6th Avenue 35th St to Central Park South

Complete Street Redesign

Presented to Community Board 5 on March 23, 2020
Background
6th Avenue Community Request

Community has requested complete street redesign of 6th Ave in Midtown

- Community Board 5
- Joint Letter from State and Local Elected Officials
  - NYS Senator Hoylman
  - Borough President Brewer
  - NYS Assemblymember Glick
  - NYS Assemblymember Gottfried
  - NYC Council Member Garodnick
  - NYC Councilmember Johnson

Heavy commercial activity, transportation hubs, tourist destinations cause congestion for all users

Direct connection to Central Park for motorists, pedestrians, cyclists
Safety Vision Zero

Vision Zero Priority Corridor
12.5 pedestrians killed or severely injured per mile

4 Vision Zero Priority Intersections
42nd St, 47th St, 57th St, Central Park South

2 Fatalities 2013-2019
1 Pedestrian, 1 Motor Vehicle Occupant

6th Avenue (34th Street – Central Park South) 2013 - 2017

<table>
<thead>
<tr>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>182</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>111</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>254</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>547</td>
<td>35</td>
<td>2</td>
</tr>
</tbody>
</table>
**Green Wave: A Plan for Cycling in New York City**

**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.
### Safety: Protected Bike Lanes

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**

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Injuries</td>
<td>1,477</td>
<td>1,263</td>
<td>-15%</td>
</tr>
<tr>
<td>MV Occupant Injuries</td>
<td>627</td>
<td>533</td>
<td>-15%</td>
</tr>
<tr>
<td>Pedestrian Injuries</td>
<td>628</td>
<td>499</td>
<td>-21%</td>
</tr>
<tr>
<td>Cyclist Injuries</td>
<td>224</td>
<td>231</td>
<td>3%</td>
</tr>
</tbody>
</table>

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
Existing Conditions

35th St – 42nd Street

66’ Wide Roadway
- 4 Moving lanes
- Bus lane
- Loading/Overnight parking lane
- Bike lane

42nd St – Central Park South

62’ Wide Roadway
- 4 Moving lanes
- Bus lane
- Loading/Overnight parking lane
Issues Pedestrians

High pedestrian volumes

• Heavy commercial activity, transportation hubs, tourist destinations

Long crossing distances

• 62 – 66 feet

Turning conflicts

• 42% of pedestrian injuries result from turning vehicles while pedestrians cross with signal

• Back pressure from through vehicles increases risk of turning vehicles
6th Avenue  Background

Issues  Cyclists

High bike volumes
- 3,487 cyclists, 18-hr count (50th St)
- 161% increase 2008-2019
- Citi Bike Core Zone
  - 10 stations within 400 ft of project
  - Citi Bike has committed to increasing station density in existing service area
- Feeds into Central Park
  - Rental shops and hotels cater to large number of tourists using 6th Ave to access park

Limited bike infrastructure
- Bike lane south of 42nd St vulnerable to being blocked
- No bike connection to Central Park

Citi Bikes in Midtown
Nearly 10,000 Citi Bike trips start and end in Midtown each day (compared to 16,000 taxi trips)

For trips that begin and end in Midtown, Citi Bikes are 2 mph faster and $6 cheaper than taxis
Issues Traffic Flow

Through traffic flows best in center lanes
- 6th Avenue through traffic volumes vary between 1,000 and 1,200 in peak hours
- Through lanes are often clear of traffic

Through Traffic in Left Lane is Delayed by Left-Turning Vehicles
- Heavy pedestrian volumes impede efficient left turns
  - 3,830 pedestrians crossing 42nd St at 5pm
  - 1,250 pedestrians crossing 57th St at 5pm
- Thru traffic is delayed by left turning vehicles
  - Lack of left turn bays to separate turns from thru movements
  - PM peaks are typically ~125 VPH
Issues Curb Use

Heavy curb use by commercial vehicles, press placard parking, TLC vehicles
Proposal
**Proposed Improvements Overview**

1. **35th St – 42nd St:**
   - Remove one lane of traffic
   - Relocate existing bike lane to curb
   - Add pedestrian islands

2. **42nd St – Central Park S:**
   - Remove one lane of traffic
   - Install parking protected bike lane
   - Add pedestrian islands

3. **Signal Changes:**
   - Left turn lanes with split phase signals
   - Offset crossings
   - Leading Pedestrian Intervals
Proposed Improvements

- Install parking protected bike lane along curb
- Add painted pedestrian islands
- Remove one moving lane
- Mitigate capacity impacts, increase safety with turn treatments
6th Avenue Proposal

Traffic Analysis

- Formal traffic analysis and observations at AM and PM peak periods assesses:
  - Traffic volumes
  - Turning vehicles
  - Pedestrian volumes
  - Trucks and buses
  - Parking turnover

- New turn bays and dedicated turn phases separate people walking and biking from vehicular traffic improving vehicular flow

- New Leading Pedestrian Intervals at 13 intersections reduce turning conflicts

- Analysis indicates that impact to vehicular flow will be minor
Design Precedent 2nd Avenue, Gramercy
**Turn Treatments Split Phase Signal**

- Turning vehicles queue in turn lane
- Pedestrians and cyclists have protected phase
- Requires turn lane
- Used at high conflict locations:
  - 41st St.
  - 42nd St
  - 45th St
  - 49th St
  - 51st St
  - 53rd St
  - 55th St
  - 57th St
  - Central Park South
**Turn Treatments Offset Crossings**

- Improve visibility of pedestrians and cyclists
- Reduce cyclist delay
- Provide space for left turning vehicles to help process thru traffic and reduce back pressure
- Used at lower conflict locations:
  - 37th St
  - 39th St
  - 43rd St
  - 47th St

4th Avenue at 7th Street, Brooklyn
Curb Access Parking/Loading Impacts

- **Split Phase Signals** at high conflict locations require turn lanes which reduce parking/loading capacity along these blocks.
- **Offset Crossings** minimize impacts on curb access.
- **New Curb Access** can be added at some locations.

6th Avenue West Curb – Proposed Parking Regulations

- 43 net parking spaces are lost.
- DOT will work with stakeholders to accommodate curb access needs.

**LEGEND**

- Parking spaces lost to left turn lane
- Parking spaces lost to offset crossing
- No left turns - parking spaces lost to pedestrian islands
- Parking spaces gained on block

*Includes changes on east side of 6th Ave*
Curbside Access Mitigation

NYC DOT will work with CB 5, property owners, and merchants to accommodate curb access needs on 6th Avenue and side streets including:

• Commercial loading
• Drop-off and pick-up
• Hotel loading zones
• Potential Citi Bike station adjustments

Updating from 3 hour to 1 hour parking regulations increases availability

On crosstown protected bike lanes matched the loading demand

• 78% of vehicles stayed at new meters less than 1 HR (26th, 29th St, 2018)
• Most vehicles (72%) used 1 HR regs for 30 min or less (26th, 29th St, 2018)
Summary

- Pedestrian safety improved through shorter crossings (up to 20 ft shorter) and turn treatments
  *Improves safety along a Vision Zero corridor*

- Safe, comfortable, continuous bike connection from 8th St to Central Park
  *Accommodates growing number of riders, including less experienced riders and tourists accessing the park*

- Travel lane removed between 35th St and Central Park South
  *Through volumes on 6th Ave can be accommodated by three lanes*

- Turn lanes and offset crossings added at left turns
  *Removing turning vehicles from through lane will improve traffic flow and safety*

- Leading Pedestrian Intervals added at 13 locations
  - *Reduces conflicts between vehicles turning from side streets and pedestrians crossing 6th Ave*

- DOT will work with stakeholders to mitigate curb access impacts at high conflict locations
THANK YOU!

Questions?