St. Nicholas Place & W. 155th St.
Intersection Safety Improvements

New York City Department of Transportation
Presented to CB 10 Full Board on February 4th, 2015
Intersection of:
Community Boards 9,10,12

Intersection of:
W 155th Street
St. Nicholas Place
Edgecombe Ave
Harlem River Driveway Entrance
Background

Community Requests

• Former Council Member Jackson requested pedestrian safety improvements
• NYPD 30th Precinct requested DOT safety investigation
• Support from NYPD 30th and 33rd Precincts for proposed DOT improvements

Safety Issues

• Long crosswalks
• Pedestrian crashes
• Multi-leg intersection with multiple conflicting movements
Public Meetings

1) 12/06/12 – 1st site walk through and workshop with community members
2) 8/13/13 – 2nd site walk through and workshop with community members
3) 5/21/14 – Community forum and presentation
4) 6/02/14 – Presentation to CB12 committee
5) 6/05/14 – Presentation to CB9 committee
6) 6/11/14 – Presentation to CB10 committee
7) 10/2/14 – Presentation to CB9 committee
8) 10/6/14 – Presentation to CB12 committee
9) 10/14/14 – Presentation to CB10 committee
10) 1/13/15 – Update with CB10 committee
Long Crosswalks

- Edgecombe Ave.
- Harlem River Driveway
- To Bronx / Yankee Stadium
- W 155th Street
- St. Nicholas Place
- New Housing/Early Childhood Dev. Center/Children's Museum

Crosswalk Lengths:
- 50 feet
- 75 feet
- 80 feet
- 55 feet
- 95 feet
- 45 feet
### St Nicholas Pl at W 155th St Injury Summary, 2008-2012 (5 years)

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<tr>
<th>Category</th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
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<td>Pedestrian</td>
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<td>1</td>
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<td><strong>72</strong></td>
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- **43 Motor Vehicle Crashes (non ped)**
- **Ranks in top one percent of Manhattan intersections**
Pedestrian Crashes

Ranks in top one percent of Manhattan intersections

38% of pedestrian crashes involved pedestrians crossing with the signal

St Nicholas Pl at W 155th St Injury Summary, 2008-2012 (5 years)

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Turning Conflicts

23% of motor vehicle crashes involved left turning vehicles

Compared to 6.8% average in all of Manhattan
Turning Conflicts

St. Nicholas Pl/
Harlem River Driveway
green phase

28 Seconds
Yielding Conflicts
Rapid Response Toolkit

- Pavement markings
- Turn Restrictions
- Painted surfaces
- Concrete Islands & Island Extensions
- Flexible Delineators
Existing Conditions

St. Nicholas Place

Edgecombe Ave

Harlem River Driveway

W 155th Street

New Housing/Early Childhood Dev. Center/Children's Museum

W 155th Street

Macombs Dam Bridge

To Bronx/Yankee Stadium

Edgecombe Ave

St. Nicholas Place
Proposed Conditions

St. Nicholas Ave
Edgecombe Ave
Harlem River Driveway

7 New Curb Extensions

W 155th Street
New Safety Island

St. Nicholas Place
Edgecombe Ave

W 155th Street
Macombs Dam Bridge

Typical safety island
Proposed Conditions

Shorter crossing distances

Tightens intersection to clarify movements and slow turns
Proposed Turn Restrictions

- Creates conflict free crosswalks
- Reduces vehicle/pedestrian, vehicle/vehicle conflict points
- Eases traffic flow
Proposed Turn Restrictions

Signal coordination at St. Nick Ave

W 155th Street

St. Nicholas Place is a residential street

Proposed turn lanes

Peak hour left turn volume – 110 Vehicles

St. Nicholas Place

Edgecombe Ave

Harlem River Driveway

W 155th Street Macombs Dam Bridge
Proposed Turn Restrictions

- Peak hour right turn volume – 10 vehicles
- Peak hour left turn volume – 35 vehicles (combined turning on Edgecombe and W.155th)

Locations:
- St. Nicholas Ave
- Edgecombe Ave
- Harlem River Driveway
- St. Nicholas Place
- W 155th Street
- Macombs Dam Bridge
Proposed Turn Restrictions

- Harlem River Driveway
- St. Nicholas Ave
- Edgecombe Ave
- St. Nicholas Place
- W 155th Street
- Signal coordination at St. Nick Ave
- Macombs Dam Bridge

**Notes:**

- Proposed turn restrictions at specified locations.
- Signal coordination at St. Nicholas Ave.
- Map indicates various street names and directions.
Proposed Turn Restrictions

Harlem River Driveway

St. Nicholas Ave

Edgecombe Ave

W 155th Street

St. Nicholas Place

Edgecombe Ave

Macombs Dam Bridge
75% of pedestrian crashes involved pedestrians crossing at intersections without stop signs or signals.

St Nicholas Pl: W 150th St to at W 153rd St

Injury Summary, 2008-2012 (5 years)

<table>
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<th>Severe Injuries</th>
<th>Fatalities</th>
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<tbody>
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<td>Pedestrian</td>
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<td>0</td>
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<tr>
<td>Bicyclist</td>
<td>2</td>
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<td>0</td>
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<tr>
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<td>29</td>
<td>6</td>
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Existing Conditions

- Lack of pedestrian crossings
- Uninterrupted corridor encourages speeding
Proposed Conditions

New pedestrian islands

Speed humps installed Summer 2014

Yield to pedestrian crosswalk in the Bronx
Plan Summary

Proposed Changes to the Intersection of St. Nicholas Pl and W 155th St
1. Add new pedestrian safety island on St. Nicholas Pl at W.155th St
2. Install five neckdowns at W.155th & St. Nicholas Pl
3. Install two neckdowns at W.155th & St. Nicholas Ave
4. Add left turn lane on W.155th St (E/B)
5. Modify signal timing to process W.155th vehicles through St. Nicholas Pl and St. Nicholas Ave
6. Ban southbound lefts off of W 155th St
7. Ban southbound right from Edgecombe
8. Ban westbound lefts off of W 155th St

Proposed Changes to St. Nicholas Pl
1. Add pedestrian islands at 151st St, 152nd St and 153rd St
2. Add yield crosswalk on St. Nicholas Pl at W 152nd St
Proposed Conditions

- St. Nicholas Ave
- Edgecombe Ave
- Harlem River Driveway
- 7 New Curb Extensions
- W 155th Street
- New Safety Island
- W 155th Street Macombs Dam Bridge

Typical safety island
Traffic Volumes
To W. 155th Street from St. Nicholas Place

No Left Turn to W. 155th Street Westbound

Alternate Routes
To W. 155th Street from Edgecombe Ave Southbound

No Right Turn to W. 155th Street Westbound

Alternate Routes
No Left Turn to St. Nicholas Place Southbound

To Southbound St. Nicholas Place from Westbound W. 155th Street
### Vehicle Crashes/Injuries

#### St Nicholas Pl at W 155th St

**Injury Summary, 2008-2012 (5 years)**

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- **2 rear end**
- **2 left turn**
- **2 right-angle**
- **8 rear end**
- **2 sideswipe**
- **1 over taking**
- **1 right angle**
- **1 left turn**
- **1 head on**
- **3 rear end**
- **2 right-angle**
- **6 left turn**
- **1 head on**

### Note

- 43 Motor Vehicle Crashes (non ped)
- *9 crash types unidentified*
- Ranks in top one percent of Manhattan intersections
Pedestrian Crashes

Ranks in top one percent of Manhattan intersections

38% of pedestrian crashes involved pedestrians crossing with the signal

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Existing Level of Service (AM)

Level of Service
A. Most vehicles do not stop at all
B. Increased delay but most vehicles do not stop at intersection
C. Moderate delay, many still pass through intersection with minimal delay
D. Many vehicles experience delay
E. Very heavy delay
F. Queues form, all vehicles do not get through in one cycle

Edgecombe often has a queue of up to 18 cars during one signal cycle
Proposed Level of Service (AM)

Level of Service
A. Most vehicles do not stop at all
B. Increased delay but most vehicles do not stop at intersection
C. Moderate delay, many still pass through intersection with minimal delay
D. Many vehicles experience delay
E. Very heavy delay
F. Queues form, all vehicles do not get through in one cycle

90 second cycle with turn restrictions

Optimized signal timing and turn lane to process diverted traffic