



ASTORIA BIKE NETWORK AND PROTECTED BIKE LANES

Public Workshop

Presented to Queens Community Board 1 - February 11, 2020



AGENDA

1. Presentation/Overview (15 min)
2. Facilitated discussion/feedback (45 min)
3. Group Share Back (15 min)



Introduction

1

Overview

Workshop Goals

- Gather feedback that will help us develop a north-south protected bicycle route as specified in the Green Wave Plan
- Gather feedback that will help us plan an expanded bicycle network in Astoria



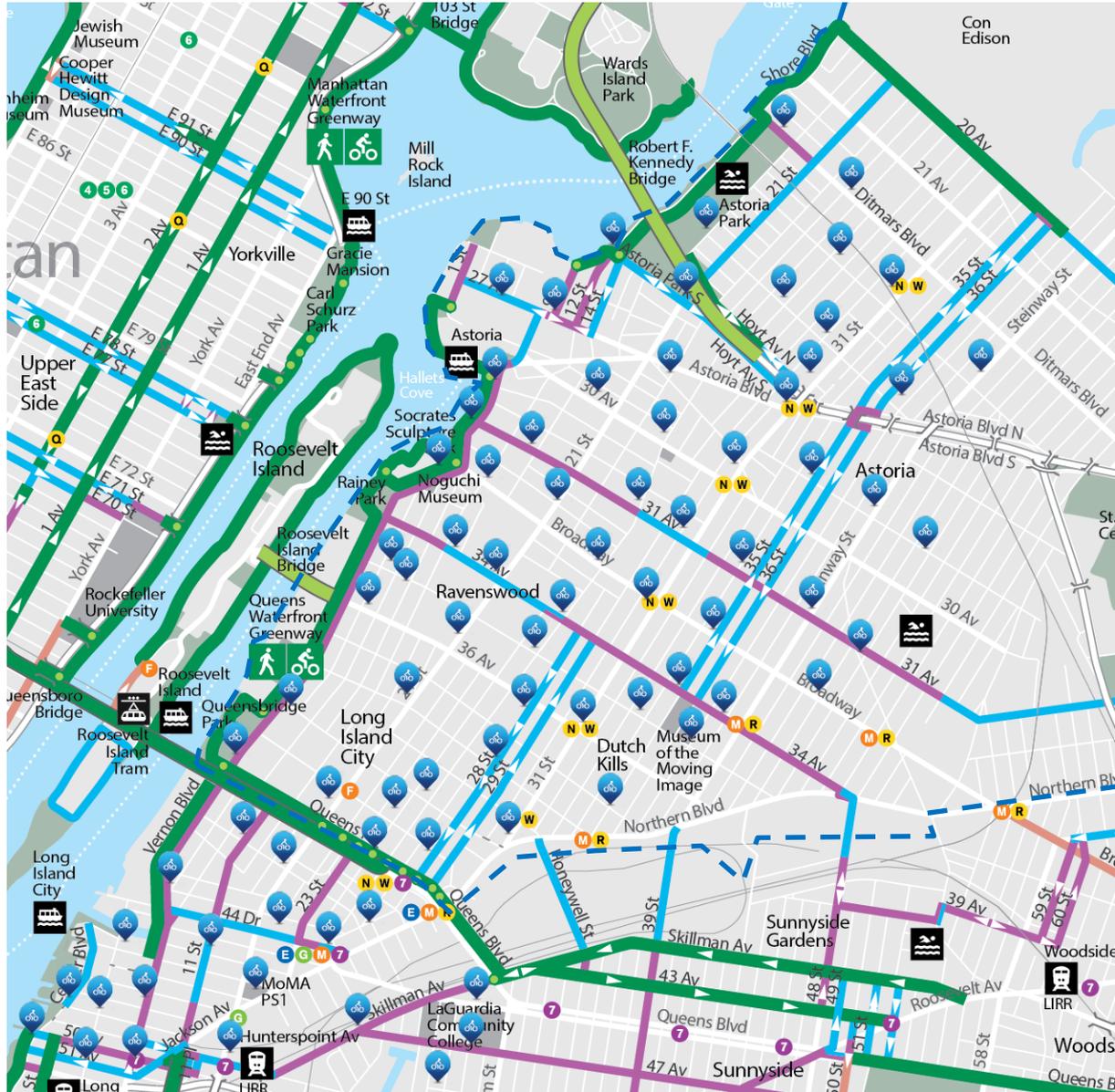
Interest in Improved Bike Access in Astoria

Citi Bike Expanded to Astoria Fall 2017 – 2018



224,166 Citi Bike trip starts & ends occurred in Community District 1 in its first summer (July, Aug, Sept 2018)

NYCHA residents 16 and older qualify for a discounted annual membership of \$5/month



Green Wave A Plan for Cycling in New York City



Analysis of fatalities – key findings (2014 - 2019):

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

Green Wave Plan:

Citywide Protected Bike Lane Network:

- Build **30 miles of protected bicycle lane** annually
- Build **75 miles of bicycle infrastructure** in **10 Bicycle Priority Districts** (7 in Brooklyn, 3 in Queens) by 2022

Better Design:

- Implement **new design standards** based on national & international best practice **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 road campaign.
- Educate all street users about safe truck operation on city streets
- **Increase helmet giveaways and helmet use encouragement**

NYPD Enforcement

- **Target enforcement on highest risk activities:** speeding, failing to yield, blocking bike lanes, oversized trucks/trucks off route

Safety Benefits of Bicycle Infrastructure

Bike Lane Projects Increase Safety for All Road Users

- Markings organize the roadway
- Standard width lanes discourage speeding
- Bike lanes provide dedicated space for cyclists, increase predictability of cyclist location for drivers + pedestrians
- Upgraded crosswalks improve visibility and pedestrian safety



Safety Benefits of Bicycle Infrastructure

Street designs that include protected bike lanes increase safety for all users

-15% drop in all crashes with injuries

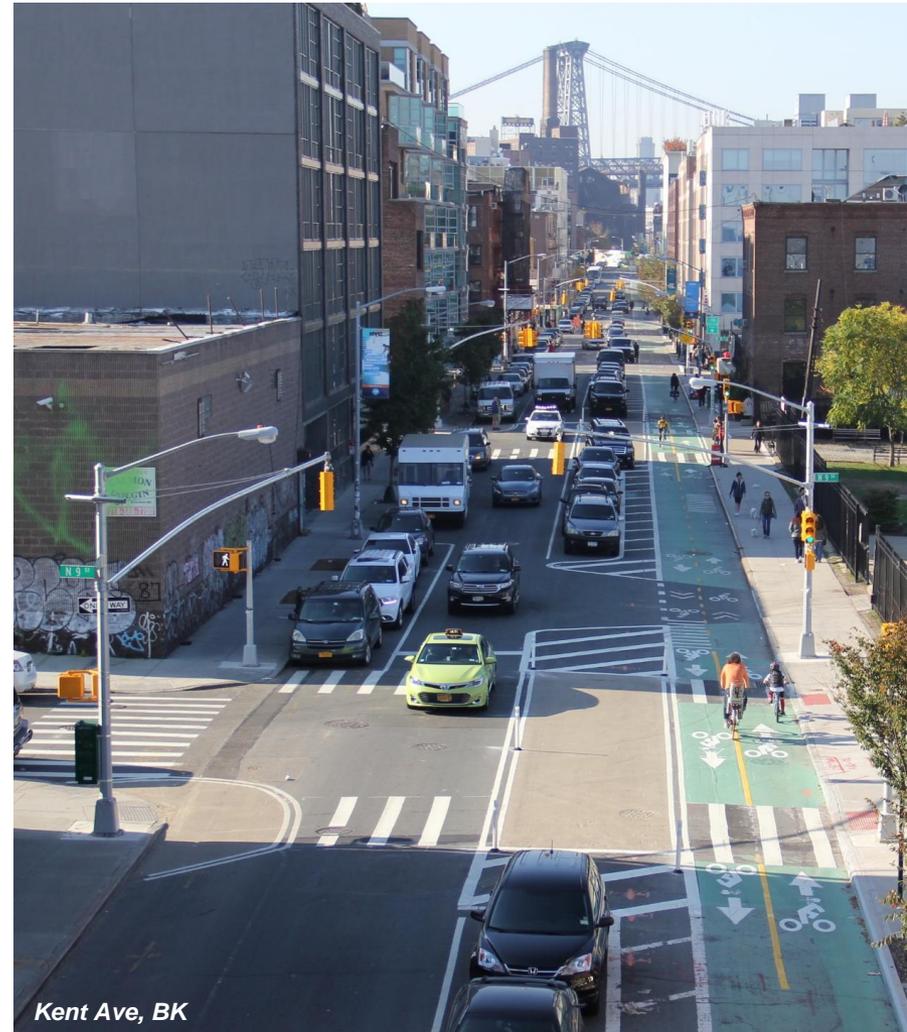
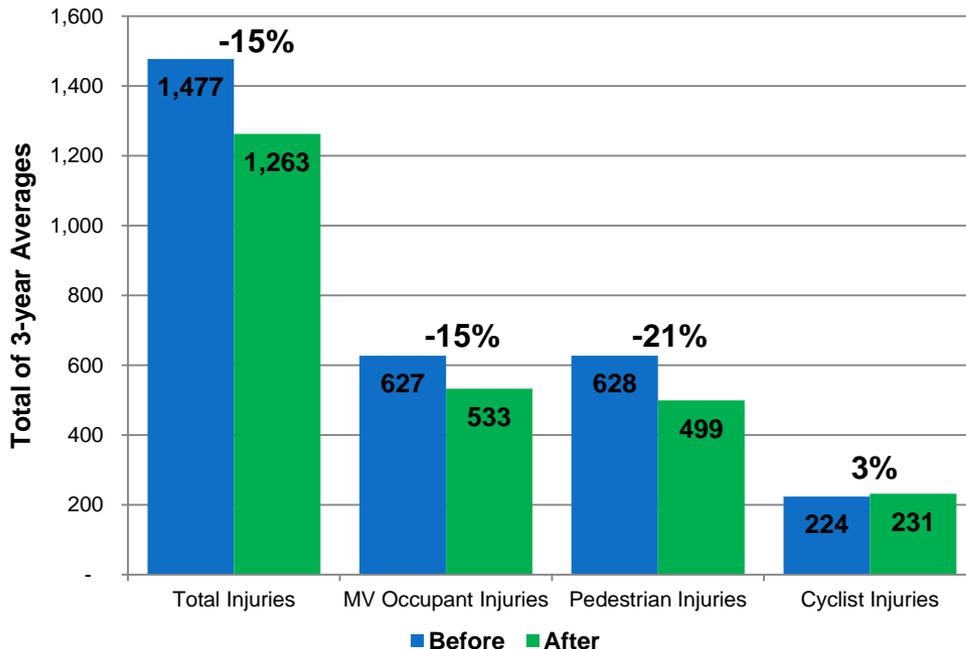
-21% drop in pedestrian injuries

on streets where protected bike lanes were installed 2007-2017

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

Protected Bike Lanes

Before and After Crash Data, 2007 - 2017



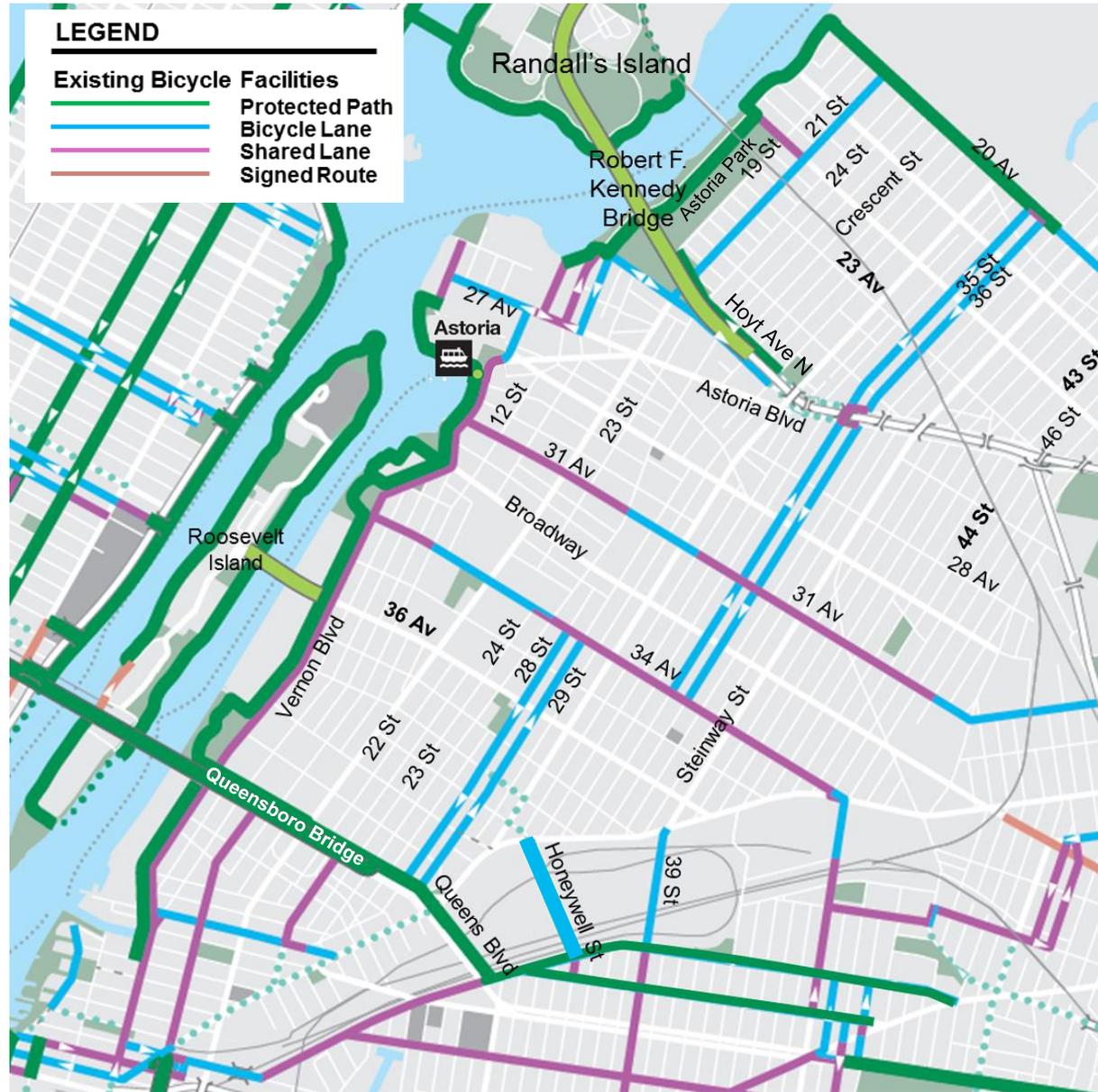
Kent Ave, BK

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

Project Focus Area

Existing Bike Network

- New waterfront routes (protected lanes on 20th Ave, Hoyt Ave N, Shore Blvd)
- Connections to parks
- Difficult to access some destinations (Central Astoria, new protected lanes, transit connections)
- Street network challenging to navigate



Project Focus Area

Street Network Issues

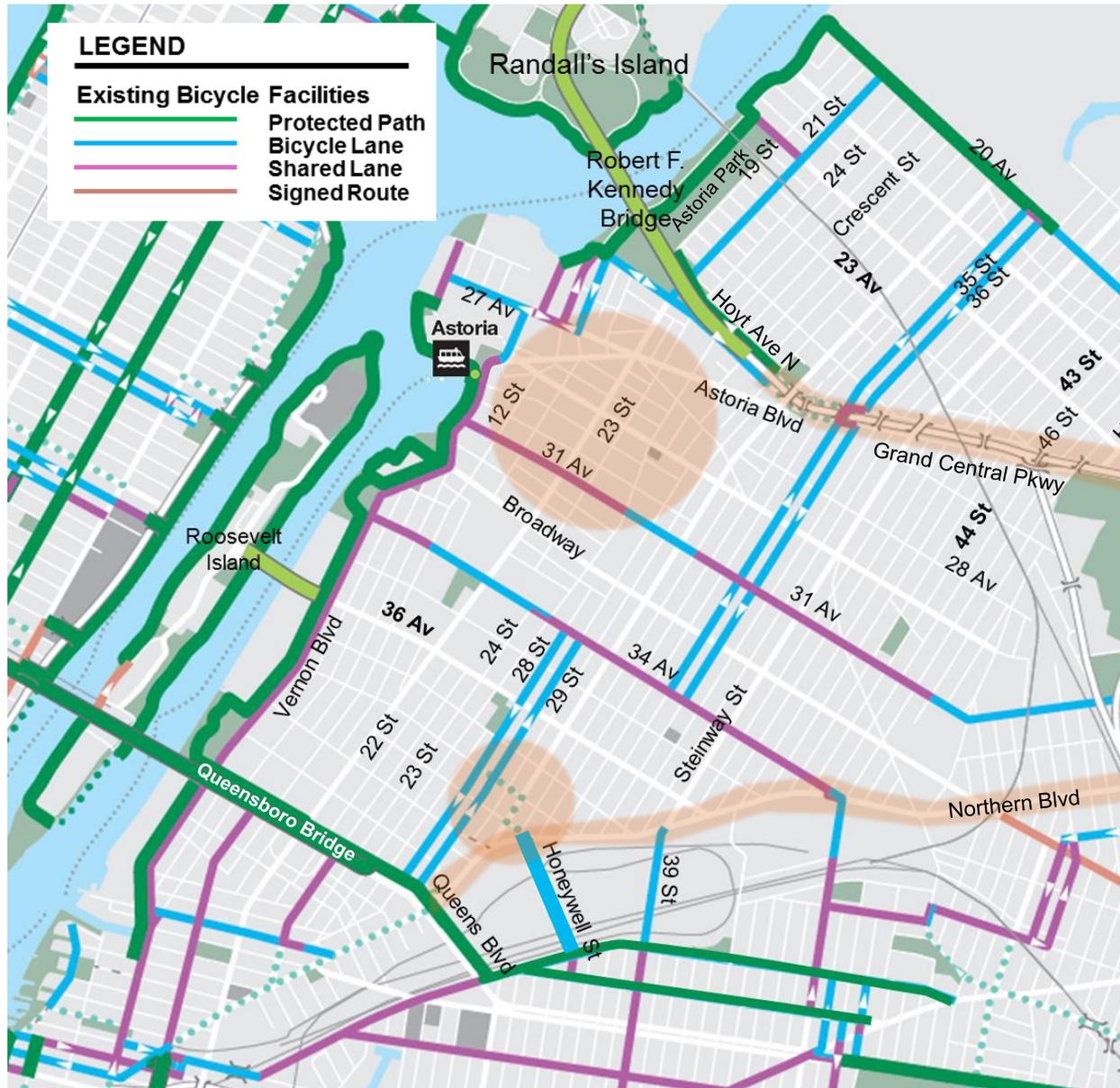
- Discontinuous streets
- Irregular street grid
- Narrow street widths
- Difficult connection to bridges
- Boundaries - Northern Blvd, Grand Central Pkwy

Project Goals

Close gaps in bicycle network

- Connections to ferry, subway
- Connections to bridges: RFK, Roosevelt Island, Queensboro, Honeywell St
- Connections to adjacent neighborhoods

Improve safety for all road users



Toolkit

2

DOT Street Improvement Projects Toolkit

Markings – Organize the Roadway to Increase Safety

High Visibility Crosswalks



Flush Medians, Turn Lanes



Bike Lanes



Colored Paint – Designate Roadway Space for New Uses

Curb Extensions



Bus Lanes



Protected Bike Lanes



Shared Bicycle Lanes

Benefits

Alert drivers and cyclists of shared space

Provide wayfinding for people on bikes

Guide cyclists away from open car doors

Considerations

Can be **less comfortable** for novice cyclists, may have less traffic calming benefits

No parking loss: typically fits in between existing travel and parking lanes



Conventional Bicycle Lanes

Benefits

Discourage speeding by visually narrowing the road

Increase predictability by clearly defining road space for each user

Considerations

No physical separation between vehicles and cyclists

No parking loss - typically fits in between existing travel and parking lanes



Protected Bicycle Lanes

Benefits

Maximizes traffic calming by physically narrowing roadways

Increases safety for all road users by shortening crossing distances for pedestrians, and separating people driving and biking

Encourages wider range of people to try riding a bike

Considerations

Typically removes parking spaces

May require removal of a travel lane



Proposed Bicycle Routes

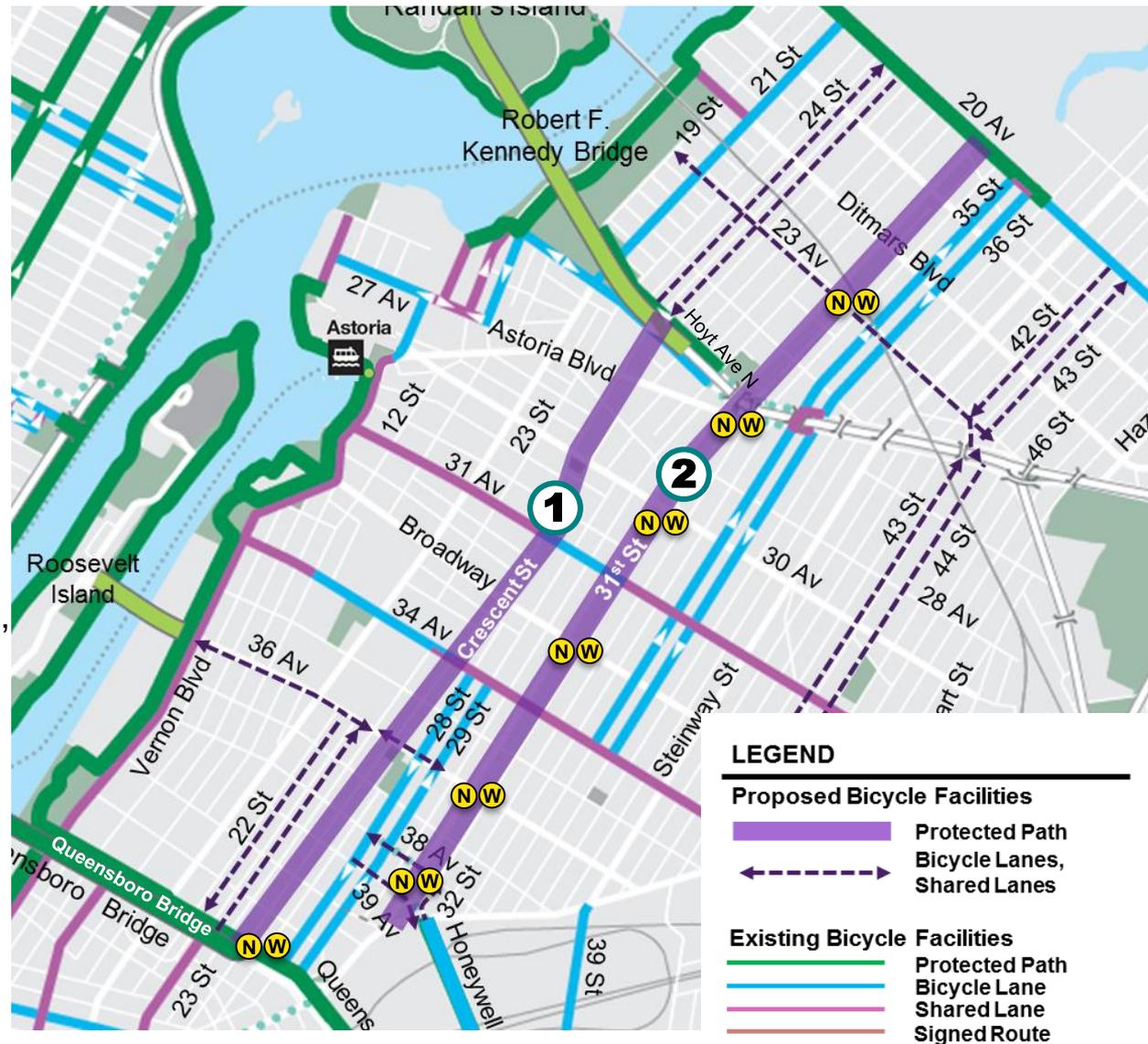
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Draft North-South Protected Bike Routes

- ① **Crescent St:** two-way protected path
- ② **31st St:** pedestrian & transit access improvements under the elevated – with protected bicycle lanes in each direction

Priorities

- Link to bridges: RFK, Queensboro, Honeywell St
- Continuous uninterrupted routes
- Connect to Long Island City
- Opportunities to improve transit accessibility



Crescent St - Concept



Existing (Typical): Crescent St



Potential Example: Kent Ave, BK

31st St - Concept

Existing: 31st St at Ditmars Blvd



Potential Example: Chicago Bike Lanes Under the El



*Potential Example: Westchester Ave, BX
'Bus Stops Under the Elevated' Improvements*



Conventional & Shared Bike Lane Network Expansion

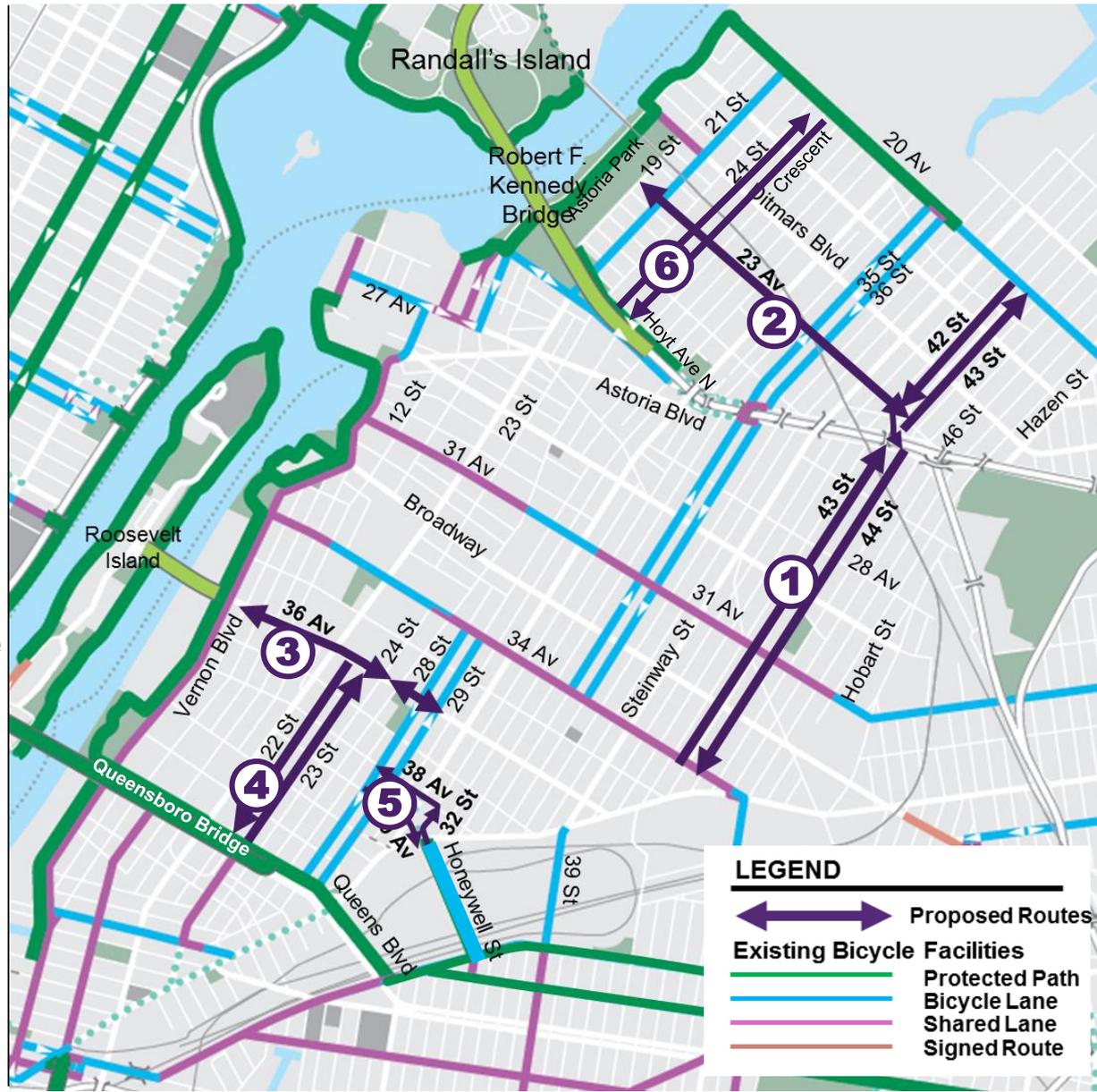
Priorities

- Close gaps in bicycle network
- Improve access to destinations and transit
- Improve safety for all road users

Proposed Routes

- ① North-south: Ditmars to Astoria
- ② East-west: to Astoria Park
- ③ East-west: Roosevelt Island Bridge Connection
- ④ North-south: LIC to Astoria
- ⑤ Honeywell St Bridge Connections
- ⑥ RFK Bridge Connector

Minimal parking loss
No travel lane removal



LEGEND	
	Proposed Routes
	Protected Path
	Bicycle Lane
	Shared Lane
	Signed Route

Standard & Shared Lanes

Existing: 43rd St, facing south



Shared Lanes



Standard Bicycle Lanes



Summary

4

Next Steps

Spring – Summer 2020

- Follow-up Community Engagement
 - *Share workshop feedback and conventional & shared bicycle routes network*
- *Present protected bicycle route design*



Summer - Fall 2020

- Begin implementation of conventional bicycle lanes
- Begin implementation of a protected bicycle route



Potential Astoria Bike Network

Workshop Goals

- Gather feedback on north-south protected bicycle route as specified in the Green Wave Plan
- Gather feedback that will help us expand the bike network in Astoria

Project Goals

- Close gaps in bicycle network
- Improve access to destinations and transit
- Improve safety for all road users

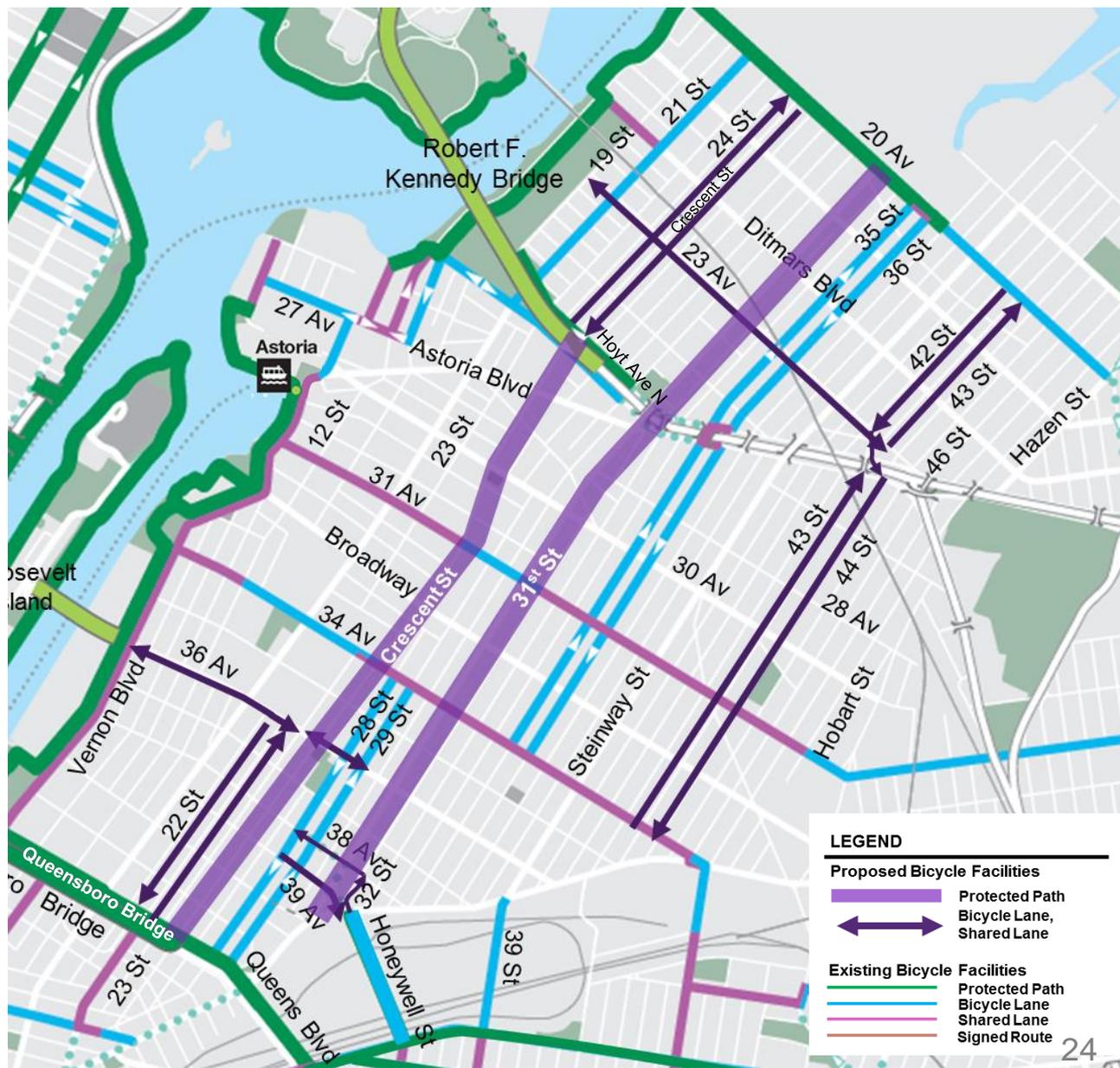


Table Exercises

Facilitated discussion & feedback

Groups share back



Questions?
THANK YOU!



NYC DOT



NYC DOT



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NYC DOT

Appendix

Bicycle Facility Types



Protected Bike Lanes

- Provide separation between cyclists and traffic
- Create shorter, safer pedestrian crossings
- May include floating parking, narrower roadway has traffic calming effect



Conventional Bike Lanes

- Create dedicated space for people on bikes and in cars
- Increase predictability for all road users
- Visually narrow the roadway, reduces crashes with injuries



Shared Lanes

- Alert drivers and cyclists of shared space
- Provide wayfinding for people on bikes
- Guide bicycles away from open car doors

Conventional & Shared Bike Lane Network Expansion

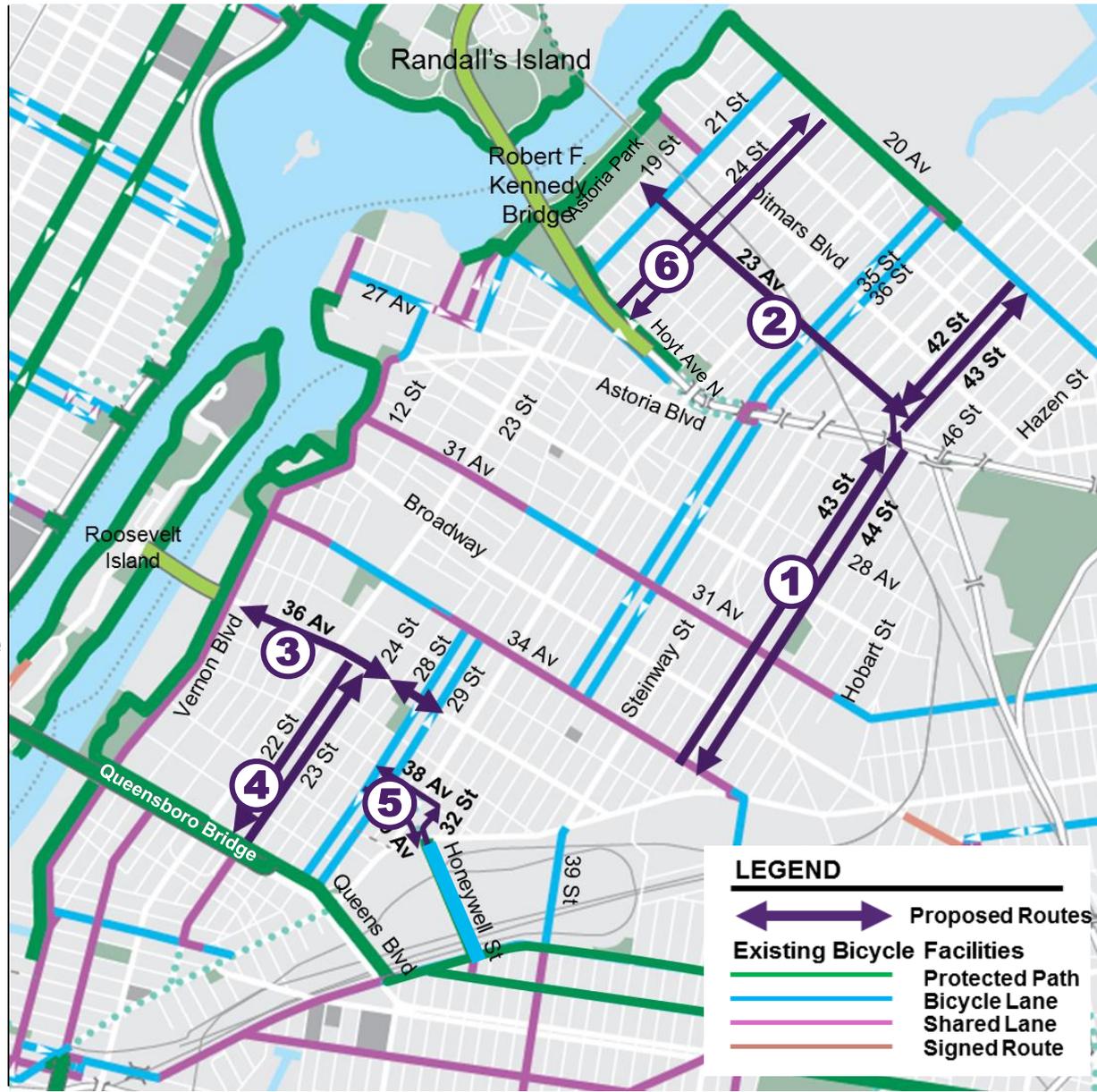
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- Improve access to destinations and transit
- Improve safety for all road users

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Minimal parking loss
No travel lane removal



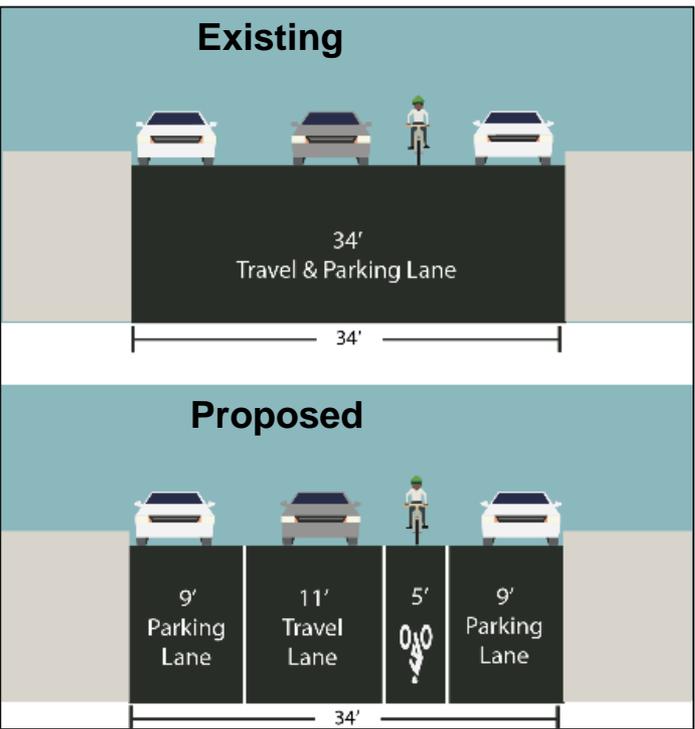
LEGEND	
	Proposed Routes
	Protected Path
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	Shared Lane
	Signed Route

1 North-South Connection
No Parking Loss

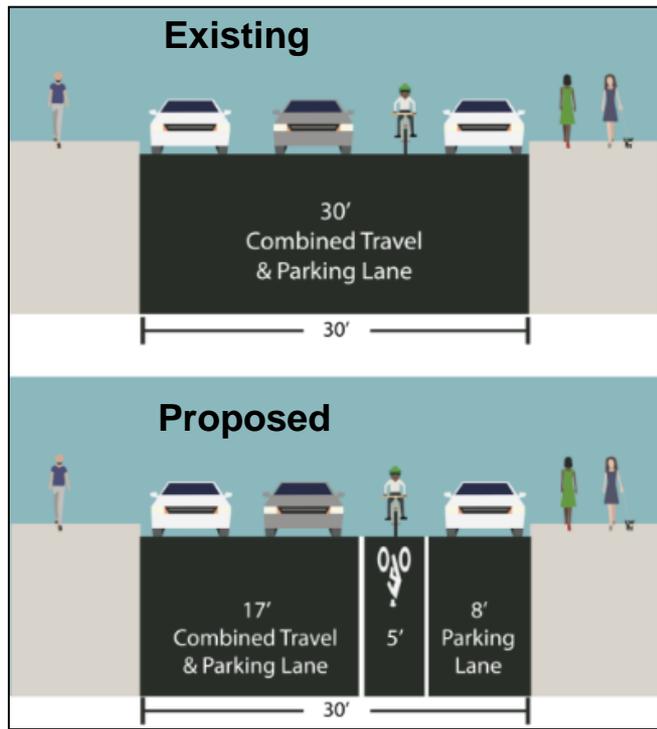
Bike lanes create a new north-south connection

- Organize roadway, calm traffic
- Provide dedicated space for cyclists
- No parking loss or travel lane removal

A 42nd St, 43rd St
 (20th Ave to 23rd Ave)



B 43rd St, 44th St
 (Astoria Blvd S to 34th Ave)



LEGEND

- Proposed Route (Solid purple line with arrows)
- Proposed Route (Dashed purple line)
- Existing Bicycle Facilities:
 - Protected Path (Green line)
 - Bicycle Lane (Blue line)
 - Shared Lane (Pink line)
 - Signed Route (Brown line)

1 North-south Connection Across Grand Central Pkwy

Shared lanes connect north-south pair across Grand Central

- Provide wayfinding for cyclists
- Connect across Grand Central Pkwy, Astoria Blvd
- Curbside lane on Astoria Blvd S. removes 3 parking spaces



LEGEND

Proposed Bicycle Facilities

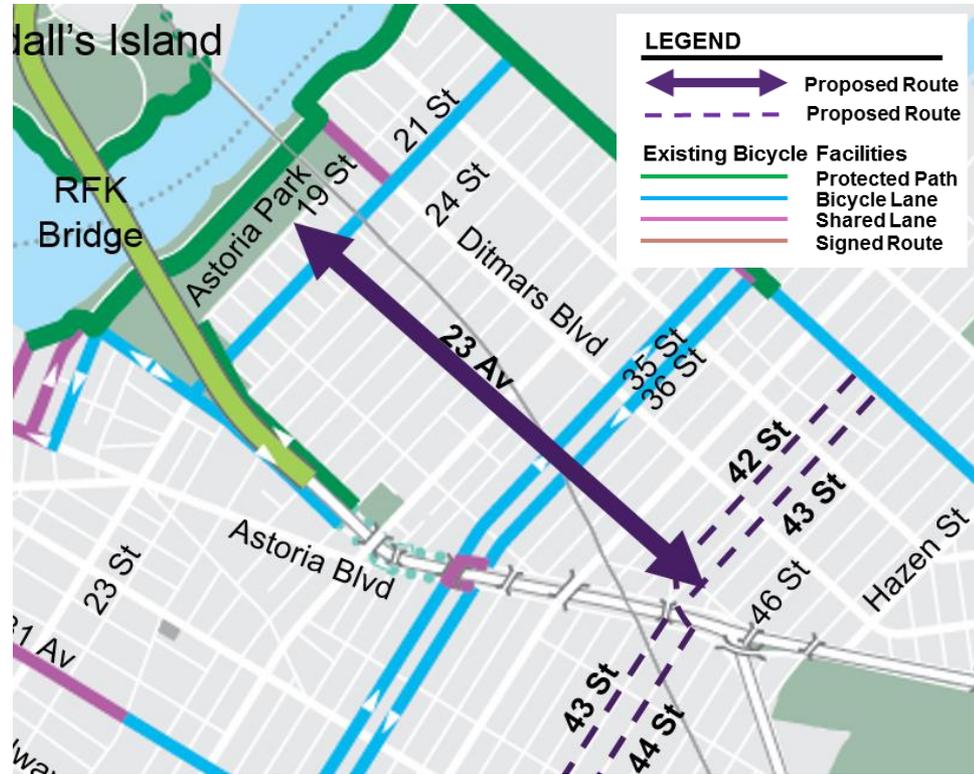
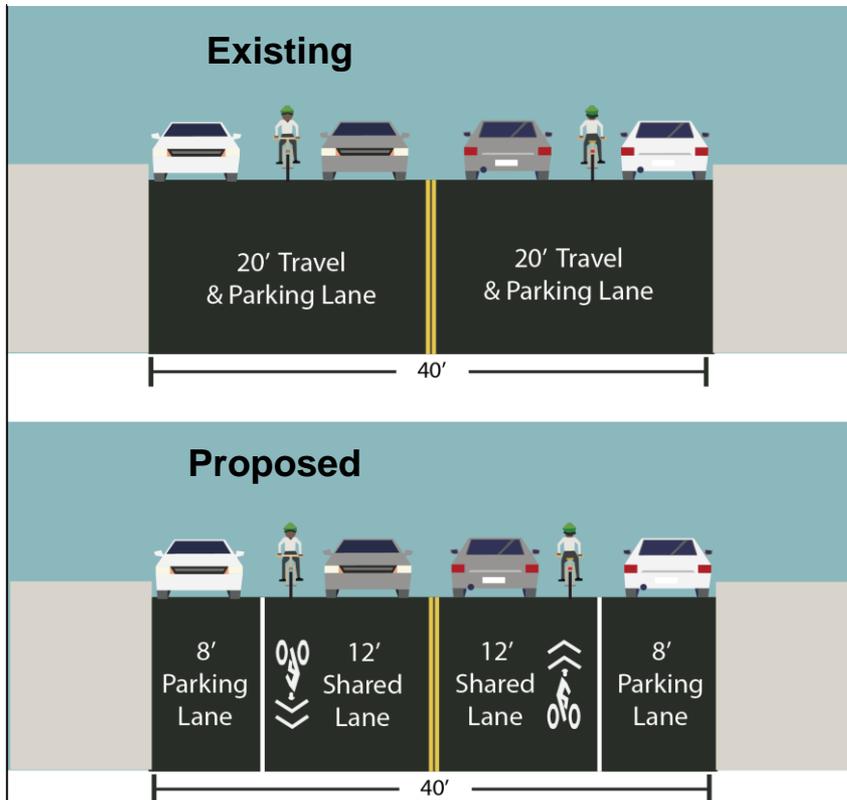
-  Bicycle Lane
-  Shared Lane

2 Astoria Park Connection
No Parking Loss

Shared lanes create an east-west connection

- Organize roadway, calm traffic
- Provide wayfinding for cyclists
- No parking loss or travel lane removal
- Connect between Astoria Park, Ditmars neighborhood

23rd Ave: 19th St to 43rd St



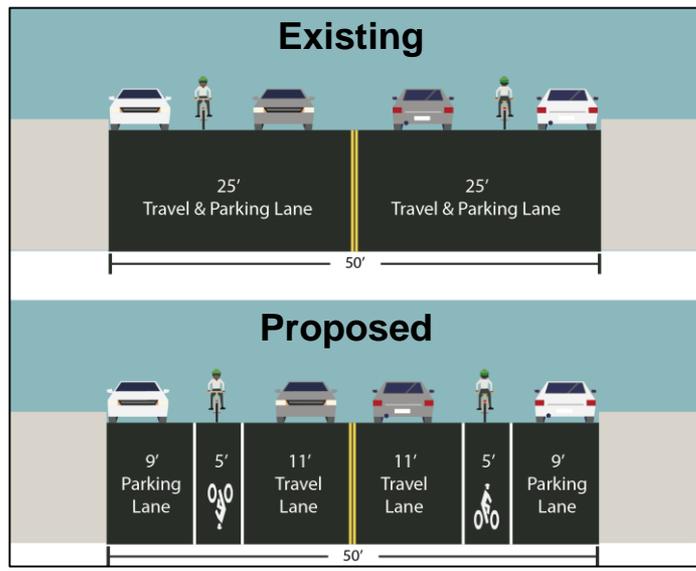
3 Roosevelt Island Bridge Connection

No Parking Loss

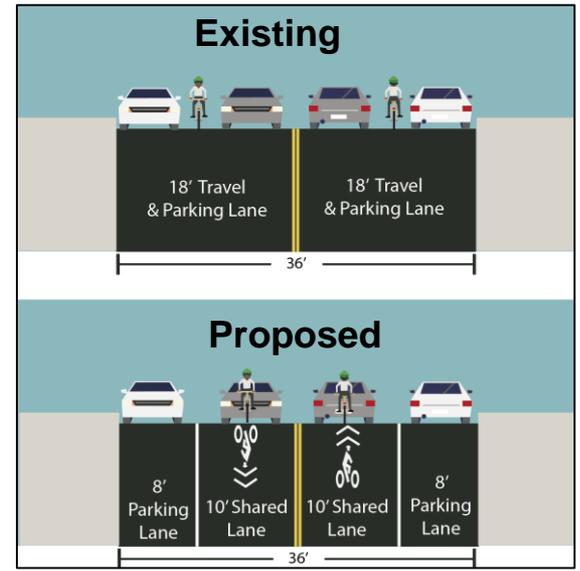
Shared and standard lanes connect to Roosevelt Island

- Organize roadway, calm traffic
- Provide dedicated space and wayfinding for cyclists
- No parking loss or travel lane removal

A 36th Ave (Vernon Blvd to 24th St)



B 36th Ave (24th St to 29th St)



Roosevelt Island

Broadway

Vernon Blvd

36 Av

24 St

28 St

29 St

LEGEND

← Proposed Route

- - - Proposed Route

Existing Bicycle Facilities

Protected Path

Bicycle Lane

Shared Lane

Signed Route

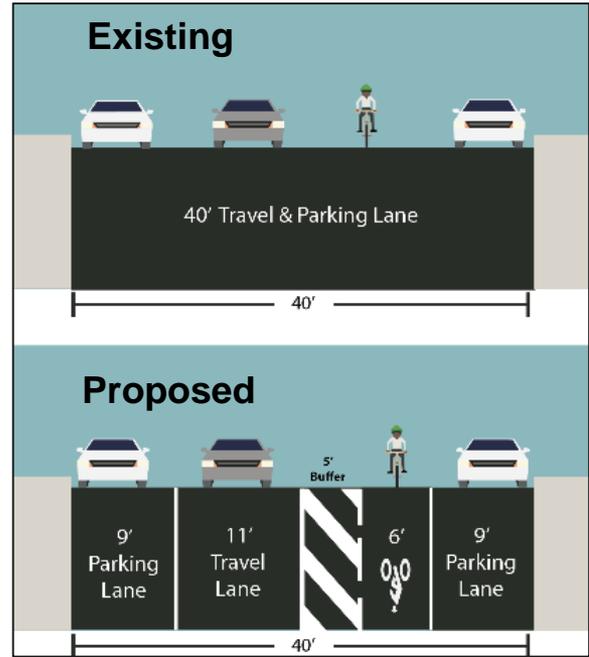
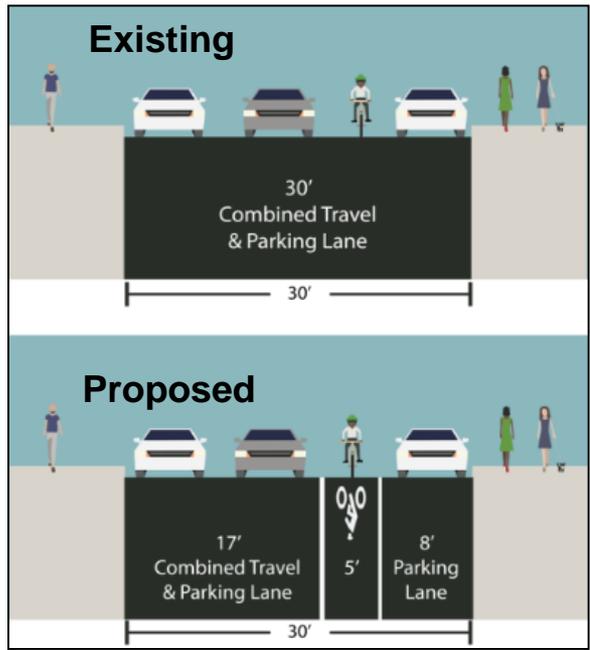
4 Long Island City to Astoria Connection
No Parking Loss

Bike lanes create a connection to Long Island City

- Organize roadway, calm traffic
- Provide dedicated space for cyclists
- No parking loss or travel lane removal
- Connects cyclists to continue under bridge

A 22nd St
 (Queens Plaza N to 36th Ave)

B 23rd St
 (Queens Plaza N to 36th Ave)



Map labels include: Queensboro Bridge, Queens Blvd, 22 St, 23 St, 36 Av, 28 St, 29 St, 38 Av, 39 Av, Honeywell St, and Plaza N.

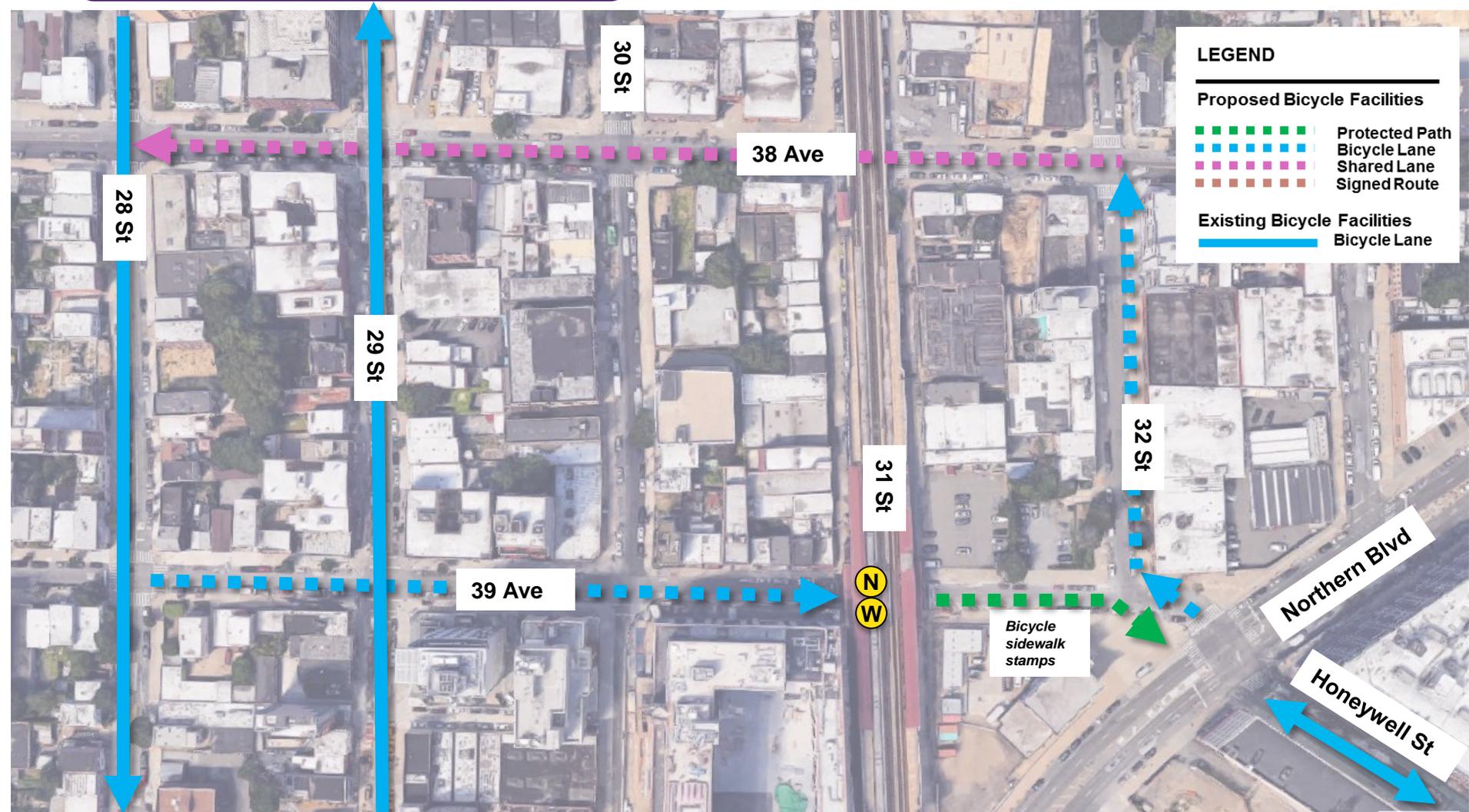
LEGEND

- Proposed Route (Solid purple arrow)
- Proposed Route (Dashed purple arrow)
- Existing Bicycle Facilities:
 - Protected Path (Green line)
 - Bicycle Lane (Blue line)
 - Shared Lane (Pink line)
 - Signed Route (Orange line)

5 Honeywell St Bridge – Sunnyside Connection

No Parking Loss

- Bike lanes create a connection to Honeywell St Bridge**
- Organize roadway, calm traffic
 - Provide dedicated space for cyclists
 - No parking loss or travel lane removal
 - Connect to existing lanes on 28 St, 29 St, Honeywell St

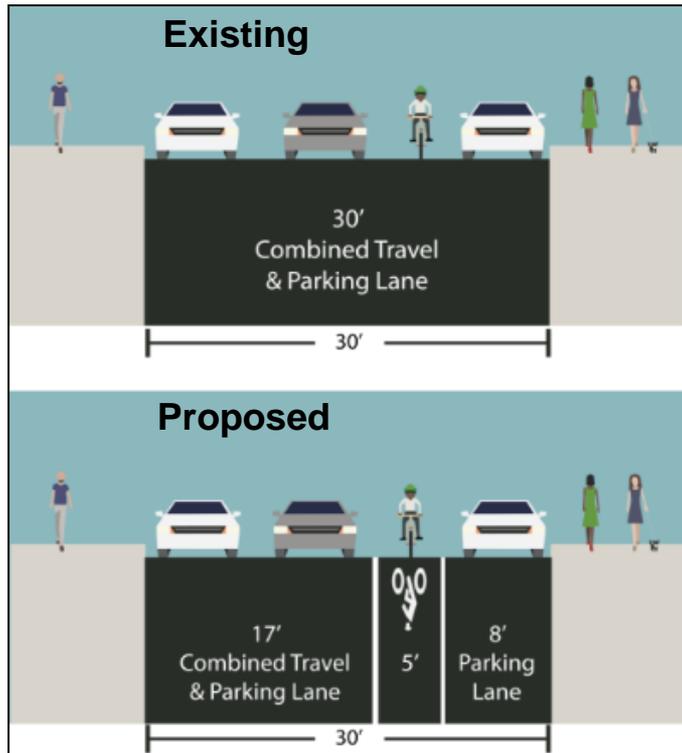


6 **RFK Bridge Connector**
No Parking Loss

Bike lanes create a new north-south connection

- Organize roadway, calm traffic
- Provide dedicated space for cyclists
- No parking loss or travel lane removal

**24th St, Crescent St
(20th Ave to Hoyt Ave N)**



Existing Bicycle Lanes in Community District 1

Protected Bicycle Lanes

- 20th Ave – Traffic Calming and Park Access
- Hoyt Ave North – RFK Bridge Access
- Shore Blvd – Astoria Park Path
- Vernon Blvd – Queens Waterfront Greenway
- Waterfront path in Ralph DeMarco Park

Conventional & Shared Bicycle Lanes

- North-south route: 21st St
- North-south pairs: 35th/36th St, 28th/29th St
- East-west: 31st Ave, 34th Ave, 20th Ave



Recent Queens DOT Bicycle Projects

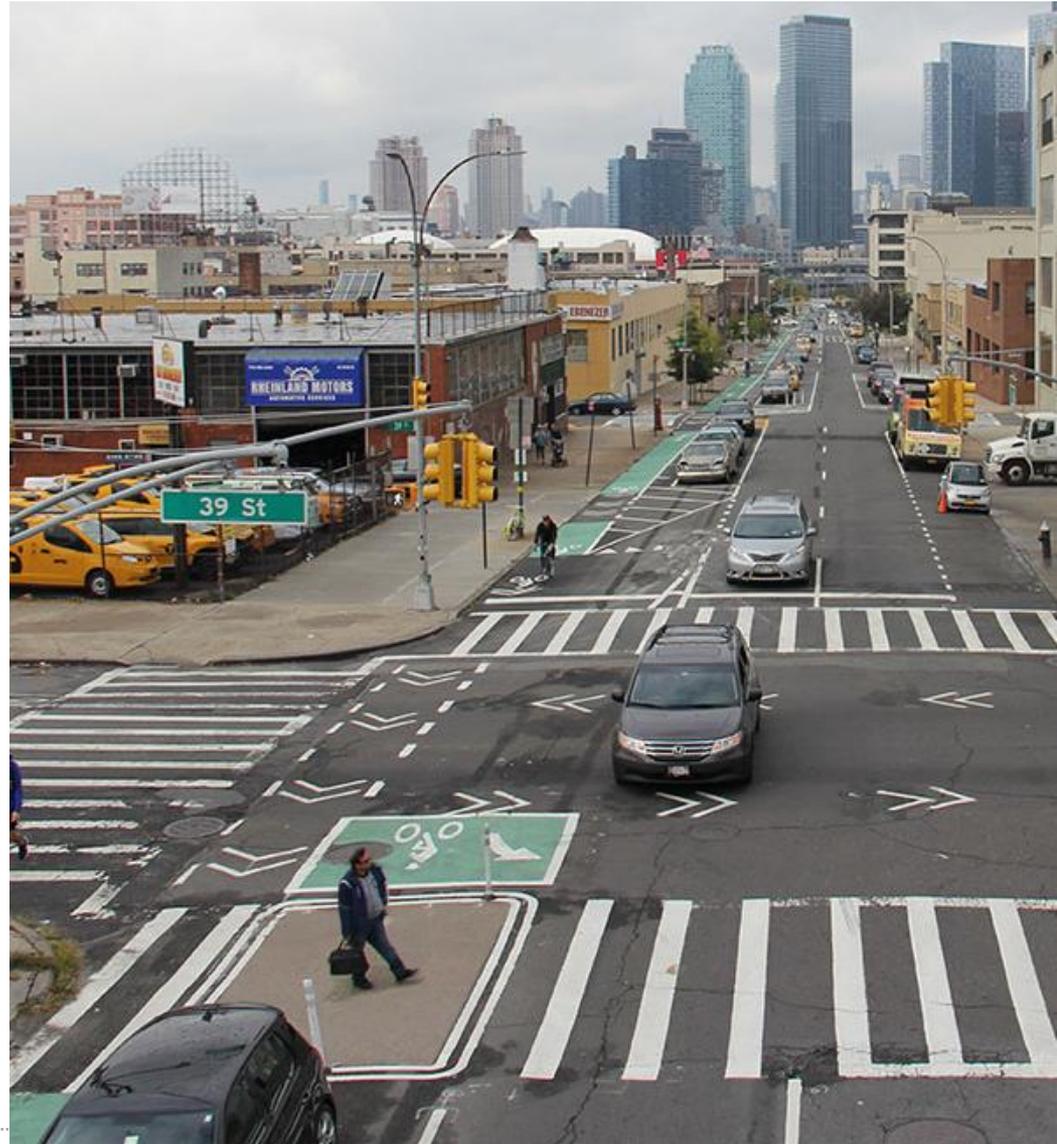
New Bicycle Routes in Queens 2017-2019

Protected Bicycle Lanes

- *Queens Blvd Phases 1, 2, 3*
- *111th Street*
- *43rd Ave, Skillman Ave*
- *Northern Blvd*
- *Shore Front Pkwy (Rockaway)*
- *Beach 94th St*
- *Cypress Hills St*
- *Alley Pond Park Connector – 223 St,
East Hampton Blvd*
- *Hoyt Ave North*
- *210th St, Oceania Ave*

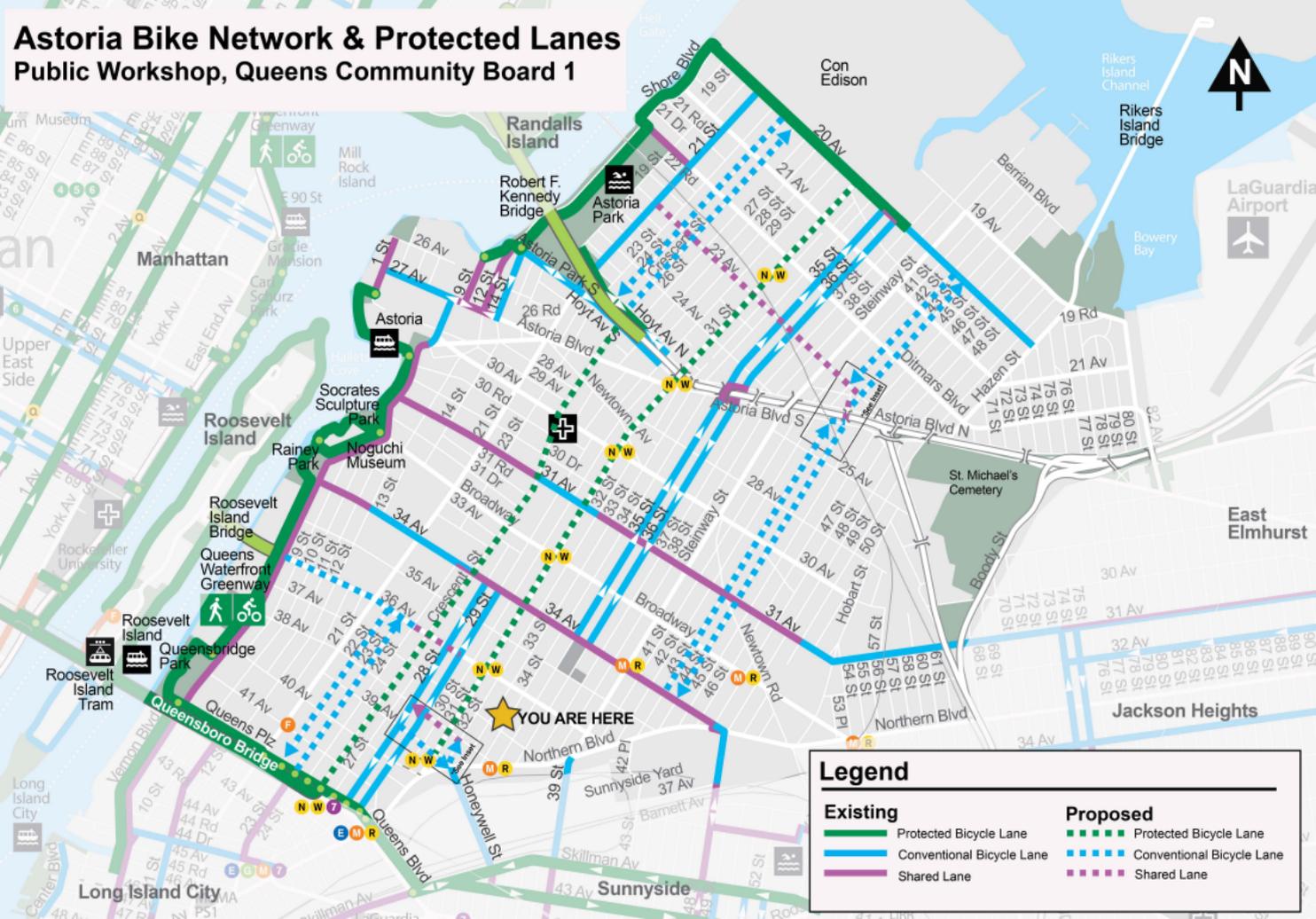
Neighborhood Bicycle Networks

- *Flushing*
- *CB 8 – Queens College, St. Johns Univ,
Cunningham Park connections*
- *CBs 2, 3, 4, 5*



Astoria Bike Network & Protected Lanes

Public Workshop, Queens Community Board 1



Legend

Existing	Protected Bicycle Lane	Proposed	Protected Bicycle Lane
	Conventional Bicycle Lane		Conventional Bicycle Lane
	Shared Lane		Shared Lane