

Appendix C

Bus Routes

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A. LOCAL/LIMITED BUS ROUTES

1. Route B1 Bay Ridge Avenue/86th Street

This route provides local east/west bus service primarily along Bay Ridge Avenue and 86th Street, connecting the Bay Ridge and Manhattan Beach neighborhoods. It also serves the Southern Brooklyn neighborhoods of Dyker Heights, Bath Beach, Bensonhurst, Gravesend, and Brighton. The route operates on corridors and areas that have high density retail. The ends of the routes have a high density of residential land uses. During a field observation, maximum load point of this route was observed at 86th Street in Gravesend. Service is provided 24 hours a day, seven days a week, with headways ranging from 4 minutes during peak periods to 50 minutes during overnight hours. Operating statistics are presented on the following table.

Average Weekday Ridership	18,983
Annual Ridership	5,815,198
Citywide Ridership Rank	35
Borough Ridership Rank	12
Total Vehicle Hours	112,164
Total Vehicle Miles	917,599
Peak Vehicle Requirements	27
Scheduled Weekday Trips	150
Avg. Weekday Service Capacity Rating*	86%
Passengers per Hour (annual)	51.8
Passengers per Mile (annual)	6.3
Passengers per Peak Vehicle (annual)	215,377.7
Hours per Peak Vehicle (annual)	4,154.2
Miles per Peak Vehicle (annual)	33,985.1
Miles per Hour (annual)	8.2
Passengers per Vehicle Trip (weekday)	126.6

* *In peak direction at maximum load point*

2. Route B2 Avenue R

This relatively short route provides local east/west bus service from Kings Plaza to East 16th Street and Kings Highway, where an intermodal connection with the Kings Highway station on the Brighton subway branch (formerly D and Q trains, now Q and Q diamond trains) is available. The route primarily utilizes Avenue R, East 6th Street, Avenue F, and Flatbush Avenue to provide a fairly direct connection between a regional commercial generator and an important rapid transit line. It also serves residential areas in between the two termini, including a medium density mixed retail/residential corridor on Avenue S, and larger apartment buildings towards its western terminus. NYCT measured its maximum load point at Ocean Avenue and Avenue R, close to the western end of the route and the connection to the subway. The Marine Park Junior High School and Cunningham Junior High School are on this route. The route operates weekdays from 5:00 AM to 1:00 AM and weekends from 5:15 AM to 1:00 AM. Frequencies range from as low as 6 minutes during peak periods to 20 minutes during the midday and weekends. Operating statistics are presented on the following table.

Average Weekday Ridership	3,737
Annual Ridership	1,096,429
Citywide Ridership Rank	154
Borough Ridership Rank	45
Total Vehicle Hours	24,604
Total Vehicle Miles	173,957
Peak Vehicle Requirements	7
Scheduled Weekday Trips	92
Avg. Weekday Service Capacity Rating*	67%
Passengers per Hour (annual)	44.6
Passengers per Mile (annual)	6.3
Passengers per Peak Vehicle (annual)	156,633
Hours per Peak Vehicle (annual)	3,515.8
Miles per Peak Vehicle (annual)	24,851
Miles per Hour (annual)	7.1
Passengers per Vehicle Trip (weekday)	40.6

* In peak direction at maximum load point

3. Route B3 Avenue U

Route B3 is a local east/west route providing service between 25th Avenue/Harway Avenue in Bensonhurst and East 71st Street/Avenue U in Bergen Beach, with some service extended to 74th Street/Avenue X. Routing is primarily on Avenue U, which is a local commercial corridor surrounded by residential land uses for much of its length. The route also provides access to the regional mall at Kings Plaza, as well as four rapid transit stations on four separate branches towards the western end of the bus route. The route thus functions as both a feeder service to subway lines and a local corridor service. Service is provided 24 hours a day, seven days a week, with headways ranging from 4 minutes during peak periods to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	14,407
Annual Ridership	4,663,552
Citywide Ridership Rank	53
Borough Ridership Rank	17
Total Vehicle Hours	79,922
Total Vehicle Miles	590,933
Peak Vehicle Requirements	20
Scheduled Weekday Trips	135
Avg. Weekday Service Capacity Rating*	83%
Passengers per Hour (annual)	58.3
Passengers per Mile (annual)	7.4
Passengers per Peak Vehicle (annual)	233,177.6
Hours per Peak Vehicle (annual)	3,996.1
Miles per Peak Vehicle (annual)	29546.6
Miles per Hour (annual)	7.4
Passengers per Vehicle Trip (weekday)	106.7

* *In peak direction at maximum load point*

4. Route B4 Bay Ridge Parkway/Neptune Avenue

Route B4 is an east/west route providing service between Bay Ridge and Sheepshead Bay, serving the residential areas of Dyker Heights, Bensonhurst, Gravesend, and Brighton Beach as well. The western terminus is Narrows Avenue/77th Street and the eastern terminus is Knapp Street/Vorhees Avenue. Major generators include Coney Island Hospital and several schools. Much of the route is through residential areas, but commercial areas include Sheepshead Bay Road and Emmons Avenue. This route provides connections to two subway stops, the 77th Street station on the R line in Bay Ridge, and the Sheepshead Bay station on the Brighton Line, but it serves primarily as a grid route. Service is provided seven days a week, from 4:25 AM to 2:05 AM on weekdays and 4:30 AM to 2:20 AM on weekends. Headways range from 15 to 20 minutes throughout the service day, with the exception of 30-minute service on weekday evenings. Operating statistics are presented on the following table.

Average Weekday Ridership	6,478
Annual Ridership	2,030,438
Citywide Ridership Rank	116
Borough Ridership Rank	35
Total Vehicle Hours	56,052
Total Vehicle Miles	494,108
Peak Vehicle Requirements	12
Scheduled Weekday Trips	58
Avg. Weekday Service Capacity Rating*	80%
Passengers per Hour (annual)	36.2
Passengers per Mile (annual)	4.1
Passengers per Peak Vehicle (annual)	169,203.0
Hours per Peak Vehicle (annual)	4,671.0
Miles per Peak Vehicle (annual)	41,175.7
Miles per Hour (annual)	8.8
Passengers per Vehicle Trip (weekday)	111.7

* *In peak direction at maximum load point*

5. Route B6 Bay Parkway/Avenue J/Flatlands Avenue

Route B6 is a southwest/northeast route that offers service between Bensonhurst and East New York, using a number of different roadways and serving multiple neighborhoods. The route has both a local and limited configuration. The termini are Harway Avenue/Bay 37 Street at the western end and the New Lots Avenue Subway station on the eastern end. Some individual bus trips terminate at the Canarsie Rockaway L subway station on the eastern side and/or Avenue J/Coney Island Avenue on the west side. This long route makes many connections to subway lines in addition to the New Lots Line and Canarsie Line mentioned above. Route B6 also provides feeder service to the West End, Sea Beach, Culver, Brighton, and Nostrand Avenue lines. The terminus of the Nostrand Avenue Line is at Flatbush Avenue and Glenwood Road, a major transportation hub and commercial center, as well as a peak loading point for Route B6. Also nearby is Brooklyn College, which the B6 serves directly. There are also three high schools served by the route. Service is provided 24 hours a day, seven days a week, with headways ranging from 2.5 minutes during weekday AM peak periods to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	35,960
Annual Ridership	11,201,511
Citywide Ridership Rank	10
Borough Ridership Rank	5
Total Vehicle Hours	183,094
Total Vehicle Miles	1,400,244
Peak Vehicle Requirements	42
Scheduled Weekday Trips	227
Avg. Weekday Service Capacity Rating*	80%
Passengers per Hour (annual)	61.2
Passengers per Mile (annual)	8.0
Passengers per Peak Vehicle (annual)	26,602.6
Hours per Peak Vehicle (annual)	4,359.4
Miles per Peak Vehicle (annual)	33,339.1
Miles per Hour (annual)	7.6
Passengers per Vehicle Trip (weekday)	158.4

* *In peak direction at maximum load point*

6. Route B7 Kings Highway/Saratoga Avenue

Route B7 is a north/south route with service between Flatlands and Bushwick, primarily on Kings Highway and Saratoga Avenue. The southern terminus is at Kings Highway and Flatbush Avenue, while the northern terminus is at Broadway/Thomas S. Boyland Street. Some trips are extended south to Kings Highway/Coney Island Avenue. Subway connections are to the Brighton line at the southern terminus, the Saratoga Avenue Station on the New Lots Line, and the Halsey Street Station on the Jamaica Line. Kings Highway is a significant corridor, with commercial uses along much of its length. The maximum load point measured by MTA-NYCT was at Kings Highway/Church Avenue, which is just outside the study area border. B7 is a 24-hour route, with headways ranging from 7.5 minutes during weekday AM peak periods to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	8,026
Annual Ridership	2,378,970
Citywide Ridership Rank	102
Borough Ridership Rank	30
Total Vehicle Hours	58,582
Total Vehicle Miles	434,593
Peak Vehicle Requirements	17
Scheduled Weekday Trips	84
Avg. Weekday Service Capacity Rating*	67%
Passengers per Hour (annual)	40.6
Passengers per Mile (annual)	5.5
Passengers per Peak Vehicle (annual)	139,939.4
Hours per Peak Vehicle (annual)	3,446.0
Miles per Peak Vehicle (annual)	25,564.3
Miles per Hour (annual)	7.4
Passengers per Vehicle Trip (weekday)	95.54

* In peak direction at maximum load point

7. Route B8 18th Avenue/Avenue D

Route B8 provides service between the 95th Street subway station in Bay Ridge and Rockaway Parkway/Hegeman Avenue in Brownsville, serving two major medical facilities, the V.A. Hospital at Fort Hamilton and the Brookdale Hospital at the eastern terminus of the route. The route uses several different roadways in Southern Brooklyn, serving the neighborhoods of Bath Beach, Bensonhurst, Flatbush, and Remsen Village. Much of the development along the route is medium density residential, with some local commercial uses. Generators other than the aforementioned hospitals include Dyker Beach Park and Golf Course and several schools. In addition to the connection to Fourth Avenue Line at 95th Street, this route also offers feeder service to subway stations on the West End Line, Sea Beach Line, Culver, and Nostrand Lines. The B8 is a 24-hour route, with headways ranging from 5 minutes during weekday peak periods to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	20,725
Annual Ridership	6,466,103
Citywide Ridership Rank	25
Borough Ridership Rank	9
Total Vehicle Hours	133,818
Total Vehicle Miles	994,041
Peak Vehicle Requirements	32
Scheduled Weekday Trips	147
Avg. Weekday Service Capacity Rating*	67%
Passengers per Hour (annual)	48.2
Passengers per Mile (annual)	6.5
Passengers per Peak Vehicle (annual)	202,065.7
Hours per Peak Vehicle (annual)	4,181.8
Miles per Peak Vehicle (annual)	31,063.8
Miles per Hour (annual)	7.4
Passengers per Vehicle Trip (weekday)	141.0

* *In peak direction at maximum load point*

8. Route B9 60th Street/Avenue M

Route B9 buses operate east/west from 71st Street/Shore Road in Bay Ridge to Kings Plaza. Some trips terminate at Flatbush Avenue/Avenue L on the east end of the route. The route serves a number of residential areas, including 60th Street in Bay Ridge and Bensonhurst, and Avenues N and L. A busy commercial district along Avenue M is also part of the route, and Kings Plaza at the eastern end is a major regional shopping center. The route also serves several schools and the West End, Culver and Brighton Subway Lines. The B9 provides service every day from 4:45 AM to 2:20 AM. Frequencies range from 4.5 minutes during weekday AM peak periods to 15 minutes on weekend evenings. Operating statistics are presented on the following table.

Average Weekday Ridership	12,109
Annual Ridership	3,754,059
Citywide Ridership Rank	74
Borough Ridership Rank	25
Total Vehicle Hours	90,125
Total Vehicle Miles	744,787
Peak Vehicle Requirements	22
Scheduled Weekday Trips	122
Avg. Weekday Service Capacity Rating*	53%
Passengers per Hour (annual)	41.6
Passengers per Mile (annual)	5.0
Passengers per Peak Vehicle (annual)	170,639.0
Hours per Peak Vehicle (annual)	4,096.6
Miles per Peak Vehicle (annual)	33,853.9
Miles per Hour (annual)	8.3
Passengers per Vehicle Trip (weekday)	99.2

* *In peak direction at maximum load point*

9. Route B11 49th & 50th Streets/Avenue J

Route B11 is another east/west grid route, providing service between the Junction at Flatbush Avenue and Glenwood Road, 1st Avenue/59th Street. This includes service via 49th and 50th Streets through Sunset Park and Borough Park. These streets are residential collectors as opposed to arterials, and therefore tend to have low operating speeds and few commercial generators. The environment on Avenues I and J towards the eastern end of the route also tends to be primarily residential, with some areas of single family detached housing. There are, however, several significant generators served by the route, including the Junction commercial area, Brooklyn College, Maimonides Medical Center, Lutheran Hospital, and Brooklyn Army Terminal. After September 11, 2001 ferry service from the Brooklyn Army Terminal to Lower Manhattan was initiated, with the Route B11 providing connections to this service. The B11 provides service every day from about 4:00 AM to 1:00 AM. Frequencies range from 7.5 minutes during weekday peak periods to 20 minutes during times on Saturdays. Operating statistics are presented on the following table.

Average Weekday Ridership	11,266
Annual Ridership	3,379,654
Citywide Ridership Rank	78
Borough Ridership Rank	26
Total Vehicle Hours	76,724
Total Vehicle Miles	487,229
Peak Vehicle Requirements	18
Scheduled Weekday Trips	110
Avg. Weekday Service Capacity Rating*	81%
Passengers per Hour (annual)	44.0
Passengers per Mile (annual)	6.9
Passengers per Peak Vehicle (annual)	187,758.5
Hours per Peak Vehicle (annual)	4,262.4
Miles per Peak Vehicle (annual)	27,068.3
Miles per Hour (annual)	6.4
Passengers per Vehicle Trip (weekday)	102.4

* *In peak direction at maximum load point*

10. Route B13 Crescent Street

Route B13 provides service between the Brooklyn Developmental Center in Spring Creek and Ridgewood/Myrtle Avenue in Ridgewood, Queens. Only the southern end of the route is within the study project area. The routing is north/south within Brooklyn, with the exception of a diversion into one of the major generators on the route, the Brooklyn General Mail Facility. This route serves residential and commercial areas in eastern Brooklyn, including businesses on Crescent Street. A connection to the Jamaica subway line is available at the Crescent Street station on Crescent and Fulton Streets, and a connection to the Fulton Street Line is available at the Euclid Avenue station. There are also connections to the Canarsie Line and Myrtle Avenue Line in Ridgewood. The B13 provides service every day from 5:00 AM to 1:45 AM. Headways of 30 minutes are provided at non-peak times and weekends, with 10 or 15 minute headways during weekday peak times. Operating statistics are presented on the following table.

Average Weekday Ridership	3,428
Annual Ridership	1,103,375
Citywide Ridership Rank	157
Borough Ridership Rank	46
Total Vehicle Hours	33,496
Total Vehicle Miles	253,266
Peak Vehicle Requirements	9
Scheduled Weekday Trips	53
Avg. Weekday Service Capacity Rating*	61%
Passengers per Hour (annual)	32.9
Passengers per Mile (annual)	4.3
Passengers per Peak Vehicle (annual)	122,597.2
Hours per Peak Vehicle (annual)	3,721.8
Miles per Peak Vehicle (annual)	28,140.7
Miles per Hour (annual)	7.6
Passengers per Vehicle Trip (weekday)	64.7

* In peak direction at maximum load point

11. Route B15 Marcus Garvey Boulevard

Route B15 provides service between Bushwick and John F. Kennedy International Airport, operating along Linden Boulevard through the study area from Fountain Avenue into Queens. This route serves the Brooklyn General Mail Facility. This is the only Brooklyn bus route that provides service to Kennedy Airport, and ridership was observed to be quite heavy between the Airport and the subway stations served. The B15 operates 24 hours a day, seven days a week, with headways ranging from fifteen minutes during peak periods, to 45 minutes late at night. The following table provides ridership statistics for this route.

Average Weekday Ridership	20,831
Annual Ridership	6,828,394
Citywide Ridership Rank	23
Borough Ridership Rank	8
Total Vehicle Hours**	141,938
Total Vehicle Miles**	1,240,809
Peak Vehicle Requirements**	25
Scheduled Weekday Trips**	312
Avg. Weekday Service Capacity Rating*	80%
Passengers per Hour (annual)	48.1
Passengers per Mile (annual)	5.5
Passengers per Peak Vehicle (annual)	273,135.8
Hours per Peak Vehicle (annual)	5,677.5
Miles per Peak Vehicle (annual)	49,672.4
Miles per Hour (annual)	8.7
Passengers per Vehicle Trip (weekday)	66.8

* *In peak direction at maximum load point*

** *1999 Data*

12. Route B16 Ft Hamilton Parkway/13th & 14th Avenue

Route B16 is a north/south route operating between Shore Road/4th Avenue in Bay Ridge and Ocean Avenue/Lincoln Road at Prospect Park. In between, the route operates through neighborhoods in the communities of Dyker Heights, Borough Park, and Kensington. 13th and 14th Avenues in Borough Park, a one-way pair, form a significant commercial corridor. Business districts in Bay Ridge and Flatbush are also served. Connections to the subway include a stop at the 86th Street Station of the Fourth Avenue Line the 55th Street station on the West End Line, and the Parkside Avenue and Prospect Park stations on the Brighton Line. This route provides service every day from about 4:45 AM to 1:35 AM. Frequencies range from 5.5 minutes in the weekday afternoon peak to 20 minutes during evenings. Operating statistics are presented on the following table.

Average Weekday Ridership	7,360
Annual Ridership	2,226,612
Citywide Ridership Rank	109
Borough Ridership Rank	32
Total Vehicle Hours	68,433
Total Vehicle Miles	540,881
Peak Vehicle Requirements	19
Scheduled Weekday Trips	87
Avg. Weekday Service Capacity Rating*	78%
Passengers per Hour (annual)	32.5
Passengers per Mile (annual)	4.1
Passengers per Peak Vehicle (annual)	117,190.1
Hours per Peak Vehicle (annual)	3,601.7
Miles per Peak Vehicle (annual)	28,467.4
Miles per Hour (annual)	7.9
Passengers per Vehicle Trip (weekday)	84.6

* *In peak direction at maximum load point*

13. Route B17 Remsen/Seaview Avenues

Route B17 operates between the Crown Heights/Utica Avenue subway station in Crown Heights south to Seaview Avenue/East 108th Street in Canarsie. An alternate configuration of this route diverts to the Canarsie Line subway at the Rockaway Parkway, station, providing feeder service, and also serves Canarsie Beach Park via Avenue L and East 80th Street. Both of the configurations on the southern end of the route are through fairly low density residential areas. The route serves the Brooklyn Terminal Market off of Remsen Avenue. It is a 24-hour route, with service every day and weekday peak headways as frequent as 3.5 minutes. The longest headways are 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	14,480
Annual Ridership	4,413,366
Citywide Ridership Rank	58
Borough Ridership Rank	18
Total Vehicle Hours	77,617
Total Vehicle Miles	617,157
Peak Vehicle Requirements	21
Scheduled Weekday Trips	154
Avg. Weekday Service Capacity Rating*	86%
Passengers per Hour (annual)	56.9
Passengers per Mile (annual)	7.1
Passengers per Peak Vehicle (annual)	210,160.3
Hours per Peak Vehicle (annual)	3696.0
Miles per Peak Vehicle (annual)	29,388.4
Miles per Hour (annual)	8.0
Passengers per Vehicle Trip (weekday)	94.0

* *In peak direction at maximum load point*

14. Route B20 Pennsylvania Avenue/Linden Boulevard

Route B20 provides local service between the Brooklyn General Mail Facility in East New York and 67th Avenue/Forest Avenue in Ridgewood. Approximately half of the trips have a northern terminus of Broadway Junction/East New York subway station, serving as a feeder to the three subway lines that serve that station. Part of this route runs along the northern border of the project area (Linden Boulevard). In addition to serving the major employment generator of the Mail Facility, this route provides residents of this area with access to business on Pennsylvania Avenue and Broadway, as well as to the aforementioned Broadway Junction subway station and the New Lots Line. Route B20 is in service from approximately 5:00 AM to 1:25 AM on weekdays and 5:40AM to 1:25 AM on weekends. Service is provided at 6.5 minute intervals during the morning weekday peak with off-peak and weekend service at 15-20 minutes. Operating statistics are presented on the following table.

Average Weekday Ridership	7,226
Annual Ridership	2,223,702
Citywide Ridership Rank	110
Borough Ridership Rank	33
Total Vehicle Hours	53,218
Total Vehicle Miles	386,786
Peak Vehicle Requirements	21
Scheduled Weekday Trips	88
Avg. Weekday Service Capacity Rating*	84%
Passengers per Hour (annual)	41.8
Passengers per Mile (annual)	5.7
Passengers per Peak Vehicle (annual)	105,890.6
Hours per Peak Vehicle (annual)	2,486.6
Miles per Peak Vehicle (annual)	18,418.4
Miles per Hour (annual)	7.3
Passengers per Vehicle Trip (weekday)	82.1

* *In peak direction at maximum load point*

15. Route B23 16th Avenue/Cortelyou Road

The B23 is a short local route passing through the communities and business districts of Borough Park, Kensington, and Flatbush, via 16th Avenue and Cortelyou Road. It serves partly as a feeder route, serving the West End and Sea Beach Lines at its western terminus and the Brighton subway line and high frequency Flatbush Avenue B41 bus line on the eastern end. Several schools are also served by this route. Route B23 is in service from approximately 5:30 AM to 11:30 PM on weekdays and 5:30 AM to 11:20 PM on weekends. Headways range from 12 to 30 minutes on weekdays and are 20 minutes all day and evening on weekends. Operating statistics are presented on the following table.

Average Weekday Ridership	1,757
Annual Ridership	530,704
Citywide Ridership Rank	176
Borough Ridership Rank	53
Total Vehicle Hours	19,465
Total Vehicle Miles	130,552
Peak Vehicle Requirements	4
Scheduled Weekday Trips	44
Avg. Weekday Service Capacity Rating*	63%
Passengers per Hour (annual)	27.3
Passengers per Mile (annual)	4.1
Passengers per Peak Vehicle (annual)	132676.0
Hours per Peak Vehicle (annual)	4866.2
Miles per Peak Vehicle (annual)	32638.0
Miles per Hour (annual)	6.7
Passengers per Vehicle Trip (weekday)	39.9

* *In peak direction at maximum load point*

16. Route B31 Gerritsen Avenue

The B31 is a short feeder route serving the community of Gerritsen Beach and providing residents with access to the Kings Highway subway station on the Brighton Line. The route operates between that station and Gerritsen Avenue/Lois Avenue. Although there is some commercial activity on Gerritsen Avenue itself, the community of Gerritsen Beach consists mainly of modest single-family homes on small lots. The route also serves several schools. Service on the B31 is provided on a 24 hour-basis, with evening service coordinated with the B2. Frequencies are highest in the weekday PM peak, with 7.5 minute headways, and lowest overnight, with 40 minute headways. Operating statistics are presented on the following table.

Average Weekday Ridership	2,733
Annual Ridership	785,862
Citywide Ridership Rank	165
Borough Ridership Rank	51
Total Vehicle Hours	24,149
Total Vehicle Miles	201,228
Peak Vehicle Requirements	6
Scheduled Weekday Trips	73
Avg. Weekday Service Capacity Rating*	72%
Passengers per Hour (annual)	32.5
Passengers per Mile (annual)	3.9
Passengers per Peak Vehicle (annual)	130,977.0
Hours per Peak Vehicle (annual)	4,024.8
Miles per Peak Vehicle (annual)	33,538.0
Miles per Hour (annual)	8.3
Passengers per Vehicle Trip (weekday)	37.4

* *In peak direction at maximum load point*

17. Route B35 Church Avenue/39 Street

Route B35 provides service along the northern edge of the study area, from 1st Avenue/39th Street in the Sunset Park area, to Hegeman Avenue/Mother Gaston Boulevard in Brownsville. Some trips do not serve the entire length of the route, terminating at McDonald Avenue/Church Avenue and/or Kings Highway/Church Avenue. It serves as an east/west grid route, while at the same time providing connections to the West End, Culver, Brighton, and Nostrand Subway Lines. Church Avenue is a commercial corridor, with a consistent level of commercial activity for most of its length. The B35 is a 24-hour route, with headways ranging from 2.5 minutes during weekday peak periods to 45 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	36,142
Annual Ridership	11,649,465
Citywide Ridership Rank	7
Borough Ridership Rank	4
Total Vehicle Hours	166,867
Total Vehicle Miles	1,011,643
Peak Vehicle Requirements	40
Scheduled Weekday Trips	237
Avg. Weekday Service Capacity Rating*	79%
Passengers per Hour (annual)	69.8
Passengers per Mile (annual)	11.3
Passengers per Peak Vehicle (annual)	291,236.6
Hours per Peak Vehicle (annual)	4,171.7
Miles per Peak Vehicle (annual)	25,291.1
Miles per Hour (annual)	6.1
Passengers per Vehicle Trip (weekday)	152.5

* *In peak direction at maximum load point*

18. Route B36 Avenue Z/Surf Avenue

Route B36 serves the communities of Sea Gate, Coney Island, Brighton, and Sheepshead Bay in a primarily east/west direction. Termini are at Avenue U/Nostrand Avenue and West 37th Street/Surf Avenue. A number of types of residential communities are served by this route, including the entrance to the gated community of Sea Gate, and a number of residential high rises along Surf Avenue. Shopping districts along the route include ones along Nostrand Avenue and Sheepshead Bay Road. Other generators include recreational areas such as Coney Island Beach, Brighton Beach, and Sheepshead Bay, attractions of Keyspan Park and the New York Aquarium, several schools, and the Coney Island Hospital. Subway connections to several lines are available at the Stillwell Avenue Station and others along the route. The service operates 24 hours a day, with headways as frequent as 2.5 minutes during the morning peak period and as infrequent as 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	15,767
Annual Ridership	4,732,844
Citywide Ridership Rank	50
Borough Ridership Rank	15
Total Vehicle Hours	74,198
Total Vehicle Miles	607,669
Peak Vehicle Requirements	23
Scheduled Weekday Trips	140
Avg. Weekday Service Capacity Rating*	78%
Passengers per Hour (annual)	63.8
Passengers per Mile (annual)	7.8
Passengers per Peak Vehicle (annual)	205,775.8
Hours per Peak Vehicle (annual)	3,226.0
Miles per Peak Vehicle (annual)	26,420.4
Miles per Hour (annual)	8.2
Passengers per Vehicle Trip (weekday)	112.6

* In peak direction at maximum load point

19. Route B37 3rd Avenue

B37 is a long north/south grid route covering the western edge of Southern Brooklyn and continuing to Downtown Brooklyn. It operates between Shore Road/3rd Avenue and Court Street/Livingston Street, serving the community of Bay Ridge in the study area. This bus route parallels the Fourth Avenue subway line but does not provide direct transfers to it or any other subway line until it reaches downtown Brooklyn. 3rd Avenue is a commercial corridor in parts of Bay Ridge and Sunset Park. This route also provides access to several schools. Service is provided 24 hours per day on the B37, with headways ranging from 12 minutes during weekday peak periods to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	4,586
Annual Ridership	1,363,744
Citywide Ridership Rank	145
Borough Ridership Rank	42
Total Vehicle Hours	47,654
Total Vehicle Miles	351,081
Peak Vehicle Requirements	11
Scheduled Weekday Trips	61
Avg. Weekday Service Capacity Rating*	66%
Passengers per Hour (annual)	28.6
Passengers per Mile (annual)	3.9
Passengers per Peak Vehicle (annual)	123,976.7
Hours per Peak Vehicle (annual)	4,332.2
Miles per Peak Vehicle (annual)	31,916.4
Miles per Hour (annual)	7.4
Passengers per Vehicle Trip (weekday)	75.2

* *In peak direction at maximum load point*

20. Route B41 Kings Plaza/Downtown Brooklyn

The B41 is a high volume local and limited stop route serving the Flatbush Avenue corridor from Downtown Brooklyn to Kings Plaza or Bergen Beach. The northern terminus is at Tillary Street/Cadman Plaza, while some trips terminate at Kings Plaza in the south and others travel to Veterans Avenue/East 70th Street. In addition to providing service in a high demand corridor that runs the length of the borough, the B41 serves an important function of providing access to the Nostrand Avenue Subway Line terminus at Flatbush Avenue/Glenwood Road to residents in residential communities south of that location and in this sense serves as an extension or a feeder line to the subway. Kings Plaza also represents an important regional destination, and the B41 provides direct access to it from much of central Brooklyn. A major portion of Flatbush Avenue contains commercial uses, as well as high density residential uses on and near it, which tend to become relatively less dense towards the south. Brooklyn College and a high school and junior high school are served by this route. B41 is a high frequency, 24-hour route, with headways less than 10 minutes at all times except the overnight hours when headways are 30 minutes. Weekday peak frequencies are 2 minutes in the AM and 2.5 minutes in the PM. Operating statistics are presented on the following table.

Average Weekday Ridership	40,482
Annual Ridership	12,945,534
Citywide Ridership Rank	5
Borough Ridership Rank	3
Total Vehicle Hours	232,836
Total Vehicle Miles	1,451,291
Peak Vehicle Requirements	58
Scheduled Weekday Trips	288
Avg. Weekday Service Capacity Rating*	76%
Passengers per Hour (annual)	55.6
Passengers per Mile (annual)	8.9
Passengers per Peak Vehicle (annual)	223,198.9
Hours per Peak Vehicle (annual)	4,014.4
Miles per Peak Vehicle (annual)	25,022.3
Miles per Hour (annual)	6.2
Passengers per Vehicle Trip (weekday)	140.6

* In peak direction at maximum load point

21. Route B42 Rockaway Parkway

Route B42 is a feeder service that runs on Rockaway Parkway and provides connections between the community of Canarsie and the Rockaway Parkway station of the Canarsie subway line. The southern terminus is the Canarsie Pier, while the northern terminus is the subway station, where buses pull in directly adjacent to the platform, enabling passengers to transfer without going through the turnstiles. Rockaway Parkway itself is a wide roadway and, apart from the area around the station and a large apartment development on Seaview Avenue, the area served is mainly single family residential. Canarsie High School is also served by this route. The service operates 24 hours a day, and offers frequent service, with headways ranging from 3 minutes during the morning peak period to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	5,042
Annual Ridership	1,549,694
Citywide Ridership Rank	133
Borough Ridership Rank	39
Total Vehicle Hours	31,128
Total Vehicle Miles	228,855
Peak Vehicle Requirements	10
Scheduled Weekday Trips	159
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	49.8
Passengers per Mile (annual)	6.8
Passengers per Peak Vehicle (annual)	154,969.4
Hours per Peak Vehicle (annual)	3,112.8
Miles per Peak Vehicle (annual)	22,885.5
Miles per Hour (annual)	7.4
Passengers per Vehicle Trip (weekday)	31.7

* *In peak direction at maximum load point*

22. Route B44 Nostrand Avenue

Route B44 is a major north/south route that runs through the middle of Brooklyn, staying on Nostrand Avenue for most of its length. The route operates as a local and a limited from the Williamsburg Bridge Plaza to Knapp Street/Emmons Avenue. Not all trips extend the length of the full route, for instance, some terminate at Nostrand Avenue and Avenue U. Nostrand Avenue is a major corridor, with commercial activity throughout much of its length and often dense residential development around it. An area of particularly heavy activity is the junction at Flatbush Avenue, which is the maximum load point for the route in both directions. This is also a key transfer point to the Nostrand Ave Subway Line and a number of other bus routes, as well as the location of Brooklyn College. The B44 serves as an important feeder from residential areas south of the junction to the subway. Other generators on this route include a number of hospitals and schools. The B44 is a 24-hour route. Headways range from 2 minutes during the morning peak to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	42,501
Annual Ridership	13,426,755
Citywide Ridership Rank	3
Borough Ridership Rank	1
Total Vehicle Hours	220,956
Total Vehicle Miles	1,604,553
Peak Vehicle Requirements	56
Scheduled Weekday Trips	267
Avg. Weekday Service Capacity Rating*	75%
Passengers per Hour (annual)	60.8
Passengers per Mile (annual)	8.4
Passengers per Peak Vehicle (annual)	239,763.5
Hours per Peak Vehicle (annual)	3,945.6
Miles per Peak Vehicle (annual)	28,652.7
Miles per Hour (annual)	7.3
Passengers per Vehicle Trip (weekday)	159.2

* *In peak direction at maximum load point*

23. Route B46 Utica Avenue/Malcolm X Blvd

The B46 is another major north/south route serving an important corridor in central Brooklyn. It runs from the Williamsburg Plaza to Kings Plaza, traveling on Utica Avenue within the study area except for a short stretch of Flatbush Avenue near its southern terminus. Utica Avenue is a major corridor that runs through the neighborhoods of Flatlands, East Flatbush, and Crown Heights. The B46 provides connections from these neighborhoods to the Utica Avenue stations on the Fulton Street and New Lots Subway Lines. Development becomes less dense towards the southern end of the route. This route operates on a 24-hour basis, with high frequencies at most times. Headways are 2 minutes in the weekday morning and afternoon peaks, and no more than 6.5 minutes at other times, with the exception of 60 minute headways overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	41,463
Annual Ridership	13,396,171
Citywide Ridership Rank	4
Borough Ridership Rank	2
Total Vehicle Hours	218,846
Total Vehicle Miles	1,490,498
Peak Vehicle Requirements	53
Scheduled Weekday Trips	316
Avg. Weekday Service Capacity Rating*	77%
Passengers per Hour (annual)	61.2
Passengers per Mile (annual)	9.0
Passengers per Peak Vehicle (annual)	252,57.9
Hours per Peak Vehicle (annual)	4,129.2
Miles per Peak Vehicle (annual)	28,122.6
Miles per Hour (annual)	6.8
Passengers per Vehicle Trip (weekday)	131.2

* *In peak direction at maximum load point*

24. Route B49 Ocean Avenue/Bedford & Rogers Avenue

B49 is a north-south grid route that operates between Oriental Boulevard/Mackenzie Street in Manhattan Beach to Fulton Street/Bedford Avenue in Bedford-Stuyvesant. It provides local routing in Manhattan Beach and Sheepshead Bay and a connection to the Sheepshead Bay subway station on the Brighton Line. The Ocean Avenue corridor has significant development, including neighborhood retail areas and high-rise apartment buildings. Major shopping centers are located at Kings Highway and Flatbush Avenue. The route runs parallel to the Brighton subway line, with no connections to rapid transit until it reaches the Fulton Street line at its northern terminus. The B49 operates from 4:06 AM to 2:14 AM on weekdays and 4:15 AM to about 3:00 AM on weekends. Headways range from 3 minutes in the weekday morning peak to 12 minutes on Sunday mornings and evenings. Operating statistics are presented on the following table.

Average Weekday Ridership	20,553
Annual Ridership	6,312,011
Citywide Ridership Rank	28
Borough Ridership Rank	11
Total Vehicle Hours	142,689
Total Vehicle Miles	1,112,740
Peak Vehicle Requirements	40
Scheduled Weekday Trips	173
Avg. Weekday Service Capacity Rating*	76%
Passengers per Hour (annual)	44.2
Passengers per Mile (annual)	5.7
Passengers per Peak Vehicle (annual)	157,800.3
Hours per Peak Vehicle (annual)	3,567.2
Miles per Peak Vehicle (annual)	27,818.5
Miles per Hour (annual)	7.8
Passengers per Vehicle Trip (weekday)	118.8

* In peak direction at maximum load point

25. Route B60 Wilson Avenue/Rockaway Avenue

Route B60 dips into the project area at its southern end, running from Williams Avenue/Flatlands Avenue in the Brownsville/Canarsie area to the Williamsburg Bridge Plaza. It serves a significant housing project at its southern end, and provides connections to the Rockaway Parkway subway station on the Canarsie Line. It then continues to the north on Rockaway Parkway and Rockaway Avenue, making connections to the New Lots and Fulton Street Subway Lines. The route operates on a 24-hour basis, with headways as frequent as 6 minutes during the weekday AM peak and 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	16,301
Annual Ridership	5,137,485
Citywide Ridership Rank	44
Borough Ridership Rank	14
Total Vehicle Hours**	107,903
Total Vehicle Miles**	770,926
Peak Vehicle Requirements**	26
Scheduled Weekday Trips**	245
Avg. Weekday Service Capacity Rating*	78%
Passengers per Hour (annual)	47.6
Passengers per Mile (annual)	6.7
Passengers per Peak Vehicle (annual)	197,595.6
Hours per Peak Vehicle (annual)	4,150.1
Miles per Peak Vehicle (annual)	29,651.0
Miles per Hour (annual)	7.1
Passengers per Vehicle Trip (weekday)	66.5

* In peak direction at maximum load point

** 1999 Data

26. Route B63 Fifth/Atlantic Avenues

B63 operates from Shore Road/4th Avenue to Columbia Street/Atlantic Avenue in Cobble Hill, passing through Bay Ridge, Sunset Park, and Park Slope. Within the study area it runs along 5th Avenue in both directions. The route runs parallel to the Fourth Avenue Subway Line, providing a connection to it at its 95th Street terminus. The route operates 24 hours a day, with headways ranging from 5.5 minutes in the weekday afternoon peak to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	14,234
Annual Ridership	4,710,340
Citywide Ridership Rank	52
Borough Ridership Rank	16
Total Vehicle Hours	110,446
Total Vehicle Miles	681,326
Peak Vehicle Requirements	24
Scheduled Weekday Trips	111
Avg. Weekday Service Capacity Rating*	78%
Passengers per Hour (annual)	42.6
Passengers per Mile (annual)	6.9
Passengers per Peak Vehicle (annual)	196,264.2
Hours per Peak Vehicle (annual)	4,601.9
Miles per Peak Vehicle (annual)	28,388.6
Miles per Hour (annual)	6.2
Passengers per Vehicle Trip (weekday)	128.23

* In peak direction at maximum load point

27. Route B64 86th Street/Bath Avenue

Route B64 is a primarily east/west grid route, serving activity centers at either end in Bay Ridge and Coney Island, and routing through the communities of Dyker Heights, Bath Beach, and Bensonhurst. Its western terminus is 4th Avenue and 86th street, which is a major retail center and a shopping destination for many in southwestern Brooklyn. Transfers to the 86th Street station of the Fourth Avenue subway line are available here as well. At the other terminus, Stillwell Avenue/Mermaid Avenue, connections are available to multiple subway lines at the Stillwell Avenue station, and attractions include Keyspan Park, the New York Aquarium, and Coney Island Beach. The environment between the two termini is characterized by medium density residential development and neighborhood retail. The route also provides access to the Dyker Beach Park and Golf course. The B64 operates 24 hours. Service is most frequent during midday and afternoons, reflecting the importance of shopping to users of the route. Frequencies range from 8.5 minutes on Saturday afternoons to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	5,770
Annual Ridership	1,862,515
Citywide Ridership Rank	123
Borough Ridership Rank	37
Total Vehicle Hours	40,957
Total Vehicle Miles	334,030
Peak Vehicle Requirements	8
Scheduled Weekday Trips	87
Avg. Weekday Service Capacity Rating*	78%
Passengers per Hour (annual)	45.5
Passengers per Mile (annual)	5.6
Passengers per Peak Vehicle (annual)	232,814.3
Hours per Peak Vehicle (annual)	5,119.6
Miles per Peak Vehicle (annual)	41,753.7
Miles per Hour (annual)	8.2
Passengers per Vehicle Trip (weekday)	66.3

* In peak direction at maximum load point

28. Route B67 McDonald/7th Avenues

Route B67 provides service between downtown Brooklyn and Kensington, on the northern edge of the study area. Within the study area, service is on McDonald Avenue. A connection is provided to the Culver Subway line at Church Avenue. The route continues north and serves the Park Slope neighborhood via 7th Avenue. The B67 provides service at all times, with headways ranging from 10 minutes in the weekday morning peak to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	5,246
Annual Ridership	1,560,655
Citywide Ridership Rank	132
Borough Ridership Rank	38
Total Vehicle Hours**	44,438
Total Vehicle Miles**	306,642
Peak Vehicle Requirements**	12
Scheduled Weekday Trips**	158
Avg. Weekday Service Capacity Rating*	79%
Passengers per Hour (annual)	35.1
Passengers per Mile (annual)	5.1
Passengers per Peak Vehicle (annual)	130,054.6
Hours per Peak Vehicle (annual)	3,703.2
Miles per Peak Vehicle (annual)	1,940.8
Miles per Hour (annual)	6.9
Passengers per Vehicle Trip (weekday)	33.2

* In peak direction at maximum load point

** 1999 Data

29. Route B68 Coney Island/Brighton Beach Avenues

The B68 is a north/south grid route, providing corridor service on Coney Island Avenue and local routing in the Brighton Beach area. Its termini are West 5th Street/Surf Avenue and Prospect Park West /15th Street. Coney Island Avenue is characterized primarily by neighborhood commercial types of land use. Concentrated shopping districts on the route are located at Kings Highway and Brighton Beach Avenue. Recreational destinations include Prospect Park and Brighton Beach. The route is in service 24 hours a day, with headways ranging from 6 minutes during weekday peak periods to 40 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	16,560
Annual Ridership	5,302,150
Citywide Ridership Rank	41
Borough Ridership Rank	13
Total Vehicle Hours	98,972
Total Vehicle Miles	817,316
Peak Vehicle Requirements	21
Scheduled Weekday Trips	144
Avg. Weekday Service Capacity Rating*	68%
Passengers per Hour (annual)	53.6
Passengers per Mile (annual)	6.5
Passengers per Peak Vehicle (annual)	252,483.3
Hours per Peak Vehicle (annual)	4,712.9
Miles per Peak Vehicle (annual)	38,919.8
Miles per Hour (annual)	8.3
Passengers per Vehicle Trip (weekday)	115.0

* In peak direction at maximum load point

30. Route B70 7th & 8th Avenues

The B70 route provides local service in Sunset Park and in a corridor bordering Bay Ridge and Dyker Heights. The termini are 39th Street/ 1st Avenue and Cropsy Avenue/ 7th Avenue. Within the study area, routing is primarily along 7th Avenue, but there is a small diversion on Fort Hamilton Parkway and 92nd Street. The route serves an important business district on 8th Avenue in Sunset Park. It also serves two major medical facilities, Victory Memorial Hospital and Maimonides Medical Center. This route operates on weekdays from 4:30 AM to 1:40 AM and on weekends from 5:00 AM to 1:40 AM. Headways are 15 or 20 minutes during peak periods and 30 minutes on off peak periods and weekends. Operating statistics are presented on the following table.

Average Weekday Ridership	2,927
Annual Ridership	891,761
Citywide Ridership Rank	160
Borough Ridership Rank	48
Total Vehicle Hours	23,699
Total Vehicle Miles	175,246
Peak Vehicle Requirements	5
Scheduled Weekday Trips	42
Avg. Weekday Service Capacity Rating*	64%
Passengers per Hour (annual)	37.6
Passengers per Mile (annual)	5.1
Passengers per Peak Vehicle (annual)	178,352.2
Hours per Peak Vehicle (annual)	4,739.8
Miles per Peak Vehicle (annual)	35,049.2
Miles per Hour (annual)	7.4
Passengers per Vehicle Trip (weekday)	69.7

* *In peak direction at maximum load point*

31. Route B74 Mermaid Avenue

The B74 route operates entirely on Coney Island and is a short feeder route from the Sea Gate and Coney Island neighborhoods to the Stillwell Avenue subway terminal, providing connections to the West End, Culver, and Brighton Subway Lines. The B74 runs east/west along Mermaid Avenue, paralleling the B36 route, and then completes a loop involving West 37th Street, Bayview Avenue, and West 36th Street, overlapping with the B36. In addition to residential generators, the route serves Mark Twain Junior High School, Keyspan Park and Coney Island Beach. Service is provided from 5:07 AM to 11:06 PM on weekdays and 7:00 AM to 11:09 PM on the weekend. Headways range from 6.5 minutes during the weekday peak to 15 or 20 minutes on weekends. Operating statistics are presented on the following table.

Average Weekday Ridership	3,929
Annual Ridership	1,150,666
Citywide Ridership Rank	153
Borough Ridership Rank	44
Total Vehicle Hours	15,636
Total Vehicle Miles	117,361
Peak Vehicle Requirements	4
Scheduled Weekday Trips	103
Avg. Weekday Service Capacity Rating*	62%
Passengers per Hour (annual)	73.6
Passengers per Mile (annual)	9.8
Passengers per Peak Vehicle (annual)	287,666.5
Hours per Peak Vehicle (annual)	3909.0
Miles per Peak Vehicle (annual)	29,340.2
Miles per Hour (annual)	7.5
Passengers per Vehicle Trip (weekday)	38.1

* *In peak direction at maximum load point*

32. Route B78 Ralph Avenue

Route B78 is a north/south grid route which runs between Kings Plaza and Rutland Road/East 98th Street. Routing in the study area is mainly along Ralph Avenue, which has commercial and residential uses, and more intensive retail development to the south in the Georgetown area. Kings Plaza is also a major retail center. The route serves several schools as well. The B78 runs on weekdays from 5:00 AM to 12:40 AM, on Saturdays from 5:14 AM to 12:40 AM, and on Sundays from 8:25 AM to 9:15 PM. Headways range from 7.5 minutes in the weekday morning peak to 20 minutes on Sunday mornings. Operating statistics are presented on the following table.

Average Weekday Ridership	5,940
Annual Ridership	1,910,303
Citywide Ridership Rank	120
Borough Ridership Rank	36
Total Vehicle Hours	40,483
Total Vehicle Miles	290,908
Peak Vehicle Requirements	11
Scheduled Weekday Trips	86
Avg. Weekday Service Capacity Rating*	74%
Passengers per Hour (annual)	47.2
Passengers per Mile (annual)	6.6
Passengers per Peak Vehicle (annual)	173,663.9
Hours per Peak Vehicle (annual)	3,680.3
Miles per Peak Vehicle (annual)	26,446.2
Miles per Hour (annual)	7.2
Passengers per Vehicle Trip (weekday)	69.1

* *In peak direction at maximum load point*

33. Route B82 Bay Parkway/Kings Highway/Flatlands Avenue

Route B82 runs across Southern Brooklyn primarily on Kings Highway and Flatlands Avenue. Its termini are at Cropsey Avenue/Canal Avenue and Pennsylvania Avenue/Seaview Avenue. Kings Highway features dense commercial development particularly west of McDonald Avenue. East of McDonald Avenue, less intensive retail is present. Flatlands Avenue also has commercial development. The B82 serves multiple communities along its route, including the Starrett City housing complex at its eastern end. Connections are made to several subway lines, including the West End Line, the Sea Beach Line, the Culver Line, the Brighton Line, and the Canarsie Line. Several hospitals and schools are also served by the route. The B82 operates 24 hours a day, with headways ranging from 4 minutes in the weekday morning peak to 60 minutes overnight. Operating statistics are presented on the following table.

Average Weekday Ridership	26,883
Annual Ridership	8,335,691
Citywide Ridership Rank	18
Borough Ridership Rank	6
Total Vehicle Hours	149,044
Total Vehicle Miles	1,248,252
Peak Vehicle Requirements	34
Scheduled Weekday Trips	154
Avg. Weekday Service Capacity Rating*	78%
Passengers per Hour (annual)	55.9
Passengers per Mile (annual)	6.7
Passengers per Peak Vehicle (annual)	245,167.4
Hours per Peak Vehicle (annual)	4,383.6
Miles per Peak Vehicle (annual)	36,713.3
Miles per Hour (annual)	8.4
Passengers per Vehicle Trip (weekday)	174.6

* *In peak direction at maximum load point*

34. Route B83 Van Siclen/Pennsylvania Avenue

Route B83 provides service in eastern Brooklyn between Starrett City and the Broadway Junction subway station. It operates in Starrett City and other neighborhoods in East New York and provides feeder service to the New Lots line as well as the Canarsie, Fulton Street, and Jamaica Subway Lines. Routing in the project area from south to north is on Pennsylvania Avenue but then diverts on to Vandalia and Van Siclen Avenues before traveling on Pennsylvania Avenue once again north of the project area. Development adjacent to the route is primarily residential apartments and some neighborhood retail. The B83 operates weekdays from 4:40 AM to 1:05AM, on Saturdays from 5:50 AM to 1:05 AM and on Sundays from 5:30 AM to 12:30 AM. Operating statistics are presented on the following table.

Average Weekday Ridership	9,158
Annual Ridership	2,796,805
Citywide Ridership Rank	89
Borough Ridership Rank	28
Total Vehicle Hours	48,047
Total Vehicle Miles	325,131
Peak Vehicle Requirements	12
Scheduled Weekday Trips	127
Avg. Weekday Service Capacity Rating*	74%
Passengers per Hour (annual)	58.2
Passengers per Mile (annual)	8.6
Passengers per Peak Vehicle (annual)	233,067.1
Hours per Peak Vehicle (annual)	4,003.9
Miles per Peak Vehicle (annual)	27,094.25
Miles per Hour (annual)	6.8
Passengers per Vehicle Trip (weekday)	72.1

* *In peak direction at maximum load point*

35. Route B100 Fillmore Avenue/East 66th Street

This route provides local east/west bus service primarily along Fillmore Avenue, connecting the Mill Basin area to the Kings Highway subway station along the Brighton Line. This bus route is the only service that serves the Mill Basin neighborhood. Besides serving Mill Basin, this route also serves the Marine Park neighborhood. Service on this route is provided by Command Bus Company, which operates service for the New York City Department of Transportation. Service operates from 5:30 AM to 12:00 AM on weekdays, with a reduced span on weekends. Buses operate on 7 minute headways during peak periods, with 12 minute headways during mid days, and 60 minute headways in the evenings. Saturday service has 30 minute headways, while hourly service is provided on Sundays. During field observations, this route was observed to operate mainly as a feeder service between the subway and Mill Basin, with the highest ridership observed closer to the Kings Highway subway station. Most of the land use along this route is residential. The following table provides route level statistics.

Average Weekday Ridership	3,780
Annual Ridership	963,845
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	30,377
Total Vehicle Miles	284,096
Peak Vehicle Requirements	12
Scheduled Weekday Trips	196
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	31.8
Passengers per Mile (annual)	3.4
Passengers per Peak Vehicle (annual)	80,320.4
Hours per Peak Vehicle (annual)	2,531.4
Miles per Peak Vehicle (annual)	23,374.7
Miles per Hour (annual)	9.4
Passengers per Vehicle Trip (weekday)	19.3

* In peak direction at maximum load point

36. Route B103 Canarsie Limited

This route provides limited stop service only, connecting the Canarsie neighborhood to Downtown Brooklyn. Service on this route is operated by the Command Bus Company. Neighborhoods served by this route include Canarsie, Flatlands, Flatbush, Kensington, and Downtown Brooklyn. Service operates only on weekdays with 20 minute headways during peak periods and hourly service during midday periods. This route operates from 6:35 AM to 6:10 PM every weekday. This route serves areas with a variety of land uses, from detached single family homes at the eastern areas such as Canarsie, to the central business district of Downtown Brooklyn. In general, density increases from east to west. This route travels along main major thoroughfares, as well as smaller neighborhood streets throughout Southern Brooklyn. The following table provides details on the service operated by the B103.

Average Weekday Ridership	513
Annual Ridership	130,824
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	12,966
Total Vehicle Miles	122,919
Peak Vehicle Requirements	8
Scheduled Weekday Trips	29
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	10.1
Passengers per Mile (annual)	1.1
Passengers per Peak Vehicle (annual)	16,353
Hours per Peak Vehicle (annual)	1,620.8
Miles per Peak Vehicle (annual)	15,364.9
Miles per Hour (annual)	9.5
Passengers per Vehicle Trip (weekday)	17.7

* In peak direction at maximum load point

37. Route Q35 Rockaway Park/Flatbush Avenue

This route, operated by Green Bus Lines, runs between the Rockaway Park Subway Station in Queens to Flatbush Avenue Subway Station in Brooklyn. This route serves the Rockaway Park, Belle Harbor, and Neponsit neighborhoods in Queens, as well as the Marine Park and Flatbush neighborhoods in Brooklyn. Also served is Jacob Riis Park and Kings Plaza. Service is provided during all times of the day and week, with 10 minute service during peak time periods and between 15 and 30 minute service during off peak times. Overnight hours have 70 minute service. Within Brooklyn, this route closely parallels other Brooklyn bus routes along Flatbush Avenue. This route mainly serves passengers going to or from the Rockaway Peninsula in Queens, with very few boarding's and alightings at stops in Brooklyn. The following table provides service statistics for the Q35.

Average Weekday Ridership	NA
Annual Ridership	1,438,852
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	33,802
Total Vehicle Miles	467,053
Peak Vehicle Requirements	7
Scheduled Weekday Trips	NA
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	42.6
Passengers per Mile (annual)	3.1
Passengers per Peak Vehicle (annual)	205,550.3
Hours per Peak Vehicle (annual)	4,828.9
Miles per Peak Vehicle (annual)	66,721.9
Miles per Hour (annual)	13.8
Passengers per Vehicle Trip (weekday)	NA

* In peak direction at maximum load point

38. Route S53 Verrazano-Narrows Bridge/Clove Rd, S79 Verrazano-Narrows Bridge/Hylan Boulevard, S93 Verrazano-Narrows Bridge/Clove Road

These routes connect various Staten Island neighborhoods with subway service at the 86th Street station on the Fourth Avenue Subway Line (R) in Bay Ridge. These routes all operate along the Verrazano-Narrows Bridge, making a loop in Bay Ridge along Fort Hamilton Parkway, 86th Street, 4th Avenue and 92nd Street. The route S53 operates seven days a week during all times of the day with frequency ranging from 10 minutes during peak periods to 40 minutes during overnight hours. The S79 operates all days of the week from about 4:45 AM to 12:00 AM on weekdays and Saturdays, with a reduced span (5:20 AM to 11:00 PM) on Sundays. The S93 is a relatively new route that offers limited stop service and operates on weekday peak periods only, with four trips from Staten Island in the morning and three trips returning in the PM. The following table provides service statistics for the S53 and S79. Data was not readily available for the new S93 route.

	S53	S79
Average Weekday Ridership	6,778	6,617
Annual Ridership	2,162,866	2,177,424
Citywide Ridership Rank	113	112
Borough Ridership Rank***	6	5
Total Vehicle Hours**	48,565	66,384
Total Vehicle Miles**	510,667	801,908
Peak Vehicle Requirements**	12	14
Scheduled Weekday Trips**	183	151
Avg. Weekday Service Capacity Rating*	62%	83%
Passengers per Hour (annual)	44.5	32.8
Passengers per Mile (annual)	4.2	2.7
Passengers per Peak Vehicle (annual)	180,238.8	155,530.3
Hours per Peak Vehicle (annual)	4,047.1	4,741.7
Miles per Peak Vehicle (annual)	42,555.6	57,279.1
Miles per Hour (annual)	10.5	12.1
Passengers per Vehicle Trip (weekday)	37.0	43.8

* In peak direction at maximum load point

** 1999 Data

*** Staten Island Rank

B. EXPRESS BUS ROUTES

1. Route X27 Shore Road Express

The X27 provides express bus service from Bay Ridge to both Midtown and Downtown Manhattan. Recently, direct service to Midtown (bypassing Downtown Manhattan) has been implemented as the X37. The X27/37 operates primarily on Shore Road in Bay Ridge, running express to Manhattan on the Gowanus and Brooklyn Queens Expressways. Six minute service is provided on each the X27 and X37 during the AM peak period, while midday service operates at an hourly schedule as the X27 only. Weekend service along this route is scheduled to be implemented on September 8th, 2002. Service operates from 5:30 AM to 11:30 PM. The following table gives an overview of the X27.

Average Weekday Ridership	3,938
Annual Ridership	1,000,316
Citywide Express Ridership Rank**	2
Borough Express Ridership Rank**	1
Total Vehicle Hours	78,030
Total Vehicle Miles	1,003,680
Peak Vehicle Requirements	34
Scheduled Weekday Trips	128
Avg. Weekday Service Capacity Rating*	84%
Passengers per Hour (annual)	12.8
Passengers per Mile (annual)	1.0
Passengers per Peak Vehicle (annual)	2,9421.1
Hours per Peak Vehicle (annual)	2,295.0
Miles per Peak Vehicle (annual)	29,520.0
Miles per Hour (annual)	12.9
Passengers per Vehicle Trip (weekday)	30.8

* *In peak direction at maximum load point*

** *NYCT operated express buses only*

2. Route X28 Cropsey Avenue Express

Route X28 provides express bus service from Coney Island, Sea Gate, Bensonhurst, Bath Beach, and Dyker Heights to Midtown and Downtown Manhattan. Direct service to Midtown Manhattan has recently been implemented on this route, under the route number X38. Service is operated primarily along Cropsey Avenue, with some service operating along Surf Avenue, 14th Avenue and 86th Street. Service operates on weekdays only from 5:25 AM to 11:30 PM with five minute service during peak periods and 60 minute service during the midday periods. Weekend service on this route is scheduled to begin on September 8th, 2002. The following table gives an overview of the X28.

Average Weekday Ridership	3,865
Annual Ridership	981,765
Citywide Express Ridership Rank**	3
Borough Express Ridership Rank**	2
Total Vehicle Hours	78,540
Total Vehicle Miles	1,015,155
Peak Vehicle Requirements	39
Scheduled Weekday Trips	125
Avg. Weekday Service Capacity Rating*	83%
Passengers per Hour (annual)	12.5
Passengers per Mile (annual)	1.0
Passengers per Peak Vehicle (annual)	25,173.5
Hours per Peak Vehicle (annual)	2,013.8
Miles per Peak Vehicle (annual)	26,029.6
Miles per Hour (annual)	12.9
Passengers per Vehicle Trip (weekday)	30.9

* In peak direction at maximum load point

** NYCT operated express buses only

3. Route X29 Coney Island Avenue Express

The X29 provides express bus service along Neptune Avenue and Coney Island Avenue from Coney Island to Downtown and Midtown Manhattan. This route serves the Brooklyn neighborhoods of Coney Island, Brighton, Gravesend, Midwood, and Flatbush. Service is provided during weekday peak periods only, in the peak direction. The morning peak period is from 6:10 AM to 8:25 AM and service operates into Manhattan at 8 minute headways. The evening peak period is from 3:25 PM to 6:15 PM with service operating out of Manhattan every 11 minutes. The following table gives an overview of the X29.

Average Weekday Ridership	596
Annual Ridership	151,287
Citywide Express Ridership Rank**	25
Borough Express Ridership Rank**	3
Total Vehicle Hours	17,595
Total Vehicle Miles	211,905
Peak Vehicle Requirements	12
Scheduled Weekday Trips	25
Avg. Weekday Service Capacity Rating*	60%
Passengers per Hour (annual)	8.6
Passengers per Mile (annual)	0.7
Passengers per Peak Vehicle (annual)	12,607.3
Hours per Peak Vehicle (annual)	1,466.3
Miles per Peak Vehicle (annual)	17,658.8
Miles per Hour (annual)	12.0
Passengers per Vehicle Trip (weekday)	23.8

* *In peak direction at maximum load point*

** *NYCT operated express buses only*

4. Route BM1 Mill Basin Express

This route, operated by Command Bus Company, provides express service between Midwood, Flatlands, Bergen Beach, and Mill Basin to both Midtown and Downtown Manhattan. Service on this route operates on weekdays from 5:20 AM to 1:30 AM, and Saturdays from 6:00 AM to 1:30 AM. Frequency on this route ranges from 5 minutes during the peak period on weekdays, to every hour and a half on Saturdays. This route operates on neighborhood streets in Mill Basin and Bergen Beach, while in other parts of Southern Brooklyn it operates on major streets such as Ralph Avenue, Avenue K, Ocean Avenue, Coney Island Avenue, and Church Avenue. The following table presents an overview of the BM1.

Average Weekday Ridership	NA
Annual Ridership	608,883
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	64,777
Total Vehicle Miles	795,497
Peak Vehicle Requirements	25
Scheduled Weekday Trips	92
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	9.4
Passengers per Mile (annual)	0.8
Passengers per Peak Vehicle (annual)	24,355
Hours per Peak Vehicle (annual)	2,591.1
Miles per Peak Vehicle (annual)	31,819.9
Miles per Hour (annual)	12.3
Passengers per Vehicle Trip (weekday)	NA

* *In peak direction at maximum load point*

5. Route BM2 Canarsie Express

This route, operated by Command Bus Company, provides express bus service between the neighborhoods of Canarsie, Flatbush, East Flatbush, and Starrett City and both Midtown and Downtown Manhattan. Pennsylvania Avenue, Flatlands Avenue, E. 105th Street, Avenue M, Avenue H, and Flatbush Avenue are some of the streets on which this route operates along. Service operates on weekdays from 5:20 AM to 1:30 AM, and on Saturdays from 6:00 AM to 1:30 AM. Frequency along this route ranges from eight minutes during the peak periods to an hour and a half on weekends. The following table provides an overview of the BM2.

Average Weekday Ridership	NA
Annual Ridership	513,854
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	58,155
Total Vehicle Miles	654,599
Peak Vehicle Requirements	24
Scheduled Weekday Trips	79
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	8.8
Passengers per Mile (annual)	0.8
Passengers per Peak Vehicle (annual)	21,410.6
Hours per Peak Vehicle (annual)	2,423.1
Miles per Peak Vehicle (annual)	27,275.0
Miles per Hour (annual)	11.3
Passengers per Vehicle Trip (weekday)	NA

* In peak direction at maximum load point

6. Route BM3 Kingsbay Express

This route, operated by Command Bus Company, provides express bus service connecting Midwood and Sheepshead Bay to both Midtown and Downtown Manhattan. This route operates mainly on Emmons Avenue and Ocean Avenue, as well as circulating on neighborhood streets in Sheepshead Bay. The BM3 operates on weekdays from 5:20 AM to 1:30 AM, and on Saturdays from 6:00 AM to 1:30 AM. The frequency of this route varies from ten minutes during the peak periods to every hour and a half during weekends. The following table provides an overview of the BM3.

Average Weekday Ridership	NA
Annual Ridership	475,278
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	58,486
Total Vehicle Miles	720,593
Peak Vehicle Requirements	24
Scheduled Weekday Trips	82
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	8.1
Passengers per Mile (annual)	0.6
Passengers per Peak Vehicle (annual)	19,803.3
Hours per Peak Vehicle (annual)	2,436.9
Miles per Peak Vehicle (annual)	30,024.7
Miles per Hour (annual)	12.3
Passengers per Vehicle Trip (weekday)	NA

* *In peak direction at maximum load point*

7. Route BM4 Gerritsen Beach Express

The route BM4, operated by Command Bus Lines, provides express bus service between the Brooklyn neighborhoods of Midwood, Marine Park, and Gerritsen Beach and both Downtown and Midtown Manhattan. Service operates primarily along Gerritsen Avenue, Nostrand Avenue, and Ocean Avenue. The route is in operation on weekdays from 6:00 AM to 10:15 PM, with three trips operating in each direction on Saturdays. The buses operate at 15-minute headways during peak periods and one hour headways during middays. The Saturday trips operate about three hour headways. The following table provides an overview of route BM4.

Average Weekday Ridership	NA
Annual Ridership	267,955
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	32,925
Total Vehicle Miles	392,634
Peak Vehicle Requirements	14
Scheduled Weekday Trips	46
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	8.1
Passengers per Mile (annual)	0.7
Passengers per Peak Vehicle (annual)	19,139.6
Hours per Peak Vehicle (annual)	2,351.8
Miles per Peak Vehicle (annual)	28,045.3
Miles per Hour (annual)	11.9
Passengers per Vehicle Trip (weekday)	NA

* In peak direction at maximum load point

8. Route BQM1 Starrett City Express

The BQM1, operated by Command Bus Company, provides express service between Spring Creek, Starrett City, and Canarsie in Brooklyn, as well as Lindenwood in Queens, to Midtown Manhattan. Service operates primarily along Avenue M, E. 105th Street, Flatlands Avenue, Louisiana Avenue, Pennsylvania Avenue, and Linden Boulevard. The route operates from 6:20 AM to 8:20 PM on weekdays at 10-minute headways during peak periods and one-hour headways during off peak time periods. Three trips are provided on Saturdays at three-hour headways, while there is no service on Sunday. The following table provides an overview of BQM1.

Average Weekday Ridership	NA
Annual Ridership	166,763
Citywide Ridership Rank	NA
Borough Ridership Rank	NA
Total Vehicle Hours	19,096
Total Vehicle Miles	235,711
Peak Vehicle Requirements	12
Scheduled Weekday Trips	31
Avg. Weekday Service Capacity Rating*	NA
Passengers per Hour (annual)	8.7
Passengers per Mile (annual)	0.7
Passengers per Peak Vehicle (annual)	19,896.9
Hours per Peak Vehicle (annual)	1,591.3
Miles per Peak Vehicle (annual)	19,642.6
Miles per Hour (annual)	12.3
Passengers per Vehicle Trip (weekday)	NA

* In peak direction at maximum load point