



# Draft Technical Memorandum

## Downtown Brooklyn Surface Transit Circulation Study

# Existing & Future Conditions

**URS**



Engineering Services Agreement (ESA) For Transportation Planning,  
Transportation Engineering, Urban Design And Related Services City Wide  
(PIN 84107MBTR187)

**Aug / 09**

## EXECUTIVE SUMMARY

Downtown Brooklyn is supported by some of the New York metropolitan region's best transit services. In fact, the Journey to Work (JTW) data from the 2000 U.S. Census shows approximately 65% of residents in the Downtown Brooklyn area use public transit for their daily commute – among the highest levels in the country. Of these, 62% commute via the subway system, most with origins and destinations to and from Downtown Brooklyn.

A total of 17 bus routes serve the Downtown Brooklyn area. During the weekday PM peak hours, more than 13,000 passengers board buses along Fulton Mall and Livingston Street alone, with a majority heading out of the downtown area to other parts of the city. For local residents, getting around Downtown Brooklyn has traditionally been accomplished by walking. In fact, only 6% of residents who work in the downtown core area commute by bus (according to 2000 JTW data). Yet no one would deny that bus transit service is a vital component of Downtown Brooklyn's surface transit system.

This report examines Downtown Brooklyn's overall surface transit environment. The results are based on extensive data analysis as well as the nearly 1000 focus group and user/non-user surveys indicating how the surface transit system is perceived by those who live, work, shop and spend time there on a daily basis. The primary focus is on bus transit service efficiency and effectiveness. What are the impacts of existing traffic congestion on quality of bus service within the downtown area? How do current bus riders perceive service in the downtown area? How will Downtown Brooklyn's projected growth and development potentially affect bus service and ridership? Are all areas adequately served by buses? This report documents existing and future conditions that directly or indirectly impact Downtown Brooklyn's surface transit. The goal of this report is to create a framework that can be used to determine the best ways to improve overall surface transit circulation in the Study Area for both the short and long term.

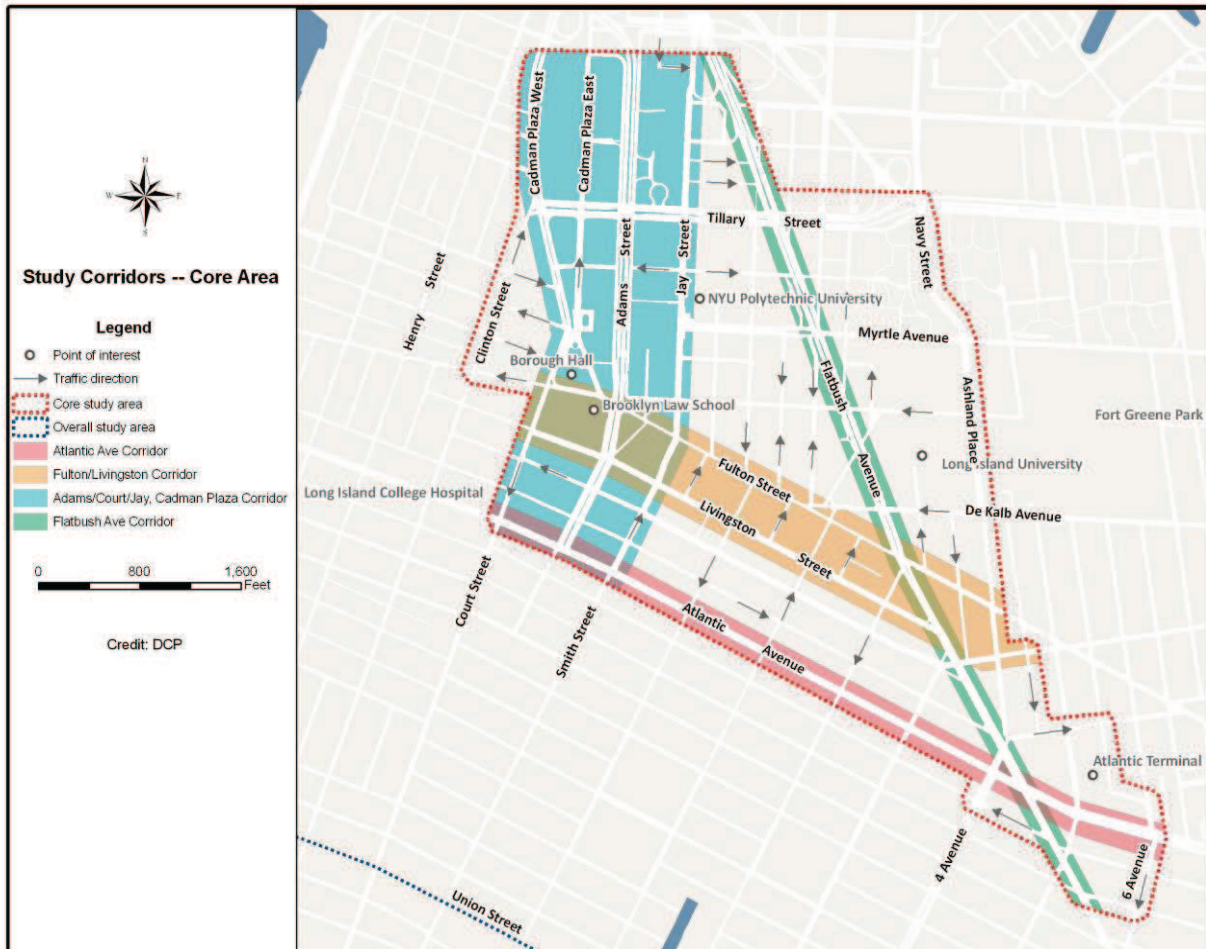
### Study Area

The Downtown Brooklyn area is defined in this report as an Overall Study Area and a Downtown Core Study Area. The Core Study Area consists of approximately one-half square mile in the urban core commonly referred to as Downtown Brooklyn. This is further broken into four corridors. These include:

- Atlantic Avenue Corridor
- Flatbush Avenue Corridor
- Jay Street/Adams Street/Cadman Plaza Corridor
- Fulton Street/Livingston Street Corridor

To facilitate analysis, a map depicting these boundaries is shown on the next page.

The overall Study Area consists of a total of nearly four square miles and has been evaluated in terms of its linkages to the Downtown area and whether or not specific neighborhoods and areas are underserved by surface transit. This area is bound by the waterfront to the north and west, Union Street to the south, and Vanderbilt Avenue to the east. It includes all or portions of Fulton Ferry/DUMBO/Vinegar Hill, Brooklyn Navy Yard, Fort Greene, Prospect Heights, Park Slope, Gowanus, and Boerum Hill/Cobble Hill/Carroll Gardens/Columbia.



### Review of Previous Studies

Through an extensive review of previous studies conducted over more than 20 years, this report identifies four recurring themes that relate to the study area’s surface transit conditions. These focus on the need to manage vehicular congestion; the reality of continuous growth and development in Downtown Brooklyn; the need to enhance existing surface transit service; and finally, a need to improve upon and expand multi-modal opportunities.

### Land Use and Demographics

Detailed descriptions of the diverse and varied neighborhoods within the study area were developed, along with key demographic statistics on employment and population densities. Total population in the Core Study Area continues to rise, jumping more than 8% from 2000-2008. Similarly employment density in the Core Study Area continues to increase, and is nearly 200,000 persons per square mile. With high densities of residents and employees, Downtown Brooklyn is an ideal candidate for transit usage. While everyone within the study area has relative proximity to surface transit routes, there is considerable variation in the level of travel options by bus from neighborhood to neighborhood.

### Transit Services and Characteristics

The report presents an overview of existing public transit service within the Study Area, including statistics on the 17 bus routes in the Study Area, locations of stops, frequencies, as well as bus ridership and bus stop volumes, and general surface transit service characteristics. During peak hours, buses arrive every 90-100 seconds along Livingston Street and Flatbush Avenue. Travel times on some routes exceed an hour, which contributes to buses having overall difficulty in maintaining schedules.

### Traveler Intercept, Bus Rider Surveys, and Focus Group Results

A series of surveys and focus group meetings were conducted to confirm field observations, to gain a better understanding of how existing bus riders and non-users perceive Downtown Brooklyn bus service, and to collect information on travel patterns and origins/destinations within the Study Area. Overall, respondents indicated that while they may use buses to get around Downtown Brooklyn, they do not use them as often as they would due to perceived reliability, on-time performance, and frequency of service issues, especially on weekends. Focus groups confirmed a number of areas perceived as bus “trouble spots” – including the Flatbush Avenue/Atlantic Terminal area, described by some as the worst intersection in Brooklyn.

### Problem Identification

The report identifies a number of surface transit and corridor-level deficiencies related to downtown circulation. There exists a high level of failing traffic intersections in every corridor identified at some point virtually every day, and while detailed information related to bus on-time performance was generally not available, that which was available shows a relatively low level of service reliability (Level “D”).

Through the development of a series of GIS maps focusing on weighted density of the number of bus routes and stops in a given neighborhood, the report evaluates in visual format the level of surface transit service that is available and that is perceived to be available throughout the Study Area. The report also identifies several neighborhoods that are experiencing new development and growth, and while well served by the subway system, could benefit from additional or new surface transit service. These potential growth areas include DUMBO (including the ferry landing), the waterfront and parallel to the new Brooklyn Bridge Park, and Fort Greene.

### Future Conditions

The locations, types, and amount of future development projected to occur within the study area are detailed in this report for two analysis years, 2011 and 2015. Data on future developments is extracted from study documents including Downtown Brooklyn Redevelopment FEIS; Atlantic Yards FEIS and Technical Memorandum; 363-365 Bond Street FEIS; A Technical Memorandum for Albee Square; and Brooklyn Bridge Park FEIS.

To identify future transit needs, travel demand forecasts were performed for each of the uses planned for development projects in the study areas. Three peak periods were analyzed, AM (8am to 9am), Mid-day (12pm to 1pm), and PM (5pm to 6pm). Assumptions and methodology are based on City Environmental Quality review (CEWR) Technical Manual, U.S. Census data, and previously approved projects.

The trip generation results indicate that over 6,000 additional daily trips can be expected by bus, and over 75,000 daily trips within the Study Area. Comparing the location of these new developments and trips to existing service, several areas emerge as areas which should be considered for additional transit services.

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