PRESENTATION OVERVIEW

1. Background
2. Proposal
3. Making it Work
4. Summary
Background
INTEREST IN IMPROVED BIKE ACCESS IN ASTORIA

Citi Bike Expanded to Astoria
Fall 2017 – 2018

Future infill expansion to be planned in CBs 1 & 2

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 – Complete Street Redesign

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

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
ROUTE SELECTION

Existing Bike Network

- 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
- Public and elected official requests to expand network and create bridge-to-bridge protected bike route on Crescent Street
COMMUNITY ENGAGEMENT & OUTREACH

Bike Network Expansion Discussion

- **Pre-Meeting** with Community Board Leadership, Elected Official Reps 2/4/2020

- **Public Workshop** Astoria Bike Network and Protected Lanes 2/11/2020
FEEDBACK FROM COMMUNITY ENGAGEMENT & OUTREACH

What We Heard

• **Public Workshop** – 120+ attendees, 77% were residents of Community District 1
  • Overwhelming support for “bridge to bridge” protected path on Crescent St
  • Preference for protected bike lanes over conventional lanes where feasible
  • Participants identified the need for future east-west lanes in addition to north-south routes
  • Desire for improved intersection designs for better visibility between drivers, pedestrians, & cyclists

• **Elected Officials**
  • CM Constantinides, CM Van Bramer support a Crescent St path to link RFK and Queensboro Bridges

• **Mt. Sinai Hospital**
  • Working to improve access with loading zones, parking regs, and appropriate treatments at entrances
PROTECTED BIKE ROUTE SELECTION

North-south Protected Bike Routes Presented at Workshop

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

Crescent St Protected Bike Route

• Simpler, standard design that will be ready to implement on a quicker timeframe
• Less resource-intense design
• Supported by both Council Members as the preferred route
• Area elected officials support additional protected lanes in Astoria
• Crescent Street has a great deal of public support for protected bike lanes and has been in the public eye for many years
• DOT has received little public opposition to protected bike lanes on Crescent Street
PLANNED ROUTES

Conventional & Shared Bike Lane Network
- New connections throughout Astoria

Crescent St Protected Bike Path
- Two-way protected path from RFK Bridge to Queensboro Bridge

Benefits
- Close gaps within bike network
- Network connections provide wayfinding throughout Astoria
- Bridge to Bridge connection –
  - Queensboro Bridge to Manhattan
  - RFK Bridge to Randalls Island, continue to the Bronx
TEMPORARY BICYCLE ROUTE

Citywide Transportation for COVID-19 Recovery

- Transportation plays a critical role during the pandemic, and will continue to be just as essential during social and economic recovery
- Bikes are an important part of a resilient transportation network to help move people and goods while adhering to social distance guidelines
- Quick installation with barrels, cones, signs, and existing markings

To be Installed in Phases:

1. Queensboro Bridge (Queens Plaza N.) to 40th Ave
2. 40th Ave to Broadway
3. Broadway to Hoyt Ave N.

Background
TEMPORARY BICYCLE ROUTE

Crescent St Typical Temporary Designs

**Queens Plz. N to 41 Ave**

Existing

Temp Design

**38th Ave to Newtown Ave***

Existing

Temp Design

**41 Ave to 38 Ave***, Newtown Ave to Hoyt Ave N.

Existing

Temp Design

*Existing conditions differ from 30 Ave – Newtown Ave, 41 Ave – 40 Ave*
Crescent St Proposal
EXISTING CONDITIONS & ISSUES – CRESCENT ST

Commercial, residential, & industrial corridor, actively used by vehicles, pedestrians and cyclists

- No dedicated space for cyclists
- Excess space in the roadway allows for speeding on wide blocks (40’)
- Lack of space for vehicles to pass a cyclist on narrow blocks (30’)
SAFETY

Crescent St is in a Vision Zero Priority Area

- High crash corridor with 9 persons killed or severely injured in a 5 year period
- Ranking in the top third of Queens corridors

Crescent St (Queens Plaza North to Hoyt Ave North), QN
Injury Summary, 2013 – 2017 (5 years)

<table>
<thead>
<tr>
<th></th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
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<td>Pedestrian</td>
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<td>4</td>
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<td>Bicyclist</td>
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<tr>
<td>Total</td>
<td>241</td>
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Fatalities, 01/01/2013 – 4/29/2020: 2

Source: Fatalities: NYCDOT, Injuries: NYSDOT. KSI: Persons Killed or Severely Injured

- Street designs that include protected bike lanes increase safety for all users: 15% reduction in all crashes with injuries, 21% reduction in pedestrian injuries (Before-after data 2007-2017, Source: NYPD AIS/TAMS Crash Database)
PARKING PROTECTED TWO-WAY BICYCLE LANE

Benefits

Reduces conflicts, increases safety
- Separates bikes from moving vehicles
- Calms traffic with standard width travel lane
- Increases predictability of cyclist location for drivers and pedestrians

Creates new transportation connection
- Improves access for bicyclists for transportation and recreation
- Provides comfortable space for cyclists of varied ages and experience levels
- Encourages physical activity – recreational bike rides, walking, jogging
Project Location

Overview

Project Segments

1. Queens Plaza North to 40th Ave
   - One-way multi-lane street, some parking

2. 40th Ave to 38th Ave, Newtown Ave to Hoyt Ave North
   - One-way, one travel lane, two parking lanes

3. 38th Ave to 30th Ave
   - One-way, two travel lanes, two parking lanes

4. 30th Ave to Newtown Ave
   - Two-way street, two parking lanes

Segments based on existing roadway typology

Project Goals

- Close gaps in bicycle network
- Improve access to bridges
- Improve safety for all road users
1. CRESCEINT ST: Queens Plaza N. to 40th Ave

Delineator-Protected Two-way Bike Lane

- Separate cyclists from pedestrians and vehicles
- Cyclists protected by buffer and vertical elements
- New concrete curb extension at Queens Plz. N. & Crescent St
- Lane changes:
  - Queens Plz. N. to 41 Ave: Repurpose one travel lane
  - 41st Ave to 40th Ave: Repurpose one parking lane

1a) Queens Plaza N. to 41st Ave

Existing

<table>
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<tr>
<th>West Sidewalk</th>
<th>9' Turn Lane</th>
<th>11' Travel Lane</th>
<th>10' Travel Lane</th>
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<tr>
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Proposed

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<th>10' Travel Lane</th>
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1b) 41st Ave to 40th Ave

Existing

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<th>Travel Lane</th>
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Proposed

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<th>10' Turn / Travel Lane</th>
<th>4' 4'</th>
<th>East Sidewalk</th>
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**Proposed**

**Delineator-Protected Two-way Bike Lane**

- Separate cyclists from pedestrians and vehicles
- Cyclists protected by buffer and vertical elements
- Repurpose one parking lane

**Existing**

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<th>West Sidewalk</th>
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<td>30' Travel &amp; Parking Lanes</td>
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**Proposed**

<table>
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<td>8' Parking Lane</td>
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<tr>
<td>3' Buffer</td>
<td>4' 4' 4'</td>
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**CRESCENT ST: 40th Ave to 38th Ave, Newtown Ave to Hoyt Ave North**
3 CRESCENT ST: 38th Ave to 30th Ave

Parking-Protected Two-way Bike Lane

- Separate cyclists from pedestrians and vehicles
- Cyclists protected by buffer and parked cars
- Provide pedestrian crossing islands, offset crossings to slow turning vehicles
- Repurpose one travel lane, add right turn lanes, rush hour lane at select locations

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Floating parking design will include some parking removal for intersection designs and vehicle turns

Crescent St at 31 Ave

Crescent St

Kent Ave, BK

Parking - Protected Two-way Bike Lane
Proposal

4 CRESCENT ST: 30th Ave to Newtown Ave

Parking-Protected Two-way Bike Lane

- Separate cyclists from pedestrians and vehicles
- Cyclists protected by buffer and parked cars
- Provide pedestrian crossing islands, offset crossings to slow turning vehicles
- Repurpose one travel lane, converting two-way street to southbound one-way street

Existing

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Floating parking design will include some parking removal for intersection designs and vehicle turns

Crescent St at 30th Ave

Kent Ave, BK

Floating parking design will include some parking removal for intersection designs and vehicle turns
Curb Management, Design Update

- Special markings to be used at locations with unique pickup/dropoff: i.e. schools, health centers
  - Painted pedestrian drop-off zone provides wider space to exit vehicles
  - Lack of green paint, and narrowed bike lane provide contrast to warn cyclists
  - Additional warning markings include rumble strips, crosswalk, chevrons, yield markings

Potential Drop-off Zone Design

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<th>9’ Parking Lane</th>
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<th>7’ Parking Lane</th>
<th>6’ Drop-off Zone</th>
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<td>40’</td>
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Patient Dropoff Zones

Two-way Loading Zones
OVERVIEW OF PEDESTRIAN IMPROVEMENTS

Proposal

Painted Pedestrian Island

Concrete Curb Extension

Project Route

Painted Pedestrian Island & Offset Crossing

Painted Pedestrian Island & Offset Crossing
OVERVIEW OF BIKE LANE DESIGN

Parking-protected bike lane

Delineator-protected bike lane
Making It Work
LOADING AND CURB ACCESS

**Driveways**
- Driveway access is maintained and indicated with markings

**Curb Access**
- Parking-protected design maintains loading and access along both sides of the street

**Curb Management Tools**
- Potential for loading zones, parking regulation changes for pickup/drop-off, metering
- Coordination to continue as businesses reopen
Summary
**Astoria Bike Network Expansion**

**Benefits**

- Close gaps within bike network
- Network connections provide wayfinding throughout Astoria
- Bridge to Bridge connection
  - Queensboro Bridge to Manhattan
  - RFK Bridge to Randalls Island, continue to the Bronx
Next Steps

**Protected Bicycle Route – Crescent St**
- Begin implementation 2020

**Conventional & Shared Bicycle Network Expansion**
- Begin implementation 2020

**Additional Protected Bike Routes**
- Exploring opportunities for additional east-west and north-south protected routes
Questions?
THANK YOU!