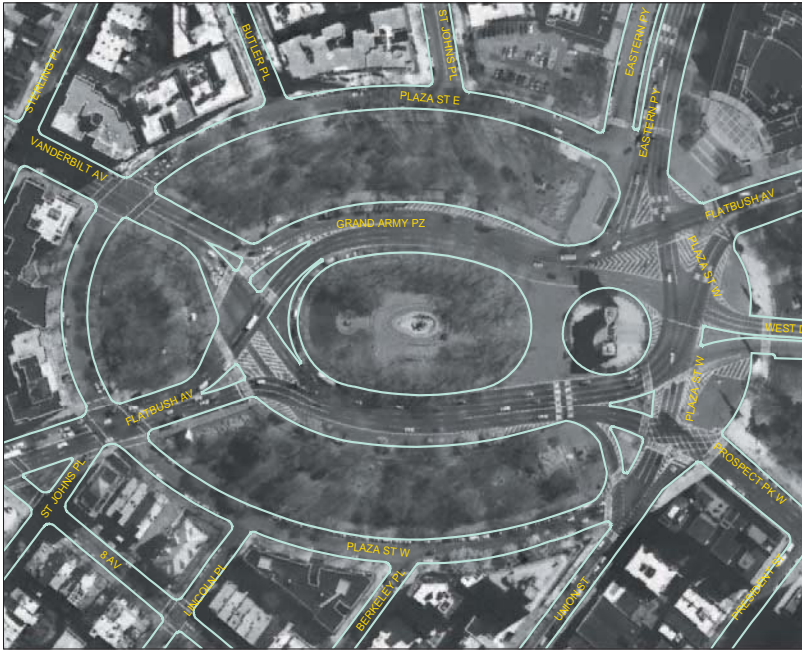


Grand Army Plaza

Description

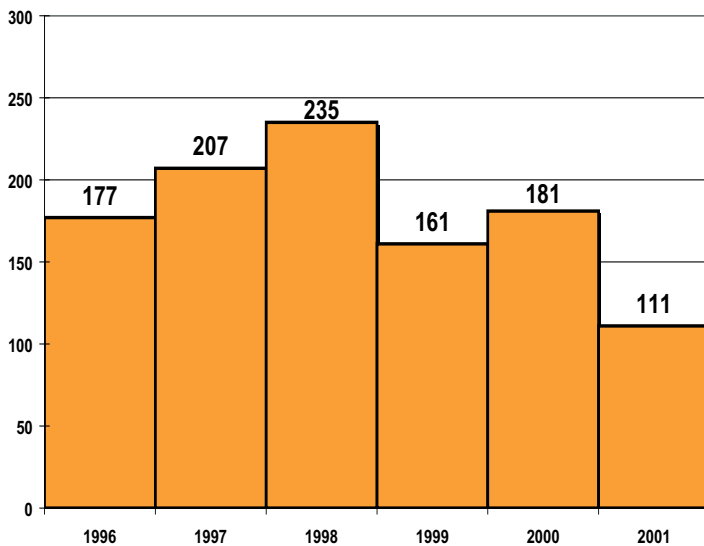


Aerial view of reconfigured intersection

Grand Army Plaza is a complex traffic circle where Flatbush and Vanderbilt Avenues, Eastern Parkway, Union Street and the Prospect Park Drive converge. Over the past several years, the Department has actively engaged in improving the operation and safety of the roadway for both motorists and pedestrians. Prior to the implementation of the Department's improvements in 1999, vehicles wishing to enter and exit the circle were forced to change lanes for the various approaches around the circle, contributing to significant

weaving movements throughout the circle. For pedestrians, the unusual geometry and wide roadway had encouraged pedestrians to move against or without signals. In addition, pedestrians were not always certain where to cross, as well as encountering medians that had little or no storage capacity.

Accident Experience 1996-2001



In the Spring of 1999, the Department conducted an in-depth analysis of the traffic conditions at Grand Army Plaza and the supporting roadways. At the time of the study, this location had consistently ranked as one of the highest overall accident locations in the city. In terms of the accident experience at this location, accidents were on an upward trend between 1996 and 1998, the year prior to the implementation of safety improvements. In 1996, there were 177 total accidents, which ranked second citywide. In 1997, accidents increased considerably to 207, which again ranked

second citywide. In 1998, accidents increased considerably, peaking at 235 total accidents. This increase made Grand Army Plaza the highest ranked accident location in the City.

In 1999, the Department implemented several measures aimed at improving vehicular and pedestrian safety throughout Grand Army Plaza. As such, the accident experience at this location improved substantially, with the total number of accidents at this location sharply decreasing by 31.4% (to 161 from 235) since 1998. In 2000, total accidents increased slightly to 181, but this still represented a 23% reduction in the number of accidents from 1998 levels. Despite the decline in the total number of accidents, this location remained the highest ranked accident location citywide. In 2001, total accidents at the intersection declined even more significantly, down 52% (to 111 from 235) from 1998 levels. For 2001, this location dropped to fourth citywide among high accident locations.

In addition to the decline in total accidents, pedestrian conditions within the Plaza have also improved. Between 1996 and 2001, there was one pedestrian accident in each of these years with the exception of 1997, when four pedestrian accidents occurred. 2001 represented the first year in which no pedestrian accidents occurred.

Based upon the consistent improvement in the accident experience at this location after the implementation of improvements in 1999, the Department has concluded that the measures implemented at this location have had a profound impact on improving the safety of both motorists and pedestrians. In addition, this location can serve as an example of the overall improvement in safety throughout the city. Although this location was ranked number one citywide in both 1999 and 2000, the total number of accidents at this location annually was still less than it was in the years prior to implementation of the safety measures. In addition, the trends in the rankings were influenced by the overall downward trend in accidents citywide.

Improvements Implemented in August 1999 and December 2000

- Through signal adjustments, separated the Prospect Park exit from the northbound Flatbush Avenue movement.
- Through new markings and signal adjustments, modified stopping points and

clearance phase to eliminate conflict between southbound Flatbush Avenue and Union Street.

- Split the pedestrian crossing of Flatbush Avenue (from the park to the library). Pedestrians are now able to cross from the park to the center median during the Flatbush Avenue north movement, from the library to the center median during the Eastern Parkway movement, and have a continuous crossing during the Prospect Park movement.
- Installed new crosswalk facilitating pedestrian access to the monument. The pedestrian signals between the traffic island and the monument were modified to display “WALK” when the southbound traffic is stopped.
- Modified the push button actuated signal (on the inner roadway at the north end of the plaza) to flash amber instead of steady green. This was coordinated with the installation of Yield signs and word message where the inner roadway merges with traffic from southbound Flatbush Avenue/Vanderbilt Avenue.
- Improved roadway geometry by modifying and refurbishing pavement markings including channelization, skip lines, lane usage arrows, painted shoulders, buffer zones, reflective lane markers, and a ‘bus only lane for southbound traffic on the west side of the Plaza.
- Installed 20 signs (12 on mast arms) in advance of and around the Plaza. These are directional signs to properly guide motorists, reduce conflicts and minimize weaving movements. The locations of these signs are shown in the illustration below.

