Expanding the Protected Bike Network: Avenue C and E Houston Street

Protected bicycle lane projects to support dense network coverage in the East Village

Manhattan Community Board 3 Presentation
November 10, 2020
Protected bicycle lane projects to support dense network coverage in the East Village

PRESENTATION OVERVIEW

1. Background
2. Proposal
3. Making It Work
4. Summary
Background

Expanding the Protected Bike Network
GREEN WAVE: A PLAN FOR CYCLING IN NYC

Cycling in Numbers

+35% growth in daily cycling in New York City between 2013 and 2018

On a typical day, there are about 510,000 cycling trips made in New York City

Plan Goals

Citywide Protected Bike Lane Network:
• Build 30 miles of protected bicycle lane annually

Better Design:
• Implement new design standards based on national & international best practices to enhance safety
• Continue piloting new designs with rigorous safety analysis

Education and Outreach:
• Launch next phase of Vision Zero public awareness campaign, educating drivers, focusing on cyclist safety
• Educate all street users about safety on city streets
• Increase helmet giveaways and helmet use encouragement
Background: Expanding the Protected Bike Network

SAFETY ANALYSIS

Avenue C, E Houston to E 20 St
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>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>61</td>
<td>7</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>34</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>133</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>228</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>

Fatalities, 01/01/2013 – 9/2/2019: 2

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

2 cyclist and pedestrian fatalities

11 people have been severely injured

Multi-agency effort to reduce traffic fatalities and injuries
32 people have been severely injured

3 cyclist and pedestrian fatalities

32 people have been severely injured

Multi-agency effort to reduce traffic fatalities and 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
The Department of Design and Construction’s ESCR project will close the East River Esplanade, a major cycling route on the east side for a few years.

ESCR project background:
- Reduce low-level, high recurrence coastal flood risks while NYC continues to advance longer term coastal needs.
- Protect critical facilities and low-lying neighborhoods.
- Improve neighborhood open amenities such as parks, playgrounds, and piers as part of this upgrade.
- Timeline: 2025 completion projected.*

*Project delayed to 2021 due to COVID-19 and the long-term impacts to the construction schedule are still unknown.
In 2019, the East River Esplanade, had an average daily count of almost **1,600 weekday cyclists** and **over 2,100 weekend cyclists**

The ESCR project will **divert these cyclists**, of varying comfort levels, to other streets

The closest existing Protected Bike Lanes are on **1st and 2nd Avenues**. These routes are already **heavily-used and a mile** from the greenway

**EXISTING CYCLIST VOLUMES**

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>East River Esplanade b/w Delancey St and Houston St</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekday Total (cyclists)</td>
<td>1593</td>
<td>2077</td>
<td>1639</td>
</tr>
<tr>
<td>Weekend Total (cyclists)</td>
<td>2134</td>
<td>1974</td>
<td>2132</td>
</tr>
</tbody>
</table>
EXISTING BUS ROUTES

- **Ave C** is an important North-South bus route and the local bus service is heavily-utilized by local residents.

- New **bike facilities will be designed to accommodate existing bus stops** and access to the curb will be informed by bus stop locations.
Proposal
Improve safety for all road users

**Existing Conditions:** 43 people severely injured, 3 pedestrian and 2 cyclists have been killed (2013-2017)

Project Proposal will include:

- **Traffic calming** and enhanced pedestrian crossings
- **Dedicated space for cyclists**, reducing conflicts with vehicles
- **Parking protected or buffered lanes** for cyclists

### Create N-S and E-W Protected Bike Lane Connections

- Create **essential protected bike lane connections** to fill in gaps in the protected bike network in the East Village
- Routes **establish a direct connection to the greenway** at 20th Street and extend the greenway experience to increase cyclist safety and comfort
- Recent requests for a **north-south protected bike lane detour** in the East Village from elected officials and community members during ESCR project

**PROJECT LOCATION AND GOALS**
EXISTING CONDITIONS/ISSUES: AVE C, E HOUSTON ST TO E 4 ST

- Narrow two-way without designated space for cyclists
- **Key connection** for all cyclists of varying comfort levels in the East Village
PROPOSED DESIGN: AVE C, E HOUSTON ST TO E 4 ST

**EXISTING**

- 8' Parking Lane
- 8-10' Shared Lane
- 8-10' Shared Lane
- 8' Parking Lane

**PROPOSED**

- 6'
- 10-12' Travel Lane
- 10-12' Travel Lane
- 6'

Curbside Conventional Bike Lanes

- **Creates dedicated space for cyclists**, reduces conflicts with vehicles
- Increase **predictability** of cyclist location for drivers and pedestrians
- Provides **key connection** for all cyclists of varying comfort levels
Bike lane frequently blocked by double-parked cars, forcing cyclists to maneuver into the travel lane

Key connection for all cyclists of varying comfort levels in the East Village
• Creates dedicated space for cyclists, reduces conflicts with vehicles
• Cyclists protected by buffer, establishing a key connection for all cyclists of varying comfort levels
• Parking/loading zones can be accommodated by shifting the center line on some blocks
PROPOSED DESIGN: AVE C, E 4 ST TO E 18 ST - SHIFTED CENTER LINE

PROPOSED

PROPOSED DESIGN: AVE C, E 4 ST TO E 18 ST - SHIFTED CENTER LINE
PROPOSED DESIGN: AVE C, E 4 ST TO E 18 ST - BUS STOPS

**EXISTING**

- 8’ Parking Lane
- 5’ 10’ Travel Lane
- 10’ Travel Lane
- 5’ 8’ Parking Lane

**PROPOSED**

- 5’ Buffer
- 11’ Travel Lane
- 11’ Travel Lane
- 15’ Shared Lane

**Shifted Center-line/Shared Bus and Bike Lane**

- Creates dedicated space for cyclists, reduces conflicts with vehicles
- Cyclists protected by buffer, establishing a key connection for all cyclists of varying comfort levels
- Bus stops are preserved and loading zones can be accommodated on some blocks
PROPOSED DESIGN: AVE C, E 4 ST TO E 18 ST - BUS STOPS
• Bike lane frequently **blocked by double-parked cars**, forcing cyclists to maneuver into the travel lane
• Excess street width **encourages speeding and reckless driving**
• **Key connection** to protected lanes on 1st Ave, 2nd Ave and future lanes on Ave C for cyclists of varied ages and experience levels
Curbside Parking/Delineator Protected Bike Lanes

- Creates dedicated space for cyclists, reduces conflicts with vehicles
- Maintains all travel lanes and most parking
- Cyclists protected by parking and vertical delineators
- Visually narrows the road, discouraging speeding
Making it Work
LOADING AND CURB ACCESS FOR AVENUE C

**Driveways**

- Driveway access is maintained and indicated with markings

**Curb Access**

- Design preserves access to the curb whenever possible by shifting centerline
- Existing bus stops will be preserved and bike facility design will accommodate these stops and inform curb access

**Curb Management Tools**

- Potential for new loading zones and parking regulation changes on wider blocks to enable curb access
- Regulation changes may include day-time truck loading zones or other regulations that provide for parking at night
**CURB MANAGEMENT, PARKING UPDATES**

- Project results in the loss of +/-128 parking spaces on Ave C*
- New regulations, including daytime truck loading, will be considered as part of the planning process
- Parking is expected to be preserved on E Houston St

**Existing Curb Regulations**

**Proposed Curb Regulations and Parking Loss**

*Parking totals are approximate and subject to final engineering review*
Summary
Expanding the Protected Bike Lane Network to Provide Dense Coverage

Project Benefits

Reduce conflicts, increases safety
- **Separate bikes** from moving vehicles - reduce conflicts between bicycles, pedestrians, vehicles, and trucks
- Increase **predictability** of cyclist location for drivers and pedestrians

Create new neighborhood amenity
- **Establish direct connections** that expand the existing protected bike lane network
- Create **comfortable** space for cyclists of varied ages and experience levels
- Provide **key routes** in lower Manhattan that serve the East Village
THANK YOU!

Questions?