NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

THE BASICS OF FREIGHT TRANSPORTATION
IN THE NEW YORK REGION

NYMTC
NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

INTERESTING FREIGHT FACTS FOR THE NYMTC REGION

Trucks carry 80 percent of all freight to the region.

The NYMTC Region is expected to have a 47% increase in volume (tonnage) through 2025 (NYMTC region).

333 million tons of freight is moved daily through the NYMTC region (1998).

The NYMTC region trades $97 billion worth of freight with upstate New York – our largest trade exchange (1996).

The top three commodity groups that are transported are petroleum, clay/concrete and food.

Freight transportation in the NYMTC region supported 1.2 million construction-related transportation jobs in 2002.

The NY/NJ Region is the nation's third ranked marine port based on value and nation's number one export port.

The NY/NJ Region has the 6th ranked air cargo airport (John F Kennedy International Airport) in U.S. by volume and is the nation's top international freight gateway based on value.

Ground freight accounts for 40 percent of the nitrogen oxides emissions and 31 percent of the particulate matter emissions from all transportation sources.

Retrofits and clean fuels are reducing environmental impacts by up to 30 percent.

WHAT IS NYMTC?

The New York Metropolitan Transportation Council (NYMTC), an association of government agencies and transportation providers, serves as the federally designated Metropolitan Planning Organization (MPO) for New York City, Long Island, and the Lower Hudson Valley counties of Putnam, Rockland, and Westchester. In its role as the MPO, the Council is required to facilitate a metropolitan transportation planning process for the area. One responsibility of the MPO is to disseminate information to the public regarding transportation-related topics in the region. The purpose of this brochure is to help inform the public about freight transportation in the NYMTC region.

INTRODUCTION

The NYMTC region is vast, diverse and complex. In addition to the five boroughs of the City of New York – Manhattan, Brooklyn, Queens, the Bronx and Staten Island – it includes the two densely populated counties of Long Island – Nassau and Suffolk – as well as the counties of the lower Hudson Valley: Westchester, Rockland and Putnam. The nearly 2,400 square mile region is home to more than 12 million people, whose gross regional product leads the nation with an estimated value of $489 billion annually.

The NYMTC region is tied together in many ways. Its transportation system, educational resources, medical care facilities, communications capabilities and recreational attractions bring each of the jurisdictions together for common purposes. The employment opportunities that exist in the NYMTC region for non-NYMTC residents and those that exist for NYMTC residents in surrounding areas support the notion of interdependence. A NYMTC paper, entitled "We Are A Region!" written in 1996 concluded that regions in name only mean little when compared to the opportunities that exist to bring neighboring regions and, indeed,

neighboring states together. Freight transportation and handling underscores this concept because of where the required rail yards, marine cargo terminals, highway links, warehouses and distribution centers are located. They are, of course located in the NYMTC region, but many, including some of the largest facilities are located in New Jersey or in neighboring New York State counties that not part of NYMTC.

Although most people think of transportation solely in terms of moving people, it is the movement of freight that connects people with the products and services they need to sustain the flow of everyday life.

This brochure aims to tell the story of freight transportation in the region and to highlight necessary steps to maintain the flow of goods in the future. The information presented here covers the importance of freight transportation, pertinent characteristics of freight, including commodities, freight volume and forecasts, how freight is moved, brief facts about some freight facilities, and highlights of ongoing projects, programs, and policies.

Materials presented here are developed from several sources, the primary source being the New York Metropolitan Transportation Council's Regional Freight Plan. Those who wish to investigate the issues and future of freight in the New York Metropolitan region are encouraged to look at the Regional Freight Plan, industry-related magazines, and visit the NYMTC website freight page and the websites of several NYMTC member agencies. Please see the glossary, along with a list of additional references at the back of this guidebook. As a companion to this brochure, a NYMTC Freight Data Wheel, is also being produced.

WHAT IT MEANS TO YOU
Freight Facilitates a Huge Economy

The regional transportation system supports economic activity by connecting widely separated points through the use of a complex matrix which connects people, products, and services. Everything that is consumed or manufactured is considered freight. Every item that is used or produced in the course of a day was, at one time, freight.

Freight transportation in the region supports a huge economy. To give an idea of just how big the region's economy is, we can look at Gross Metropolitan Product, or the total annual value of all goods and services produced in an area. Based on the Gross Metropolitan Product of the top 20 metropolitan areas in 2003, New York City ranked first ($489 billion), and Nassau and Suffolk ranked sixteenth ($123 billion). The regional freight system sup-

ports a population of 12.2 million people in ten counties over a 2,346 square mile area to bring them the food they eat (47 million tons in 1998), to stock the clothing they wear (2.8 million tons purchased in 1998), and bring them the gasoline to get them to and from their jobs and activities (70 million tons in 1998).

From 2002 to 2003 the 7.4 million households in the New York metropolitan area (metropolitan statistical area) each spent the following annual average dollars on:

FIGURE 1: Expenditure by Item

Item	Yearly Expenditure per Household
Food	$ 7,005
Apparel	$ 2,638
Gasoline	$ 1, 101

Source: Bureau of Labor Statistics

Freight transportation brings us those items we use every day, as well as the raw materials to build our homes and supply our businesses. As the cost and complexity of freight transportation increases, the cost of these items increases as well. Additionally, the amount of products and materials coming into and out of the region is expected to increase a total of 47% in the next 25 years.

Clearly, a great deal is at stake when it comes to providing transportation for the essential materials of daily life.

The construction industry provides a good example of the increase in freight movement as a result of the increase in population. In 2002, there were 27,007 housing permits issued to build new homes. Each of the homes built as a result of one of these permits requires tons of building products. Houses are built of a wide variety of materials such as metal, lumber, and glass which all must be brought into the region via train, truck, or ship. In 1998, 11.4 million tons of building products alone were delivered to the NYMTC region. This is forecasted to grow to almost 17 million tons in 2025, almost all of which must be brought into the region.

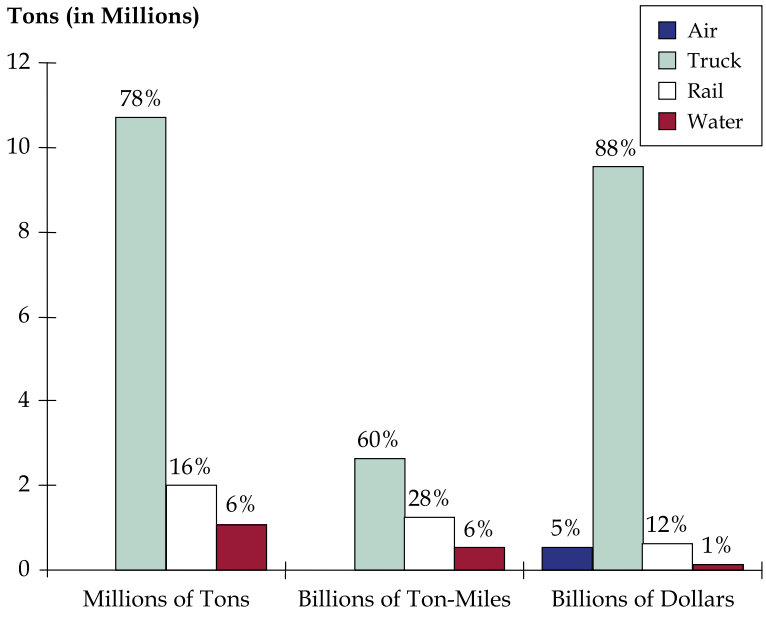
THE FUTURE OF FREIGHT

Nationally, it is anticipated that the volume of freight will increase by 68% between 1998 and 2020. In another study, a similar forecast was made for the NYMTC Region.

Figure 2: Freight Mode Share Nationally, 1998

This figure shows the national freight growth forecast by mode. In the national projections, trucks still carry the majority of freight. Rail freight also plays an important role, particularly for moving heavier goods longer distances.

- Trucks carry the majority of freight
- Rail freight plays an important role, particularly for moving heavier goods over long distances



Source: Reebie Associates and FHWA Freight Analysis Framework Project.

FREIGHT IS GLOBAL

Products are made and moved internationally. Whereas things used to be manufactu red locally, many countries are now involved in the manufacturing of parts and the assembling of whole products. The assembled items are then shipped where they are needed. Logistics, or the movement of freight, is truly global in nature. The transportation system that supports this movement is itself global in nature, depending on ever larger internationally owned ships and the highway and rail systems of the countries of origin. Twenty-one percent of the goods moved into and out of New York State has either a foreign origin or a foreign destination. Forty-five percent of imported apparel comes through the region.

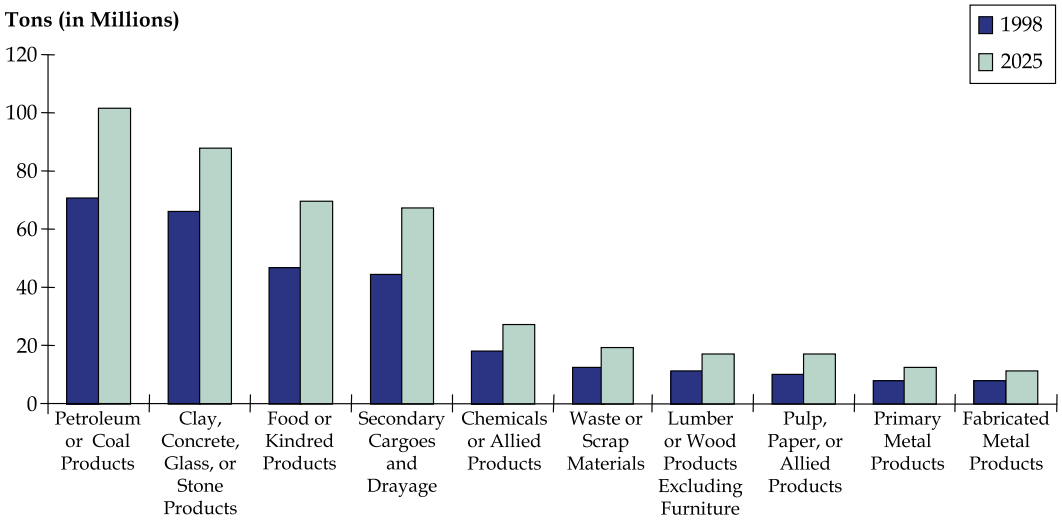
GROWING FREIGHT REGIONALLY

Forecasters expect the regional economy to continue to grow, and this growth is expected to fuel an increase in the amount of freight moved to, from, and within the region. Between 2002 and 2030 total employment is expected to increase by a total of 3.2 million jobs in that time period, while annual population will rise by 20%, or about 4.3 million people in that time period.

As population grows, so does the amount of commodities needed to sustain all those people. This means freight movements will have to increase to bring in and take out the growing amount of materials which are used, produced, and discarded in the region. Forecast economic growth in the 10-county region is expected to significantly increase the volume of freight moved in the region. Our 10-county region already experiences the highest volume of freight movement of any metropolitan area in the nation. Regional commodity flows are expected to grow from 333 million annual tons in 1998 to 490.5 million annual tons in 2025, a 47% increase.

The chart below shows the growth that is expected in the region, broken down by individual commodities. As you can see, there is expected growth for every item that already comes into the region.

Figure 3: Freight Growth in the NYMTC Region, 1998-2025
BASE AND FORECASTED FLOWS BY COMMODITY



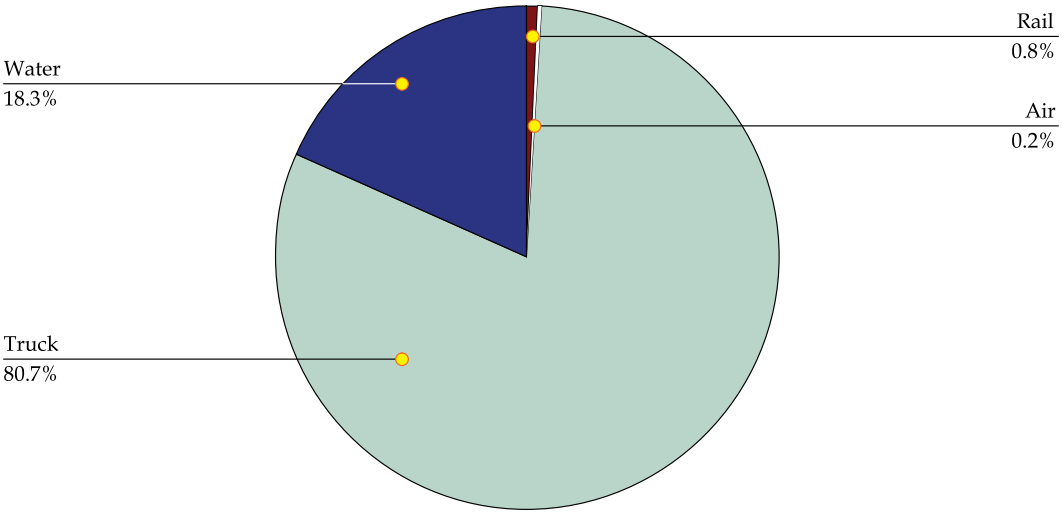
Source: Reebie Associates.

BASIC INFORMATION YOU SHOULD KNOW

The Modal Share of Freight

The movement of freight is made possible by a transportation network comprised of several components. These components, or modes, include: marine facilities such as ports and barges, railroad lines, trucking companies and air carriers. Many of these modes work together to get the job done. Sometimes the movement of freight requires just one mode, such as trucking, but often a combination of modes is necessary.

FIGURE 4: 1998 Mode Split for the NYMTC Region



As the diagram above shows (based on freight moved by weight), the region is largely dependent on trucks to move freight. The region has the benefit of direct access to several waterways, which allow for about one fifth of our freight to travel into the region by water. Rail carries a small percentage of freight into the region as well, and these items are mostly heavy materials that travel long distances through the country. Air freight comprises the smallest amount of freight, and is generally limited to high value and time-sensitive cargo, such as letters, packages, specialized machinery, flowers, and food.

The Origins and Destinations of Freight

The region's most active trading partners are its immediate neighbors. A majority of the region's freight is exchanged with the rest of the East Coast, and from manufacturing centers in the Midwest. A notable amount of exchange also happens between our region and upstate New York. Figure 5 on this page shows where the 330 million tons of freight that move through the NYMTC region come from by region of origin, while the bottom figure (Figure 6) depicts the likely destinations of the freight moving through the region by region. The darker green symbolizes the highest volume of trade. As you can see here, the NYMTC Region's largest trading partner is itself,

FIGURE 5: Annual Tons of Freight Arriving in the NYMTC Region
BY ORIGIN

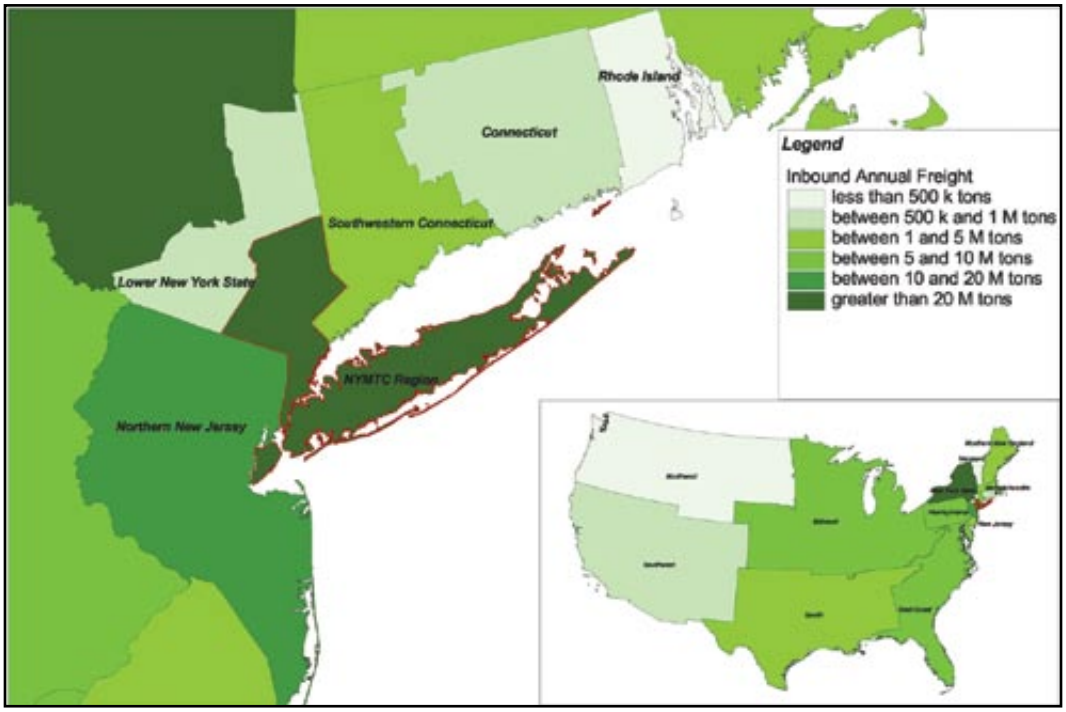
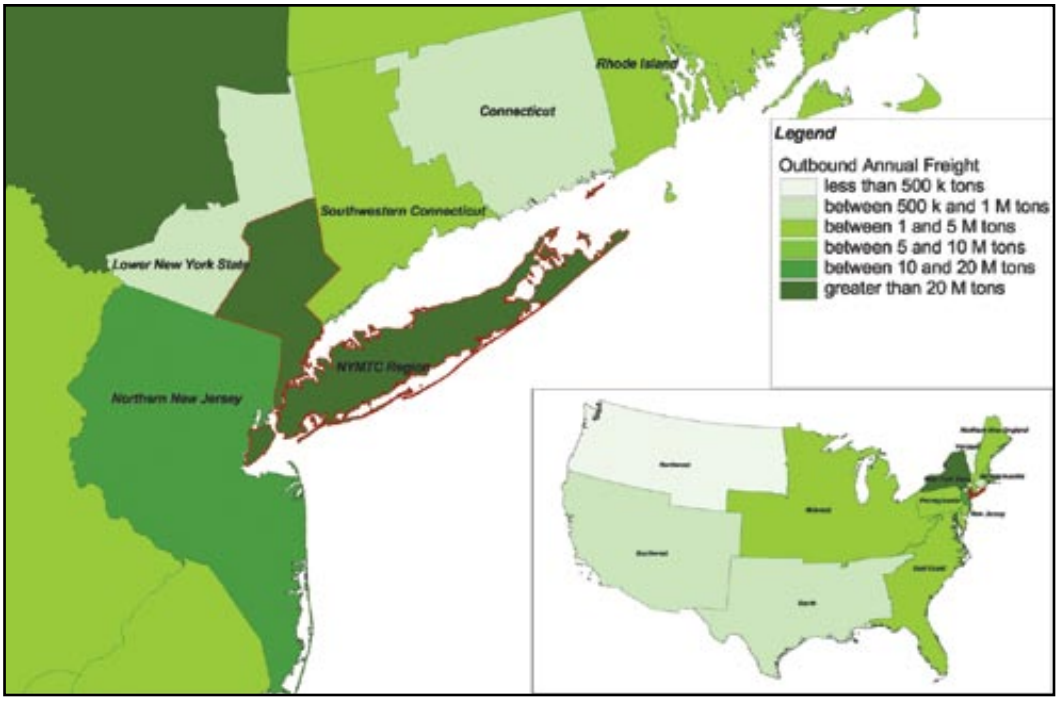


FIGURE 6: Annual Tons of Freight Leaving the NYMTC Region
BY DESTINATION



GETTING THE JOB DONE: HOW FREIGHT IS MOVED

The movement of freight requires an immense support system consisting of ports and warehouses. For the NYMTC region, the largest volume of freight is handled in these facilities, located in New Jersey. The largest and busiest port terminals are located in New Jersey and lastly, New Jersey is home to millions of square feet of warehousing and distribution facilities many of which serve the needs of the NYMTC region.

Moving Freight Intermodally

The key to the efficient movement of freight is using all of the available modes together in a coordinated fashion. This interconnection of modes is known as intermodal transport. Intermodal freight transport utilizes ships, railroads, trucks and barges to move containers and, indeed, trucks themselves, from point to point. Containers are the standard units, being able to be carried on any one of the above modes. Standard linkages on the containers enable this. It is this standardization that allows for, and promotes, the international movement of freight. Almost anything can be carried in a container including food, clothing, electronics, medical supplies, automobile parts and others goods. Whole rail yards are setup solely for the handling of these containers. Once a container reaches a yard, it will be handled from train to truck to ship or any combination of these. The truck and its ability to transport goods to their final destinations, is the basic support for all intermodal transport. The NYMTC region does not currently receive goods directly by intermodal rail. These intermodal rail trips originate all over the country and end at several major intermodal rail terminals in New Jersey. From here, the containers or trailers are offloaded onto trucks bound for the NYMTC Region.

Moving Freight by Warehousing

An essential element supporting the transportation and handling of freight is warehousing and distribution. At some point in the transport of freight it is necessary to store, inventory, and/or repackage goods. A warehouse or distribution facility serves as just such a location, and will typically feature loading docks so that trucks and/or railcars can load or unload into the facility. Modern facilities can cover thousands of square feet, and

unique software is used to track the inventory of products so that nothing gets lost along the way.

Each warehouse or distribution facility works with each transport mode to ensure the expeditious movement and handling of goods. These facilities can be privately owned and used by one single manufacturer or distributor for its own products or they can be a "public facility," which handles freight for a number of manufacturers and distributors.

GETTING THE JOB DONE
Moving Freight by Truck

Truck freight is moved by thousands of common carriers and truck operators and scores of individual companies. Some operators are as small as a single vehicle; while others such as JB Hunt or Werner Transportation operate thousands of trucks across the country. As mentioned previously, trucks carry about 80% of all freight (measured in tons) in the region.

Every mode of freight transportation is tied to a truck trip. Intermodal rail and air cargo would not be possible without trucks. Trucks provide flexibility and low cost transportation.

Trucks utilize specific combinations of highways called corridors, which connect to the local routes that trucks use to reach their origins and destinations. The figure below shows the region's most heavily used corridors and the volume of freight (in tons per year) moved through them. The corridors illustrate the key highways used for freight into and through the region. As shown in the map below, I-95, I-80, and I-278 are the most heavily traveled corridors in the metropolitan region.

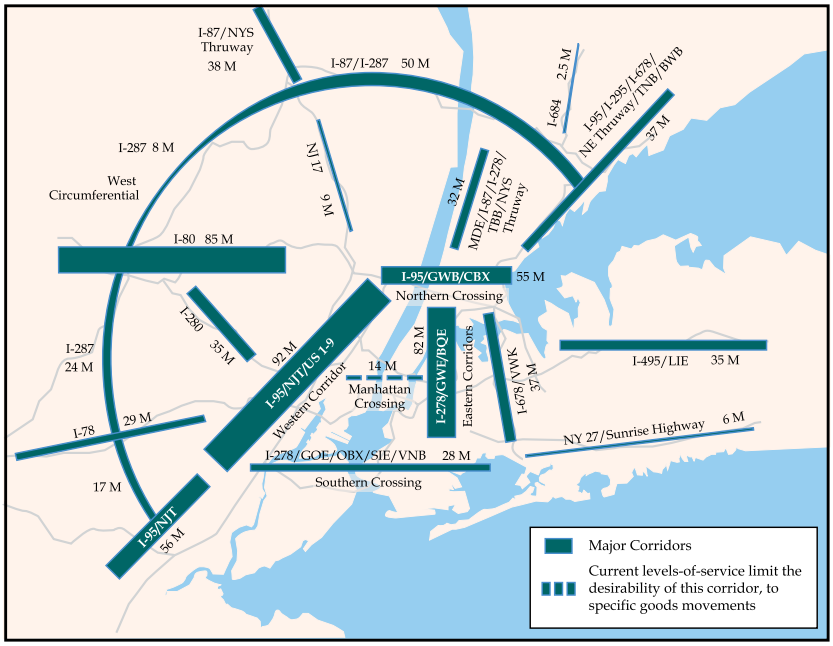
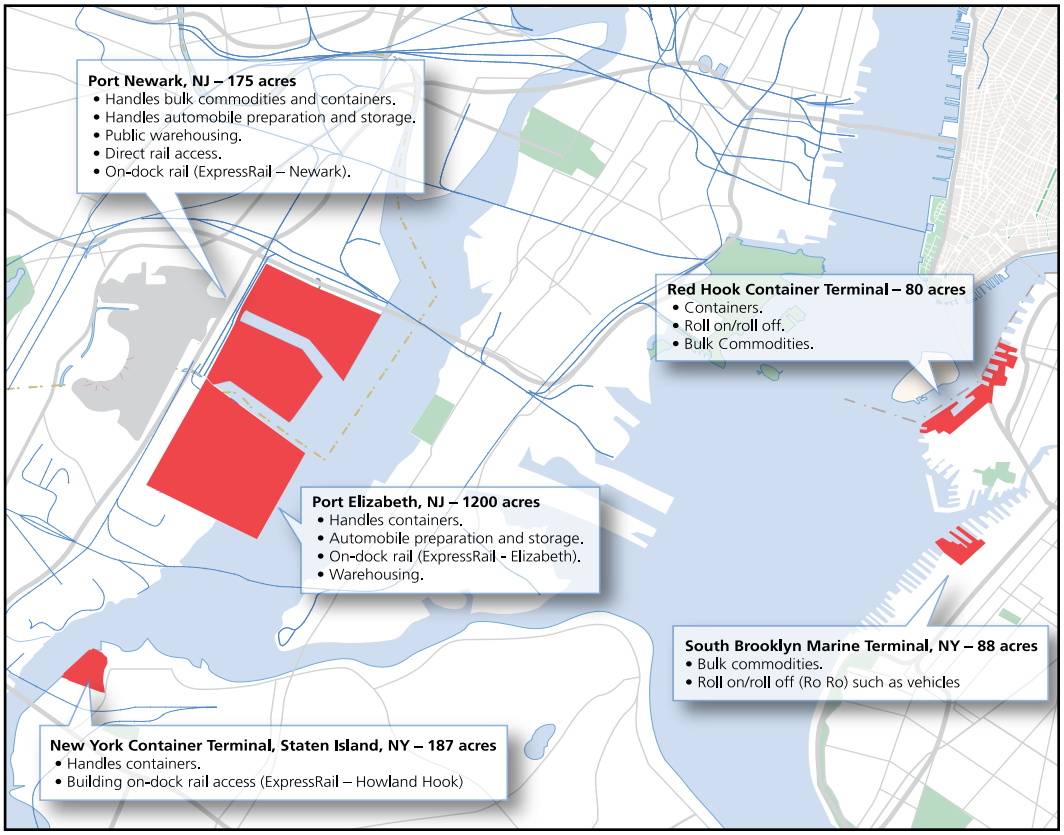


Figure 7: In this figure, the width of each line represents the volume of truck freight that moves along the indicated corridor. This means that the wider the line, the higher the volume of freight traveling along the corridor.

GETTING THE JOB DONE
Moving Freight by Water

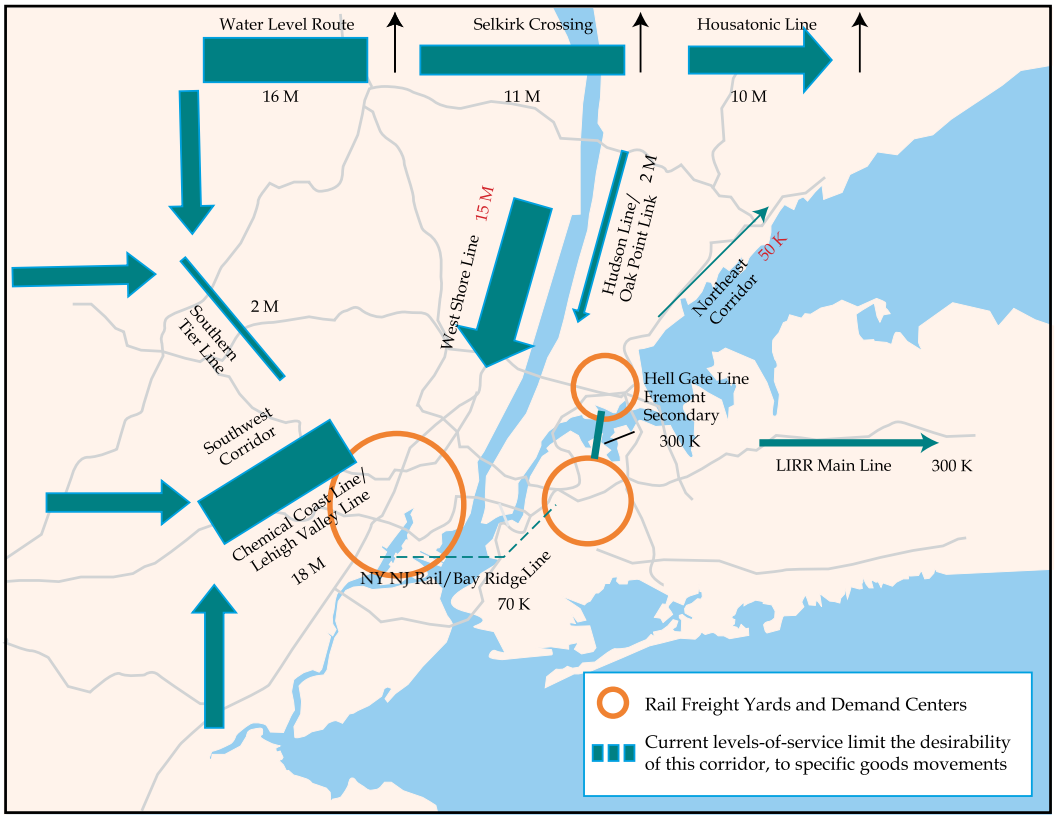
Waterborne freight transportation has a long history in the region, and today accounts for the movement of almost 20 percent of all freight by tonnage. It is facilitated by marine cargo ports, inland waterways, and several hundred wharves and docks scattered throughout the region. Our regional ports work closely with other modes, such as truck and rail, to link local markets with distant locations, such as Western Europe and Asia. Again, this interconnection of modes is known as intermodal transport.

Marine cargo is made up of two main types; 1) the cargo delivered via ocean-going vessels called liners which carry both bulk commodities, vehicles and containers; and 2) barges which carry only bulk commodities, such as stone and fuel. Ocean-going vessels sail to the Port of New York and New Jersey from many international locations, while barges make short trips all around the region and to neighboring regions. The amount of marine system freight moving within and through the bistate region has been growing rapidly; increasing by 8-10% per year over the last several years.



GETTING THE JOB DONE
Moving Freight by Rail

The volume of freight moved by rail is relatively small in the NYMTC region, accounting for 1% by tonnage. Nevertheless, the railroads continue to be a crucial transportation mode as they tend to deliver the building products, lumber, food, stone, and fuel. In addition, many intermodal containers are moved via rail from distant point to terminals in New Jersey and are then transferred to trucks for final delivery to customers throughout the metro region. One challenge to planners is the development of new intermodal terminals closer to the customers in the NYMTC Region, and one such project is described in the 'What Is Planned for the Future' section of this brochure. Several railroads serve the region: CSX Transportation, New York & Atlantic Railway, Canadian Pacific Railway, New York New Jersey Rail and Providence and Worcester Railroad.



The New York and Atlantic Railway (NYA) operates freight service over Long Island Rail Road tracks. This short-line carrier interchanges cars with CSX, Providence and Worcester Railroad and Canadian Pacific Railway at its Fresh Pond yard in Queens.

CSX Transportation provides service over 21,000 rail miles in 23 states, the District of Columbia and 2 Canadian provinces. It provides rail, intermodal and rail-to-truck transload services. It is the largest railroad in the eastern United States. Canadian Pacific provides service over a 14,000 mile network in Canada and the United States. It is headquartered in Calgary, Alberta, Canada. Providence and Worcester Railroad is a regional railroad operat-

ing in the states of Massachusetts, Rhode Island, Connecticut and New York. It covers 545 miles of track.

The NYA also interchanges with New York New Jersey Rail which operates a modest car float service between Greenville, New Jersey and Brooklyn, as well as serving local customers in Brooklyn

Freight railroad routes traverse many parts of the NYMTC region. The map below shows where these routes are and the freight yards and other facilities in the region.

1) Fresh Pond Yard

The yard is comprised of 15 classification tracks covering an area of about 10 acres. Products such as food, lumber and building products, stone, plastic pellets and other products are delivered from here.

2) Oak Point Yard

This facility covers approximately 50 acres with 39 tracks. Railcars arrive here from all points of North America. Food products arrive here in cars destined for the Hunts Point Terminal Market located a short distance away. Some railcars will travel 100 additional miles to rail customers located in places such as Riverhead or Southold, Long Island.

3) Harlem River Transportation and Distribution Center

This facility covers approximately 28 acres. The yard has two sections, one for general freight and another for commercial waste.

GETTING THE JOB DONE
Moving Freight by Air

The air cargo market is made up of freight and mail. Air mail is contracted out by the United States Postal Service (USPS) and travels in the lower deck baggage/cargo compartments of commercial passenger aircraft and on freighters operated by contractors. Air freight refers to all cargo other than mail and passenger baggage. Three types of carriers move air freight: passenger airlines, traditional air-cargo carriers, and integrated air-cargo carriers.

Passenger airlines and traditional all-cargo airlines both provide transport with little through service, although at vastly different scales. The passenger airlines, such as Continental Airlines and Delta Air Lines, emphasize the use of "belly space" on their scheduled passenger aircraft, while the traditional air cargo airlines, such as Kitty Hawk, Polar Air Cargo, and Cargolux, have entire fleets dedicated to air cargo and have few limits on cargo size or type. Some passenger carriers, such as Northwest Airlines, also operate "combis," which are aircraft that are designed to carry a combination of both cargo and passengers on the main deck. Integrated air-cargo carriers such as the United Postal Service (UPS) and Federal Express (FedEx) provide all service from the origin to the receipt point, including ground and air.

Air cargo is totally reliant on the region's highway system. All air cargo is moved by truck either to its final destination or to another airport or distribution center. Two airports in the New York metropolitan area provide commercial air cargo service: John F. Kennedy International Airport and Newark Liberty International Airport. To a lesser extent, LaGuardia Airport (LGA) and Stewart International Airport also provide localized air cargo services.

REGIONAL AIRPORT FACILITIES:

John F. Kennedy International Airport (JFK) is operated by the Port Authority of New York and New Jersey under a lease from the City of New York since June 1, 1947. The 4,930-acre airport is located in the southeastern section of Queens County, on Jamaica Bay. It is the sixth busiest air-cargo facility in the United States, as measured by weight.

Newark Liberty International Airport (EWR) has been operated by the Port Authority of New York and New Jersey, under a lease from the City of Newark since March 22, 1948. The 2,027 acre airport is located in Essex and Union Counties between the New Jersey Turnpike, U.S. Routes 1 and 9 and Interstate-78, about 16 miles from midtown Manhattan.

LaGuardia Airport (LGA) has been operated by the Port Authority of New York and New Jersey under a lease from the city of New York since June 1, 1947. LaGuardia Airport is located in the Borough of Queens, New York City, bordering on Flushing Bay and Bowery Bay. It is eight miles from midtown Manhattan and covers 680 acres.

Stewart International Airport (SWF) is located in New Windsor, in Orange County, New York, approximately 55 miles north of New York City, situated at the intersection of the New York State Thruway (I-87) and Interstate 84. It services the New York State Mid-Hudson/Catskill Region and Bergen, Morris, Passaic, and Sussex Counties in New Jersey; Pike County in Pennsylvania; and Fairfield and Litchfield Counties in Connecticut. The airport is approximately 2,220 acres in size.

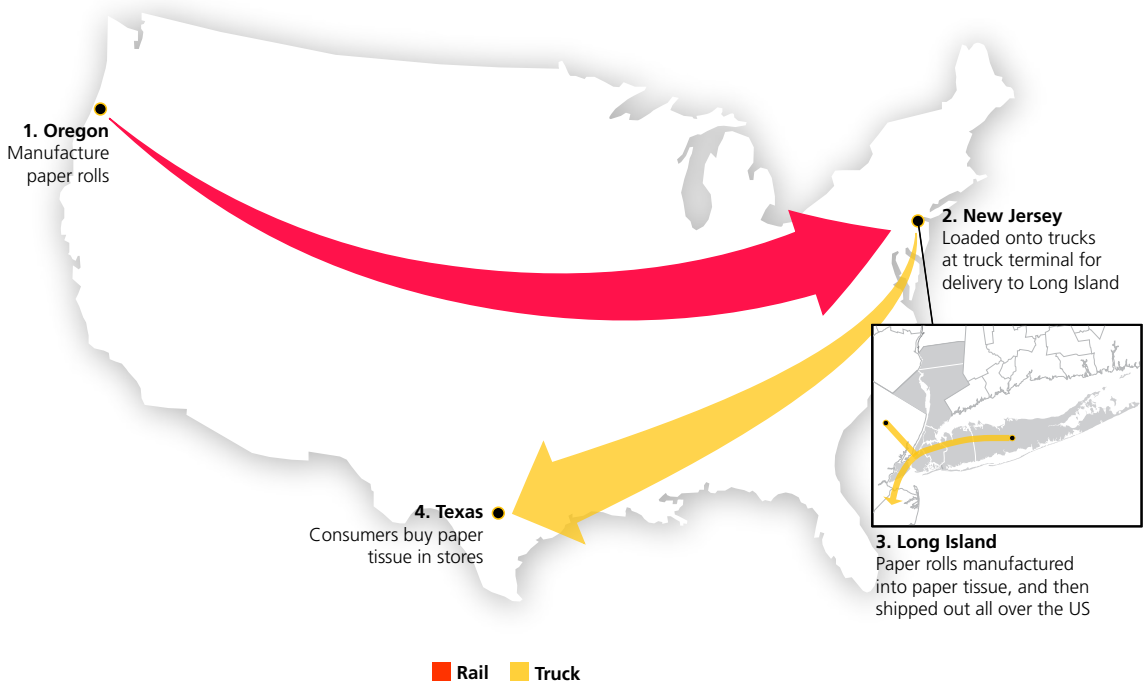
TRACKING THE MOVEMENT OF FREIGHT
The Journey of an iPod across the World

The following is an example of how freight transportation occurs between different kinds of carriers. When a commodity travels via several modes, it is called intermodal freight transportation. An example of this is an iPod whose voyage can be traced from China to your local retailer.

TRACKING THE MOVEMENT OF FREIGHT
The Paper Tissue Story

Another example of the complex path that commodities travel is the movement of paper tissue from the paper mills in Oregon to your neighborhood convenience store.

1) The paper rolls are manufactured in Oregon and then loaded onto train cars to be transported across the United States to an intermodal facility in New Jersey.
2) In New Jersey, the rolls are transferred from the train cars onto trucks and delivered to a paper plant in Long Island, NY.
3) At the plant in Long Island they are manufactured into paper tissue and other paper products and distributed all over the country by truck.
4) Below we can see the long trip the paper tissue takes by truck from Long Island to Texas.



The paper rolls are transported by rail because the large size and immense weight of the rolls makes rail the cheapest, most feasible option. Once the paper has been converted into paper tissue, however, it is widely distributed in smaller quantities which weigh less. This makes trucking a much more viable and cost effective mode of distribution for the tissue.

WHAT IS PLANNED FOR THE FUTURE?

Freight transportation is a concern at three levels; federal, State and local. The federal government, through federal law known as SAFETEA-LU or Safe, Accountable, Flexible and Efficient Transportation Equity Act-Legacy for Users, provides guidance, funding and expertise to other government units to improve transportation operations and infrastructure. The State of New York also provides planning guidance and funding for freight and passenger transportation.

The purpose of the New York Metropolitan Transportation Council (NYMTC) Regional Freight Plan is to develop a roadmap for the improvement of freight transportation in the NYMTC region. The plan presents a wide range of strategies and actions that include capital projects, operational improvements, and policy changes. The Regional Freight Plan Project was intended to achieve the following goals for the improvement of freight transportation. It is intended that these goals be achieved in ways that protect the interests of communities throughout the region:

- To improve the transportation of freight by removing burdensome government regulations and restrictions;
- To improve the physical infrastructure of the transportation system for freight-related transport among shipping and receiving points, and major terminals and ports;
- To improve the reliability and overall movement of freight in the region by encouraging expedient and cooperative multimodal shipment of freight;
- To improve the reliability and overall movement of freight in the region by expanding alternatives for trucks and other commercial vehicles; and
- To improve the freight system's strategic redundancy (NYMTC and other agencies currently are addressing this goal in other studies).

In general, the NYMTC region's freight system serves admirably to move the large volume of goods needed to keep the nation's largest regional economic engine running. However, those who reside and do business in the region face high levels of traffic congestion. This congestion impacts the predominant mode of freight travel in the region – trucks. As residents, this increases their cost of living. As businesspeople, this forces them to pay more for freight services. There are a number of specific issues that, in aggregate, create less than efficient conditions to move freight. The five deficiencies identified below relate to broad regional issues, specific bottlenecks, or detailed terminal interconnections at particular facilities.

1. **Lack of Coordination** – Historically, freight transportation has evolved around independent modal networks, each competing with others in a redundant and often destructive manner.
2. **Modal Dependence** – The region is dependent on a highway infrastructure that is subject to tremendous congestion at all times of the day.
3. **State of Infrastructure** – Freight movements over both rail and highway systems are restricted by inadequate dimensional envelopes to prevent rail cars and trucks from moving in the most logical and expedient fashion.
4. **Operational Limitations** – Truck access is hampered by a highway system that is not always contiguous for commercial vehicle movement, while freight trains must share publicly owned and intensively used passenger rail lines.
5. **Economic Challenges** – These deficiencies inflate the price of goods and services, impacting business locational decisions, reducing the profitability of existing companies, and otherwise sapping the region's economic vitality.

The NYMTC Freight Plan cites numerous initiatives by member agencies and local governments that address elements of these issues, often with broader benefits beyond the goods movement industry. The region's current transportation agenda reflects greater attention to essential freight needs. Freight-related initiatives within and adjacent to the NYMTC region also suggest an emerging set of strategies that, taken together, can result in more reliable goods movement and more options for shippers in the years to come. In addition, there is a growing emphasis on inter-agency planning and partnering. Key themes include the following:

Trade Corridors and Gateways: NYSDOT's recently completed statewide Master Plan introduces a concept of "Trade Corridor" routes identified as priorities where multi-modal strategies are expected to enhance reliability and capability to handle forecast increases in freight volumes. The NYS Thruway, I-95, upstate rail freight access, and highway access for

JFK cargo shipments are highlighted in the NYMTC region. The recently completed multi-agency Comprehensive Port Improvement Program (CPIP) provides a blueprint for improving container terminal facilities in the bi-state harbor and managing landside access by road, rail, and waterborne connections.

Improving the Regional Highway Network: NYSDOT has advanced rehabilitation projects for many of the aging interstate highway segments in the NYMTC region. Infrastructure rehabilitation and replacement comprise the largest portion of State DOT's Capital Program in NYC. In addition, State DOT has undertaken detailed planning studies for major freight corridors including the Cross Bronx-Major Deegan expressways, the Gowanus Expressway, and Long Island highways. Two major bridges on important freight corridors (I-278/I-287) are under study for rehabilitation or replacement: NYSDOT, the NYS Thruway Authority and the MTA's Metro North Railroad are evaluating project alternatives at the Tappan Zee Bridge. The Port Authority of New York and New Jersey is seeking federal permits for replacement of the functionally obsolete Goethals Bridge, part of the 'Southern Gateway' highway corridor serving Staten Island and regional travelers.

Expanding Rail Freight Service: NYSDOT is sponsoring local rail access and clearance improvements in the NYMTC region, and planning for a new intermodal terminal at the Pilgrim State Hospital site on Long Island. Railroads using the Hudson River Line between NYC and Albany have prepared a joint assessment and phased capital plan to accommodate increased freight and passenger service on this route. NYC's Economic Development Corporation and the Port Authority are making coordinated investments to restore attractive mainland rail freight connections to Staten Island, serving the container port at Howland Hook, an adjacent intermodal yard, and other borough sites.

Addressing Regulatory Issues: NYCDOT is soliciting public and agency comments on recommendations drawn from a comprehensive study of truck routes in the five boroughs. The draft study calls for comprehensive signage improvements, expanded information for commercial-vehicle operators, and potential adjustments in regulations and routing to safely accommodate industry-standard tractor-trailers serving key distribution centers and freight gateways.

Exploring Waterborne Options: Entrepreneurs and public agencies continue to examine the potential for shifting some freight movement to short-haul barges or other waterborne vessels. The Bridgeport Port Authority is planning a container barge service in partnership with PANYNJ to link that Connecticut city with marine terminals in the bi-state harbor. NYMTC's Long Island Sound Waterborne and Hunts Point Freight Ferry studies assessed potential freight ferry markets. Private operators are evaluating the potential of transporting some air cargo to and from JFK International Airport via water.

Mitigating Environmental and Community Impacts: Heightened concerns about the environmental effects of increasing freight volumes have prompted public agencies and businesses to focus on ways to control these and other emissions from freight transportation sources, particularly diesel engines. One program working to reduce diesel emissions from a variety of sources, including freight transportation, is the National Clean Diesel Campaign (NCDC). NCDC works vigorously to reduce the pollution emitted from diesel engines across the country through the voluntary implementation of varied control strategies and the aggressive involvement of national, state, and local partners. Under the umbrella of the NCDC, the Northeast Diesel Collaborative (NEDC), which includes the eight northeast states from New Jersey to Maine, builds upon the success of its partners in reducing diesel emissions through innovative projects and voluntary measures, which focus on the primary sectors contributing to diesel emissions in the Northeast. Among the priority sectors identified by the NEDC is the freight sector. NEDC is an ideal vehicle for improving efficiency and reducing emissions from the freight sector in the Northeast, especially in the NYMTC region.

An important voluntary measure which has demonstrated success in the freight sector is the SmartWay[SM] Transport Partnership. This program is designed to increase energy efficiency while significantly reducing greenhouse gases and air pollution from freight transportation sources. SmartWay Transport Partners lead the way towards a cleaner, more efficient transportation future by encouraging fuel-saving strategies that increase profits and reduce emissions. By 2012, this initiative aims to reduce between 33 - 66 million metric tons of carbon dioxide (CO2) emissions and up to 200,000 tons of nitrogen oxide (NOx) emissions per year. At the same time, the initiative will result in fuel savings of up to 150 million barrels of oil annually. Value-pricing toll structures in place at the Port Authority's interstate crossings and the Tappan Zee Bridge encourage off-peak travel by trucks as well as autos to ease congestion during the busiest hours for commuting.

Beyond these efforts, the region continues to examine long-term strategies for rationalizing regional goods movement. These range from the proposed cross-harbor rail freight tunnel to suggestions for truck-only lanes on key freight corridors. Planners in the NYMTC region and in New Jersey are exploring potential advantages of "freight villages" and other concepts that link freight-dependent land uses with local transportation access improvements.

GLOSSARY OF TERMS

Additional definitions can be found on the NYMTC Website

53' Tractor-trailer	A truck trailer used for freight, whose standard length is 53 feet. These are generally not legal on the arterial streets of New York City.
Arterials *Arterial Highway* *Arterial Route*	A main road or channel with many branches off of it.
Cargo	Goods carried by a truck, ship, train, or plane.
Carrier	An individual or organization that deals in the transport of people or goods.
Clearance *Overhead* *Vertical* *Lateral* *Doublestack*	The amount of space or distance by which a moving object clears something; overhead clearance is the space above the object as it passes under an overpass or a bridge; vertical clearance is the distance from the ground to the bridge or overpass; lateral clearance is the distance from side to side; doublestack clearance is the clearance necessary for a doublestack rail freight car to pass through (see "Railcar").
Commercial Vehicle	Any motor vehicle, other than a passenger vehicle, which is designed, used and maintained for the transportation of persons or property for hire, compensation, profit, or in the furtherance of a commercial enterprise
Commodities	Goods which are bought and sold; an article of commerce.
Congestion	A state of flow on a road or highway in which movement is restricted due to the high presence of other vehicles.
Connectivity	The extent to which a system facilitates connections between modes.
Container	A rectangular storage unit commonly used to transport goods in a process called intermodal.
Curbside Capacity/Space	The amount of space available at the curb of a street used for commercial vehicles to load and unload goods.

Dense Trade Clusters	Areas where trade industry is concentrated so as to reduce the amount of vehicle miles traveled and therefore reduce congestion and emissions.
Expressways	A major arterial used for high-speed vehicle travel.
Fleet	A group of transport vessels operated by a single organization.
Floats/Float Operations	Terms used to describe the movement of rail cars across water.
Freight	Commercial goods generally transported by truck, train, ship, or airplane; cargo.
Freight Facility	A space designed to facilitate the storage, transfer, and or transport of freight.
Freight Volume	The quantity of freight shipped through a given area; usually measured in tons per day/month/year.
Freight Yard	A railroad facility where freight cars are assembled or reassembled into trains; also applies to railroad facilities engaged in intermodal freight transfers.
Idling Reduction	A program of emission reduction utilizing external facilities allowing the electric operation of the auxiliary components of a truck without engaging the engine or battery.
Intermodal	A single shipment of goods utilizing several modes of transportation combined with the connections between them.
ITS *Intelligent Transportation System*	An information sharing technology integrated into the transportation system infrastructure, and in vehicles themselves, to help monitor and manage traffic flow, reduce congestion, and provide alternate routes to travelers.
Loading Zones	Curbs designated in urban areas specifically for the use of loading and unloading commercial motor vehicles.
Mobility	The degree of ease with which people and freight can move through the transportation system.

Modes	The various methods by which people and goods can be transported.
Mode Share	The share of a given transportation method's use out of all methods used; usually measured in percentages.
Parkways	A major arterial used for high-speed vehicle travel restricted to passenger vehicles only.
Port Inland Distribution Network	The quick movement of primarily containerized fright to locations away from the port at which it arrived.
Railcar *Boxcar* *Flatcar* *Well Car*	A vehicle with flanged wheels that is designed to carry freight along a guideway composed of steel rails; a boxcar is a rectangular, roofed freight car usually with sliding doors, used for the transport of general freight; a flatcar is a freight car consisting of a flat platform onto which containers or other large items are loaded and then fastened; a well car is a specialized railcar that is essentially a platform with short sidewalls onto which containers or truck trailers are loaded.
Right-of-Way	A tract or series of contiguous tracts of land designated for specific transportation uses; i.e.: a rail line, roadway, or utility line.
Station	A facility along a rail line for the loading or unloading of passengers and goods
Terminal	A passenger or freight facility which constitutes the final rail destination for a specific train and may include intermodal capabilities
Transloading Facilities	A facility where bulk commodities can be loaded from one mode of transportation to another, for example from a barge or a train to a truck.
Trip *Warehouse or Distribution* *Core* *Through* *Interplant*	The transport by truck of goods between various places; a warehouse trip is the distribution by truck of goods from a warehouse or distribution facility to the delivery site; a core trip is the distribution of goods a truck makes within the urban core; a through trip is the movement of goods through a region without stopping in the region; an interplant trip is the transport of materials between facilities.
Truck Trailer	The portion of a tractor-trailer that is the platform upon which cargo is loaded and towed by the truck.

WHERE TO FIND MORE INFORMATION

Planning and Understanding Freight

NYMTC Website
www.nymtc.org

NYMTC Regional Freight Plan
http://webservices.camsys.com/nymtcfreight/

Federal Highway Administration
http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf/index.htm

Glossary of Freight Terms
www.nymtc.org

Periodicals

Traffic World
http://www.trafficworld.com/index.asp

Facilities

Port Authority of New York & New Jersey
http://www.panynj.gov/

Freight Operators

Trucking

American Trucking Association
http://www.truckline.com/index

NYS Motor Truck Association
http://www.nytrucks.org

Railroads

CSX Transportation
http://www.csx.com/?fuseaction=general.main

New York and Atlantic Railway
http://www.anacostia.com/nyar/nyar.html

Marine

Marine Columbia Coastal Group
http:// www.columbia-costal.com

Environment

North East Diesel Collaborative
http://www.northeastdiesel.org

SmartWaySM Transport Partnership program
http://www.epa.gov/smartway/index.htm

Data

NYMTC Website (under data services)
www.nymtc.org

Questions or comments?
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NOTES

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