

**LINDA JOY AND KENNETH JAY POLLIN
MEMORIAL COMMUNITY
TRANSPORTATION IMPACT STUDY
WASHINGTON, D.C.**

Prepared for
Pollin Memorial Community Development
And
District of Columbia Housing Authority

Prepared by
Wells & Associates, LLC

June 16, 2006

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- A. Existing Vehicular Traffic Counts
- B. Existing Pedestrian Traffic Counts
- C. Existing Levels of Service
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- E. Total Future Levels of Service

Section I INTRODUCTION

This report presents the results of a traffic impact analysis of the Linda Joy & Kenneth Jay Pollin Memorial Community residential project within Parkside in Ward 7 in the northeast section of Washington, D C , as shown on Figure I-1

Parkside is located east of Kenilworth Aquatic Gardens, west of Kenilworth Avenue, and south of Mayfair. The subject site consists of 459,939 square feet of land area in Square 5040, Parcel 170/27 and a portion of Parcel 170/28, in the northeast section of Washington, D C. Lot 804 in Square 5040 is zoned R-5-A and is bounded by Anacostia Avenue, Hayes Street, Barnes Street and Grant Street. Parcel 170/27 and 170/28, which are triangular in shape and not now included in a zone district, are collectively bounded by Hayes Street, Anacostia Avenue and Kenilworth Park.

Pollin Memorial Community Development and the District of Columbia Housing Authority propose a Planned Unit Development consisting of 125 residential units and 125 off-street parking spaces. The 42 rental apartment units that currently occupy the site would be replaced and the remaining 83 units would be owner occupied townhomes.

The subject site is served by a connected network of local streets, including Anacostia Avenue, Barnes Street, Grant Place, and Hayes Street. Parkside is connected to Route 295 (Kenilworth Avenue), a limited access highway. The closest interchanges are located to the north at Nannie Helen Burroughs Avenue and to the south at Benning Road.

For purposes of this traffic analysis, this development was assumed to be completely built and occupied three years hence, by 2009.

Tasks undertaken in this study included the following:

- 1 Review the proposed development plans and other background data
- 2 A field reconnaissance of existing roadway and intersection geometrics, traffic controls, traffic signal phasing/timings, and speed limits
- 3 Counts of existing vehicular and pedestrian traffic at four (4) key intersections
- 4 Analysis of existing levels of service at these intersections
- 5 Background future traffic volumes were forecasted for project buildout.



- 6 Background levels of service were calculated at key intersections based on background traffic forecasts, existing traffic controls, and existing intersection geometrics
- 7 The number of AM and PM peak hour trips that would be generated by the proposed project were estimated based on (1) Institute of Transportation Engineers (ITE) trip generation rates, (2) the proximity of the project to the nearest Metro station, and (3) experience with other comparable projects in Washington, D C
- 8 Total future traffic volumes were forecasted for 2009
- 9 Total future levels of service were calculated at key intersections based on total future traffic forecasts, existing traffic controls, and existing intersection geometrics
- 10 The adequacy of the proposed number of parking spaces were evaluated

Sources of data for this analysis included traffic counts conducted by Wells & Associates, ITE, the Washington Metropolitan Area Transit Authority (WMATA), the District of Columbia Office of Planning, the District Department of Transportation (DDOT), Parkside Mixed-Use Development Traffic Impact Study, Gorove Slade, August 8, 2005, and the development team



The conclusions of this traffic impact study are as follows.

- 1 Turning movements at the four intersections in the study area currently operate at level of service (LOS) "C" or better during both the AM and PM peak hours.**
- 2. The Linda Joy & Kenneth Jay Pollin Memorial Community residential project will add 24 new AM peak hour trips and 28 new PM peak hour trips, to the public street system upon project completion.**
- 3. The net additional trips that would be generated by the proposed residential project will not have an adverse impact on traffic conditions in the study area. On average, motorists on Hayes Street at the Kenilworth Avenue access road would realize 4.9 seconds of additional delay.**
- 4. The connected sidewalk system in the immediate site vicinity and the proximity to the Minnesota Avenue Metrorail Station provide a transit opportunity for residents other than the automobile**
- 5 The 125 off-street parking spaces would adequately accommodate the Linda Joy & Kenneth Jay Pollin Memorial Community residential project.**



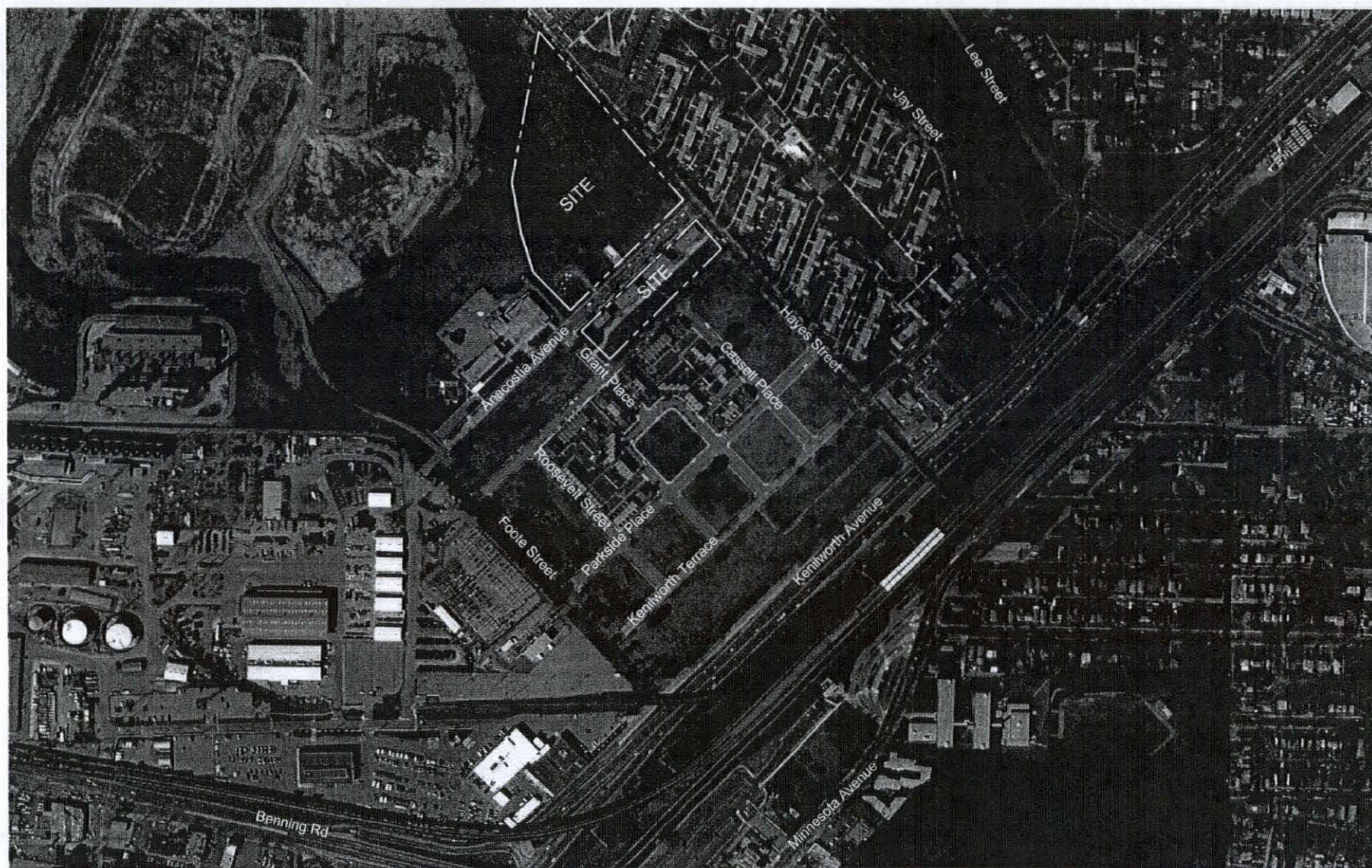
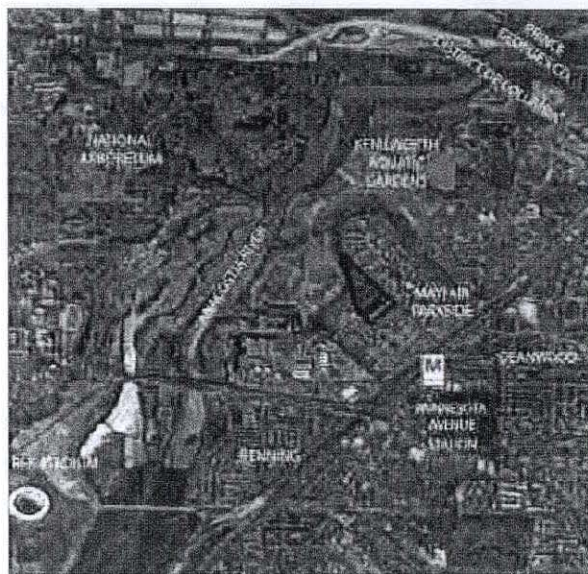


Figure 1-1
Site Location





LOCATION PLAN



ILLUSTRATIVE SITE PLAN

§ 1406.11 PLD Application Requirements

1. The proposed development shall be in accordance with the following requirements:

LINDA JOY & KENNETH JAY POLLIN MEMORIAL COMMUNITY

Figure 1-2
Site Plan



Section 2

BACKGROUND DATA

Overview

This section presents the general study scope and background data regarding the public road network, existing vehicular and pedestrian traffic counts, public transportation facilities and services, curb parking, and bicycle facilities

Study Scope

This traffic study includes the following intersections

- 1 Kenilworth Avenue/Foote Street.
- 2 Anacostia Avenue/Hayes Street
- 3 Kenilworth Terrace/Hayes Street.
- 4 Kenilworth Avenue/Hayes Street.

Also two future intersections along Hayes Street and on intersection along Anacostia Avenue were included

Level of service (LOS) "D" is considered the minimum acceptable level of service in urban areas such as Washington, D C

Public Road Network

Overview The subject site is served by a connected network of local streets and a freeway Existing intersection lane use and traffic control at key intersections in the site vicinity are shown on Figure 2-1

In the site vicinity, Kenilworth Avenue is classified by DDOT as a freeway Anacostia Avenue, Foote Street, Hayes Street, and Kenilworth Terrace are classified as local streets

Kenilworth Avenue (Route 295) is a north-south, limited access, freeway connecting the Baltimore Washington Parkway in Maryland to Interstate 295 in Washington, D C Access to Kenilworth Avenue, the immediate site vicinity is provided via southbound access road The closest interchanges are located to the north at Nannie Helen Burroughs Avenue and to the south at Benning Road

Anacostia Avenue in the site vicinity is a 30-foot road that connects Hayes Street through Parkside to Benning Road. On-street parking is permitted on both sides of Anacostia Avenue. Sidewalks are located on either side of Anacostia Avenue in the site vicinity.

Foote Street is a two-way, local street that connects Anacostia Avenue to the Kenilworth Avenue access road. Sidewalks are located on the both side of Foote Street.

Hayes Street is a 62 -foot wide local street that operates one-way westbound between Kenilworth Terrace and Mayfair Terrace. Between Kenilworth Avenue and Kenilworth Terrace, Hayes Street operates two-way. Sidewalks are located on both sides of Hayes Street.

Kenilworth Terrace is a north-south, two-way, local street connecting Jay Street to the north to Foote Street. Sidewalks are located on either side of Kenilworth Terrace.

Existing Traffic Counts

Vehicular Traffic Counts Existing AM and PM peak period vehicular traffic counts were conducted on Thursday, March 30, 2006, by Wells & Associates at the following intersections:

- 1 Kenilworth Avenue/Foote Street.
- 2 Anacostia Avenue/Hayes Street.
- 3 Kenilworth Terrace/Hayes Street.
- 4 Kenilworth Avenue/Hayes Street.

The results are included in Appendix A and summarized on Figure 2-2.

Figure 2-2 indicates that Anacostia Avenue, through the site, carried 71 trips during the AM peak hour, and 34 trips during the PM peak hour. Hayes Street, just north of Kenilworth Terrace carried 287 trips during the AM peak hour, and 245 trips during the PM peak hour.

Pedestrian Traffic Counts Existing AM and PM peak period pedestrian traffic counts also were conducted on Thursday, March 30, 2006, by Wells & Associates at the intersections listed above. The results are included in Appendix B and summarized on Figure 2-3.

Public Transportation Facilities and Services

The subject site is served by numerous Metrobus lines and the Minnesota Avenue Metro station, as shown on Figure 2-4. The Minnesota Avenue Metro station is located approximately 1,500 feet from the proposed project, across Kenilworth Avenue. The Metro station is connected to the residential community by an existing pedestrian bridge at Hayes Street. Another pedestrian bridge is planned to cross Kenilworth Avenue at Grant Street.

Metrobus Line U6 is routed on Kenilworth Terrace and Hayes Street, adjacent to Parkside Metrobus Lines U2, U4, U5, U6, U8, V7, V8, and X3 serve the Minnesota Avenue Metro station

Curb Parking

Parking is permitted on both sides of both sides of Anacostia Avenue and Hayes Street in the through and along the site frontage. On-street curb parking is planned to remain along both Anacostia Avenue and Hayes Street with the proposed Linda Joy & Kenneth Jay Pollin Memorial Community residential project. As noted above, each dwelling unit would also have off-street parking.

Bicycle Facilities

Currently, there are no bicycle facilities in the immediate site vicinity. A multi-use trail is proposed along Foote Street and Kenilworth Terrace.



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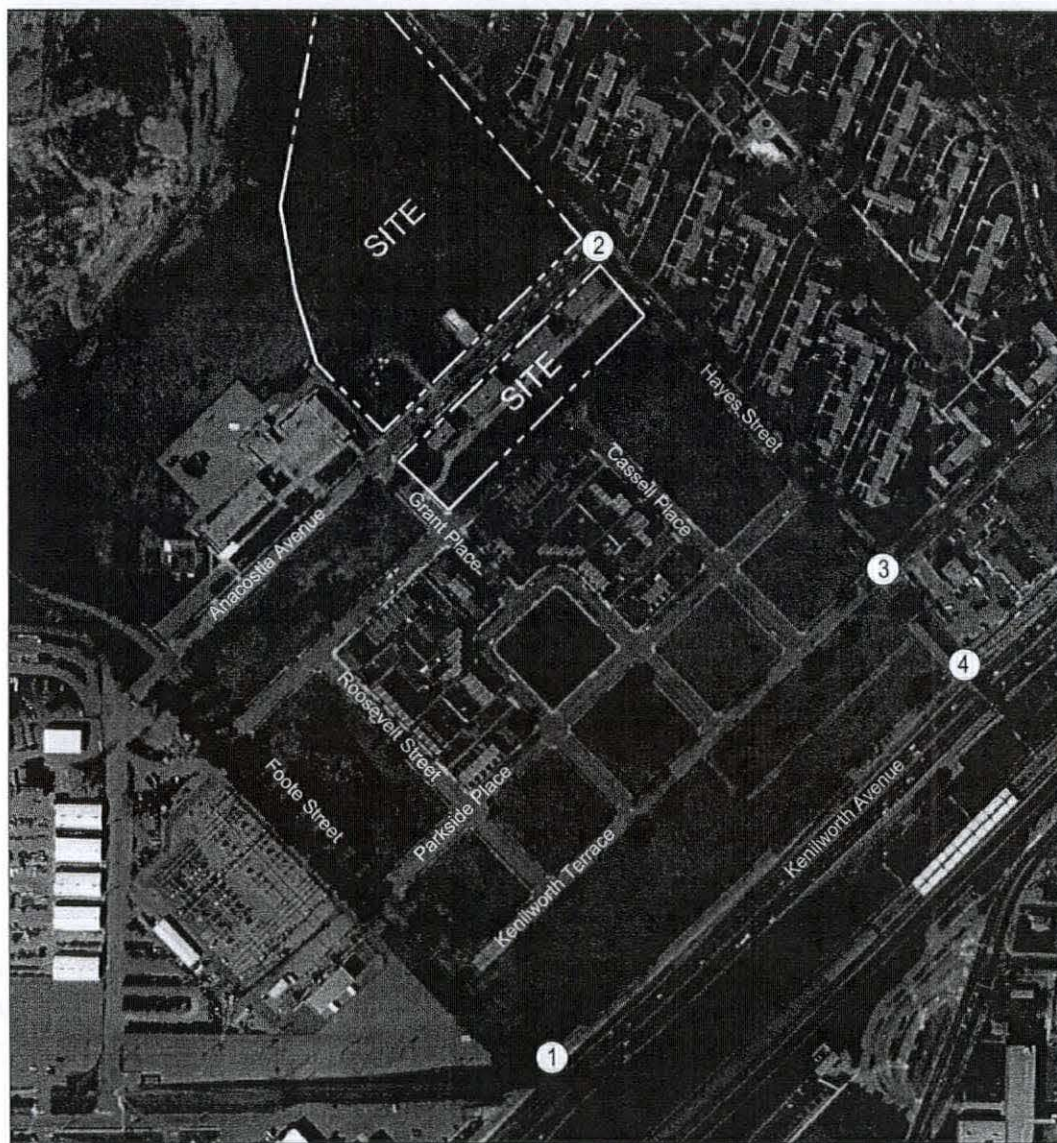
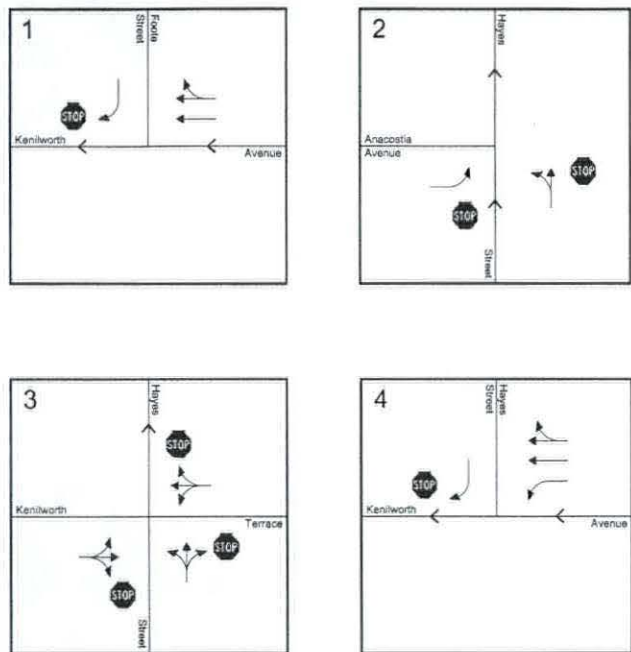


Figure 2-1
Intersection Lane Use and Traffic Control

- ← Represents One Travel Lane
- ⊗ Signalized Intersection
- Stop Sign



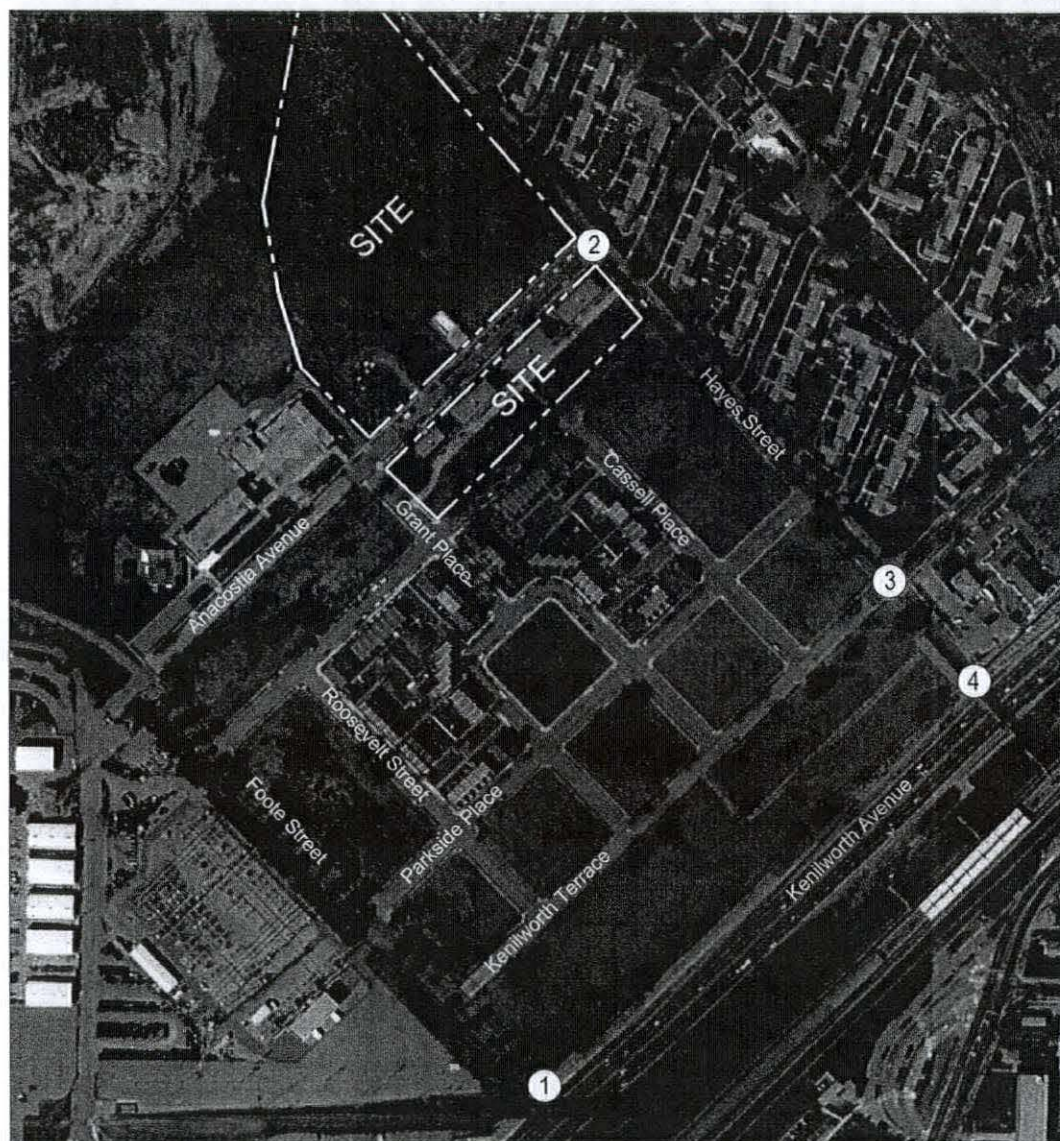
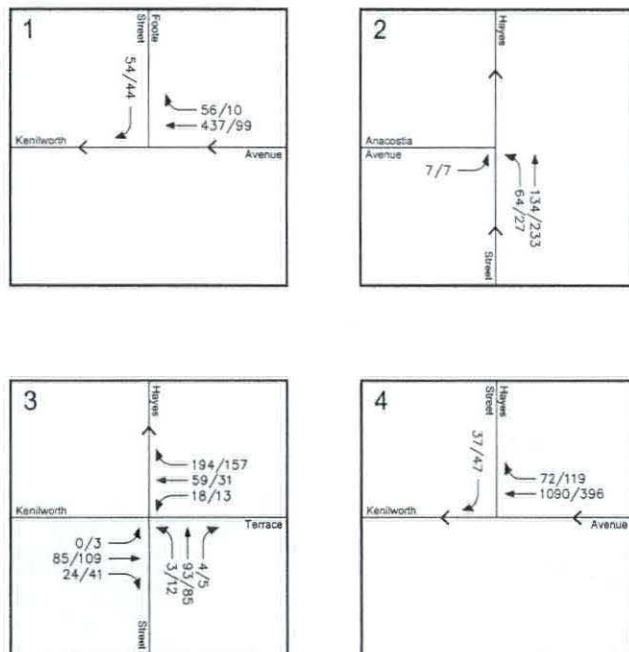


Figure 2-2
Existing Vehicular Traffic Counts

AM PEAK HOUR
PM PEAK HOUR
000/000
North

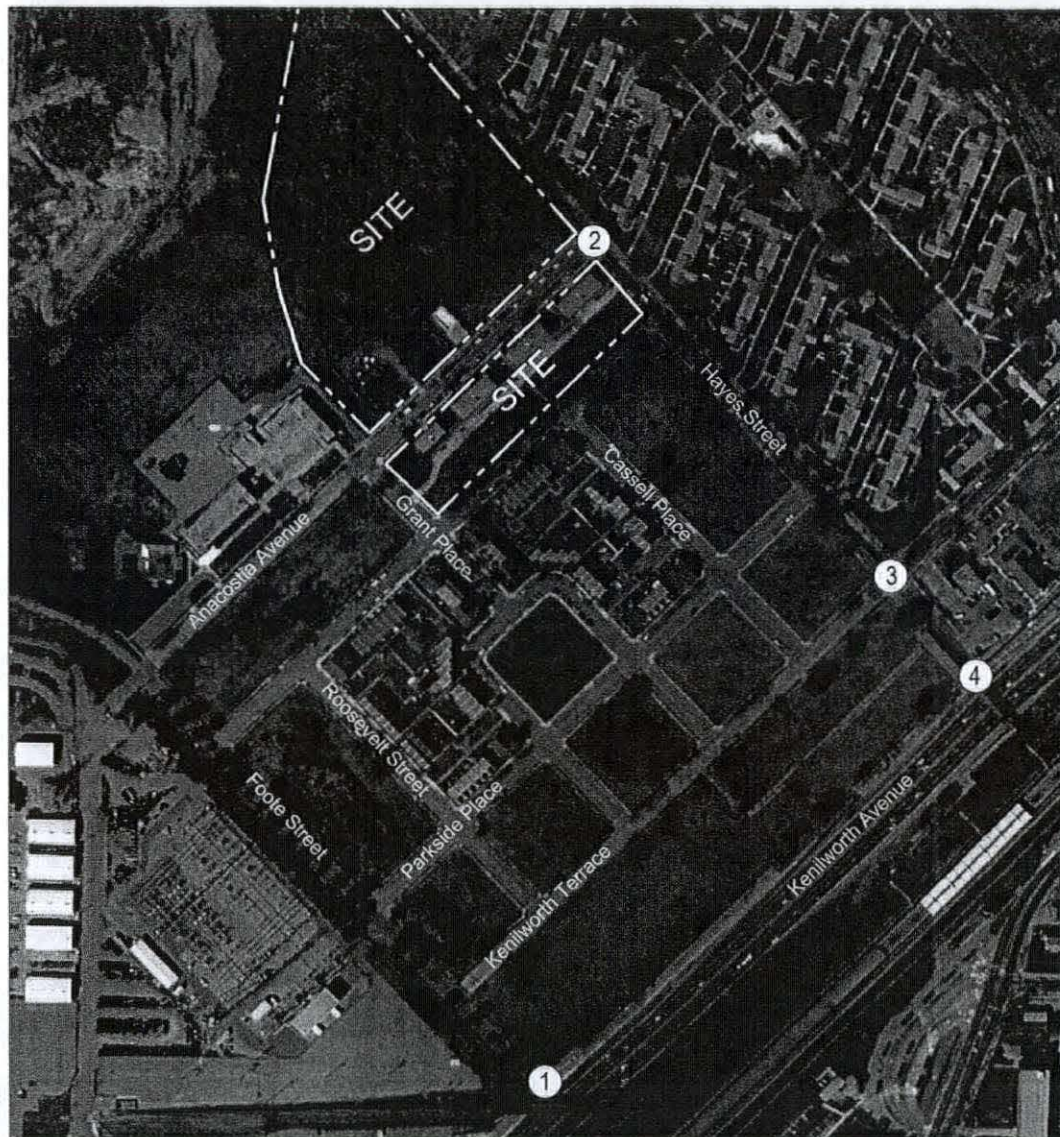
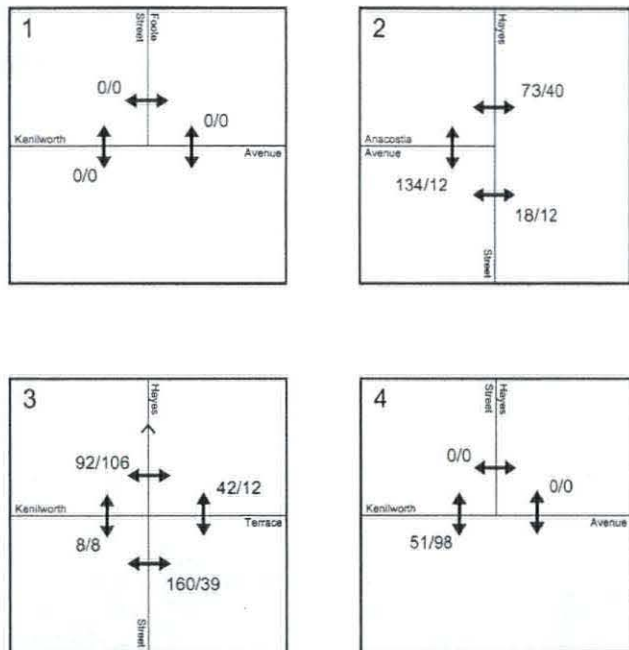


Figure 2-3
Existing Pedestrian Traffic Counts



Existing Pedestrian Volumes



North

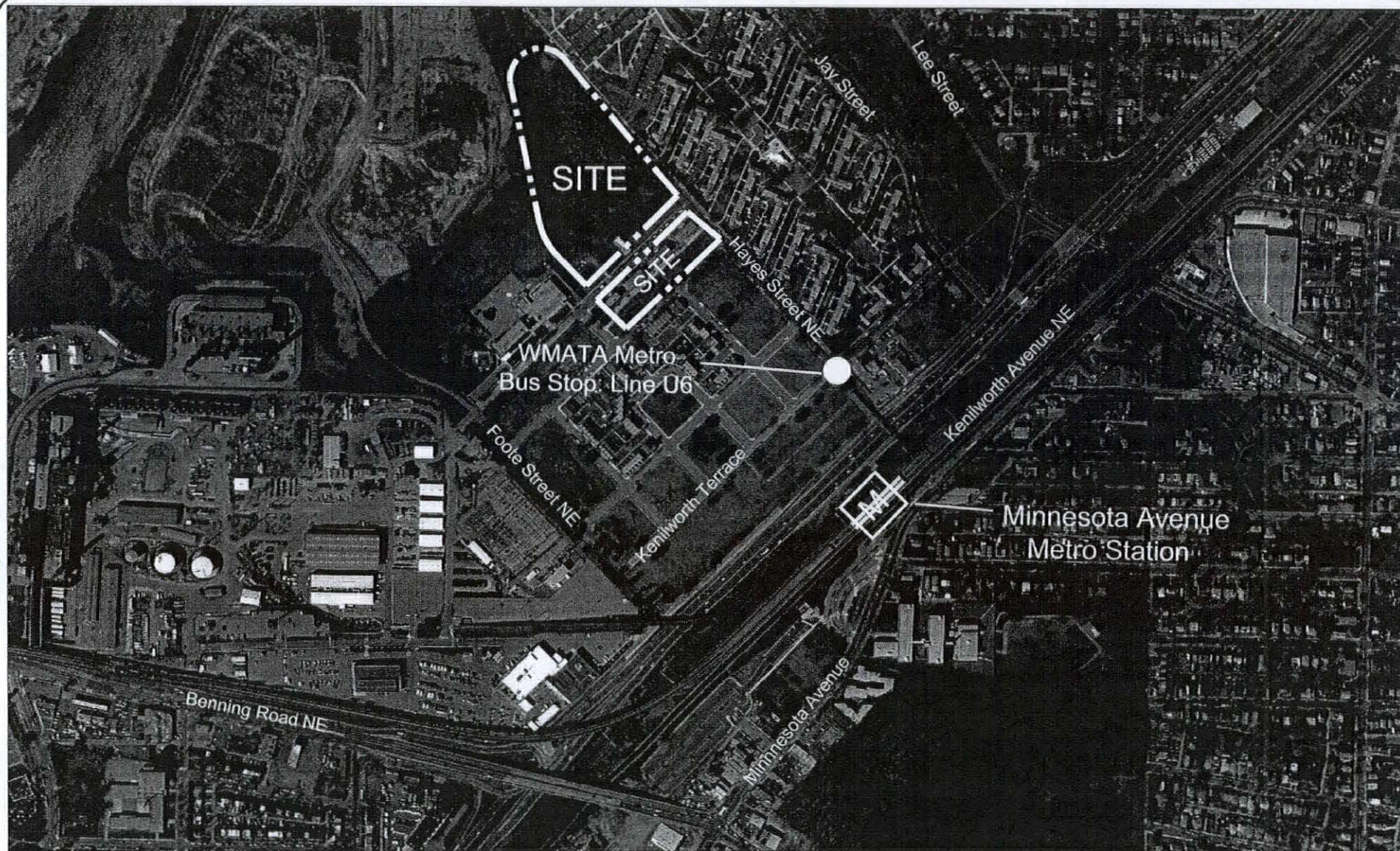


Figure 2-4
Existing Metro Bus & Rail Service



Section 3 ANALYSIS

Overview

This section presents analyses of existing and future traffic conditions, without and with the proposed Linda Joy & Kenneth Jay Pollin Memorial Community residential project, and evaluations of the parking requirements

Existing Levels of Service

Existing peak hour levels of service were estimated at the four key intersections in the study area based on the existing lane usage and traffic control shown on Figure 2-1, existing vehicular traffic counts shown on Figure 2-2, existing pedestrian traffic counts shown on Figure 2-3, and the Synchro intersection capacity analysis model. The results are presented in Appendix C and summarized in Table 3-1.

Table 3-1 indicates that the turning movements at the four, unsignalized, study intersections currently operate at level of service (LOS) "C" or better during both the AM and PM peak hours.

Background Traffic Growth

A 0.5 percent per year background traffic growth rate was used to account for general regional traffic growth and other projects that may be built within the next three years in the District of Columbia outside of the study area. This rate was compounded for three years for project buildout (2009). This growth rate was applied to all movements at each study area intersection.

Pipeline Projects

Vehicular trips associated with the Parkside PUD were included in this traffic study. Traffic data for the Parkside PUD was obtained from the Parkside Mixed-Use Development Traffic Impact Study, Gorove Slade, August 8, 2005.

The Parkside PUD would include 1,865 residential units, 586,520 S F of office, and 37,000 S F of retail. As shown in Table 3-2, the Parkside project is anticipated to generate 797 AM peak hour trips (522 in, 275 out) and 871 PM peak hour trips (307 in, 564 out).

The traffic assignments for the Parkside PUD were obtained from the traffic study and are shown on Figure 3-1.



Table 3-1

Linda Joy and Kenneth Jay Pollin Memorial Community
Intersection Level of Service (1 2 3)

Intersection	Control	Approach	Existing		Background		Total Future	
			AM	PM	AM	PM	AM	PM
1 Kenilworth Avenue & Foote Street	Unsignalized	EBR	B [10.4]	A [8.8]	B [11.2]	A [10.0]	B [11.3]	B [10.0]
2 Anacostia Avenue & Hayes Street	Unsignalized	WBTL NBL	A [8.3] A [7.6]	A [8.8] A [7.8]	A [8.3] A [7.7]	A [8.8] A [7.8]	A [8.3] A [7.7]	A [9.0] A [7.8]
3 Kenilworth Terrace & Hayes Street	Unsignalized	NBLTR SBLTR WBLTR	A [8.1] A [8.8] A [8.6]	A [8.3] A [8.2] A [8.5]	NA NA NA	NA NA NA	NA NA NA	NA NA NA
IMPROVEMENT <i>Parkside Mixed Use Development</i> Proposes Hayes Street to be 2 way from Parkside Place to Kenilworth Terrace	Unsignalized	EBLTR	NA	NA	A [8.9]	A [8.8]	A [8.9]	A [8.9]
		WBLTR	NA	NA	A [9.6]	A [9.8]	A [9.7]	B [10.0]
		NBLTR	NA	NA	A [9.1]	A [9.9]	A [9.3]	B [10.0]
		SBLTR	NA	NA	B [11.8]	B [10.2]	B [11.9]	B [10.4]
4 Kenilworth Avenue & Hayes Street	Unsignalized	EBR	C [15.7]	B [11.4]	E [45.0] /	C [16.4]	E [49.9]	C [16.8]
5 Anacostia Avenue & Site Access	Unsignalized	EBLR	NA /	NA	NA	NA	A [8.7]	A [8.5]
6 Site Access & Hayes Street	Unsignalized	WBLT NBL	NA NA	NA NA	NA NA	NA NA	A [8.5] A [7.2]	A [0.3] B [10.1]
7 Site Access & Hayes Street	Unsignalized	NBLT	NA	NA	NA	NA	A [9.2]	A [0.1]

Notes:

Based on as Synchro version 6

¹ Numbers in brackets, [], represent control delay in seconds per vehicle for unsignalized intersections.² Numbers in parenthesis, (), represent control delay in seconds per vehicle for signalized intersections.

Table 3.2

Linda Joy and Kenneth Jay Pollin Memorial Community

Pipeline Project Trip Generation (1)

Background Development	Land Use	Land Use Code	Size	Units	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Parkside Mixed Use Development										
	Residential				68	203	271	184	119	303
	Office				442	61	503	80	392	472
	Retail				12	11	23	43	53	96
Total Background Development					522	275	797	307	564	871

Notes

(1) Trip Generation taken from Parkside Mixed-Use Development, Traffic Impact Study Prepared by Gorove Slade, August 8, 2005

Background Traffic Forecasts

Future peak hour traffic forecasts, without the Linda Joy & Kenneth Jay Pollin Memorial Community residential project, were estimated based on existing traffic counts, background traffic growth, and traffic assignments associated with the Parkside PUD, as shown on Figure 3-2

Background Future Levels of Service

Future peak hour levels of service, without the Linda Joy & Kenneth Jay Pollin Memorial Community residential project, were estimated at the four key intersections in the study area for the year of project buildout (2009) based on the intersection lane usage and traffic control shown on Figure 2-1, the background traffic forecasts shown on Figure 3-2, and the Synchro intersection capacity analysis model

The results are presented in Appendix D, and are summarized in Table 3-1 Table 3-1 indicates that the turning movements at the Kenilworth Avenue/Foote Street, Anacostia Avenue/Hayes Street, and Kenilworth Terrace/Hayes Street intersections would operate at LOS "A" or "B" during the AM and PM peak hours

The eastbound right turn movement on Hayes Street at the Kenilworth Avenue access road would operate at LOS "E" during the AM peak hour and LOS "C" during the PM peak hour

Site Trip Generation Analysis

The number of trips that will be generated by the proposed Linda Joy & Kenneth Jay Pollin Memorial Community residential project were estimated based on (1) Institute of Transportation Engineers (ITE) trip generation rates, (2) the proximity of the project to the Minnesota Avenue Metro station, and (3) experience with other comparable projects in Washington, D C

The number of vehicle trips generated by the proposed project were reduced to account for the proximity to the Minnesota Avenue Metro station, based on US Census 2000 Data and the *Development-Related Ridership Survey II*, Washington Metropolitan Area Transit Authority, December 1989 The proposed project is approximately 1,500 feet from Metro station, with access provided via an existing bridge over Kenilworth Avenue and in the future via a new pedestrian bridge It is assumed that 40 52 percent of the residents will use either Metrorail, Metrobus or another form of transportation other than a single occupancy vehicle

Table 3-3
Linda Joy and Kenneth Jay Pollin Memorial Community
Site-Trip Generation Analysis

Land Use	Size	Units	Land Use Code	In	AM Peak Hour		Total	In	PM Peak Hour		Total
					Out				Out		
Existing Conditions											
Apartments	42	D U	220	5	19	24		27	14		41
Existing ITE Person-Trips (2)											
Apartments	42	D U	220	6	21	26		30	15		45
Existing ITE Vehicle Trips (3)											
Apartments	42	D U	220	3	10	13		15	7		22
Proposed ITE Vehicle-Trips (1)											
Townhomes	83	D U	230	7	37	44		35	17		52
Apartments	42	D U	220	5	19	24		27	14		41
ITE Person Trips (2)											
Townhomes	83	D U	230	8	41	48		39	19		57
Apartments	42	D U	220	6	21	26		30	15		45
ITE Vehicle Trips (3)											
Townhomes	83	D U	230	4	20	24		19	9		28
Apartments	42	D U	220	3	10	13		15	7		22
Proposed Development Subtotal				7	30	37		34	16		50
Difference (Proposed minus Existing)				4	20	24		19	9		28

- Notes (1) Based on Trip Generation 7th Edition Institute of Transportation Engineers
(2) Assumptions

Residential

Non-auto mode split 0%
Average vehicle occupancy 1.10
(persons per vehicle)

- (3) Assumptions

Residential

Non-auto mode split 40-52%
Average vehicle occupancy 1.20
(persons per vehicle)

Non auto mode splits were adapted from the U.S. Census 2000 Data Summary File 3 and the Development Related Ridership Survey II
Washington Metropolitan Area Transit Authority December 1989

It is estimated that the proposed 125 dwelling units would generate 37 AM peak hour trips, and 50 PM peak hour trips, as shown in Table 3-3. The 42 existing residential apartments generate 13 AM peak hour trips and 22 PM peak hour trips, based on ITE rates. The proposed Linda Joy & Kenneth Jay Pollin Memorial Community, thus, would generate 24 net additional trips during the AM peak hour and 28 net additional trips during the PM peak hour, or one (1) vehicle every 2.5 minutes during the AM peak hour and one (1) vehicle every 2.15 minutes during the PM peak hour.

Trip Distribution Analysis

The distribution of peak hour trips that would be generated by the proposed Linda Joy & Kenneth Jay Pollin Memorial Community residential project was determined based on existing traffic counts and are consistent with other traffic studies conducted in the area. The estimated directions of approach are shown on Figure 3-3.

As shown on Figure 3-3, 25 percent of the trips would approach the site from the north on Kenilworth Avenue, 50 percent would approach the site from the south on Kenilworth Avenue and 25 percent would approach the site from the west on Benning Road.

Site Traffic Assignments

The site-generated traffic volumes were assigned to the public road network according to the directional distribution described above. The resulting site traffic assignments are shown on Figure 3-4.

Total Future Traffic Forecasts

These site traffic assignments were added to the future background traffic volumes shown on Figure 3-2 to yield the total future traffic forecasts shown on Figure 3-5.

Total Future Levels of Service

Future peak hour levels of service with Linda Joy & Kenneth Jay Pollin Memorial Community residential project were estimated at the key intersections in the study area based on the lane usage and traffic controls shown on Figure 2-1, the total future traffic forecasts shown on Figure 3-5, and the Synchro intersection capacity analysis model. The results are presented in Appendix E and summarized in Table 3-1.

Table 3-1 indicates that the turning movements at the unsignalized, study intersections would continue to operate at levels of service consistent with background levels during both the AM and PM peak hours. The eastbound right turn movements from Hayes Street onto the Kenilworth Avenue access road would continue to operate at or near capacity during the AM peak hour. The trips associated with the Linda Joy & Kenneth Jay Pollin Memorial Community residential project would add 4.9 seconds of delay per vehicle to the eastbound right turn movement during the AM peak hour and only 0.4 seconds during the PM peak hour. Based on the intersection levels of service and the minimal increase in delay, the project will not have an adverse impact on the surrounding road network.

Parking Requirements

The parking requirement for residential units, both apartments and one-family dwellings, within the R-5-A zone is one (1) space for each dwelling unit, according to Chapter 21 of the *District of Columbia Municipal Regulations*. The proposed Linda Joy & Kenneth Jay Pollin Memorial Community residential project, therefore, would require 125 parking spaces.

The proposed residential project would be served by 125 off-street parking spaces, one space for each dwelling unit. Further, some of the dwelling units will have tandem off-street parking spaces and on-street parking is proposed to remain along Anacostia Avenue and Hayes Street and is proposed along the dwelling side of the 20-foot streets within the project. These on-street spaces will provide an opportunity for guests of the residents to park within the site and not spill onto other neighborhood streets. The proposed parking supply more than adequately accommodates the parking requirements for the proposed residential project.



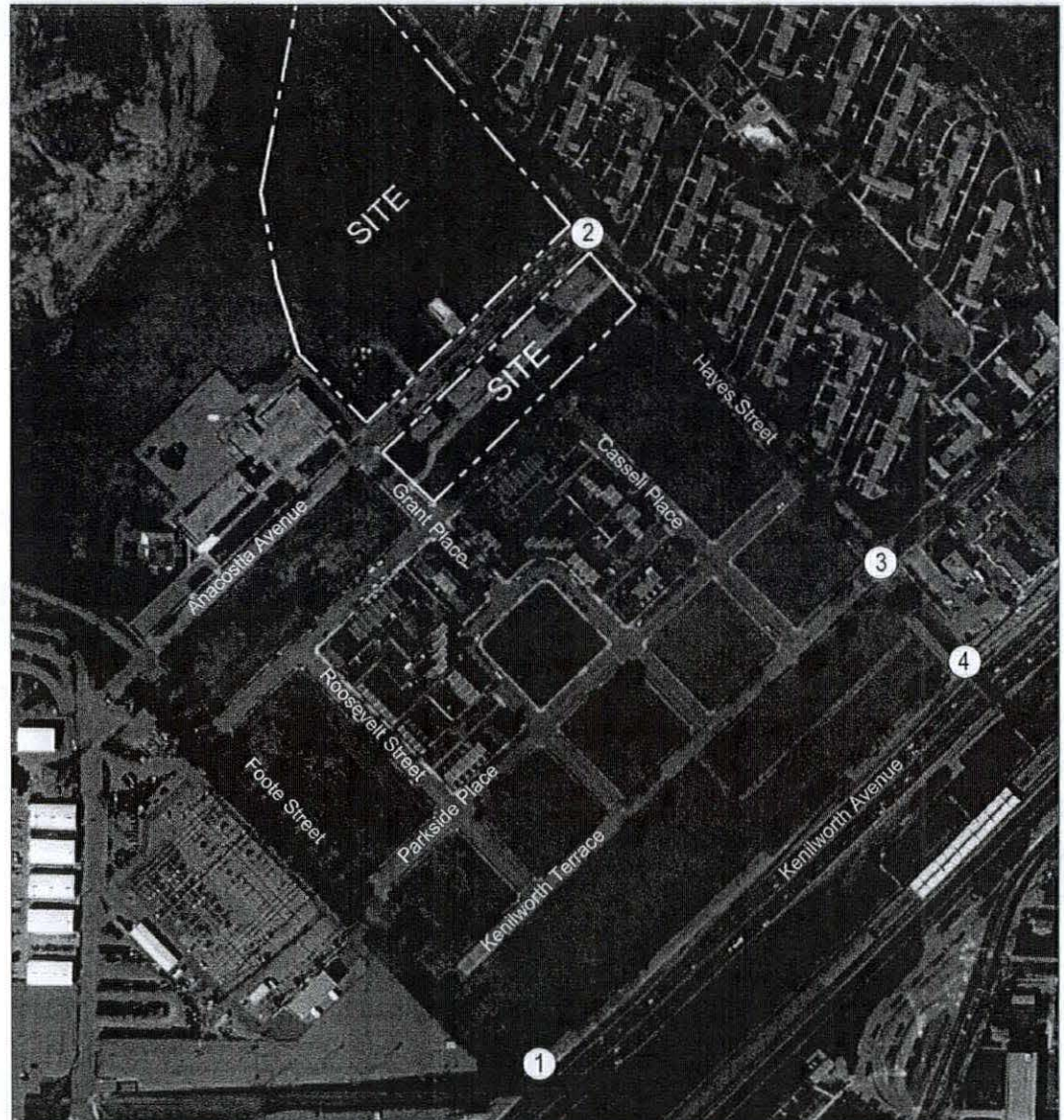
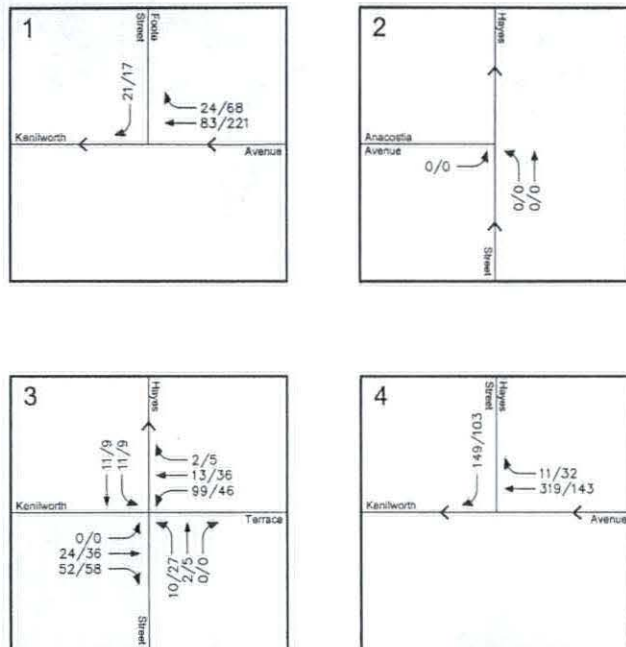


Figure 3-1
Pipeline Project Traffic Forecasts

AM PEAK HOUR
PM PEAK HOUR
000/000
North

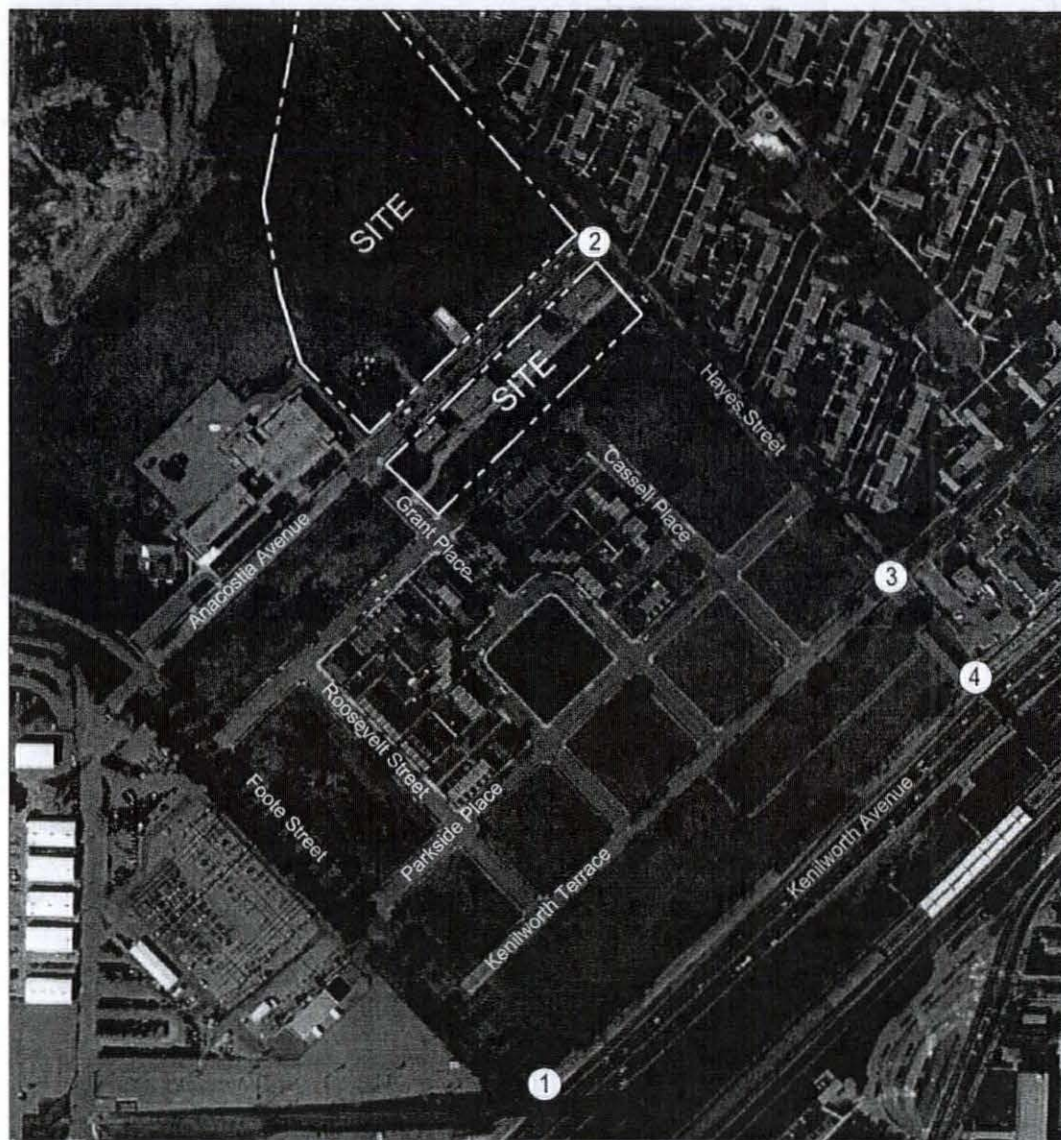
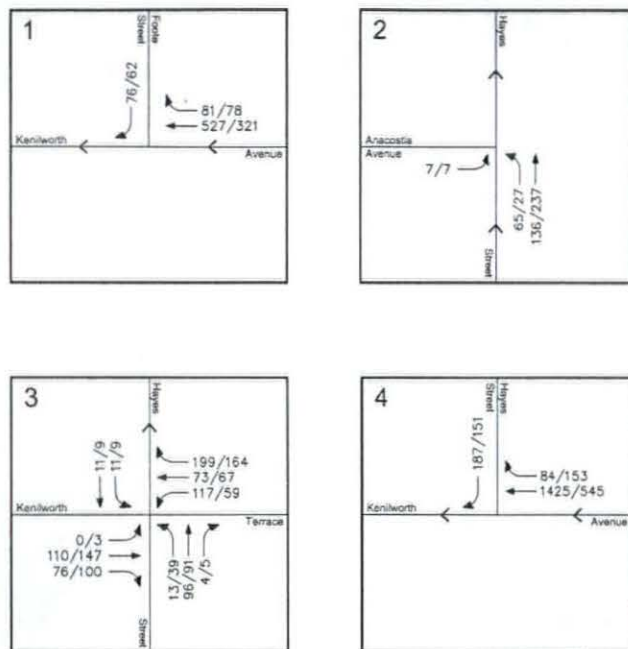


Figure 3-2
Background Future Peak Hour Traffic Forecasts

AM PEAK HOUR
PM PEAK HOUR
000/000
North

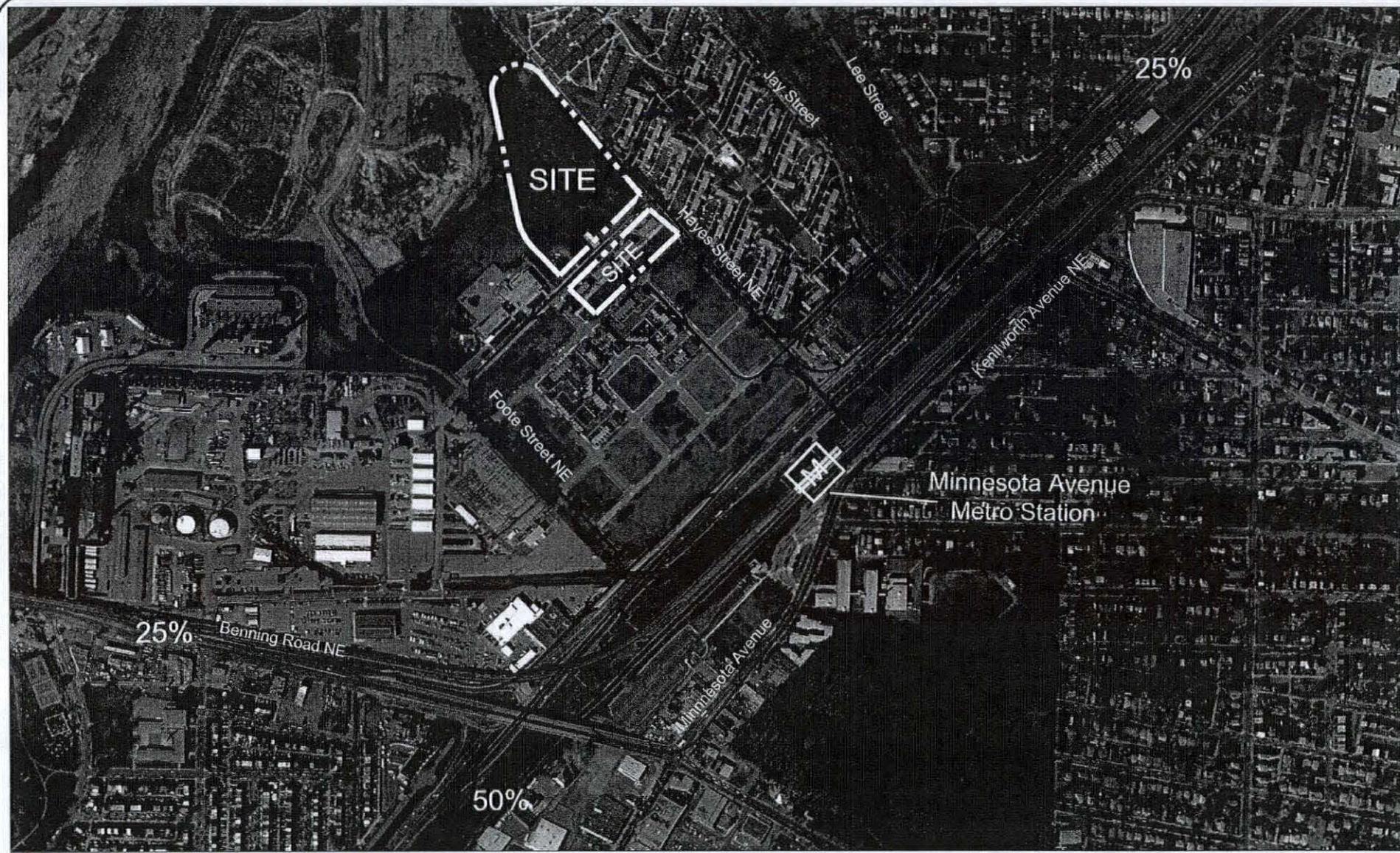


Figure 3-3
Site-Generated Traffic Directional Distribution



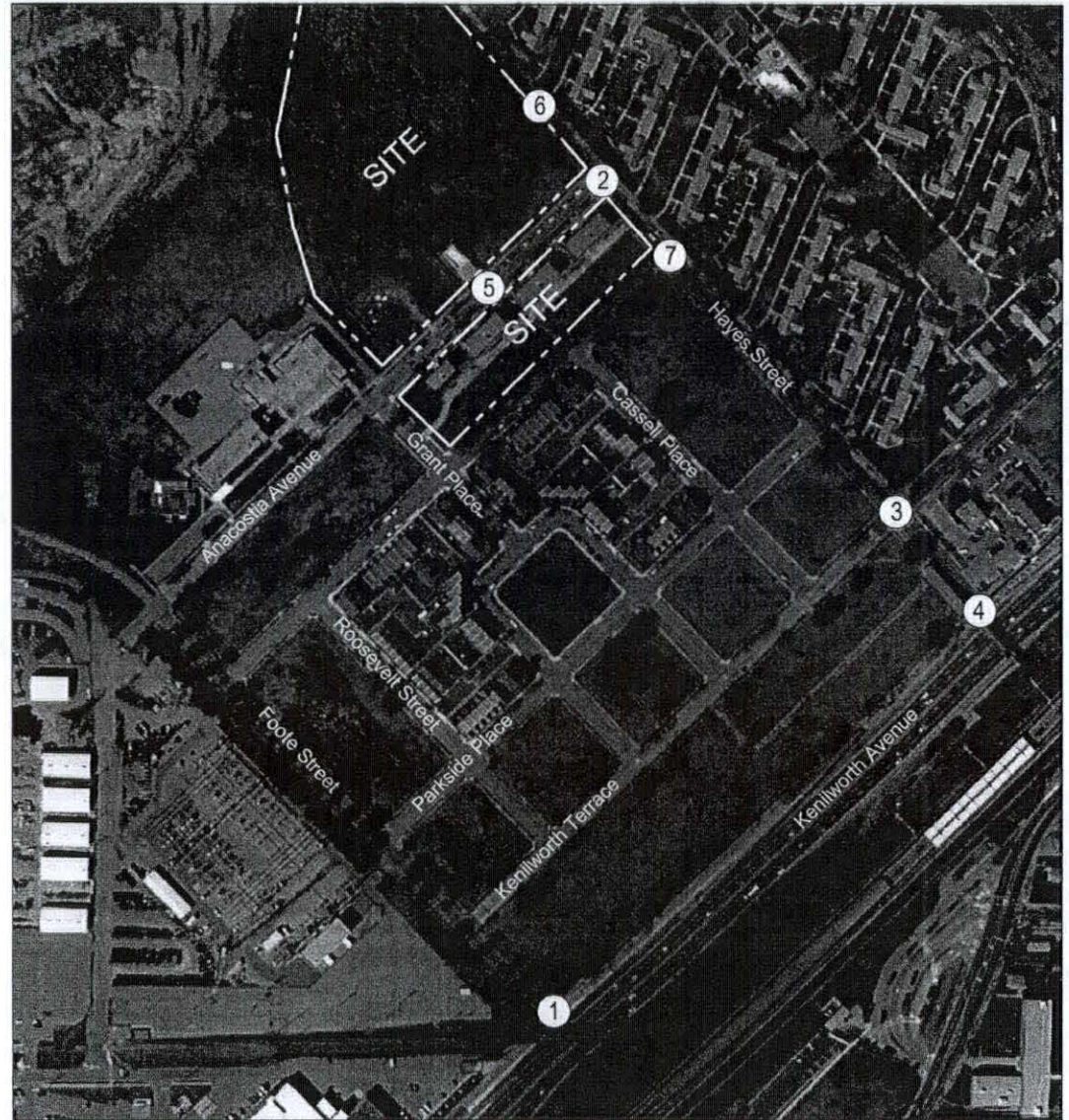
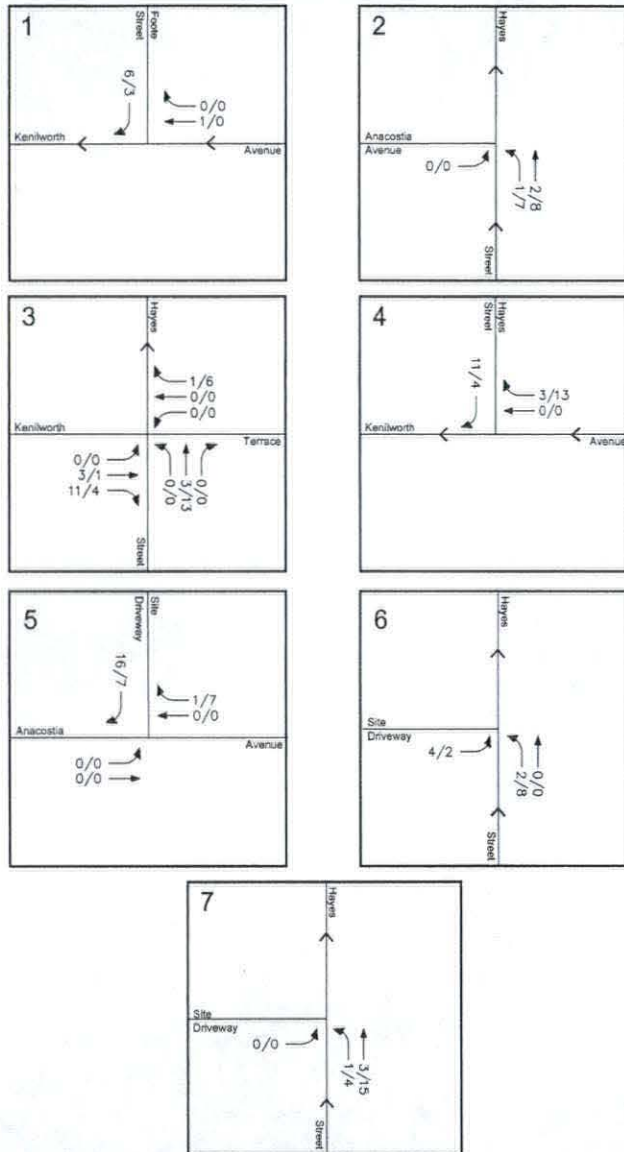


Figure 3-4
Site-Generated Traffic Assignments

AM PEAK HOUR
PM PEAK HOUR
000/000
North

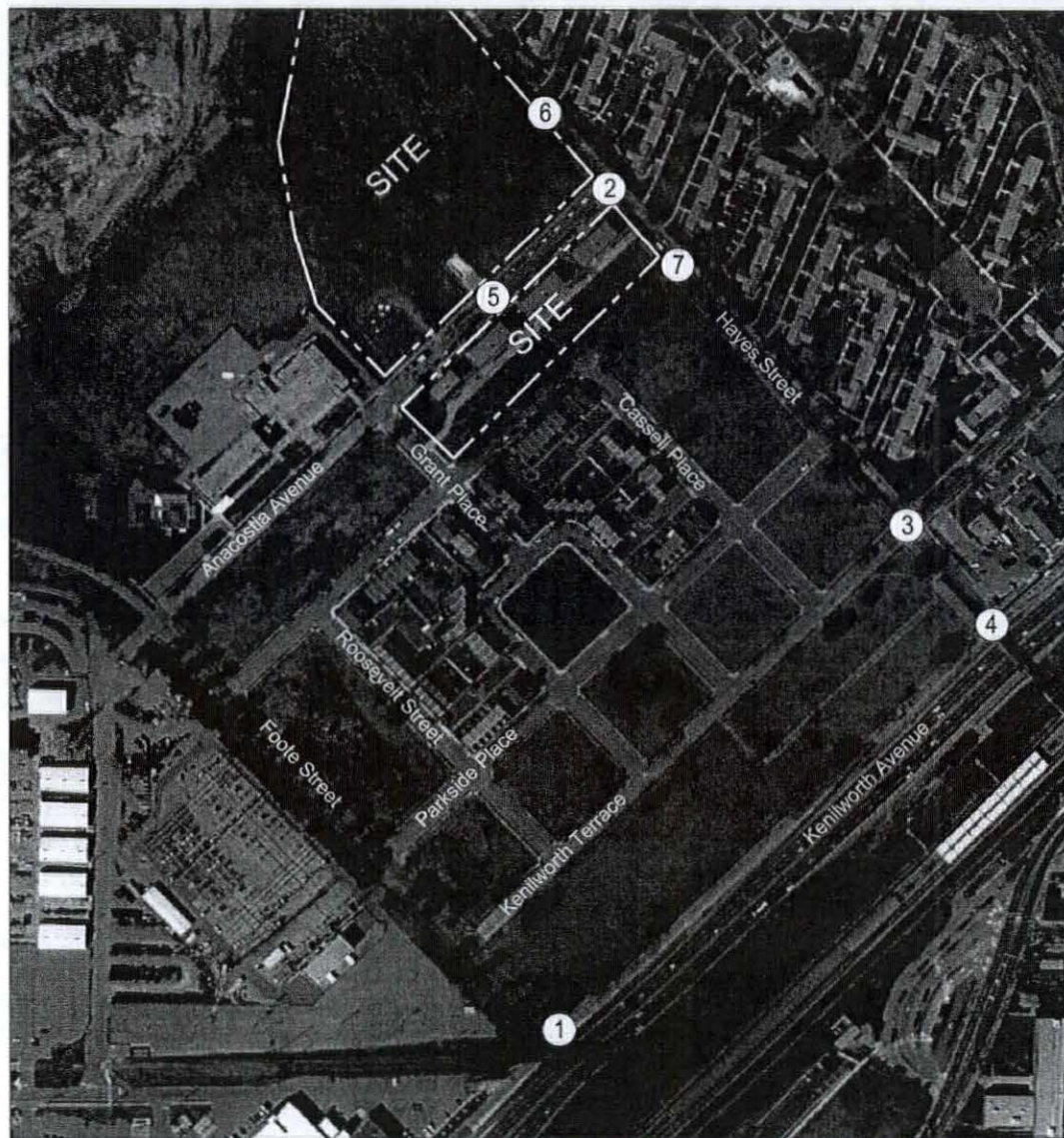
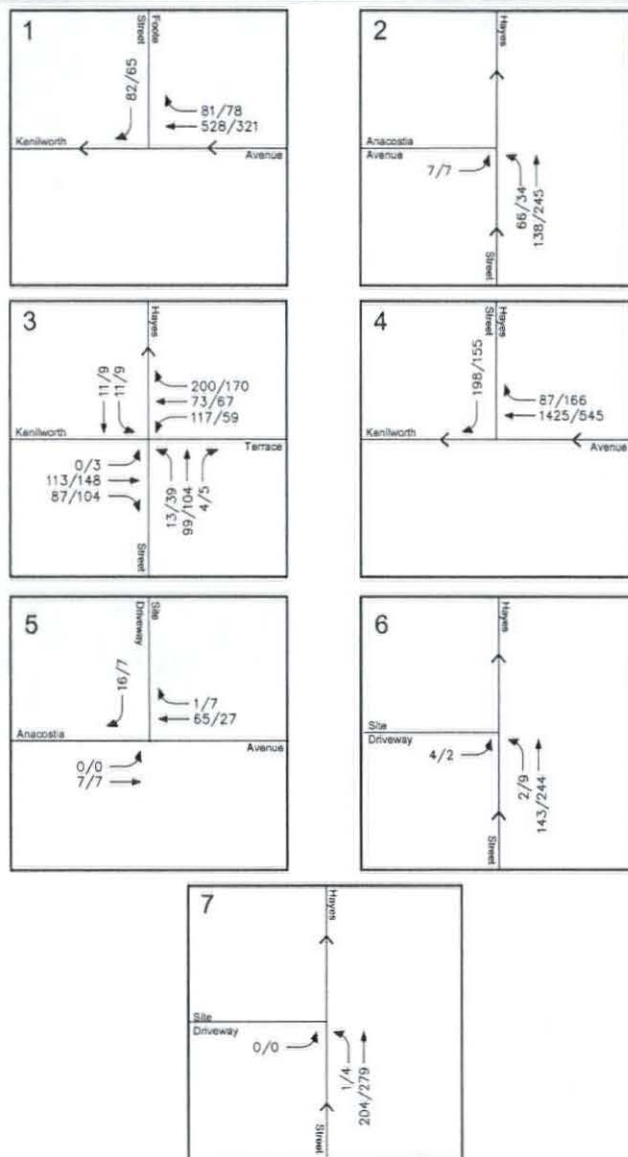


Figure 3-5
Total Future Peak Hour Traffic Forecasts

AV PEAK HOUR
PM PEAK HOUR
000/000
North

Section 4

CONCLUSIONS

The conclusions of this traffic impact study are as follows

- 1 Turning movements at the four intersections in the study area currently operate at level of service (LOS) "C" or better during both the AM and PM peak hours
- 2 The Linda Joy & Kenneth Jay Pollin Memorial Community residential project will add 24 new AM peak hour trips and 28 new PM peak hour trips, to the public street system upon project completion
- 3 The net additional trips that would be generated by the proposed residential project would have no significant impact on the intersections in the study area. On average, motorists on Hayes Street at the Kenilworth Avenue access road would realize 4.9 seconds of additional delay.
- 4 The net additional trips that would be generated by the proposed residential project will not have an adverse impact on traffic conditions in the study area. On average, motorists on Hayes Street at the Kenilworth Avenue access road would realize 4.9 seconds of additional delay.
- 5 The 125 off-street parking spaces would adequately accommodate the Linda Joy & Kenneth Jay Pollin Memorial Community residential project.

