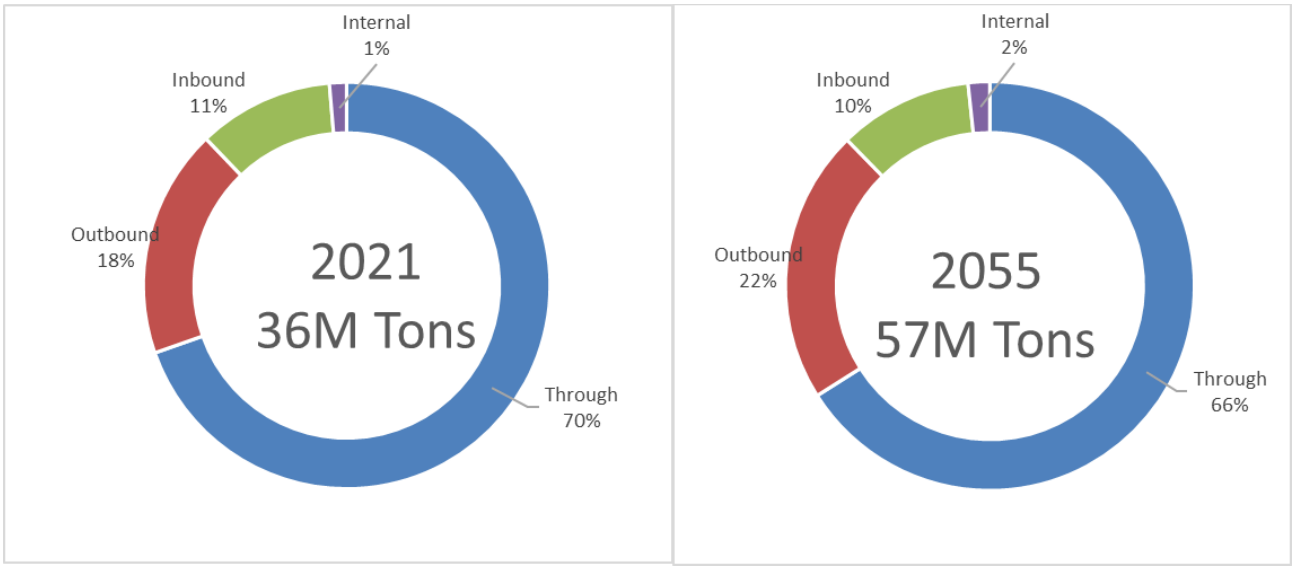
Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

By direction of movement as defined in Figure 3, most of the freight moving in the HOCTC region is passing through between origins and destinations located outside the region, as shown in Figure 5 and Figure 6.

Through movements accounted for 70 percent of total freight moved in the study area in 2021. As shown in Figure 5 and Figure 6, approximately 25 million tons of goods valued at $37 billion moved through the HOCTC region. Through 2055, the weight and value of goods passing through the region are expected to increase by 49 percent and 74 percent, respectively.

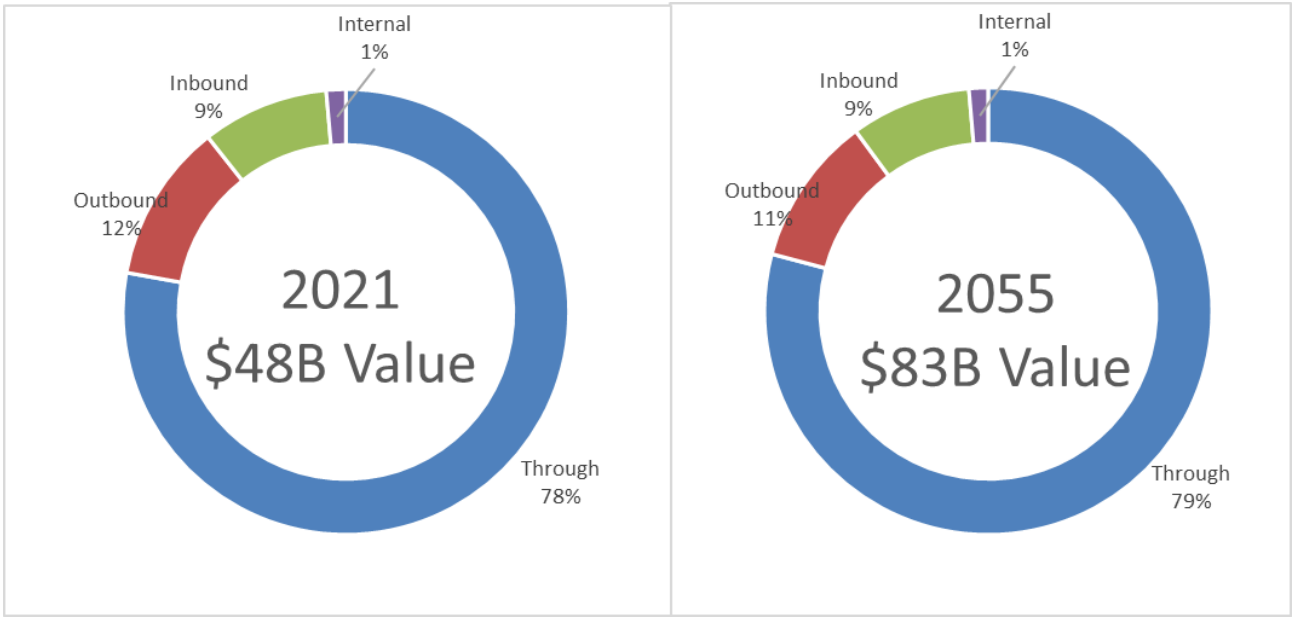
The second leading freight flow direction is **outbound** flows, which have an origin in the region and a destination outside the region. Outbound flows accounted for 18 percent of total freight weight and 12 percent of total value in 2021. By 2055, outbound flows are projected to reach 12 million tons worth $9 billion, an 87 percent increase in tonnage and 60 percent increase in value from 2021.

Figure 5. Freight Tonnage by Direction, 2021 and 2055, HOCTC Region



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Figure 6. Freight Value by Direction, 2021 and 2055, HOCTC Region



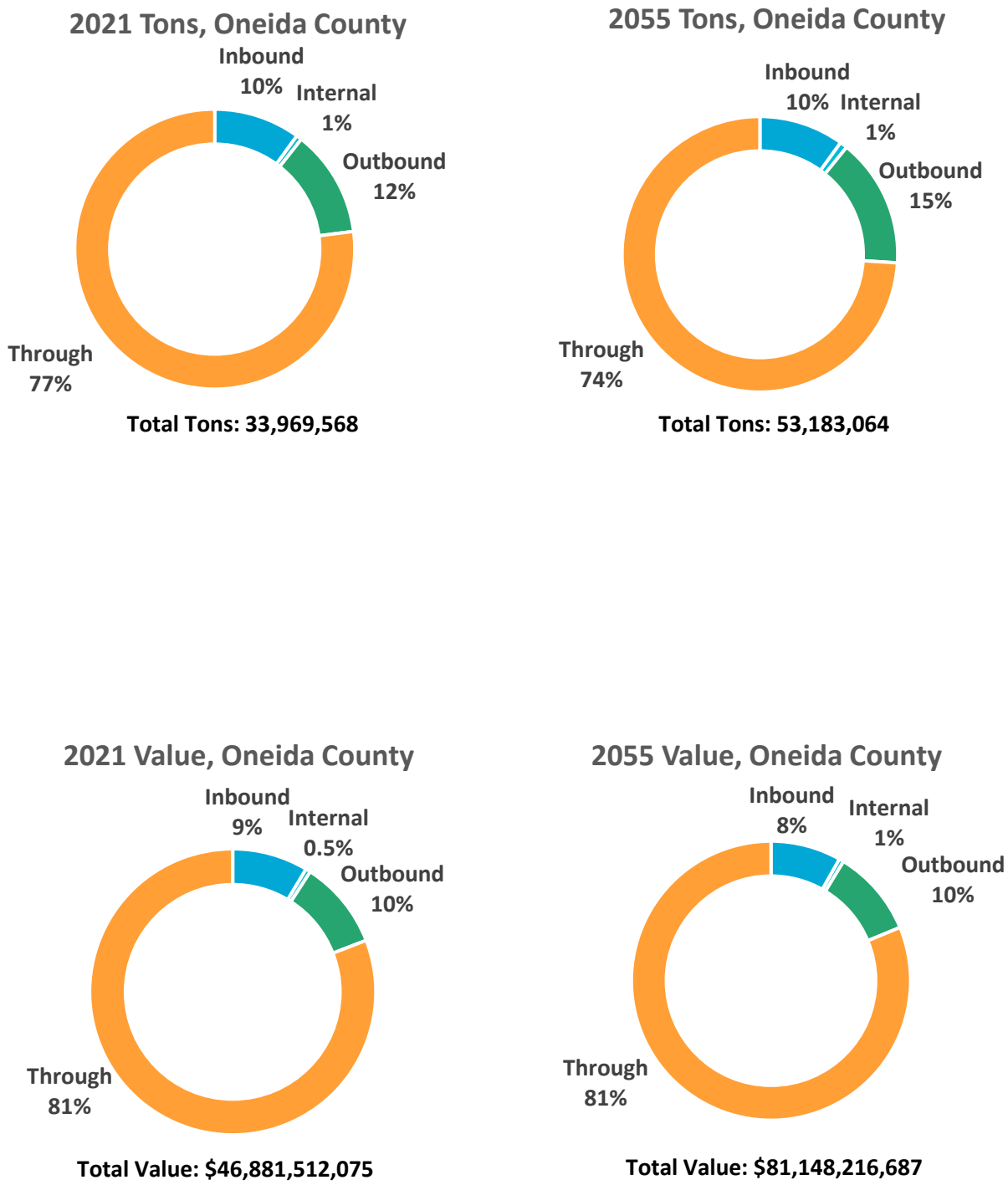
Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

In Oneida County, 34 million tons of freight moved in 2021. This is expected to increase by 56.5 percent to 53.2 million tons by 2055. As Figure 7 shows, 77 percent of the freight tons are passing through. By 2055, Oneida County's outbound share is expected to increase from 12 percent to 15 percent of total tonnage in the county. This shift is likely capturing anticipated growth in manufacturing in Oneida County over the forecast period. Measured by value, $46.9 billion in 2021, expected to increase by 73 percent to $72.2 billion by 2055. Through flows represent a larger share (81 percent) of flows measured by value, indicating that goods passing through the county are of higher value than the goods moving into, out of, or within the county.

In Herkimer County, 31 million tons of freight valued at $41.8 billion moved in the county in 2021, as Figure 8 shows. The volume of freight moving in the county is expected to increase to 48.1 million tons valued at $72 billion by 2055. This forecast would represent a 55 percent increase in tonnage and 72 percent increase in the value of goods moved in Herkimer County between 2021 and 2055. Through flows represented 89 percent of tons and 96 percent of the value of goods moved in Herkimer County in 2021, and that share is expected to remain relatively stable through 2055.

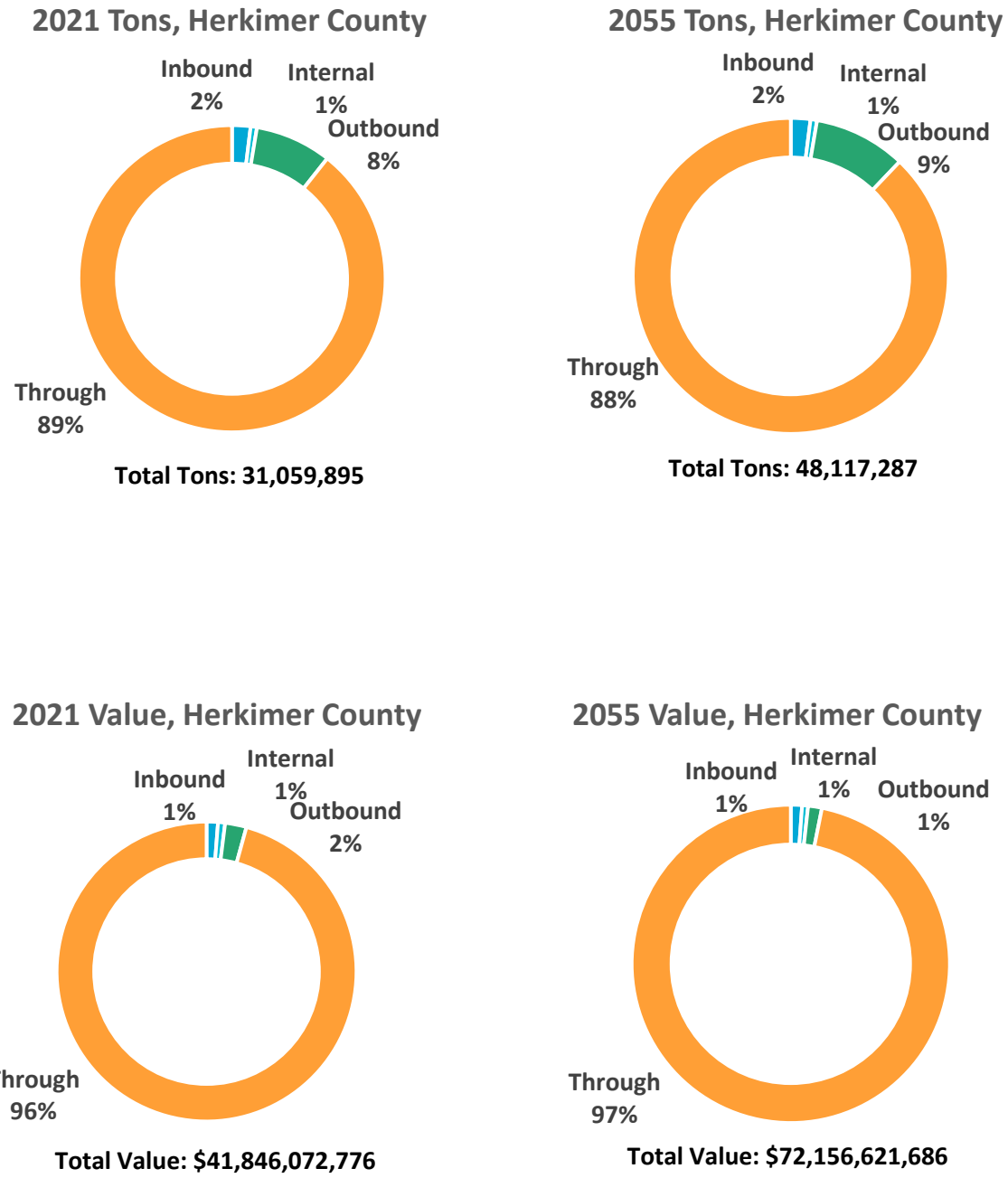
It is worth noting that the sum of the commodity flows in each county would far exceed the regional total presented earlier in this section of the report. This is primarily due to through flows passing through both counties, which would be double counted if the totals for the counties were added together.

Figure 7. Freight Tons and Value by Direction, 2021 and 2055, Oneida County



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Figure 8. Freight Tons and Value by Direction, 2021 and 2055, Herkimer County



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Nearly 100 percent of freight tons and value moved in the HOCTC region are on trucks. The remaining modes, including rail, air, and others, accounted for less than one percent of total freight weight and value, as shown in Table 3 and Table 4. Modes such as rail are expected to grow at a faster rate. However, despite this rapid growth, rail's overall tonnage and value will remain a relatively small proportion of the total freight moved in the region.

Table 3. Freight Flow Tonnage by Mode, 2021 and 2055

Mode	Tons 2021	2021 Tons Percent	Tons 2055	2055 Tons Percent	2021- 2055 Tons Growth
Truck	36,258,479	99.8%	57,018,472	99.6%	57.3%
Rail*	85,038	0.2%	200,837	0.4%	136.2%
Air	6	0.0%	8	0.0%	26.9%
Other	44	0.0%	90	0.0%	106.0%
Total	**36,343,567**	**100%**	**57,219,407**	**100%**	**57.4%**

*Does not include pass through rail.
Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Table 4. Freight Flow Value by Mode, 2021 and 2055

Mode	Value 2021 ($Million)	2021 Value Percent	Value 2055 ($Million)	2055 Value Percent	2021- 2055 Value Growth
Truck	$ 48,003.3	99.8%	$ 82,278.3	99.7%	71.4%
Rail*	$ 95.7	0.2%	$ 246.9	0.3%	157.9%
Air	$ 0.1	0.0%	$ 0.1	0.0%	8.4%
Other	$ 0.4	0.0%	$ 0.8	0.0%	110.0%
Total	**$ 48,099.6**	**100.0%**	**$ 82,526.1**	**100.0%**	**71.6%**

*Does not include pass through rail.
Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

The HOCTC region has a long legacy of mining and agriculture, making the area a hotspot for nonmetallic minerals, farm products, and food-related manufacturing activities. There are also a growing number of warehouses and distribution centers, as noted in Section 2.3. Figure 9 and Figure 10 list the top commodity groups by tonnage and value. Nonmetallic minerals (7.7 million tons), farm products (6.4 million tons), and secondary traffic (4.5 million tons) are the top commodity groups by tonnage.

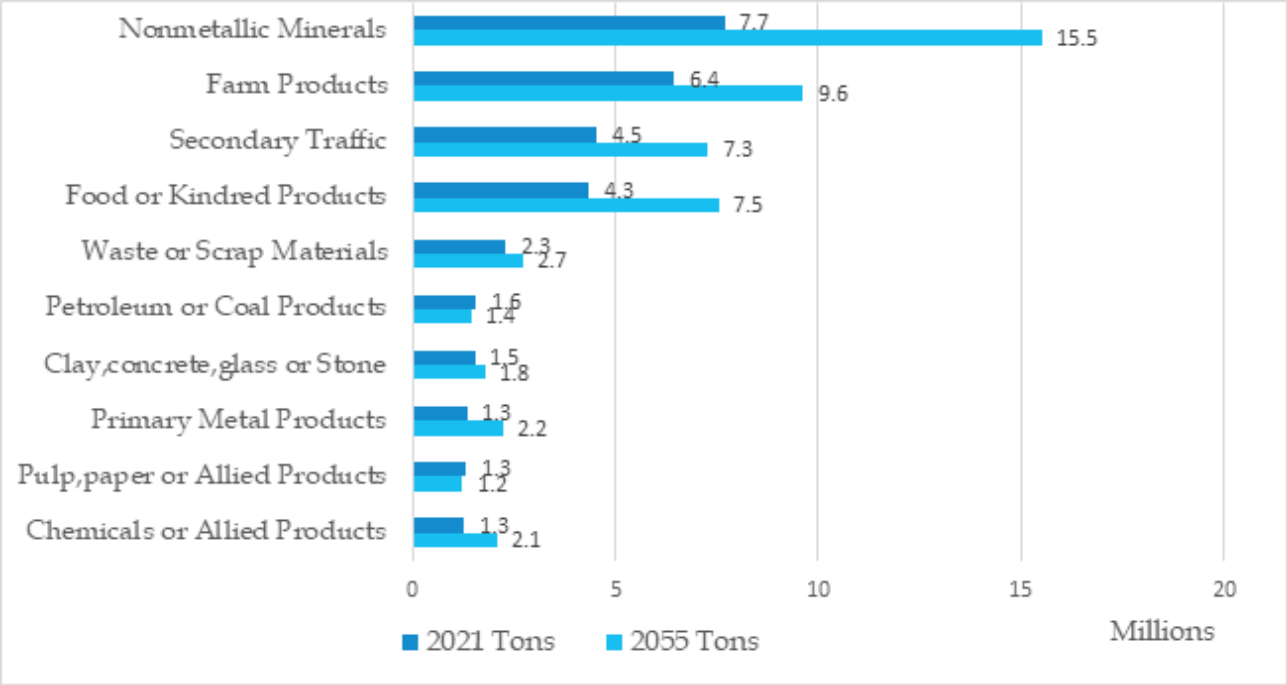
The top 10 commodity groups made up about 89 percent of total freight tonnage in 2021. Through 2055, most of the top commodities are expected to grow despite estimated eight percent declines in both pulp, paper, or allied products and petroleum or coal products groups.

Measured by value of goods, secondary traffic ($6.9 billion) is the top commodity in the region. This could include a lot of retail consumer products, e-commerce shipments, and other mixed shipments. Also, among the top commodities measured by value in 2021, about $5.8 billion worth of food or kindred products, a commodity category consisting of food products and related goods such as animal feed and beverages, and $5 billion worth of primary metal products moved in the region. The top 10 commodity groups by value, collectively, accounted for more than 85 percent of total freight value in 2021. Through 2055, only pulp, paper, or allied product group is estimated to have a five percent slight value decrease. On the contrary, the value of electrical equipment in 2055 will be more than triple the value in 2021.

Secondary Traffic *is a "catch-all" classification representing unspecified or mixed shipments of goods that are being repositioned to or from rail yards, ports, or warehouses and distribution centers.*

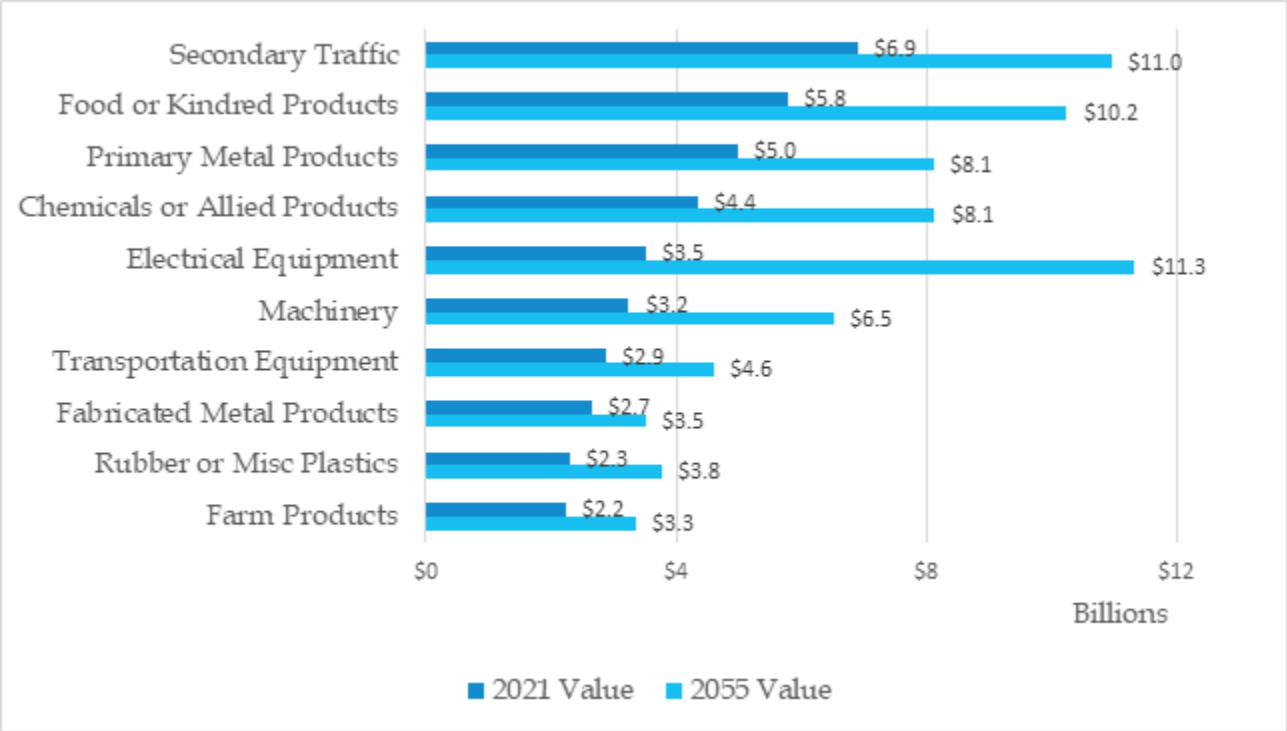
Food and Kindred Products *is a category that includes a variety of food products, related goods such as beverages, animal feed, and oils.*

Figure 9. Top 10 Commodities by Tonnage, 2021 - 2055



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Figure 10. Top 10 Commodities by Value, 2021 - 2055



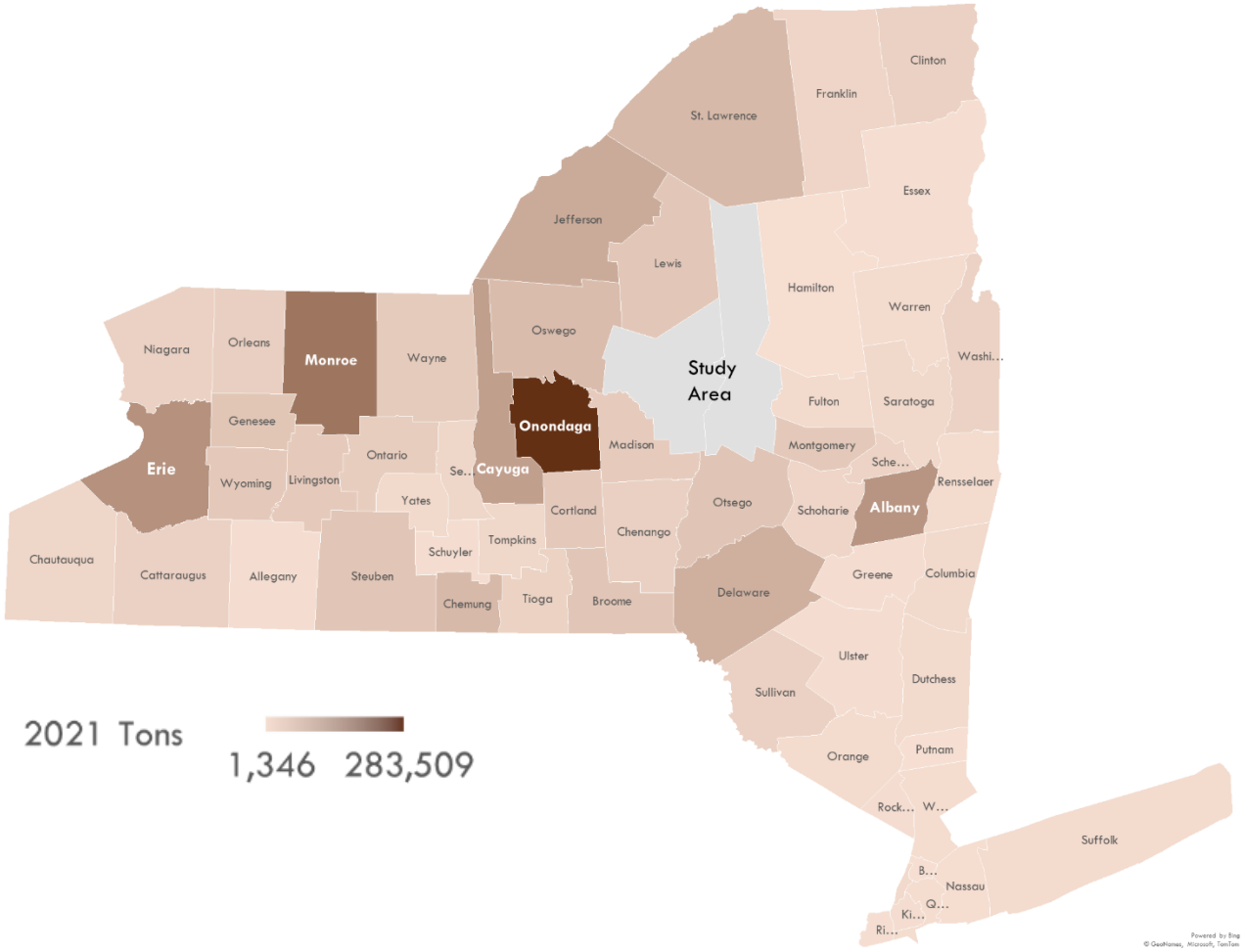
Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Given the relatively central location of the HOCTC region within New York State, and proximity to other, larger metropolitan areas in the state, a large portion of the freight moves into or from the remaining parts of the state, as well as the adjacent states such as Pennsylvania, Massachusetts, and New Jersey.

In 2021, the HOCTC region had more than 5 million tons of inbound and outbound goods trading, with a value of $3 billion, with the rest of New York accounting for 50 percent and 30 percent of the total 2021 inbound and outbound freight tonnage and value, respectively.

- As Figure 11 shows, Onondaga, Monroe, and Erie counties are the top origins of **inbound** commodities coming into the HOCTC region, accounting for 15 percent of total inbound flow tonnage and 14% of inbound value. The major commodity groups transported from these counties to the HOCTC region are petroleum or coal products and secondary traffic, primary metals, and food or kindred products.

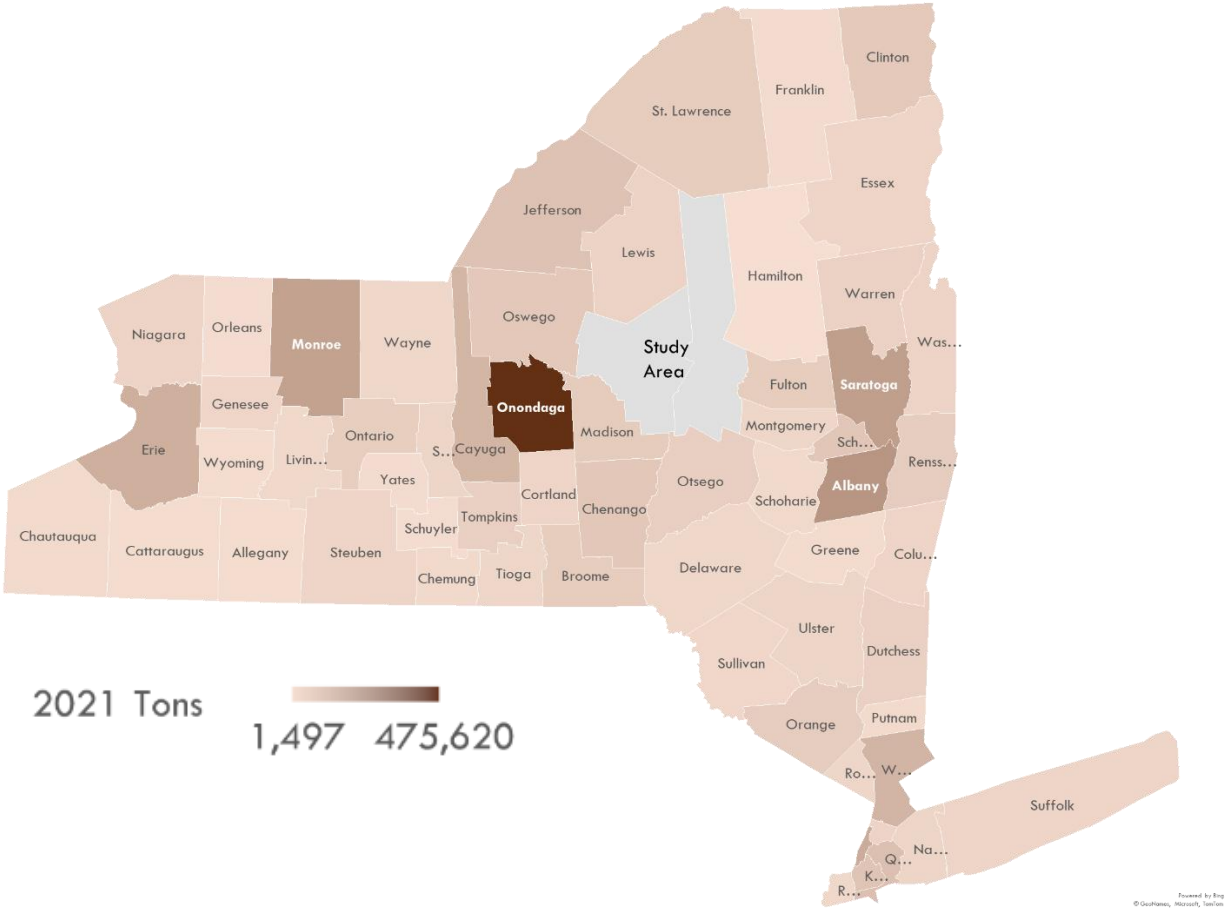
Figure 11. Inbound Tons from NYS Counties to HOCTC Region, 2021



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

- As shown in Figure 12, the top destinations for goods moved **outbound** from the HOCTC region are Onondaga, Albany, and Saratoga counties. The total outbound to these three counties was nearly 850,000 tons, accounting for 13 percent of total outbound tonnage. Measured by value, Onondaga and Erie counties are the major in-state trading partners, with a commodity value of $512 million, accounting for nearly 10 percent of total outbound value from the HOCTC region. The major outbound commodity groups from HOCTC to these counties include nonmetallic minerals and food or kindred products based on weight, and secondary traffic and electronic equipment by value.

Figure 12. Outbound Tons to NYS Counties from HOCTC Region, 2021



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Figure 13 and Figure 14 show out-of-state trade in tonnage and value, respectively. Key findings include:

- **Pennsylvania** is the leading out-state trading partner for the region. As of 2021, there were 411,000 tons of goods, valued at $391 million transported from Pennsylvania to the HOCTC region, primarily consisting of farm products, nonmetallic minerals, and food or kindred products. Meanwhile, 602,000 tons of goods, valued at $441 million were transported from the HOCTC region to Pennsylvania, including nonmetallic minerals, farm products, primary metal products, and electrical equipment. In general, the HOCTC region is estimated to have growth trading with Pennsylvania, including a 68 percent increase in commodity tonnage, and 55 percent growth in value, by 2055.

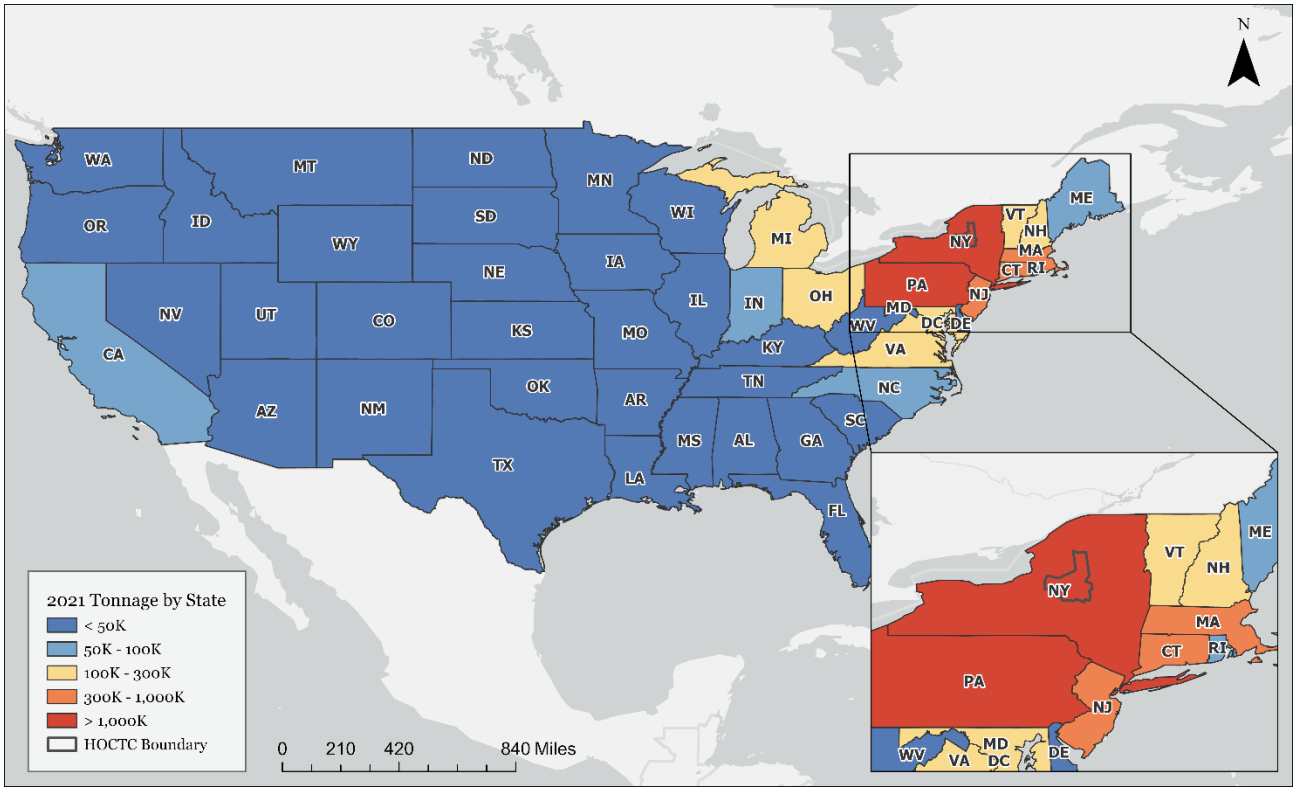
- As the second leading trading partner by tonnage, **Massachusetts** had 914,000 tons of inbound and outbound trade with the HOCTC region in 2021. Most of this

trade moved outbound from the HOCTC region to Massachusetts. Major commodities moving to or from Massachusetts include nonmetallic minerals and farm products in terms of tonnage, primary metal products, and electrical equipment in terms of value. Through 2055, tonnage and value of goods traded with Massachusetts are both expected to grow, by 63 percent and 56 percent, respectively.

- The third top out-of-state leading trading partner is **New Jersey**, with 647,000 tons of goods, valued at $565 million moved inbound to or outbound from the HOCTC region in 2021. By 2055, an estimated one million tons worth over $1 billion of trade with New Jersey are expected, representing 71 percent estimated growth in tonnage and 77 percent in value. The major commodities moving between the New Jersey and HOCTC region include nonmetallic minerals and farm products by tonnage, and primary metal products, electrical equipment, and food or kindred products by value.

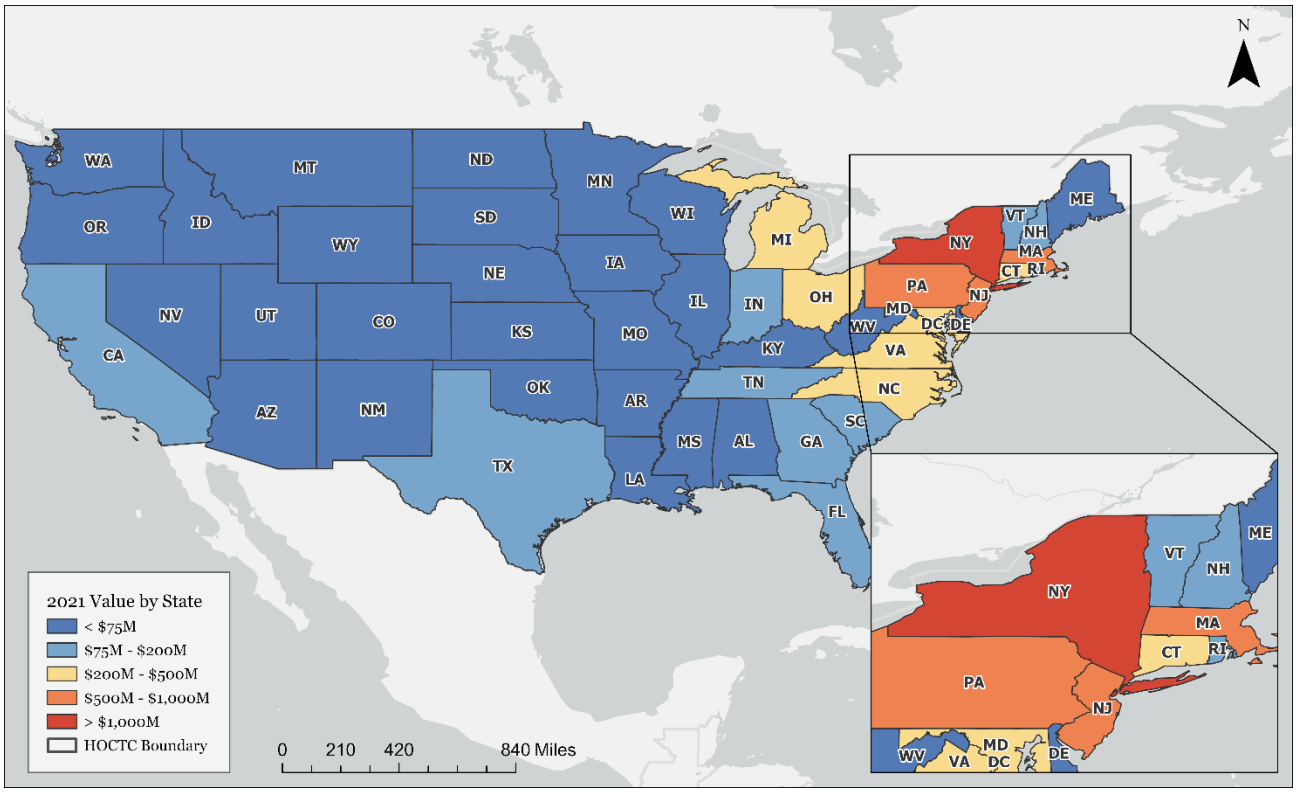
  The predominant flow of this trade with New Jersey is in the outbound direction, suggesting an increase in the volume of goods produced in the HOCTC region and sent to New Jersey is expected. New Jersey is home to the major marine terminals that are part of the Port of New York and New Jersey, handling much of the HOCTC region's overseas import and export shipments. In addition, northern New Jersey has more than 1 billion square feet of warehousing and distribution center space serving the greater New York City metropolitan region.

Figure 13. Domestic Inbound and Outbound Trading Partner by Tonnage, 2021



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

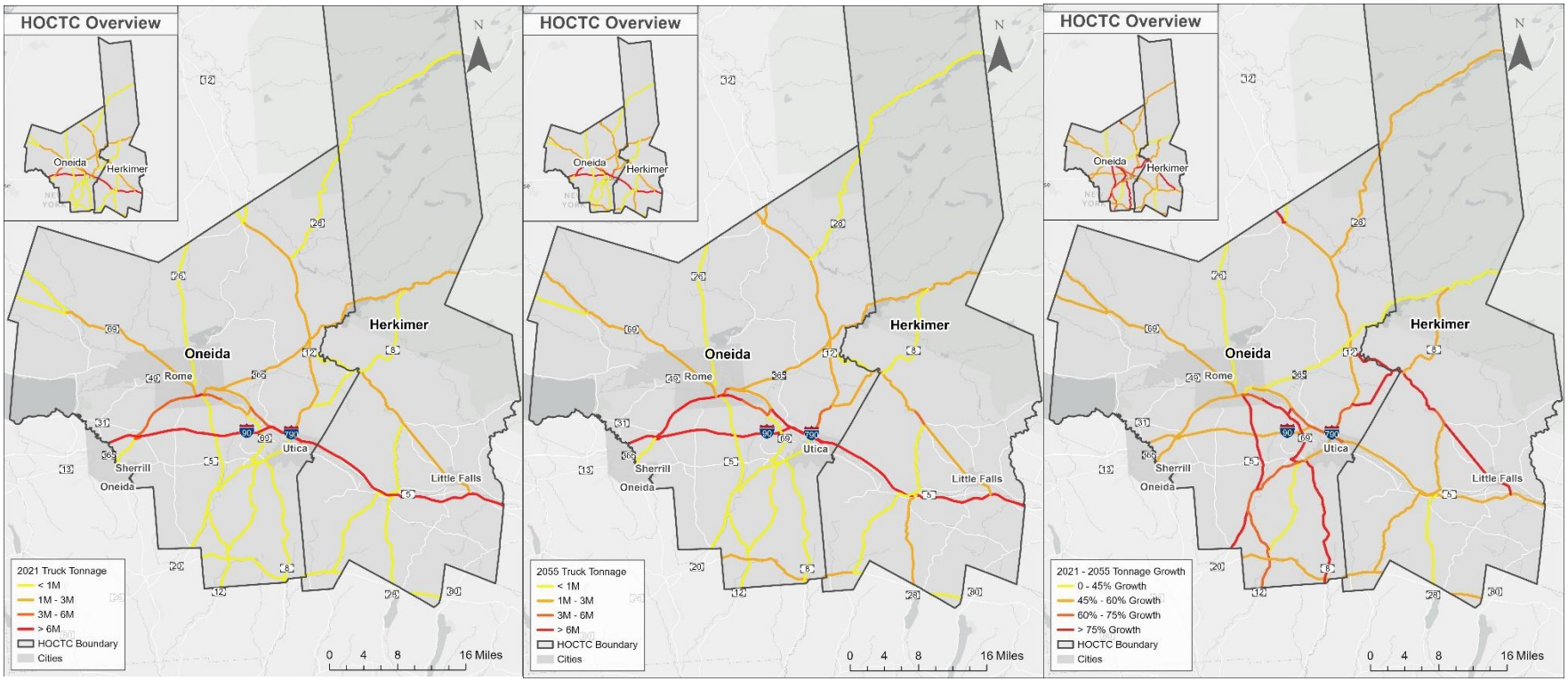
Figure 14. Domestic Inbound and Outbound Trading Partner by Value, 2021



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

Figure 15 shows commodity flows assigned to the highway network in the region, measured in tons. The assignment shows that the New York State Thruway carries the greatest volume of truck tonnage in the region. Other key segments include portions of NYS Route 49 between Utica and Rome and NYS Route 365 between Rome and Verona, where more than 3 million tons of freight were carried in 2021. By 2055, freight tonnage is expected to increase on much of the region's highway network. Segments of NYS Routes 49 and 365 could carry more than 6 million tons by then. The greatest rates of growth in freight tonnage carried could be expected on portions of NYS Routes 169 and 28 between Little Falls and Trenton, NYS Route 8 south of Utica, NYS Route 8 in Deerfield, portions of NYS Route 12B in Madison and Oriskany Falls, NYS Route 233 between Kirkland and Rome, and NYS Routes 5A, and 12D in Boonville, each of which could be expected to carry 75 percent more freight tonnage in 2055 than they carried in 2021.

Figure 15. Commodity Flow Tons on the National Highway Network, 2021 (Left), 2055 (Center), and Change from 2021-2055 (Right)



Source: S&P Global Transearch, 2021, processed by Cambridge Systematics.

2.3 Where: Freight-Generating Nodes and Network Utilization

Mapping freight movements in the HOCTC region includes noting where the generators of freight activity are located throughout the two counties, and the highways that connect those generators to customers, distribution facilities, or other nodes within and outside the region.

This section focuses on freight generating facilities or businesses related to some of the region's key commodity movements (as noted in Section 2.2). These include:

- Warehouses, distribution centers, and manufacturing facilities, which receive inbound shipments of raw materials or finished products and generate outbound shipments to stores, consumers' homes, or to other warehousing facilities; and
- Agriculture and mining, including farms that generate dairy and other agricultural products and mines that generate outbound shipments of extracted materials;
- Solid waste transfer and disposal facilities, where waste and recyclables are collected, transloaded, and/or disposed.

Warehouses, Distribution Centers, and Manufacturing Facilities

The HOCTC region's position along the New York State Thruway and within several hours' drive to some of the largest metropolitan areas in the northeastern U.S. and in Canada make it a strategic location for the distribution of goods for many companies. While each company develops its supply chain logistics scheme to optimize cost, reliability, and other factors unique to its respective needs and priorities, there are several that have

NEW CHOBANI DAIRY PROCESSING PLANT IN ROME

In April 2025, Chobani broke ground on a 1.8 million square-foot manufacturing facility in the Griffiss Business and Technology Park in Rome. The facility will have the capacity to process up to 12 million pounds of milk every day, producing over one billion pounds of dairy product annually.

This new facility represents a $1.2 billion investment in the Mohawk Valley's economy. It will employ approximately 1,000 people. As such, it represents an exciting economic development opportunity for the region. There is also the potential for this facility to generate residual business relocations or expansions in the region, including suppliers or contractors who would work with or provide services to Chobani.

Investments made in recent years to improve highway access to Griffiss, relatively uncongested and reliable transportation performance, and proximity to dairy farms in the Mohawk Valley and nearby areas of New York State are contributing factors to Chobani's investment. Maintaining an efficient and safe freight transportation system could help the region to remain an attractive location for other manufacturers and distributors.

found the HOCTC region, and developable sites available in the region, to be advantageous to their operations. Major warehouses and manufacturing facilities that exist or are being constructed in the HOCTC region are mapped in Figure 16. Many of these facilities, among others, are located in one of the region's several major clusters of industrial development, which include:

- **Griffiss Business and Technology Park**, located at the former Griffiss Air Force Base in Rome, covers more than 3,000 acres of land. After the realignment of the base in the mid-1990s, the park had near-immediate success luring private investment and continues to attract new tenants. The site has been re-imagined as a business park focusing on advanced manufacturing, semiconductor manufacturing, aerial drone testing, and distribution. In 2025, Chobani and economic development organizations in the region announced a $1.2 billion, 1.8 million square-foot new manufacturing facility will be constructed on the Triangle site in Griffiss. This facility will add to, not replace, Chobani's presence in New York State.

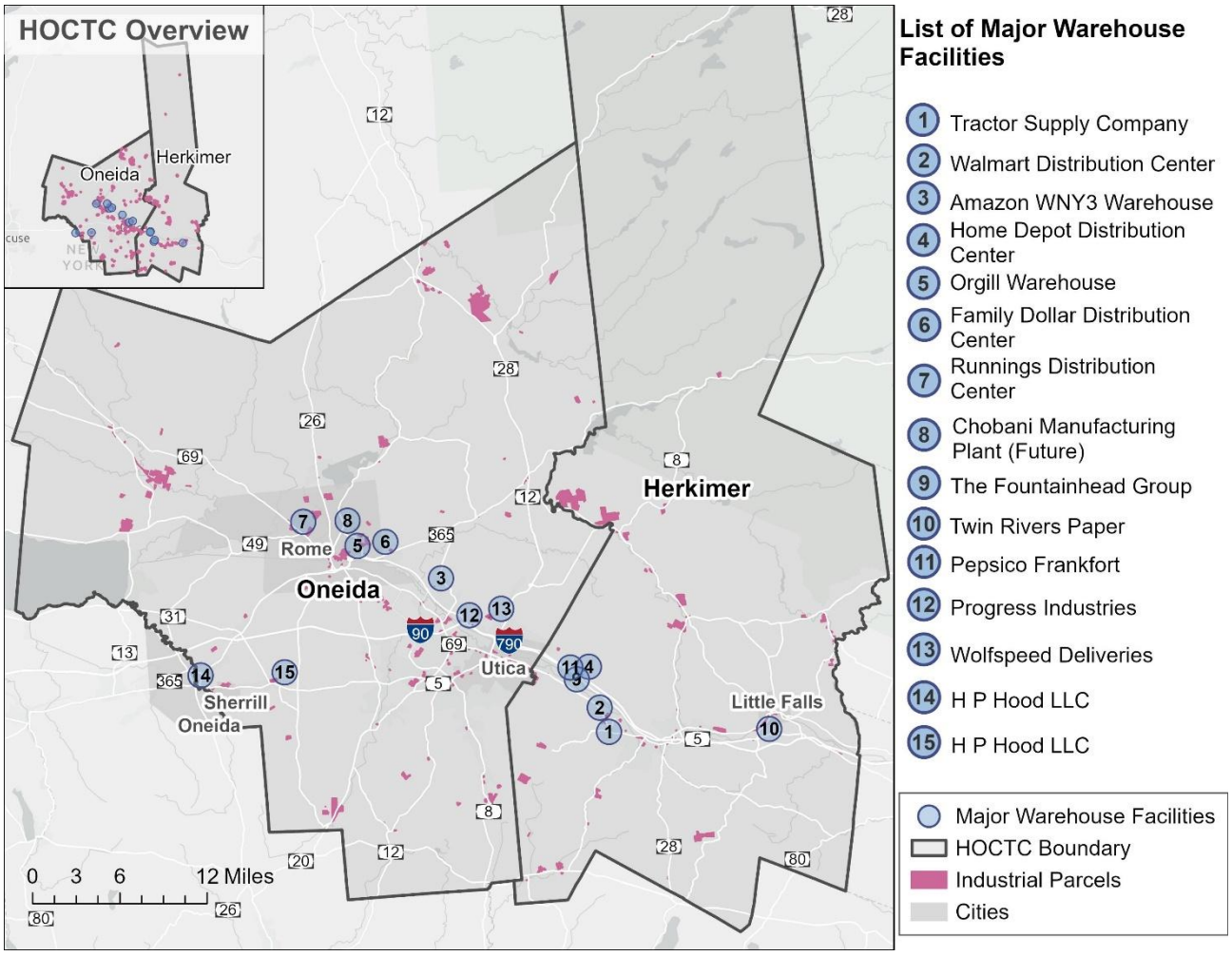
- **Schuyler Business Park**, owned by the Herkimer County Industrial Development Agency (IDA), is a nearly 300-acre site along NYS Route 5 in Schuyler. The park is home to several warehouses, including Wilcor International, Fountainhead Group, Home Depot, and Pepsi.

- **Frankfort 5S South Business Park**, located along NYS Route 5S in Frankfort, a 930,000 square foot distribution center for Tractor Supply Company is the largest in a cluster of industrial buildings that also includes an Amazon fulfillment center, Heidelberg Bread production facility, a JBF Stainless manufacturing facility, and a shovel-ready site that can accommodate a building of up to 1 million square feet (dubbed Central New York Logistics Center).

- **Four Corners**, just 1.5 miles west of Schuyler Business Park, is another Herkimer County IDA site that has 76 acres of land available.

- **Marcy**, in Oneida County, is home to a large Walmart Distribution Center and Wolfspeed's manufacturing facility. There are other developable sites in this area as well.

Figure 16. Locations of Major Warehouses and Manufacturing Facilities in the HOCTC Region



The establishments located in each of these parks and clusters, and elsewhere around the HOCTC region, generate inbound and outbound truck trips. Depending upon the building's role in its company's supply chain, it could be receiving inbound truckloads of product from upstream distribution facilities or from international trade gateways. Products are then transloaded into outbound truckloads delivering to retail stores or to downstream distribution facilities. In the case of manufacturing activities, inbound loads of input materials are brought to the facility, and outbound loads of manufactured products are moved to wholesalers, retailers, or to international gateways for export.

According to the Herkimer IDA, the Tractor Supply Company's distribution center generates approximately 600 truck trips per day. The volume and type of trucks going to and from other facilities vary by product type, origin and destination of the inbound and outbound trips, and other factors. The Institute of Transportation Engineers (ITE) Trip Generation Manual produces truck trip generation rates for different land use categories.[viii]

The rates are based on a limited number of case studies across the country, and thus, there may be discrepancies between the estimated rates and what is actually generated by existing and proposed facilities in the HOCTC region. Table 5 lists estimated weekday daily truck trips for warehousing, manufacturing, and other industrial uses for buildings of various gross floor area sizes. A manufacturing building of 50,000 square feet, for example, would be expected to generate 23 truck trips per weekday, on average, according to the ITE trip rates. These rates can be useful for estimating the truck trip impacts of industrial development, but with the understanding that how a specific business plans to operate a facility could significantly change the day-to-day volume of trucks moving in and out.

Table 5. Estimated Truck Trip Generation based on ITE Trip Rates for Buildings of Representative Sizes

ITE Land Use Categories	Square Feet of Gross Floor Area			
	50,000	100,000	500,000	1,000,000
110: General Light Industrial	13	25	125	250
130: Industrial Park	29	57	285	570
140: Manufacturing	23	45	225	450
150: Warehousing	30	60	300	600
154: High-Cube Transload and Short-Term Storage Warehouse	11	22	110	220
155: High-Cube Fulfillment Center Warehouse - Non-Sort	12	23	115	230
155: High-Cube Fulfillment Center Warehouse - Sort	10	19	95	190
156: High-Cube Parcel Hub Warehouse	29	58	290	580
157: High-Cube Cold Storage Warehouse	38	75	375	750

Source: Institute of Transportation Engineers[ix]

Industrial development is occurring in the region, and there are opportunities for more development to follow. All of the industrial and business parks referenced above have capacity for more development. There is an opportunity to develop the former Mohawk Glen Golf Course for industrial use as well. Further, the development of Chobani in Rome and Micron in Syracuse present opportunities for “spinoff” development by firms that supply those larger facilities.

The most sought-after parcels for large warehousing, distribution, and manufacturing facilities will be those on flat land, with utility and communications infrastructure, and with quick and reliable access to NYS Routes 5S, 5, 49, 365, and the New York State Thruway. These highways have the capacity to handle current and future volumes of truck and automobile traffic associated with planned development opportunities. However, improvements to NYS Route 46 and access to it may be needed if the former Mohawk

Glen Golf Course site is redeveloped with a freight-generating use. An eight-acre portion of the golf course has been incorporated into a late-2025 redesign of Chobani's campus.[x] Opportunities to establish new developable sites that meet all those criteria will become increasingly challenging as more of the land currently available is developed.

Agriculture and Mining

Agriculture is a key fixture of the region's economy. While the quantity and value of agricultural products produced in the region has increased in recent years, the supply of farms and farmland in the region has decreased over time. According to the U.S. Department of Agriculture's Agriculture Census, which is published at 5 year intervals, and as summarized in Table 6, the market value of agricultural products produced in the Herkimer-Oneida region increased by $49 million between 2012 and 2022, after adjusting for inflation, an increase of 21 percent.

The region had 405 fewer farms in 2022 than it had in 2012, and 51,000 fewer acres of farmland. This represents a decrease of 23 percent of the region's farms and 15 percent of the region's farmland acreage. About 87 percent of the decrease has been in mid-sized farms (50 to 499 acres). The number of farms exceeding 1,000 acres increased by 69 percent between 2012-2022.

Table 6. Farms, Farmland, and Market Value of Agricultural Products in Herkimer and Oneida Counties, 2012 and 2022

	2012			2022			Change 2012-2022		
	Herkimer	Oneida	Total	Herkimer	Oneida	Total	Herkimer	Oneida	Total
Farms	687	1,066	1,753	514	834	1,348	(173)	(232)	(405)
Land in farms (acres)	140,270	205,106	345,376	106,572	187,672	294,244	(33,698)	(17,434)	(51,132)
Average size of farm (acres)	204	192	197	207	225	218	3	33	21
Farms by size	Herkimer	Oneida	Total	Herkimer	Oneida	Total	Herkimer	Oneida	Total
1 to 9 acres	40	59	99	36	66	102	(4)	7	3
10 to 49 acres	104	215	319	110	191	301	6	(24)	(18)
50 to 179 acres	259	451	710	193	325	518	(66)	(126)	(192)
180 to 499 acres	220	253	473	135	179	314	(85)	(74)	(159)
500 to 999 acres	46	67	113	28	36	64	(18)	(31)	(49)
1,000 acres or more	8	21	29	12	37	49	4	16	20
Market value of agricultural products (thousands of 2022 dollars)	89,789	144,273	234,062	93,092	190,072	283,164	3,303	45,799	49,102

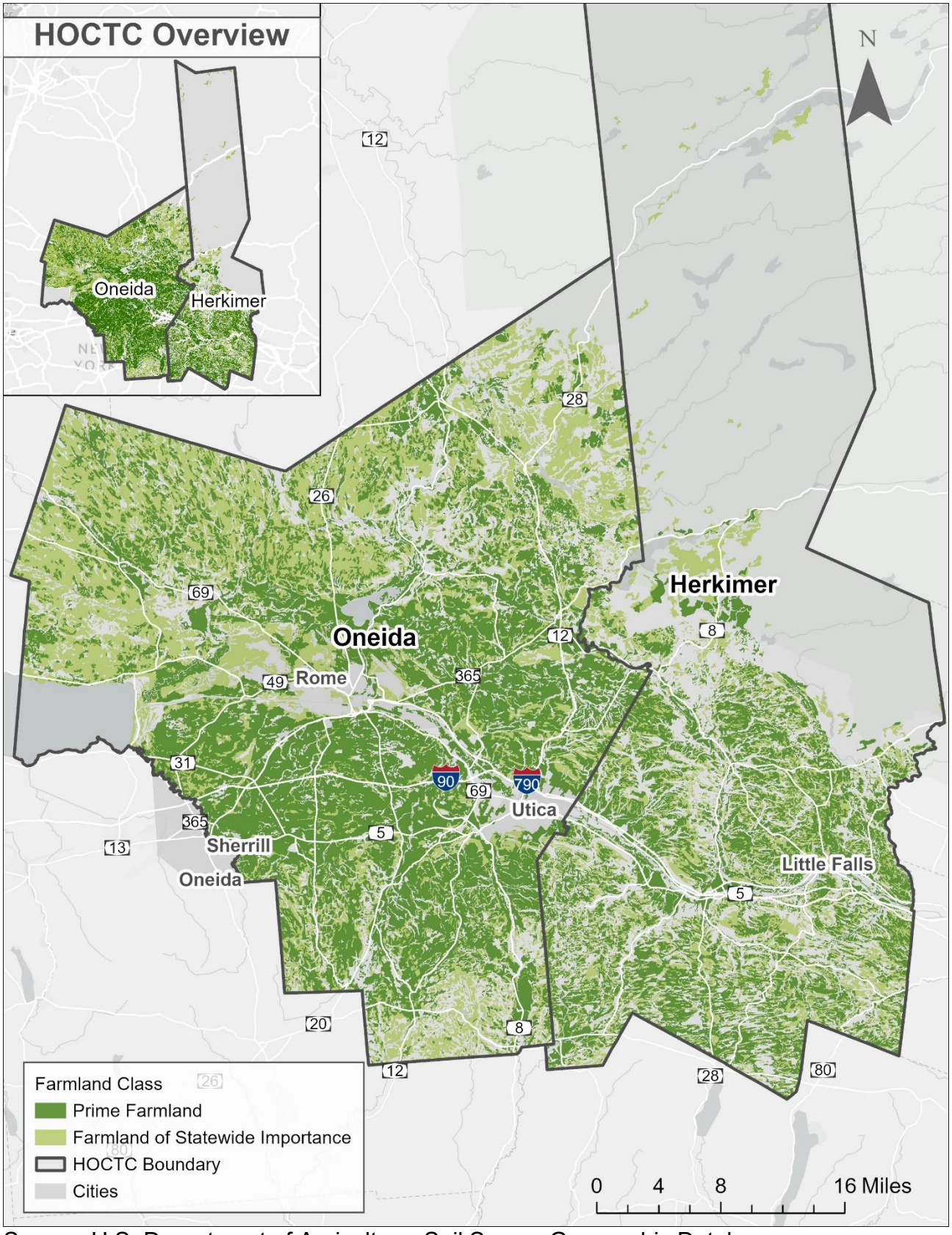
Source: U.S. Department of Agriculture, Agricultural Census 2012 and 2022, analyzed by Cambridge Systematics.

Figure 17 shows the geographic distribution of farmland in the HOCTC region, based upon soil characteristics. The two categories shown include “Prime Farmland,” which the U.S. Department of Agriculture defines as lands that have the best soil composition for agricultural use. “Farmland of Statewide Importance” is a classification defined by New York state as lands that do not meet the criteria for prime farmland, but that are still in good condition, capable of producing high yields of crops.

Much of Oneida County is on land that is considered prime or of statewide importance for agricultural use. Areas of prime farmland are concentrated in a large zone bounded by NYS Route 20 to the south, the county boundary with Madison County to the south-west, NYS Route 46 from Durhamville north to Frenchville, NYS Route 274 between Frenchville and Fuller Road, and then an imaginary line extending east to the Herkimer County border. Areas fully or partially in this zone include the Towns of Bridgewater, Sangerfield, Paris, Marshall, Augusta, Kirkland, New Hartford, Whitestown, Westmoreland, Vernon, Verona, Deerfield, Marcy, Floyd, Trenton, Western, and Steuben.

Areas of farmland of statewide significance and more intermittent occurrences of prime farmland exist to the north and west of this zone, including in areas within the Towns of Vienna, Camden, Florence, Annsville, Lee, Ava, Boonville, and Remsen.

Figure 17. Prime and Important Farmland in the HOCTC Region



Source: U.S. Department of Agriculture, Soil Survey Geographic Database

Dairy farms in the Herkimer-Oneida Counties region produce milk that must be picked up from the farms daily, or in some cases twice daily, and delivered to milk and dairy product processing facilities within and outside the region. Oneida-Madison Milk Producers, a cooperative that includes more than 40 farms in Oneida and Madison counties, for example, produces 25 million pounds of milk per year (about 350,000 pounds daily). Most of the milk produced by those farmers is delivered to one of Hood's two processing facilities in the region, in Oneida and in Vernon. Milk produced in the region also goes to Chobani's existing manufacturing plant in New Berlin in Chenango County. When Chobani's new manufacturing facility is completed in Rome, milk produced in this region, and potentially from outside the region as well, will be transported to that site. Trucks with carrying capacities of 55,000 to 74,000 pounds pick up milk from several farms each morning, and some return for a second pickup in the afternoon. Oneida-Madison, for example, operates 8 pickup routes daily, delivering 28 loads per week to the Hood facilities. Because milk is perishable, pickups must happen daily, regardless of weather or road conditions.[xi]

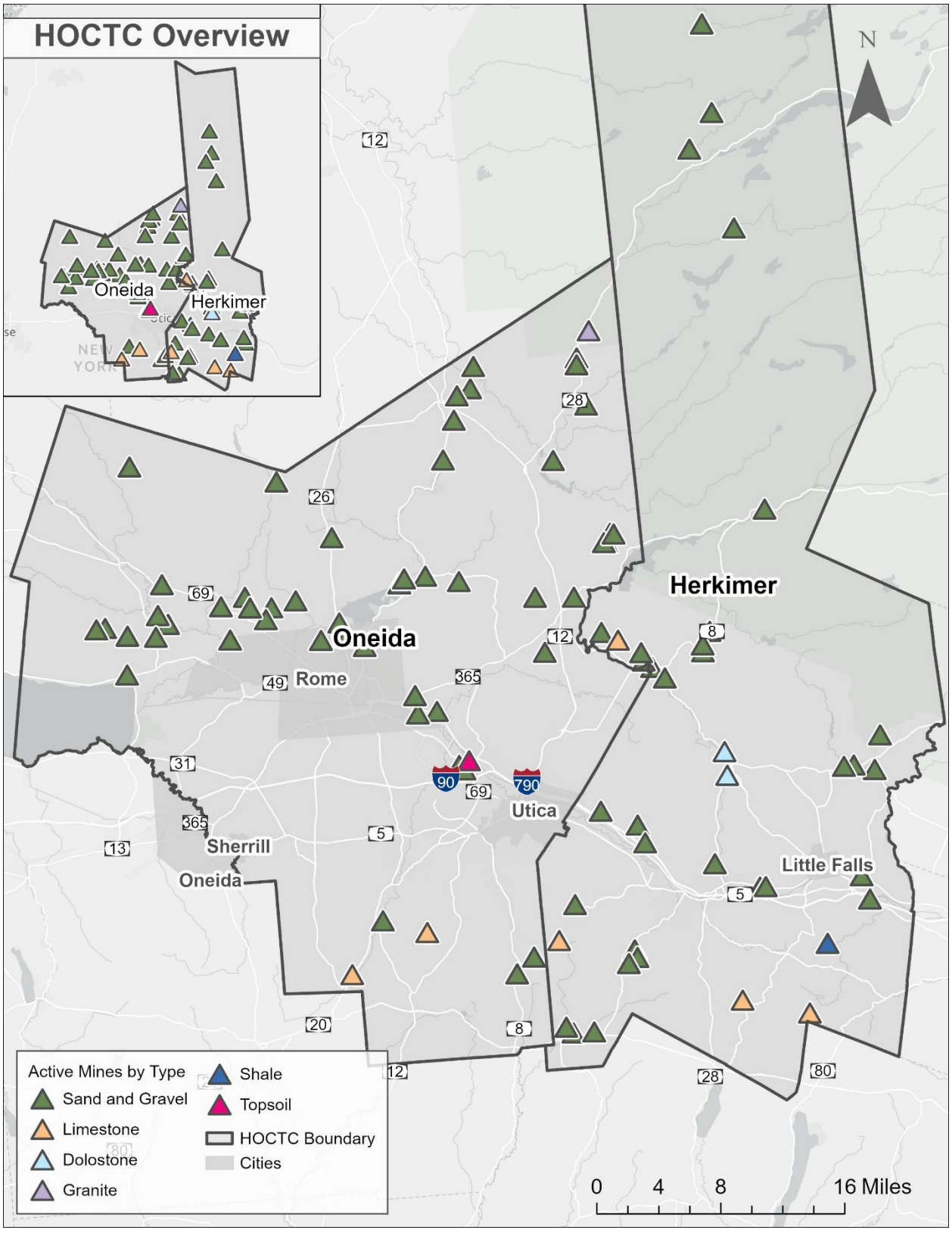
The HOCTC region also produces row crops and vegetables. Hay, corn, soybeans, green beans, and other vegetables are among the crops produced in the region. While much of the hay produced here is also consumed here, other crops are typically gathered, consolidated, and trucked outside the region. Except on the largest farms, harvested crops are transported from farms to local consolidators in less-than-truckload quantities and then transported in larger shipments and vehicles outside the region via the New York State Thruway.

In addition, tree harvesting for lumber in the northern reaches of the region, including near Boonville, and mining operations around the region, some of which extract aggregates and stone, others iron ore, and some unearth semi-precious gemstones, produce truckloads of material that must be transported from the point of extraction to processing facilities within and outside the region.

The locations of mines, color coded by the types of materials extracted, are shown in Figure 18. As shown, the vast majority (83 out of 94) active mines in the region are extracting sand and/or gravel and are spread throughout the region. Six mines, concentrated primarily along the southern edge of Herkimer and Oneida counties, extract limestone. Two mines in the Middleville area of Herkimer County extract dolostone. The Forestport Quarry in the northeastern corner of Oneida County extracts granite. The Insight Sairy Shale Quarry in Little Falls in Herkimer County extracts shale. Fred Burrows Trucking and Excavating in Whitesboro, Oneida County is listed as an extraction location for topsoil.

Of the 94 active quarries and mines in the region, 48 have direct access to the state highway system. There are 46 quarries and mines that are located on county or local roads. These facilities are listed in Table 7. Because county and local roads are often built to accommodate lighter vehicle volumes and often traverse rural, sometimes rugged, terrain, the impacts of truck traffic carrying heavy loads of mined materials could be more significant burdens for highway maintenance on the county and local systems.

Figure 18. Locations of Active Mines in the HOCTC Region by Type of Material Excavated



Source:

Table 7. Mines and Quarries Located on Local or County Highways

Name	City/Town	County	Material	Road Type	Road name
Jordanville Quarry	Warren	Herkimer	Limestone	County	Kingdom Road (CR 155)
Barrett Paving Materials Inc.	Clayville	Herkimer	Limestone	Local	Rasbach Rd
Materials Sand and Gravel	Poland	Herkimer	Limestone	County	Hinckley Rd (CR 205)
Insight Dairy LLC	Little Falls	Herkimer	Limestone	County	Newville Rd (CR 45)
Insight Dairy LLC	Little Falls	Herkimer	Shale	County	Newville Rd (CR 45)
Bienick Pit	Russia	Herkimer	Sand/Gravel	Local	Beecher Rd
Salisbury Sand And Gravel	Salisbury	Herkimer	Sand/Gravel	County	Military Rd (CR 36)
Town Of Ohio Pit	Ohio	Herkimer	Sand/Gravel	County	Nellis Rd (CR 76)
Boss Mine	West Winfield	Herkimer	Sand/Gravel	Local	Sale Rd
Leitz Gravel Pit	Frankfort	Herkimer	Sand/Gravel	Local	McIntyre Rd
Bisby Road Bridge Pit	Webb	Herkimer	Sand/Gravel	Local	Bisby Road
Hurricane Road Pit	Norway	Herkimer	Sand/Gravel	County	Hurricane Rd (CR 48)
Indian Castle Mine	Danube	Herkimer	Sand/Gravel	County	Newville Rd (CR 45)
Stone Road Pit	Winfield	Herkimer	Sand/Gravel	County	Stone Rd (CR 141)
Big Moose Road Pit	Webb	Herkimer	Sand/Gravel	Local	Big Moose Rd
Jones Road Sand Pit	Litchfield	Herkimer	Sand/Gravel	Local	Jones Rd
Forestport Quarry	Forestport	Oneida	Granite	Local	Horton Rd
Schachtler Quarry	Clinton	Oneida	Limestone	County	Shanley Rd (CR 9)
McConnellsville Pit	Annsville	Oneida	Sand/Gravel	Local	Bryant Rd
Mcconnellsville Plant	Annsville	Oneida	Sand/Gravel	County	Blossvale Rd (CR 66)
Ludlow Sand And Gravel	Paris	Oneida	Sand/Gravel	County	Holman City Rd (CR 2)
Lee Valley Road Pit	Lee	Oneida	Sand/Gravel	County	Lee Valley Rd (CR 62)
Reber Road Pit	Rome	Oneida	Sand/Gravel	Local	Reber Rd
Sperry Hill	Boonville	Oneida	Sand/Gravel	Local	Valley View Rd
Hajdasz Sand And Gravel Pit	Trenton	Oneida	Sand/Gravel	Local	Spicer Rd
West Thomas Street Site	Rome	Oneida	Sand/Gravel	County	W Thomas St (CR 62)
Newton Mine	Vienna	Oneida	Sand/Gravel	Local	Gore Rd

Name	City/Town	County	Material	Road Type	Road name
Schlaepfer Sand and Gravel Pit	Paris	Oneida	Sand/Gravel	Local	Reservoir Rd
Florence Sand and Gravel	Florence	Oneida	Sand/Gravel	County	Thompson Corners-Florence Rd (CR 70)
Wagner Pit	Remsen	Oneida	Sand/Gravel	Local	Lake Julia Rd
Route 13 Mine	Vienna	Oneida	Sand/Gravel	County	Blossvale Rd (CR 66)
Jones Mine	Remsen	Oneida	Sand/Gravel	Local	Lake Julia Rd
Holmes Road Mine	Boonville	Oneida	Sand/Gravel	Local	Holmes Rd
Remsen Mine	Remsen	Oneida	Sand/Gravel	County	Fairchild Rd (CR 54A)
River Road Mine	Western	Oneida	Sand/Gravel	County	Augusta Rd (CR 10)
Tkachuk Sand and Gravel	Ava	Oneida	Sand/Gravel	Local	Murphy Rd
Schallenberg Gravel Pit	Western	Oneida	Sand/Gravel	County	Stokes-Westernville Rd (CR 53)
Boonville Sand and Gravel Mine	Boonville	Oneida	Sand/Gravel	County	Thompson Corners-Florence Rd (CR 70)
Wheeler Hill Mine	Annsville	Oneida	Sand/Gravel	Local	Church Rd
Dustin Road Pit	Forestport	Oneida	Sand/Gravel	Local	Dustin Rd
Mapledale Road Pit	Trenton	Oneida	Sand/Gravel	County	Mapledale Rd (CR 37)
West Branch Mine	Lee	Oneida	Sand/Gravel	Local	Meyers Rd
Wagner Mine	Remsen	Oneida	Sand/Gravel	County	Nellis Rd (CR 76)
Cook Road Mine	Annsville	Oneida	Sand/Gravel	Local	Meadows Rd
Meadows Road Sand and Gravel Pit		Oneida	Sand/Gravel	Local	Meadows Rd
Hoke Pit	Western	Oneida	Sand/Gravel	County	Stokes-Westernville Rd (CR 53)

Source: New York State Department of Environmental Conservation and analysis by Cambridge Systematics

Outlook

Despite the consolidation of some farms, loss of some farmlands to other uses such as residential development or energy production, milk production is expected to continue to increase into the future. The development of Chobani's new manufacturing facility in Rome, and new and growing state programs that promote the use of New York-sourced food in schools and other state institutions, provide growing markets for agricultural products raised in the HOCTC region. The state programs include:

- Farm-to-School, which provides 25 cents per meal to schools if 30 percent of the food is sourced from New York;
- Nourish New York, which provides approximately $50 million per year to food banks to buy New York-sourced food; and
- Executive Order 32, which requires that every state agency buys at least 30 percent of its food from New York sources, which represents a potential increase of $400 million per year in agency spending on New York-sourced agricultural products.[xii]

In addition, increased semiconductor and advanced manufacturing activities in the region offer opportunities to increase the volume of mined materials produced in the HOCTC region as well.

With these opportunities comes the need to ensure that these products can be transported safely and efficiently. Connections from agricultural consolidators to production facilities and consumer markets within and beyond the region are key. Thus, the New York State Thruway and roads connecting to its interchanges are critical transportation assets for this sector.

Solid Waste Transfer and Disposal

According to annual reports filed with the New York State Department of Environmental Conservation, waste transfer stations in Herkimer and Oneida counties produced approximately 180,000 tons of municipal solid waste (MSW), 55,000 tons of construction and demolition (C&D) debris, 239 tons of sewage materials, and 600 tons of other waste types in 2023. The volume of material in each of these waste streams fluctuates year-to-year but has generally been within 10 percent of these numbers each year since 2019.

There are 14 waste transfer stations located throughout the region and are mapped in Figure 19. The Oneida-Herkimer Solid Waste Authority (OHSWA) manages the two largest transfer stations. In 2023 OHSWA's Eastern Transfer Station in Utica handled 69 percent of the MSW generated in the region, OHSWA's Western Transfer Station in Rome handled

29 percent, and all other transfer stations, many of which are operated by villages and towns, handled 2 percent combined.

98 percent of the MSW, C&D, and other materials tonnage handled by transfer stations in the HOCTC region are ultimately sent to the OHSWA landfill in Ava, while the remaining 2 percent mostly consists of material going to the wastewater treatment plant in Utica or to private recycling facilities elsewhere. The regional landfill only accepts waste material from Herkimer and Oneida counties and is not permitted to take waste from outside the region.

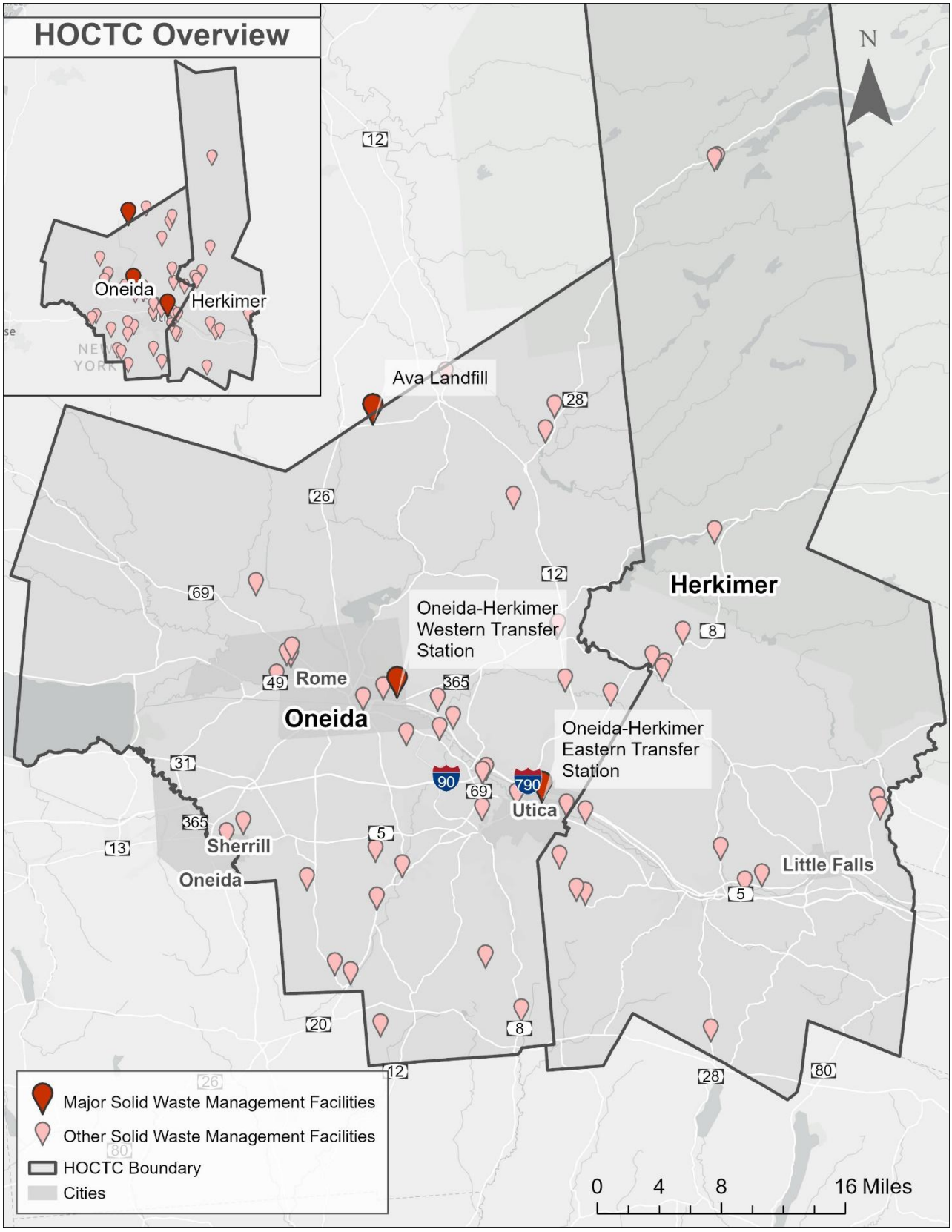
The primary movements of waste material in the region, therefore, are movements of MSW and C&D materials from the Eastern and Western transfer stations to the landfill in Ava. The OHSWA contracts with a private hauler to transport waste by truck from the transfer stations to the landfill. Approximately 32 trailer loads per day are moved from the Eastern Transfer Station to Ava, and 10 loads per day go from the Western Transfer Station to Ava. The routes between the two major transfer stations and the landfill consist almost entirely of state highways. NYS Route 12 is the primary route from Utica to Ava, and NYS Route 26 is the primary route from Rome to Ava. NYS Route 294 is the last-mile connection between NYS Routes 12, 26, and the landfill entrance. Within the communities of Utica, Rome, and Boonville, trucks carrying waste use some alternate routes to distribute the burden of truck traffic. For example, trucks from Utica may be re-routed via NYS Route 49 and 26 to avoid Boonville when the fair is happening, or on local streets within the City of Rome, some waste trucks use local Potter Road while others are routed via Chestnut Street, so that not all trucks are using one road. This distribution of traffic was agreed upon as part of the environmental impact process.

In addition to waste, the landfill receives about 40,000 tons annually of cover material. Some of that material is excavated on site, and up to 20 percent of the material may consist of contaminated soils brought in from construction sites or other locations. The landfill has approximately 55 years of remaining capacity. About every four years, new cells need to be constructed, generating some truck trips to facilitate the construction.

Outlook

The regional landfill should have capacity to serve the region for more than half of a century, based on recent waste generation trends. If the region were to experience more robust economic and population growth, that timeline could shorten. While the roads used to move waste are in good condition and are generally free of congestion, weather can present some challenges.

Figure 19. Solid Waste Transfer Stations and Disposal Sites in the HOCTC Region



Source: New York State Department of Environmental Conservation

2.3.2 Where Trucks Move on the Network

The highway network is the primary infrastructure connecting freight-generating businesses in the Herkimer-Oneida counties region with customers located within the region, elsewhere around the United States, and to ports of entry that access all corners of the globe. It also brings goods produced elsewhere into the region to support the population and business communities here. The backbone of the region's highway network is the New York State Thruway, I-90. The Thruway carries the greatest volume of trucks in the Herkimer-Oneida counties region, by far. On an average day, more than 9,000 trucks travel on the Thruway in these two counties. Interviews with stakeholders in the region affirm that the Thruway is the most critical freight transportation asset in the region. It connects the region to other parts of the state and beyond.

Table 8 shows the annual traffic volumes exiting the Thruway at five interchanges in the HOCTC region—Interchange 29A, 30, 31, 32, and 33, over an eight-year period from 2016 through 2023. During this period, Interchange 31 in Utica was the top interchange regarding the number of trucks exiting the Thruway, with truck volumes near or exceeding 190,000 each of the past three years, representing more than 9 percent of the total traffic volume exiting at that interchange. Interchange 33 has experienced the greatest total traffic volume exiting the Thruway, though trucks make up a smaller volume and proportion—131,000 trucks and about 6 percent of the total volume in 2023—than at Interchange 31.

Table 8. Summary of Traffic Exiting the New York State Thruway at Interchanges in the HOCTC Region Annually, 2016-2023

Interchange	Vehicles	2016	2017	2018	2019	2020	2021	2022	2023
29A	Total	252,316	272,949	277,727	286,156	232,206	282,716	293,585	308,278
	Truck	18,498	20,117	19,291	18,884	18,318	20,015	19,628	20,368
	Truck %	7.3%	7.4%	6.9%	6.6%	7.9%	7.1%	6.7%	6.6%
30	Total	799,398	813,192	825,940	855,426	628,956	791,649	828,910	841,528
	Truck	42,286	43,059	47,321	53,901	54,202	60,772	60,095	59,308
	Truck %	5.3%	5.3%	5.7%	6.3%	8.6%	7.7%	7.2%	7.0%
31	Total	1,950,665	1,993,163	2,005,503	2,059,232	1,536,776	1,974,835	2,039,051	2,052,553
	Truck	165,151	167,230	169,529	170,358	172,862	193,596	197,240	189,818
	Truck %	8.5%	8.4%	8.5%	8.3%	11.2%	9.8%	9.7%	9.2%
32	Total	1,286,247	1,356,368	1,372,083	1,394,962	970,952	1,214,061	1,275,870	1,370,267
	Truck	48,115	50,670	48,551	46,135	44,080	45,246	48,596	51,455
	Truck %	3.7%	3.7%	3.5%	3.3%	4.5%	3.7%	3.8%	3.8%
33	Total	2,588,152	2,586,806	2,523,778	2,501,098	1,736,983	2,153,953	2,224,963	2,206,904
	Truck	112,230	116,943	123,767	126,490	127,779	142,774	134,750	131,078
	Truck %	4.3%	4.5%	4.9%	5.1%	7.4%	6.6%	6.1%	5.9%

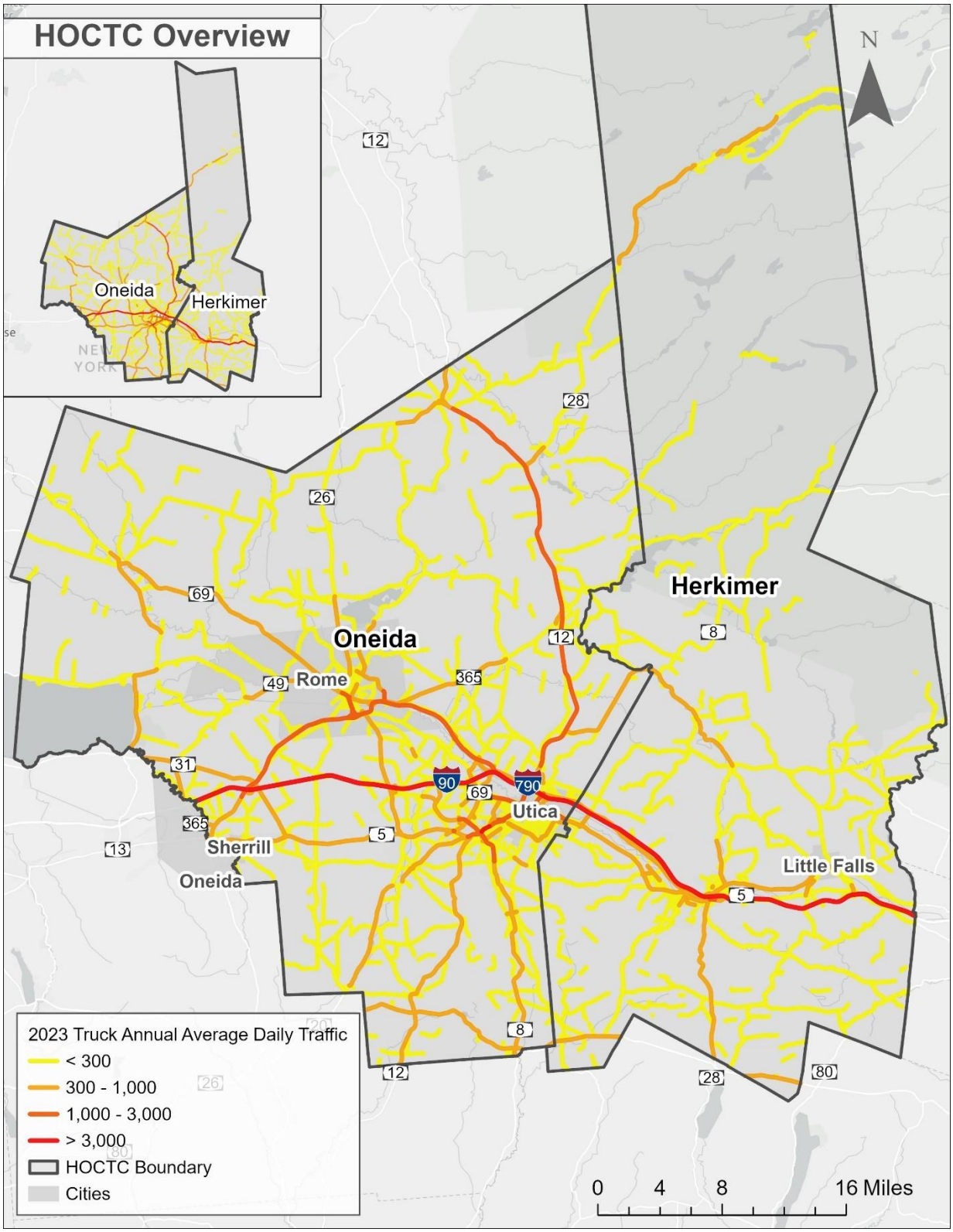
Source: Exit 31 PEL Study.

The busiest segments of the region's off-Thruway network are those routes that connect shippers and other freight-generating facilities in the region with the Thruway. Off the Thruway, the segments carrying the greatest volumes of truck traffic include:

- Interstate 790 in the city of Utica, which carries approximately 4,000 trucks per day (2,700 single-unit trucks and 1,250 combination trucks) on average;
- NYS Route 49 between Marcy and Rome carries over 1,700 trucks per day (900 single-unit trucks and 800 combination trucks);
- Segments of NYS Route 12 south of NYS Route 5S and north of NYS Route 5 carry about 1,600 trucks per day on average; and
- NYS Route 365 also carries about 1,600 trucks per day on average (about 800 single-unit and 800 combination trucks).[xiii]

Figure 20 shows the average annual daily truck traffic (AADTT) for combination trucks and single-unit trucks in 2023 according to Highway Performance Monitoring System (HPMS) data published in the New York Traffic Data Viewer.[xiv]

Figure 20. Average Annual Daily Truck Traffic, Combination and Single-Unit Trucks, 2023



Source: NYSDOT Traffic Data Viewer, HPMS, 2023.

3.0 Key Issues and Challenges

With a better understanding of why freight moves, what is moving, and where it needs to go, there is value in exploring some of the issues and challenges associated with the movement of goods in the HOCTC region. The performance of the region's highway network with respect to congestion and reliability, pavement conditions, and safety provides insights into how well the network is serving the needs of freight movement today. Investigating various industry and technology trends and their potential impacts on goods movement in the region can provide indicators related to the region's preparedness for future needs that could be different from today's.

3.1 Performance

The region's highway network can accommodate freight and passenger travel demand with few instances of recurring congestion or delays. This section explores the travel time reliability for trucks on the highway network and identifies some key bottlenecks; identifies locations where pavement conditions on highways used by trucks are substandard; and evaluates truck parking capacity and needs, as a safety indicator.

3.1.1 Truck Travel Time Reliability (TTTR) and Bottlenecks

One measure of system performance is travel time reliability. Truck Travel Time Reliability (TTTR) is defined as the ratio of the 95th percentile truck travel time to the "average" or 50th percentile travel time. With a value of 1 representing an ideal scenario of perfectly predictable travel time, a higher value represents great unpredictability. Contrary to congestion or delay measures, TTTR is a measure of the variability of travel time. This distinction is important for trucking companies and freight shippers because high levels of variability or unpredictability in travel time can introduce unexpected costs associated with transporting and delivering goods.

TTTR analysis was performed using the National Performance Management Research Data Set (NPMRDS). The NPMRDS is a national database produced by the Federal Highway Administration. It includes traffic volumes, travel time, and travel time reliability derived from vendors who collect vehicle GPS and mobile device location information.[xv]

Table 9 shows eight segments of the highway network in the HOCTC region where the TTTR index exceeded 5.0 in 2023. The data source is the NPMRDS. While many of these segments carry small numbers of trucks every day, it is worth pointing out that two of the highest-volume segments on this list are in the top 3 by TTTR as well. These segments are NYS Route 31 between Verona and Vernon, which carries over 300 trucks per day and had a TTTR of 6.2 in 2023, and NYS Route 46, New London Road, in Rome, which also

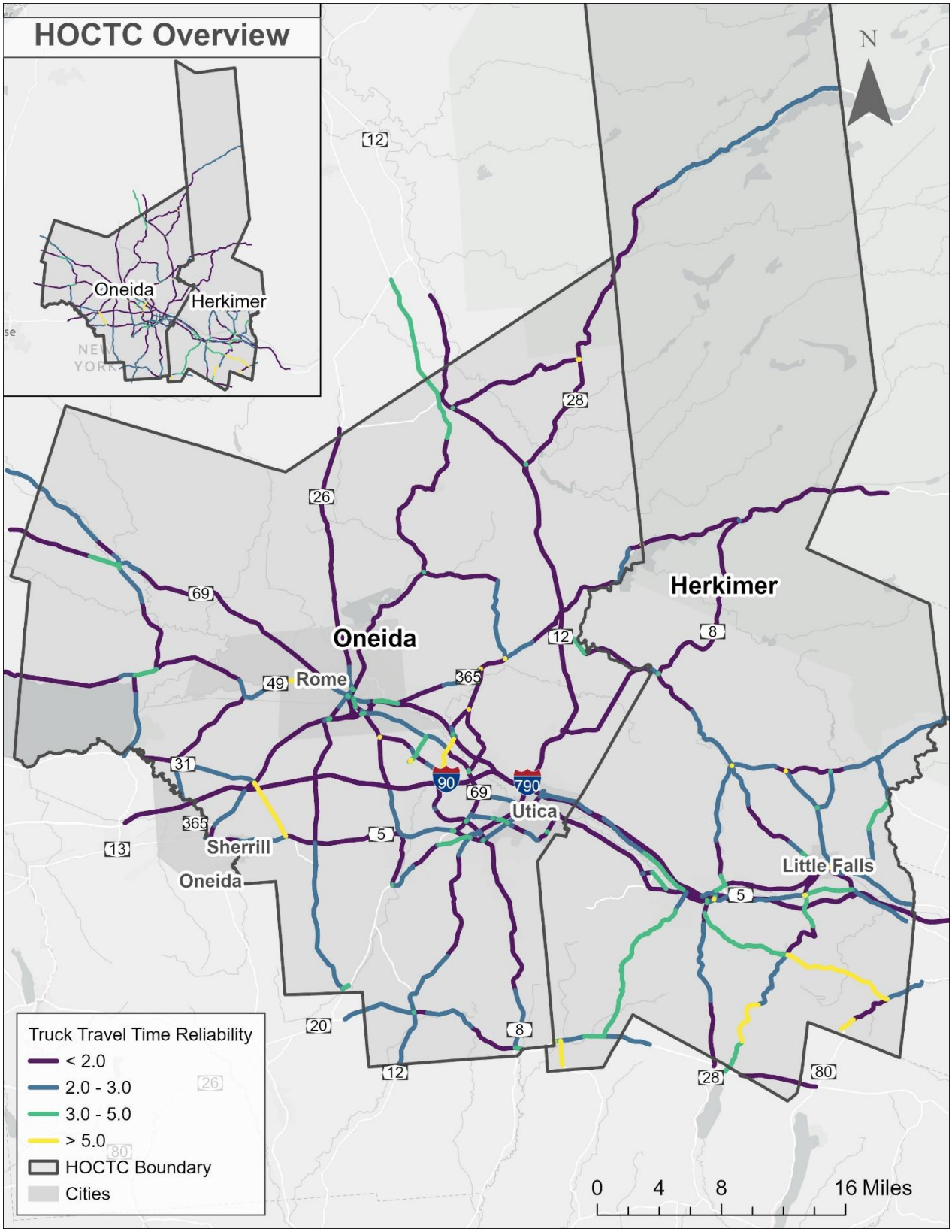
carried over 300 trucks per day and had a TTTR of 6.1 in 2023. Figure 21 shows TTTR for highway segments throughout the HOCTC region.

Table 9. Highway Segments with TTTR Exceeding 5.0 in the HOCTC Region, 2023

Road	Segment	TTTR	Miles	AADTT
NY-51	US 20 to Otsego County Line	7.08	1.61	60
NY-80	Van Hornesville to Otsego County Line	6.40	1.03	75
NY-31	Verona to Vernon	6.21	3.99	306
NY-46	Rome-New London Road	6.08	2.37	346
NY-168	NY 80 to NY 167	6.00	7.38	36
NY-167	Jordanville to Cullen	5.71	3.29	87
CR-32	Valley Road, Judd Rd to Oriskany	5.50	1.80	46
CR-32	Valley Road, Oriskany	5.32	0.81	46

Source: NPMRDS and HPMS, analyzed by Cambridge Systematics

Figure 21. Truck Travel Time Reliability Index, 2022



Source: NPMRDS, analyzed by Cambridge Systematics

In addition to the bottlenecks defined by truck travel time reliability thresholds, NYSDOT has identified a series of other bottlenecks that likely impact the movement of goods in the region. These NYSDOT-identified bottlenecks are listed in Table 10.

Table 10. Top 11 Bottlenecks in the HOCTC Region

NYSDOT Rank (1-11)	Route	Segment (between)	Municipality
1	NYS Route 5	Commercial Drive; Middle Settlement Rd.	Town of New Hartford
2, 8, 10	Oriskany St. W	Genesee St.; State St	City of Utica
3	NYS Route 5	Genesee St.; Clinton Rd.	Town of New Hartford
4, 6, 7	Burrstone Rd.	Grandview Ave.; Genesee St.	City of Utica
5	Commercial Drive	Route 840; Henderson St.	Town of New Hartford and Village of New York Mills
9	Genesee St	Campion Rd; Sunnydale Dr.	City of Utica and Town of New Hartford
11	Erie Blvd.	At the Black River Blvd. intersection	City of Rome

Source: NYSDOT Region 2

3.1.2 Pavement and Bridge Condition

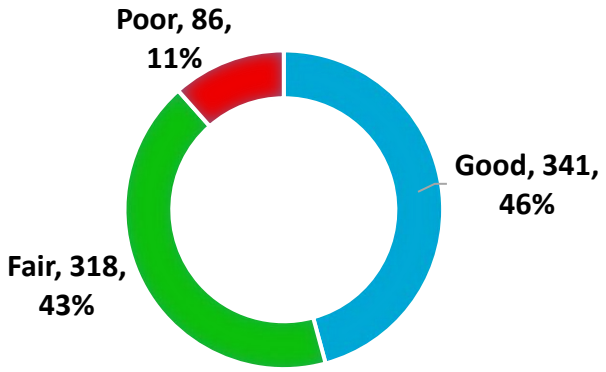
Pavement condition is a freight issue because poor condition can lead to crashes or other unsafe situations, increase wear and tear on trucks and other vehicles, and increase the cost of moving goods. Trucks are also a major contributor to poor pavement conditions in many places. In the Herkimer-Oneida Counties region, pavement conditions on state highways are generally good. There are several brief segments of highways where pavement conditions are poor, and only a few of these segments are in places where there are significant truck volumes. Examples of segments with high truck volumes and poor pavement conditions include the following, some of which will be addressed in programmed projects listed in the region's Transportation Improvement Program (TIP)[xvi], as the Project Identification Numbers (PIN) referenced below indicate:

1. NYS Route 12 in the City of Utica;
2. NYS Route 28 in Mohawk;
3. NYS Route 5 in North Utica;

4. North Genesee Street in Utica (TIP PIN 204707);
5. Broad Street in Utica (TIP PIN 265067);
6. NYS Route 5 near the boundary of Herkimer and East Herkimer;
7. NYS Route 12B in Clinton (TIP PIN 206538);
8. NYS Route 46 in Rome; and
9. Sections of Rome-New London Road between Erie Blvd. West and Seifert Corners.

The National Bridge Inventory (NBI)[xvii] includes attribute information for 745 bridges on local, county, state, and interstate highways in the HOCTC region. As of June 2025, the latest update of the NBI at the time of publication of this report, 46 percent of the bridges in the HOCTC are in good condition, 43 percent are in fair condition, and 11 percent are in poor condition, as Figure 22.

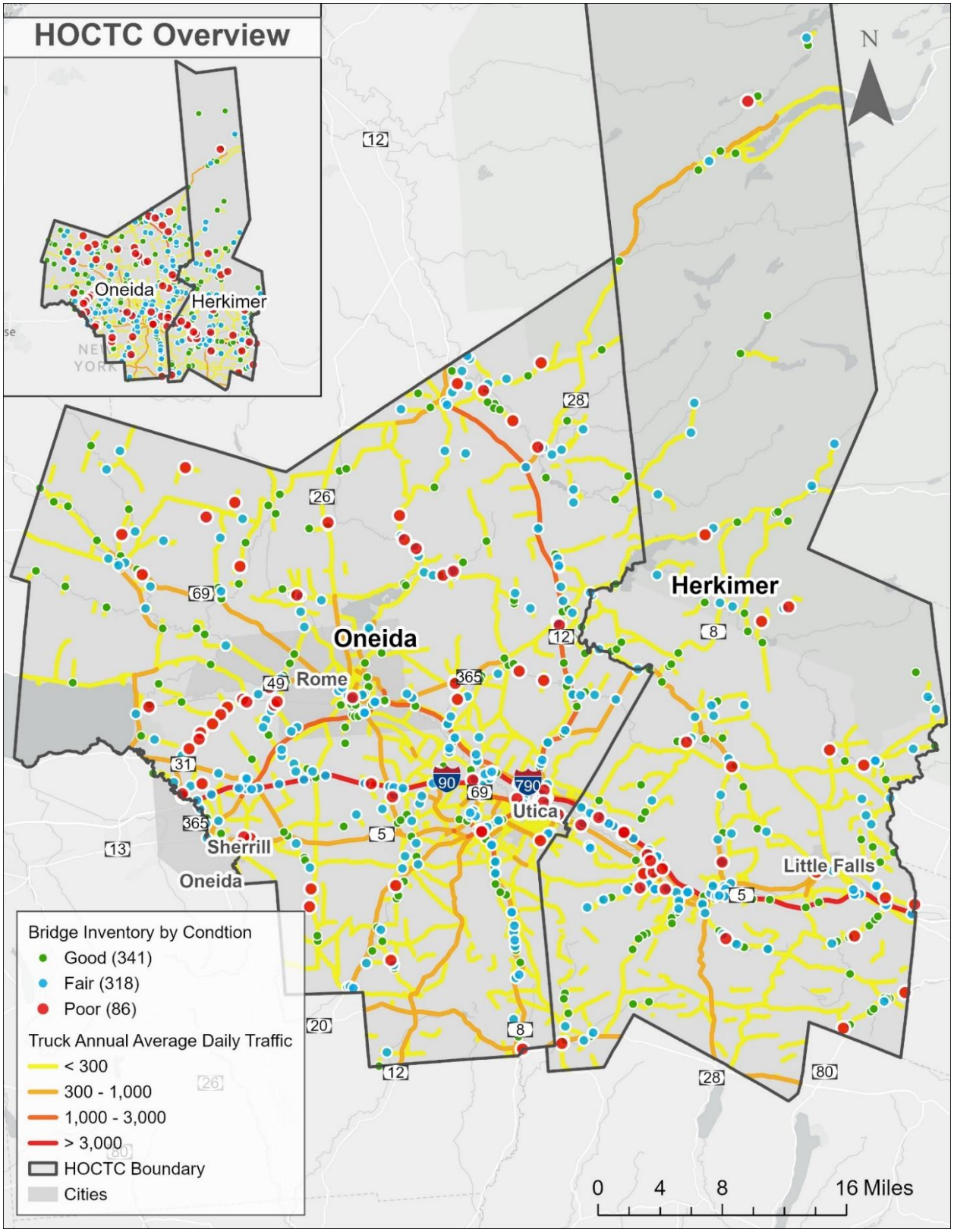
Figure 22. Bridges in the HOCTC Region by Condition Rating



Source: National Bridge Inventory, FHWA

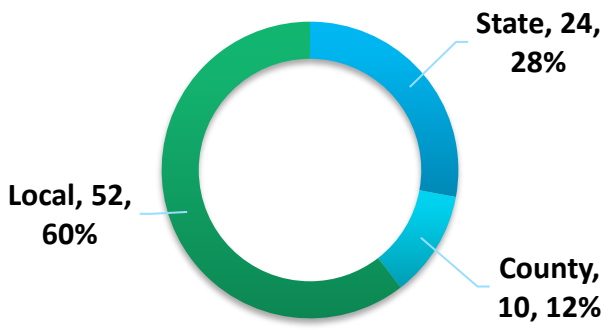
Figure 23 shows the distribution of bridges across the region, with their condition rating noted. Figure 24 indicates the number of bridges that are in poor condition by jurisdiction (i.e., state, county, or local), and Table 11 lists the county-owned bridges that are in poor condition. Most of the county bridges that are in poor condition carry low volumes of truck traffic, with the exception of Dyke Road, which carries over 1,000 trucks per day and provides an important connection between NYS Routes 5 and 5S. In addition, Military Road and County Route 36 are access routes to/from active mines in Herkimer County. Locations where the HOCTC Transportation Improvement Program[xviii] includes programmed projects to replace or rehabilitate bridges are indicated with the Project Identification Number.

Figure 23. Bridge Inventory by Condition, with Truck Volumes Overlaid



Source: National Bridge Inventory, FHWA, 2025; HPMS, 2023.

Figure 24. Poor-Condition Bridges by Jurisdiction



Source: National Bridge Inventory, FHWA

Table 11. Bridges on County Highways in Poor Condition, Herkimer and Oneida

ID	Facility Carried	Feature Crossed	Location	County	Cond-ition	TIP PIN (if applicable)
3366130	Dyke Road (CR 37)	Ferguson Creek Ferguson	1 Mi SW of West Schuyler	Herkimer	Poor	275497
1051230	Higby Road (CR 96)	Rte 5S	9.7 Mi E Jct Rts 5s & 12	Herkimer	Poor	280707
2268960	Military Road (CR 36)	Beaver Creek	1.5 Miles NW of Salisbury	Herkimer	Poor	
3307800	Newport Road (CR 34)	Shedd Brook	1.5 Mi SW Village Newport	Herkimer	Poor	
2204620	Shells Bush Road (CR 94)	West Canada Creek	.75 Mi N Jct Rt 5 & Rt 28	Herkimer	Poor	275500
3311050	CR 36	Nine Mile Creek	2.4 Mi East of Holland Pa	Oneida	Poor	
4426180	Hawkinsville Road (CR 61)	Forestport Canal Feeder	East Of Boonville	Oneida	Poor	
4426380	Higginsville Road (CR 50A)	Old Erie Canal	5 Mi East of Sylvan Beach	Oneida	Poor	
4426340	Main Street (CR 50)	Old Erie Canal	In New London	Oneida	Poor	
4426360	Senn Road (CR 52)	Old Erie Canal	2 Mi SW of New London	Oneida	Poor	

Source: National Bridge Inventory, FHWA

3.1.3 Crash History

In a five-year period between October 2020 and September 2025, there were 1,670 crashes involving a truck in the HOCTC region, according to NYSDOT's Crash Location and Engineering Analysis Repository (CLEAR) database. The vast majority (86.7 percent) of the truck-involved crashes during this period resulted in property damage but no known injuries to truck drivers, motorists, or others. About 13 percent of the truck-involved crashes resulted in injuries to one or more people, and 6 crashes (0.4 percent of the total) resulted in a fatality. Table 12 shows the number of truck-involved crashes by severity (i.e., crashes involving a fatality, injury, or property damage).

Table 12. Crashes by Severity, Oct 2020-Sep 2025

Crash Severity	Count	Percent of Total
Fatality	6	0.4%
Injury	216	12.9%
Property Damage	1,447	86.7%
Total	1,669	100.0%

Source: NYSDOT CLEAR Database

Figure 25 shows the locations of truck-involved crashes in the HOCTC region, coded by crash severity.

Figure 26 includes the same information, with average annual daily truck volumes overlaid. The six fatal crashes that occurred between 2020 and 2025 are located:

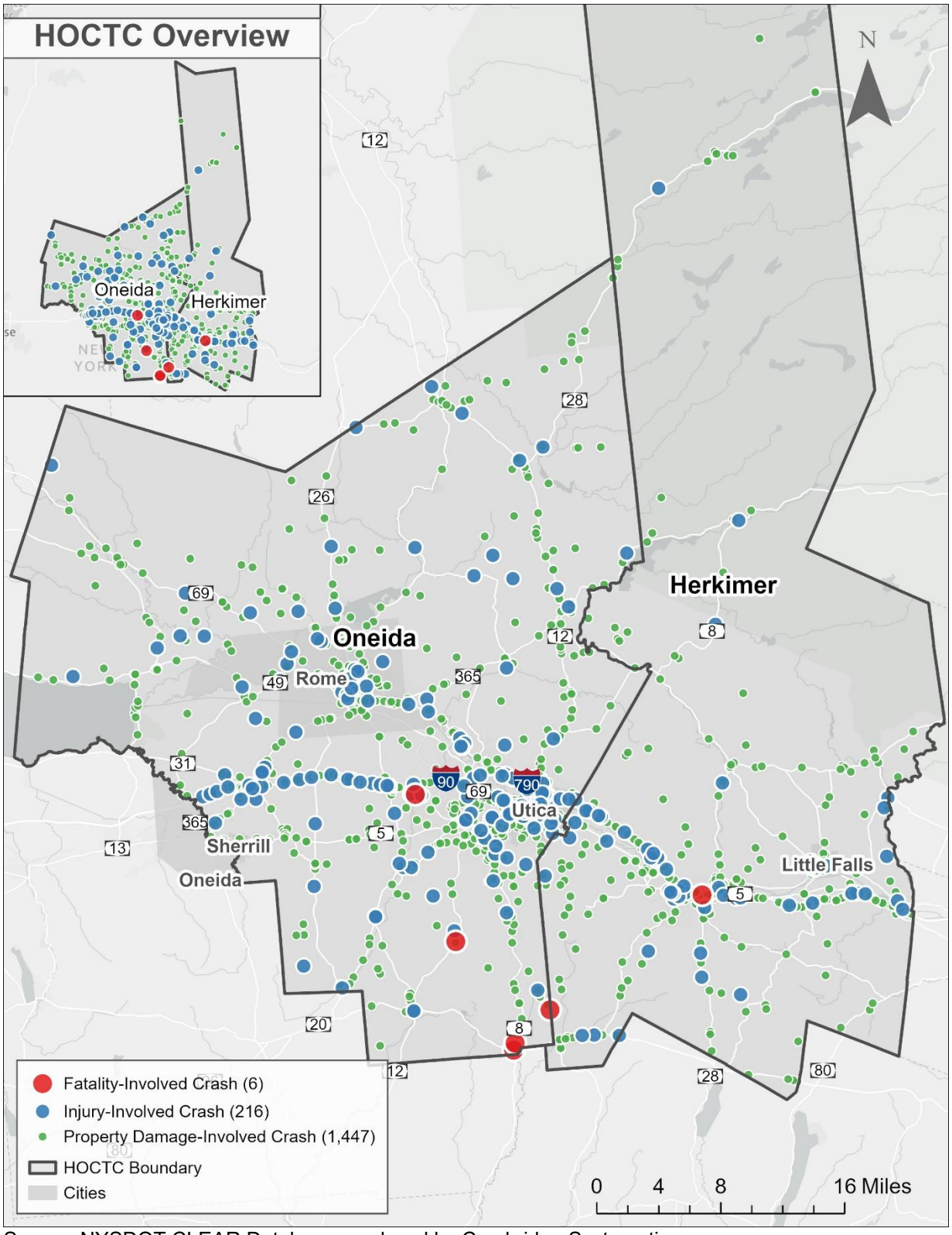
- Stone Road (County Route 52) near Peckville Road in Westmoreland, Oneida County;
- NYS Route 8 south of US 20, Bridgewater, Oneida County;
- NYS Route 8 north of Mill Street, Bridgewater, Oneida County;
- NYS Route 12 north of Tormey Rd, near the boundary of Marshall and Paris, Oneida County;
- Stone Road (County Route 2A) near Shaul Road, Bridgewater, Oneida County; and
- NYS Thruway near the bridge over NYS Route 5, Herkimer, Herkimer County.

Two of the six fatal crashes were on county highways, both in Oneida County. Five of the six were on highways that carry more than 1,000 trucks per day according to HPMS data. Only the Stone Road (County Route 2A) location was on a segment with a relatively low truck volume.

Two of the crashes occurred within proximity to one another, on NYS Route 8 in the area of Bridgewater. One occurred in December 2023 in the pre-dawn hours of the morning during wet conditions, and the second occurred in January 2024 in the afternoon, when snow and ice were present on the roadway. Given the occurrences of fatal crashes at this location, investigation of potential safety improvements may be warranted.

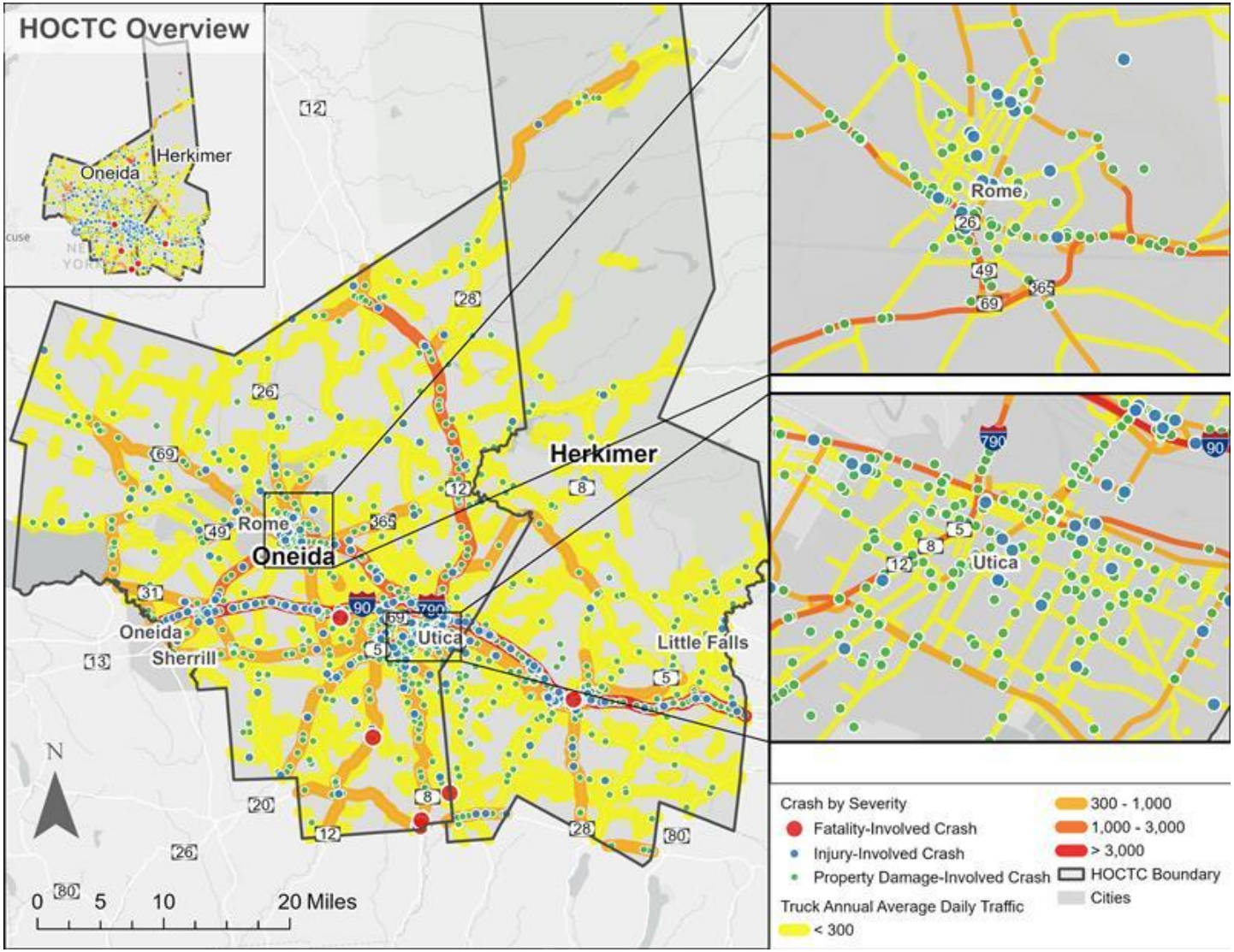
Non-fatal injury and property damage crashes have occurred in greater frequencies along corridors that observe high truck volumes. About 17 percent, or 276, of the truck-involved crashes during the analysis period happened on the NYS Thruway, according to information included in the CLEAR reports. Portions of NYS Routes 49, 5, 5S, 8, 12, and 20 also observed many crash occurrences. In addition, more than two dozen crashes, mostly involving only property damage, occurred at intersections in each of the cities of Utica and Rome.

Figure 25. Locations of Truck-Involved Crashes in the HOCTC Region, October 2020-September 2025, by Crash Severity (Involving Fatality, Injury, or Property Damage)



Source: NYSDOT CLEAR Database, analyzed by Cambridge Systematics

Figure 26. Truck-Involved Crashes in the HOCTC Region, October 2020-September 2025, by Severity, with Truck Volume Data Overlaid



Source: NYSDOT CLEAR Database, HPMS 2023, analyzed by Cambridge Systematics

3.1.4 Truck Parking

Truck parking is an essential part of the highway freight transportation system. Lack of adequate truck parking disrupts the flow of goods and leads to negative safety outcomes for drivers and other motorists due to fatigue and undesignated truck parking. Truck drivers must comply with federal Hours of Service (HOS) regulations that limit the number of hours drivers can be behind the wheel and on duty. When drivers' hours have expired, they must stop driving and rest. While this regulation aims to reduce instances of fatigued driving, in many parts of the country there are not enough parking spaces for large trucks at on-highway rest areas and travel plazas or off-highway truck stops. This is especially true during overnight hours when the demand for rest is greatest. As a result, occurrences of truck drivers parking on the shoulders of highways and ramps, in business parking lots, and other undesignated truck parking areas are observed in many areas. These undesignated parking situations can present safety issues such as reduced sight lines for passing motorists. Parked truck drivers can also become targets of crime activity. For these reasons, truck parking is often considered a major freight safety issue.

A truck parking inventory was performed as part of the New York State Freight Plan. That study estimated a capacity of under 600 truck parking spaces, roughly evenly split between private truck stops and public service areas in the Mohawk Valley region, which includes Herkimer, Oneida, Otsego, Schoharie, Montgomery, and Fulton counties. Truck parking capacity in the region is heavily used during overnight hours. Between midnight and 1AM, truck parking within an hour of most highway segments in the region are nearly filled. [xix]

Opportunities to expand truck parking capacity are limited due to limited land availability at or near existing service areas and in public right of ways. The New York State Freight Plan truck parking analysis noted, for example, that service area redesigns on the Thruway system limit any significant expansions to truck parking capacity. Opportunities to develop more or expanded private truck stops are also limited. Other uses such as retail or residential are generally more profitable per acre on private land. Oftentimes, there is community opposition to truck parking facilities being developed in their backyards. This means that developing more truck parking capacity is a difficult task in most places.

3.2 Trends Impacting the Movement of Goods

The commodity flow forecast described in Section 2 is driven primarily by economic models and assumes that freight in the future will generally move the same way it does today. There are some key emerging trends that may influence how much freight moves in the region, where it comes from and goes, and/or what modes and routes are used to move it. The trends discussed in this section include growth in e-commerce activity and the effects on supply chains, growing emphasis on supply chain resilience, population trends

and workforce implications, and technological advancements in the warehousing and transportation sectors.

3.2.1 Growth in E-commerce, Local Delivery and Warehousing

U.S. consumer behavior is increasingly shifting toward e-commerce, outpacing traditional brick-and-mortar retail. E-commerce reached an all-time high during the onset of the COVID-19 pandemic; Today, it accounts for just over 16 percent of total U.S. retail sales, nearly returning to those peak levels. This trend has been accompanied by a surge in parcel shipments across the country, dominated by four parcel carriers – UPS, FedEx, the United States Postal Service (USPS), and Amazon Logistics – which together delivered nearly 22 billion parcels in the U.S. in 2024.[xx] Since 2019, the volume of parcel deliveries has increased over 45 percent. This dramatic surge in demand has necessitated a large increase in trips for delivery vehicles, having significant implications for freight markets regionally. New York's 2019 Freight Plan forecasts a nearly 50 percent increase in freight movements statewide from 2012 to 2040. Within the HOCTC region, key corridors such as I-90 are expected to play a critical role in accommodating this growth.[xxi]

Across the country, the growth in direct-to-consumer delivery has driven an increase in warehouses and fulfillment centers. In the Oneida-Herkimer Counties region, several Amazon fulfillment centers have already been established, and the online retail giant is planning a new logistics facility in neighboring Montgomery County. If constructed, the proposed 3.2 million square-foot facility would be one of the largest in the country.[xxii] Additionally, all three of Walmart's New York distribution centers are in the Mohawk Valley region. Walmart is the second largest online retailer in the U.S., following Amazon, and the company has expressed a strong intention to strengthen their online market.[xxiii],[xxiv] As a result, the transportation networks across Oneida, Herkimer, and surrounding counties will be increasingly vital for moving both Amazon and Walmart shipments throughout the region and the state.

To support the rise in demand for quick home delivery of online orders, an increasingly decentralized and high frequency delivery network is necessary, creating pressures on local infrastructure and increasing traffic nationwide. To satisfy these demands, the region may face pressures to develop more e-commerce fulfillment and distribution facilities. Such development could generate additional large truck volumes delivering products to those facilities, and increased volumes of smaller vehicles used to deliver packages the last-mile to consumers. Growth in warehousing and distribution center development necessitates coordination between transportation and land use planning functions at the local and regional levels. It will be important to plan for the transportation system impact of

fulfillment centers regarding truck trip generation, times of day, etc. on local, county, and state highways.

3.2.2 Supply Chain Resilience

Across the U.S., communities depend on the reliable delivery of goods to support manufacturing industries, as well as household necessities like food and medicine. Supply chains rely on “just-in-time” strategies to deliver goods right as they’re needed, and while this approach helps business reduce cost by improving efficiency and minimizing inventory needs, it also makes the supply vulnerable to disruptions that can ripple through the system creating delays and shortages.

Supply chain disruptions can generally be categorized in two ways: localized disruptions, such as severe weather events that cause closures, and global disruptions, including international trade policies or public health crisis’ such as the COVID-19 pandemic.

In terms of local disruptions, the Oneida-Herkimer counties region is susceptible to several types of severe weather events which can impact the networks and facilities that support the movement of goods. Nor’easter storms commonly pass through the Mohawk Valley, bringing freezing rain, heavy snowfall and strong winds that can reduce warehouse productivity and lead to facility and roadway closures, ultimately disrupting freight routes and causing delays. Similar impacts are associated with heavy rainfall and hurricanes in the region. Flash flooding is a recurring issue throughout the region but especially in low lying areas along riverways, which is only expected to become more frequent with climate change.[xxv] Table 13 lists the hazard level, according to the Federal Emergency Management Agency (FEMA) National Risk Index, for disaster types where the risk level is at least “relatively moderate” in at least one of the region’s two counties.

Table 13. FEMA National Risk Index, for Select Hazard Types in Oneida and Herkimer Counties

Hazard Type	Risk Level in Oneida County	Risk Level in Herkimer County
Ice Storm	Relatively High	Relatively Moderate
Landslide	Relatively Moderate	Relatively High
Cold Wave	Relatively Moderate	Relatively Low
Lightning	Relatively Moderate	Relatively Low
Riverine Flooding	Relatively Moderate	Relatively Moderate
Strong Wind	Relatively Moderate	Relatively Low
Risk Index (All Hazards)	Relatively Low	Very Low

Source: FEMA National Risk Index[xxvi]

Global disruptions also have significant effects on supply chains and therefore the region's freight network. For example, the COVID-19 pandemic created massive labor reductions at factories, ports and warehouses, the effects of which rippled through the global and national supply chain, creating shortages, right at the time when demand for direct-to-consumer deliveries was spiking.

Recently, sweeping policies to increase tariffs on foreign goods have been a particularly pertinent contributor to global supply chain disruptions, as rising costs and shifting trade routes impact manufacturers and retailers worldwide. As an immediate impact of tariff announcements, freight rates have become more volatile, with demand surging ahead of expected tariffs causing shortages. As tariffs begin to take effect, higher costs and prices are inevitable. However, businesses may be able to mitigate these impacts by diversifying their supply chains, nearshoring or reshoring production, and investing in technologies that enhance operational efficiency and improve market predictability.[xxvii]

Tariffs on Canada, being New York's largest trading partner,[xxviii] are likely to be particularly impactful to the region, causing increased costs and complexity as trade flows are disrupted and access to Canadian suppliers is reduced. The impacts are likely to be most acute in Northern New York, where economic activity is most closely tied to US-Canada relations, however the impacts will ripple through the entire State and region.[xxix,xxx] Governor Hochul, in a recent Statewide Tariff Response Memo, highlighted

the impact that tariffs have already taken on New York's agricultural industry, which is of particular importance to the Oneida-Herkimer Counties region.[xxxi]

3.2.3 Dairy Industry Trends

New York State ranks fifth in the nation in dairy production and is the largest producer of yogurt and cottage cheese. The state produced 7 percent of the nation's total milk product in 2024. Herkimer and Oneida counties alone are home to 29,700 dairy cows, or about 4.7 percent of the state's population of dairy cows in 2024. This is a slight increase from 27,600 cows and 4.4 percent of the state's dairy cow population in 2021. The two counties produced nearly 62 million pounds of milk in May 2024, which is 4.7 percent of the milk produced in New York State.[xxxii] Between 2014 and 2024, the volume of milk produced in New York State that is processed in New York dairy plants has increased by 16 percent. The volume sold for out-of-state manufacturing has decreased over the same period by 32 percent.[xxxiii]

New York State's dairy production is growing at a greater rate than the number of farms and dairy cows, in large part because of increased use and upcycling of components and byproducts to produce more products.[xxxiv] In addition, 12 major investments in dairy processing facility development or expansion are happening across the state, which will increase the state's dairy processing capacity by 25-30 percent by 2027. These developments, listed in Table 14 included the $1.2 billion Chobani plant in Rome, which is expected to process up to 12 million pounds of milk per day.

Table 14. New York State Dairy Processing Investments, 2023-2027[xxxv]

Facility/ Company	Location	Timeline/Status	Estimated Milk Demand	Notes	Estimated Cost
Great Lakes Cheese	Franklinville	Packaging began in 2024 at near full capacity first half of 2025	4 M lbs/day	500,000+ sq.ft. Cheese plant	$600M
Chobani 2nd Plant	Rome	Groundbreaking April 2025, expected opening 2026	12M lbs/day	1.8 million sq.ft. Yogurt plant and "natural foods" campus, 28 product lines	$1.2B
Fairlife (Coca-Cola)	Webster	Groundbreaking 2024; open 2026	5M lbs/day	Ultrafiltered dairy beverage plant	$650M
Cayuga Milk Ingredients	Aurelius	Expansion complete 2025	2M lbs/day	Aseptic and ultrapasteurized (UHT) ESL milk, beverages, and ingredients	$270M
Agri-Mark/ Cabot/ McCadam	Chateaugay	Completed mid-2023	Unspecified capacity	Modernization enabling continued output	$30M
Byrne Dairy	Courtlandville	Broke ground July 2025; Phased expansion through 2026	1-2M lbs/day	Batch and ultrafiltered dairy, ESL expansion	$120M
HP Hood	Batavia	2024-2026 phased expansion, increasing capacity 10%	0.5M lbs/day	Line and storage expansion	$120M
Wells Enterprises/ Blue Bunny	Dunkirk	Expansion underway, completion 2025-26	Estimated 1-2M lbs/day	2x current plant size, 4x ice cream output with separate chocolate making alongside	$425M
Lactalis USA	Walton	2024-2026 expansion	30% increase in output	Sour cream/cottage cheese modernization and expansion	$15M
Lactalis USA	Buffalo	2024-27 expansion	undisclosed	2023 whey upgrade w/ increased output, 2025 cheese production upgrade and expansion	$93M
Upstate Niagara Coop	West Seneca	Underway 2025; Estimated completion 2026-2027	Modest milk demand increase	Expansion trimmed from 250K to 165K sq.ft., net-neutral to slight increase; modernization class I and II	$150M
Southern Dairy PROPOSED	Watertown	Proposed/under consideration as of 2025, possible completion by 2027	Large, unspecified	Proposed 300k sq.ft. Dry dairy ingredients and infant formula plant to source raw milk, skim milk, and whey from regional farms and plants	$250M

Source: Sherry Bunting, 2025

This added capacity provides more opportunities for dairy farmers in the HOCTC region and across the state to sell product. It could also place pressure on existing plants to make investments to upgrade or expand their facilities. These opportunities could generate more production in the HOCTC region, leading to increased volumes of trucks bringing product from farms in the HOCTC region to production locations within and beyond the region's boundaries. There could also be significant volumes of product brought into the region from places outside the Northeast, including Michigan, which is the nation's sixth-largest milk producer, and a popular source for milk processed in the Northeast. Outbound product largely goes to the major metropolitan areas of the Northeast.[xxxvi]

In order for the HOCTC region to capitalize on the expected growth in dairy production, we must ensure continued safe and efficient transportation connections between milk consolidation facilities and processing facilities, between processing facilities and the Thruway, and on the state and county roads that milk trucks are using to make daily (sometimes twice-daily) pickups at farms across the region.

As noted in Section 2.3.1 in the discussion of agricultural freight generators, more than 51,000 acres of farmland in Herkimer and Oneida counties were lost to other uses between 2012 and 2022, with the greatest losses occurring in the mid-range of 50-499-acre farms. While there has been an increase in the number of large farms exceeding 1,000 acres, and while production continues to grow, the long-term viability of the region’s milk production will require the continued agricultural use of much, if not most, of the region’s supply of agricultural land.

Development pressures from warehousing, distribution (described in Section 3.2.1), and other uses, in combination with anticipated growth in agricultural activity, could necessitate interventions to preserve farmland for agricultural use. New York State’s Agricultural District Law, for example, enacted in 1971, aims to protect and promote the availability of land for farming purposes. County planning agencies prepare and submit resolutions to approve or modify agricultural districts to the Commissioner of Agriculture and Markets of New York State. [xxxvii] Oneida County Planning staff should continue ongoing communication with the agricultural industry and work with HOCTC to proactively address emerging transportation needs and formulate solutions such as encouraging major shippers to address intake processes to limit truck queuing and optimize driver utilization, identifying bottlenecks, capacity issues, and poor pavement affecting farm to destination routes, and planning for oversized agricultural equipment and slow moving vehicles by designating suitable corridors and improving bridges and upgrading culverts. In addition, local land use policies such as promoting cluster zoning and mixed-use development can accommodate development in a manner that preserves more open space and/or agricultural land.[xxxviii]

3.2.4 Technological Advancements

Technological advances hold significant potential to address critical challenges related to freight and logistics. Over the past few decades, the freight industry has rapidly transformed to meet the demands of a growing and increasingly technology reliant society, however, several persistent challenges remain. Roadway safety, vehicle emissions, labor shortages, and supply chain volatility tied to trade policy are all key issues that still require continued attention across the nation. Emerging technologies, listed below, offer promising solutions, relevant to the HOCTC region:

- **Artificial Intelligence (AI):** refers to the application computational systems to perform a task. They typically require human intelligence. Several companies in the freight industry are utilizing AI-supported applications for truck drivers to enhance operational efficiency and decision-making. Common applications include:[xxxix],[xl]
    - Dynamic route optimization services to minimize travel time and empty truck miles;
    - Algorithms to optimize fuel consumption;
    - Predictive maintenance tools to monitor assets in real-time;
    - Improved supply chain management to track inventory and demand; and
    - Automation of certain tedious tasks like data entry to allow personnel to focus on higher-priority operational needs.
- **Autonomous Vehicles (AV):** refers to the combination of technology being advanced to allow for navigation of roadways or use of equipment, without direct human control, which could improve operational efficiency in both freight delivery and warehousing. Federal regulations on use of AV's, especially without human supervision, are still developing, however potential applications could include: [xli], [xlii], [xliii]
    - **Delivery Service:** Includes autonomous trucks used for long-haul transportation, which benefits from the ability to operate continually with minimal breaks, therefore improving fuel efficiency and lower labor costs. Another application is last-mile delivery, which could include small vehicles or autonomous robots intended to navigate sidewalks or smaller roads.
    - **Warehousing:** Applications include technologies, such as robots, to select, pack, and move goods within warehouses and distribution centers. This

could also include the operation of larger equipment like cranes and vehicles used to move freight containers. [xliv]

While these technologies could address labor shortages in the regional freight sector and bring improved operational efficiency and safety, automation also presents its own set of challenges. Despite shrinking labor pool in the HOCTC region, the freight industry continues to serve as a vital employment opportunity, underscoring the need to balance technological advancement with workforce development.

- **Intelligent Transportation Systems**: ITS refers to a range of advanced technologies – such as sensors, communication systema, data analytics, and AI/automation – that are integrated into transportation infrastructure and vehicles. ITS is designed to improve the safety, mobility, sustainability and efficiency of transportation networks and can be applied to freight in a number of ways. Common applications include vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication systems, which enable the efficient transmission of valuable information—such as real-time parking availability, traffic congestion, and road closures—to drivers through connected networks, helping inform route-choice. [xlv]

- **Truck Decarbonization:** While decarbonization has primarily advanced in the light-duty vehicle market, freight decarbonization in the form of zero-emission trucks is a compelling technological advancement that could reduce business costs and the environmental impacts associated with trucking. Fuel typically accounts for a large percentage of operating costs for motor carriers (about 24%), only second to drivers' wages.[xlvi] Moreover, fuel prices are highly volatile and susceptible to supply chain disruptions, making them a persistent concern for the trucking industry.

  While truck decarbonization is a promising way to address the concerns around costs and negative environmental impacts, it is not without challenges. Although global electric truck sales surged by nearly 80% in 2024, this growth was largely driven by China and still represents only about 2% of total truck sales, highlighting the low market penetration of zero-emission trucks.[xlvii] One of the key barriers in the U.S. is the high upfront cost of electric trucks and the need for complex, expensive charging infrastructure. That said, these costs are trending downwards, and as battery and hydrogen fuel cell technologies mature and charging and hydrogen fueling infrastructures expand, the transition to truck decarbonization may become increasingly feasible.

Lower hurdles exist for transitioning fleets of smaller “last-mile” delivery vehicles, and class 2 or class 3 trucks that operate locally and can be recharged after a driver’s tour is completed.

3.2.5 Workforce Issues.

The issue of “workforce access” has two sides—the ability of companies to attract and retain skilled and qualified workforce is one side, and the ability of workers to safely and efficiently access jobs at freight-generating facilities is the other.

Access to Qualified Workforce

Workforce availability is an issue that many companies within the HOCTC region and nationwide are concerned about. Many firms in the technology and advanced manufacturing sectors, by default, locate or expand in major metropolitan areas, often assuming that if any place can offer skilled workers, it would be a large metropolitan area. Having a smaller population than the major metro areas does not appear, however, to be holding the HOCTC region back from attracting semiconductor manufacturing, drone testing, Wolfspeed, and potential spinoff businesses seeking to serve Micron and others.

One sector that does appear to be having trouble tapping qualified talent is the motor carrier (aka, trucking) industry. The American Trucking Association has been pointing to long-term demographic trends in the trucking workforce for many years, with concern about an increasing gap between truck driver supply and demand. Contributing factors include long hours, low pay with little opportunity to increase earnings substantially as a fleet driver, time away from home, and stress. Being a truck driver, particularly a long-distance, or “over-the-road” driver, is as much a lifestyle as a career.

Another challenge has been the barriers to entry into the workforce for drivers. For many years, the minimum age for obtaining a Class A commercial driver’s license (CDL) was 21. The trucking industry considered that a problem for recruiting talent because many people have to find other career paths by age 18, and by the time they turned 21 they were not

able or interested in getting into the truck driving profession. In 2020, New York State reduced the age to 18. New York State also began allowing third-party skills testing, eliminating a bottleneck at DMV locations.[xlviii] These initiatives are likely to help alleviate some of the barriers to entry into the field. However, because the average age of truck drivers nationally is 46 years old, there could be more drivers exiting the workforce than entering in the years ahead.[xlix]

While education and training programs are outside of the scope of most transportation and planning agencies, understanding this issue can inform the decisions and collaboration between public agencies, freight-generating companies, educational institutions, and other stakeholders. Because passenger transit service providers also face driver availability challenges, according to the HOCTC Human Services Transportation Plan, there could be opportunities for motor carriers to participate and collaborate with transit service providers in joint recruiting and training programs.[l]

Workers' Access to Jobs

The development of freight-generating businesses across the region also presents a need to identify and address employees' ability to travel to and from work. Many workers in warehousing, distribution, and trucking are wage workers who may be asset-limited and income-constrained, and therefore without reliable access to a personal automobile.

There is public transportation access to many of the existing and emerging clusters, but ensuring that transit schedules align with shift schedules, and that routes match home and job sites is important. The Mohawk Valley Economic Development District, for example, is working on several grant-supported programs to facilitate site readiness and to study access-to-jobs needs. A capacity-building and feasibility study is underway, evaluating opportunities to connect the Mohawk Tribe in Fonda to the Oneida Nation in Verona with public transportation, closing a transit gap in the Mohawk Valley.

To address the challenges of workers' access to jobs, and consistent with the goals of the region's Long Range Transportation Plan and Coordinated Public Transit-Human Services Transportation Plan, HOCTC can identify and help to continue or improve coordination between employers and transit service providers and advance projects and initiatives that aim to ensure adequate transit service to existing or future employment centers, ensure that active transportation infrastructure (i.e., sidewalks, bicycle infrastructure, etc.) facilitates connections to employment centers, and that safe separation of active transportation users from busy truck driveways, loading areas, etc., can be achieved whenever possible.

4.0 Capital and Policy Recommendations

The analysis and stakeholder engagement performed for this study have led to the identification of capital investments and policy initiatives that may be necessary to ensure the safe and efficient movement of goods with minimal negative impact to system performance and communities. Table 15 lists recommended capital investments and Table 16 lists policy recommendations. The capital and policy recommendations are presented with their alignment with Federal planning factors and the goals of the HOCTC Long-Range Transportation Plan on a scale ranging from “not aligned” to “fully aligned” with each factor or goal. All the capital recommendations are potential projects that would need further study of feasibility, alternatives, funding, and other factors.

Section 4.2 includes additional explanation and/or examples associated with capital and policy recommendations.

4.1 Capital and Policy Recommendations: Tables

Table 15. Recommended Capital Investments and Alignment with Federal and Regional Priorities

Needs and Recommendations	Lead Steward(s)	Location	Source	Federal Planning Factors										HOCTC's LRTP Goals				
				Economic Vitality	Safety	Security	Accessibility & Mobility	Environment, energy conservation, and quality of life	Integration & connectivity	Management & operation	Preservation	Resiliency & accessibility	Travel & Tourism	Mobility & Accessibility	Safety In Transportation Options	Coordination of Transportation with Land Use	System Preservation	Environmental Impacts
Address bottlenecks in the region (identified in Section 3.1.1).	NYSDOT, HOCTC, Local	Regional	GIS analysis for Freight Analysis - NPMRDS; NYSDOT Region 2 Interview	◔	◔	○	◕	◕	○	◔	○	○	○	◑	○	○	○	◑
Address pavement condition along portions the network where condition is poor and truck traffic is high. See the list in Section 3.1.2.	NYSDOT, HOCTC, Local	Regional	GIS analysis for Freight Analysis - NYSDOT AADT Database	○	◕	○	◕	○	◔	◕	○	◕	◔	◕	◑	○	◕	○
Advance and implement the programmed rehabilitation project for the bridge on Dyke Road in Frankfort and Schuyler.	HOCTC	Frankfort and Schuyler	HOCTC Long-Range Transportation Plan	○	◕	○	◕	◔	○	◔	◕	◕	○	◕	◑	○	◕	○
Address “poor” condition bridges across the region.	NYSDOT, HOCTC, Local	Regional	GIS analysis for Freight Analysis - National Bridge Inventory and NYSDOT AADT Database	○	◕	○	◕	◔	○	◔	◕	◕	○	◕	◑	○	◕	○
Identify and address bridges that could be susceptible to riverine flooding and washouts.	NYSDOT, HOCTC, Local	Regional	HOCTC Long-Range Transportation Plan	○	◕	○	◕	◑	○	◔	◕	●	○	◕	◑	○	◕	◕
Investigate the road and intersection conditions along NY Route 8 in Bridgewater within a mile north and south of US Route 20 to determine if there are design or other factors that contribute to the colocation of fatal crashes.	NYSDOT	Bridgewater	GIS analysis for Freight Analysis - CLEAR database	○	●	○	◔	○	○	◕	○	○	○	◔	●	○	○	○
Complete the direct connection between I-90 and I-790.	NYSDOT, NYSTA	Utica	Exit 31 PEL Study	◔	◑	○	◕	○	◕	◔	○	◑	◔	○	◑	◑	○	○
Consider the viability of developing a new truck stop in North Utica.	NYSDOT, HOCTC	Regional	Interview with ERL Intermodal	◔	◔	◔	◔	○	○	◔	○	○	○	○	○	○	○	○
Track NYSDOT’s State Rail Plan Update for opportunities to enhance rail access and utilization.	NYSDOT, HOCTC	Regional	Several interviews	◑	◔		◑	◔	○	◔	○	○	○	○	○	○	◔	◔
Consider and advance improvements on and connecting to Route 46 near Griffiss and Mohawk Glen.	NYSDOT, HOCTC	Rome	Interview with Oneida County Economic Development	◕	○	○	◑	○	◑	◔	○	◑	○	◕	○	◔	○	○
Consider establishing a new Thruway interchange for westbound traffic at the Schuyler rest area, with connection to NYS Route 5.	NYSDOT, NYSTA	Schuyler	Interview with Herkimer IDA	◔	○	○	◑	○	◑	○	○	◑	◔	◑	○	◔	○	○

Key: ○ Not aligned, ◔ Slightly aligned, ◑ Moderately aligned, ◕ Very aligned, ● Fully aligned

Table 16. Policy Recommendations and Alignment with Federal and Regional Priorities

Needs and Recommendations	Lead Steward(s)	Location	Source	Federal Planning Factors										HOCTC's LRTP Goals				
				Economic Vitality	Safety	Security	Accessibility & Mobility	Environment, energy conservation, and quality of life	Integration & connectivity	Management & operation	Preservation	Resiliency & accessibility	Travel & Tourism	Mobility & Accessibility	Safety In Transportation Options	Coordination of Transportation with Land Use	System Preservation	Environmental Impacts
Continue planning staff's communication with agricultural industry and coordinate with HOCTC to address transportation needs and solutions, as appropriate.	HOCTC, OC Planning	Regional	Interviews with agriculture industry representatives	◑	◑	◑	○	○	◑	◕	◔	○	○	◑	◔	◑	○	○
Continue to coordinate with IDAs and EDs to ensure that truck and passenger trip generation associated with existing and planned future freight-generating development can be absorbed without detrimental impact to the system.	HOCTC, NYSDOT, IDAs, Economic Development	Regional	Interviews with multiple stakeholders	◑	◑	◑	○	○	◑	◕	◔	○	○	◑	◔	◑	○	○
Complete a land use inventory and development feasibility study, which would identify land that could potentially be developed for freight-generating uses, and potential truck trip generation	HOCTC	Regional	Interviews with multiple stakeholders	◑	◔	◔	◔	◕	◔	○	○	◔	○	◔	◔	●	○	◔
Develop zoning and development regulation guidance for its municipalities focused on directing freight-generating development to appropriate sites and avoiding or reducing external impacts.	HOCTC	Regional	Interviews with multiple stakeholders, GIS analysis	◔	○	○	◔	◕	○	○	○	○	○	◔	◔	●	○	◔
Develop design guidance and management policies that could reduce the instances of truck-involved crashes in the region.	HOCTC and/or NYSDOT	Regional	GIS analysis for Freight Analysis - CLEAR database	○	●	◔	◔	○	○	○	○	○	○	◔	●	○	○	○
Investigating and addressing the causes of truck-involved crashes at intersections in the cities of Utica and Rome.	HOCTC, Cities of Utica and Rome	Utica and Rome	GIS analysis for Freight Analysis - CLEAR database	○	●	◔	◔	○	○	○	○	○	○	◔	●	○	○	○
Review areas where truck traffic and active transportation activity overlay to identify any potential issues or needs.	HOCTC	Regional	GIS analysis for Freight Analysis	○	◕	◑	◑	○	◑	○	○	○	◕	◔	◕	○	○	○
Evaluate NYS Route 12 between New Hartford and Waterville for opportunities to improve safe truck movement during winter weather events.	NYSDOT	NYS Route 12 Corridor	Interview with NYSDOT Region 2	○	●	◔	○	○	○	◔	○		○	◔	◕	○	○	○
Address truck parking capacity/availability to promote safe operations.	NYSDOT, HOCTC	Regional	Interviews with multiple stakeholders, NYS Freight Plan	○	◕	◔	○	○	○	◔	○	○	○	○	◔	○	○	○
Identify, designate, and inform the motor carrier industry of the availability of temporary emergency parking in the region.	NYSDOT, NYSTA	Regional/ Statewide	Research of examples from other states.	○	●	◕	○	○	○	◑	○	○	○	○	●	○	○	○
Study the impacts of disruptions to the NYS Thruway and, potentially, other key freight corridors such as NYS Route 5 or NYS Route 5S with regard to network performance. Consider potential alternative route designations and management processes that may be necessary.	NYSTA, NYSDOT, HOCTC	Regional	Interviews with multiple stakeholders; HOCTC staff	◔	◔	○	◕	○	◕	◕	○	◑	○	◕	◔	○	○	○

Needs and Recommendations	Lead Steward(s)	Location	Source	Federal Planning Factors										HOCTC's LRTP Goals				
				Economic Vitality	Safety	Security	Accessibility & Mobility	Environment, energy conservation, and quality of life	Integration & connectivity	Management & operation	Preservation	Resiliency & accessibility	Travel & Tourism	Mobility & Accessibility	Safety In Transportation Options	Coordination of Transportation with Land Use	System Preservation	Environmental Impacts
Encourage major shippers to address intake processes to limit truck queuing and optimize driver utilization.	NYSDOT, Local Planners	Regional	Interview with Oneida-Madison Co-Op	◔	○	◑	◔	○	○	○	○	○	○	◔	○	○	○	○
Consider and address workforce access to jobs at existing and planned freight-generating job sites such as Chobani in Rome, Amazon in Frankfort, etc., via enhanced fixed-route or flexible transit services, active transportation connections, ride sharing services, carpooling and vanpooling programs, etc.	Employers, transit providers	Regional	Interviews with multiple stakeholders	◕	○	○	◕	○	◑	◔	○	○	○	◑	◑	◔	○	○
Foster industry, community colleges, and trade schools collaboration in the development of programs that train the workforce industry needs.	Employers, Educational institutions	Regional	Interviews with multiple stakeholders	◕	○	○	○	○	○	◔	○	◔	○	○	○	○	○	○
Anticipate the potential effects of technological developments to come on the performance of the region's freight system.	Logistics industry, NYSDOT, NYSTA, HOCTC	Regional	Interviews with multiple stakeholders	◔	◕	◑	○	◕	○	◑	○	○	○	◔	◕	○	○	◕

Key: ○ Not aligned, ◔ Slightly aligned, ◑ Moderately aligned, ◕ Very aligned, ● Fully aligned

4.2 Capital and Policy Recommendations: Detailed Descriptions

4.2.1 Recommended Capital Investments

Recommended capital investments, each of which requiring further study in order to develop feasible alternatives and cost estimates, include:

- Address bottlenecks in the region (identified in Section 3.1.1) that impact goods movement. Most of the top truck bottlenecks are on the state highway system. HOCTC can focus on two segments of County Route 32, one in the Village of Oriskany, and the other in the Town of Whitestown.

- Address pavement condition along portions of the network where condition is poor and truck traffic is high, including the following locations referenced in Section 3.1.2. Some of these bridges are expected to be replaced or rehabilitated via the programmed projects referenced in parentheses[li]:

    - NYS Route 12 in the City of Utica;
    - NYS Route 28 in Mohawk;
    - NYS Route 5 in North Utica;
    - North Genesee Street in Utica (TIP PIN 204707);
    - Broad Street in Utica (TIP PIN 265067);
    - NYS Route 5 near the boundary of Herkimer and East Herkimer;
    - NYS Route 12B in Clinton, part of a programmed repaving project (TIP PIN 206538);
    - NYS Route 46 in Rome; and
    - Sections of Rome-New London Road between Rome and Seifert Corners.

- Advance and implement the programmed rehabilitation project for the bridge on Dyke Road in Frankfort and Schuyler, which carries a high volume of truck traffic (TIP PIN 275497).

- Address other “poor” condition bridges across the region. NYSDOT should address bridges on the state highway system and HOCTC can focus on the poor condition bridges on the county highway system listed in Table 11. Several of these bridges are already programmed in the HOCTC Transportation Improvement Program.

- Identify and address bridges that could be susceptible to riverine flooding and washouts.

- Investigate the road and intersection conditions along NYS Route 8 in Bridgewater within a mile north and south of US Route 20 to determine if there are design or other factors that contribute to the location of fatal crashes in the area; and identify any capital improvements or management strategies that could improve the safe operation of trucks in this area.

- Complete the direct interchange-to-interchange connection between I-90 and I-790.

- Consider the viability of developing a new truck stop in North Utica near the Exit 31 interchange.

- Track the development of the forthcoming New York State Rail Plan (expected to be published in 2027) with respect to any opportunities to improve shippers' access to rail sidings, team tracks, and spurs in and near the HOCTC region. This would help to provide alternatives to trucking and potentially reduce the impacts of projected growth in truck traffic on the region's highway infrastructure. Based upon stakeholder interviews, the limited access to the rail network is a hindrance to moving more freight into and out of the region by rail.

- Consider and advance improvements on and connecting to NYS Route 46 near Griffiss and Mohawk Glen, if needed, to support freight-generating development at the former golf course site.

- Consider establishing a new Thruway interchange for westbound traffic at the Schuyler rest area, with connection to NYS Route 5. This would provide a more direct connection to industrial development sites on NYS Routes 5 and 5S in the Schuyler area and alleviate some congestion at the Herkimer and Utica interchanges.

4.2.2 Policy Recommendations

Policy recommendations include potential regulations, studies, and partnerships that HOCTC, NYSDOT, and/or other agencies or organizations could implement in order to address freight needs in the region. The policy recommendations of this study include:

- Continue planning staff's communication with agricultural industry, including produce and milk cooperatives, to identify new challenges or issues on the highway network if/when they emerge, and coordinate with HOCTC to address transportation needs and solutions, as appropriate.

- HOCTC, NYSDOT, and others should continue to coordinate with IDAs and EDs to ensure that truck and passenger trip generation associated with existing and

planned future freight-generating development can be absorbed without detrimental impact to the system. This may require improved connections from specific sites to the state highway system in some cases.

- Related to the recommendation above, and building upon the discussion in Section 3.2.1, HOCTC should complete a land use inventory and development feasibility study, which would identify land that could potentially be developed for freight-generating uses. This includes available sites in business parks, potential "dark store" retail conversions, and potential development of farmland in some parts of the region. The study would consider trends in manufacturing, distribution, and other land development, potential uses of developable sites, and potential truck trip generation in a development scenario. This could help to identify areas where there could be significantly higher truck volumes in the future than are observed today.

- HOCTC could develop zoning and development regulation guidance for its municipalities focused on directing freight-generating development to appropriate sites, facilitating growth trends in the farming sector, and avoiding or reducing external impacts. Resources such as the forthcoming FHWA Freight and Land Use Handbook (expected to be published in 2026) could provide valuable examples and recommendations.

- Develop design guidance and management policies that could reduce the instances of truck-involved crashes in the region, including:

    - Consideration of truck operations, stopping geometry, turning radii, etc., in the design of major rehabilitations, redesigns, or new-build highway infrastructure;

    - Ensuring the quick and thorough removal of snow, ice, debris, and other hazards during and after major weather events;

    - Ensuring the safe management of construction zones and other temporary lane or roadway reconfigurations;

- Investigating and addressing the causes of truck-involved crashes at intersections in the cities of Utica and Rome.

- Review areas where truck traffic and active transportation activity overlay, for example, portions of the Empire State Trail on County Route 32 in Oriskany, Southside Road between Frankfort and Utica, Erie Boulevard. in Rome, etc., to identify any potential issues or needs.

- Evaluate NYS Route 12 between New Hartford and Waterville for opportunities to improve safe truck movement during winter weather events. This could include prioritizing the corridor for snow removal and/or identifying potential emergency truck parking locations in this corridor.

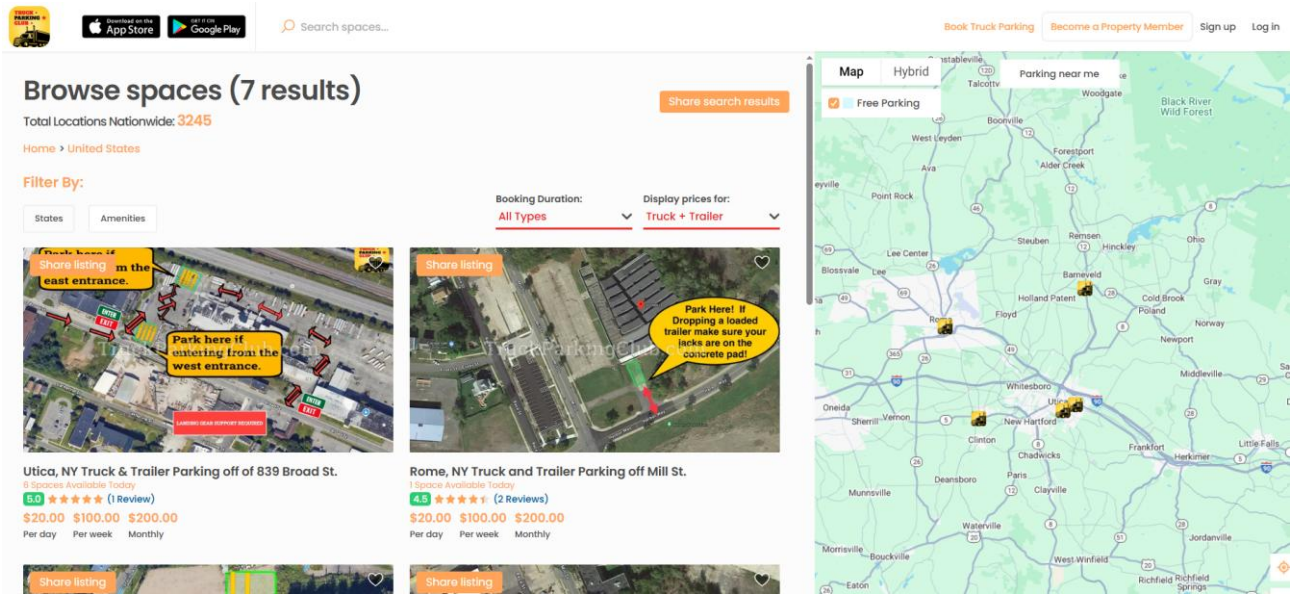
- Address truck parking capacity/availability to promote safe operations. This includes:

    - Encouraging local jurisdictions to incorporate staging areas and overnight truck parking capacity into industrial and commercial zoning regulations for new developments using spaces per loading dock door or per thousand square feet of gross floor area. The Township of Upper Macungie in the Lehigh Valley region of Pennsylvania, for example, has an ordinance that requires at least one off-street truck parking space for every two new loading docks.[lii] In Upper Macungie, the off-street truck parking spaces are primarily intended to be used for staging during hours of operation, preventing truck queuing on public streets. They are not necessarily required to be available for overnight parking. Many warehouse, manufacturing, and retail businesses understand the need for safe truck parking and thus allow truck drivers to park overnight, especially establishments that are operating 24 hours per day.; and

    - Working with the business community to encourage existing establishments to allow overnight parking on their property; and

    - HOCTC could play a supporting role, as needed and appropriate, by sharing information with industry stakeholders related to other parking solutions. For example, Truck Parking Club, lists businesses and other sites that offer spaces for truck drivers to park their tractors, trailers, or both. Most of them charge a fee between $15-25 per day. There are seven locations listed on Truck Parking Club's website in the HOCTC region, each having between one and ten parking spaces available. Figure 27 shows the Truck Parking Club website, with available truck parking in the Herkimer-Oneida counties region.[liii] Connecting truck drivers with resources like Truck Parking Club can be an initiative for organizations such as the Trucking Association of New York to champion.

Figure 27. Truck Parking Club Active Listings in the HOCTC Region



Source: Truck Parking Club website

- HOCTC could work with NYSDOT, the NYSTA, and other agencies to identify, designate, and inform the motor carrier industry of the availability of temporary emergency parking in the region. Temporary emergency parking would be most useful in areas with good highway access, large, paved areas for parking and driveway access or road geometry that can accommodate trucks, and little competing use during a weather emergency. And, in most places, finding suitable sites on publicly owned land is preferred. Parking areas at large sporting or event venues, park-and-ride lots, or government buildings could be good candidates. The Maryland State Highway Administration (SHA) is an example to follow. The SHA has identified park-and-ride lots located just off the interstate highway network and parking lots at state Motor Vehicle Administration offices that tractor trailer drivers may use “during 6+ inch snowstorms.” SHA published a map for drivers (see Figure 28 for an excerpt) to find these and other truck parking areas throughout the state of Maryland.[liv] NYSDOT should develop similar tools to share information about emergency parking locations with the trucking industry.

Figure 28. Emergency Truck Parking Map Tool, Maryland State Highway Administration

Source: Maryland State Highway Administration[lv]

- HOCTC could perform a review of developable sites, e.g., sites in designated business parks or agricultural land with good highway access that could potentially transition to freight-generating uses and estimate potential trip generation associated with those sites. Such an evaluation could help HOCTC and planning stakeholders understand the potential impacts of future development and take a proactive approach to avoiding or mitigating negative effects.

- Local land use regulations may need to be reviewed and amended in order to avoid community impacts, such as by requiring minimum buffers between loading docks and property lines, or incorporating off-street truck parking capacity, as discussed in Section 3.1.2. Solutions must be context sensitive. A reinvigorated industrial site in the City of Utica or one of the region's village centers, for example, may not be able to accommodate buffers and parking capacity on-site, and may instead need to include noise-reducing walls or landscaping.

- Study the impacts of disruptions to the NYS Thruway and, potentially, other key freight corridors such as NYS Route 5 or NYS Route 5S with regard to network performance. Consider potential alternative route designations and management processes that may be necessary to manage truck movement if/when key freight routes are interrupted due to weather or other events. To anticipate the effects of local and global supply chain disruptions:
    - HOCTC can study the potential localized effects of riverine and flash flooding, landslides, and other disasters on portions of the highway network that are critical to the movement of goods.
    - HOCTC can work with NYSDOT to identify and designate potential alternative routes for truck traffic during and in the aftermath of weather events and identify any capital investments that could help to make the network more resilient to climate/weather events. Resilience planning could also include evaluation of how the network can be used to facilitate disaster response, e.g., ensuring the continued operation of routes that can accommodate over dimensional loads such as generators and heavy machinery.
    - HOCTC can work with the economic development community to help the region take advantage of opportunities to attract, retain, and expand domestic manufacturing in this region.
- Encourage major shippers to address intake processes to limit truck queuing and optimize driver utilization. Scheduled appointment systems and/or adjusting intake hours to avoid peak vehicular traffic periods (which can be established during the environmental and site plan review processes) can improve the efficiency of operations.
- Consider and address workforce access to jobs at existing and planned freight-generating job sites such as Chobani in Rome, Amazon in Frankfort, etc., via enhanced fixed-route or flexible transit services, active transportation connections, ride sharing services, carpooling and vanpooling programs, etc.
- Foster industry, community colleges, and trade schools' collaboration in the development of programs that train the workforce industry needs, including safety and compliance training, manufacturing and warehouse machinery operation, commercial drivers' license (CDL) training, apprenticeship programs, etc. Note ESD's comments about smaller metro areas being at a competitive disadvantage, workforce availability being a concern.

- To anticipate the potential effects of technological developments to come, HOCTC should:
    - Monitor the results of testing and pilot programs, especially those in regions and conditions like the HOCTC region (e.g., climatological conditions, regulatory environments, etc.) to ascertain potential challenges to operating new technologies in the region.
    - Organizations in the region could support and facilitate UAS testing at Griffiss to promote relocations and startups in that sector.
    - Facilitate alternative fuel transitions that work for the environment, communities, and industry. For example, hydrogen fuel cell is more nascent, yet less impactful than BEV on heavy duty truck costs and operations.

Appendix A. Stakeholder Interview Summary

A.1 Stakeholder Interviews Overview

Data and research are important aspects of the Freight and Truck Analysis task, however, the input of stakeholders adds valuable confirmation, interpretation, and context. The companies that move freight see performance issues and recognize needs first-hand. The agencies that promote the region to companies seeking logistics or manufacturing locations recognize the strengths, challenges, and how future development may present changing needs over time. Agricultural industry representatives offer valuable insights into trends affecting one of the region's most important legacy industry sectors and a generator of freight movements.

For these reasons, the study team conducted interviews with eleven organizations that have unique perspectives on the current and potential future conditions, issues, and needs associated with moving freight in the HOCTC region. The interviewed stakeholders are listed in Table A.1. Section A.2 offers an overview of the key themes and takeaways from each interview. Section A.3 provides the lists of questions used to guide the interview discussions, tailored to each stakeholder type. The interview findings were used to help interpret and contextualize the findings of the analysis performed and described in Sections 2 and 3 of the report, and to identify and describe recommended projects and policies listed in Section 4.

Table A.1. List of Interviews Completed

Organization	Stakeholder Type	Participant(s)	Interview Date
Cornell Cooperative Extension	Agriculture Industry	Myron J. Thurston, III	7/21/2025
Oneida-Madison Milk Producers	Agriculture Industry	Maryellen Baldwin	7/22/2025
Empire State Development	Economic Development: Statewide	Kristi Schwebke and Jeff Janiszewski	8/19/2025
Mohawk Valley EDGE	Economic Development: Regional and Local	Tim Fitzgerald	8/13/2025
Herkimer IDA	Economic Development: Regional and Local	John Piseck, Jr.	8/14/2025
Oneida County Economic Development	Economic Development: Regional and Local	Shaun Kaleta	8/18/2025
Mohawk Valley Economic Development District	Economic Development: Regional and Local	Stephen Smith and Heather Devitt	8/22/2025
Oneida Herkimer Solid Waste Authority	Solid Waste (a key freight commodity)	Josh Olbrys	8/20/2025
NYSDOT Region 2	Transportation System Manager	Samantha Morrone	8/14/2025
Mohawk Global Logistics	Motor carrier and logistics company	Brandon Clifford	8/18/2025
ERL Intermodal	Motor carrier and logistics company	Steve Sperbeck	9/3/2025

A.2 Key Themes and Takeaways

The key themes and takeaways from each of the interview discussions is presented below.

With the **Cornell Cooperative Extension**, the team discussed:

- Key agricultural products grown, raised, and produced in the region and the logistics patterns (e.g., movements of product from farms to aggregators and then to consumers outside the region);
- The importance of the New York State Thruway as a conveyor of agricultural products from the region to markets located downstate and elsewhere;
- State programs that promote New York agriculture and could thus increase demand for agricultural products produced in New York and the HOCTC region;
- Key trends that could impact the agriculture industry in the region, including workforce availability, changing climate patterns, and growth in agro-tourism.

With the **Oneida-Madison Milk Producers**, the team discussed:

- The number of farms participating in the cooperative, the volume of milk produced and moved annually, and where that product is sent.
- Impacts of the Producer Price Differential and new processing capacity on the competitiveness of milk produced in the region relative to milk produced in the Midwest and other regions;
- Key routes used by milk haulers, including NYS routes 315, 233, 12B, 12, 5, 26, 840, 46, and 11;
- Potential cost reduction impacts of mobile manifests and improved on-farm storage silos;
- Challenges associated with reliably picking up milk every day (sometimes twice per day), finding and retaining qualified CDL drivers, and intake and scheduling challenges at major customer facilities;
- Trends and market impacts, including increased production despite reductions in active farmland, Chobani's new facility in Rome, and other production facility investments across the state.

With **Empire State Development**, the team discussed:

- The successes the Mohawk Valley region has had in reinvigorating its economy, with emphasis on agriculture, food production, and advanced manufacturing and technology;

- Opportunities to leverage investments made by “big players” such as Micron and Chobani, and the UAS activity at Griffiss;

- Excellent access to and performance of the highway network, which helps the region compete. And the pipeline of production and distribution facilities is unlikely to change that;

- There are few good rail-served sites, which could deter companies that want to use rail;

- Workforce availability is partly a perception issue, though partnerships with education institutions could help prepare workers for opportunities.

With **Mohawk Valley EDGE**, the team discussed:

- Key growing and emerging industry sectors, including advanced manufacturing (semiconductors, machinery, aerospace), agriculture and food production. Distribution centers are also growing, though that is not a “target” sector;

- The region is among the top in the nation for metals manufacturing and that supports growth opportunities in semiconductor manufacturing;

- The opportunities for big projects like Chobani’s new production facility in Rome and Micron in Syracuse to spin off investments by suppliers and other auxiliary businesses in the region;

- Transportation networks and utilities factor into site location decisions, and that there are relatively few large developable sites available.

With **Herkimer IDA**, the team discussed:

- The types of businesses that have been developing or seeking out sites in Herkimer County, including retail and e-commerce distribution, data centers, and the potential for development of suppliers to Micron and others;

- Developable sites that exist in Herkimer County, including in the business parks that the IDA manages;

- The region's dependence upon trucking due to cost, speed, and lack of alternatives such as direct rail access;

- The excellent performance of the region's highways, and ideas for capital investments that could improve access (e.g., potentially a new Thruway interchange in Schuyler).

With **Oneida County Economic Development**, the team discussed:

- The region's economic development advantages, including UAS test site, central location, good transportation access, and abundance of water;

- Future development opportunities at Griffiss, redevelopment of the former Mohawk Glen Golf Course (160 acres), and other sites in Oneida County;

- Potential highway improvements, such as Exit 31, upgrades to Route 46 and other roads to support future development at Mohawk Glen;

- Workforce availability challenges, and opportunities to collaborate with community colleges to develop a workforce pipeline for major employers such as Chobani.

With **Mohawk Valley Economic Development District**, the team discussed:

- While congestion is not a major issue, there are issues in some of the more rural areas, including narrow rural roads, bridge weight limits, etc.;

- The potential and challenges associated with transitioning to alternative fuels and/or electric trucks;

- Challenges companies encounter when seeking skilled workers and CDL drivers;

- Transit connectivity issues and opportunities, including work that MVEDD is doing to connect Mohawk and Oneida tribal communities. Also, the need to get workers to/from major employment centers (distribution centers, Chobani, etc.).

With **Oneida Herkimer Solid Waste Authority**, the team discussed:

- The logistics chain for solid waste, including collection, consolidation at transfer stations, and transporting loads to the regional landfill (while some products go to locations outside the region for recycling or disposal);

- The routes, trailer equipment, and frequency of trips between the transfer stations and the regional landfill;

- The good performance of the highway network;
- Opportunities to use renewable natural gas for trucks that haul waste, and potential limitations or challenges associated with battery electric vehicles for this use;
- Challenges associated with finding and retaining qualified CDL drivers.

With **NYSDOT Region 2**, the team discussed:

- Truck travel patterns in the region, with key east-west truck corridors including I-90, NYS Routes 20, 5, 5S, and 49, and key north-south truck corridors including NYS routes 12, 8, 12B, and 28;
- Bottlenecks in the region, which may or may not be caused by truck traffic, but which impact freight movement regardless;
- Truck parking and the need for more truck parking capacity to facilitate highway safety and compliance with hours-of-service regulations for truck drivers;
- Opportunities associated with Exit 31 (PEL study ongoing);
- The system has capacity for existing and planned future demand, though some challenges could exist if/when development of freight generators requires improved connections to the major highway corridors.

With **Mohawk Global Logistics**, the team discussed:

- Mohawk Global Logistics' operations, key services, routes, and origin-destination pairs, which include the movement of lots of international shipping container loads from the Port of New York-New Jersey into the Mohawk Valley region;
- Impacts of trade policies, demurrage and detention, etc., on costs, workflows and load processing;
- Opportunities to further automate Customs processing and manifests;
- Need for more CDL drivers and trade job support, including forklift operators, warehouse staff, etc.

With **ERL Intermodal**, the team discussed:

- ERL Intermodal's operations, key services, routes, and origin-destination pairs, which includes international container shipments that originate at the Port of New York-New Jersey and are delivered to customers in the Mohawk Valley region;
- Recent challenges associated with economic and trade trends, and opportunities for local economic development to provide growth in business for motor carriers and other supporting logistics companies;
- The good condition of local highway infrastructure, but the need for expanded truck parking capacity;
- Challenges associated with hydrogen and battery electric trucks for heavy duty applications;
- The need for studying autonomous truck operation in climate conditions that resemble upstate New York.

A.3 Interview Question Lists

Because the stakeholders interviewed represented different types of agencies or companies, with different roles and perspectives on freight transportation, the questions asked during the interviews had to be tailored to the audience. This section lists the questions that were asked to each stakeholder group.

A.3.1 Agriculture Industry Discussion Guide (Cornell Cooperative Extension and Oneida-Madison Milk Producers)

As part of the ongoing implementation of the HOCTC Long-Range Transportation Plan, HOCTC is working with assistance from the consultant team of Transpo Group and Cambridge Systematics to analyze future freight demand and develop a network utilization framework that aims to evaluate truck movement in the Herkimer-Oneida Counties region, account for the potential impacts of trends on future truck movement, and identify actionable strategies to enhance safety, efficiency, and sustainability of the freight network.

Your input is desired to help make sure that this planning task accounts for the current and future needs of shippers, carriers, and other freight stakeholders in the Herkimer-Oneida region. In a brief interview, the study team would like to discuss the topics listed below. Please think about the freight that your company, agency, or members move, handle, or manage.

- What moves and how? Specifically:
    - What are the types of goods associated with your organization?
    - What moves inbound and/or outbound?
    - How are those goods moved (types of trucks/trailer equipment, etc.)?
    - What are the trip origins and destinations? Are there key routes that are critically important to this supply chain?
    - Is there seasonal variation in the volume or travel pattern?
- Has the amount/volume of goods changed in the past several years? If so, what factors are driving those changes (economic, pricing, technology, customer demands, other?)
- Are new or emerging technologies changing the movement of goods associated with your organization? Could technology change things in the future? How?
- Are there any factors that might make it more difficult to move freight safely or efficiently in the future? How could those be addressed?
- What strategies, projects, or programs could help ensure that the region's freight system can best serve future needs?

A.3.2 Economic Development Discussion Guide: Statewide (Empire State Development)

As part of the ongoing implementation of the HOCTC Long-Range Transportation Plan, HOCTC is working with assistance from the consultant team of Transpo Group and Cambridge Systematics to analyze future freight demand and develop a network utilization framework that aims to evaluate truck movement in the Herkimer-Oneida Counties region, account for the potential impacts of trends on future truck movement, and identify actionable strategies to enhance safety, efficiency, and sustainability of the freight network.

Your input is desired to help make sure that this planning task accounts for the current and future needs of shippers, carriers, and other freight stakeholders in the Herkimer-Oneida region. In a brief interview, the study team would like to discuss the topics listed below.

- ESD’s website lists four key industries in the Mohawk Valley—distribution, homeland and cybersecurity, tech and electronics, and materials processing. To

what extent are these sectors growing in the region? Do these sectors have unique freight transportation impacts or needs?

- Are there other key sectors or businesses that represent potential economic development opportunities in the region?
- What role does the region's freight transportation network play in retaining and attracting businesses in the region?
- Do the companies you interact with discuss any shortcomings or needs related to the region's freight transportation system? If so, what are they?
- Are there certain transportation investments (projects) or policies that are key to maintaining (or improving) the region's competitive edge?

A.3.3 Economic Development Discussion Guide: Regional and County-Level (Mohawk Valley EDGE, Herkimer IDA, Oneida County Economic Development, Mohawk Valley Economic Development District)

As part of the ongoing implementation of the HOCTC Long-Range Transportation Plan, HOCTC is working with assistance from the consultant team of Transpo Group and Cambridge Systematics to analyze future freight demand and develop a network utilization framework that aims to evaluate truck movement in the Herkimer-Oneida Counties region, account for the potential impacts of trends on future truck movement, and identify actionable strategies to enhance safety, efficiency, and sustainability of the freight network.

Your input is desired to help make sure that this planning task accounts for the current and future needs of shippers, carriers, and other freight stakeholders in the Herkimer-Oneida region. In a brief interview, the study team would like to discuss the topics listed below.

- What industries or sectors to you anticipate growing locally?
- Do these sectors have unique freight transportation impacts or needs?
- Are there other key sectors or businesses that represent potential local economic development opportunities?
- What role does the region's freight transportation network play in retaining and attracting businesses in the Herkimer-Oneida Counties region?
- Do the companies you interact with discuss any shortcomings or needs related to the region's freight transportation system? If so, what are they?

- Are there certain transportation investments (projects) or policies that are key to maintaining (or improving) the region's competitive edge?

A.3.4 Solid Waste Discussion Guide (Oneida Herkimer Solid Waste Authority)

As part of the ongoing implementation of the HOCTC Long-Range Transportation Plan, HOCTC is working with assistance from the consultant team of Transpo Group and Cambridge Systematics to analyze future freight demand and develop a network utilization framework that aims to evaluate truck movement in the Herkimer-Oneida Counties region, account for the potential impacts of trends on future truck movement, and identify actionable strategies to enhance safety, efficiency, and sustainability of the freight network.

Your input is desired to help make sure that this planning task accounts for the current and future needs of shippers, carriers, and other freight stakeholders in the Herkimer-Oneida region. In a brief interview, the study team would like to discuss the topics listed below.

- What types of material are moved to landfills or other destinations?
    - What is the typical volume of this material?
- How are those materials moved (types of trucks/trailer equipment, etc.)?
- What is the typical origin and destination of materials?
    - How much waste comes from outside the region?
- Has the amount/volume of waste being handles changed in the past several years? If so, what factors are driving those changes (economic, pricing, technology, customer demands, other?)
- Are any new or emerging technologies affecting your organization operations in terms of hauling waste? Could technology change things in the future? How?
- Are there any factors that might make it more difficult to move materials safely or efficiently in the future? How could those be addressed?

A.3.5 Transportation System Manager Discussion Guide (NYSDOT Region 2)

As part of the ongoing implementation of the HOCTC Long-Range Transportation Plan, HOCTC is working with assistance from the consultant team of Transpo Group and Cambridge Systematics to analyze future freight demand and develop a network utilization framework that aims to evaluate truck movement in the Herkimer-Oneida Counties region,

account for the potential impacts of trends on future truck movement, and identify actionable strategies to enhance safety, efficiency, and sustainability of the freight network.

Your input is desired to help make sure that this planning task accounts for the current and future needs of shippers, carriers, and other freight stakeholders in the Herkimer-Oneida region. In a brief interview, the study team would like to discuss the topics listed below.

- What are the most common origins and destinations for trucks along the state highway systems in the region (i.e. how are trucks typically moving through the system)?
    - How these truck movements connect to and interact with the counties highway systems?
- What are the key bottlenecks for truck movements along the current highway system?
- What safety concerns exist for freight movement in the region?
- Are there any investments you see as necessary to maintain or improve the system?
- Are there any trends impacting freight movements that you see affecting planning or operation efforts along the state highway system?

A.3.6 Motor Carrier and Logistics Company Discussion Guide (Mohawk Global Logistics and ERL Intermodal)

As part of the ongoing implementation of the HOCTC Long-Range Transportation Plan, HOCTC is working with assistance from the consultant team of Transpo Group and Cambridge Systematics to analyze future freight demand and develop a network utilization framework that aims to evaluate truck movement in the Herkimer-Oneida Counties region, account for the potential impacts of trends on future truck movement, and identify actionable strategies to enhance safety, efficiency, and sustainability of the freight network.

Your input is desired to help make sure that this planning task accounts for the current and future needs of shippers, carriers, and other freight stakeholders in the Herkimer-Oneida region. In a brief interview, the study team would like to discuss the topics listed below.

- What goods are handled and how? Specifically:
    - What are the types of goods are typically handled by Mohawk Global Logistics ?
    - What goods tend to move inbound and/or outbound?
    - How are those goods moved (types of trucks/trailer equipment, etc.)?
    - What are the trip origins and destinations? Are there key routes that are critically important to this supply chain?
    - Is there seasonal variation in the volume or travel pattern?
- Has the amount/volume of goods handled/coordinated by Mohawk Global changed in the past several years? If so, what factors are driving those changes (economic, pricing, technology, customer demands, other?)
- Are new or emerging technologies changing the movement of goods associated with your organization? Could technology change things in the future? How?
- Are there any factors that might make it more difficult to move freight safely or efficiently in the future? How could those be addressed?
- What strategies, projects, or programs could help ensure that the region's freight system can best serve future needs?

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