

**4136 GEORGIA AVENUE
TRANSPORTATION IMPACT STUDY
WASHINGTON, D.C.**

**Prepared for:
Petworth Holdings, LLC**

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- A. Existing Vehicular Traffic Counts
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Section I

INTRODUCTION

This report presents the results of the traffic impact analysis of a new six to seven-story residential building with ground-floor retail, that Petworth Holdings, LLC proposes to build on the site of an existing Shell service station, located at 4136 Georgia Avenue, as shown on Figure I-1.

The subject site is located in Square 2910, east of Kansas Avenue, west of Georgia Avenue, and south of Upshur Street in the northwest section of Washington, D.C. The subject site, which is zoned C-2-A, presently is occupied by a Shell service station, with driveways on Kansas Avenue, Upshur Street, and Georgia Avenue.

The new building would consist of 57 residential condominiums and approximately 4,884 S.F. of retail space. The building would be served by a total of 37 surface and below-grade parking spaces and a loading dock. Vehicular access would be provided from a single driveway on Kansas Avenue, as shown on Figure I-2.

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 Petworth Holdings, LLC 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 five (5) key intersections and the existing Shell station driveways.
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 and loading berths 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), Symmetra Design, S.G.A. Architecture, and Petworth Holdings, LLC.

The conclusions of this traffic impact study are as follows:

- 1. The three signalized intersections in the study area currently operate at level of service (LOS) "D" or better during both the AM and PM peak hours. All approaches to each of the signalized intersections also operate at LOS "D" or better during both the AM and PM peak hours, except the southbound approach on Georgia Avenue at the Georgia Avenue/Kansas Avenue intersection during the AM peak hour, which operates at LOS "E".***
- 2. Kansas Avenue east of Georgia Avenue currently operates at bicycle level of service (BLOS) "A", while west of Georgia Avenue currently operates at BLOS "C", according to the April 2005 District of Columbia Bicycle Master Plan.***
- 3. The proposed mixed-use building would generate 61 fewer trips during the AM peak hour and 13 fewer trips during the PM peak hour than the current Shell gas station.***
- 4. The new trips that would be generated by the proposed mixed-use building would have no significant impact on the signalized intersections in the study area. Motorists on Taylor Street would utilize gaps created by the Georgia Avenue/Upshur Street signal to turn onto Georgia Avenue.***

- 5. The 37 parking spaces provided at and below-grade would accommodate the 4136 Georgia Avenue mixed-use project.**
- 6. The loading/delivery/service facilities provided for this development would adequately service the project and all but the loading berth would meet D.C. minimum zoning requirements.**





Figure 1-1
Site Location



O:\Projects\3001-3500\3156 Georgia Avenue\Graphics\3156 Rpt Graphics.dwg\CA

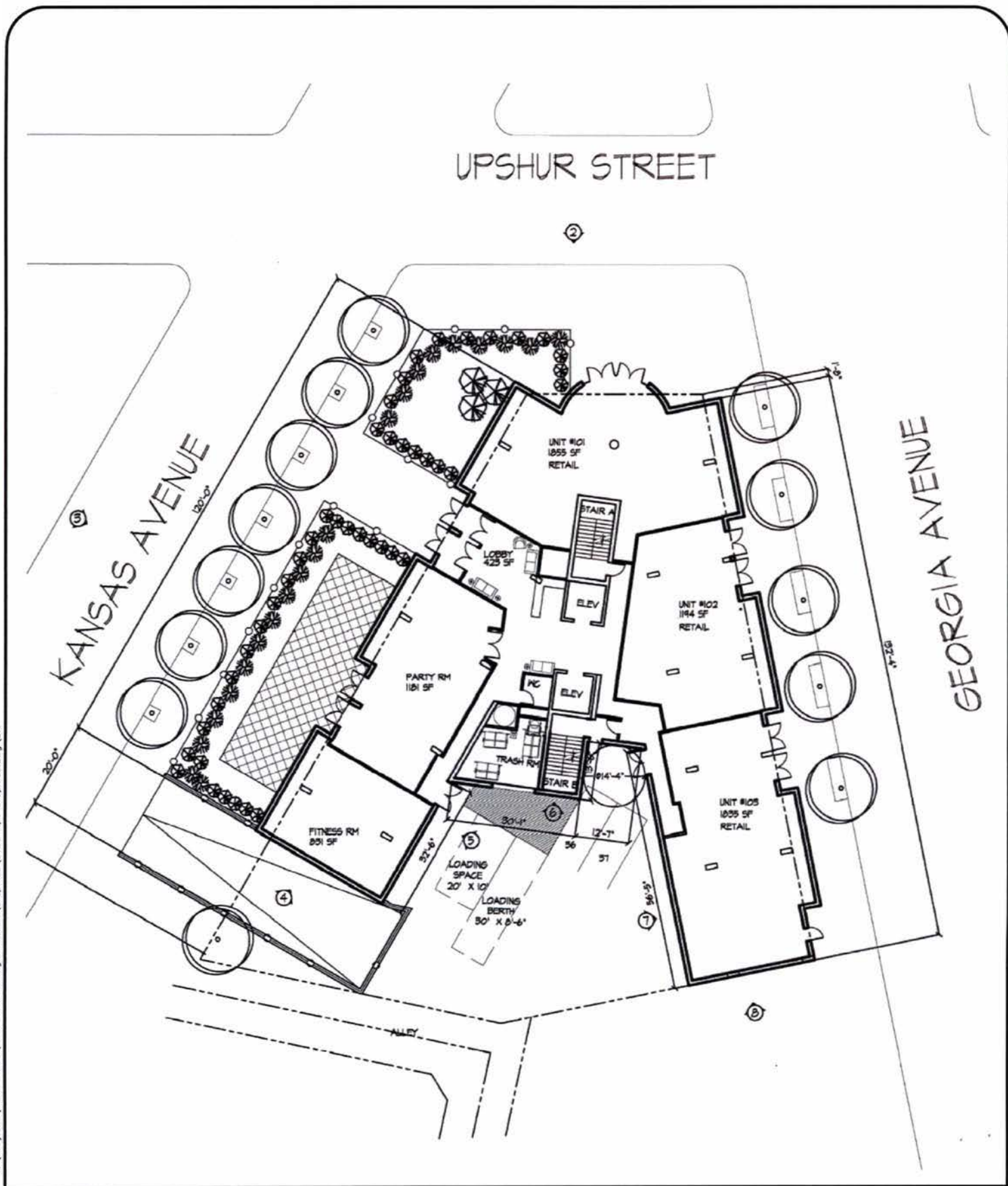


Figure 1-2
Site Plan



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. Georgia Avenue/Kansas Avenue,
2. Kansas Avenue/Upshur Street,
3. Georgia Avenue/Upshur Street,
4. Kansas Avenue/Taylor Street, and
5. Georgia Avenue/Taylor Street.

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 arterial, collector, and local streets. Existing intersection lane use and traffic control at key intersections in the site vicinity are shown on Figure 2-1.

In the site vicinity, Georgia Avenue is classified as a Principal Arterial, Kansas Avenue is classified as a Minor Arterial, Upshur Street is classified as a Collector and Taylor Street a local street by District of Columbia Department of Transportation (DDOT).

Georgia Avenue is a four lane road that runs north to south from the Maryland State Line in Silver Spring to Florida Avenue, NW in the District of Columbia. One-hour metered, on-street parking is provided along Georgia Avenue adjacent to the site, from 7:00 AM until 6:30 PM. Traffic signals are located on Rhode Island Avenue at Upshur Street and Kansas Avenue. Taylor Street is under STOP control at Georgia Avenue.

Kansas Avenue is a two lane road that runs northeast-southwest and extends from the Maryland State Line in Hyattsville to Spring Road, NW in the District of Columbia. On-street parking is permitted on Kansas Avenue between Upshur Street and Taylor Street. Due to the two existing driveways to the gas station, there are no on-street parking spaces along the Kansas Avenue property frontage. South of Taylor Street, zone 4 residential permit parking is allowed on both sides of the street, with two-hour on-street parking permitted between 7:00 AM and 8:30 PM.

Upshur Street is a two lane, east-west road that extends from Rock Creek Church Road NW and terminated just east of Rock Creek Park. Zone 4 residential permit parking is allowed on both sides of the street east of Georgia Avenue, with two-hour on-street parking permitted between 7:00 AM and 8:30 PM. West of Kansas Avenue, on-street parking is prohibited between 7:00 and 9:30 AM on the north side of the street and between 4:00 PM and 6:30 PM on both sides of the street.

Taylor Street is a two lane, east-west road that extends from Rock Creek Church Road NW to Arkansas Avenue NW, in the site vicinity. Curb Parking is permitted on both sides of the street.

Existing Traffic Counts

Vehicular Traffic Counts. Existing AM and PM peak period vehicular traffic counts were conducted on Tuesday, March 14, 2006, by Wells & Associates at the following intersections:

1. Georgia Avenue/Kansas Avenue,
2. Georgia Avenue/Upshur Street, and
3. Five existing site driveways; two on Georgia Avenue, two on Kansas Avenue and one on Upshur Street.

The remaining intersection;

4. Kansas Avenue/Upshur Street
5. Kansas Avenue/Taylor Street, and
6. Georgia Avenue/Taylor Street,

were obtained from The Residences at Georgia Avenue 4100 Georgia Avenue, NW Traffic Impact Study, November 8, 2005, Symmetra Design. These counts were collected in September 2005.

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



Georgia Avenue, south of Kansas Avenue carried 24,400 vehicles per day (vpd) in 2002, according to DDOT. Kansas Avenue, south of Georgia Avenue, carried 7,700 vpd, while Upshur Street west of Kansas Avenue carried 7,000 and east of Georgia Avenue carried 5,800 vpd.

The morning peak hour generally occurred at 7:45 to 8:45 AM, and the afternoon peak hour generally occurred at 5:15 to 6:15 PM. Figure 2-2 indicates that Georgia Avenue, along the site frontage, carried 1,918 trips during the AM peak hour, and 1,673 trips during the PM peak hour. Georgia Avenue, along the site frontage, carried 558 trips during the AM peak hour, and 523 trips during the PM peak hour.

The existing Shell gas station generated 99 AM peak hour trips and 102 PM peak hour trips on the survey day.

Pedestrian Traffic Counts. Existing AM and PM peak period pedestrian traffic counts also were conducted on Tuesday, March 14, 2006, by Wells & Associates at the intersections listed above. The results are included in Appendix B.

Public Transportation Facilities and Services

The subject site is served by four Metrobus lines and the Georgia Avenue-Pentworth Metro station located approximately 0.33 miles to south on Georgia Avenue. Metrobus lines 60, 62, 70, and 71 operate on Georgia Avenue adjacent to the subject site. Two car sharing spaces are located on Upshur Street, east of 9th Street. The Public Transportation Facilities are shown on Figure 2-3.

Bicycle Facilities

Kansas Avenue from Grant Circle NW to Georgia Avenue is a designated bikeway. West of the Georgia Avenue intersection to 13th Street, Kansas Avenue is a signed bicycle route according to the April 2005 District of Columbia Bicycle Master Plan.

Kansas Avenue east of Georgia Avenue currently operates at bicycle level of service (BLOS) "A", while west of Georgia Avenue currently operates at BLOS "C", according to the Plan.

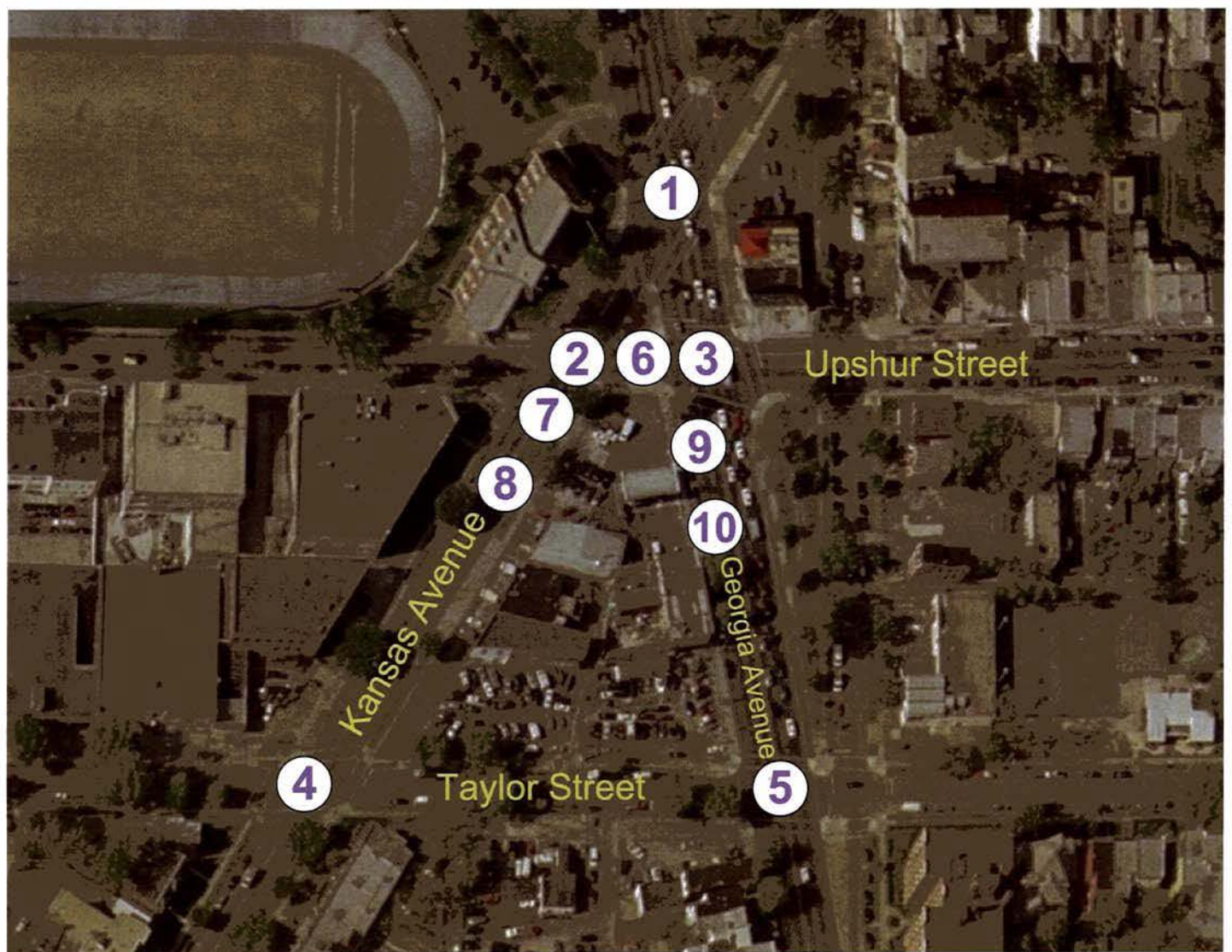
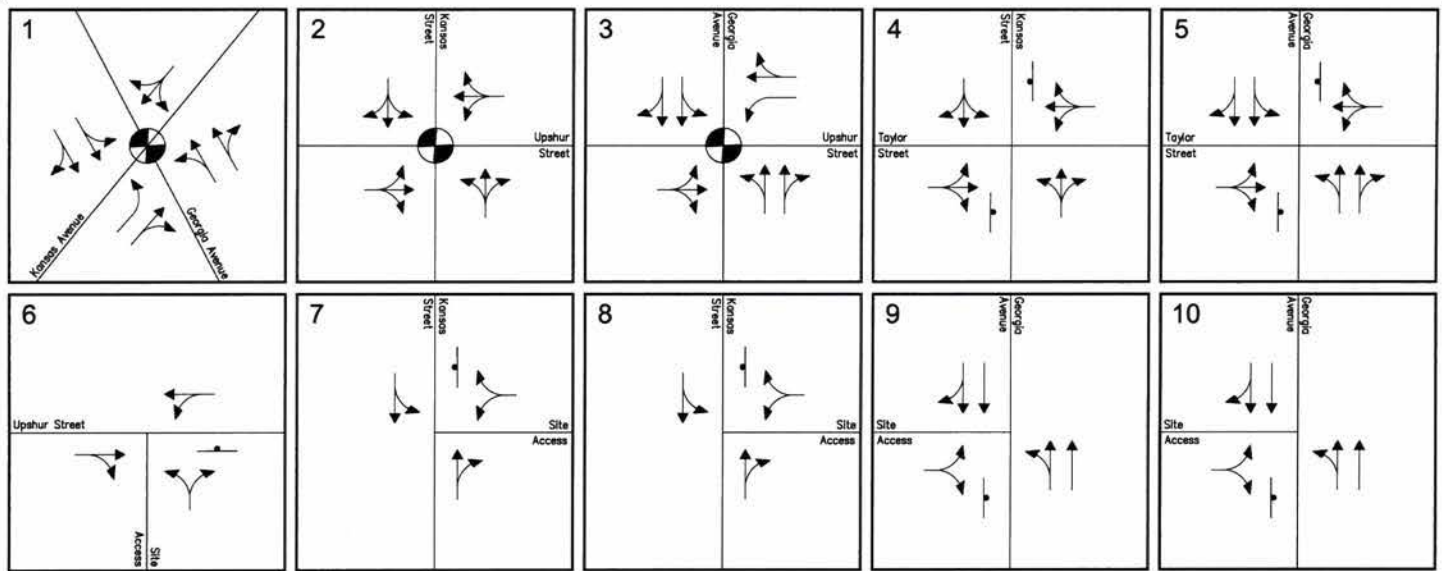


Figure 2-1
Existing Lane Use and Traffic Controls

← Represents One Travel Lane
 ● Signalized Intersection
 — Stop Sign



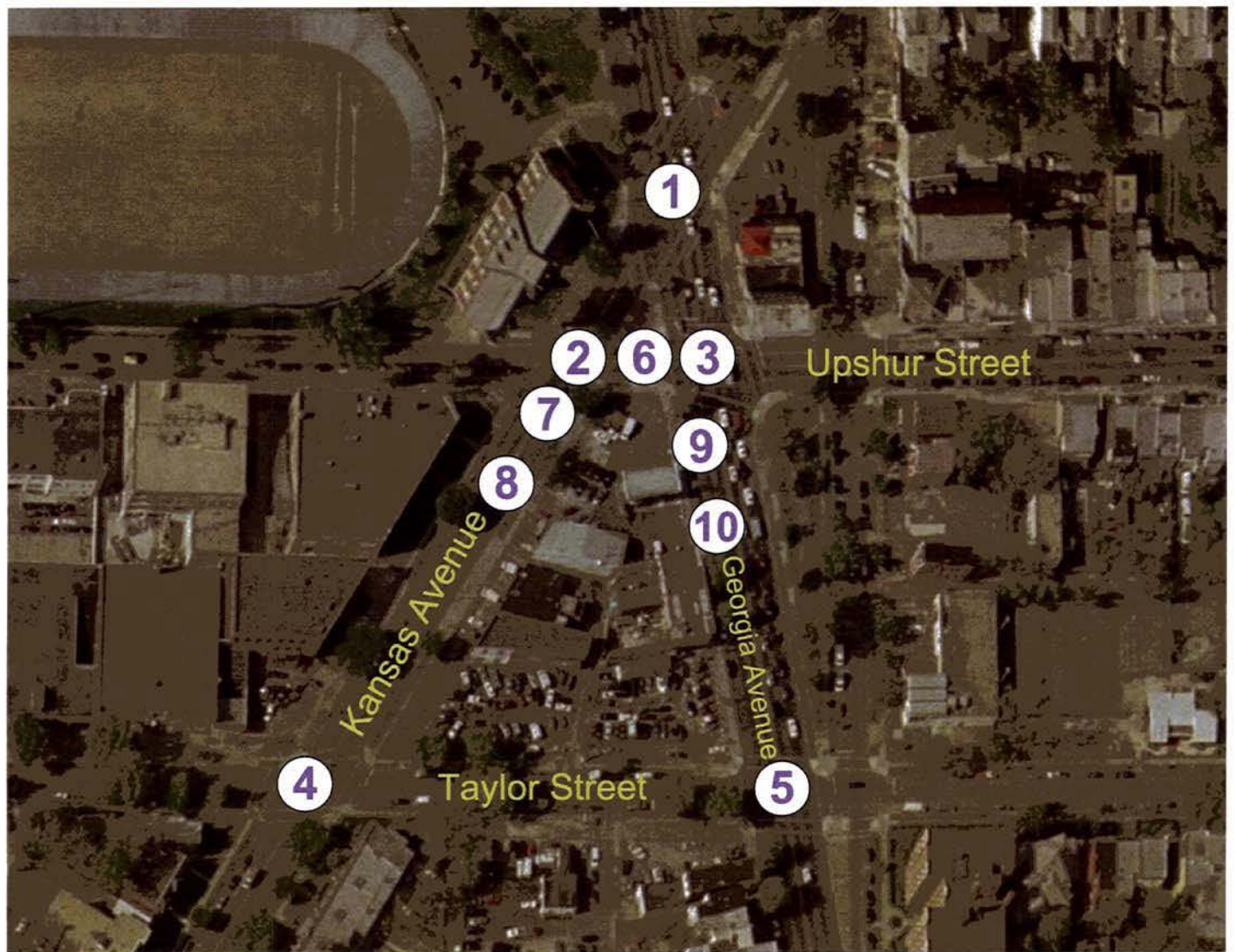
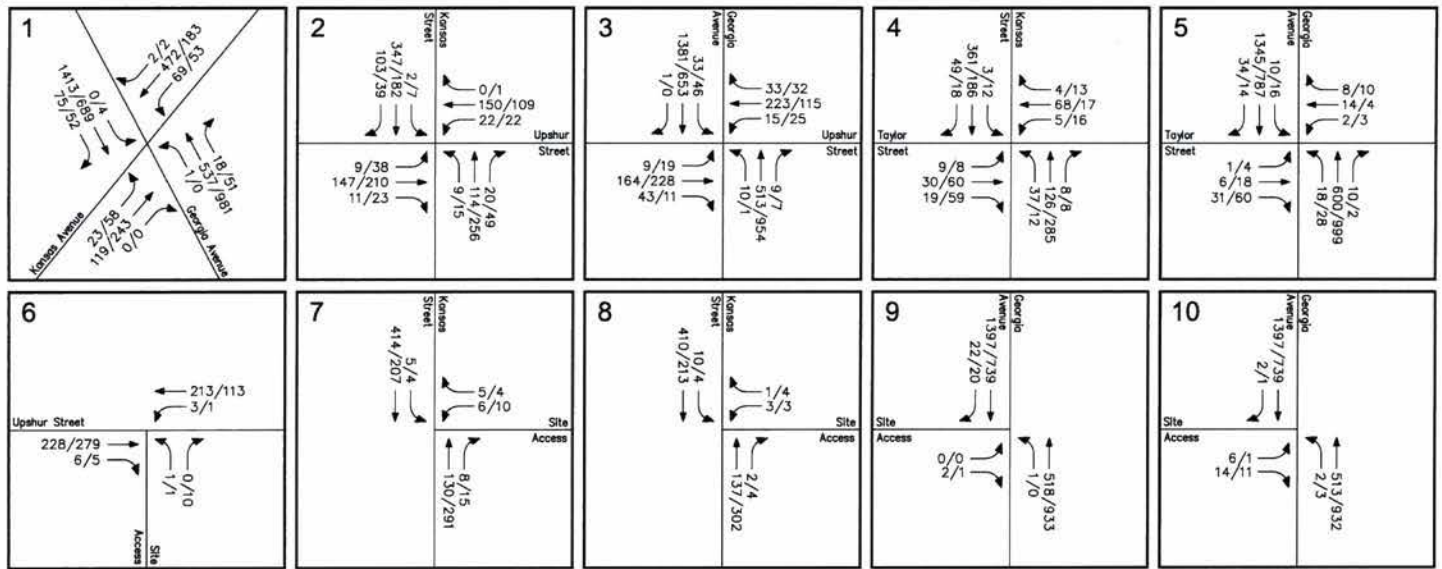


Figure 2-2
Existing Vehicular Traffic Counts



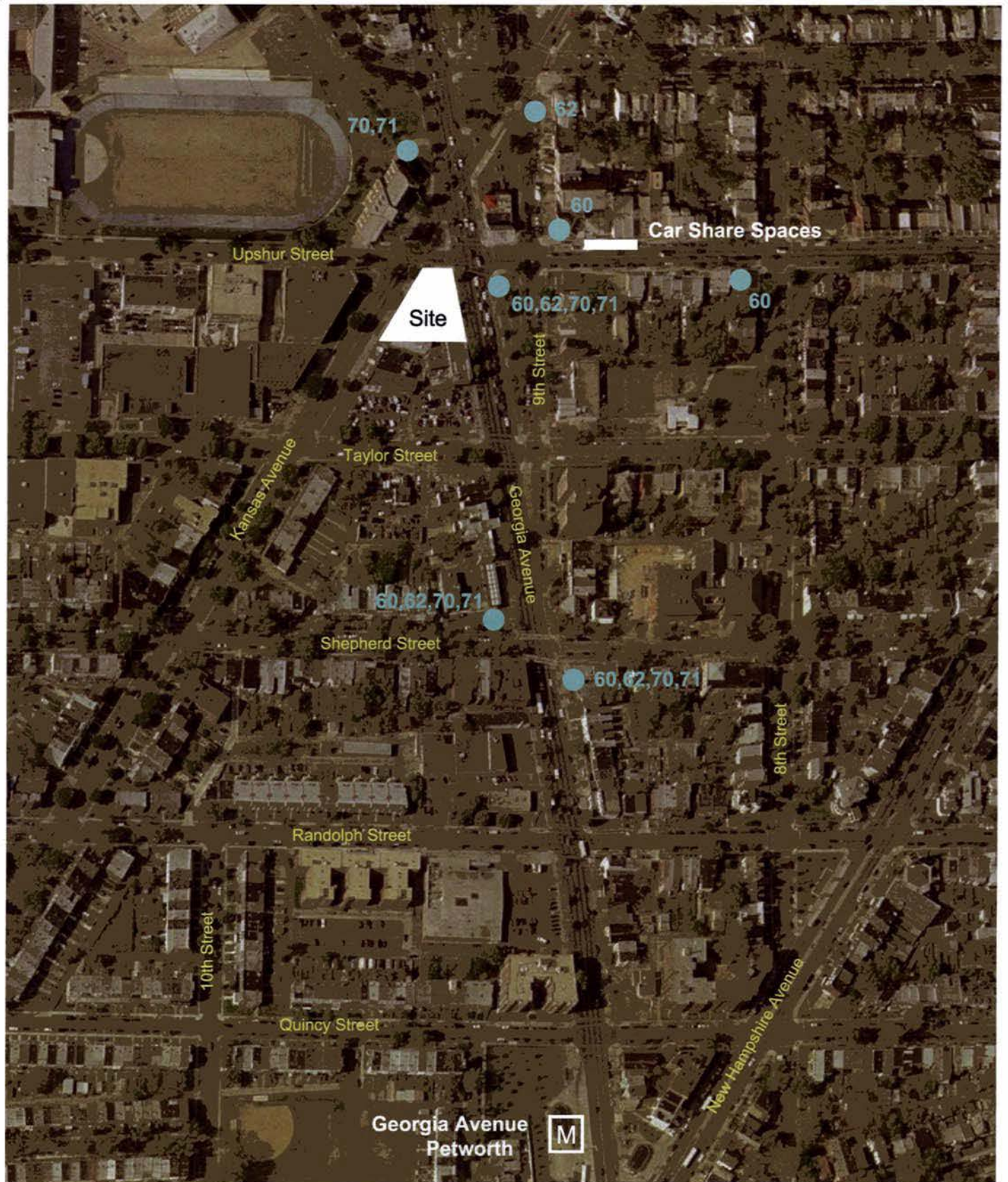


Figure 2-3
Existing Metro Bus and Rail Service

 Metro Bus Stops
  North

Section 3 ANALYSIS

Overview

This section presents analyses of existing and future traffic conditions, without and with the proposed re-development of the subject site, and evaluations of the parking and loading requirements.

Existing Levels of Service

Existing peak hour levels of service were estimated at the five 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 each of the three signalized intersections in the study area currently operate at an overall level of service (LOS) “D” or better during both the AM and PM peak hours. All approaches to each of the signalized intersections also operate at LOS “D” or better except the southbound approach on Georgia Avenue at the Georgia Avenue/Kansas Avenue intersection during the AM peak hour, which operates at LOS “E”.

All approaches at the unsignalized intersections operate at LOS “D” or better except the eastbound and westbound approaches on Taylor Street at Georgia Avenue during both the AM and PM peak hour, which currently operate at LOS “F” and the eastbound traffic leaving the southern Shell driveway on Georgia Avenue, which presently operates at a LOS “E” during the AM peak hour.

Trip Distribution Analysis

The distribution of peak hour trips that would be generated by the proposed mixed use, residential and retail, building at 4136 Georgia Avenue was determined based on existing traffic counts. Below are the estimated directions of approach:

To/Form	AM		PM	
	Inbound	Outbound	Inbound	Outbound
Georgia Avenue, North	25%	20%	25%	20%
Kansas Avenue, North	10%	5%	10%	5%
Upshur Street, West	10%	10%	10%	10%
Taylor Street, West	1%	4%	1%	4%
Georgia Avenue, South	38%	45%	38%	45%
Kansas Avenue, South	10%	10%	10%	10%
Upshur Street, East	5%	5%	5%	5%
Taylor Street, East	1%	1%	1%	1%
Total	100%	100%	100%	100%

Background Traffic Growth

A one (1) 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, shown on Figure 3-1.

Pipeline Projects

Two pipeline projects were identified within the vicinity of 4136 Georgia Avenue. The vehicular trips associated with the Park Place and 4100 Georgia Avenue projects are included in this traffic study. The trip generation volumes were obtained from the 4100 Georgia Avenue, Traffic Impact Study, Symmetra Design, November 8, 2005.

Table 3-1
4136 Georgia Avenue
Intersection Level of Service Analysis ^{1, 2, 3}

Intersection	Control	Approach	Existing - 2006		Background - 2009		Total Future - 2009	
			AM	PM	AM	PM	AM	PM
1. Georgia Avenue/Kansas Avenue IMPROVEMENT SIGNAL TIMING OPTIMIZATION	SIGNAL	EB	B (19.1)	C (23.7)	B (19.0)	C (26.0)	NA	NA
		WB	C (25.6)	B (17.6)	C (27.4)	B (18.5)	NA	NA
		NB	B (10.5)	B (10.5)	B (10.6)	B (10.8)	NA	NA
		SB	<u>E (73.1)</u>	<u>C (22.4)</u>	<u>F (90.0)</u>	<u>C (23.2)</u>	<u>NA</u>	<u>NA</u>
		OVERALL	D (48.1)	B (16.8)	E (57.3)	B (17.6)	NA	NA
		EB	NA	NA	C (21.9)	C (26.9)	C (22.1)	B (17.0)
		WB	NA	NA	C (34.7)	B (19.3)	C (33.4)	B (19.2)
		NB	NA	NA	A (7.9)	A (9.8)	A (7.8)	B (13.4)
		SB	<u>NA</u>	<u>NA</u>	<u>D (54.3)</u>	<u>C (22.3)</u>	<u>D (51.2)</u>	<u>C (22.2)</u>
		OVERALL	NA	NA	D (39.0)	B (17.1)	D (37.1)	B (17.4)
2. Upshur Street/Kansas Avenue	SIGNAL	EB	D (37.5)	C (33.8)	D (37.7)	C (34.2)	D (37.4)	D (54.0)
		WB	B (19.3)	B (14.9)	B (19.4)	B (14.4)	B (19.5)	C (20.5)
		NB	A (5.1)	A (9.7)	A (5.2)	A (9.9)	A (5.2)	A (6.4)
		SB	<u>A (8.5)</u>	<u>A (6.4)</u>	<u>A (8.6)</u>	<u>A (8.0)</u>	<u>A (8.3)</u>	<u>B (12.1)</u>
		OVERALL	B (15.1)	B (16.5)	B (15.2)	B (16.9)	B (15.0)	C (22.8)
3. Upshur Street/Georgia Avenue	SIGNAL	EB	B (14.2)	B (11.7)	B (14.6)	B (11.4)	B (14.0)	A (7.3)
		WB	C (25.8)	B (19.5)	C (26.1)	B (19.5)	C (26.0)	C (23.1)
		NB	B (12.8)	B (19.0)	B (13.3)	B (19.5)	B (13.2)	B (15.6)
		SB	<u>A (3.5)</u>	<u>A (4.2)</u>	<u>A (4.0)</u>	<u>A (5.1)</u>	<u>A (3.7)</u>	<u>A (3.9)</u>
		OVERALL	A (9.0)	B (13.2)	A (9.4)	B (13.6)	A (9.2)	B (11.2)
4. Taylor Street/Kansas Avenue	STOP	EBLTR	C [15.8]	B [14.0]	C [16.7]	C [16.2]	C [17.0]	C [16.7]
		WBLTR	C [18.2]	C [15.1]	C [19.6]	C [17.3]	C [19.4]	C [16.2]
		NBLTR	A [2.1]	A [0.4]	A [2.1]	A [0.4]	A [2.2]	A [0.4]
		SBLTR	A [0.1]	A [0.5]	A [0.2]	A [1.5]	A [0.5]	A [2.1]
5. Taylor Street/Georgia Avenue	STOP	EBLTR	F [66.2]	F [58.8]	F [7]	F [119.0]	F [886.9]	F [129.2]
		WBLTR	F [238.7]	F [59.3]	F [448.3]	F [126.6]	F [436.7]	F [158.6]
		NB	A [1.8]	A [1.1]	A [2.4]	A [2.1]	A [3.0]	A [2.7]
		SB	A [0.3]	A [0.8]	A [0.3]	A [0.8]	A [0.3]	A [0.8]
6. Upshur Street/Driveway	STOP	WBLT	A [0.1]	A [0.1]	A [0.1]	A [0.1]	NA	NA
		NBLR	B [10.9]	B [10.2]	B [10.9]	B [10.2]	NA	NA
7. Kansas Avenue/North Driveway	STOP	WBLR	B [11.7]	B [12.1]	B [11.9]	B [12.4]	NA	NA
		SBLT	A [0.1]	A [0.2]	A [0.1]	A [0.2]	NA	NA
8. Kansas Avenue/South Driveway	STOP	WBLR	B [12.6]	B [11.3]	B [12.9]	B [11.6]	NA	NA
		SBLT	A [0.3]	A [0.2]	A [0.3]	A [0.2]	NA	NA
9. Georgia Avenue/North Driveway	STOP	EBLR	B [13.2]	B [10.7]	B [13.3]	B [10.8]	NA	NA
		NB	A [0.2]	A [0.0]	A [0.2]	A [0.0]	NA	NA
10. Georgia Avenue/South Driveway	STOP	EBLR	E [45.4]	B [12.6]	F [59.3]	B [13.2]	NA	NA
		NBLT	A [0.3]	A [0.1]	A [0.4]	A [0.2]	NA	NA
11. Kansas Avenue/Site Access	STOP	WBLR	NA	NA	NA	NA	B [12.2]	B [12.9]
		SBLT	NA	NA	NA	NA	A [0.2]	A [1.0]

Notes:

¹ Based on as Synchro version 6

² Numbers in brackets, [], represent control delay in seconds per vehicle for unsignalized intersections

³ Numbers in parenthesis, (), represent control delay in seconds per vehicle for signalized intersections.

As shown in Table 3-2, the Park Place project includes 148 residential units and 17,000 S.F. of retail, 4100 Georgia Avenue includes 72 residential units and 11,020 S.F. of retail. It is anticipated that these two pipeline projects will generate a total of 222 AM peak hour trips (92 in, 130 out) and 224 PM peak hour trips (119 in, 205 out).

A summation of the pipeline project trip assignments is shown on Figure 3-2.

Background Traffic Forecasts

Background peak hour traffic forecasts, as shown on Figure 3-3, without re-development of 4136 Georgia Avenue, were estimated based on existing traffic counts, background traffic growth and the two pipeline project mentioned above.

Background Future Levels of Service

Future peak hour levels of service, without re-development of 4136 Georgia Avenue, were estimated at the five 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 both the Kansas Avenue/Upshur Street and Georgia Avenue/Upshur Street intersection both will continue to operate at an overall LOS "D" or better during both the AM and PM peak hours. Each approach also continues to operate at LOS "D" or better.

The Georgia Avenue/Kansas Avenue intersection would operate near capacity, LOS "E", during the AM peak hour and would continue to operate at an overall LOS "B" during the PM peak hour. As indicated in Table 3-1, optimization of the existing signal timing at Georgia Avenue/Kansas Avenue would result in an overall LOS "D", during the AM peak hour. The southbound Georgia Avenue approach would operate at LOS "D" with the signal timing modifications.

All approaches at the unsignalized intersections continue operate at LOS "D" or better except the eastbound and westbound approaches on Taylor Street at the Georgia Avenue during both the AM and PM peak hour, which would operate at LOS "F" and the eastbound traffic leaving the southern Shell driveway on Georgia Avenue, which would operate at a LOS "E" during the AM peak hour.

Table 3-2
4136 Georgia Avenue
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
Park Place										
	Residential	232	148	DU	9	41	50	36	21	57
	Retail	814	17,000	S.F.	56	60	116	20	26	46
Development Subtotal					65	101	166	56	47	103
4100 Georgia Avenue										
	Residential	220	72	DU	6	15	21	17	12	29
	Retail	880	11,020	S.F.	21	14	35	46	46	92
Development Subtotal					27	29	56	63	58	121
Total Background Development					92	130	222	119	105	224

Notes:

(1) Based on Trip Generation, 7th Edition, Institute of Transportation Engineers.

Source: The Residences at Georgia Avenue, 4100 Georgia Avenue NW, Traffic Impact Study by Symmetra Design

Site Trip Generation Analysis

The number of trips that will be generated by the proposed mixed-use building at 4136 Georgia Avenue were estimated based on: (1) Institute of Transportation Engineers (ITE) trip generation rates, (2) the proximity of the project to the Georgia Avenue-Petworth Metro stations, and (3) experience with other comparable projects in Washington, D.C.

It is estimated that the proposed 57 residential units and 4,884 S.F. of ground floor retail would generate 38 AM peak hour trips (16 in and 23 out), and 89 PM peak hour trips (46 in and 42 out), as shown in Table 3-3.

The existing Shell gas station currently generates 99 AM peak hour trips and 102 PM peak hour trips, based on existing driveway counts. The proposed project, thus, would generate 61 fewer trips during the AM peak hour and 13 fewer trips during the PM peak hour.

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. The existing Shell gas station trips were subtracted from the road network based on existing travel patterns, as shown on Figure 3-5.

Total Future Traffic Forecasts

The 4136 Georgia Avenue site traffic assignments, shown on Figure 3-4, and the existing Shell gas station trips, shown on Figure 3-5, were added and subtracted to the future background traffic volumes, shown on Figure 3-3, to yield the total future traffic forecasts shown on Figure 3-6.

Total Future Levels of Service

Future peak hour levels of service with re-development of 4136 Georgia Avenue 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 3-6; and the Synchro intersection capacity analysis model. The results are presented in Appendix E and summarized in Table 3-1.



Table 3-3
4136 Georgia Avenue
Site-Trip Generation Analysis

Land Use	Size	Units	Land Use Code	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Observed Driveway Counts (Tuesday 3/14/2006)				61	38	99	57	45	102
<u>ITE Vehicle-Trips (1)</u>									
Retail	4,884	S.F.	820	16	10	26	41	44	85
Reisidential	57	D.U.	230	<u>6</u>	<u>27</u>	<u>33</u>	<u>25</u>	<u>13</u>	<u>38</u>
			Subtotal	22	37	59	66	57	123
<u>ITE Person-Trips (2)</u>									
Retail	4,884	S.F.	820	18	12	30	47	51	98
Reisidential	57	D.U.	230	<u>7</u>	<u>30</u>	<u>36</u>	<u>28</u>	<u>14</u>	<u>42</u>
			Subtotal	25	42	66	75	65	140
<u>ITE Vehicle Trips (3)</u>									
Retail	4,884	S.F.	820	12	8	20	32	35	67
Reisidential	57	D.U.	230	<u>4</u>	<u>15</u>	<u>18</u>	<u>14</u>	<u>7</u>	<u>22</u>
			Total	16	23	38	46	42	89
Difference (Existing minus Proposed)				45	15	61	11	3	13
Percent Difference				74%	39%	62%	19%	7%	13%

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

	<u>Retail</u>	<u>Residential</u>
Non-auto mode split:	0%	0%
Average vehicle occupancy (persons per vehicle)	1.15	1.10

(3) Assumptions:

	<u>Retail</u>	<u>Residential</u>
Non-auto mode split:	21.67%	38.52%
Average vehicle occupancy (persons per vehicle)	1.15	1.20

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.

Table 3-1 indicates that the net trips that would be generated by the proposed mixed-use building would have no significant impact on the signalized intersections in the study area. The signalized intersections and all approaches to those intersections would continue to operate at LOS “D” or better during both the AM and PM peak hours.

East-west traffic on Taylor Street, which is controlled by a stop sign at Georgia Avenue, theoretically would operate at capacity at LOS “F” during both the AM and PM peak hours. In practice, the nearby traffic signal at Georgia Avenue and Upshur Street would create gaps in traffic along Georgia Avenue, which would allow motorists to turn from Taylor Street onto Georgia Avenue without undue delay.

The 4136 Georgia Avenue driveway on Kansas Avenue is forecasted to operate at LOS “B” during both the AM and PM peak hours, under STOP control.

Parking Requirements

The parking requirement for a 57 residential unit and 4,884 S.F. of ground floor retail, mixed-use building within the underlying C-2-A zone is one (1) space for each two (2) dwelling units and one (1) space for each 300 S.F. of gross floor area and cellar floor area in excess of 3,000 S.F., according to Chapter 21 of the *District of Columbia Municipal Regulations*. The proposed mixed-use building, therefore, would require 36 parking spaces.

The proposed mixed-use building would be served by 37 surface and below-grade parking spaces. Further, metered on-street parking and residential permit parking is permitted along adjacent streets in the immediate site vicinity. The proposed parking supply would meet the parking requirements for the proposed mixed-use building.

Loading Requirements

Two loading berths will be provided by the proposed building, one (1) 20-foot loading berth and one (1) 30-foot loading berths. The loading dock area will be located at the rear of the proposed building with access from Kansas Avenue via the existing. SU-30 trucks are able to pull into the loading area, front-in, turn around and leave front-out, as shown on Figure 3-7.

Within the underlying C-2-A zone no loading is required for retail uses under 5,000 S.F., residential uses with 50 or more units require one (1) 20-foot deep loading berth for service/delivery requirements and a 55-foot deep loading berth according to Chapter 22 of the *District of Columbia Municipal Regulations*.



As shown on Figure 3-7, a SU-30 truck will be able to access the loading area. Loading for a 55-foot truck is proposed to occur along Kansas Avenue, adjacent to the site, during the infrequent occasion it would occur. DDOT has suggested applying for No Parking signs during such rare occurrences when a 55- foot truck would be at the site.

We are requesting relief from Section 2204.2 of the Zoning Regulations that require that loading berths and loading spaces shall be directly accessible from a street, alley or private driveway, due to the unusual shape of the property caused by the three abutting streets.

Wells & Associates conducted surveys of six residential developments in Washington D.C. in 2002 regarding the frequency moves per month and the usage of 55-foot trucks. The six condominium developments were located in the northwest section of the District and ranged in size from 58 to 300 units with an average development size of 138 units. The following conclusions were drawn from the surveys:

1. The average number of moves per month was one to two, indicating a low turnover rate.
2. Many of the buildings required pre-scheduling of moving and restricted moving activities to general business hours on weekdays and weekends.
3. Nearly all of the surveyed sites indicated that the arrival of a large tractor-trailer is a rare occurrence. In those seldom instances, they must load and unload from a 30-foot dock or along the front or sides of the buildings.

Telephone surveys of truck rental facilities serving the City indicated that a 14- or 15-foot van or small truck is most frequently used for moving purposes. Many area moving companies indicated that they recommend the use of smaller moving vehicles for moves into urban areas. Long-distance moves are accommodated by transferring items from large trucks into smaller vehicles prior to delivery.

Therefore, the number of trucks generated by the proposed residential development is not expected to be significant. A 30-foot loading dock is proposed adjacent to the southeast corner of the building in order to accommodate many of the potential deliveries to the site.

The loading/delivery/service facilities provided for this development would adequately service the project and all but the loading berth would meet D.C. minimum zoning requirements.



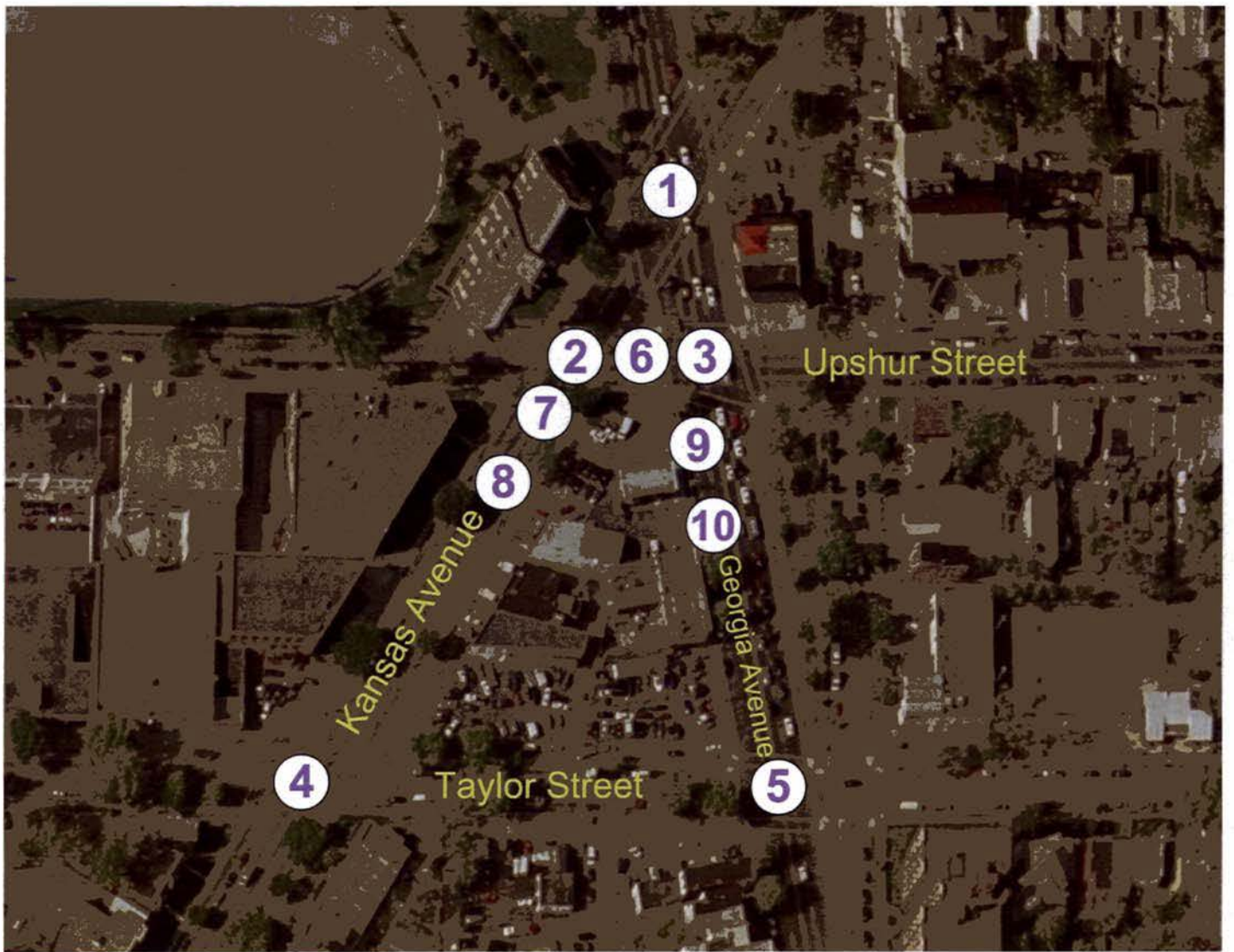
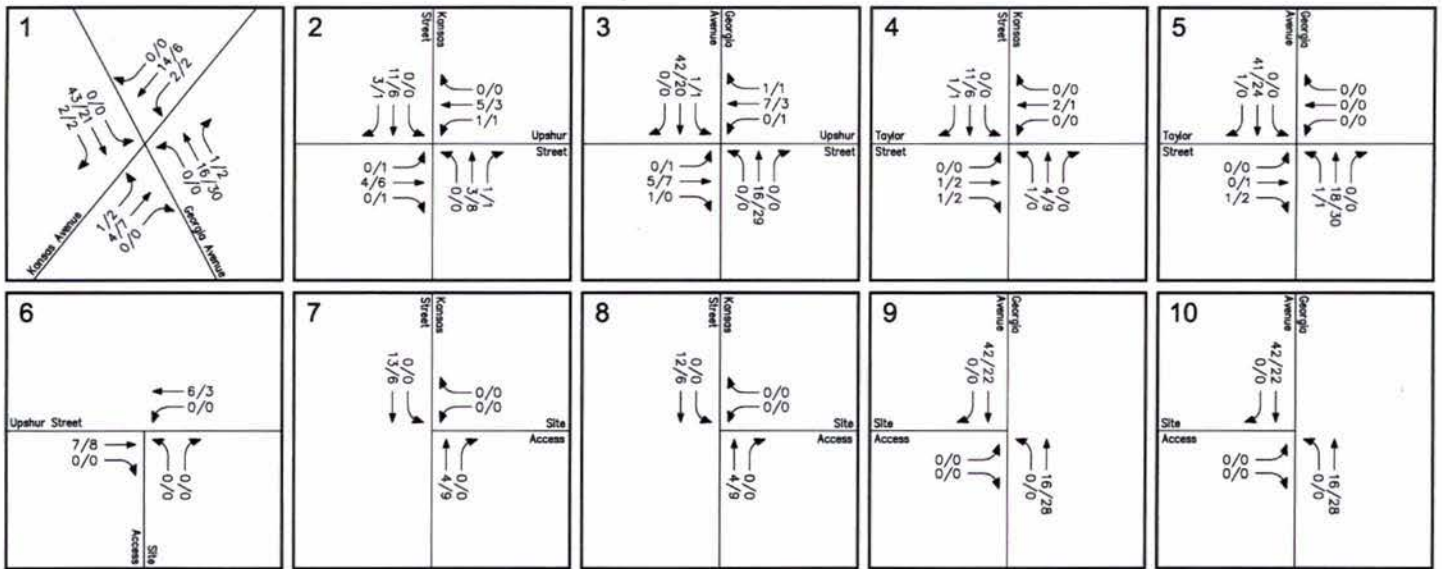


Figure 3-1
Background Traffic Growth

AM PEAK HOUR
PM PEAK HOUR
000/000



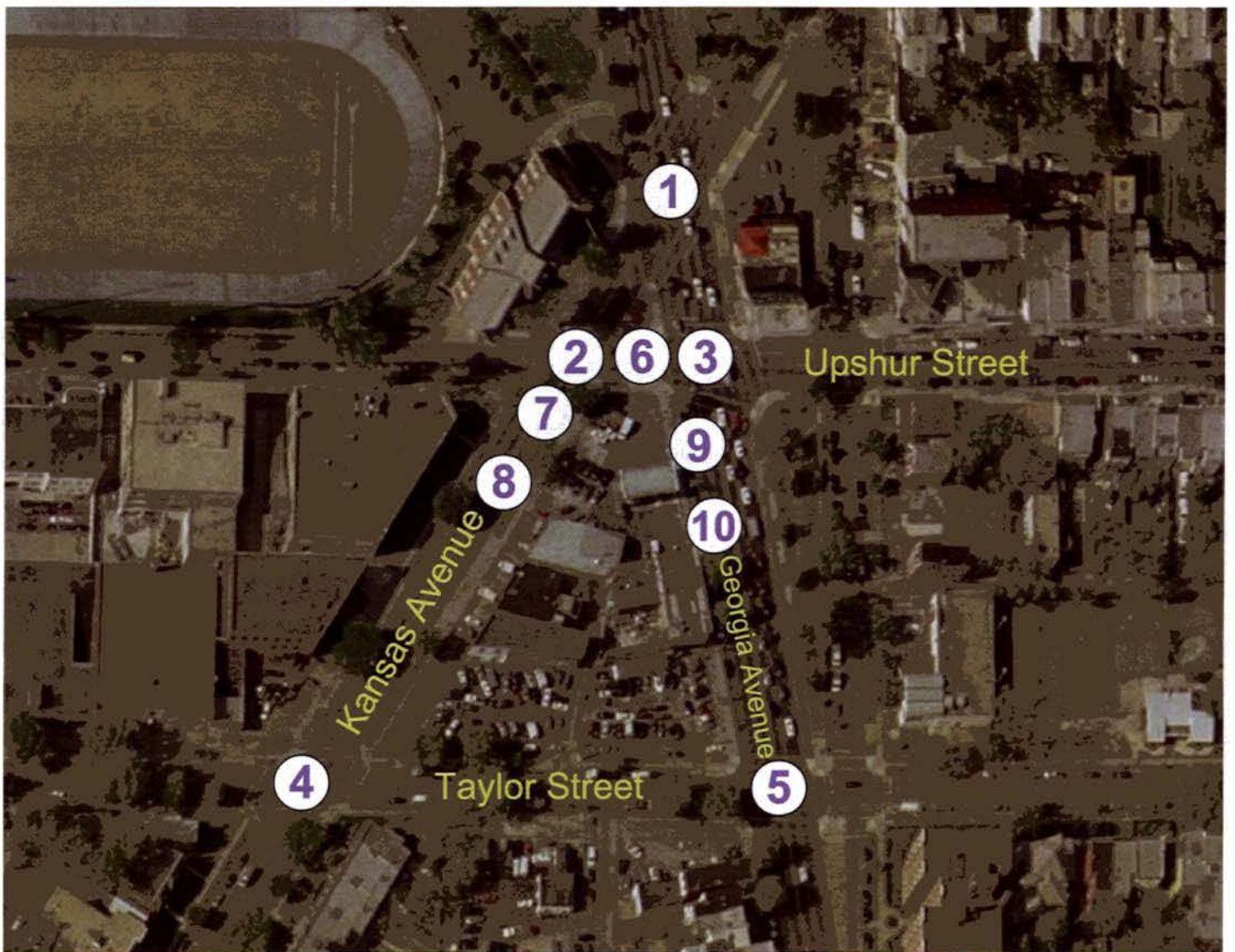
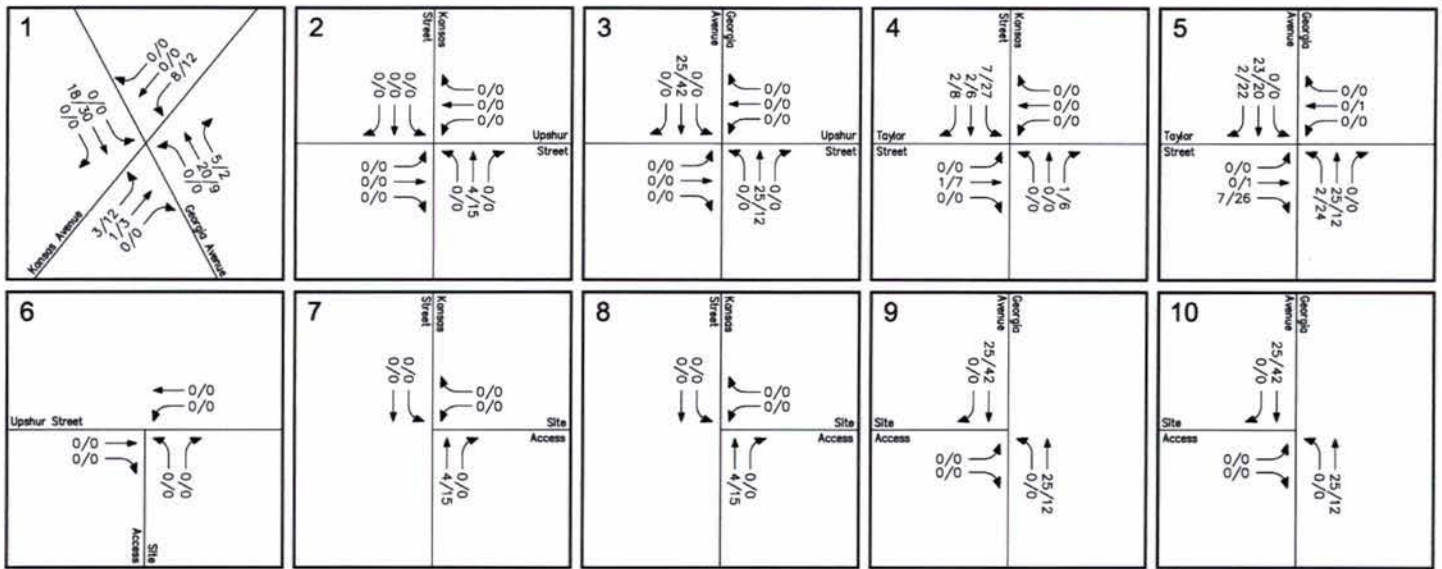


Figure 3-2
Pipeline Project Trip Assignments

AM PEAK HOUR
PM PEAK HOUR
000/000



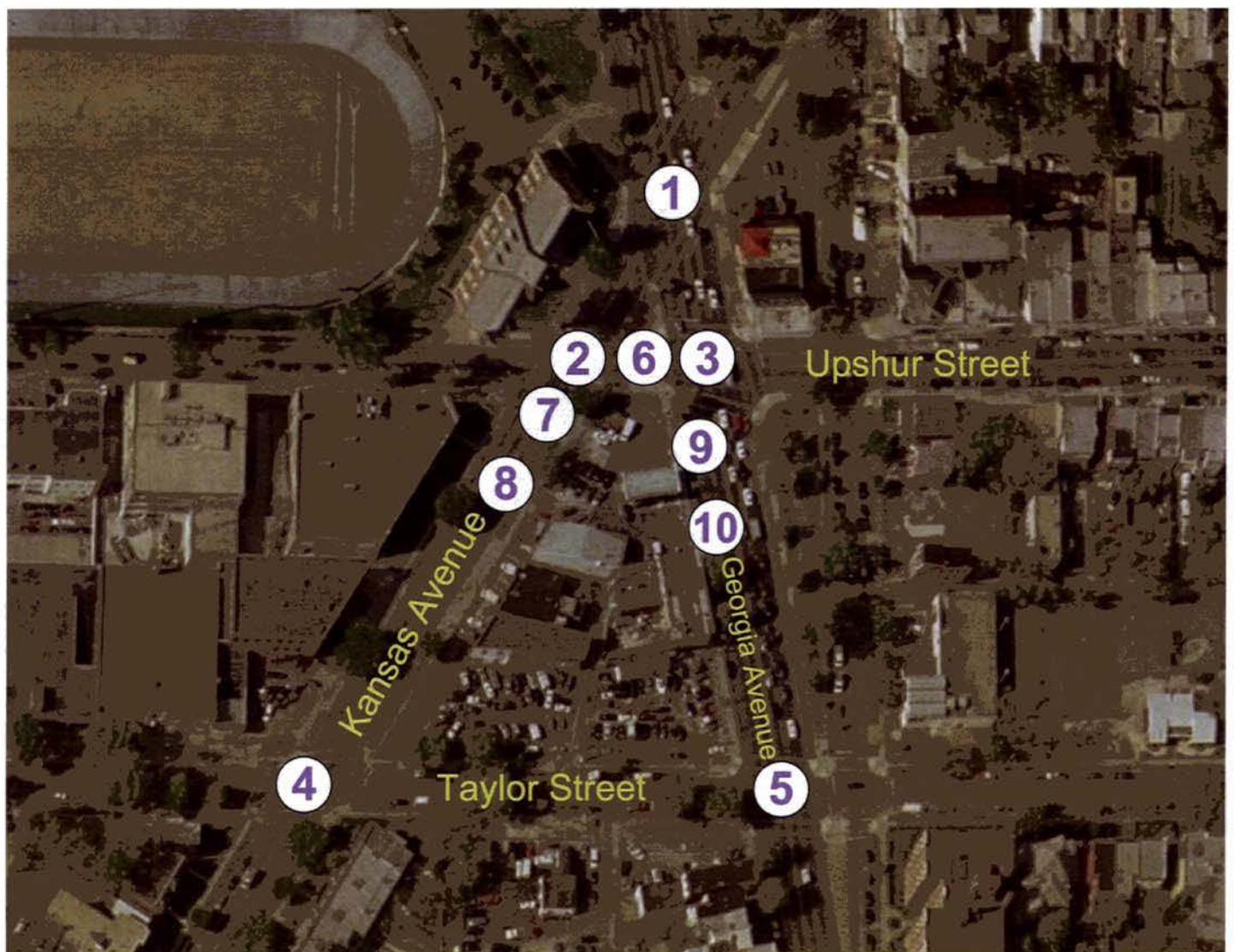
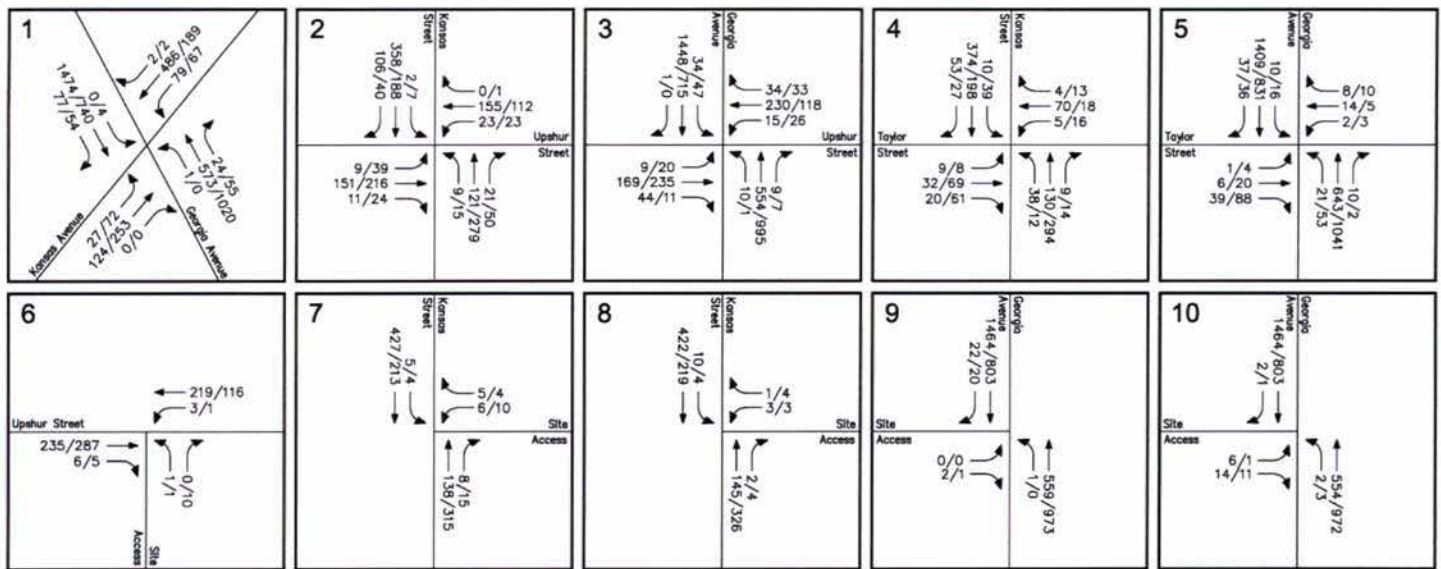


Figure 3-3
Background Future Peak Hour Traffic Forecasts

AM PEAK HOUR
PM PEAK HOUR
000/000
North

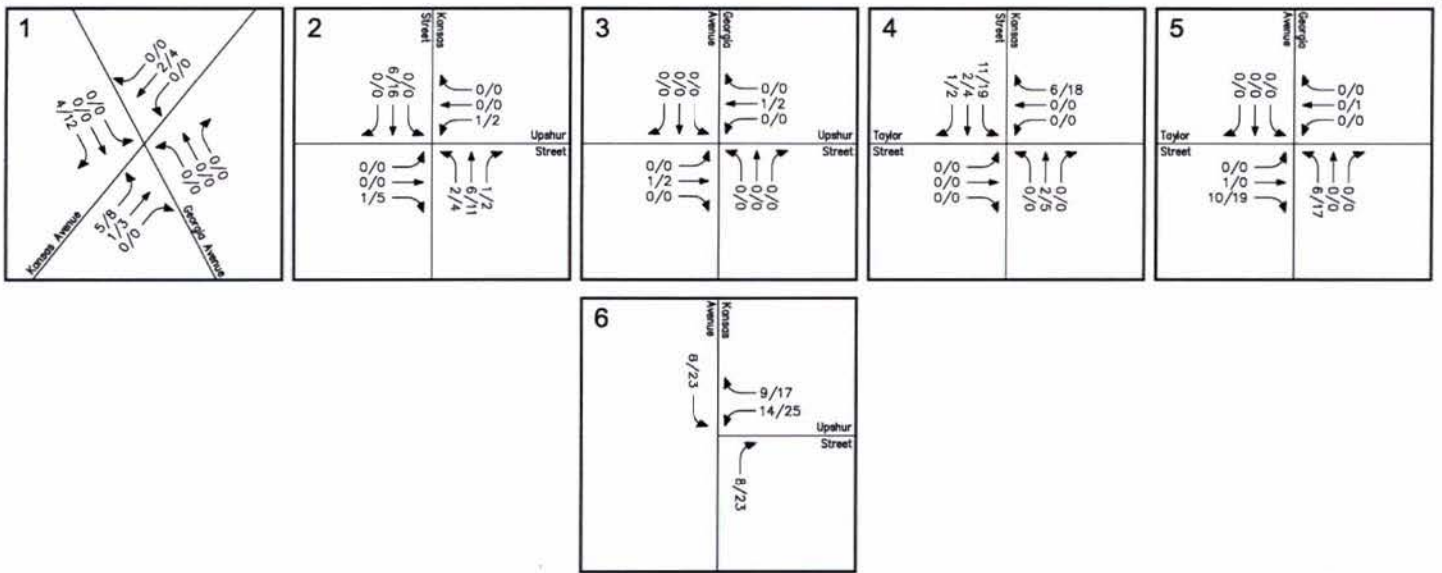


Figure 3-4
Site-Generated Traffic Assignments

AM PEAK HOUR
PM PEAK HOUR
000/000



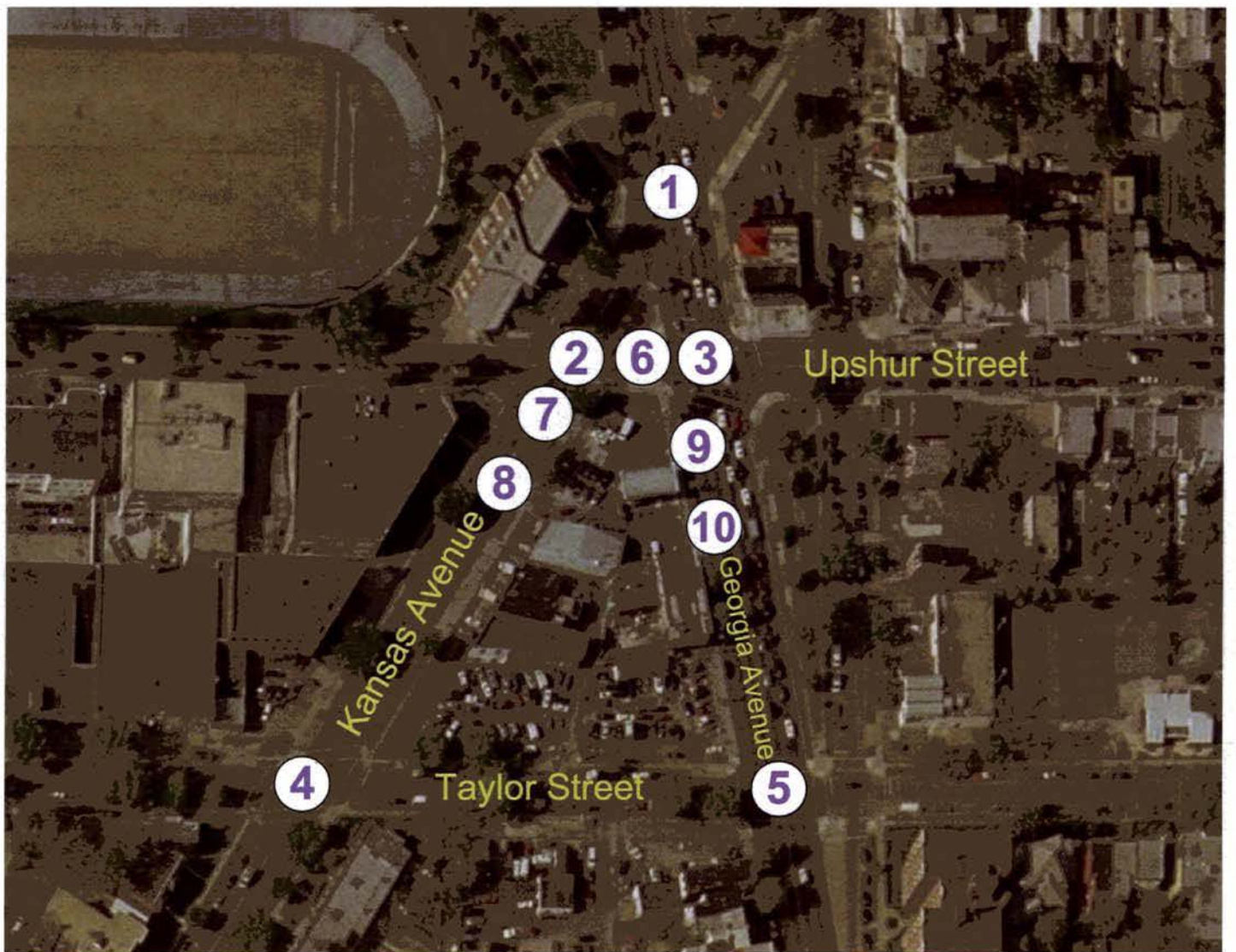
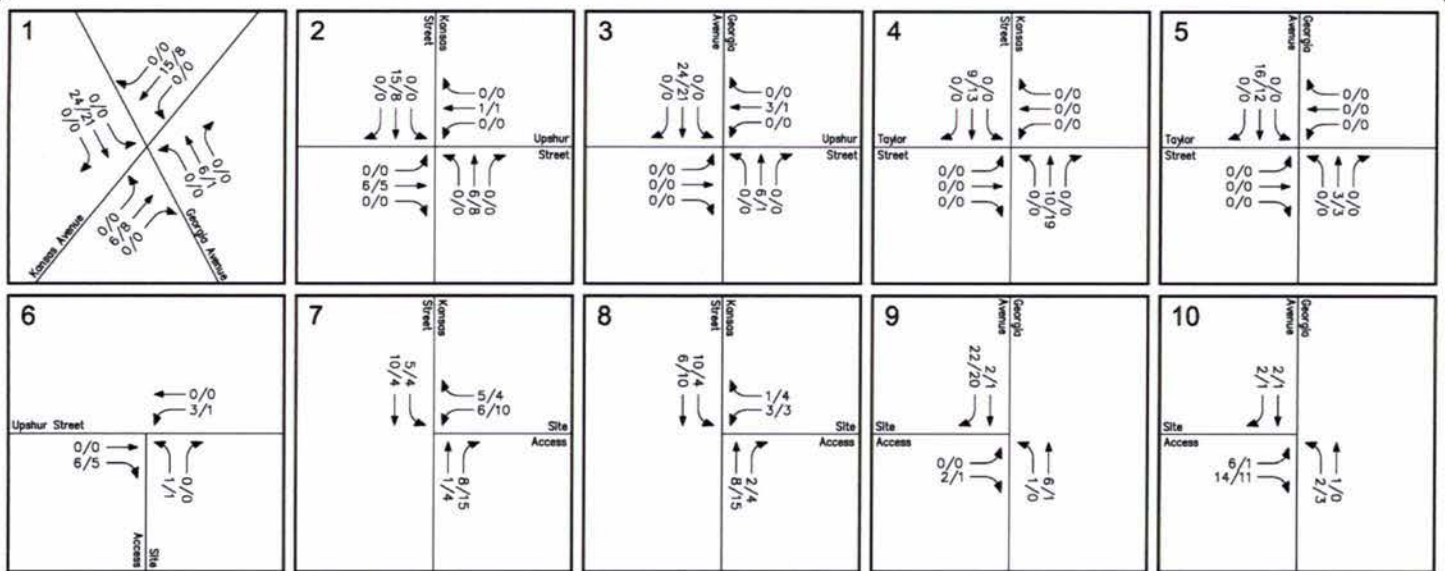


Figure 3-5
Existing Shell Station Trips

AM PEAK HOUR
PM PEAK HOUR
000/000



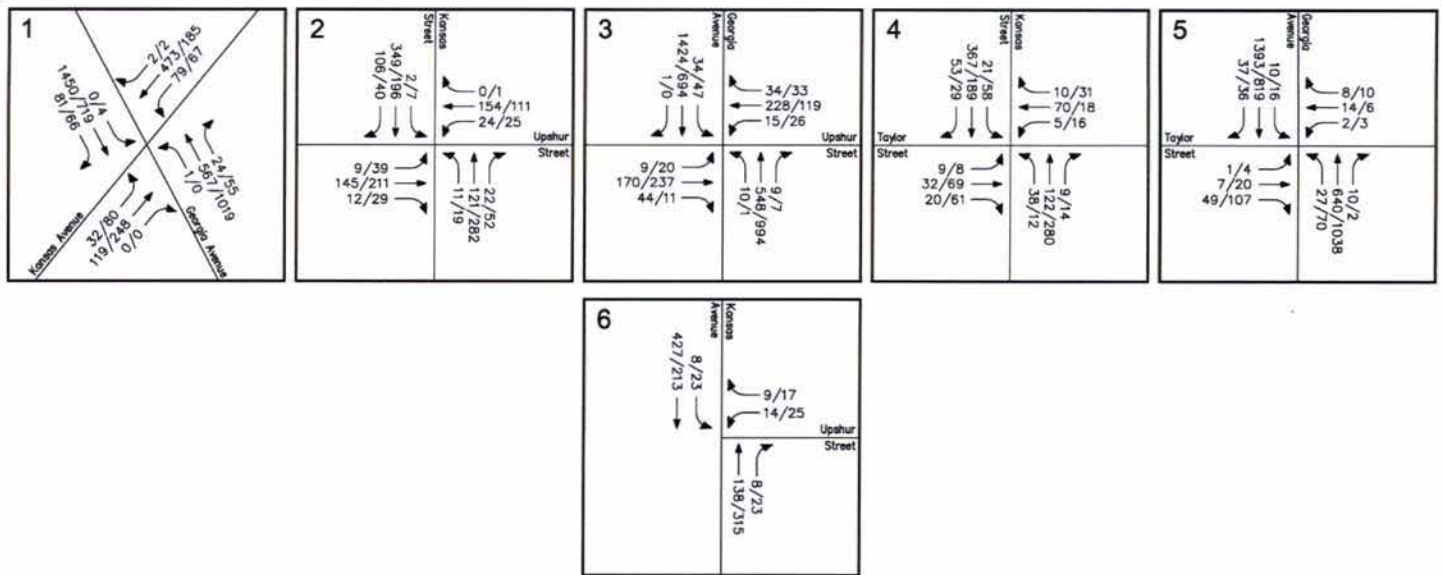


Figure 3-6
Total Future Peak Hour Traffic Forecasts

AM PEAK HOUR
PM PEAK HOUR
000/000



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Figure 3-7
Truck Access, Egress and Circulation



Section 4

CONCLUSIONS

The conclusions of this traffic impact study are as follows:

1. The three signalized intersections in the study area currently operate at level of service (LOS) "D" or better during both the AM and PM peak hours. All approaches to each of the signalized intersections also operate at LOS "D" or better during both the AM and PM peak hours, except the southbound approach on Georgia Avenue at the Georgia Avenue/Kansas Avenue intersection during the AM peak hour, which operates at LOS "E".
2. Kansas Avenue east of Georgia Avenue currently operates at bicycle level of service (BLOS) "A", while west of Georgia Avenue currently operates at BLOS "C", according to the April 2005 District of Columbia Bicycle Master Plan.
3. The proposed mixed-use building would generate 61 fewer trips during the AM peak hour and 13 fewer trips during the PM peak hour than the current Shell gas station.
4. The new trips that would be generated by the proposed mixed-use building would have no significant impact on the signalized intersections in the study area. Motorists on Taylor Street would utilize gaps created by the Georgia Avenue/Upshur Street signal to turn onto Georgia Avenue.
5. The 37 parking spaces provided at and below-grade would accommodate the 4136 Georgia Avenue mixed-use project.
6. The loading/delivery/service facilities provided for this development would adequately service the project and all but the loading berth would meet D.C. minimum zoning requirements.



Appendix A
Existing Vehicular Traffic Counts

Appendix B

Existing Pedestrian Traffic Counts



Appendix C

Existing Levels of Service



Appendix D

Background Future Levels of Service

Appendix E

Total Future Levels of Service

