DELANCEY ST

Protected Bike Lanes and Safety Improvements

Presented to Manhattan Community Board 3
April 5, 2017

nyc.gov/visienzero

NEW YORK CITY DOT
Background
Current gap in protected bike lane network between Williamsburg Bridge path and Allen St - 1st Ave

No connection from new two-way protected bike lane on Chrystie St to Williamsburg Bridge path

Delancey St
Chrystie St to Clinton St

Proposal:
- 2-way protected bike lane on eastbound Delancey St, between Allen St to Clinton St
- Eastbound bike lane on Delancey St from Chrystie St to Allen St
NEW YORK CITY MOBILITY

Growth in NYC (2010-2015)

- +370,000 New York City residents
- +520,000 new jobs
- +20% growth Tourists

Recent Travel Trends (2010-2015)

- +10% growth in subway trips
- +80% growth in daily cycling trips
  Including 60,000 Citi Bike trips daily

Biking provides an efficient and affordable transportation option for a growing city

GROWTH IN CYCLING

More and more New Yorkers are biking to work, 2010-2015:

+98% bike commuting in Manhattan

+83% bike commuting in Brooklyn

In 2016, an average of 7,580 cyclists used the Williamsburg bridge everyday, a 13% increase compared to 5 years ago.
GROWTH IN CYCLING – L Train Shutdown

Substantial increase in bike ridership on Williamsburg Bridge expected with closure of L line

- **During Hurricane Sandy**, bike volumes on Manhattan Bridge increased **200-300%**
- **During the 2005 transit strike**, bike volumes on the East River bridges **more than quadrupled**

Biking will provide a convenient alternative to transit for regular L train riders

MTA will release a draft concept plan in the Spring/Summer 2017

**Approximate Bike Travel Times to Manhattan from L Train Stations, via the Williamsburg Bridge**

- **Delancey St at Clinton St**: 13 min (2.1 mi)
- **Bedford Ave**: 16 min (2.6 mi)
- **Graham Ave**: 16 min (2.6 mi)
- **Morgan Ave**: 21 min (3.1 mi)
- **Myrtle-Wyckoff**: 28 min (4.6 mi)
SAFETY

Delancey St, 2010-2014
Chrystie St to Clinton St

3 Pedestrian fatalities
1 Bicyclist Fatality
14 Pedestrians severely injured
11 Cyclists severely injured

Delancey St at Essex St is a Vision Zero Priority Intersection

Pedestrian Safety Project Installed
2012 – 2 year analysis
- 48% drop in total crashes
- 39% drop in Crashes with injuries

<table>
<thead>
<tr>
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<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
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<td>Pedestrian</td>
<td>83</td>
<td>14</td>
<td>3</td>
<td>17</td>
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<tr>
<td>Bicyclists</td>
<td>92</td>
<td>11</td>
<td>1</td>
<td>12</td>
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<tr>
<td>Motor Vehicle Occupant</td>
<td>468</td>
<td>24</td>
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<tr>
<td>Total</td>
<td>643</td>
<td>49</td>
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Source: Fatalities NYCDOT, Injuries: NYSDOT, KSI: Persons Killed or Severely Injured
Protected bicycle lane projects with 3 years of after data include the following: 9th Ave (16th-31st), 8th Ave (Bank-23rd-23rd-34th), Broadway (59th-47th, 33rd-26th, 23rd-18th), 1st Avenue (Houston to 34th), 2nd Ave (Houston-34th), Columbus Ave (96th-77th) Note: Only sections of projects that included protected bicycle lanes were analyzed

Source: NYPD AIS/TAMS Crash Database
Proposal
Existing Conditions

• Williamsburg Bridge is currently accessed via Suffolk St, Clinton St

• Issues with existing routes, blocked lanes, double parking, narrow streets

• Typical weekday, 1,050 cyclist use Delancey St, currently lacks a bike facility
  – 580 EB
  – 457 WB
Existing Vehicular Volumes and Capacity

- 4 moving lanes in each direction during the peak period
- Peak volumes are substantially higher in the westbound direction
- Potential opportunity to add protected bike lanes in eastbound roadway

Peak Hour Volumes
WB Peak (8-9am) EB peak (5-6pm)
Proposed Capacity Changes – Eastbound Roadway

- Remove one lane between Allen St and Norfolk St
- Peak period traffic volumes exceed threshold for 3 lanes east of Norfolk St
- Maintain 4 moving lanes east of Norfolk St

Peak Hour Capacity

- 830
- 1,724
- 2,228
- 2,626

- 3 Moving Lanes
- 4 Moving Lanes

- Sara D. Roosevelt Park
- Forsyth St
- Eldridge St
- Allen St
- Orchard St
- Ludlow St
- Essex St
- Norfolk St
- Suffolk St
- Clinton St
Existing Conditions: Eastbound, Allen St to Suffolk St

- 4 travel lane lanes during peak periods
- 3 travel lanes and 1 parking lane during off-peak periods
- No bike facilities
Proposed Conditions: Eastbound, Allen St to Suffolk St

- Remove 1 eastbound travel lane from Allen St to Norfolk St
- Add two-way Jersey barrier protected bike lane along south side of median
  *Creates direct, protected bike connection between bridge and Allen St protected lanes*
- Add painted median extensions
  *Increases pedestrian safety at intersections*
Suffolk St to Bridge

- Create two-way bike lane in striped median space
  - *Completes connection*

- Design slows fast moving cyclists coming off the bridge
  - *Reduces pedestrian conflicts*

- Slightly reduces plaza space but improves space by removing obsolete concrete islands
  - *Increases usable plaza space*
Allen St Intersection

- Add two-way Jersey barrier protected bike lane along south side of median
  - *Creates direct, protected bike connection between bridge and Allen St protected lanes*
  - *Feeds into northbound 1st Ave*

- Add protected bike box in the intersection
  - *Facilitates safe bike movements*

- Add painted median extension, improving pedestrian environment
  - *Shorter, safer crossings*
### Traffic Analysis

- **Allen St to Ludlow St:** Slight *increase* in delay, no change in level of service
- **Essex St to Norfolk St:** Minor impact on level of service
- **Suffolk St to Clinton St:** Slight *decrease* in delay, no change in level of service

#### Delancey St – e/b from Eldridge to Clinton St

**Traffic Analysis Summary**

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<tr>
<th>Intersection</th>
<th>Storage (ft.)</th>
<th>PM Peak (5-6P)</th>
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<td></td>
<td>V/C Ratio</td>
<td>Control Delay (seconds)</td>
<td>LOS</td>
<td>V/C Ratio</td>
<td>Control Delay (seconds)</td>
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<td>Norfolk St</td>
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<td>Suffolk St</td>
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<tr>
<td>Clinton St</td>
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<td>1.07</td>
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<td>47.9</td>
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Chrystie St Connection

- Add eastbound bike lane along the median
  - *No impact to capacity or parking*
- Creates connection to new Chrystie two-way bike lane
  - *Via Chrystie connects to southbound 2nd Ave*
- Add painted median extension, improving pedestrian environment
  - *Shorter, safer crossings*
New Protected Bike Lane Connections

- Two-way bike lane on Delancey St between Clinton St and Allen St
  - Creates direct, protected bike connection between bridge and Allen St protected lanes
  - Feeds into northbound 1st Ave

- One-way bike lane on Delancey St between Chrystie St and Allen St
  - Creates direct, bike connection from southbound 2nd Ave via Chrystie St to the Bridge
SUMMARY

- Creates direct, connection between Williamsburg Bridge, Allen St and Chrystie St bicycle facilities
  - Feed Uptown 1st Ave and 2nd Ave protected bike lane network
  - Makes crosstown connections simpler and safer

- Provides dedicated, safe space for bicycles in advance of projected increase in ridership during L train shutdown

- Better accommodates high bike volumes

- Improves interaction between bicycles and pedestrians along at the base of the bridge

- Add painted median extension, creating shorter, safer pedestrian crossings

- No impact to parking
THANK YOU!

Questions?