Bushwick Community Bicycle Planning

New York City Department of Transportation
Presented to Community Board 4 Transportation Committee on February 2, 2016
Community Bicycle Network Development Process

### Planning

2015

1. Community Outreach and Engagement
2. Data Collection and Evaluation
3. Street Network Limitations and Opportunities
4. Potential Routes and Facility Type

### Implementation

2016

- Seek Community Board support for Phase I projects
- Implement Phase I projects
- Steering Committee evaluation and input for Phase II

2017

- Seek Community Board support for Phase II projects
- Implement Phase II projects
- Steering Committee evaluation and input on full network
Community Planning Process

1. Community Outreach and Engagement
2. Data Collection and Evaluation
3. Street Network Limitations and Opportunities
4. Potential Routes and Facility Type
Community Planning Process

1. Community Outreach and Engagement

1  2  3  4
### Outreach and Engagement

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>AUGUST</td>
<td>Online Survey Launch</td>
</tr>
<tr>
<td></td>
<td>NOVEMBER</td>
<td>Kickoff Meeting</td>
</tr>
<tr>
<td>2015</td>
<td>FEBRUARY</td>
<td>First Community Workshop</td>
</tr>
<tr>
<td></td>
<td>MARCH &amp; APRIL</td>
<td>Bike Shop Visits</td>
</tr>
<tr>
<td></td>
<td>APRIL</td>
<td>Mobile Workshop at Eco-Station Earth Day Event</td>
</tr>
<tr>
<td></td>
<td>APRIL</td>
<td>Public Surveying at Myrtle-Wyckoff M/L Stop</td>
</tr>
<tr>
<td></td>
<td>MAY</td>
<td>Public Surveying at Jefferson L Stop Visits to Schwinn Clubs &amp; Bike Shops</td>
</tr>
<tr>
<td></td>
<td>JUNE</td>
<td>Second Community Workshop</td>
</tr>
<tr>
<td></td>
<td>JUNE</td>
<td>Mobile Workshop at Shape Up Bushwick</td>
</tr>
<tr>
<td></td>
<td>JUNE</td>
<td>Mobile Workshop at Arts In Bushwick</td>
</tr>
<tr>
<td></td>
<td>JUNE</td>
<td>Online Survey close out (6/30)</td>
</tr>
<tr>
<td></td>
<td>AUGUST</td>
<td>Bike Lanes Lesson at El Puente Tabling at Maritza Davila Parade</td>
</tr>
</tbody>
</table>
Outreach and Engagement

Myrtle-Wyckoff L/M Stop Surveys

Jefferson L Stop Surveys

Bushwick Bike Shop

Borinquen Schwinn Club

Bravo Bike Shop
1 Outreach and Engagement

2015 Steering Committee Meeting

2015 Shape Up Bushwick

February 2015 Workshop

April 2015 Mobile Workshop
Community Planning Process

1

2 Data Collection and Evaluation

3

4
Existing Bicycle Network

- Only 2 routes in neighborhood
- Limited internal circulation
- Few connections to rest of city
Data Collection and Evaluation Workshop: Top Destinations

- Disconnect between where current routes are and community destinations
  - Subway stations
  - Shopping
  - Parks
  - Connections to other neighborhoods

LEGEND

- Existing Bicycle Facilities
  - Protected Bicycle Path
  - Bicycle Lane
  - Shared Lane
  - Signed Route

- Biking Destinations
  - 1
  - 2 - 4
Data Collection and Evaluation Workshop: Typical Bike Routes

- Preference for 2-way streets
- Connections throughout neighborhood
- Commercial corridors

**LEGEND**

- **Existing Bicycle Facilities**
  - Protected Bicycle Path
  - Bicycle Lane
  - Shared Lane
  - Signed Route

**Typical Bike Routes**

- 1 - 4
- 5 - 8
- 9 - 10
Data Collection and Evaluation Workshop: Streets Not Good for Biking

- People take routes despite not feeling comfortable
- Shows importance of connectivity

Legend:
- Existing Bicycle Facilities
  - Protected Bicycle Path
  - Bicycle Lane
  - Shared Lane
  - Signed Route

Streets Not Good for Biking
- 1 - 3
- 4 - 5
Data Collection and Evaluation Workshop: Problem Areas

• Some streets are barriers
• People want an easy way to cross streets
Data Collection and Evaluation Workshop: Bike Routes Wanted

- Preference for streets currently used
- Desire for backbone routes
Data Collection and Evaluation Survey: Bike Routes Wanted

- Preference for streets currently used
- High preference for east/west commercial corridors that serve entire neighborhood
- No strong preference for specific north/south routes shows that we can prioritize geometry and connectivity
Street Network and Facility Type

1 2 3 4

3 Street Network Limitations and Opportunities
Bushwick Street Types:
1-Way Residential

- The bulk of Bushwick’s north/south streets are 1-way residential
- Typically 30’ wide
- Low traffic volumes
Street Design: 1-Way Dedicated Bicycle Lanes

- Bushwick’s 1-Way Residential Streets can fit:
  - Space for cyclists
  - Space for motor vehicles
  - No parking impact

DEDICATED LANE
30’ Minimum Width

18’ Combined Moving/Parking Lane
5’
7’ Parking Lane
Bushwick Street Types: 1-Way Mixed Use

- Some of Bushwick’s east/west streets
- Wider streets
- Retail destinations
- Higher traffic volumes
- More parking turnover

Knickerbocker, Brooklyn
3
Street Design: 1-Way Dedicated Bicycle Lanes

Bushwick’s 1-Way Mixed Use Streets can fit:
- Space for cyclists
- Narrows travel lane to calm traffic
- No parking impact
- Cyclists kept out of door zone

Willoughby Ave, BK

DEDICATED LANE Width - 34’

<table>
<thead>
<tr>
<th>9’ Parking Lane</th>
<th>10’ Parking Lane</th>
<th>5’</th>
<th>10’ Parking Lane</th>
</tr>
</thead>
</table>

34’
Bushwick Street Types: 2-Way Mixed Use

- Remainder of Bushwick Streets
- Examples:
  - Myrtle Ave
  - Broadway
  - Wilson Ave
  - Wyckoff Ave
  - Gates Ave
  - DeKalb Ave
  - Bushwick Ave
  - Flushing Ave
- 34-44’ width is too narrow for bicycle lanes on two-way without significant changes
- Complicated geometries
- Higher traffic volumes
Street Design: 2-Way Shared Lanes

- Only option for low-impact facility in narrow space
  - No parking impact
  - No travel lane impact
- No dedicated space for cyclists
- Not ideal for high volume streets
- Many of these streets parallel a 1-way pair that would be a better alternative

**SHARED LANE Width - 42’**
Project Implementation

**Short-Term Projects**

- Low-Impact:
  - Little or no parking loss
  - No travel lane loss
- Standard design
- Quick buildout
- Low cost

**Long-Term Projects**

- Higher-Impact:
  - Potential parking loss
  - Potential travel lane loss
- More complex design
- Robust traffic modeling
- Potentially higher-cost

Anticipated installation Summer of 2016

Continue to work with community to evaluate potential long-term opportunities
4 Potential Routes
Potential Routes: Considerations

**Connectivity**
- “Key destinations”
- “Routes wanted”
- “Routes used”
- To existing network
- In/outside neighborhood
- Grid change

**Safety**
- “Street not good for cycling”
- “Problem areas”
- Vision Zero
- Conflicting movements
- Traffic volumes

**Geometry**
- Design limitations and opportunities
- Street width
- Facility type

Safety is both an issue and an opportunity
4 Connectivity

Destinations

In Bushwick:
- Shopping on Knickerbocker and DeKalb Avenues
- Subway stations
- Parks

Out of Bushwick:
- Jamaica
- Highland Park
- Broadway Junction
- Bedford-Stuyvesant
- Ridgewood
- Williamsburg & Williamsburg Bridge

LEGEND

<table>
<thead>
<tr>
<th>Existing Bicycle Facilities</th>
<th>Biking Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Bicycle Path</td>
<td>1</td>
</tr>
<tr>
<td>Bicycle Lane</td>
<td>2 - 4</td>
</tr>
<tr>
<td>Shared Lane</td>
<td></td>
</tr>
<tr>
<td>Signed Route</td>
<td></td>
</tr>
</tbody>
</table>

[Map showing connectivity and destinations in Bushwick and beyond]
Connectivity

LEGEND
- Streets Connecting All of Bushwick
- Stub Streets
Connections on South Side of Bushwick
- Dead End on North End of Street
- Dead End on South End of Street
Connections on North Side of Bushwick
- Dead End on South End of Street

Street Grid/Network
- Certain streets are barriers
- Grid changes
- Dead ends
- T-intersections
- One-way changes
Safety

Vision Zero Priority Corridors

- Flushing Ave
- Myrtle Ave
- Bushwick Ave
- Broadway
- Knickerbocker Ave
  - Has capacity for bike lane

LEGEND

Existing Bicycle Facilities

- Protected Bicycle Path
- Bicycle Lane
- Shared Lane
- Signed Route
- Vision Zero Corridors
Geometry

Bicycle lanes

Shared lanes
2016 Proposed Bicycle Routes

- Low impact
- Routes connect through entire neighborhood and beyond
- Opportunities for safety enhancements
- Backbone routes

LEGEND
Existing Bicycle Facilities
- Green: Protected Bicycle Path
- Blue: Bicycle Lane
- Pink: Shared Lane
- Yellow: Signed Route

Potential Bike Routes
Potential Future Bicycle Routes

- Routes shown are illustrative of a 2017 build-out.
- Steering committee will work to determine routes.
- 2017 Priorities:
  - Build out western network
  - Low impact
  - Local circulators
  - Connection to Highland Park

LEGEND
- Existing Bicycle Facilities
  - Protected Bicycle Path
  - Bicycle Lane
  - Shared Lane
  - Signed Route

- 2016 Proposed Routes
- Possible Future Routes
- Further analysis required
Further Analysis

- Community has shown interest in these corridors, but they are challenging:
  - What are the streets we should concentrate on?
  - What is the role of the Steering Committee?

- Considerations:
  - Potential safety improvements
  - Complicated geometries
  - Higher impact to traffic patterns and parking
  - Need further discussion and analysis
Proposed Bike Routes

East/West
- Knickerbocker Ave, Irving Ave

North/South
- Jefferson Ave/Cornelia St, Hancock St

- Low impact
- Opportunities for safety enhancements
- Backbone routes
- Opportunities to extend beyond neighborhood
- Safety improvements
Existing Bicycle Volumes
June, 2015

Weekday

- 552
- 727

Weekend

- 475
- 410
- 312
- 205
- 308
- 258
- 113
- 108
- 137
- 126
Knickerbocker Ave, Irving Ave
Existing Conditions

34’ Wide
- Mixed-use (residential & commercial)
- 1-way street
- Curbside parking lanes
Knickerbocker Ave, Irving Ave

Issues

- **Wide Travel Lane**
  - Encourages Speeding

- **Lack of Markings**
  - No dedicated space for cyclists

Existing

34’
Combined Travel/Parking Lane

34’
Knickerbocker Ave, Irving Ave
Proposed Design

- **Standard Width Travel Lane**
  - Calms traffic

- **Bike Lanes**
  - Provide dedicate space for cyclists
  - Increase predictability of cyclist location

Proposed:

- 9’ Parking Lane
- 10’ Parking Lane
- 5’
- 10’ Parking Lane

Total: 34’
Knickerbocker Ave at Flushing Ave
Existing - George St to Melrose St

- Lack of Markings
  - No dedicated space for cyclists

- Wide Travel Lane
  - Encourage speeding

Existing

North Sidewalk

46’
Combined Travel / Parking Lane

46’

South Sidewalk
Knickerbocker Ave
Proposed Design - George St to Melrose St

**Standard Width Travel Lane**
- Reduces speeding
- Maintains alignment

**Bike Lanes**
- Provide dedicate space for cyclists
- Increase predictability of cyclist location

Proposed

North Sidewalk

- 10’ Parking Lane

5’ Buffer

- 10’ Travel Lane

6’ Buffer

- 10’ Parking Lane

South Sidewalk

46’
Knickerbocker Ave
Existing Conditions—Harman St to Bleecker St

Lack of Markings
- No dedicated space for cyclists
- Potential for sideswiping parked vehicle

Elevated Train Columns
- Confusion around elevated train column

Previous Safety Improvements
Concrete curb extension
- New pedestrian space
- Access to subway
- Calms traffic

Parking
- Existing nearby parking lots provide alternatives to these spots
Knickerbocker Ave
Proposed Design - Harman St to Bleecker St

Markings
Guide drivers away from elevated train columns

Through and Right Turn Lane
- Clearly designates vehicular movements

Dedicated Left Turn Lane
- Clearly designates space for turning vehicles

Bike Lanes
- Provide dedicated space for cyclists
- Increase predictability of cyclist location

Bike Lane
- Guides cyclists through challenging intersection

Trade-off: improved intersection for four parking spots
Irving Ave
Existing Conditions—Menahan St to Linden St

- Desired Pedestrian Crossing
- Elevated Train Columns
- Existing Day lighting
Irving Ave
Proposed Design - Menahan St to Linden St

New Crosswalk

Intersection markings
- Guide cyclists around train columns

Previous Safety Improvement
- Day lighting

Bike Lanes
- Provide dedicated space for cyclists
- Increase predictability of cyclist location
Existing Conditions

30’ Wide
- Mixed-use (residential & commercial)
- 1-way street
- Curbside parking lanes
Lack of Markings
- No dedicated space for cyclists
- Invites speeding

Existing

30’
Combined Travel/Parking Lane

30’
Jefferson Ave/Cornelia St St, Hancock St
Proposed Design

**Bike Lanes**
- Increase predictability of cyclist location
- Dedicated space for cyclists

Proposed

- 7'6" Parking Lane
- 10' Travel Lane
- 5'
- 7'6" Parking Lane

30'
Improves Safety

1. Provides dedicated space for cyclists
2. Discourage speeding

Improves Mobility

1. Build network in Bushwick
2. Opportunities to expand network beyond neighborhood
Questions?

nyc.gov/dot

Thank You