



Safety



30%
decline in citywide
traffic fatalities since
2001

Introduction

Public safety is the primary mission of government, and traffic safety on NYC streets is the over-arching mission of the New York City Department of Transportation. Improving safety performance permeates all of the work that the Department undertakes on City streets, highways, intersections and ferry infrastructure.

NYCDOT has established a remarkable record of success in traffic safety. The streets of America's largest city are dramatically safer than they were 20 and 10 years ago. From 1990 to 2012, annual fatalities involving all road users have dropped by 61%, and by 30% from 2001 to 2012. Most impressively, since 2004, the number of annual traffic deaths has been lower than 1910 levels, the first and previously lowest count on record. In 2011, the City experienced 246 traffic fatalities, an all-time record annual low.

DOT's challenge is to continue this success indefinitely, using all the analytical, engineering and regulatory tools at its disposal to deliver ever-safer streets.

In developing its 2008 Sustainable Streets strategic plan, the NYCDOT adopted clear goals for reducing traffic fatalities in New York, with the understanding that street design and other strategies can significantly affect the safety performance of a city street network. Cities and countries with strong, goal-oriented safety policies have increasingly assigned responsibility for such performance to the designers of the transportation system, rather than to its users.

Sustainable Streets set the goal of reducing annual traffic fatalities by 50% from 2007 to 2030. This provided New York City's street designers with clear annual targets—an average of a 3% annual drop in fatalities—that they strive to meet. Since 2007, DOT has embraced this mandate by undertaking the most ambitious and comprehensive set of traffic safety initiatives in the city's history, and in any large U.S. city. With hundreds of traffic calming projects, education campaigns, technological applications and stronger regulations such as lower speed limits, DOT has successfully reduced traffic fatalities to record low numbers.

One thousand New Yorkers are alive today who would not be if annual traffic fatalities had remained at the same levels seen in NYC a decade ago. Traffic risk per resident in New York City is lower than it has ever been before, even in the face of NYC's increasing population. At 3.1 fatalities per 100,000 in 2012, New Yorkers experience a fraction of the risk to residents of other big American cities, substantially lower than any of the next 20 largest U.S. cities.

Yet the costs of traffic crashes in NYC remain high. Most of those killed are in prime productive years and often have dependent family members. Traffic crashes are the third most frequent cause of death of New Yorkers ages 5 to 24, and second highest cause of injury deaths among adults over 45. Safety risks also tend to limit pedestrian trips for

Safer streets across New York City since 2007:

- **Implemented safety design on 137 street corridors and 113 intersections**
- **Installed 772 new traffic signals and 241 all way stop controls**
- **Implemented leading pedestrian intervals at 100 intersections to give pedestrians extra time and visibility when crossing the street.**
- **39 acres of road repurposed for plazas, public seating, refuge islands, painted extensions, medians, and bulb outs**
- **29 implemented or planned slow speed residential zones**
- **189 schools with reduced speed zones**
- **Added red light cameras at 50 intersections and new speed radar cameras at 20 locations**



High Crash Locations



Traffic Calming



Safe Routes to School



Slow School Zones



Residential Slow Zones



Safe Streets for Seniors



Bike Lane Network



Intersection Daylighting



Safe Routes to Transit



Public Campaigns



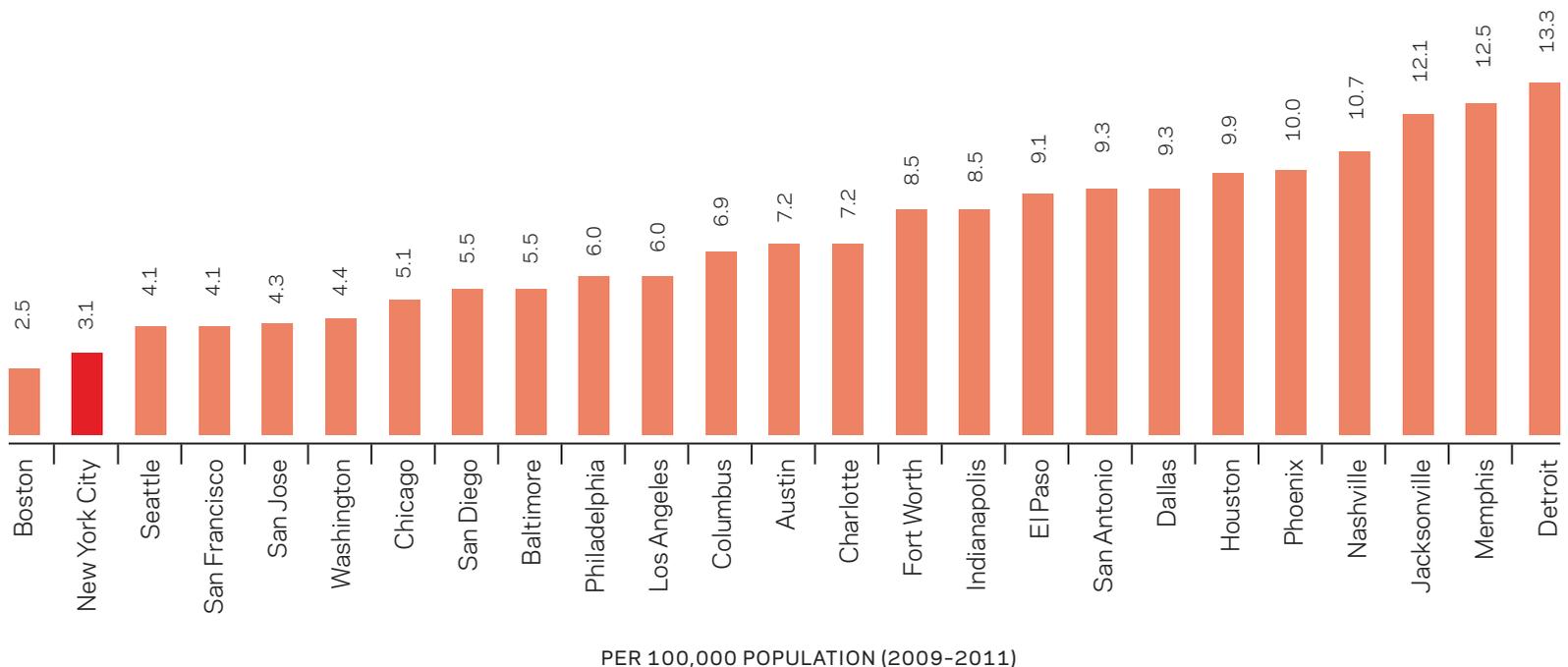
DOT Education

children and the elderly. On the other hand pedestrian-friendly streets promote walking and a higher likelihood of physical activity and healthy body-weight. They have also been linked to strong home values, a key factor in middle class retention.

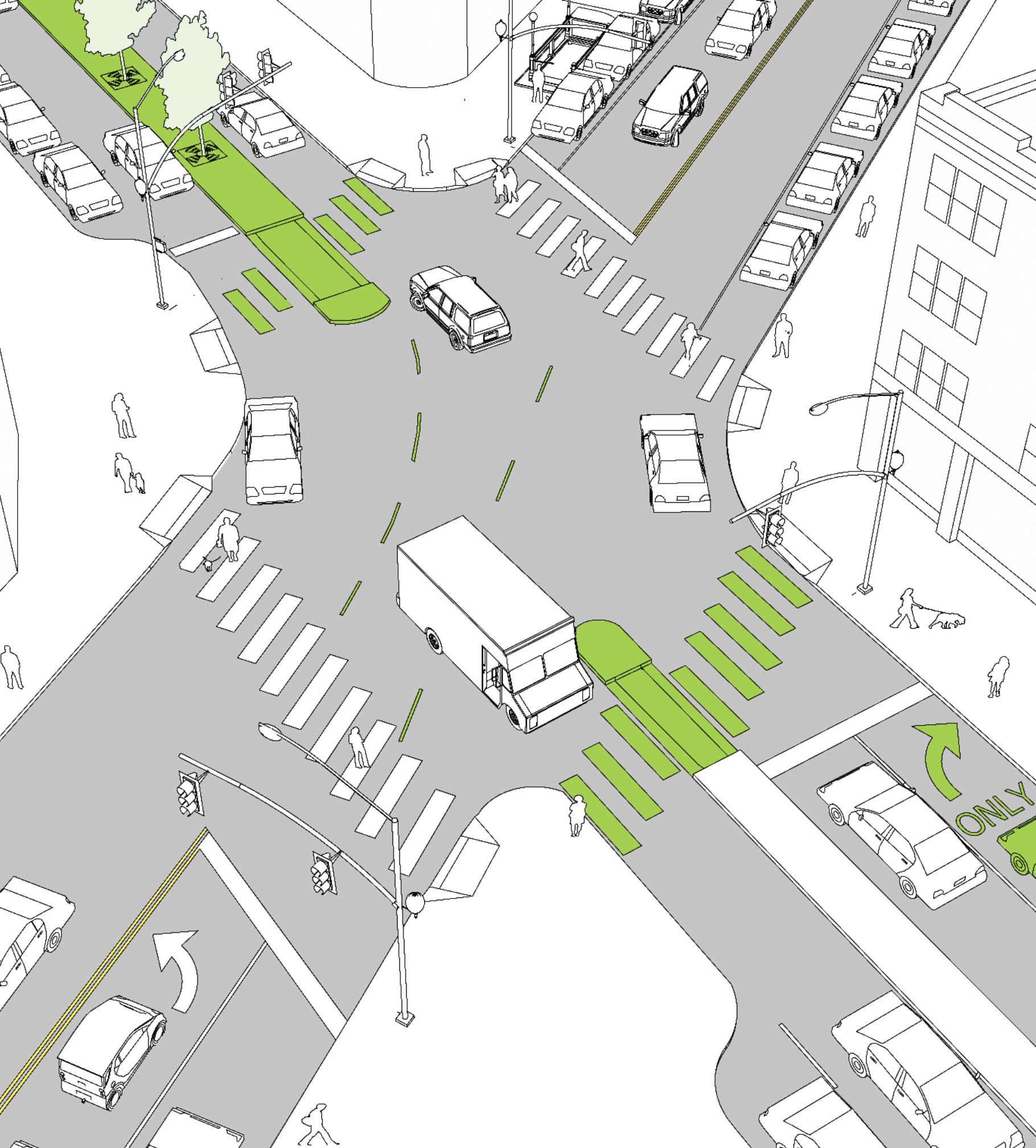
Improving street safety is critical to the transportation policies adopted in PlaNYC. In transportation, safety and sustainability go hand in hand. The City's policies to make

walking, cycling and transit use (which depends on walking) more widespread and attractive will only succeed as long as the environment for these activities is seen as safe by the public. As we chronicle throughout this report, New York is succeeding in these areas, in many cases dramatically so, but much work also remains. Continuing to meet the City's goal for progressively lower fatalities will require ongoing and steadfast commitment, analysis and innovation.

TRAFFIC FATALITY RATES OF 25 LARGEST US CITIES







Chapter 1

Designing Safe Streets

City streets are full of design cues that tell users what to do. Large, straight streets with wide lanes and minimal markings tell drivers that higher speeds are expected and hindrances to fast driving are not. Streets with proximity to high pedestrian activity and high-visibility crosswalks, sidewalks built out at corners, and markings that indicate the presence of buses and cyclists send a different message, not only to drivers but to all those who navigate the city streetscape. Street design can tell people outside of cars they are not welcome, or it can create a vibrant urban neighborhood, cultural district or place of commerce. When it comes to safety and how streets affect vehicle speeds and the interaction of vehicles, pedestrians and other street users, street design can literally make the difference between life and death. Designing safe streets for pedestrians and other vulnerable road users is critical for New York, where the large majority of street users and also most of the victims of traffic crashes are outside of motor vehicles.

In neighborhoods throughout the five boroughs, NYCDOT has undertaken street improvement projects meant to keep vehicle speeds within safe limits, to provide designs that increase the predictability of each type of street user and provide more and better-defined room for people on foot and using bicycles.

In total, NYCDOT has implemented 250 safety-focused street redesign projects, averaging 42 per year, since 2007. These elements are all defined in detail in NYC's official *Street Design Manual*, in its chapter on Street Geometry (see *Street Design Manual* in Infrastructure Section). Combining these features into plans that meet specific street conditions requires substantial traffic planning expertise. This work is carried out by NYCDOT's Traffic and Planning Division, which plans street geometry and is

At locations where major engineering changes have been made, fatalities have decreased by 34% since 2005

Standard features of NYCDOT safety projects:

- Intersection simplification
- Raised medians and or refuge islands
- Sidewalk extensions and widening
- Narrowing roadways with built or painted medians and wide parking lanes
- Bicycle network expansion
- Speed reducers
- High visibility markings and changes to signal timing

responsible for street markings, signage, traffic signals and speed reducers, and by DOT's Citywide Concrete program. The Traffic division also works with DOT's Capital Projects program to plan reconstruction projects that undertake more difficult and long-term projects such as moving curb-lines (to widen sidewalks or otherwise change street widths) that affect drainage and other assets below the street surface, to build these safety features into the permanent street infrastructure.

Street improvement projects with these features have worked. At locations where major engineering changes have been made, fatalities have decreased by 34% since 2005, twice as quickly as at all other locations. NYCDOT projects—ranging from the redesign of complex intersections to the implementation of pedestrian plazas and bus and bicycle lanes—have created tremendous safety benefits.





14%

decrease in crashes
after Southern Blvd
improvements

EXEMPLARY PROJECTS

The following descriptions show how DOT's traffic experts combine street safety elements into create projects tailored to very specific conditions and issues in particular intersections and corridors on the streets of New York.



1 SOUTHERN BOULEVARD

Long crossing distances, vehicle pedestrian conflicts, traffic congestion and the complicated geometry of this South Bronx intersection made it particularly dangerous before 2010, when DOT implemented a thorough set of safety treatments. The junction of Southern Boulevard, Hunts Point Ave, and East 163rd Street created a five legged intersection at Cramers Square. The area has bus and subway stops that generate high pedestrian volumes. In response to community concerns about pedestrian safety and access, DOT conducted a public workshop and developed a plan to address dangerous conditions.

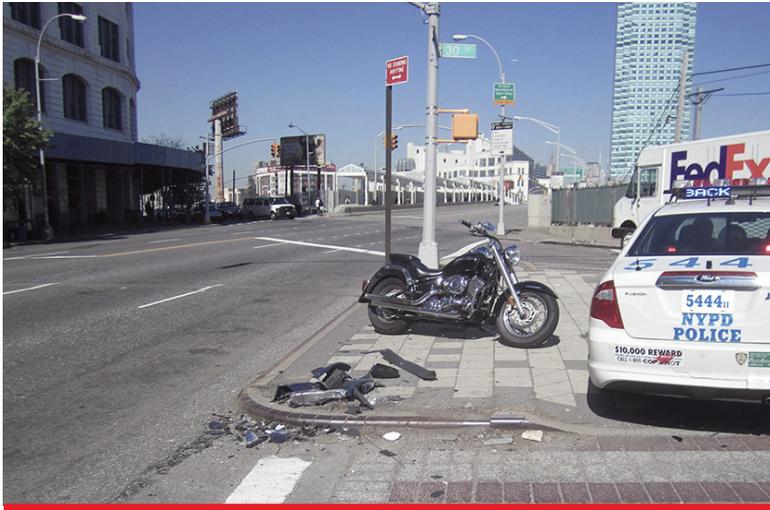
The project combined several traffic calming elements to improve safety, better connect pedestrian destinations, beautify the area, and reduce traffic congestion. In some

instances, pedestrians crossing distances were reduced by as much as 40 feet.

Following implementation, the number of crashes declined by 14% and travel speeds improved by 35% in the evening rush.

The work narrowed Southern Boulevard and installed painted medians, pedestrian refuge islands and left turn bays. The pedestrian plaza at Cramers Square was expanded, shortening pedestrian crossing distances. DOT simplified signal phasing and eliminated low volume turns in Cramers Square and converted Hoe Avenue to one way. The project demonstrates how signal timing changes and relatively inexpensive materials such as pavement markings and carefully placed concrete can significantly improve pedestrian access and safety.

Speeding decreased dramatically and safety was greatly improved as a result of the changes on East 180th Street



BEFORE: Thompson Avenue



AFTER: Thompson Avenue

2 EAST 180TH STREET

East 180th Street was the fifth highest crash location per mile in the Bronx, with 19 severe injuries or fatalities between 2004 and 2008. Extra wide travel lanes of 17 feet and low traffic volumes encouraged drivers to speed along the 1.2 mile corridor.

To calm traffic, DOT narrowed each of the moving lanes from 17 to 11 feet. The excess space allowed the creation of a 10 foot painted center median with 21 left turn bays and wide parking lanes. DOT also upgraded the crosswalks with high visibility markings.

The changes reduced speeding dramatically, with major improvement in safety performance. Only 1% of vehicles in the eastbound direction and 8% of vehicles in the westbound direction were found to be speeding after implementation, compared to 30% and 40% before. Pedestrian injuries fell by 67% after the improvements, from an average of 14.3 per year to 4.8 per year.

3 SKILLMAN, 43RD AND THOMPSON AVENUES

Two DOT projects made a high traffic area in Queens safer for pedestrians, cyclists, and drivers. They led to a 65% reduction in the number of crashes involving injuries to pedestrians and 49% reduction in crashes with injuries to motor vehicle occupants.

Skillman Avenue and 43rd Avenue were used by motorists as an alternative to Queens Boulevard, creating dangerous conditions for pedestrians. In 2009, DOT narrowed travel lanes, installed on-street bike lanes, and made signal modifications to give pedestrians more time to cross the

street. The improvements reduced average vehicle speed by 18% in the mornings.

Additional changes were made nearby, at the intersection of Skillman and Thompson, after a reckless driver killed a 16 year old boy and injured 5 other people, including 4 college students. The intersection was improved with left turn bans, and a slip street was closed and turned into a public plaza to reduce turning conflicts and provide additional space for pedestrians. New planters in the plaza helped beautify the intersection.



21%

decrease in crashes
after Delancey Street
improvements

4 DELANCEY STREET

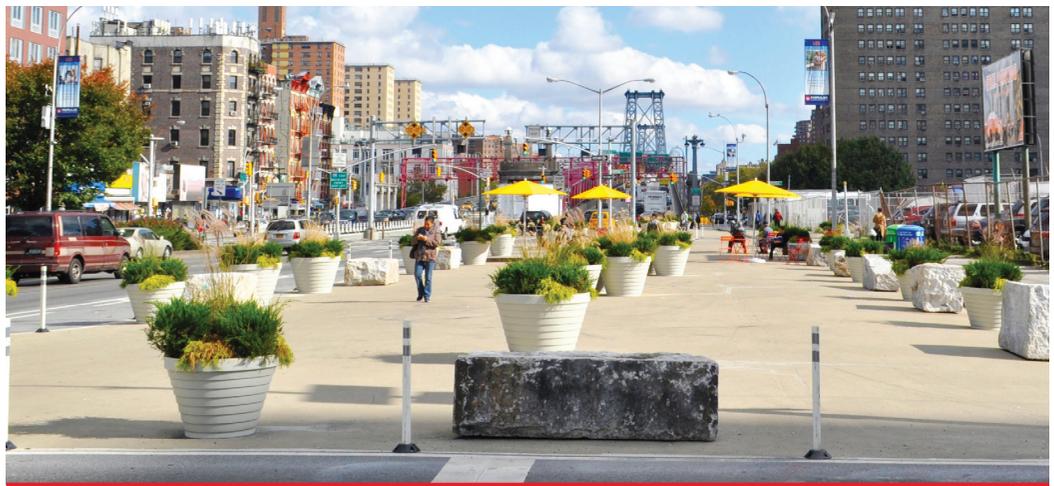
In response to crash data and community calls for a safer street, DOT implemented comprehensive safety and traffic flow improvements for Delancey Street.

The upgrades included shortening many crosswalks along the corridor with neckdowns, clarifying and delineating travel lanes, improvements to traffic signal timing and a new plaza and streetscape treatments at the entrance to the Williamsburg Bridge. Nine months after the project, total crashes decreased by 21%. The busy street is a key east-west artery for Manhattan and serves Williamsburg Bridge traffic.

Projects such as those profiled here are identified and developed through continual analysis of safety performance on NYC streets, including screens for crash history, severity and causes. This analytic work is described in depth in Chapter 2 below.



BEFORE: Delancey Street



AFTER: Delancey Street

Crashes have fallen 60% since Safe Streets for Seniors was implemented in the Lower East Side

PROTECTING VULNERABLE STREET USERS

NYCDOT maintains safety programs designed specifically to improve the safety of groups with special vulnerability in traffic.



Pedestrian crossing distance significantly reduced on Fort George Avenue

SAFE STREETS FOR SENIORS

DOT launched Safe Streets for Seniors in 2008 to respond to the disproportionate number of New Yorkers over age 65 in the City's traffic fatality totals. Where people over 65 make up 12% of New York's population, seniors on foot represented 36% of traffic fatalities in 2012. Safe Streets for Seniors aims to counter this imbalance, and has succeeded in reducing the city-wide rate since 2008, with marked gain in some districts.

The effort began by combining demographic analysis with data on intersection and corridor crash histories to identify districts where senior pedestrians are most at risk on City streets. The initial analysis identified 25 areas throughout the five boroughs for priority street redesign and other work. Improvements in these areas included 154 new pedestrian

safety islands and new or expanded medians to shorten crossing distances and provide safe spaces for slower moving pedestrians. DOT extended curbs at 13 points for similar reasons. Another 16 roadway segments were narrowed with new markings, including painted medians, to calm traffic.

Senior pedestrian fatalities in the City are down since the program was launched. The 2012 level was 18% below that in 2008. Additionally, the crashes that lead to traffic fatalities are down significantly in many of the program's focus areas. Along Rutgers Slip in the Lower East Side, crashes leading to injuries are down by 42%, while all crashes have fallen 60% since implementation of Safe Streets for Seniors improvements. At Bowne Street in Flushing, injuries have fallen 43% since program implementation.

84%

decrease in pedestrian injuries at 7th Ave and W 23rd St



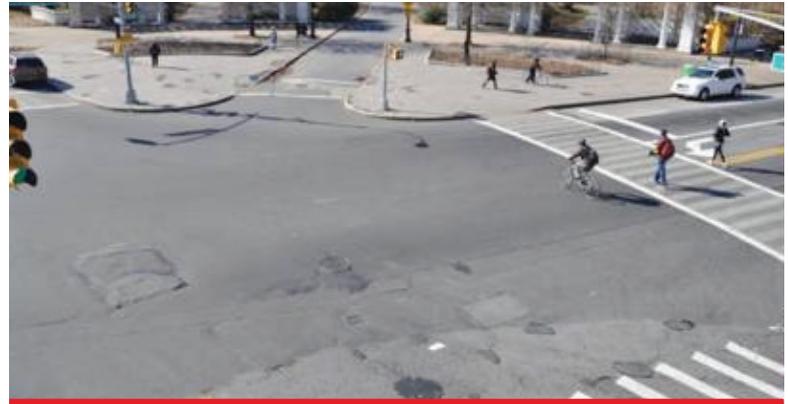
BEFORE: 23rd Street and 7th Avenue



AFTER: 23rd Street and 7th Avenue

17%

decline in injuries on W Fordham Road



BEFORE: Flatbush and Ocean Avenue



AFTER: Flatbush and Ocean Avenue

Project Examples

In the Fordham/University Heights senior pedestrian focus area, DOT closed a slip lane, extended curbs and added two pedestrian refuge islands in the junction of Sedgwick Avenue and West Fordham Road in 2010. Injuries at the intersections are down

by 17% since the improvements.

In 2011, DOT installed two pedestrian islands, separated left turns from mixed traffic, installed audible pedestrian signals and increased pedestrian time at crossing signals at 7th Avenue and West 23rd

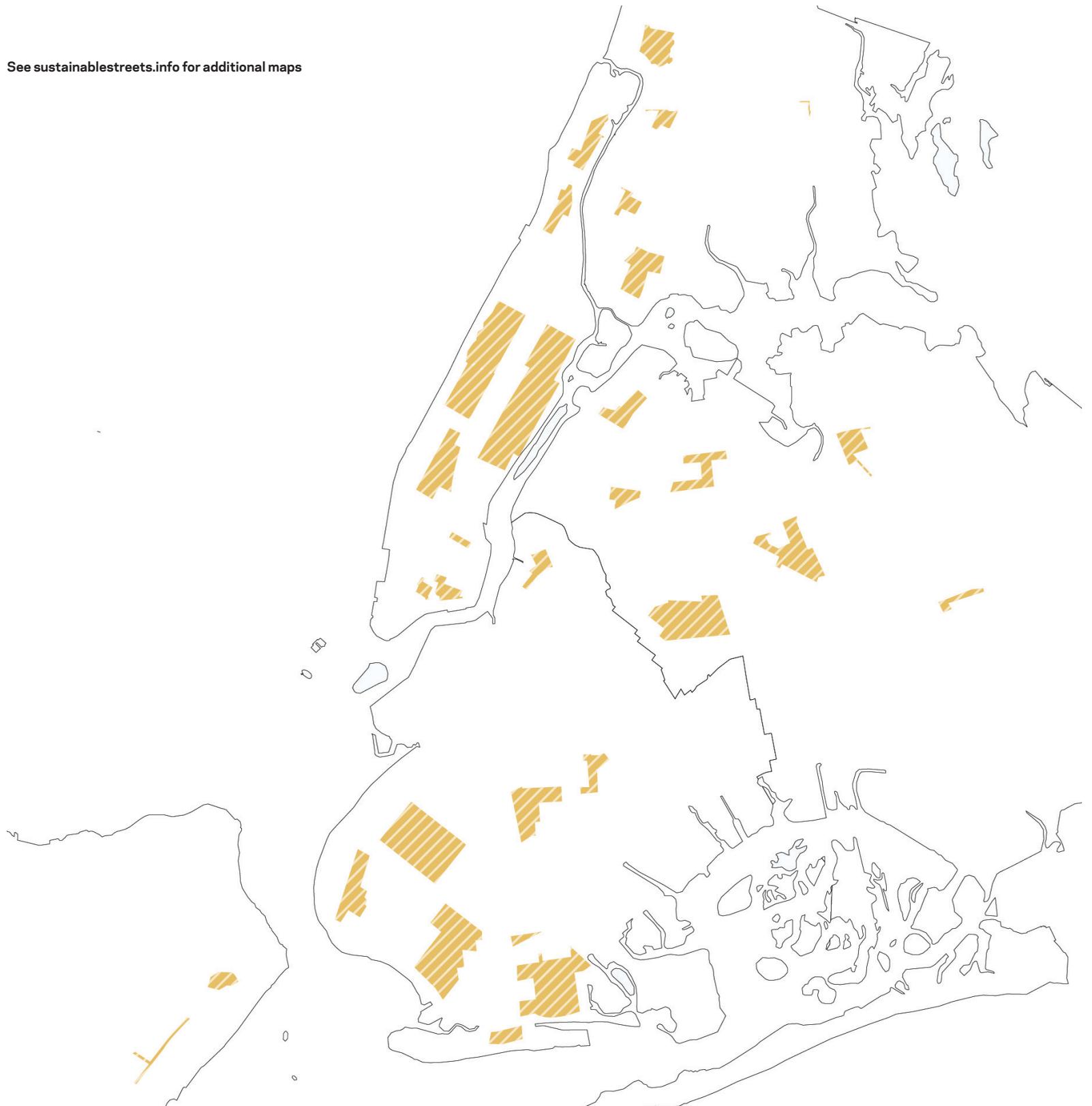
Street in Chelsea. All injuries at the intersection have dropped 93% since the improvements, with pedestrian injuries down 84%.

DOT expanded Safe Streets for Seniors in 2012 adding senior focus areas for pedestrian safety

improvements in Kingsbridge, Bronx, Manhattan Valley, East Harlem and the Upper East Side in Manhattan, Astoria, Forest Hills and Middle Village in Queens, Flatbush, Bay Ridge, Bath Beach and Kings Bay in Brooklyn and South Beach in Staten Island.

SAFE STREETS FOR SENIORS FOCUS AREAS

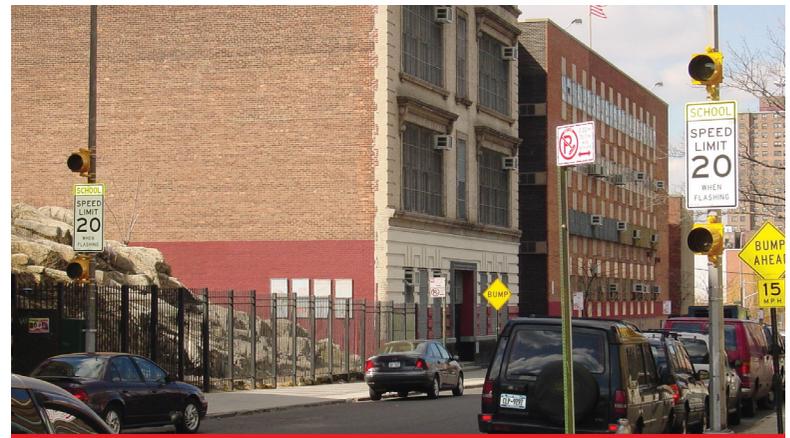
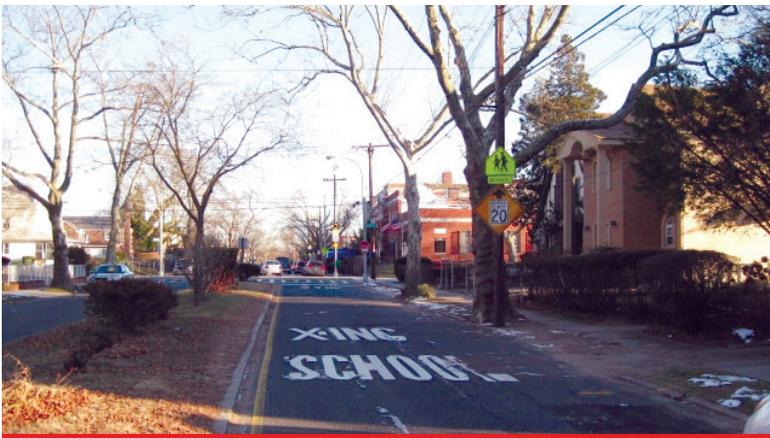
See sustainablestreets.info for additional maps



“Interventions to make the built environment safer can greatly reduce injuries to children as they walk to school”

—Charles DiMaggio, Columbia University

SAFE ROUTES TO SCHOOL



NYCDOT has also been a pioneer in improving safety around schools. DOT’s multifaceted approach seeks to protect children from speeding and aggressive driving through a combination of street design changes, new regulations, better enforcement, and innovative education programs.

DOT inaugurated the first Safe Routes to School effort in the United States in the Bronx in 1997, with parents and safety advocates. A citywide Safe Routes to School program began in 2002.

Major street work for Safe Routes to School occurs in cycles because of its capital-intensive nature, such as moving curbs and

realigning road-beds. Capital improvements—such as sidewalk extensions, pedestrian islands, raised medians and sidewalk widening projects at the 135 schools identified by DOT as top safety priorities are underway. Shorter-term safety improvements at these schools are complete.

They include new traffic and pedestrian signals, the addition of exclusive pedestrian crossing time, speed humps, speed boards, high visibility crosswalks and new parking regulations. These design changes are strongly reinforced with speed regulation in school zones, described below in Chapter 2.

DOT has identified an additional group of 175 public, private and parochial elementary middle and high schools as Safe Routes to School priorities. Individualized planning studies are underway or complete for each school and short term improvements have started. The schools were selected after DOT staff evaluated conditions at the city’s 1,700 primary and secondary schools. The program includes partnership with parents, teachers and students

New York’s Safe Routes to School program has been highly successful. According to a Columbia University School of Public Health study published

in 2013, Safe Routes to School measures reduced child injury rates during peak times by 44%. The research looked at crash data encompassing 169,000 pedestrian injuries from 2001 to 2010 to assess the effectiveness of the program for children ages 5 through 19. “Interventions to make the built environment safer can greatly reduce injuries to children as they walk to school”, said the study’s lead author Charles DiMaggio, research director of Columbia’s Center for Injury Epidemiology and Prevention at Columbia.

City installation of speed bumps has accelerated dramatically

SPEED REDUCERS



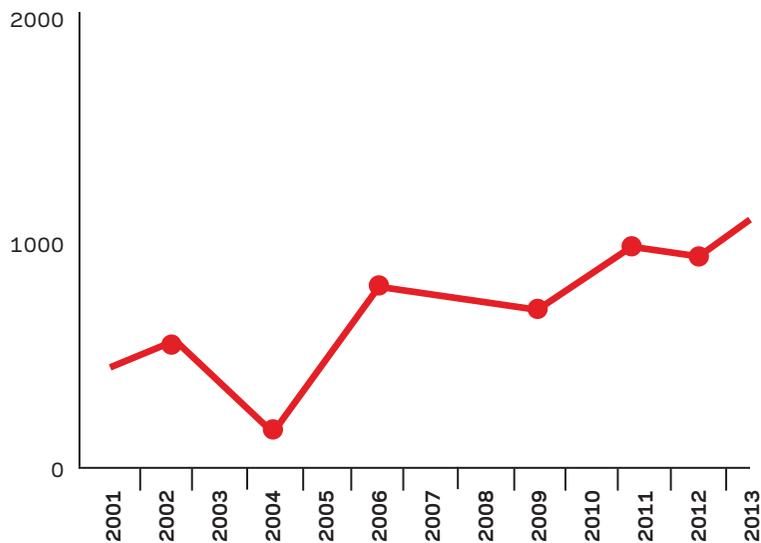
Speed bump installation

Speed bumps or speed reducers are a street safety feature designed to deter speeding that NYCDOT can deploy quickly and without otherwise redesigning a city street.

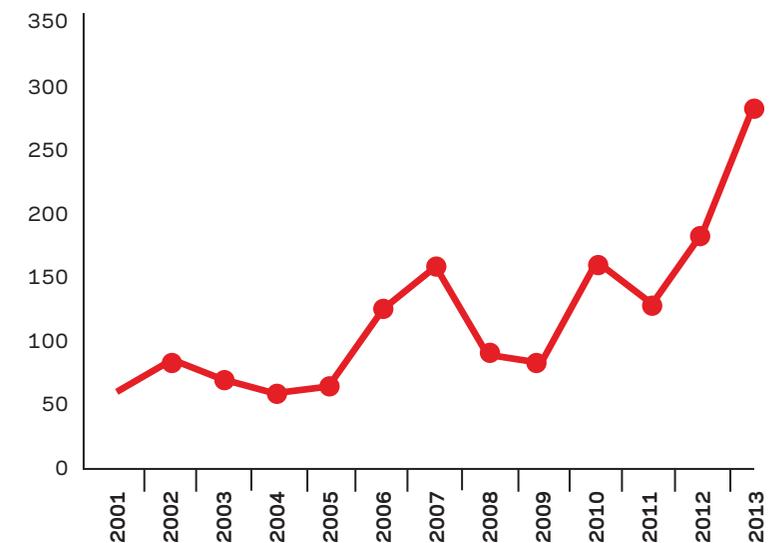
NYCDOT before/after studies found an average of 19% reduction in speeds where speed humps are in place. They have been shown to reduce crashes as well; DOT analysis has found that speed reducers reduce injury crashes by approximately 40%.

Speed reducers are key components of DOT's school safety and residential slow zone programs, as well as being available on demand where appropriate by citizens, community boards and elected officials (guidelines for locations and requests are available at nyc.gov/dot). New Yorkers' awareness of the speed bump program has increased significantly, driving requests to new highs. As a result of these needs and demands, the number of speed bumps on city streets today is at an all-time record.

SPEED BUMP STUDIES (FISCAL YEAR)



SPEED BUMPS INSTALLED (FISCAL YEAR)

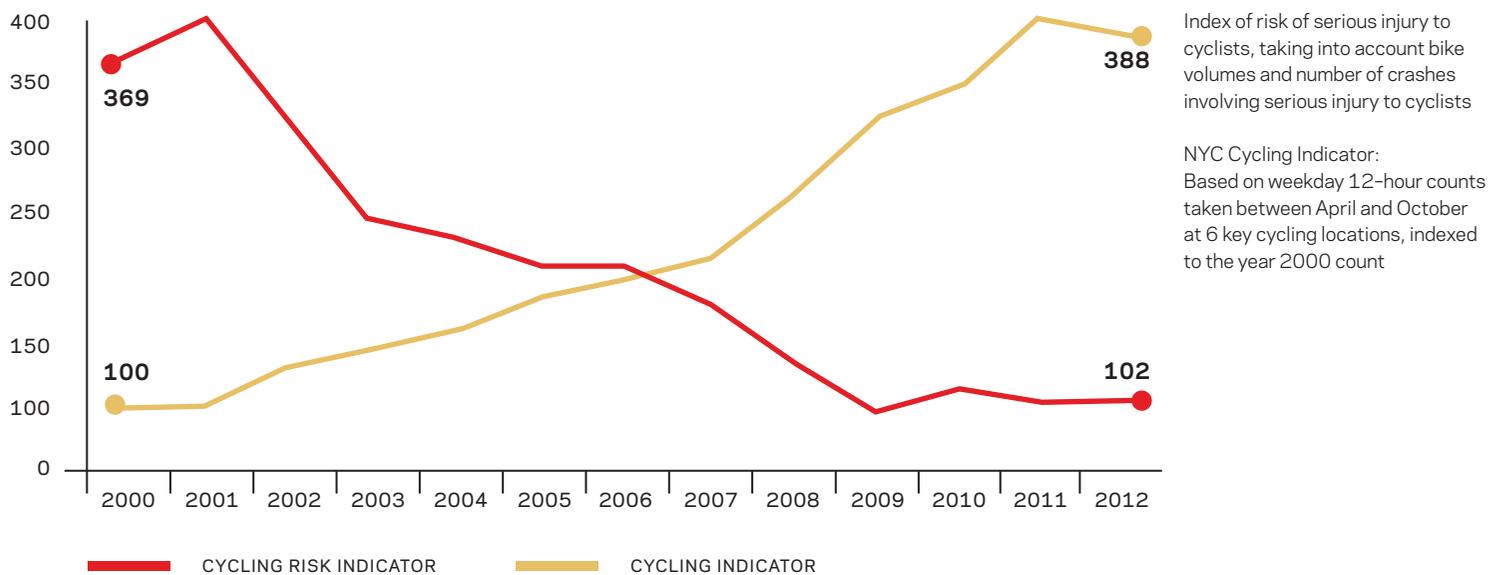


73%

decrease in risk of
serious cycling injuries
since 2000

CYCLING SAFETY

NYC CYCLING RISK INDICATOR



Mayor Bloomberg's 2007 PlaNYC sustainability program called for an increase in bicycle transportation. Converting most would-be cyclists into actual bike users requires streets designed with cycling safety in mind. NYCDOT's bicycle network program has been tremendously successful in this regard, encouraging a rapid increase in cycling from 2007 to 2012 without any corresponding rise in bicycling injury crashes. NYC's expanded bicycle network also provided the foundation for the launch of CitiBike in 2013. CitiBike has created another major increase in NYC bicycle use along with a salutary safety record during its first season in operation.

Because cycling has increased significantly while cycling injuries have remained flat, the rate of crashes per cyclist and per mile pedaled has fallen dramatically from 2000 to the present. DOT calculates a 73% decline in the average risk of serious cycling injury over this time frame.

The City's bike lane network itself is one prominent reason for this major gain in cycling safety. Corridor data from the City's parking-protected bicycle lanes—pioneered on 9th Avenue in Manhattan in the Fall of 2007—show marked safety improvements in every case, even where an older design of bike lane was in place prior to implementation of the improved protected lane.

Bicycle lanes, either protected or more traditionally-designed, also have a general traffic calming and safety effect. Total traffic

Study after study around the world has found that greater bicycle use in a city, town or country coincides with a stronger cycling safety record



fatalities in the city have reached historic lows at the same time that the cycling network has reached its largest extent. Controlling for other factors, serious pedestrian crashes on streets with bike lanes are 40% less deadly as crashes on other streets. On Allerton Avenue in the Bronx, speeding declined 7% eastbound and 4% westbound after implementation of painted bike lanes. The installation of bike lanes usually involves a narrowing of the motor vehicle portion of the roadway and indicates to drivers that they need to watch for other road users. These changes lower vehicle speeds and increase driver attention.

In addition to safety created by innovative street designs, the large increase in cycling that the bicycle lane network has helped to propel has a feedback effect that increases cycling safety.

Study after study around the world has found that greater bicycle use in a city, town or country coincides with a stronger cycling safety record. A greater presence and visibility of cyclists on city streets habituates motorists, pedestrians and cyclists themselves to the presence of regular bicycle traffic. Interactions involving bicycles become a predictable part of the traffic norm, with better safety outcomes for all. The CitiBike program may be accelerating this effect. Though CitiBike has generated over 5 million bicycle trips in Manhattan and Brooklyn since its launch on May 27, reported injury accidents involving CitiBike riders are fewer than 30, with no fatalities. As of October 2013 city-wide bicycle fatalities are on track for a below-average annual total, with no cyclist fatalities within the bike share service area.

36%

decline in frequency
of injuries despite
growth in cycling

Parking protected bike lanes save lives

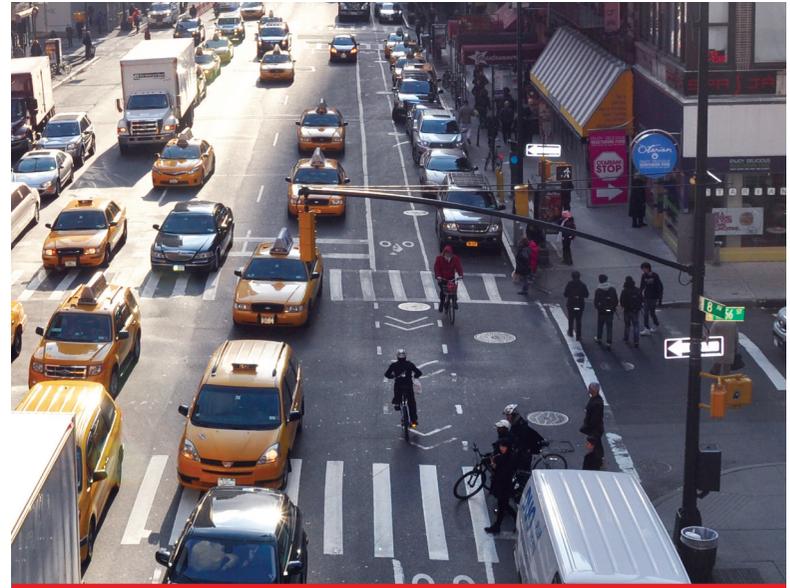
DOT's on-street protected bicycle paths, first implemented on Manhattan's 9th Avenue in 2007, improve safety by clearly organizing the different streams of traffic and giving each type of user dedicated space. The changed lane design also embodies significant traffic calming features, narrowing roadways with surplus capacity. They make intersections predictable and increase safe space for crossing pedestrians. The design gives cyclists secure routes through the heart of Manhattan.

In three years since implementation of the protected bike lane, 9th Avenue saw 43% fewer crashes with injuries than in the three years prior to the project. Cyclist volumes are up substantially, but injuries to cyclists are 36% less frequent than before the lane was installed.

Similar analysis for the 8th Avenue bike lane, implemented in 2008, shows total crashes down by 11% and crashes with injuries down by 20%.

Following implementation of protected bicycle lanes on Allen and Pike Streets in the Lower East Side of Manhattan, both motor vehicle and bicycle crashes declined by 35%.

Total crashes fell 22% after installation of a protected bike lane on First Avenue.



BEFORE: 8th Avenue and 56th Street



AFTER: 8th Avenue and 56th Street





STOP

EXPRESS

Bollywood Video

2-17

077

076

68

Chapter 2

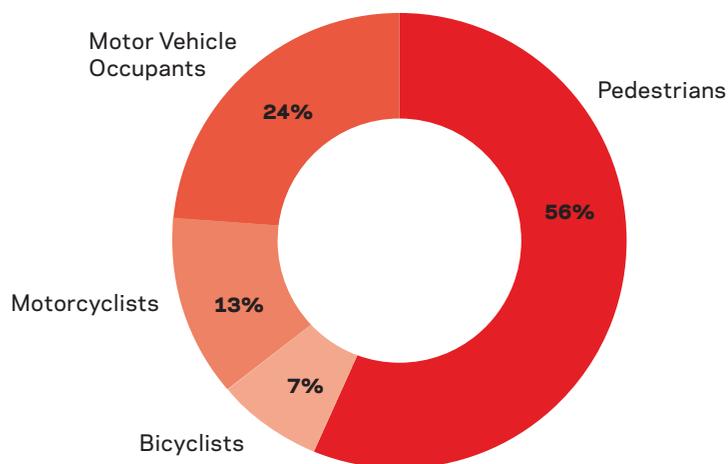
The Science of Safety

DOT's concerted work to re-engineer streets with above-average crash histories, to meet community concerns about traffic safety and to meet its own strategic goal of reducing traffic fatalities each year relies on ongoing and painstaking analysis. NYCDOT collects and analyzes more information about the causes of traffic deaths and injuries than ever before, and applies the agency's resources to develop site-specific responses to that information.

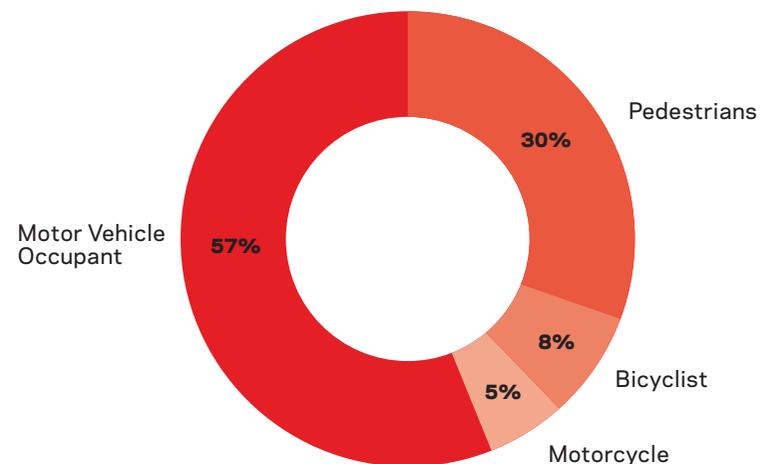
Data and design analysis have been key factors in DOT's success in pushing traffic deaths to historic lows, and

drives safety policy and projects to an unprecedented degree. The main effort sustains ongoing analysis of the highest-crash corridors and intersections so those areas can be addressed by DOT's traffic safety experts and engineers. This work also focuses resources on particular groups of at-risk pedestrians. The Safe Streets for Seniors and Safe Routes to Schools programs described in Chapter 1 are based on crash statistics that identify and address safety problems experienced by specific vulnerable groups.

TRAFFIC FATALITIES (2008-2012)



TRAFFIC INJURIES (2007-2012)



Data and design analysis have been key factors in DOT's success in pushing traffic deaths to historic lows

A NEW ANALYTIC FOUNDATION

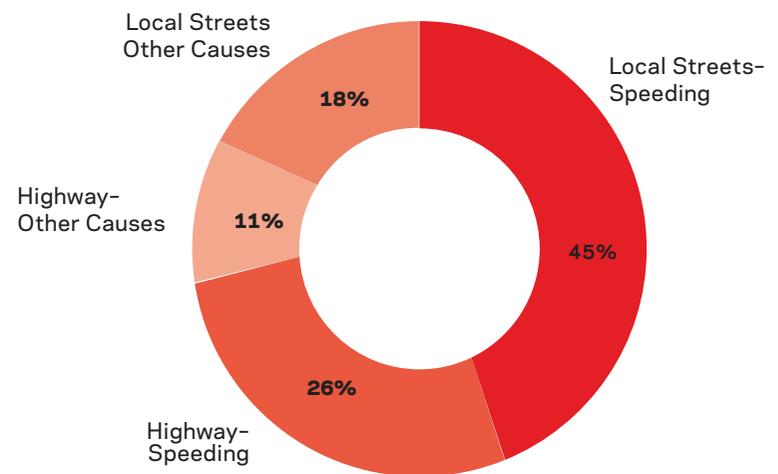
NYCDOT established a new basis for safety analysis with its seminal 2010 Pedestrian Safety Study & Action Plan. NYCDOT researchers examined dozens of factors and a wide variety of datasets from over 7,000 severe and fatal pedestrian crashes in New York City during 2002-2006 that could be associated with each pedestrian injury and with the number of injuries in given geographic areas. Variables with significant levels of correlation with pedestrian crashes were identified, then used to build a carefully designed statistical model. Experts from NY University, Rensselaer Polytechnic Institute and SUNY Buffalo supported the effort.

The state-of-the-art data statistical modeling techniques used attempted to control for pedestrian exposure to crashes, using factors like population, vehicle registrations, presence of traffic signals (generally located at higher-volume intersections) and transit usage. The study used two distinct approaches to modeling: crash frequency analysis and crash severity analysis. Crash frequency analysis aims to determine the causes of a high frequency crash location, while crash severity analysis aims to determine why some crashes resulted in a severe injury, while others resulted in a fatality.

The vast size and diversity of New York City's street network and neighborhoods presented a robust opportunity for this advanced analysis, as crash rates could be compared across neighborhoods that differ by a wide variety of characteristics but contain very similar geometric dimensions and engineering treatments.

The Action Plan accompanying the pedestrian safety study summarized its findings, some of which are shown here. The analysis continues to inform DOT's annual set of street improvement projects.

MOTOR VEHICLE OCCUPANT FATALITIES BY CAUSE AND LOCATION, 2012



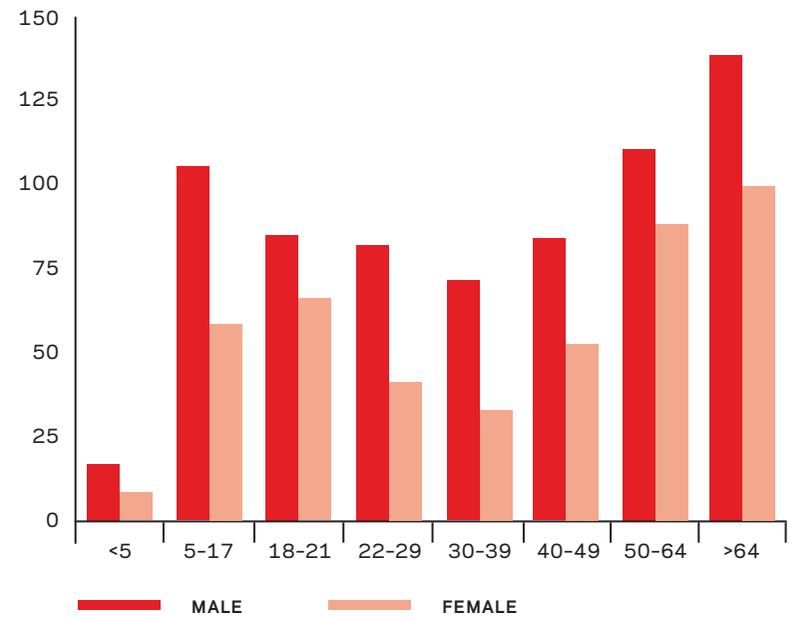
PEDESTRIAN ACTION AT TIME OF CRASH

PEDESTRIAN ACTION	SEVERE	FATAL	TOTAL	%TOTAL
CROSSING WITH SIGNAL	1,589	123	1,712	26.9%
CROSSING, NO SIGNAL OR SIDEWALK	1,338	168	1,506	23.6%
CROSSING AGAINST SIGNAL	1,155	146	1,301	20.4%
OTHER ACTIONS IN ROADWAY	399	83	482	7.6%
EMERGED FROM BEHIND PARKED VEHICLE	401	38	439	6.9%
CROSSING, NO SIGNAL, MARKED CROSSWALK	327	37	364	5.7%
NOT IN ROADWAY	204	30	234	3.7%
PLAYING IN ROADWAY	88	3	91	1.4%
GETTING ON/OFF VEHICLE	83	1	84	1.3%
WORKING IN ROADWAY	66	5	71	1.1%
ALONG HIGHWAY WITH TRAFFIC	41	6	47	0.7%
ALONG HIGHWAY AGAINST TRAFFIC	24	5	29	0.5%
CHILD GETTING ON/OFF SCHOOL BUS	8	1	9	0.1%

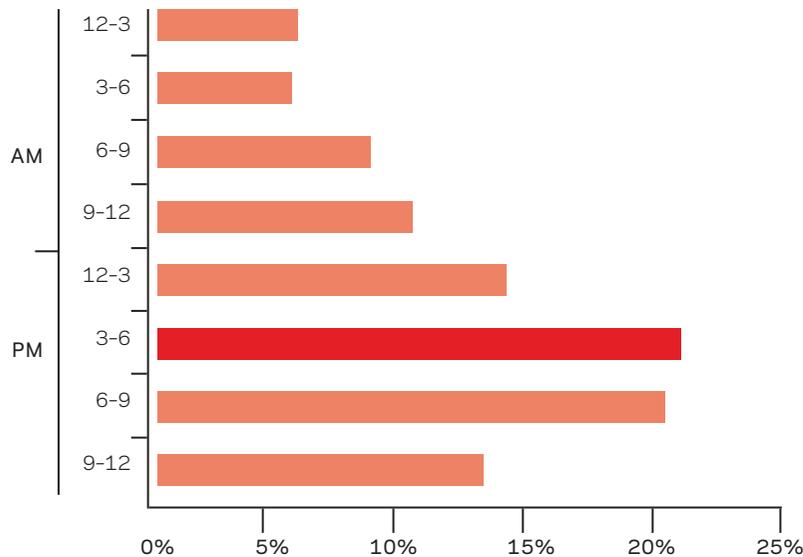
CONTRIBUTING FACTORS TO CRASHES

APPARENT FACTOR	CASES (n=7,354)	% OF TOTAL
DRIVER INATTENTION	2,647	36.0%
PEDESTRIAN'S ERROR/CONFUSION	1,578	21.5%
FAILURE TO YIELD RIGHT OF WAY	1,512	20.6%
UNSAFE SPEED	610	8.3%
BACKING UNSAFELY	506	6.9%
VIEW OBSTRUCTED/LIMITED	382	5.2%
ALCOHOL INVOLVEMENT	352	4.8%
TRAFFIC CONTROL DEVICES DISREGARDED	344	4.7%
OTHER (VEHICLE)	342	4.7%
AGGRESSIVE DRIVING/ROAD RAGE	280	3.8%
PAVEMENT SLIPPERY	277	3.8%
DRIVING EXPERIENCE	240	3.3%
GLARE	212	2.9%
PASSING OR LANE USAGE IMPROPERLY	119	1.6%
OUTSIDE CAR DISTRACTION	81	1.1%
REACTION TO OTHER UNINVOLVED VEHICLE	70	1.0%

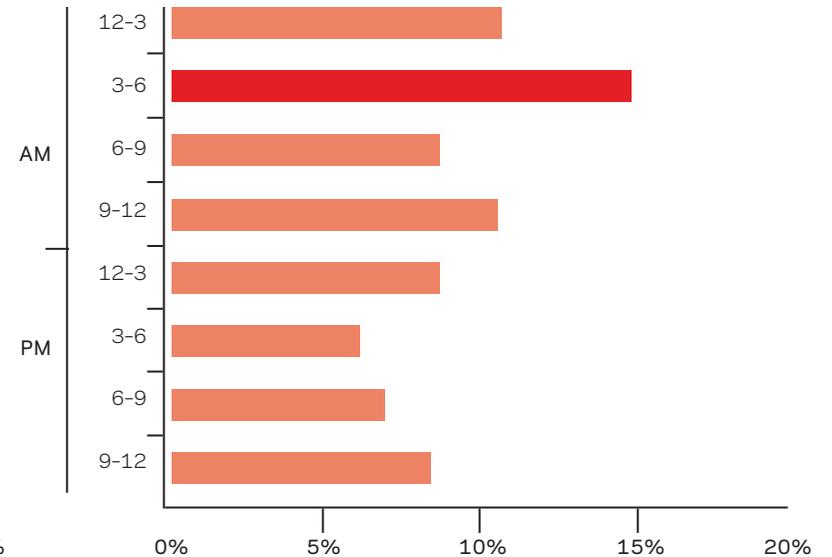
RATES OF PEDESTRIAN FATALITIES+SEVERE INJURIES PER 100K POPULATION



PEDESTRIAN KSI BY TIME OF DAY (2002-2006)



PEDESTRIAN KSI BY TIME OF DAY PERCENT FATAL (2002-2006)





ONLY



ONLY



DO NOT
ENTER

1888 JUNKCARS

PROJECT DEVELOPMENT



Most of DOT street improvement projects result directly from this ongoing analysis of safety conditions as well as input from elected officials and the public, especially those meant to protect pedestrians and cyclists. Following location identification, DOT undertakes field inspections and audit reports. A wide range of safety improvements are considered: signal timing changes, markings installations, turn restrictions, parking/loading and other sign installations, lane designations and concrete construction. Based on the appropriate improvement, data is ordered to analyze, support and verify the treatment. A design is then drafted and submitted for internal approvals and community review. This process could take between six months to a year, based on the complexity of the intersection or corridor and the proposed improvement.

BEFORE-AFTER TRACKING

Continued success in making New York City streets safer requires learning from experience to identify and implement the most effective approaches to street design. During the past six years, NYCDOT has dramatically stepped-up results tracking from changes in street design. DOT's annual Sustainable Streets Index and the 2012 Measuring the Street report are manifestations of this sustained work

Until NYCDOT began to systematically implement and evaluate street improvement projects, there was relatively little data available, locally or nationally, showing the effectiveness of projects that combined traffic engineering and the newer traffic calming techniques, particularly in large, dense urban street networks like that of NYC. As NYCDOT projects were completed, however, agency planners were able to systematically evaluate the effectiveness of each project on a broad range of evaluation metrics, including traffic safety.

Continual research and review feeds back into future project design and provides NYCDOT and the public with the opportunity to make highly informed choices about the future of the City's streetscape, especially in making our streets safer.

SPEED
LIMIT
20

SR-2027 DEPT. OF TRANSPORTATION

NEIGHBORHOOD
SLOW
ZONE



SI-1327G



Chapter 3

Tools for Safe Streets

New York City complements street design changes and police traffic law enforcement with updated technology and regulations, and has substantially accelerated innovation in this regard over the past six years. From automated law enforcement to changes in parking rules to improve visibility in intersections, NYCDOT has continually expanded the range of traffic safety tools at its disposal.

SCHOOL SPEED ZONES

To complement long term construction and roadway realignment near schools, NYCDOT has dramatically increased its work to lower speed limits and signify the presence of students on foot around school zones with signs and street markings. This effort, combined with the Safe Routes to Schools program described in Chapter 1, comprises the most comprehensive and effective school safety program in the United States.

NYCDOT's School Speed Zones use signage, regulation, flashing lights, high visibility street markings and, where appropriate, speed humps to slow drivers in areas around schools. Speed limits in the zones are as low as 15 miles per hour.

Since 2008, DOT has improved the street markings and signage around nearly 1,500 primary and secondary schools.

NYCDOT has approved 305 blocks around schools low speed limits, with 189 implemented with flashing lights and regulatory changes imposing 15 or 20mph speed limits. The 108 additional slow speed blocks are in the implementation pipeline, while analysis is underway for additional schools.



School Slow Zone

DOT and NYPD observations indicate that speeds have lessened in the first Neighborhood Slow Zone implemented

NEIGHBORHOOD SLOW ZONES



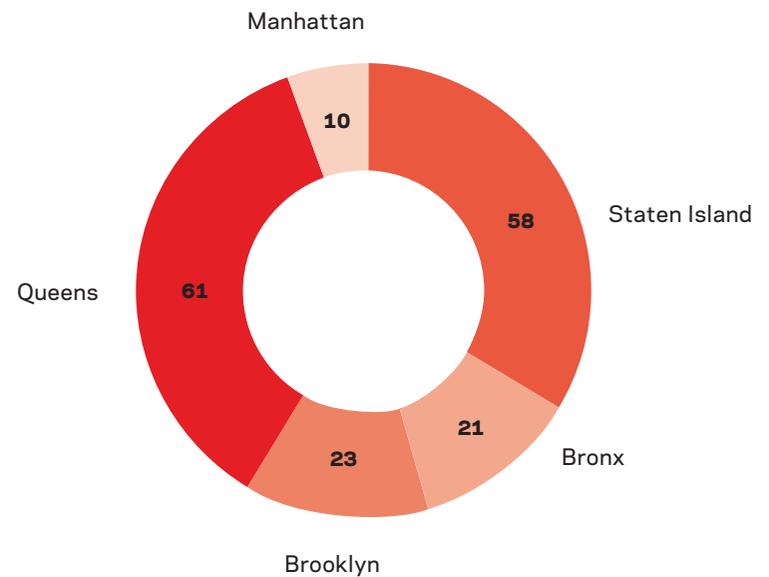
Inwood Neighborhood Slow Zone

Neighborhood Slow Zones is a community-driven program launched in 2011 that reduces the standard speed limit from 30 mph to 20 mph and adds traffic calming features in definable residential areas. Slow Zones also seek to enhance quality of life in residential neighborhoods by reducing cut-through traffic and traffic noise.

Neighborhood Slow Zones are established in small, self-contained areas that consist primarily of local streets. Gateways consisting of signs and markings announce the presence of a Slow Zone. The zone itself is a self-enforcing, reduced-speed area with speed humps, “20 MPH” street markings and other traffic calming treatments. Slow Zones are implemented in areas with low traffic volumes and minimal through traffic, where reducing the speed limit will not cause traffic congestion.

DOT creates Neighborhood Slow Zones in response to applications from communities. Following selection, DOT works with the community to devise a plan to install the Slow Zone. Slow Zones must be approved by the Community Board that contains the area

NEIGHBORHOOD SLOW ZONES APPLICATION TOTAL (2012-2013)



defined in the application, which must also demonstrate local support for establishing the zone. DOT does not approve zones that contain fire stations and hospitals or are traversed by truck routes.

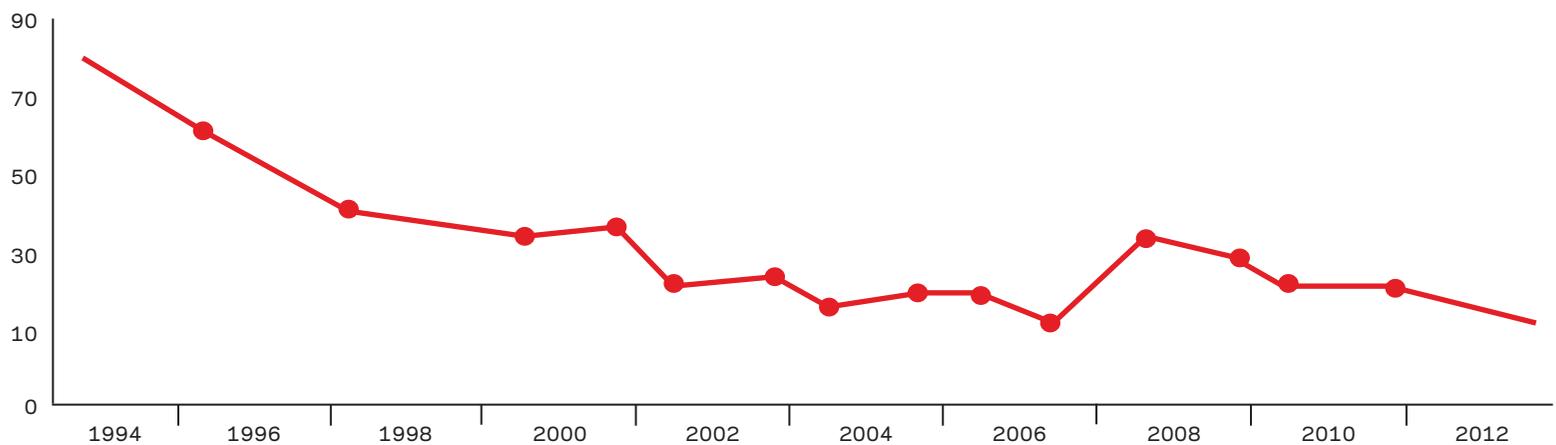
Like the demand for the speed reducer program described in Chapter 1, the extremely strong demand for Neighborhood Slow Zones that NYCDOT has experienced since the program’s inception indicates dramatic public support for traffic safety and control of speeding on City streets. 173 neighborhoods across the city applied to the program in the first two years.

Although the program is not yet old enough to have created a strong database, DOT and NYPD observations indicate that speeds have lessened in the first 20mph Neighborhood Slow Zone, implemented in the Claremont section of the Bronx in 2012. During 2013, DOT is implementing a further 13 Neighborhood Slow Zones. In London, the introduction of 20 mph zones was associated with a 42% reduction in injuries, as compared to untreated areas. In the UK, average speeds in 20 mph zones have been reduced by 9 mph.

As the number of red light cameras expanded, fewer drivers received automated violations for running red lights

RED LIGHT CAMERAS

ENFORCEMENT CAMERAS WORK TO REDUCE RED LIGHT RUNNING



DAILY NUMBER OF VIOLATIONS AT EACH NYC RED LIGHT CAMERA (1994-2012)

Since the 1980s, NYCDOT has used red light cameras to help reduce red light running and improve safety. The program works to reduce crashes and their severity. DOT has successfully persuaded the NY State Legislature to expand the program several times. It is now at its greatest extent, but should be expanded further as the City seeks ever-safer streets.

Red light cameras have been an enormously effective traffic safety measure in New York. Since the program's inception in 1988, cameras have issued over 4 million violations. In 2011 alone, 821,483 violations were issued to passenger vehicles, buses, trucks and taxicabs running through red lights.

These citations have improved street safety: intersections where red light cameras were installed saw a 20% decline in all injuries, a 31% decrease in pedestrian injuries, and a 25% decrease in serious injuries over the three years after the cameras were installed. Red light running at intersections where the cameras are installed has declined by as much as 40% to 60%. Citywide, the number of

violations has also declined over time—fewer drivers are getting red light tickets as the cameras deter violations. Violations issued declined by 22% from 2010 to 2011. The City does not make red-light camera locations public in order to extend the cameras' deterrent effect beyond the small number of locations where they are installed.

The decline in NYC red light violations correlates with studies conducted by the Insurance Institute for Highway Safety a well-recognized research organization. Reviews by the Institute conclude that cameras reduce red light violations by 40–50 percent.

The NY State Legislature has extended the duration of the demonstration program six times since 1991, gradually increasing the number of intersections where the cameras can be installed. Today, New York has 190 red light cameras at 150 intersections, less than 2% of NYC's total of 12,000 signalized intersections. The advent and expansion of the program broadly coincides with the City's dramatic improvement in street safety since the mid-1990s.

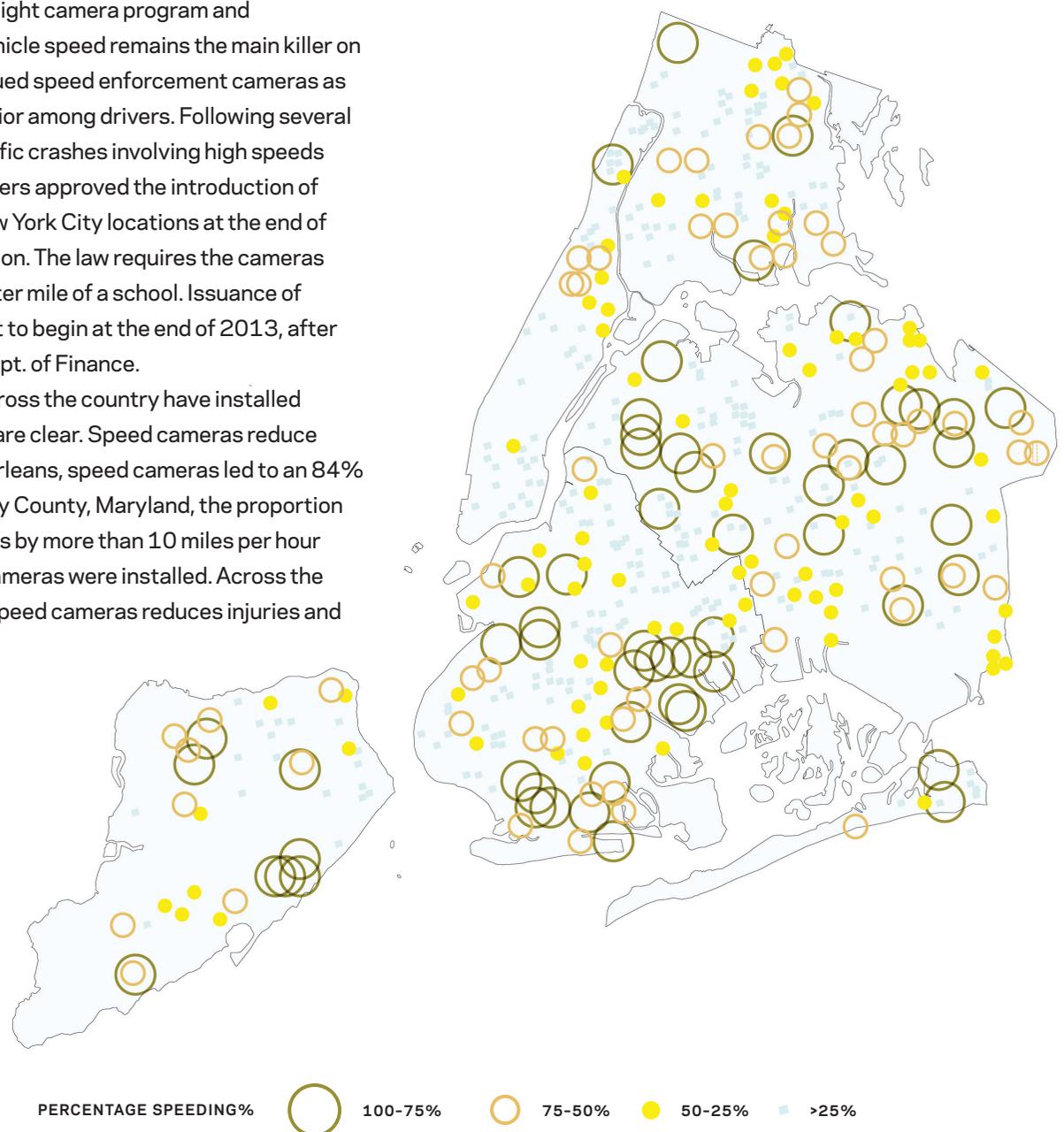
Across the United States, introduction of speed cameras has reduced injuries and fatalities by 40 to 45 percent

SPEED CAMERAS

Based on the success of its red light camera program and overwhelming evidence that vehicle speed remains the main killer on City streets, NYCDOT has pursued speed enforcement cameras as a way to encourage safer behavior among drivers. Following several terrible and well-publicized traffic crashes involving high speeds early in the year, Albany lawmakers approved the introduction of speed-radar cameras at 20 New York City locations at the end of the 2013 state legislative session. The law requires the cameras to be deployed within one-quarter mile of a school. Issuance of \$50 speeding summonses is set to begin at the end of 2013, after adoption of rules by the NYC Dept. of Finance.

Over 100 cities and towns across the country have installed speed cameras and the results are clear. Speed cameras reduce speeds and save lives. In New Orleans, speed cameras led to an 84% drop in speeding. In Montgomery County, Maryland, the proportion of drivers exceeding speed limits by more than 10 miles per hour declined by 70% after speed cameras were installed. Across the United States, introduction of speed cameras reduces injuries and fatalities by 40 to 45 percent.

LOCATIONS WITH DOCUMENTED SPEEDING WITH 1/4 MILE OF A SCHOOL



DOT staff visited 4,000 businesses prior to enforcement of the strengthened commercial cyclist law

COMMERCIAL CYCLIST ENFORCEMENT

Cyclists who make deliveries for businesses and restaurants, either directly or through a messenger service, are a fixture on New York City's streets. These hardworking men and women provide a valuable service for New Yorkers and the City's economy, and do so in an environmentally sustainable and congestion-beating manner. But if they fail to obey traffic rules or lack necessary bicycle safety equipment they pose danger to themselves and to others.

In response to community and elected official requests, DOT launched a comprehensive education and enforcement campaign in summer 2012 to educate businesses on requirements of the commercial cycling rules. While City law has long mandated that restaurants display posters about safe cycling, outfit bikes with lights and bells, provide helmets and safety vests to delivery cyclists, few were complying.

COMMERCIAL CYCLIST OUTREACH TO BUSINESS, BY BOROUGH

BOROUGH	STORES VISITED
MANHATTAN	2,891
BROOKLYN	547
QUEENS	370
BRONX	284
TOTAL	4,092

DOT launched the City's first-ever commercial cyclist outreach and enforcement unit, a six-person team of DOT inspectors to travel door-to-door to ensure that businesses comply with the law. Between summer 2012 and spring 2013, the inspectors visited over 4,000 businesses and then began enforcement in spring of 2013.

In addition, DOT held 36 educational forums reaching near 5,000 attendees, handing out helmets, bike bells, reflective vests, and sample ID tags for businesses and their employees.



Commissioner Sadik-Khan greets commercial cyclists with new reflective vests



City officials announce the commercial bicyclist safety effort.

DOT also partnered with the City Council to revise the commercial cycling law and make compliance simpler for businesses and less burdensome on delivery cyclists.

The education, enforcement and legislative effort had a noticeable effect on delivery cyclists' compliance with the law. Now cyclists across the City can now be seen wearing reflective vests with the name of the business they represent.

TRAFFIC SIGNAL IMPROVEMENTS

In addition to continually evaluating streets and intersections for conditions that may warrant additional traffic controls, NYC DOT is implementing several innovative signal program:

Signal timing helps improve mobility and safety by regulating traffic flow and speed, and giving pedestrians more time to cross. This has been widely used by DOT in neighborhoods throughout the city to improve safety.

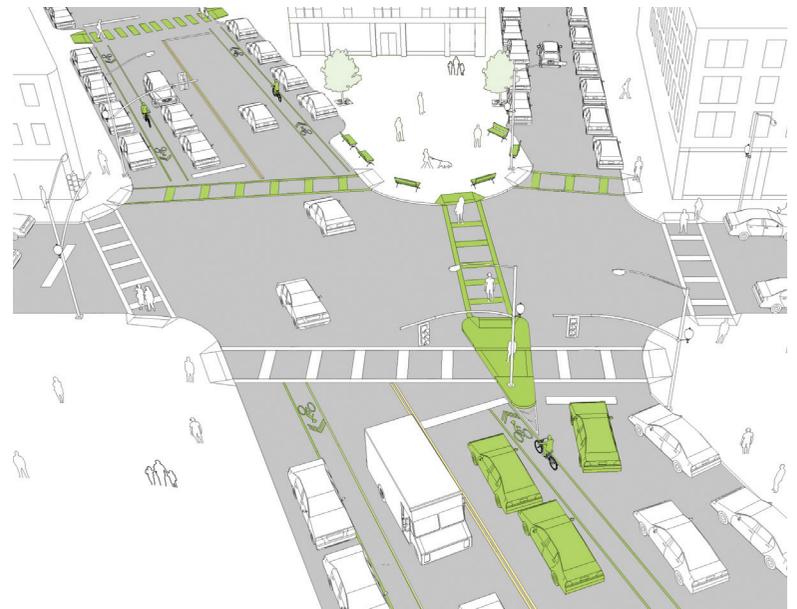
Pedestrian countdown signals tell people on foot how many seconds they have to cross the street. DOT before/after analysis of pedestrian countdown signals installed at 1,800 intersections during 2011 and 2012 found that total crashes were reduced by 5%, and injuries to pedestrians also declined by 5%. DOT will have installed 8,000 of these signals representing two-thirds of City intersections by the end of 2015.

Leading pedestrian intervals show a walk sign for pedestrians before showing a green light for drivers. LPIs have been installed at 100 intersections citywide since 2007.

Accessible pedestrian signals help low vision and blind people cross the street by making noise when it is safe to cross. They have been installed at 53 intersections citywide.

Overall, NYC DOT has installed new signals at 772 intersections and new 4-way stop controls at 241 intersections since 2007. Both treatments reduce right-angle crashes and improve pedestrian access.

PARKING AND TURN RESTRICTIONS



“Daylighting” is the removal of curbside parking spaces at the approach to an intersection. It prevents parked vehicles from impeding the sight-lines of both pedestrians and drivers. Visual obstacles in busy intersections can lead to pedestrian-vehicle crashes.

Prohibiting certain turns in busy intersections simplifies traffic patterns, giving drivers and pedestrians fewer points to check when proceeding. NYC DOT has installed 175 left turn bans citywide since 2007.

Phone
VanWagner



Walk safe. Cross smart.
Traffic injuries are avoidable.
Mom was right.
Look before you cross the street.



LOOK! LOOK FOR THE DOT



BUS LANE
TAM - 10AM 2PM - 7PM MON - FRI
BUSES ONLY ↓



Chapter 4

DOT's Public Conversation on Street Safety

Safety themes and improvements permeate DOT's goals, programs, projects and overall dialogue with New Yorkers. It's not an exaggeration to state that New Yorkers both inside and outside of government are pulling together to deliver safer streets. Elected officials, community groups and many other associations and stakeholders routinely approach the Department with ideas for improving street safety, and as we have documented in the chapters above, DOT's application-based safety programs such as slow speed zones and speed reducers are heavily subscribed. City Council legislation has codified major elements of DOT's safety improvement project development and analytic procedures, for example, mandating an update of the 2010 Pedestrian Safety and Action Plan every five years (Local Law 11 of 2008).

The status of the public dialogue over traffic safety augurs well for future gains. DOT's safety work with stakeholders in particular locations is strongly collaborative, and in recent years the agency has developed the communications capacity to help expand a culture of street safety to the general public.

41%

decrease in crashes at
Harlem River Park

PROJECT DEVELOPMENT THROUGH INPUT AND DIALOGUE

HARLEM RIVER PARK GATEWAYS

DOT was approached in 2008 by the Harlem Community Development Corporation and other stakeholders to discuss pedestrian access routes to the relatively new Harlem River Park. Although there were pedestrian overpasses to take park-goers across Harlem River Drive, the access points were adjacent to intersections and Harlem River bridge connections with heavy traffic and difficult to reach for many residents. DOT safety and traffic experts worked with

local groups and the NYC Parks Department to improve pedestrian access at East 135th Street and Madison Avenue, East 138th Street and 5th Avenue, East 139th Street and 5th Avenue and 142nd Street and 5th Avenue. The projects created over 2,400 square feet of new space for pedestrians and have shown strong results for all street users, reducing crashes with injuries to pedestrians by 10% and crashes with injuries to motor vehicle occupants by 48%.



BEFORE: Harlem River Park Gateway



AFTER: Harlem River Park Gateway

JACKSON HEIGHTS

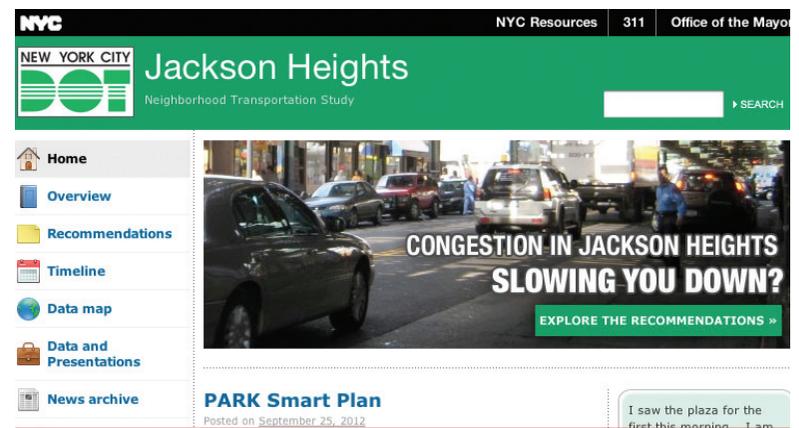
In 2011, DOT carried out a comprehensive set of improvements in the heart of Jackson Heights, the culmination of a community-driven planning process that started in 2009. Local residents, business owners and elected and civic leaders had expressed a range of pressing transportation concerns and worked with DOT to guide the development of solutions. DOT created a robust set of opportunities for public participation, including community workshops, neighborhood walk-throughs, an innovative web portal that allowed DOT staff to receive and respond to comments at any time, and a Community Advisory Committee to facilitate ongoing involvement of key stakeholders.

The project addressed traffic safety, as well as sidewalk crowding, vehicle congestion, parking availability, slow bus service and a lack of public open space. Focused on the

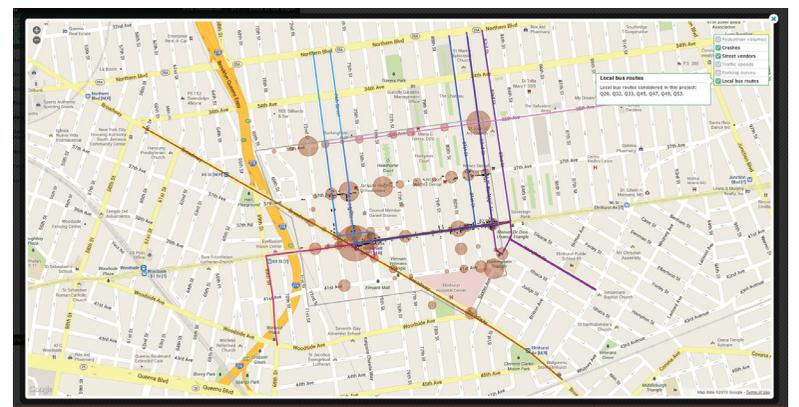
area where 73rd Street, 37th Road, Broadway and Roosevelt Avenue converge, the core improvements were carried out in the second half of 2011. Updated curb regulations were introduced in spring 2012, offering a better use of space for deliveries and customer parking. Further parking improvements were implemented in 2013 with the introduction of the variable-rate PARK Smart program.

There are fewer injury-causing crashes; problematic traffic bottlenecks have been eliminated; buses are faster and more efficient; and the 37th Road plaza is a popular gathering spot year-round, home to frequent public events and a boon to adjacent businesses. Safety performance in the area has improved markedly since implementation—total crashes with injuries have declined by 26%.

DOT created a robust set of opportunities for public participation in Jackson Heights



Online portal for participation in Jackson Heights



Online portal for participation in Jackson Heights

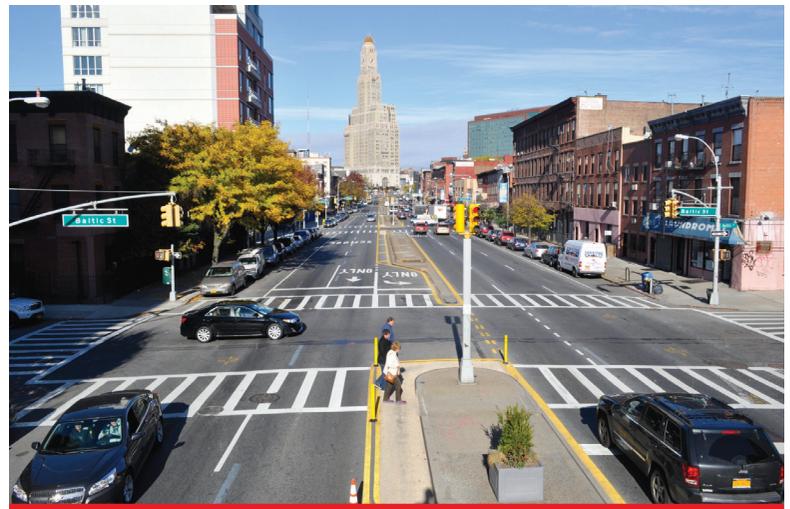
FOURTH AVENUE, BROOKLYN



Residents discuss 4th Avenue safety improvement in Park Slope

DOT has implemented major design changes to reduce speeding on 81 blocks of Brooklyn's Fourth Avenue, with one more segment under consideration as of October, 2013. Overall, the project ranges for much of the length of Brooklyn, from Bay Ridge to the Barclay's Center. The project is generally widening medians, narrowing pedestrian crossing distances and restricting some turns. Implementation began following intensive public dialogue and collaboration. Discussion in the corridor continues today.

In 2011, in partnership with a task force convened by the Brooklyn Borough President, DOT began holding community workshops for sections of Fourth Avenue to develop design ideas for improving safety and traffic operations. Safety on Fourth Avenue has long been a concern of DOT and the people who live and work along the corridor. In 2009, the NY Police Department's 72nd Precinct requested a safety project along the Fourth Avenue corridor. Community Board 7 also approached DOT with requests



4th Avenue, after improvements

for safety improvements along the avenue in Sunset Park.

All three segments of the project have been subject to an extensive dialogue and discussion. As in Jackson Heights, presentations, open houses, workshops, community board hearings, walk-throughs and an interactive on-line portal were part of the varied repertoire for discussing and developing an accepted action plan for the corridor. In Park Slope and Bay Ridge, DOT used a new tool that lets community members anonymously post notes on

street views of each intersection in the study area to suggest improvement ideas. Park Slope Council Member Brad Lander wrote that it "is one of the best examples of online interactive government I've seen."

DOT's Safety Education division also engaged parents, teachers and students in meetings and workshops on the basics of safety design at a total of 35 public and private schools along the corridor.

PUBLIC CAMPAIGNS FOR TRAFFIC SAFETY

NYCDOT complements its street design projects and safety-oriented technology and regulations with clear, hard-hitting safety education campaigns. From traditional billboards to new apps and online portals, DOT has pioneered a variety of communication methods to explain the dangers of drunk driving, speeding and distraction to a wide audience.



Prior to 2007, the agency's capacity for public communication was limited. In the past five years, DOT has developed robust contracting capacity, funding streams, expertise to develop, review and select effective communications campaigns, including associated social media efforts to deliver a strong public message on behalf of safer streets.

BE THE MAN

DOT's "You the Man"/"Be the Man" anti-drunk driving campaign used research and focus group insights to develop messages targeted towards the New Yorkers most likely to drink and drive: young men ages 21-39. This age group was responsible for 63% of alcohol related deaths in 2008. This audience is aware that drinking and driving is wrong, but has become relatively immune to traditional government warnings, and many still fail to make a plan to get home safely at the end of a night out.

"Be the Man" lionizes the role of the designated driver from a peer-group point of view, and emphasizes practical steps to ensure a safe conclusion to a night out.

Rather than launch traditional television ads, the campaign sought its audience via media

that is present during nights out: smart-phones, radio spots, posters and coasters in bars and clubs and beer cups at Staten Island Yankees and Brooklyn Cyclones games. Promotions included an innovative phone app with a "find-a-ride" feature using the phone's GPS to identify the closest Taxi and Limousine Commission-registered car services and subway stations and free-ride-home MetroCards and taxi coupons distributed in a variety of holiday periods and during March Madness.

DOT tracking surveys showed that Be the Man was reaching its target audience. DOT found that the campaign was recognized more by 21 to 35 year olds than by other groups. One third of the 21-35 group were aware of the campaign, with highest acknowledgement in Staten Island.



One quarter of New Yorkers surveyed recognized the 2012 LOOK! campaign

LOOK



LOOK is NYCDOT's general traffic safety rubric, urging New Yorkers through a variety of media to take extra care to watch out for each other on City streets. The LOOK brand now has a wide range of applications, combining innovative street markings, taxi window decals, ads, and videos to send a life-saving message, reminding New Yorkers to be alert, whether on foot, bike or behind the wheel. 25,000 LOOK-themed backpacks have been distributed

to children who work with DOT Safety Education.

At over 100 selected street corners, distinctive street markings spell out "LOOK", with eyes looking in the direction of oncoming traffic.

Street markings are reinforced by ads created for TV, radio, outdoor, and internet that have so far generated over 130 million impressions. LOOK display ads have appeared on telephone kiosks, bus shelters, billboards and the backs of NYC Transit buses.

LOOK was launched in 2007 after a multi-agency study found that driver and cyclist inattention was the number one reason for bicycle and pedestrian crashes.

LOOK returned to the theme of cycling safety in 2012. 26,000 eye-catching, orange-and-white window stickers reading "LOOK! For Cyclists" were made available to the city's 13,000 yellow-taxi fleet. A video placed on Taxi TV called on New Yorkers to "Take out their boss/Take out a date/But

don't take out a cyclist'. Display ads anticipating the launch of CitiBike reminded New Yorkers of the cardinal traffic rules.

Pop up LOOK smartphone ads on distracted driving in popular apps such as Words With Friends and NYTimes mobile

Fully one quarter of New Yorkers acknowledged the 2012 LOOK campaign in a fall survey.



THAT'S WHY IT'S 30

DOT's research in 2009 showed that two-thirds of New Yorkers are uncertain what the City's standard speed limit is, and nearly 7 in 10 New Yorkers say that speeding is a safety problem in the city. To raise awareness of the speed limit and highlight the danger of excessive speed, DOT created an advertising campaign of pointed television and radio ads and hard-hitting public billboards.

The ads explain the reason why the standard city speed limit is 30mph: if a pedestrian is hit by a car traveling 40 m.p.h. or faster, there's a 70% chance that a struck pedestrian will be killed. At 30 m.p.h., there's an 80% chance that the pedestrian will live. Billboards were in Spanish and English

Display and TV ads were further complemented with message cards with That's Why it's 30 themes

that were included in NY State Dept. of Motor Vehicle mailings for driver license renewals. DOT further reinforced the campaign theme with specially-programmed speedboards that produced varying imagery depending on speed of the vehicles

In follow up surveys, That's Why it's 30 had the highest campaign identification and recall among New Yorkers of all of NYCDOT's

advertising efforts. 1 in 3 survey respondents said they had seen the ads and 2 of 3 viewers said the campaign caused them to understand that speeding is a serious issue. Over half of survey respondents who had seen the ads said they were less likely to drive 10mph over the speed limit.

Curbside Haikus generated a buzz about street safety issues



CURBSIDE HAIKUS

Generating talk on the street and a buzz in the press is one way to broadcast a stronger culture of safety on City streets. DOT succeeded in the winter of 2011/2012 with its Curbside Haiku campaign, whose set of twelve bright, eye-catching designs by artist John Morse was heavily covered and discussed around town. Each sign, which are still installed on City streets today, is accompanied by a haiku poem. The “Curbside Haiku” installation

encompassed 144 signs across the City to promote road safety. Each design and haiku delivers a safety message by focusing on a transportation mode. In many locations, the haikus were embedded in a QR code on the sign, readable with smartphone apps, making the safety messages interactive and fun to discover. In others, the signs are hung in pairs with the image and text from its accompanying haiku.

DON'T BE A JERK

DOT’s “Don’t Be A Jerk” bike safety campaign humorously highlighted the essential dos and don’ts of safe, responsible biking. DOT launched the effort as cycling numbers in the City skyrocketed. With more bikes on the road, smart cycling is even more crucial to making New York City’s streets safer for everyone using them.

The simple message of “Don’t Be A Jerk”: Always follow traffic laws by yielding to pedestrians, riding with traffic, and riding on the street not the sidewalk (unless you’re 12 or younger).

100,000 free bicycle helmets have been given away by NYCDOT to New Yorkers of all ages

FREE HELMET, LIGHT AND BELL PROGRAMS

DOT complements cycling safety message campaigns with promotional and practical programs about safe cycling equipment. Every fall, as daylight wanes, DOT staff promote use of bicycle lights by handing out a limited number of front and rear lights that clip easily to bike seatposts and handlebars. Each spring as cycling picks up in better weather, DOT also distributes free bells, reminding cyclists that being heard is preferable to being hurt. Both lights and bells are required on bicycles by law in New York City.

Bicycle helmets are required by law for children age 13 or younger and commercial cyclists.

The DOT has partnered with elected officials, other city agencies, and community groups to give away over 100,000 helmets to New Yorkers of all ages. DOT staff trained to properly fit bike helmets to New Yorkers of all ages run the helmet giveaway events. City Council funding allocations, totaling more than \$60,000, have significantly augmented the program.



DOT staff fits free helmets for members of the public

CITIBIKE: A PLATFORM FOR CYCLING SAFETY

The CitiBike system is itself a platform for messages about bicycling safely on NYC Streets. From the messages facing the rider on the handlebars of every CitiBike to similar notices in multiple languages on the kiosk screens at hundreds of stations, riding advice at the CitiBike website

and the discount helmet coupon sent to every annual subscriber, hundreds of thousands of New Yorkers and visitors are exposed to easy-to-understand rules of the road. Unsurprisingly, CitiBike has recorded an impressive safety record in its first five months, which have seen over 5 million rides.



Citi Bike handle bars remind riders to follow the rules of the road

The DOT's 5 Safety City facilities teach safe streets skills to 30,000 children and adults annually

SAFETY EDUCATION

DOT also conducts safety education and outreach programs for children, parents, educators, senior citizens and all New Yorkers. DOT's Division of Safety Education visits 600 schools and 100 senior centers a year. The unit works with kids and teachers to collect data on speeding and distracted driving and envision safer designs for streets. The DOT's five Safety City projects use a variety of education methods to teach children safety walking and biking habits. The facilities have mock versions of streets, so children can practice crossing the street safely in a variety of situations.

Safety Education targets special corridors where crashes are high and schools and Senior Centers are many. In 2011 we piloted this work on Adam Clayton Powell from 135th to 153rd street and continued the work in the 2011-

2012 school year using Manhattan Safety City as a base. Safety Educators worked with students in schools along the corridor to collect data about speeding, distracted driving and other safety conditions near school on ACP. Students requested a speed board which was put in place in May of 2011 to educate the community about the prevalence of speeding. When DOT presented plans for traffic calming and other measures, Safety Education staff worked at the tables. Meetings were held with principals and other administrators in schools and with Senior Centers to review the plans and many submitted letters in support of the changes. In 2012-2013, we focused the work from 135th to 117th streets. We worked with a total of 25 schools and 4 Senior Centers along this corridor.



Commissioner Sadik-Khan, City Councilmember James Vacca, and friends check traffic speeds

WORKZONE SAFETY

The U.S. Department of Transportation and the Federal Highway Administration present National Work Zone Awareness Week each spring, to bring national attention to motorist and worker safety in work zones and to call Albany's attention to potential NY State legislation that could lessen the problem of danger in work zones.

NYCDOT participates to raise driver awareness and decrease the number of persons, including members of DOT, killed and hurt in motor vehicle crashes in work zones. 7 NYCDOT workers have

died in work zone incidents in the last two decades, while 22 have been injured in work zone incidents since 2009. DOT places work zone safety ribbon magnets on all DOT vehicles and runs print, radio and outdoor ads to promote work zone safety in both New York City and in Albany.

NYCDOT favors state legislation to intensify penalties against drivers who are convicted of either killing or injuring construction workers in work zones. A proposed bill to serve as a deterrent to driving carelessly in a work zone was not acted upon by the State Legislature.

LEGISLATIVE CODIFICATION OF DOT SAFETY EFFORTS

One mark of the progress of the public dialogue on street safety is the amount of legislation the NYC City Council has approved to validate and ensure the continuation and longevity of NYCDOT's analytic and practical approaches to street safety. distraction to a wide audience.



Local Law 11 of 2008 requires DOT to identify the twenty highest crash locations based upon a ranking of the total number of crashes involving pedestrians, and to provide information on safety improvements that have been implemented at identified locations.

Local Law 23 of 2008 requires DOT to develop, monitor and report on a set of indicators that allow the agency to implement a performance driven transportation policy, geared toward achieving the sustainability, mobility, infrastructure and quality of life goals set forth in Mayor Bloomberg's PlaNYC 2030 initiative. DOT does this with its annual Sustainable Streets Index, which provides extensive before after information on implemented safety projects.

Local Law 12 of 2011 requires DOT to publish an update every 5 years of its 2010 Pedestrian Safety Study and Action Plan, identifying the causes, common factors and geographic distribution of pedestrian crashes in New York City.

Local Law 66 of 2011 requires DOT to report on traffic and safety related data for three years before and one year after a project that realigns a City roadway for four or more consecutive blocks, or 1,000 consecutive feet of street. DOT closely tracks the impact of its projects.



Looking Ahead

New York City must be relentless and innovative in seeking ways to continually improve its traffic safety performance. Gone are the days when concerted efforts in obviously dangerous corridors like the Queens Boulevard or Grand Concourse of the 1990s can quickly drive crash and fatality numbers down. As City streets have become markedly safer, clustering of crashes and injuries is less pronounced, and thus more difficult to address. With the targets of safety policy becoming more diffuse, broader strategies such as deploying higher numbers of automated enforcement devices such as red light and speed-radar cameras are likely to become more important. The State Legislature will need a stronger understanding of these facts and trends to become a full partner in driving down NYC crashes, injuries and fatalities. The next opportunity to further develop this understanding and partnership presents itself very soon—the City’s red light camera program must be legislatively renewed in 2014. Ideally, the Legislature would unfetter camera enforcement programs altogether and allow the City to determine the right size and applications for both red light and speed enforcement camera programs.

The diffusion of crash clusters notwithstanding, making large arterial streets safer remains the City’s largest safety challenge. Slow speed zones, speed humps and other improvements suited to smaller streets are highly popular and have quality of life as well as safety benefits, but larger projects similar to the recent realignments of Adam Clayton Powell Boulevard in Manhattan and Fourth Avenue in Brooklyn will have greater impact on the City’s overall safety performance. This fact may become even more pronounced as New York’s population continues to age. Such projects require extensive local support, explanation and outreach. The high receptivity and demand by New Yorkers for every type of street safety improvement program and feature augurs well for further improvements in this vein.

Steady erosion of the federal commitment to transportation may have impacts on safety programs that future City leaders will have to grapple with. In 2012, Congress eliminated the federal Safe Routes to Schools funding program, and it is unclear how NY State DOT, which administers Federal Highway Administration aid in New York, will regard ongoing funding requests from local safe routes to schools program’s like New York’s. U.S. traffic safety funding is also very constrained in its uses. NYCDOT’s safety ad campaigns would have a greater impact if they were able to be deployed and broadcast far more broadly, but FHWA safety funds are confined to hardware regardless of local safety needs, and in some degree distributed at the discretion of NY State. Broadening the uses of federal safety funds, and providing direct FHWA funding to large cities, as strongly advocated by the National Association of City Transportation Officials, would in small part make up for the declining amount (in both real and nominal terms) of federal transportation aid for safety and in other areas (see the Infrastructure section).

- **Remove state legislative restrictions on automated enforcement cameras that improve safety, including red light, speed, and bus lane cameras. Allow the Mayor and City Council to decide the appropriate scope of these programs.**
- **Focus additional resources on remaining high crash corridors, especially long, wide arterial streets where safety issues persist.**
- **Provide more city resources for programs and street treatments that are popular with New Yorkers, such as speed humps, Neighborhood Slow Zones, and other traffic calming techniques.**
- **Change federal law to allow direct federal highway aid to cities and a broadened use of federal safety funds.**