

Ridgewood Transportation Planning Study

Technical Memorandum No. 1

Existing Conditions 2004

PIN PTDT06G00.06

Contract No. D000642

The preparation of this report has been financed in part through funds from the U.S. Department of Transportation, Federal Highway Administration under the Federal Act of 1965, as amended, and the Urban Mass Transportation Act of 1964, as amended. This document is disseminated by the New York City Department of Transportation (NYCDOT) in the interest of information exchange. It reflects the views of the NYCDOT which is responsible for the facts and accuracy of the data presented. The report does not necessarily reflect any official views or policies of the Federal Transit Administration, the Federal Highway Administration, or the State of New York. This report does not constitute a standard, specification, or regulation.

Prepared by:

New York City Department of Transportation

Iris Weinshall, Commissioner

Judy Bergtraum, First Deputy Commissioner

Michael Primeggia, Deputy Commissioner

Naim Rasheed, Director

Michael Griffith, Deputy Director

Eva Marin, Project Manager

Hau Cho Li, Project Manager

Ali Hamoudeh, Highway Transportation Specialist

Vishal Shah, Intern

Camilla Davis, Intern

TABLE OF CONTENTS**Page**

S.0	EXECUTIVE SUMMARY.....	S-1
S.1	Introduction.....	S-1
S.2	Demographics.....	S-1
S.3	Land Use and Zoning.....	S-2
S.4	Traffic and Transportation.....	S-2
S.5	Public Transportation.....	S-3
S.6	Parking.....	S-3
S.7	Pedestrian and Bicycle Analysis.....	S-4
S.8	Accidents / Safety Analysis.....	S-4
1.0	INTRODUCTION.....	1-1
1.1	Setting the Context.....	1-1
1.2	Goals and Objectives.....	1-2
1.3	The Study Area.....	1-4
1.4	Project Organization and Methodology.....	1-8
2.0	DEMOGRAPHIC ANALYSIS.....	2-1
2.1	Population Trends.....	2-4
2.2	Labor Force.....	2-5
2.3	Household Characteristics.....	2-7
2.4	Median Household Income.....	2-8
2.5	Vehicle Ownership.....	2-9
2.6	Journey to work by Mode.....	2-12
3.0	LAND USE AND ZONING.....	3-1
3.1	Residential Zoning Districts.....	3-4
3.2	Commercial Zoning Districts.....	3-7
3.3	Manufacturing Zoning Districts.....	3-11
3.4	New and Proposed Developments.....	3-14
3.5	Residential Land Use.....	3-14
3.6	Commercial Land Use.....	3-17
3.7	Manufacturing Land Use.....	3-17
3.8	Community Facilities.....	3-17
3.9	Recreational Facilities, Parks and Open Space.....	3-21
3.10	Vacant Land.....	3-21
4.0	TRAFFIC AND TRANSPORTATION.....	4-1
4.1	Existing Conditions.....	4-1
4.2	Activity Centers & the Transportation Network.....	4-3
4.3	Data Collection & Traffic Operations.....	4-6
4.4	Network Traffic Volumes.....	4-11
4.5	Street Capacity & Level of Service (LOS).....	4-17
4.6	Existing Traffic Conditions.....	4-19
4.7	Vehicle Speeds.....	4-31
4.8	Goods Movement.....	4-38
5.0	PUBLIC TRANSPORTATION.....	5-1
5.1	Subway Service.....	5-1
5.2	Bus Service.....	5-4

6.0	PARKING.....	6-1
6.1	Introduction.....	6-1
6.2	Off-Street Public Parking.....	6-1
6.3	Off-Street Accessory Parking.....	6-2
6.4	On Street Parking and Issues.....	6-6
7.0	PEDESTRIAN AND BICYCLE ANALYSIS.....	7-1
7.1	Introduction.....	7-1
7.2	Existing Pedestrian Analysis.....	7-1
7.3	Level of Service Analysis and Methodology.....	7-11
7.4	Pedestrian Activity near school locations.....	7-15
7.5	Bicycle Lanes and Paths - Network System and Use.....	7-15
8.0	ACCIDENTS/SAFETY ANALYSIS.....	8-1
8.1	Introduction.....	8-1
8.2	Cost Analysis of Accidents.....	8-3
8.3	Frequency and Severity of Accidents.....	8-5
8.4	Annual Accident Analysis.....	8-7
9.0	CONCLUSION.....	9-1

Table 2-1:	Study Area census tract, borough, and community district	2-2
Table 2-2:	Population by Area	2-4
Table 2-3:	Population by Area and Age Group	2-5
Table 2-4:	Labor Force Distribution for 1980, 1990, and 2000 Census Data	2-7
Table 2-5:	Household Characteristics	2-8
Table 2-6:	Median Household Income by Area	2-8
Table 2-7:	Vehicle Ownership per Household (1980 and 2000)	2-11
Table 2-8:	1980 Journey to Work by Mode	2-13
Table 2-9:	1990 Journey to Work by Mode	2-14
Table 2-10:	2000 Journey to Work by Mode	2-14
Table 2-11:	Study Area Journey to Work by Mode	2-15
Table 3-1:	Residential Zoning Districts Located Within the Study Area	3-5
Table 3-2:	Commercial Zoning Districts Located With the Study Area	3-8
Table 3-3:	Manufacturing Zoning Districts Located With the Study Area	3-12
Table 4-1:	Peak Hour ATR Volumes	4-12
Table 4-2:	Traffic Capacity Analysis Of Signalized Intersections	4-20
Table 4-3:	Corridor Travel Speeds	4-33
Table 4-4:	Corridor Travel Speeds Summary	4-37
Table 5-1:	Subway Service	5-1
Table 5-2:	Average Subway Ridership (Weekday & Saturday)	5-2
Table 5-3:	Average Frequency of NYCT Bus Service (in minute)	5-4
Table 5-4:	Bus Ridership – Average Weekday AM Peak Hour	5-6
Table 5-5:	Bus Ridership – Average Weekday MD Peak Hour	5-7
Table 5-6:	Bus Ridership – Average Weekday PM Peak Hour	5-8
Table 5-7:	Bus Ridership – Average Weekday Saturday MD Peak Hour	5-9
Table 6-1:	Off-Street Accessory Parking Garage/Lots	6-4
Table 6-2:	On-Street Parking Regulations Key	6-9
Table 7-1:	Existing Conditions Crosswalk Level of Services	7-13
Table 7-2:	Existing Conditions Corner Level of Services	7-14
Table 8-1:	Three Year Accident History	8-1
Table 8-2:	Summary of the Accidents History by Year	8-3
Table 8-3:	Average Cost of Accidents by Class	8-4
Table 8-4:	Total Cost of Accidents at Metropolitan Avenue @ Fresh Pond Road (1998)	8-4
Table 8-5:	Severity Factor at Metropolitan Avenue @ Fresh Pond Road (1998)	8-5
Table 8-6:	Interpretation of the Critical Factors in Accidents	8-6
Table 8-7:	1998 Traffic Accident Analysis	8-9
Table 8-8:	1998 Traffic Accident History	8-10
Table 8-9:	1999 Traffic Accident Analysis	8-13
Table 8-10:	1999 Traffic Accident History	8-14
Table 8-11:	2000 Traffic Accident Analysis	8-17
Table 8-12:	2000 Traffic Accident History	8-18

LIST OF FIGURES

Page

Figure 1-1:	Study area in the Regional context.....	1-5
Figure 1-2:	Study Area Boundary & Community Boards.....	1-6
Figure 1-3:	Ridgewood Transportation Study Process & Issues.....	1-10
Figure 2-1:	Population by Census Tract (1980-2000).....	2-3
Figure 2-2:	Study Area Population Trends Graph.....	2-15
Figure 3-1:	Ridgewood Zoning Map.....	3-3
Figure 3-2:	Ridgewood Residential Zoning Map.....	3-6
Figure 3-3:	Ridgewood Commercial Zoning & Commercial Overlay District Map.....	3-9
Figure 3-4:	Ridgewood Manufacturing Zoning District Map.....	3-12
Figure 3-5:	Ridgewood Land Use Map.....	3-15
Figure 3-6:	Typical one and two-family residences in the study area.....	3-16
Figure 3-7:	Community Facility Locations.....	3-20
Figure 4-1:	Study Area Major Arterials.....	4-2
Figure 4-2:	Study Area Activity Centers.....	4-5
Figure 4-3:	Traffic Count Locations.....	4-8
Figure 4-4:	AM Peak Hour Traffic Volumes.....	4-13
Figure 4-5:	MD Peak Hour Traffic Volumes.....	4-14
Figure 4-6:	PM Peak Hour Traffic Volumes.....	4-15
Figure 4-7:	Saturday MD Peak Hour Traffic Volumes.....	4-16
Figure 4-8:	Intersection LOS – AM Peak Hour.....	4-23
Figure 4-9:	Intersection LOS – MD Peak Hour.....	4-24
Figure 4-10:	Intersection LOS – PM Peak Hour.....	4-25
Figure 4-11:	Intersection LOS – Saturday MD Peak Hour.....	4-26
Figure 4-12:	Intersection with LOS D, E, or F – AM Peak Hour.....	4-27
Figure 4-13:	Intersection with LOS D, E, or F – MD Peak Hour.....	4-28
Figure 4-14:	Intersection with LOS D, E, or F – PM Peak Hour.....	4-29
Figure 4-15:	Intersection with LOS D, E, or F – Saturday MD Peak Hour.....	4-30
Figure 4-16:	Speed Run Corridors.....	4-32
Figure 4-17:	Local and Through Truck Routes.....	4-39
Figure 5-1:	Subway Services.....	5-3
Figure 5-2:	Local Bus Routes.....	5-5
Figure 6-1:	Off-Street Public Parking and Accessory Parking Locations.....	6-3
Figure 6-2:	Alternate Side Street Cleaning Regulations.....	6-8
Figure 6-3:	No Parking Anytime/No Standing Anytime Regulations.....	6-10
Figure 6-4:	Metered Parking Locations.....	6-11
Figure 7-1:	Pedestrian Counts Locations.....	7-3
Figure 7-2:	Pedestrian Peak Hour Volumes (am peak hour).....	7-7
Figure 7-3:	Pedestrian Peak Hour Volumes (midday peak hour).....	7-8
Figure 7-4:	Pedestrian Peak Hour Volumes (pm peak hour).....	7-9
Figure 7-5:	Pedestrian Peak Hour Volumes (Saturday midday peak hour).....	7-10
Figure 7-6:	Pedestrian Level of Services (LOS).....	7-12
Figure 8-1:	Accidents Locations in t the Study Area.....	8-2
Figure 8-2:	1998 Accidents y Collision Type and Driving Conditions.....	8-8
Figure 8-3:	1999 Accidents y Collision Type and Driving Conditions.....	8-12
Figure 8-4:	2000 Accidents y Collision Type and Driving Conditions.....	8-16

Appendix A: On-Street Parking Utilization Tables

Appendix B: Crosswalk and corner summary sheets

EXECUTIVE SUMMARY

S.1 PROJECT DESCRIPTION

The Ridgewood Transportation study area is located on the Brooklyn/Queens border and is bounded by Metropolitan Avenue to the north, Myrtle Avenue to the south, Traffic Avenue and 65th Street to the east and a line parallel to Forest Avenue connecting Flushing and Metropolitan Avenues in the north to Myrtle and Irving Avenues to the south. The major arterials within the study area include Myrtle Avenue, Forest Avenue, Metropolitan Avenue and Fresh Pond Road. It straddles Community Board 5 in Queens and a small section of Community Board 4 in Brooklyn.

The goal of the study is to assess the existing and future traffic and transportation conditions, identify any problems and generate recommendations to develop a package of improvement measures designed to safely accommodate future transportation needs, resulting from potential development and economic growth, also to examine ways to improve transit. The study will investigate land use, zoning, demographics and other factors that influence traffic and transportation.

S.2 DEMOGRAPHICS

The Ridgewood's study area cuts across two community districts; CD 5 in Queens and CD 4 in Brooklyn, and consists of nineteen census tracts in whole or part.

The demographic analysis for the study area examined population trends from 1980 to 2000. The study area experienced an increase in population of 5.8% between 1980 and 1990 and 15.9% between 1990 and 2000. Similar trend was observed for Queens and New York City with 17.4% and 13% growth, respectively over the 20 years period. The number of households in the study area, Queens and New York City increased over both decades (1980-2000). Median household income has grown over the 20 year period in New York City, Queens and the study area by approximately 29%, 18% and 30%, respectively.

The study area labor force increased by 21.1% between 1980 and 1990; and by 4% between 1990 and 2000. The journey to work by mode distribution shows the majority of

the study area residents in year 2000 used public transportation (subway and buses) and a similar trend was observed for the New York City and Queens residents.

S.3 LAND USE AND ZONING

A land use and zoning analysis of the study area was done by examining the existing zoning, land use, patterns and trends. The analysis focused on categories such as residential, commercial, manufacturing, institutional, and parks uses. It included a review of existing land use maps and the New York City Zoning Resolution. It also looked at recent rezoning actions such as the Middle Village – Glendale Rezoning.

The report shows that the predominant land use in the Ridgewood study area is residential while the land use along Myrtle Avenue is mainly commercial, comprising of national chain stores, restaurants, retails stores, and fast food chain stores.

S.4 TRAFFIC AND TRANSPORTATION

The Existing 2004 traffic conditions were determined through field surveys conducted in November of 2004. The surveys included an inventory of street geometry, signal timing, traffic volumes and parking regulations. Manual turning movements and vehicle classification counts were conducted at many locations. In addition, Automatic Traffic Recorders (ATR) machines were placed at seven locations to record 24 hours traffic volumes on the area street network. The existing condition capacity and level of service analyses showed that there are intersections with poor level of service (LOS) throughout the study area. From a total of 22 intersections analyzed for the various peak hours about half experienced LOS D, E, and F in some or all lane groups. The following lists the number of locations that experienced LOS D, E or F for the respective peak hours:

- During the AM peak hour there are 12 locations;
- During the MD peak hour there are 7 locations;
- During the PM peak hour there are 11 locations; and
- During the Saturday peak hour there are 11 locations.

The most congested corridor in the study area is Myrtle Avenue as seen from the LOS analysis and travel speeds. The average travel speed along Myrtle Avenue is approximately 8 to 14 miles per hour, which is slower than the other cross-town corridors in the study area by approximately 20%.

Goods movement in the study area is a function of truck routes and the origin and destination of goods and services. The distribution of commercial/retail, residential, industrial, and manufacturing can be gleaned from the existing land use and zoning.

There are only two through truck routes in the study area but is adequately served by local truck routes which provide connections to through routes. Truck activity in the study area is very high, particularly along the Myrtle Avenue and Metropolitan Avenue where many commercial/retail establishments are located.

S.5 PUBLIC TRANSPORTATION

The study conducted a transit analysis within the area of study by examining the public transportation facilities and services (subway and bus services) under existing conditions. The capacity and ridership volumes on the buses were also analyzed. The study area is well served and has adequate bus service on all bus routes. A total of thirteen local buses provide service within the area.

S.6 PARKING

A parking analysis of the study area was done by examining existing on-street and off-street parking facilities and the extent to which parking is available and utilized under existing conditions. The study also inventoried and evaluated curb-side street parking regulations within the study area.

The study reveals that:

- There are 2 off-street privately owned parking facilities in the study area with a total capacity of 100 parking spaces.
- The off-street public parking supply is adequate currently and can accommodate the existing demand.

- There are 36 accessory off-street parking facilities in the study area with a total capacity of 1,256 parking spaces.
- The on-street parking utilization on major corridors such as Myrtle Avenue, Palmetto Street, Fresh Pond Road, Forest Avenue, Seneca Avenue, and Central Avenue in the study area shows that the demand just equals capacity as very few empty parking spaces were available, particularly after midday.

S.7 PEDESTRIAN AND BICYCLE ANALYSIS

A pedestrian and bicycle analysis for the study area was conducted for the existing conditions. The pedestrian analysis focused on the identification of high pedestrian volume locations along major corridors and around subway stations, bus stops, and adjacent land uses. It also provided an overview of general pedestrian concentration and flows at selected locations within the study area and assessed vehicle, pedestrian conflicts and capacity problems under current conditions.

The pedestrian data was collected during weekdays (Tuesday, Wednesday or Thursday) during the morning, afternoon and evening peak hours and Saturday Midday peak hours. The pedestrian analysis which included crosswalk and corner level of service (LOS) was done using the HCM methodology. The existing LOS analysis shows that the 13 locations surveyed operate at a LOS C or better.

A review of existing bicycle routes and facilities listed in the New York City Bicycle Master Plan and the New York City Cycling Map was undertaken. The study area does not have network of bicycle lanes and greenway paths. Also there are no bicycle facilities on the study area.

S.8 ACCIDENTS/SAFETY ANALYSIS

A detailed accident analysis was conducted for nine locations in the study area where the total accidents for the three year period between 1998 to 2000 were 20 or more. A preliminary screening for the frequency of accidents showed that there were two locations that averaged between 20 and 37 accidents per year, four locations between 10

and 20 accidents per year, and three locations with less than 10 accidents per year for the three year period.

1.0 INTRODUCTION

1.1 Setting the Context

The Ridgewood neighborhood is known for its brick and stone one or two family homes and row of small multiple dwelling from the early 20th century, mostly build before 1930. There has been little change over the years in the national origins of the area population. Descendants of the original immigrants, predominately from Germany and Central and Eastern Europe still remain in the district but more recently have intermingled with Italian, Irish and Latinos coming to the area.

Ridgewood is a quiet residential mainly working-class neighborhood. The area being less than 45 minutes from Manhattan and close to Williamsburg enjoyed rapid population growth after World War 1 when the bridges connecting Manhattan and Brooklyn were built and the BMT line was extended to Metropolitan Avenue. The M (elevated), the L (underground) and the LIRR provide train service to the area. The M line runs through central Ridgewood (Fresh Pond Road, Forest Avenue, and Seneca Avenue stations) and cuts across Brooklyn to lower Manhattan. At Myrtle/Wyckoff, you can switch to the L train that traverses Williamsburg on its way to Manhattan's Union Square.

The main commercial streets in the study area are Myrtle Avenue, Fresh Pond Road, Forest Avenue, Wyckoff Avenues and Metropolitan Avenue providing adequate opportunities for shopping. Several small stores and local shops specialize in German and Eastern Europe merchandises and delicacies. These corridors have a mix of commercial and residential land uses on both sides of the streets. Buildings are generally 2 to 3 stories high with commercial on the ground floor and residential units on the second and third floors. Retail activities included restaurants, clothing and shoes stores, groceries, delis, pork shops, household appliance stores, hardware and services such as dry cleaners and medical-dental services.

Immediately outside the study area is the Metro Mall, with stores such as Kmart, BJ'S, Conway, GNC, and the Wyckoff Heights Medical center, all the facilities are heavily used by residents of the study area.

Many commercial banks can be found in the study area such as Chase and Citibank at Metropolitan Avenue and Flushing Avenue, and the Ridgewood saving bank - a classic stone bank headquarters at Forest Avenue and Myrtle Avenue. The area also house the “Ridgewood Theater” on Myrtle Avenue, which was opened in 1913. It is one of the longest continuously operated theater in NYC. The neighborhood is also home to post offices, auto sales, rental establishment, major supermarkets, and pharmacies. A police station is located on Catalpa Avenue. The study area offers open green spaces such as Grover Cleveland Park, Glen Ridge Park and the Athletic Field Park for recreational use.

Private and public educational institutions present in the study area are Our Lady of the Miraculous Medal School, St Matthias School, P.S 81, P.S 71, J.H.S 93, and the Queens Ridgewood Library among others.

1.2 Goals and Objectives

The goal of the study is to assess the existing and future traffic and transportation conditions, identify problems and generate recommendations to develop a package of improvement measures to address future transportation needs. The study’s main objectives therefore are:

- To identify the travel and traffic characteristics and to assess the existing transportation demand of the study area;
- To project and assess the future (2015) conditions of the study area with respect to demographic, land use, traffic, transit, pedestrian and bicycle, parking, and good movement and;
- To reduce vehicular congestion, while improving travel conditions and safety for all users (vehicular and pedestrian) and increase accessibility to public transit / alternate modes.

An in-dept analysis of the following pertinent issues will provide the basis for realizing the study’s goals and objectives along with extensive public outreach.

Demographics: An analysis of existing and future population trends will be conducted focusing on household size, income, car ownership-rates, age distribution, travel behavior, and mode share.

Land Use and zoning: An analysis of the existing zoning and land use trends in the area will be conducted. It will focus on the spatial distribution and identification of the major trip generators

and associated trips due to the land use characteristics. An assessment of the future implications of potential land use changes will also be done.

Traffic: An analysis of the existing and future traffic conditions will be undertaken. This requires an inventory of the street geometry, traffic volumes, parking regulations, traffic controls, and other factors required to conduct traffic capacity analysis using the Highway Capacity Manual (HCM) methodology. This will allow one to determine volume to capacity (v/c) ratios, vehicular delay and level of services (LOS) for the AM, MD, PM and Saturday peak hours.

Pedestrians & Bicycles: Pedestrian activity and level of services will be conducted for existing and future conditions for crosswalks and corners at selected locations where high pedestrian concentrations are found usually due to the land use characteristics. An inventory of bicycles facilities will be conducted and an assessment of the demand for the use of bicycles as an alternate mode in the study area will be done.

Accidents: An accident analysis for the study area will be done for a three year period (1998-2000), using data provided by NYCDOT, NYPD, and DMV. The analysis will address factors such as accident type, frequency, severity, and pedestrian/bicyclists involves.

Parking: A detailed examination of on and off-Street parking supply and demand for existing and future projected conditions will be done. Areas with parking short fall will be identified and measures recommended to satisfy demand.

Goods Movement: An assessment of truck routes and truck traffic in the study area and its relation to commercial, retail, and industrial activity will be done.

Transit: An analysis of transit usage (bus and subway) in the area. The analysis will address routes, ridership, frequency, and adequacy of service.

The study will recommend measures (Transportation Systems Management, Transportation Demand Management) to alleviate congestion and improve safety and mobility of pedestrian and vehicular traffic thereby improving the quality of life of people who live and work there.

1.3 The Study Area

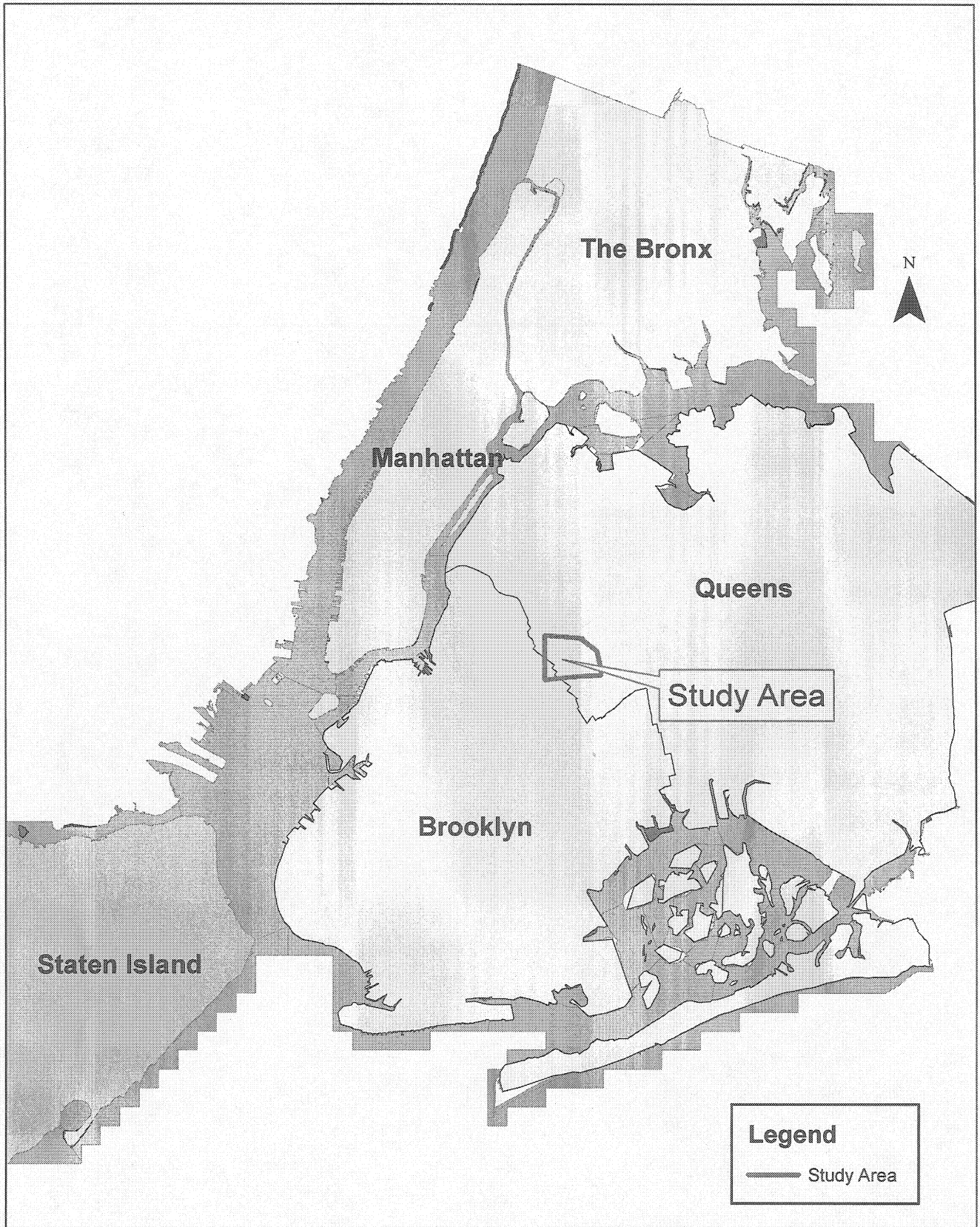
The study area is located on the Brooklyn / Queens Border and is bounded by Metropolitan Avenue to the north, Myrtle Avenue to the south, Traffic Avenue and 65th Street to the east and a line parallel to Forest Avenue connecting Flushing and Metropolitan Avenues in the north to Myrtle and Irving Avenues to the south. The major arterials within the study area are Myrtle Avenue, Forest Avenue, Metropolitan Avenue and Fresh Pond Road.

The study area falls within community board 5 in Queens and a small section of community board 4 in Brooklyn. Figure 1-1 shows the study area in a regional context and Figure 1-2 shows the study area boundaries and community boards.

The Ridgewood area has experienced an increase in population over the past two decades, a trend still seen today. The population trends in the study area show an increase of approximately 16.0 % from 53,524 in 1990 to 62,053 in year 2000. The number of households increased also during the 1990's and 2000's.

The study area is well served by major highways and public transit. The major expressways in the vicinity of the study area are the Brooklyn- Queens Expressway / I-278 to the west which can be accessed using Flushing, Grand, or Metropolitan Avenues. To the north is the Long Island Expressway (LIE), and to the south east of the study area there are the Jackie Robinson Parkway and the Van Wyck Expressway. The transit operators providing service in the area are NYC Transit (Bus and Subways) and Long Island Rail Road (commuter rail).

Figure 1-1: Study area in the Regional context



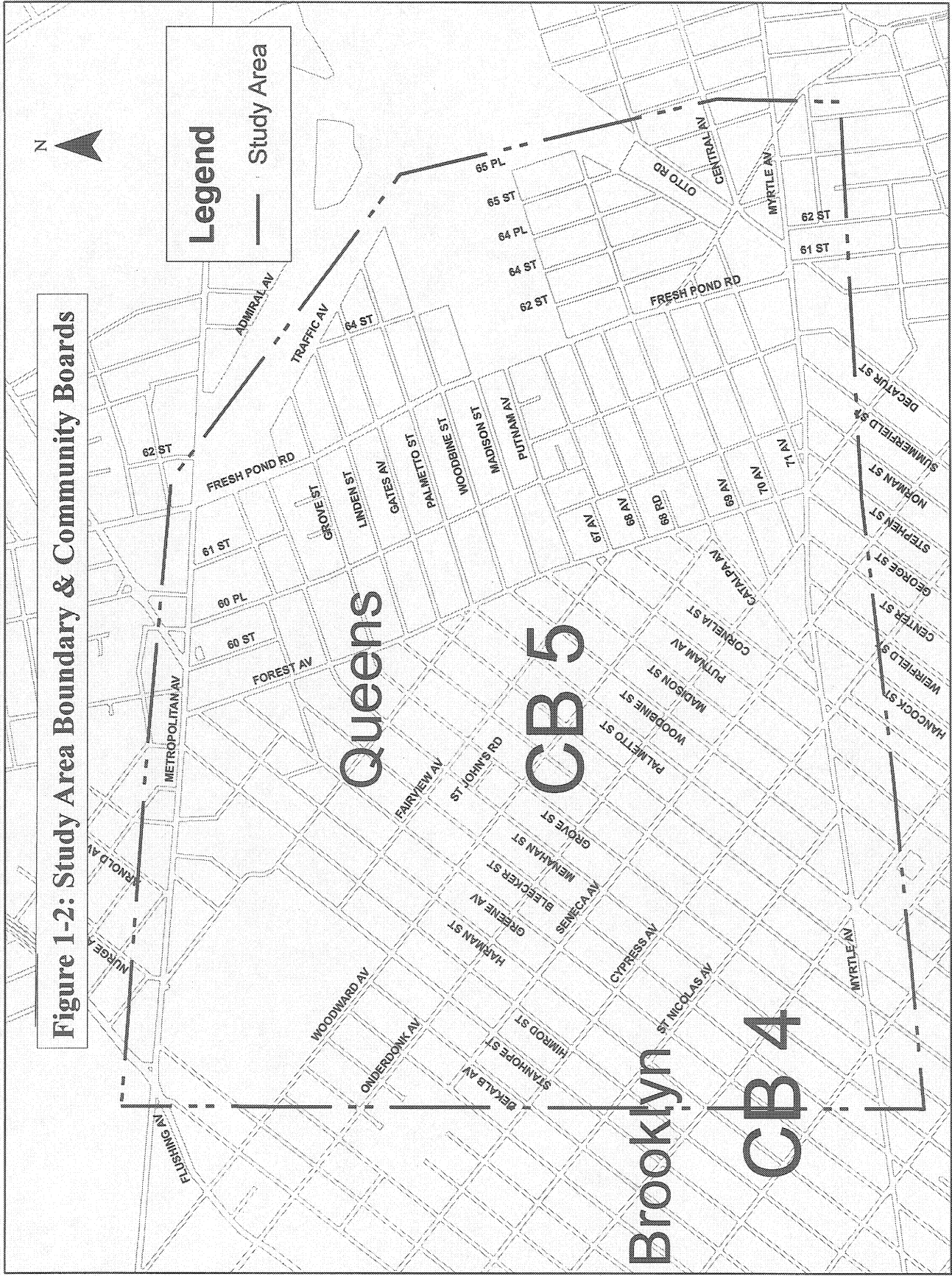


Figure 1-2: Study Area Boundary & Community Boards

At the moment, there is no known planning or rezoning proposals within the study area. However, there are two major transit rehabilitation and improvements projects underway and the planned reconstruction of Wyckoff Avenue. The following highlights some of the studies.

Myrtle/Wyckoff Intermodal Improvements

The Myrtle/Wyckoff Intermodal Improvements project is sponsored by NYCT and NYC DOT, in coordination with the Federal Transit Administration. The primary objective of the project is to improve customer transfers among the subway stations (elevated M and underground L trains) and buses by transforming the one block segment of Palmetto Street between Myrtle/Wyckoff Avenues and St. Nicholas Avenue into an integrated intermodal facility. The intermodal improvements work is expected to start in February 2007 and last until June 2008.

Rehabilitation of Myrtle/Wyckoff subway station

NYCT is currently in the process of rehabilitating and upgrading the Myrtle/Wyckoff subway stations, a project separate from the intermodal improvements mentioned above. Both stations have been designated in poor condition and are not in compliance with the Americans with Disabilities Act (ADA). The station rehabilitation is currently underway and is anticipated to be completed in August 2007.

Reconstruction Wyckoff Avenue from Flushing Avenue to Cooper Avenue

This reconstruction project passes through a very small section of the study area. The Department of Design and Construction of the City of New York is undertaking the reconstruction of Wyckoff Avenue from Flushing Avenue to Cooper Avenue. Currently the project is in its design/pre-construction phase.

1.4 Project Organization and Methodology

The organization of this study is reflected in Figure 1-3. The following are the project tasks:

Task 1 – Project Organization and Management

A detailed work program that outlines tasks, subtasks, task products and schedule has been developed including selection of Technical Advisory Committee (TAC) members.

Task 2 – Literature Search

Relevant studies have been obtained from DOT's Environmental Impact Statement Library and from the Department of City Planning and other public and private agencies. Some of the studies reviewed were:

1. Myrtle/Wyckoff Intermodal Improvements, Draft Categorical Exclusion, NYCT September 2005

Task 3 – Data Collection and Identification of Issues

Primary and secondary data was collected for the following: demographic, land use and zoning, traffic, parking, pedestrians and bicycles, transit, accidents, and goods movement for the study area. An inventory of all existing conditions information was created.

Task 4 – Analysis of Existing Conditions

Conduct a comprehensive analysis of the existing conditions (2003) data collected for population, land use and zoning, traffic and transportation, parking, pedestrian and bicycle, transit, accidents and goods movement in the study area. Identify problems and issues based on analysis and community input.

Task 5 – Draft report for Existing Conditions (Technical Memorandum No.1.)

Task 6 – Analysis of Future Conditions

Conduct an analysis of projected future (2015) conditions, for all issues studied for the existing conditions (demographics, land-use and zoning, traffic, parking, transit, pedestrian and bicycle, accidents and goods movements.)

Task 7 – Development & Evaluation of Alternative Improvement Packages

Generate recommendations and to develop a package of improvement measures designed to safely accommodate future traffic and transportation needs resulting from potential development and economic growth.

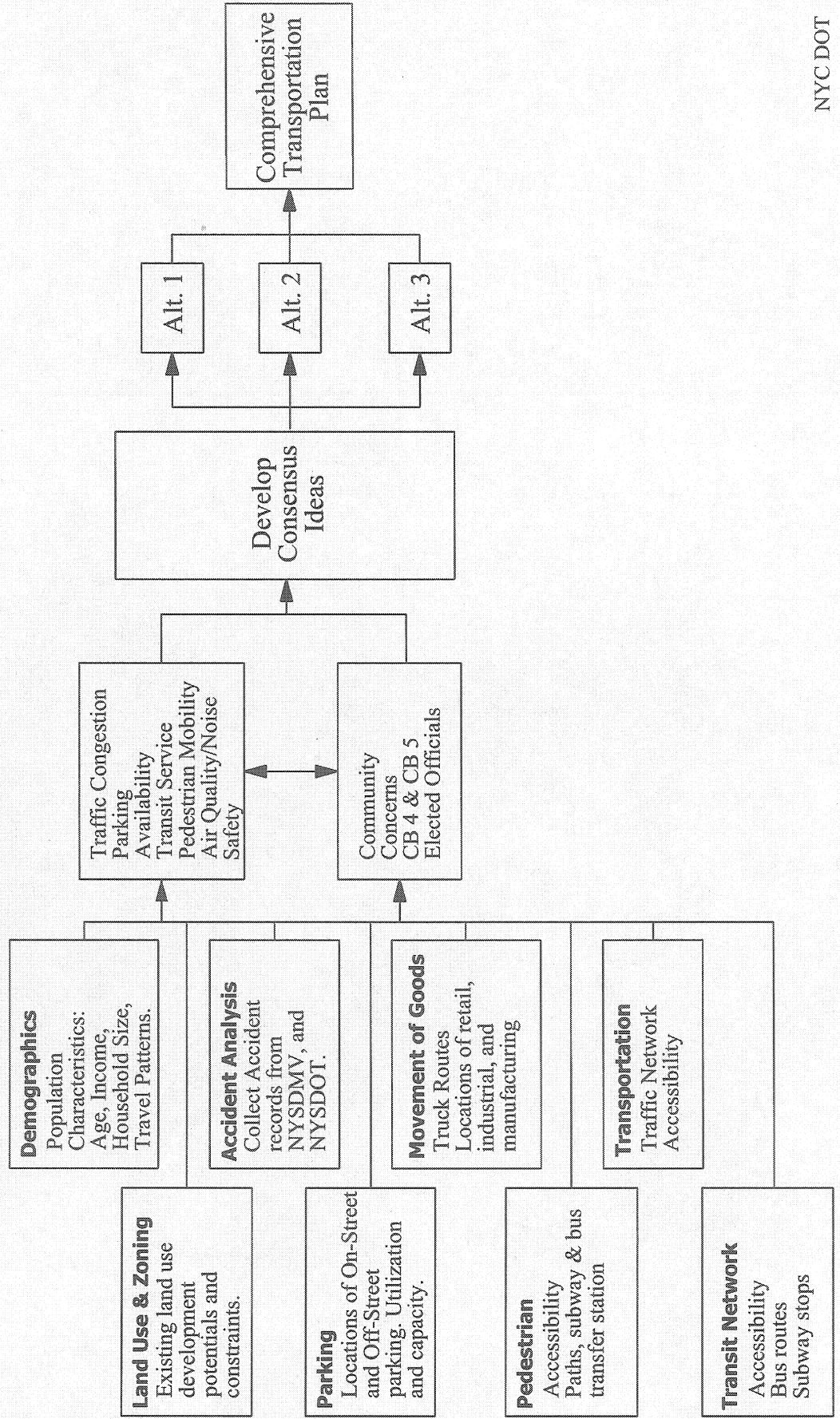
Task 8 – Recommendations and Implementation Plan

Task 9 – Draft Final Report

Task 10 – Final Report

Incorporate comments of the various agencies and community groups.

Figure 1-3
RIDGEWOOD TRANSPORTATION STUDY
Process & Issues
Inventory Issues Alternatives Plan



2.0 DEMOGRAPHIC ANALYSIS

The demographic and socioeconomic analysis of the study area examine trends such as population growth and decline, age distribution and sex, household size, employment, income and car ownership rate to help determine future travel needs.

The demographic analysis relies on data from New York City Department of City Planning (NYCDCP), and computer files issued by the United States Department of Commerce – Bureau of the Census. Data was collected and analyzed for the years 1980, 1990 and 2000.

The Ridgewood's study area cuts across two community districts and two New York City Boroughs. The Study area is located predominately within Community District No. 5 in Queens with a very small section in the southwest part of the study area in CD No. 4 in Brooklyn.

There are nineteen census tracts in the study area; eleven of them fall entirely within the study area, while eight are partially located in the study area. Three of the nineteen tracts are in Brooklyn and the others are in Queens. The study area consists of the following Census Tracts: 439*, 441*, 443*, 539*, 545, 547, 549, 551, 577*, 579*, 581, 583, 585, 587, 589, 591, 593, 595*, 613*.

To better assess the population dynamics of the study area, comparisons were made with the Borough of Queens, where approximately 95% of the study area falls, and New York City, where applicable. Table 2-1 shows the census tracts, borough, community district and the percentage of the census tract in the study area.

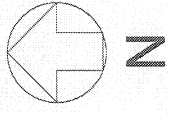
*Tracts partially within the study area.

In the analysis of partial census tracts, it is assumed that the population and other related variables are evenly distributed geographically. Figure 2-1 shows the study area and the community districts boundaries.

TABLE 2-1

#	Census Tract	Borough/CD	Percentage of Tract in The Study Area (%)
1	439	BK/4	35
2	441	BK/4	97
3	443	BK/4	45
4	539	Q/5	60
5	545	Q/5	100
6	547	Q/5	100
7	549	Q/5	100
8	551	Q/5	100
9	577	Q/5	30
10	579	Q/5	20
11	581	Q/5	100
12	583	Q/5	100
13	585	Q/5	100
14	587	Q/5	100
15	589	Q/5	100
16	591	Q/5	100
17	593	Q/5	100
18	595	Q/5	55
19	613	Q/5	25

Figure 2-1 Population by Census Tract (1980-2000)



Legend

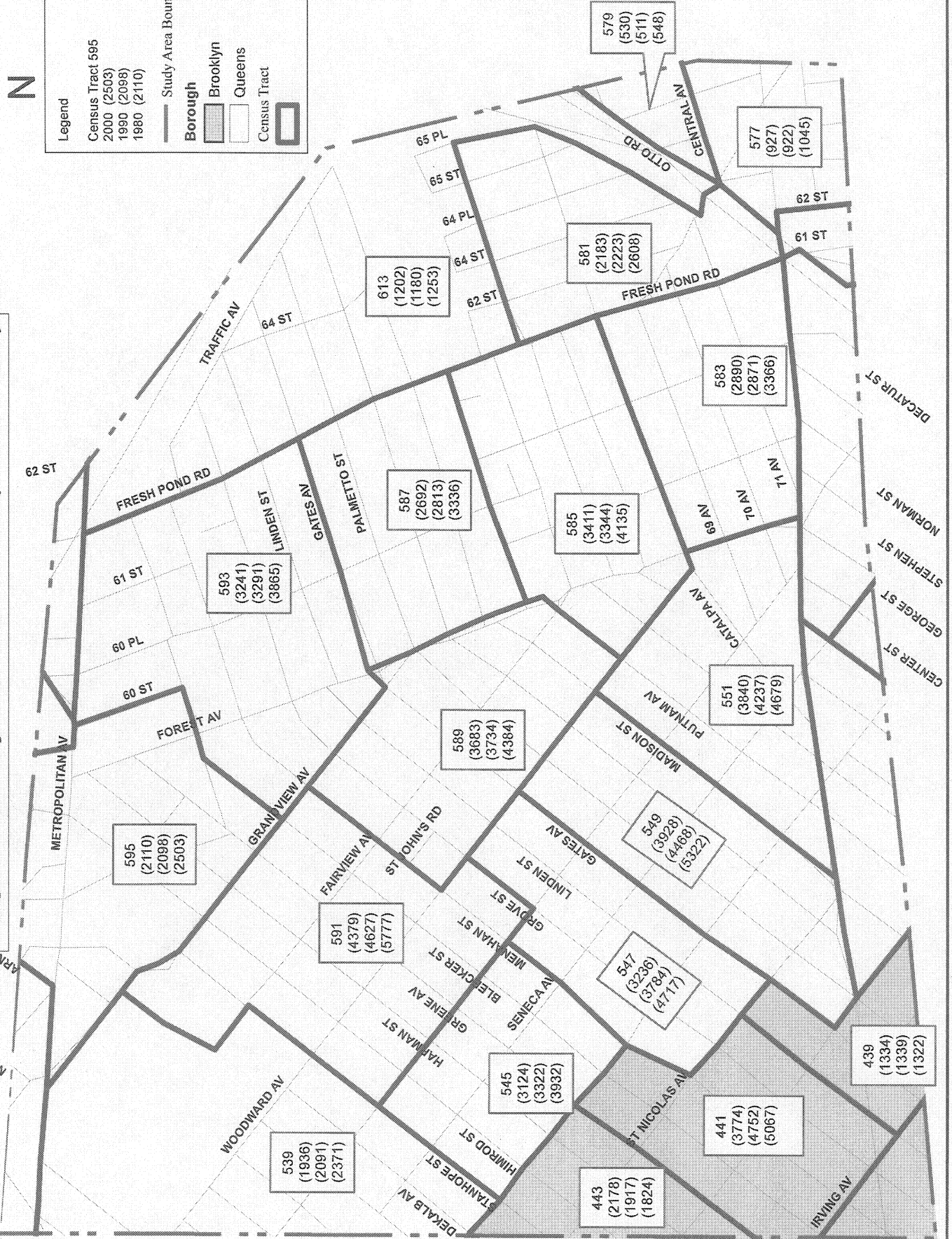
Census Tract 595
2000 (2503)
1990 (2098)
1980 (2110)

Study Area Boundary

Borough

Brooklyn
Queens

Census Tract



2.1 Population Trends

As shown in Table 2-2 below, the population analysis covers the three decennial years 1980, 1990 and 2000. The study area had a population of 50,597 in 1980, 53,524 in 1990, and 62,053 in 2000. This shows a population increase of 21.7% over the 20 year period. Comparing the population changes in the study area with the borough of Queens and New York City, it shows that all three geographic areas recorded growth; New York City grew by 13%, and Queens grew by 17.4% over the 20 year period.

Table 2-2: Population by Area

Census Year	New York City	% Change	Queens	% Change	Study Area	% Change
1980	7,071,639	-	1,891,325	-	50,597	-
1990	7,322,564	3.6	1,951,598	3.2	53,524	5.8
2000	8,008,278	9.4	2,229,379	14.2	62,053	15.9

The travel needs and characteristics of the school-attending population are different from that of the working and retired population. To capture the difference, the analysis was applied to six age groups between 0-4, 5-9, 10-14, 15-19, 20-64, 65+. This analysis reflects pre-school, elementary, junior high school, high school, employable, and retired population, respectively. Even though the legal working age is 16, Department of City Planning (DCP) statistics show that less than 40% of the ages 0-17 are employed. Census data also shows that a significant number of the school population is between 19-25 years old. According to the DCP, the retirement age of 65 plus was supported by the fact that less than 20% of this population is employed. The 0-19 age group is predominately a school attending population. Their trips are slightly outside the work trip peak hours. The work trips are more directly related to the 20-64 age groups. The majority of the retirement age group trips are outside the work trip and school trip peak hours. Table 2-3 shows comparison in the age distribution among the study area, Queens and New York City.

Table 2-3: Population by Area and Age Group

Census Year & Age Group	New York City	% Share	Queens	% Share	Study Area	% Share
1980	7,071,639	100	1,891,325	100	50,597	100
0 - 4	470,694	6.7	111,399	5.9	3,907	7.7
5 - 9	447,327	6.3	110,369	5.8	5,211	10.3
10 - 14	506,283	7.2	127,289	6.7	2,871	5.7
15 - 19	563,492	8.0	143,124	7.6	5,833	11.5
20-64	4,132,111	58.4	1,117,816	59.1	23,567	46.6
65+	951,732	13.5	281,328	14.9	9,180	18.1
1990	7,322,564	100	1,951,598	100	53,524	100
0 - 4	509,740	7.0	121,590	6.2	3,917	7.3
5 - 9	457,477	6.2	108,599	5.6	3,380	6.3
10 - 14	450,072	6.1	110,275	5.7	3,249	6.1
15 - 19	470,786	6.4	117,941	6.0	3,431	6.4
20 - 64	4,481,172	61.2	1,204,850	61.7	32,168	60.1
65+	953,317	13.1	288,343	14.8	7,380	13.8
2000	8,008,278	100	2,229,379	100	62,053	100
0 - 4	540,878	6.8	140,509	6.3	4,923	7.9
5 - 9	561,115	7.0	146,955	6.6	5,041	8.1
10 - 14	530,816	7.0	140,287	6.3	4,348	7.0
15 - 19	520,641	7.0	134,795	6.0	4,228	6.8
20 - 64	4,916,971	61.4	1,384,009	62.0	37,813	60.9
65+	937,857	12.0	282,824	13.0	5,699	9.2

2.2 Labor Force

According to the U.S census bureau, the labor force includes all persons in the civilian labor force plus members of the Armed Forces (persons 16 years of age and over on active duty with the U.S. Army, Navy, Air Force, Marine Corps, or Coast Guards). The “civilian labor force” consists of persons classified as employed or unemployed. Those not in the labor force are mainly students, housewives, retired workers, seasonal workers, inmates of institutions, disabled persons, and persons doing only incidental unpaid family work.

As expected, the labor force fluctuates with changes in the total population. Table 2-4 shows the labor force distribution for the years 1980, 1990 and 2000 for New York City, Queens, and the study area.

Table 2-4 indicates that in New York City from 1980 to 2000 the percentage of the population over 16 years of age decreased by 10.1% in the first decade, while the labor force also decreased by 4.7%. During the second decade, even though the population over 16 years of age increased by 7.9% in New York City, the labor force only increased by 1.1%. From 1980 to 1990 in New York City, the number of employed civilians decreased by 6.6% while the number of unemployed civilians increased by 19.7%. The employed and unemployed civilians from 1990 to 2000 increased by 0.6% and 7.6%, respectively in New York City

Queens' population over 16 years of age increased during both decades by 4.9% from 1980 to 1990 and by 11.8% between 1990 and 2000. The labor force also increased by 12% between 1980 and 1990 and by 2% from 1990 to 2000. Queens also experienced an increase in both employed and unemployed civilians during both decades; there was a 10.4% and 34.4% increase during the first decade, and there was a slight increase of 1.9% and 4.4% during the second decade.

In the study area, the population over 16 years of age increased by 10.2% between 1980 and 1990 from 37,969 to 41,837. This is reflected by the 21.1% or the 4,386 person increase in the labor force during this period. During the second decade, the population over 16 years old and the labor force also increased by 11.6% and 4%, respectively. The study area experienced an increase in employed (17.4%) and unemployed (63.9%) civilians between 1980 and 1990. The unemployed civilians in the study area almost doubled the rate observed for Queens and almost tripled the rate for New York City during the same period. In the ten years between 1990 and 2000 in the study area, the number of employed civilians increased by 4% while unemployed civilians increased 5.8%.

Table 2-4: Labor Force Distribution for 1980, 1990 and 2000 Census data

Census Year	New York City	% change	Queens	% change	Study Area	% change
1980 (Total pop)	7,071,639	-	1,891,325	-	50,597	-
Pop over 16 years	6,467,814	-	1,514,278	-	37,969	-
In labor force	3,764,267	-	908,085	-	20,744	-
Employed	3,487,013	-	850,310	-	19,160	-
Unemployed	269,009	-	57,123	-	1,578	-
1990 (Total pop)	7,322,564	3.6	1,951,598	3.2	53,524	5.8
Pop over 16 years	5,817,015	-10.1	1,588,591	4.9	41,837	10.2
In labor force	3,586,428	-4.7	1,017,127	12.0	25,112	21.1
Employed	3,257,637	-6.6	938,996	10.4	22,489	17.4
Unemployed	322,125	19.7	76,752	34.4	2,586	63.9
2000 (Total pop)	8,008,278	9.4	2,229,379	14.2	62,053	15.9
Pop over 16 years	6,279,431	7.9	1,775,449	11.8	46,694	11.6
In labor force	3,626,865	1.1	1,037,238	2.0	26,127	4.0
Employed	3,277,825	0.6	956,784	1.9	23,384	4.0
Unemployed	346,741	7.6	80,111	4.4	2,737	5.8

2.3 Household Characteristics

The number of households in the study area increased by 6.4% from 19,541 to 20,782 between 1980 and 1990, while the number increased by only 2.3% to 21,255 between 1990 and 2000. The number of households in Queens also increased in both decades; It increased by 1% to 720,149 between 1980 and 1990 and by 9% to 782,664 from 1990 to 2000. In New York City the number of households increased by 1% from 2,788,530 to 2,819,401 from 1980 to 1990, while between 1990 and 2000 the number increased by 7.2% to 3,021,588.

The average household size, which is measured in persons per household, in the study area showed an increase from 2.42 to 2.61 between 1980 and 1990 and a similar increase from 2.61 to 3.01 between 1990 and 2000. Household size in Queens showed a similar trend; there was an increase from 2.63 to 2.67 between 1980 and 1990 and an increase from 2.67 to 2.81 between 1990 and 2000. The average household size for New York City increased during both decades from 2.49 to 2.54 between 1980 and 1990 and from 2.54 to 2.59 between 1990 and 2000. The rate of growth is slightly lower than the increase observed within the study area.

Table 2-5 shows the household characteristics (number of household and average household size) in New York City, Queens and the study area.

Table 2-5: Household Characteristics

Census Year	New York City	% Change	Queens	% Change	Study Area	% Change
1980 Population	7,071,639		1,891,325		50,597	
# of Households	2,788,530		711,940		19,541	
Persons Per Household	2.49		2.63		2.42	
1990 Population	7,322,564	3.6	1,951,598	3.2	53,524	5.8
# of Households	2,819,401	1.1	720,149	1.2	20,782	6.4
Persons Per Household	2.54	2.0	2.67	1.5	2.61	7.9
2000 Population	8,008,278	9.4	2,229,379	14.2	62,053	15.9
# of Households	3,021,588	7.2	782,664	8.7	21,255	2.3
Persons Per Household	2.59	2.0	2.81	5.2	3.01	15.3

2.4 Median Household Income

The median household income in the study area is best represented by a comparison with New York City and Queens. Table 2-6 shows median income in New York City, Queens, and the study area for the period 1980-2000.

Table 2-6: Median Household Income by Area

Census Year	New York City	% Change	Queens	% Change	Study Area	% Change
1980	\$29,802	-	\$36,270	-	\$26,567	-
1990	\$38,909	30.6	\$44,601	23.0	\$35,477	33.5
2000	\$38,293	-1.6	\$42,439	-4.8	\$34,158	-3.7

Household median income has grown over the past 20 years in New York City, Queens, and the study area by approximately 29%, 18% and 30%, respectively. The median income of New York City was \$29,802 in 1980 and rose to \$38,909 by 1990, reflecting an increase of 30.6% during the first decade. The median income in Queens, on the other hand, increased by 23% from \$36,270 to \$44,601 while in the study area it increased by as much as 33.5% from \$26,567 to \$35,477. However, the median household income of the study area was only \$34,158 which was approximately 19% less than Queens median income and 11% less than New York City. Between 1990 and 2000 the residents of New York City, Queens and the study area all experienced income decreases of approximately 2%, 5% and 4%, respectively.

2.5 Vehicle Ownership

Between 1980 and 2000, vehicle ownership in New York City increased by approximately 16%. In 1980, from a total of 2,788,530 households, about 41% owned a vehicle. By 1990, about 44% of the total households owned a vehicle. Data from 2000 shows that the percentage remained the same, and about 44% of the 3,021,588 households in New York City owned a car.

The number of households with only one vehicle decreased by approximately 1.7% in New York City between 1980 and 1990, while number of households with two and three or more vehicles increased by approximately 34% and 98%, respectively. Between 1990 and 2000, the trend slowed and the number of households with one vehicle, two vehicles, and three or more vehicles increased in New York City by approximately 7.6%, 8%, and 5.3%, respectively.

In Queens, the total number of households that did not own a vehicle during 1980, 1990 and 2000 were 39%, 37% and 38% of the total respectively. Hence, more than 60% of the households owned a car. Queens experienced a 12% increase in vehicle ownership over the 20 year period. Between 1980 and 1990 the number of households with one vehicle decreased by 6.8%, while households with two vehicles increased by 27%, but the number of households with three or more vehicles doubled from 1980 to 1990. Between 1990 and 2000, the number of households with one vehicle increased by 7.8%, households with two vehicles increased by 7.1%, and households with three or more vehicles experienced a decline of about 3%.

In 1980, 1990 and 2000 in the study area, 47%, 46% and 45% respectively owned at least one vehicle. s . Though vehicle ownership declined 1% per decade, the number of households with vehicles increased overall by 3.8% between 1980 and 1990 and decreased by 0.4% between 1990 and 2000. While Queens had a 12% increase in car ownership, the number of households in the study area with no vehicle increased by 12% over the past 20 year period.

Between 1980 and 1990 the number of households in the study area owning one, two, and three or more vehicles increased by 0.8%, 19.6% and 1.1%, respectively. However, between 1990 and 2000, households owning one and two vehicles decreased by 0.4% and 9.2%, while households with three or more increased by 55.3%. Table 2-7 shows vehicle ownership per household in the study area, Queens and New York City for the period 1980-2000.

The population in the study area increased by 21.7% between 1980 and 2000 and gained an absolute number of 11,456 people. Vehicle ownership however remained relatively stable with 47%, 46%, and 45% over 1980, 1990, and 2000.

Table 2-7: Vehicle Ownership per Household (1980 and 2000)

Area	Year	Number of Households	Households with Zero veh	% change	Households with vehicles	% change	One	% change	Two	% change	Three or more	% change
NYC	1980	2,788,530	1,636,988	-	1,151,542	-	902,529	-	211,518	-	37,495	-
	1990	2,819,401	1,575,217	-3.8	1,244,184	8.0	887,309	-1.7	282,593	33.6	74,282	98.1
	2000	3,021,588	1,682,946	6.8	1,338,642	7.6	955,165	7.6	305,267	8.0	78,210	5.3
Queens	1980	711,940	278,073	-	433,867	-	319,765	-	96,632	-	17,470	-
	1990	720,149	263,702	-5.2	456,447	5.2	297,987	-6.8	123,443	27.7	35,017	100.4
	2000	782,664	295,049	11.9	487,615	6.8	321,337	7.8	132,217	7.1	34,061	-2.7
Study Area	1980	19,541	10,268	-	9,273	-	7,553	-	1,460	-	261	-
	1990	20,782	11,159	8.7	9,623	3.8	7,613	0.8	1,746	19.6	264	1.1
	2000	21,255	11,674	4.6	9,581	-0.4	7,586	-0.4	1,585	-9.2	410	55.3

2.6 Journey to work by Mode

Journey to work by mode was examined in the 1980, 1990 and 2000 census years.

Tables 2-8, 2-9, 2-10 and 2-11 show a summary of the journey to work by mode share.

The 1980 journey to work data for public transportation and other modes were not available at the same level of detail as for 1990 and 2000 census years. However, the 1980 data clearly shows that for New York City, Queens and the study area public transportation was the predominant mode. It represented 56.2%, 50.8% and 53.9% of the total trips, respectively. Journey by rail (subway, elevated trains and rail road) trips represented approximately 42% in New York City, and 40% in both Queens and in the study area.

Journey to work by automobiles represent the second most commonly used mode with 31% auto share in New York City, 42% in Queens and 32% in the study area.

Walking was about 12% share and 14% share Of the journey to work trips in New York City walking made up a 12% share, the study area was a 14% share, and the share of walking in Queens only constituted 7%. Travel by "other means" for journey to work was less than 2% of the trips in New York City, Queens and the study area over the decades.

The 1990 journey to work data showed similar trends to 1980 with public transportation as the predominant mode. In 1990, New York City public transportation accounted for 54.5% of all work trips, 48.5% in Queens, and 50% in the study area. Travel by subway was the most commonly used mode of public transportation in all locations, accounting for 38% of all work trips in the study area, 35.1% in Queens and 37.6 in New York City.

Automobile are the second most commonly used mode of transportation for journey to work in New York City (33.4%), Queens (44.9%), and the study area (37.8%). This category includes both driving alone and carpooled trips.

Less than 1% of the study area residents use taxicabs, ferry or railroad for journey to work. Walking represents 11.5% share in the study area, is about the same for New York City, but is only half of that in Queens.

The 2000 journey to work data maintained the trends of 1990 with public transportation as the predominant mode. In New York City, 54.2% of the residents use public transit, in Queens the share is 48.2% and in the study area the share is 56.1%. In the study area 42.9% of the trips are made by subway and 11.7% made by buses. Taxicabs represent less than 1% of the work trips in the study area and Queens, while in New York City the percentage share is 1.7%. Automobile accounted for 32% of the total trips in the study area, 45.3% in Queens and 33.9% for New York City. Among the other modes, walking represents 11.2% in the study area, 5.8% in Queens and 10.7% in New York City.

Table 2-8: 1980 Journey To Work By Mode

1980 Census Year	New York City	Mode Share %	Queens	Mode Share %	Study Area	Mode Share %
Car, Truck or Van						
Drove alone	567,774	20.7	239,045	29.4	4,159	22.3
Carpooled	278,273	10.2	101,640	12.5	1,769	9.5
Total	846,047	30.9	340,685	41.9	5,928	31.7
Public Transportation						
Bus or street car	384,393	14	88,221	10.8	2,520	13.5
Subway, elevated train or rail road	1,157,634	42.2	324,898	39.9	7,544	40.4
Total	1,542,027	56.2	413,119	50.8	10,064	53.9
Walked only	320,308	11.7	54,960	6.8	2,583	13.8
Other means	33,166	1.2	4,928	0.6	102	0.5
Total Trips	2,741,548	100	813,692	100	18,677	100

Table 2-9: 1990 Journey To Work By Mode

1990 Census Year	New York City	Mode Share %	Queens	Mode Share %	Study Area	Mode Share %
Car, Truck or Van	-	-	-	-	-	-
Drove alone	765,151	24.6	309,990	34.3	5,913	27.2
Carpooled	271,503	8.7	95,940	10.6	2,329	10.7
Total	1,036,654	33.4	405,930	44.9	8,240	37.8
Public Transportation	-	-	-	-	-	-
Bus	403,477	13.0	94,390	10.4	2,318	10.8
Subway	1,168,346	37.6	317,421	35.1	8,124	38.0
Railroad	54,716	1.8	21,260	2.3	213	1.0
Ferry	16,619	0.5	94	0.0	0	0
Taxicab	50,096	1.6	5,237	0.6	59	0.3
Total	1,693,254	54.5	438,402	48.5	10,714	50.0
Other modes	-	-	-	-	-	-
Motorcycle	1,711	0.1	415	0.0	4	0
Bicycle	9,643	0.3	1,531	0.2	31	0.1
Walked	340,077	10.9	54,646	6.0	2,472	11.5
Other means	24,930	0.8	3,767	0.4	88	0.4
Total	376,361	12.1	60,359	6.7	2,595	12.1
Total Trips	3,106,269	100	904,691	100	21,407	100

Table 2-10: 2000 Journey To Work By Mode

2000 Census Year	New York City	Mode Share %	Queens	Mode Share %	Study Area	Mode Share %
Car, Truck or Van	-	-	-	-	-	-
Drove alone	794,422	25.6	319,187	34.9	5,349	23.9
Carpooled	254,974	8.2	95,329	10.4	1,827	8.2
Total	1,049,396	33.9	414,516	45.3	7,176	32.0
Public Transportation	-	-	-	-	-	-
Bus	364,408	11.8	94,729	10.4	2,625	11.7
Subway	1,199,226	38.7	319,225	34.9	9,608	42.9
Railroad	51,141	1.6	20,845	2.3	157	0.7
Ferry	11,193	0.4	143	0.0	0	0.0
Taxicab	53,781	1.7	6,235	0.7	163	0.7
Total	1,679,749	54.2	441,177	48.2	12,553	56.1
Other modes	-	-	-	-	-	-
Motorcycle	1,488	0.0	384	0.0	12	0.1
Bicycle	15,024	0.5	2,417	0.3	93	0.4
Walked	332,264	10.7	52,776	5.8	2,515	11.2
Other means	21,998	0.7	3,766	0.4	45	0.2
Total	370,774	12.0	59,343	6.5	2,665	11.9
Total Trips	3,099,919	100	915,036	100	22,394	100

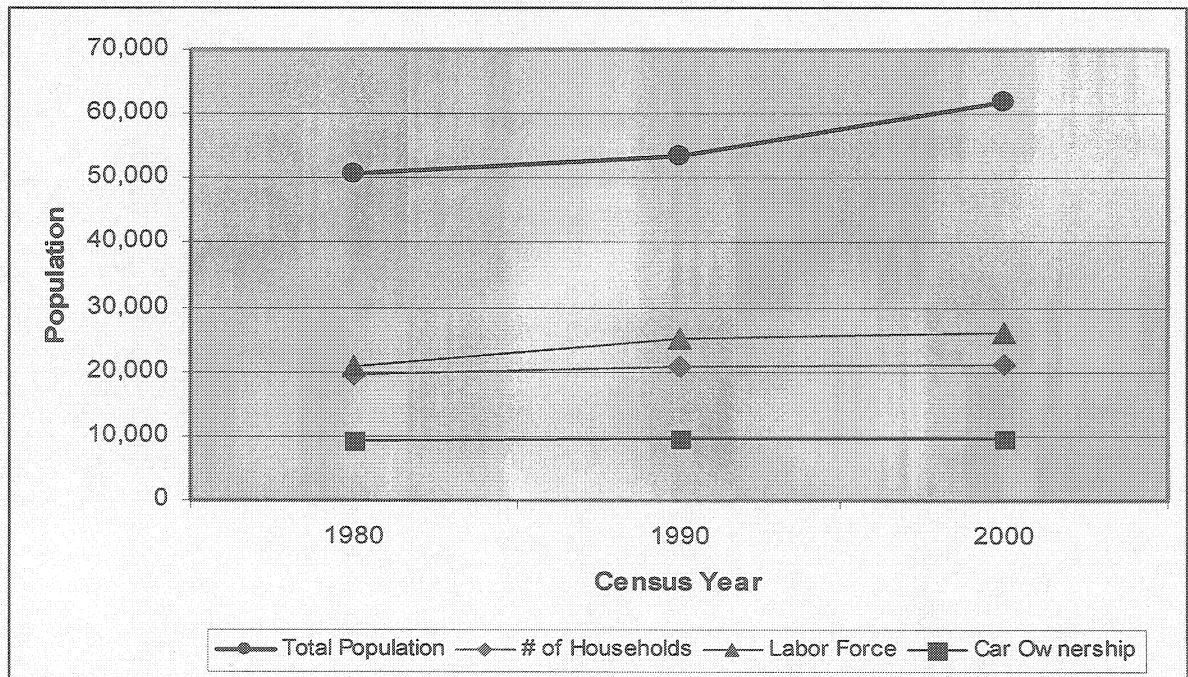
2.7 Study Area Population Characteristics

Table 2-11 and Figure 2-2 show population characteristics in the study area for each of the census year. Over the past 20, years the study area experienced an increase in population of about 22% and 8.7% increase in the total number of households. The labor force, income and car ownership also experienced an increase over the two decades.

Table 2-11
Study Area Population Characteristics

Census Year	Total Population	# of Households	Labor Force	Income	Car Ownership
1980	50,597	19,541	20,744	\$ 26,567	9,273
1990	53,524	20,782	25,112	\$ 35,477	9,623
2000	62,053	21,255	26,127	\$ 34,158	9,581
% change (1980-2000)	21.7	8.7	25.1	29.8	3.4

Figure 2-2
Study Area Population Graph Trends



3.0 ZONING AND LAND USE

Zoning

For land use and zoning purposes, the city is divided into three basic zoning districts: residential (R), commercial (C), and manufacturing (M). The three basic categories are further subdivided into lower, medium, and higher density residential, commercial and manufacturing districts. Development within these districts is regulated by use, building size, and parking regulations. Here is a brief description of the three basic zoning districts according to the Zoning Handbook:

Residential District (R)

In New York City, there are ten standard residential districts, R1 through R10. The numbers refer to the permitted density (R1 having the lowest density and R10 the highest) and other controls such as required parking. A second letter or number signifies additional controls are required in certain districts. R1 and R2 districts allow only detached single-family residences and certain community facilities. The R3-2 through R10 districts accept all types of dwelling units and community facilities and are distinguished by differing bulk and density, height and setback, parking, and lot coverage or open space requirements.

Commercial District (C)

The commercial districts reflect the full range of commercial activity in the city from local retail and service establishments to high density, shopping, entertainment and office uses. There are eight basic commercial districts where two (C1 and C2 districts) are designed to serve local needs, one district (C4) is for shopping centers outside the central business district, two (C5 and C6 districts) are for the central business districts which embrace the office, retail, and commercial functions that serve the city and region, and three (C3, C7, and C8 districts) are designed for special purposes (waterfront activity, large commercial amusement parks and heavy repair services). Variations in bulk, parking and loading requirements also exist in these commercial districts.

Manufacturing District (M)

Manufacturing activities are grouped into three districts: M1, M2, and M3. These districts include performance standards which establish limits on the amount and type of industrial nuisances which may be created. The more noxious uses are restricted to M3 districts but they may be permitted in districts M1 and M2 if they comply with performance standards of those districts. Retail and commercial uses are permitted in manufacturing districts with some exceptions while residential and community facility uses are excluded from most manufacturing districts.

Zoning Districts in the Study Area

The Ridgewood study area is zoned for residential, commercial, and manufacturing. The study area contain a variety of land uses including offices, residential row houses and multi-family buildings, retail stores, industrial firms, rail lines and yards. A limited wind screen field survey was conducted, and this was complemented by secondary data from DCP and the city web sites. See Figure 3-1 for the location of each of the zoning district in the study area.

3.1 Residential Zoning Districts

According to the data, the predominant zoning designation in the study area is residential which accounts for approximately 69% of the total area. There are four residential districts within the study area (R5, R5B, R6, and R6B). Figure 3-2 shows the distribution of the zoning residential districts in the study area.

R5 residential zoning district represents approximately 2% of the study area and is concentrated on the southeast area of Otto Road. R5 district is usually a general residence district that have detached single or two family houses. The FAR for R5 district is 1.25 and it provides a transition between lower and higher density neighborhoods.

The R5B category, which allows more lot coverage than R5, covers the largest area making up approximately 32% of the study area. It is predominately located in the east section from south of Metropolitan Avenue to 71st Avenue and between Forest Avenue to Traffic Avenue/ 65 Place. (Excluding the section along Fresh pond Road corridor which is zoned R6B) However, other R5B districts can be found on the west portion of the study area, particular on the following mid-block sections:

- Mid-block between Onderdonk Avenue and Woodward Avenue south of Stanhope Street and north of Woodbin Street
- Mid-block between Fairview Avenue and Woodward Avenue south of Stanhope Street and north of Grove Street
- Mid-block between Grandview Avenue and Fairview Avenue south of Stanhope Street and north of Linden Street

The R6 category covers approximately 5% of the study area. It is primarily located on the southwest section of the study area, from part of Cypress Avenue south to Irving Avenue and north of Myrtle Avenue. R6 residential zoning districts are appropriate for medium density housing and are usually between three and twelve stories buildings. In terms of the R6 district, parking is required for one per dwelling unit or 70 percent of the dwelling units if grouped.

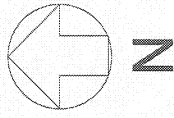
The higher density designation R6B residential zoning districts represent approximately 30% of the study area, covering the second largest portion. The R6B districts are found mainly on the west section of the study area, between Grandview Avenue and Cypress Avenue, south of Hart Street and north of Catalpa Avenue. R6B districts are found also along Metropolitan Avenue between Fresh Pond Road and Grandview Avenue, along Fresh Pond Road between Metropolitan to Myrtle Avenue and on Myrtle Avenue between Wyckoff Avenue and Forest Avenue. One section located between 65th Place and Fresh Pond Road south of Madison Street and north of Kluepfel Court is designated R6B. An R6B district is a low rise building with lot coverage greater than R6 district. In terms of the R6B district, parking is required for one per dwelling unit or 50 percent of the dwelling units if grouped.

Table 3-1 below shows the floor area ratio (FAR) for each residential zoning district located within the Ridgewood study area. (A building can contain floor area equal to the lot area multiplied by the floor area ratio of the district in which the lot is located.)

Table 3-1: Residential Zoning Districts Located within the Study Area

Zoning District	Maximum Residential FAR	Maximum Commercial FAR*	Maximum Community FAR	Approximate percentage in the study area
R5	1.25	1.00	2.00	2%
R5B	1.35	1.00	2.00	32%
R6	0.78 to 2.43	2.00	4.80	5%
R6B	2.00	2.00	4.80	30%

* Represents maximum FAR for commercial overlay district which permits a wide range of local retail and personal service establishments needed in a residential neighborhood. Typical uses include grocery stores, small dry cleaning establishments, restaurants and barber shops.

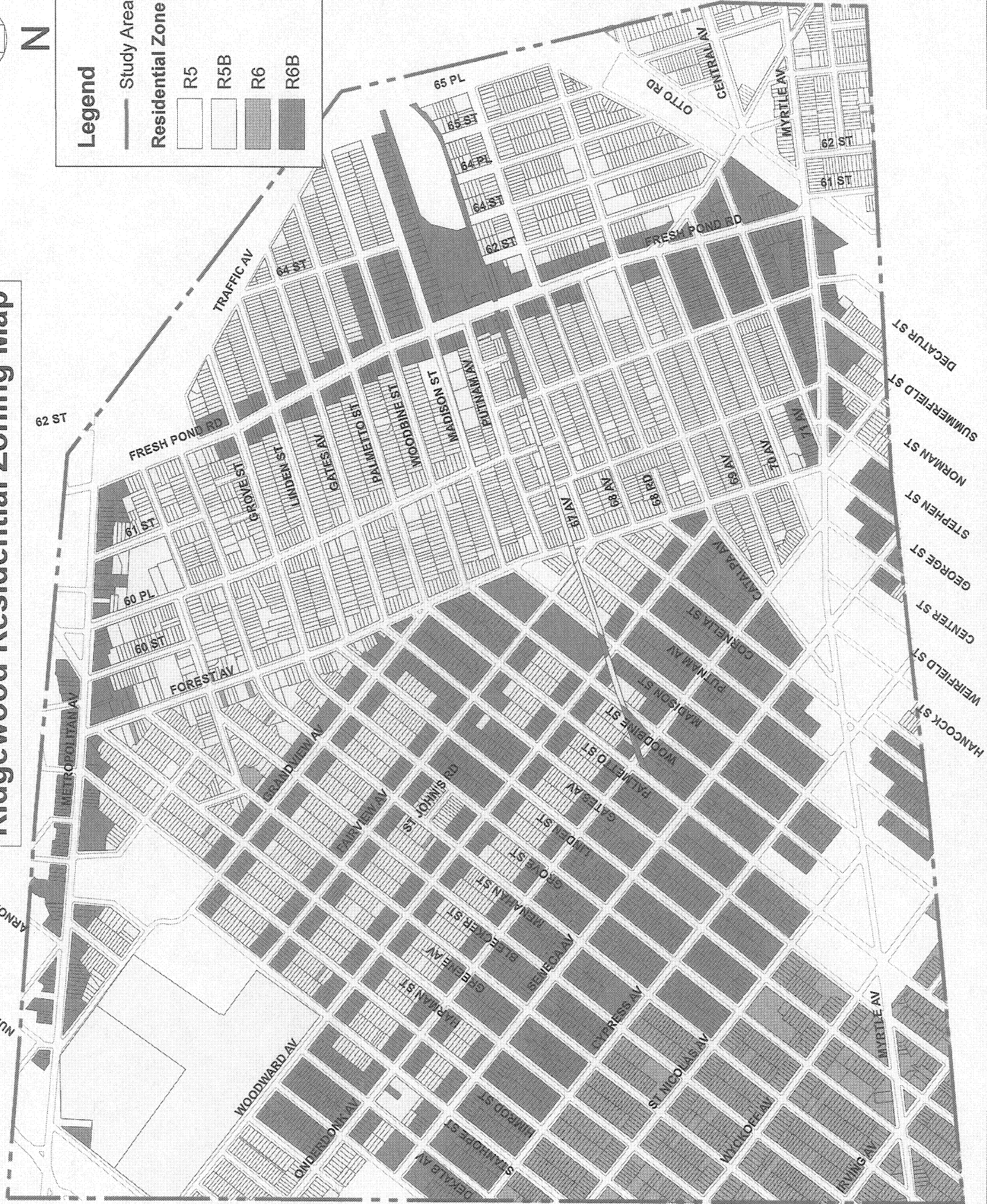


**Figure 3-2
Ridgewood Residential Zoning Map**

Legend

- Study Area Boundary
- Residential Zone

R5
R5B
R6
R6B



3.2 Commercial Zoning Districts

There are only two commercial zoning districts (C4-3 and C4-3A) within the study area. The commercial zoning districts are located mainly along Myrtle Avenue between Wyckoff Avenue and Forest Avenue. Areas zoned for commercial use make up approximately 4% of the study area. See Figure 3-3 for the distribution of the areas zoned for commercial use in the study area.

The C4 zoning designation permits commercial centers located outside the central business districts. These include pharmacies, chain stores, movie rental, fast food chain stores, banks, and other commercial uses that serve a larger area. There are several subsidiaries of C4 which are usually differentiated by FAR and parking requirements.

In the study area, a C4-3A commercial district is located along Myrtle Avenue between Madison Street and Stephen Street/Forest Avenue, representing approximately 3% of the total area. This section of the corridor accommodates retail and personal service shops such as Sleepy Mattress Company, Rainbow Shoes store, furniture stores, Rite Aid pharmacy, chain restaurants such as Subway and McDonalds, and other establishments such as delis, grocery stores, pizzeria restaurants and café places. Additional services include banks, dental and optical medical care, and travel agencies among others.

The C4-3 zoning district has a commercial FAR of 3.4 which is higher than the C4-3A zoning district. C4-3 is approximately 1% of the study area and is located in the section bounded by Gates Avenue and Madison Street and between Wyckoff and St. Nicholas Avenue. This area contains major commercial and retail establishments such as furniture stores, a Duane Reade pharmacy, fast food chains (KFC and McDonalds), delis and grocery stores.

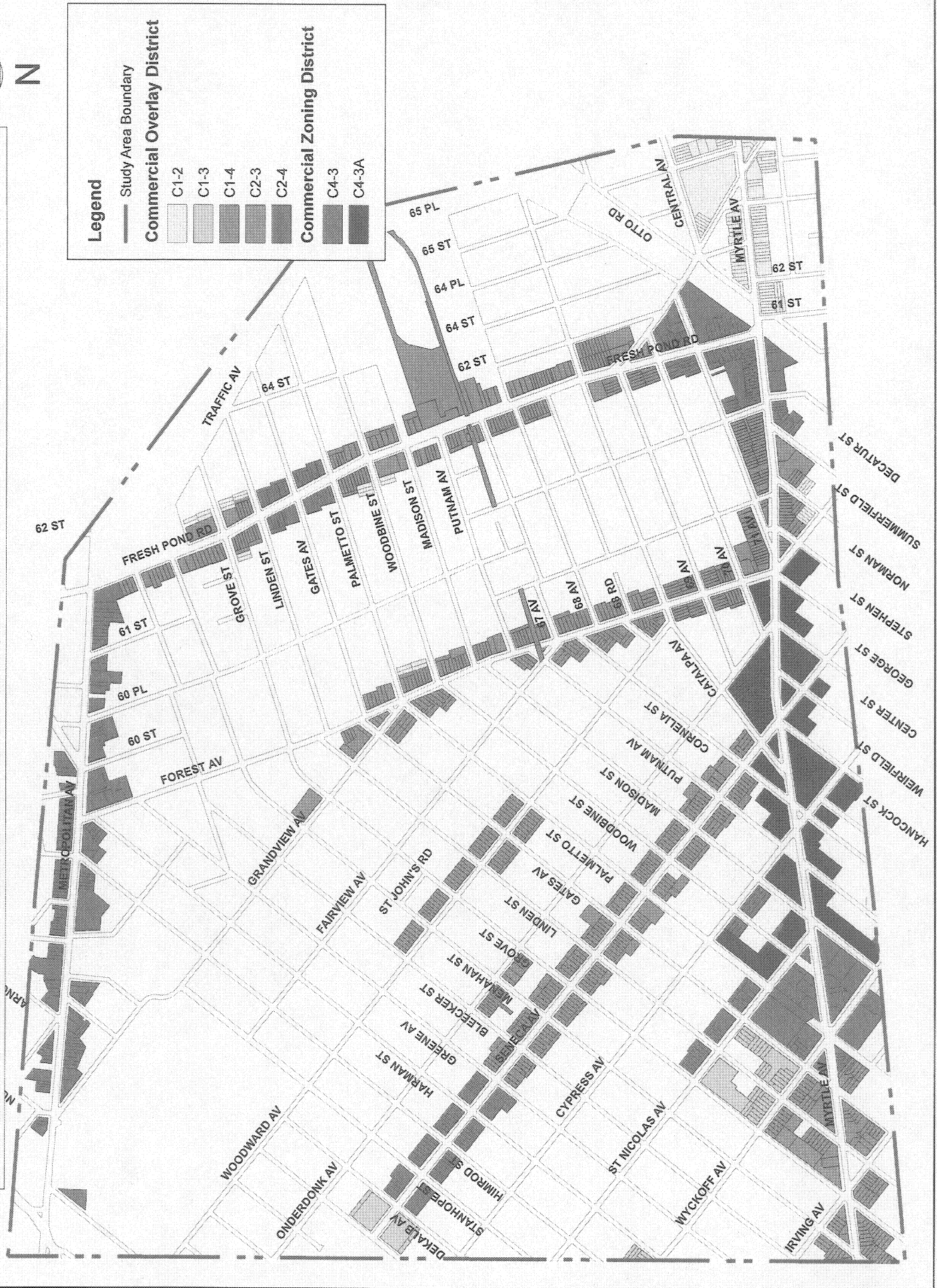
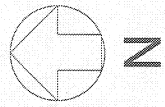
Table 3-2 below shows the floor area ratio (FAR) for each commercial zoning district located within the Ridgewood study area. (A building can contain floor area equal to the lot area multiplied by the floor area ratio of the district in which the lot is located).

Table 3-2: Commercial Zoning Districts Located within the Study Area

Zoning District	Maximum Residential FAR	Maximum Commercial FAR	Maximum Community FAR
C4-3	2.43	3.40	4.80
C4-3A	3.00	3.00	3.00
C1-2 overlay district	*	2.00	-
C1-3 overlay district	*	2.00	-
C1-4 overlay district	*	2.00	-
C2-3 overlay district	*	2.00	-
C2-4 overlay district	*	2.00	-

*Maximum residential FAR in these commercial districts is governed by the regulations of the surrounding residential district.

**Figure 3-3
Ridgewood Commercial Zoning and Commercial Overlay Districts Map**



Commercial Overlay Districts

Commercial overlay districts exist in the Ridgewood study area. They are the C1-2, C1-3, C1-4, C2-3 and C2-4 and cover approximately 18% of the study area. See Figure 3-3 for the distribution of commercial overlay districts in the study area. These commercial districts are mapped as overlays and are generally found along major avenues/arterials in residential districts such as Metropolitan Avenue, Fresh Pond Road, Seneca Avenue, Myrtle Avenue and on Forest Avenue south of Linden Street. When these overlay districts are mapped in R1 to R5 and R6-B districts, the maximum commercial FAR is 1.0. When they are mapped as overlays in R6 to R10 districts, the maximum commercial FAR is 2.0 as such is the case in this study area.

The C1-2 commercial overlay districts are mapped generally where the residential districts R5 is located within the study area, and it covers about 2% of the area. It is located along both side of Myrtle Avenue between Otto Road and 65th Street and include the south side of Central Avenue. However, few other districts are scattered throughout the center and south portion of the study area.

Commercial C1-3 overlay districts are located in the center west and southwest section of the area, covering approximately 1.5% of the study area. One section is located along both sides of Seneca Avenue between DeKalb Avenue and Stockholm Street. The second section is the two blocks bounded by Wyckoff Avenue and St Nicholas Avenue between Gates Avenue and Grove Street.

The C1-4 commercial overlay districts takes approximately 7% of the study area, and it is mapped generally along the avenues throughout the study area where residential districts R5B and R6B are found.

- Seneca Avenue both sides (between Greene Avenue and Catalpa Avenue)
- Forest Avenue both sides (between Grove Street and Myrtle Avenue)
- Fresh Pond Road both sides (between Bleecker Street and Linden Street)
- Fresh Pond Road both sides (between Palmetto Street and 70th Avenue)
- Myrtle Avenue both sides (between Forest Avenue and 60th Lane)

- Woodward Avenue both sides (between Bleecker Street and Palmetto Street)
- Grandview Avenue both sides (between Menahan Street and Grove Street)

There is a C2-3 commercial overlay districts in the southwest corner of the study area, which takes approximately 1.5% of the study area. This section is located along both sides of Myrtle Avenue between Wyckoff and Irving Avenues.

The C2-4 commercial overlay district is approximately 6% of the study area. It can be found generally along the corridors where residential district R6B is mapped. The locations are general along the avenues through out the study area:

- Seneca Avenue both sides (between Dekalb Avenue and Greene Avenue)
- St Nicholas Avenue east side (between Grove Street and Palmetto Street)
- Cypress Avenue west side (between Palmetto Street and Madison Street)
- Metropolitan Avenue both sides (between Nurge Avenue and Eliot Avenue)
- Metropolitan Avenue south side (between Eliot Avenue and Fresh Pond Road)
- Fresh Pond Road both sides (between Linden Street and Palmetto Street)
- Fresh Pond Road both sides (between 70th Avenue and Myrtle Avenue)
- Myrtle Avenue both sides (between Summerfield Street and Otto Road)
- 60th Lane west side (between 60th Lane and Myrtle Avenue)

3.3 Manufacturing Zoning Districts

There are two manufacturing districts in the study area (M1-1 and M1-4D). They are concentrated on the north-east section of the study area along Traffic Avenue, 65 Place, Otto road, and part of Metropolitan Avenue. Manufacturing districts make up approximately 9% of the study area. See Figure 3-4 for the distribution of the manufacturing districts in the study area.

Areas zoned as M1-1 constitute approximately 8% of the study area and are located along the following avenues and streets:

1. along Traffic Street between Metropolitan Avenue and Madison Street.

2. between Otto Road and Shaler Avenue, from Myrtle Avenue to 65th Street
3. on the north side of Metropolitan Avenue between Fresh Pond Road and Eliot Avenue.
4. on both sides of Metropolitan Avenue between Nurge Avenue and Flushing Avenue.

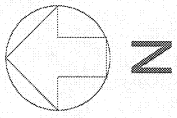
There are two light manufacturing-high performance districts in the southern section of Ridgewood that are zoned M1-4D, which account for approximately 1% of the study area. The first portion is located on both sides of Decatur Street between Forest and Myrtle Avenues. The second location is on both sides of Weirfield Street between Seneca and Cypress Avenues.

The Table 3-3 below shows the floor area ratio (FAR) for each manufacturing zoning district located within the Ridgewood study area. (A building can contain floor area equal to the lot area multiplied by the floor area ratio of the district in which the lot is located.)

Table 3-3: Manufacturing Zoning Districts Located within the Study Area

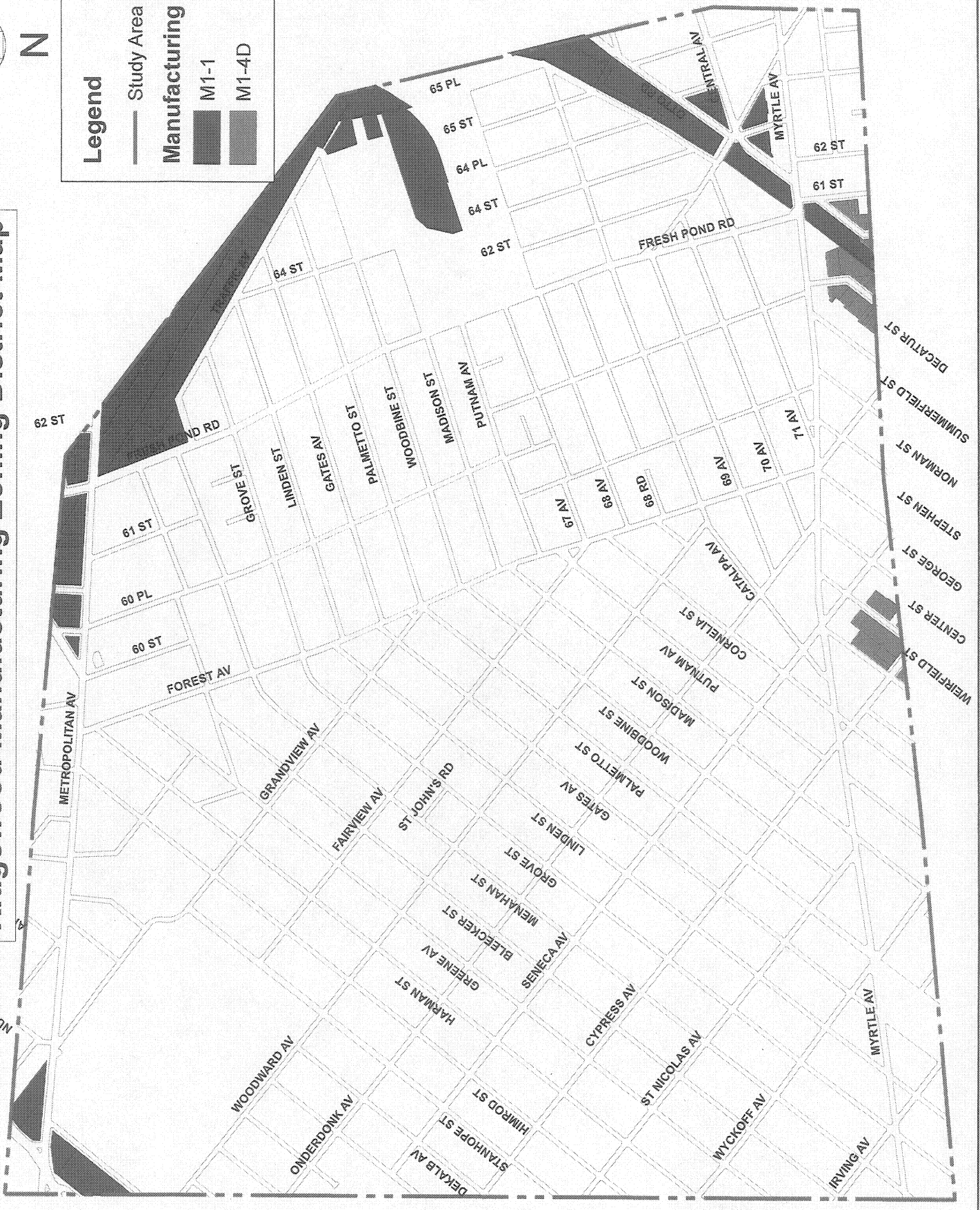
Zoning District	Maximum Commercial FAR	Maximum Manufacturing FAR
M1-1	1.00	1.00
M1-4D	2.00	2.00

**Figure 3-4
Ridgewood Manufacturing Zoning District Map**



Legend

- Study Area Boundary
- Manufacturing Zoning**
- M1-1
- M1-4D



3.4 New and Proposed Developments

There are no major developments occurring in the study area. However, the Department of City Planning (DCP) has identified an area for a rezoning “The Middle Village – Glendale Rezoning” plan. It is situated just outside of the southeast boundary of the Ridgewood study area. This proposed rezoning would preserve the area’s predominant low-density character and ensure that future residential development is consistent with its surrounding neighborhood. Although the proposed rezoning is close to the study area, no significant impact is expected.

Existing Land Use

The Ridgewood study area contains various land uses supported by the different zoning districts. Existing land use includes offices, residential, retail stores, educational institutions, industrial firms and recreational facilities. Figure 3-5 shows the existing land use pattern in the study area.

3.5 Residential Land Use

The predominant land use in the Ridgewood study area is residential. The residential land use comprises mainly multi-family walk-up apartment buildings, one and two-family houses, and residential houses with commercial use on the ground floor.

One and Two-Family Residences

Most of the residential neighborhoods scattered throughout the east side of the study area consist of one and two-family residences. They are mainly the traditional three-story rowhouse - detached and semi-detached houses. On the west side of the study area, there are mainly four-story rowhouses – detached and semi-detached houses. One and two-family residences occupy almost 90% of the land use within the study area. See Figure 3-6 for the typical one and two-family residences in the study area.

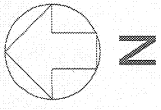
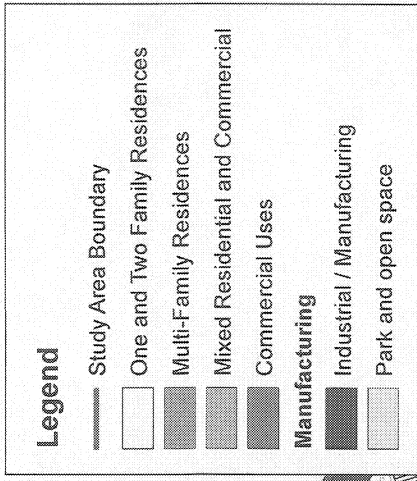


Figure 3-5
Ridgewood Land Use Map



Many of the residential buildings along the major corridors are mixed residential/commercial buildings with the street level being a retail store, grocery store, or restaurant. They are located mainly along:

- Myrtle Avenue between Menahan Street and Cypress Hills Street
- Fresh Pond Road between Metropolitan Avenue and Myrtle Avenue
- Forest Avenue between Metropolitan Avenue and Myrtle Avenue
- Seneca Avenue between DeKalb Avenue and Myrtle Avenue.



Figure 3-6 typical one and two-family residences in the study area

3.6 Commercial Land Use

The commercial land use in the study area is concentrated along Myrtle Avenue, Fresh Pond Road, Forest Avenue, and Seneca Avenue. These commercial retail shopping streets are correspond with the C-1 zoning. The commercial retails along these corridors include national chain stores, clothing stores, restaurants, video rental stores, banks, and fast food chain stores. Metropolitan Avenue in the north of the study area is also another major commercial street but to a lesser extent. Businesses along Metropolitan Avenue are mostly banks, auto repair shop, and auto dealer with their own parking lots between Flushing Avenue and Fresh Pond Road. Another type of commercial land use in Ridgewood is the theater, culture and entertainment use. The Ridgewood Theater is on 5527 Myrtle Avenue.

3.7 Manufacturing Land Use

The manufacturing land use in the study area is concentrated in a very small area on the eastern edge of the study area. It is mainly on the north side of Traffic Avenue in the form of warehouses and print shops. Also beyond the intersection of Traffic Avenue and Woodbine Street is the MTA New York City Transit Fresh Pond Bus Maintenance Facility. On the lower east side of the study area, light manufacturing land use occurs along the south side of Shaler Avenue between 65th Place and Myrtle Avenue.

3.8 Community Facilities

One mental retardation & developmental disabilities service, six health care centers and eight dental services are located throughout the study area.

- Professional Service Center – 1663 Madison Street
- The Wyckoff Heights Medical Center – 374 Stockholm Street
- The Family Health Ctr-Ridgewood – 68-52 Fresh Pond Road
- Ridgewood Medical Center – 57-38 Myrtle Avenue
- Ridgewood Dialysis Center – 3-85 Seneca Avenue
- Putnam Family Health Center – 1670 Putnam Avenue
- QHN Medical Center at Ridgewood – 769 Onderdonk Avenue
- Wyckoff Ave Medical Dental Center – 321 Wyckoff Avenue

- Forest Medical, P.C. – 66-85 Forest Avenue
- Ridgewood Dental Group – 54-31 Myrtle Avenue
- Putnam Family Dentistry – 60-83 Myrtle Avenue
- Glenridge Dental Center – 65-34 Myrtle Avenue
- Goldman Michael L DDS – 69-03 Fresh Pond Road
- Alongi James a DMD – 68-35 Fresh Pond Road
- Aiuto Vivian DDS – 66-22 Fresh Pond Road
- Ridgewood Dental Care – 64-12 Fresh Pond Road

Many public/private elementary and secondary schools serve the study area. There are a total of 16 schools in the study area:

- PS 71 – 62-85 Forest Avenue
- Intermediate School 93 – 66-56 Forest Avenue
- PS 75 – 16-66 Hancock Street
- PS 81 – 559 Cypress Avenue
- PS 88 – 60-85 Catalpa Avenue
- Intermediate School 77 – 976 Seneca Avenue
- Grover Cleveland High School – 21-27 Himrod Street
- Saint Aloysius School – 360 Seneca Avenue
- Saint Matthias School – 5825 Catalpa Avenue
- Saint Bridgids School – 438 Grove Street
- Our Lady of the Miraculous Medal School – 62-32 61st Street
- Grover Cleveland High School – 21-27 Himrod Street
- German Amer School Assn – 70-01 Fresh Pond Road
- Kumon Center of Ridgewood – 61-01 Catalpa Avenue
- Drive a-Arama Auto School – 61-05 Madison Street
- Midway Paris Beauty School – 5440 Myrtle Avenue

Several daycare and residential facilities for children are also located in the study area. There are 5 daycare centers in the study area as follows:

- DayWatch Day Care – 20 Saint Johns Road
- New Life Day Care Site II – 408 Grove Street
- Catalpa YMCA Early Childhood Pre-school – 69-02 64th Street
- The GRYC Little Stars Pre-school – 62-02 Myrtle Avenue
- Salvation Army Pre-school – 69-23 Cypress Hills Street

The area residents have access to several libraries and cultural institutions such as the Ridgewood Public Library on 20-12 Madison Street in Central Ridgewood, the Brooklyn Public Library: Washington Irving on 360 Irving Avenue just one block outside of the southern boundary of the study area. See Figure 3-7 for detail location of all the community facilities.

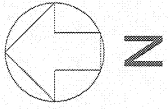
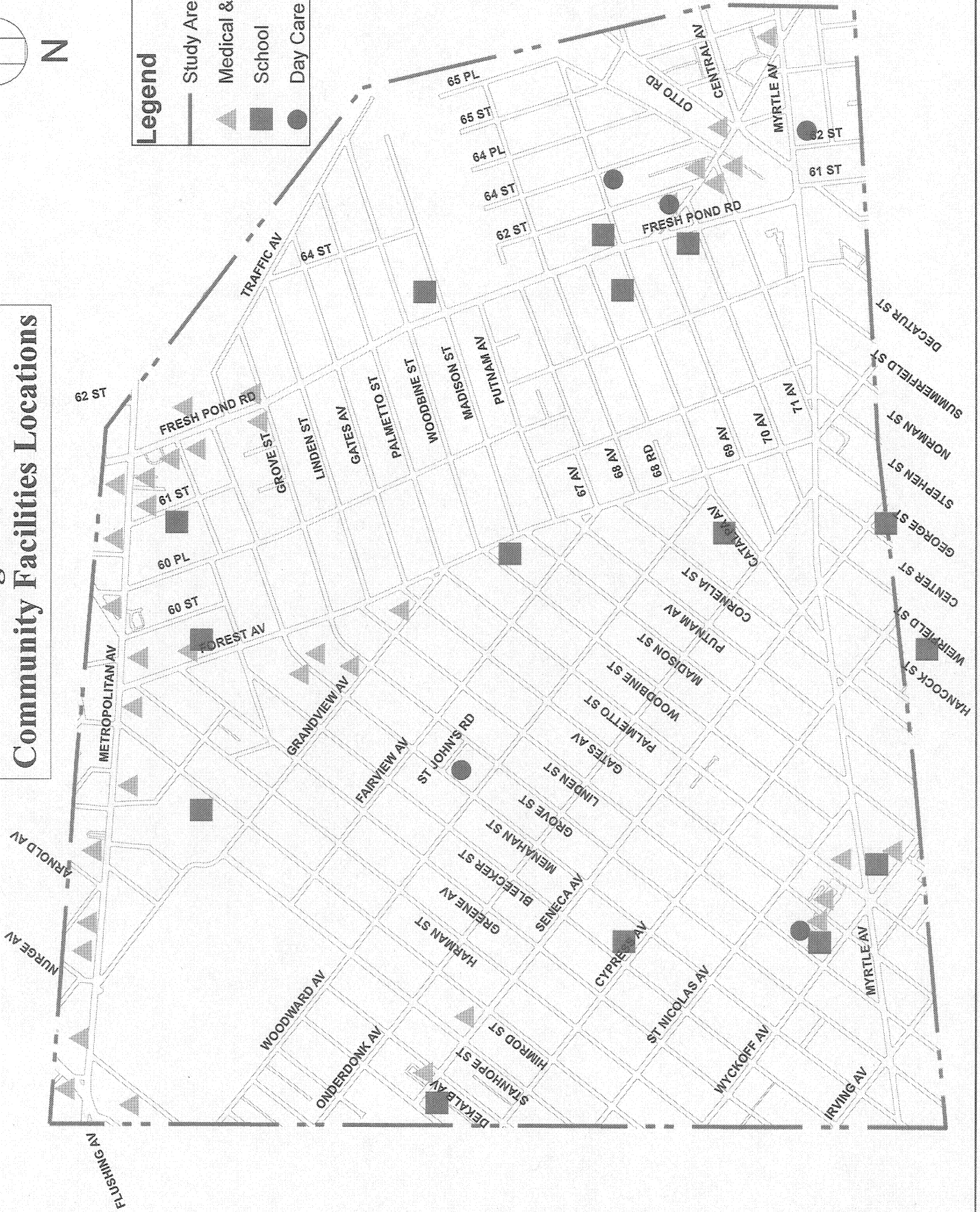


Figure 3-7
Community Facilities Locations

Legend

- Study Area Boundary
- Medical & Dental Offices
- School
- Day Care Centers



3.9 Recreational Facilities, Parks and Open Space

The study area is also well served by recreational facilities, including parks and open spaces. In the north-west quadrant of the study area exist a large park - Cleveland Park which has an area of 5.1 acres. It is located right by the Linden Hill Cemetery and Ahawith Chesed Cemetery between DeKalb Avenue and Stanhope Street south of Grandview Avenue and north of Fairview Avenue. There is also a smaller park – JHS 93 Playground (Ridgewood) with an area of 1.97 acres located on Woodbine Street between Woodward and Fairview Avenues. In addition, there is a smaller park less than an acre - Benninger Playground located on Madison Street between Fresh Pond Road and 60th Place. There is a very large park – Glen Ridge Park located on the eastern edge of the study area. Although this park is located on the edge of the study area, it attracts a significant number of residents in the vicinity.

3.10 Vacant Land

Within the study area, the residential density is significantly high, which lead to shortage of land use. The percent of vacant properties is very low. This is very little vacant land in the study area. In fact, here is only one vacant site located on the north side of Traffic Avenue between Linden Street and Gates Avenue in the study area.

4.0 TRAFFIC AND TRANSPORTATION

4.1 Existing Conditions

The study area is bounded by Metropolitan Avenue to the north, Myrtle Avenue to the south, Traffic Avenue and 65th Street to the east and a line parallel to Forest Avenue connecting Flushing and Metropolitan Avenues in the north to Myrtle and Irving Avenues to the south. The street system has a grid like structure with two separate grids. The east half and the west half coming together at Forest Avenue. The two are differently oriented and this creates irregular intersection along the Forest Avenue interface.

Street System

The street network provides adequate vehicular access to the study area. Although there is no direct connection to any major highway, the study area is within a half mile of the LIE and the BQE. The main arterials in the study area are Metropolitan Avenue, Myrtle Avenue, Forest Avenue, and Fresh Pond Road. Myrtle Avenue and Metropolitan Avenue are the east/west corridors in the south and north of the study area in which Metropolitan Avenue serve as a truck route and connects to the Brooklyn Queens Expressway (I-278) in Brooklyn in the west. It also provides connection to Union Turnpike/Jackie Robinson Parkway in the east. Myrtle Avenue in the south of the study area also connects to Union Turnpike/Jackie Robison Parkway further east. Metropolitan Avenue and Myrtle Avenue are truly mixed use in character, there are commercial, residential and major entertainment centers (e.g. Ridgewood Theater) located along these corridors. Two other major corridors are Fresh Pond Road and Forest Avenue that are in the north/south direction. See Figure 4-1:

Fresh Pond Road is a main north/south corridor in the east half of the study area. Fresh Pond Road comprises of one moving lane and one parking lane in each direction. There is a mixture land uses, such as residential, commercial, and offices (medical and dental service) located along the corridor. The street is approximately 45 feet wide from Metropolitan Avenue to Myrtle Avenue.

Forest Avenue is another major north/south corridor parallel to Fresh Pond Road in the center of the study area. It comprises of one moving lane and one parking lane in each direction. The street which is approximately 35 feet wide has a mixture of residential, commercial, and institutional uses located along its length.

Seneca Avenue is a two way east-west corridor with one lane and a parking lane in each direction. The street is approximately 40 feet wide from DeKalb Avenue to Myrtle Avenue. The land use along this corridor includes residential, commercial/retail, institutional, and funereal homes uses.

Palmetto Street is a two way east-west corridor with one lane and a parking lane in each direction. It is partially underneath the MTA elevated subway track – the “M” line between Myrtle Avenue and Onderdonk Avenue. The street is approximately 40 feet wide. There is a mixture of residential and commercial uses as well as a MTA bus depot located along this corridor.

Wyckoff Avenue is a two way east-west corridor with one lane and a parking lane in each direction. The street is approximately 30 feet wide with a mixture of residential, commercial, and offices such as medical and dental located along this corridor.

4.2 Activity Centers & the Transportation Network

A high percentage of the peak hour vehicle trips in the study area are through trips for work and shopping oriented. The trips leaving the area in the AM are home based trips (origins) while those coming into the area constitute a high share of non-home based trips (destinations). The reverse pattern is somewhat evident in the PM peak. The area’s economic activity, local retail/offices and entertainment centers make this area a destination point. The two major transit hubs and the surrounding commercial retail create major Activity Centers in the study area, see Figure 4-2.

Activity Center # 1 is driven by a major transit hub which connect two subway lines (M and L) and the MTA bus depot/terminal at Palmetto Street/Myrtle Avenue and Wyckoff Avenue. Because of the bus depot most of the bus lines (B54, Q55, Q58, B13, B54, and B26) either start, end or pass through this section during its route. This portion of the Myrtle corridor is predominantly commercial in nature with major retail activities; food shopping centers such us the Food Bazaar

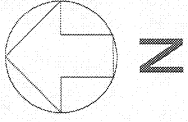
and Dimensions' supermarket. There are also shoes and clothing stores, restaurants (K and K Super Buffet), fast food national chains, pharmacies (Duane Reade) and banking service (North Fork Bank). The area is easily accessible by automobile as well.

Activity Center # 2: is concentrated along Metropolitan Avenue between Flushing Avenue and Forest Avenue, but takes also a portion of the area south of Metropolitan Avenue bounded with Grandview and Forest Avenue. This area contains a mixture of commercial and retails businesses such us auto sales and auto body shops, fast food chain stores, pharmacies and several banks such is Citibank and Chase located on the western section along Metropolitan Avenue. There are also two schools located in this area, (PS 71 on 62-85 Forest Avenue and the Grover Cleveland High School on 21-27 Himrod Street). Two transit bus lines run along Metropolitan Avenue (B38 and Q54).

Activity Center # 3: is the Fresh Pond Road Corridor between Metropolitan Avenue and Catalpa Avenue. This section of the corridor contains the second major transit hub in the study area with the MTA bus depot between 68 Avenue and Madison Street, and The "M" train subway station next to it. This connection ensures a constant flow of commuters and pedestrians who use the surrounding services. This section is predominately commercial with retail activity on the ground floor, such us pharmacies, grocery stores, supermarkets, banking and medical offices. This area contains also PS 88. It has one public bus line (Q58) running between Metropolitan Avenue and Putnam Avenue, and two public bus lines (B13 and B20) running between Putnam Avenue and Myrtle Avenue that serve this activity center.

Activity Center # 4: is located on Forest Avenue between Gates and Myrtle Avenue. It is served by three public bus lines (B13, Q39, and Q58), and the subway line "M" which stop at Forest Avenue station. The area contains shopping retail stores such us the Metro Discount Center, delis, supermarkets, and other services such banking, and medical offices. PS 93 and the Queens Library Ridgewood are also located on this area. Like the rest of the study area activity center 4 is easily accessible by automobile.

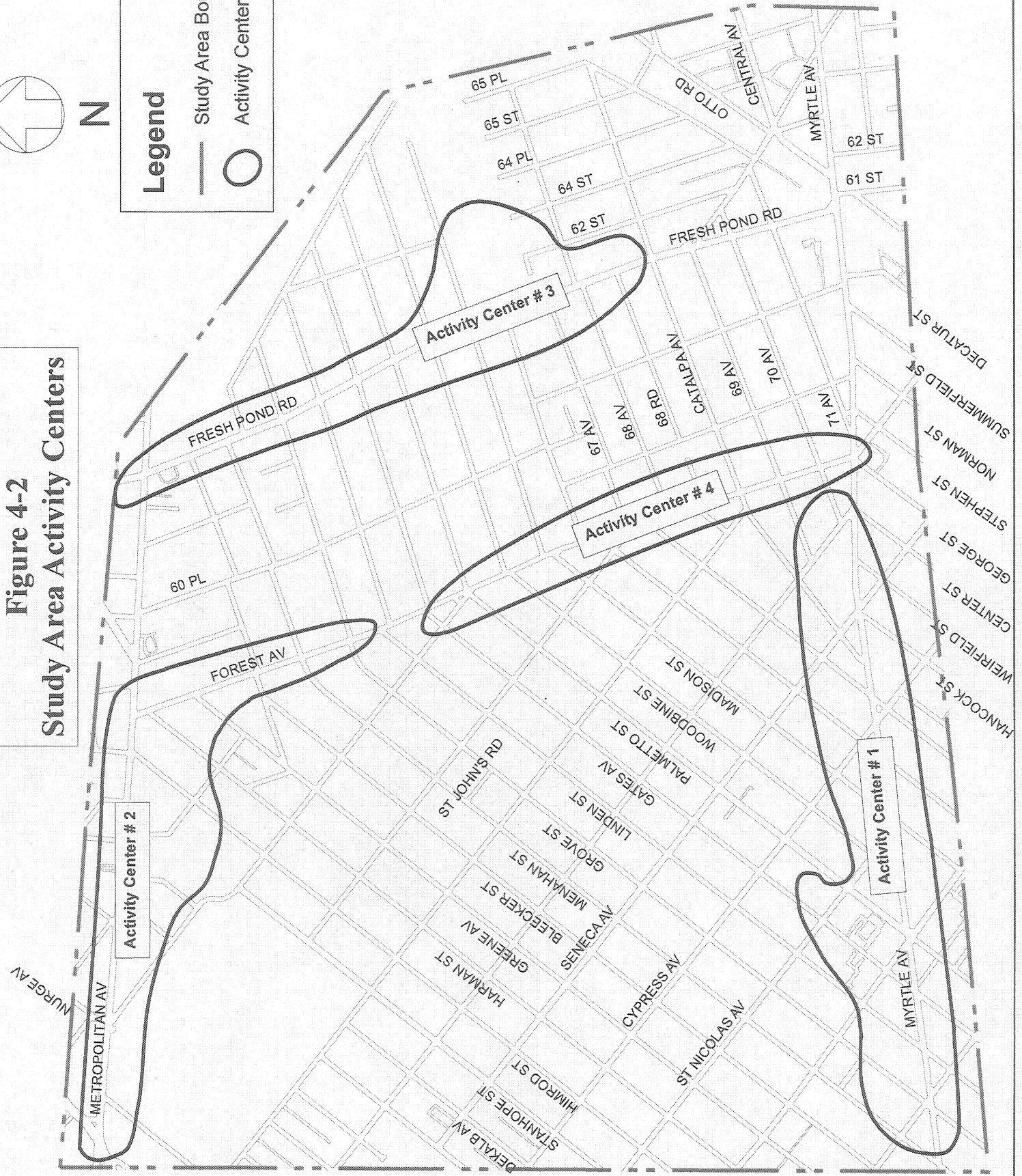
Figure 4-2
Study Area Activity Centers



Legend

— Study Area Boundary

○ Activity Centers



4.3 Data Collection & Traffic Operations

Data Collection

Existing traffic conditions were defined through field surveys conducted for one week in November 2004. Automatic Traffic Recorders (ATR) provided traffic count data from Monday November 15, 2004 to Sunday November 21, 2004. This was supplemented with information from recent environmental documents and other studies conducted for projects in the study area.

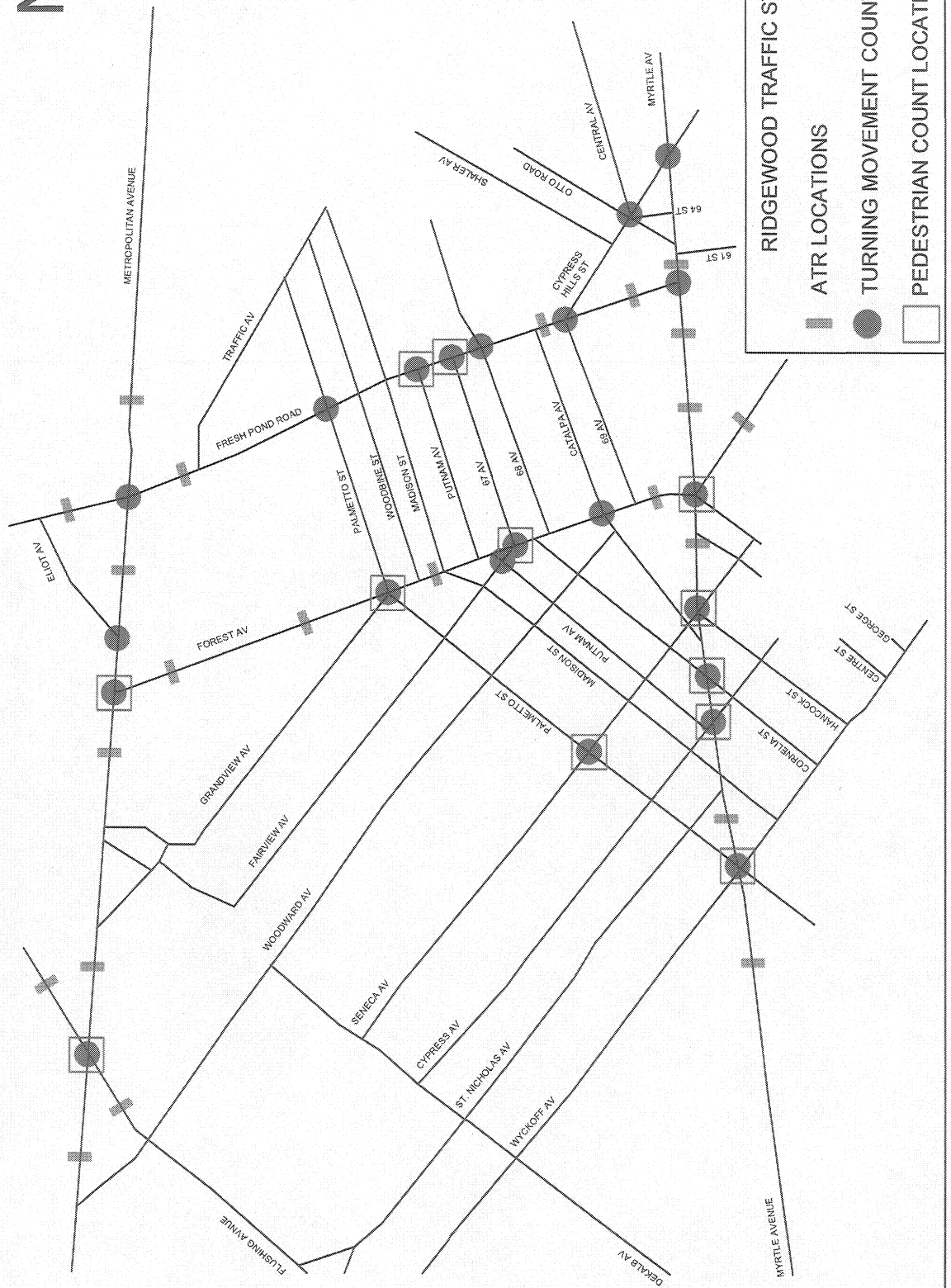
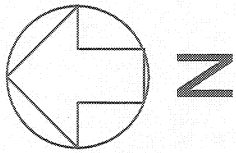
Traffic volume counts included vehicle classification and turning movements for three midweek days (Tuesday, Wednesday, and Thursday) during the AM, midday, and PM peak hours and for the Saturday Midday peak hour. The ATR machines were placed at twenty-two locations for the duration of seven days. See Figure 4-3 for the traffic count locations in the study area. Speed and delay runs were also conducted for the various peak hours along the main corridors.

Automatic Traffic Recorders (ATR) were placed at the following twenty-two locations:

- Myrtle Avenue between St Nicholas Street and Wyckoff Avenue (Westbound)
- Myrtle Avenue between Gates Avenue and Wyckoff Avenue (Eastbound)
- Myrtle Avenue between Onderdonk Avenue and Forest Avenue (Eastbound)
- Myrtle Avenue between Forest Avenue and 71st Avenue (Westbound)
- Forest Avenue between Stephen Street and George Street (Northbound)
- Forest Avenue between 70th Avenue and Myrtle Avenue (Southbound)
- Myrtle Avenue between 60th Lane and Fresh Pond Road (Eastbound)
- Myrtle Avenue between Otto Road and Fresh Pond Road (Westbound)
- Fresh Pond Road between 70th Avenue and 69th Avenue (Northbound)
- Fresh Pond Road between Catalpa Avenue and 69th Avenue (Southbound)
- Fresh Pond Road between Bleecker Street and Metropolitan Avenue (Northbound)
- Fresh Pond Road between 62nd Road and Metropolitan Avenue (Southbound)
- Metropolitan Avenue between 61st Street and Fresh Pond Road (Eastbound)
- Metropolitan Avenue between 62nd Street and Fresh Pond Road (Westbound)
- Metropolitan Avenue between Starr Street and Flushing Avenue (Westbound)
- Metropolitan Avenue between Woodward Avenue and Flushing Avenue (Eastbound)

- Flushing Avenue between 53rd Street and Metropolitan Avenue (Southbound)
- Flushing Avenue between Woodward Avenue and Metropolitan Avenue (Northbound)
- Forest Avenue between Woodbine Street and Palmetto Street (Northbound)
- Forest Avenue between Gates Avenue and Palmetto Street (Southbound)
- Forest Avenue between Harman Street and Metropolitan Avenue (Northbound)
- Metropolitan Avenue west of Forest Avenue (Eastbound)

Figure 4-3 Traffic Count Locations



Vehicle classification and turning movement counts were conducted for the various peak periods at the following 22 signalized location:

Signalized intersections:

1. Metropolitan Avenue @ Flushing Avenue
2. Metropolitan Avenue @ Eliot Avenue
3. Metropolitan Avenue @ Forest Avenue
4. Metropolitan Avenue @ Fresh Pond Road
5. Myrtle Avenue @ Wyckoff Avenue/Palmetto Street
6. Myrtle Avenue @ Cypress Avenue
7. Myrtle Avenue @ Cornelia Street
8. Myrtle Avenue @ Seneca Avenue/Hancock Street
9. Myrtle Avenue @ Forest Avenue/George Street
10. Myrtle Avenue @ Fresh Pond Road
11. Myrtle Avenue @ Cypress Hills Street
12. Cypress Hill Street @ Central Avenue
13. Fresh Pond Road @ Palmetto Street
14. Fresh Pond Road @ Putnam Avenue
15. Fresh Pond Road @ 67th Avenue
16. Fresh Pond Road @ 68th Avenue
17. Fresh Pond Road @ Cypress Hill Street/69th Avenue
18. Forest Avenue @ Palmetto Street/Grandview Avenue
19. Putnam Avenue @ Fairview Avenue
20. Forest Avenue @ 67th Avenue/Fairview Avenue
21. Forest Avenue @ Catalpa Avenue
22. Seneca Avenue @ Palmetto Street

Pedestrian Data

Pedestrian traffic plays a significant role in the study area due to the presence of the transit hubs, commercial retails, recreational facilities, schools, and churches. Fourteen intersections were identified for pedestrian counts for the weekday (AM, MD, and PM) and Saturday peak hour.

1. Myrtle Avenue @ Wyckoff Avenue/Palmetto Street
2. Metropolitan Avenue @ Forest Avenue
3. Forest Avenue @ 67th Avenue
4. Forest Avenue @ Palmetto Street/Grandview Avenue
5. Fresh Pond Road @ Putnam Avenue
6. Fresh Pond Road @ 67th Avenue
7. Metropolitan Avenue @ Flushing Avenue
8. Myrtle Avenue @ Seneca Avenue
9. Seneca Avenue @ Palmetto Street
10. Myrtle Avenue @ Fresh Pond Road
11. Myrtle Avenue @ Cypress Avenue
12. Myrtle Avenue @ Cornelia Street
13. Myrtle Avenue @ Forest Avenue
14. Metropolitan Avenue @ Fresh Pond Road

Parking Data

Parking data was collected in detail for the following facilities:

- Off street parking garages
- Off street parking lots
- On-street metered parking
- On-street non-meter parking

Accident Data

Accident data for nine intersections for the years 1998-2000 from NYSDOT and DMV records was analyzed to identify patterns in the study area. The accidents locations are the following:

- Metropolitan Avenue @ Fresh Pond Road
- Metropolitan Avenue @ Flushing Avenue
- Fresh Pond Road @ Cypress Hills Street
- Metropolitan Avenue @ Forest Avenue
- Myrtle Avenue @ Cypress Avenue
- Metropolitan Avenue @ Eliot Avenue
- Myrtle Avenue @ Seneca Avenue
- Myrtle Avenue @ George Street
- Myrtle Avenue @ Fresh Pond Road

4.4 Network Traffic Volumes

Balanced traffic network volumes for the various peak periods were prepared using the ATRs and the manual turning movement counts. This information was plotted on traffic flow maps for each of the representative peak hours; AM (7:45 - 8:45), midday (11:45am - 12:45pm), PM (5:15 - 6:15), and Saturday midday (12:00 - 1:00). Figures 4-4, 4-5, 4-6, and 4-7 present the 2004 existing peak hour traffic volumes.

The data showed that two locations along the Metropolitan Avenue corridor processed the highest number of vehicles for all four peak periods.

1. Westbound Metropolitan Avenue between 62nd Street and Fresh Pond Road processed approximately 1052, 654, 757, and 808 vehicles per hour (vph) in the AM, midday, PM, and Saturday midday peak hours, respectively; and

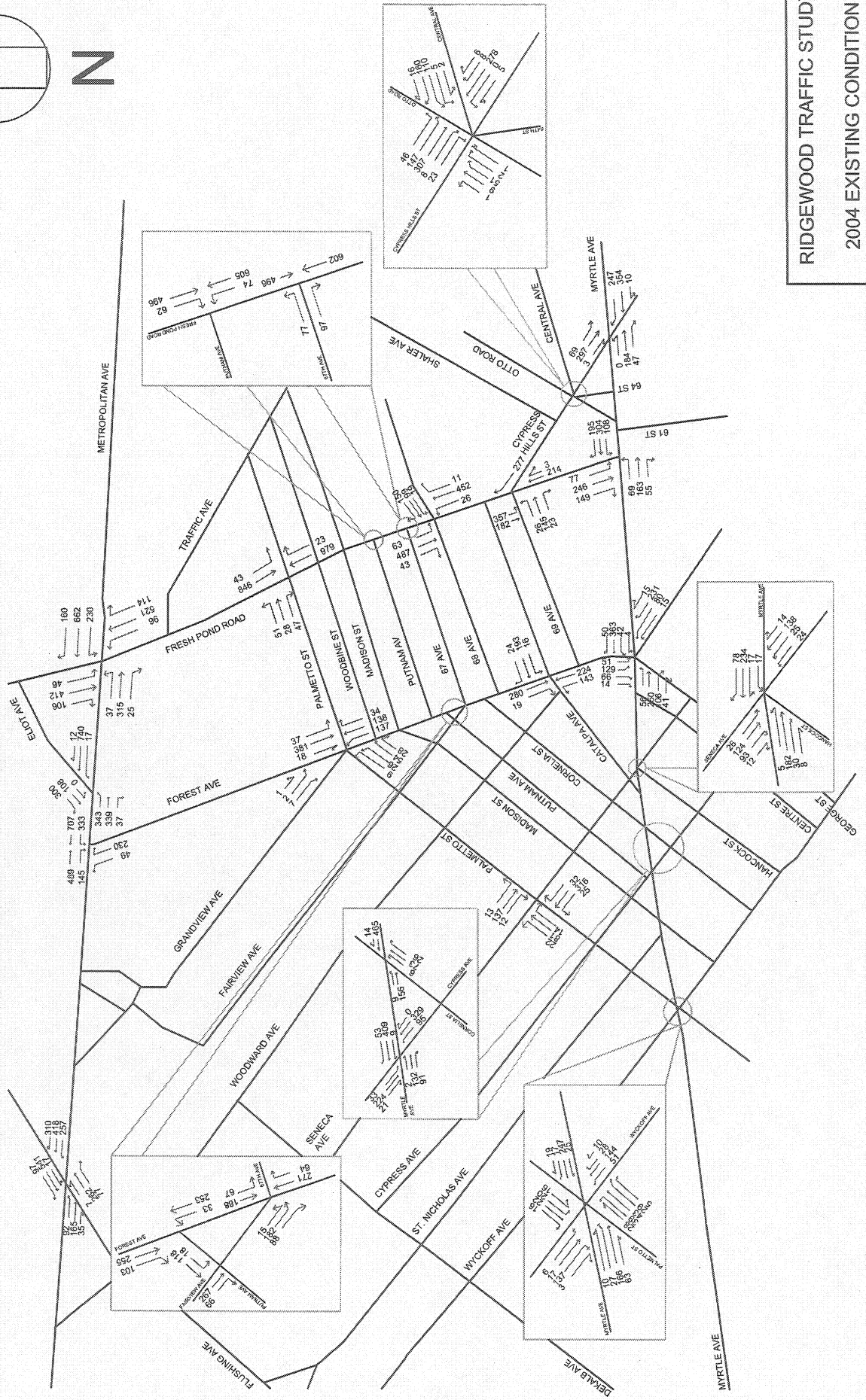
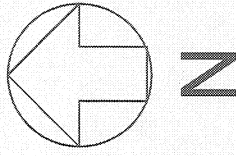
2. Eastbound Metropolitan Avenue between Woodward Avenue and Flushing Avenue processed approximately 1208, 769, 749, and 864 vehicles per hour (vph) in the AM, midday, PM, and Saturday midday peak hours.

Table 4-1 shows vehicles per hour (vph) for the AM, midday, PM, and Saturday midday peak hours, respectively at all ATR count locations.

**Table 4-1
Peak Hour ATR Volumes**

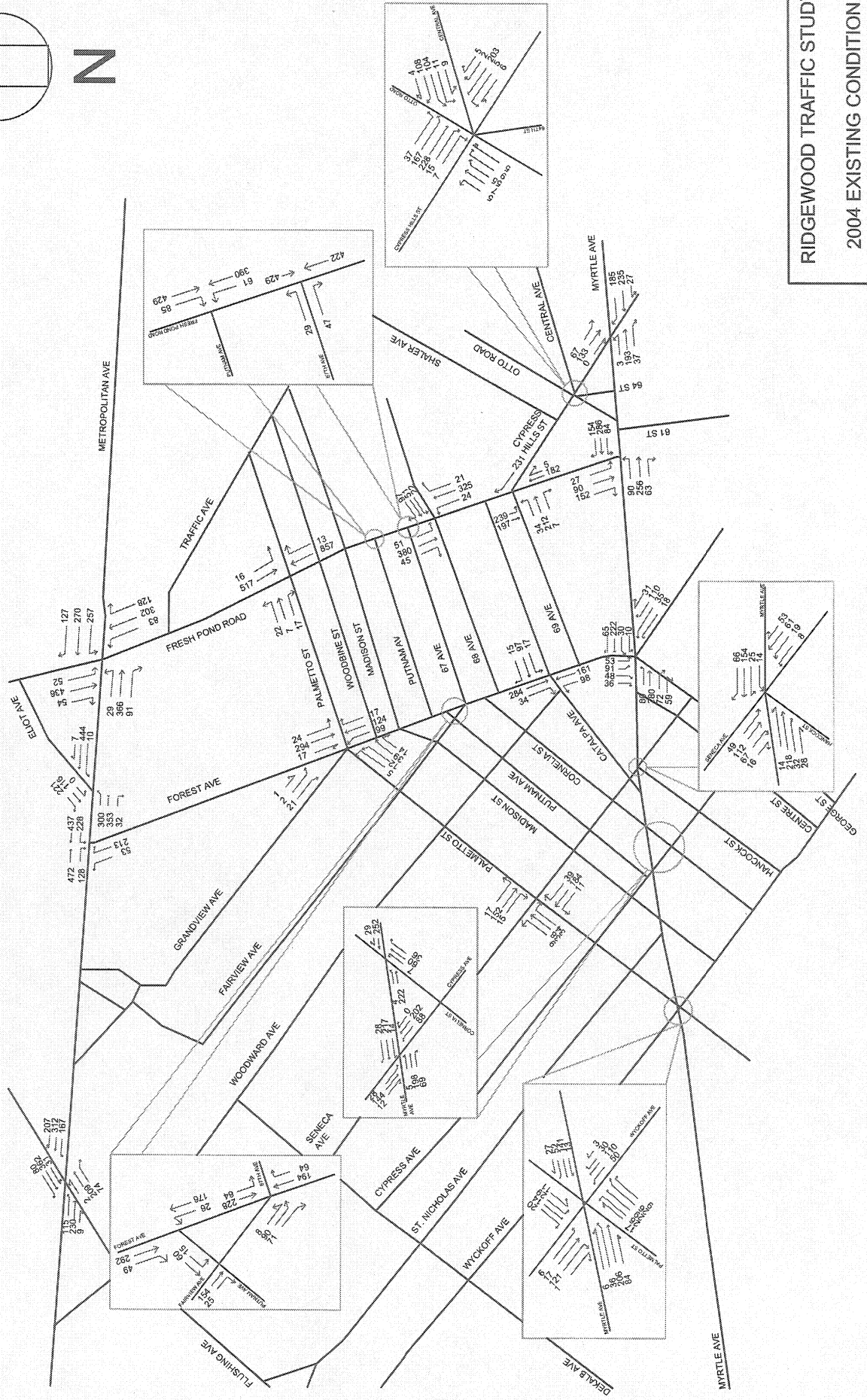
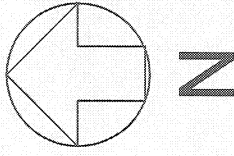
Location ID	Location	Peak Hour Volumes			
		AM	MD	PM	SAT MD
1	Myrtle Ave between St Nicholas St & Wyckoff Ave (westbound)	332	233	253	295
2	Myrtle Ave between Gates Ave & Wyckoff Ave (eastbound)	281	337	427	393
3	Myrtle Ave between Onderdonk Ave & Forest Ave (eastbound)	480	454	621	601
4	Myrtle Ave between Forest Ave & 71st Ave (westbound)	507	332	357	402
5	Forest Ave between Stephen St & George St (northbound)	378	196	259	325
6	Forest Ave between 70th Ave & 69th Ave (southbound)	273	220	365	403
7	Myrtle Ave between 60th La & Fresh Pond Rd (eastbound)	507	332	357	402
8	Myrtle Ave between Otto Rd & Fresh Pond Rd (westbound)	546	260	310	541
9	Fresh Pond Rd between 70th Ave & 69th Ave (northbound)	217	187	189	224
10	Fresh Pond Rd between Catalpa Ave & 69th Ave (southbound)	539	383	549	466
11	Fresh Pond Rd between Bleecker St & Metropolitan Ave (northbound)	731	513	611	641
12	Fresh Pond Rd between 62nd Rd & Metropolitan Ave (southbound)	561	542	762	635
13	Metropolitan Ave between 61st St & Fresh Pond Rd (eastbound)	427	486	749	603
14	Metropolitan Ave between 62nd St & Fresh Pond Rd (westbound)	1052	654	757	808
15	Metropolitan Ave between Starr St & Flushing Ave (westbound)	338	399	815	500
16	Metropolitan Ave between Woodward Ave & Flushing Ave (eastbound)	1208	769	749	864
17	Flushing Ave between 53rd St & Metropolitan Ave (southbound)	699	535	572	485
18	Flushing Ave between Woodward Ave & Metropolitan Ave (northbound)	294	355	444	281
19	Forest Ave between Woodbine St & Palmetto St (northbound)	309	190	258	245
20	Forest Ave between Gates Ave & Palmetto St (southbound)	436	335	544	473
21	Forest Ave between Harman St & Metropolitan Ave (northbound)	279	266	325	371
22	Metropolitan Ave west of Forest Ave (eastbound)	634	600	1122	734

Figure 4-4 Existing AM Peak Hour Volume (7:45 - 8:45 am)



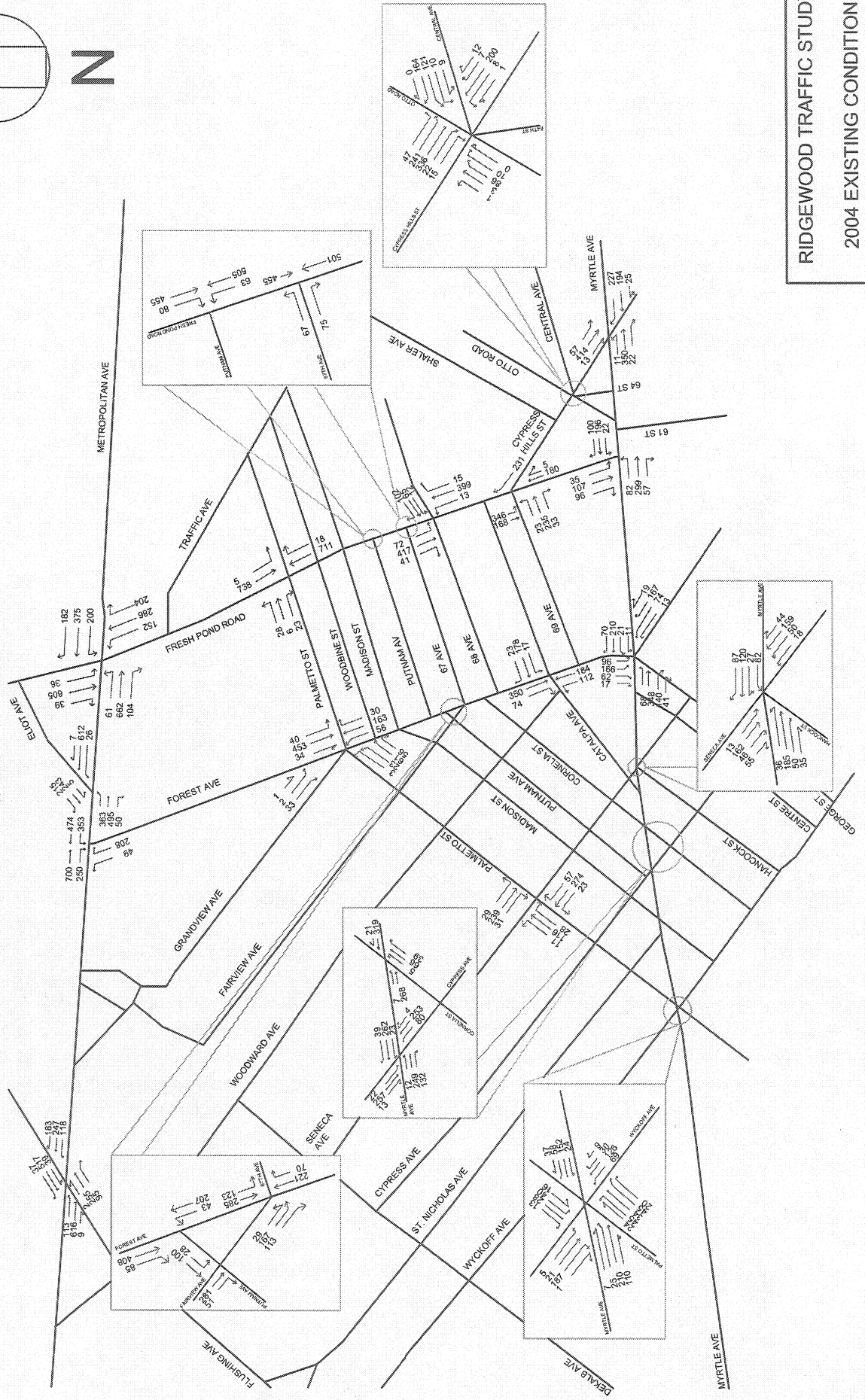
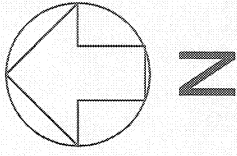
RIDGEWOOD TRAFFIC STUDY
2004 EXISTING CONDITION

Figure 4-5
Existing MD Peak Hour Volume
(11:45am - 12:45 pm)



RIDGEWOOD TRAFFIC STUDY
 2004 EXISTING CONDITION

Figure 4-6 Existing PM Peak Hour Volume (5:15 - 6:15 pm)



4.5 Street Capacity & Level of Service (LOS)

The capacity of the roadways is the maximum rate of flow which may pass through a section of roadway under prevailing traffic, roadway and signalization conditions. The capacity of a roadway is determined by several factors including turning movements, signal timing, geometric design of the intersection, pedestrian movements, type of vehicle, illegal and/or double parking, grade, roadway conditions, and weather. In determining street capacity within the study area, the 2000 Highway Capacity Manual methodology was used. The methodology requires the use of official signal timings, street geometry, and other relevant information for performing capacity and LOS analyses. Field inventories were conducted in order to gather the prevailing conditions of the intersection.

The traffic flow characteristics are measured in terms of the volume-to-capacity (v/c) ratios and delays. The quality of the flow is expressed in terms of LOS, which is based on an average delay experienced by a vehicle. When the v/c ratio exceeds 1.0, a facility or intersection operates at or over capacity. In this situation severe congestion occurs in traffic with stop-and-start conditions, and extensive vehicle queuing and delays. Volume-to-capacity ratios of less than 0.85 are considered to be reflective of acceptable traffic conditions, with average delays of 45 seconds or less. The following are level of service criteria as specified in the 2000 HCM Methodology.

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Level of Service	Control Delay Per Vehicle	Description of Traffic Condition
A	≤ 10.0	LOS A describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all.
B	>10 to 20	LOS B describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	> 20 to 35	LOS C describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths or both. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	> 35 to 55	LOS D describes operations with control delay greater than 35 and up to 55 s/veh. The influence of congestion becomes more noticeable at this level. Longer delays may result from a combination of unfavorable progression, long cycle lengths, and/or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55 to 80	LOS E describes operations with control delay greater than 55 and up to 80 s/veh. These higher delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80	LOS F describes operations with delay in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Sources: Highway Capacity Manual, Transportation Research Board;
National Research Council, Washington D.C., 2000;
New York City Department of Transportation;
New York State Department of Transportation.

Note: Control delay is measured in terms of seconds per vehicle.

4.6 Existing Traffic Conditions

Intersections with significant activity and volumes were identified and analyzed for roadway capacity using the 2000 Highway Capacity Manual (HCM) methodology. Balanced traffic network for the weekday AM, Midday, PM, peak hours and Saturday Midday peak hour were developed and volume-to-capacity (v/c) ratios, vehicular delay, and level-of-service (LOS) were determined. Table 4-2 shows the 2004 Existing Conditions, v/c ratios, delays, and level of service (LOS) for AM, midday, PM, and Saturday midday peak hours for the 22 signalized intersections analyzed in the study area.

The analysis shows that most intersections operated at an acceptable level of service (LOS) C or better during the AM, midday, PM, and Saturday midday peak hours. However, some intersections experienced LOS D, E, and F for some or all lane groups during some peak hours. Figures 4-8, 4-9, 4-10, and 4-11 show the overall LOS for all analyzed intersections in the study area.

The intersections with approaches or lane groups with mid LOS D (equal to 45 sec/veh) or worse are listed below and shown in Figures 4-12, 4-13, 4-14, and 4-15.

- Metropolitan Avenue & Flushing Avenue
- Metropolitan Avenue & Eliot Avenue
- Metropolitan Avenue & Forest Avenue
- Metropolitan Avenue & Fresh Pond Road
- Myrtle Avenue & Wyckoff Avenue/Palmetto Street
- Myrtle Avenue & Cypress Avenue
- Myrtle Avenue & Seneca Avenue/Hancock Street
- Myrtle Avenue & Forest Avenue/George Street
- Myrtle Avenue & Cypress Hills Street
- Cypress Hills Street & Central Avenue
- Fresh Pond Road & Palmetto Street
- Fresh Pond Road & 67th Avenue
- Fresh Pond Road @ Cypress Hills Street/69th Avenue
- Forest Avenue & Palmetto Street/Grandview Avenue

TABLE 4-2 (Page 1 of 3)
TRAFFIC CAPACITY ANALYSIS FOR SIGNALIZED INTERSECTIONS
2004 EXISTING CONDITIONS

	Lane Group		AM			MID			PM			MID SAT		
			V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS
Metropolitan Avenue & Flushing Avenue	EB	DefL	0.87	65.70	E	0.49	22.50	C						
		T	0.36	18.10	B	0.41	18.90	B	0.94	48.60	D	0.80	27.60	C
	WB	DefL				0.49	21.60	C	1.04	124.70	F	0.97	84.10	F
		T	0.90	36.30	D	0.58	22.30	C	0.53	27.90	C	0.59	22.20	C
	NB	L	0.04	14.50	B	0.01	14.00	B	0.01	9.00	A	0.02	14.10	B
		TR	0.60	22.90	C	0.55	21.60	C	0.43	13.20	B	0.46	19.50	B
	SB	L	0.07	14.80	B	0.15	16.00	B	0.12	10.10	B	0.11	15.20	B
Intersection LOS														
			0.55	20.10	C	0.43	18.30	B	0.36	11.70	B	0.30	16.60	B
			28.70	C		20.40	C		32.80	C		27.50	C	
Metropolitan Avenue & Eliot Avenue	EB	DefL	1.03	80.70	F	0.71	23.10	C	0.89	44.10	C	0.92	48.30	D
		TR	0.48	9.80	A	0.43	9.20	A	0.53	10.50	B	0.49	9.80	A
	WB	LTR	0.62	17.80	B	0.41	14.50	B	0.52	15.90	B	0.50	15.60	B
	SB	LTR	0.66	35.10	D	0.48	31.30	C	0.71	36.30	D	0.49	31.40	C
Intersection LOS														
			31.30	C		18.50	B		24.70	C		23.80	C	
Metropolitan Avenue & Forest Avenue	EB	TR	0.52	15.90	B	0.49	15.50	B	0.63	17.70	B	0.48	15.20	B
	WB	DefL	0.73	28.20	C	0.62	22.50	C	0.90	50.70	D	0.72	27.90	C
		T	0.70	13.40	B	0.45	8.90	A	0.45	8.80	A	0.45	8.80	A
	NB	L	0.19	28.80	C	0.16	28.50	C	0.17	28.50	C	0.23	29.30	C
		R	0.98	84.80	F	0.98	83.10	F	0.72	43.90	D	0.83	52.50	D
Intersection LOS														
			25.70	C		25.80	C		24.70	C		21.80	C	
Metropolitan Avenue & Fresh Pond Road	EB	LTR	0.60	25.70	C	0.57	20.90	C	0.89	37.30	D	0.71	23.70	C
	WB	DefL				0.56	23.20	C	0.69	42.80	D	0.75	42.20	D
		TR	1.05	63.90	E	0.63	16.90	B	0.76	24.20	C	0.74	20.20	C
	NB	LTR	1.04	69.50	E	1.02	69.60	E	0.98	56.20	E	0.87	43.90	D
	SB	LTR	0.98	54.50	D	1.05	78.70	E	0.68	25.60	C	0.89	40.50	D
Intersection LOS														
			58.40	E		47.30	D		36.60	D		36.50	D	
Myrtle Ave & Wyckoff Ave & Palmetto Street	EB	LTR	0.73	37.60	D	0.77	31.10	C	0.69	34.70	C	0.87	38.00	D
	WB	LTR	0.56	29.50	C	0.46	19.80	B	0.64	32.60	C	0.45	19.70	B
		Wyckoff												
	NB	DefL				0.85	99.10	F	1.04	154.60	F			
		TR	0.61	49.40	D	0.69	46.80	D	0.70	58.80	E	0.51	35.30	D
	SB	LTR	1.00	111.50	F	1.04	87.90	F	1.04	93.40	D	0.92	64.70	E
		Palmetto												
	NB	LTR	0.47	47.10	D	0.55	41.30	D	0.69	57.40	E	0.67	45.30	D
	SB	L	0.31	45.90	D	0.46	43.80	D	0.56	61.30	E	0.45	44.00	D
	R	0.43	49.80	D	0.34	38.20	D	0.26	43.80	D	0.18	33.00	C	
Intersection LOS														
			50.90	D		54.20	D		67.90	E		40.40	D	
Myrtle Avenue & Cypress Avenue	EB	LTR	0.32	10.90	B	0.40	11.80	B	0.49	13.00	B	0.52	13.80	B
	WB	LTR	0.62	15.70	B	0.39	11.70	B	0.46	12.70	B	0.40	11.90	B
	NB	LTR	0.55	28.30	C	0.39	25.70	C	0.55	29.60	C	0.52	27.70	C
	SB	LTR	0.80	44.40	D	0.56	31.10	C	0.77	38.80	D	0.99	75.60	E
Intersection LOS														
			24.10	C		19.20	B		24.00	C		32.40	C	

TABLE 4-2 (Page 2 of 3)
TRAFFIC CAPACITY ANALYSIS FOR SIGNALIZED INTERSECTIONS
2004 EXISTING CONDITIONS

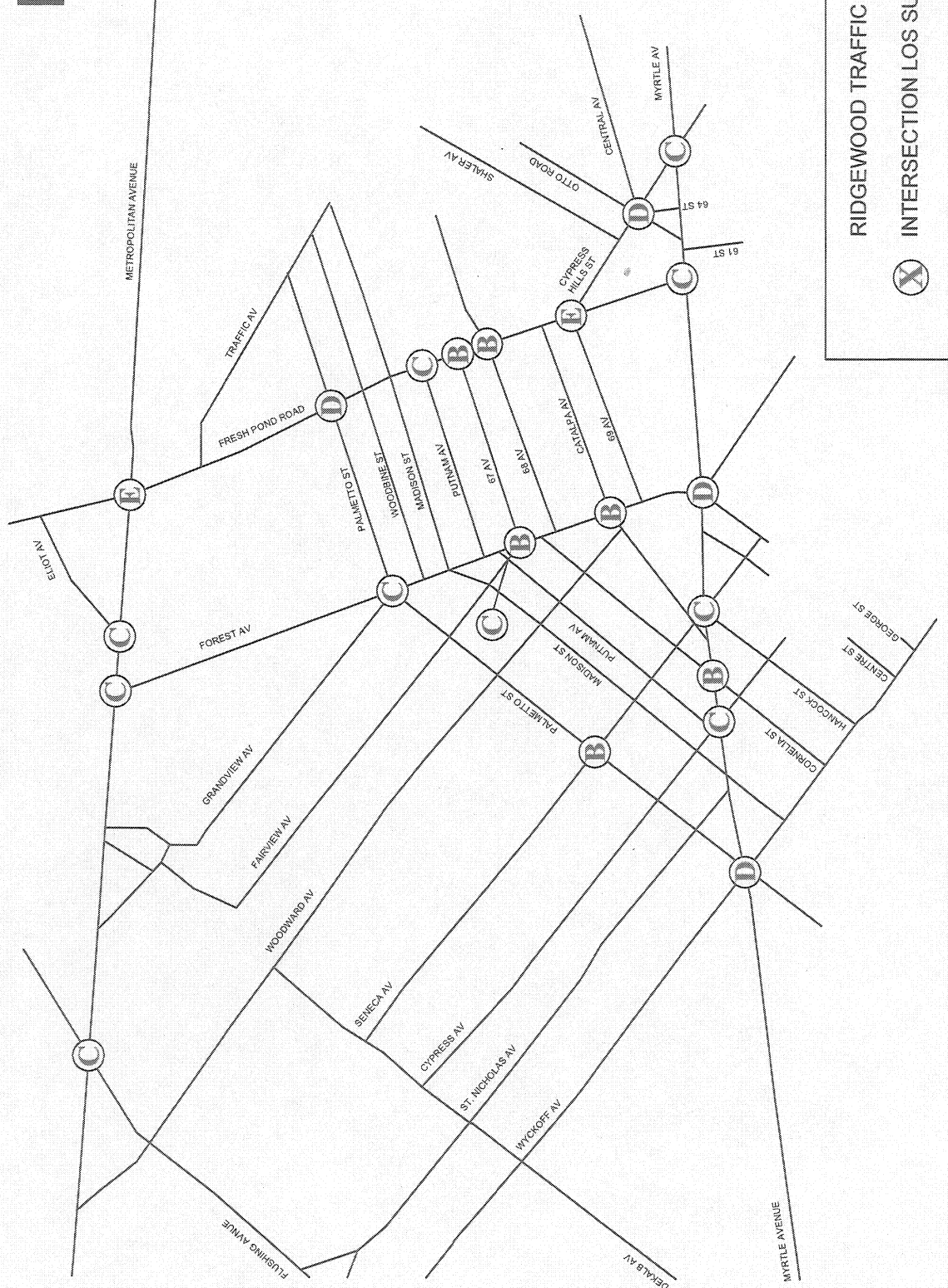
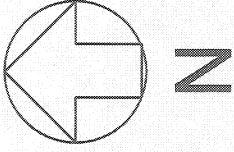
INTERSECTION	Lane Group		AM			MID			PM			MID SAT		
	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS		
Myrtle Avenue & Cornelia Street	EB	LT	0.33	11.00	B	0.30	10.50	B	0.30	10.50	B	0.32	10.80	B
	WB	TR	0.61	15.40	B	0.39	11.60	B	0.38	11.40	B	0.35	11.00	B
	NB	LTR	0.18	23.00	C	0.16	22.80	C	0.13	22.50	C	0.21	23.40	C
	Intersection LOS			15.40	B	13.30	B	12.90	B	14.10	B			
Myrtle Avenue & Seneca Ave & Hancock Street	EB	LTR	0.36	12.90	B	0.45	14.30	B	0.46	14.30	B	0.49	15.10	B
	WB	LTR	0.55	16.30	B	0.47	14.60	B	0.74	23.30	C	0.59	17.30	C
	NB	LTR	0.57	29.00	C	0.65	31.80	C	0.76	36.90	D	0.58	30.00	C
	SB	LTR	0.64	31.20	C	0.59	29.30	C	0.56	27.70	C	0.59	29.50	C
Intersection LOS			22.00	C	21.80	C	25.40	C	21.60	C				
Myrtle Avenue & Forest Avenue & George Street	EB	LTR	0.79	25.10	C	0.83	27.50	C	0.79	24.30	C	0.95	40.80	D
	WB	LTR	0.98	50.50	D	0.63	18.70	B	0.49	14.90	B	0.63	17.80	B
	NB	LTR	1.04	83.10	F	0.66	32.50	C	0.90	54.30	D	0.65	31.90	C
	SB	LTR	0.87	50.90	D	0.75	37.50	D	1.03	83.70	F	1.00	73.80	E
Intersection LOS			50.30	D	28.00	C	41.70	D	40.20	D				
Myrtle Avenue & Fresh Pond Road	EB	LTR	0.58	15.90	B	0.70	19.40	B	0.64	16.80	B	0.73	20.40	C
	WB	LTR	0.50	12.50	B	0.42	11.40	B	0.21	9.40	A	0.29	10.10	B
	SB	LTR	0.76	34.10	C	0.43	26.20	C	0.32	24.70	C	0.29	24.30	C
	Intersection LOS			21.50	C	17.70	B	16.50	B	17.10	B			
Myrtle Avenue & Cypress Hills Street	EB	LTR	0.34	13.20	B	0.35	13.20	B	0.48	15.20	B	0.47	15.00	B
	WB	LTR	0.89	32.90	C	0.64	18.80	B	0.65	19.20	B	1.04	64.30	E
	SB	LTR	0.63	28.60	C	0.43	24.30	C	0.86	40.80	D	0.74	32.90	C
	Intersection LOS			27.70	C	18.70	B	26.20	C	44.90	D			
Cypress Hills Street & Central Ave (& 64th Street/Otto Road)	EB	LTR	0.22	25.30	C	0.21	25.20	C	0.24	25.50	C	0.33	27.00	C
	WB	LTR	0.91	54.10	D	0.66	34.70	C	0.76	39.40	D	0.17	24.70	C
	NB	LTR	0.40	18.90	B	0.33	18.00	B	0.40	19.20	B	0.41	19.00	B
	SB	LTR	1.00	61.40	E	1.04	72.10	E	1.03	67.40	E	1.04	68.10	E
Intersection LOS			47.50	D	49.50	C	48.40	D	49.90	D				
Fresh Pond Road & Palmetto Street	EB	LTR	0.55	36.70	D	0.16	27.60	C	0.15	27.30	C	0.33	29.80	C
	NB	TR	1.05	56.80	E	0.76	15.70	B	0.61	11.70	B	0.44	9.10	A
	SB	LT	1.02	49.30	D	0.59	11.70	B	0.61	11.60	B	0.50	9.80	A
	Intersection LOS			52.10	D	14.60	B	12.30	B	11.80	B			
Fresh Pond Road & Putnam Avenue	NB	LT	0.79	21.00	C	0.51	14.20	B	0.63	16.20	B	0.71	18.30	B
	SB	TR	0.87	28.70	C	0.76	21.60	C	0.74	20.50	C	0.86	27.30	C
	Intersection LOS			24.40	C	18.00	B	18.20	B	22.80	C			
Fresh Pond Road & 67th Avenue	EB	L	0.36	30.90	C	0.19	28.00	C	0.30	29.10	C	0.34	29.80	C
		R	0.47	35.40	D	0.33	31.50	C	0.28	29.20	C	0.30	29.70	C
	NB	T	0.36	8.40	A	0.26	7.60	A	0.25	7.50	A	0.26	7.50	A
	SB	T	0.29	7.80	A	0.24	7.40	A	0.23	7.30	A	0.25	7.50	A
Intersection LOS			11.60	B	9.80	A	10.80	B	11.10	B				
Fresh Pond Road & 68th Avenue	WB	LTR	0.35	25.60	C	0.21	24.00	C	0.24	24.30	C	0.22	24.10	C
	NB	LTR	0.36	10.30	B	0.24	9.10	A	0.24	9.20	A	0.28	9.50	A
	SB	LTR	0.84	24.70	C	0.63	15.30	B	0.65	16.00	B	0.71	17.80	B
Intersection LOS			19.70	B	14.70	B	15.20	B	15.80	B				

TABLE 4-2 (Page 3 of 3)
TRAFFIC CAPACITY ANALYSIS FOR SIGNALIZED INTERSECTIONS
2004 EXISTING CONDITIONS

INTERSECTION	Lane Group		AM			MID			PM			MID-SAT			
			V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	
Fresh Pond Road & Cypress Hills Street 69th Avenue	EB	LTR	0.24	25.00	C	0.30	25.60	C	0.34	26.10	C	0.36	26.40	C	
	WB	R	0.98	74.90	E	0.59	36.20	D	0.69	40.80	D	0.77	45.70	D	
	NB	TR	0.27	24.80	C	0.22	24.10	C	0.22	24.20	C	0.51	29.80	C	
	SB	LT	1.03	76.30	E	1.03	83.20	F	1.04	81.90	F	1.03	79.80	E	
Intersection LOS				58.9	E		49.0	D		50.5	D		50.2	D	
Forest Avenue & Palmetto Street & Grandview Avenue	Palmetto														
	EB	LTR	0.72	54.50	D	0.43	37.90	D	0.85	65.9	E	0.36	35.60	D	
	Grandview														
	EB	LTR	0.21	37.30	D	0.20	36.10	D	0.27	37.5	D	0.12	34.40	C	
Intersection LOS	NB	TR	0.52	18.50	B	0.40	16.20	B	0.43	16.7	B	0.44	16.90	B	
	SB	LT	0.74	25.20	C	0.50	17.80	B	0.86	32.3	C	0.62	20.60	C	
				27.10	C		20.10	C		34.4	C		21.10	C	
Putnam Ave & Fairview Avenue	WB	L	0.04	14.50	B	0.03	14.40	B	0.06	14.70	B	0.03	14.40	B	
		T	0.27	17.10	B	0.12	15.30	B	0.17	15.90	B	0.19	16.10	B	
	SB	TR	0.59	22.30	C	0.24	16.50	B	0.46	19.50	B	0.40	18.60	B	
Intersection LOS				20.60	C		16.10	B		18.30	B		17.70	C	
Forest Avenue & 67th Avenue Fairview Avenue	EB	LTR	0.40	27.00	C	0.24	25.10	C	0.40	27.10	C	0.37	26.70	C	
	NB	TR	0.42	11.50	B	0.33	10.50	B	0.36	10.80	B	0.40	11.20	B	
	SB	LT	0.45	12.40	B	0.45	12.10	B	0.57	20.00	C	0.62	16.20	B	
Intersection LOS				16.80	B		14.60	B		19.60	B		17.70	B	
Forest Avenue & Catalpa Avenue	WB	LTR	0.49	29.70	C	0.30	26.30	C	0.51	29.70	C	0.40	27.70	C	
	NB	LT	0.65	17.00	B	0.39	11.40	B	0.55	14.50	B	0.60	15.40	B	
	SB	TR	0.37	11.00	B	0.42	11.60	B	0.58	14.10	B	0.57	13.90	B	
Intersection LOS				18.40	B		14.40	B		18.00	B		17.10	B	
Seneca Avenue & Palmetto Street	EB	LTR	0.13	14.30	B	0.08	14.00	B	0.18	14.60	B	0.14	14.40	B	
	NB	LTR	0.53	11.60	B	0.35	9.30	A	0.51	11.40	B	0.62	13.80	B	
	SB	LTR	0.26	8.60	A	0.28	8.70	A	0.47	10.90	B	0.33	9.20	A	
Intersection LOS				11.40	B		9.90	A		11.9	B		12.6	B	

approach with LOS D or worse

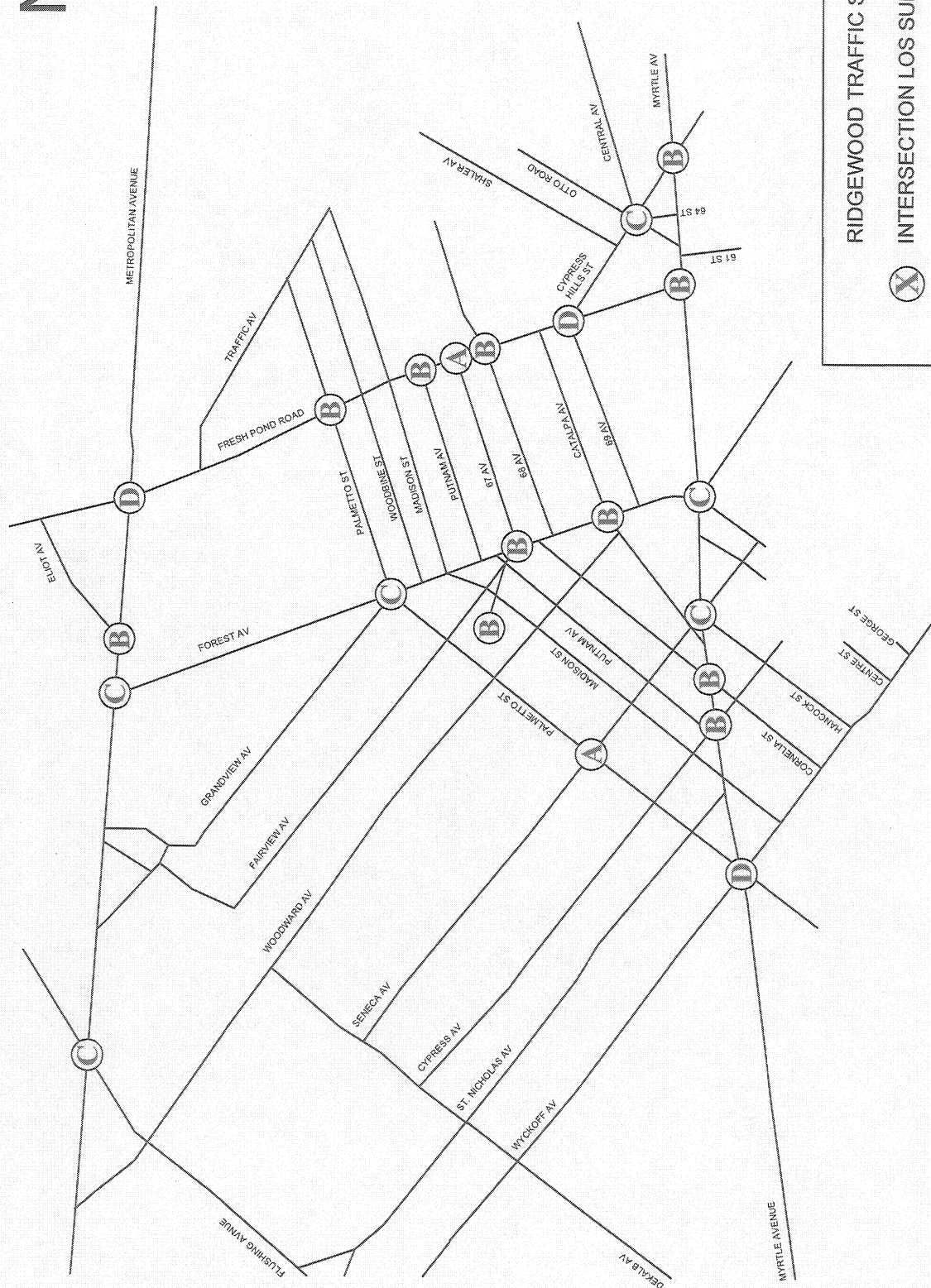
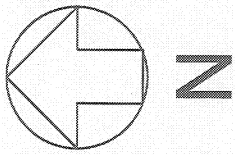
Figure 4-8
Existing Intersection LOS
(AM Peak Hour - 7:45-8:45)



RIDGEWOOD TRAFFIC STUDY
 INTERSECTION LOS SUMMARY



Figure 4-9
 Existing Intersection LOS
 (MD Peak Hour - 11:45-12:45)



RIDGEWOOD TRAFFIC STUDY
 INTERSECTION LOS SUMMARY



Figure 4-10
Existing Intersection LOS
(PM Peak Hour - 5:15-6:15)

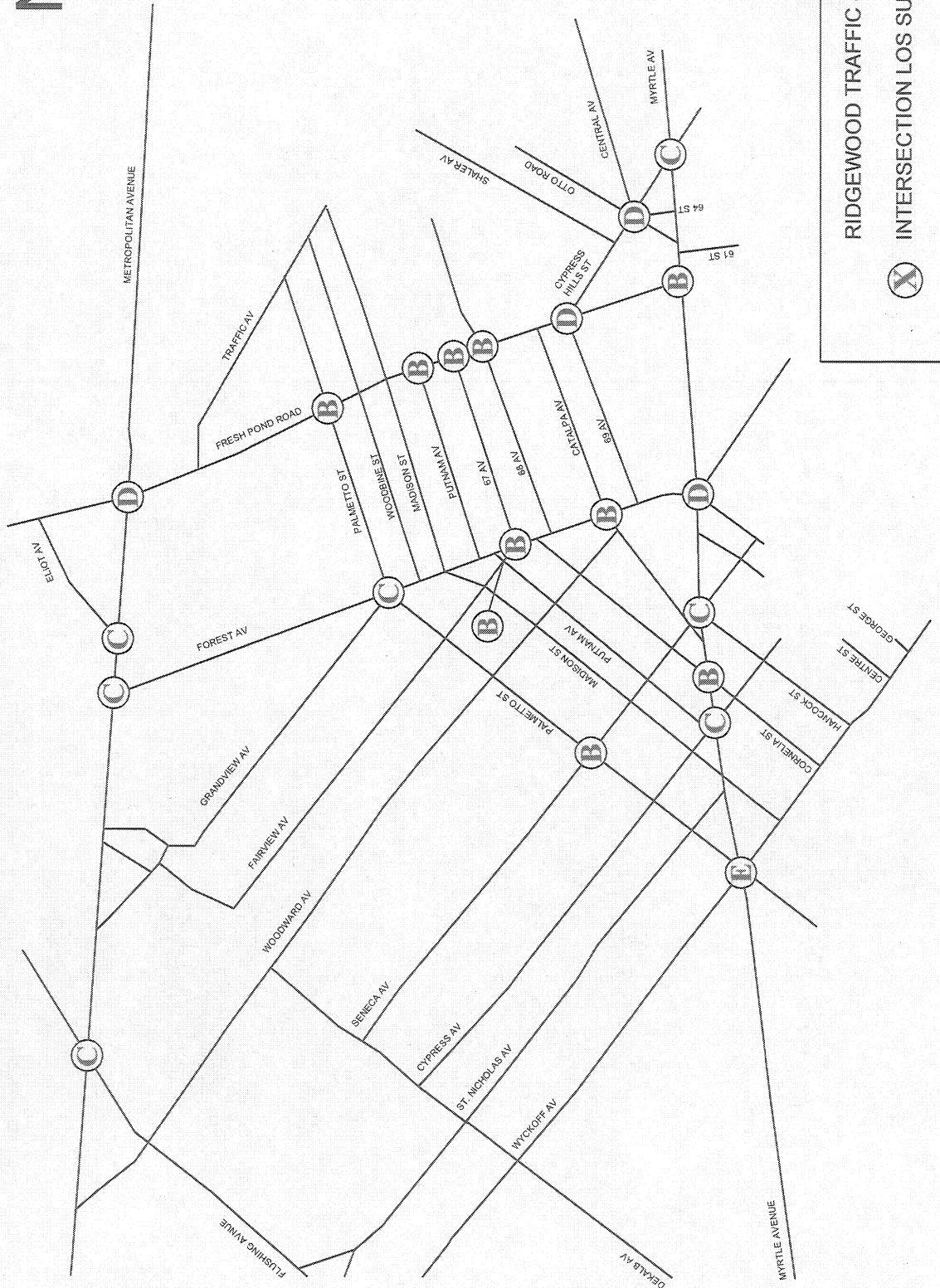
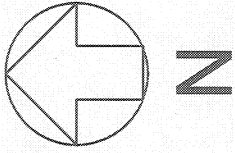


Figure 4-11

Existing Intersection LOS

(Saturday MD Peak Hour - 12:00-1:00)

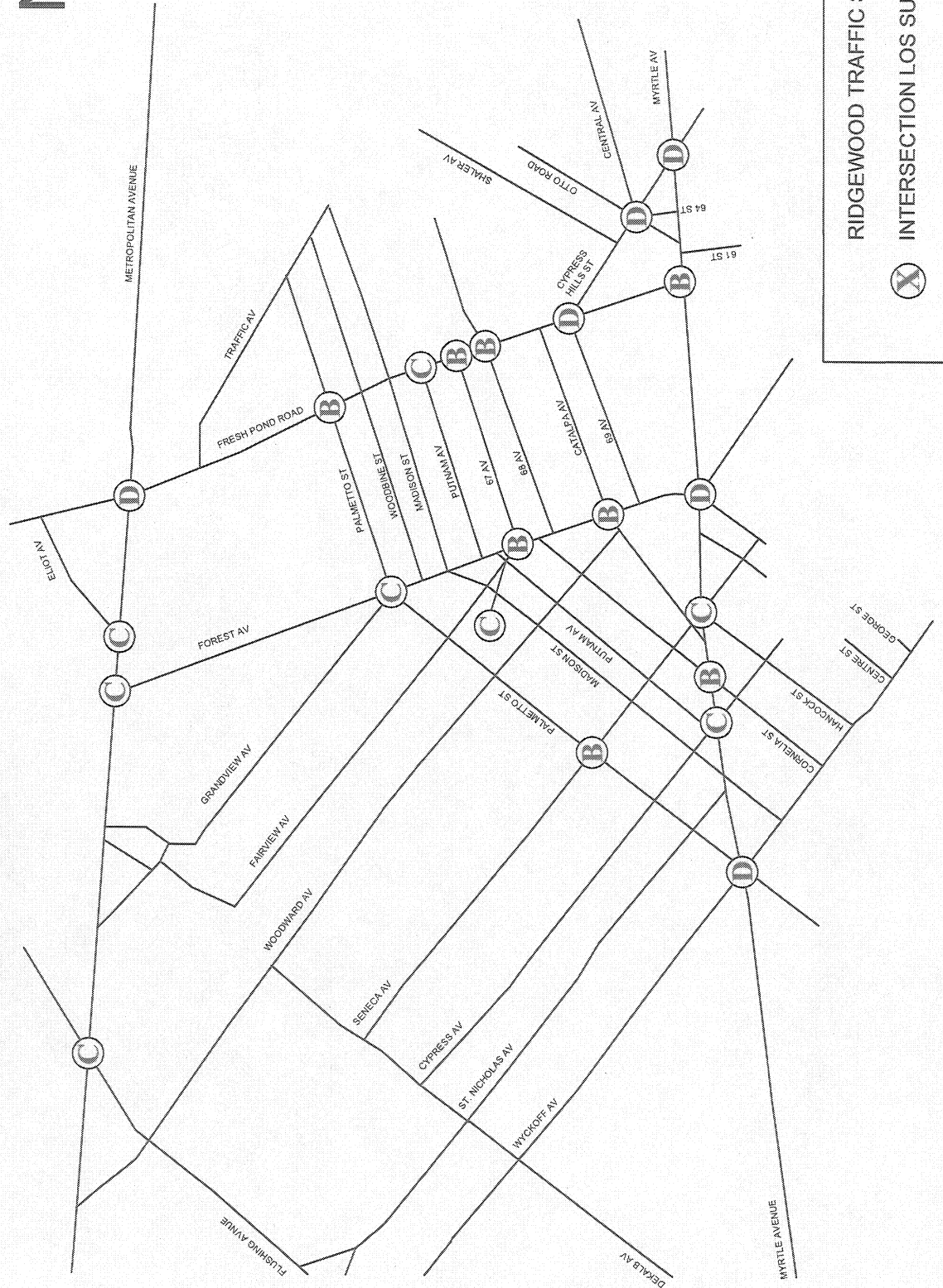
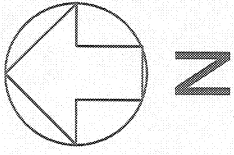


Figure 4-12
 Existing Intersection with LOS D, E, and F
 (AM Peak Hour - 7:45-8:45)

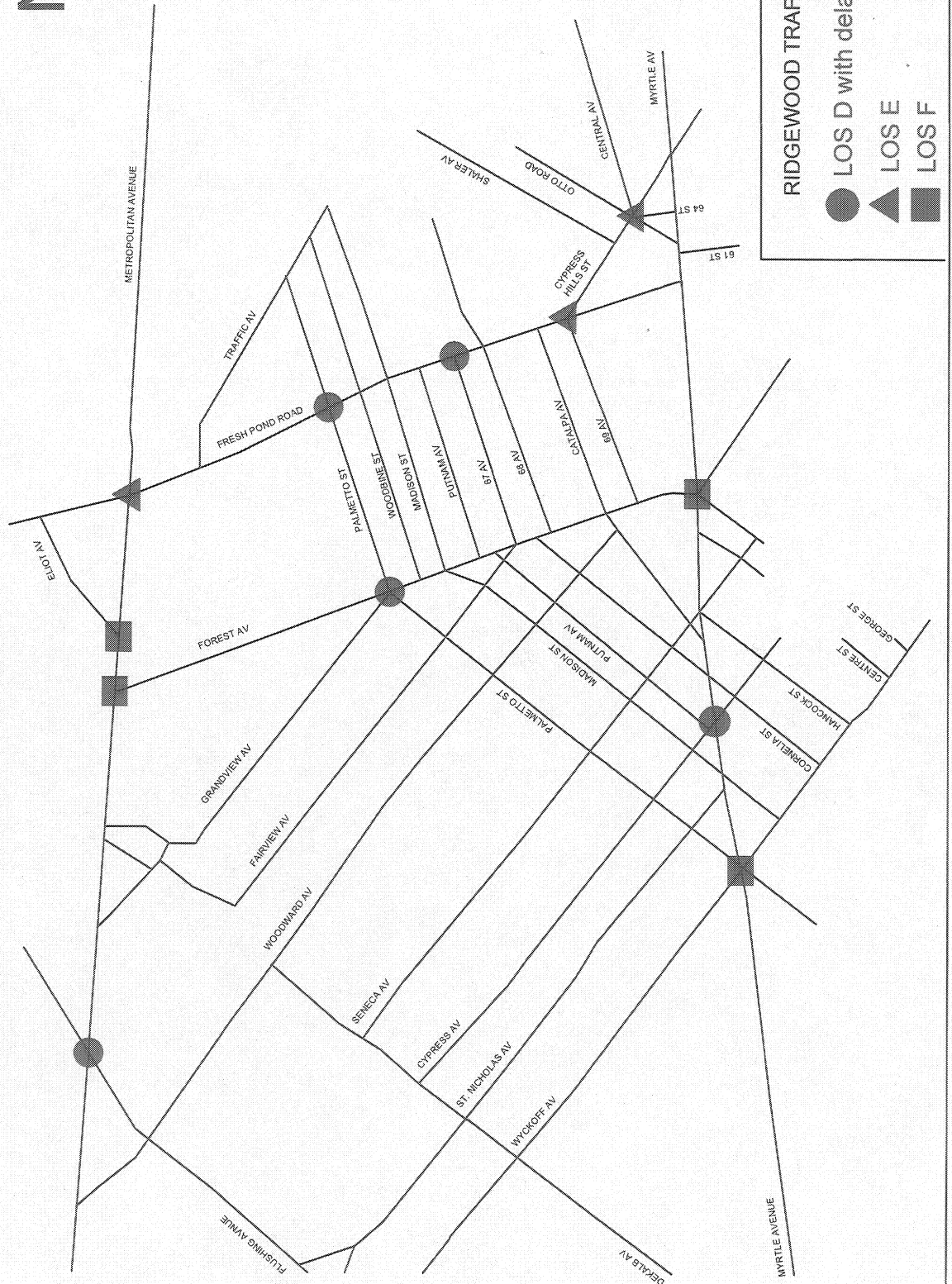
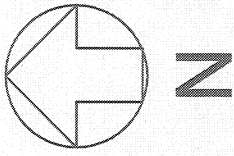
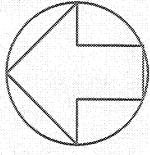
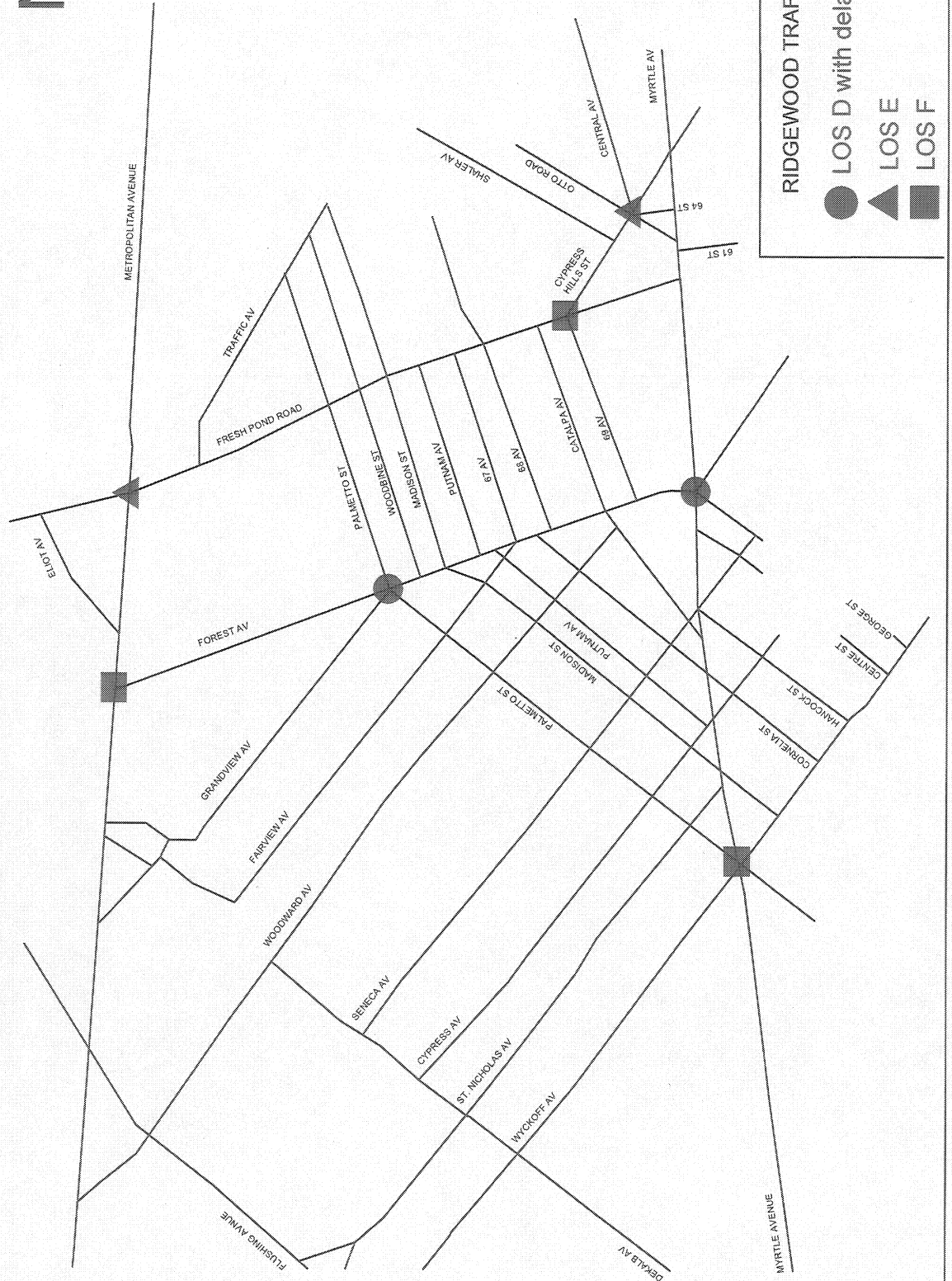


Figure 4-13

Existing Intersection with LOS D, E, and F (MD Peak Hour - 11:45-12:45)



N



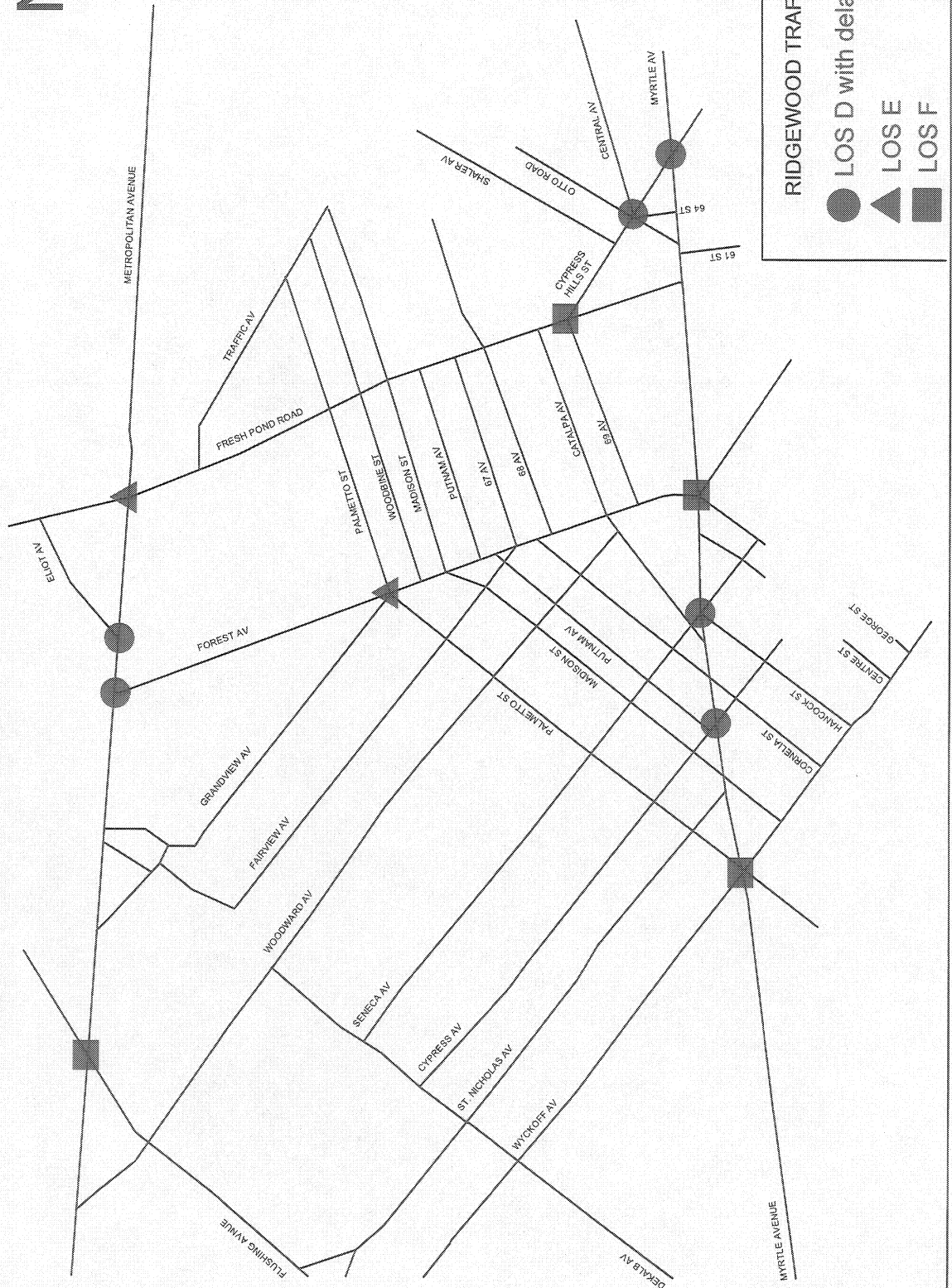
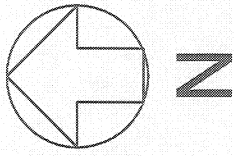
RIDGEWOOD TRAFFIC STUDY

● LOS D with delay > 45 sec

▲ LOS E

■ LOS F

Figure 4-14
 Existing Intersection with LOS D, E, and F
 (PM Peak Hour - 5:15-6:15)



4.7 Vehicle Speeds

In order to measure peak hour travel time and vehicular speeds in the study area and to identify locations where traffic delay exists, multiple speed runs and travel time data were collected during the weekday in November 2004.

The travel time runs were conducted on the major corridors for each peak period for two consecutive weekdays concurrently with the traffic volume data collection. Three or four runs were performed for each link during each peak travel period.

The “floating car” method (a technique whereby a field vehicle travels at speeds under prevailing traffic conditions) was used to measure travel time and speed on the following four corridors:

1. Myrtle Avenue between Irving Avenue and Cypress Hills Avenue (East and West bounds)
2. Metropolitan Avenue between Flushing Avenue and 65th Street (East and West bounds)
3. Fresh Pond Road between Myrtle Avenue and Metropolitan Avenue (North and South bounds)
4. Forest Avenue between Myrtle Avenue and Metropolitan Avenue (North and South bounds)

Travel speeds throughout the study area for various peak periods range from 6 mph to 18 mph approximately. The corridor with the lowest travel speed is Fresh Pond Road, ranging from 6 mph to 15 mph during the three peak hours. Figure 4-16 shows the speed run corridors and Table 4-3 and 4-4 display a summary of average link and corridor travel speeds.

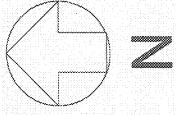
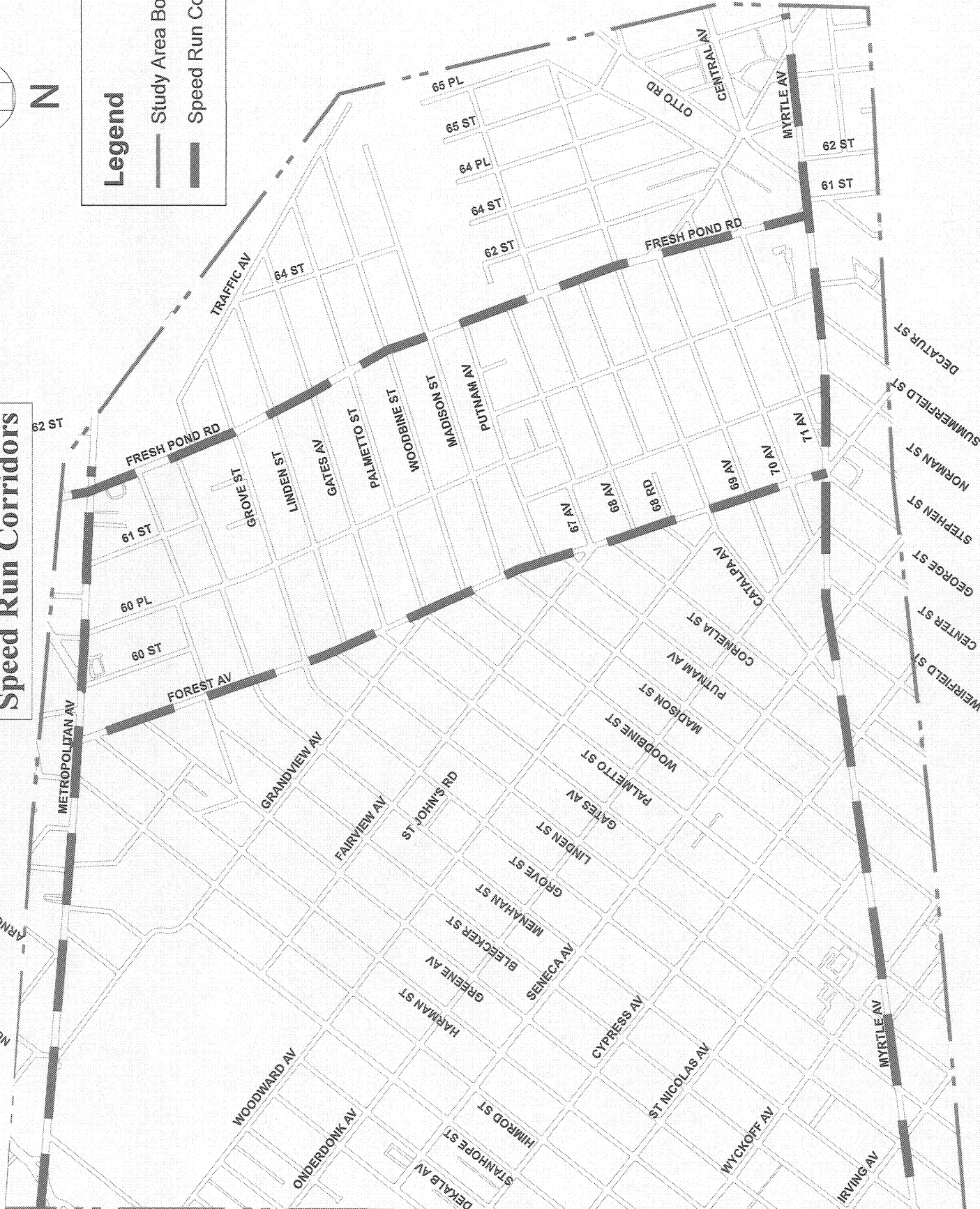


Figure 4-16
Speed Run Corridors

Legend

- Study Area Boundary
- Speed Run Corridors



**Table 4-3
CORRIDOR TRAVEL SPEEDS**

**Myrtle Avenue - Corridor 1
(from Irving Avenue to Cypress Hill Avenue)**

Direction-Eastbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Irving Avenue to Gates Avenue	653	16.5	15.0	15.9
Palmetto Street	420	17.9	23.2	23.9
St. Nicolas	607	18.8	21.8	5.5
Cypress Avenue	715	24.4	14.0	6.1
Cornelia Street	188	25.6	18.7	10.7
Seneca Avenue	541	7.2	15.0	19.4
Centre Street	605	17.2	10.0	4.7
Forest Avenue	371	2.5	7.4	23.0
Stephen Street (71 Ave)	255	17.8	18.7	4.4
Norman Street (60 Pl)	313	18.9	11.6	10.3
Decatur Street	547	53.3	17.2	14.3
Fresh Pond Road	467	31.8	6.7	6.5
Central Avenue	185	18.0	26.3	7.0
62nd Street	115	5.2	17.6	9.8
64th Street	254	3.3	24.7	21.7
64th Place	265	18.1	24.2	22.6
Cypress Hills Avenue	230	12.1	24.4	3.3
Tot Dist & Eastbound Average Travel Speed	6,731	11.4	13.9	8.4

Direction-Westbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Cypress Hill Avenue to 64th Place	230	15.8	21.0	26.1
64th Street	265	19.1	24.1	22.6
62nd Street	254	21.7	23.2	28.9
Central Avenue	115	17.6	22.9	19.6
Fresh Pond Avenue	185	24.8	21.0	31.5
Decatur Street	467	6.3	12.4	29.0
60th Place	625	18.5	14.4	8.5
71st Avenue	345	21.4	23.8	16.8
Forest Avenue	157	7.0	7.7	10.7
Centre Street	371	9.2	21.1	23.0
Seneca Avenue	605	20.4	18.9	7.0
Cornelia Street	541	14.8	7.4	21.7
Cypress Avenue	188	16.0	11.3	18.3
Madison Street	553	6.1	12.1	6.0
Palmetto Street	757	11.2	4.4	7.1
Gates Avenue	420	10.2	6.7	19.1
Irving Avenue	653	12.4	12.5	9.1
Tot Dist & Westbound Average Travel Speed	6,731	11.8	10.6	11.3

Table 4-3 (Cont')
CORRIDOR TRAVEL SPEEDS

Metropolitan Avenue - Corridor 2
(from Flushing Avenue to 65th Street)

Direction-Eastbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Flushing Avenue to Starr Street	316	15.2	11.3	21.6
Grandview Avenue	521	25.5	22.2	20.9
Arnold Avenue	599	19.0	18.6	19.5
Tonsar Street	538	18.1	13.1	28.2
Himrod Street	537	28.3	15.9	30.5
Forest Avenue	245	14.0	3.1	2.9
60th Street	190	16.5	21.6	18.5
Eliot Avenue	153	12.1	9.5	26.1
60th Place	326	24.4	31.8	27.8
61st Street	423	23.6	32.1	17.0
Fresh Pond Road	453	7.0	17.2	18.2
65th Street	1313	26.0	28.9	17.9
Tot Dist & Eastbound Average Travel Speed	5,614	18.1	15.7	16.4

Direction-Westbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
65th Street to Fresh Pond Road	1313	20.8	8.6	8.3
61st Street	453	18.2	25.7	25.7
60th Place	423	24.0	9.0	6.9
Eliot Avenue	326	31.8	27.8	27.8
60th Street	153	20.9	20.9	17.4
Forest Avenue	189	21.5	18.4	16.1
56th Street	253	21.6	28.8	14.4
Andrews Avenue	554	22.2	25.2	8.6
Arnold Avenue	539	27.6	24.0	14.4
Nurge Avenue	633	25.4	27.0	3.8
Starr Street	462	5.7	19.7	6.3
Flushing Avenue	316	10.8	30.8	13.5
Tot Dist & Westbound Average Travel Speed	5,614	17.4	15.7	8.6

**Table 4-3 (Cont')
CORRIDOR TRAVEL SPEEDS**

**Fresh Pond Road - Corridor 3
(from Myrtle Avenue to Metropolitan Avenue)**

Direction-Northbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Myrtle Avenue to 71st Avenue	408	11.3	18.0	27.8
Cypress Hills Street	504	5.5	7.0	5.9
Catalpa Avenue	256	17.6	17.5	34.9
68th Road	237	25.0	19.6	14.7
68th Avenue	269	23.3	25.5	20.4
67th Avenue	190	18.9	18.9	16.2
Madison Street	521	14.9	16.4	8.3
Woodbine Street	247	22.6	19.1	15.3
Palmetto Street	252	14.5	9.4	21.5
Gates Street	261	19.2	14.5	6.4
Linden Street	254	22.0	8.2	15.7
Grove Street	268	22.2	16.7	3.8
Bleecker Street	618	7.1	14.6	21.1
Metropolitan Avenue	305	17.3	2.4	26.0
Tot Dist & Northbound Average Travel Speed	4,590	12.1	10.2	11.3

Direction-Southbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Metropolitan Avenue to Bleecker Street	305	10.9	17.3	5.6
Grove Street	618	20.8	9.0	6.2
Linden Street	268	25.4	21.6	14.1
Gates Street	254	25.1	22.6	1.0
Palmetto Street	261	21.8	15.5	9.4
Woodbine Street	252	27.3	26.0	10.1
Madison Street	247	10.9	9.3	3.8
67th Avenue	521	11.3	19.8	16.9
68th Avenue	222	17.9	26.9	10.8
68th Road	218	15.8	16.5	18.6
Catalpa Avenue	237	21.2	24.2	18.0
Cypress Hills Street	256	14.4	19.3	3.8
71st Avenue	504	14.8	30.4	17.2
Myrtle Avenue	408	5.1	6.9	5.1
Tot Dist & Southbound Average Travel Speed	4,571	13.5	14.8	5.8

Table 4-3 (Cont')
CORRIDOR TRAVEL SPEEDS

Forest Avenue - Corridor 4
(from Myrtle Avenue to Metropolitan Avenue)

Direction-Northbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Myrtle Avenue to 69th Avenue	476	10.1	8.4	6.8
Catalpa Avenue	264	16.4	18.0	30.0
67th Avenue	746	23.1	20.9	23.1
Putnam Street	289	21.9	13.3	19.7
Madison Street	262	4.0	23.0	2.8
Woodbine Street	260	13.6	11.6	17.7
Palmetto Street	258	2.8	11.2	3.9
Gates Street	263	10.6	14.6	10.6
Grove Street	532	7.3	8.2	7.6
Menahen Street	316	21.6	20.6	21.6
Bleecker Street	302	2.5	19.7	15.8
Greene Street	397	8.7	14.7	20.8
Metropolitan Avenue	410	2.7	3.1	4.7
Tot Dist & Northbound Average Travel Speed	4,775	6.7	10.4	8.9

Direction-Southbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Metropolitan Avenue to Greene Street	410	16.6	6.3	16.4
Bleecker Street	397	16.3	22.7	15.9
Menahen Street	302	16.6	27.6	22.9
Grove Street	316	11.7	22.7	30.8
Gates Street	532	9.8	22.6	19.1
Palmetto Street	263	18.2	21.0	3.3
Woodbine Street	258	18.6	16.5	10.4
Madison Street	260	19.9	19.9	11.1
Putnam Street	262	26.1	14.6	25.5
67th Avenue	289	14.5	13.1	28.2
Catalpa Avenue	746	12.9	26.1	10.0
69th Avenue	264	9.8	12.9	15.0
Myrtle Avenue	476	8.8	11.1	9.8
Tot Dist & Southbound Average Travel Speed	4,775	13.3	15.7	12.2

**Table 4-4
Corridor Travel Speeds Summary - Existing Condition**

No	Corridors	From	To	Time	Direction	Existing Conditions
						Average Speed (mph)
1	Myrtle Avenue	Irving Avenue	Cypress Hills Avenue	AM	EB	11.4
					WB	11.8
				MD	EB	13.9
					WB	10.6
				PM	EB	8.4
					WB	11.3
2	Metropolitan Avenue	Flushing Avenue	65th Street	AM	EB	18.1
					WB	17.4
				MD	EB	15.7
					WB	15.7
				PM	EB	16.4
					WB	8.6
3	Fresh Pond Road	Myrtle Avenue	Metropolitan Avenue	AM	NB	12.1
					SB	13.5
				MD	NB	10.2
					SB	14.8
				PM	NB	11.3
					SB	5.8
4	Forest Avenue	Myrtle Avenue	Metropolitan Avenue	AM	NB	6.7
					SB	13.3
				MD	NB	10.4
					SB	15.7
				PM	NB	8.9
					SB	12.2

4.8 Goods Movement

The movement of goods and trucks in the study area is influenced by DOT designated truck routes and the concentration of industrial and commercial activities along certain corridors. There are two categories of truck routes. See Figure 4-17:

- a) Through truck routes – routes for use by all trucks and;
- b) Local truck routes – routes for use by trucks with local origins and/or destinations.

The through truck routes in the study area are located at:

- Flushing Avenue from Metropolitan Avenue to 53rd Street
- Myrtle Avenue from Wyckoff Avenue/Palmetto Street to 65th Street

The local truck routes are located at:

- Metropolitan Avenue between Flushing Avenue and 62nd Street
- Myrtle Avenue between Menahan Street and Wyckoff Avenue/Palmetto Street
- Fresh Pond Road between Metropolitan Avenue and Myrtle Avenue
- Central Avenue between Myrtle Avenue and 65th Place

Metropolitan Avenue though not the busiest with commercial retail experiences a significant amount of truck traffic. This is due to its location as it provides access to the BQE as well as its close proximity to the Maspeth industrial area. The north east section of the study area which is zoned M1-1 has warehouse and many trucks access the area by pass of Traffic Avenue. Many trucks can be seem parked and idling in the area and has been of some concern to the community.

5.0 PUBLIC TRANSPORTATION

5.1 Introduction

Public transportation plays an important role in the transportation system of the study area. It also helps to reduce traffic congestion and other related problems. The study area is well served with public transportation. There are two subway lines with six stations and thirteen bus lines with stops throughout the study area. Both transit modes converge at Myrtle Avenue, Wyckoff Avenue, and Palmetto Street creating a large transit hub.

5.2 Subway Service

The Metropolitan Transportation Authority - New York City Transit (MTA-NYCT) operates subway service within the study area. There are two subway lines along two routes that serve six subway stations. Table 5-1: "Subway Service" below lists the subway lines and stations. Figure 5-1: "Subway Service" shows the subway routes and locations.

**Table 5-1
Subway Service**

LINES	ROUTES	STATIONS
L (Local)	Wyckoff Avenue	● Myrtle Avenue
M (Local)	Myrtle Avenue	● Wyckoff Avenue ● Seneca Avenue ● Forest Avenue ● Fresh Pond Road ● Metropolitan Avenue

These subway lines connect the study area to Brooklyn and Lower Manhattan.

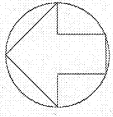
Subway Line Description:

- The "L" subway line on Wyckoff Avenue runs local from 8th Avenue/14th Street (Manhattan) to Canarsie/Rockaway Parkway (Brooklyn). This line operates at all times during weekdays and weekends.
- The "M" subway line on Myrtle Avenue goes local from Bay Parkway (Brooklyn) to Lafayette Street (Lower Manhattan) to Metropolitan Avenue (Queens). This line only

operates during the weekday rush hours in the peak direction between Bay Parkway (Brooklyn) and Fulton Street (Lower Manhattan). The stations between Chambers Street (Lower Manhattan) and Flushing Avenue (Brooklyn) do not always operate or sometimes skipped. The other stations between Myrtle Avenue (Brooklyn) and Metropolitan Avenue (Queens) provide local service at all times during weekdays and weekends.

Detailed average weekday and Saturday subway riderships data as shown on Table 5-2 for each of the peak hours between year 2003 and 2005.

**Figure 5-1
Subway Services**



N

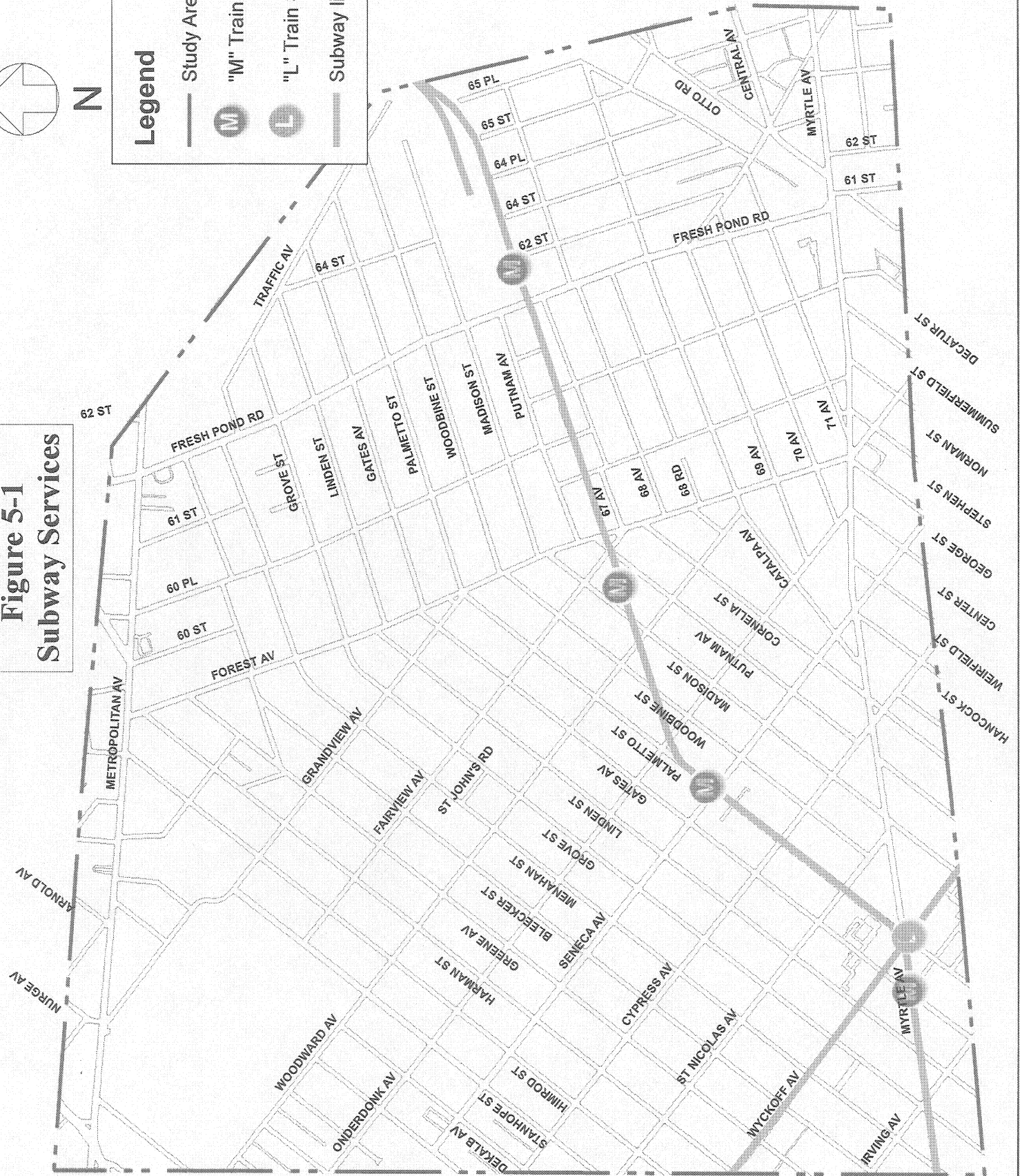
Legend

Study Area Boundary

"M" Train Station

"L" Train Station

Subway lines



**Table 5-2
Average Subway Ridership (Existing Condition)**

Station (Train)	2003 Average Weekday			2004 Average Weekday			2005 Average Weekday		
	AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
Metropolitan Avenue (M)	376	136	195	385	137	199	405	136	209
Fresh Pond Road (M)	698	148	103	731	158	111	768	160	115
Forest Avenue (M)	542	123	93	571	127	95	593	126	93
Seneca Avenue (M)	286	81	61	297	87	64	318	89	67
Myrtle Avenue/Myckoff Avenue (L, M)	1829	620	553	1863	610	563	1902	618	559

Station (Train)	Average Saturday		
	2003 Saturday MD Peak Hour	2004 Saturday MD Peak Hour	2005 Saturday MD Peak Hour
Metropolitan Avenue (M)	103	82	87
Fresh Pond Road (M)	133	110	116
Forest Avenue (M)	106	85	88
Seneca Avenue (M)	83	65	76
Myrtle Avenue/Myckoff Avenue (L, M)	548	644	562

Source: New York City Transit (NYCT)

5.3 Bus Service

Ten New York City Transit (NYCT) local bus routes and three Triboro Coach Corp. bus routes provide service within the study area as indicated in Figure 5-2: “Local Bus Routes”. These bus routes operate on four avenues (north-south direction) (Seneca Avenue, Forest Avenue, Wyckoff Avenue, and Fresh Pond Road) as well as on the seven major cross-town streets (Metropolitan Avenue, Gates Avenue, Palmetto Street, Madison Street, Putnam Avenue, 67th Avenue, and Myrtle Avenue). Among these bus lines, three of them (B26, B52, and B54) pass through the transit hub on Myrtle Avenue and three lines (B13, B20, and Q58) pass through the transit hub on Fresh Pond Road. Metropolitan Avenue is the major bus route in the study area with three bus lines (Q38, Q54, and Q67) traversing the corridor.

Reviewing the “*Summary of Ridership and Average Passengers per Trip*” data provided by the NYCT for the bus routes that serve the Ridgewood study area, it is evident that the area is well served and has adequate bus service on all the bus routes. The frequency of bus service varies greatly; reflecting different user patterns within the area of study. Table 5-3 below provides headway information for each route. Table 5-4 to 5-7 show the existing ridership during each of the AM, midday, PM, and Saturday midday peak hour.

**Table 5-3
Average Frequency of NYCT Bus Service (in minutes)**

Route	Weekday					Saturday					Sunday				
	AM	Noon	PM	Eve	Night	AM	Noon	PM	Eve	Night	AM	Noon	PM	Eve	Night
B13	12	20	15	25	ns	30	20	30	30	Ns	30	30	30	30	ns
B20	8	12	10	10	ns	18	15	12	16	Ns	20	15	12	14	ns
B26	5	9	8	10	ns	10	8	6	10	Ns	20	10	10	12	ns
B38	3	5	5	6	ns	10	5	6	7	Ns	15	8	7	10	ns
B52	5	6	6	10	ns	15	8	8	9	Ns	15	11	10	12	ns
B54	5	10	10	10	ns	15	10	10	12	Ns	25	15	12	15	ns
Q38	12	20	15	30	ns	30	15	15	20	Ns	ns	20	20	40	ns
Q39	6	15	6	15	ns	30	20	20	30	Ns	30	30	30	30	ns
Q54	10	15	10	10	ns	15	12	12	15	Ns	30	15	15	10	ns
Q55	10	15	10	10	ns	15	12	12	15	Ns	20	15	15	20	ns
Q58	6	8	8	8	ns	8	8	8	10	Ns	9	8	8	10	ns
Q67	11	30	15	60	ns	60	70	70	60	ns	ns	70	70	60	ns
QM24	4	ns	12	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns

Notes: Time Periods: AM= 7-9 AM, Noon= 11 AM-1 PM, PM= 4-7 PM, Eve= 7-9 PM and Night= Midnight - 4 AM
ns = no service during time period.

Headway in minutes

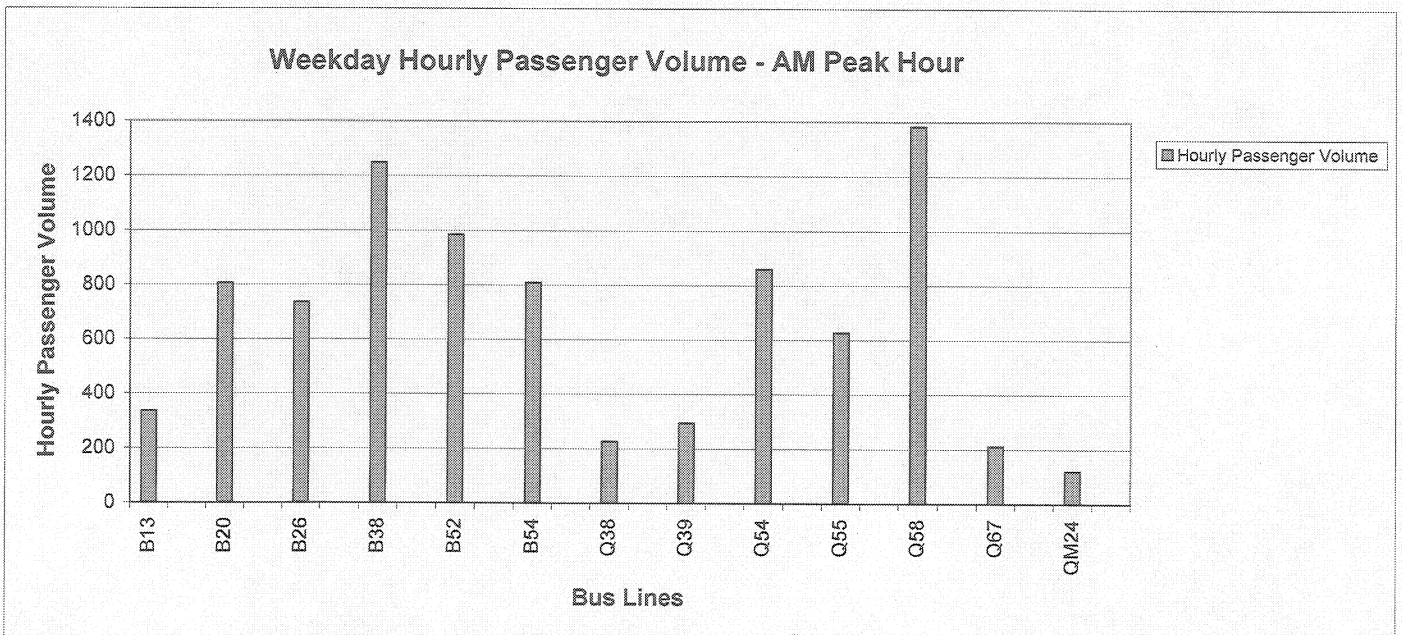
**Table 5-4
Bus Ridership - Average Weekday AM Peak Hour (7:45 - 8:45am)
Existing Condition**

Bus Route	Bus Route Description	Direction	Buses Per Hour	Hourly Passenger Volume	Bus Capacity Per Hour	Average Ridership Bus	Available Capacity	Hourly Passenger Volume
B13	Between Williamsburg and Gateway Center Mall, Spring Creek, Brooklyn, via Queens	NB	5	199	350	40	151	336
		SB	6	137	420	23	283	
B20	Between Brooklyn General Mail Facility and Ridgewood, Queens	NB	9	488	630	54	142	806
		SB	7	318	490	45	172	
B26	Between Ridgewood and Downtown Brooklyn	EB	6	189	420	32	231	735
		WB	10	546	700	55	154	
B38	Between Ridgewood, Queens and Downtown Brooklyn	EB	7	234	490	33	256	1247
		WB	22	1013	1540	46	527	
B52	Between Ridgewood, Queens and Downtown Brooklyn	EB	6	263	420	44	157	984
		WB	13	721	910	55	189	
B54	Between Ridgewood, Queens and Downtown Brooklyn	EB	8	272	560	34	288	808
		WB	9	536	630	60	94	
Q38	Between Forest Hill H.S. and Horace Harding Expwy, Corona	NB	5	113	350	23	237	226
		SB	4	113	280	28	167	
Q39	Between Ridgewood and Long Island City	EB	5	138	350	28	212	294
		WB	9	156	630	17	474	
Q54	Between Jamaica, Queens, and Williamsburg Bridge Plaza, Brooklyn	EB	6	299	420	50	121	858
		WB	15	559	1050	37	491	
Q55	Between Ridgewood and Richmond Hill	EB	8	207	560	26	353	626
		WB	8	419	560	52	141	
Q58	Between Ridgewood and Flushing, Queens	EB	12	699	840	58	141	1382
		WB	13	683	910	53	227	
Q67	Between Ridgewood and Long Island City	EB	4	105	280	26	175	210
		WB	5	105	350	21	245	
QM24	Between Midtown, Manhattan and Glendale, Queens	EB	0	0	0	-	0	120
		WB	4	120	280	30	160	

Notes:

1. Derived from NYCT Ridercheck Survey
2. Maximum load point is defined as the peak passenger accumulation point on a bus route.
3. The hourly volume is calculated by adding the highest accumulation on each bus during the peak hour.
4. Available capacity is calculated by multiplying the existing bus frequency by the bus capacity and subtracting the hourly volume.
5. Maximum capacity of buses is 70 passengers per bus.

Source: New York City Transit (NYCT)



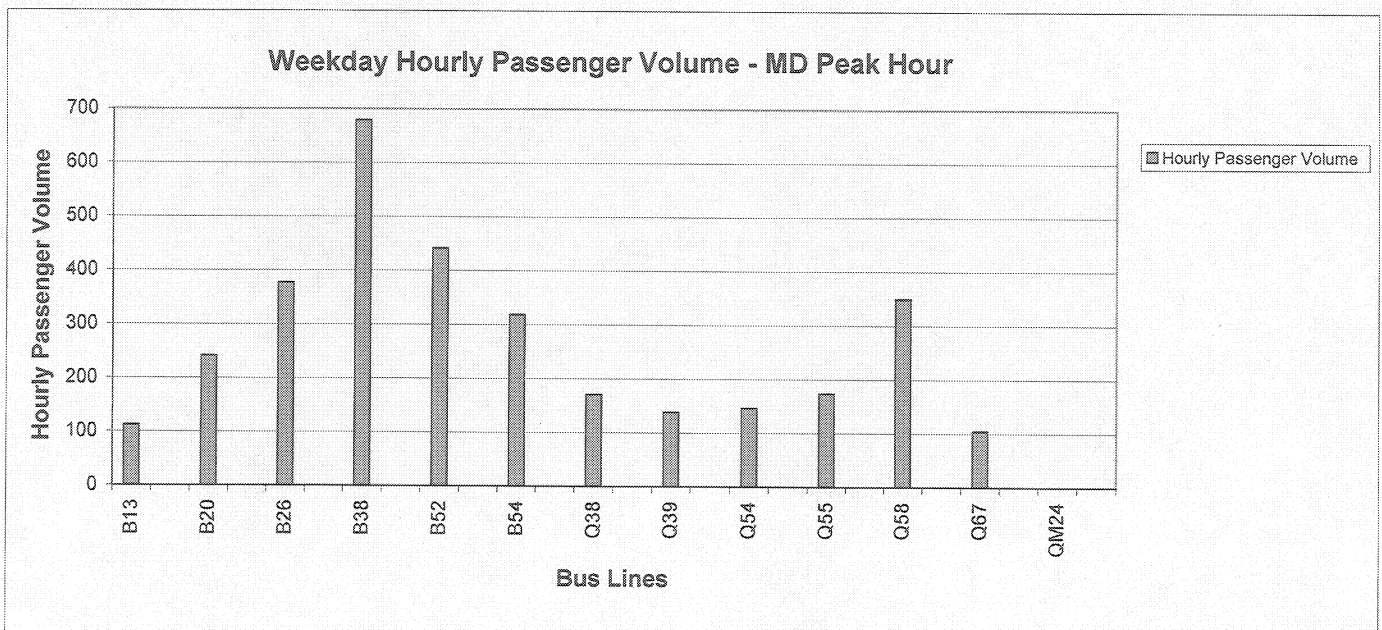
**Table 5-5
Bus Ridership - Average Weekday MD Peak Hour (11:45am - 12:45pm)
Existing Condition**

Bus Route	Bus Route Description	Direction	Buses Per Hour	Hourly Passenger Volume	Bus Capacity Per Hour	Average Ridership Bus	Available Capacity	Hourly Passenger Volume
B13	Between Williamsburg and Gateway Center Mall, Spring Creek, Brooklyn, via Queens	NB	3	37	210	12	173	112
		SB	3	75	210	25	135	
B20	Between Brooklyn General Mail Facility and Ridgewood, Queens	NB	5	113	350	23	237	241
		SB	5	128	350	26	222	
B26	Between Ridgewood and Downtown Brooklyn	EB	7	206	490	29	284	377
		WB	7	171	490	24	319	
B38	Between Ridgewood, Queens and Downtown Brooklyn	EB	12	282	840	24	558	679
		WB	12	397	840	33	443	
B52	Between Ridgewood, Queens and Downtown Brooklyn	EB	9	237	630	26	393	441
		WB	9	204	630	23	426	
B54	Between Ridgewood, Queens and Downtown Brooklyn	EB	6	162	420	27	258	318
		WB	6	156	420	26	264	
Q38	Between Forest Hill H.S. and Horace Harding Expwy, Corona	NB	3	85	210	28	125	170
		SB	3	85	210	28	125	
Q39	Between Ridgewood and Long Island City	EB	5	69	350	14	281	138
		WB	4	69	280	17	211	
Q54	Between Jamaica, Queens, and Williamsburg Bridge Plaza, Brooklyn	EB	4	74	280	19	206	146
		WB	4	72	280	18	208	
Q55	Between Ridgewood and Richmond Hill	EB	4	100	280	25	180	173
		WB	4	73	280	18	207	
Q58	Between Ridgewood and Flushing, Queens	EB	8	190	560	24	370	349
		WB	8	159	560	20	401	
Q67	Between Ridgewood and Long Island City	EB	2	52	140	26	88	104
		WB	2	52	140	26	88	
QM24	Between Midtown, Manhattan and Glendale, Queens	EB	0	0	0	-	0	0
		WB	0	0	0	-	0	

Notes:

1. Derived from NYCT Ridercheck Survey
2. Maximum load point is defined as the peak passenger accumulation point on a bus route.
3. The hourly volume is calculated by adding the highest accumulation on each bus during the peak hour.
4. Available capacity is calculated by multiplying the existing bus frequency by the bus capacity and subtracting the hourly volume.
5. Maximum capacity of buses is 70 passengers per bus.

Source: New York City Transit (NYCT)



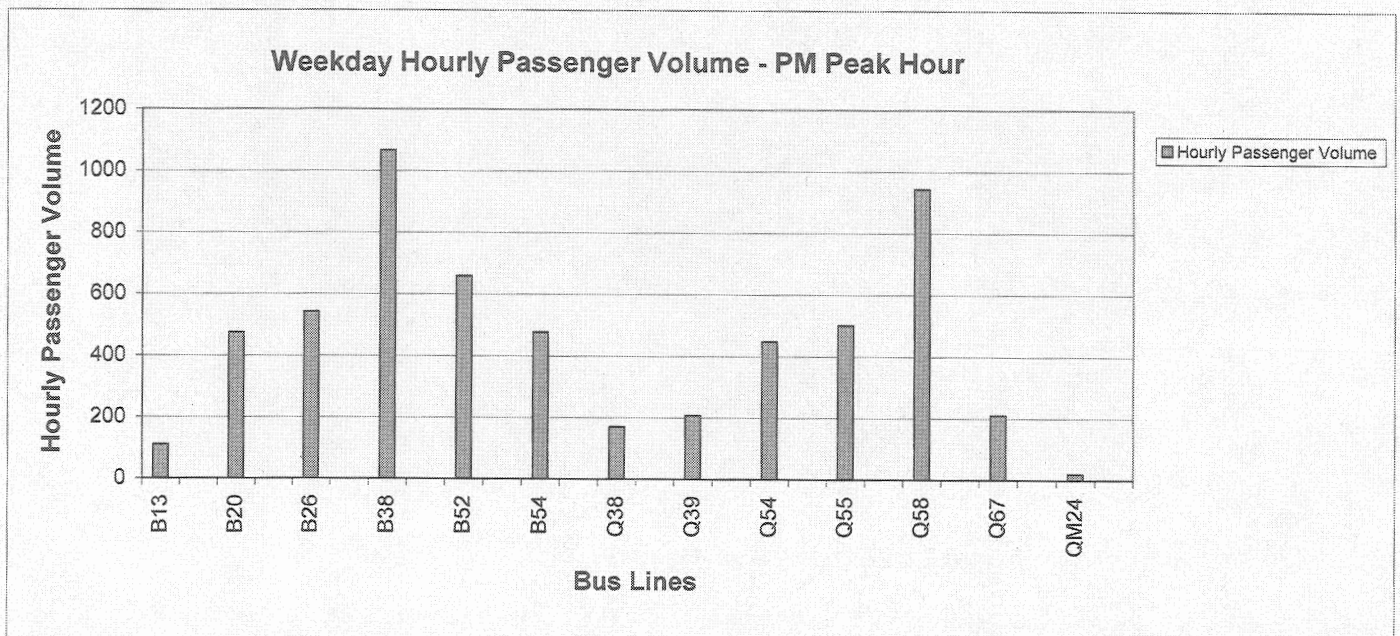
**Table 5-6
Bus Ridership - Average Weekday PM Peak Hour (5:15 - 6:15pm)
Existing Condition**

Bus Route	Bus Route Description	Direction	Buses Per Hour	Hourly Passenger Volume	Bus Capacity Per Hour	Average Ridership Bus	Available Capacity	Hourly Passenger Volume
B13	Between Williamsburg and Gateway Center Mall, Spring Creek, Brooklyn, via Queens	NB	2	45	140	23	95	110
		SB	2	65	140	33	75	
B20	Between Brooklyn General Mail Facility and Ridgewood, Queens	NB	6	210	420	35	210	475
		SB	6	265	420	44	155	
B26	Between Ridgewood and Downtown Brooklyn	EB	9	389	630	43	241	542
		WB	7	153	490	22	337	
B38	Between Ridgewood, Queens and Downtown Brooklyn	EB	16	711	1120	44	409	1066
		WB	16	355	1120	22	765	
B52	Between Ridgewood, Queens and Downtown Brooklyn	EB	10	382	700	38	318	658
		WB	10	276	700	28	424	
B54	Between Ridgewood, Queens and Downtown Brooklyn	EB	8	278	560	35	282	477
		WB	8	199	560	25	361	
Q38	Between Forest Hill H.S. and Horace Harding Expwy, Corona	NB	4	85	280	21	195	170
		SB	4	85	280	21	195	
Q39	Between Ridgewood and Long Island City	EB	8	121	560	15	439	207
		WB	5	86	350	17	264	
Q54	Between Jamaica, Queens, and Williamsburg Bridge Plaza, Brooklyn	EB	6	260	420	43	160	448
		WB	6	188	420	31	232	
Q55	Between Ridgewood and Richmond Hill	EB	7	339	490	48	151	501
		WB	6	162	420	27	258	
Q58	Between Ridgewood and Flushing, Queens	EB	10	394	700	39	306	944
		WB	10	550	700	55	150	
Q67	Between Ridgewood and Long Island City	EB	4	105	280	26	175	210
		WB	5	105	350	21	245	
QM24	Between Midtown, Manhattan and Glendale, Queens	EB	2	20	140	10	120	20
		WB	0	0	0	-	0	

Notes:

1. Derived from NYCT Ridercheck Survey
2. Maximum load point is defined as the peak passenger accumulation point on a bus route.
3. The hourly volume is calculated by adding the highest accumulation on each bus during the peak hour.
4. Available capacity is calculated by multiplying the existing bus frequency by the bus capacity and subtracting the hourly volume.
5. Maximum capacity of buses is 70 passengers per bus.

Source: New York City Transit (NYCT)



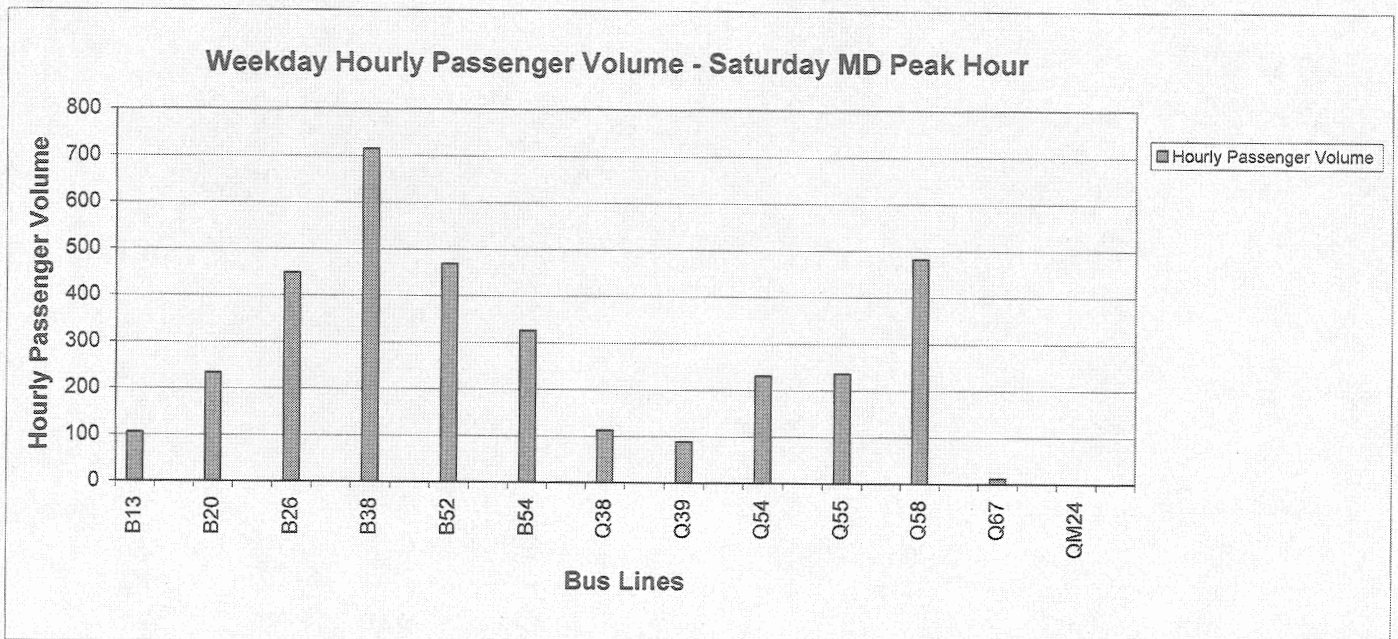
**Table 5-7
Bus Ridership - Saturday MD Peak Hour (12:00 - 1:00pm)
Existing Condition**

Bus Route	Bus Route Description	Direction	Buses Per Hour	Hourly Passenger Volume	Bus Capacity Per Hour	Average Ridership Bus	Available Capacity	Hourly Passenger Volume
B13	Between Williamsburg and Gateway Center Mall, Spring Creek, Brooklyn, via Queens	NB	2	34	140	17	106	105
		SB	2	71	140	36	69	
B20	Between Brooklyn General Mail Facility and Ridgewood, Queens	NB	5	121	350	24	229	233
		SB	5	112	350	22	238	
B26	Between Ridgewood and Downtown Brooklyn	EB	8	213	560	27	347	448
		WB	8	235	560	29	325	
B38	Between Ridgewood, Queens and Downtown Brooklyn	EB	11	255	770	23	515	714
		WB	11	459	770	42	311	
B52	Between Ridgewood, Queens and Downtown Brooklyn	EB	8	166	560	21	394	468
		WB	8	302	560	38	258	
B54	Between Ridgewood, Queens and Downtown Brooklyn	EB	6	177	420	30	243	325
		WB	6	148	420	25	272	
Q38	Between Forest Hill H.S. and Horace Harding Expwy, Corona	NB	4	56	280	14	224	112
		SB	4	56	280	14	224	
Q39	Between Ridgewood and Long Island City	EB	3	44	210	15	166	88
		WB	3	44	210	15	166	
Q54	Between Jamaica, Queens, and Williamsburg Bridge Plaza, Brooklyn	EB	5	126	350	25	224	230
		WB	5	104	350	21	246	
Q55	Between Ridgewood and Richmond Hill	EB	5	111	350	22	239	236
		WB	5	125	350	25	225	
Q58	Between Ridgewood and Flushing, Queens	EB	8	297	560	37	263	482
		WB	7	185	490	26	305	
Q67	Between Ridgewood and Long Island City	EB	1	6	70	6	64	12
		WB	1	6	70	6	64	
QM24	Between Midtown, Manhattan and Glendale, Queens	EB	0	0	0	-	0	0
		WB	0	0	0	-	0	

Notes:

1. Derived from NYCT Ridercheck Survey
2. Maximum load point is defined as the peak passenger accumulation point on a bus route.
3. The hourly volume is calculated by adding the highest accumulation on each bus during the peak hour.
4. Available capacity is calculated by multiplying the existing bus frequency by the bus capacity and subtracting the hourly volume.
5. Maximum capacity of buses is 70 passengers per bus.

Source: New York City Transit (NYCT)



B13

The B13 operates between Williamsburg at Metropolitan Avenue/Graham Avenue and Gateway Center Mall at Gateway Drive/Seaview Avenue at all times except overnight service. In the study area, it provides service along Gates Avenue, Wyckoff Avenue, Forest Avenue, Putnam Avenue, 67th Avenue, and Fresh Pond Road.

The frequency of the service is ten minutes and fifteen minutes headway during AM and PM peak hour respectively in both northbound and southbound directions during the weekdays. Additional service is provided between 3 PM and 3:45 PM on school days in the southbound direction. During Saturday AM and PM peak hours; the headway is thirty minutes.

B20

The B20 operates between Brooklyn General Mail Facility at Spring Creek and Ridgewood at Forest Avenue/Putnam Avenue at all times except overnight service. In the study area, it provides service along Fresh Pond Road, Putnam Avenue, and 67th Avenue. The frequency of the service is eight minutes and ten minutes headway during the weekday AM and PM peak hour respectively in both directions. The headway during Saturday AM peak hour is twenty minutes in the northbound direction and fifteen minutes in the southbound direction. During Saturday PM peak hour, it is twelve minutes in both directions.

B26

The B26 operates between Ridgewood from Myrtle Avenue/Palmetto Street and Brooklyn Heights to Cadman Plaza West/Court Street at all times except there is no overnight service. The route is along Wyckoff Avenue with the final stop at Myrtle Avenue.

The frequency of the service varies by direction and peak hours. During the weekday AM peak hour, the headway is five minutes in the westbound and ten minutes in the eastbound directions. During the weekday PM peak hour, the headway is ten minutes in the westbound and eight minutes in the eastbound directions. The Saturday AM peak hour headway is ten minutes in the eastbound direction and twenty minutes in the

westbound direction, while the Saturday PM peak hour headway is seven minutes in both directions.

B38

The B38 operates between Ridgewood from Seneca Avenue/Catalpa Avenue and Downtown Brooklyn to Cadman Plaza West at all times except there is no overnight service on this route. The route travels along Seneca Avenue, Stanhope Street, then circle around the Linden Hill Cemetery with its final stop located at Seneca Avenue and Catalpa Avenue.

The frequency of the service varies by peak hour and direction. During the weekday AM peak hour, the headway is three minutes in the westbound and five minutes in the eastbound directions. The weekday PM peak hour headway is six minutes westbound and five minutes eastbound. Additional service is provided between 3 PM and 4 PM on school days in the westbound direction. During Saturday AM and PM peak hours, the headway is ten minutes and six minutes in the eastbound and westbound direction, respectively.

B52

The B52 operates between Ridgewood from Myrtle Avenue/Palmetto Street and Downtown Brooklyn to Cadman Plaza West at all times except overnight service. In the study area, it provides service along Gates Avenue with its final stop at Myrtle Avenue/Palmetto Street.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is four to six minutes in the westbound and ten minutes in the eastbound directions. The weekday PM peak hour headway is six minutes in both directions. The Saturday AM peak hour headway is fifteen minutes in the eastbound direction and ten minutes in the westbound direction, while the Saturday PM peak hour headway is seven minutes in both directions.

B54

The B54 operates between Downtown Brooklyn from the MetroTech Center and Ridgewood Terminal to Myrtle Ave/Wyckoff Avenue at all times except there is no overnight service. In the study area, the B54 runs along Myrtle Avenue with its final stop at Palmetto Street/Myrtle Avenue.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is five to six minutes in the westbound and ten minutes in the eastbound directions. The weekday PM peak hour headway is ten minutes in both directions. Additional service is provided between 2:30 PM and 3:30 PM on school days in the eastbound direction. The Saturday AM and PM peak hour headways are fifteen minutes and ten minutes in the eastbound and westbound direction, respectively.

Q38

The Q38 is a Triboro Coach Corp. bus line in the study area. It operates daily between Forest Hill High School/Queens and Queens/Horace Harding Expressway and Otis Street with no overnight service. In the study area, the route runs along Metropolitan Avenue.

The frequency of service varies slightly by peak hour. The weekday AM peak hour headway is twelve minutes in the eastbound and westbound directions. During the weekday PM peak hour, the headway is fifteen minutes in both directions. Additional service is provided between 2 PM and 4 PM on school days in the westbound direction and 7:20 AM to 7:30 AM in the eastbound direction. During Saturday AM and PM peak hours, the headway is thirty minutes and fifteen minutes in eastbound and westbound direction, respectively.

Q39

The Q39 is another bus route serviced by the Triboro Coach Corp. in the study area. It operates daily between Queens Plaza South and Cooper Avenue/60th Lane with no overnight service. In the study area, the route runs along Forest Avenue.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is five to six minutes northbound and eight minutes southbound. The weekday PM peak hour headway is six minutes northbound and ten minutes

southbound. During Saturday AM and PM peak hours, the headway is thirty minutes and twenty minutes in both directions, respectively.

Q54

The Q54 operates between Williamsburg Bridge Plaza and Jamaica Avenue/171st Street at all times with no overnight service. In the study area, it runs along Metropolitan Avenue.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is fifteen minutes in the westbound and ten minutes in the eastbound directions. The weekday PM peak hour headway is ten minutes in both directions. Additional service is provided between 2 PM and 4 PM on school days in the eastbound direction. The Saturday AM and PM peak hour headways are fifteen minutes and twelve minutes in eastbound and westbound directions, respectively.

Q55

The Q55 operates between Richmond Hill from Myrtle Avenue/Jamaica Avenue and Ridgewood Terminal to Myrtle Ave/Palmetto Street at all times with no overnight service. This bus route runs along Myrtle Avenue.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is ten minutes in the eastbound and six to seven minutes in the westbound directions. The weekday PM peak hour headway is ten minutes in both directions. During the Saturday AM and PM peak hour, the headway is fifteen minutes in both directions.

Q58

The Q58 operates daily between Ridgewood from Myrtle Avenue/Wyckoff Avenue and MTA LIRR Flushing Station to Main Street/41st Avenue. There is no overnight service on this route. In the study area, it runs along 67th Ave, Putnam Avenue, Myrtle Avenue, Palmetto Street, Madison Street, and Fresh Pond Road.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is six minutes in the eastbound and five to six minutes in the

westbound directions. The weekday PM peak hour headway is six to eight minutes in the eastbound and five to seven minutes in the westbound directions. On school days, additional service is provided between 2:30 PM and 3:15 PM in the eastbound direction, and between 2 PM and 4 PM in the westbound direction. The Saturday AM and PM peak hour headway is eight minutes in both directions.

Q67

The Q67 operates between Ridgewood from Metropolitan Avenue/Fresh Pond Road and Hunters Point to Queensboro Plaza at all times with no overnight service. In the study area, the route runs along Metropolitan Avenue and has its final stop at Metropolitan Avenue and Fresh Pond Road.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is ten to fifteen minutes in the westbound and thirteen minutes in the eastbound directions. The weekday PM peak hour headway is fifteen minutes in both directions. During Saturday AM and PM peak hours, the headway is sixty minutes and seventy minutes in the eastbound and westbound directions, respectively.

QM24

The QM24 is a Triboro Coach Corp. bus service in the study area. It operates in the peak hours in the peak direction only. The eastbound weekday service operates from 2:30pm to 8:00pm between 34th Street Midtown, Manhattan and Glendale, Queens; and from 3:30pm to 7:30pm at weekends between Water Street, Lower Manhattan and Glendale, Queens. The westbound weekday service operates from 6:00am to 11:00am between 57th Street Midtown, Manhattan and Glendale, Queens, and from 6:20am to 9:30am at weekends between Park Row, Lower Manhattan and Glendale, Queens. There is no overnight service on this route. In the study area, the route runs along Fresh Pond Road and Myrtle Avenue between Fresh Pond Road and 65th Street.

The frequency of service varies by peak hour and direction. During the weekday AM peak hour, the headway is four minutes in the westbound direction and for the weekday PM peak hour it is twelve minutes in the eastbound direction. There is no service on weekends.

6.0 PARKING

6.1 Introduction

Parking plays an important role in the overall transportation system. Inadequate parking could lead to unnecessary circulation as motorists search for parking spaces, or to illegal and double parking, thus reducing roadway capacity. This section will analyze the study area's parking demand and supply, identify areas where parking deficiencies exist, and generate recommendations to address the area's parking needs.

Both on-street and off-street parking facilities exist in the study area. On-street parking is generally permitted on all streets in the study area except where it is prohibited by parking regulation to facilitate street cleaning. Off-street parking facilities are associated with large multi-unit dwellings as well as with some commercial, entertainment and residential establishments in the study area.

The parking analysis for the study area included surveys of on-street and off-street parking facilities. The surveys were performed along major corridors in the study area during the weekday peak period (7:00 – 9:00am, 12:00 – 2:00pm, and 4:00 – 6:00pm) to determine the supply and demand.

6.2 Off-Street Public Parking

An inventory of all publicly accessible parking lots and garages in the study area was done. The inventory shows that only two privately owned public parking facilities are located in the study area.

There are two privately owned off-street parking facilities in the study area. One located on Seneca Avenue between Himrod Street and Harman Street with a capacity of 25 spaces and the other located on 749 Wyckoff Avenue with a capacity of 75 spaces. The total utilization rate of these off-street parking facilities during midday on weekdays is 90%. There seems to be no demand in this type of facility in the study area. Figure 6-1 illustrates the location of the off-street parking facilities.

6.3 Off-Street Accessory Parking

The accessory off-street parking garage/lots locations in the study area have been identified and mapped as shown in Figure 6-1. They are located mainly in close proximity to the major corridors such as Metropolitan Avenue, Forest Avenue, Fresh Pond Road, and Palmetto Street.

There are 36 accessory parking garages/lots in the study area. Three are primarily used for residential parking, thirty as accessory commercial parking, two for institutional parking, and one for governmental parking. The three residential lots have approximately 87 parking spaces and based on observations have an average utilization rate of approximately 60% at various times of the week.

The two institutional parking garages/lots used by agency staff and for agencies' vehicles appear to have a utilization rate of 55% and 30%, respectively. The government parking garage located on Metropolitan Avenue between Flushing Avenue and Nurge Street has a utilization rate of 66%.

The 30 accessory commercial parking lots throughout the study area are shown in Table 6-1 which has the complete list of the capacity and utilization rate. The number of available parking spaces and utilization are based on estimation as access was restricted to some of the facilities.

Figure 6-1

Off-Street Public Parking and Accessory Parking Locations

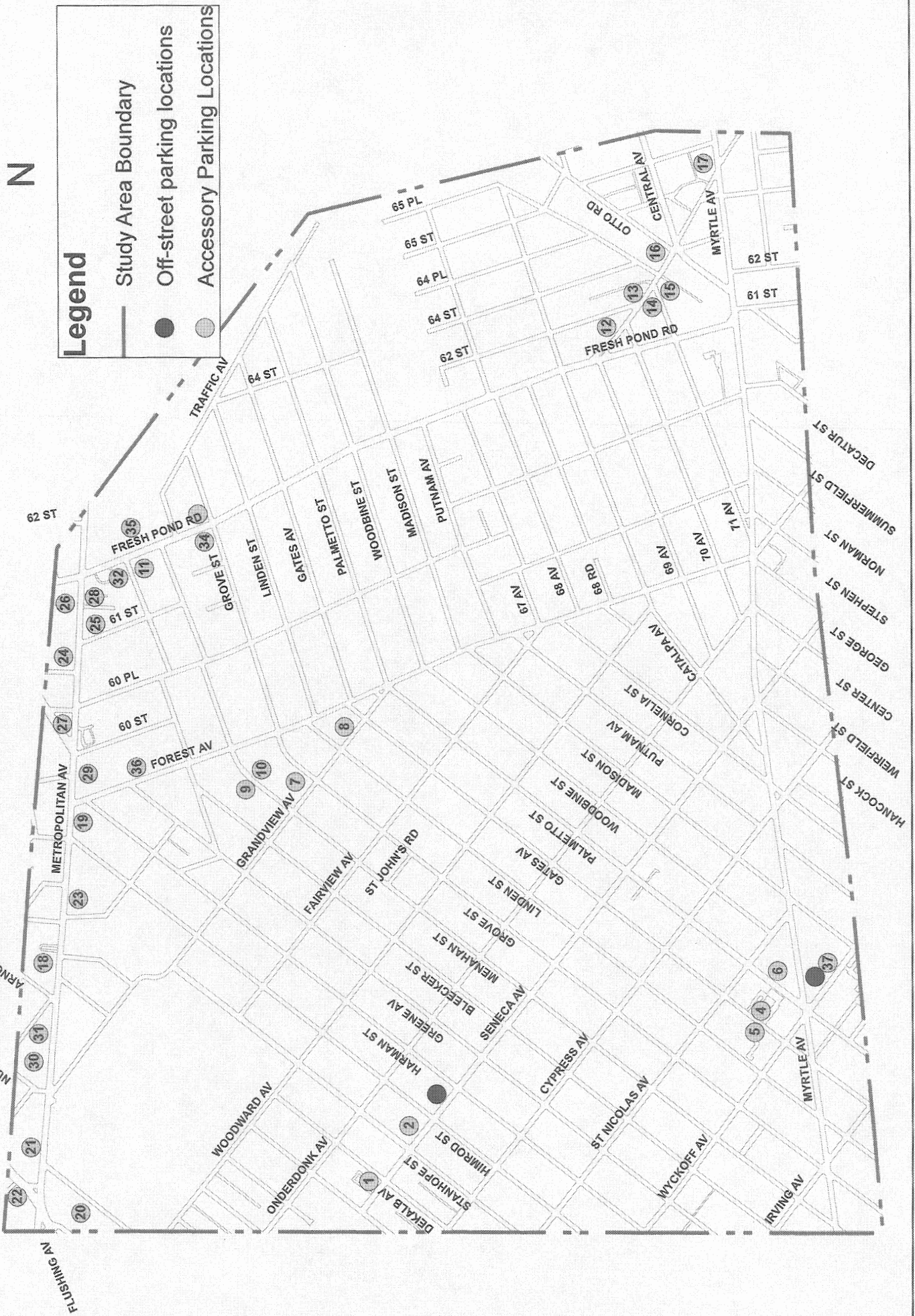
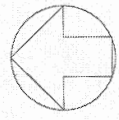


Table 6-1: Off Street Accessory Parking Garage/Lots

Location ID	Lot- Garage Name	Location	License #	Capacity	Occupancy	Utilization Rate	Available Capacity	Type of use
1	Associate's Supermarket	Seneca Ave between DeKalb Ave and Stockholm St (northside)	-	53	40	75%	13	Commercial
2	Church	Seneca Ave between Stanhope St and Himrod St (northside)	-	50	28	55%	23	Institutional
3*	D. Naegele- 457-9 Seneca Ave	Seneca Ave between Himrod St and Harman St	363400	25	15	60%	10	Public
4	Dimensions' Supermarket	Gates Ave between St Nicholas Ave & Wyckoff Ave (southside)	-	60	30	50%	30	Commercial
5	North Fork Bank	Gates Ave between St Nicholas Ave & Wyckoff Ave (northside)	-	40	38	96%	2	Commercial
6	K and K Super-Buffer	Palmetto St between St Nicholas Ave & Cypress Ave (southside)	-	60	24	40%	36	Commercial
7	Eckerd Pharmacy	Grandview Ave between Menahan St & Grove St (northside)	-	26	13	50%	13	Commercial
8	Norton Funeral Home-Chapel	Grandview Ave between Linden St & Gates St (northside)	-	16	5	30%	11	Institutional
9	N/A	Menahan St between Grandview Ave & Forest Ave (northside)	-	7	7	95%	0	Commercial
10	N/A	Menahan St between Grandview Ave & Forest Ave (southside end-block)	-	12	4	30%	8	Residential
11	Laundromat	Bleecker St between Fresh Pond Rd & 61st St (southside)	-	15	12	83%	3	Commercial
12	Salvation Army	Cypress Hills St between 69th Ave & 70th Ave-close to Fresh Pond Rd (northside)	-	6	4	66%	2	Commercial
13	Lot	Corner of Cypress Hills St between 62nd St and & 70th Ave (east sidewalk)	-	25	18	72%	7	Residential
14	Lot	Cypress Hills St between 71st Ave and 62nd St (southside)	-	20	10	50%	10	Commercial
15	Building- parking	Cypress Hills St between 71st Ave and Shaler Ave (southside)	-	50	30	60%	20	Residential
16	Laundromat	Corner of Otto Rd, Cypress Hills St and Central Ave (northside)	-	9	5	50%	5	Commercial
17	Stop & Shop store	Myrtle Ave between Cypress Hills St & 65th St (northside)	-	122	92	75%	31	Commercial
18	Mc Donald	Metropolitan Ave between Andrews Ave & Amony Ct (northside)	-	26	7	27%	19	Commercial
19	Dunkin Donuts	Metropolitan Ave between Himrod St & Forest Ave (southside)	-	20	7	35%	13	Commercial
20	Citibank	Starr St between Woodward Ave & Metropolitan Ave (westside)	-	37	33	90%	4	Commercial
21	Chase	Metropolitan Ave between Flushing Ave & Nurge St (northside)	-	22	19	85%	3	Commercial
22	Sanitation/Police Department	Metropolitan Ave between Flushing Ave & Nurge St (northside)	-	27	18	66%	9	Governmental
23	Ride Aid	Metropolitan Ave between Tonsor St & 55th St (southside)	-	40	8	20%	32	Commercial
24	Pepboys Auto Shop Store	Metropolitan Ave between 60th Ln & 61st St (northside)	-	45	23	51%	22	Commercial
25	Lot Across Pepboys	Metropolitan Ave between 60th Ln & 61st St (southside)	-	65	65	100%	0	Commercial
26	Chevrolet Meyer	Metropolitan Ave between 61st St & Fresh Pond Rd (northside)	-	25	12	48%	13	Commercial
27	Lot	Metropolitan Ave between 60th Pl & 60th St (northside)	-	22	20	90%	2	Commercial
28	Lot	Metropolitan Ave between 60th Pl & 61st St (southside)	-	15	14	90%	2	Commercial

Table 6-1 (Cont'): Off Street Accessory Parking Garage/Lots

Location ID	Lot- Garage Name	Location	License #	Capacity	Occupancy	Utilization Rate	Available Capacity	Type of use
29	Boston Market	Metropolitan Ave between Forest Ave & 60th St (southside)	-	15	10	67%	5	Commercial
30	J.J Metro Laundromat	Metropolitan Ave between Nurge St & Arnold Ave (northside)	-	20	7	35%	13	Commercial
31	Lot at the corner	Metropolitan Ave between Nurge St & Arnold Ave (northside)	-	40	30	75%	10	Commercial
32	Commerce Bank	Fresh Pond Rd between Metropolitan Ave & Bleecker St (westside)	-	14	14	100%	0	Commercial
33	CVS Pharmacy	Fresh Pond Rd between Grove St & Menahan St (eastside)	-	17	8	47%	9	Commercial
34	Karl/Ehmer Parking	Fresh Pond Rd between Grove St & Menahan St (westside)	-	15	7	47%	8	Commercial
35	Lot	Fresh Pond Rd between Menahan St & Bleecker St (eastside)	-	15	4	27%	11	Commercial
36	Medical office	Forest Ave between Greene St & Bleecker St (eastside)	-	15	2	15%	13	Commercial
37	Food Bazaar Supermarket	Wyckoff Ave between Palmetto St & Putnam St (eastside)	-	190	86	45%	105	Commercial
38*	Wyckoff Garage Inc	749 Wyckoff Ave	1191317	75	75	100%	0	Public

* - Off-Street public parking garage

6.4 On-Street Parking and Issues

This section examines the existing on-street parking conditions and provides quantitative and qualitative analysis of the parking provision in the study area. The analysis includes an inventory of on-street parking spaces and parking regulations. The on-street parking regulations vary greatly in the area. They range from alternate side of the street parking regulations on residential streets to restricted parking on commercial streets including metered-parking, time restricted parking, no standing zones, bus stops, fire hydrants, authorized parking zones, loading bays, etc.

An on-street parking survey was conducted that focused on major corridors in the study area where commercial activities and high density residential uses are concentrated. Only the major corridors were studied because of the higher traffic volumes and parking demand. The major corridors being analyzed are:

- Myrtle Avenue between Menahan Street and 65th Street
- Fresh Pond Road between Metropolitan Avenue and Myrtle Avenue
- Forest Avenue between Metropolitan Avenue and Myrtle Avenue
- Palmetto Street between Myrtle Avenue and Fresh Pond Road
- Seneca Avenue between DeKalb Avenue and Myrtle Avenue
- Cypress Avenue between Stockholm Street and Myrtle Avenue
- Wyckoff Avenue between Harman Street and Myrtle Avenue
- Catalpa Avenue between Fresh Pond Road and Myrtle Avenue
- Central Avenue between 65th Street and Myrtle Avenue

The parking survey documented the parking accumulation (the number of parked vehicles) by time of day for the AM, Midday, and PM peak hour. Parking regulations on each block face along the major corridors were recorded along with capacity and utilization rates. Appendix A provides detailed parking capacity/utilization data.

A variety of on-street parking regulations were observed and recorded along the major corridors. Figure 6-2 shows the alternate-side cleaning regulations, Figure 6-3 shows the “No Parking” and “No Standing” regulations, and Figure 6-4 shows where metered parking exists

in the study area which is normally found in close proximity to commercial/retail activities. Table 6-2 provides a list of parking regulations along the major corridors studied.

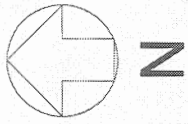
On Street Utilization/Demand

Observation of on-street parking utilization along Myrtle Avenue, Palmetto Street, Fresh Pond Road, Forest Avenue, Seneca Avenue and Central Avenue indicate that there are very few empty parking spaces. Even before the New York City Department of Sanitation is done with the task of picking up the garbage and cleaning the street at the curb, vehicles are already quickly filling up the parking spaces. Metered parking spaces are continuously being filled up as soon as a vehicle leaves.



Double Parking Issue

Double parking on Myrtle Avenue is a problem in the core shopping area of Myrtle Avenue (from Menahan Street to 65th Street). The metered parking spaces along Myrtle Avenue have frequent turnover (except when people feed the meters). The cause of double parking on Myrtle Avenue is due to the limited supply of on street parking spaces relative to the demand. Even though there is a public parking facilities in the vicinity, private vehicles tend to double parked on Myrtle Avenue to make quick purchases, rather than spend additional time and money to park off-street. There is an absence of loading/unloading zones along Myrtle Avenue for commercial deliveries. In addition, there is only one 10 feet travel lane on each direction along Myrtle Avenue which makes it congested whenever vehicles double parked or buses or trucks pass by.

Figure 6-2
Alternate Side Street Cleaning Regulations



Legend

-  Study Area Boundary
-  Alternate Parking Regulations

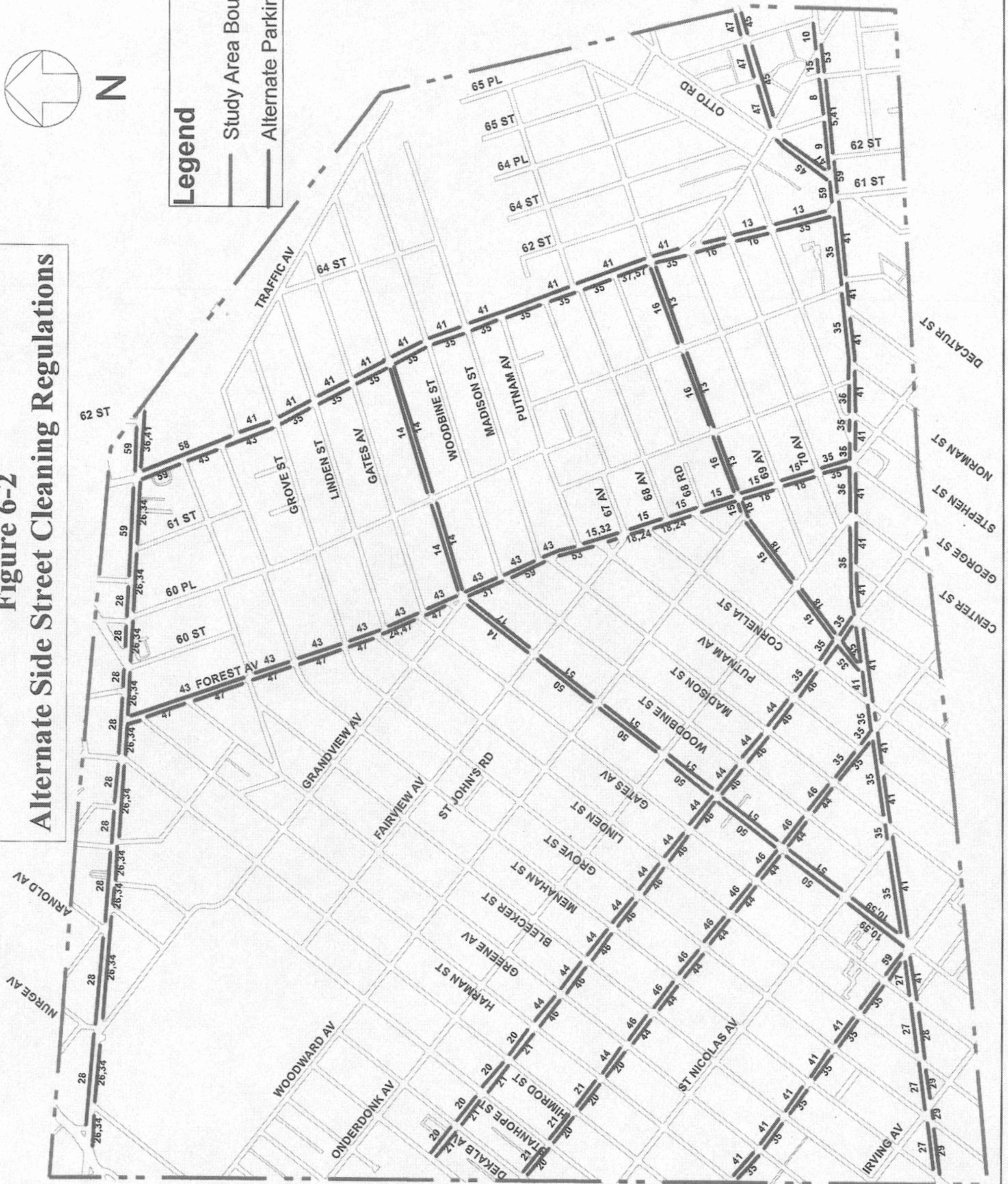


Table 6-2: On-Street Parking Regulations Key

No.	Parking Regulation Descriptions
1	1 Hour Parking 8:00am - 7:00pm Except Sunday
2	1 Hour Parking 8:00am - 7:00pm Including Sunday
3	1 Hour Parking 8:30am - 7:00pm Including Sunday
4	1 Hour Parking 9:00am - 7:00pm Including Sunday
5	2 Hour Parking 8:00am - 7:00pm Including Sunday
6	2 Hour Parking 8:30am - 7:00pm Except Sunday
7	2 Hour Parking 8:30am - 7:00pm Including Sunday
8	2 Hour Parking 9:00am - 7:00pm Except Sunday
9	2 Hour Parking 9:00am - 7:00pm Including Sunday
10	Bus Stop No Standing
11	Night Regulation Midnight to 3:00am Monday & Thursday
12	Night Regulation No Parking Midnight to 3:00am Tuesday & Friday
13	No Parking 11:00am - 12:30pm Friday
14	No Parking 11:00am - 12:30pm Monday
15	No Parking 11:00am - 12:30pm Monday & Thursday
16	No Parking 11:00am - 12:30pm Thursday
17	No Parking 11:00am - 12:30pm Tuesday
18	No Parking 11:00am - 12:30pm Tuesday & Friday
19	No Parking 11:00am - 12:30pm Wednesday
20	No Parking 11:30am - 1:00pm Monday & Thursday
21	No Parking 11:30am - 1:00pm Tuesday & Friday
22	No Parking 12:00pm - 1:30pm Monday & Thursday
23	No Parking 12:00pm - 1:30pm Tuesday & Friday
24	No Parking 4:00pm - 7:00pm Except Sunday
25	No Parking 4:00pm - 7:00pm Monday & Friday
26	No Parking 4:00pm - 7:00pm Monday thru Friday
27	No Parking 7:00am - 10am Monday & Thursday
28	No Parking 7:00am - 10am Monday thru Friday
29	No Parking 7:00am - 10am Tuesday & Friday
30	No Parking 7:00am - 4:00pm School Days
31	No Parking 7:00am - 7:00pm Except Sunday

No.	Parking Regulation Descriptions
32	No Parking 7:00am - 7:00pm Monday thru Friday
33	No Parking 7:00am - 8:00am Monday & Friday
34	No Parking 7:00am - 8:00am Monday thru Friday
35	No Parking 7:30am - 8:00am Except Sunday
36	No Parking 7:30am - 8:00am Including Sunday
37	No Parking 7:30am - 8:00am Thursday
38	No Parking 7:30am - 8:00am Tuesday & Friday
39	No Parking 8:00am - 6:00pm Except Sunday
40	No Parking 8:00am - 6:00pm Monday thru Friday
41	No Parking 8:00am - 8:30am Except Sunday
42	No Parking 8:00am - 8:30am Including Sunday
43	No Parking 8:30am - 10:00am Friday
44	No Parking 8:30am - 10:00am Monday & Thursday
45	No Parking 8:30am - 10:00am Tuesday
46	No Parking 8:30am - 10:00am Tuesday & Friday
47	No Parking 8:30am - 10:00am Wednesday
48	No Parking 8:30am - 9:00am Except Sunday
49	No Parking 9:30am - 11:00am Friday
50	No Parking 9:30am - 11:00am Monday & Thursday
51	No Parking 9:30am - 11:00am Tuesday & Friday
52	No Parking 9:30am - 11:00am Wednesday
53	No Parking Anytime
54	No Standing 4:00pm - 7:00pm Except Sunday
55	No Standing 4:00pm - 7:00pm Monday thru Friday
56	No Standing 7:00am - 10:00am Monday thru Friday
57	No Standing 7:00am - 4:00pm School Days
58	No Standing 7:00am - 9:00am Except Sunday
59	No Standing Anytime
60	No Standing Anytime Taxi Standing
61	No Standing Except Authorized Vehicles
62	Snow Route No Standing During Emergency Vehicles Towed

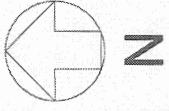
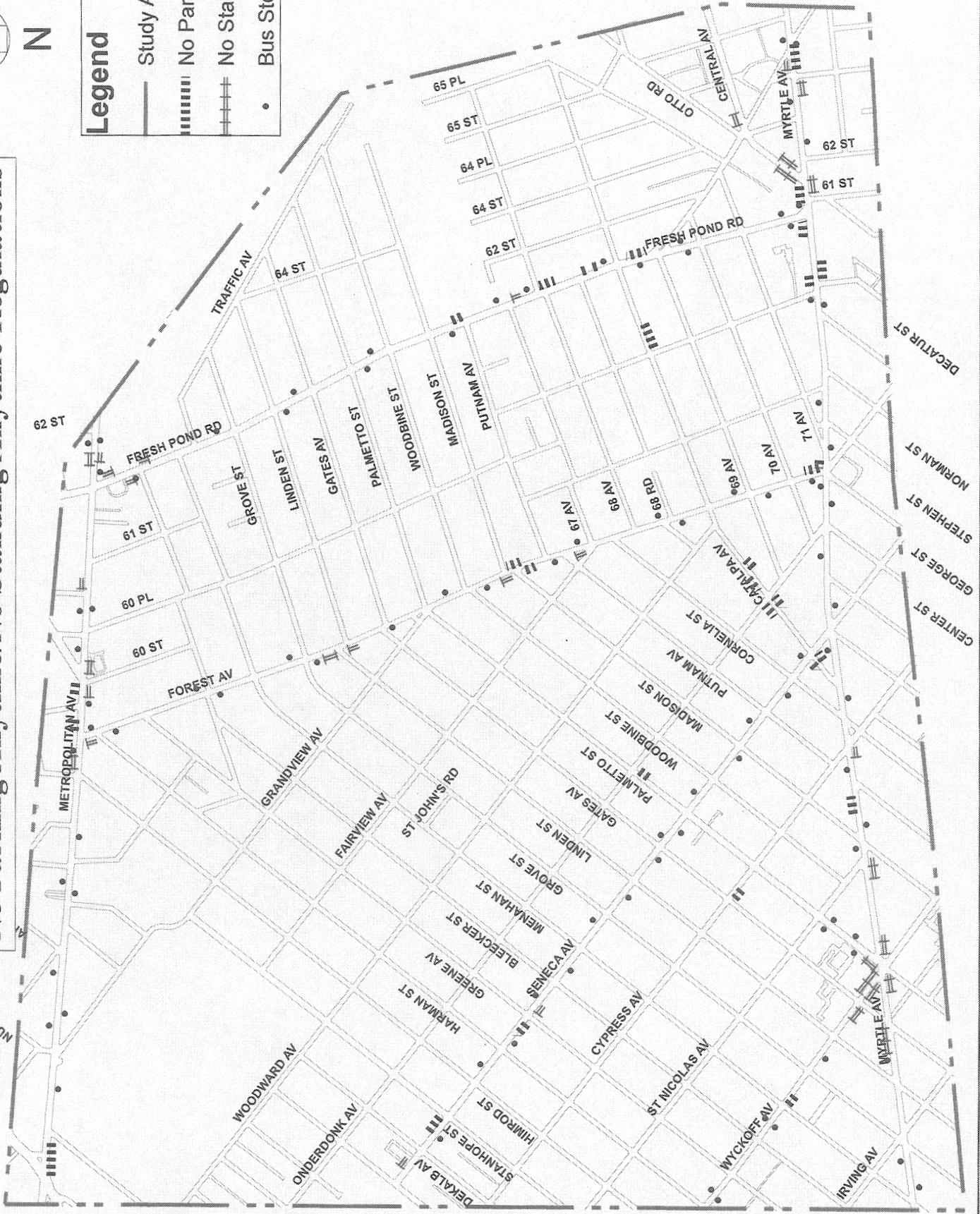


Figure 6-3
No Parking Anytime/No Standing Anytime Regulations

Legend

- Study Area Boundary
- ||||| No Parking Anytime
- |||| No Standing Anytime
- Bus Stop No Standing



7.0 PEDESTRIAN AND BICYCLE ANALYSIS

7.1 Introduction

Pedestrian activity is an important element in the capacity analysis of urban streets and in the design and operation of transportation systems. The concentration of pedestrian activity occurs at major transit stops or terminals and in high density areas. Hence we tend to see pedestrian concentration near transit terminals, high-rise building, stores, and other major traffic generators. The concentration of pedestrians at corners and crosswalks at intersection affect pedestrian themselves but can also impede turning vehicles and reduce the capacity of the intersection.

In the study area there are corridors where significant pedestrian activity occurs due to the land use patterns. Corridors such as Myrtle Avenue, Forest Avenue, Fresh Pond Road, Seneca and sections of Metropolitan Avenue experience significant pedestrian volumes. This is due to the concentration of commercial, retail activity, offices, banks, cleaning stores, printing, medical services, and other such uses. The study area also has many schools and institutional places that generate pedestrian trips. The two subway lines (M and L train) with stops contribute to high pedestrian concentration. Myrtle Avenue/Palmetto Street @ Wyckoff Avenue is a major transit hub with some commercial retail that experiences very concentrated pedestrian volume during the various peak hours.

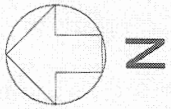
7.2 Existing Pedestrian Analysis

The analysis examines existing pedestrian volumes, pedestrian flow patterns and level of service by focusing on the capacity of intersections, corners, and crosswalks.

To assess pedestrian activity in the study area, pedestrian counts were conducted during the AM (7:45-8:45 am), midday (11:45- 12:45 pm), and PM (5:15-6:15pm) peak hours during weekdays and the weekend Saturday peak hour (12-1pm).

Pedestrian counts were conducted during October/November of 2005 and February 2006 at the following thirteen locations which are also shown in Figure 7-1.

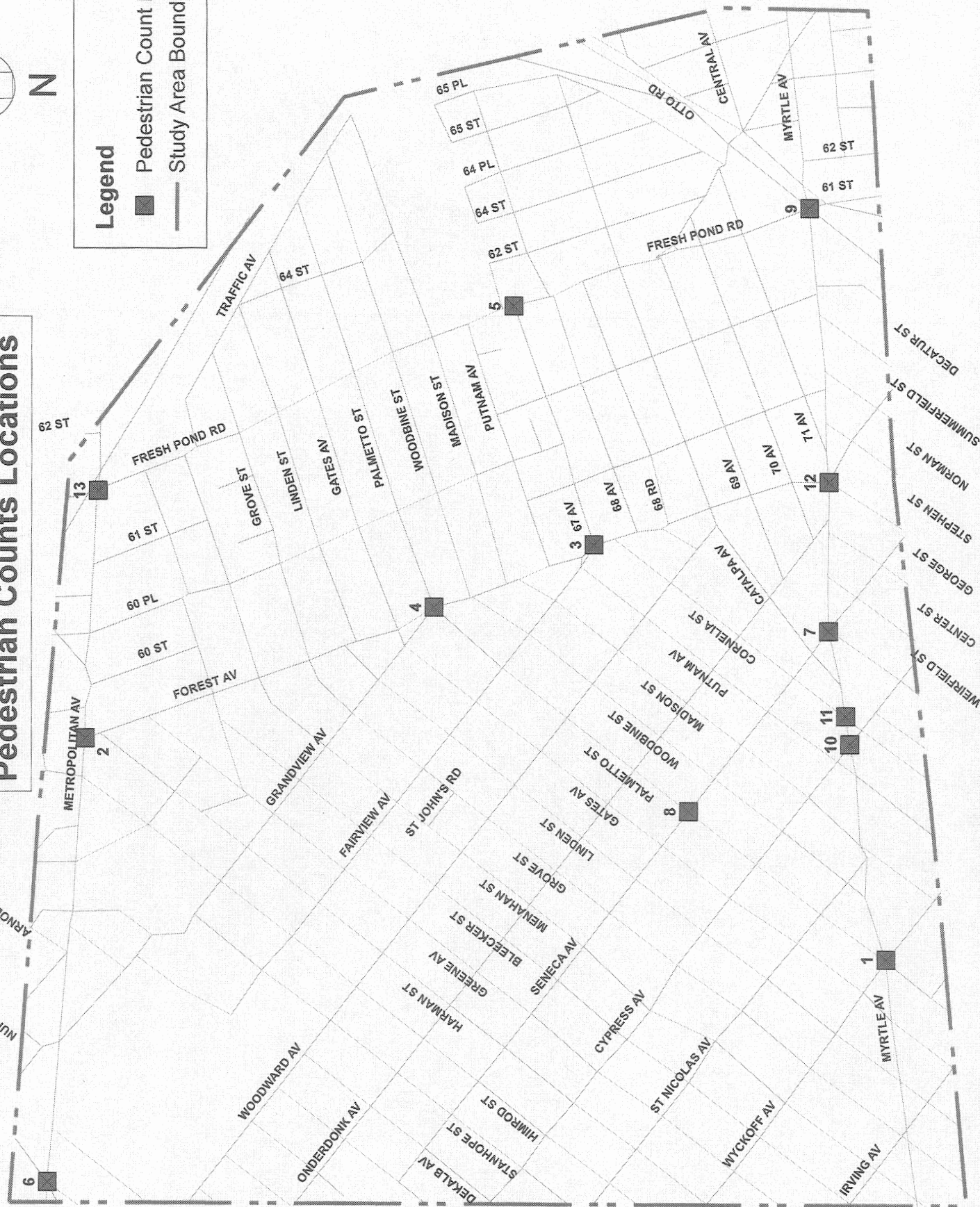
1. Myrtle Avenue & Wyckoff Avenue / Palmetto Street
2. Metropolitan Avenue and Forest Avenue
3. Forest Avenue & 67th Avenue / Fairview Avenue
4. Forest Avenue & Palmetto Street / Grandview Avenue
5. Fresh Pond Road & 67th Avenue
6. Metropolitan Avenue & Flushing Avenue
7. Myrtle Avenue & Seneca Avenue
8. Seneca Avenue & Palmetto Street
9. Myrtle Avenue & Fresh Pond Road
10. Myrtle Avenue & Cypress Avenue
11. Myrtle Avenue & Cornelia Street
12. Myrtle Avenue & Forest Avenue/George Street
13. Metropolitan Avenue & Fresh Pond Road



Legend

- Pedestrian Count Locations
- Study Area Boundary

**Figure 7-1
Pedestrian Counts Locations**



The corridors with heavy pedestrian volumes can generally be linked to subway stations and/or major bus transfer points, employment centers, retail/commercial centers and high density residential areas. By this criteria and the pedestrian counts, the following corridors emerge as the ones with significant pedestrian traffic.

- 1) Metropolitan Avenue (east-west)
- 2) Myrtle Avenue (east-west)
- 3) Fresh Pond Road (north-south)
- 4) Forest Avenue (north-south)
- 5) Palmetto St (east-west)
- 6) Seneca Avenue (north-south)

The survey reveals that Myrtle Ave from Wyckoff Avenue to Fresh Pond Road carries heavy pedestrian traffic, with the highest crosswalk pedestrian volumes per hour (699). The highest one hour crosswalk pedestrian volumes were observed at Myrtle Avenue/Palmetto Street @ Wyckoff Avenue with 615, 569, 699 and 584 during the AM, midday, PM and Saturday midday peak hours.

Along Forest Avenue between Palmetto Avenue and Catalpa Avenue, the average crosswalk pedestrian volumes per hour range between 28 and 325 pedestrians during weekdays and Saturday.

Along Fresh Pond Road, pedestrian activity is similar to that observed on Forest Avenue with similar land uses. Pedestrian crosswalk volumes range from 57 to 430 during weekday and Saturday peak hours. Along Metropolitan Avenue, however the lowest pedestrian activity was observed, with crosswalk volumes of 165 pedestrian per hour or less during the weekday and Saturday peak hours.

The following locations had the highest crosswalk pedestrian volumes during the AM, MD, PM and MD SAT peak hour:

1. Myrtle Avenue & Wyckoff Avenue / Palmetto Street (615, 569, 699, 584)

2. Myrtle Avenue & Cypress Avenue (170, 308, 498, 547)
3. Myrtle Avenue & Cornelia Street (104, 376, 338, 482)
4. Myrtle Avenue & Seneca Avenue (132, 332, 394, 373)
5. Forest Avenue & Palmetto Street / Grandview Avenue (325, 151, 209, 129)
6. Fresh Pond Road & 67th Avenue (330, 191, 257, 430)

Figures 7-2, 7-3, 7-4, and 7-5 show the existing weekday and weekend hourly pedestrian volumes during the AM, MD, PM, and Saturday midday peak hours at the selected intersections. The pictures below show the pedestrian activity observed during the peak hours at different locations.



AM (Fresh Pond Road @ Myrtle Avenue)



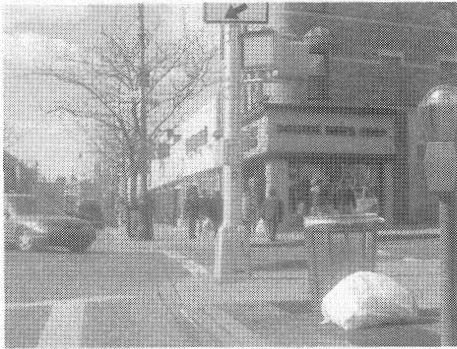
MD (Seneca Avenue @ Myrtle Avenue)



MD (Palmetto St/ Wyckoff Ave @ Myrtle Avenue)



PM (Myrtle Ave @ Cypress Avenue)



PM (Forest Avenue @ Myrtle Avenue)



SAT (Myrtle Ave @ Cypress Avenue)



SAT (Palmetto St/ Wyckoff Ave @ Myrtle Avenue)

Figure 7-2 - Existing Pedestrian Peak Hour Volumes (AM) (7:45 - 8:45 am)

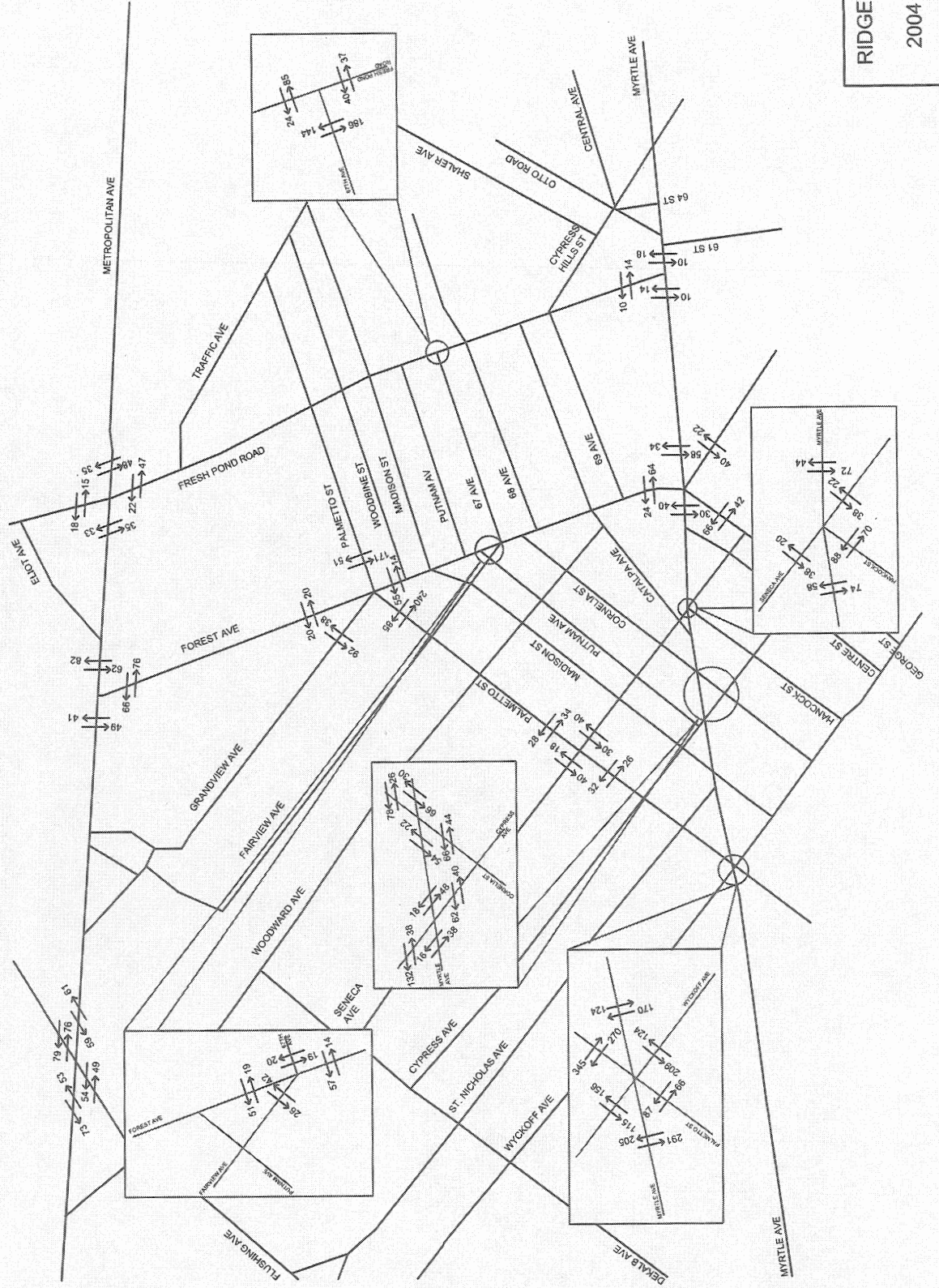
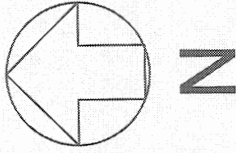
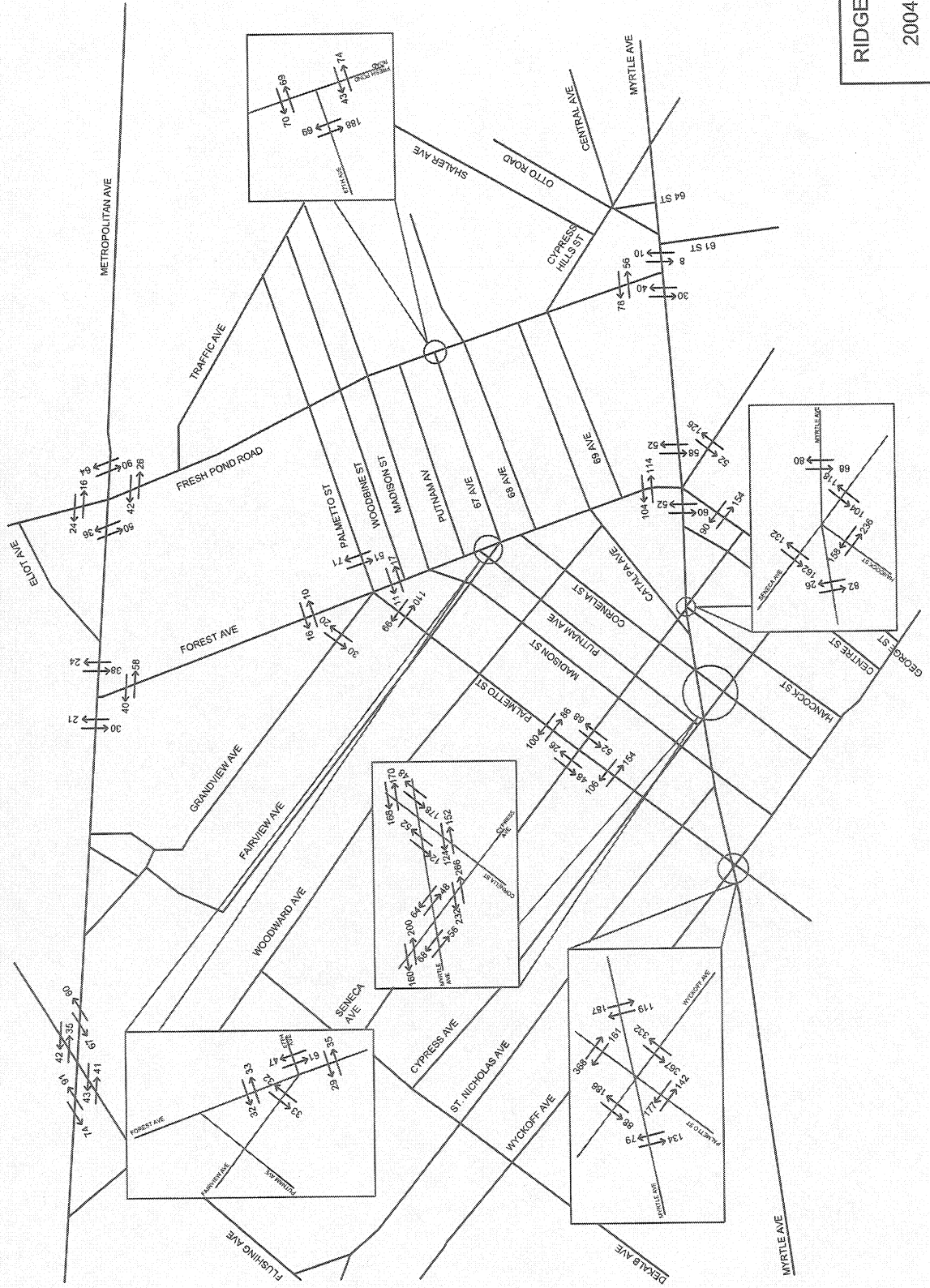
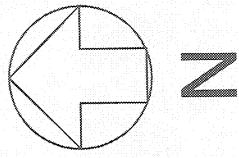


Figure 7-4 - Existing Pedestrian Peak Hour Volumes (PM)

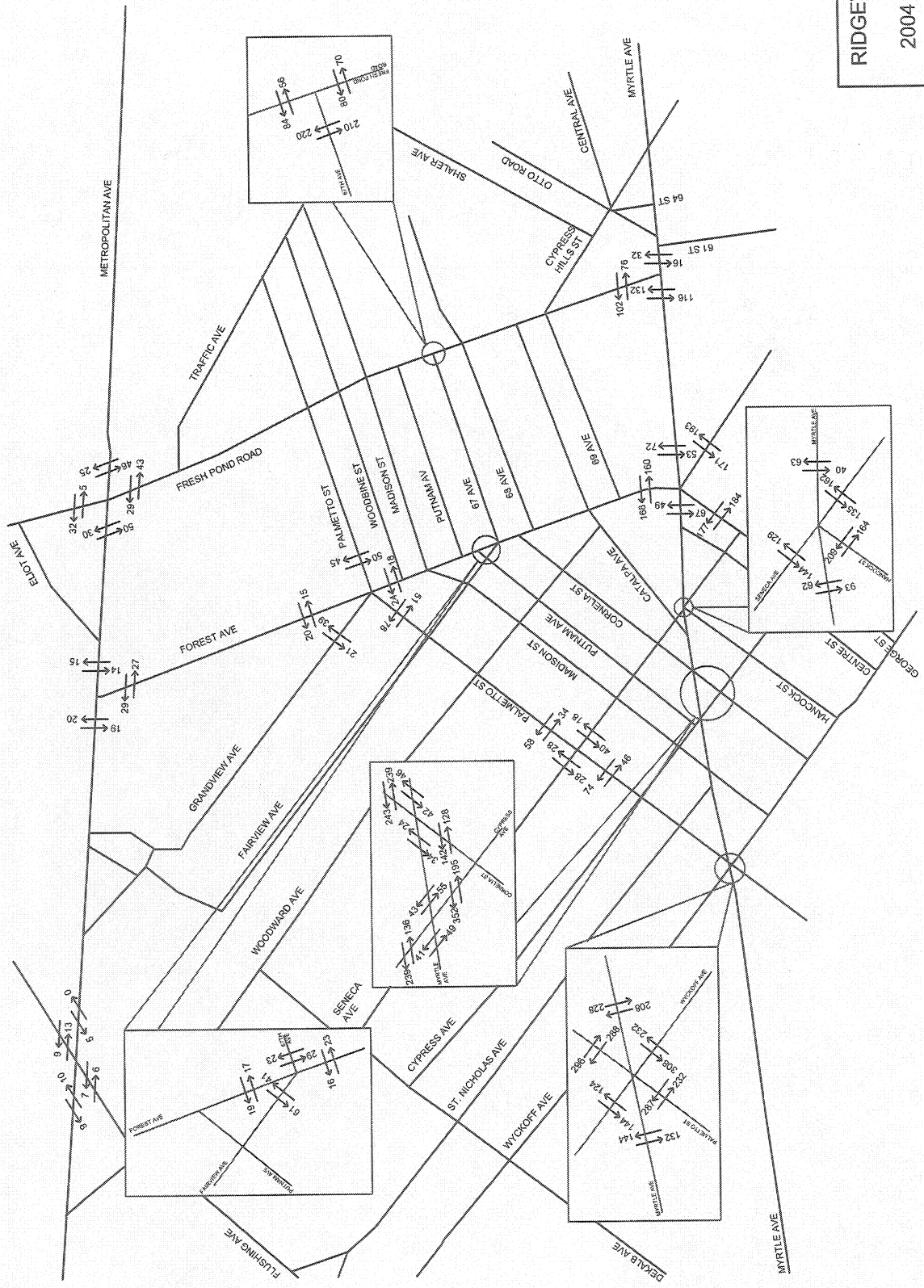
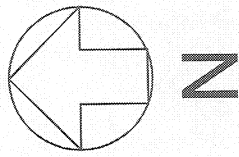
(5:15 - 6:15 pm)



RIDGWOOD TRAFFIC STUDY
2004 EXISTING CONDITION

Figure 7-5 - Existing Pedestrian Peak Hour Volumes (Sat MD)

(12:00 - 1:00 pm)



RIDGEWOOD TRAFFIC STUDY
2004 EXISTING CONDITION

7.3 Level of Service Analysis and Methodology

Pedestrian volumes for the LOS analysis were collected in 15-minute increments during the peak hours of the day.

The Highway Capacity Manual methodology was used to determine pedestrian level of service at the crosswalks and corners for the thirteen intersections selected. The analysis examined the level of service (LOS) for the AM, Midday, PM and SAT peak hours of crosswalk and corners for the 2005 existing condition. The pedestrian LOS is measured in terms of square feet of space per pedestrian (SF/P), as indicated in Figure 7-6 which also shows the criteria for analyzing pedestrian level of service as define by the highway capacity manual.

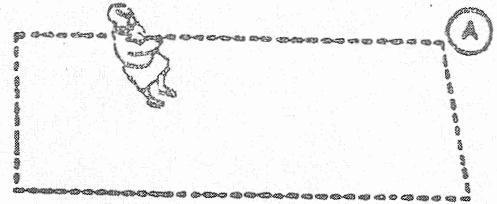
The analysis shows that most locations have a pedestrian LOS of A during all peak periods. Approximately 15% of the locations have a pedestrian LOS B for all peak period. There are two locations with pedestrian LOS C. Table 7-1 and Table 7-2 how the results of crosswalk and corner LOS analysis.

Figure 7-6: Pedestrian Level of Service (LOS)

LEVEL OF SERVICE A

Pedestrian Space: ≥ 130 sq ft/ped Flow Rate: ≤ 2 ped/min/ft

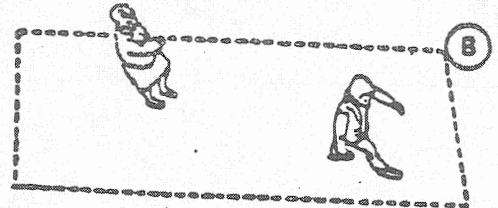
At walkway LOS A, pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.



LEVEL OF SERVICE B

Pedestrian Space: ≥ 40 sq ft/ped Flow Rate: ≤ 7 ped/min/ft

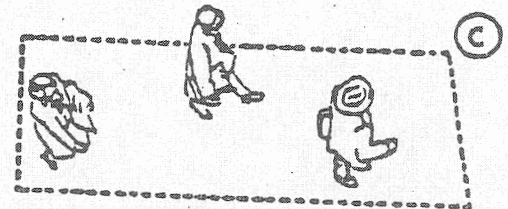
At LOS B, sufficient area is provided to allow pedestrians to freely select walking speeds, to bypass other pedestrians, and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence in the selection of walking path.



LEVEL OF SERVICE C

Pedestrian Space: ≥ 24 sq ft/ped Flow Rate: ≤ 10 ped/min/ft

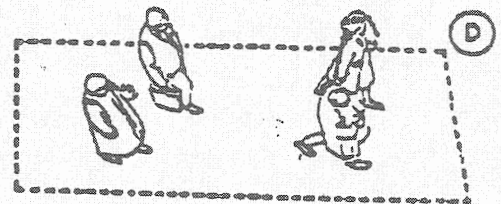
At LOS C, sufficient space is available to select normal walking speeds, and to bypass other pedestrians in primarily unidirectional streams. Where reverse-direction or crossing movements exist, minor conflicts will occur, and speeds and volume will be somewhat lower.



LEVEL OF SERVICE D

Pedestrian Space: ≥ 15 sq ft/ped Flow Rate: ≤ 15 ped/min/ft

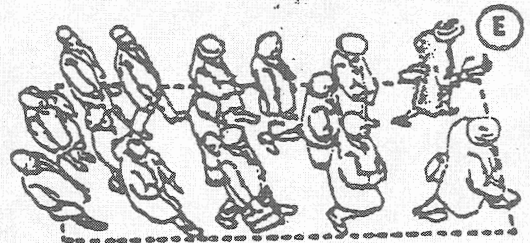
At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflict is high, and its avoidance requires frequent changes in speed and position. The LOS provides reasonably fluid flow; however, considerable friction and interaction between pedestrians is likely to occur.



LEVEL OF SERVICE E

Pedestrian Space: ≥ 6 sq ft/ped Flow Rate: ≤ 25 ped/min/ft

At LOS E, virtually all pedestrians would have their normal walking speed restricted, requiring frequent adjustment of gait. At the lower range of this LOS, forward movement is possible only by "shuffling." Insufficient space is provided for passing of slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with resulting stoppages and interruptions to flow.



LEVEL OF SERVICE F

Pedestrian Space: ≤ 6 sq ft/ped Flow Rate: variable

At LOS F, all walking speeds are severely restricted, and forward progress is made only by "shuffling." There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.



**Table 7-1 Existing Conditions
Crosswalk Level of Service**

Loc #	Intersection	Crosswalk	AM		MD		PM		SAT MD	
			Crosswalk Space							
			SF/P	LOS	SF/P	LOS	SF/P	LOS	SF/P	LOS
1	Myrtle Avenue @ Wyckoff Avenue/Palmetto Street	North (Wyckoff)	73	B	81	B	81	B	62	B
		North (Palmetto)	50	B	45	B	54	B	47	B
		East(Myrtle)	70	B	64	B	70	B	46	B
		South (Wyckoff)	78	B	91	B	48	B	50	B
		South (Palmetto)	162	A	69	B	69	B	31	C
		West (Myrtle)	26	C	78	B	78	B	64	B
2	Metropolitan Avenue @ Forest Avenue	East	141	A	311	A	227	A	455	A
		South	159	A	125	B	243	A	435	A
		West	192	A	209	A	238	A	417	A
3	Forest Avenue @ 67 th Avenue/Fairview Avenue	North	154	A	285	A	182	A	363	A
		East	591	A	591	A	203	A	373	A
		South	208	A	342	A	184	A	369	A
		West	197	A	422	A	144	A	204	A
4	Forest Avenue @ Palmetto Street/Grandview Avenue	North (Forest)	140	A	562	A	262	A	328	A
		North (Grandview)	78	B	202	A	231	A	243	A
		East	61	B	184	A	130	A	184	A
		South	136	A	272	A	236	A	236	A
5	Fresh Pond Road @ 67 th Avenue	North	159	A	139	A	133	A	139	A
		South	195	A	253	A	130	A	94	B
		West	70	B	166	A	91	B	79	B
		North	100	B	222	A	231	A	643	A
6	Metropolitan Avenue @ Flushing Avenue	East	106	B	135	A	185	A	674	A
		South	152	A	241	A	208	A	2893	A
		West	111	B	171	A	125	B	780	A
		North	368	A	62	B	73	B	49	B
7	Myrtle Avenue @ Seneca Avenue	East	173	A	230	A	127	B	164	A
		South (Seneca)	389	A	95	B	100	B	76	B
		South (Hancock)	160	A	81	B	74	B	55	B
		West	177	A	193	A	193	A	98	B
8	Seneca Avenue@ Palmetto Street	North	501	A	361	A	475	A	501	A
		East	431	A	234	A	160	A	303	A
		South	429	A	180	A	215	A	564	A
		West	413	A	530	A	109	B	195	A
9	Myrtle Avenue @ Fresh Pond Road	North	1122	A	281	A	273	A	171	A
		East	517	A	466	A	776	A	245	A
		West	840	A	315	A	378	A	108	B
10	Cypress Avenue @ Myrtle Avenue	North	200	A	107	B	93	B	70	B
		East	243	A	227	A	227	A	188	A
		South	342	A	129	B	89	B	59	B
		West	438	A	243	A	146	A	199	A
11	Cornelia Street @ Myrtle Avenue	North	275	A	116	B	102	B	72	B
		East	176	A	227	A	154	A	144	A
		South	173	A	80	B	55	B	75	B
		West	208	A	346	A	306	A	306	A
12	Forest Avenue @ Myrtle Avenue	North	327	A	102	B	130	A	88	B
		East	180	A	170	A	155	A	132	A
		South (Forest)	307	A	80	B	103	B	49	B
		South (George)	157	A	66	B	85	B	123	B
13	Metropolitan Avenue@ Fresh Pond Rd	West	218	A	160	A	150	A	123	B
		North	653	A	711	A	599	A	599	A
		East	248	A	202	A	165	A	331	A
		South	270	A	615	A	282	A	239	A
		West	247	A	351	A	247	A	229	A

**Table 7-2 Existing Conditions
Corner Level of Service**

Loc #	Intersection	Corner	AM		MD		PM		SAT MD	
			SF/P	LOS	SF/P	LOS	SF/P	LOS	SF/P	LOS
1	Myrtle Avenue @ Wyckoff Avenue/Palmetto Street	Northeast	82	B	87	B	81	B	76	B
		North-center	77	B	112	B	83	B	101	B
		Northwest	Under construction		Under construction		Under construction		Under construction	
		Southeast	145	A	177	A	106	B	93	B
		South-center	130	A	143	A	74	B	67	B
		Southwest	73	B	107	B	113	B	66	B
2	Metropolitan Avenue @ Forest Avenue	Southeast	252	A	269	A	340	A	628	A
		Southwest	204	A	181	A	277	A	537	A
3	Forest Avenue @ 67 th Avenue/Fairview Avenue	Northeast	403	A	502	A	259	A	431	A
		Southeast	249	A	341	A	140	A	250	A
		Southwest	161	A	240	A	161	A	264	A
		Northwest	516	A	1038	A	1038	A	1038	A
4	Forest Avenue@ Pametto Street/Grandview Avenue	Northwest	52	B	115	B	122	B	191	A
		North-center	408	A	1162	A	940	A	1068	A
		Northeast	208	A	650	A	450	A	561	A
		Southwest	154	A	314	A	280	A	394	A
		Southeast	117	B	355	A	243	A	312	A
5	Fresh Pond Road @ 67 th Avenue	Southwest	205	A	410	A	213	A	204	A
		Northwest	191	A	326	A	213	A	213	A
6	Metropolitan Avenue @ Flushing Avenue	Northeast	151	A	251	A	312	A	654	A
		Southeast	150	A	205	A	216	A	898	A
		Southwest	275	A	431	A	317	A	3055	A
		Northwest	171	A	321	A	243	A	243	A
7	Myrtle Avenue @ Seneca Avenue	Northwest	407	A	159	A	159	A	100	B
		Northeast	410	A	162	A	173	A	151	A
		Southeast	119	B	59	B	49	B	43	B
		South-center	201	A	93	B	99	B	63	B
		Southwest	231	A	146	A	129	B	91	B
8	Seneca Avenue@ Palmetto Street	Northeast	241	A	132	A	123	B	226	A
		Southeast	387	A	198	A	143	A	369	A
		Southwest	361	A	240	A	137	A	290	A
		Northwest	401	A	401	A	143	A	235	A
9	Myrtle Avenue @ Fresh Pond Road	Northeast	2145	A	1107	A	1146	A	703	A
		Northwest	2529	A	2529	A	517	A	315	A
10	Cypress Avenue @ Myrtle Avenue	Northeast	578	A	347	A	318	A	229	A
		Southeast	101	B	51	B	36	C	24	C
		Southwest	441	A	186	A	116	B	92	B
		Northwest	290	A	367	A	290	A	290	A
11	Cornelia Street @ Myrtle Avenue	Northeast	432	A	279	A	215	A	163	A
		Southeast	555	A	373	A	243	A	218	A
		Southwest	442	A	340	A	239	A	316	A
		Northwest	290	A	362	A	330	A	200	A
12	Forest Avenue @ Myrtle Avenue	Northwest	1128	A	482	A	593	A	402	A
		Northeast	741	A	360	A	417	A	286	A
		Southeast	1108	A	602	A	701	A	390	A
		South-center	459	A	177	A	233	A	121	B
		Southwest	499	A	261	A	309	A	209	A
13	Metropolitan Avenue@Fresh Pond Rd	Northeast	891	A	800	A	658	A	1077	A
		Southeast	714	A	854	A	501	A	691	A
		Southwest	767	A	1372	A	769	A	650	A
		Northwest	762	A	873	A	761	A	658	A

In general, crosswalks and corners in the study area are adequate for the pedestrian demand observed. Appendix B shows the summary of the crosswalks and corners results. Some jaywalking was observed, particularly on Myrtle Avenue.

The sidewalks and corners in general are very clear with very few newspaper boxes or any other street furniture except for trash cans. There are no vending activities on the sidewalks.

7.4 Pedestrian activity near school locations

There are a total of 16 schools in the study area, of which eight are elementary, four public schools and four private schools.

Elementary schools serve the community needs of the residents surrounding them, where kids from kindergarten up to 6 grade attend. Trips attracted by these schools are mostly done by walking during the morning and early afternoon.

The School Safety Division (SSD) of the Department of Transportation is in the process of developing school safety plans for schools throughout the city. The safety plans include the designation of official school crosswalks, identified by prominent warning signs and roadway markings, it also designates curbside locations for school bus loading and unloading and other parking controls to improve safety for the students. In the study area, the SSD has prepared plans for 4 schools in the area.

7.5 Bicycle Lanes and Paths - Network System and Use

A network of bicycle lanes and greenway paths does not exist within the study area. According to the 2000 census data, the use of bicycle as an alternative mode of transportation in the study area was less than 1% of the total mode share. Very few people were observed using bicycles in the study area.

8.0 ACCIDENTS/SAFETY ANALYSIS

8.1 Introduction

The loss of life and property damage due to traffic and other transportation related accidents bring safety issues into the center of the traffic and transportation planning debate.

To identify safety issues and address traffic accidents problems, it was necessary first to examine the accident history in the study area to see if there are any patterns. Consequently, all existing accident data for a three year period (1998-2000) was assembled and analyzed. These records were collected from the NYSDMV and NYSDOT. This data provide information such us location, severity type, accident type, collision type, time of the accident, and weather conditions among other factors. The data was used to identify critical locations with high accident frequency and or severity for further study.

After screening all intersections on the main corridors in the study area those where the average annual total accidents are 20 or more were subjected to a detailed accident analysis, however this study also examine the following listed nine location. See Table 8-1 and Figure 8-1 for locations of all accidents.

Table 8-1: Three Year Accident History

No	Node #	Main St	Cross St	1998	1999	2000	Total	Average
1	22891	Metropolitan Ave	Fresh Pond Rd	35	27	49	110	37
2	23022	Metropolitan Ave	Flushing Ave	21	26	22	70	23
3	19598	Fresh Pond Rd	Cypress Hills St	20	15	23	58	19
4	22902	Metropolitan Ave	Forest Ave	17	6	11	34	11
5	23144	Myrtle Ave	Cypress Ave	14	14	6	34	11
6	22895	Metropolitan Ave	Eliot Ave	8	7	18	33	11
7	23142	Myrtle Ave	Seneca Ave	7	5	12	24	8
8	23139	Myrtle Ave	George St	12	1	11	24	8
9	22811	Myrtle Ave	Fresh Pond Rd	10	5	9	24	8

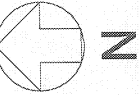
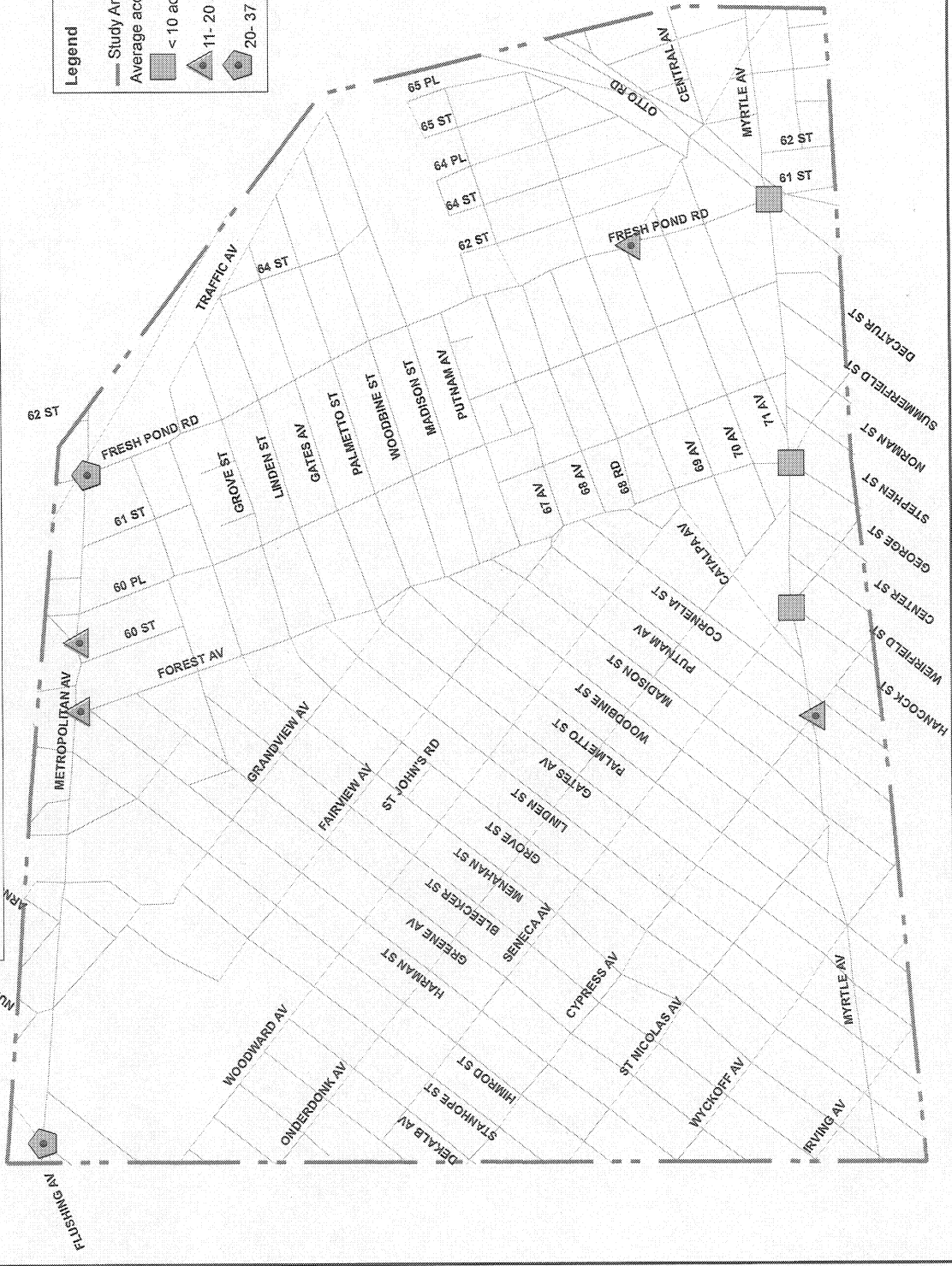


Figure 8-1
Accidents Location in The Study Area (1998-2000)

Legend

- Study Area Boundary
- Average accidents Three Year
- < 10 acc
- 11- 20 acc
- 20- 37 acc



The data showed that the two intersections with more than 20 accidents average per year are located along Metropolitan Avenue. They are Metropolitan Avenue and Fresh Pond Road with the highest frequency average of 37 accidents per year over the three years, followed by Metropolitan Avenue and Flushing Avenue with 23 accidents average per year.

Over the three year period (1998-2000) a total of 411 accidents occurred at the 9 locations. This translates into an average of 15.2 total accidents per year per location, with the average for reportable accidents being 6.6 suggesting issues are not as high. The total accidents include both reportable (177) and non-reportable (234). Of the total reportable accidents, 190 were injuries and 1 fatality. There were 24 pedestrians and 2 bicyclists involved in the accidents during the three year period. The highest number of accidents involving pedestrians was observed at Myrtle Avenue and George Street and Metropolitan Avenue and Fresh Pond Road with 7 and 6 accidents respectively. Table 8-2 summaries the accident history by years for the study area.

Table 8-2: Summary of the Accidents History by Year

Year	Total Acc	Reportable	Non-Reportable	Fatalities	Injuries	Pedestrian	Bicyclist
1998	144	44	100	0	64	7	1
1999	106	47	59	0	45	4	1
2000	161	86	75	1	90	13	0
Total	411	177	234	1	199	24	2

8.2 Cost Analysis of Accidents

Accidents are classified as either reportable or non-reportable. According to New York State Vehicle and Traffic Law, all accidents involving death, injury or resulting in property damage in excess of \$1,000 must be report to the NYS Department of Motor Vehicle (DMV) by police agencies, hence they are reportable accidents.

Non-Reportable accidents are defined as any accident that costs under \$1,000 in property damage.

There is a cost associated with all accidents, reportable and non-reportable. For reportable accidents, a cost is assigned based on the severity of personal injury and the amount of property damage sustained in the accident. There are three classifications for personal injury, Type A, Type B, and Type C; Type C being the least severe and Type A being the most severe form of injury.

Property damage is considered only when public or private properties such as buildings, houses, business stores or other assets are damaged due the accident but do not include damage or injuries to the cars, pedestrians or bicyclists involved in the accident. Table 8-3 shows average cost of accidents by class.

Table 8-3: Average Cost of Accidents by Class

Accidents Class	Average Cost	Relative Weight
Non-Reportable (NR)	\$1,000	1
Property Damage (PD)	\$3,800	4
Injury-Class C (IC)	\$96,000	96
Injury-Class B (IB)	\$385,000	385
Injury-Class A (IA)	\$1,548,000	1,548
Fatal Accidents (FA)	\$3,468,000	3,468

Table 8-4 shows the total cost for accidents occurring at Metropolitan Avenue @ Fresh Pond Road for the year 1998.

Table 8-4: Total Cost of Accidents at Metropolitan Avenue @ Fresh Pond Road (1998)

No. of Accidents by type	Accidents Class	Average Cost	Total Cost
28	Non-Reportable	\$1,000	\$28,000
1	Property Damage	\$3,800	\$3,800
11	Injury-Class C	\$96,000	\$1,056,000
2	Injury-Class B	\$385,000	\$770,000
1	Injury-Class A	\$1,548,000	\$1,548,000
0	Fatal Accident	\$3,468,000	\$0
Total Cost:			\$3,405,800

The analysis shows that the total cost for the 35 accidents that occurred at this intersection in 1998 was approximately \$3.4 million with the highest cumulative cost resulting from one Class A injury.

8.3 Frequency and Severity of Accidents

Frequency and severity are two critical factors in the analysis of accidents. These two factors allow for a better understanding of the problems at the study locations. The NYCDOT Safety Division developed a set of equations to help determine the severity and frequency of accidents at a location.

Severity Factor

The severity factor (SF) indicates whether or not a location tends to have accident with significant levels of damage. A value can be assigned between 0 and 10, ten being the highest level of severity and zero the lowest level. Various levels of severity can be determined from the relative weight assigned to each accident class based on the accident cost. Table 8-5 shows the severity factor calculation for Metropolitan Avenue @ Fresh Pond Road for 1998.

Table 8-5: Severity Factor at Metropolitan Avenue @ Fresh Pond Rd (1998)

Accidents Class	Relative Weight	Frequency (1998)	Total Relative Weight
Non-Reportable (NR)	1	28	28
Property Damage (PD)	4	1	4
Injury-Class C (IC)	96	11	1056
Injury-Class B (IB)	385	2	770
Injury-Class A (IA)	1,548	1	1,548
Fatal accidents (FA)	3,468	0	0
		Total	3,406
		SF=Ln (Total)	8.13

The severity factor of 8.13 indicates that this location tends to have accident with significant levels of damage with the likelihood of accidents resulting in Class C injuries.

Frequency Factor

The frequency at which accidents occur at a location (frequency factor (FF)) is an additional tool to help understand accidents at a location. The frequency factor is based in part on the accident records supplied by NYSDMV and NYSDOT Centralized Local Accident Surveillance System (CLASS). This value assigned ranges from 0 to 10, representing 10 the highest level of frequency accidents for the intersection. For example the frequency factor for this location Metropolitan Avenue @ Fresh Pond Road for 1998 is 7.11.

The critical factors (frequency and severity), based on Index Equations developed by the NYCDOT Safety Division, is helpful for determining the frequency or likelihood, and severity of traffic accidents.

Composite Index

The composite index represents the ratio of the severity factor to the frequency factor $CI = SF/FF$. If the complexity index is greater than 1.0 then the location's accidents will be skewed toward severity; if the factor is less than 1.0 then accidents will be skewed toward frequency. With a severity factor greater than 7.0, a frequency factor greater than 6.0, and a composite index greater than 1.0, accidents with a fatality or Type A injuries are likely to happen at that location. Table 8-6 shows an interpretation summary of the severity factors, frequency factors, and composite index values that correspond to the type of injury and damage that is sustained in an accident.

Table 8-6: Interpretation of the Critical Factors in Accidents

Severity Factor 7-10	Frequency Factor 7-10	Composite Index >1.0
This scenario indicates the likelihood of fatal accidents or Type A injuries, or random accidents.		
Severity Factor 7-10	Frequency Factor 7-10	Composite Index <1.0
This scenario indicates Type A and B injuries, no fatalities, but significant damages.		
Severity Factor 7-10	Frequency Factor 7-10	Composite Index =1.0
This scenario illustrates fatal accidents or Type A or B injuries; there is both frequency and severity.		
Severity Factor 4-7	Frequency Factor 4-7	Composite Index <1.0
This scenario illustrates Type C injuries and non-reportable accidents.		
Severity Factor 4-7	Frequency Factor 4-7	Composite Index >1.0
This scenario illustrates Type C injuries and non-reportable accidents.		

8.4 Annual Accident Analysis

Year 1998

During 1998 there were a total of 144 accidents, of which were 100 non-reportable and 44 reportable. Of the 44 reportable accidents, 2 resulted in Class A injuries, 8 Class B injuries and 54 Class C injuries. No fatality was reported for this year. Table 8-7 shows the total number of accidents by location, fatalities and class with corresponding frequency and severity factors and composite index. Table 8-8 shows the break down of accidents by collision types with pedestrians and bicyclist involved.

The *Metropolitan Avenue and Fresh Pond Road* intersection had 35 accidents, the highest number for that year. There were 7 reportable accidents and 28 non-reportable. From the 7 reportable accidents one resulted in a class A injury, two class B and eleven class C injuries. Twenty-four percent of the total annual accidents in the study area occurred at this intersection. This intersection also had the highest frequency factor (FF) of 7.11 and severity factor (SF) of 7.84.

The intersection of *Metropolitan Avenue and Flushing Avenue* was ranked second in the frequency of accidents accounting for approximately 15% of the annual accidents. This intersection has the highest number of injuries (16) which comprise injury Class B and C.

Accidents Involving Pedestrians and Bicyclists

In 1998 there were 7 accidents involving pedestrians at various locations throughout the study area. The highest pedestrian accident location was *Myrtle Avenue/George Street* where three occurred. There was 1 accident involving a bicyclist at *Fresh Pond Road and Cypress Hills Street*.

Accidents by Collision Type and driving Conditions

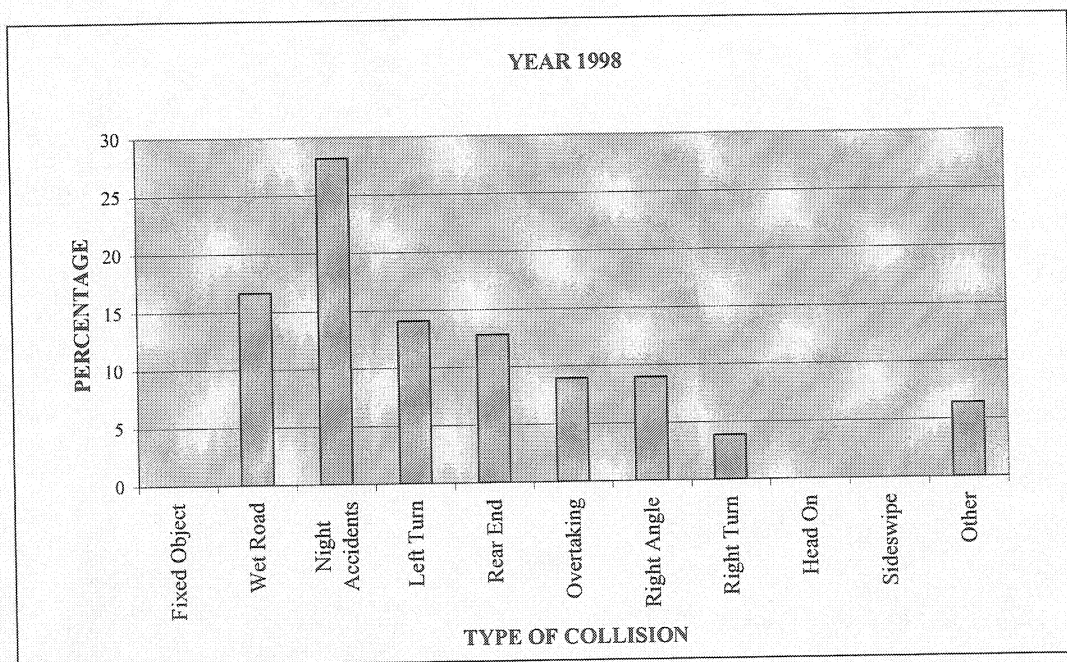
As shown in Figure 8-2, during 1998, 28% of the accidents occurred during night time and about 17% occurred under wet roadway conditions. The distribution of accidents by collision type showed that 14% were left turn, 13% rear end and 9% right angle. The location with the highest

frequency of accident with left turn collision type was *Fresh Pond Road/ Cypress Hills Street* with 33% of the total.

The highest frequency of rear end collision was observed at *Metropolitan Avenue/ Flushing Avenue* with 33% of the total. Right angle collision type was relatively low with a total of 5 for the year, with two accidents observed at *Metropolitan Avenue/ Flushing Avenue* and *Metropolitan Avenue/ Fresh Pond Road*.

Figure 8-2 shows the distribution of reportable accidents in 1998 and driving conditions.

Figure 8-2: 1998 Accidents by Collision Type and Driving Conditions



Severity and Frequency of Accidents

During 1998 of the 9 locations studied 3 intersections had a severity factor greater than 7.0, and 2 with frequency factor greater than 6.0. The composite index for 8 of the 9 intersections was greater than 1.0. This indicates that the majority of the accidents that occurred at these locations were skewed toward severity. Table 8-7 shows the severity factor, frequency factor and the composite index for all analyzed intersections in year 1998.

Table 8-7
1998 Traffic Accident Analysis

Node #	Main St	Cross St	Fatal	Injury A	Injury B	Injury C	Property Damage	Non-Reportable	Total Accident	Severity Factor	Frequency Factor	Composite Index
22891	Metropiltan Av.	Fresh Pond Road	0	1	2	11	1	28	35	7.84	7.11	1.10
23022	Metropiltan Av.	Flusing Av.	0	0	3	13	0	13	21	7.55	6.09	1.24
19598	Fresh Pond Road	Cypress Hill St.	0	0	1	7	1	11	20	6.75	5.99	1.13
22902	Metropiltan Av.	Forest Av.	0	0	0	2	0	15	17	5.12	5.67	0.90
23144	Myrtle Av.	Cypress Av.	0	0	0	9	1	10	14	6.54	5.28	1.24
23139	Myrtle Av.	George St.	0	1	0	5	0	6	12	7.38	4.97	1.48
22811	Myrtle Av.	Fresh Pond Road	0	0	1	4	1	6	10	6.42	4.61	1.39
22895	Metropiltan Av.	Eliot Av.	0	0	1	2	0	5	8	6.13	4.46	1.37
23142	Myrtle Av.	Seneca Av.	0	0	0	1	0	6	7	4.41	3.89	1.13

Note: Calculation for Severity Factor, Frequency Factor, and Composite index is based on safety index equations developed by NYC DOT Safety Division utilizing NYC accidents records supplied by NYSDMV, NYSDOT Class System and accident cost research

Year 1999

During 1999 there were a total of 106 accidents, of which 59 were non-reportable and 47 were reportable. Of the 47 reportable accidents, none resulted in Class A injuries, 7 resulted in Class B injuries and 38 resulted in Class C injuries. No fatality was reported for this year. Table 8-9 shows the total number of accidents by location, fatalities and injury class with corresponding frequency factor, severity factor and composite index. Table 8-10 shows the break down of accidents by collision types with pedestrians and bicyclist involved.

The intersection of *Metropolitan Avenue/Flushing Avenue* had the highest number of accidents with 27. There were 11 reportable accidents and 16 non-reportable. From the 11 reportable accidents, four were class B and twelve class C injury. Twenty-five percent of the total annual accidents occurred at this intersection, with the highest frequency factor (FF) of 6.59 and the highest severity factor (SF) of 7.67 from all the locations in the study area.

The intersection of *Metropolitan Avenue/Fresh Pond Road* was ranked second in frequency with 26 accidents, being approximately 24% of the total. Of the 26 accidents, 11 were reportable with four class C injury.

Accidents Involving Pedestrians and Bicyclists

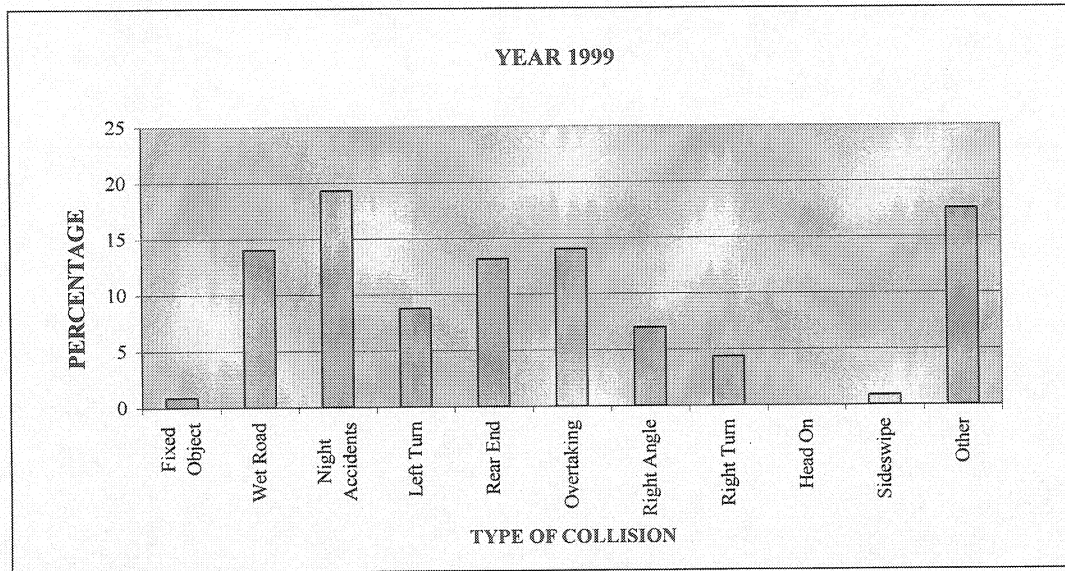
In 1999 there were 4 pedestrian accidents at three locations in the study area. The location with the highest pedestrian accident was *Metropolitan Avenue/Eliot Avenue* with two accidents. There was only one accident involving bicyclists in the study area at the intersection of *Metropolitan Avenue and Eliot Avenue*.

Accidents by Collision Type and driving Conditions

As shown in Figure 8-3 during 1999, 19% of the accidents occurred during night time and 14% occurred under wet roadway conditions. The distribution of accidents by collision types showed that 14% were overtaking, 13% rear end, and 9% left turn. The locations with the highest frequency of overtaking collision type were *Metropolitan Avenue/ Fresh Pond Road* and *Metropolitan Avenue/ Flushing Avenue*.

The highest frequency of rear-end collision was observed at *Metropolitan Avenue/ Flushing Avenue* with 3 from a total of 8. Left turn collision type accident were distributed evenly throughout the area. Figure 8-3 shows the distribution of reportable accidents and driving conditions for 1999.

Figure 8-3: 1999 Accidents by Collision Type and Driving Conditions



Severity and Frequency of Accidents

During 1999 of the 9 locations studied one intersection had a severity factor greater than 7.0, and two intersections had a frequency factor greater than 6.0. The composite index for 7 of the intersections was greater than 1.0. This indicates that the majority of the accidents that occurred at these locations were skewed toward severity. Table 8-9 shows the severity factor, frequency factor and the composite index for all analyzed intersections for the year 1999.

Table 8-9
1999 Traffic Accident Analysis

Node #	Main St	Cross St	Fatal	Injury A	Injury B	Injury C	Property Damage	Non-Reportable	Total Accident	Severity Factor	Frequency Factor	Composite Index
23022	Metropolitan Av.	Flusing Av.	0	0	4	12	1	16	27	7.67	6.59	1.16
22891	Metropolitan Av.	Fresh Pond Road	0	0	0	4	0	15	26	5.79	6.52	0.89
19598	Fresh Pond Road	Cypress Hill St.	0	0	1	9	1	4	15	6.9	5.42	1.27
23144	Myrtle Av.	Cypress Av.	0	0	0	4	0	12	14	5.75	5.28	1.09
22895	Metropolitan Av.	Eliot Av.	0	0	0	2	0	4	7	5.06	3.89	1.30
22902	Metropolitan Av.	Forest Av.	0	0	0	1	0	3	6	4.39	3.58	1.23
23142	Myrtle Av.	Seneca Av.	0	0	0	4	0	3	5	5.44	3.22	1.69
22811	Myrtle Av.	Fresh Pond Road	0	0	2	2	0	1	5	6.63	3.22	2.06
23139	Myrtle Av.	George St.	0	0	0	0	0	1	1	0	0	-

Note: Calculation for Severity Factor, Frequency Factor, and Composite index is based on safety index equations developed by NYCDOT Safety Division utilizing NYC accidents records supplied by NYSDMV, NYSDOT Class System and accident cost research

Year 2000

During 2000 there were a total of 161 accidents, of which 75 were non-reportable and 86 were reportable. Of the 86 reportable accidents, 2 resulted in Class A injuries, 11 resulted in Class B injuries and 77 resulted in Class C injuries. One fatality was reported for this year. Table 8-11 shows the total number of accidents by location, fatalities and injury class with corresponding frequency factor, severity factor and composite index. Table 8-12 shows the break down of accidents by collision types with pedestrians and bicyclist involved.

The location of *Metropolitan Avenue/Fresh Pond Road* had the highest number of accidents with 49 during the year. There were 30 reportable accidents and 19 non-reportable. From the 30 reportable accidents at this intersection, one resulted in class A injury, four resulted in class B injury and twenty four resulted in class C injury. Approximately 30% of the total annual accidents occurred at this intersection. This intersection had the highest frequency factor (FF) of 7.78 and the highest severity factor (SF) of 8.36 for the year.

The intersection of *Fresh Pond Road/Cypress Hills Street* was second in frequency with 23 accidents, which represented 14% of the annual total accidents. Of the 23 accidents, 13 were reportable with sixteen class C injury.

Accidents Involving Pedestrians and Bicyclists

In 2000 there were 13 pedestrian accidents at various locations throughout the study area. The highest pedestrian accident location was *Metropolitan Avenue/Fresh Pond Road* with six accidents, followed by *Myrtle Avenue/Fresh Pond Road* with four accidents. There were no accidents involving bicyclists in the study area.

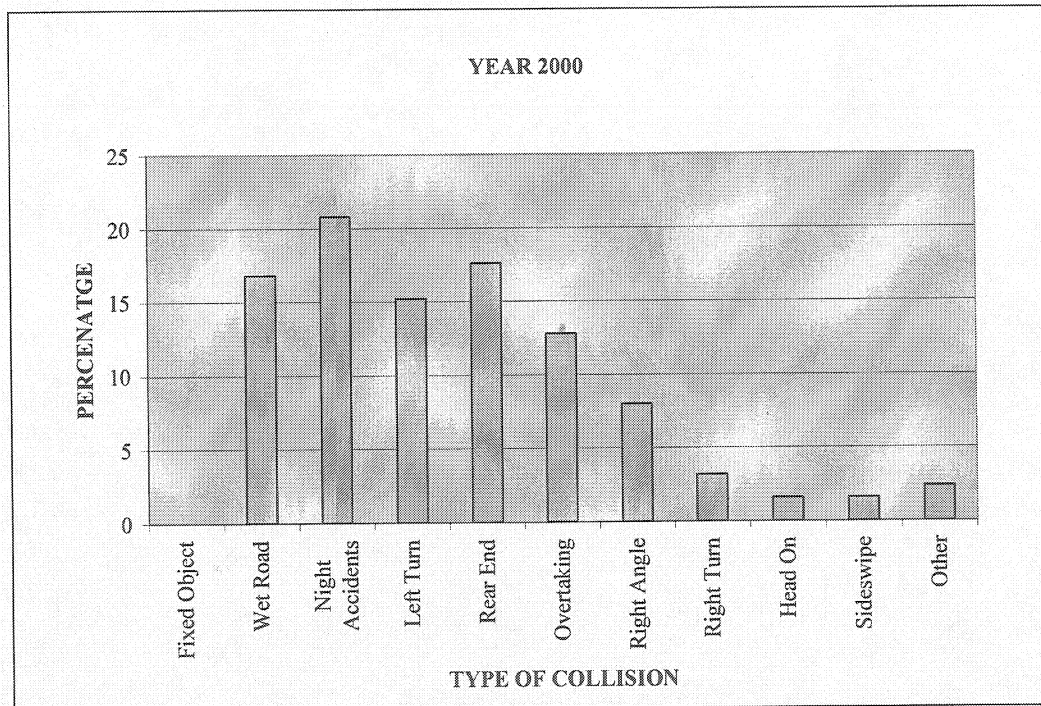
Accidents by Collision Type and driving Conditions

As shown in Figure 8-4 during 2000, 21% of the accidents occurred during night time and 17% occurred under wet roadway condition. The distribution of accidents by collision types showed that 18% were rear end, 15% left turn, and 13% overtaking. The location with the most frequent rear end collision type was *Metropolitan Avenue/Fresh Pond Road* with seven accidents, representing 44% of the total in the study area. It was also observed that

Metropolitan Avenue/ Fresh Pond Road had the highest overtaking collision type accident with six.

The location of *Metropolitan Avenue/ Forest Avenue* had the highest left turn collision type accident with four. Figure 8-4 shows the distribution of reportable accidents and driving conditions for year 2000.

Figure 8-4: 2000 Accidents by Collision Type and Driving Conditions



Severity and Frequency of Accidents

During 2000, of the nine intersections studied five had a severity factor greater than 7.0, and three intersections had frequency factor greater than 6.0. The composite index for all nine intersections analyzed was greater than 1.0. This indicates that all of the accidents that occurred at these locations were skewed toward severity. Table 8-11 shows the severity factor, frequency factor and the composite index for all analyzed intersection in year 2000.

**Table 8-11
2000 Traffic Accident Analysis**

Node #	Main St	Cross St	Fatal	Injury A	Injury B	Injury C	Property Damage	Non-Reportable	Total Accident	Severity Factor	Frequency Factor	Composite Index
22891	Metropiltan Av.	Fresh Pond Road	0	1	4	24	1	19	49	8.36	7.78	1.07
19598	Fresh Pond Road	Cypress Hill St.	0	0	0	16	1	10	23	7.05	6.27	1.12
23022	Metropiltan Av.	Flusing Av.	0	1	3	4	0	12	22	7.8	6.18	1.26
22895	Metropiltan Av.	Elfot Av.	0	0	1	11	0	7	18	7.04	5.78	1.22
23142	Myrtle Av.	Seneca Av.	0	0	0	2	0	10	12	5.09	4.97	1.02
22902	Metropiltan Av.	Forest Av.	0	0	0	9	0	5	11	6.53	4.8	1.36
23139	Myrtle Av.	George St.	0	0	1	5	0	5	11	6.53	4.8	1.36
22811	Myrtle Av.	Fresh Pond Road	1	0	1	5	1	4	9	8.14	4.39	1.85
23144	Myrtle Av.	Cypress Av.	0	0	1	1	10	3	6	5.95	3.58	1.66

Note: Calculation for Severity Factor, Frequency Factor, and Composite index is based on safety index equations developed by NYCDOT Safety Division utilizing NYC accidents records supplied by NYSDMV, NYSDOT Class System and accident cost research

**Table 8-12
2000 Traffic Accident History**

Node #	Main St	Cross St	Total Acc	Reportable	Non-Reportable	Fatal	Injury	Pedestrian	Bicyclist	Fixed Object	Wet Road	Night	Left Turn	Rear End	Overtaking	Right Angle	Right Turn	Head On	Sideswipe	Other
22891	Metropolitan Av.	Fresh Pond Rd	49	30	19	0	29	6	0	0	5	6	3	7	6	2	3	0	1	1
23022	Metropolitan Av.	Flusing Av.	23	13	10	0	16	0	0	0	3	6	3	1	1	5	0	1	0	1
19598	Fresh Pond Rd	Cypress Hill St.	22	10	12	0	8	1	0	0	2	2	2	2	2	2	0	1	0	0
22902	Metropolitan Av.	Forest Av.	18	11	7	0	12	0	0	0	0	4	4	2	0	2	0	0	1	0
23144	Myrtle Av.	Cypress Av.	12	2	10	0	2	0	0	0	0	2	0	1	0	0	1	0	0	0
23139	Myrtle Av.	George St.	11	6	5	0	9	1	0	0	3	2	1	2	1	1	0	0	0	0
22811	Myrtle Av.	Fresh Pond Rd	11	6	5	0	6	4	0	0	2	0	2	0	1	0	0	0	0	0
22895	Metropolitan Av.	Elliot Av.	9	5	4	1	6	0	0	0	0	2	1	0	1	1	0	0	0	1
23142	Myrtle Av.	Seneca Av.	6	3	3	0	2	1	0	0	1	1	1	1	0	0	0	0	0	0

9.0 Conclusions

The analyses of the existing conditions are the basis for identifying various issues and problems in the study area that requires further study and would be addressed as part of the future condition of the study.

At the public meeting held in the study area, community members provide input and raised some general concerns and issues they would like to address. The community had concerns about truck activity along Traffic Avenue pertaining to illegal parking and truck safety. The issue on Forest Avenue and 67th Avenue/Fairview Avenue is having a very narrow traffic lane. There is only one traffic lane per direction with parking and a bus route running along Forest Avenue. It does not provide enough space for cars and buses to proceed in the opposite direction simultaneously. This forces drivers to cross the centerline into the opposing traffic. In addition, double parking which impacts traffic flow are seen on major corridors such as Myrtle Avenue, Forest Avenue and Fresh Pond Road due to its narrow lanes width geometry.

Passengers departed from buses and transfer to subway is the most critical pedestrian movement in the study area. People tend to enter the roadbed to get to the subway station and creating more conflicts with the traffic.

Field observation shows that along Myrtle Avenue, in locations such as Myrtle Avenue & Wyckoff Avenue / Palmetto Street, Myrtle Avenue & Seneca Avenue, and Myrtle Avenue & Forest Avenue/George Street pedestrians did not use the crosswalk to get to the opposite sidewalk on the main street, instead they walked across the street in the mid block.

APPENDIX A

Parking Inventory

Roadway: Myrtle Avenue

Block Between	North Curb												Curbside Capacity		
	AM						Midday							PM	
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.			
Menahan Street & Grove Street	5	0	56%	9	1	111%	8	0	89%	0	0	89%	9		
Grove Street & Irving Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0		
Irving Avenue & Linden Street	2	1	43%	6	0	86%	4	0	57%	0	0	57%	7		
Linden Street & Gates Avenue	5	1	86%	4	0	57%	3	0	43%	0	0	43%	7		
Gates Avenue & Palmetto Street/Wyckoff Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0		
Palmetto Street/Wyckoff Avenue & St Nicholas Avenue	3	0	15%	17	1	90%	21	0	105%	0	0	105%	20		
St Nicholas Avenue & Madison Street	0	1	-	0	0	-	0	0	-	0	0	-	0		
Madison Street & Putnam Avenue	1	0	9%	9	0	82%	8	0	73%	0	0	73%	11		
Putnam Avenue & Cypress Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0		
Cypress Avenue & Cornelia Street	0	0	0%	2	0	67%	3	0	100%	0	0	100%	3		
Cornelia Street & Catalpa Avenue	0	0	0%	2	0	100%	3	0	150%	0	0	150%	2		
Catalpa Avenue & Hancock Street	0	0	-	0	0	-	0	0	-	0	0	-	0		
Hancock Street & Seneca Avenue	1	0	20%	4	0	80%	5	0	100%	0	0	100%	5		
Seneca Avenue & Weirfield Street	0	0	0%	12	0	100%	12	0	100%	0	0	100%	12		
Weirfield Street & Onderdonk Avenue/Center Street	1	0	13%	8	0	100%	8	1	113%	1	1	113%	8		
Onderdonk Avenue/Center Street & Forest Avenue/George Street	4	0	57%	7	0	100%	5	0	71%	0	0	71%	7		
Forest Avenue/George Street & Stephen Street	3	0	75%	2	0	50%	4	0	100%	0	0	100%	4		
Stephen Street & 60th Street	0	0	0%	0	2	100%	2	0	100%	0	0	100%	2		
60th Street/Norman Street & Summerfield Street	3	0	17%	14	0	78%	12	1	72%	1	1	72%	18		
Summerfield Street & 60th Lane/Decatur Street	0	0	-	0	0	-	0	0	-	0	0	-	0		
60th Lane/Decatur Street & Fresh Pond Road	6	0	43%	14	0	100%	15	0	107%	0	0	107%	14		
Fresh Pond Road & 61st Street	0	0	-	0	0	-	0	1	-	1	1	-	0		
61st Street/Central Avenue & 62nd Street	0	0	-	0	0	-	0	0	-	0	0	-	0		
62nd Street & 64th Street	2	0	33%	5	0	83%	6	0	100%	0	0	100%	6		
64th Street & 64th Place	2	0	40%	5	0	100%	5	0	100%	0	0	100%	5		
64th Place & Cypress Hills Street	0	0	-	0	0	-	0	0	-	0	0	-	0		
Cypress Hills Street & 65th Street	0	0	-	0	0	-	0	0	-	0	0	-	0		

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Myrtle Avenue

Block Between	South Curb												Curbside Capacity
	AM			Midday			PM						
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	
Menahan Street & Grove Street	5	0	63%	7	0	88%	6	0	75%	6	0	75%	8
Grove Street & Irving Avenue	0	0	-	1	0	-	1	0	-	1	0	-	0
Irving Avenue & Linden Street	0	0	0%	1	2	100%	3	1	133%	3	1	133%	3
Linden Street & Gates Avenue	7	0	70%	10	0	100%	9	0	90%	9	0	90%	10
Gates Avenue & Palmetto Street/Wyckoff Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
Palmetto Street/Wyckoff Avenue & St Nicolas Avenue	11	0	55%	18	0	90%	22	0	110%	22	0	110%	20
St Nicolas Avenue & Madison Street	0	0	-	0	0	-	0	0	-	0	0	-	0
Madison Street & Putnam Avenue	1	0	13%	6	0	75%	5	0	63%	5	0	63%	8
Putnam Avenue & Cypress Avenue	0	0	0%	1	0	17%	4	0	67%	4	0	67%	6
Cypress Avenue & Cornelia Street	0	0	-	0	0	-	0	0	-	0	0	-	0
Cornelia Street & Catalpa Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
Catalpa Avenue & Hancock Street	2	0	13%	14	0	88%	16	0	100%	16	0	100%	16
Hancock Street & Seneca Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
Seneca Avenue & Weirfield Street	4	0	80%	4	0	80%	2	0	40%	2	0	40%	5
Weirfield Street & Onderdonk Avenue/Center Street	9	0	100%	9	0	100%	9	0	100%	9	0	100%	9
Onderdonk Avenue/Center Street & Forest Avenue/George Street	6	0	100%	6	0	100%	6	1	117%	6	1	117%	6
Forest Avenue/George Street & Stephen Street	2	1	75%	4	1	125%	4	0	100%	4	0	100%	4
Stephen Street & 60th Street	5	0	50%	10	0	100%	9	0	90%	9	0	90%	10
60th Street/Norman Street & Summerfield Street	3	0	38%	8	2	125%	4	0	50%	4	0	50%	8
Summerfield Street & 60th Lane/Decatur Street	3	0	100%	3	0	100%	3	0	100%	3	0	100%	3
60th Lane/Decatur Street & Fresh Pond Road	8	0	67%	9	0	75%	12	0	100%	12	0	100%	12
Fresh Pond Road & 61st Street	0	0	-	0	0	-	0	0	-	0	0	-	0
61st Street/Central Avenue & 62nd Street	1	0	33%	2	0	67%	3	1	133%	3	1	133%	3
62nd Street & 64th Street	4	2	120%	4	0	80%	5	0	100%	5	0	100%	5
64th Street & 64th Place	3	0	33%	6	0	67%	8	0	89%	8	0	89%	9
64th Place & Cypress Hills Street	0	0	-	0	0	-	0	0	-	0	0	-	0
Cypress Hills Street & 65th Street	0	0	-	0	0	-	0	0	-	0	0	-	0

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Metropolitan Avenue

Block Between	North Curb										Curbside Capacity
	AM			Midday			PM			% Util.	
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.		
Flushing Avenue & Starr Street	0	0	-	0	0	-	0	0	0	-	0
Starr Street & Nurge Avenue	0	0	0%	6	0	43%	8	0	0	57%	14
Nurge Avenue & Arnold Avenue	0	0	0%	3	0	15%	6	0	0	30%	20
Arnold Avenue & Rene Court	0	0	0%	3	0	60%	3	0	0	60%	5
Rene Court & Tonsor Street	0	0	-	0	0	-	0	1	0	-	0
Tonsor Street & 55th Street	0	0	0%	4	0	44%	8	0	0	89%	9
55th Street & Himrod Street	0	0	-	0	0	-	0	7	0	-	0
Himrod Street & Forest Avenue	0	0	-	0	0	-	0	0	0	-	0
Forest Avenue & 60th Street/Eliot Avenue	0	0	-	0	0	-	0	0	0	-	0
Eliot Avenue & 60th Place	0	0	0%	0	0	0%	0	0	0	0%	2
60th Place & 60th Lane	0	0	0%	0	0	0%	0	0	0	0%	2
60th Lane & 61st Street	0	0	-	0	0	-	0	0	0	-	0
61st Street & Fresh Pond Road	0	0	-	0	0	-	0	0	0	-	0
Fresh Pond Road & 62nd Street	0	0	-	0	0	-	0	0	0	-	0
62nd Street & Admiral Avenue	0	0	0%	11	0	92%	10	0	0	83%	12

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Metropolitan Avenue

Block Between	South Curb										Curbside Capacity
	AM			Midday			PM			% Util.	
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.		
Flushing Avenue & Starr Street	0	0	-	0	0	-	0	0	0	-	0
Starr Street & Nurge Avenue	0	0	0%	4	0	29%	0	0	0	0%	14
Nurge Avenue & Arnold Avenue	0	0	0%	6	0	19%	0	0	0	0%	32
Arnold Avenue & Rene Court	0	0	0%	0	0	0%	0	0	0	0%	3
Rene Court & Tonsor Street	0	0	0%	0	0	0%	0	0	0	0%	7
Tonsor Street & 55th Street	0	0	0%	0	0	0%	0	1	0	50%	2
55th Street & Himrod Street	0	0	0%	4	0	40%	0	0	0	0%	10
Himrod Street & Forest Avenue	0	0	0%	0	0	0%	0	0	0	0%	3
Forest Avenue & 60th Street/Eliot Avenue	0	0	-	0	0	-	0	0	0	-	0
Eliot Avenue & 60th Place	0	0	0%	0	0	0%	0	0	0	0%	8
60th Place & 60th Lane	0	0	0%	1	0	100%	0	0	0	0%	1
60th Lane & 61st Street	0	0	0%	2	0	67%	0	0	0	0%	3
61st Street & Fresh Pond Road	0	0	-	0	0	-	0	0	0	-	0
Fresh Pond Road & 62nd Street	0	0	-	0	0	-	0	0	0	-	0
62nd Street & Admiral Avenue	4	3	175%	4	5	225%	4	2	4	150%	4

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Palmetto Street

Block Between	North Curb												Curbside Capacity
	AM			Midday			PM						
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	
Myrtle Avenue & St Nicholas Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
St Nicholas Avenue & Cypress Avenue	14	0	78%	10	0	56%	13	0	72%	18			18
Cypress Avenue & Seneca Avenue	12	3	125%	12	1	108%	12	2	117%	12			12
Seneca Avenue & Onderdonk Avenue	10	0	77%	9	0	69%	10	0	77%	13			13
Onderdonk Avenue & Woodbine Street	17	0	85%	12	0	60%	11	0	55%	20			20
Woodbine Street & Fairview Avenue	13	0	76%	15	0	88%	14	0	82%	17			17
Fairview Avenue & Forest Avenue	20	0	83%	21	0	88%	22	0	92%	24			24
Forest Avenue & 60th Place	25	0	96%	13	0	50%	15	0	58%	26			26
60th Place & Fresh Pond Road	25	0	89%	13	0	46%	25	0	89%	28			28

Block Between	South Curb												Curbside Capacity
	AM			Midday			PM						
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	
Myrtle Avenue & St Nicholas Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
St Nicholas Avenue & Cypress Avenue	14	0	88%	16	0	100%	15	0	94%	16			16
Cypress Avenue & Seneca Avenue	15	0	75%	8	0	40%	15	0	75%	20			20
Seneca Avenue & Onderdonk Avenue	6	0	75%	7	0	88%	7	0	88%	8			8
Onderdonk Avenue & Woodbine Street	15	0	75%	15	0	75%	14	0	70%	20			20
Woodbine Street & Fairview Avenue	12	0	57%	7	0	33%	18	0	86%	21			21
Fairview Avenue & Forest Avenue	20	0	83%	19	0	79%	22	0	92%	24			24
Forest Avenue & 60th Place	18	0	72%	14	0	56%	18	0	72%	25			25
60th Place & Fresh Pond Road	19	0	58%	23	0	70%	28	0	85%	33			33

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Fresh Pond Road

Block Between	East Curb										Curbside Capacity		
	AM			Midday			PM			% Util.			
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.				
Metropolitan Avenue & Bleecker Street	0	0	0%	2	0	50%	0	0	0%	0	0	0%	4
Bleecker Street & Menahan Street	1	0	14%	7	0	100%	6	0	86%	0	0	86%	7
Menahan Street & Grove Street	3	0	50%	1	0	17%	0	0	0%	0	0	0%	6
Grove Street & Linden Street	7	0	88%	5	0	63%	4	0	50%	0	0	50%	8
Linden Street & Gates Avenue	3	0	50%	4	0	67%	5	0	83%	0	0	83%	6
Gates Avenue & Palmetto Street	9	0	100%	6	0	67%	8	0	89%	0	0	89%	9
Palmetto Street & Woodbine Street	4	0	80%	4	0	80%	5	0	100%	0	0	100%	5
Woodbine Street & Madison Street	4	0	50%	8	0	100%	8	0	100%	0	0	100%	8
Madison Street & Putnam Avenue	6	0	86%	7	1	114%	6	0	86%	0	0	86%	7
Putnam Avenue & 67th Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
67th Avenue & 68th Avenue	1	0	50%	3	0	150%	0	0	50%	0	1	50%	2
68th Avenue & 68th Road	3	0	43%	8	0	114%	7	0	100%	0	0	100%	7
68th Road & Catalpa Avenue	2	0	40%	5	0	100%	4	0	80%	0	0	80%	5
Catalpa Avenue & 69th Avenue/Cypress Hills Street	2	1	75%	5	0	125%	3	0	75%	0	0	75%	4
69th Avenue/Cypress Hills Street & 70th Avenue	1	0	50%	1	0	50%	2	0	100%	0	0	100%	2
70th Avenue & 71st Avenue	9	0	90%	10	0	100%	8	0	80%	0	0	80%	10
71st Avenue & Myrtle Avenue	12	0	100%	12	0	100%	12	0	100%	0	0	100%	12

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Fresh Pond Road

Block Between	West Curb												Curbside Capacity
	AM			Midday			PM			PV	IP	% Util.	
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.				
Metropolitan Avenue & Blecker Street	0	0	-	0	3	-	0	1	-	0	1	-	0
Blecker Street & Menahan Street	6	0	86%	5	1	86%	3	0	43%	3	0	43%	7
Menahan Street & Grove Street	9	0	100%	11	0	122%	8	0	89%	5	0	63%	8
Grove Street & Linden Street	2	0	25%	4	0	50%	5	0	100%	5	3	160%	5
Linden Street & Gates Avenue	3	1	57%	3	0	43%	7	2	129%	5	2	140%	7
Gates Avenue & Palmetto Street	3	0	60%	5	1	120%	5	2	100%	9	0	100%	9
Palmetto Street & Woodbine Street	6	0	67%	9	0	100%	5	0	100%	5	0	100%	4
Woodbine Street & Madison Street	1	0	25%	3	1	100%	6	1	117%	6	1	117%	6
Madison Street & Putnam Avenue	3	0	50%	5	0	83%	6	0	100%	6	0	100%	6
Putnam Avenue & 67th Avenue	3	0	50%	6	0	86%	5	0	86%	7	0	88%	8
67th Avenue & 68th Avenue	2	0	29%	4	0	50%	4	0	100%	3	0	60%	5
68th Avenue & 68th Road	2	0	25%	5	0	56%	1	0	11%	2	0	22%	9
68th Road & Catalpa Avenue	2	0	25%	6	1	63%	6	1	88%	4	0	50%	8
Catalpa Avenue & 69th Avenue/Cypress Hills Street	3	0	60%	10	0	27%	7	0	91%	7	0	64%	11
69th Avenue/Cypress Hills Street & 70th Avenue	5	0	56%										
70th Avenue & 71st Avenue	5	0	63%										
71st Avenue & Myrtle Avenue	3	0	27%										

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Forest Avenue

Block Between	East Curb											Curbside Capacity
	AM			Midday			PM			% Util.		
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.			
Metropolitan Avenue & Harman Street	0	0	-	0	0	-	0	1	-	0	1	0
Harman Street & Greene Avenue	4	0	80%	5	0	100%	4	0	80%	5	0	5
Greene Avenue & Blecker Street	8	3	110%	10	3	130%	9	0	90%	10	0	10
Blecker Street & Menahan Street	9	0	100%	7	0	78%	3	0	33%	9	0	9
Menahan Street & Grove Street	6	2	114%	7	1	114%	7	0	100%	7	0	7
Grove Street & Linden Street	6	0	55%	1	0	9%	4	0	36%	11	0	11
Linden Street & Gates Avenue	9	2	122%	4	0	44%	3	0	33%	9	0	9
Gates Avenue & Palmetto Street	6	0	67%	7	0	78%	7	0	78%	9	0	9
Palmetto Street & Woodbine Street	3	0	50%	4	0	67%	3	1	67%	6	0	6
Woodbine Street & Madison Street	8	0	80%	7	0	70%	8	0	80%	10	0	10
Madison Street & Putnam Avenue	1	0	33%	2	0	67%	2	0	67%	3	0	3
Putnam Avenue & 67th Avenue	5	2	140%	4	0	80%	4	0	80%	5	0	5
67th Avenue & Cornelia Street	2	0	50%	3	0	75%	4	4	200%	4	0	4
Cornelia Street & 68th Avenue	6	0	75%	8	0	100%	1	0	13%	8	0	8
68th Avenue & 68th Road	3	0	50%	2	0	33%	4	0	67%	6	0	6
68th Road & Catalpa Avenue	6	0	67%	4	0	44%	2	1	33%	9	0	9
Catalpa Avenue & 69th Avenue	4	0	67%	3	0	50%	5	0	83%	6	0	6
69th Avenue & 70th Avenue	8	0	80%	8	0	80%	8	0	80%	10	0	10
70th Avenue & George Street/Myrtle Avenue	1	0	20%	3	0	60%	2	0	40%	5	0	5

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Forest Avenue

Block Between	West Curb											Curbside Capacity
	AM				Midday				PM			
	PV	IP	% Util.		PV	IP	% Util.		PV	IP	% Util.	
Metropolitan Avenue & Harman Street	0	0	-		0	0	-		0	0	-	0
Harman Street & Greene Avenue	6	0	100%		6	0	100%		5	0	83%	6
Greene Avenue & Bleecker Street	11	1	109%		11	1	109%		7	0	64%	11
Bleecker Street & Menahan Street	7	0	100%		3	0	43%		5	0	71%	7
Menahan Street & Grove Street	9	1	91%		11	1	109%		9	0	82%	11
Grove Street & Linden Street	2	0	100%		2	0	100%		2	0	100%	2
Linden Street & Gates Avenue	4	0	67%		2	0	33%		2	0	33%	6
Gates Avenue & Palmetto Street	4	0	57%		2	0	29%		0	0	0%	7
Palmetto Street & Woodbine Street	0	0	0%		0	0	0%		0	0	0%	8
Woodbine Street & Madison Street	0	0	-		0	0	-		0	0	-	0
Madison Street & Putnam Avenue	0	0	-		0	0	-		0	0	-	0
Putnam Avenue & 67th Avenue	0	0	-		0	0	-		0	0	-	0
67th Avenue & Cornelia Street	0	0	-		0	0	-		0	0	-	0
Cornelia Street & 68th Avenue	3	0	75%		3	0	75%		1	0	25%	4
68th Avenue & 68th Road	1	0	13%		2	0	25%		2	0	25%	8
68th Road & Catalpa Avenue	0	0	0%		0	0	0%		4	2	150%	4
Catalpa Avenue & 69th Avenue	3	0	43%		7	0	100%		6	0	86%	7
69th Avenue & 70th Avenue	3	0	38%		4	0	50%		4	0	50%	8
70th Avenue & George Street/Myrtle Avenue	1	0	20%		5	0	100%		2	0	40%	5

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Seneca Avenue

Block Between	North Curb												Curbside Capacity
	AM			Midday			PM			% Util.			
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.				
DeKalb Avenue & Stockholm Street	0	0	0%	0	0	0%	0	0	0%	0	0	0%	3
Stockholm Street & Stanhope Street	5	0	71%	5	0	71%	4	0	57%	0	0	57%	7
Stanhope Street & Himrod Street	8	0	89%	0	0	0%	7	0	78%	0	0	78%	9
Himrod Street & Harman Street	5	0	100%	0	0	0%	4	0	80%	0	0	80%	5
Harman Street & Greene Avenue	6	0	100%	6	1	117%	7	0	117%	0	0	117%	6
Greene Avenue & Bleecker Street	3	0	60%	5	0	100%	3	0	60%	0	0	60%	5
Bleecker Street & Menahan Street	5	0	71%	4	0	57%	6	0	86%	0	0	86%	7
Menahan Street & Grove Street	5	0	83%	5	1	100%	5	0	83%	0	0	83%	6
Grove Street & Linden Street	7	0	78%	5	0	56%	6	0	67%	0	0	67%	9
Linden Street & Gates Avenue	8	0	100%	4	0	50%	8	0	100%	0	0	100%	8
Gates Avenue & Palmetto Street	3	0	100%	3	3	200%	3	1	133%	0	0	133%	3
Palmetto Street & Woodbine Street	9	0	90%	9	0	90%	9	0	90%	0	0	90%	10
Woodbine Street & Madison Street	5	0	100%	5	0	100%	5	0	100%	0	0	100%	5
Madison Street & Putnam Avenue	8	0	89%	9	0	100%	9	1	111%	0	0	111%	9
Putnam Avenue & Cornelia Street	5	0	100%	5	0	100%	5	1	120%	0	0	120%	5
Cornelia Street & Catalpa Avenue	0	0	0%	5	0	100%	5	0	100%	0	0	100%	5
Catalpa Avenue & Myrtle Avenue	1	0	25%	3	0	75%	3	0	75%	0	0	75%	4

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Seneca Avenue

Block Between	South Curb												Curbside Capacity
	AM			Midday			PM			PV	IP	% Util.	
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.				
DeKalb Avenue & Stockholm Street	5	0	63%	3	0	38%	4	0	50%	4	0	50%	8
Stockholm Street & Stanhope Street	5	0	83%	5	0	83%	6	0	100%	6	0	100%	6
Stanhope Street & Himrod Street	9	0	100%	9	2	122%	6	0	67%	6	0	67%	9
Himrod Street & Harman Street	7	0	100%	7	0	100%	4	0	57%	4	0	57%	7
Harman Street & Greene Avenue	2	0	67%	2	0	67%	2	0	67%	2	0	67%	3
Greene Avenue & Bleecker Street	8	0	80%	10	0	100%	7	0	70%	7	0	70%	10
Bleecker Street & Menahan Street	6	0	100%	6	0	100%	4	0	67%	4	0	67%	6
Menahan Street & Grove Street	9	0	90%	9	0	90%	9	0	90%	9	0	90%	10
Grove Street & Linden Street	5	0	83%	4	1	83%	5	0	83%	5	0	83%	6
Linden Street & Gates Avenue	6	0	86%	6	0	86%	5	1	86%	5	1	86%	7
Gates Avenue & Palmetto Street	5	0	100%	5	0	100%	5	1	120%	5	1	120%	5
Palmetto Street & Woodbine Street	3	0	50%	5	0	83%	5	0	83%	5	0	83%	6
Woodbine Street & Madison Street	7	0	88%	8	0	100%	8	0	100%	8	0	100%	8
Madison Street & Putnam Avenue	4	0	67%	5	0	83%	4	1	83%	4	1	83%	6
Putnam Avenue & Cornelia Street	0	0	0%	6	0	75%	6	0	75%	6	0	75%	8
Cornelia Street & Catalpa Avenue	0	0	-	0	0	-	0	0	-	0	0	-	0
Catalpa Avenue & Myrtle Avenue	0	0	0%	3	0	75%	3	0	75%	3	0	75%	4

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Cypress Avenue

Block Between	North Curb												Curbside Capacity
	AM				Midday				PM				
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.	
DeKalb Avenue & Stockholm Street	2	0	29%	7	0	100%	4	0	57%	7	0	57%	7
Stockholm Street & Stanhope Street	6	0	75%	8	0	100%	5	0	63%	8	0	63%	8
Stanhope Street & Himrod Street	7	0	88%	8	2	125%	7	0	88%	8	0	88%	8
Himrod Street & Harman Street	4	0	44%	8	0	89%	4	0	44%	9	0	44%	9
Harman Street & Greene Avenue	7	2	129%	7	3	143%	2	0	29%	7	0	29%	7
Greene Avenue & Bleecker Street	8	1	113%	8	1	113%	5	0	63%	8	0	63%	8
Bleecker Street & Menahan Street	0	0	0%	4	0	40%	2	0	20%	10	0	20%	10
Menahan Street & Grove Street	0	0	0%	6	0	86%	7	0	100%	7	0	100%	7
Grove Street & Linden Street	0	0	0%	5	0	50%	6	0	60%	10	0	60%	10
Linden Street & Gates Avenue	1	0	14%	6	0	86%	5	0	71%	7	0	71%	7
Gates Avenue & Palmetto Street	0	0	0%	7	1	114%	7	1	114%	7	1	114%	7
Palmetto Street & Woodbine Street	0	0	0%	9	1	111%	7	0	78%	9	0	78%	9
Woodbine Street & Madison Street	1	0	14%	6	0	86%	7	0	100%	7	0	100%	7
Madison Street & Putnam Avenue	5	0	56%	6	1	78%	7	0	78%	9	0	78%	9
Putnam Avenue & Myrtle Avenue	1	0	25%	3	0	75%	4	0	100%	4	0	100%	4

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Cypress Avenue

Block Between	South Curb											Curbside Capacity
	AM			Midday			PM			% Util.		
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.			
DeKalb Avenue & Stockholm Street	6	1	117%	0	0	0%	1	0	17%	6		
Stockholm Street & Stanhope Street	8	0	73%	0	0	0%	6	0	55%	11		
Stanhope Street & Himrod Street	9	1	111%	3	0	33%	8	0	89%	9		
Himrod Street & Harman Street	6	3	150%	0	0	0%	5	0	83%	6		
Harman Street & Greene Avenue	0	0	0%	7	1	114%	4	0	57%	7		
Greene Avenue & Bleecker Street	0	0	0%	8	0	80%	7	0	70%	10		
Bleecker Street & Menahan Street	6	0	86%	2	0	29%	5	0	71%	7		
Menahan Street & Grove Street	6	2	133%	2	0	33%	1	0	17%	6		
Grove Street & Linden Street	7	2	129%	5	0	71%	6	0	86%	7		
Linden Street & Gates Avenue	8	3	138%	7	0	88%	8	2	125%	8		
Gates Avenue & Palmetto Street	7	1	114%	7	1	114%	7	0	100%	7		
Palmetto Street & Woodbine Street	5	0	100%	5	0	100%	5	0	100%	5		
Woodbine Street & Madison Street	10	0	100%	5	0	50%	9	0	90%	10		
Madison Street & Putnam Avenue	6	0	67%	4	0	44%	6	0	67%	9		
Putnam Avenue & Myrtle Avenue	3	0	60%	4	0	80%	3	0	60%	5		

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Catalpa Avenue

Block Between	North Curb												Curbside Capacity	
	AM			Midday			PM			PV	% Util.	IP		% Util.
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.					
Fresh Pond Road & 60th Lane	11	0	58%	5	0	26%	11	0	58%	19		0	58%	19
60th Lane & 60th Street	14	0	61%	6	0	26%	15	0	65%	23		0	65%	23
60th Street & Forest Avenue	11	0	58%	5	0	26%	14	0	74%	19		0	74%	19
Forest Avenue & Woodward Avenue	3	0	100%	1	0	33%	2	0	67%	3		0	67%	3
Woodward Avenue & Onderdonk Avenue	6	0	55%	4	0	36%	10	0	91%	11		0	91%	11
Onderdonk Avenue & Seneca Avenue	18	0	100%	4	0	22%	15	0	83%	18		0	83%	18
Seneca Avenue & Myrtle Avenue	0	0	0%	5	0	100%	3	0	60%	5		0	60%	5

Block Between	South Curb												Curbside Capacity	
	AM			Midday			PM			PV	% Util.	IP		% Util.
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.					
Fresh Pond Road & 60th Lane	21	1	92%	24	1	104%	15	0	63%	24		0	63%	24
60th Lane & 60th Street	25	0	100%	24	0	96%	21	0	84%	25		0	84%	25
60th Street & Forest Avenue	19	0	100%	17	0	89%	13	0	68%	19		0	68%	19
Forest Avenue & Woodward Avenue	5	0	100%	5	0	100%	5	0	100%	5		0	100%	5
Woodward Avenue & Onderdonk Avenue	10	0	63%	16	0	100%	7	0	44%	16		0	44%	16
Onderdonk Avenue & Seneca Avenue	13	0	100%	12	0	92%	11	0	85%	13		0	85%	13
Seneca Avenue & Myrtle Avenue	0	0	0%	2	0	50%	4	1	125%	4		1	125%	4

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

Parking Inventory

Roadway: Central Avenue

Block Between	North Curb												Curbside Capacity
	AM			Midday			PM			% Util.	Curbside Capacity		
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.				
66th Street & 65th Street	7	0	100%	7	0	100%	7	1	114%	7			
65th Street & 64th Place	9	0	100%	9	0	100%	9	0	100%	9			
64th Place & Cypress Hills Street/Otto Road	7	0	100%	7	0	100%	6	0	86%	7			
Cypress Hills Street/Otto Road & Myrtle Avenue	17	0	100%	15	0	88%	17	0	100%	17			

Block Between	South Curb												Curbside Capacity
	AM						PM			% Util.	Curbside Capacity		
	PV	IP	% Util.	PV	IP	% Util.	PV	IP	% Util.				
66th Street & 65th Street	9	0	100%	8	0	89%	7	0	78%	9			
65th Street & 64th Place	10	0	100%	10	0	100%	10	0	100%	10			
64th Place & Cypress Hills Street/Otto Road	11	0	100%	11	0	100%	9	0	82%	11			
Cypress Hills Street/Otto Road & Myrtle Avenue	13	0	100%	13	0	100%	13	0	100%	13			

PV - Number of Parked Vehicles
 IP - Number of Illegal Parked Vehicles
 % Util. - Percent Utilization

APPENDIX B

APPENDIX B-1
Existing Conditions: Crosswalk Summary

Intersection 1 : Myrtle Avenue @ Wycoff Avenue/Palmetto Street											AM Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
North (Wycoff)	12	30	270	4.50	58	285	A	246	A	73	B	
North (Palmetto)	12	40	615	10.25	58	152	A	137	A	50	B	
East (Myrtle)	11	36	294	4.90	30	149	A	149	A	70	B	
South (Wycoff)	13	40	333	5.55	30	237	A	213	A	78	B	
South (Palmetto)	12	30	153	2.55	31	630	A	545	A	162	A	
West (Myrtle)	13	44	496	8.27	31	77	B	57	B	26	C	

Intersection 1 : Myrtle Avenue @ Wycoff Avenue/Palmetto Street											MD Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
North (Wycoff)	12	30	187	3.12	58	315	A	273	A	81	B	
North (Palmetto)	12	40	569	9.48	58	130	A	112	B	45	B	
East (Myrtle)	11	36	268	4.47	30	83	B	83	B	54	B	
South (Wycoff)	13	40	284	4.73	30	261	A	226	A	91	B	
South (Palmetto)	12	30	215	3.58	31	267	A	231	A	69	B	
West (Myrtle)	13	44	298	4.97	31	232	A	171	A	78	B	

Intersection 1 : Myrtle Avenue @ Wycoff Avenue/Palmetto Street											PM Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
North (Wycoff)	12	30	274	4.57	58	315	A	273	A	81	B	
North (Palmetto)	12	40	529	8.82	58	165	A	149	A	64	B	
East (Myrtle)	11	36	306	5.10	30	149	A	122	B	70	B	
South (Wycoff)	13	40	699	11.65	30	146	A	131	A	48	B	
South (Palmetto)	12	30	319	5.32	31	267	A	231	A	69	B	
West (Myrtle)	13	44	213	3.55	31	232	A	171	A	78	B	

Intersection 1 : Myrtle Avenue @ Wycoff Avenue/Palmetto Street											SAT MD Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
North (Wycoff)	12	30	268	4.47	58	227	A	187	A	62	B	
North (Palmetto)	12	40	584	9.73	58	130	A	112	B	45	B	
East (Myrtle)	11	36	436	7.27	30	83	B	83	B	64	B	
South (Wycoff)	13	40	540	9.00	30	261	A	226	A	91	B	
South (Palmetto)	12	30	519	8.65	31	113	B	93	B	31	C	
West (Myrtle)	13	44	276	4.60	31	144	A	88	B	64	B	

Intersection 2 : Metropolitan Avenue@Forest Avenue											AM Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
East	13	41	144	2.40	24	251	A	89	B	141	A	
South	11	40	142	2.37	60	485	A	438	A	159	A	
West	11	41	90	1.50	24	343	A	251	A	192	A	

Intersection 2 : Metropolitan Avenue@Forest Avenue											MD Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
East	13	41	40	0.67	24	512	A	374	A	287	A	
South	11	40	138	2.30	60	383	A	219	A	125	B	
West	11	41	39	0.65	24	337	A	319	A	190	A	

Intersection 2 : Metropolitan Avenue@Forest Avenue											PM Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
East	13	41	62	1.03	24	554	A	197	A	311	A	
South	11	40	98	1.63	60	383	A	345	A	125	B	
West	11	41	51	0.85	24	371	A	272	A	209	A	

Intersection 2 : Metropolitan Avenue@Forest Avenue											SAT Peak Hour	
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS	
East	13	41	29	0.48	24	810	A	288	A	455	A	
South	11	40	56	0.93	60	1329	A	1200	A	435	A	
West	11	41	39	0.65	24	743	A	543	A	417	A	

**APPENDIX B-1
Existing Condition:Crosswalk Summary**

Intersection 3 : Forest Avenue@67 th Avenue/Fairview Avenue						AM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	33	70	1.17	29.9	398	A	377	A	154	A
East	12	30	39	0.65	56.7	2295	A	2057	A	591	A
South	12	33	71	1.18	29.9	540	A	455	A	208	A
West	10	30	68	1.13	56.7	765	A	765	A	197	A

Intersection 3 : Forest Avenue@67 th Avenue/Fairview Avenue						MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	33	41	0.68	29.9	739	A	701	A	285	A
East	12	30	39	0.65	56.7	2295	A	2057	A	591	A
South	12	33	50	0.83	29.9	887	A	743	A	342	A
West	10	30	46	0.77	56.7	1639	A	1639	A	422	A

Intersection 3: Forest Avenue@67 th Avenue/Fairview Avenue						PM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	33	65	1.08	29.9	470	A	446	A	182	A
East	12	30	108	1.80	56.7	787	A	685	A	203	A
South	12	33	64	1.07	29.9	478	A	403	A	184	A
West	10	30	65	1.08	56.7	560	A	560	A	144	A

Intersection 3: Forest Avenue@67 th Avenue/Fairview Avenue						SAT MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	33	36	0.60	29.9	941	A	892	A	363	A
East	12	30	53	0.88	56.7	1449	A	1262	A	373	A
South	12	33	39	0.65	29.9	955	A	806	A	369	A
West	10	30	102	1.70	56.7	791	A	791	A	204	A

Intersection 4: Forest Avenue@Palmetto/Grandview Ave						AM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North(Forest)	10	30	40	0.67	34	450	A	344	A	140	A
North(Grandview)	10	30	130	2.17	34	298	A	250	A	78	B
East	11	30	222	3.70	47	231	A	194	A	61	B
South	9	30	69	1.15	34	436	A	333	A	136	A
West	12	30	325	5.42	47	166	A	140	A	44	B

Intersection 4 : Forest Avenue@Palmetto/Grandview Ave						MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North(Forest)	10	30	20	0.33	34	1800	A	1376	A	562	A
North(Grandview)	10	30	66	1.10	34	769	A	645	A	202	A
East	11	30	91	1.52	47	700	A	587	A	184	A
South	9	30	30	0.50	34	872	A	667	A	272	A
West	12	30	151	2.52	47	326	A	273	A	86	B

Intersection 4 : Forest Avenue@Palmetto/Grandview Ave						PM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North(Forest)	10	30	26	0.43	34	840	A	642	A	262	A
North(Grandview)	10	30	50	0.83	34	879	A	737	A	231	A
East	11	30	122	2.03	47	495	A	415	A	130	A
South	9	30	28	0.47	34	756	A	578	A	236	A
West	12	30	209	3.48	47	299	A	251	A	79	B

Intersection 4 : Forest Avenue@Palmetto/Grandview Ave						SAT MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North(Forest)	10	30	35	0.58	34	1050	A	802	A	328	A
North(Grandview)	10	30	52	0.87	34	923	A	774	A	243	A
East	11	30	95	1.58	47	700	A	587	A	184	A
South	9	30	42	0.70	34	756	A	578	A	236	A
West	12	30	129	2.15	47	583	A	489	A	153	A

APPENDIX B-1
Existing Condition: Crosswalk Summary

Intersection 5 : Fresh Pond Rd @ 67 th Ave						AM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	109	1.82	26	283	A	221	A	159	A
South	10	45	77	1.28	26	346	A	270	A	195	A
West	16	26	330	5.50	60	304	A	304	A	70	B

Intersection 5 : Fresh Pond Rd @ 67 th Ave						MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	121	2.02	26	248	A	193	A	139	A
South	10	45	57	0.95	26	450	A	351	A	253	A
West	16	26	191	3.18	60	720	A	720	A	166	A

Intersection 5 : Fresh Pond Rd @ 67 th Ave						PM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicle		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	139	2.32	26	236	A	184	A	83	A
South	10	45	117	1.95	26	231	A	180	A	130	A
West	16	26	257	4.28	60	393	A	393	A	91	B

Intersection 5 : Fresh Pond Rd @ 67 th Ave						SAT MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	140	2.33	26	248	A	193	A	139	A
South	10	45	150	2.50	26	167	A	130	A	94	B
West	16	26	430	7.17	60	344	A	344	A	79	B

Intersection 6 : Metropolitan Avenue@ Flusing Avenue						AM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	45	155	2.58	43	260	A	248	A	100	B
East	10	42	120	2.00	43	292	A	270	A	106	B
South	9	45	103	1.72	43	394	A	329	A	152	A
West	9	42	126	2.10	43	306	A	282	A	111	B

Intersection 6 : Metropolitan Avenue@ Flusing Avenue						MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	45	92	1.53	43	547	A	506	A	222	A
East	10	42	112	1.87	43	370	A	342	A	135	A
South	9	45	66	1.10	43	624	A	550	A	241	A
West	9	42	84	1.40	43	468	A	432	A	171	A

Intersection 6 : Metropolitan Avenue@ Flusing Avenue						PM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	45	77	1.28	33	506	A	457	A	231	A
East	10	42	127	2.12	53	542	A	499	A	185	A
South	9	45	84	1.40	33	456	A	411	A	208	A
West	9	42	165	2.75	53	366	A	359	A	125	B

Intersection 6 : Metropolitan Avenue@ Flusing Avenue						SAT MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	10	45	22	0.37	43	1665	A	1586	A	643	A
East	10	42	5	0.08	43	1850	A	1756	A	674	A
South	9	45	13	0.22	43	7492	A	6958	A	2893	A
West	9	42	19	0.32	43	2141	A	2032	A	786	A

APPENDIX B-1
Existing Condition:Crosswalk Summary

Intersection 7 : Myrtle Avenue@ Seneca Avenue							AM Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	12	40	58	0.97	50	1080	A	894	A	368	A
East	12	35	120	2.00	34	555	A	470	A	173	A
South(Seneca)	13	36	60	1.00	50	1040	A	879	A	389	A
South(Hancock)	14	30	105	1.75	50	424	A	363	A	160	A
West	13	35	132	2.20	34	570	A	483	A	177	A

Intersection 7 : Myrtle Avenue@ Seneca Avenue							MD Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	12	40	332	5.53	50	182	A	151	A	62	B
East	12	35	90	1.50	34	740	A	627	A	238	A
South(Seneca)	13	36	268	4.47	50	253	A	214	A	95	B
South(Hancock)	14	30	288	4.80	50	217	A	183	A	81	B
West	13	35	128	2.13	34	618	A	524	A	193	A

Intersection 7 : Myrtle Avenue@ Seneca Avenue							PM Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	12	40	294	4.90	50	213	A	177	A	73	B
East	12	35	148	2.47	34	408	A	345	A	127	B
South(Seneca)	13	36	222	3.70	50	267	A	226	A	100	B
South(Hancock)	14	30	394	6.57	50	198	A	167	A	74	B
West	13	35	108	1.80	34	618	A	524	A	193	A

Intersection 7 : Myrtle Avenue@ Seneca Avenue							SAT MD Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	12	40	273	4.55	50	143	A	118	B	49	B
East	12	35	103	1.72	34	526	A	445	A	164	A
South(Seneca)	13	36	297	4.95	50	203	A	172	A	76	B
South(Hancock)	14	30	373	6.22	50	146	A	123	B	55	B
West	13	35	155	2.58	34	314	A	266	A	98	B

Intersection 8 : Seneca Avenue@ Palmetto Street							AM Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	62	1.03	23.8	829	A	780	A	501	A
East	9	43	70	1.17	34.8	863	A	804	A	431	A
South	13	40	58	0.97	23.8	710	A	669	A	429	A
West	9	38	58	0.97	34.8	911	A	841	A	413	A

Intersection 8 : Seneca Avenue@ Palmetto Street							MD Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	108	1.80	23.8	597	A	562	A	361	A
East	9	43	100	1.67	34.8	469	A	437	A	234	A
South	13	40	50	0.83	23.8	298	A	281	A	180	A
West	9	38	102	1.70	34.8	1172	A	1081	A	530	A

Intersection 8 : Seneca Avenue@ Palmetto Street							PM Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	186	3.10	23.8	785	A	739	A	475	A
East	9	43	120	2.00	34.8	322	A	300	A	160	A
South	13	40	260	4.33	23.8	355	A	334	A	215	A
West	9	38	74	1.23	34.8	241	A	223	A	109	B

Intersection 8 : Seneca Avenue@ Palmetto Street							SAT MD Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	92	1.53	23.8	829	A	780	A	501	A
East	9	43	58	0.97	34.8	863	A	804	A	431	A
South	13	40	120	2.00	23.8	710	A	669	A	429	A
West	9	38	56	0.93	34.8	911	A	841	A	413	A

APPENDIX B-1
Existing Condition:CrossWalk Summary

Intersection 9: Myrtle Avenue Fresh Pond Road								AM Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	14	40	24	0.40	55	3430	A	2945	A	1122	A
East	10	38	28	0.47	31	1250	A	989	A	517	A
West	14	45	24	0.40	31	1750	A	1627	A	840	A

Intersection 9: Myrtle Avenue Fresh Pond Road								MD Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	14	40	118	1.97	55	857	A	736	A	281	A
East	10	38	26	0.43	31	1125	A	891	A	466	A
West	14	45	80	1.33	31	656	A	610	A	315	A

Intersection 9: Myrtle Avenue Fresh Pond Road								PM Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	14	40	135	2.25	55	834	A	716	A	273	A
East	10	38	18	0.30	31	1875	A	1484	A	776	A
West	14	45	70	1.17	31	788	A	732	A	378	A

Intersection 9 : Myrtle Avenue Fresh Pond Road								SAT MD Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	14	40	178	2.97	55	532	A	449	A	171	A
East	10	38	48	0.80	31	592	A	469	A	245	A
West	14	45	248	4.13	31	225	A	209	A	108	B

Intersection 10: Cypress Avenue@Myrtle Avenue								AM Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	170	2.83	58	610	A	598	A	200	A
East	16	33	66	1.1	31	667	A	635	A	243	A
South	18	35	102	1.7	58	1167	A	1086	A	342	A
West	16	33	54	0.9	31	1200	A	1027	A	438	A

Intersection 10 : Cypress Avenue@Myrtle Avenue								MD Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	304	5.07	58	857	A	736	A	281	A
East	16	33	86	1.43	31	1125	A	891	A	466	A
South	18	35	308	5.13	58	1167	A	1086	A	342	A
West	16	33	104	1.73	31	656	A	610	A	315	A

Intersection 10 : Cypress Avenue@Myrtle Avenue								PM Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	360	6.00	58	834	A	716	A	273	A
East	16	33	112	1.87	31	1875	A	1484	A	776	A
South	18	35	498	8.30	58	1167	A	1086	A	342	A
West	16	33	124	2.07	31	788	A	732	A	378	A

Intersection 10: Cypress Avenue@Myrtle Avenue								SAT MD Peak Hour			
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	13	40	375	6.25	58	523	A	449	A	171	A
East	16	33	98	1.63	31	592	A	469	A	245	A
South	18	35	547	9.12	58	1167	A	1086	A	342	A
West	16	33	90	1.50	31	225	A	209	A	108	A

APPENDIX B-1
Existing Condition:CrossWalk Summary

Intersection 11: Cornelia Street@Myrtle Avenue						AM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	16	30	104	1.73	55	1069	A	1040	A	275	A
East	11	35	96	1.60	31	458	A	438	A	176	A
South	11	30	110	1.83	55	674	A	656	A	173	A
West	12	35	76	1.27	31	540	A	516	A	208	A

Intersection 11: Cornelia Street@Myrtle Avenue						MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	16	30	270	4.50	55	452	A	440	A	116	B
East	11	35	168	2.80	31	589	A	563	A	227	A
South	11	30	376	6.27	55	311	A	303	A	80	A
West	12	35	26	0.43	31	900	A	859	A	346	B

Intersection 11: Cornelia Street@Myrtle Avenue						PM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	16	30	338	5.63	55	396	A	386	A	102	B
East	11	35	226	3.77	31	399	A	381	A	154	A
South	11	30	276	4.60	55	213	A	207	A	55	B
West	12	35	64	1.07	31	794	A	758	A	306	A

Intersection 11: Cornelia Street@Myrtle Avenue						SAT MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	16	30	482	8.03	55	280	A	265	A	72	B
East	11	35	88	1.47	31	375	A	341	A	144	A
South	11	30	270	4.50	55	292	A	284	A	75	B
West	12	35	58	0.97	31	794	A	758	A	306	A

Intersection 12: Forest Avenue@Myrtle Avenue						AM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	15	33	88	1.47	51	1168	A	1105	A	327	A
East	11	35	92	1.53	34	513	A	473	A	180	A
South(Forest)	10	35	62	1.03	51	1194	A	1016	A	307	A
South(George)	12	30	108	1.80	51	608	A	578	A	157	A
West	10	35	70	1.17	34	621	A	500	A	218	A

Intersection 12: Forest Avenue@Myrtle Avenue						MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	15	33	278	4.63	51	359	A	338	A	102	B
East	11	35	96	1.60	34	511	A	457	A	170	A
South(Forest)	10	35	260	4.33	51	305	A	257	A	80	B
South(George)	12	30	276	4.60	51	252	A	212	A	66	B
West	10	35	108	1.80	34	480	A	412	A	160	A

Intersection 12: Forest Avenue@Myrtle Avenue						PM Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	15	33	218	3.63	51	457	A	418	A	130	A
East	11	35	120	2.00	34	466	A	433	A	165	A
South(Forest)	10	35	178	2.97	51	394	A	332	A	103	B
South(George)	12	30	244	0.00	51	324	A	273	A	85	B
West	10	35	112	1.87	34	450	A	370	A	150	A

Intersection 12: Forest Avenue@Myrtle Avenue						SAT MD Peak Hour					
Crosswalk	X walk W	X walk L	Ped.Vol. (p/hr)	Flow Rate (p/min)	G+ Amb* (sec)	Without Vehicles		With Vehicles		Maximum Surge	
	(ft)	(ft)				(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	15	33	328	5.47	51	308	A	282	A	88	B
East	11	35	125	2.08	34	396	A	368	A	132	A
South(Forest)	10	35	363	6.05	51	189	A	159	A	49	B
South(George)	12	30	361	6.02	51	214	A	180	A	56	B
West	10	35	116	1.93	34	369	A	317	A	123	B

APPENDIX B-1
Existing Conditions : Crosswalk Summary

Intersection 13: Metropolitan Avenue@Fresh Pond Rd							AM Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles	With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	33	0.55	47	1710	A	1512	A	653	A
East	13	39	83	1.38	39	689	A	605	A	248	A
South	10.5	40	69	1.15	47	781	A	659	A	270	A
West	12	39	68	1.13	39	685	A	580	A	247	A

Intersection 13 : Metropolitan Avenue@Fresh Pond Rd							MD Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles	With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	27	0.45	49	1935	A	1777	A	711	A
East	13	39	102	1.70	34	512	A	419	A	202	A
South	10.5	40	34	0.57	49	1847	A	1464	A	615	A
West	12	39	48	0.80	34	889	A	696	A	351	A

Intersection 13 : Metropolitan Avenue@Fresh Pond Rd							PM Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles	With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	40	0.67	47	1568	A	1277	A	599	A
East	13	39	154	2.57	39	460	A	347	A	165	A
South	10.5	40	68	1.13	47	816	A	646	A	282	A
West	12	39	86	1.43	39	685	A	517	A	247	A

Intersection 13: Metropolitan Avenue@Fresh Pond Rd							SAT MD Peak Hour				
Crosswalk	X walk W	X walk L	Ped.Vol.	Flow Rate	G+ Amb*	Without Vehicles	With Vehicles		Maximum Surge		
	(ft)	(ft)	(p/hr)	(p/min)	(sec)	(sq.ft/p)	LOS	(sq.ft/p)	LOS	(sq.ft/p)	LOS
North	11	45	37	0.62	47	1568	A	1386	A	696	A
East	13	39	71	1.18	39	919	A	806	A	321	A
South	10.5	40	72	1.20	47	691	A	583	A	239	A
West	12	39	80	1.33	39	636	A	539	A	226	A

APPENDIX B-2
Existing Condition :Corner Summary

Loc #	Intersection	Corner	Radius	Sidewalk width (east/west)	Sidewalk width (north/south)
1	Myrtle Avenue @ Wyckoff Avenue/Palmetto Street	Northeast	27	14	19
		North-center	15	9	18
		Northwest	UC*	11	16
		Southeast	27	18	17
		South-center	13	12	14
		Southwest	24	12	18
2	Metropolitan Avenue @ Forest Avenue	Southeast	16	14	14
		Southwest	15	13	11
3	Forest Avenue @ 67 th Avenue/Fairview Avenue	Northeast	7	15	6
		Southeast	7	8	7
		Southwest	16	9	15
		Northwest	11	12	13
4	Forest Avenue@ Pаметto Street/Grandview Avenue	Northwest	12	10	9
		North-center	12	16	15
		Northeast	11	10	14
		Southwest	13	9	10
		Southeast	9	11	10
5	Fresh Pond Road @ 67 th Avenue	Southwest	16	18	12
		Northwest	17	18	12
6	Metropolitan Avenue @ Flushing Avenue	Northeast	10	11	11
		Southeast	19	15	10
		Southwest	10	12	12
		Northwest	10	11	11
7	Myrtle Avenue @ Seneca Avenue	Northwest	22	12	17
		Northeast	14	12	17
		Southeast	31	14	17
		South-center	16	9	15
		Southwest	19	10	17
8	Seneca Avenue@ Palmetto Street	Northeast	8	12	5
		Southeast	11	12	9
		Southwest	7	12	7
		Northwest	8	12	7
9	Myrtle Avenue @ Fresh Pond Road	Northeast	13	19	17
		Northwest	18	20	19
10	Cypress Avenue @ Myrtle Avenue	Northeast	16	17	16
		Southeast	18	10	10
		Southwest	22	13	17
		Northwest	17	17	15
11	Cornelia Street @ Myrtle Avenue	Northeast	24	14	18
		Southeast	12	14	17
		Southwest	21	14	17
		Northwest	16	14	17
12	Forest Avenue @ Myrtle Avenue	Northwest	10	17	17
		Northeast	10	14	17
		Southeast	15	17	17
		South-center	10	10	15
		Southwest	15	10	17
13	Metropolitan Avenue@ Fresh Pond Rd	Northeast	16	18	13
		Southeast	17	18	13
		Southwest	13	19	12
		Northwest	13	14	13

All measurements are in feet unit
UC*:Under Construction