

Delivering Green:

A vision for a sustainable freight network serving New York City



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NYC / EDC



Introduction

Freight transportation is an integral and inescapable part of New York’s economy, moving everything from cookies to concrete, employing thousands of New Yorkers, and meeting the needs of residential and commercial neighborhoods alike. Nearly all of the food in our refrigerators, the paper in our printers, and the souvenirs in our shops are moved through the five boroughs at some point as freight.

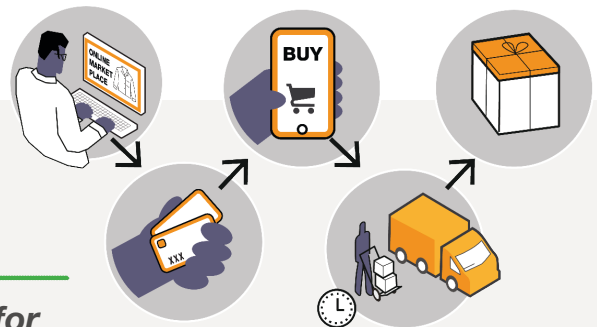
New York City’s population is expected to reach 9 million people by 2040, and this growth will bring increasing residential and commercial freight demand. Even before the COVID-19 pandemic changed our shopping habits, the rise of e-commerce was already leading to an unprecedented surge in freight activity.

Today close to 90% of the City’s goods are moved into and around the city by truck—the result of the shift from rail and water networks to highways in the second half of the twentieth century. Now, our dependency

on trucks to meet an increasing demand for goods exacerbates traffic congestion, pollutes our air, stresses our aging infrastructure, and harms the quality of life in our residential neighborhoods.

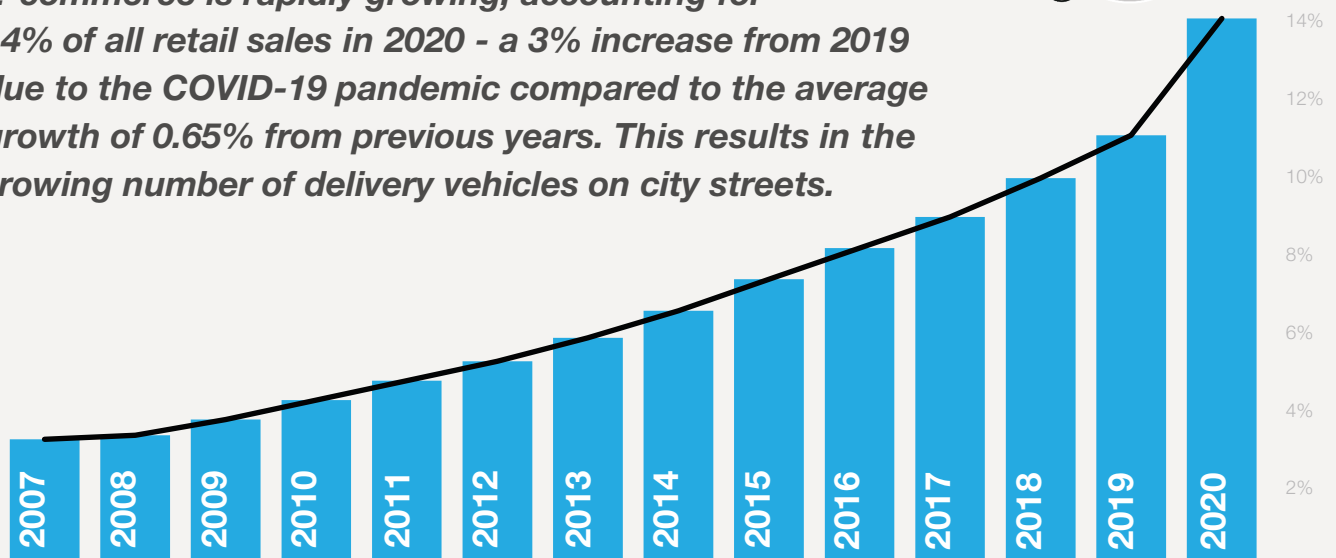
Heavy-duty diesel vehicles are responsible for roughly half of on-road tailpipe emissions in New York City, while only representing a fraction of total vehicle activity. These truck emissions have disproportionate health effects on environmental justice communities. Climate impacts from truck emissions are also substantial, with older diesel trucks emitting high levels of black carbon, a potent short-lived climate pollutant.^[1]

Earlier estimates projected regional freight movement growth of 67% between 2012 and 2045^[2], yet since January of 2020, The NYC Department of Transportation (NYC DOT) estimates that freight traffic across the Hudson River has already increased by over 50%.



Growing Demands for E-Commerce

E-commerce is rapidly growing, accounting for 14% of all retail sales in 2020 - a 3% increase from 2019 due to the COVID-19 pandemic compared to the average growth of 0.65% from previous years. This results in the growing number of delivery vehicles on city streets.



Data Source: Retail Indicators Branch, U.S. Census Bureau



Absent a rethinking of our freight network, the increasing volume of the freight being carried into the city will result in tens of thousands more trucks crossing into the city every day, while the city’s network of streets and bridges will remain fixed.

This future is simply untenable—for our communities, our streets, and our environment.

This vision document lays out five bold steps the city will take to fundamentally restructure freight distribution and create a sustainable system for getting goods where they need to go.

The City is committed to bold action to make our freight system more sustainable and efficient. NYC DOT and the NYC Economic Development Corporation (NYCEDC) are committed to encouraging greener and more efficient truck deliveries, increasing the share of goods moved by water, rail, and cargo bicycles, and supporting innovation and new technologies to make freight movement more efficient.

The 2021 federal Bipartisan Infrastructure Law includes over \$150 billion in federal funding over the next five years that can support these initiatives. This is a once-in-a-generation opportunity for the City of New York to compete for federal funding on a size and scale that could have transformational impacts on how goods are moved into, out of, and around the five boroughs.

The City intends to seek federal funding for critical freight projects over the next 5 years and beyond. With the appropriate funding and support, the transformative freight solutions highlighted here will have enormous impacts on freight mobility in New York City. They will put the city on a path towards a safer, more responsible, sustainable, and efficient freight system that grows the economy, supports freight-related jobs, and delivers the goods that residents and businesses need.

Both agencies are pursuing a robust set of initiatives, as laid out in NYC DOT’s *Delivering New York: the Smart Truck Management Plan* and NYCEDC’s *FreightNYC*. This document serves as a bridge between these efforts and articulates a joint vision—one that we hope to advance with new resources made available by President Biden’s ambitious infrastructure plan.



This plan is centered on five key goals:

Goal #1:

Make the Last Mile More Efficient

Goal #2:

Green the Last Mile

Goal #3:

Create a Culture of Compliance

Goal #4:

Shift Freight from Road to Water

Goal #5:

Shift Freight from Road to Rail



Goal #1: Make the Last Mile More Efficient

Every day in New York there are thousands of trucks delivering packages to homes and businesses. This “last mile” of the journey is often challenging—trucks are slowed by traffic congestion and struggle to find curb space to load and unload, costing the industry time and money. Making the last mile delivery more efficient will reduce costs for the industry while lessening the burden that trucks place on our communities.

NYC will promote Off Hour Deliveries, expand Neighborhood Loading Zones, and develop urban consolidation and micro-distribution approaches.

Retiming Deliveries: Trucks most often make their deliveries to businesses during the middle of the day when streets are congested and demand for space at the curb is at its highest. Shifting commercial deliveries to the evening and overnight hours can help reduce traffic and double parking, while also reducing costs for shippers. NYC DOT’s Off-Hour Deliveries (OHD) program provides technical assistance to freight receivers and shippers to help them shift deliveries to off-peak hours. To date, the agency has enrolled close to 1,150 locations and has secured \$6 million in federal funding for the program. In creating the program, NYC DOT conducted a survey of freight transporters and receivers to better understand the financial and

logistical reasons behind how and when deliveries are made and developed its branding, media plan, and program based on this research.

- DOT aims to enroll 1,500 OHD locations by the end of 2021 and another 1,000 locations by 2026.
- **NYC DOT proposes to scale up the program by providing incentives to participants to enroll, such as funding for building retrofits to facilitate unattended deliveries or for installing low noise equipment for delivery vehicles. This would enable the agency to get to 5,000 locations by 2040, shifting a total of 62,000 trucks away from driving into the city during peak hours daily. The City intends to seek federal funding to support this initiative.**

Reduce Truck Traffic in Residential Neighborhoods: Congested neighborhoods have a high delivery demand and often lack loading docks for trucks. The impact of delivery vehicles in these areas can be mitigated through the implementation of urban consolidation centers, voluntary vendor programs, and the timing of delivery activity. By removing the “last mile” truck delivery from the logistics chain, off-street consolidation helps to reduce roadway congestion and competition for curb access and deliveries during the most congested times of the day.



- NYC DOT is partnering with the private sector to promote vendor procurement consolidation programs and evaluate shared use lockers technologies.
- NYC DOT will also collaborate with NYCEDC, the NYC Department of City Planning (NYC DCP), and other city agencies to explore creating urban consolidation centers through Public Private-Partnerships (P3) and to advance other freight supportive strategies.
- **The City proposes to facilitate the research, development, and implementation of urban consolidation programs. Evidence from European cities suggests that consolidation centers can reduce delivery traffic at the final delivery point by up to 70%.^[3] The City intends to seek federal funding to support this initiative.**

NYC DOT is working with the New York City Council on legislation to facilitate the establishment of micro-distribution centers that would encourage last mile deliveries by zero emission vehicles.

Increase Curb Space for Residential Deliveries:

Neighborhood Loading Zones (NLZ) provide flexible curb space for deliveries and personal vehicle or for-hire vehicle access. NLZs reduce double parking by up to 70% while creating a safer and more efficient environment.

- NYC DOT will expand the popular NLZ Program to accommodate the growing market share of residential e-commerce deliveries, planning for a total of 1,500 NLZ locations by 2040.



Goal #2: Green the Last Mile

Conventional, diesel-fueled trucks have a considerable impact on the environment. They contribute significantly to the production of both greenhouse gas emissions and fine particulate matter (PM), which is a significant contributor to respiratory disease. The EPA estimates that about 29% of total greenhouse gas emissions in the nation annually comes from transportation sources, with medium and heavy-duty trucks making up 24% of that sector^[4]. A 2016 study found that 27% of primary PM 2.5 emissions regionally come from heavy duty vehicles, and estimated that PM 2.5 pollution from traffic sources contributed to 320 premature deaths and 870 emergency department visits and hospitalizations each year.^[5]

NYC will support the transition to zero emission truck fleets, help shift goods off trucks and onto commercial cargo bicycles, and explore other sustainable small delivery approaches.

Increase Sustainable Small Delivery Methods:

NYC DOT's Commercial Cargo Bicycle Pilot program shifts deliveries from truck to bicycle to reduce double parking and air pollution while enhancing traffic safety. Enrolled companies can use bicycles to load and unload wherever commercial vehicles can and at designated cargo bike corrals, both free of charge. NYC DOT is also examining future and emerging technologies and regulation reform to support other sustainable small delivery methods.

NYC DOT is currently engaging with the trucking industry to learn more about their attitudes toward the use and adoption of electric vehicles for deliveries. NYC DOT will use this knowledge to launch a Green Loading Zone pilot in spring 2022 that will prioritize curb access for low and/or zero emission vehicles.

- NYC DOT is creating a permanent cargo bike program through the promulgation of rules allowing for a permit system, with a goal of growing enrollment from 350 bikes in 2021 to 2,500 bikes by 2026.
- **NYC DOT proposes to promote and incentivize the switch to cargo bikes for deliveries in NYC, aiming to shift 25% of last-mile freight deliveries from trucks to small, sustainable delivery methods by 2040. Each cargo bike generates annual CO2 savings of approximately 7 tons, equivalent to over 100 planted trees, or 15,000 passenger car miles traveled. The City intends to seek federal funding to support this initiative.**
- NYC DOT will also work with NYCEDC to explore multimodal freight operations at underutilized landings, looking to support barge and/or freight ferry to cargo bicycles and other sustainable delivery methods.
- **NYC DOT proposes to pursue ferry dock infrastructure upgrades necessary to institutionalize this sustainable method of transloading. The City intends to seek federal funding to support this initiative.**





Replace Dirty Trucks Serving Industrial Business Zones:

NYC DOT's Clean Trucks Program promotes a cleaner environment by offering incentives to truck owners to replace their old polluting vehicles with cleaner new ones. The incentives offset the cost of alternative fuel trucks and exhaust retrofit technologies. To date, the program has successfully replaced, retrofitted, or scrapped 649 older heavy polluting diesel trucks servicing the Hunts Point Food Distribution Center, helping to improve air quality in the South Bronx, reducing particulate matter emissions from these trucks by 96%. The effort also supports Vision Zero by installing truck side guards.

- NYC DOT is expanding the Clean Trucks Program to all Industrial Business Zones Citywide to replace an additional 200 trucks.
- **NYC DOT proposes to expand the Clean Trucks Program to cover as many as another 1,000 trucks by 2030. The City intends to seek federal funding to support this initiative.**

Replace Dirty Refrigeration Units: Food and other sensitive products such as pharmaceuticals must be transported at cool temperatures in special trucks with diesel-powered truck refrigeration units (TRUs). While smaller than truck engines, TRUs produce significant volumes of pollutants. As part of a pilot program, NYC DOT supported the replacement of 68 diesel TRUs with electric or hybrid units within the Hunts Point Food Distribution Center, drastically reducing the amount of emissions.

- DOT will launch a citywide inventory survey of TRUs.
- **NYC DOT proposes to expand the NYC TRU replacement incentive program to replace more stationary Tier 0-3 TRU diesel engines to meet current emissions standards citywide.^[6] The City intends to seek federal funding to support this initiative.**

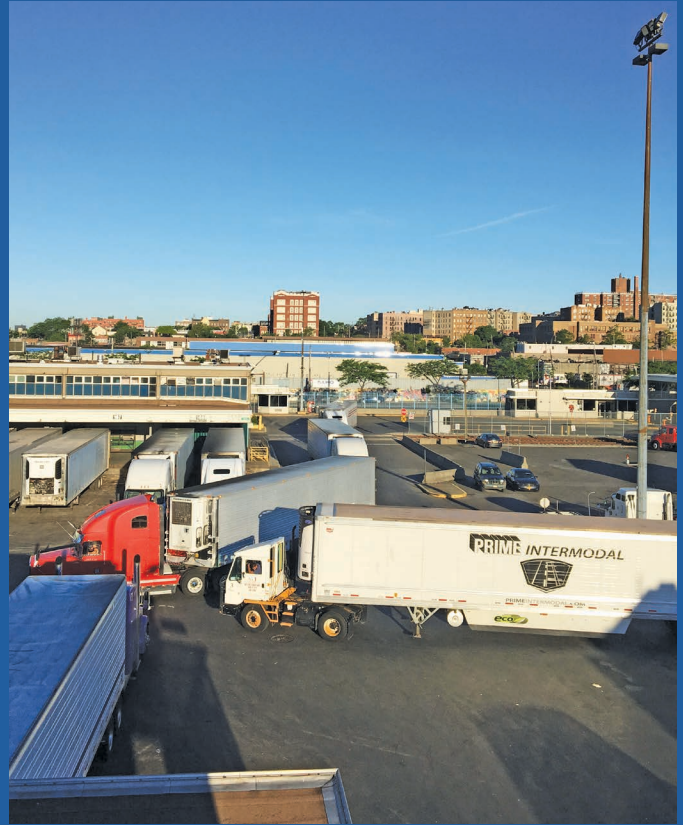
Accelerating the adoption of alternative fuel and zero-emission trucks is vital to the City's goal of achieving carbon neutrality by 2050.

Electrify Trucks: NYC DOT has set ambitious targets for light duty vehicle electrification, which are a major source of greenhouse gas emissions. Electrifying medium- and heavy-duty vehicles is also important to achieving the City's goal of carbon neutrality by 2050.

- NYC DOT and NYCEDC are developing a Citywide Freight Decarbonization and Truck Electrification Strategy to explore the barriers to truck electrification and to develop strategies to address these challenges.
- **NYC DOT proposes to install a network of up to 100 truck chargers by 2026 and NYCEDC proposes to install EV Chargers at the Hunts Point Food Distribution Center. The City intends to seek federal funding to support this initiative.**

Hunts Point Produce Market Redevelopment

NYCEDC is committed to the reconstruction of a new produce market facility, with modern, temperature-controlled warehouse space and improved site circulation, to better suit the needs of its vendors and purchasers and to better comply with regulatory requirements and industry standards. The new market will move produce more efficiently, support electric truck charging, improve existing rail service and reduce onsite congestion, idling, and VMTs. The facility's expanded warehouse capacity will eliminate the use of over 1,600 diesel-powered refrigerated trailers that currently run 24 hours per day on site, providing additional cold storage space. The redevelopment of the Produce Market will reduce emissions in an Environmental Justice community and serve as an archetype for urban food distribution. NYCEDC is requesting federal, state, and city funding to support the project.



Goal #3: Create a Culture of Compliance

Federal, state, and local regulations for trucks are intended to ensure the safe operation of trucks in the city, reduce truck intrusion into residential neighborhoods, and protect unique and aging infrastructure. It is important that truck drivers observe these rules and regulations for their own safety and the safety of all road users. However, state and local enforcement cannot catch all violations of truck rules, and New York City's highway network presents operational challenges to law enforcement personnel with limited available space to safely conduct truck stops. Therefore, leveraging enforcement and supporting technologies are essential to fostering a culture of compliance with NYC truck route rules and regulations.

NYC DOT will seek federal funding to implement technology and for education and outreach to improve truck rule compliance.

The useful life of pavement can be reduced by up to 25% if just 1-3% of trucks are overweight. Using Weigh In Motion technology, NYC DOT has observed as many as 15-20% of trucks being overweight.

Increase Compliance with Truck Weight and Route Restrictions: Both the City and State issue oversize and overweight permits for the routing of overweight loads on roadways under their jurisdiction. NY State issues divisible loads permits, and, pursuant to State law, the City has grandfathered divisible overweight permits since the 1980s, of which there are a limited number in use today. The lack of uniformity in regulations creates inconsistencies and challenges in moving freight in an efficient manner.

By seeking legislative reforms to level the playing field and then increasing enforcement of overweight rules, the City will be better able to protect our infrastructure and make our streets safer.

- NYC DOT is pursuing legislative reforms to the antiquated laws on overweight permits in order to level the playing field for the trucking industry and will seek to expand automated enforcement authority to size, weight, and truck route rules.
- NYC DOT is installing "weigh-in-motion" (WIM) technology to monitor overweight trucks on the BQE.



- **NYC DOT proposes to build out a WIM network citywide by 2040 of up to 50 locations to inform and potentially enforce truck rules and regulations governing size, weight, and routes. The City may seek federal funding to support this initiative.**

Expand Automated Data Collection and Camera Enforcement for Truck Rules: Emerging management technologies including pay by-plate meter systems, license plate recognition, and virtual permit systems offer tools to keep pace with the changing landscape of transportation mobility. These tools enhance the efficiency of parking enforcement, help better manage and understand parking activity in dense areas, and control the needs of special use permitted vehicles.

- NYC DOT is seeking state authorization to expand automated camera enforcement of traffic and parking rules related to the safe and efficient movement of goods.

- **NYC DOT proposes to install technology to enable more detailed and continuous data collection, which could lead to more automated enforcement and even real-time curbside space information for truck drivers. The City intends to seek federal funding to support this initiative.**

Promote a Safe Driving Culture through Industry Engagement and Education: The City recognizes that the industry is a vital partner in achieving all of our freight goals, and that compliance requires sound public policy, industry buy-in, and awareness at all levels of the supply chain.

- NYC DOT will continue to meet regularly with public and private sector stakeholders, including a Freight Advisory Committee (FAC).
- **NYC DOT proposes to conduct education, outreach, and awareness campaigns that promote a safe driving culture among all levels of the trucking industry. The City intends to seek federal funding to support this initiative.**



Goal #4: Shift Freight from Road to Water

New York Harbor is the largest port on the U.S. East Coast, making it a primary gateway for international maritime cargos that go to regional distribution centers before entering the consumer market. Due to policy choices made in the middle of the last century to rely on trucking, there is no active maritime service that moves consumer goods directly into the NYC boroughs.

Prior to the construction of bridges and tunnels that lead to a reliance on trucking, New York Harbor was filled with “lighterage” services that moved goods from multiple points along the New York and New Jersey waterfront by barge. Similar to reactivation of passenger ferry services, the city’s growth creates an opportunity and a need for waterways to become active for moving intra-harbor freight again.

This approach will leverage the City’s network of maritime infrastructure to create opportunities for shippers to bring a multitude of freight, such as shipping containers, truck trailers, palletized cargo or even cargo-laden bicycles, to city marine terminals. Such a system could support a local inter-borough barging system or serve regional markets that stretch to New England and Mid-Atlantic States, bypassing the city’s congested highways and eliminating truck VMT.

The City will create opportunities for waterborne freight movement by modernizing its marine terminals, expanding waterfront access to maritime shippers, and supporting private sector marine highway initiatives.

To realize this goal, investment will be needed to equip marine facilities with docking infrastructure as well as upland staging areas that can handle movement of freight in a reliable manner with minimal community impact. In addition, since it has been decades since consumer goods moved by water, new or retrofitted vessels will be needed to create a system to provide daily freight waterborne services. Several efforts will address this bold vision, as described below:

Transform South Brooklyn Marine Terminal into a Project Cargo Hub for the Offshore Wind (OSW) Industry. Building a robust yet environmentally sustainable freight system depends on clean energy. Fortunately, the shift to renewable energy committed to by Mayor de Blasio provides an opportunity to significantly upgrade deep water ports, including the South Brooklyn Marine Terminal (SBMT).

- NYCEDC is partnering with a private terminal management company and offshore wind company to stage the assembly of OSW turbines in support of new wind farms in the Atlantic Ocean.
- **NYCEDC could modernize SBMT with heavy-duty platforms, shore power connections to enable vessels to turn off their engines at berth, cranes to handle heavy cargo, and deeper water for larger vessels. Shifting toward green energy on a large-scale also provides necessary infrastructure to generate clean energy which may be used to charge electric vehicles. The City intends to seek federal funding to support this initiative.**



- **Renovate the Red Hook Piers:** The City and Port Authority of New York and New Jersey (PANYNJ) have preserved and maintained the Red Hook Container Terminal, an integral component of the Brooklyn Piers waterborne transportation system. However, like many other piers in New York Harbor, these were built on wooden piles over a half century ago and require significant amounts of capital investment to modernize. Without reconstruction, more piers will be condemned and taken out of operation.
- **NYCEDC and PANYNJ proposes to renovate and restore Piers 9A and 9B to maintain and increase direct ocean-going ship calls to Red Hook. Additionally the City and the Port Authority could purchase new, electric container cranes for Red Hook Container Terminal to replace decades old diesel cranes. Federal investment will also allow the Port Newark/Red Hook barge service to attract greater usage for containerized cargo as well as introduce a Roll on/Roll off (RoRo) service for trailers serving e-commerce fulfillment centers in Brooklyn. The City intends to seek federal funding to support this initiative.**
- **Support Private Marine Highway Initiatives through the Identification of City-Owned Waterfront Assets:** NYC possesses smaller marine terminals and ferry landings across the five boroughs. Through partnerships with local maritime companies and shippers, these piers can be activated for last-mile freight services. This includes retrofitting to allow for RoRo operations so that vessels carrying delivery trucks, freight bikes, electric hand trucks and palletized cargoes can get to their final destinations more efficiently by water, circumventing daytime traffic conditions. Waterways can be used to create marine highways between distribution areas in New York and New Jersey with residents in a manner that reduces air pollution and restores equity to residents living near traditional industrial and distribution districts.
- NYCDOT and NYCEDC will release an RFEI to solicit private interest in waterfront use, which will help inform the City's investment priorities. Key maritime activation sites could include those within the city-managed DockNYC portfolio or others.



The City is currently considering three main types of maritime freight services: regional, intra harbor, and local.

Regional services linking port cities

NYCEDC and PANYNJ launched the North Atlantic Marine Highway Alliance to convene port cities from Maine to Virginia to foster movement of international containers or domestic trailers between these points avoiding crowded interstate highways. Under the US Department of Transportation’s “America’s Marine Highway” program overseen by the Maritime Administration, many cities and private companies have received formal designations of these routes and have applied for grant funding to support key infrastructure to implement these services. In New York, the New York New Jersey Railroad and the container barge service between Red Hook and Newark have received federal support.

Intra harbor services linking New York to New Jersey distribution centers

To create a maritime “bridge” between origin and destination points within New Jersey and New York to transport truck trailers or international containers by marine vessel, thereby eliminating truck trips going into and out of NYC. Truck service could be done through a roll-on/roll off (RORO) operation where trailers are loaded at waterfront terminals then floated to a waterfront fulfillment center where the contents can be unloaded for the “last-mile” journey. International containers can be stacked by crane to increase density and efficiency in a manner, similar to the regular service between Red Hook and Newark as well as the Department of Sanitation’s solid waste export program.

Local services with origins and destinations within the five boroughs

To use purpose-built vessels or reconfigured ferry boats to move goods from distribution centers to customers using either small delivery vehicles, bicycles or hand trucks for the last mile. This would involve reconfiguring City-owned facilities such as DOT or NYCEDC ferry landings, DockNYC sites operated by NYCEDC, or other public waterfront sites in order to accommodate the appropriate movement of goods to stores, offices, and residences in what would be a new supply chain network.



Other global waterfront cities have developed maritime services to move last-mile freight into central business districts. In order to avoid truck activity, the landside freight is transferred from a small marine vessel to a zero- or low-emission vehicle, such as cargo bike. NYC stands to benefit greatly from such a service due to the volume of cargo coming from across the Hudson, which generates an inordinate amount of truck activity, congestion and pollution. There are significant market and infrastructure barriers to initiating such a service, which the City is committed to understanding through further study and analysis.

Goal #5: Shift Freight from Road to Rail

Traffic congestion, increasing truck transport costs, and environmental justice concerns are making rail freight a more competitive and resilient option, but the number of locations in NYC where freight can easily be moved from train cars to the final customer is a limiting factor. There are many local businesses that would like to receive goods via rail but cannot find enough rail-adjacent locations with sufficient capacity to meet their needs. Past experiences in Staten Island, the Bronx, and elsewhere have shown that investment in rail has led to increases in freight moving by train. Rail access is especially important for industrial businesses that must transport construction materials, bulk goods and heavy food products such as rice or tomato sauce.

To induce more opportunities for sustainable, resilient, and competitive transport options, New York City will support the expansion of its 90 miles of freight rail lines and facilities where shipments are moved from railcars to “last-mile” trucks. The City will assist in developing new rail spurs to better connect industrial businesses to the national rail network, eliminating thousands of truck miles in the city each year. By expanding places for rail to connect to customers and improving rail corridors, the City can reduce truck traffic and resulting air pollutants.

The City and industry partners will increase diversion of freight from trucks to trains by expanding transload facilities in the city and modernizing key freight rail assets.

Improve Access to Rail Yards in the Sunset Park Industrial Business Zone: New investments and growth at the Brooklyn Army Terminal, the new MiNY Campus at Bush Terminal, and the creation of an Offshore Wind staging facility at the South Brooklyn Marine Terminal all mark a significant revival of the Sunset Park’s Industrial Business Zone. These developments have resulted in significant pressures on an aging roadway system, and have traffic impacts on First Avenue rail freight traffic. Converting First and Second avenues to one way north-south streets could significantly reduce

traffic congestion, reduce delay, de-conflict rail and rubber-tire vehicle traffic and create safer corridors for bicyclists and pedestrians. The project requires updates signage, geometrical improvements to curbs and street signage and signaling.

- NYCEDC and NYCDOT are studying this concept to improve safety and efficiency to this important rail service, which is a partnership between the City, the Port Authority of New York and New Jersey and the New York/New Jersey Railroad. Each loaded rail car replaces approximately four tractor-trailers in transporting municipal recycling aggregates and other important commodities along the Brooklyn Waterfront.



Construct New Transload Facilities: Transloading is the process of transferring goods from one form of transport to another and is a critical step in bringing goods into the city by train. Transload facilities are essential for expanding the use of cross-harbor rail freight, much of which enters the City from the 65th Street Rail Yard along the Sunset Park Waterfront. Without these facilities, NYC infrastructure would not be able to handle increased rail freight car volume or train sizes.

- NYCEDC will work with local partners to determine feasibility of greater use of Bay Ridge cut and other rail lines for additional freight handling, which is necessary to support expanded cross harbor rail freight operations.
- NYCEDC will work with local freight rail operators to construct a new transload facility at the Long Island City Wheel Spur Yard, which will allow for greater railcar volume at a single time.
- NYCEDC proposes to begin an additional planning process to identify more NYC sites which may support enhanced rail transload facilities. Once identified, new facilities could be constructed across NYC, which will increase economic demand for rail freight.

- **Modernize the Arthur Kill Lift Bridge:** The Arthur Kill Lift Bridge (AKLB) is a vital rail link connecting Staten Island to New Jersey that moves much of New York City’s municipal solid waste (MSW) and supports New York State’s largest container terminal, Global Container Terminal New York (GCT New York). AKLB is the only rail freight gateway in the city that can handle modern, intermodal “double-stack” trains. AKLB facilitates direct rail connections to the national rail network and provides international container service to/from the Port of New York and New Jersey. Moreover, AKLB acts as a safety valve for intermodal traffic when Elizabeth and Port Newark are at-capacity and cannot process additional cargo, which causes additional truck congestion, idling and national supply chain backups.
- **NYCEDC and bridge operators propose to begin a capital renovation program to improve or replace mechanical, electrical and structural systems on the AKLB necessary to keep it in good working order—which is especially important because the bridge must rise to allow for maritime traffic to pass underneath. The City intends to seek federal funding to support this initiative.**



A major environmental benefit of AKLB is that it allows the diversion of heavy truck vehicle miles traveled (VMT) from the region’s highways to the Staten Island Railroad.^[7] The shift from truck to rail greatly reduces carbon and particulate emissions along the local I-278 corridor.

Conclusion

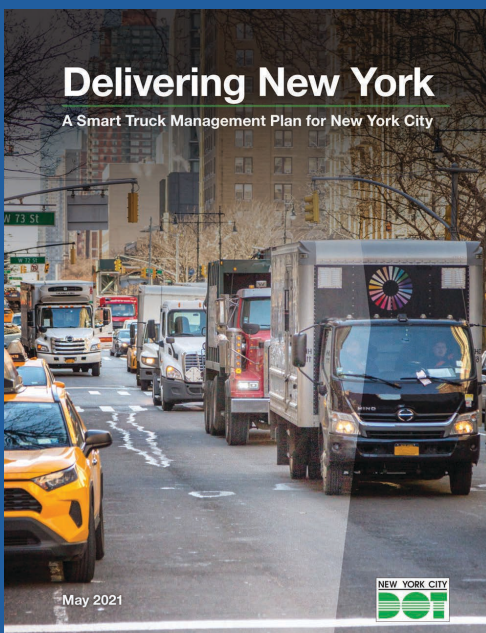
The goals and initiatives in this plan are highlights of the critical work needed to execute New York City’s shared vision for the future of safer, more efficient, and sustainable freight movement. The City intends to seek federal funding to execute these initiatives in the next five years and beyond.

Read more about the City’s vision for how to safely and sustainably meet the increasing demands for goods in NYCEDC’s *FreightNYC* and NYC DOT’s *Delivering NY*. At a regional level, NYMTC’s *Regional Freight Plan* and The Port Authority of New York and New Jersey (PANYNJ) *Goods Movement Action Program* and *Port Master Plan 2050* support and enhance the New York metropolitan region’s position as a global center—a hub of commerce, culture, finance, and trade—through strategic multimodal goods movement initiatives.



FreightNYC

NYCEDC’s *FreightNYC* is a plan to modernize the City’s freight distribution system through strategic investments in maritime and rail infrastructure, as well as the creation of new distribution facilities. The investments will optimize how freight enters NYC before it is distributed to stores, businesses and consumers, working towards a more sustainable and resilient supply chain network. Once implemented, the initiatives outlined in *FreightNYC* are projected to reduce truck modal share by approximately 5%, down to 85%. This modal share reduction would eliminate up to 40 million truck miles, 71,500 metric tons of GHG emissions, and 30,000 pounds of particulate matter annually.



Smart Truck Management Plan

In May 2021, Mayor De Blasio and NYC DOT released *Delivering New York: A Smart Truck Management Plan for NYC*, a blueprint for enhanced freight management in NYC over the next 5–10 years, which includes over 30 strategies (100 + initiatives), programs, and policies will transform the City’s last-mile delivery system—improving safety, efficiency, livability and the environment, supported by public private partnerships. Building on existing freight programs and policies outlined in *OneNYC*, DOT’s *Strategic Plan*, and EDC’s *FreightNYC* plan, *Delivering New York* introduces creative approaches to accommodate growth, while improving last-mile deliveries, and lays the groundwork for reimagining a sustainable multimodal vision for freight in NYC.

NYC Freight Vision Goals: Federal Funding Opportunities

Make the Last Mile More Efficient	Green the Last Mile	Foster a Culture of Compliance	Shift Freight from Road to Water	Shift Freight from Road to Rail
<p>Retiming Deliveries: Provide incentives to reach Off Hour Deliveries program enrollment goal of 5,000 locations by 2040, shifting 62,000 trucks away from driving into the city during peak hours daily.</p> <p>Reduce Truck Traffic in Residential Neighborhoods: Facilitate research, development, and implementation of urban consolidation programs.</p>	<p>Increase Sustainable Small Delivery Methods:</p> <ul style="list-style-type: none"> Promote and incentivize the switch to cargo bikes for deliveries in NYC and reach the goal of shifting 25% of last-mile freight deliveries from trucks to small, sustainable delivery methods by 2040. Pursue ferry dock infrastructure upgrades necessary to institutionalize barge to cargo bike transloading. <p>Replace Dirty Trucks Serving Industrial Business Zones: Expand the Clean Trucks Program to cover as many as 1,000 more trucks by 2030.</p> <p>Replace Dirty Refrigeration Units: Expand the NYC TRU replacement incentive program to replace more stationary Tier 0-3 TRU diesel engines.</p> <p>Electrify Trucks:</p> <ul style="list-style-type: none"> Install up to 100 electric truck chargers citywide by 2026. Instal electric truck chargers at the Hunts Point Distribution Center. <p>Redevelop the Hunts Point Produce Market</p> <ul style="list-style-type: none"> Reconstruct entire market with modern, temperature-controlled warehouse space to eliminate need for diesel-powered TRU's. Improve site circulation and existing rail access 	<p>Increase Compliance with Truck Weight and Route Restrictions: Build out a WIM network citywide by 2040 of up to 50 locations to inform and potentially enforce truck rules and regulations governing size, weight, and routes.</p> <p>Expand Automated Data Collection and Camera Enforcement for Truck Rules: Install technology to enable more detailed and continuous data collection, which could lead to more automated enforcement and even real-time curbside space information for truck drivers.</p> <p>Promote a Safe Driving Culture through Industry Engagement and Education: Conduct education, outreach, and awareness campaigns that promote a safe driving culture among all levels of the trucking industry.</p>	<p>Transform South Brooklyn Marine Terminal:</p> <ul style="list-style-type: none"> Modernize SBMT with heavy-duty platforms. Provide shore power connections to enable vessels to turn off their engines at berth. Install cranes to handle heavy cargo. Create deeper water for larger vessels. Generate clean energy. <p>Renovate the Red Hook Piers:</p> <ul style="list-style-type: none"> Renovate and restore Piers 9A and 9B to maintain and increase direct ocean-going ship calls to Red Hook. Purchase new, electric container cranes for Red Hook Container Terminal to replace decades old diesel cranes. Retrofit diesel yard equipment to operate with zero emissions. Attract greater usage for containerized cargo and introduce a Roll on/Roll off service for trailers serving e-commerce fulfillment centers in Brooklyn. 	<p>Modernize the Arthur Kill Lift Bridge: Improve or replace mechanical, electrical and structural systems on the AKLB necessary to keep it in good working order.</p> <p>Cross Harbor Rail: Support efforts to directly connect New York City to the national rail freight network via the northern New Jersey freight system</p>

Endnotes

[1] International Council on Clean Transportation (ICCT). Air quality and health impacts of diesel truck emissions in New York City and implications for city-level policies Michelle Meyer and Tim Dallmann Report The Real Urban Emissions (TRUE) Initiative.

[2] New York Metropolitan Transportation Council (NYMTC). Freight Planning. Available: <https://www.nymtc.org/Regional-Planning-Activities/Freight-Planning>

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[6] Tier 0 through 4 refers to progressive emission reduction improvements as regulated through the USEPA NON ROAD model engine emission standards (25-40 hp engines). Tier 0/1 are unregulated engines with no to minimal emissions controls. Tier 4 engines refer to newer models with the latest emission controls..

[7] The Tioga Group, Inc. Final Report Impact of Staten Island Railroad-Related Industrial Redevelopment. July 2016

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