Agenda

• Summary of Existing Conditions on Eighth & Ninth Avenues

• Traffic, Bicycle and Pedestrian Data

• Safety Statistics

• Proposed Plan – CB 4
+250 miles of bicycle routes installed (2007-2010)

+87% increase in commuter cycling (2007-2010)

Traffic data collected for Hells Kitchen Study
Chelsea (West 14th Street – West 23rd Street)

- 3 travel lanes
- Curbside and floating parking lanes
- M20 bus route
- Pedestrian safety islands
- Left-turn lanes
- Parking-protected bicycle path
- Land Use: Residential & Commercial

<table>
<thead>
<tr>
<th>Volumes</th>
<th>Am Peak</th>
<th>PM Peak</th>
<th>12-hour Weekday Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycles</td>
<td>227</td>
<td>243</td>
<td>1,827</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1,223</td>
<td>1,356</td>
<td>14,036</td>
</tr>
</tbody>
</table>

Notes: Bicycles btw. Greenwich/14th Sts (April 2011; Vehicles btw. 20/21st Sts (Sept 2009)
Eighth Avenue – Before/After Crash Analysis
from Bank Street to W. 14th Street

<table>
<thead>
<tr>
<th>Category</th>
<th>Before Period*</th>
<th>After*: 2-year Average</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Before</td>
<td>3-year Average</td>
<td></td>
</tr>
<tr>
<td>Crashes</td>
<td>266</td>
<td>88.7</td>
<td>-18.8%</td>
</tr>
<tr>
<td>Crashes w/ Injury</td>
<td>46</td>
<td>15.3</td>
<td>-15.2%</td>
</tr>
<tr>
<td>Total Injuries</td>
<td>55</td>
<td>18.3</td>
<td>-18.2%</td>
</tr>
</tbody>
</table>

*Before period: 09/01/05 – 08/31/08 (3-years); After period: 12/01/08 – 11/30/10 (2-years)

Note: Phase I of project installed - Bank St – 14th Street

- Crashes are down **19 %**
- Crashes that cause injuries are down **15 %**
- Injuries to all street users are down **18 %**

Crash Data source:
NYPD Accident Database (TAMS data)
# Eighth Avenue – Before/After Crash Analysis

from W. 15th Street to W. 23rd Street

<table>
<thead>
<tr>
<th></th>
<th>Before Period*</th>
<th>After*: 2-year Average</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Before</td>
<td>3-year Average</td>
<td></td>
</tr>
<tr>
<td>Crashes</td>
<td>583</td>
<td>194.3</td>
<td>-13.0%</td>
</tr>
<tr>
<td>Crashes w/ Injury</td>
<td>103</td>
<td>34.3</td>
<td>-30.1%</td>
</tr>
<tr>
<td>Total Injuries</td>
<td>127</td>
<td>42.3</td>
<td>-35.0%</td>
</tr>
</tbody>
</table>

*Before period: 06/01/06 – 05/30/09 (3-years); After period: 07/01/09 – 06/30/11 (2-years)

Note: Phase II of project installed - W. 15th St – 23rd Street

- Crashes are down **13 %**
- Crashes that cause injuries are down **30 %**
- Injuries to all street users are down **35 %**

Crash Data source:
NYPD Accident Database (TAMS data)
Chelsea (West 23rd Street – West 34th Street)

- 4 travel lanes
- Curbside and floating parking lanes
- M20 bus route
- Pedestrian safety islands
- “Mixing zones” and left-turn lanes
- Parking-protected bicycle path
- Land Use: Residential , Commercial, Penn Station & Madison Square Garden

<table>
<thead>
<tr>
<th>Volumes</th>
<th>Am Peak</th>
<th>PM Peak</th>
<th>12-hour Weekday Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycles</td>
<td>143</td>
<td>181</td>
<td>1,356</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1,204</td>
<td>1,299</td>
<td>13,986</td>
</tr>
</tbody>
</table>

Notes: Bicycles btw 28/29th Sts (April 2011; Vehicles btw. 24/25th Sts (Sept 2009)
Travel Times – Before & After

8th Avenue Weekday Travel Times
W 23rd Street to W 34th Street

8th Avenue travel times improved after implementation

Weekday average travel times derived from two runs per hour conducted over the days of:
Before: September 30 - October 1, 2009 and October 6 - 8, 2009
After: November 16 - 18, 2010
Existing Conditions – 8th Avenue

Hell’s Kitchen/Midtown West (West 34th Street – West 59th Street)

- 4 travel lanes
- Curbside parking lanes
- M20 bus route
- Dedicated bicycle lane
- Land Use: Commercial & Port Authority

<table>
<thead>
<tr>
<th>Volumes</th>
<th>Am Peak</th>
<th>PM Peak</th>
<th>12-hour Weekday Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycles</td>
<td>66</td>
<td>221</td>
<td>1,527</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1,828</td>
<td>1,729</td>
<td>19,130</td>
</tr>
</tbody>
</table>

Notes: Bicycles @ 50th Sts (Sept 2010); Vehicles btw. 43/44th Sts (Sept 2010)
### Eighth Avenue – Serious Injury & Fatalities Ranking (2005-2009)

**From W. 34th Street to W. 59th Street**

<table>
<thead>
<tr>
<th>User Type</th>
<th>Total Injuries</th>
<th>Average Injury / Year</th>
<th>Average Injury / Mile / Year</th>
<th>Serious Injury / Fatality Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrians</td>
<td>317</td>
<td>63.4</td>
<td>51.8</td>
<td>98%</td>
</tr>
<tr>
<td>Cyclists</td>
<td>79</td>
<td>15.8</td>
<td>12.9</td>
<td>N/A</td>
</tr>
<tr>
<td>Motor Vehicle Occupants</td>
<td>405</td>
<td>81.0</td>
<td>66.2</td>
<td>95%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>807</strong></td>
<td><strong>160.2</strong></td>
<td><strong>131.0</strong></td>
<td><strong>98%</strong></td>
</tr>
</tbody>
</table>

### Fatalities (2005 – present)

- **8 Pedestrians**
- **1 Motorist**

**Crash Data source:**
NYS Dept. of Motor Vehicles / NYS Dept. of Transportation
Existing Conditions – 9th Avenue

Chelsea (West 14th Street – West 33rd Street)

- 3 travel lanes
- Curbside and floating parking lanes
- M20 bus route
- Pedestrian safety islands
- Left-turn lanes
- Parking-protected bicycle path
- Curbside bicycle lane (14th-16th St), Dedicated Bicycle Lane (33rd-31st St)
- Pedestrian plaza (14th-15th St)
- Land Use: Residential & Commercial

<table>
<thead>
<tr>
<th></th>
<th>Am Peak</th>
<th>PM Peak</th>
<th>12-hour Weekday Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycles</td>
<td>65</td>
<td>212</td>
<td>1,399</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1,014</td>
<td>1,014</td>
<td>13,197</td>
</tr>
</tbody>
</table>

Notes: Bicycles btw. 18/19th Sts (April 2011; Vehicles btw. 30/31st Sts (Sept 2009)
Ninth Avenue – Before/After Crash Analysis
Between 16th Street to 23rd Street

<table>
<thead>
<tr>
<th></th>
<th>Before Period*</th>
<th>After*: 3-year Average</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Before</td>
<td>3-year Average</td>
<td></td>
</tr>
<tr>
<td>Crashes</td>
<td>448</td>
<td>149.3</td>
<td>-22.9%</td>
</tr>
<tr>
<td>Crashes w/ Injury</td>
<td>99</td>
<td>33.0</td>
<td>-56.1%</td>
</tr>
<tr>
<td>Total Injuries</td>
<td>116</td>
<td>38.7</td>
<td>-58.2%</td>
</tr>
</tbody>
</table>

*Before period: 08/01/04 – 07/31/07 (3-years); After period: 11/01/07 – 10/31/10 (3-years)
Note: Phase I of project installed - West 16th Street – West 23rd Street

- Crashes are down 23%
- Crashes that cause injuries are down 56%
- Injuries to all street users are down 58%

Crash Data source:
NYPD Accident Database (TAMS data)
# Ninth Avenue – Before/After Crash Analysis

Between 24th Street to 31st Street

<table>
<thead>
<tr>
<th></th>
<th>Before Period*</th>
<th></th>
<th>After*: 2-year Average</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Before</td>
<td>3-year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crashes</td>
<td>399</td>
<td>133.0</td>
<td>146.0</td>
<td>9.8%</td>
</tr>
<tr>
<td>Crashes w/ Injury</td>
<td>90</td>
<td>30.0</td>
<td>20.5</td>
<td>-31.7%</td>
</tr>
<tr>
<td>Total Injuries</td>
<td>109</td>
<td>36.3</td>
<td>23.5</td>
<td>-35.3%</td>
</tr>
</tbody>
</table>

*Before period: 08/01/05 – 07/31/08 (3-years); After period: 11/01/08 – 10/31/10 (2-years)

Note: Phase II of project installed - West 24th Street – West 31st Street

- Severity of crashes significantly decreased
- Crashes that cause injuries are down 32 %
- Injuries to all street users are down 35 %

Crash Data source: NYPD Accident Database (TAMS data)
Existing Conditions – 9th Avenue

Hell’s Kitchen/Midtown West (West 33rd Street – West 59th Street)

- 4 travel lanes; 5 lanes during AM & PM rush hour periods
- Curbside parking lanes
- M20 bus route
- Land Use: Residential, Commercial, Lincoln Tunnel & Port Authority

### Volumes

<table>
<thead>
<tr>
<th></th>
<th>Am Peak</th>
<th>PM Peak</th>
<th>12-hour Weekday Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycles</td>
<td>70</td>
<td>194</td>
<td>1,480</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1,694</td>
<td>1,852</td>
<td>20,628</td>
</tr>
</tbody>
</table>

Notes: Bicycles @ 50th St (Sept 2010); Vehicles btw. 42/41st Sts (Sept 2009)
### Ninth Avenue – Serious Injury & Fatalities Ranking (2005-2009)

**From W. 33rd Street to W. 59th Street**

<table>
<thead>
<tr>
<th></th>
<th>Total Injuries</th>
<th>Average Injury / Year</th>
<th>Average Injury / Mile / Year</th>
<th>Serious Injury / Fatality Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrians</td>
<td>313</td>
<td>62.6</td>
<td>50.1</td>
<td>95%</td>
</tr>
<tr>
<td>Cyclists</td>
<td>74</td>
<td>17.8</td>
<td>11.8</td>
<td>N/A</td>
</tr>
<tr>
<td>Motor Vehicle Occupants</td>
<td>383</td>
<td>76.6</td>
<td>61.3</td>
<td>88%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>770</strong></td>
<td><strong>154.0</strong></td>
<td><strong>123.2</strong></td>
<td><strong>95%</strong></td>
</tr>
</tbody>
</table>

#### Fatalities (2005 – present)

6 Pedestrians

**Crash Data source:**
NYS Dept. of Motor Vehicles / NYS Dept. of Transportation
Eighth and Ninth Avenue Plan

Potential Phasing

Phase I - Spring 2012
• Eighth Avenue bicycle facilities extended from West 34th Street to West 42nd Street
• Ninth Avenue bicycle facilities extended from West 33rd Street to West 42nd Street

Phase II - Fall 2012
• Eighth Avenue bicycle facilities extended from West 42nd Street to Columbus Circle
• Ninth Avenue bicycle facilities extended from West 42nd Street to West 59th Street

Potential Phase 1: W 33/34 Sts to W 42 St
Potential Phase 2: W 42 St to W 59 St
Design Treatments

- **Maintain all travel lanes** – mixing zones/turn lanes increases roadway capacity
- **Mixing Zones** – accommodate vehicle/bike turning conflict
- **Turn Lanes** – protects cyclists from turning vehicles with dedicated bicycle signal
Eighth and Ninth Avenue Plan

Turn Treatments
Between 59th – 33rd Streets

Mixing Zones
- 10 on Eighth Ave
- 9 on Ninth Ave

Dedicated Turn Lane
- 1 on Eighth Ave
- 4 on Ninth Ave

Investigating additional turn lane locations as part of Hells Kitchen Study
Design Treatments

- Pedestrian Islands – Shorten pedestrian crossings
- “Floating” Parking Lane – Maintain on-street parking
Pedestrian Crossing Improvements

70' crossing distance

45' crossing distance

Safe, Protected Space on Street

Warning Strips for Vision-impaired Pedestrians
Existing Conditions

Existing Design – Eighth Avenue (W. 34th - W. 59th Sts)

- 4 Travel Lanes
- 2 Curbside Parking/Loading Lanes
- Bike lane adjacent to parking
- Curbside Bus Lane (W. 42nd to W. 59th Sts)
Design Treatments

Typical Design – Eighth Avenue

- Parking-Protected Bicycle Path
- “Floating” Parking/Loading Lane
- Pedestrian Safety Islands
- Curbside Bus Lane

<table>
<thead>
<tr>
<th>Repurposed Parking Space</th>
<th>Parking Space Equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Turn Lanes / Mixing Zones</td>
<td>38</td>
</tr>
<tr>
<td>30 Pedestrian Islands</td>
<td>12</td>
</tr>
<tr>
<td>Total Spaces Repurposed</td>
<td>50</td>
</tr>
<tr>
<td>Total Existing Parking Spaces (59th-34th Sts)</td>
<td>209</td>
</tr>
<tr>
<td>Percent of Spaces Repurposed</td>
<td>23.9%</td>
</tr>
</tbody>
</table>
Existing Design

Port Authority Design – Eighth Avenue

- No Shared Lane or Bicycle Markings (W. 39th – 42nd Sts)
- Curbside Taxi Stand and Drop-off/Pick-up Area
- Left-Turn Lanes at West 42nd Street
Design Treatments

Port Authority Design – Eighth Avenue

- Buffered Bicycle Lane and Shared Lane Design
- Maintain Taxi Stand and Drop-off/Pick-up Area
- Maintain Left-Turn Lanes at West 42nd Street
Existing Design

Existing Conditions – Ninth Avenue (W. 33rd – W. 59th Sts)

- 4 fulltime travel lanes
- 2 parking/loading lanes
- Port Authority and Lincoln Tunnel Access
Design Treatments

Typical Design – Ninth Avenue

- Parking-Protected Bicycle Path
- Retain all Four Fulltime Travel Lanes Plus Curbside Rush hour Lane (west)
- Mixing Zones and Dedicated Turn Lanes
- Pedestrian Safety Islands

<table>
<thead>
<tr>
<th>Repurposed Parking Space</th>
<th>Parking Space Equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 Turn Lanes / Mixing Zones</td>
<td>68</td>
</tr>
<tr>
<td>32 Pedestrian Islands</td>
<td>8</td>
</tr>
<tr>
<td>Total Spaces Repurposed</td>
<td>76</td>
</tr>
<tr>
<td>Total Existing Parking Spaces (59th-33rd Sts)</td>
<td>209</td>
</tr>
<tr>
<td>Percent of Spaces Repurposed</td>
<td>36.4%</td>
</tr>
</tbody>
</table>
Design Treatments

Design Option: Port Authority – Ninth Avenue

- Parking-Protected Bicycle Path
- Dedicated Turn Lane at W 40th St
- “Floating” Parking/Loading Lane
- Pedestrian Safety Islands
Design Treatments

Design Option: Port Authority – Ninth Avenue

- Parking-Protected Bicycle Path
- Dedicated Turn Lane at W 40th St with some loading space
- “Floating” Parking/Loading Lane
- Pedestrian Safety Islands
Passenger Drop-off & Pick-up

Eighth & Ninth Avenues
between 59th – 34th Sts

- 7 Day Care Centers
- 2 Senior Centers
- 7 Other Drop-off/Pick-up Points

- No Day Care or Senior Centers load onto the avenues
- Other points will retain sufficient loading space

Drop-off and Pick-up will not be adversely affected

DOT to conduct educational outreach
Passenger Drop-off & Pick-up

- Reinforced Pedestrian Safety Signage
- Signage to Indicate Passenger Drop-off/Pick-up Areas
- Drop-off / Pick-up Space Retained

Second Avenue
Commercial Loading Replacement

- Fed Ex
- Terrazza
- Gristedes
- Rite Aid
- Ciro Trattoria
- Charley O’s
- Golden Paradise & Denim Collection (Retail)
- Amici 36 Deli

Existing Side Street Truck/Commercial Loading
Proposed Additional Truck/Commercial Loading
Major Loading Generators near Proposed Mixing Zones
- Community outreach through CB 4

- Examine successful design on 8th and 9th Avenues

- Potential for two-phase installation
  - Phase I: West 33/34 Sts to West 42 St
  - Phase II: West 42 St to West 59 St / Columbus Circle
Questions?

Thank You