

Broadway: W 135th St to W 153rd St

Corridor Safety Improvement Proposals

2015



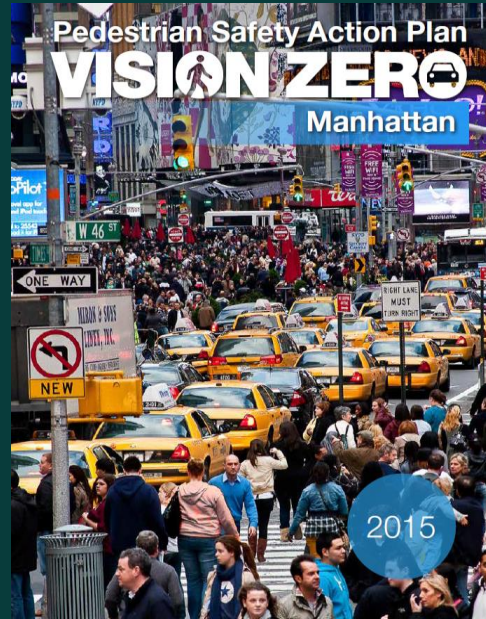
New York City Department of Transportation

Presented by Research, Implementation, and Safety on June 4, 2015 to Manhattan Community Board 9

Why Broadway? Vision Zero Priority Corridor

Vision Zero

- Multi-agency effort to reduce traffic fatalities in NYC
- Borough Action Plans released in 2015
- Priority Intersections, Corridors, and Areas identified for each borough
 - Broadway identified as a Priority Corridor for Manhattan
 - Broadway and W 135th St identified as a Priority Intersection



Manhattan Priority Map



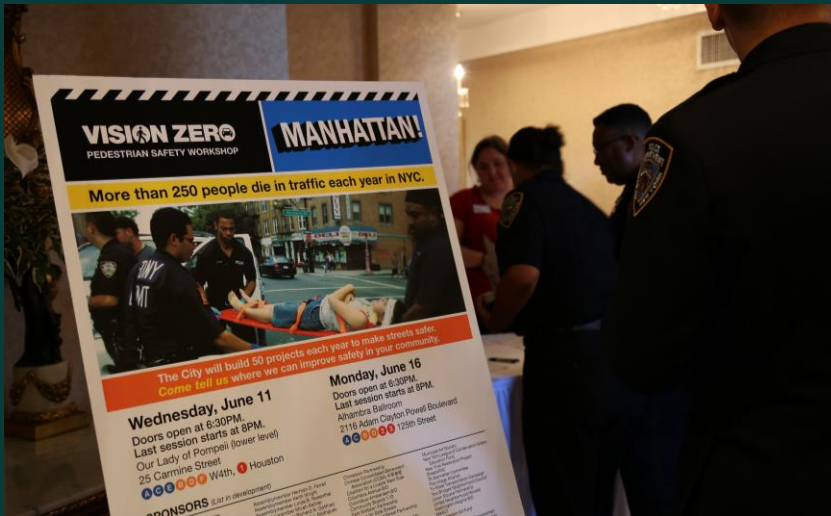
Why Broadway?

Need

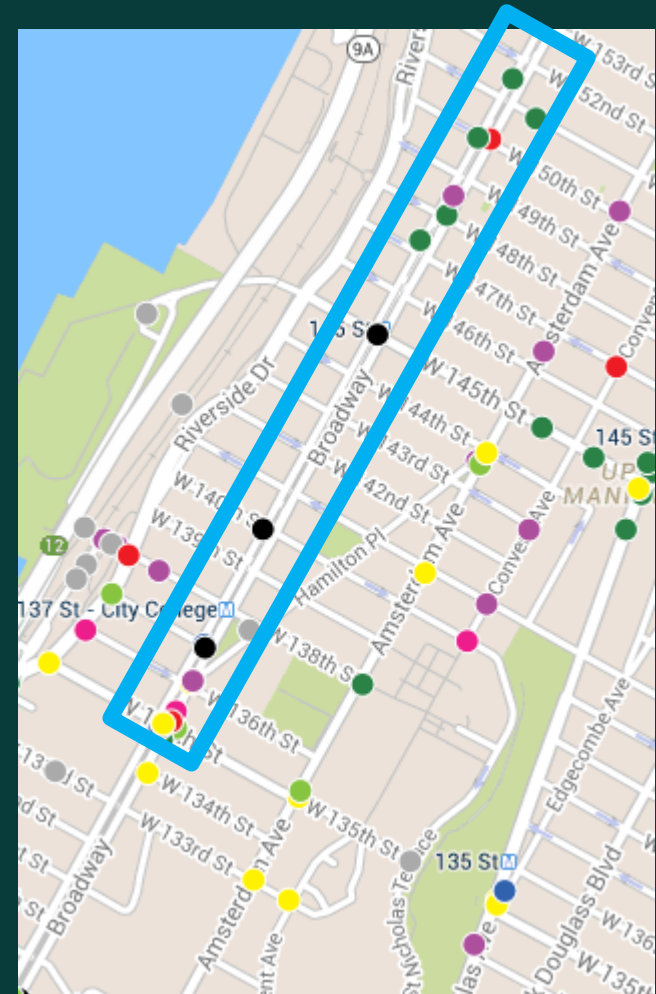
- Vision Zero Priority Corridor
- Vision Zero Priority Intersection: W 135th St
- In Hamilton Heights Senior Focus Area
- 6 fatalities in study area since 2007
 - 5 pedestrians, 1 passenger
- High rate of left-turn and right angle crashes (41% vs 30% MN avg)
- Speeding
 - Up to 30% of vehicles traveling over speed limit

Why Broadway?

- Comments about Broadway via Vision Zero public feedback:
 - Double Parking (green)
 - Speeding (purple)
 - Not enough time to cross (black)
 - Failure to Yield to pedestrians (yellow)
 - Red light running (red)



Public workshop held at Alhambra
Ballroom in Harlem on June 16, 2014



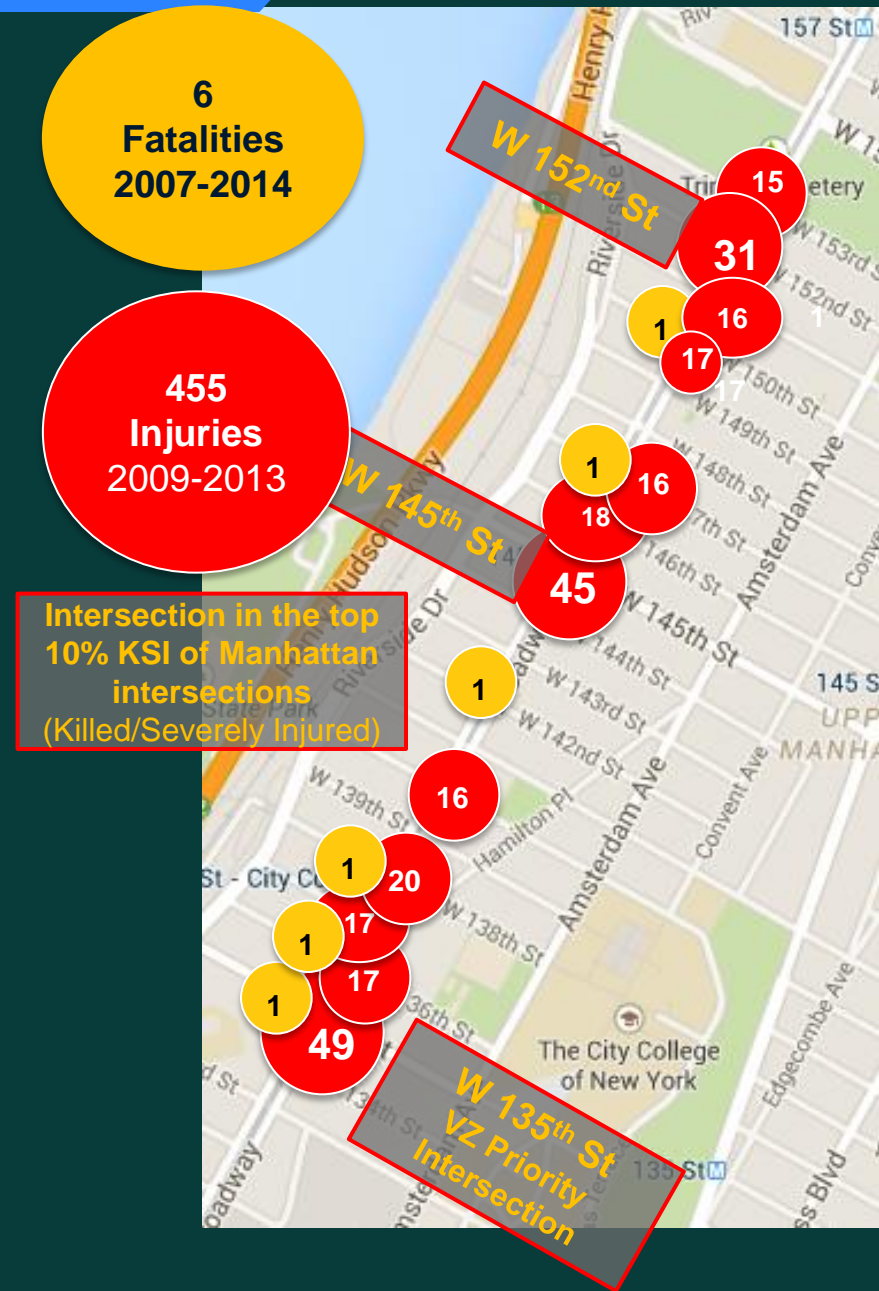
2015 Vision Zero Public Feedback

<http://www.nyc.gov/visionzeromap>

Project Limits: W 135th St to W 153rd St

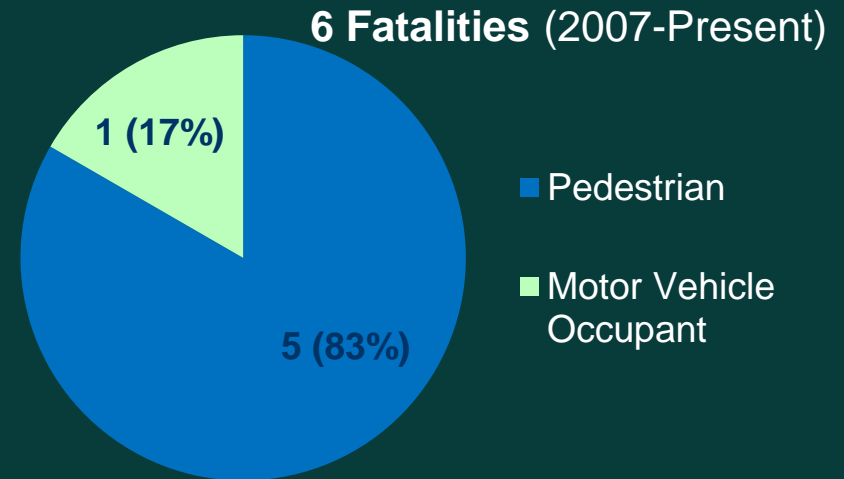
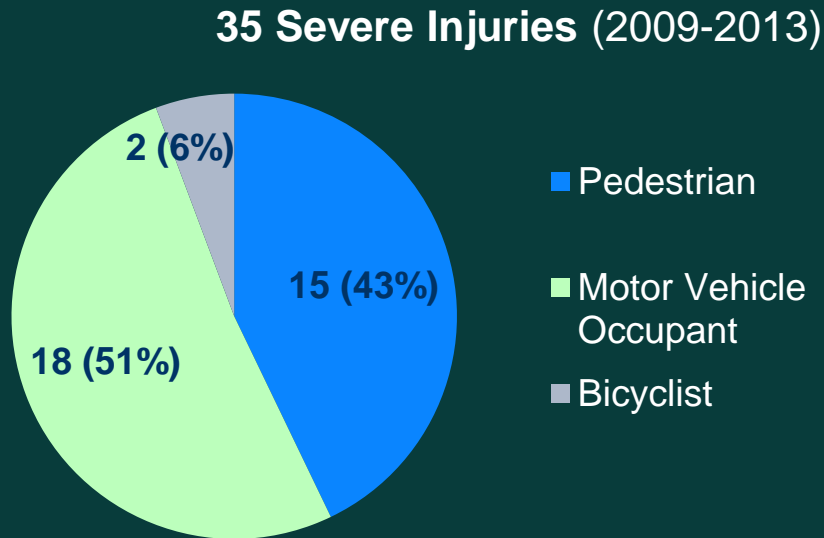
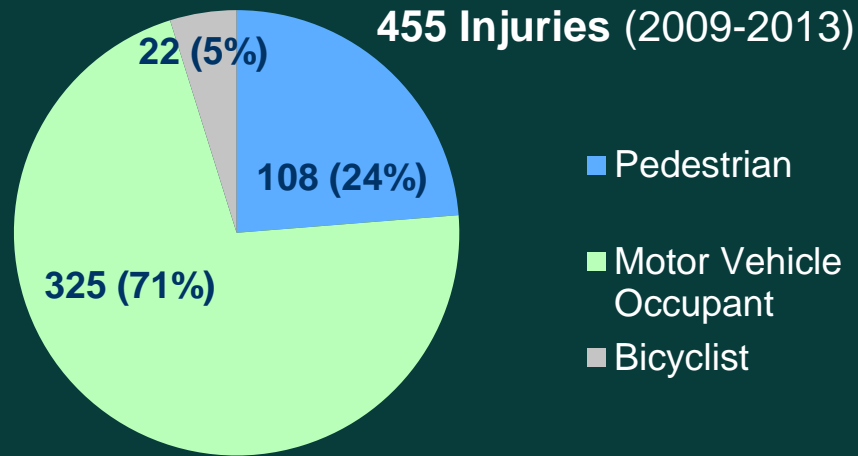
Crash Data: Injuries

- Injuries highest: 135th, 145th, 152nd
 - Among top 10% highest injury Manhattan intersections
- Of 455 injuries 135th and 153rd Sts in 5 years (2009-2013), 24% pedestrians, 71% motor vehicle occupants
- Among the 108 pedestrians injured:
 - 53% crossing with the signal
 - 27% crossing against the signal



Who is being injured?

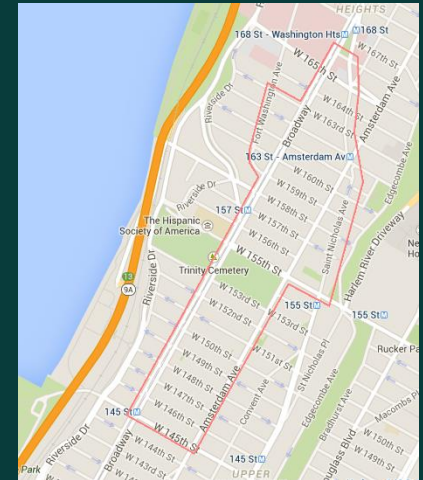
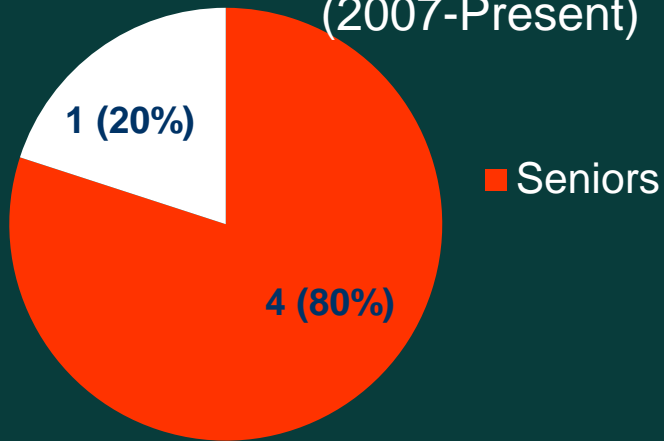
Of 455 injuries 135th and 153rd Sts in 5 years (2009-2013):



Who is being injured?

Of 455 injuries 135th and 153rd Sts in 5 years (2009-2013):

5 Pedestrian Fatalities (2007-Present)



Hamilton Heights Senior Area

Broadway runs through the NYCDOT Hamilton Heights senior pedestrian focus area from W 145th St to W 166th St

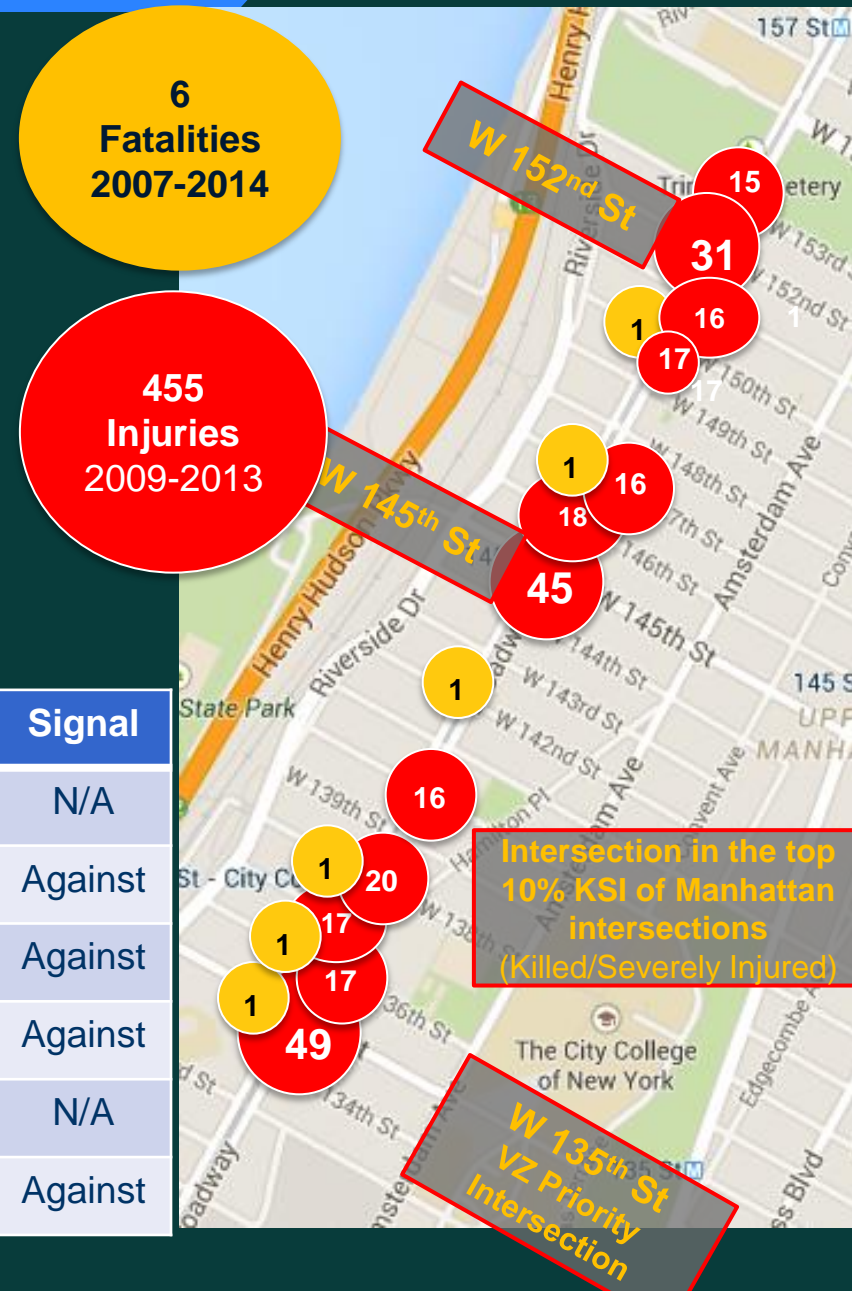


Safety improvement built at Bway/155th St

Crash Data: Fatalities

- 6 fatalities since 2007:
 - 5 are pedestrians
 - 4 are senior pedestrians
 - 4 are pedestrians against signal
 - 4 vehicles going southbound
 - 3 drivers of taxi or livery vehicles

B'way at	When	NB/SB	Fatality	Signal
W 135 th	Feb 2013	SBL/NBT	SB vehicle occupant	N/A
W 136 th	Oct 2009	SB	NYPD hit senior ped	Against
W 138 th	Feb 2012	SB	Livery hit senior ped	Against
W 142 nd	Dec 2008	NB	Taxi hit senior ped	Against
W 147 th	Mar 2007	?	Backed into senior ped	N/A
W 150 th	Dec 2009	SB	Taxi hit 24 year old	Against



Crash Data: Fatalities (con't)

- 6 fatalities since 2007:
 - All were outside rush hour peak directions (7-10AM SB, 5-7pm NB)
 - → Indicates need to redesign roadway for off-peak hours
 - 5 weather was dry or clear
 - 5 during daylight hours
 - → Majority during times with good visibility

B'way at	Time of day	When	Roadway	NB/SB	Fatality	Signal
W 135 th	Weds 14:15	Feb 2013	Dry	SBL/NBT	SB vehicle occupant	N/A
W 136 th	Thurs 16:20	Oct 2009	Clear	SB	NYPD hit senior ped	Against
W 138 th	Sun 07:40	Feb 2012	Clear	SB	Livery hit senior ped	Against
W 142 nd	Mon 01:09	Dec 2008	Rain	NB	Taxi hit senior ped	Against
W 147 th	Thurs 15:41	Mar 2007	Clear	?	Backed into senior ped	N/A
W 150 th	Thurs 05:17	Dec 2009	Clear	SB	Taxi hit 24 year old	Against

Fatalities on Broadway

Hit-run driver mows down great-grandfather

By Doug Auer

February 12, 2012 | 4:25pm



Police at the scene investigate the deadly hit-and-run.

Photo: Warzer Jaff

A 75-year-old Harlem great-grandfather walking to Sunday Mass was mowed down by a hit-and-run driver and killed today, authorities said.

Luis Rosado was crossing Broadway at West 138th Street, a block from his apartment, around 7:41 a.m. when he was struck by a car believed to be a livery cab going southbound, police said.

"They ran over him," his son, Henry Rosado, 47, said tearfully as members of the tight-knit family grieved.

The victim, a retired baker, had just become a great-grandfather in July.

"At least he got to see his [great-grandson]," Henry Rosado said.

Crash kills one, injures six on Broadway

Lisette Ventura and two children were in one car, but she died after going into cardiac arrest. Six other victims were taken to nearby hospitals.

BY CHELSIA ROSE MARCIUS, SHANE DIXON KAVANAUGH / NEW YORK DAILY NEWS /

Wednesday, February 6, 2013, 5:46 PM

AAA

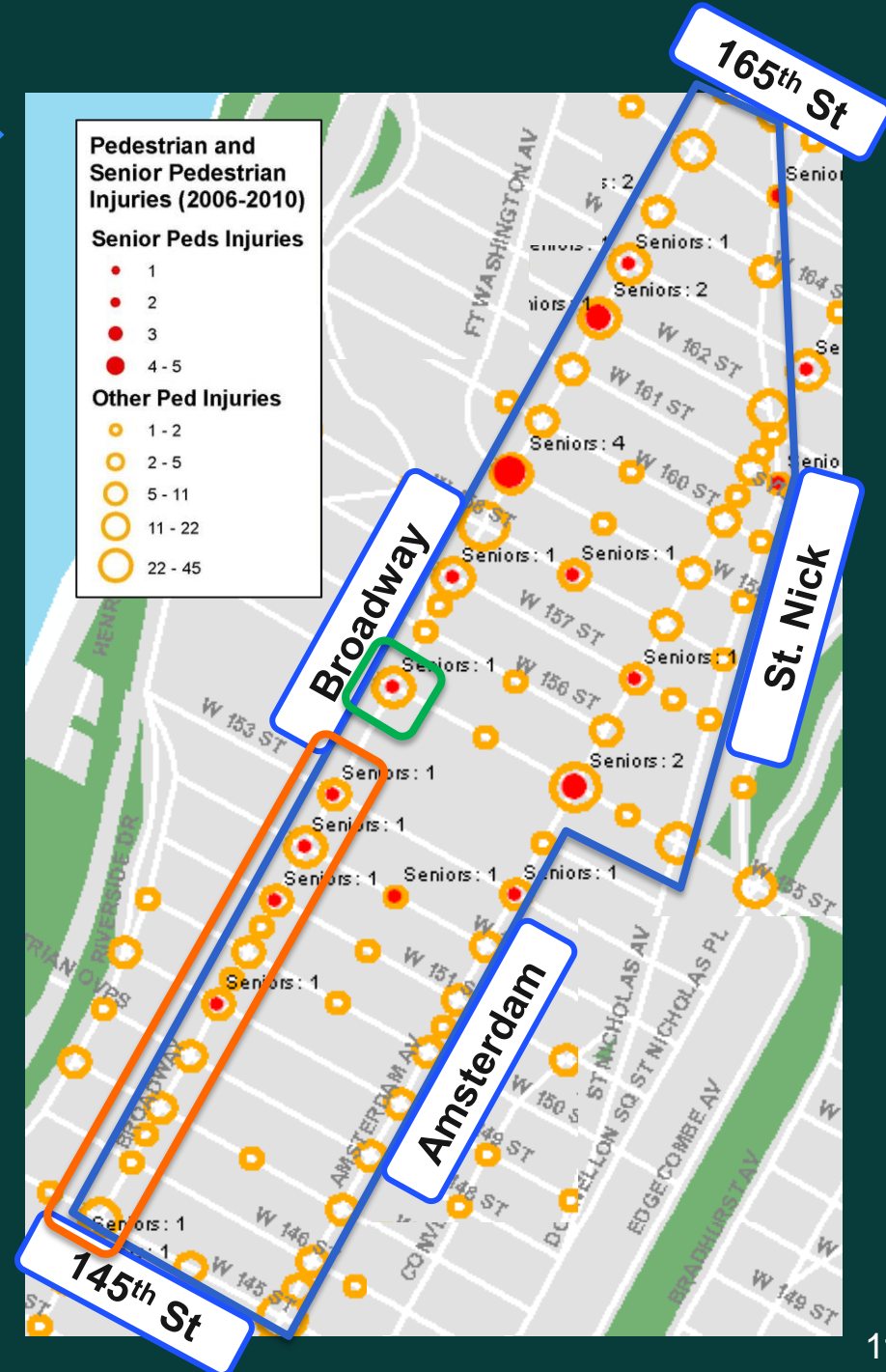


ANDREW SAVULICH/NEW YORK DAILY NEWS

A woman in this car died, and two children were injured, in the red car, which collided with another car on Broadway and 135th St. in Manhattan.

Hamilton Heights Senior Area

- Map presented to CB9 on 9/20/12
- 2 implemented projects:
 - Broadway and W 155th intersection safety improvements
 - Pedestrian countdown displays on Broadway
- Broadway corridor project has the potential to improve safety in larger area



2 Community Walkthroughs



**JOIN DOT ON A COMMUNITY WALKTHROUGH TO
DISCUSS TRAFFIC SAFETY ON BROADWAY**

Subject: Join DOT on a community walkthrough to discuss traffic safety on Broadway
(Please join us for both or either walkthrough)

DATE:

Wednesday, May 13, 2015

TIME:

4:00 p.m.

LOCATION:

Meet at 135th and Broadway on the northwest corner
(in front of the Bus Stop Diner)

Tuesday, May 19, 2015

10:00 a.m.

Meet at 145th and Broadway on the northwest corner
(in front of McDonald's)

Contact: Josh Orzeck at NYC DOT, 212-839-6218 or jorzeck@dot.nyc.gov, for all questions,
including accessibility accommodations. Please provide as much advance notice
as possible to allow us to provide optimal access.

Discussion Involves:

Traffic Safety

Current Street Design

Parking Regulations

Pedestrian Crossings



Since last presentation:

Weds May 13 at 4pm – Met at Broadway
and W 135th St (in front of the Bus Stop
Diner)

Thurs May 19 at 10am – Met at
Broadway and W 145th St (in front of
McDonald's)

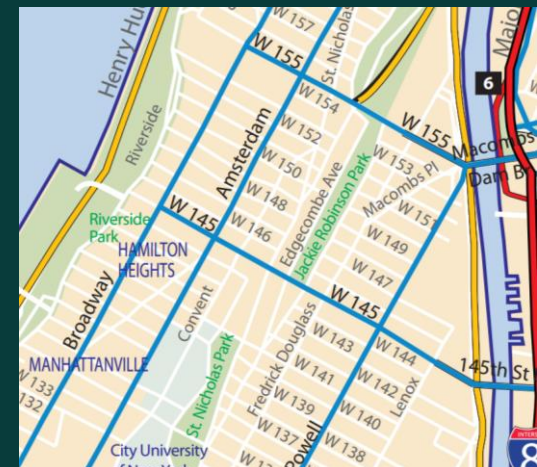


Existing Conditions

- 3 lanes in each direction
- Planted medians (Broadway Malls)
- Residential and retail land uses
- 1-train subway, M4/M5 (Broadway), M11 (W 135th St); Bx19 (W 145th St) buses
- Broadway is a Local Truck Route



Bus Routes



Truck Routes

Issues on Broadway 135th-153rd

Long crossing distances



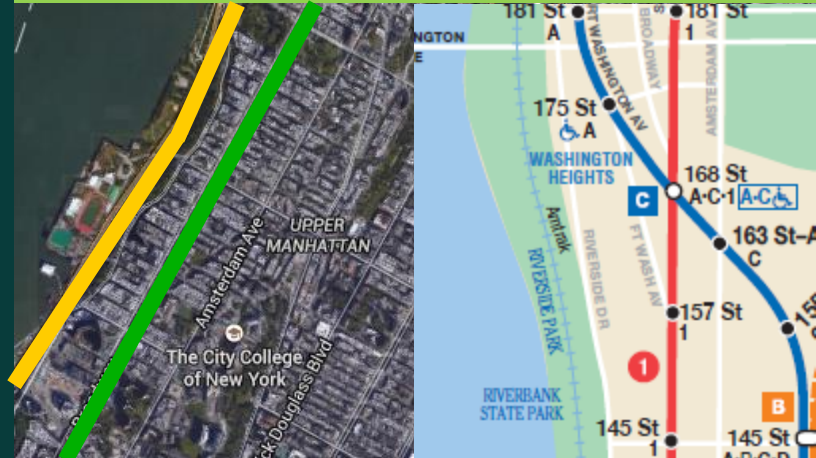
30% of vehicles traveling over speed limit



Truck loading Activity



Main Street, Parallel to Highway



Issue: Speeding

	W 140 TH -141 ST Street		W 150 th -151 st Street	
	NB	SB	NB	SB
% Above	17%	29%	23%	30%
Max	41	47	49	43



Collected Thurs 11/14/13 and Fri 11/15/13
Between 11am and 1pm, when the speed limit was 30mph

Odds of Pedestrian Death*

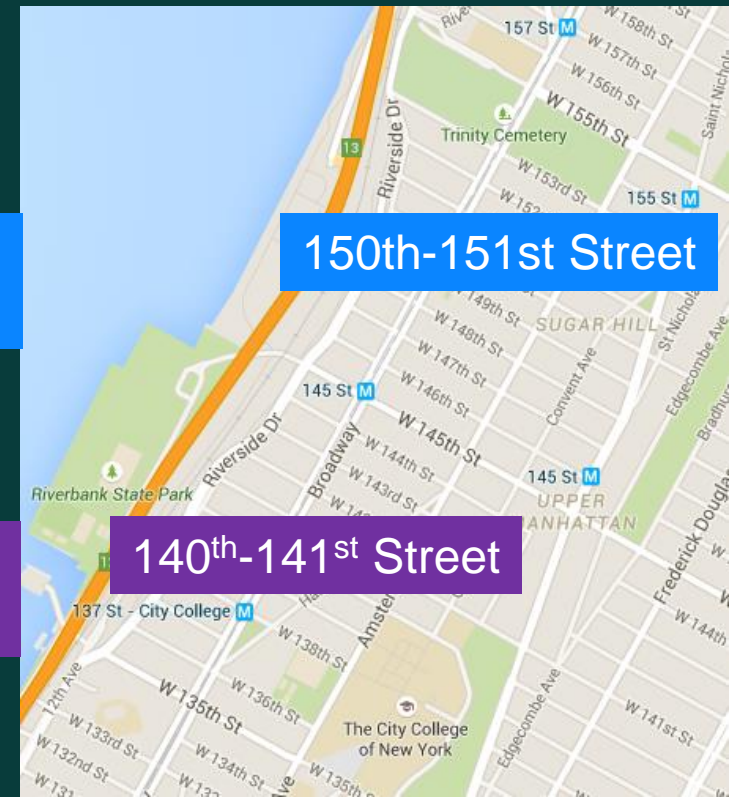


Issue: More **Southbound** speeding, fatalities

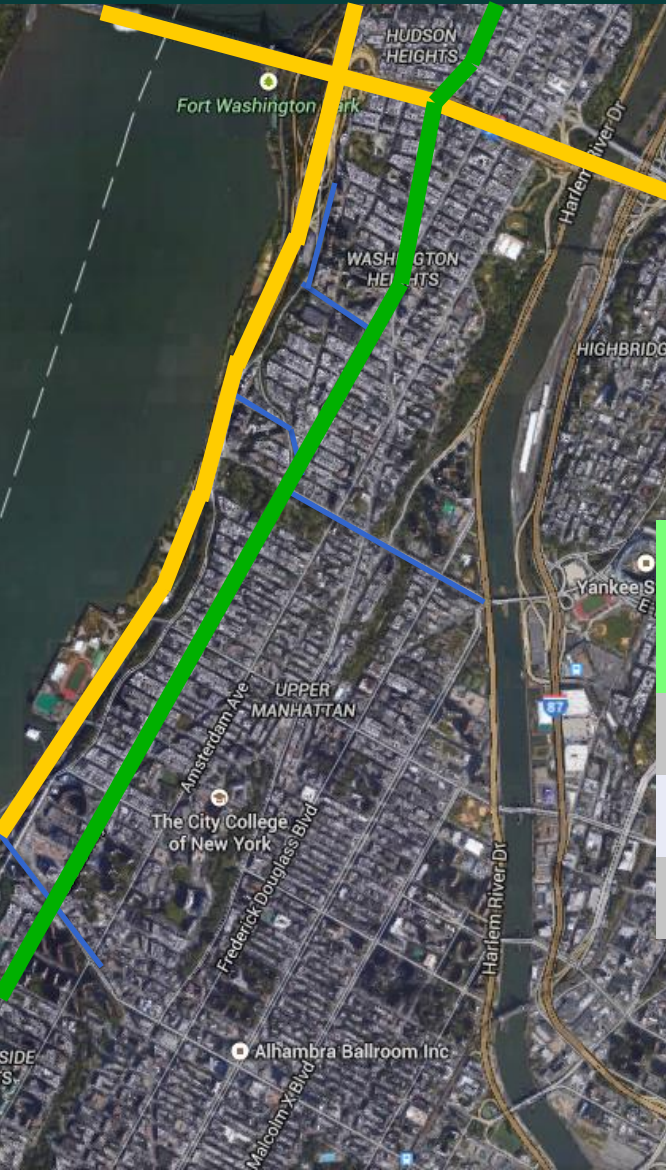
- 6 fatalities since 2007:
 - 5 are pedestrians
 - 4 are senior pedestrians
 - 4 are pedestrians against signal
 - **4 vehicles going southbound**
 - 3 drivers of taxi or livery vehicles

S/B: **30% Above**
Speed Limit

S/B: **29% Above**
Speed Limit



Traffic Volumes



- Traffic engineering rule of thumb: one lane can process 700 vph
- Broadway is under capacity. However volumes are much higher on Friday afternoons
- Broadway is a parallel alternate route to the Henry Hudson Pkwy (9A), toward the GWB

Northbound Broadway PM	June 2012			August 2014		
	Midweek	Fri	Fri % higher	Midweek	Fri	Fri % higher
W 135th St	722	1073	33%	650	763	15%
W 145th St	949	1474	36%	783	1093	29%
W 155th St	985	1334	26%	762	1,100	31%

- Even at peak of the peak (summer Fridays), Broadway's volumes can be accommodated in 2 lanes

Issue: Swerving around backups



Vehicles waiting to turn block left lane

Center lane is best or only through lane

Loading activity blocks right lane

Drivers have to suddenly break and make fast lane changes to get through

Issue: Low pedestrian visibility



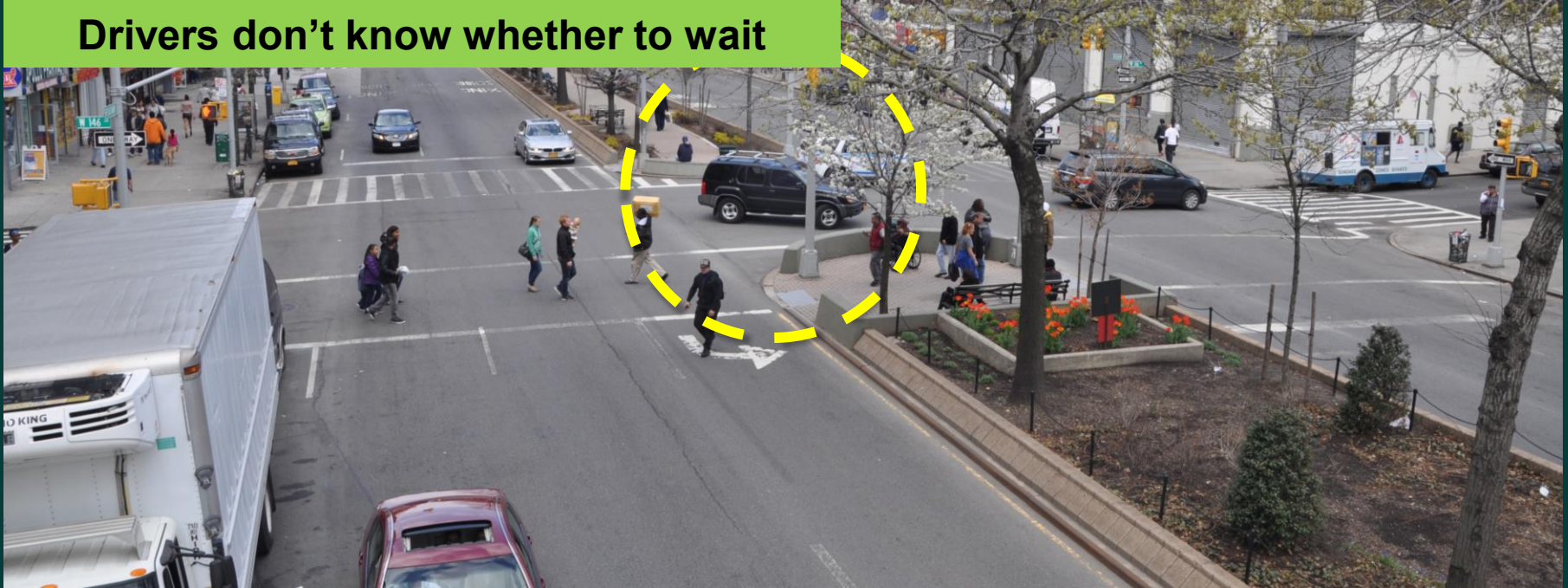
Pedestrians walk far out into the intersection, **even when they have the red**, to see beyond truck loading

Issue: Crossing outside islands



Issue: Unclear Left Turns

Drivers don't know whether to wait



- DOT observes 70% of left turners wait for the green light on the side street to finish their turn
- High percentages of crashes involve turn or right angle crashes
 - 41% (vs 30% average in Manhattan)
 - Left turn pedestrian KSI crashes outnumber right turn crashes 3 to 1

**NYC Pedestrian Safety Study & Action Plan (2010), and Lord/Smiley/Haroun Transportation Research Board (1998)*

Issue: Loading reduces pedestrian visibility

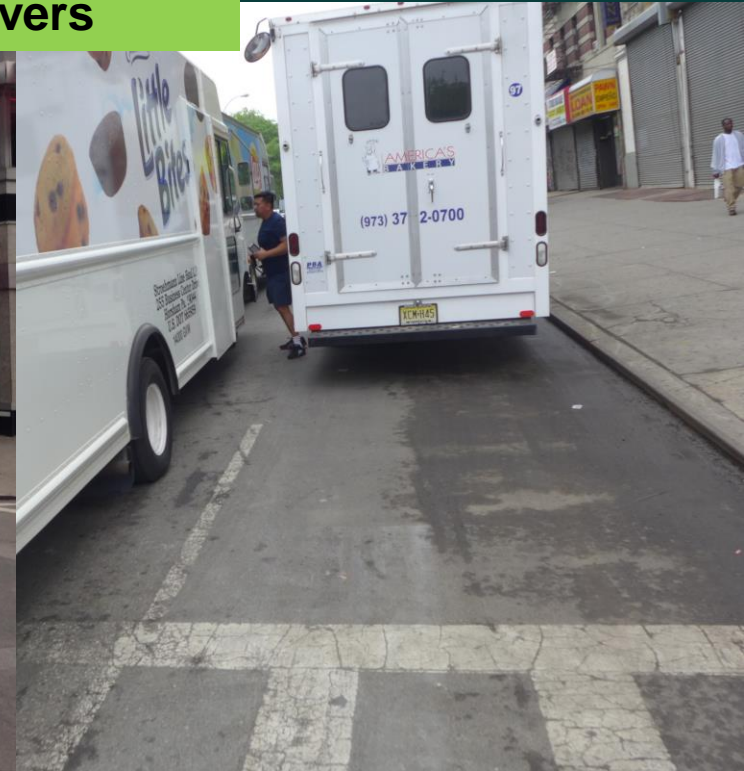
Hard to see pedestrians, hard to see truck drivers



- Truck loading blocks right lane; Broadway operates as two lanes
- Truck loading lowers visibility
 - Hard for drivers to see pedestrians in the crosswalk
 - Blocks access to and from curbside parking

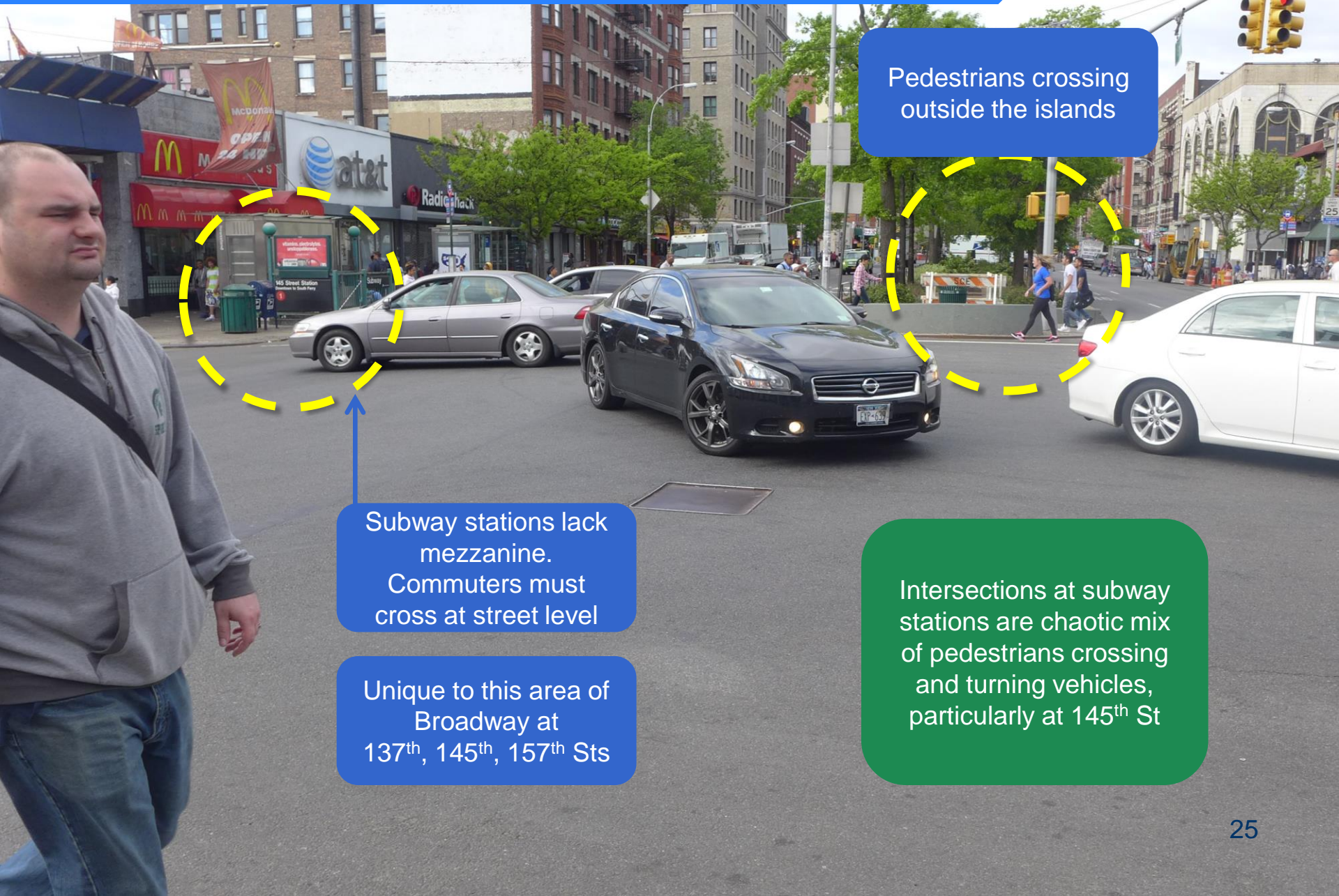
Issue: Loading reduces pedestrian visibility

Hard to see pedestrians, hard to see truck drivers



- Loading seen on community walkthroughs
- Loading blocks access to curbside parking
- Better curbside management would improve safety
 - Significant loading activity observed in midday

Issue: Subway riders cross at grade



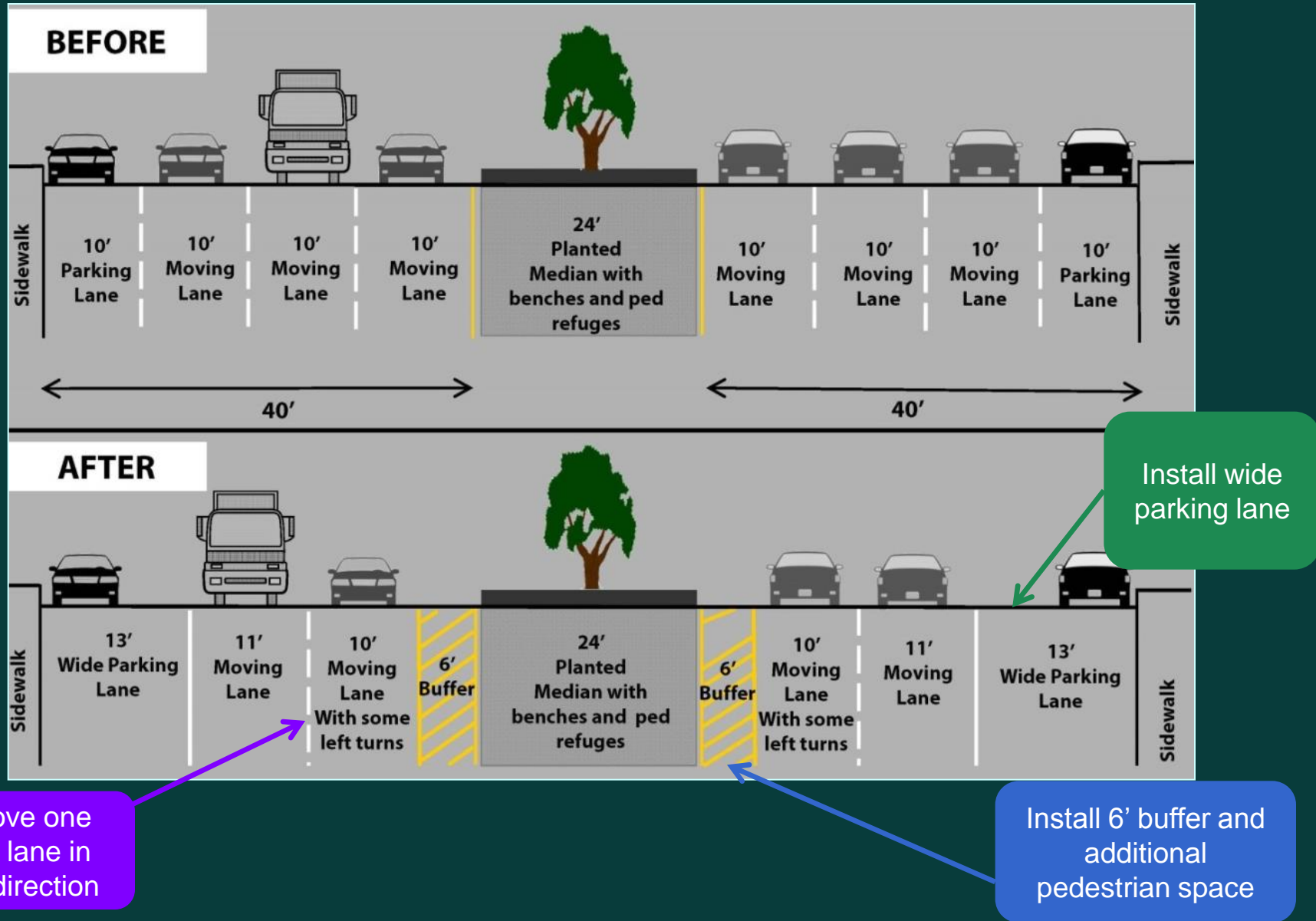
Pedestrians crossing outside the islands

Subway stations lack mezzanine.
Commuters must cross at street level

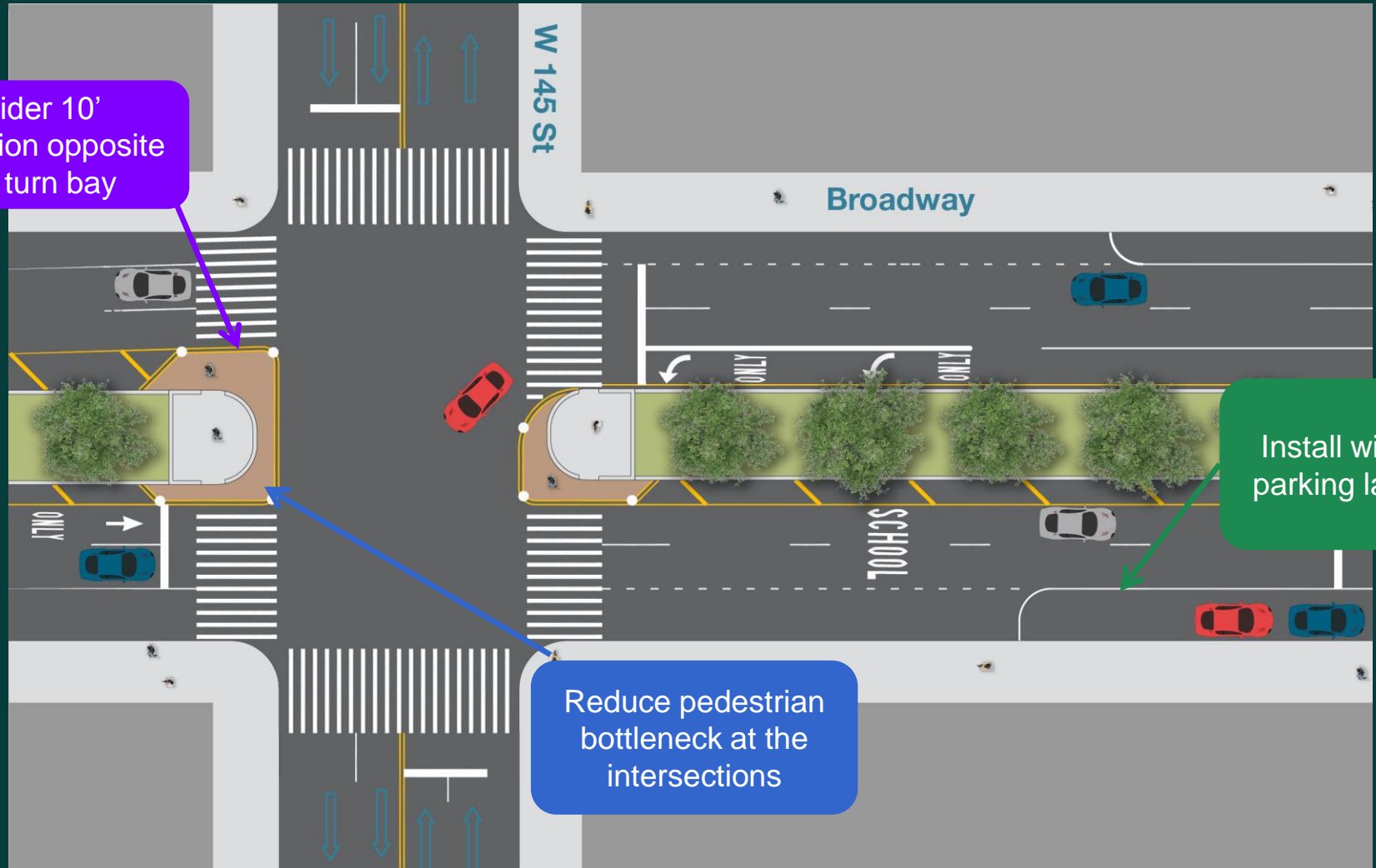
Unique to this area of
Broadway at
137th, 145th, 157th Sts

Intersections at subway
stations are chaotic mix
of pedestrians crossing
and turning vehicles,
particularly at 145th St

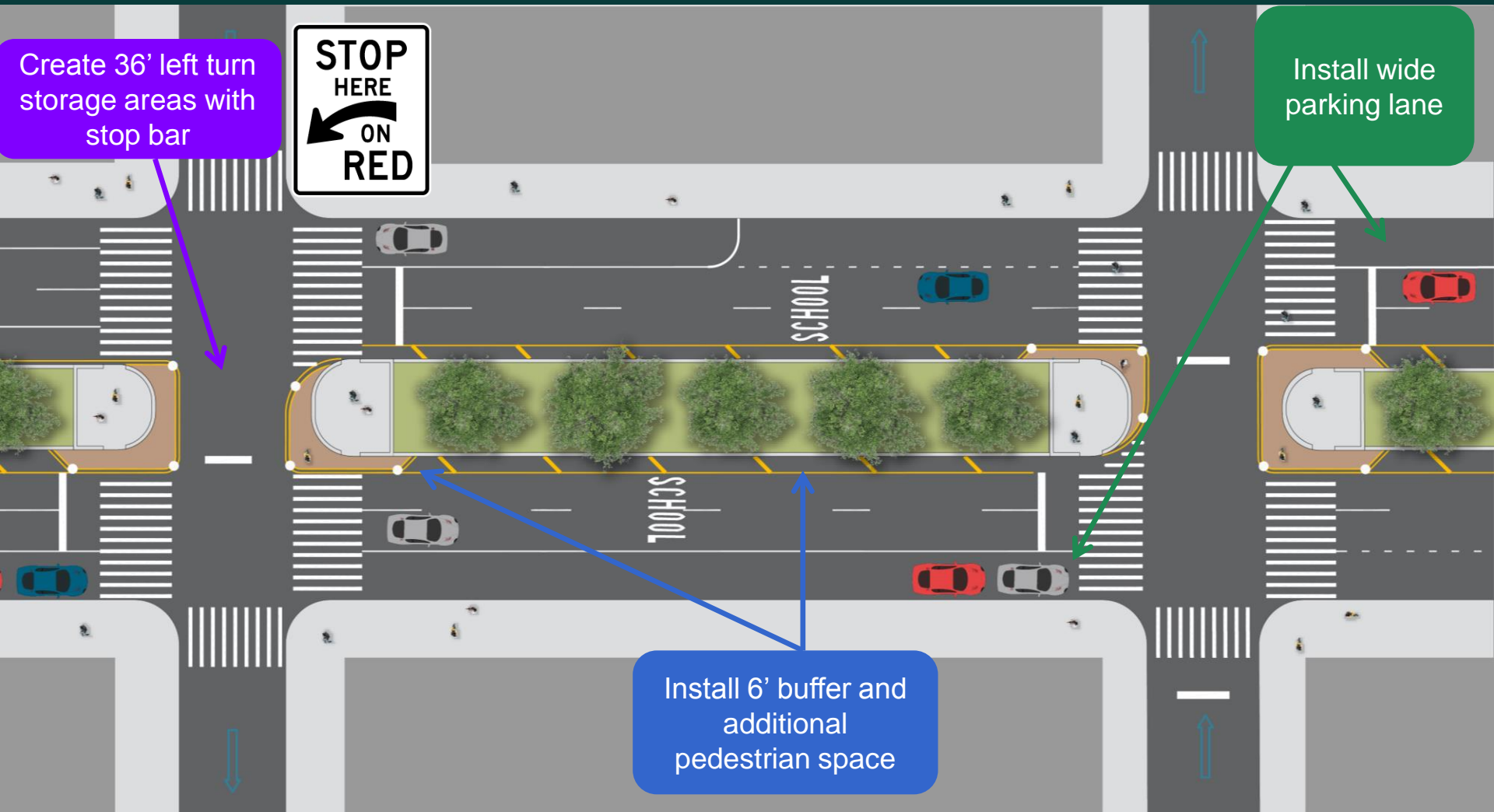
Proposed: W 135th St to W 153rd Sts



Proposed: At 145th St



Proposed: Stop bars for left turns



Proposed: Better, Safer turns

Clearer Left Turns



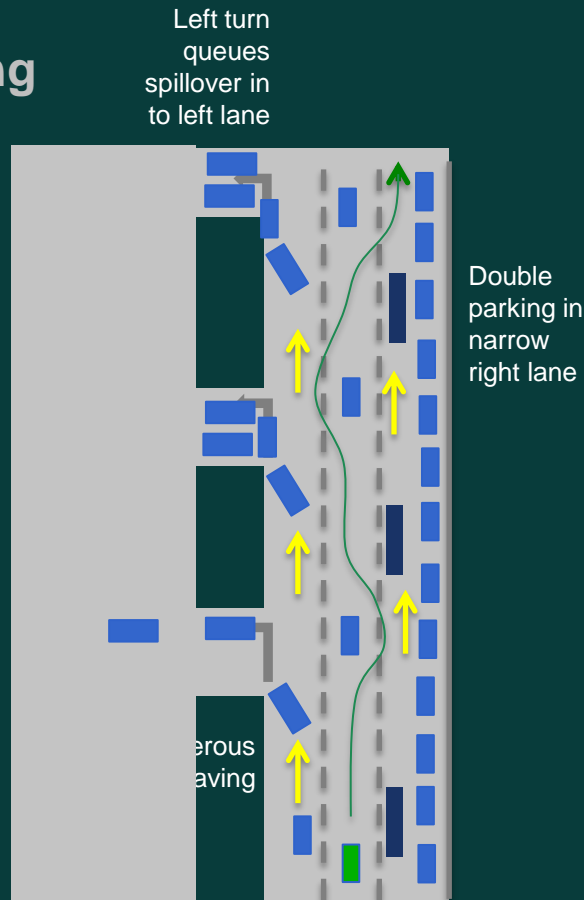
Stop Here (example): Park Ave & E 87th St

- Clarify left turns waiting areas from Broadway to side streets:
 - Add “Stop Here on Red” signs and stop bars
 - Wider medians will create more storage space
- Left only turn bays remain at main intersections (135th, 145th Sts)

Does one less lane = more traffic?

- No: The existing right lane is full of trucks loading, not a usable lane
- Existing: up to 30% speeding, drivers prefer center, avoid right lane

Existing



Does one less lane = more traffic?

- No: Similar projects built since 2012 carry the same volume after
- Proposal creates 2 good lanes, safer left turn bays and parking lane

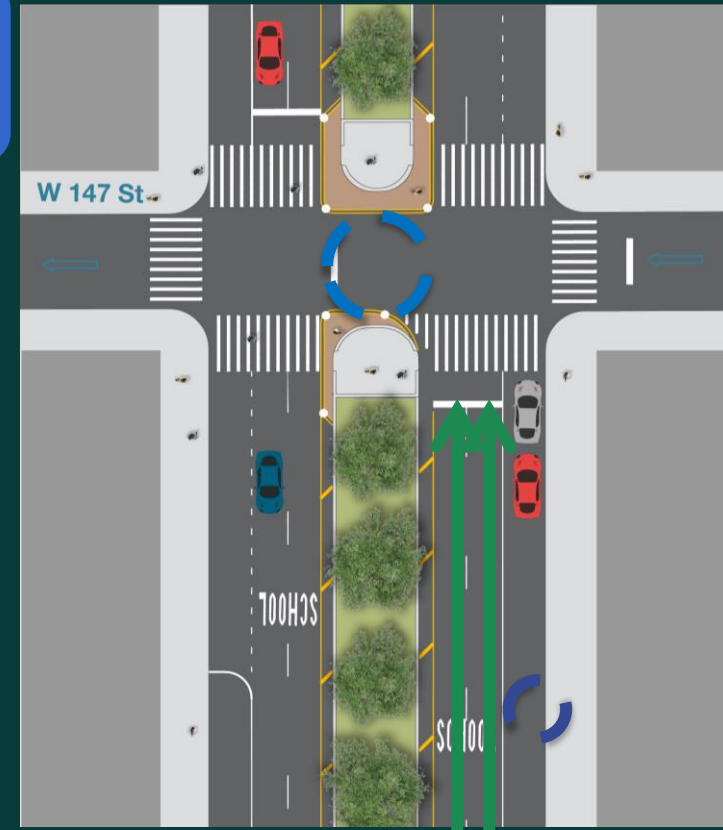
2 wider lanes that
better organize
through traffic

New loading zone
next to grocery in
wide parking lane

Left turners wait in
widened bay

4th Ave, Bklyn at 25th St

Proposed



Similar Projects: Injury Reductions



Broadway and
W 155th St
**Single
Intersection**

Spring 2012



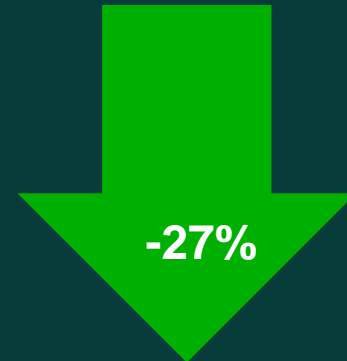
4th Ave, BK
**Two-way
calming with
rush hour
regulations**

Fall 2012



Broadway
W 93rd-100th St
**Southbound
calming**

Spring 2014



Adam Clayton
Powell Blvd
W 133-153rd St
**Two-Way
calming**

Fall 2012

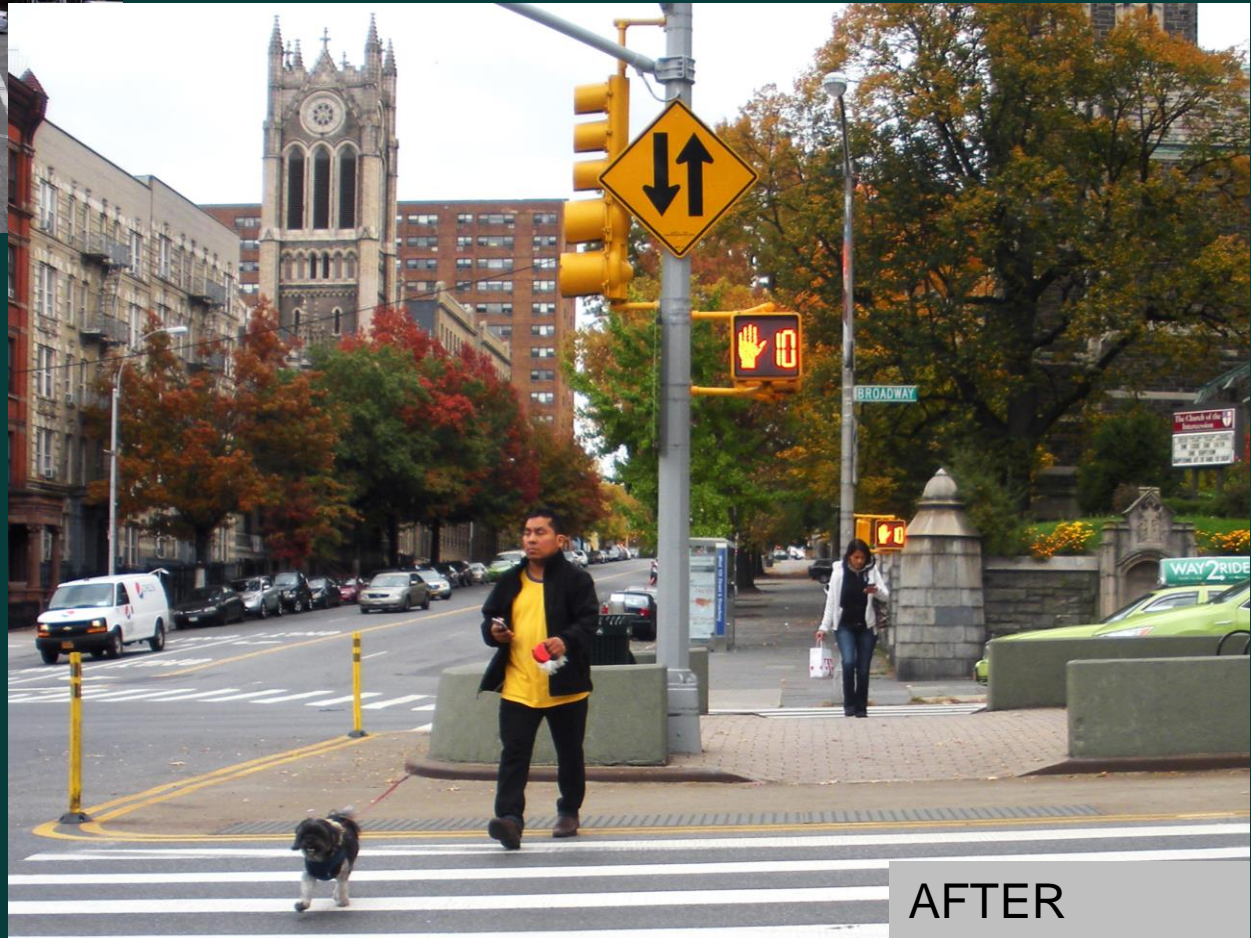
Similar Project: Broadway and W 155th

BEFORE



Slight injury reduction at single intersection

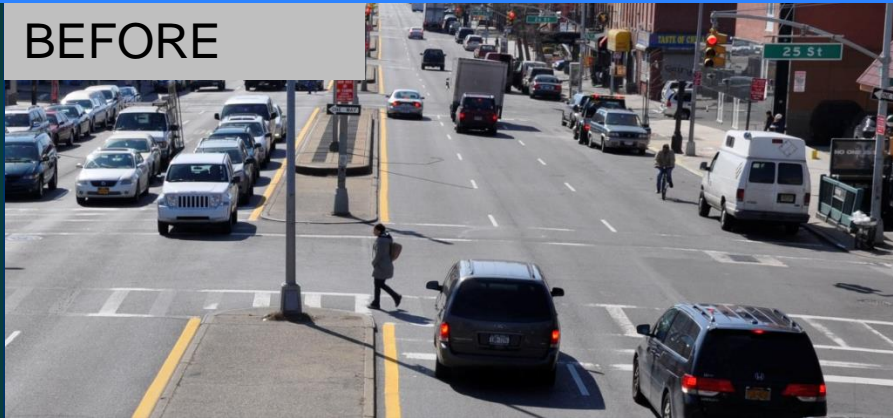
Better results in a corridor project



AFTER

Similar to Fourth Ave, Brooklyn

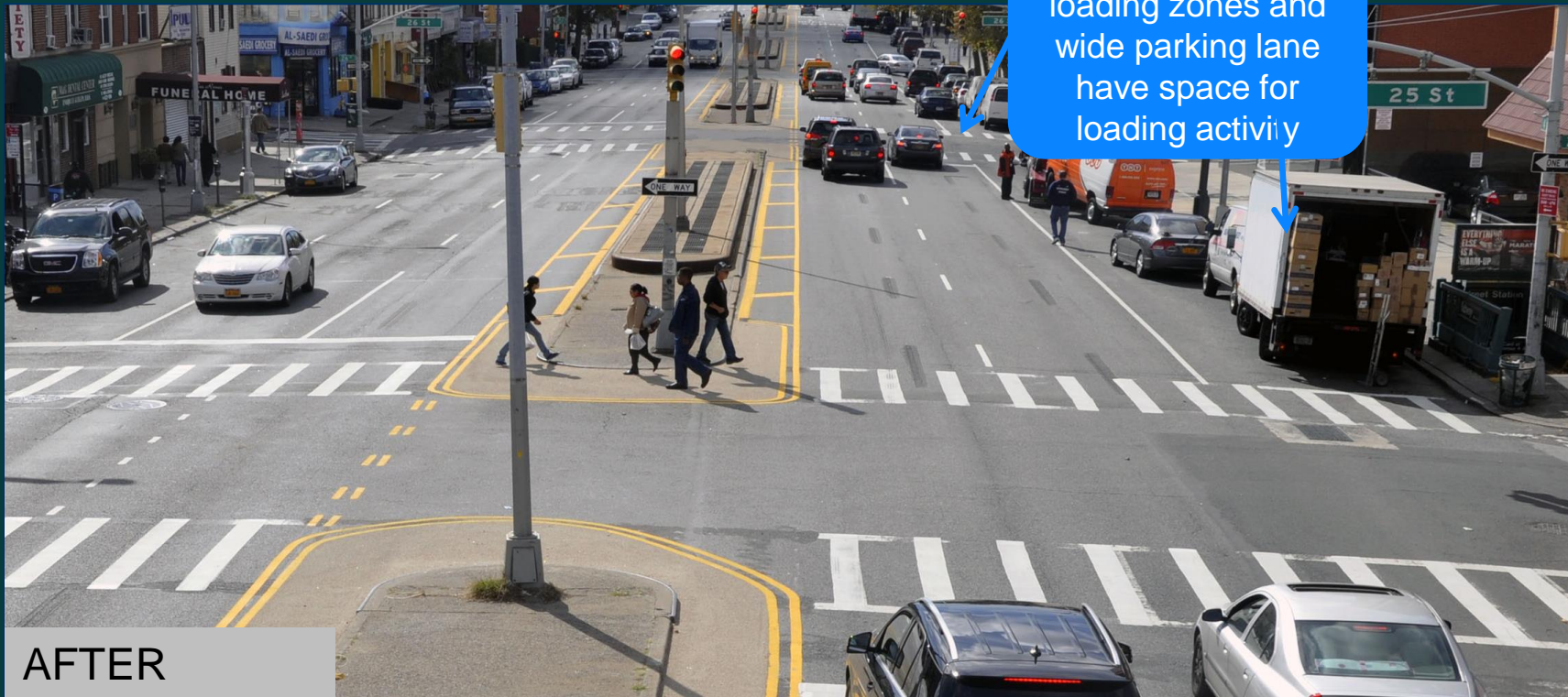
BEFORE



15th to 65th Sts (built 2012):

- 16% fewer injuries
- 30% fewer pedestrian injuries
- NB AM Rush hour regulations =
 - Peak vehicle volumes increased
 - Peak Travel Times improved

New curbside loading zones and wide parking lane have space for loading activity



AFTER

Similar Project: Broadway W 93rd-100th St

W 93rd to 100th Sts (built 2014):

- 18% fewer injuries
- 37% fewer pedestrian injuries



BEFORE



Broadway at W 97th St
Looking north at
southbound

AFTER

Similar to Adam Clayton Powell Blvd

BEFORE



W 133rd-153rd Sts (built 2012):

- 27% fewer injuries
- 48% fewer pedestrian injuries
- Peak vehicle volumes unchanged
- Travel Times maintained

Installed
wide parking
lane

Added stop bar to
clarify movements left
turning cars & cross
street traffic

Installed buffer and
additional
pedestrian space

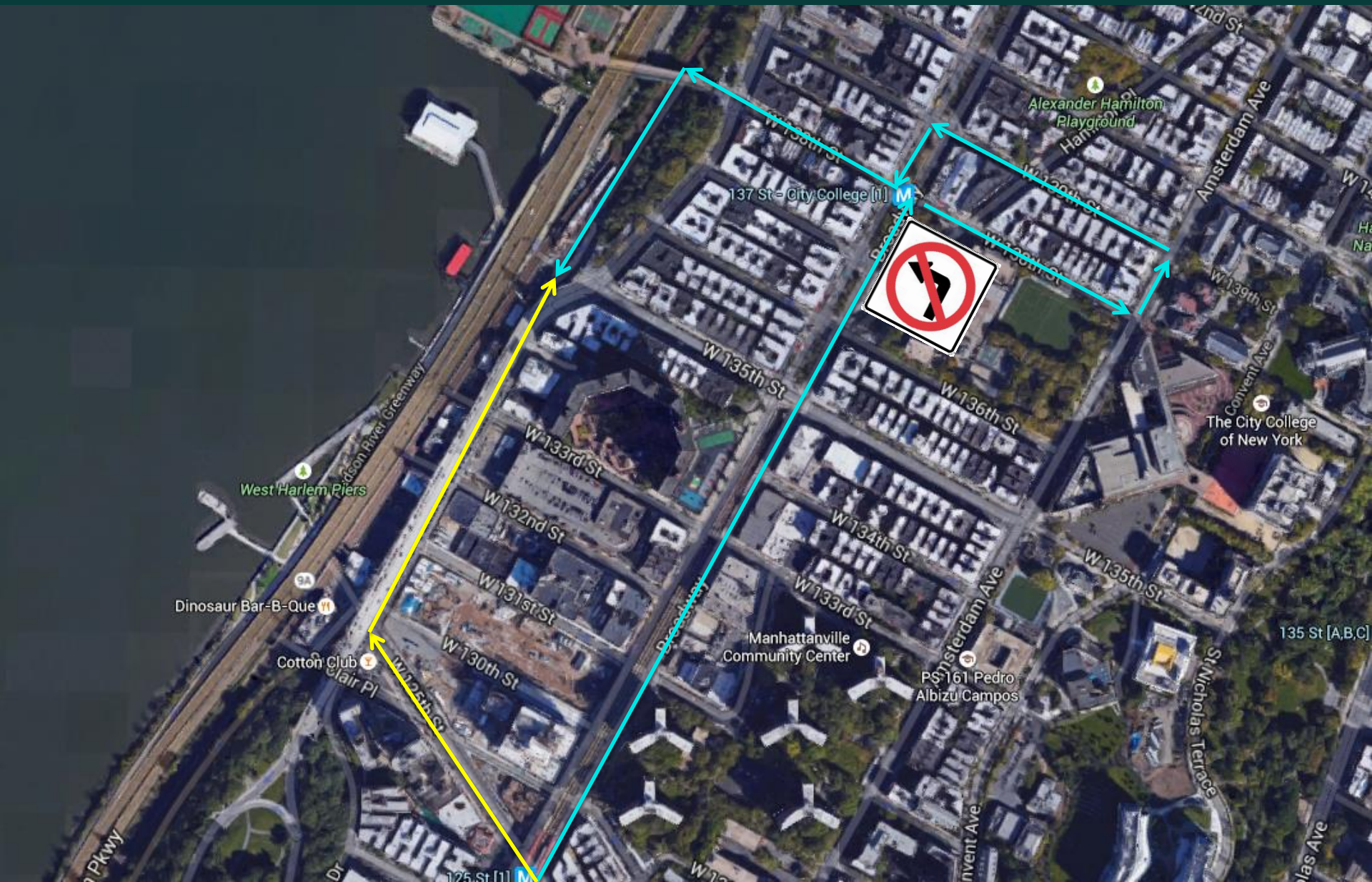
AFTER

Proposed: NB Left turn ban at W 138th St

- Not enough space to make opposing lefts in narrow intersection
- Southbound left is heavier, provides access to PS192 and City College
- Chaotic area with pedestrian fatalities (at 135th, 136th and at 138th St)
- Affects 40 left turners in PM summer Friday peak hr (busiest time of year)

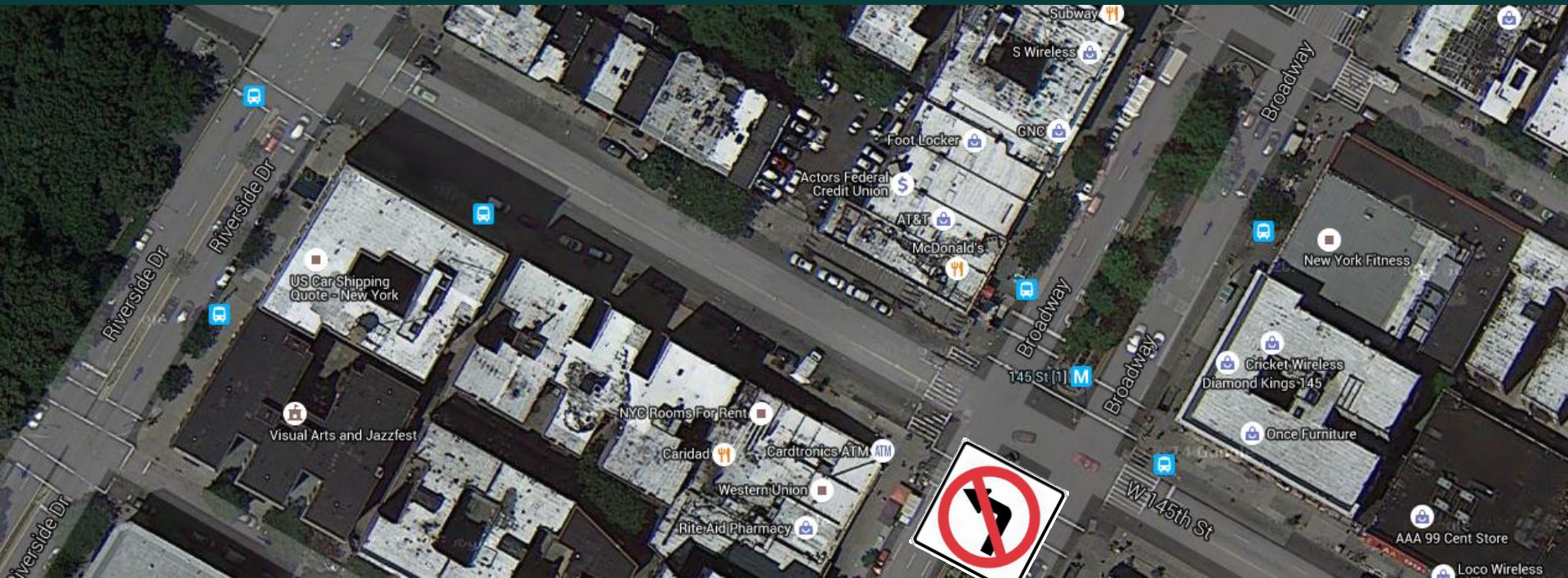


Alt Routes for NBL ban at W 138th St

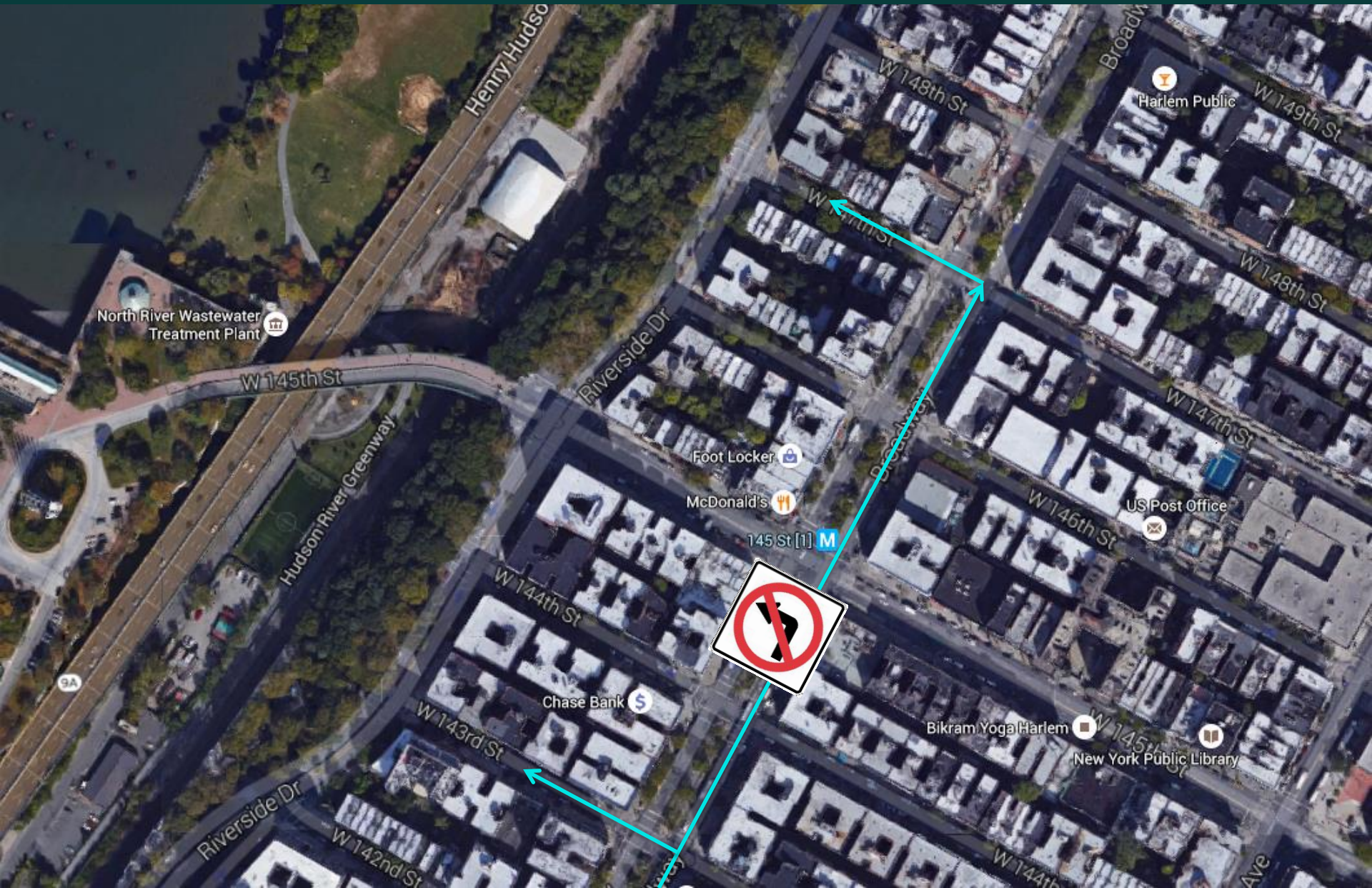


Proposed: NB Left turn ban at W 145th St

- Existing 7s LPI crossing Broadway, near 1-train subway station
- Existing SBL protected phase
- Banning northbound left would allow for a longer southbound left signal, which would allow more vehicles to safely make the southbound left turn
- Affects 51 turners in the PM peak hour



Alt Routes for NBL ban at W 145th St



Proposed: Loading Zones

DOT would like to work with CB, community and local businesses to identify good hours and locations for truck loading zones

Frequent loading observed:

Northbound (east curb)

- 149-150 in front of C-Town (and adjacent blocks)
- 144-145 bank and subway entrance
- 139-140 near Compare Foods on 138-139
- 138-139 double parked trucks block parked cars at meters
- Hamilton Pl in front of Meat Market

Southbound (west curb)

- 152-153 taxis in front of Haldon Court (residential building)
- 144-145 near subway
- 137-138 in front of grocery and in unutilized taxi stand at subway



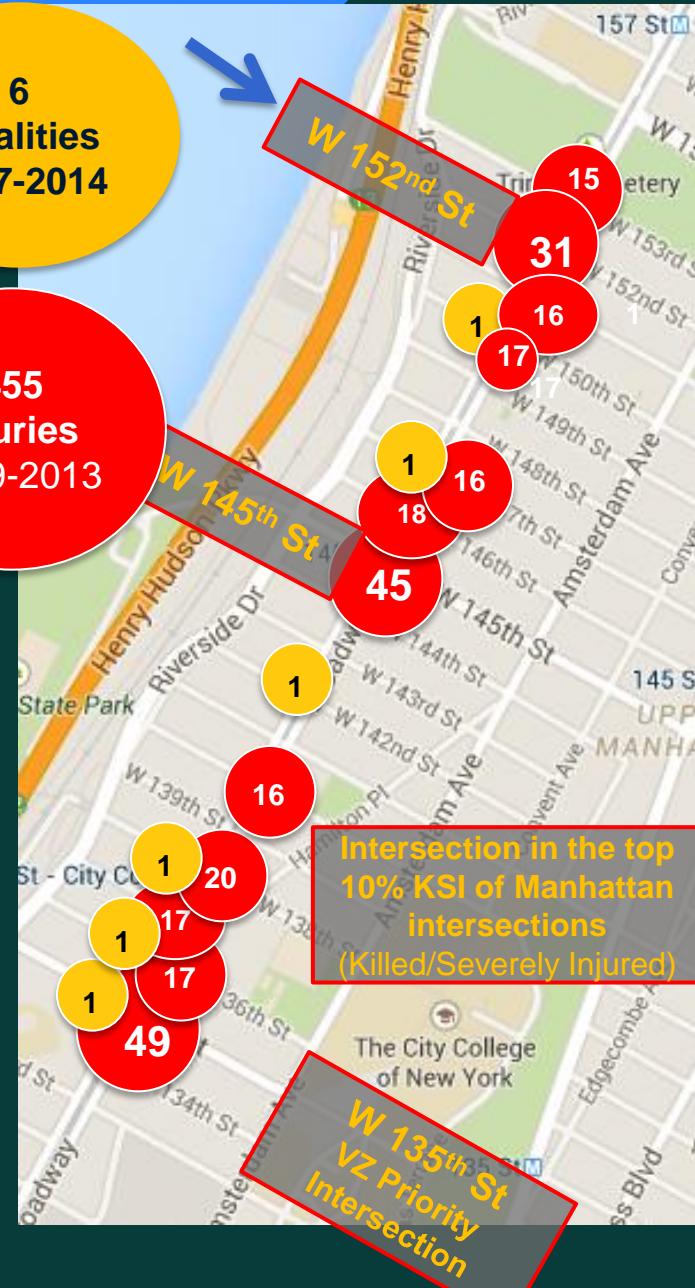
Proposed: Ban SB U-turn at W 152nd St



**6
Fatalities
2007-2014**

**455
Injuries
2009-2013**

- 3 severe injuries (2 are seniors)
- Low visibility of uphill W 152nd St traffic from intersection
- Many seniors attend Wilson Major Morris Community Center
- Alternate routes: W 150th St, W 148th St



Benefits of Proposal

- Reduces speeding/calms traffic
- Clarifies left turns and movements through medians
- Shortens pedestrian crossings

Existing:
Broadway at W 135th St



Proposed (example):
Broadway at W 97th St



Benefits of Proposal

- Better for Pedestrians
 - More pedestrian space near retail, seniors, and subways
 - Wide parking lane = safer place to wait for walk signal
 - Curbside loading zones increase visibility at intersections
- Better for Drivers
 - More comfortable driving experience; improves lane widths
 - Removes need for dangerous last minute swerving
 - Bigger left turn bays with clearer instructions to wait for green
- Better for Businesses
 - Adds loading zones for truck loading



Questions?



Thank
You