Western Connecticut Council of Governments

Regional Freight Profile

Updated February 2023

Introduction

Western Connecticut is a geographic region of Connecticut, defined by the Western Connecticut Council of Governments as being located in the southwest corner of the state.[1] Within this region, there are two Metropolitan Planning Organizations, those being the South Western CT MPO and the Housatonic Valley MPO. Western Connecticut encompasses the most densely populated region in the state[with a population of approximately 610,000.

Western Connecticut functions as a gateway for freight movements in and out of New England as well as Canada. It is also a generator and consumer of freight, as it is one of Connecticut's more densely populated regions. Its freight transportation network is chiefly comprised of Interstate, US and state-numbered routes. Some of the nation's most productive population centers lie just beyond the region's borders to the north and south. Forty-four percent of freight movements in Connecticut are through trips.

By Truck: Connecticut's roads, and especially its Interstate System, carry a disproportionate burden of this through traffic - trucks transport over 99 percent of the freight that passes through Connecticut.[1] Put another way, nearly 94 percent of the freight that travels to, from or through Connecticut does so by truck. Trucks also move over 84 percent of the fuel oil that is shipped to the state.

By Rail: currently, there are four recognized freight rail lines in the Region. The regional freight rail network centers upon Danbury, with all four lines serving the city. CSX Transportation (CSX), the Housatonic Railroad (HRRC) and Genesee & Wyoming (G&W)'s Providence and Worcester Railroad (PWRR) are the freight operators. CSX provides a link in Pittsfield, MA, to national and international markets for rail freight originating or arriving in the region.

By Marine: Connecticut hosts three deepwater ports outside the WestCOG region: 1) Bridgeport; 2) New Haven, and 3) New London. Freight movements to/from the region make use of Bridgeport and New Haven facilities. In addition, modest amounts of freight are transported to marine facilities in Norwalk and Stamford.

By Air: most air freight movements to/from the region are transported by truck and involve air cargo operations at JFK and Bradley International Airports.

[1] https://portal.ct.gov/-/media/DOT/FASTLANE/Freight_Plan/CTDOTFreightPlanFinal111617pdf.pdf, p. iii.

System Condition and Performance

Freight Generators

In 2017 WestCOG prepared an inventory of freight generators for the region in support of CTDOT's effort to develop a list of freight stakeholders to interview as part of its Statewide Freight Plan. For the purposes of this Plan, freight stakeholders included anyone who was involved in the movement of goods, whether as a shipper or receiver. WestCOG staff reviewed a database of businesses within its region and identified the following sites:

- Warehouses
- Distribution centers
- Freight railroads
- Retail – larger shopping centers and malls
- Trucking companies
- Manufacturers
- Freight forwarders – UPS, DHL, FedEx, US Postal Service

The definition of a freight generator is not currently clearly defined. The chosen businesses were selected because they are larger than a single box store and have three (3) or more loading docks at their site. All shopping centers were also included.

The Freight Generators Map is viewable in the HVMPO and SWRMPO 2019-2045 Long-Range Transportation Plans at https://westcog.org/wp-content/uploads/2019/05/HVMPO-LRTP.pdf, p. 38 and https://westcog.org/wp-content/uploads/2019/05/SWRMPO-LRTP.pdf, p. 42 respectively.

Freight Transportation-Commodity Flows

Commodity flow data for the WestCOG region comes from Transearch work that was prepared in support of CTDOT's 2017 State Freight Plan. This data is aggregated at the County level, making it possible to analyze the goods moved into, out of, and through Fairfield and Litchfield Counties. Note that the WestCOG region also includes the towns of Bridgewater and New Milford, which are in neighboring Litchfield County.

Connecticut's highway system is the most direct and accessible means of transport, both for long-distance movements that begin or end outside the state and for local transport and deliveries.

Imports

Major inbound truck tonnages in 2014 are shown by state origin in Figure 7.9. Over half of all truck movements originated from a nearby state: New York (11.2 million, 23.0%), Massachusetts (7.7 million, 15.9%), and New Jersey (6.5 million, 13.4%). The primary destinations of inbound truck shipments were Hartford County (14.0 million, 28.8%), Fairfield County (11.7 million, 24.0%), and New Haven County (10.5 million, 21.6%).https://portal.ct.gov/-/media/DOT/FASTLANE/Freight_Plan/CTDOTFreightPlanFinal111617pdf.pdf?la=en

Exports

Major outbound truck tonnages in 2014 have been broken down by county origin. Truck movements destined for out-of-state travel from Hartford County (8.5 million, 25.4 percent), New Haven County (7.0 million, 20.9 percent), and Fairfield County (6.0 million, 17.8 percent). Nearly 2/3 of the out-of-state shipments were destined for a neighboring state. The major destinations of outbound freight were New York (10.2 million, 30.3%), Massachusetts (7.8 million, 23.3%), and New Jersey (3.5 million, 10.4%). [2]

I-95 from New York to New Haven, I-91 from New Haven to Hartford and I-84 from New York to Massachusetts carry the highest volumes of trucks in the state, whether by tonnage or by value.[3]

Truck tonnage is forecasted to increase from 198.7 million in 2014 to 315.4 million in 2040, an increase of 58.7 percent (1.8 percent annually). Truck commodity value is forecast to increase from $337.5 billion in 2014 to $681.1 billion by 2040, an increase of 101.8 percent (2.7 percent annually). The most heavily traveled truck routes today will absorb the most growth, according to forecasts, meaning I-95 from New York City to New Haven, along I-91 from New Haven to Hartford, and from Hartford to the Massachusetts border along I- 84. In percentage terms, the growth is more dispersed throughout Connecticut, with many secondary routes exhibiting a greater percentage growth than the primary interstate corridors. Total truck freight-related vehicle miles traveled (VMT) is expected to increase by 88 percent from 2009 to 2040. Through freight is projected to account for the largest share of the forecasted increase in Connecticut's freight truck travel, which is expected to increase by 103 percent. [4]

Existing Conditions – Roadways

As shown in Table 1 below, CTDOT records showed that in 2019 the WestCOG region had approximately 3,048 miles of roads. Approximately 87% of those miles were maintained by local municipalities.

Table 1: Roadways by Municipality

Municipality	State Maintained	Locally Maintained	Total
Bethel	12.54	87.67	100.21
Bridgewater	8.91	38.78	47.69
Brookfield	19.16	101.28	120.44
Danbury	35.60	242.16	277.76
Darien	14.61	83.37	97.98
Greenwich	21.07	266.25	287.32
New Canaan	20.0	122.96	142.96
New Fairfield	18.19	67.72	85.91
New Milford	28.41	208.80	237.21
Newtown	34.27	244.17	278.44
Norwalk	32.69	248.27	280.91
Redding	18.76	92.31	111.07
Ridgefield	24.84	169.84	194.68
Sherman	16.09	35.13	51.22

[2] https://portal.ct.gov/-/media/DOT/FASTLANE/Freight_Plan/CTDOTFreightPlanFinal111617pdf.pdf?la=en
[3] https://portal.ct.gov/-/media/DOT/FASTLANE/Freight_Plan/CTDOTFreightPlanFinal111617pdf.pdf?la=en, p. 7-5.
[4] (Development of a Strategic Plan for Reducing Emissions Associated with Freight Movement, Connecticut Department of Energy and Environmental Protection, July 2011), from 2017 CT State Freight Plan

Stamford	29.67	309.21	338.88
Weston	11.36	80.23	91.59
Westport	28.01	123.58	151.59
Wilton	22.30	129.64	151.94
Totals	396.48	2,651.37	3,047.85

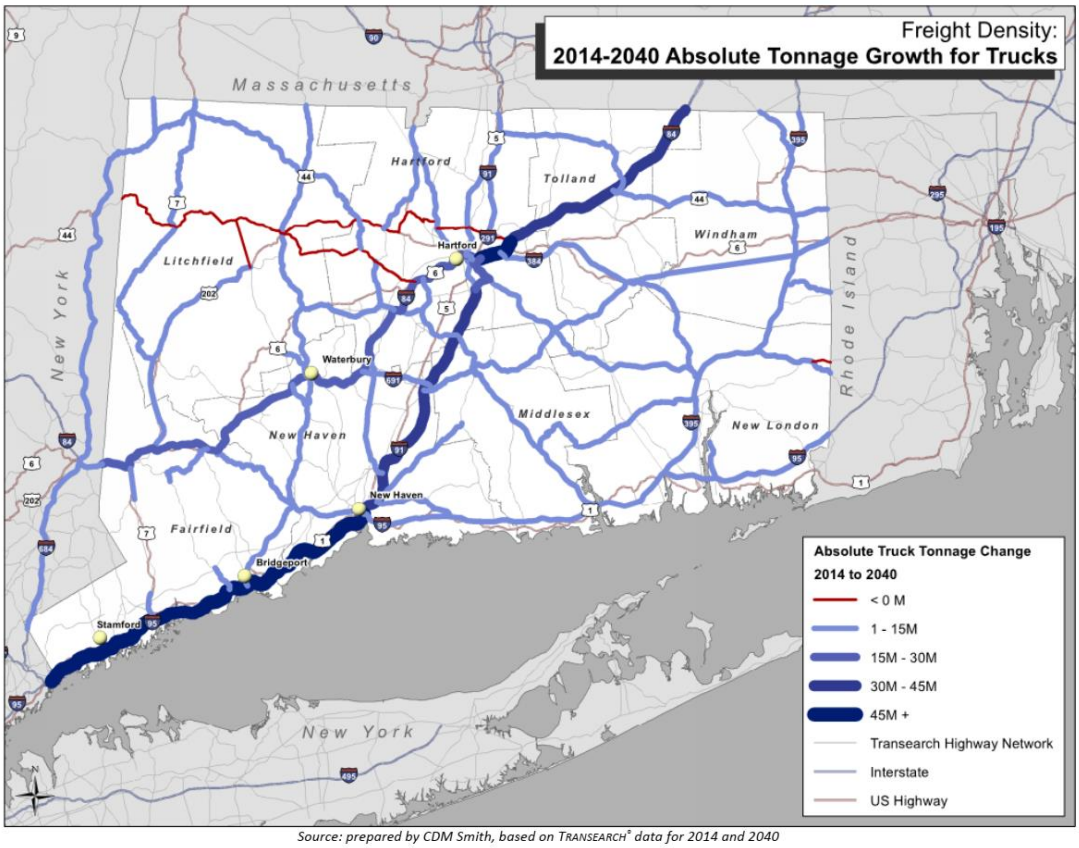
Data Source: CTDOT

WestCOG in 2023 calculated that there are 3,193 miles of roads in the region, including: 41 miles of interstates; 88 miles of U.S. numbered routes; 426 miles of state numbered routes, and 2,638 miles of local roads.

The primary truck routes in the region are Interstates 84 and 95; U.S. Routes 1, 7 and 202, and thirteen state-numbered routes.

Forecast – Truck Freight Movements

Figure 37: Truck Density Absolute Growth, 2014 to 2040



Source: prepared by CDM Smith, based on TRANSEARCH® data for 2014 and 2040

The growth in freight traffic cannot solely be attributed to a growing population and economy. Increased globalization coupled with innovations in production methods and an evolution from traditional "push" to "pull" logistics means the Region, like other metropolitan areas, is reliant upon an ever-increasing freight flow to supply businesses and consumers. "A pull inventory system prioritizes current demand. The supplier orders or manufactures goods in the quantity and timeframe needed, based on existing customer sales orders. In contrast, the push inventory system uses demand forecasting. The manufacturer instead produces goods to anticipate customer needs and pushes them through the supply chain to retailers."[5]

Increased freight traffic threatens to further strain the Region's transportation system, which in many cases is already at or exceeding capacity. Trucks will likely continue to be the dominant mode moving freight into, out of and within the Region. In fact, slow growth in freight movement by other modes will

[5] Finale Inventory, https://www.finaleinventory.com/inventory-management/pull-vs-push-system-management#:~:text=Push%20System%20%E2%80%94%20Key%20Differences,inventory%20system%20uses%20demand%20forecasting.

mean that the Region's reliance on trucks for goods movement will only increase. Increased truck traffic will have to compete with higher forecasted passenger vehicle volumes. Greater congestion may have a ripple effect on the freight transportation system, making it slower and less reliable, which could drive up shipping costs. [6]

Weighing and inspection of trucks is conducted at over thirty locations statewide under the Department of Motor Vehicles (DMV). Two weighing stations are located in the WestCOG region:

- I-95 northbound in Greenwich—quadruple static scales and scale house (Weigh-in-Motion equipped)
- I-84 eastbound in Danbury—triple pad static scale and scale house

USDOT-registered trucks: The FMCSA registration process requires that companies define the type of Motor Carrier, Broker, Intermodal Equipment Provider (IEP), Cargo Tank Facility, Shipper and/or Freight Forwarder business operation they plan to establish. The Agency administers the Federal Motor Carrier Safety Regulations (FMCSR) and Hazardous Materials Regulations (HMR) that govern interstate - and some intrastate - commercial trucking and bus industries. WestCOG in 2021 inventoried by community information for all USDOT-registered trucks, including information on use and materials carried.

Truck Parking: Sanctioned truck parking facilities are located in Danbury (I-84) and Darien (I-95).

Truck Exclusions: Section 14-298 of the General Statutes of Connecticut (CGS) grants authority to the Office of the State Traffic Administration (OSTA) to prohibit through truck traffic on streets and highways within the limits of and under the jurisdiction of any city, town, or borough within Connecticut. As shown in Table 3 below, in the WestCOG region there are 158 roadways subject to truck exclusions. Most of these roads are local; however, there are some excluded segments that are federal and/or state numbered routes, which may have a practical effect on freight movements within the communities.

Table 3: Number of Truck Excluded Routes by Municipality, WestCOG region

Municipality	# of truck excluded routes	Municipality	# of truck excluded routes
Bethel	4	Norwalk	17
Bridgewater	4	Redding	18
Brookfield	1	Ridgefield	3
Danbury	34	Sherman	1
Darien	10	Stamford	17
Greenwich	7	Weston	2
New Canaan	1	Westport	6
New Fairfield	1	Wilton	13
New Milford	3		
Newtown	16	Total	158

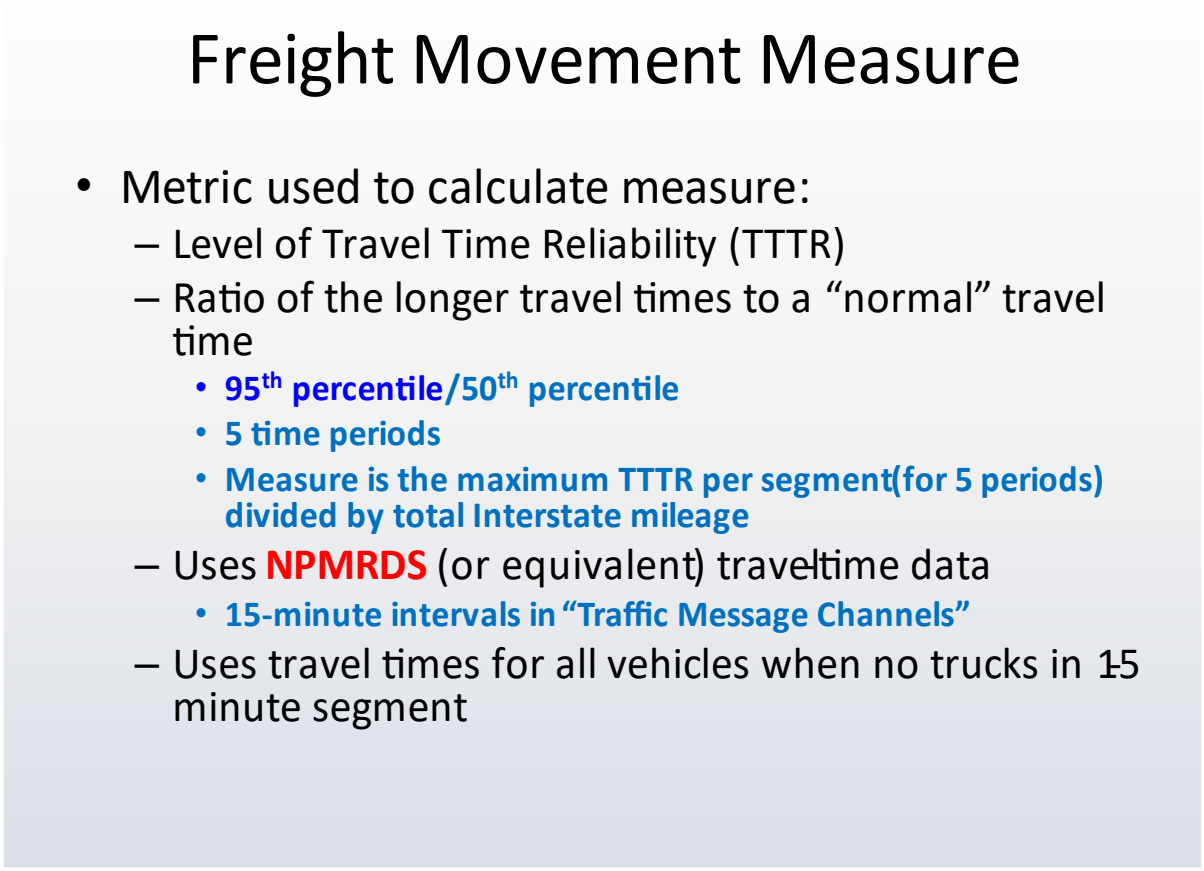
[6] https://westcog.org/wp-content/uploads/2015/12/LRTP-Update-2.pdf, p. 107.

Details on specific routes are available at Through Truck Prohibitions (ct.gov).

Truck Travel Time Reliability

The average volumes of combination trucks, e.g. tractor trailers, on I-84 and I-95 in the region constitute 10-15% of the total average annual daily traffic (AADT).[7] These routes are often unreliable for freight traffic, according to the Truck Travel Time Reliability (TTTR) measure, a federally-mandated performance measure for freight. The Freight Movement on the Interstate target for the National Highway Freight Program (NHFP) is measured using the truck travel time reliability index (TTTR) along the Interstate system. TTTR is measured as the ratio between the worst congestion experienced along a segment (95th percentile) and the average congestion along that segment (50th percentile).

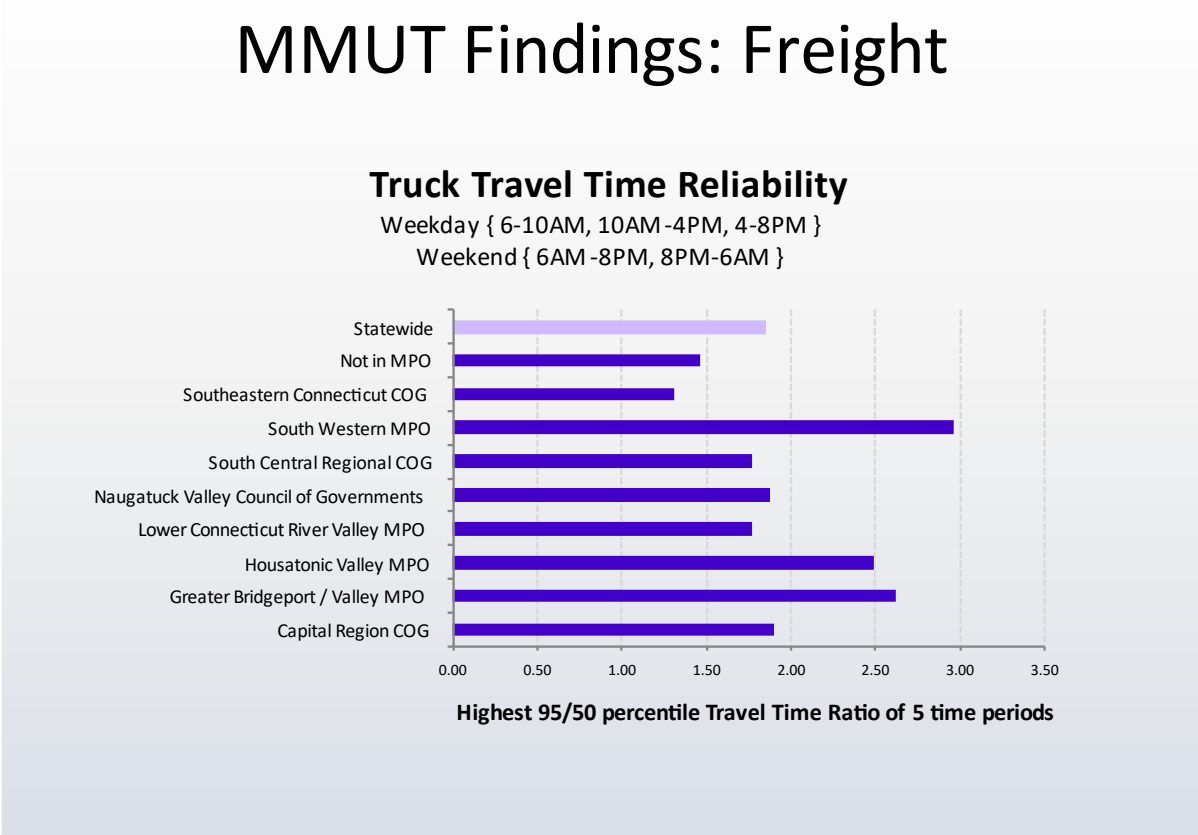
Figure 1 Courtesy of CTDOT



[7] https://portal.ct.gov/-/media/DOT/FASTLANE/Freight_Plan/CTDOTFreightPlanFinal111617pdf.pdf?la=en , p. 7-5.

Mobility Management in Urban Transportation (MMUT)

Figure 2 Courtesy of CTDOT



Federal Highway Administration (FHWA) National Performance Management Research Data Set (NPMRDS), which provides travel-time data in 5- minute time aggregations (throughout the year) for both trucks and passenger cars on the traffic message channel (TMC) roadway network.

Table 4: Truck Travel Time Reliability on National Highway System (2021 through August, and 2020)		
Year	% of Reliable Miles HVMPO	% Reliable Miles SWRMPO
2020	2.05	2.80
2021 (to Aug.)	2.62	3.03

Source: National Performance Management Research Dataset

The HVMPO and SWMPO endorsed resolutions supporting the targets established by CTDOT on November 15, 2018:

Table 5: Interstate TTTR Current Conditions and Targets by year			
	Current Condition	2-year targets (2020)	4-year targets (2022)
Interstate TTTR	1.75	1.79	1.83

Source: HVMPO LRTP, p. 78

As is the case in some other regions of Connecticut, TTTR fluctuates seasonally. Like in those regions, WestCOG believes that this is attributable to increased tourism and vacation/holiday travel. This fluctuation for Calendar Year 2021 in the Housatonic Valley and Southwest Region MPOs is shown in Figures 3 and 4 below:

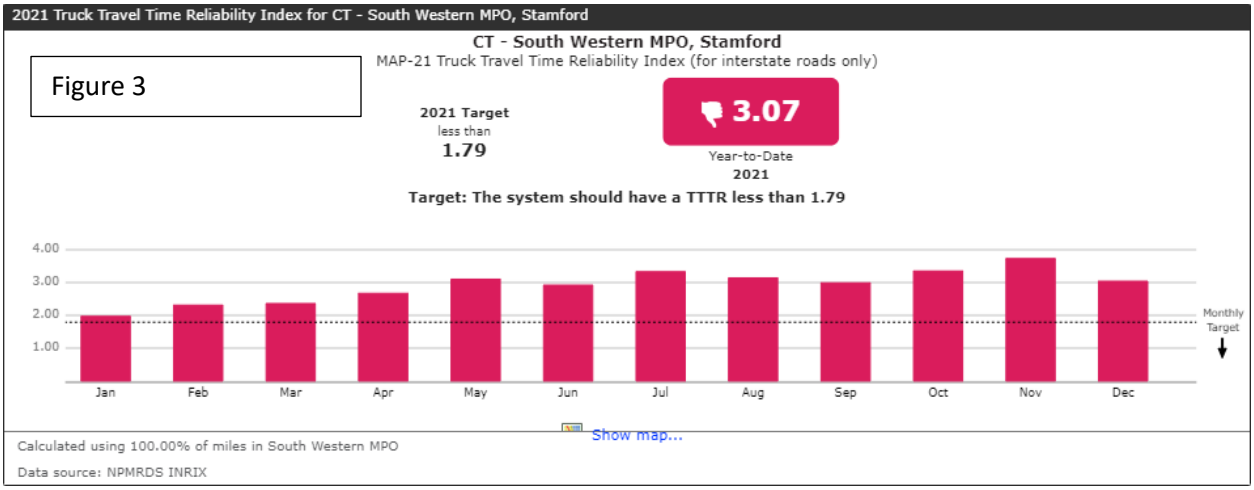


Figure 3

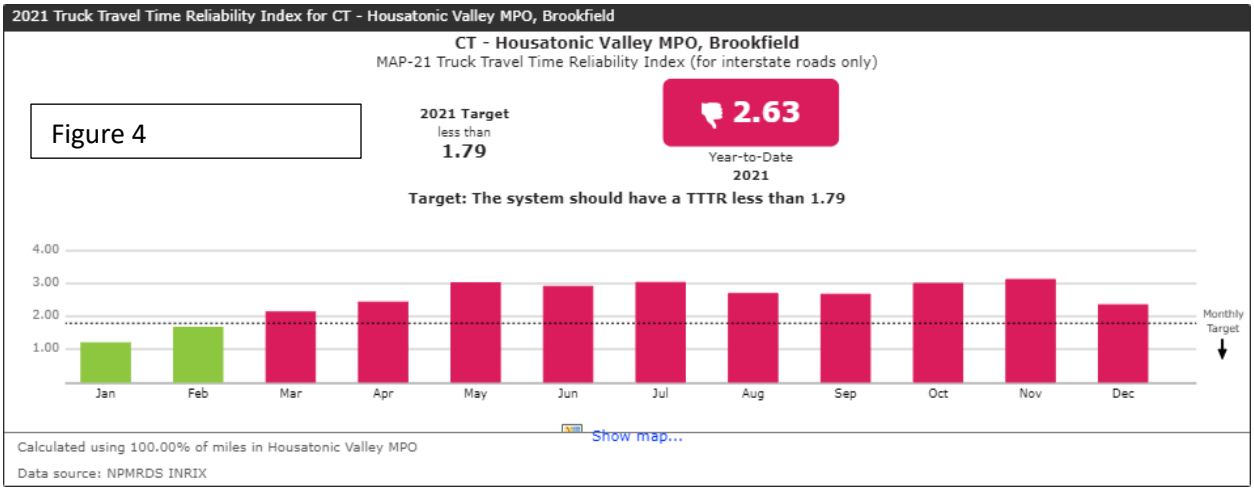


Figure 4

Prospects for increased freight movements by truck: local deliveries, and e-commerce are said to be increasing truck volumes and must be a factor in truck travel time reliability. A recent Metropolitan Area Planning Council study on the impacts of e-commerce in Massachusetts goes into the transportation impacts of e-commerce in greater detail.[8] An equivalent study has not, to WestCOG's knowledge, been conducted in Connecticut.

[8] MAPC, Hidden and in Plain Sight: Impacts of E-Commerce in Massachusetts, February 2021 https://www.mapc.org/wp-content/uploads/2021/02/Feb2021-Ecommerce-Report.pdf

Railroad

Network Overview/Existing Conditions

As shown in Table 6 below, the WestCOG region has approximately 88.3 miles of railroad infrastructure actively supporting freight movements.

Table 6: Lines Currently Used for Rail Freight Movements in the WestCOG Region

Rail Line	Municipalities in Region	Owner(s)	Freight Railroad Operator(s)	Termini	Length in region
Berkshire	Brookfield, Danbury, and New Milford	HRRC, CTDOT	Housatonic Railroad Company	Danbury, Pittsfield, MA	19.9 miles
Danbury Branch	Bethel, Danbury, Redding, and Ridgefield	CTDOT	Genesee & Wyoming	Danbury, Norwalk	23.7 miles
Maybrook	Brookfield, Danbury, and Newtown	HRRC	Housatonic Railroad Company, Genesee & Wyoming	Danbury, Derby	22 miles
New Haven	Westport, Norwalk, Darien, Stamford, Greenwich	CTDOT	Genesee & Wyoming	New Haven, New York City	22.7 miles

Rail Freight: The major commodities moved through the Housatonic Region by rail include municipal solid waste, lumber, crushed stone, construction debris, wood pulp, corn oil, and industrial chemicals.[9] These commodities are break-bulk, not intermodal.

The Berkshire Line segment in Connecticut operates in the communities of Canaan, Falls Village, Cornwall, Kent and enters the WestCOG region at New Milford, proceeding south to Brookfield and Danbury. That line segment serves a paper mill, a limestone quarry, a plastics manufacturer, a pharmaceutical company, and two food manufacturers.

The Connecticut segment of the Maybrook Line within the WestCOG region extends from the New York State Line at Danbury east through the communities of Danbury, Hawleyville, Newtown, and Botsford (a village within Newtown). A railroad-owned lumber distribution center and a bulk transfer facility are located in Hawleyville. Other customers on the Maybrook Line within and outside the WestCOG region include three lumber companies, a waste disposal firm, a corrugated manufacturer, a printing company, a polyester products firm, and a variety of small manufacturing firms.

[9] Housatonic Rail Cover (westcog.org)

While the Metropolitan New York region has a well-developed freight rail system, it is better developed and connected to the national rail network west of the Hudson River than it is east of the Hudson River. As a result, critical rail connections to the east-of-Hudson market are remote, inefficient, or have capacity restrictions, leading to a greater dependency on trucks for moving freight to and from the east-of-Hudson counties. As a result, a large portion of the region's freight shippers have limited transportation mode choice. Consequently, highway connections between the west-of-Hudson and east-of-Hudson regions experience the greatest proportion of surface freight transport impacts, and freight shippers, receivers, and carriers throughout the region continue to experience the negative effects of growing highway congestion.[10]

In terms of freight handling, the freight rail industry's business is moving toward the increased handling of intermodal shipments and less bulk shipments. Monthly and annual carload reports support this finding. Further, more 'first mile-last mile' freight movements are occurring by truck. Accordingly, the market for expanded direct rail service to/from producers and consumers in the WestCOG region is not expected to grow in the foreseeable future. Another consideration that is restricting the development of rail freight movements in the WestCOG region is the use of 'Plate F' boxcars, which cannot be used in electrified territory. This prohibits certain freight movements from making use of existing rail infrastructure in the region, specifically in the Northeast Corridor.

The region's goal is to preserve existing rail freight capacity and to work with freight industry stakeholders to ensure maintenance of rail freight service to key locations in the region. While current freight industry trends favor the use of trucks for most freight movements in the region, to the extent possible WestCOG seeks to increase the use of rail to move freight to/from and through the region that would otherwise be moved by truck. Part of that work might include the establishment of inland freight ports in the region, as has been proposed in nearby Naugatuck.[11]

Infrastructure maintenance is key. The economics of freight rail remain challenging, particularly so for the Class II railroads that serve the region. On a positive note, the 2020 award of the BUILD grant for a Regional Value Capture Feasibility Study may prepare the region for the financing of improved rail infrastructure on the Danbury and New Canaan Branches, and there is potential for replication of value capture as a tool for investing in rail infrastructure that serves both passenger and freight movements in the region.

The following factors have and will continue to affect the volume of freight transported in Connecticut by rail:

- The lack of multiple Hudson River rail crossings makes freight shipping more challenging or less practical for many commodities and products to/from points west of Connecticut.
- Overhead clearances of under the optimal 22'8" limits the size of freight cars that can be used.
- Freight railroads in Connecticut often operate at low speeds due to rail weight and age.
- Rail car weight restrictions below 268,000 pounds on many lines do not meet industry standards and limit per car loading.

[10] Federal Highway Administration (FHWA) and the Port Authority of New York and New Jersey (PANYNJ) Tier I Draft Environmental Impact Statement (DEIS), Cross Harbor Freight Program (CHFP) Alternatives (Executive Summary, p. ES-1).

[11] Naugatuck's Revival Is Well Underway And Here's What Is Next | Naugatuck, CT Patch

- High trackage fees for freight railroads operating over Amtrak right of way.
- The strong competitive position of the trucking industry due to the short distances involved in movement into and through Connecticut.
- The state's business and service activities trend toward generating smaller volumes of freight. The weakening and dilution of Connecticut's industrial base, and the shortening and tightening of the product stream, have led to fundamental changes in the way goods are manufactured, shipped and received. Rarely do plants receive rail cars full of materials to be converted into finished products, with all phases of manufacturing and assembly taking place at one location. Instead, manufacturing occurs at several locations with any one plant having a limited role. Changes in materials management, particularly just-in-time delivery, mean that sites are getting smaller, more frequent deliveries of materials, and are doing the same with their outbound shipments.
- One of the major container ports in the world and one of the largest intermodal rail yards in the country are located in northeastern New Jersey, within one hundred miles of the WestCOG region.[12]

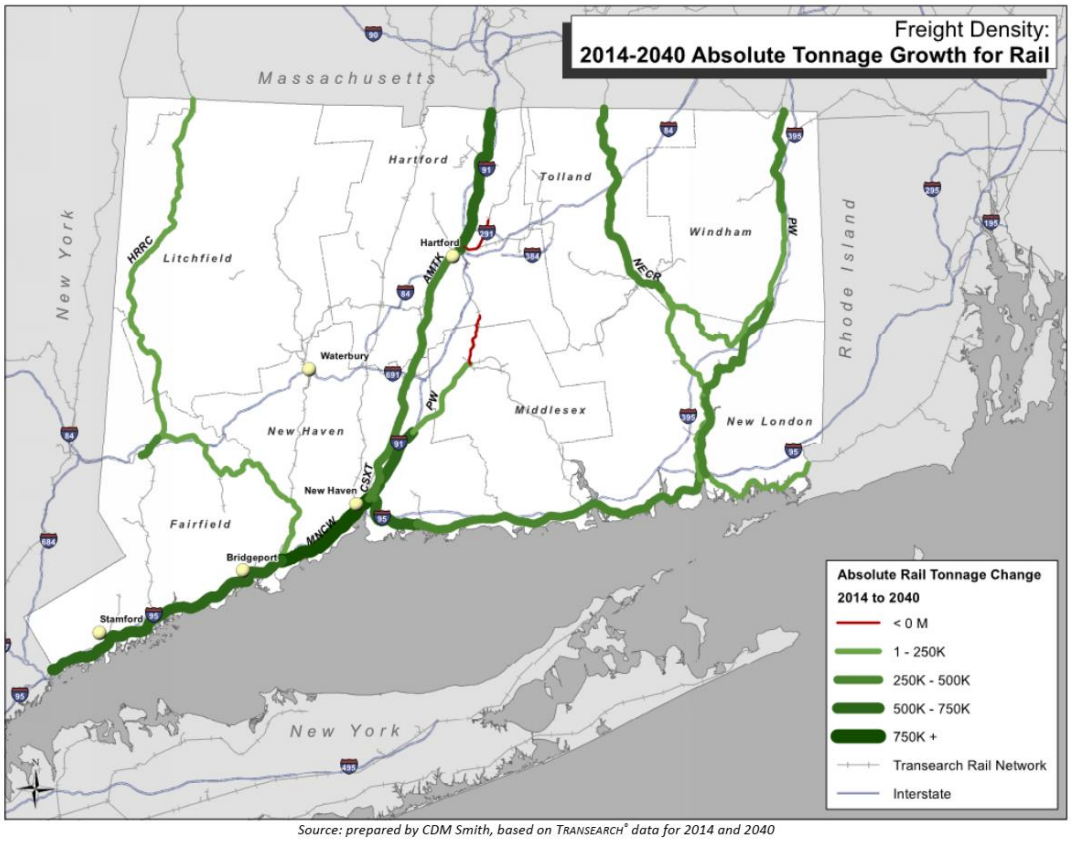
However, Transearch reported the following in the CTDOT State Rail Plan (2017):

"the greatest rail absolute tonnage increase is expected to occur on the existing densest routes, along the coast from New York City to New Haven, and from New Haven to Hartford to the Massachusetts border. Generally, the absolute rail growth is projected to occur on the rail-equivalent corridor of the densest truck routes, generally following I-95 and I-91….." [13]

Increased rail freight movements will not only consist of raw materials and manufactured products. A recent regional waste management study completed for WestCOG (Barton and Loguidice, 2021) notes that waste handling firms in Connecticut and nearby states have been investing for several years in equipment and infrastructure to deliver municipal solid and other wastes to distant out-of-state landfills in states such as New York, Pennsylvania, Ohio, and Kentucky. Some of those waste streams are expected to be shipped by rail to facilities specifically designed to receive and offload inbound materials from railcars.[14]

[12] https://westcog.org/wp-content/uploads/2015/09/HV-Regional-Transportation-Plan.pdf, p. 95.
[13] AppendixATransearchFreightMovements080417pdf.pdf, p. 57.
[14] Barton and Loguidice, WestCOG Regional Waste Management Study, p. 4.

Figure 39: Rail Density Absolute Growth, 2014 to 2040



Source: prepared by CDM Smith, based on TRANSEARCH® data for 2014 and 2040

Marine - Port facilities

In 2017 over 2.2 million metric tons of non-containerized goods were imported through Connecticut's deepwater ports. While other ports in the region have limited capacity for break bulk cargo and have begun to move towards the greater use of containerization of cargo, the majority of the cargo, aside from fuel, going through Connecticut's deepwater ports continue to be break bulk. Petroleum products, including motor fuels and home heating oils, represent over half of imports through Connecticut's three deepwater ports by value since 2003, and were 90% of imports by value in 2011 and 2013. While the volatility of petroleum prices is partially responsible for this fluctuation, the consistently high share of petroleum imports highlights the importance of these commodities to Connecticut's ports. Most of these imports enter through the Port of New Haven, including over 70% of home heating products in the state.[15]

The WestCOG Region hosts commercial harbors in Norwalk and Stamford. Both harbors handle similar commodities: fuel oil, sand and gravel. The fuel oil consists primarily of heating oil, which is transported by barge from larger ports in New Haven and New York / New Jersey. Trucks distribute the heating oil to customers in the Region and beyond. The sand and gravel handled at the ports is used in the production of concrete and asphalt, which is distributed locally by truck. Sand and gravel shipments come by barge from larger ports in New Haven, Bridgeport, and New York / New Jersey. Similar to other Connecticut harbors, scrap metal is the largest export commodity. In general, the WestCOG Region is served by larger commercial ports in Bridgeport and New Haven and the globally significant Port of New York and New Jersey.[16]

Forecast and Prospects for Future Marine Freight Activity

Connecticut's deep-water ports have historically been best suited for shipping break bulk goods. Break bulk goods are those that do not fit into standard shipping containers and are instead transported individually on a pallet or crate, or in a drum, bag, or box. Given the relatively small size of Connecticut's ports, this has been their most efficient economic use, but opportunity and time may modify the mix in the future.[17]

With the exception of the facilities referred to in the Town of Norwalk and the City of Stamford, maritime facilities in the WestCOG region are chiefly devoted to recreational boating at this time.

The CT Port Authority believes that Connecticut's geographic location could provide an alternative entry point for perishable food products headed to the New England market – allowing shippers to avoid the transportation bottleneck of the I-95 corridor when moving goods north from more southern ports.[18] Such a development could reduce the number of trucks in the region if logistics permit.

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[15] Connecticut-Maritime-Strategy-2018_Updated-April-2019.pdf (ctportauthority.com), p. 7.
[16] https://westcog.org/wp-content/uploads/2015/12/LRTP-Update-2.pdf, p. 105.
[17] Connecticut-Maritime-Strategy-2018_Updated-April-2019.pdf (ctportauthority.com), p. 4.
[18] Connecticut-Maritime-Strategy-2018_Updated-April-2019.pdf (ctportauthority.com), p. 7.

Air

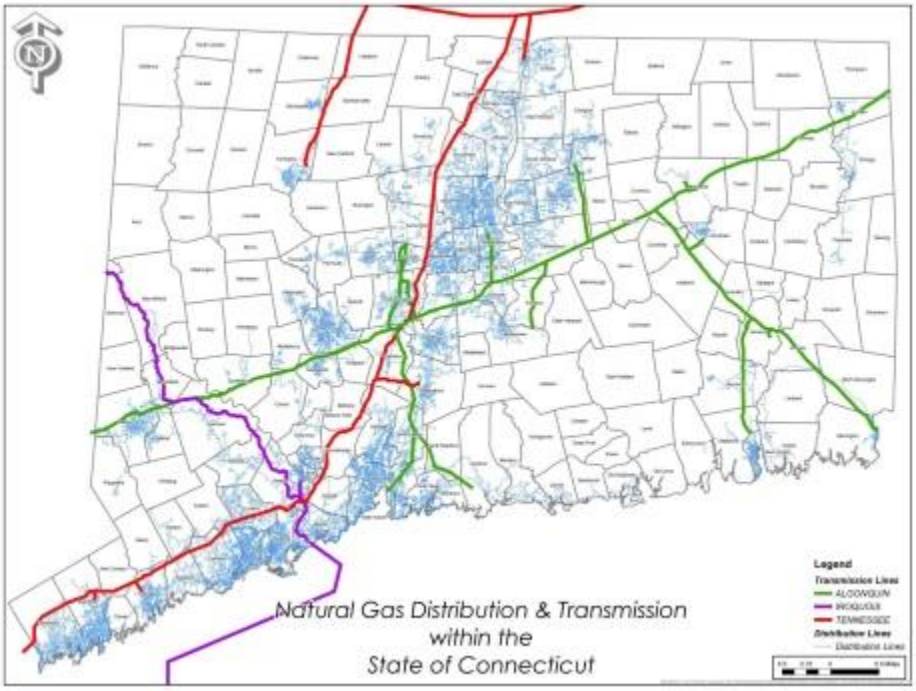
Most, if not all air freight movements in the region involve transportation by truck to John F. Kennedy International Airport and Bradley International Airports. From the CT Statewide Airport System Plan (2016):

https://www.ctairports.org/wp-content/uploads/2017/05/FINAL-CSASP-REPORT.pdf

Freight Volume Forecast (5, 10, 20-year periods): there are projections for BDL, which is where the focus is in CT on air freight movements. Approximately 75% of BDL's air freight currently moves on flights operated by U.S. domestic integrated carriers including FedEx and UPS. It is expected that BDL's location between two international gateways, JFK and BOS, will result in cargo tonnage continuing to increase. (https://www.ctairports.org/wp-content/uploads/2017/05/FINAL-CSASP-REPORT.pdf p. 118).

Pipelines

Connecticut is served by three interstate gas pipelines, each of which cross the WestCOG region:



Algonquin Gas Transmission (AGT - Enbridge) originates in New Jersey where it connects to Texas Eastern and runs from Danbury northeasterly to Thompson, with major spurs to North Haven and New London.

Iroquois Gas Transmission System (IGT) starts at the Canadian border, enters Connecticut at Sherman and runs southeast through Milford, then offshore to Long Island.

Tennessee Gas Transmission (TGP -Kinder Morgan) starts in the Gulf, enters Connecticut in Greenwich, runs northeasterly leaving Connecticut in Suffield, with a spur from Massachusetts to Torrington.

https://portal.ct.gov/PURA/Gas-Pipeline-Safety/What-transmission-pipelines-serve-CT

Note: current volumes are not available, but may be reported in the CTDOT State Freight Plan Update.

III Trends and Opportunities

Several freight planning studies cover all or a portion of the WestCOG region. For example, the South Western Region Freight Overview (2010, updated 2013) described the region's freight system and presented trends that may impact the freight system over the next twenty to thirty years. The report identified key elements of the freight transportation system in Southwestern Connecticut, described the movement of goods through the region, and recognized the safe, efficient, and economical movement of goods as an integral component of the region's multi-modal transportation system.

The CTDOT State Rail Plan (2017) highlighted truck freight industry trends and issues – both general and region-specific, that included the following:

- Freight traffic is expected to increase.
- Need more truck-only parking areas. The closure of the I-84 Southington and Willington rest areas is an issue. See Jason's Law report for information on the importance of truck parking for safety.
- Shortage of drivers nationally – in particular, a shortage of third party, contracted haulers.
- Plan for autonomous trucks. Automatic braking is already in use.
- Clear marking of all bridge height and weight restrictions.
- Sometimes posted speed limits conflict with the information in the TomTom OptiDrive system that drivers use. Database of speed limit information should be more readily accessible to technology companies.
- Online shopping and other shifts in consumer behavior are changing supply chain logistics.
- Expect more distribution warehouse operations by Amazon and similar companies.
- Need route planning assistance for oversized loads.
- Compliance, Safety, Accountability (CSA) ratings for haulers not reliable due to small inspection samples.
- Want slower speeds and greater safety in highway work zones, especially at night.
- US-7 and I-84 in Danbury; traffic slow-downs start at 6:00 AM and can result in delays of two or more hours.
- The diverge from southbound US-7 to I-84 East is a problem because vehicles block left-turning vehicles.

Top issues in the region will be congestion management; provision of adequate facilities serving trucks, and resolving freight bottlenecks on I-84, from New York through US-7 in Danbury.

Projects that could improve freight mobility/resiliency (CTDOT State Freight Plan, p. 11-6)

I-95: widen from NY State Line to Stamford ($1,660,000,000) and from Stamford to Bridgeport ($4,085,000,000). These projects include the construction of an additional operational lane in each direction along I-95 from the NY state border to Stamford. The highly congested I-95 corridor constructed in the early 1950s has outgrown its ability to serve the region and current operations present significant congestion and safety issues. The projects will enhance vehicular capacity, increase

operational safety, and provide a significant benefit to the economic environment, as well as the ability of the coastal route to support tourism and recreation. [19]

I-84: this roadway is heavily travelled by commercial vehicles and is a major freight corridor utilized by many of the interstate trucking routes and the following improvements would provide a higher level of service for commercial operations and improved safety for all motorists:

- widen from the NY State Line to Danbury Exit 3, with the addition of one operational lane increasing capacity from 2 to 3 lanes. Estimated cost: $150,000,000;
- widen in/near Danbury between Exit 3 and Exit 8, with the addition of one operational lane. Estimated cost: $640,000,000
- widen from Danbury Exit 8 to Waterbury Exit 18, with the addition of one operational lane. Estimated cost: $720,000,000

Potential Freight Rail Improvements:

- Restart operation of Maybrook Line (Derby to Maybrook, NY, via Danbury). Owner (HRRC) lacks financial capacity to undertake repairs.
- Construct new siding at O&G Industries in New Milford for quarry and road salt (State Freight Plan, p. 9-12).
- Develop a coordinated growth plan for the NEC, to establish adequate daytime windows for freight movements.
- Find an alternative to Plate F cars, which measure 17' tall and cannot be run under the overhead electrical system along the NEC (state freight plan, p. 9-13).

Automation

The trucking industry is investigating the feasibility of automated freight movements. In the future, the region may see deployment of automated trucks on its roadways. CTDOT released a Strategic Plan in February 2021 that addresses the future of CAV, with the goals of ensuring that CAV is operated safely, securely, and seamlessly across all jurisdictions. Building from this vision, CTDOT has developed near-term and long-term strategies to maximize the potential benefits of still evolving CAV technologies.

[19] https://portal.ct.gov/-/media/DOT/FASTLANE/Freight_Plan/CTDOTFreightPlanFinal111617pdf.pdf?la=en p. 11-5

Strategies to Improve Performance and Connectivity

Regional Models of Collaboration

CTCOG/MPO Activities

WestCOG, in concert with other CT COGs, is a participant in CTDOT's development of freight-relevant statewide plans such as the State Rail Plan (2016) and State Freight Plan: CTDOT (CDM Smith, 2017). CTDOT is currently revising and updating the State Rail Plan for release in late 2022/early 2023. As an example activity, WestCOG was included in a CTDOT discussion with a freight rail operator in its region. WestCOG expects that it will interact with CTDOT on an ongoing basis as the 2017 Statewide Freight Plan is updated. WestCOG provided updated information on freight generators for the 2022 State Rail Plan.

MAP Forum Multi-State Freight Working Group

This group is comprised of representatives from the ten planning organizations (including WestCOG) that participate in the Forum. The working group coordinates freight planning work in Connecticut, New Jersey, New York, and Pennsylvania. The group has discussed the shortage of truck drivers, inventorying truck parking, and freight studies underway in the region. Visit https://map-forum-njtpa.hub.arcgis.com/pages/freight to learn more about the Group's activities.

NYMTC Clean Freight Corridors Study

The **Clean Freight Corridors Planning Study** (2020-2022) assesses opportunities for designation and development of Clean Freight Corridors within the NYMTC planning area and across several states, which includes the WestCOG region. The study is identifying a series of roadways to best advance high-efficiency, low-emission alternative transportation technologies for all types of vehicles that ship freight. The roadways assessed include high speed traffic highways, local roads that support the connection of modes of freight, trucking "hubs", and areas of concentrated goods movement activity.[20]

The Study has produced a series of recommended roadway designations as Clean Freight Corridors based on the availability of truck fuel infrastructure. It makes recommendations to address gaps in that infrastructure, and modifications to the demand side of freight deliveries to improve efficiency. This Study originated from the NYMTC Regional Freight Plan to advance more efficient goods movement. The Study's principal focus will be on interstate highways in the tri-state region as they carry the most trucks – including I-84 and I-95. The Multi-State Freight Working Group (WestCOG is a participant) served as the Study's Technical Advisory Committee.

Study documents are available at https://www.nymtc.org/Regional-Planning-Activities/Freight-Planning/Clean-Freight-Corridors-Study

NYSDOT - Interstate 684 (I-684) & Interstate 84 (I-84) Transportation Corridor Study

"Both I-684 and I-84 are considered strategic freight highways and facilitate the movement of trucks throughout New York State and the Northeast Region. Both corridors are part of the New York State Freight Core Highway Network. One rest area is located within the Study corridor (north of Exit 8 in

[20] https://www.nymtc.org/ereports/Spring-2021/Freight-Studies-Updates

Brewster) and serves as a commercial truck stop. In addition to truck freight, the region surrounding the Study area supports rail freight and air cargo freight."[21]

"It's anticipated that the Study corridor will experience significant increases in freight traffic in response to projected increases in freight value."[22]

Recommendations: Source: NYMTC, Moving Forward
https://nymtcmovingforward.org/pdfs/app_h.pdf#page=254

- Continue regional and megaregional collaboration through the MAP Forum, New York State MPO Association and the Eastern Transportation Coalition. These organizations are important resources for data exchange, plan and project coordination, and advancement of freight solutions across jurisdictional boundaries.
- Coordinate with responsible state and regional partners to identify needs and opportunities for truck inspection locations, weigh-in-motion facilities, truck parking and staging locations, and alignment of size/weight and other operating regulations.

As part of ongoing work, WestCOG will continue to support the improvement of Interstates 84 and 95 through its region. WestCOG also supports the NYSDOT Interstate 684 (I-684) & Interstate 84 (I-84) Transportation Corridor Study Findings Report, as they address an important freight route.

The COG is looking for innovative opportunities to upgrade infrastructure that supports freight. That opportunity may arise with the rollout of new federal grant programs in the coming year.

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[21] https://www.lewisborogov.com/sites/default/files/fileattachments/community/page/17161/i684_and_i84_study_findings_report_june_2021.pdf, p.9.

[22] Ibid, p. 11.