2ND AVE E 68TH ST TO 59TH ST
PEDESTRIAN AND BIKE NETWORK IMPROVEMENTS

New York City Department of Transportation
Presented to Community Board 8 by the Bicycle and Greenway Program on September 5, 2018
OVERVIEW

1. Protected Bike Network Implementation Update
2. Evaluation of Off-Peak Protected Bike Lane (2nd Ave, 52nd to 43rd Streets)
3. Filling the Gaps
4. Proposal: Bridge (2nd Ave, 68th to 59th Streets)
5. Update: Tunnel (2nd Ave, 43rd to 34th Streets)
6. Next Steps
Protected Bike Network Implementation Update
Northbound: 1\textsuperscript{st} Ave
- Continuous 9-mile protected bike lane connecting Brooklyn, Manhattan and the Bronx

Southbound: 2\textsuperscript{nd} Ave
- Challenges to creating continuous protected bike lane:
  - 2\textsuperscript{nd} Ave Subway construction
  - High traffic volumes approaching Queensboro Bridge and Midtown Tunnel
2ND AVENUE EXISTING BIKE FACILITIES

Background

PROTECTED BIKE LANE
96 St – 88 St
2016 (MTA)

88 St – 82 St
Functional, not yet completed (MTA)

82 St to 74 St
2016 (DOT)

74 St – 68 St
Functional, not yet completed (MTA)

ENHANCED SHARED LANE
68 St – 59 St Bridge
Fall 2016/17 (MTA/DOT)

PROTECTED BIKE LANE
59 St – 43 St:
2017 (DOT)

52 St – 43 St: Off-peak Protected Bike Lane Design
2017 (DOT)

ENHANCED SHARED LANE
43 St – 34 St Tunnel
2011 (DOT)
BIKE VOLUMES ARE GROWING

In the third quarter of 2017, 699,000 Citi Bike trips either started or ended in CB 6 and CB 8.

On Average, 5,406 cyclists use the Queensboro Bridge bike lane daily (between April and October).

Bike Counts on 2nd Ave: +105% (2015-2017)

2nd Ave at 86th St

<table>
<thead>
<tr>
<th>Year</th>
<th>Bike Lane Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>631</td>
</tr>
<tr>
<td>2015</td>
<td>940</td>
</tr>
<tr>
<td>2016</td>
<td>1,024</td>
</tr>
<tr>
<td>2017</td>
<td>1,924</td>
</tr>
</tbody>
</table>

Bicycle Volume Data: Average of three 12-hr (7AM-7PM) counts conducted on weekdays in May, July, and September for each year reported.
SAFETY CONCERNS

2nd Ave is a Vision Zero Priority Corridor

2 Ave, 68 St – 59 St
Injury Summary, 2012-2016 (5 years)

<table>
<thead>
<tr>
<th></th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>87</td>
<td>9</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>32</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>244</td>
<td>16</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>363</td>
<td>26</td>
<td>0</td>
<td>26</td>
</tr>
</tbody>
</table>

Fatalities, 01/01/2012 – 03/19/2018: None

2 Ave, 43 St – 34 St
Injury Summary, 2012-2016 (5 years)

<table>
<thead>
<tr>
<th></th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>118</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>64</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>194</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>376</td>
<td>23</td>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>

Fatalities, 01/01/2012 – 03/19/2018: None

Source: Fatalities: NYCDOT. Injuries: NYSDOT. KSI: Persons killed or severely injured
Evaluation of Off-Peak Protected Bike Lane Design
Evaluation of Off-Peak Protected Bike Lane Design

BEFORE: 2 AVE, 52 ST – 43 ST

- High traffic volumes, lack of organization in roadway
- Gap in the protected bike lane network where facilities were most needed
- Site specific curb access and parking needs
AFTER: Peak Period Design

Curbside bike lane provides dedicated space for cyclists
Maintains five moving lanes
Loading not permitted
Evaluation of Off-Peak Period Bike Lane Design

AFTER: Off-Peak Design

Parking protected bike lane provides dedicated space for cyclists, separated from moving vehicles

Removal of travel lane calms traffic when speeding is more likely to occur

Loading permitted
### Evaluation of Off-Peak Protected Bike Lane Design

#### VEHICLE SPEEDS: MIDTOWN IN MOTION EZPASS DATA

<table>
<thead>
<tr>
<th></th>
<th>AM</th>
<th>MD</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 ST - 57 ST</td>
<td>2016</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>10.3 mph</td>
<td>11.2 mph</td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>9.3 mph</td>
<td>10.3 mph</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>13.8 mph</td>
<td>13.2 mph</td>
<td></td>
</tr>
<tr>
<td>42 ST - 49 ST</td>
<td>2016</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>10.5 mph</td>
<td>10.4 mph</td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>6.9 mph</td>
<td>7.5 mph</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>8.3 mph</td>
<td>8.5 mph</td>
<td></td>
</tr>
<tr>
<td>34 ST - 42 ST</td>
<td>2016</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>8.1 mph*</td>
<td>7.2 mph</td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>10.6 mph*</td>
<td>9.2 mph</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>8.6 mph*</td>
<td>5.3 mph</td>
<td></td>
</tr>
</tbody>
</table>

Note: No operational changes made south of 43rd St

Data show no significant change to average vehicle speeds in the project area (2nd Ave 59th St to 43rd St)

Source: EZPASS 2017 October Mid-week Vs. 2016 October Mid-Week.
Note*: 2nd Avenue - Southbound - 42nd St to 34th St, 15 min Average Travel Time using 2017 October midweek vs. 2016 October midweek (The 2016 data for this link is approximate using the historical travel time as EZPASS reader at 34 St was down during this month). Note**: Taxi GPS is used as a proxy for travel speeds.

Overall, average motor vehicle speeds on streets in Midtown Manhattan decreased during this same time period**
## Evaluation of Off-Peak Protected Bike Lane Design

### Blocking of Bike Lane: Time Lapse Camera Observations

#### Bike Lane Blockages

<table>
<thead>
<tr>
<th>Locations</th>
<th>43 St</th>
<th>44 St</th>
<th>45 St</th>
<th>46 St</th>
<th>48 St</th>
<th>50 St</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Analyzed (Days)</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Video Analyzed (Minutes)</td>
<td>1,200</td>
<td>1,200</td>
<td>1,440</td>
<td>2,160</td>
<td>2,880</td>
<td>2,160</td>
</tr>
<tr>
<td>Number of Times Bike Lane was Blocked</td>
<td>26</td>
<td>13</td>
<td>20</td>
<td>3</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Total Time Bike Lane was Blocked in Minutes</td>
<td>81</td>
<td>48</td>
<td>86</td>
<td>21</td>
<td>46</td>
<td>36</td>
</tr>
<tr>
<td>Percentage of Time Bike Lane was Blocked</td>
<td>6.8%</td>
<td>4.0%</td>
<td>6.0%</td>
<td>1.0%</td>
<td>1.6%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

#### No Stopping Left Turn Area Blockages

<table>
<thead>
<tr>
<th>Locations</th>
<th>43 St</th>
<th>44 St</th>
<th>45 St</th>
<th>46 St</th>
<th>48 St</th>
<th>50 St</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Analyzed (Days)</td>
<td>5</td>
<td>9</td>
<td>12</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video Analyzed (Minutes)</td>
<td>1,200</td>
<td>2,160</td>
<td>2,880</td>
<td>2,160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Times No Stopping LT was Blocked</td>
<td>29</td>
<td>15</td>
<td>61</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Time No Stopping LT was Blocked in Minutes</td>
<td>454</td>
<td>72</td>
<td>1,380</td>
<td>201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of Time No Stopping LT was Blocked</td>
<td>37.8%</td>
<td>3.3%</td>
<td>47.9%</td>
<td>9.3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

- Bike lane is clear 97% of the time.
- Left Turn Area is clear 75% of the time.
BIKE VOLUMES: BEFORE/AFTER COUNTS

Off-Peak Protected Bike Lane installed on 2nd Ave, 59 St to 43 St in Spring/Summer 2017

2nd Ave at 50th St

Bike Volume Data: Average of three 12-hr (7AM-7PM) counts conducted on weekdays in May, July, and September for each year reported.

+36% increase in cycling (2015-2017)
Proposal
CORRIDOR: EXISTING CONDITIONS

- High Traffic Volume
- High volume especially approaching bridge and tunnel

- Curb Access/ Parking
- Commercial un/loading, drop-off/pick-up of passengers

- Heavily Used Cycling Route
- No dedicated space for cyclists
- Gap in the protected bike network
CORRIDOR: PROPOSED DESIGN (68th – 60th St)

Gap in the Protected Bike Network
- No dedicated space for cyclists
- Enhanced shared lane breaks down during peak hour

Peak Period (7am - 10am, 3pm - 8pm)
- Curbside buffered bike lane
- Maintains vehicular capacity

Off-Peak Period
- Parking protected bike lane
- Traffic calming
- East curb access (loading/unloading)
- West curb access (loading/unloading) when bus lane not in effect
QUEENSBORO BRIDGE: EXISTING CONDITIONS

Complex intersection
- High, constant vehicle volumes
- Limited pedestrian and bicycle access
QUEENSBORO BRIDGE: EXISTING/ISSUES

Vehicle Volumes:

1. High volumes throughout the day
2. No pedestrian and bike crossing on east side from 60th and 59th St
3. Southbound cyclists forced to merge turning vehicles to continue traveling through
QUEENSBORO BRIDGE: PROPOSAL

Add pedestrian and bicycle crossing
- Allows pedestrian crossing along east side
- Closes the gap on the protected bike network on 2nd Ave

Add concrete island and tip extension
- Shorter pedestrian and bicycle crossing that works with signal timing

Change in lane configuration
 Existing:
- 3 SB through
- 1 shared SB/left lane
- 1 left lane onto QBB
 Proposed:
- 3 SB through
- 2 left lanes onto QBB
- No left turn from 2nd Ave onto 59th St

Potential installation of delineators along bus lane
- DOT is exploring addition of physical separation to improve bus service

No change to signal timing
PROPOSED DESIGN ELEMENTS AND BENEFITS

**EXISTING**

- Continue existing lane south to 59th St
  - Bike lane is now continuous from 125th to 43rd Street
  - Shared lanes replaced with dedicated bike lanes at bridge

**PROPOSED: Peak Period**

- New pedestrian crossing at QB Bridge
  - People can now walk continuously along east side

**PROPOSED: Off-Peak Period**

- Minimize congestion impacts
  - Signal timing remains the same, minimizing back-ups into surrounding streets
New Curbside Bike Lane: Fills the gap in bike network on 2 Ave from E 68 St to E 59 St

New Cut Through: Improves Pedestrian Access

New Pedestrian and Bicycle Access: Ramp to QBB

New Concrete Island: Creates Shared Pedestrians and Cyclists Space

New Tip Extension and Cut Through

New Pedestrian Island

New Signal Infrastructure: (Same Signal Timing) Allows for pedestrians and cyclists to cross 2 Ave from E 60 St to E 59 St along the east side
QUEENS MIDTOWN TUNNEL: ISSUES

Complex intersection

High vehicular volume for most of the day

Ongoing MTA work around the Tunnel area

DOT is currently working with MTA to develop a plan
Next Steps
**QUEENSBORO BRIDGE**
- **Project Development**
  - Complete analysis and design of corridor during all traffic configurations
  - Finalize proposal for rush hour/parking regulations

- **Community Outreach**
  - Present finalized designs to
    - Elected Officials
    - Community Board 6 and 8

- **Implementation**
  - Late 2018 / Early 2019

**QUEENS MIDTOWN TUNNEL**
- DEP capital work on 2\(^{nd}\) Ave between 34\(^{th}\) and 36\(^{th}\) Streets
- DOT is working with MTA to develop a plan for the area
- Due to ongoing work and coordination efforts, facilities between 34\(^{th}\) and 43\(^{rd}\) Streets will not be implemented at the same time as QBB
THANK YOU!

Questions?