# Safe Streets for Seniors

## EAST CONCOURSE

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1. **PROJECT DESCRIPTION**

Since 1990 the number of pedestrian fatalities in New York City has decreased by 56%. Moreover, prior to 1950, pedestrians accounted for three-fourths of all traffic fatalities and since then, that percentage has decreased to account for about one-half of all traffic fatalities. Despite these statistical improvements, pedestrians continue to be the largest at risk mode – with older adults more likely to suffer serious injuries or fatalities from traffic crashes than other pedestrians. The rate of pedestrian fatalities for every 100,000 persons in the City has decreased by nearly half since 1991 – to 2.0 from 3.8 – while the rate of senior pedestrian fatalities per 100,000 seniors has decreased even more sharply – to 6.6 from 13.1. Nevertheless, while seniors make up only 12% of the population in New York City, they still comprise 39% of pedestrian fatalities. The recognition of the disproportional representation of the senior population among severe pedestrian injuries and fatalities led to the development of the Department of Transportation’s Safe Streets for Seniors (SSS) Program.

The purpose of this project is to address senior pedestrian safety issues at 25 Senior Pedestrian Focus Areas (SPFAs) in the five boroughs of New York City and to develop and implement mitigation measures to improve the safety of seniors and other pedestrians within the 25 SPFAs. DOT identified SPFAs to include the top senior pedestrian crash (severe injury and fatality) areas within each borough. Four of the SPFAs are located in the Bronx, seven in Brooklyn, five in Queens, eight in Manhattan and one in Staten Island. The SPFAs have been selected based on the density of senior pedestrian crashes resulting in fatalities or severe injuries in a five-year period. DOT conducted in-house studies for five pilot SPFAs and is utilizing consultant services to perform a comprehensive study of pedestrian safety conditions at intersections and along corridors within 20 selected SPFAs.

The project evaluates the crash history and existing traffic conditions and controls (e.g., roadway geometry, signal timing) at selected intersections and corridors within each SPFA in order to develop short- and long-term measures to reduce pedestrian crashes specifically for seniors, and improve safety and traffic operations for all users. The DOT makes specific safety recommendations consisting of low-cost as well as capital engineering and design improvements for these 20 areas. In addition, the DOT conducts data analysis as needed, prepares engineering and design schematics and related services, as necessary, for capital improvements.

In this report, the East Concourse SPFA located in Bronx has been studied and improvements have been recommended.
2. BACKGROUND

Land-use in the East Concourse Study Area is a mix of commercial and residential buildings. There is one senior center, Rain College Avenue Senior Center, located near the study area on the north side of E 165th Street between Findlay and College Avenues. Bronx Lebanon Hospital is in close proximity to the study area of East Concourse.

There are two schools located inside the study area (list of school names and addresses shown in Exhibit 5).

Bicycle Facilities

The 2010 NYC Bike Map shows “existing” and “planned/proposed” bicycle facilities throughout the city. The following existing bike routes are located in the vicinity of the East Concourse Study Area, as shown in Exhibit 2:

- Class 2 two-way bicycle lanes on Grand Concourse and on E 167th Street
- Class 2 one-way bicycle lane southbound on Walton Avenue starting from E 167th Street

Truck Routes

The local truck route along Jerome Avenue is included in the study area. There are no more truck routes of any types along any street in close proximity to the study area (Exhibit 3).

Bus Lines and Subway

Five bus lines operate within the study area, including (Exhibit 4):

- B1: Operates along Grand Concourse
- B2: Operates along Grand Concourse
- BXM4: Operates along Grand Concourse
- B32: Operates along Morris Avenue
- B35: Operates along E 167th Street

The Subway lines 7 & 4 operate near Grand Concourse, while line 4 operates along Jerome Avenue within the study area (Exhibit 4). A subway station for the lines 7 & 4 is located at the following intersection:

- E 167th Street and Grand Concourse

The subway station for line 4 is located outside of the study area at the intersection of Jerome Avenue and E 170th Street.
2 **Background**

**EXHIBIT 2 – BIKE MAP**

**EXHIBIT 3 – TRUCK MAP**

**EXHIBIT 4 – TRANSIT MAP**

**EXHIBIT 5 – LIST OF SCHOOLS IN STUDY AREA**

<table>
<thead>
<tr>
<th><strong>SCHOOL NAME</strong></th>
<th><strong>ADDRESS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Christ the King School</td>
<td>1345 Grand Concourse, New York, NY 10452</td>
</tr>
<tr>
<td>City of New York: JHS 22</td>
<td>270 East 167th Street, New York, NY 10456</td>
</tr>
<tr>
<td>Grand Concourse Academy</td>
<td>116 East 169th Street, New York, NY 10452</td>
</tr>
<tr>
<td>PS/IS 218 Rafael Hernandez</td>
<td>1220 Gerard Avenue, New York, NY 10452</td>
</tr>
<tr>
<td>PS 53 Bronx Basheer Quisim</td>
<td>360 E 168th Street, New York, NY 10456</td>
</tr>
<tr>
<td>PS 88 Silverstein Little Sparrow</td>
<td>1340 Sheridan Avenue, New York, NY 10456</td>
</tr>
</tbody>
</table>
3. EXISTING CONDITIONS

3.1 ABOUT THE STUDY AREA

The East Concourse Study Area consists of one major arterial north-south corridor: Grand Concourse between E 165th Street and Marcy Place (Photo No. 1). There are also several minor north-south corridors: Walton Avenue from E 165th Street to Marcy Place; Sheridan Avenue, Sherman Avenue, Grant Avenue and Morris Avenue all between McClellan Street and E 169th Street; and College Avenue and Findlay Avenue between E 167th Street and E169th Street. There is one major east-west corridor included in the study area: E 167th Street from Walton Avenue to Findlay Avenue. Several other minor east-west corridors are also included in the study area: Marcy Place from Jerome Avenue to Grand Concourse Avenue; Clark Place E from Walton Avenue to Grand Concourse; E 169th Street and E 167th Street from Walton Avenue to Findlay Avenue; E 168th Street from Walton Avenue to Sheridan Avenue; McClellan Street from Walton Avenue to Morris Avenue; and both E 166th Street and E 165th Street from Walton Avenue to Grand Concourse. The major corridors also carry several NYCT routes (Exhibit 4). Many of the senior residents interviewed showed some concerns about these corridors, especially the Grand Concourse. The combination of heavy traffic volumes, operational factors and geometric factors make these corridors difficult for senior pedestrians to safely cross.

3.2 FIELD OBSERVATIONS AND SENIOR PEDESTRIANS CONCERNS

There were numerous issues that were repeatedly observed during the field visits and/or conveyed by senior pedestrians during interviews. Those issues are listed here:

- Insufficient pedestrian crossing time
- Missing crosswalk markings
- Missing or non-standard ADA pedestrian ramps
- Length of crosswalks
- Missing pedestrian refuge islands
- Turning vehicles not yielding to pedestrians with right-of-way at intersection
- Poor drainage and ponding
- Potholes and poor surface conditions at crosswalks
4. TRAFFIC OPERATIONS

4.1 CRASH SUMMARY

Crash data was obtained from the New York City Department of Transportation (NYCDOT) for the East Concourse study area from 2001 through 2006. This data provides some details relating the circumstances and cause of each crash. Table 1 and Exhibit 6 show a summary of crashes.

<table>
<thead>
<tr>
<th>INTERSECTION</th>
<th>SENIOR PEDESTRIAN CRASHES</th>
<th>SENIOR PEDESTRIAN FATALITIES</th>
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<tr>
<td>Marcy Place</td>
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<td></td>
</tr>
<tr>
<td>Walton Avenue</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>East 165th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Concourse</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>East 166th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Concourse</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>East 167th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Concourse</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>East 169th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherman Avenue</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>East 167th Street</td>
<td></td>
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</tr>
<tr>
<td>Findlay Avenue</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>East 167th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Findlay Avenue</td>
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</tr>
<tr>
<td>East 169th Street</td>
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<tr>
<td><strong>TOTAL</strong></td>
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Exhibit 6 – Pedestrian Crash Statistics
4 TRAFFIC OPERATIONS

4.2 TRAFFIC VOLUMES

In order to analyze conditions for vehicles and pedestrians, traffic volume data was collected at key locations (see Table 2).

The results of the ATR, TMC and pedestrian counts are included in Appendices A, B, and C and the Technical Supplement.

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<thead>
<tr>
<th>LOCATION</th>
<th align="right">ATR ¹</th>
<th align="right">TMC²</th>
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<td align="right">x³</td>
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<td align="right">x⁴</td>
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<tr>
<td>Morris Avenue and East 167th Street</td>
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</tbody>
</table>

Notes:
1. Twenty-four hour Automatic Traffic Recorder (ATR)
2. Turning Movement Counts (TMC’s)
3. Count data provided by NYCDOT for June 2007 and projected to year 2010 at a growth rate of ½ percent per year, as per CEQR Manual directives
4. Count data provided by NYCDOT for May 2010
4.3 SIGNAL TIMING: PEDESTRIAN INTERVAL

According to the MUTCD 2009 (Manual on Uniform Traffic Control Devices), Section 4E.06, a minimum of seven (7) seconds is allocated for a walk interval, in addition to a pedestrian clearance time based on a walking speed of 3.5 feet per second. All signalized intersections within the study area were modified to provide a clearance interval of 3 feet per second to accommodate slower walking speeds (see Appendix C).
## 5. ILLUSTRATING THE SOLUTION

### 5.1 EXECUTIVE SUMMARY AND GENERAL RECOMMENDATIONS

<table>
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<th>TABLE 3: SUMMARY OF SPECIFIC RECOMMENDATIONS</th>
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<tbody>
<tr>
<td>Locations</td>
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<tr>
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<tr>
<td>Marcy Place &amp; Jerome Avenue</td>
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<td>Marcy Place &amp; Walton Avenue</td>
</tr>
<tr>
<td>Grand Concourse &amp; Marcy Place</td>
</tr>
<tr>
<td>Grand Concourse &amp; Clarke Place E</td>
</tr>
<tr>
<td>Grand Concourse &amp; E 169th Street</td>
</tr>
<tr>
<td>Grand Concourse &amp; E 168th Street</td>
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<tr>
<td>Grand Concourse &amp; E 167th Street</td>
</tr>
<tr>
<td>Grand Concourse &amp; Tudor Place</td>
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<tr>
<td>Grand Concourse &amp; McClellan Street</td>
</tr>
<tr>
<td>Grand Concourse &amp; E 166th Street</td>
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<tr>
<td>Walton Avenue &amp; Clarke Place E</td>
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<tr>
<td>Walton Avenue &amp; E 169th Street</td>
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<td>Walton Avenue &amp; E 166th Street</td>
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<tr>
<td>Walton Avenue &amp; E 165th Street</td>
</tr>
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<td>Sheridan Avenue &amp; E 167th Street</td>
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<td>Sheridan Avenue &amp; E 165th Street</td>
</tr>
<tr>
<td>Sherman Avenue &amp; E 167th Street</td>
</tr>
<tr>
<td>Sherman Avenue &amp; McClellan Street</td>
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**East Concourse**  
**Safe Streets for Seniors**  
**Final Report**  
**Page 12**
### Table 3: Summary of Specific Recommendations

<table>
<thead>
<tr>
<th>Locations</th>
<th>Install Traffic Signal</th>
<th>Installation/Replacement of Pedestrian Ramps</th>
<th>Extended/Raised Median</th>
<th>Curb Extension</th>
<th>High-visibility Crosswalk</th>
<th>Standard/School Crosswalk</th>
<th>Stripe Median</th>
<th>Stripe Parking Lane</th>
<th>Stripe Channelization</th>
<th>Enforce Day Light Saving</th>
<th>Installation of Y2P and/or any other Signs</th>
<th>Left-turn Bay</th>
<th>Stripping Improvements</th>
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<tr>
<td>Along the corridors of E 165th Street, E 167th Street, E 169th Street, McClellan Street and Walton Avenue</td>
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</tbody>
</table>

x – Recommendations proposed by study of Safe Street for Seniors - East Concourse
x¹ – Recommendations proposed under other NYCDOT projects
General Recommendations

- **Place stop bars ten feet in advance of all crosswalks**
  The NYC DOT standard for placement of a stop bar is ten feet in advance of any marked pedestrian crosswalk, including school and high-visibility crosswalks. This positioning helps to maximize pedestrian visibility and to minimize the potential for pedestrian/vehicle conflicts. Therefore, it is recommended that stop bars be placed ten feet in advance of all crosswalks.

- **Provide additional crossing time where feasible**
  A number of senior residents interviewed indicated that there was not enough time to cross many of the streets. Therefore, all of the signals, where possible, will be retimed to allow more crossing time for pedestrians.

- **Green projects where feasible**
  All medians, pedestrian plazas and curb extensions will be part of the Greenstreets project, where feasible. The Greenstreets project is a citywide program to convert paved vacant traffic islands and medians into green spaces filled with shade trees, flowering trees, shrubs and groundcover.
5.2  JEROME AVENUE AND MARCY PLACE

This intersection is one of the uncommon types of 4-legged intersections within the study area (Photo No. 2 and Figure 1). The southbound traffic approaches this intersection from both Jerome Avenue and Plaza Drive. The alignment of Jerome Avenue is north-south, and it is approximately 60 feet wide. Plaza Drive has a one-way travel lane with on-street parking on both sides of the road. The width of Plaza Drive is 35 feet. There is a striped, channelized gore area at the corner separating southbound Plaza Drive traffic and southbound Jerome Avenue traffic. Under the School Safety Project, it is recommended that Plaza Drive be entirely closed from W 170th Street to Marcy Place. This proposal is forwarded by GPI and is shown in Illustration Exhibit 7. This closure will prevent all traffic from entering Plaza Drive, relieving congestion and bottlenecks, and resulting in a safer pedestrian crossing. Access to eastbound Elliot Place from southbound Plaza Drive will also be prohibited. All improvements proposed at this location are shown in Exhibit 8.

Photo No. 2: Jerome Avenue and Marcy Place (looking north)
5.3 WALTON AVENUE

Walton Avenue from Marcy Place to E 165th Street is included within the study area. The length of this corridor is approximately 0.6 miles and the average width is 33 feet, with one moving lane in the southbound direction. There is an existing bike lane on the west side of Walton Avenue between E 167th Street and E 165th Street (Photo No. 3). It is recommended that 8 foot wide parking lanes be installed on both sides of Walton Avenue from Marcy Place to E 167th Street and on the east side of Walton Avenue between E 167th Street and E 165th Street.

In order to shorten the crossing distance, slow down vehicular traffic and provide better visibility for senior pedestrians, it is recommended that a neck-down or curb extension be constructed at the following location:

- Southeast corner of Walton Avenue and E 169th Street

Daylighting is recommended at the following intersection in order to improve pedestrian visibility to the drivers:

- Walton Avenue and Marcy Place: on the north side of Marcy Place in advance of the east crosswalk

Crosswalks and/or stop bars are recommended at the following intersections:

- Walton Avenue and Marcy Place
- Walton Avenue and E Clarke Place
- Walton Avenue and E 167th Street (Under the School Safety Project, it is recommended that the north, south and west crosswalks be replaced with school crosswalks)
- Walton Avenue and E 166th Street
- Walton Avenue and E 165th Street (Install high visibility crosswalks at this intersection as the steep gradient can impact a driver’s line of sight)

In order to shorten the crossing distance of long crosswalks and to provide a safer refuge for senior pedestrians, refuge islands or extensions of raised medians are recommended at the following locations:

- Walton Avenue and E 167th Street: Under the School Safety Project, it is recommended that 6 foot wide raised medians be installed on the east side crosswalk. It is further recommended that raised pedestrian and channelized islands be installed on the west side crosswalk.

Installation of channelized striping is recommended at Walton Avenue and E 165th Street intersection.

All improvements proposed along Walton Avenue are shown in Exhibit 9.
5.4 GRAND CONCOURSE

Grand Concourse is the most critical corridor in this Senior Pedestrian Study Area. The project limits for this corridor extend approximately 0.65 miles from E 165th Street to Marcy Place. The width of Grand Concourse within the study area varies from 140 to 145 feet. In addition, this corridor has north and south service roads (Photo No. 4). The traffic data was gathered along Grand Concourse at the E 167th Street and E 169th Street intersections. Turning movement and pedestrian counts were collected during the AM and PM peak hours at these intersections. In general, improvements are recommended at the following intersections:

- Grand Concourse & Marcy Place
- Grand Concourse & E Clarke Place
- Grand Concourse & E 169th Street
- Grand Concourse & E 168th Street
- Grand Concourse & E 167th Street
- Grand Concourse & McClellan Street
- Grand Concourse & E 166th Street
- Grand Concourse & E 165th Street

It should be noted that Academy Charter, P.S. 88 S Silverstein Little Sparrow and Christ the King Schools Safety Projects have proposed several recommendations along Grand Concourse. Proposed recommendations for this project concur with School Safety recommendations.

Under the School Safety Projects, it is recommended that a new traffic signal be installed at E 168th Street and Grand Concourse in conjunction with new school crosswalks on the north side. A neck-down or curb extension is recommended at the following locations to shorten the crossing distance, slow down vehicular traffic and provide better visibility for senior pedestrians:

- Southeast and southwest corners of Grand Concourse and Marcy Place (School Safety Project)
- Southwest side of Grand Concourse and E Clarke Place (School Safety Project)
- Along the north and south service roads of Grand Concourse and E 169th Street (School Safety Project)

It is also recommended that a raised center median with flush pedestrian ramps be installed at the intersection of Grand Concourse and Marcy Place. (This recommendation is in agreement with DOT’s capital plan.)
A raised pedestrian refuge island with flush painted median and flush pedestrian ramps are recommended for the E 165th Street crosswalks at the intersection of Grand Concourse and E 165th Street.

An extension of the median separating the Grand Concourse mainline and service roads is recommended at the following intersections in order to provide more refuge area for pedestrians and to improve visibility:

- Grand Concourse and Marcy Place
- Grand Concourse and E Clarke Place
- Grand Concourse and E 169th Street
- Grand Concourse and E 168th Street
- Grand Concourse and E 167th Street
- Grand Concourse and McClellan Street

Installation of ‘Do Not Walk’ symbol/”Use Crosswalk” signs are recommended at the following locations to avoid confusion and improve safety for pedestrians:

- Grand Concourse and E Clarke Place (‘Do Not Walk’ symbol/”Use Crosswalk” sign)
- Grand Concourse and Tudor Place (‘Do Not Walk’ symbol/”Use Crosswalk” sign)

Under the School Safety Projects, pedestrian countdown timers and “Cross With Care” signs are to be installed at the corners of the following intersections:

- Grand Concourse and Marcy Place
- Grand Concourse and E 169th Street
- Grand Concourse and E 168th Street
- Grand Concourse and E 168th Street

Lane channelization is proposed at Grand Concourse and E 165th Street intersection to provide better guidance for E 165th Street traffic while entering and traversing through a wider intersection. Additionally, high visibility crosswalks and/or stop bars are also recommended at this intersection to improve pedestrian safety.

Green island installations are recommended along the north and south service roads of Grand Concourse from E 165th Street to Marcy Place. These recommendations comply with DOT’s proposed capital plan.

Pedestrian ramps are to be realigned, installed new or made flush wherever necessary along Grand Concourse.

New pavement marking installations for the southbound left turn bay at E 169th Street are also recommended.

All improvements proposed along Grand Concourse are shown in Exhibit 10.
5.5 McCLELLAN STREET

Within the study area, the project limits for McClellan Street extend from Walton Avenue to Morris Avenue. The length of this corridor is approximately 0.33 miles with an average width of about 33 feet. McClellan Street has one moving lane eastbound from Sheridan Avenue to Morris Avenue, and one moving lane westbound from Sheridan Avenue to Walton Avenue (Photo No. 5). It is recommended that 8 foot wide parking lanes be installed on both sides of McClellan Street from Morris Avenue to Grand Concourse. It is also recommended that new pedestrian ramps be installed at the northwest and southwest corners of Sherman Avenue, and at the northeast, northwest and southwest corners of Grant Avenue, and southeast corner of Grand Concourse.

All improvements proposed along McClellan Street are shown in Exhibit 11.

Photo No. 5: McClellan St. & Morris Ave. (looking west)
5.6 E 165TH STREET

Within the study area, E 165th Street is a two-way street that provides access in the east-west directions. Between Walton Avenue and Sherman Avenue, E 165th Street is approximately 0.21 miles in length and approximately 75 feet wide (Photo No. 6). In this segment there are two moving lanes (11 feet and 18 feet wide) in each direction. Beyond this segment, E 165th Street funnels down to one moving lane in each direction with approximate width ranging from 9 feet to 11 feet. The wider roadway segment on E 165th Street is noted to encourage speeding and thus, consideration should be given to calm traffic operations on this wider section of E 165th Street in order to improve pedestrian safety.

Under this project, the study area of E 165th Street is limited to a short segment between Walton Avenue and Grand Concourse. However, after field observations it is recommended to include pedestrian safety improvements beyond this short segment and develop a comprehensive recommendation plan between Walton Avenue and Sherman Avenue, where the roadway is wider. As a result, the proposed recommendation measures presented below are inclusive of the recommendations that are located beyond the original project study area boundary of E 165th Street.

A median pedestrian refuge Island is recommended at the east and west crosswalks of Grand Concourse and E 165th Street intersection in order to calm traffic operations and shorten the pedestrian crossing distance to improve pedestrian safety.

A hatched median Island with varying width is recommended along E 165th Street between Walton Avenue and Sherman Avenue to improve pedestrian safety.

It is recommended that 11-feet wide parking lanes be striped along with 5-feet wide bike lanes on both sides of E 165th Street from Walton Avenue to Sherman Avenue. This lane striping configuration will result in one through lane with left turn bays at various intersections.

Lane channelization is also proposed at following intersections.

- Walton Avenue and E 165th Street
- Grand Concourse and E 165th Street
- Sherman Avenue and E 165th Street

Other specific intersection improvements at Walton Avenue and Grand Concourse intersections with E 165th Street are previously discussed under sections 5.3 and 5.4 of this report.

All improvements proposed along E 165th Street are shown in Exhibit 12.
5.7 E 167TH STREET

Within the study area, E 167th Street is a two-way street that provides access in the east-west direction. This corridor extends from Walton Avenue to Morris Avenue and is approximately 0.5 miles in length. The roadway width is approximately 90 feet between Walton Avenue and Sherman Avenue, and then tapers down to about 50 feet wide between Grant Avenue and Findlay Avenue. The wider roadway width is due to the additional two-way travel lanes for the main roadway underpass between Walton Avenue and Sherman Avenue (Photo No. 7). Outside of this area, the roadway is one lane in each direction.

Existing bike lanes are striped for both the eastbound and westbound directions on E 167th Street from Grant Avenue to Findlay Avenue.

It should be noted that the J.H.S. 22 – Jordan L. Mott Junior High School and the P.S. /I.S. 218 Rafael Hernandez Dual Language Magnet School Safety Projects have proposed several recommendations along E 167th Street, which are also included in these improvements.

Neck-downs or curb extensions are recommended at the following locations to shorten the crossing distance, slow down vehicular traffic and provide better visibility for senior pedestrians:

- All corners of E 167th Street and Grant Avenue (proposed under School Safety Project)
- The northwest, northeast and southeast corners of E 167th Street and Morris Avenue (proposed under School Safety Project)
- All corners of E 167th Street and College Avenue (proposed under School Safety Project)
- The northwest and southwest corners of E 167th Street and Findlay Avenue (southwest corner curb extension proposed under School Safety Project)

The installation of “STOP” and “No Left Turn” signs are recommended at the following intersections:

- E 167th Street and Sheridan Avenue (”STOP” signs)
- E 167th Street and Sherman Avenue (“No Left Turn” sign)

The installation of high visibility crosswalks is recommended at the following intersections:

- E 167th Street and Sherman Avenue intersection (east and west crosswalks)
- E 167th Street and Grant Avenue (east and west crosswalks)

All improvements proposed along E 167th Street are shown in Exhibit 13.
5.8 E 169th Street

Within the study area, E 169th Street is a two-way street providing east-west access (Photo No. 8). The corridor extends from Walton Avenue to Findlay Avenue and is approximately 0.42 miles in length. The roadway is approximately 43 feet wide. It is recommended that 8 foot wide parking lanes be installed on both sides of E 169th Street from Sheridan Avenue to Findlay Avenue. A realignment of the pedestrian ramps is proposed at the Findlay Avenue intersection.

It should be noted that J.H.S. 22 – Jordan L. Mott Junior High School and P.S 88 S Silverstein Little Sparrow School Safety Projects have proposed several recommendations along E 169th Street, which are also included in these improvements.

Neck-downs or curb extensions are recommended at the following locations to shorten the crossing distance, slow down vehicular traffic and provide better visibility for senior pedestrians:

- All corners of E 169th Street and Findlay Avenue (proposed under School Safety Project)

The installation of high visibility crosswalks are proposed at the following intersection:

- E 169th Street and College Avenue (east and west crosswalks)

The installation of a school crosswalk is proposed at the following intersection:

- E 169th Street and Grant Avenue, north side crosswalk (proposed under School Safety Project)

All improvements proposed along E 169th Street are shown in Exhibit 14.
Recommended improvements include:

- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new pedestrian ramps. Where proposed, align the ramps with the crosswalks
- Close Plaza Drive from W 170th Street to Marcy Place as shown in the illustration (proposed under School Safety Project)

Pedestrian concerns in this area:

- Non-standard pedestrian ramps
- Turning vehicles not yielding to pedestrians
- Signal timing (insufficient crossing time)

Additional Information

- This study area was visited on April 23, April 25 and August 3, 2010
- Parking regulations for the project area have been collected and are shown in Appendix D

CLOSURE OF PLAZA DRIVE PROPOSED UNDER FAMILY LIFE ACADEMY CHARTER SCHOOL SAFETY PROJECT (SHOWN IN COLOR)
Recommended improvements include:

- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new high visibility crosswalks at E 165th Street
- Install standard crosswalks at E 166th Street as shown in the illustration
- Install new advanced stop bars at E 166th Street, Clarke Place E and Marcy Place intersections as shown in the illustration
- Install new school crosswalks at the intersection of Walton Avenue and E 167th Street as shown in the illustration (proposed under the School Safety Project)
- Install 6 foot wide raised medians along E 167th Street on the east side as shown in the illustration (proposed under the School Safety Project)
- Install raised pedestrian and channelized islands at E 167th Street on the west side as shown in the illustration
- Install new pavement striping for parking lanes on both sides of Walton Avenue from E 167th Street to Marcy Place
- Install new pavement striping for parking lanes on east side of Walton Avenue from E 167th Street to E 165th Street
- Install new pedestrian ramps. Where proposed, align the ramps with the crosswalks
- Remove the first parking space along the north side of Marcy Place in advance of the east crosswalk as shown in the illustration
- Install a neck-down or a curb extension:

Pedestrian concerns in this area:

- Non-standard pedestrian ramps
- Turning vehicles not yielding to pedestrians
- Signal timing (insufficient crossing time)

Additional Information:

- This study area was visited on April 23, April 25 and August 3, 2010
- Parking regulations for the project area have been collected and are shown in Appendix D
Recommended improvements include:

- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new pavement markings as shown in the illustration
- Install new ‘Do Not Walk’ symbol “Use Crosswalk” signs at the intersections shown in the illustration
- Install raised median islands along Grand Concourse mainline and service roads at Marcy Place intersections as shown in the illustration
- Install new pedestrian ramps. Where proposed as shown in illustration and align the ramps with the crosswalks
- Flush pedestrian ramps and move if necessary at Marcy Place and McClellan Street intersections of Grand Concourse
- Install grass island along the north and south service roads as shown in the illustration
- Extend raised median Marcy Place, E 169th Street, E 168th Street, E 167th Street, McClellan Street intersection of Grand Concourse as shown in the illustration
- Install a neck-down or a curb extension
- Install a mid-block signal and school pedestrian crossings at E 168th Street and Grand Concourse (proposed under the School Safety Project)
**Recommended improvements include:**

- Install new pedestrian ramps. Where proposed, align the ramps with the crosswalks
- Install new pavement striping for parking lanes on both sides of McClellan Street from Morris Avenue to Grand Concourse

**Pedestrian concerns in this area:**

- Non-standard pedestrian ramps
- Turning vehicles not yielding to pedestrians

**Additional Information**

- This study area was visited on April 23, April 25 and August 3, 2010
- Parking regulations for the project area have been collected and are shown in Appendix D
Pedestrian concerns in this area:
- Turning vehicles not yielding to pedestrians
- Signal timing (insufficient crossing time)

Recommended improvements include:
- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new high visibility crosswalks along E 165th Street as shown in the illustration
- Install new stop bars as shown in the illustration
- Install new pavement striping for parking lanes on both sides of E 165th Street from Walton Avenue to Sherman Avenue as shown in the illustration
- Install new Pedestrian Median Islands as shown in the illustration
- Install new bike lanes as shown in the illustration
- Install new pavement striping as shown in the illustration
- Install new left turn bays as shown in the illustration

Additional Information
- This study area was visited on April 23, April 25 and August 3, 2010
- Parking regulations for the project area have been collected and are shown in Appendix D
**Recommended Improvements Include:**

- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new high visibility crosswalks at Sherman Avenue and Grant Avenue as shown in the illustration
- Install new pedestrian ramps. Where proposed, align the ramps with the crosswalks
- Install new “STOP” signs at Sheridan Avenue as shown in the illustration
- Install new “No Left Turn” sign at Sherman Avenue as shown in the illustration
- Install new pavement striping as shown in the illustration
- Install new pavement marking for parking on both sides of E 167th Street between Sherman Avenue and Grand Avenue
- Install a neck-down or a curb extension:

**Pedestrian concerns in this area:**

- Non-standard pedestrian ramps
- Turning vehicles not yielding to pedestrians
- Signal timing (insufficient crossing time)

**Additional Information**

- This study area was visited on April 23, April 25 and August 3, 2010
- Parking regulations for the project area have been collected and are shown in Appendix D
EXHIBIT 14 – E 169TH STREET

Recommended improvements include:

- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new high visibility crosswalks at E 169th Street and College Avenue as shown in the illustration
- Install new school crosswalk on the north side at the intersection of E 169th Street and Grant Avenue as shown in the illustration (proposed under School Safety Project)
- Install new pavement striping for parking lanes on both sides of E 169th Street from Grand Concourse to Findlay Avenue as shown in the illustration
- Install a neck-down or a curb extension

Additional Information

- This study area was visited on April 23, April 25 and August 3, 2010
- Parking regulations for the project area have been collected and are shown in Appendix D

Pedestrian concerns in this area:

- Non-standard pedestrian ramps
- Turning vehicles not yielding to pedestrians
- Signal timing (insufficient crossing time)