

# Safe Streets for Seniors

## New York City



## What is Vision Zero?

- Vision Zero goal: Protect the public, bring traffic fatalities to zero
- Based on Swedish model
- A shift in perception and values: Expect safe streets
- Design facilities with zero fatalities as goal
- Drive down fatalities and injuries, not necessarily crashes in total
- Fatalities and injuries not “accidents”, “crashes” that are preventable



# Vision Zero in NYC

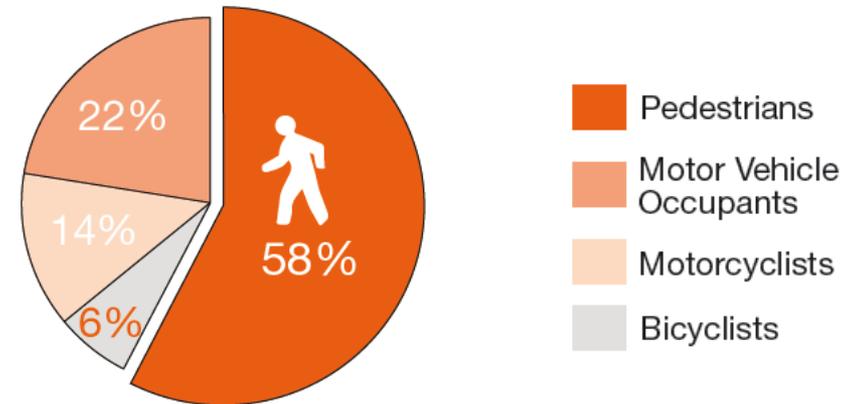
- Led by City Hall
- Prominent
- Multi-Agency
- Funded
- Comprehensive
  - Engineering
  - Enforcement
  - Education
  - Policy
- Year 1 and 2 Accomplishments:
  - 2015: Lowest year on record for pedestrian fatalities
  - 740 new Speed Bumps
  - 472 new Leading Pedestrian Intervals (LPIs)
  - 25 mph new speed limit
  - 140 Speed Cameras Deployed
  - 102 Safety Engineering Projects
  - 350% increase in failure to yield summonses; 70% increase in speeding summonses



# Why Focus on Pedestrians?

- Pedestrians represent the majority of traffic fatalities citywide
- Pedestrian fatalities have grown as a share of all traffic fatalities
  - Between 2007 and 2013 pedestrian fatalities grew from 51% of all traffic fatalities to 58%
  - Since 2007, fatalities of vulnerable road users increased by 1%, while fatalities of motor vehicle occupants fell by 37%

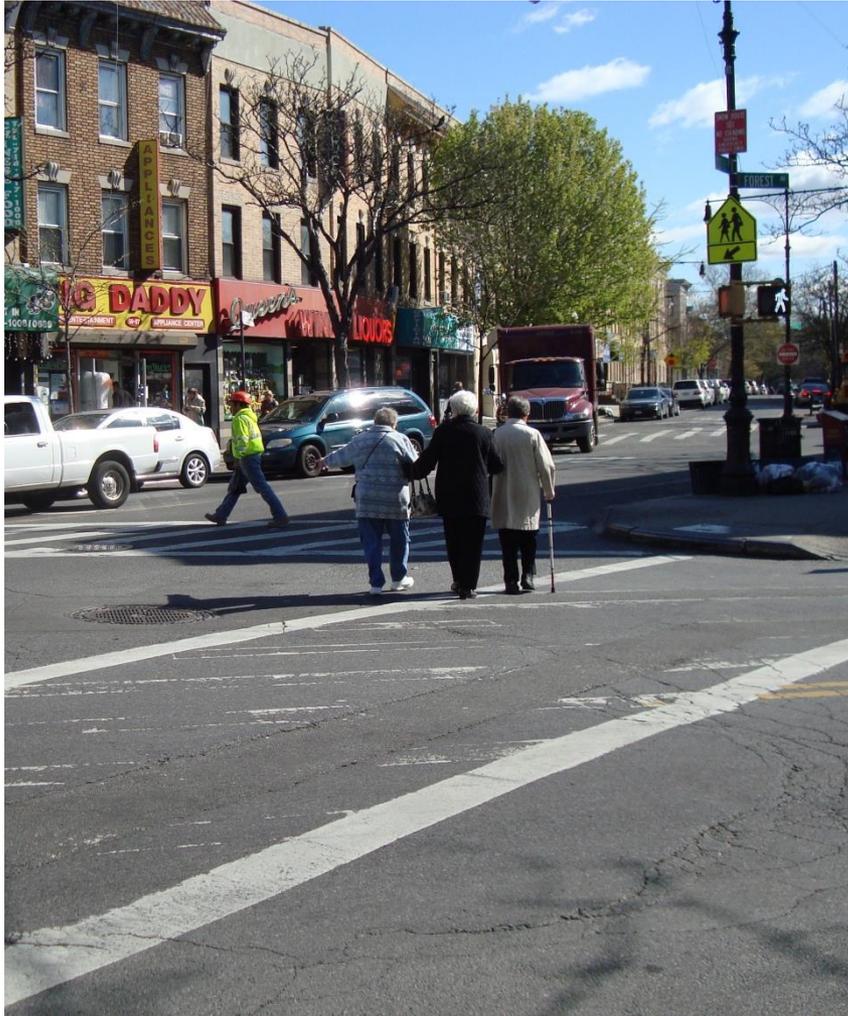
Fatalities by Mode: NYC 2011-2013 Average, Rounded



All NYC Fatalities

	Pedestrian	Bicyclists	Motorcyclists	Motor Vehicle Occupants	Total
All NYC	157	17	37	61	272

# Why Focus on Senior Pedestrians?



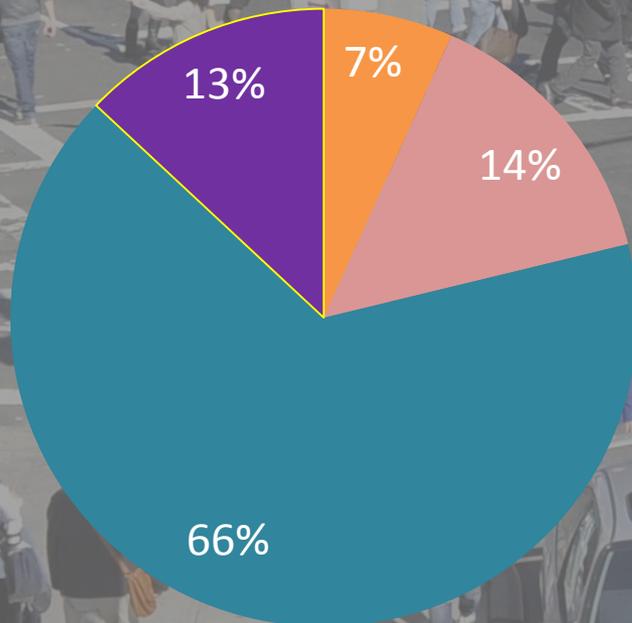
- The challenge of an aging city
  - Baby boomers are reaching retirement age
  - Seniors in NYC walk much more than those elsewhere in the US
  - Senior fatality rate 4X that of Younger New Yorkers

# Senior Pedestrians

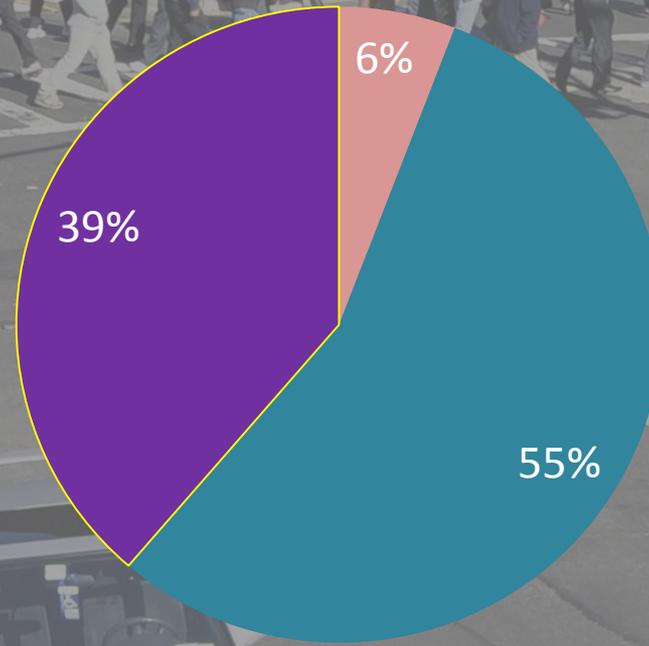
- 13% of the NYC population are seniors
- 39% of NYC pedestrian traffic fatalities are seniors

2014 NYC Population

2014 Pedestrian Traffic Fatalities



Total: 8,491,079

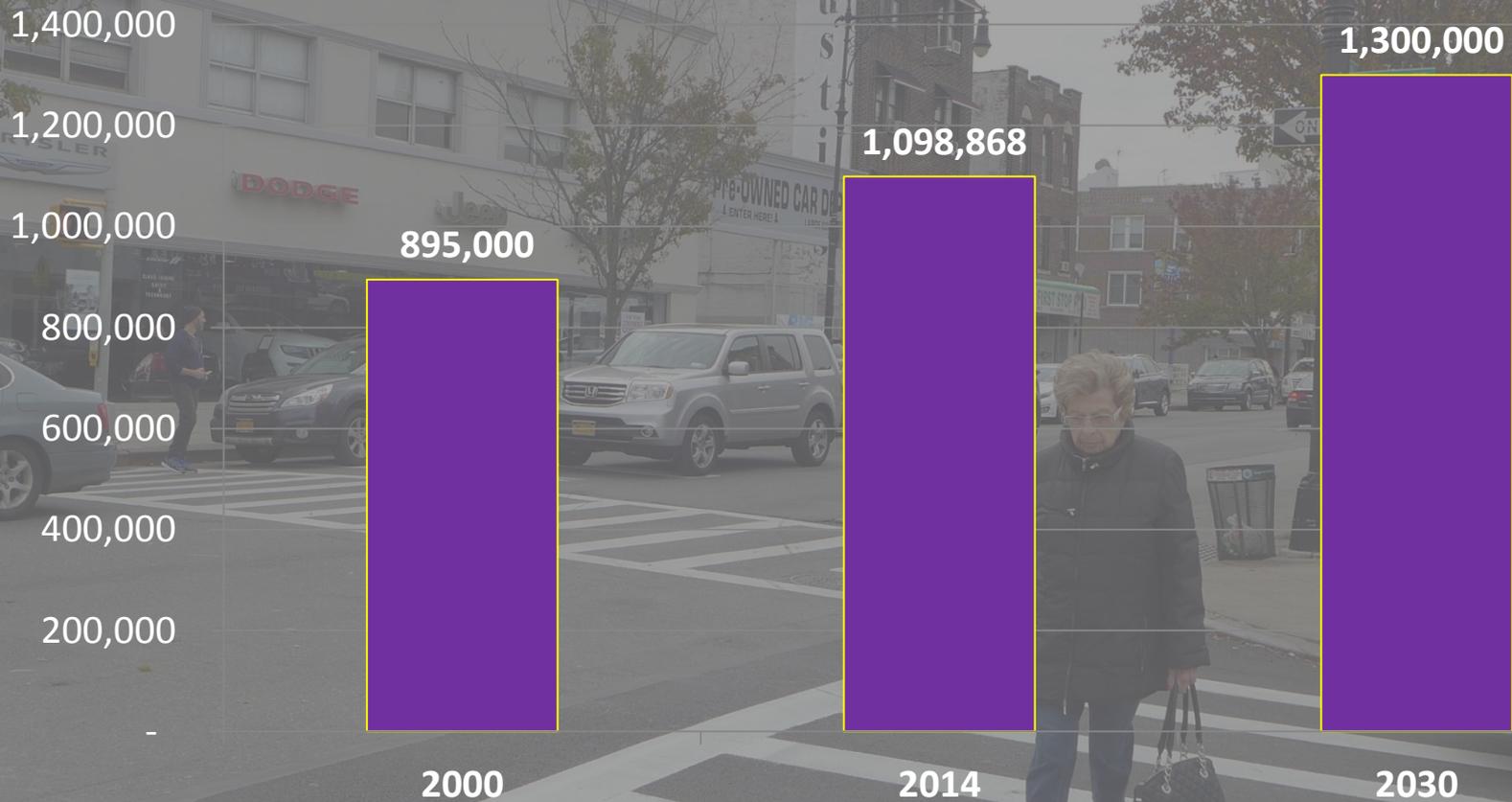


Age known for 137 of 139

- Toddlers (0-4)
- School-age Children (5-17)
- Adults (18-64)
- Seniors (65+)

# NYC Senior Population Increasing

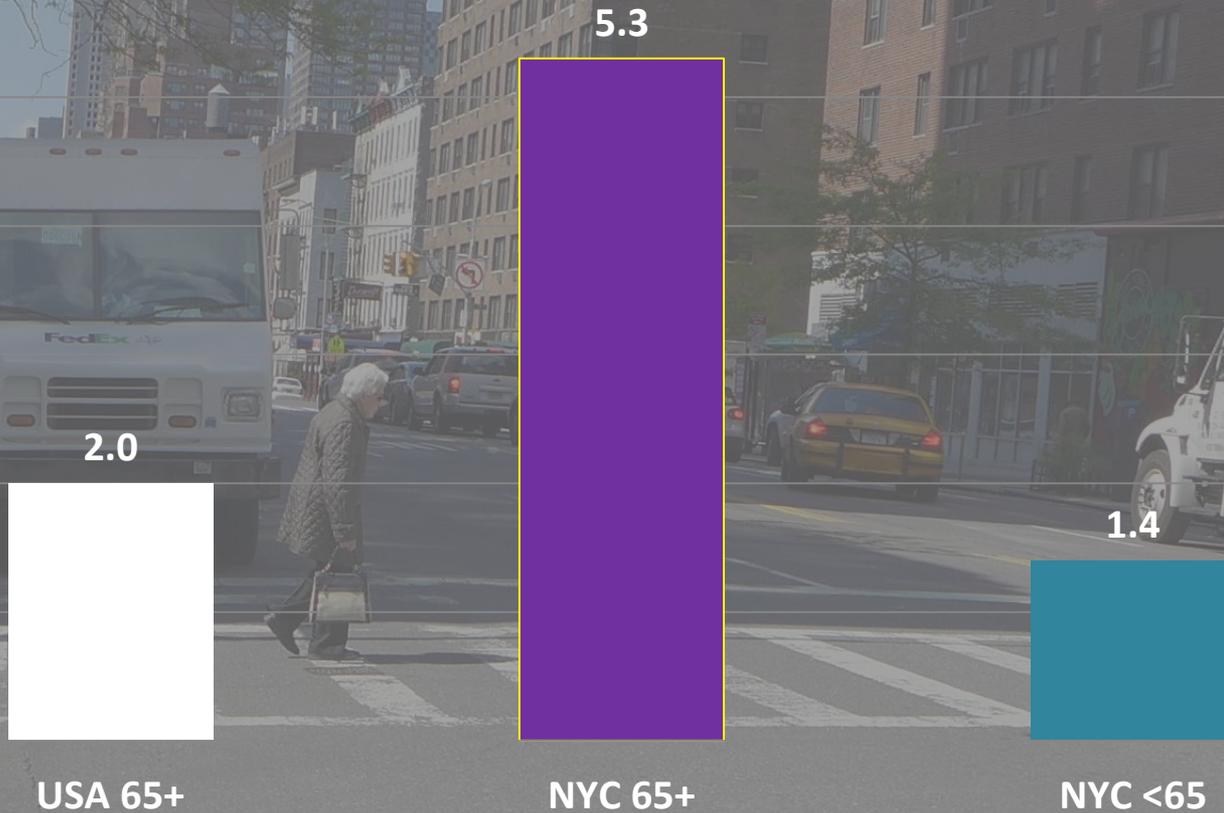
NYC Population Age 65+



# Higher Pedestrian Fatality Rate among Seniors

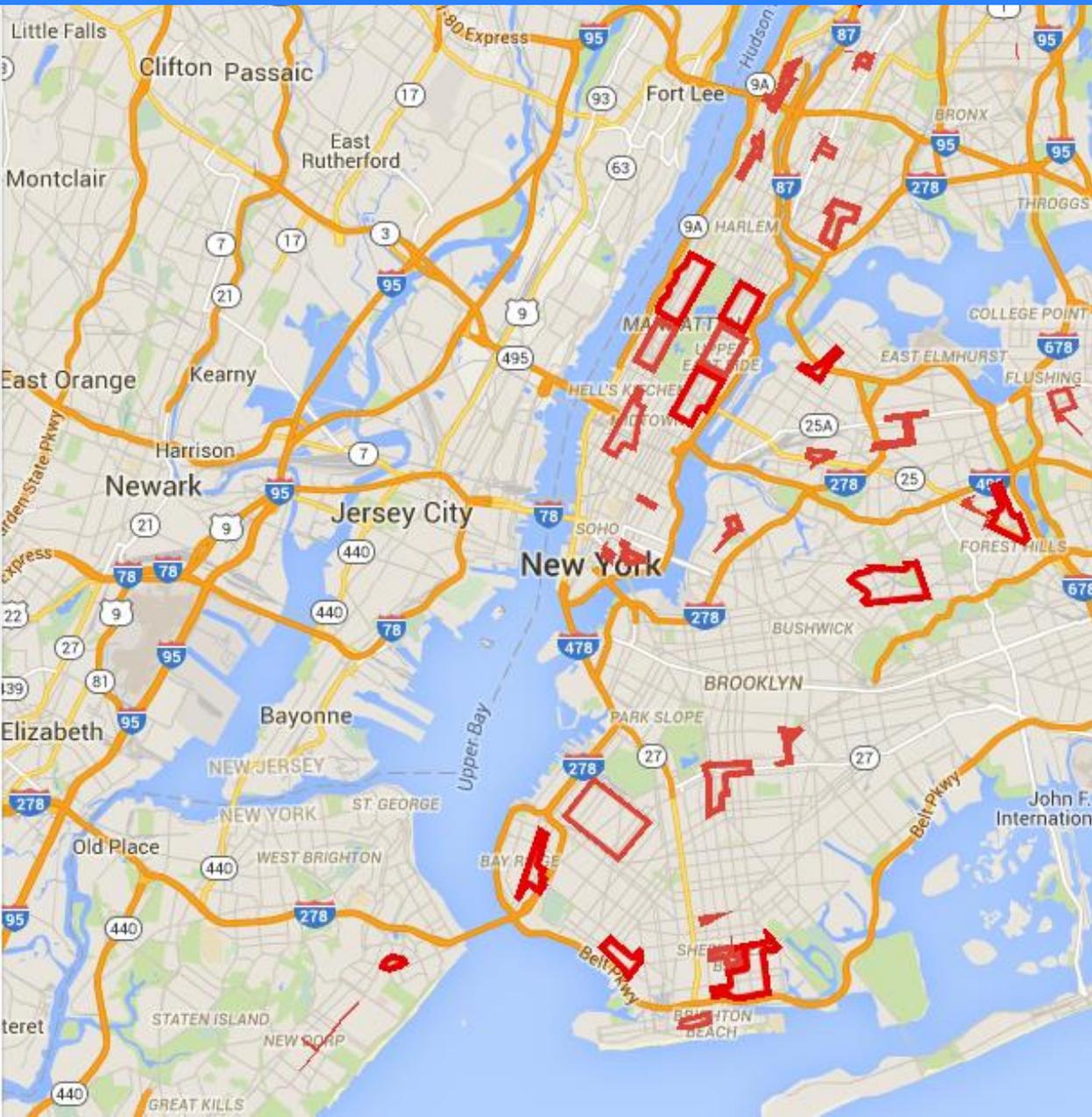
Senior pedestrian fatalities per 100,000 population

6  
5  
4  
3  
2  
1  
0



USA data excludes NYC; Average of last 3 years of available data

# Senior Program began in 2008



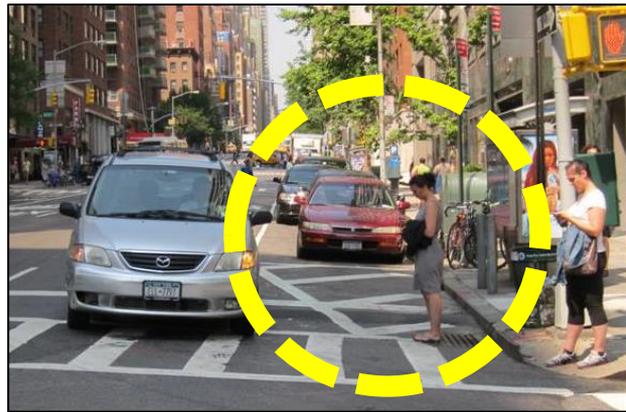
- Mapped age 65+ pedestrians killed and severely injured to find clustering areas
- 2008: First 25 areas identified
- Studied senior centers, other geospatial variables
- 2012: 12 new areas identified
- 2016: New areas to be announced

# Input from Senior Pedestrians

- Not enough time to cross the street
- Broken or missing pedestrian ramps
- Faded and hard-to-see markings
- Poor drainage or ponding in crosswalks
- Turning vehicles failing to yield



# Toolbox of Typical Safety Improvements



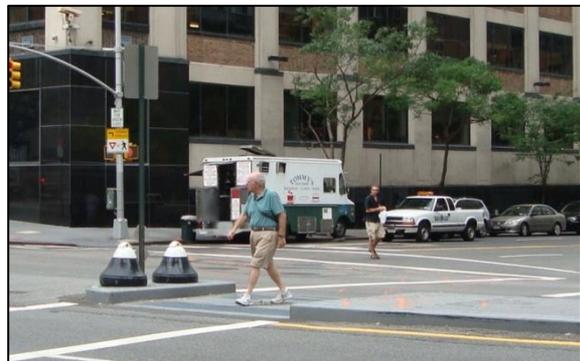
**Daylighting:**  
Better driver-pedestrian visibility



**Countdown Signals:**  
Tell pedestrians how much more time they have to cross



**Prioritize Pedestrians:**  
Clarify pedestrian desire lines, add LPIs or split phases



**Pedestrian Safety Islands:**  
Shortens crossings on wide streets, provides safer crossing



**Road Diet:**  
Organizes traffic, less speeding



**Sidewalk Extensions:**  
Shortens crossing distance, slows turning cars

# Toolbox



**Accessible Pedestrian Signals (APS):**  
Provide audible signal in areas with visibility-impaired populations



**Repair Pedestrian Ramps:**  
Repair pedestrian ramps on intersections with safety projects



**Provide more time to cross:**  
Add more time to cross the street where possible



**Simplify intersection movements:**  
Ban low volume left turns that conflict with high volume crosswalks



**Close Slips/Normalize turns:**  
Creates safer turns and improves driver to pedestrian visibility



**Shorten crossing distances:**  
Narrow lanes and pedestrian crossings in large intersections

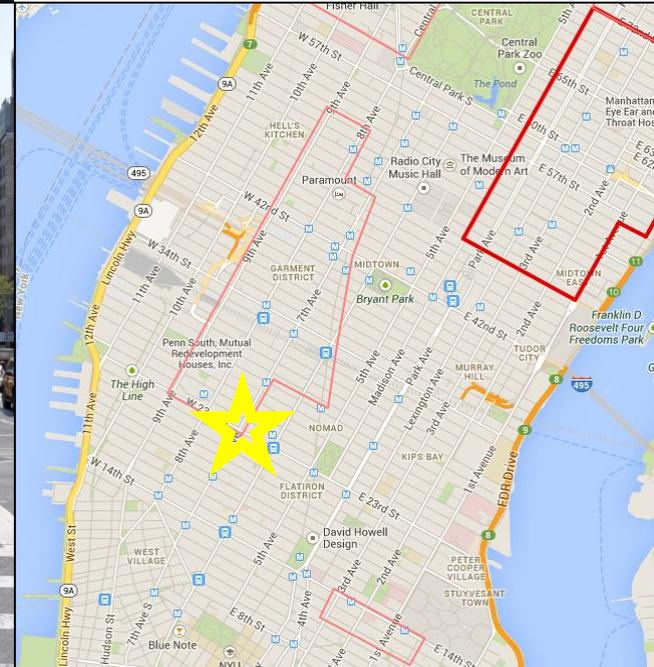
# Safety Improvements near Facilities for Visually Impaired



## W 23<sup>rd</sup> St/7<sup>th</sup> Ave (2010)

### Location:

- Chelsea, Manhattan
- Truck Routes
- Subway: 1-train
- High pedestrian volumes
- Near American Foundation for the Blind
- Near Penn South NORC



# Safety Improvements near Facilities for Visually Impaired

7<sup>th</sup> Ave and W 23<sup>rd</sup> St, Manhattan

- Pedestrian injuries down by **68%**

**Midtown West Senior Area**



Before

Modified signal timing to add protected pedestrian crossing

Installed two pedestrian safety islands

Created separated left turns



Accessible Pedestrian Signal (APS) installed



After

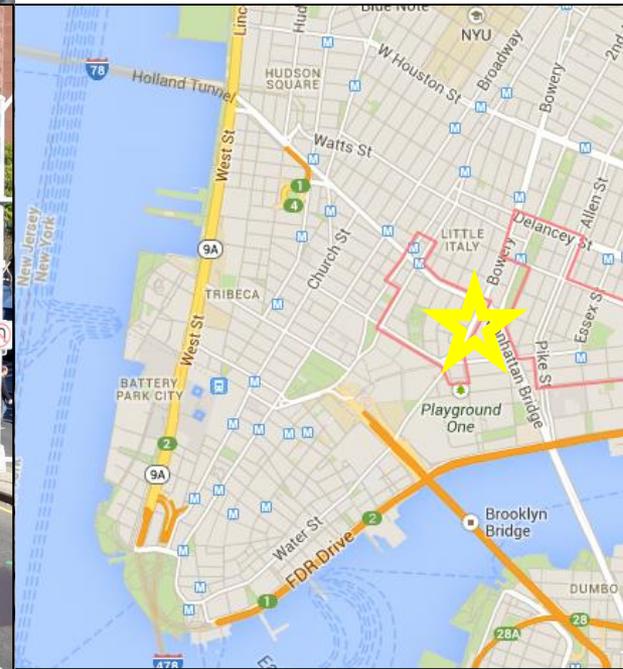
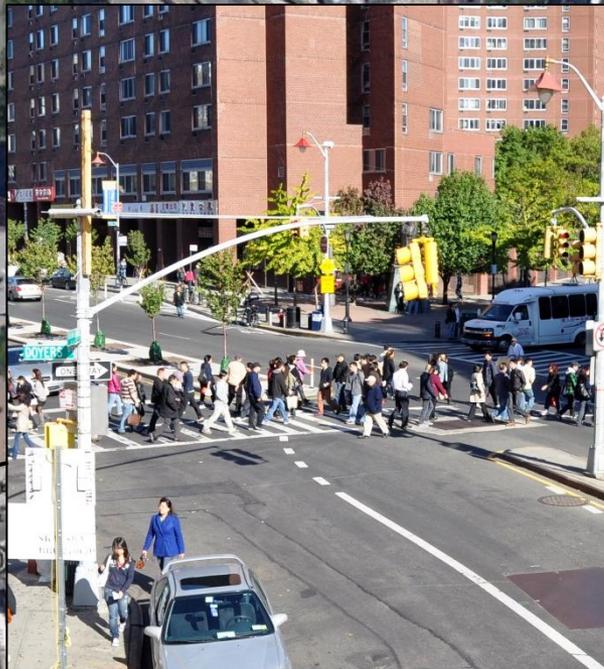
# Safety Improvements near Senior Housing



## Bowery (2010)

### Location:

- **Chinatown, Manhattan**
- Truck Routes
- Heavy traffic on Canal between Holland Tunnel and Manhattan Bridge
- Very high pedestrian volumes

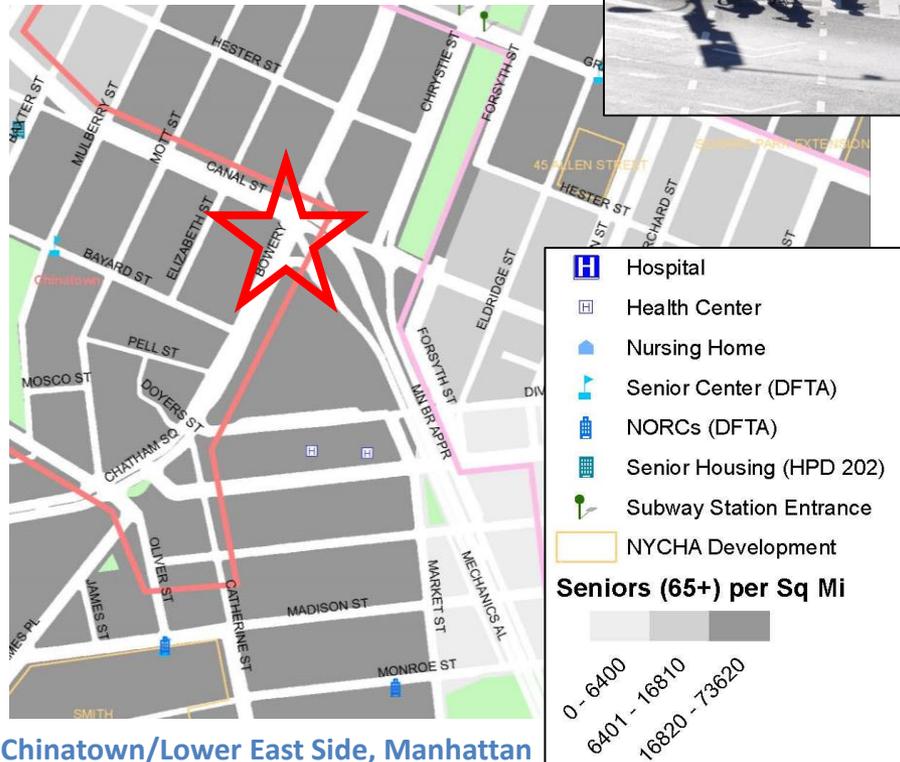


# Safety Improvements near Senior Housing

## Bowery, Manhattan

- Pedestrian injuries reduced by **39%**

Better organized and calmed Bowery traffic



Added planted median between Canal and Division



Bowery at Canal St (Manhattan Bridge entrance), looking south

# Safety Improvements on Arterials near NORCs



## Context: Columbus Ave

### Location:

- Upper West Side, Manhattan
- Truck Route, Bus Route
- Near Subway: B/C trains
- High pedestrian volumes
- Goddard Riverside NORC and Senior Center, Park West Village NORC

A screenshot of a Twitter profile for Goddard Riverside (@GoddardRiv). The profile picture shows the entrance to the Goddard Riverside Community Center. The bio states: "We provide housing, meals, social services, affordable childcare, college counseling &amp; vocational training for New Yorkers in need. New York, NY · goddard.org". The profile has 1,219 tweets, 921 following, and 744 followers. A tweet is shown, retweeted by Goddard Riverside, from Helen Rosenthal (@HelenRosenthal) dated May 9. The tweet text is: "Thrilled and grateful that @GoddardRiv green keepers are planting outside my office! @efrost1 @westsiderag pic.twitter.com/uEwXhvkewZ". Below the text is a photograph of several people in high-visibility vests planting flowers in a planter box on a city street. At the bottom of the tweet, there are icons for "Expand", "Reply", "Retweet", "Favorite", and "More".

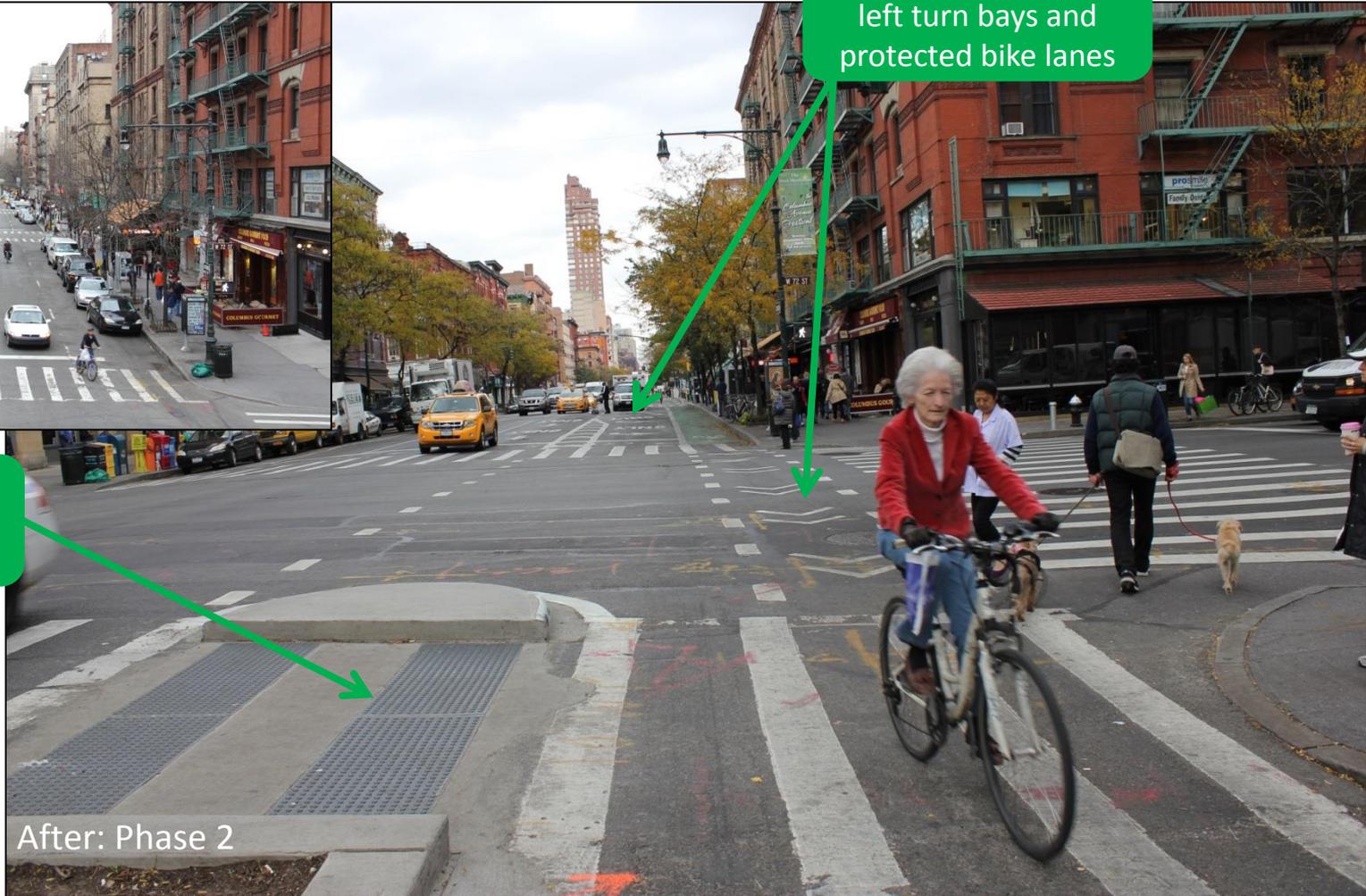


# Safety Improvements on Arterials near NORCs

## Columbus Ave, Manhattan Phase 1 (W 77<sup>th</sup> to W 97<sup>th</sup> St)

- Pedestrian injuries down by **39%**

## Upper West Side Senior Area



Created separated  
left turn bays and  
protected bike lanes

Installed pedestrian  
safety islands

# Partnering with NYCDOT City Bench

- Working with DOT's City Bench program
- Placement at strategic locations, e.g.:
  - Senior centers
  - Bus stops without shelters
  - Public libraries
  - Municipal facilities



*2<sup>nd</sup> Avenue bus stop, Manhattan*



*Self Help Austin St Senior Center in Forest Hills, Queens*

# How are projects built so quickly?

- SSFS projects are funded through Federal (FTA, FHWA) and local sources
- [Public Interest Finding](#): Use federal funds for in-house construction
- In-house construction is faster and lower cost than capital construction
- PIF allows NYCDOT to respond to street safety locations faster
- Painted curb extension geometries can be piloted in paint and built out in in-house or capital concrete later

U.S. Department of Transportation  
Federal Highway Administration

*FHWA's Livable Communities Case Study Series*

**New York City Department of Transportation – Safe Streets for Seniors Program**

**Challenge**—High rate of pedestrian traffic fatalities among older adults

Using maps to identify clusters of various types of crashes, the New York City Department of Transportation (NYCDOT) found that older adults represented a disproportionate share of pedestrian fatalities in the city. Although those over 65 years of age make up only 12 percent of the population in New York City, they account for 36 percent of pedestrian fatalities according to an NYCDOT analysis. According to New York City demographic projections, as the baby boomer generation ages, the city's older adult population is expected to grow to 16 percent of the population in 2030, compared to 11 percent in 2010. Without action, the number of pedestrian fatalities involving older adults could continue to grow among this vulnerable population.

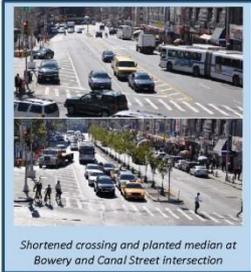
**Solution**—Focus on the conditions that contribute to pedestrian crashes involving older adults

In response to these troubling statistics, NYCDOT's safety group created the Safe Streets for Seniors program in 2008 and began reviewing crash data and police reports to identify potential infrastructure or operational problems at the crash sites. The program is part of a larger suite of NYCDOT pedestrian and bicycle safety programs focusing on Safe Routes to School, high crash corridors, and automobile speeding in neighborhoods. Safety analysts in NYCDOT's Office of Research, Implementation, and Safety used historical data and site observations to identify the following prime factors that contribute to pedestrian crashes involving older adults:

- Insufficient pedestrian signal time to cross wide streets
- Unclear or faded street markings
- Turning vehicles not yielding to pedestrians
- Pedestrian ramps missing or in disrepair
- Poor storm drainage in crosswalks

NYCDOT then conducted statistical analyses to help map and better understand traffic fatalities and serious injuries involving older adults, leading to the identification of 25 geographic focus areas for special attention. Through a detailed safety audit, NYCDOT identified and developed a set of infrastructure and operational strategies tailored to older adults:

- Adjust signal timing and install countdown signals to accommodate slower walking speeds and give pedestrians more information at crosswalks
- Implement road diets to reduce speeding and create more predictable vehicular movements
- Install pedestrian safety islands and build curb extensions to shorten crossing distance and slow turning cars



*Shortened crossing and planted median at Bowery and Canal Street intersection*

Creating more livable communities through transportation choices



[http://www.fhwa.dot.gov/livability/case\\_studies/newyork/](http://www.fhwa.dot.gov/livability/case_studies/newyork/)

# Taking input from NYC Seniors

- Partnered with advocates for the visually and hearing impaired led to better informed design decisions using truffle paint and gravel curb extensions
- Working with the NYC Department for the Aging
- Coordinating with NYCDOT's Safety Education Team
- Going into Senior Centers to get feedback
- Approaching Aging Committees on Community Boards for project ideas
- Working in coordination with Age-Friendly NYC

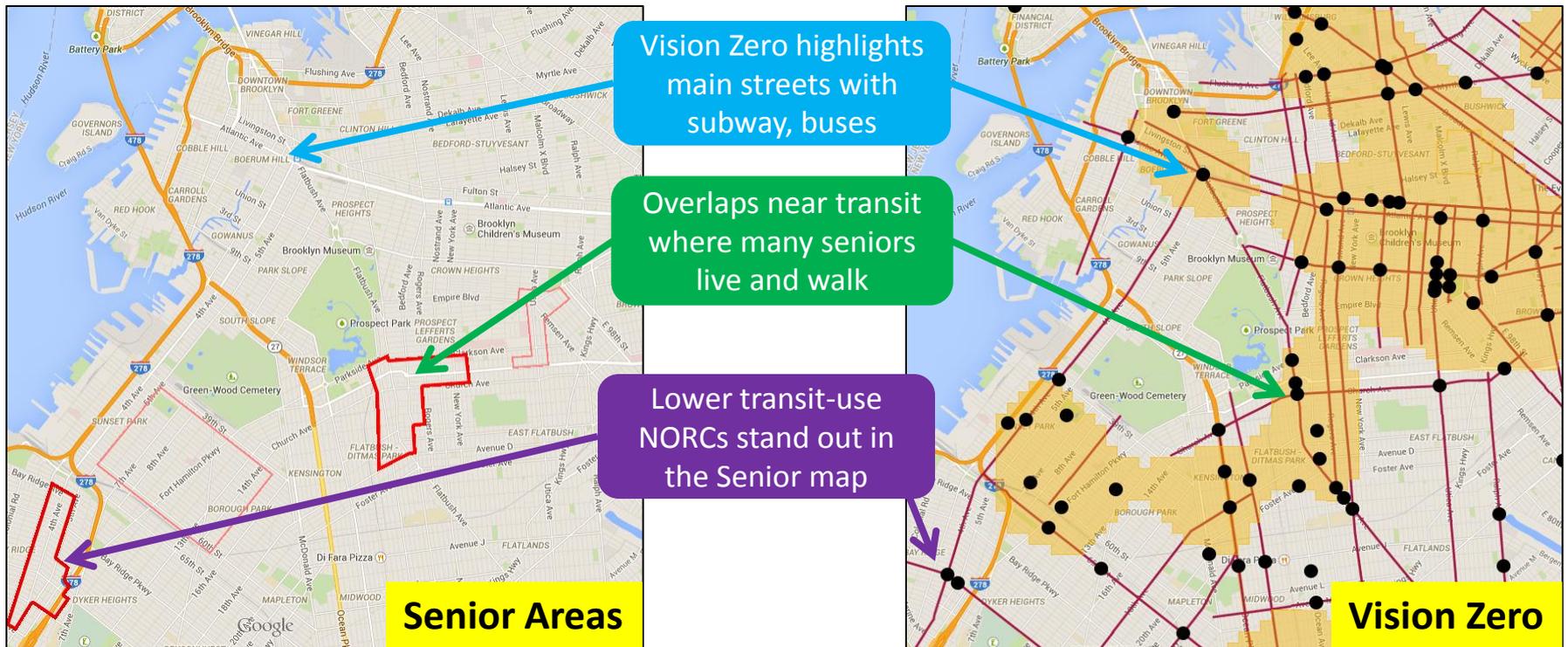


59  
INITIATIVES  
Age-Friendly NYC

# Next Steps: Vision Zero and Senior Safety

## Future of Senior program

- Age-friendly NYC initiative unites senior population growth with DOT safety goals
- Frequent overlaps between senior safety areas and Vision Zero priority geographies
- Areas with senior pedestrian injuries will continue to be funded for studies and redesigns, even if they are outside the Vision Zero priority geographies





More at [nyc.gov/dot](https://nyc.gov/dot)

Thank  
You