9TH STREET
COMPREHENSIVE STREET REDESIGN

Presented to Community Board 6

June 21, 2018

VISION ZERO
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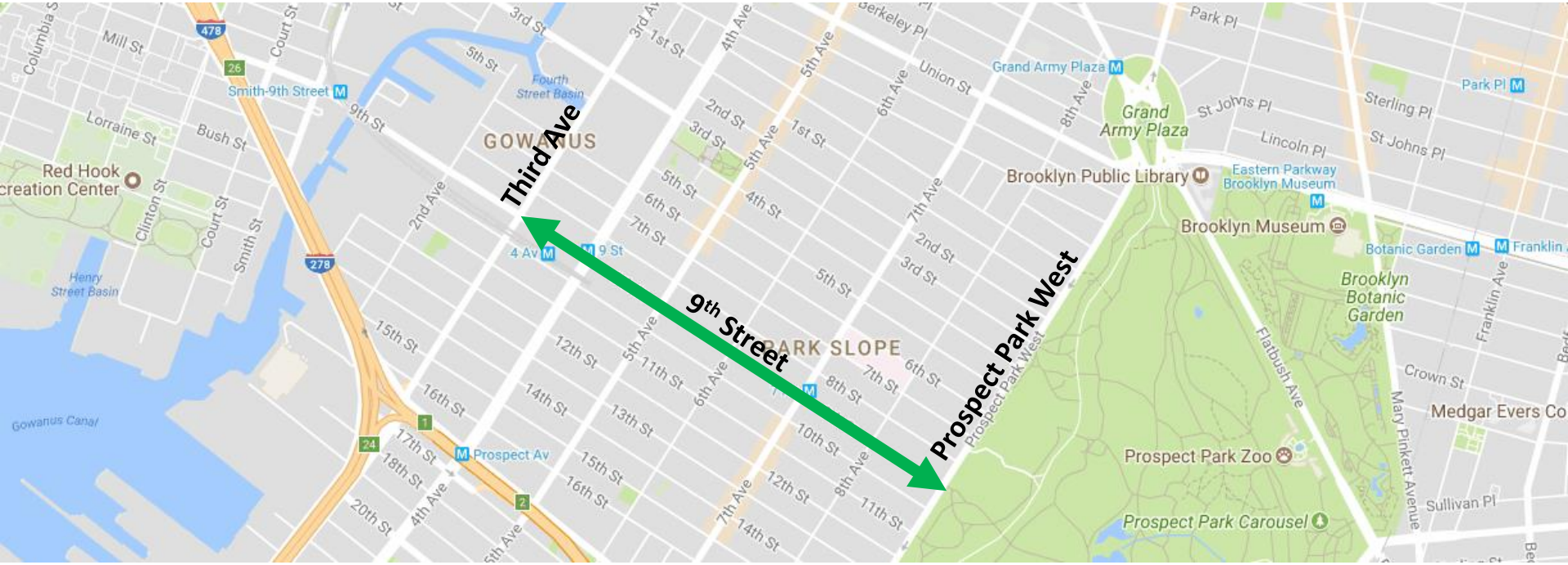
NEW YORK CITY DOT

Project Area Location



Neighborhood Street and Collector Road Heavily Used by All Modes

- **Commercial/retail activity** creates heavy demand for curb access and pedestrian traffic
- **Subway access** generates significant pedestrian traffic
- **Connection Prospect Park** draws people walking and biking
- **Bridge across Gowanus Canal** funnels motor vehicle, bike, and pedestrian traffic
- **Connections to Gowanus Expressway/Battery Tunnel** attracts motor vehicle traffic
- **B61 Bus Route**
- **Truck Route west of 4th Ave**

Project Area Safety

9th Street: 3rd Ave – Prospect Park West
Crash History 2012-2016

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	39	2	2	4
Bicyclists	34	4	0	4
Motor Vehicle Occupant	64	4	0	4
Total	137	10	2	12

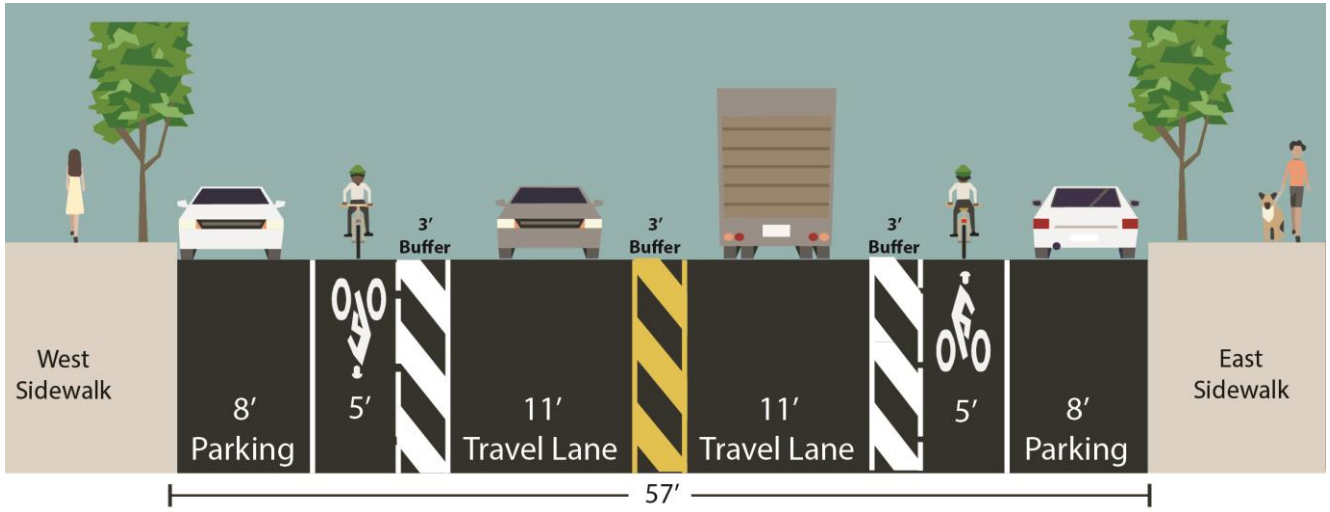
4 Pedestrian Fatalities 2012-2018

- 1 fatality in 2013 on 4th Ave
- 1 fatality in 2016 on 9th St at 5th Ave
- 2 children killed in 2018 on 9th St at 5th Ave

High Crash Corridor with 13.6 Killed or Severely Injured (KSI) per mile, ranking in the top third of Brooklyn corridors (2012-2016)

Existing Conditions Roadway Design

Midblock Configuration

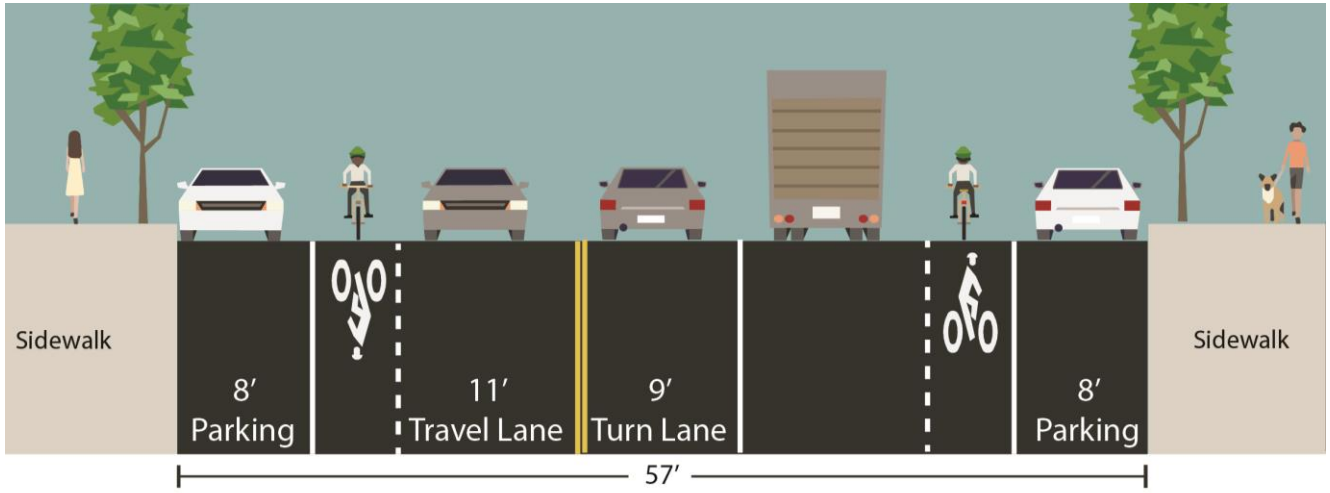


Standard moving lanes

3’ Buffer/Median

Buffered bike lanes

Intersection Configuration



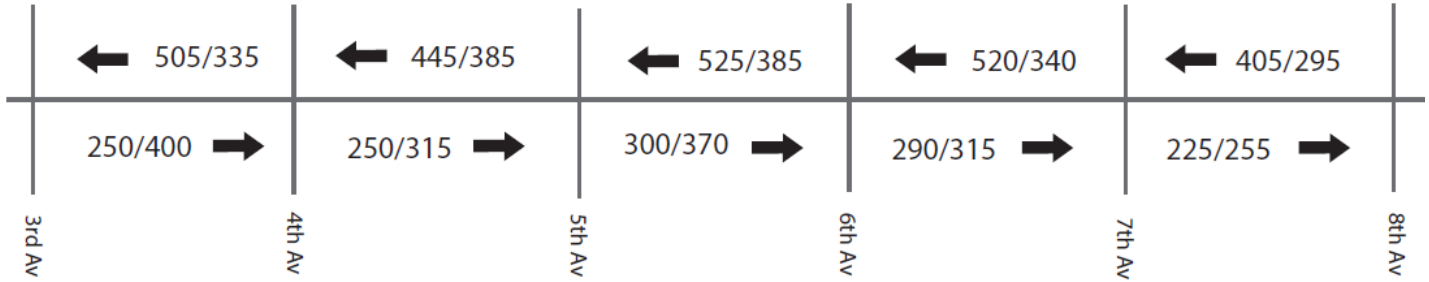
Standard moving lanes

Left turn lanes

Conventional bike lanes

Existing Conditions Motor Vehicle Congestion

- Moderate traffic volumes
  - AM Peak Eastbound: 300 VPH
  - AM Peak Westbound: 525 VPH
  - PM Peak Eastbound 385 VPH
  - PM Peak Westbound: 370 VPH
- Limited green time (more time goes to avenues)
- Traffic backs up in the westbound direction during the AM peak
- Congestion encourages unsafe behavior
- Turn volumes vary



Existing Conditions Curb Demand

- Frequent double parking
- Demand for loading and short term parking
- Provokes unpredictable traffic maneuvers
- Bikers are forced to ride with traffic

Existing Conditions Pedestrian Safety

- Numerous pedestrian traffic generators
  - Neighborhood commercial
  - Subway (F / R / G)
  - Prospect Park
- Steady pedestrian volumes
  - 553 people crossing 9th St at 5th Ave at AM peak, April 2018
  - 1,173 people crossing 9th St at 5th Ave at PM peak, April 2018
- Long crossings (57 ft)
- Leading Pedestrian Intervals (LPI) crossing 3rd Ave and 4th Ave and crossing 9th St at 6th Ave

Existing Conditions Bicycle Route

- Bike lanes installed in 2007
  - Buffered midblock
  - Conventional at intersections
- Key east-west link to Prospect Park and across Gowanus Canal
- Moderate bike volumes
  - 739 bikes 12-hr weekday count
  - 829 bikes 12-hr weekend count

    June 2017, between 3th Ave and 4th Ave
  - 551 bikes 12-hr weekday count
  - 782 bikes 12-hr weekend count

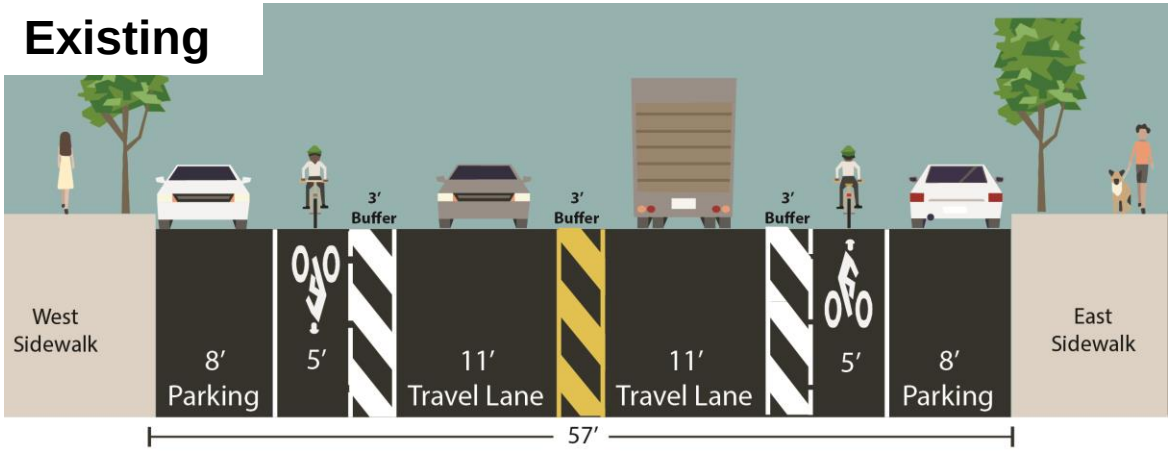
    June 2017, between 7th Ave and 8th Ave
- Double parking frequently blocks bike lane forcing cyclists into traffic

Proposed Design Goals

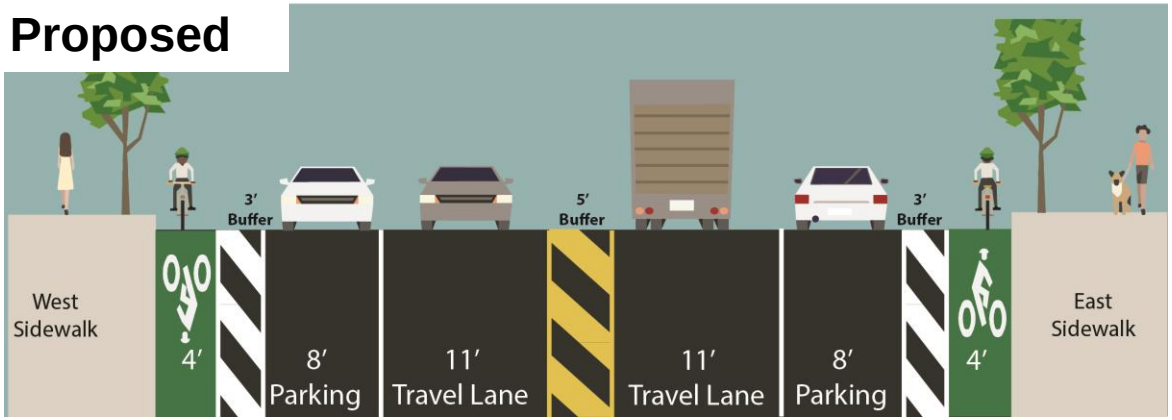
- Improve pedestrian safety
  - Shorten crossing distances
  - Slow turns
- Improve cyclist safety and comfort
  - Reduce double parking in bike lane
- Maintain motor vehicle circulation
  - Minimize congestion and spillback onto other streets
  - Reduce off-peak speeding
  - Allow emergency access
- Minimize parking loss
  - Add loading zones where necessary

Proposed Design Midblock

Existing



Proposed



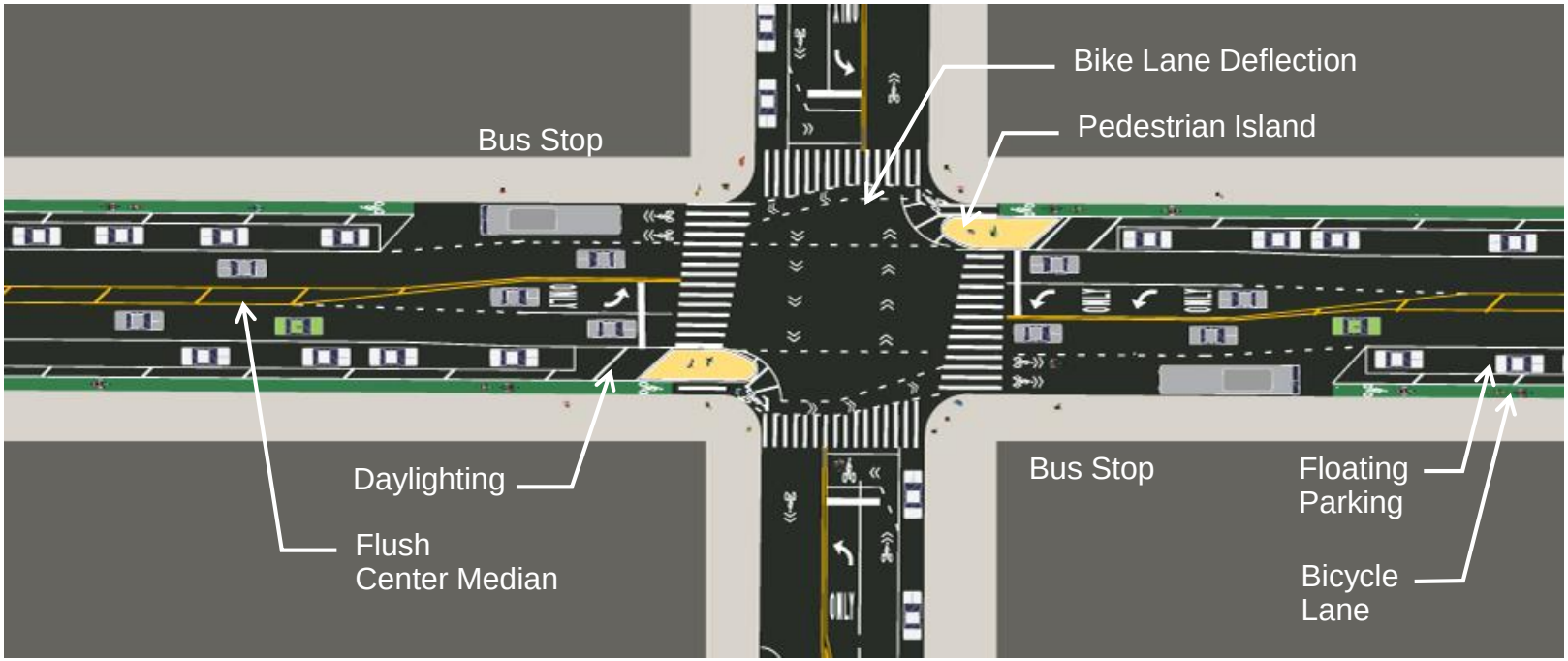
Parking protected bike lanes along curbs

5’ Buffer/Median

- Narrower roadway discourages speeding
- Parking lane discourages double parking and keeps bike lane clear of parked vehicles
- Larger median buffer assists emergency access
- Street sweepers and snow plows, as necessary, will service bicycle lane during alternate side parking hours

Proposed Design Intersections

- Add pedestrian islands
- Reduce crossing distance by 26% (42’ from 57’)
- Slow right-turning vehicles
- Re-orient right-turning vehicles for better visibility of bike lane
- Minimize parking loss



Typical design; design will vary slightly at 4th Ave and 3rd Ave

Proposed Design Curb Management

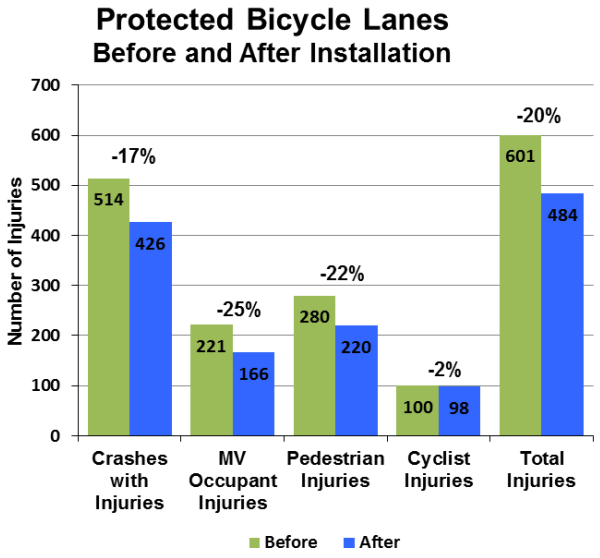
9th Street Parking Changes	
Street Block	**Approx. # of Spaces Removed**
3rd Ave – 4th Ave	5
4th Ave – 5th Ave	4
5th Ave – 6th Ave	4
6th Ave – 7th Ave	4
7th Ave – 8th Ave	4
8th Ave – Prospect Park West	5

- Safety improvements require conversion of 26 spaces to “No Standing Anytime” between 3rd Ave and Prospect Park West (out of ~310 spaces)
- Expand existing daytime loading zones between 4th and 6th Avenue to reduce double parking at post office, grocery store, CVS, YMCA, and car service dispatch

Summary Project Benefits

- Increases pedestrian safety by shortening crossing distances and slowing turns
- Discourages speeding by narrowing roadway
- Discourages double parking through redesign and new regulations
- Creates a safer, more comfortable experience for cyclists
- Maintains traffic capacity where necessary

Street redesigns with protected bike lanes improve safety for all street users, especially pedestrians



Protected bicycle lane projects with 3 years of after data include the following: 9th Ave (16th-31st), 8th Ave (Bank-23rd, 23rd-34th), Broadway (59th-47th, 33rd-26th, 23rd-18th), 1st Avenue (Houston to 34th), 2nd Ave (Houston-34th), Columbus Ave (96th-77th) Note: Only sections of projects that included protected bicycle lanes were analyzed.
Source: NYPD AIS/TAMS Crash Database