

## 7. ACTION PROGRAM

This section outlines the actions that were developed with the community to implement the area-wide strategy described above. *Section 7.1* introduces a number of themes that underlie the strategy; *Section 7.2* describes the action plans for each corridor that form the bulk of the strategy. The drawings that accompany each corridor's strategy show the options for which the community showed preference through extensive Open House and Community Board consultation in 2001 and 2002. Definitions and explanations of all traffic calming measures proposed in this section can be found in *Figure 4.1*.

In developing the action plan, the consultant, community, and elected officials reached a consensus that development of plans for a number of areas should be deferred to separate investigation. These areas are noted in *Section 7.2*. *Section 7.4* outlines a staging plan and provides an estimate of broad costs for each implementation stage. Finally, *Section 7.5* reviews some of the many ideas considered but rejected for inclusion in the strategy.

While this document outlines a comprehensive strategy for calming traffic in the study area, specific actions can not be implemented without the level of detailed, site-specific investigation undertaken in the Pilot Program phase. All changes to the physical layout of roadways are subject to approval and revision by NYCDOT's Highway Design section. All changes to signal timings are subject to warrant studies by NYCDOT's Signal Timing section.

### 7.1 Traffic Management Themes

A number of themes underlie the traffic calming strategy for Downtown Brooklyn. These themes, and the appropriate traffic calming tools to address them, are introduced briefly below. Each of these themes was considered in the development of the traffic calming action plan for each corridor. Note that these are not site-specific recommendations, but rather generic actions available to planners in the development of the areawide traffic calming strategy.

#### 7.1.1 Pedestrian circulation and connectivity

Because Brooklyn's surface streets carry large volumes of vehicles, some high-traffic streets are difficult for pedestrians to cross during peak hours and logical pedestrian desire lines go unserved. Strategy recommendations that address pedestrian connectivity issues include:

- **neckdowns** and **medians** to shorten crossing distances,
- signalized **mid-block crossings** to introduce connections on long blocks, and
- **leading pedestrian intervals (LPI)**, **all-pedestrian phases (APP)**, and **turn restrictions** to build pedestrian confidence and visibility at key intersections.

#### 7.1.2 Improving transit operations

Although eighteen New York City Transit bus routes serve Downtown Brooklyn, roadway congestion slows bus speeds, causes bus bunching, and hinders the ability of buses to merge back into traffic after stopping. Illegal parking and standing in bus stops create difficulties for bus drivers and for boarding and exiting passengers. Strategy recommendations that address pedestrian connectivity issues include:

- **bus bulbs** to simplify bus maneuvers and improve the bus-to-sidewalk interface,
- improved **subway/sidewalk passenger** connection, and

### 7.1.3 Developing the bicycle network

Although many neighborhoods in Downtown Brooklyn have dedicated bicycle lanes, critical gaps still exist in the area-wide cycling network. Strategy recommendations that address bicycle network issues include:

- **new bike lanes** to give cyclists safe, dedicated routes to ride,
- **neckdowns, gateways,** and other measures aimed at slowing traffic, and
- **enhanced bike lanes** to clearly delineate routes

### 7.1.4 Truck access and routing

While trucks are blamed for many traffic problems in Downtown Brooklyn, they are the primary mode of freight access in the City. Maintaining a clear and logical truck network is critical to the local economy. Strategy recommendations that mitigate truck impacts while maintaining truck access to Downtown Brooklyn include:

- **neckdowns and gateways** to keep trucks off living streets, and
- **improved street management** to improve conditions for trucks on Travel and Community Streets.

### 7.1.5 Managing through traffic

The concept of a Street Framework argues that Travel Streets are the appropriate places to accommodate through traffic in Downtown Brooklyn. At the same time, through traffic should be discouraged from using Community and Living Streets, and its impacts should be mitigated on all streets. Strategy recommendations that address through traffic issues include:

- **neckdowns, gateways, raised intersections,** and other measures to discourage through traffic from using Living and Community streets and to reclaim street space for pedestrians,
- **improved signal progressions** on Travel streets to create “green waves” that allow for appropriate free-flow travel speeds, and
- **channelization** of intersections with high pedestrian volumes to delineate vehicle and pedestrian space.

### 7.1.6 Local traffic permeability

While many traffic calming measures aim to reduce vehicular impacts and keep regional traffic off Living and Community streets, it is important that the street grid remain permeable to appropriate volumes of local traffic. Strategy recommendations that aim to preserve local permeability include:

- **raised intersections and crosswalks,** and **slow signal progressions** that slow but do not block traffic,
- **gateways,** and **neckdowns** that discourage but do not prevent traffic from entering Living streets.

### 7.1.7 Emergency vehicle access

Traffic calming projects are sometimes criticized for decreasing access and slowing response times for emergency vehicles. In the Downtown Brooklyn Traffic Calming project, every recommendation that changes street geometry has been accompanied by a test to ensure that turning fire engines and other large emergency vehicles could negotiate the new street alignments

safely. Every recommendation that alters the normal flow of traffic has been tested to make sure emergency vehicles can still permeate the entire street grid easily. Strategy recommendations that required this testing included:

- **neckdowns, raised intersections, and gateway treatments:** tested for safe vehicle movements
- **partial diverters and street direction changes:** tested for continued network permeability

**Figure 7.1 Testing the Hicks Street neckdown for FDNY turning radius**



## 7.2 Action Plans

Coordinated action plans were developed for all streets in the study area on a corridor-by-corridor basis. These action plans are consistent with the street management framework described in *Section 5.2*, the traffic management themes and tools described in *Section 7.1*, and the overall street management strategy. The plans also address the issues and ideas that arose throughout the community outreach process<sup>9</sup>. Community Boards that were directly affected reviewed each action plan, and engaged the project team in a detailed discussion of their own ideas for improving the plan. These discussions led to a final action plan for each corridor, with the reviewing Community Board's endorsement. In each case, the full Community Board adopted the endorsement of the Community Board's designated review committee (the Transportation Subcommittee in the case of Community Board 6 and a specially constituted review panel in the case of Community Board 2).

The action plans reflect the objectives for each street, based on the agreed street designation.

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<sup>9</sup> A comprehensive list of ideas raised by the community at the outset of the process can be found in *Appendix A3: Idea Development*. A comprehensive list of public comments suggesting and reacting to the action plans can be found in *Appendix D: Public Comments Received*