

New York City Department of Transportation

Strategic Plan 2017 PROGRESS REPORT





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Letter from the Commissioner

My fellow New Yorkers:

A little over a year ago, the Department of Transportation released its *Strategic Plan 2016*, a vision for a safe, sustainable, equitable, and efficient transportation network. It provided a roadmap for how DOT plans to efficiently use the streets to accommodate the City's record 8.5 million residents and to make sure that all New Yorkers, regardless of income or ability, can safely get to jobs, schools, healthcare services or whatever destinations they choose.

I am happy to report that we are well on our way to accomplishing many of the 105 initiatives contained in the plan. In collaboration with the NYPD and other City agencies, DOT continues to make progress on the Mayor's Vision Zero initiative. We're using data to analyze where and why crashes occur, and then we're redesigning our streets so that they work better for pedestrians, cyclists, and drivers. The result is that since 2013, traffic fatalities have declined by 28 percent, making 2017 the safest year on record in New York City.

In partnership with the MTA, we've also implemented new Select Bus Service routes in areas under-served by transit. The Q52/53 SBS along Woodhaven and Cross Bay Boulevards in Queens is our most recent SBS to launch. Not only does this corridor serve over 30,000 daily bus riders and connect them to eight subway lines and over 20 additional bus routes, but the project brings transformational Vision Zero safety improvements to one of the widest and highest-crash streets in New York City.

These are just a few of the achievements DOT's dedicated employees have made possible in the past year. This report includes a selection of updates from across the agency, including progress on DOT's safety, mobility, freight, asset management, public realm and other efforts. A detailed table with the status of all of the *Strategic Plan 2016* initiatives is available on the plan website: nycdotplan.nyc/initiative-table.

Looking forward, we hope to achieve much more. The rehabilitation of the Brooklyn-Queens Expressway's triple-cantilever structure is a high priority project that DOT hopes to fast track with the use of design-build authority. The upcoming closure of the L train's Canarsie Tunnel will require close communication with the community and innovative street treatments so that people in the affected neighborhoods can continue to get around. While challenging, these projects represent vital investments in New York City's future mobility and quality of life.

Sincerely,

Polly Trottenberg
Commissioner, New York City Department of Transportation





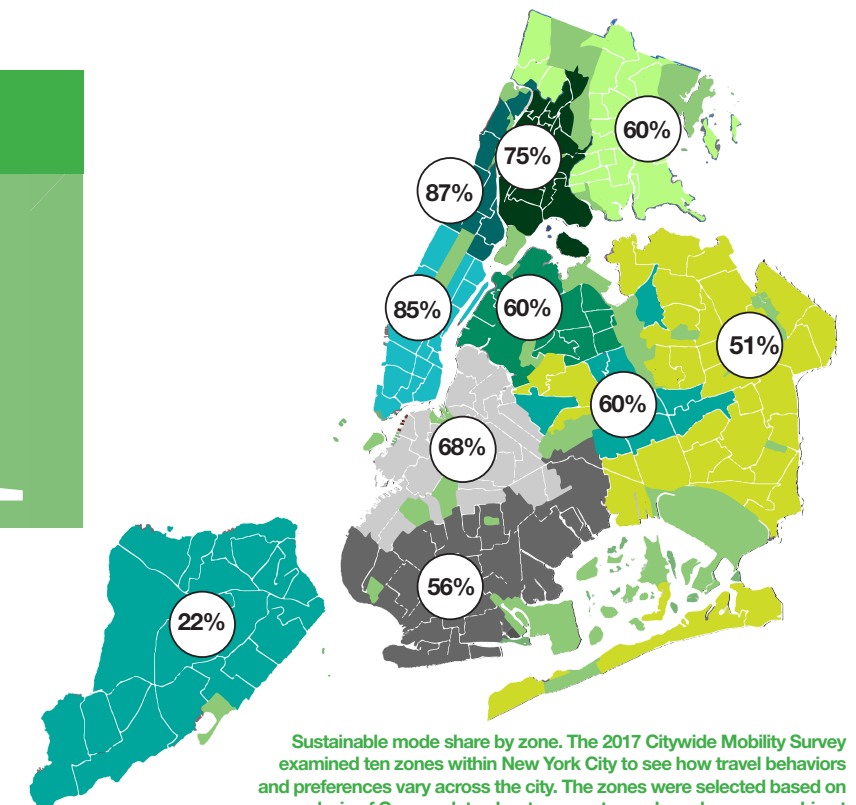
Introduction



Strategic Plan 2017

Progress Report

highlights a number of DOT's achievements from the past year. A detailed description of the agency's progress on each initiative from the plan is also available at nycdotplan.nyc/initiative-table.



Sustainable mode share by zone. The 2017 Citywide Mobility Survey examined ten zones within New York City to see how travel behaviors and preferences vary across the city. The zones were selected based on an analysis of Census data about commute mode and car ownership at the neighborhood tabulation area level.

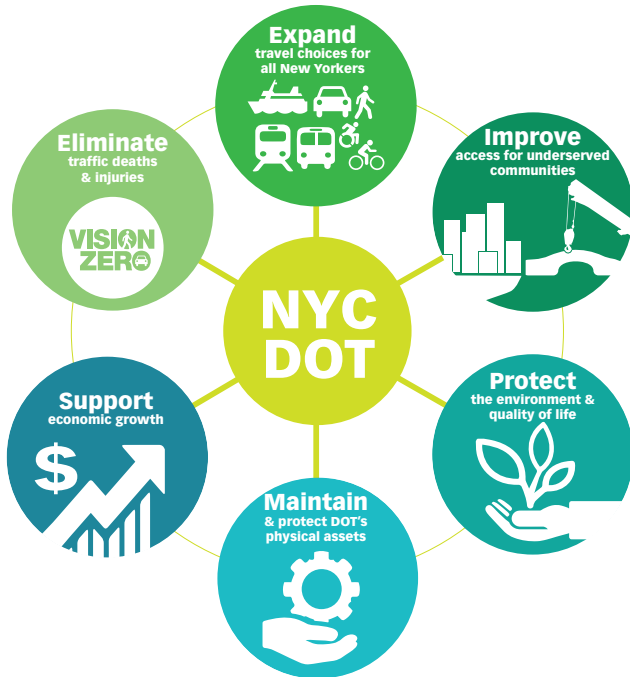
In the year since the New York City Department of Transportation (DOT) published its *Strategic Plan 2016*, DOT has made significant progress towards advancing the 105 initiatives in the plan and making our streets safer and more sustainable, accessible, and efficient. The agency has also continued to expand transportation options for all New Yorkers, especially those who live in communities currently under-served by transit.

DOT implemented 114 Vision Zero safety projects in the last year, making our streets safer for pedestrians, cyclists, and motorists, and completed a number of capital projects to improve the pedestrian environment, including the reconfiguration of Astor Place and Cooper Square. The agency also increased travel options for New Yorkers with the expansion of Citi Bike in western Queens and upper Manhattan, the installation of a record number of miles of protected bike lanes, and the implementation of new Select Bus Service routes, such as the Bx6 and Woodhaven routes.

DOT also remains committed to measuring its progress and tracking its work in comparison to the agency's global peers. The agency conducted its first annual Citywide Mobility Survey this spring to gain an in-depth understanding of how New Yorkers get around. The survey found that 62 percent of all trips citywide were made using sustainable modes such as walking, biking, or transit. Not surprisingly, how people get around varies widely from neighborhood to neighborhood. For example, in the Manhattan core the sustainable mode share is 85 percent, while in Staten Island this figure is just 22 percent.



Agency Core Mission



The agency's core mission, shown graphically above, starts with our commitment to safety. Above all, DOT strives in everything it does to achieve Vision Zero—the City's multi-agency initiative to eliminate deaths and serious injuries from traffic crashes. DOT places a particular focus on protecting pedestrians and cyclists, our most vulnerable street users.

DOT is committed to significantly boosting the share of trips made by walking, biking, and transit through a more balanced distribution of street space and the implementation of innovative street designs from around the globe. Our continuing growth as a city depends on more people using the most space-efficient modes to get around. This approach is consistent with protecting our most vulnerable street users and meeting the City's climate change goals.

The agency seeks to improve transportation equity by improving and expanding affordable and convenient travel choices for low- and moderate-income New Yorkers. Through our Select Bus Service (SBS) partnership with the Metropolitan Transportation Authority (MTA) and our shared-use mobility efforts with the Taxi and Limousine Commission (TLC), the agency endeavors to improve access to economic and educational opportunities for communities underserved by rail transit and for people with disabilities.

Expanding travel choices and increasing the efficiency of our streets in turn supports the City's growing economy—commuters can get to work, students to school, and residents to shopping and essential services. The agency helps to facilitate freight movement, advocates for the expanded use of rail and waterborne transportation instead of trucks, and reduces the environmental impacts of freight, especially on communities that have historically shouldered more than their fair share of these impacts.

Reducing greenhouse gas (GHG) emissions and harmful air pollution, and helping the City successfully adapt to the effects of climate change are also key DOT priorities. By expanding opportunities for walking and biking and by facilitating faster bus service—modes of transportation that require less energy—the agency is helping to reduce GHGs and to support better public health. DOT is further advancing these goals by promoting smarter freight, shared-use mobility, intelligent vehicles, real-time management of our streets, and the use of cleaner vehicle technologies.

Finally, DOT strives to keep the City's network of streets and bridges, the Staten Island Ferry, and all of our facilities in a state of good repair. From pavement markings to traffic signals and streetlights to the Brooklyn Bridge—taking good care of the system is a core tenet of the agency's mission. Smart asset management improves safety and resiliency, extends the useful life of our streets and bridges, ensures more efficient use of capital resources, and saves the City's taxpayers money.

Agency Overview

Accomplishing the *Strategic Plan 2016* initiatives is only possible through the hard work and dedication of DOT's 5,500 employees. They form the core of the agency's efforts to safely and efficiently manage our:

 6,000 miles of streets	 13,000 signalized intersections
 12,000 miles of sidewalk	 300,000 streetlights
 794 bridges	 69 million linear feet of street markings

The bulk of these employees work in the agency's operating divisions, shown below. These divisions—under the oversight of the agency's Chief Operations Officer (COO) – operate and maintain the agency's infrastructure as well as plan and implement new projects.



While many staff in these divisions work from DOT Headquarters in lower Manhattan, DOT also has a strong presence in each borough. For example, each borough has a Borough Commissioner's office that manages community outreach and a Borough Engineer's office that reviews projects and installs signs to manage curb and street activity. The agency also has dozens of operational facilities across the five boroughs, from bridge maintenance yards in every borough, to asphalt plants in Brooklyn and

Queens, and a major sign manufacturing facility in Maspeth, Queens.

Supporting these operating divisions are a series of divisions under the oversight of the Executive Deputy Commissioner for Strategic and Agency Services. Lastly, units in the Executive Division directly support the Commissioner. They include the legal, communications, intergovernmental affairs, and policy units.





Safety



Since 2013, overall traffic fatalities in the City have declined by over 28 percent and pedestrian deaths have declined by 45 percent.



2017 was New York City's safest year on record, with 214 traffic fatalities. Since 2013, overall traffic fatalities in the City have declined by over 28 percent and pedestrian deaths have declined by 45 percent. Comparatively, traffic fatalities nationwide have increased by more than 13 percent from 2013 to 2016. However, DOT and its agency partners have much work to do before the City reaches its Vision Zero goal of eliminating all traffic-related fatalities. For a complete list of the agency's progress on Strategic Plan 2016 Safety Initiatives, refer to [nycdotplan.nyc/initiative-table](https://www.nycdotplan.nyc.gov/initiative-table).

Street Redesigns

In 2017, DOT completed 114 Vision Zero street redesign projects to simplify complicated intersections or corridors, exceeding its annual target of 50 projects. These areas were chosen because they had high rates of crashes in which someone was killed or severely injured, a measure DOT refers to as KSI. The initial changes are implemented with DOT's in-house forces and on-call contractors, using a tool kit of traffic markings, concrete medians, signal upgrades, and temporary plaza treatments.

In-House Projects

An example of a recent Vision Zero project is the reconfiguration of the **Lincoln Center Bow-Tie**, a complex multi-leg intersection on the Upper West Side with long crossing distances and a history of safety concerns. DOT analysis showed that, between 2008 and 2012, there were 39 injuries and one fatality at the intersection of West 65th Street, Columbus Avenue, and Broadway, placing this intersection in the top five percent of intersections by KSI in Manhattan. By November 2016, DOT had completely redesigned the intersection – extending the median and sidewalk, limiting turns, adding crossings and detectable warning surfaces, and providing accessible pedestrian signals. Now pedestrians and motorists alike can more easily navigate the area.

Another recently redesigned street is **Greeley Avenue in Staten Island**, where a DOT study found that 98 percent of vehicles traveled above the 25

mph speed limit. DOT installed traffic circles along the avenue as a way to address the speeding issue. Although fairly rare in the city, traffic circles have been found to reduce speeds while also maintaining traffic flow during peak hours.

In addition to implementing full intersection and street redesigns, DOT is looking at ways to use its signal system to make streets safer. For example, the leading pedestrian interval (LPI) is a proven method of reducing pedestrian-vehicle conflicts at high pedestrian crash intersections. A signal with an LPI gives pedestrians an exclusive phase before any vehicles, including turning vehicles, receive the green light. As part of Vision Zero, DOT has dramatically expanded the use of this treatment and now there are now 2,074 intersections with LPIs.

DOT focuses particular attention on improving safety for children and older New Yorkers. The agency implemented a **school safety project in Bayside, Queens** near Middle School 74 in response to safety concerns about illegal U-turns, double parking, and speeding on Oceania and 210th Street from the Horace Harding Expressway to the Brooklyn-Queens Greenway. DOT installed a two-way parking protected bike lane adjacent to Cunningham Park and converted a portion of 210th Street to one-way to eliminate a complicated merge near a popular crossing for students. The three-quarter mile bike connection also improves access to the Brooklyn-Queens Greenway, Alley Pond Park, and the Kissena Corridor Park.



Lincoln Center Bow-Tie: BEFORE



Lincoln Center Bow-Tie: AFTER



This project illustrates DOT's efforts to integrate education and awareness into its Vision Zero work. DOT's School Safety and Safety Education units met with students to describe the agency's efforts to improve street safety and the protected bike lane project. DOT staff then showed students how to lay out the bike lane with spray paint, use speed detectors, and measure the roadway. In the past year, DOT's Safety Education teams engaged with 679 schools and 157 senior centers across the City.

Capital Projects

Some streets and intersections require changes that are beyond the capability of DOT's in-house teams. In these locations, DOT partners with the New York City Department of Design and Construction (DDC) to implement capital reconstruction projects, which often include upgrades to both underground utilities and the design of the street. DOT has identified four Vision Zero Great Streets across the five boroughs where the agency is working with DDC to implement full capital reconstruction projects. The goal of these major corridor projects is to prevent crashes, enhance mobility, increase accessibility, and bolster neighborhood vitality.

In the past year, DOT and DDC made significant progress towards the completion of the **Grand Concourse Great Street** project. The Grand Concourse, a distinct and historic boulevard running through the Bronx, had a rate of 13 pedestrian KSI per mile from 2009 to 2013. The street also had long crossing distances and narrow medians, making it difficult for pedestrians to cross. This fall, DOT and DDC completed Phase 2 of this multiple-phase project. Phase 2 included planted and widened medians and raised crosswalks from 166th Street to 171st Street, enhancing pedestrian safety and access while integrating amenities that make it a more pleasant place to walk, bike, and drive.



Research and Analysis

DOT is constantly evaluating new ways to make our streets safer. In a 2016 study, the agency determined that left turn maneuvers by vehicles pose a higher risk to pedestrians and cyclists, with KSI due to a left-turning vehicle occurring at over three times the rate (19 percent) of pedestrian and cyclist KSI by a right-turning vehicle (6 percent). Based on these statistics, DOT committed to implementing left turn safety improvements at 100 key intersections each year.

DOT has now tested several **left turn safety improvements** that aim to induce drivers to slow down and make turns at an angle that increases the visibility of pedestrians and cyclists. An evaluation of these treatments found that median left turn speeds decreased by 24 percent. The rate of crossing the double yellow line while turning also dropped by 98 percent. These relatively inexpensive treatments are just one way that DOT is designing its streets to prevent serious crashes. Moving forward, the agency will continue to implement at least 100 left turn safety improvements each year.

Enforcement

Effective enforcement is an essential component of Vision Zero. As speeding is a leading factor in fatal crashes in the City, DOT has advocated for the **expansion of its speed camera program**. Speed

cameras are a proven tool to reduce dangerous driving behavior: an agency analysis found that speeding violations dropped on average by 63 percent at locations where a camera was installed. However, the effectiveness of the speed camera program is limited by state law. Most young New Yorkers walk and take transit to school, but under current law speed cameras can only protect them along the street that is adjacent to their school building. Between 2010 and 2014, 85 percent of traffic deaths or severe injuries occurred at locations or times where speed cameras are prohibited.

Given the effectiveness of speed cameras, the City advocated for the expansion of the program during the 2017 legislative session in Albany. Assembly Member Deborah Glick and Senator Jose Peralta introduced legislation (A7798/S6046) to allow automated enforcement in a total of 290 school speed zones, adding authorization for fifty new zones annually over a three year period. Importantly, this legislation also expanded the area speed camera enforcement is permitted to within a radial quarter mile from a school building, entrance or exit. While the legislation did not pass, DOT will continue to work with elected officials and advocates to push for the expansion of speed cameras in the City in 2018.



Community Feedback

At Jewel Avenue and 164th Street in Queens, DOT painted a curb extension near a school to improve pedestrian sightlines and slow turning vehicles.

"My son is five years old and in first grade at PS/MS 200, Magnet School of Global Studies and Leadership. This [safety improvement] is a great thing. It slows down traffic for us. It's much safer for us to cross the street. I love having it here. A lot of parents like it. It's the best thing that ever happened to us here."

Before this there was a lot of traffic, double parking, and cars would come up near the curb, close to the children. Traffic - as they were turning - it would just be a faster right turn. One of the staff members was hit."

—Danielle, parent at PS/MS 200





Mobility



To sustain the city's growth and expand mobility, DOT will allocate more street space to walking, biking, and buses, modes that move the greatest number of people while using the least amount of street capacity.



Every day, New Yorkers make decisions about how they travel. Is the trip to the doctor fastest by walking or subway? Will there be a place to park? The reality is that most New Yorkers use a variety of modes depending on the time of day, trip purpose, convenience, and cost. And DOT's job is to make sure that New Yorkers, regardless of where they live or of disability, have a range of options to safely and efficiently navigate their city.

For pedestrians, improving mobility means expanding sidewalks, adding pedestrian ramps, and installing accessible pedestrians signals (APS). DOT has been upgrading pedestrian ramps throughout lower Manhattan and is working on a citywide plan, which will include a major increase in capital funding and a significant expansion of the agency's in-house pedestrian ramp crews. As of the end of 2017, there are **APS units installed at 286 intersections citywide**. The agency is also expanding the bike network and adding bus lanes to speed up bus service. At the Staten Island Ferry, DOT brought back **lower level boarding** so that the ferry can load larger crowds in a shorter period of time. These changes all make it easier for people to walk, bike, and take transit around the City. For a complete list of the agency's progress on Mobility Initiatives, refer to nycdotplan.nyc/initiative-table.

Bike Network

DOT continues to increase and upgrade its bike network. After installing a record 18.5 lane miles of protected bike lanes in 2016, DOT had another record setting year in 2017, completing 25 lane miles of protected lanes. Altogether, DOT implemented over 75 lane miles of bike projects.

As cycling grows, the agency is focused on expanding **neighborhood bike networks**, especially in the outer boroughs. An example of this effort is Community Board 12 in the Bronx, where DOT recently added 12 lane miles of bike lanes. This project improved bike and pedestrian access to waterfront parkland and a major greenway route. It is just one of several neighborhoods where DOT is building out the bike network; we are also expanding the bike networks in Jamaica, Glendale, and East New York.

Bridge and Greenway Connections

New York is a city of islands, so DOT focuses significant effort on integrating its bridges into the overall bike network. One example is the **Centre Street/Park Row two-way protected bike lane**, which DOT completed in September 2017. Before this project, cyclists had to take a circuitous route from Lower Manhattan to the Brooklyn Bridge. Now, a new two-way protected connection to the Brooklyn Bridge bike and pedestrian path provides a safer and more direct route for the over 1,500 cyclists who use the bridge on a daily basis. The project also created a more pleasant pedestrian environment with new crossings and expanded medians on Park Row.

The City is taking advantage of its waterfront space by building out the greenway network. The **Manhattan Waterfront Greenway** is a planned 32-mile waterfront pedestrian promenade and

bicycling path around the whole of Manhattan that is moving towards completion. DOT has worked closely with the community to close the gap in the network between the Harlem River and Hudson River and, in November 2017, implemented parking protected bike lanes along Dyckman Street that connect the Hudson River Greenway with the Harlem River Greenway.

This project is in addition to other major investments in the greenway that occurred in 2017. In September, Mayor de Blasio announced the kickoff of the formal design process for a \$100 million investment to close the largest gap in the East River Greenway: the section between East 53rd Street and East 61st Street. Design of the new esplanade will begin this year and construction will commence in 2019, with completion expected in 2022. Lastly, in December, the City committed \$83 million towards the development of a new park in East Harlem that will advance construction of a new section of the greenway between East 125th and East 132nd Streets. When this segment and the East Midtown expansion are complete, there will be a contiguous waterfront esplanade and bikeway for nearly 100 blocks along the east side of Manhattan.

L Train

The upcoming closure of the Canarsie Tunnel will have a major impact on how New Yorkers move throughout the city. A total of 400,000 daily riders use the L train: 50,000 within Manhattan, 225,000 between Manhattan and Brooklyn, and 125,000 within Brooklyn. At peak hours, the L train carries as many people into Manhattan as all six East River bridges and tunnels together carry in vehicles. DOT is therefore working closely with the MTA to support alternative travel options during the 15-month closure. The preliminary mitigation plan includes implementing high occupancy vehicle (HOV3) restrictions on the Williamsburg Bridge during rush hours, creating a busway in the core of the 14th Street corridor during peak hours, and installing a new two-way protected crosstown bike lane along 13th Street. DOT and the MTA will hold further community meetings to discuss the proposed plans and receive additional input.

Congestion Plan

In October 2017, the Mayor announced a series of initiatives to help ease congestion in the city. Working with the NYPD and other city agencies, DOT will modify curb regulations and signage, install block-the-box markings, and expand its signals-based congestion management system called Midtown in Motion. The tool kit of congestion management strategies will also be applied to outer borough hotspots such as downtown Flushing and downtown Jamaica.



Centre St: BEFORE



Centre St: AFTER



Community Feedback

"It is much more convenient to use lower level boarding. I don't worry as much about missing the boat because I can go right on rather than having to go all the way upstairs."

—Rosalind, Staten Island Ferry rider





Transit Improvements

DOT and the Metropolitan Transportation Authority (MTA) work in close partnership to improve bus service throughout the city. A major component of this partnership is Select Bus Service (SBS), New York City's version of bus rapid transit that offers fast, frequent, and reliable service on high-ridership bus routes. DOT and the MTA have jointly implemented 15 SBS corridors, including three in 2017.

Select Bus Service

SBS uses transit signal priority (TSP), off-board fare collection, and enforcement via bus lane cameras to achieve better service. For example, TSP is implemented along several key sections of nine

SBS corridors. The technology facilitates bus movements through intersections by either holding the green light or shortening the red light to reduce the amount of time buses are stopped at intersections. It has contributed to an average reduction in bus travel times of about 12 percent during weekday peak periods. Riders also appreciate the real-time passenger information (RTPI) signage that is included along SBS routes and some local bus routes. It lets riders know when the next bus is arriving so they can make more informed travel decisions. As of the end of 2017, DOT has installed 381 RTPIs, which include both wayfinding totems and pole signs, citywide.

The **Bx6**, a recent SBS route launched in September 2017, serves nearly 25,000 daily riders and connects the South Bronx and Upper Manhattan. The design for each SBS route is customized to the specific corridor, and the Bx6 SBS is no exception. DOT converted the East 161st Street tunnel—which was originally built for streetcars—to bus only in the eastbound direction and created a center-running bus lane with stops at the median rather than the sidewalk. By using a center lane, the bus avoids getting stuck behind double-parked vehicles. DOT also built two bus boarding islands that provide pedestrians with a safe space to wait for the bus and added amenities such as shelters, benches, and leaning bars.

The **Q52/53 SBS along Woodhaven and Cross Bay Boulevards** in Queens was implemented in November 2017. The new SBS route is nearly 15 miles, making it the longest SBS corridor in New York City. The Q52/53 SBS has a combined daily ridership of 20,000 riders, but altogether, over 45,000 daily riders of Queens bus routes, including express bus passengers, will benefit from improvements along the corridor. The project area also contains eight Vision Zero Priority intersections, which were redesigned as part of the SBS project. Overall, more than 30 intersections were upgraded for pedestrian safety and traffic flow as part of the DOT's largest street improvement project of 2017.

Planning for the Future

DOT and the MTA select SBS routes based on a combination of data analysis and public input. Both the Bx6 and Q52/53 were identified as potential routes in the *Bus Rapid Transit Phase II: Future Corridors* report, which was released in June 2010. With many of the routes in that report nearing completion, DOT, with input from the MTA, decided to undertake a new planning and public engagement process to identify the next generation of SBS routes. In October 2017 the agency released *Bus Forward*, its blueprint for the next generation of bus improvements. The plan targets more than 21 new bus corridors, commits to expanding bus-priority treatments to local routes across the city, and when implemented will almost triple the number of commuters served by SBS.

Bus Forward is part of DOT's **Citywide Transit Plan (CTP)**, a visioning process for the future of transit across the five boroughs. In mid-2018 DOT will release a companion report to *Bus Forward* that will focus on improvements to existing services, how to best prioritize existing resources to meet transit needs, and what the City's priorities are for transit system expansion. The agency received public input for the CTP through a robust outreach process. Between fall 2016 and summer 2017, DOT held six public workshops and surveyed people on the street at 19 locations. The agency also created a website where transit riders could take a survey online. In total, DOT received feedback from 5,996 transit riders: 191 at public workshops; 1,693 on-street; and 4,112 online.



Community Feedback

"I ride the Q44 to work in Flushing. Before the Q44 was a Select Bus, it was hectic. It was always overcrowded; it was always late. Now it seems like since we have the SBS and the schedule, they're on time. Since this has started, I haven't had any problems. If [the real time arrival display] says two minutes, it's two minutes."

—Mari, Q44 SBS Rider



citywide transit plan NYC

Join the NYC Department of Transportation for a series of public workshops to discuss the future of public transportation in New York City. Help us understand where you go, where you want to go and how you want to get there.

Brooklyn Tuesday, February 7, 2017 6:00-8:30 PM Brooklyn College Student Center Campus Road & E. 27th St. Brooklyn, NY 11210	The Bronx Wednesday, February 15, 2017 6:00-8:00 PM Fordham University Campbell Hall 441 E. Fordham Road Bronx, NY 10458
Queens (Ridgewood) Monday, February 13, 2017 6:30-8:30 PM I.S. 77 976 Seneca Avenue Ridgewood, NY 11385	Queens (Jackson Heights) Wednesday, February 22, 2017 6:00-8:00 PM Elmhurst Hospital Center 79-01 Broadway Elmhurst, NY 11373
Staten Island Monday, February 27, 2017 5:30-7:30 PM St. George Library Center 5 Central Avenue Staten Island, NY 10301	Manhattan Wednesday, March 7, 2017 6:00-8:00 PM Adam Clayton Powell Jr. State Office Bldg. 163 W. 125th St. - 2nd Fl.

Shared-Use Mobility

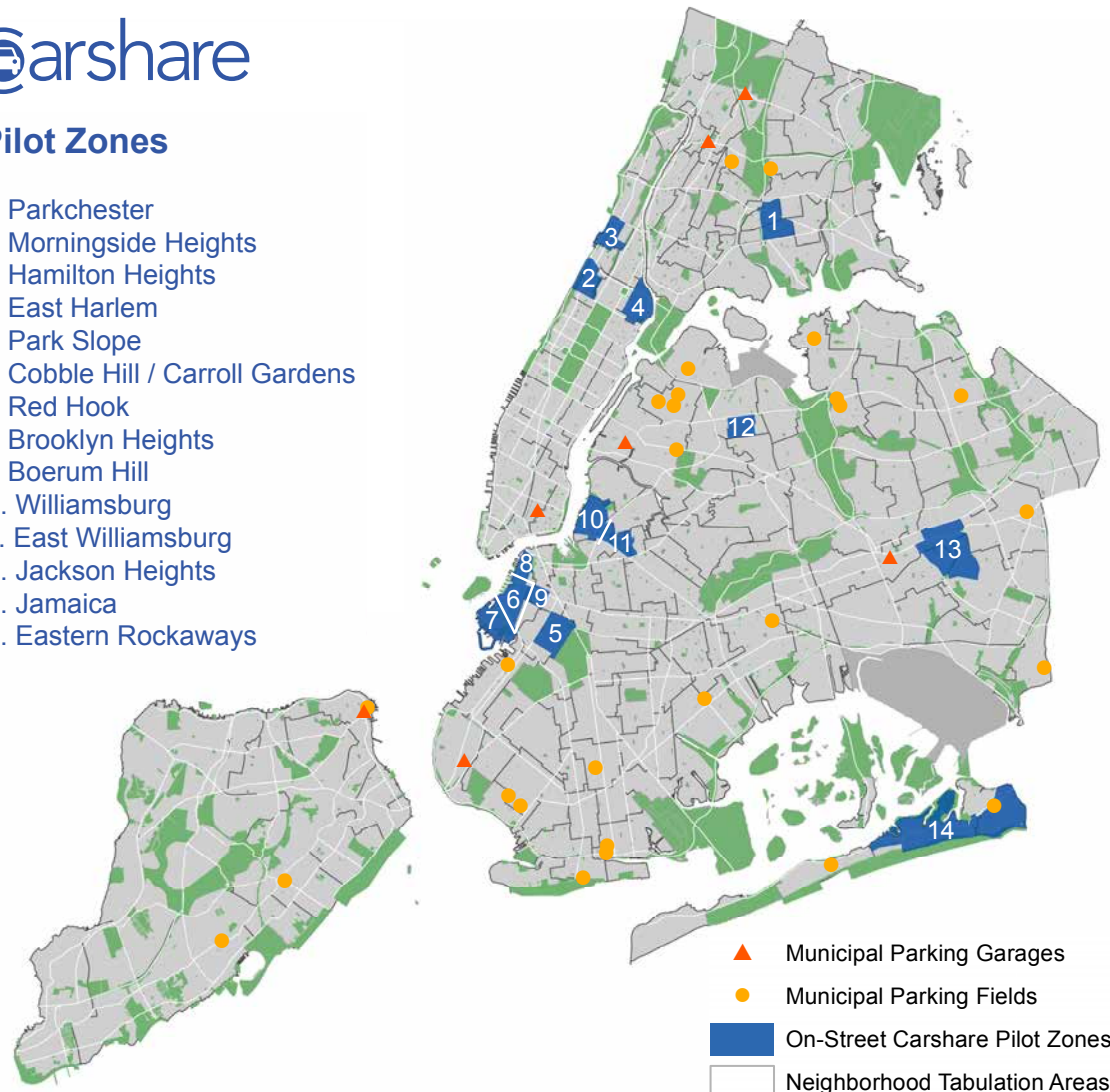
New Yorkers are more and more taking advantage of new mobility services, such as carshare and bike share. On March 21, 2017, Mayor de Blasio signed two carshare-related bills into law. One requires DOT to establish a **carshare pilot program** allowing qualified carshare companies to apply for designated on-street parking spaces, while the other mandates that the agency allow carshare companies to apply for designated parking spaces in municipal parking facilities. These two bills create the framework for DOT's carshare parking pilot, which aims to provide an affordable and practical alternative to car ownership for New Yorkers. The carshare parking pilot will launch in 2018 in 14 neighborhoods (see map). DOT designated zones where on-street carshare vehicles would

most enhance mobility and reduce personal car ownership, and with community input, identified on-street carshare parking spaces in each zone. In addition, DOT will reserve at least 10 percent or 10 spaces for carshare (whichever is less) in any municipal parking facility where there is demand from carshare companies. DOT will evaluate the success of the pilot. It is partnering with researchers from the Transportation Sustainability Research Center at the University of California, Berkeley to conduct a survey of carshare members and is requiring data sharing from all participating companies.



Pilot Zones

1. Parkchester
2. Morningside Heights
3. Hamilton Heights
4. East Harlem
5. Park Slope
6. Cobble Hill / Carroll Gardens
7. Red Hook
8. Brooklyn Heights
9. Boerum Hill
10. Williamsburg
11. East Williamsburg
12. Jackson Heights
13. Jamaica
14. Eastern Rockaways



DOT is also progressing with its goal to expand bike share. In December 2017, the agency released a Request for Expressions of Interest (RFEI) soliciting ideas and information from **dockless bike share** providers. Dockless bike share bikes have internal locking mechanisms and do not require a network of docks, allowing the

bikes to be parked anywhere within a designated geography. Through the RFEI process, DOT plans to evaluate the feasibility of operating dockless bike share in the city and whether to pilot the new technology in areas not currently served by Citi Bike.



Community Feedback

“As a NYCHA resident, paying \$5 a month to unlock a bike and ride has been the key to my success and livelihood as a struggling New Yorker working full-time, [...] studying law, and babysitting in my spare time.”

—Shaquana, Citi Bike member





Asset Management + Project Delivery



NYC DOT will allocate \$10.1 billion over the next five years to ensure that its assets are well maintained.



Maintaining DOT's assets in a state of good repair is a core part of the agency's mission, and DOT plans to invest \$10.1 billion over the next five years in its infrastructure. In 2017, the agency continued its record pace of street resurfacing, made strategic investments in technology to better monitor the condition of its assets, and advocated for reforms to deliver major capital projects more quickly and at a lower cost. For a complete list of the agency's progress on Asset Management and Project Delivery Initiatives, refer to nycdotplan.nyc/initiative-table.

Street Resurfacing and Reconstruction

In City fiscal year 2017, DOT resurfaced 1,325 lane miles of streets, including sections of the Grand Concourse in the Bronx, Avenue of the Americas in Manhattan, Ocean Avenue in Brooklyn, Woodhaven Boulevard in Queens, and Richmond Avenue in Staten Island. DOT plans to resurface another 1,300 lane miles in fiscal year 2018, benefiting drivers, cyclists, and pedestrians.

In addition to repaving streets, DOT undertakes major street reconstruction projects in partnership with DDC. In the past year, ten new projects have entered the design phase and 44 projects have started construction. One example of a project starting construction is the **Pelham Parkway Phase 2** project in the Bronx. The project will replace water mains and sewers in addition to upgrading the road with ADA-accessible sidewalks and ramps, new traffic signals, and improved street lighting. When complete, Pelham Parkway will be updated both above and below the road surface. Other major reconstruction projects initiated this year include Atlantic Avenue Phase 1 and Grand Concourse Phase 3.



Bridges

DOT is responsible for 794 bridge structures – the four iconic East River Bridges, 24 movable bridges, and over 760 other bridges on arterial roadways and in neighborhoods. The Division of Bridge's primary mission is to maintain them in a state of good repair. While all 794 structures are currently open to the public, many are reaching the end of their useful life. To address these needs, the Bridges Ten Year Capital Plan includes \$9.3 billion for bridge reconstruction, major rehabilitation, component rehabilitation, protective coating, and Superstorm Sandy recovery efforts.

The East River Bridges Program currently includes a \$103 million project for structural steel repairs of the Manhattan Bridge; an over \$300 million replacement of the upper deck of the Queensboro Ed Koch Bridge; and \$18 million in storm-related repairs to granite and historic cladding on the Brooklyn Bridge as well as a future project for rehabilitation of the landmark bridge's iconic structural arches.

In 2017, the Division initiated the project for the rehabilitation of the **Brooklyn Queens Expressway (BQE) from Atlantic Avenue to Sands Street**,



including the triple cantilever section. This vital connection, the only interstate through Brooklyn, includes a series of 21 concrete and steel bridges from Brooklyn Heights to Downtown Brooklyn. With an average traffic volume of 153,000 vehicles per day, the reconstruction of this section of the BQE poses tremendous engineering challenges and has been budgeted at more than \$1.9 billion. In the past year, the City lobbied the New York State legislature for the authority to use the design-build approach for this project. Under design-build, a single team engineers and constructs the project, reducing the cost and duration of the project. Unfortunately, the State failed to grant the City design-build authority in 2017. As DOT continues to advocate for design-build in Albany, the agency will also move forward with the traditional design-bid-build process to ensure that a plan is in process before emergency repairs become necessary.

Belt Parkway Bridges

DOT also has a major bridge reconstruction program along the Belt Parkway. The \$1.02 billion Belt Parkway Bridge reconstruction program consists of seven structures: the Fresh Creek, Rockaway Parkway, Paerdegat Basin, Gerritsen Inlet, Mill Basin, Bay Ridge Avenue, and Nostrand Avenue bridges.

The Fresh Creek, Rockaway Parkway, and Paerdegat Basin bridges were substantially completed in August 2013 and represented a \$474 million investment. The Gerritsen Inlet Bridge reconstruction commenced in February 2013 and the new bridge will be completed in January 2018 at a cost of \$137 million. The new bridge improves sight distances and geometry and adds lane width and shoulders, bringing the bridge to the newest engineering standards.

Construction for the replacement of the Mill Basin Bridge began in September 2015, and when completed in January 2021, will represent another \$328 million Belt corridor improvement. In December 2017, all traffic transitioned to the new structure, allowing DOT to forever open the old structure. Marine traffic now has sixty feet of vertical clearance, which means that motor vehicle traffic will no longer be delayed waiting for vessels to pass.

Looking forward, the Bridges Division plans to reconstruct four bridges on the Belt Parkway that are located in the Sheepshead Bay community. If DOT receives design-build authority, the approach will enable the agency to minimize the overall construction duration and achieve significant cost savings through tightly sequenced design and construction of these four structures.



Leveraging Technology

As DOT reconstructs its infrastructure and adds new elements to our roadways, such as signs and street furniture, it is essential that the agency have efficient ways to track and manage these assets. DOT is therefore leveraging technology to improve its asset management capabilities.

In June 2017, the agency launched its **Sign Information Management System (SIMS)**, which enables DOT to track its one million street signs and manage their inspection, repair, and installation. This system uses open source technology instead of proprietary software and is flexible enough to modify for future database management needs.

Technology is also helping DOT assess and maintain the city's roadways. For years, the agency used a basic windshield inspection to assess the condition of city streets. With the launch of the new PavementWorks module in mid-2018, DOT will be able to adopt a more precise **pavement assessment methodology**. The new system will gather the extent and severity of all types of pavement distresses and calculate a pavement condition rating based on a nationally recognized standard. With better data DOT will be able to adopt a more proactive strategy in its resurfacing program, targeting road segments for repaving before they deteriorate to a substandard condition.

In December 2016, DOT launched **ParkNYC**, a new mobile parking payment system for the City's 86,000 metered spaces. The system initially launched in Manhattan and went citywide in August 2017. ParkNYC provides benefits to drivers and DOT operations. The mobile app allows the customer to pay for parking remotely without having to access the parking meter and gives the customer a notification when the payment time is running out. On the operations side, the new system leads to a reduction in meter paper receipts, cash collections, wear and tear on the meter machines, and credit card fees. State-of-the-art handheld scanners also allow traffic enforcement agents to determine if parked cars have paid.

Currently, the system processes almost 40,000 daily transactions, which is about 8.2 percent of all parking transactions, and to date, there have been over 4.4 million transactions with the mobile app. Trends and best practices from other cities indicate that this number of transactions will continue to increase. Given the large number of commercial spaces in the City, the Department launched ParkNYC Business in December 2017. The program provides additional enhancements to the mobile payment platform, allowing large fleet and commercial operators to improve overall management and accounting for their fleets and to eliminate the need for drivers to pay for parking at the meter.





Freight Movement



Today, of the 400 million tons of cargo that enter, leave, or pass through New York City each year, more than 90 percent is carried by truck.



Recent results from DOT's 2017 Citywide Mobility Survey indicate that 41 percent of New Yorkers receive a delivery of some kind at their home at least a few times a week. This statistic highlights the growing impact of truck freight on the City's streets. DOT's Office of Freight Mobility has a number of initiatives that it has advanced in the past year in an effort to better understand freight movement through the City and alleviate some of the issues that arise from heavy truck traffic. For a complete list of the agency's progress on Freight Initiatives, refer to [nycdotplan.nyc/initiative-table](https://www.nycdotplan.nyc/initiative-table).



Smart Truck Management Plan

The Smart Truck Management Plan is DOT's comprehensive blueprint to improve the efficiency of truck deliveries across the five boroughs and to reduce the environmental and community impacts of trucking. To create this plan, the agency convened a freight advisory group in December 2016 that brought together the trucking industry, businesses, researchers, advocacy groups, and government agencies. The purpose of the group was to examine curb management, sustainability, compliance, enforcement, and land use policies related to truck freight. DOT also solicited input from the communities most directly impacted by truck traffic through a series of 11 community open houses. This feedback is being incorporated into the Smart Truck Management Plan, scheduled for release in mid-2018. The plan will provide recommendations

on updates to truck routes, reforms to truck rules, strategies to improve compliance, and a specific truck freight plan for each of the five boroughs.

Off-Hour Deliveries

DOT wants businesses in heavily congested areas, such as Midtown Manhattan and Flushing, Queens, to shift their deliveries to less busy times in the evening or overnight. This approach, called off-hour deliveries, has the potential to reduce congestion and double-parking. DOT is creating a voluntary program to encourage businesses to switch to off-hour deliveries. Starting in May 2017, the agency conducted a survey of businesses, including freight transporters and receivers, to better understand how and when deliveries are made and the financial and logistical reasons behind these decisions. The results will inform the design of the off-hour deliveries program, scheduled to launch in 2018.

Truck's Eye View

DOT also strives to educate the public on specific issues relating to trucks, including safety. The Truck's Eye View program demonstrates to the public the blind spots common around large trucks. DOT held five events in the past year with a total of 1,742 participants. At these events, participants can sit in the driver's seat of a truck and learn about the vehicle's blind spots from a professional truck driver.





The Public Realm



DOT sees our streets not just as conduits for people and goods, but as public spaces essential to the life and vibrancy of the City.



DOT maintains and manages a large portion of New York City's public space as our streets make up 27 percent of the city's total land area. The agency is committed to making our streets inviting places for people of all ages and abilities. In the past year, DOT has continued its efforts to turn underutilized spaces into plazas and worked with partners to test innovative street designs and new uses of our streets. For a complete list of the agency's progress on Public Realm Initiatives, refer to [nycdotplan.nyc/initiative-table](https://www.nyc.gov/nycdotplan/nyc/initiative-table).

Avenue C Plaza

DOT recently completed construction on the Avenue C Plaza in Kensington, Brooklyn. In 2014, the Kensington Stewards, in collaboration with the Horticultural Society of New York, applied to DOT's Plaza Program, hoping to turn an under-utilized triangle at the intersection of Avenue C and McDonald Avenue into a community asset. The plaza was built out in concrete in June 2017 after two months of construction, and it hosts many events in the community. For example, the plaza served as the rallying point for a group of Kensington residents who gathered earlier this year to declare their neighborhood a "Hate-Free Zone."

The Avenue C Plaza would not have been possible without the One NYC Plaza Equity Program, which provides assistance to medium- and high-need plaza partners to help them maintain and manage plaza spaces. The Horticultural Society of New York provides technical assistance and maintenance services to high-need partner organizations for a period of three years, during which they help grow partner capacity to the point where the plaza partner can assume full responsibility for maintaining the space. DOT currently provides this kind of support to 28 of its plaza partners, with 14 medium-need

partners receiving \$20,000 a year and 14 high-need partners receiving a full package of support such as daily sweeping, trash cleanup, power washing, and snow removal.

Flatiron Shared Street

DOT is now looking at new ways it can transform its streets into more inviting public spaces. For example, the agency is testing and evaluating shared streets, which are roadways designed for slow travel speeds where pedestrians, cyclists, and motorists all share the right of way. On a fully implemented shared street there is no grade separation between the sidewalk and the roadway, and the advisory speed limit is five miles per hour. DOT implemented its first shared street in temporary materials on Broadway between 24th and 25th Streets. The project is part of a series of improvements that DOT and its partners, the Flatiron 23rd Street Partnership and the Madison Square Park Conservancy, have implemented in the past few years. The resulting public space improves pedestrian safety and access while maintaining vehicular access and circulation. It also has the City's first installation of tactile guideways for visually impaired pedestrians, which the agency plans to evaluate for use in other parts of the city.



Seasonal Street: Garment District Urban Garden

In another experiment, DOT and the Garment District Alliance conducted a seasonal street closure pilot on two blocks of Broadway between 36th and 37th Streets and 39th and 40th Streets from June to August 2017. Called the Garment District Urban Garden, this pilot added 26,400 square feet of public space to the neighborhood and included 19 birch trees, 61 planters, and 400 linear feet of public art. The Garment District Alliance also programmed the space with weekly fitness classes and a pop-up food market.

Seasonal street closures are a great way to repurpose space during the summer months when traffic volumes are lower and the desire for public space is greatest. During the course of the Garment District Urban Garden pilot, an additional 1.8 million pedestrians were counted on the blocks compared to the same time period in 2016. A survey of users found that 88 percent of respondents who live or work in the neighborhood use the Broadway plazas at least once per week, showing how the space serves as an important neighborhood amenity.



Community Feedback

"[The Myrtle-Wyckoff Plaza] is good for me and my business. I live right around the corner and set up here almost every day. I even come here on my days off too to sit and relax. It's a good place to have a conversation."

—Ozgur,
Fruit seller and Queens resident





Sustainability



New York City's transportation sector accounts for nearly 30 percent of the City's total greenhouse gas emissions.



DOT continues to pursue its sustainability initiatives with the goal of helping the City reduce its greenhouse gas (GHG) emissions 80 percent below 2005 levels by 2050. The agency is focused in two main areas: one, reducing DOT's own energy footprint, and two, expanding and improving sustainable travel options for all New Yorkers. For a complete list of the agency's progress on Sustainability Initiatives, refer to nycdotplan.nyc/initiative-table.

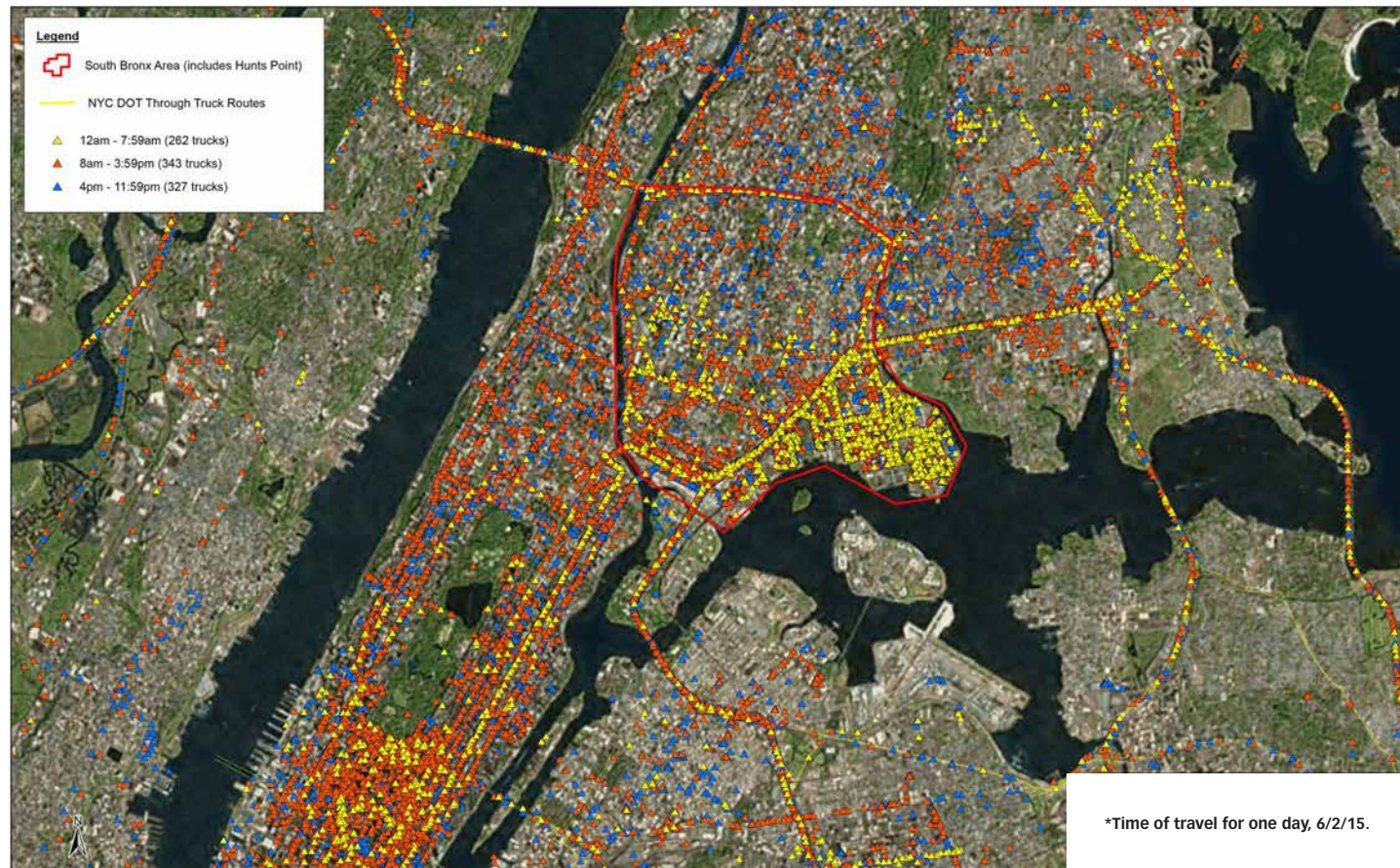
LED Street Lights

In the largest such project in the country, DOT is currently retrofitting all of New York City's street lights with energy-efficient LEDs. The new lighting will reduce annual energy demand and maintenance cost, helping the agency to both meet its greenhouse gas reduction goals and save money. Additionally, the LEDs provide a higher quality light that enables better color contrast, which makes pedestrians and cyclists more visible at night. The project is scheduled for completion in May 2019.

Hunts Point Clean Truck Program

DOT's Hunts Point Clean Truck Program is a federally funded program that provides incentives to truck

owners in the Hunts Point area to replace their older, dirtier trucks with cleaner, new models. In its first round of funding, DOT worked with trucking companies to replace or upgrade 500 trucks. In the past year, the agency received funding to replace or upgrade 100 additional trucks. The Clean Truck Program is making a noticeable impact on emissions in Hunts Point while providing significant air quality and health benefits over a much larger area in which the trucks operate. Replacement trucks in the program are on average 90 percent cleaner for nitrogen oxides (NOx) and 97 percent cleaner for particulate matter (PM2.5). If funding permits, DOT plans to expand the program to other Industrial Business Zones (IBZs) across the five boroughs. In December 2017, the program was recognized with a C40 Cities Mobility award.



Map from June 2015, showing where trucks that participate in the Hunts Point Clean Truck Program travel.

Electric Vehicle Charging

On Earth Day 2017, Mayor Bill de Blasio set a target of making 20 percent of new vehicle registrations in NYC electric by 2025. Increasing the number of electric vehicles (EVs) is crucial to the City's efforts to improve air quality and public health and to reduce greenhouse gas emissions. To make this happen, however, the City will need to work with private sector partners to dramatically expand the availability of electric vehicle charging stations across the five boroughs.

DOT is advancing on several fronts. In 2017, the agency announced it will partner with Con Edison to install at least 100 level 2 charging stations at curbside locations throughout the city. Level 2 chargers at the curb will allow EV owners to power up their vehicles while parked. The City will also invest \$10 million to foster the creation of a network of 50 fast charging stations by 2020. Direct current (DC) fast chargers can provide an 80 percent charge to an EV in about 30 minutes.



Go Smart

DOT also has a program to encourage New Yorkers to use sustainable transportation. The agency's Go Smart program helps New Yorkers make better local travel choices by providing information and support on walking, biking, carpooling, and taking transit. Go Smart originally launched in Middle Village, Queens and has now rolled out in Stapleton, Staten Island. With significant commercial and residential development taking place on Staten Island's North

Shore, DOT is using its Go Smart program as a way to mitigate congestion.

Over the course of the program, DOT has distributed information on sustainable transportation options to thousands of New Yorkers, mailed out more than 800 personalized travel kits, and partnered with over 30 local businesses to provide incentives and rewards to participants who log their Go Smart trips.





Organizational Excellence



DOT is committed to achieving excellence in all aspects of its operations, including staff development and retention, employee diversity and equal opportunity, workforce safety, customer service, and the management of our vehicles and facilities.



DOT implemented a number of new programs to support organizational excellence in the past year. These programs are intended to encourage staff development and retention and to enhance the safety culture in our operational units. For a complete list of the agency's progress on Organizational Excellence Initiatives, refer to nycdotplan.nyc/initiative-table.



Employee Spotlight

"Working with other leaders allowed me to see the DOT in dimensions. These gardeners, lawyers, engineers and operators showed the human value of our institution. And this is precisely why I value the rotational program: to walk in the shoes of those who build and restore our city."

—Huascar,
DOT Future Leader



Future Leaders

This year, DOT launched the Future Leaders Fellowship Program, a competitive program to cultivate the next generation of leaders at DOT. The year-long program provides 30 early- to mid-career professionals from across the agency the opportunity to develop communication and presentation skills, network with colleagues from across the agency, and connect their work to DOT's big picture goals. Future leaders attend biweekly events, which include guest speakers, panel discussions, interactive workshops, tours, and social events. The program culminates with group presentations to pitch an idea to senior staff and a short work assignment in another division within the agency.

DOT Employee Town Halls

Since the Strategic Plan's release, Commissioner Trottenberg and senior staff held seven internal town hall meetings with employee groups across the agency. These meetings provide an opportunity for staff at all levels to hear directly from the Commissioner on key priorities and agency goals, as well as a chance to ask questions on a wide variety of topics.

One recent town hall focused on women in the field and included over 100 female employees holding field positions across the agency. Women from all of DOT's operational divisions – Bridges, Roadway Repair and Maintenance, Sidewalks and Inspection Management, Ferries, Transportation Planning and Management, and Traffic Operations – attended. The meeting focused on unique challenges that women face in field conditions.

Employee Safety Survey

As part of DOT's effort to enhance workplace safety, the agency conducted an employee safety survey of both office and field employees in 2016. The survey was a way for employees to give anonymous feedback on their working conditions. DOT employees use a range of equipment on the job - forklifts, inspection trucks, concrete saws, bucket trucks, and paving machines – and it is important that

each staff member know how to properly operate the equipment they use. From the safety survey responses, DOT identified a need to increase training on the various types of equipment. Between 2016 and 2017, the agency increased equipment training by 80 percent and more training sessions are planned in the future.





Public Engagement



DOT organizes or participates in hundreds of public meetings a year, from workshops on proposed Select Bus Service routes to community board presentations on Vision Zero projects.



Almost every project DOT implements has a public engagement element. Whether talking with schoolchildren about our Vision Zero safety projects, asking bus riders for suggestions for our Citywide Transit Plan, or working with the trucking industry to improve freight movement, nearly all DOT units communicate with members of the public. For example, our Street Ambassadors completed 330 deployments supporting 75 individual projects, reaching over 21,000 people in 2017. DOT planners and outreach staff also conducted numerous workshops, open houses, walk-throughs, and community board presentations on projects large and small. For a complete list of the agency's progress on Public Engagement Initiatives, refer to nycdotplan.nyc/initiative-table.

Digital Communication

DOT's communication office uses social media to connect with the public and share information about the agency's projects. The staff is constantly looking for new ways to communicate with New Yorkers in a meaningful way. In the summer of 2017, the social media team used Facebook Live to explain Lower Level Boarding at the Staten Island Ferry. The video, which was available both live and after the recording, describes the process for lower level boarding, something that DOT recently reintroduced at its Staten Island Ferry terminals. Using Facebook Live was a quick way for DOT to deliver information to the public and respond immediately to their questions.



Citywide Mobility Survey

As technologies develop and preferences change, it is important for DOT to understand how New Yorkers use the transportation system. From May to June 2017, DOT conducted a Citywide Mobility Survey that asked approximately 3,600 New York City residents how and why they travel through the City. Staff will get a better understanding of

why people make certain travel decisions and track whether new initiatives have had an effect on travel choices. DOT hopes to conduct this survey annually so that it provides an up-to-date look at the transportation challenges and opportunities facing the City.





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