MIDTOWN CROSSTOWN  PROTECTED BIKE LANES

Presented to Manhattan Community Boards 4, 5, 6
March, 2019
PRESENTATION OVERVIEW

1. Background

2. 26th St and 29th St
   Analysis & Summary

3. 52nd St and 55th St
   Proposal

4. Next Steps
Background
Midtown 59th St to 13th St
Heavy commercial activity, transportation hubs, and tourist destinations
Major attractions cause congestion for all users

NY Waterway Ferry
Javitz Center
Lincoln Tunnel
Penn Station
High Line
Bryant Park
Grand Central Terminal
Central Park
Grand Central Terminal
Queens Midtown Tunnel
Madison Square Park
Union Square
East River/Citywide Ferry
Ed Koch/Queensboro Bridge
Rockefeller Center
ESB
Times Square

Heavy Loading Activity
Inadequate Bike Facilities
High Pedestrian Volumes
Midtown Biking

Bike route network established with strong north – south facilities
Lack of cross town options contributes to safety issues

More people are biking in Midtown
- More than 30,000 bikes cross 50th St daily (7a – 7p) 38% increase from 2015 to 2018
- Over 12,500 Citi Bike trips start and end in Midtown each day Q2/2016,Q2/2018
- Citi Bike adding 1,250 more bikes to areas in Manhattan and Brooklyn in Spring 2019
- Bike commuting mode share is 2.2% for Midtown residents, compared to 1.1% citywide (ACS 5-yr)

Biking is an efficient option for trips in Midtown but there are deterrents
- Citi Bikes are faster and cheaper than taxis
- Many protected lane options for north-south bicycle rides, few protected crosstown routes

Safety concerns are a barrier to increased ridership
- More women counted riding in protected bike lanes at 50th St than on streets without
While there has been dramatic growth in cycling citywide, cyclist fatalities remain low. 2018 record low for cyclist fatalities, half of the year before. However, the majority of cyclist fatalities have occurred on streets without bike lanes. Community Boards 4, 5, and 6 have the highest cyclist KSI in Manhattan.
Midtown Bicyclist Safety

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>Total Injuries</th>
<th>MV Occupant Injuries</th>
<th>Pedestrian Injuries</th>
<th>Cyclist Injuries</th>
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<tr>
<td>Before</td>
<td>1,477</td>
<td>627</td>
<td>628</td>
<td>224</td>
</tr>
<tr>
<td>After</td>
<td>1,263</td>
<td>533</td>
<td>499</td>
<td>231</td>
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-15% drop in all crashes with injuries
-21% drop in pedestrian injuries

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
26th St and 29th St
Analysis & Summary
Madison Square Corridor

26th Street and 29th Street

- Connections to Madison Square Park, Bellevue Hospital, colleges, commercial uses, multi-family residences, industrial uses

Installed 2018
Summary

Community Requests and Project Adjustments

Implementation
• Coordinated markings installation with ASP regulation times
• Clarified new parking configuration with parking signage, DOT staff onsite

Updated markings and signage
• Preserved curb access for disability placards at 26th St and 1st Ave
• Additional markings at school bus loading areas
• Adjustments made for driveway and loading access

Ongoing Coordination
• Working with hotels, schools and residential areas to optimize curbside access
26th Street and 29th Street

Analysis

Bike Ridership Increased During Peak Hours

Largest increases observed on 26th St, where no bike lane existed before

26th Street
6th Ave – 7th Ave
New bike lane

29th Street
6th Ave – 7th Ave
Upgraded bike lane

12hr Bike Counts 7a – 7p
Before: April 2018, 55-70 degrees F
After: October 2018, 58 degrees F

After counts conducted just 6 weeks after implementation, 2019 counts planned
26th Street and 29th Street

Analysis

Bikes as Travel Mode Increased

*Share of bikes captures the percentage of bicycles in relation to vehicle volume*

26th Street

**New bike lane**

<table>
<thead>
<tr>
<th>Share of Bikes</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>29th Street</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>26th Street</td>
<td>12%</td>
<td>13%</td>
</tr>
</tbody>
</table>

29th Street

**Upgraded bike lane**

<table>
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<th>Before</th>
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<td>29th Street</td>
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<td>12%</td>
<td>15%</td>
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</tbody>
</table>

*Share of Bikes reflects PM Peak Hour, 5:30 PM – 6:30 PM, between 6 Ave – 7 Ave on both corridors*
**Vehicle travel times**

Average speeds on both corridors remained relatively similar. Adjacent streets without new bike lanes showed similar patterns.
Updated Loading Regulations

Allow for varying occupation times on each block as well as potential higher turnover

North curb

1 hour Metered Commercial Loading

South curb (bike lane side) No Change

3 hour Metered Commercial Loading

How are the new 1 hour loading areas used?

- 78% of vehicles on north curb stayed for less than 1 hour
- Most vehicles (72%) on north curb stayed for 30 minutes or less
- Loading zones were fully utilized for most of the day at most locations

Updated regulations appear to match usage patterns

6 locations observed in October 2018
New No Standing Zones
added to preserve short term curbside access and emergency clearance in commercial Midtown core

How are the new NSA zones used?

Occupancy
• 26th St: Drivers stop over often, but are not parked all day
  • 80% of drivers stay less than 15 minutes
• 29th St: zones are more than 60% clear at all times of day

Duration
• More than half (53%) of all stopovers last 5 mins or less
• 9% of stopovers last for 30 mins – 1 hour
• 4% last for more than an hour

4 locations observed in October 2018
Double Parking
Updated roadway design discourages double parking

How was double parking affected?

- **Before** the project was installed, 12% of double parking vehicles would stop for 30 minutes or longer
- **After** installation, double parking occurred less frequently, and 0% of vehicles doubled parked for more than 30 minutes
  Most (67-100%) double parked vehicles stopped for less than 15 minutes
Madison Square Corridor

26th Street and 29th Street

- Connections to Madison Square Park, Bellevue Hospital, colleges, commercial uses, multi-family residences, industrial uses

Summary

- Number of cyclists increased
- Vehicle travel times not affected
- Curbside regulation updates well used
- Design elements replicable yet flexible for Midtown context
Proposed Crosstown Routes
Midtown Crosstown Routes

Crosstown Bike Routes Strategy

Proposed Routes - accessible every ½ mile through Midtown

- **Central Park South**
  - 52nd St and 55th St
  - Proposed

- **Times Square Area**
  - In Development / Planning

- **Madison Square**
  - 26th St and 29th St
  - Implemented Summer 2018

- **Union Square**
  - 12th St and 13th St
  - Implementation Began Fall 2018
  - Currently Under Review

Protected Bike Lane

Conventional or Shared Bike Lane

Area Under Study
Central Park South Corridor

52nd Street and 55th Street

- Connections to Ed Koch/Queensboro Bridge, Central Park, Columbus Circle, Rockefeller Center, theaters, museums, hotels, commercial uses, multi-family residences
**52nd Street and 55th Street**

**Route Selection**

*Why did we choose 52nd St and 55th St?*

**Continuity**

*Uninterrupted Crosstown Streets*

**Connectivity**

- Hudson River Greenway Access
- Connection to 1st Ave Bike Lane

**EASTBOUND**

*multiple eastbound options based on connectivity*

- 59 St
- 58 St
- 57 St
- 56 St
- 54 St
- 52 St
- 50 St
- 48 St
- 46 St

- **M50 Bus Route**

*48 St between 8 Ave – 6 Ave has 2+ vehicle lanes*
52nd Street and 55th Street

Route Selection

Why did we choose 52nd St and 55th St?

Street Widths

EASTBOUND

52nd St has the most 34’ + blocks without multiple travel lanes
**52nd Street and 55th Street**

**Route Selection**

*Why did we choose 52nd St and 55th St?*

**Street Widths**

34’ allows for protected bike lane on a one-way street with parallel parking on both sides

Narrower blocks require parking removal on one side

52nd and 55th St have the most blocks that fit a protected bike lane without removing a travel lane or parking lane.
52nd Street and 55th Street

Route Selection

Why did we choose 52nd St and 55th St?

Continuity
Uninterrupted Crosstown Streets

Connectivity
- Hudson River Greenway Access
- Connection to 1st Ave Bike Lane

WESTBOUND

55th St has the only crossing to Hudson River Greenway

55th St has the only crossing to Hudson River Greenway
Accommodations for land uses
- Update parking regulations to mitigate double parking
- Additional locations delineated for pick ups/drop offs
- Maintain emergency access with No Standing zones
- Hotels / commercial floating loading
- Theaters / loading zones
**Design**

**Curb Management**

*Preserve short term curbside access and emergency clearance in the commercial Midtown core blocks*

*Consider adjacent land use of new NSA zones*

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**Midtown Core**

- **North Curb**
  - Restrict curbside use, while allowing short term access
    - Increase No Standing zones
    - Existing loading zones will be maintained where necessary

- **South Curb**
  - Short Term Commercial Loading (1 Hour)

- **Emergency Access**
  - 80' No Standing Anytime zones (2-3 per block, sited at hydrants and driveways to minimize impact)
52nd Street and 55th Street

52nd Street  Typical Design

existing

South Sidewalk  11’ Parking Lane  12’ Travel Lane  11’ Parking Lane  North Sidewalk

proposed

South Sidewalk  4’  8’ Parking Lane  11’ Travel Lane  8’ Parking Lane  North Sidewalk

South side of street aligns with greenway access

Requires approx 2-3 parking spaces per block for daylighting at intersections
**52nd Street and 55th Street**

**52nd Street**  
*Atypical Block: Broadway-7th Ave*

### Existing

- South Sidewalk
- 11' Travel Lane
- 12' Travel Lane
- 8'-11' Parking Lane
- North Sidewalk

### Proposed

- South Sidewalk
- 5' Curbside lane to be painted green
- 10' Travel Lane
- 11' Travel Lane
- 8' Parking Lane
- North Sidewalk

- Requires removal of 1 loading space on north curb (6 remain)
52nd Street and 55th Street

52nd Street  Atypical Block: 6th Ave – 5th Ave

Existing

- South Sidewalk
- 11' Parking Lane
- 11' Travel Lane
- 11' Parking Lane
- North Sidewalk

33'

Proposed

- South Sidewalk
- 5' 0"
- 9' Buffer
- 11' Travel Lane
- 9' Parking Lane
- North Sidewalk

33'

- Enough clearance to install flexible bollards along bike lane buffer
- Requires removal of 27 loading spaces on south curb (31 remain on the block)

52 St

- 12 Ave
- 11 Ave
- 10 Ave
- 9 Ave
- 8 Ave
- Broadway
- 7 Ave
- 6 Ave
- 5 Ave
- Madison Ave
- Park Ave
- Lexington Ave
- 3 Ave
- 2 Ave
- 1 Ave
**52nd Street and 55th Street**

**52nd Street**  
Atypical Blocks: 3rd Ave – 1st Ave

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**existing**

- South Sidewalk
- 9’ Parking Lane
- 12’ Travel Lane
- 9’ Parking Lane
- North Sidewalk

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**proposed**

- South Sidewalk
- 5’ Sidewalk
- 11’ Travel Lane
- 8’ Parking Lane
- North Sidewalk

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**Flexible Delineators**

**Enough clearance to install flexible bollards along bike lane buffer**

**Removal of approx. 24 loading and AVO spaces per clock on south curbs (27 remain on north curbs)**
Typical Design

Existing:
- North Sidewalk: 10' Parking Lane, 10' Travel Lane, 5' Other, 9' Parking Lane, South Sidewalk

Proposed:
- North Sidewalk: 8' Parking Lane, 11' Travel Lane, 8' Parking Lane, South Sidewalk

New design ‘flips’ parking lane and bike lane

Buffer allows flexibility for people accessing vehicles or cyclists to maneuver

Design accommodates M57 Bus Stop at 1st Ave
Existing

North Sidewalk
9’ Parking Lane
12’ Shared Lane
9’ Parking Lane

South Sidewalk

North Sidewalk
8’ Parking Lane
11’ Travel Lane

South Sidewalk

5’

Enough clearance to install flexible bollards along bike lane buffer

Removal of 14 commercial loading spaces on south curb (17 remain on north)

52nd Street and 55th Street

55th Street Atypical Block: Lexington Ave – Park Ave

Flexible Delineators
**52nd Street and 55th Street**

**55th Street**  Atypical Block: Broadway – 8th Ave

**Existing**

- North Sidewalk
- 11’ Travel Lane
- 11’ Travel Lane
- 5’ Parking Lane
- South Sidewalk

**Proposed**

- North Sidewalk
- 11’ Travel Lane
- 10’ Travel Lane
- 8’ Parking Lane
- South Sidewalk

**New design ‘flips’ parking lane and bike lane**

**2 travel lanes maintained**
55th Street  Atypical Block: 11th Ave – 12th Ave

existing

North Sidewalk

12’

10’

5’

10’

South Sidewalk

proposed

North Sidewalk

12’

10’

5’

10’

South Sidewalk

3 turn lanes maintained

Cyclists can continue to Hudson River Greenway without turning conflict
Typical Design Benefits

**Cyclist Safety**
- Cyclists are separated from through traffic by parked cars, from turning vehicles by quick curb
- Cyclists to use existing LPIs

**Pedestrian Safety**
- Simplified vehicular movements
- Ease congestion by providing space for turns

**Curb Management**
- Preserves loading and curbside access

Diagram showing curbside access preserved, vertical separation, loading and metered parking maintained, and parking-protected bike lane.
Parking Spaces and Curb Management

**52nd Street**

<table>
<thead>
<tr>
<th>Block</th>
<th>Bike Lane Design</th>
<th>NSA Zones</th>
<th>Remaining</th>
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<tbody>
<tr>
<td>12 Ave - 11 Ave</td>
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<td>21</td>
</tr>
<tr>
<td>11 Ave - 10 Ave</td>
<td>4</td>
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<td>65</td>
</tr>
<tr>
<td>10 Ave - 9 Ave</td>
<td>3</td>
<td>-</td>
<td>70</td>
</tr>
<tr>
<td>9 Ave - 8 Ave</td>
<td>-</td>
<td>3</td>
<td>53</td>
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**55th Street**

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<td>26</td>
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<td>-</td>
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<tr>
<td>9 Ave - 8 Ave</td>
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**CB 5**

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<tbody>
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<td>8 Ave - Broadway</td>
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<td>2</td>
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<tr>
<td>7 Ave - 6 Ave</td>
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<tr>
<td>6 Ave - 5 Ave</td>
<td>29</td>
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<tr>
<td>5 Ave - Madison Ave</td>
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<td>2</td>
<td>30</td>
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<tr>
<td>Madison Ave - Park Ave</td>
<td>4</td>
<td>3</td>
<td>28</td>
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<tr>
<td>Park Ave - Lexington Ave</td>
<td>-</td>
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<thead>
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**CB 6**

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<td>3 Ave - 2 Ave</td>
<td>28</td>
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<td>25</td>
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<td>2 Ave - 1 Ave</td>
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<td>28</td>
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<tr>
<td>1 Ave - Sutton Pl</td>
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<td>36</td>
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<tr>
<td>3 Ave - 2 Ave</td>
<td>4</td>
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</tr>
<tr>
<td>2 Ave - 1 Ave</td>
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<td>-</td>
<td>51</td>
</tr>
<tr>
<td>1 Ave - Sutton Pl</td>
<td>3</td>
<td>-</td>
<td>44</td>
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</tbody>
</table>

**Bolded** numbers are commercial loading spaces
Parking Regulations to be updated based on 26th St and 29th St analysis and feedback
Next Steps
Next Steps

Winter - Spring 2019
• Community Board presentations for 52nd St and 55th St Project
• On-going Stakeholder Engagement

Summer – Fall 2019
• Implementation of 52nd St and 55th St Project
• Collection of One-Year After Data for 26th St and 29th St Project

Fall 2019 – Winter 2020
• Development and Planning for Times Square Area Project
THANK YOU!

Questions?