



9TH STREET STREET SAFETY UPGRADES

Community Board 6 Transportation Committee
May 17, 2023



Background

1

Project Area Location



- Industrial and residential land use
- B61 bus route
- Critical connection between Park Slope and Gowanus and Red Hook
- 35 feet wide roadway

Background

- 9th Street Bicycle Facilities
 - 2nd Ave – 3rd Ave: Shared Lanes
 - Installed 2009
 - 2nd Ave – Hamilton Ave: Bike Lanes
 - Installed 2009
 - 3rd Ave – Prospect Park West: Protected Bike Lanes
 - Installed 2018
 - Followed pedestrian fatalities and updates to PBL tool kit
- 9th Street intersects nearby bicycle lanes on 4th Ave, 3rd Ave, and Smith St
- LPIs installed at on 9th St at 2nd Ave and 8th Ave in Jan 2023
- Gowanus and 4th Ave redevelopment and impending Hamilton Ave greenway (BWG) may lead to higher bike volumes



9th St at 5th Ave



9th St at the Gowanus Canal

Issues Mid-Block Unprotected Bike Lanes

- West of 4th Ave, 9th St is typically 35' wide
- Smith St – 2nd Ave:
Two existing moving lanes and two existing curbside bike lanes
- 2nd Ave – 3rd Ave:
Two existing moving lanes with shared bike lane markings and two existing parking lanes



Issues Intersection Safety

- West of 4th Ave, turn lanes on 9th St reduce space available for bicycle infrastructure
- Truck routes on 9th Street, Smith St, 3rd Ave, 4th Ave heighten the necessity of safe bike infrastructure on the corridor



Issues Addressing Curb Access

- 9th St between 2nd Ave and 3rd Ave is a mix of industrial, commercial, and residential uses
- Industrial uses have many driveways, particularly on south side of 9th St
- Reports of frequent double parking despite nearby parking lots
- Current parking regulations are No Parking 8am-6pm but are routinely disregarded
- Frequent sidewalk parking



Issues Community Concerns

April 2023 Community Meeting:

- Presented Design Tool Kit and draft principles of 9th Street redesign
- Listened to requests brought by community:
 - Preference for Jersey barriers
 - Poor pavement conditions
 - Signal wanted at Lowe's driveway
 - Loading zones on avenues
 - Bus stop boarding islands
 - LPIs (pedestrian head-starts)
 - Physical deflections for drivers (chicanes and speed bumps)



Safety

2

Project Area Safety

9th Street – 3rd Avenue to Smith Street Crash History 2016-2020

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	15	2	0	2
Bicyclists	8	1	0	1
Motor Vehicle Occupant	30	0	0	0
Total	53	3	0	3

- 7.1 Killed or Severely Injured (KSI) per mile puts the corridor in the middle 33% of dangerous corridors in Brooklyn
- Fatality of a cyclist in January 2023 underscores need for continuously-protected bike facilities



Safety Benefits of Protected Bike Lanes

Protected bike lanes benefit all street users:

Crashes with
Injuries

Down 15%

Motor Vehicle
Occupant Injuries

Down 15%

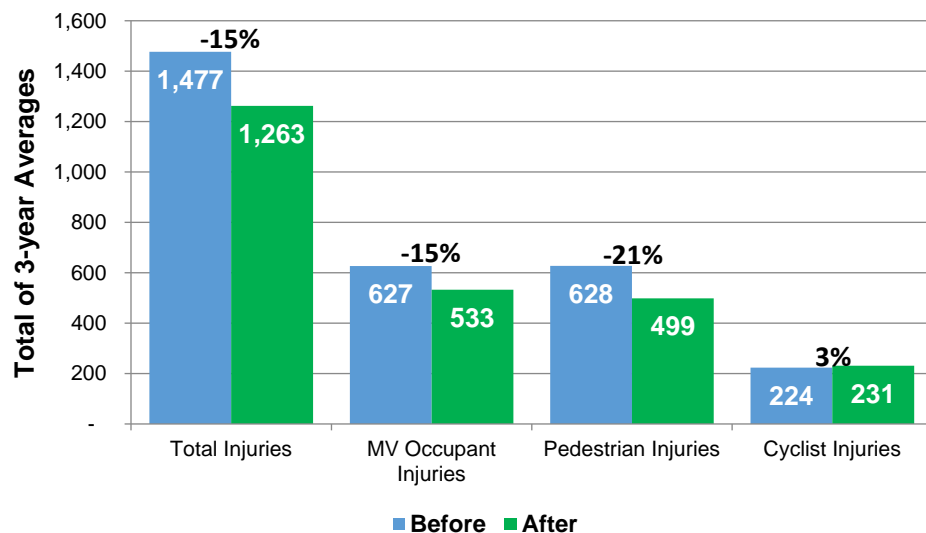
Pedestrian
Injuries

Down 21%

Injuries to cyclists increase only 3%, despite a 61% increase in bike volume increase

Protected Bike Lanes

Before and After Crash Data, 2007 - 2017



Data from 25 separate protected bicycle lane projects installed from 2007-2014 with 3 years of after data. Includes portions of 1 Ave, 2 Ave, 8 Ave, 9 Ave, Broadway, Columbus Ave, Hudson St, Lafayette St / 4 Ave, Sands St, Allen/Pike St, Kent Ave, Prospect Park West, Flushing Ave, Bruckner Blvd & Longfellow Ave, Imlay St / Conover St, Paerdegat Ave. Only sections of projects that included protected bike lanes were analyzed. Source: NYPD AIS/TAMS Crash Database

Green Wave

Analysis of fatalities key factors (2014-Present):

- **60% of fatalities happened at intersections**; 23% involved a vehicle turn; 16% involved a driver's failure to yield the right of way
- Nearly **90% of fatalities** happened on **streets without bike lanes**

Citywide Protected Bicycle Lane (PBL) Network

- **Build 30 miles of protected bicycle lane annually**, guided by a PBL vision document.

Better Design:

- Implement **new design** standards based on national & international best practices **to enhance safety at intersections**.
- Continue **piloting new designs with rigorous safety analysis**

Education and Outreach:

- Launch **next phase of Vision Zero** public awareness campaign, educating drivers with a focus on cyclist safety — and **expand the “Get There”** bicycle encouragement/rules of the road campaign
- **Educate all street users** about safe truck operation on city streets
- Increase helmet giveaways and helmet use encouragement.



Safe Streets for Cycling



Protected Bike Lanes

- **34% reduction in risk of injury**
- On the highest-risk streets, cycling risk or injury is reduced by over 60%



Standard Bike Lanes

- **32% reduction in risk of injury**
- Improved safety on all study projects



Shared Lanes

- **18% reduction in risk of injury** across all projects
- Limited use (wayfinding, as part of bike blvds, or on very narrow/low volume streets)*

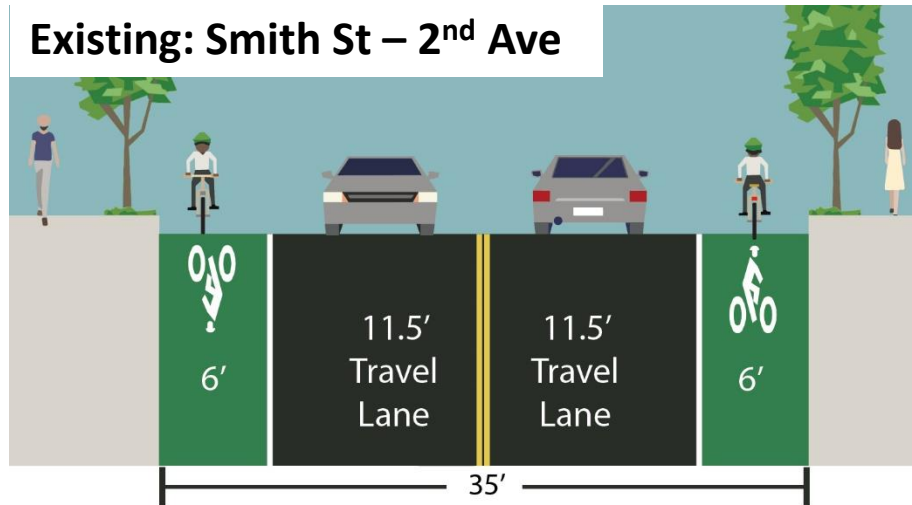
*Source: Safe Streets for Cycling: How Street Design Affects Bicycle Safety and Ridership. October, 2021.

Potential Design

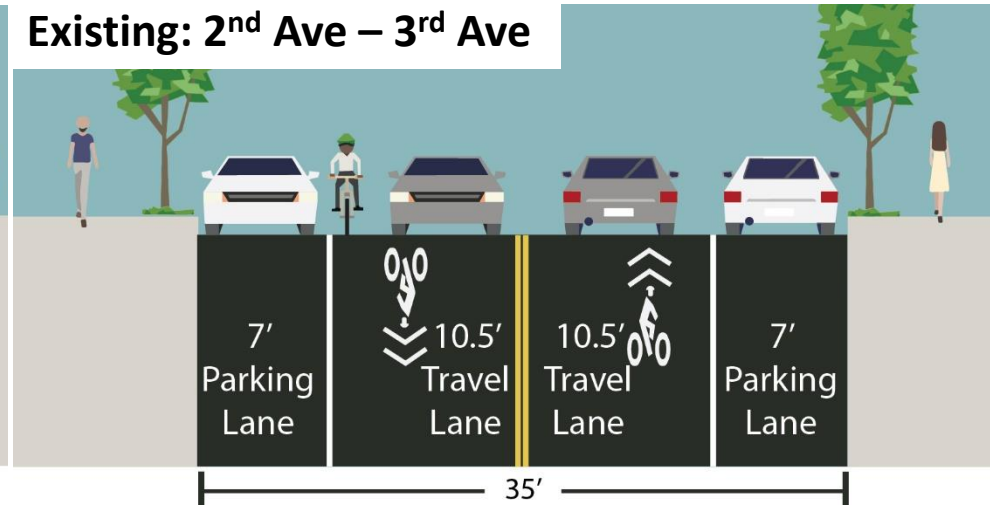
3

9th Street, Smith St to 3rd Avenue Potential Roadway Design

Existing: Smith St – 2nd Ave



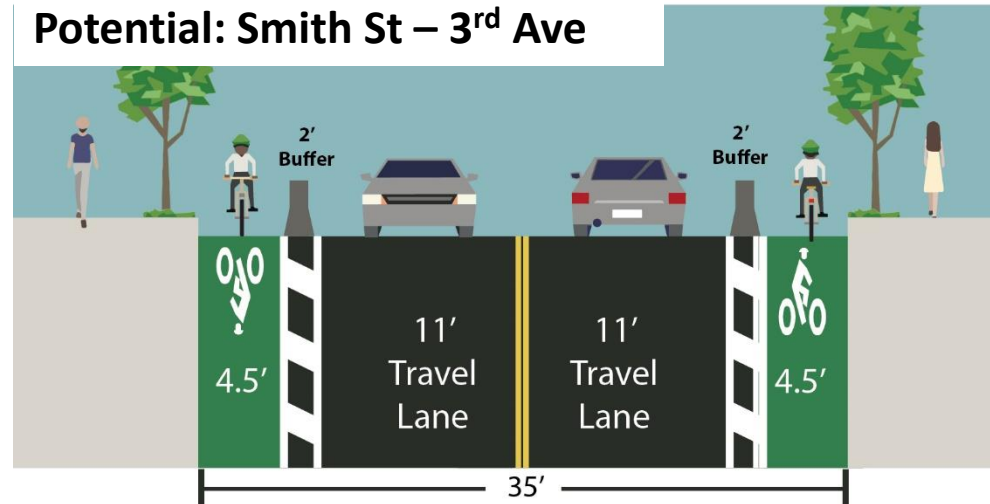
Existing: 2nd Ave – 3rd Ave



Advantages

- Barrier-protected lane provides dedicated space for bikes
- Barriers deters vehicles from blocking bike lane

Potential: Smith St – 3rd Ave



9th Street, Smith St to 3rd Avenue Potential Roadway Design

Existing



Potential Configuration: Grand St, Brooklyn

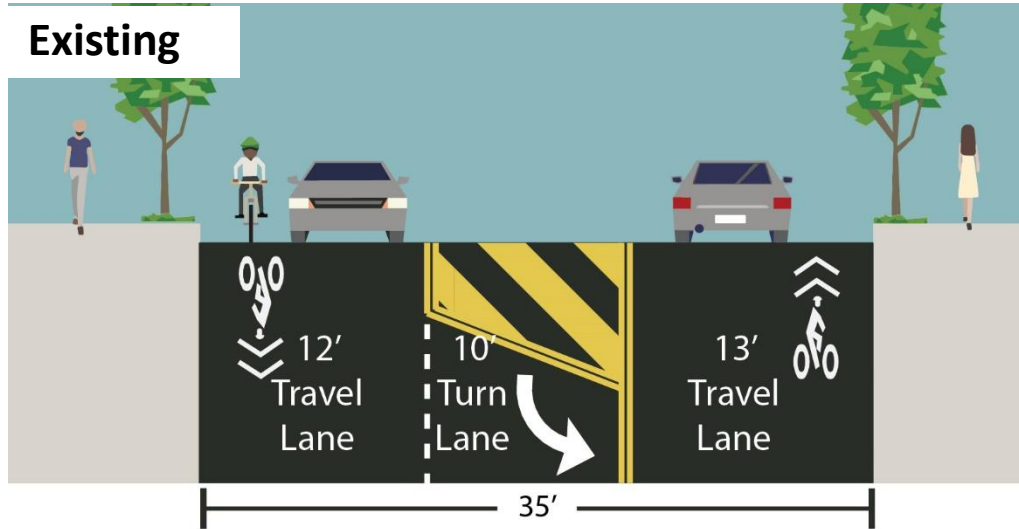


Disadvantages

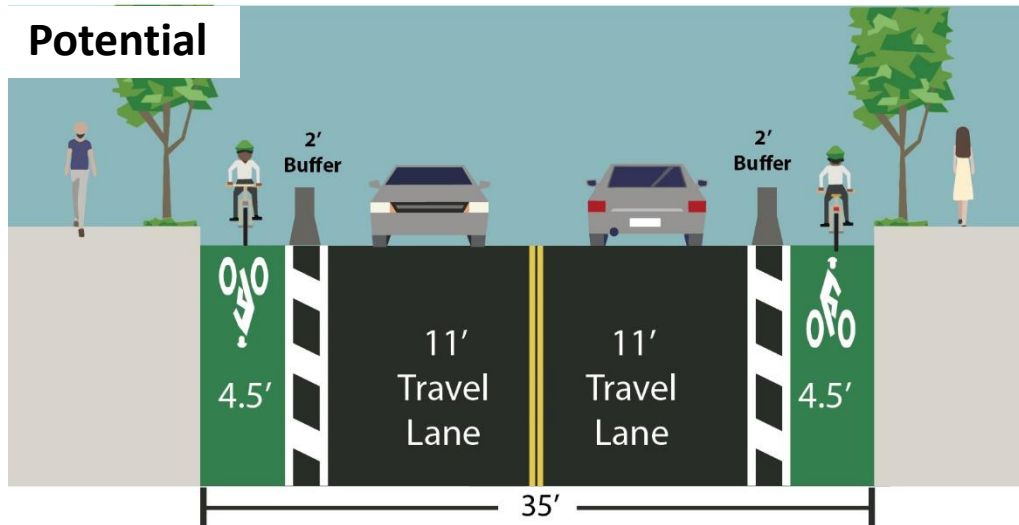
- Loss of 14 parking spaces
- Bike lane protection must end at bus stops
- Narrow bike lane requires special maintenance arrangements with DSNY
- Narrow bike lane impedes passing
- Conflicts remain at driveways

9th Street, Smith St to 3rd Avenue Potential Roadway Design Intersections

Existing



Potential



Advantages

- Removing existing left turn lanes allows space to maintain bike lane
- Extends protected, dedicated space for cyclists at approach to intersections between Smith St and 3rd Ave

Disadvantages

- Lack of turn lanes will increase traffic delay and lengthen queues
- May require left turn bans
- Could create back pressure on turning vehicles may encourage riskier turns

9th Street, 5th Ave to 8th Ave Bike Corrals



Proposed Design: Crescent St at Broadway, Queens

- Bike corrals will be installed on existing 9th Street pedestrian islands at 5th Ave, 6th Ave, 7th Ave, and 8th Ave
- Protects island from illegal parking to maintain visibility between people biking, walking, and driving

Questions?

THANK YOU!



NYCDOT



nyc_dot



nyc_dot



NYCDOT