

**symmetra** design

## MEMORANDUM

**TO:** Ryan Westrom DDOT  
Anna Chamberlin DDOT

**FROM:** Samantha Williams Symmetra Design  
Nicole White, P.E., PTOE Symmetra Design

**DATE:** September 29, 2014

**RE:** 3619 Georgia Avenue, NW –Transportation Memorandum  
BZA Case # 18876

## INTRODUCTION

The following memorandum is a transportation assessment for the proposed 3619 Georgia Avenue project. The subject site (Square 3032 Lot 0803 herein “Site”) is situated in the southeast corner of the Georgia Avenue, NW/Princeton Place, NW intersection and is 4,699 square feet. The project is located in the Georgia Avenue Overlay area<sup>1</sup> zoned C-3-A. The site consists of a single story building that supports two commercial uses.

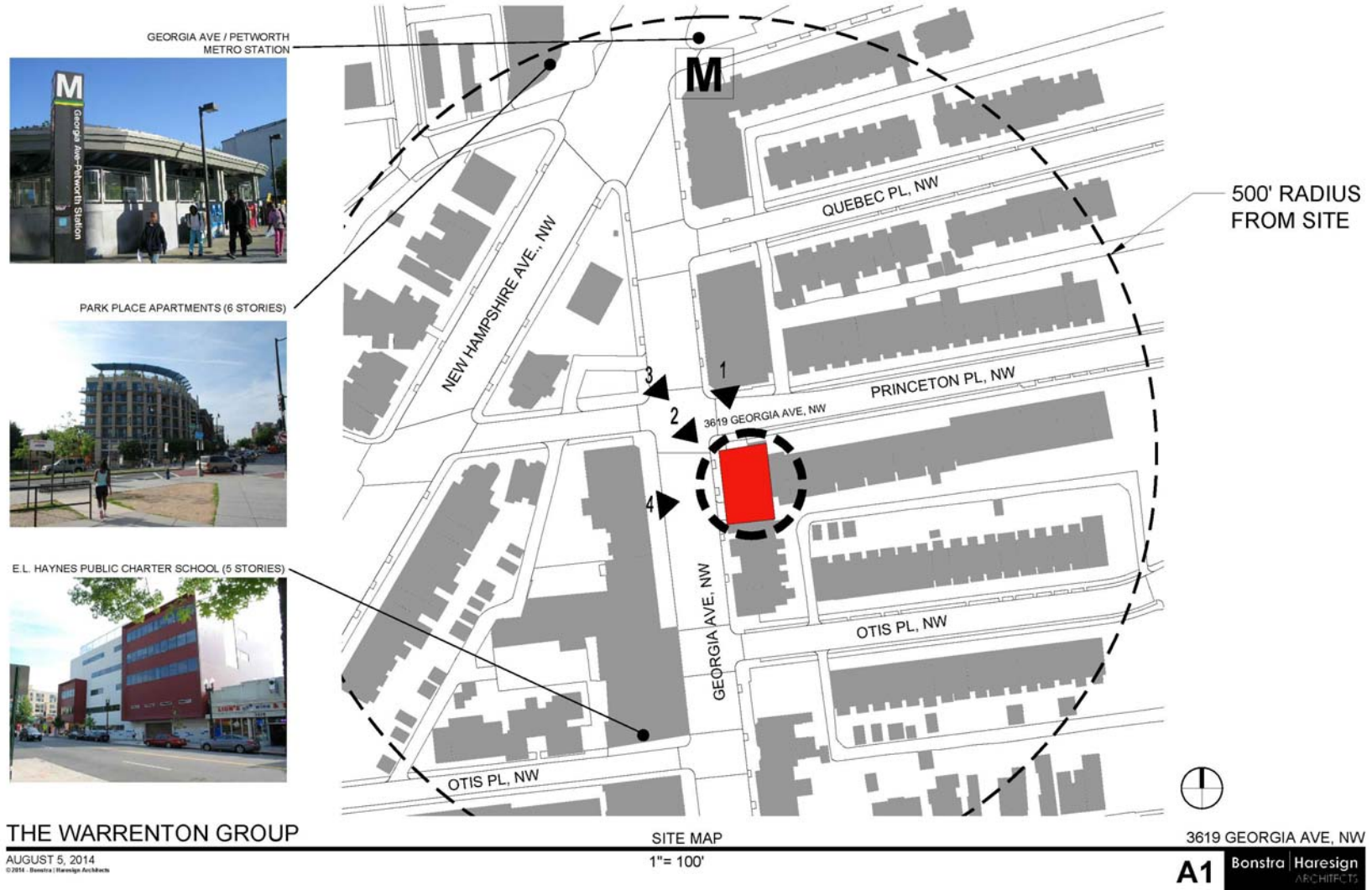
The Warrenton Group (the “applicant”) plans to build 27 residential units and 2,911 square feet of cellar and ground floor retail. The unique characteristics of the lot restrict the applicant’s ability to provide for on-site parking. The site is, however, well served by a number of transportation options such as Metrorail and Metrobus and it is anticipated that the majority of residents will utilize non-automobile transportation options to access the site.

The applicant is seeking relief from the Board of Zoning Adjustment (“BZA”) to provide no parking on the site premises. The zoning requirement is one space for every two units, or 14 total spaces.

---

<sup>1</sup> Per the Office of Zoning, the Georgia Avenue (GA) Overlay District was established to implement the objectives of the Petworth Metro Station Area and Corridor Plan and the Great Streets Framework Plan for 7th Street; to encourage additional residential uses and improved commercial uses; and to encourage vertically-mixed uses (ground-floor commercial and residential above) within a quarter mile of the Georgia Avenue – Petworth Metrorail Station

See **Figure 1** for a site location map.



**Figure 1: Site Location Map**

727 15th Street, NW  
 Suite 1000  
 Washington, DC 20005

T 202.370.6000  
 F 202.370.6001

www.symmetrdesign.com

Transportation Planning. Traffic Engineering.

## **SCOPE OF STUDY**

The applicant has completed the scoping process with the District Department of Transportation (DDOT). The scope of this transportation memorandum was confirmed and approved by DDOT. The final approved scoping form is attached.

This memorandum provides an assessment of existing On-street Parking Conditions, Pedestrian and Bicycle Facilities, Transit Service, Loading and Transportation Demand Management.

## EXISTING PARKING CONDITIONS

### Off-Street Parking

There are no public parking garages within proximity of the Site. There is a private garage for the E.L. Haynes Public Charter School located at the northwest corner of Georgia Avenue and Otis Place. The garage supports the Charter School only and is not available for public use. There are a number of buildings within the vicinity of the site that offer parking. The 3tree Flats building located at 3901 Georgia Avenue and Park Place at Petworth located at Georgia Avenue and New Hampshire Avenue both offer day, evening and full-time spaces for rent.

Some residents of the residential row homes, within the study area, have private parking accessed via the public alley network.

### On-Street Parking Supply and Restrictions

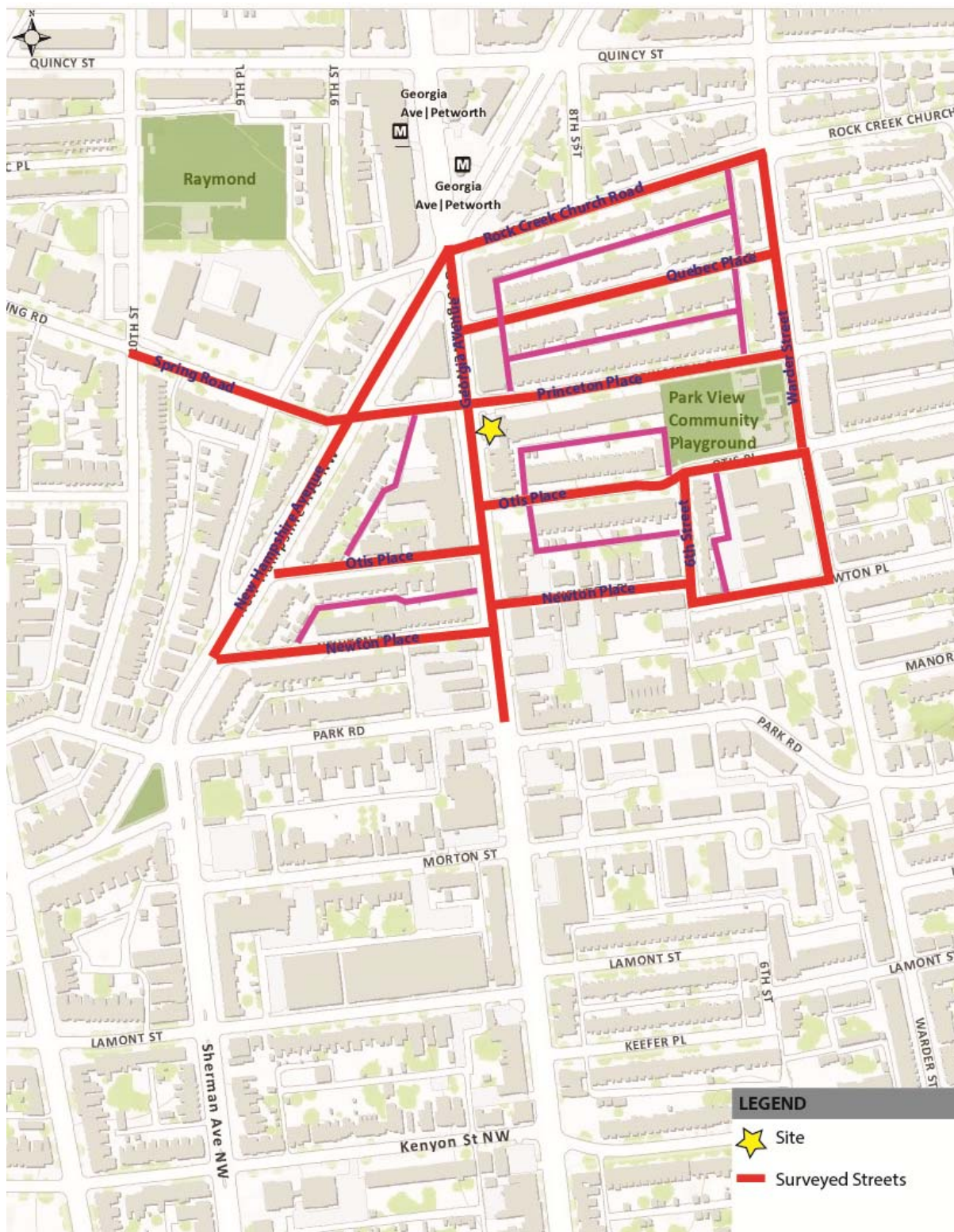
An inventory of on-street parking supply, control and restrictions were conducted along the following street segments illustrated in **Figure 2**:

- Georgia Avenue (between Rock Creek Church Road and Park Road)
- New Hampshire Avenue (between Georgia Avenue and Newton Place)
- Rock Creek Church Road (between Georgia Avenue and Warder Street)
- Princeton Place (between New Hampshire Avenue and Warder Street)
- Spring Road (between 10<sup>th</sup> Street and New Hampshire Avenue)
- Otis Place (between New Hampshire Avenue and Warder Street)
- Newton Place (between New Hampshire Avenue and Georgia Avenue to Warder Street)
- Warder Street (between Quebec Place and Newton Place)
- 6<sup>th</sup> Street (between Newton Place and Otis Place)
- Quebec Street (between Georgia Avenue and Warder Street)

A summary of parking supply by type for the aforementioned street segments is shown in **Table 1**. The parking supply was determined by measuring the length of available space to park with a measuring wheel. Interruptions such as driveways, fire hydrants and loading zones were excluded from the allowable parking areas. The allowable parking area measured was then divided by 25 feet, to account for an average size vehicle and additional buffer space. This number provided an approximate parking supply for each street section shown in Table 1. For Streets in which on-street spaces were parked at capacity, the number of parked vehicles were counted as the supply instead of determining the supply using the measuring wheel methodology.

**Table 2** identifies parking control, including restrictions such as loading zones and street cleaning, for the parking study area. The appendix of this document provides an excerpt from DDOT's August 20, 2014 Residential Parking Permit (RPP)/ANC map.





**Figure 2:** On-Street Parking Survey Study Area

727 15th Street, NW  
Suite 1000  
Washington, DC 20005

T 202.370.6000  
F 202.370.6001

[www.symmetrdesign.com](http://www.symmetrdesign.com)

Transportation Planning. Traffic Engineering.

**Table 1:** On-Street Parking Supply by Type

Street	Block	Side	RPP	Metered	Handicap Meter	Handicap	Pay to Park	No Parking Time Limit <sup>2</sup>	Not Signed	Short Term Parking <sup>3</sup>	Loading Zone	Total
Georgia Avenue	Rock Creek Church Rd. to Quebec St.	East		5								5
		West		6	1							7
	Quebec St. to Princeton Pl.	East										0
		West			1		3					4
	Princeton Pl. to Otis Pl.	East			1					1		1
		West								9		10
	Otis St. to Newton St.	East						2		3		5
		West								4		4
	Newton St. to Park Rd.	East					2			1		3
West						1				5 <sup>4</sup>	6	
Total			0	11	3	1	5	2	0	18	5	45
Rock Creek Church Road	Warder St. to 8th St.	North <sup>5</sup>	16									16
		South	14									14
	8th St. to Georgia Ave.	North								4 <sup>6</sup>		4
		South	12									12
Total			42	0	0	0	0	0	0	0	0	16
Quebec Street	Warder St. to 8th St.	North	26									26
		South	24									24
Total			50	0	0	0	0	0	0	0	0	50

<sup>2</sup> No Parking Monday through Friday 6:00AM to 2:00PM or 7:00AM to 6:30PM

<sup>3</sup> Includes locations signed 15 minute, 30 minute, 1, 2 and 3 hour parking.

<sup>4</sup> School loading Zone Drivers must remain in vehicle No Parking 7:00AM-6:30PM Monday-Friday

<sup>5</sup> Approximately 3 vehicle spaces temporarily reserved 8/25/14 through 11/30/14 7:00 AM to 5:00 PM.

<sup>6</sup> 15 minute parking 6:00AM-9:00AM and 4:00PM-6:00PM



Street	Block	Side	RPP	Metered	Handicap Meter	Handicap	Pay to Park	No Parking Time Limit <sup>2</sup>	Not Signed	Short Term Parking <sup>3</sup>	Loading Zone	Total
Warder Street	Rock Creek Church Rd. to Quebec St.	East	7							1 <sup>7</sup>		
		West	6									
	Quebec St. to Princeton Pl.	East	8									
		West	8			1						
	Princeton Pl. to Otis Pl.	East							7			
		West							6			
	Otis St. to Newton St.	East							6			
		West									10 <sup>8</sup>	
Total			29	0	0	1	0	0	19	1	10	59
Princeto n Place	Georgia Avenue to Warder Street	North	27			1						28
		South <sup>9</sup>	22			1						23
Total			49	0	0	2	0	0	0	0	0	51
Otis Place	Warder St. to 6 <sup>th</sup> St.	North	6					7 <sup>10</sup>				13
		South	2								7 <sup>11</sup>	9
	6 <sup>th</sup> St. to Georgia	North	12			1			1			14

<sup>7</sup> 30 minute parking

<sup>8</sup> School Loading Zone No Parking 7:45AM-3:15PM

<sup>9</sup> There were approximately two spaces temporarily blocked with a trash dumpster. Posted signage stated the restriction would be in place through 9/19/2014.

<sup>10</sup> No Parking 7:00AM-6:30PM; No Parking 6:00AM-2:00PM

<sup>11</sup> 15 minute parking School Zone 7:45AM-9:00AM and 3:00PM-6:00PM

Street	Block	Side	RPP	Metered	Handicap Meter	Handicap	Pay to Park	No Parking Time Limit <sup>2</sup>	Not Signed	Short Term Parking <sup>3</sup>	Loading Zone	Total
	Ave.	South	13			2						17 <sup>12</sup>
	Georgia Ave. to New Hampshire Ave.	North	17								3 <sup>13</sup>	
		South	19	4								
Total			69	4	0	3	0	7	1	0	10	96
6 <sup>th</sup> Street	Otis St. to Newton Pl.	East										
		West	7									7
Total			7	0	0	0	0	0	0	0	0	7
Newton Pl.	Warder St. to 6th St.	North	2						8			10
		South	13						2			15
	6 <sup>th</sup> St. to Georgia Ave.	North										0
		South	13			1				2		16
	Georgia Ave. to New Hampshire Ave.	North	25									25
		South	32			1						32
Total			85	0	0	2	0	0	10	2	0	99
New Hampsh ire	Newton St. to Otis Pl.	East	5									5
	Otis Pl. to Spring	East	12			1						13

<sup>12</sup> This supply also includes two car share spaces located along the south side of the street approaching Georgia Avenue.

<sup>13</sup> School Loading Zone Drivers Must Remain in the Vehicle 7:00AM-6:30PM

Street	Block	Side	RPP	Metered	Handicap Meter	Handicap	Pay to Park	No Parking Time Limit <sup>2</sup>	Not Signed	Short Term Parking <sup>3</sup>	Loading Zone	Total
Avenue	St.	West	14									14
	Park Rd. to Rock Creek Church Rd.	West	8									8
	Spring Rd to Georgia Avenue	East	3			1						4
		West	9									9
Total			51	0	0	2	0	0	0	0	0	53
Spring Road	10 <sup>th</sup> St to Rock Creek Church Rd.	North									13 <sup>14</sup>	13
		South	11									11
	Rock Creek Church Rd. to New Hampshire Ave.	North	3									3
		South	4									4
	New Hampshire Ave. to Georgia Avenue	North	0									0
		South	0									0
Total			18	0	0	0	0	0	0	0	13	31
Total Study Area			400	15	3	11	5	9	30	25	38	538

<sup>14</sup> School Loading Zone No Parking School Days 8:30AM-4:00PM

As shown in **Table 1**, curb parking is primarily RPP. Further, some of the surveyed Streets provide resident parking exclusively for Zone 1 residents or for Zone 1 and 4 residents such as sections of Warder Street, Otis Place and New Hampshire Avenue. The specific type of parking and allowed duration varies along the commercial areas such as Georgia Avenue. Detailed parking control and restrictions for the surveyed Streets is shown in **Table 2**.

**Table 2:** Parking Control and Restrictions

Street	Block	Side	Total	Control/Restrictions
Georgia Avenue	Rock Creek Church Rd. to Quebec St.	East	5	<ul style="list-style-type: none"> <li>Metered/Two Hour Parking 7AM-6:30PM</li> </ul>
		West	7	<ul style="list-style-type: none"> <li>Tow Away Zone</li> <li>Metered/Two Hour Parking 9:00AM-6:30PM Monday-Friday 7:00AM-6:30PM Saturday No time limit 6:30PM-10:00PM Monday-Saturday</li> </ul>
	Quebec St. to Princeton Pl.	East	0	
		West	4	<ul style="list-style-type: none"> <li>Handicap Meter 4 Hour Parking 7AM-6:30PM Monday-Friday</li> <li>Pay to Park/ Two Hour Parking 9:00AM-6:30PM Monday-Friday</li> </ul>
	Princeton Pl. to Otis Pl.	East	1	<ul style="list-style-type: none"> <li>Bus Loading Zone</li> <li>Two Hour Parking 7:00AM-6:30PM</li> </ul>
		West	10	<ul style="list-style-type: none"> <li>Two Hour Parking 9:00AM-6:30PM Monday-Friday</li> <li>School Loading Zone</li> </ul>
	Otis Pl. to Newton St.	East	5	<ul style="list-style-type: none"> <li>Three Hour Parking 9:00AM-6:30PM</li> <li>No Parking 7:00AM-6:30PM</li> </ul>
		West	4	<ul style="list-style-type: none"> <li>Two Hour Parking 9:00AM-6:30PM Monday-Friday</li> </ul>
	Newton St. to Park Rd.	East	3	
		West	6	<ul style="list-style-type: none"> <li>Bus Loading Zone</li> <li>No Parking</li> </ul>
Rock Creek Church Road	Warder St. to 8th St.	East	16	<ul style="list-style-type: none"> <li>Zone 1 &amp; 4 Resident Permit Parking Only 7AM-8:30PM Monday through Friday</li> <li>Street Cleaning Tuesday 12:30PM to 2:30PM</li> </ul>

Street	Block	Side	Total	Control/Restrictions
	8th St. to Georgia Ave.	West	14	<ul style="list-style-type: none"> <li>Tow Away Zone</li> <li>No Standing or Parking Metro Bus Zone</li> <li>Two Hour Parking Limit in Zone 1/4C 7AM-8:30PM Monday-Friday</li> <li>Street Cleaning Monday 12:30PM to 2:30 PM</li> </ul>
		East	4	<ul style="list-style-type: none"> <li>Tow Away No Standing or Parking Anytime</li> <li>Tow Away No Parking Loading Zone 7AM-6:30pm Monday through Saturday</li> <li>Street Cleaning No Parking Tuesday 12:30PM to 2:30PM</li> <li>15 Minute Parking 6AM-9AM and 4PM-6PM</li> </ul>
		West	12	<ul style="list-style-type: none"> <li>No Parking</li> <li>Two Hour Parking Limit in Zone 1/4C 7AM-8:30PM Monday through Friday</li> <li>Street Cleaning Monday 12:30PM to 2:30PM</li> </ul>
Quebec Street	Warder St. to Georgia Ave.	North	26	<ul style="list-style-type: none"> <li>No Parking or Standing Anytime</li> <li>Two Hour Parking Limit in Zone 1 &amp; 4 7AM-8:30PM Monday through Friday</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
		South	24	<ul style="list-style-type: none"> <li>No Standing or Parking Anytime</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
Warder Street	Rock Creek Church Rd. to Quebec St.	East	7	<ul style="list-style-type: none"> <li>No Standing or Parking Anytime</li> <li>Zone 1 &amp; 4 Resident Permit Parking Only Monday-Friday 7:00AM-8:30PM</li> </ul>
		West	6	<ul style="list-style-type: none"> <li>Zone 1 Resident Permit Only 7:00AM-8:30PM Monday through Friday</li> </ul>
	Quebec St. to Princeton Pl.	East	8	<ul style="list-style-type: none"> <li>Zone 1 Resident Permit Only 7:00AM-8:30PM Monday through Friday</li> <li>Street Cleaning Thursday 12:30PM-2:30PM</li> </ul>
		West	9	<ul style="list-style-type: none"> <li>Reserved Parking Special Permit</li> <li>Two Hour Parking Limit in Zone 1 7:00AM-8:30PM Monday – Friday</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
	Princeton Pl. to Otis Pl.	East	7	<ul style="list-style-type: none"> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
		West	6	<ul style="list-style-type: none"> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>

Street	Block	Side	Total	Control/Restrictions
	Otis St. to Newton St.	East	6	<ul style="list-style-type: none"> <li>No Parking</li> <li>Tow Away Zone 7:00AM-6:30PM Monday-Friday</li> </ul>
		West	10	<ul style="list-style-type: none"> <li>No Parking</li> <li>School Loading Zone No Parking 7:45AM-3:15PM</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
Princeton Place	Warder St. to Georgia Ave.	North	28	<ul style="list-style-type: none"> <li>Two Hour Parking Limit in Zone 1 7AM-8:30PM Monday –Friday</li> <li>Zone 1 Resident Permit Parking Only 7:00AM-12:00AM Monday through Saturday</li> <li>Reserved Parking Special Permit</li> <li>Street Cleaning Tuesday 12:30-2:30PM</li> </ul>
		South	23	<ul style="list-style-type: none"> <li>No Parking</li> <li>Two Hour Parking Limit in Zone 1 7AM-12AM Monday through Saturday</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
Otis Place	Warder St. to 6 <sup>th</sup> St.	North	13	<ul style="list-style-type: none"> <li>No Parking 7AM-6:30PM</li> <li>No Parking 6AM-2PM</li> <li>Zone 1 Resident Permit Parking Only Monday through Friday 7AM-8:30PM</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
		South	9	<ul style="list-style-type: none"> <li>15 minute parking School Zone 7:45AM-9:00AM and 3:00PM-6:00PM</li> <li>Two Hour Parking Limit in Zone 1 Monday-Friday 7:00AM-8:30PM</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
	6 <sup>th</sup> St. to Georgia Ave.	North	14	<ul style="list-style-type: none"> <li>Zone 1 Resident Permit Parking Only 7AM-8:30PM Monday through Friday</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
		South	17	<ul style="list-style-type: none"> <li>No Parking Except Car share vehicles</li> <li>1 Hour Parking 9:30AM-6:30PM; Pay by Phone</li> <li>Two Hour Parking Limit in Zone 1 7AM-8:30PM Monday through Friday</li> <li>Street Cleaning Friday 9:00AM-11:30AM;</li> </ul>
	Georgia Ave. to New Hampshire Ave.	North	20	<ul style="list-style-type: none"> <li>School Loading Zone Drivers Remain in Vehicle 7:00AM-6:30PM</li> <li>Zone 1 Resident Permit Only Monday-Friday 7AM-8:30PM</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>



Street	Block	Side	Total	Control/Restrictions
		South	23	<ul style="list-style-type: none"> <li>Pay by Phone Parking</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
6 <sup>th</sup> Street	Otis Pl. to Newton St.	East	0	<ul style="list-style-type: none"> <li>No Parking Anytime</li> </ul>
		West	7	<ul style="list-style-type: none"> <li>Zone 1 Resident Permit Parking Only Monday-Friday 7:00AM-8:30PM</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
Newton Place	Warder St. to 6th St.	North	10	<ul style="list-style-type: none"> <li>Not Signed</li> <li>Zone 1 Resident Permit Parking Only Monday-Friday 7:00AM-8:30PM</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
		South	15	<ul style="list-style-type: none"> <li>Zone 1 Resident Permit Parking Only 7AM-8:30PM Monday through Friday</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
	6 <sup>th</sup> St. to Georgia Ave.	North	0	<ul style="list-style-type: none"> <li>No Parking</li> </ul>
		South	16	<ul style="list-style-type: none"> <li>No Parking</li> <li>Two Hour Parking Limit in Zone 1 7:00AM-8:30PM Monday-Friday</li> <li>Reserved Parking Special Permit</li> <li>1 Hour Parking Wellness Center Only Monday-Saturday 7AM-6:30PM</li> <li>Street Cleaning Monday-Friday 12:30PM-2:30PM</li> </ul>
	Georgia Ave. to New Hampshire Ave.	North	25	<ul style="list-style-type: none"> <li>No Parking</li> <li>Zone 1 Resident Permit Only Monday-Friday 7AM-8:30PM</li> <li>Zone 1 &amp; 6 Resident Permit Parking Only</li> <li>Street Cleaning Tuesday 12:30-2:30PM</li> </ul>
		South	33	<ul style="list-style-type: none"> <li>Two Hour Parking Limit in Zone 1 Monday-Friday 7:00AM-8:30PM</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
New Hampshire Avenue	Newton St. to Otis Pl.	East	5	<ul style="list-style-type: none"> <li>No Parking</li> <li>Two Hour Parking Limit in Zone 1 Monday-Friday 7:00AM-8:30PM</li> <li>Street Cleaning Monday 12:30PM-2:30PM</li> </ul>
	Otis Pl. to Spring Rd.	East	13	<ul style="list-style-type: none"> <li>No Standing or Parking Metro Bus Zone</li> <li>Zone 1 &amp; 4 Resident Permit Parking Only Monday-Friday 7AM-8:30PM</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>

Street	Block	Side	Total	Control/Restrictions
	Park Rd. to Rock Creek Church Rd.	West	14	<ul style="list-style-type: none"> <li>Zone 1 Resident Permit Parking Only Monday-Friday 7AM-8:30PM</li> <li>No Standing or Parking Anytime</li> </ul>
		West	8	<ul style="list-style-type: none"> <li>Zone 1 &amp; 4 Resident Permit Parking Only 7AM-8:30PM Monday-Friday</li> <li>Street Cleaning Tuesday 12:30PM-2:30PM</li> </ul>
	Spring Rd. to Georgia Ave.	East	4	<ul style="list-style-type: none"> <li>Two Hour Parking Limit in Zone 1/4 Monday-Friday 7:00AM-8:30PM</li> </ul>
		West	9	<ul style="list-style-type: none"> <li>Zone 1 &amp; 4 Resident Permit Parking Only Monday-Friday 7AM-8:30PM</li> </ul>
Spring Road	10th St. to Rock Creek Church Road	North	13	<ul style="list-style-type: none"> <li>No Parking School Days 8:30AM-4:00PM</li> </ul>
		South	11	<ul style="list-style-type: none"> <li>Zone 1 &amp; 4 Resident Permit Parking Only 7:00AM-8:30PM Monday-Friday</li> </ul>
	Rock Creek Church Rd. to New Hampshire Ave.	North	3	<ul style="list-style-type: none"> <li>Two Hour Parking Limit in Zone 1/4C Monday-Friday 7:00AM-6:30PM</li> </ul>
		South	4	<ul style="list-style-type: none"> <li>Two Hour Parking Limit in Zone 1/4C Monday-Friday 7:00AM-6:30PM</li> </ul>
	New Hampshire Ave. to Georgia Ave.	North	0	<ul style="list-style-type: none"> <li>No Parking</li> </ul>
		South	0	<ul style="list-style-type: none"> <li>No Parking</li> </ul>

### Existing On-Street Parking Demand

Occupancy surveys were conducted to determine existing demand for on-street parking spaces within the study area. A 6:00 PM survey was conducted to capture commercial parking demand in the area and a 9:00 PM survey was conducted to capture residential demand. Surveys were conducted on Thursday, September 18, 2014. **Table 3** lists parking occupancy by street segment. A detailed worksheet (by type of space) for each survey period is provided in the appendix.

**Table 3:** Parking Occupancy for Thursday, September 18, 2014 6:00PM and 9:00PM Survey

Street	Supply	(6:00 PM)			(9:00 PM)		
		Occupied Spaces	% Occupied	Vacant	Occupied Spaces	% Occupied*	Vacant
Georgia Avenue	45	29	64%	16	32	71%	13
Rock Creek Church Road	46	39	84%	7	41	89%	5
Quebec Street	61	48	79%	12	63	103%	--
Warder Street	60	48	81%	11	52	87%	8
Princeton Place	51	43	84%	8	50	98%	1
Otis Place	96	79	82%	17	84	88%	12
6 <sup>th</sup> Street	7	8	114%	--	9	129%	--
Newton Place	99	89	90%	10	95	96%	4
New Hampshire Avenue	53	31	58%	22	57	108%	--
Spring Road	31	19	61%	12	24	77%	7
<b>Total Study Area</b>	<b>549</b>	<b>433</b>	<b>79%</b>	<b>116</b>	<b>508</b>	<b>93%</b>	<b>42</b>

*\*Includes illegally parked vehicles*

Occupancy levels, shown in Table 3, indicate demand for on-street parking was at 79% and 93% of the available supply during the 6:00 PM and 9:00PM survey periods, respectively. Peak demand was observed during the 9:00PM survey along Quebec Street, 6<sup>th</sup> Street and New Hampshire Avenue. Curb spaces along Princeton Place was near capacity with one space remaining unoccupied during the 9:00PM survey.

Examining street segments immediately adjacent to the Site (this includes the Princeton Place and Otis Place blocks (between Georgia Avenue and Warder Street) and Warder Street and Georgia Avenue (between Princeton Place and Otis Place), on-street parking spaces were 82% and 90% occupied during the 6:00 PM and 9:00 PM survey, respectively.

## BICYCLE FACILITIES

The bicycle network surrounding the subject Site provides both north-south and east-west bicycle connectivity. The following bicycle facilities are located near 3619 Georgia Avenue, NW:

- Bike Lanes along the east side of Warder Street (between Harvard Street, NW and Kansas Avenue, NW)
- Bike Lane along the west side of Park Place/5<sup>th</sup> Street (between Harvard Street, NW and Grant circle)
- Bike Lanes along both sides of Kansas Avenue
- On-street signed routes along Kenyon Street (between 12<sup>th</sup> Street and continuing along Michigan Avenue to Brookland Catholic University Metrorail Station) and Irving Street
- On-street signed route on 8<sup>th</sup> Street
- On-street signed route on 13<sup>th</sup> Street

There are numerous single U-shaped bicycle racks within public spaces near the Site. Along Georgia Avenue, immediately south of the Site frontage and near a bus stop, there are two bicycle racks. Opposite the subject Site along Georgia Avenue there are 12 single U-shaped bicycle racks distributed along the sidewalk. Both the northeast and northwest corners of the Georgia Avenue/Princeton Place intersection also have a single U-shaped bicycle rack. There are seven U-shaped bicycle racks at the Georgia Avenue-Petworth Metrorail station of which 4 were in use during field observations.

A capital bikeshare station is located at the Georgia Avenue Petworth Metrorail Station. The bikeshare station offers nine bicycles. Field observations indicate eight of the nine bicycles were rented and not available at that time. Bikeshare stations are also located along Georgia Avenue further north at the intersection of 9<sup>th</sup> Street/ Upshur Street and further south at the intersection with Columbia Road.

Per Walkscore.com, the bike score near the site is rated at 86 out of 100. This is indicative of the convenient access to bikeshare and the location of the site in proximity to a number of bicycle facilities such as bike lanes.

The 2005 Proposed Bicycle Facilities Map identifies New Hampshire Avenue as a signed bicycle route.

## **CAR SHARING**

There are two car share stations located along Otis Place, one block south of Princeton Place, at the intersection with Georgia Avenue. Two car share vehicles are also stationed at 815 Rock Creek Church Road behind Park Place apartments at the Georgia Petworth Metrorail Station. A third car share station, providing two vehicles, is located north of the site behind the Griffin Residential Building at 3801 Georgia Avenue.

## **PEDESTRIAN ASSESSMENT**

The pedestrian assessment includes an inventory of existing facilities and walkability for pedestrians along study area roadways to/from the Site and neighboring destinations such as the Georgia Avenue Petworth Metrorail Station.

In regards to walkability, the Walkscore was sourced which is a ranking of walkability for a neighborhood scored from 0 (representing a car is necessary to access amenities) to 100 (representing a neighborhood that has essential amenities in a walkable distance). The availability of grocery stores, restaurants, parks, schools and other amenities are accounted for in the scored ranking. Per Walkscore.com, this area has a walk score of 78, which indicates most errands can be accomplished by foot.

A number of Streetscape enhancements are in-place along Georgia Avenue between the Site and the Metrorail Station that allow for a pleasant walking environment. Some include pedestrian-scaled lighting, special textured crosswalks and pavement treatments and curb extensions with sections of widened sidewalk space.

Along the route to the Metrorail Station, pedestrians would cross three signalized intersections at Princeton Place, Rock Creek Church Road and New Hampshire Avenue. All of these intersections have pedestrian signals. Pedestrians would not need to cross Georgia Avenue since a station entrance is located on the same side of Georgia Avenue (i.e. east side of Georgia Avenue).

A more detailed review of sidewalks (and width), crosswalks and ADA ramps and compliance with applicable regulations<sup>15</sup> were conducted along the route to/from the site and the Georgia Ave/ Petworth Metrorail Station as described in the following sections.

---

<sup>15</sup> DDOT Design and Engineering Manual and the DDOT Public Realm Design Manual

## Sidewalks

Sidewalks are provided along the surveyed roadways and are in good to fair condition. In some sections, such as the east side of Georgia Avenue (fronting the subject Site), the sidewalk is slightly raised due to the roots of a mature tree.

Sidewalk widths requirements vary for each roadway based on the classification of the roadway and zoned use. Georgia Avenue is a principal arterial and New Hampshire Avenue is a minor arterial. Princeton Place is a local Street. Sidewalk requirements, by functional classification, according to the *Public Realm Design Manual* (2011) are shown below in **Table 4**.

**Table 4 Sidewalk and Buffer Zone Width Requirements**

Street Type	Tree Box Area	Sidewalk (does not include tree box)	
		(Residential)	(Commercial)
Local/Collector	4 ft. min/ 6 ft. pref.	6 ft. min	10 ft. min
Principal and Secondary Arterials	6 ft. min	(Residential) 8 ft. min	(Commercial) 10 ft. min

Along the perimeter of the Site at the Princeton Place intersection, the sidewalk along Georgia Avenue is 18 feet at the bulb-out and narrows to 5 feet with a 4-foot tree box. Along the west side of Georgia Avenue approaching Princeton Place, the sidewalk is 12 feet wide with a 6-foot tree box. Princeton Place provides for a 5-foot sidewalk with a 3-foot tree box. **Table 5** identifies sidewalk widths including buffer zones along Georgia Avenue, New Hampshire Avenue, Rock Creek Church Road and Princeton Place.



**Table 5 Sidewalk and Buffer Zone for Study Roadways**

Street Type		Tree Box Area	Sidewalk	Total	Meets Standards
Principal/ Minor Arterial	Georgia Avenue (southeast corner of intersection with Princeton Place)	4-ft.	5-ft.	9-ft.	No
	Georgia Avenue (southwest corner of intersection with Princeton Place)	6-ft.	12-ft.	18-ft.	Yes
	New Hampshire Avenue <sup>16</sup>	4-ft.	3-ft.	7-ft.	No
Local Roadway	Rock Creek Church Road <sup>17</sup>	3-ft.	5-ft.	8-ft.	No
	Princeton Place <sup>18</sup>	3-ft.	5-ft.	8-ft.	No

As shown in Table 5, sidewalk widths along the west side of Georgia Avenue meet design standards while sidewalks along the remaining roadways within proximity to the subject Site are less than the minimum width requirements (i.e. tree box and sidewalk areas).

The sidewalks fronting the Site along Georgia Avenue will be redesigned in accordance with requirements.

## Crosswalks

Crosswalks are provided at all approaches of the studied intersections. The crosswalk markings are in good condition and are visible for both pedestrians and motorists.

There are special decorative treatments at all crosswalks at the Georgia Avenue/ New Hampshire Avenue/Rock Creek Church intersection and a decorative treatment within the intersection. The crosswalk location along the west leg of the Georgia Avenue/Rock Creek Church Road intersection does not allow for the most direct route crossing Rock Creek Church Road. In some instances, pedestrians were observed crossing Rock Creek Church Road (west side of the street) outside of the crosswalk markings. Pedestrians were also observed crossing during the “Do Not Walk” phase.

<sup>16</sup> west side approaching Georgia Avenue

<sup>17</sup> East leg east of the intersection with Georgia Avenue

<sup>18</sup> East leg east of the intersection with Georgia Avenue

There are three signalized crossings along Georgia Avenue including intersections with New Hampshire Avenue, Princeton Place and Park Road. Between Princeton Place and Park Road, there are three marked crosswalks at unsignalized intersections (at Otis Place and at the east and west legs of Newton Place). Pedestrian crossing warning signage is installed at all unsignalized intersections on Georgia Avenue within the study area.

There are marked crosswalks at all intersections along New Hampshire Avenue of which three are signalized (at Georgia Avenue, Princeton Place and Park Road) and two are unsignalized (at Otis Place and Newton Place). At the New Hampshire Avenue/ Otis Place intersection, there are flashing beacons (indicated by a push button) in place to notify motorists when a pedestrian is approaching/attempting to cross New Hampshire Avenue. During field observations motorists were observed exceeding the posted speed limit of 30 miles per hour.

### **Curb Ramps**

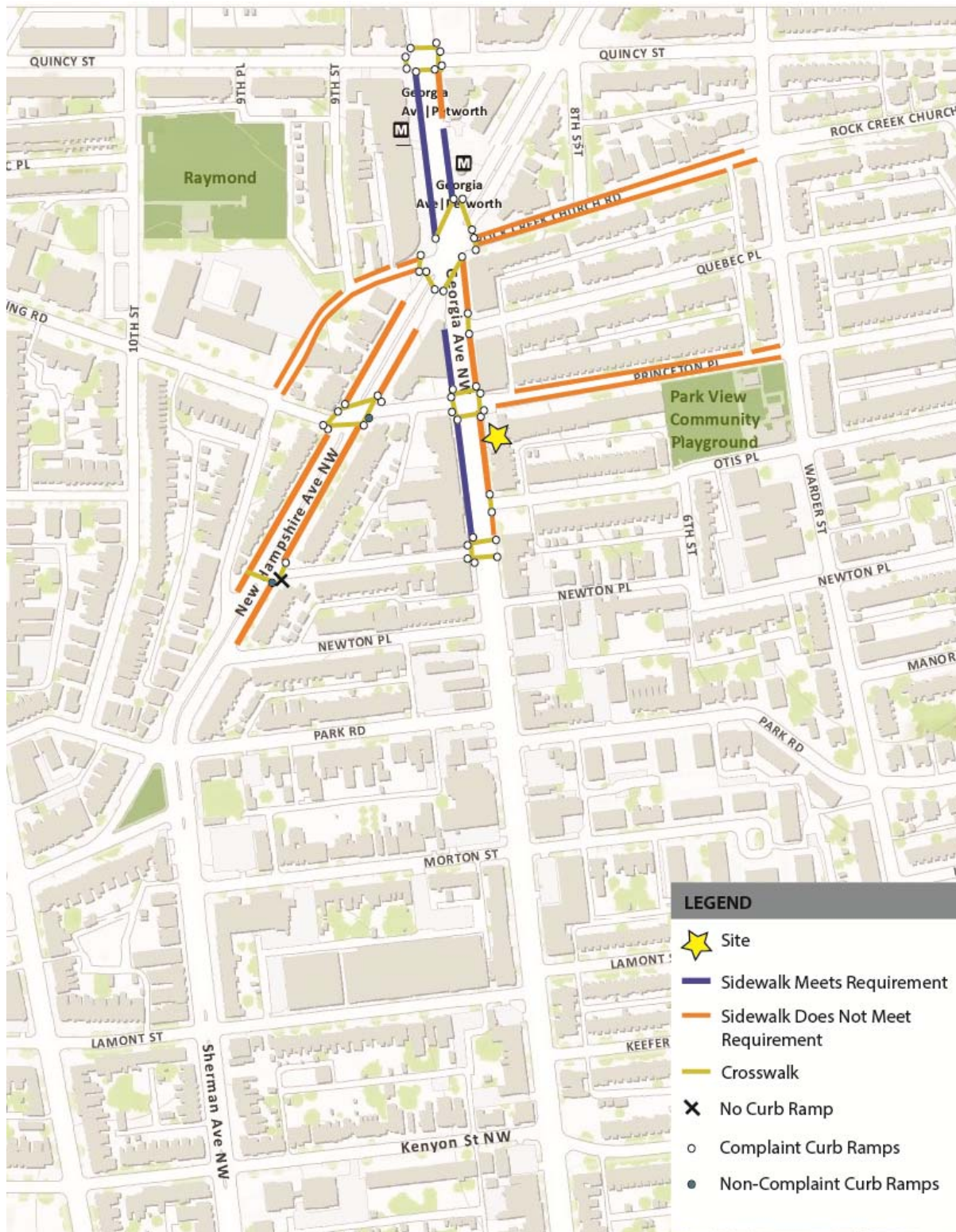
ADA standards require that all curb ramps be provided wherever an accessible route crosses a curb. The DDOT's Design and Engineering Manual (2009) was used to evaluate curb ramps along the route to/from the site and the Metrorail station. Most of the curb ramps along the route to/from the Metrorail station met ADA standards. Locations that are non-complaint are illustrated in Figure 3. No curb ramp is provided at the southeast corner of the New Hampshire Avenue/ Otis Place intersection for crossing Otis Place.

### **Pedestrian Facility Summary**

- Generally, the existing network of sidewalks and crosswalks adequately support existing users.
- A number of Streetscape enhancements are in-place along Georgia Avenue between the Site and the Metrorail Station that allow for a pleasant walking environment.
- Sidewalks are provided along the surveyed roadways and are in good to fair condition. Sidewalk widths along the west side of Georgia Avenue meet design standards while sidewalks along the remaining roadways within proximity to the subject Site are less than the minimum width requirements (i.e. tree box and sidewalk areas).
- The sidewalks fronting the Site along Georgia Avenue will be redesigned in accordance with requirements.
- Crosswalks are provided at all approaches of the studied intersections. The crosswalk markings are in good condition and are visible for both pedestrians and motorists.

- In some instances, pedestrians were observed crossing the Rock Creek Church Road leg of the intersection (west side of the street) outside of the crosswalk markings. Pedestrians were also observed crossing during the “Do Not Walk” phase.
- During field observations motorists were observed exceeding the posted speed limit of 30 miles per hour.

Pedestrian facilities including sidewalks, crosswalks and ADA ramps are shown in **Figure 3**.



**Figure 3: Pedestrian Facilities**

727 15th Street, NW  
Suite 1000  
Washington, DC 20005

T 202.370.6000  
F 202.370.6001

[www.symmetrdesign.com](http://www.symmetrdesign.com)

Transportation Planning. Traffic Engineering.

## TRANSIT FACILITIES AND SERVICES ASSESSMENT

The site is well served by Washington Metropolitan Area Transit Authority (WMATA) Metrorail and Metrobus. Per Walkscore.com, transit service near the site is rated at 78 out of 100. This is a favorable score and indicates travel by way of transit is convenient for most trips.

The Georgia Avenue-Petworth Metrorail station on WMATA's Green/ Yellow line is located within a 500-foot radius of the Site and is about a two minute walk (assuming a 3.5 feet per second walking pace) immediately north. On weekdays, during peak period<sup>19</sup> service, the Georgia Ave-Petworth Metrorail station provides six minute headways in both directions. During off-peak periods, trains service the station in both directions every 12 to 20<sup>20</sup> minutes. Weekend service headways are 12 to 15 minutes in both directions during the daytime on Saturday and Sunday and are extended to 20 minute for later service.

In addition, the site resides within the Georgia Avenue/ New Hampshire Avenue Metrobus corridor, which provides access to multiple WMATA Metrobus lines. The 70 and 79 Metro Extra bus lines provide services along Georgia Avenue. The Metro Extra line provides faster limited stop service Weekdays, Saturdays and Sundays 8:00AM to 7:00PM. Metrobus Lines 64 and H8 services New Hampshire Avenue. Metrobus routes, key destinations and service headways are shown in **Table 6**. Bus stops are distributed along Georgia Avenue. The stops fronting the Metrorail Station along Georgia Avenue and New Hampshire Avenue are shelter and fitted with amenities such as seating and trash receptacles. WMATA bus routes and bus stop locations are illustrated in **Figure 4**. Bikeshare and car share locations are also shown in **Figure 4**.

WMATA is planning to increase the number of articulated buses, 60-foot in length and longer than the standard bus, for the 70 Metrobus line. Per a July 11<sup>th</sup> article published by the Washington Post, for the 70 line the number of trips using articulated buses will nearly double from 89 to 172. The longer buses are anticipated to run throughout the day, with approximately five more trips running with longer buses each hour from 4:00AM to 10:00PM. This improvement was slated to begin in late August 2014.

The District Department of Transportation is also examining four alternatives for a north-south Streetcar along a section of Georgia Avenue from Buzzard Point to Silver Spring. Two of the four alternatives (Alternative 1 and 2) include a route that would potentially run along the proposed subject Site. The District Department of Transportation (DDOT) hosted three public meetings on

---

<sup>19</sup> 5:00 – 9:30 AM and 3:00 – 7:00 PM

<sup>20</sup> for late night 9:30 PM – Close



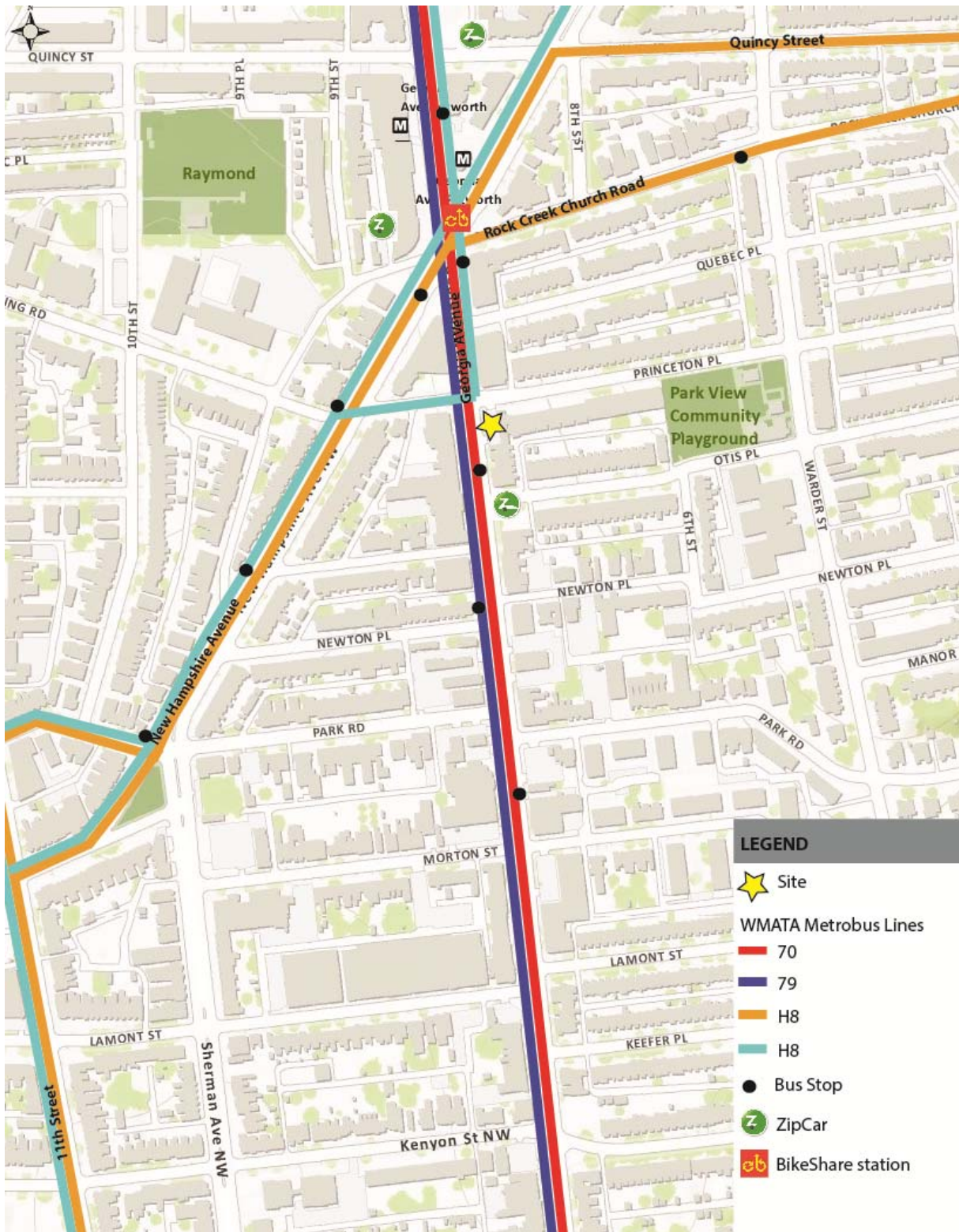
the project in of June 2014. The project is still in the stage 1 Planning Phase which includes identifying/reviewing options and studying options in further detail.

**Table 6: Metro Bus Routes, Key Destinations, and Service Headways**

Route	Route Name	Key Destinations	Service Headways (Weekday Peak) <sup>21</sup>	Service Headways (Weekends)
64	Fort Totten Petworth Line	<ul style="list-style-type: none"> <li>• Fort Totten Station</li> <li>• Armed Forces Retirement Home</li> <li>• Georgia Ave-Petworth Station</li> </ul>	23 Minutes	Does Not Run on Weekends
H8	Park Road- Brookland Line	<ul style="list-style-type: none"> <li>• Columbia Heights</li> <li>• Georgia Avenue Petworth</li> <li>• Armed Forces Retirement Home</li> <li>• Brookland-CUA station</li> <li>• Rhode Island Ave station</li> </ul>	12-19 Minutes 9-16 Minutes	20-25 Minutes
70	Georgia Avenue- 7 <sup>th</sup> Street Line	<ul style="list-style-type: none"> <li>• Silver Spring Station</li> <li>• Georgia Ave-Petworth Station</li> <li>• Howard University</li> <li>• Washington Convention Center</li> <li>• Gallery Place Station</li> </ul>	12 Minutes	15 Minutes
79	Metro Extra Georgia Avenue Limited Line	<ul style="list-style-type: none"> <li>• Silver Spring Station</li> <li>• Georgia Ave-Petworth Station</li> <li>• Columbia/Irving</li> <li>• Howard University</li> <li>• Washington Convention Center</li> <li>• Gallery Pace</li> <li>• Archives Station</li> </ul>	Service every 10-15 minutes.	

<sup>21</sup> 7:00AM-9:00AM and 5:00PM-7:00PM





**Figure 4: Transit and Multi-modal Facilities**

727 15th Street, NW  
Suite 1000  
Washington, DC 20005

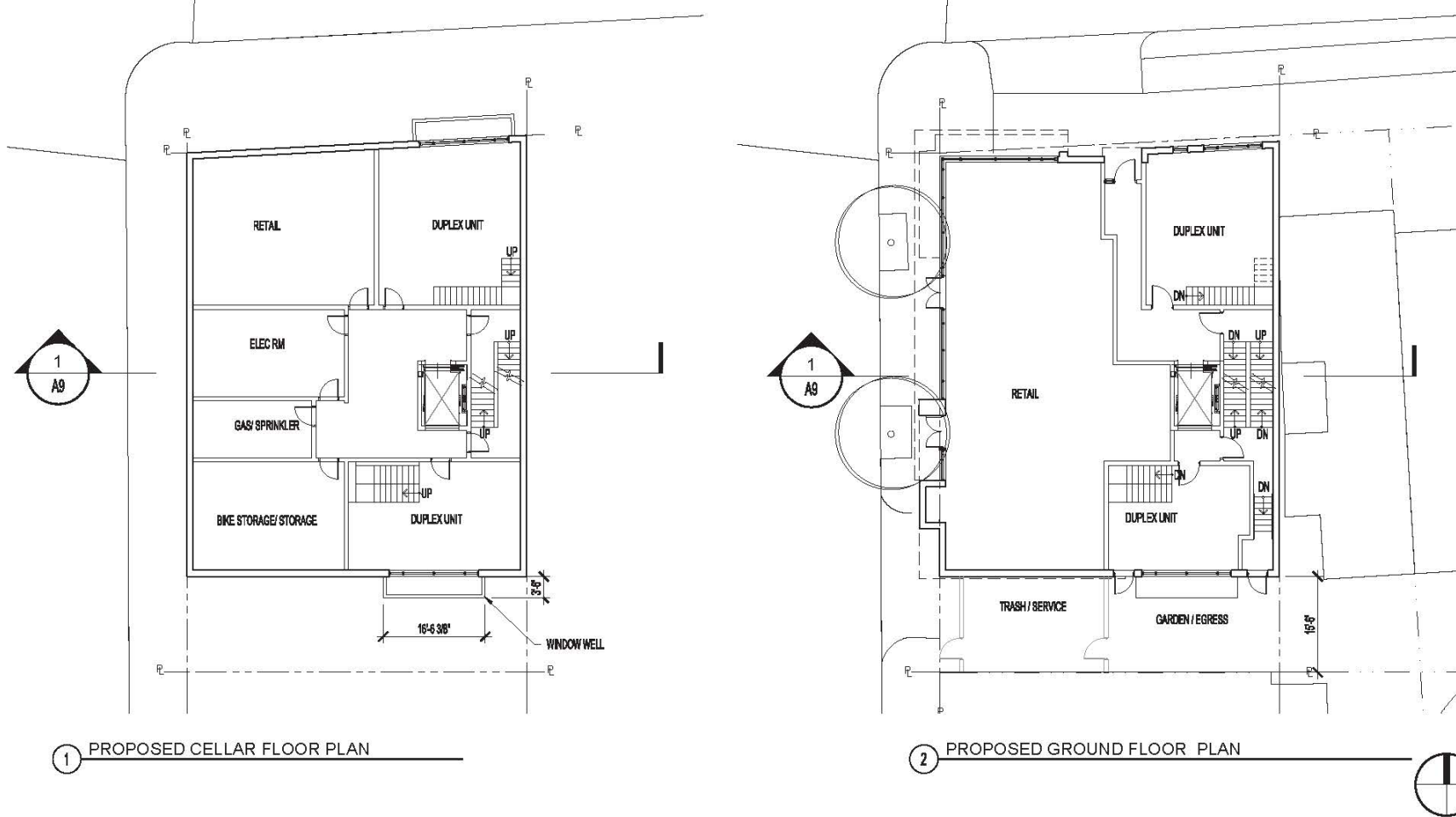
T 202.370.6000  
F 202.370.6001

[www.symmetrdesign.com](http://www.symmetrdesign.com)

Transportation Planning. Traffic Engineering.

## **SITE PLAN**

The site plan for the 3619 Georgia Avenue development is shown in **Figure 5**.



THE WARRENTON GROUP

PROPOSED FLOOR PLANS

3619 GEORGIA AVE, NW

AUGUST 5, 2014  
 © 2014 - Bonstra | Haresign Architects

1/16" = 1'-0"

**A6** Bonstra | Haresign

**Figure 5:** 3619 Georgia Avenue, NW Proposed Cellar Floor Plan and Ground Floor Plan

## **SITE ACCESS**

No vehicular access will be provided on-site. Residential access will be provided via Princeton Place and the ground floor retail and cellar entrances will be along Georgia Avenue.

The applicant will provide nine indoor and one outdoor bicycle parking space as required by Zoning.

## **LOADING**

A gated trash/service area is planned along Georgia Avenue located along the southern portion of the Site property. Trash pick-up will occur along Georgia Avenue.

An existing curb cut along Princeton Place and one along Georgia Avenue will be closed once the project is developed. The closure of those curb cuts will allow for two additional car spaces.

There would be no physical impact to existing curb spaces as a result of the development. There is one metered space for handicap patrons fronting the property which is not anticipated to be impacted as a result of the project.

There is a bus stop just south of the proposed Site frontage along Georgia Avenue (along the east side south of Princeton Place and north of Otis Place). This bus stop will not be impacted by the project.

Per DCMR11 2201.1 loading requirements, there is no loading berth, platform or service/delivery space requirement for a residential building with less than 50 units.

## TRANSPORTATION DEMAND MANAGEMENT (TDM)

The Transportation Demand Management (TDM) Plan is an active program used to foster alternative transportation choices that are more environmentally friendly than driving alone. *DDOT's TDM in the Development Process Report* was used as a reference to guide development of this TDM plan. The applicant will provide all expected TDM measures as outlined in the TDM Recommendations Matrix which identifies TDM measures based on the level of projected vehicle trips for the project.

The applicant has proffered additional measures to the TDM plan to further reduce potential vehicle trip and parking demand by the project. The applicant will commit to the following:

- The applicant will provide nine indoor and one outdoor bicycle parking space.
- Post all TDM commitments on-line, publicize availability, and allow the public to see what commitments have been promised.
- Provide each initial tenant a welcome package that promotes website links such as CommunterConnections.com, goDCgo.com, Capital BikeShare and ZipCar, WMATA Metrobus route and DC Bicycle maps.
- Install a Transportation Information Center Display (kiosk) containing printed materials related to local transportation alternatives and maintain a stock of materials at all times.
- Offer an annual Capital Bikeshare and car share membership for the initial term of the lease for new apartment residents for the first five years the building is open or offer an annual Capital Bikeshare and car share membership for initial condo residents
- Identify the property manager as the project's TDM Leader to advertise and build awareness of programs to residents
- Install a transportation information screen in the building.
- Restrict the project from being included as RPP eligible<sup>22</sup>

---

<sup>22</sup> DDOT is in the process of reviewing existing and future parking for the 3600 block of Georgia Avenue, NW.

## **CONCLUSION**

The 3619 Georgia Avenue, NW project will provide 27 residential units and 2,911 square feet of ground floor retail without on-site parking.

The area surrounding the subject site provides a robust multi-modal transportation network. Given the site context, it is expected non-automobile transportation will be the primary mode choice for future residents.

The applicant will commit to Transportation Demand Management measures to encourage future residents to utilize non-automobile transportation options. The applicant will also exclude future residents of the 3619 Georgia Avenue project from the RPP system as to not create any adverse impact to existing RPP parking along neighboring Streets.





**symmetra** design

## **3619 Georgia Avenue, NW**

### **Transportation Memorandum Technical Appendix**

---

Appendix A. CTR Scoping Form

Appendix B. Parking Occupancy by type of space Worksheets



**symmetra** design

## Appendix A. CTR Scoping Form and Attachments

---

## TRAFFIC ASSESSMENT SCOPING FORM

**Project Name:** 3619 Georgia Avenue, NW

**Applicant Team:** The Warrenton Group

**Case Type & No. (PUD, LTR, etc.):** BZA Case # 18847

**Project Location:** Ward 1; Generally bounded by Princeton Place to the north, Georgia Avenue to the west, residential row homes to the east and commercial to the south (Square 3032, Lot 0803). See attached aerial.

**Current Zoning and/or Overlay District:** C-3-A/Georgia Avenue Overlay

**Date of Filing:** August 5, 2014

**Estimated Date of Hearing:** November 15, 2014

The applicant proposes to build 27 condominium units and 2,911 square feet of cellar and ground floor retail. The site is well served by Metrorail and Metrobus and is located 500 feet south of the Georgia-Petworth Metrorail Station.

The applicant will be seeking relief from the Board of Zoning Adjustment ("BZA") to provide no parking on the site premises (requirement is 1 space per two dwelling units). A memorandum will be submitted inclusive of an existing parking conditions assessment as well as sections on pedestrian and bicycle access, transit services and facilities, future site plan and provisions for bicycle parking.

Program/trip generation assumptions:

**Preliminary  
Vehicular  
Trip  
Generation:**

- Trips generated using ITE Trip Generation Manual, 8<sup>th</sup> Edition, Land Use Code 230 Condominiums/Townhome<sup>1</sup> (27 units) and Land Use Code 814 Specialty Retail<sup>2</sup>
- Non-automobiles reductions were applied based on the 2005 WMATA Development-Related Ridership Survey. Detailed calculations attached

<sup>1</sup> Trips were calculated using the fitted curve equation for the AM and PM Peak Hour of Adjacent Street Traffic.

<sup>2</sup> Trips were calculated using the average rate for the PM Peak Hour of Adjacent Street Traffic. No fitted equation or average rate was available for the AM of adjacent street traffic. The AM peak trip rate was calculated as 25% of the PM site trips. This assumption is based the AM peak hour site trips for ITE's shopping center (820) land use which is 25% of the PM peak hour site trips.

Strategic Planning Elements (Planning Documents)	DDOT Comments/Action Items
<p><b>Proposed Documents:</b></p> <p>The study will address how the proposed development considers the primary planning documents of the District, as well as localized studies. We propose that the study include a section addressing the following documents:</p> <ul style="list-style-type: none"> <li>• DC Comprehensive Plan</li> <li>• DC Bicycle Master Plan</li> <li>• DC Pedestrian Master Plan</li> <li>• DC Circulator Transit Development Plan</li> <li>• DDOT Design and Engineering Manual</li> <li>• DCMR Title 11 – Zoning Regulations (Sections 16,21,22,23 and 24)</li> <li>• DC’s Transit Future System Plan</li> <li>• SustainableDC Plan</li> <li>• Lower Georgia Avenue Transportation and Streetscape Study</li> </ul>	<p>DDOT concurs with the documents listed, and would additionally add the DDOT Design and Engineering Manual, DCMR Title 11 – Zoning Regulations (Sections 16, 21, 22, 23, and 24), DC’s Transit Future System Plan, with an emphasis on the DC Streetcar, and the SustainableDC plan.</p> <p>Also, please add any area plans in proximity to the project within the neighborhood.</p>

Roadway Network, Capacity & Operations	DDOT Comments/Action Items																				
<p><b>Proposed Scope:</b> The transportation memorandum will exclude traffic analysis for study area intersections since the project will generate less than 25 trips during any one peak hour. Since the proposed project does not meet the criterion to require a complete CTR TIS, no scope has been identified for the Roadway Capacity &amp; Operations section.</p> <p>As requested, and to provide clarification, site trips for each mode are shown below. Tables 1A and 1B provides the residential and retail modal split. A detailed explanation of the modal split assumptions is provided in the appendix to this form. Table 2 provides base line vehicular trip generation using the Institute of Transportation Engineers 8<sup>th</sup> Edition trip rates. The base vehicular trips were converted to person trips by mode using the 2009 National Household Travel Survey (NHTS) Average Vehicle Occupancy (AVO) for Selected Trip Purpose (Table 16) as also shown in Table 2. The 2009 AVO is 1.13 for trips to/from work and 1.78 for shopping related trips. Tables 3A and 3B provide site trips by mode by use and Table 3C summarizes total site trips by mode. Since no parking will be provided on-site it is assumed trips shown in Table 3C will all originate as a pedestrian trip (exiting the building) and then be distributed into each of the listed modes.</p> <p>Table 1A: Residential Mode Share</p> <table border="1" data-bbox="128 857 577 1044"> <tbody> <tr> <td>Metrorail</td> <td>50%</td> </tr> <tr> <td>Metrobus &amp; Other</td> <td>6.0%</td> </tr> <tr> <td>Auto</td> <td>32.0%</td> </tr> <tr> <td>Walk &amp; Other</td> <td>14.0%</td> </tr> <tr> <td>Total</td> <td>102%</td> </tr> </tbody> </table> <p>Table 1B Retail Mode Share</p> <table border="1" data-bbox="128 1110 577 1297"> <tbody> <tr> <td>Metrorail</td> <td>23%</td> </tr> <tr> <td>Metrobus &amp; Other</td> <td>8%</td> </tr> <tr> <td>Auto</td> <td>42%</td> </tr> <tr> <td>Walk &amp; Other</td> <td>27%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </tbody> </table>	Metrorail	50%	Metrobus & Other	6.0%	Auto	32.0%	Walk & Other	14.0%	Total	102%	Metrorail	23%	Metrobus & Other	8%	Auto	42%	Walk & Other	27%		100%	<p>DDOT concurs with the exclusion of vehicular analysis due to the scale of this project. However, the calculations to support this must be correct. Thus, please clarify the trip generation table shown above. For the Metrorail row, are these trips for people who are walking to the Metro? For your building's purposes, these should be listed as pedestrians, and pedestrians should be split amongst those headed for rail, bus, and other destinations. Also, while the use of a non-auto reduction is appropriate in calculating the building's net impact on the transportation network, we need to show how many people are riding the bus. And further, since this is a new building, the reductions are only from what might have been. Finally, in summing the total peak trips generated, this reduction factor should not be used, as what we desire to see are the actual trips occurring (not compared to what might have been). Please revise the table accordingly.</p>
Metrorail	50%																				
Metrobus & Other	6.0%																				
Auto	32.0%																				
Walk & Other	14.0%																				
Total	102%																				
Metrorail	23%																				
Metrobus & Other	8%																				
Auto	42%																				
Walk & Other	27%																				
	100%																				

# TRAFFIC ASSESSMENT SCOPING FORM

Table 2 ITE Base Vehicle Trips and Converted Person Trips using NHTS AVO

	AM Peak Generation			PM Peak Generation		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Residential						
Base Vehicles Trips	3	15	18	14	7	21
Person Trips	3	17	20	16	8	23
Retail						
Base Vehicles Trips	1	1	2	4	4	8
Person Trips	2	2	4	7	7	14

Table 3A Residential Site Trips by Mode

	AM Peak Generation			PM Peak Generation		
Mode Share	IN	OUT	TOTAL	IN	OUT	TOTAL
Auto (Drive Alone & Carpool)	1	5	6	5	3	7
Metrorail	2	8	10	8	4	12
Metrobus	0	1	1	1	0	1
Walk/Bike	0	2	3	2	1	3
<b>Total</b>	<b>3</b>	<b>17</b>	<b>20</b>	<b>16</b>	<b>8</b>	<b>23</b>

# TRAFFIC ASSESSMENT SCOPING FORM

Table 3B Retail Site Trips by Mode

	AM Peak Generation			PM Peak Generation		
Mode Share	IN	OUT	TOTAL	IN	OUT	TOTAL
Auto (Drive Alone & Carpool)	1	1	2	3	3	6
Metrorail	0	0	1	2	2	3
Metrobus	0	0	0	1	1	1
Walk/Bike	1	1	1	2	2	4
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>6</b>

Table 3C Total Site Trips by Mode

	AM Peak Generation			PM Peak Generation		
Mode Share	IN	OUT	TOTAL	IN	OUT	TOTAL
Auto (Drive Alone & Carpool)	2	6	8	8	6	13
Metrorail	2	9	11	9	5	15
Metrobus	0	1	2	2	1	3
Walk/Bike	1	3	4	4	3	7
<b>Total</b>	<b>5</b>	<b>19</b>	<b>24</b>	<b>23</b>	<b>15</b>	<b>37</b>

## Vehicle Site Access

**Access Location(s):** No on-site vehicular access proposed.

**Access Control:** N/A

**Existing curb cuts utilized:** N/A

**Existing curb cuts abandoned:** N/A

N/A

## TRAFFIC ASSESSMENT SCOPING FORM

<p><b>Proposed curb cuts:</b> None</p> <p><b>Curb cut width and radii:</b> N/A</p>	
<p><u>Development Scenarios</u></p> <p>Typically, all studies should include the following scenarios:</p> <ul style="list-style-type: none"> <li>• Existing conditions</li> <li>• Future conditions, at the anticipated build-out year of the development, <u>without</u> the construction of the development (Background Conditions)</li> <li>• Future conditions, at the anticipated build-out year of the development, <u>with</u> the construction of the development (Total Future Conditions)</li> <li>• Forecast year</li> </ul> <p>If the proposed development will be in stages, with significant trip generation for each stage, individual phases will need to be examined individually.</p> <p><b>Proposed Development Scenario:</b></p> <p>The transportation memorandum will exclude traffic analysis for the existing, future background and future conditions development scenarios since the project does not meet the threshold criterion.</p>	<p>N/A</p>
<p><u>Vehicle Study Area</u></p> <p>No vehicle study area will be analyzed for this project.</p>	<p>N/A</p>
<p><u>Data Collection and Hours of Analysis</u></p> <p><b>Proposed turning movement count intersections:</b></p> <p>No turning movement vehicular, pedestrian or bicycle counts will be conducted for this project.</p>	<p>N/A</p>
<p><u>Roadway Improvements</u></p> <p><b>Proposed roadway improvements:</b></p>	<p>N/A</p>



TRAFFIC ASSESSMENT SCOPING FORM

<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<u>Background Developments</u> <ul style="list-style-type: none"> <li>N/A</li> </ul>	N/A
<u>Background Growth</u> <ul style="list-style-type: none"> <li>N/A</li> </ul>	N/A
<u>Site Trip Distribution &amp; Assignment</u> <ul style="list-style-type: none"> <li>N/A</li> </ul>	N/A
<u>Analysis Methodology</u> <b>Proposed analysis methodology:</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>	N/A
<b><u>Bicycle &amp; Pedestrian Facilities</u></b>	<b>DDOT Comments/Action Items</b>
<u>CTR Bike and Pedestrian Study area</u> <b>Proposed bike and pedestrian study areas:</b> <p>The study will identify existing and proposed pedestrian &amp; bicycle services within the site. The proposed study area consists of:</p> <ul style="list-style-type: none"> <li>Georgia Avenue (between Quincy Street and Otis Place)</li> <li>Princeton Place (between New Hampshire Avenue and Warder Street)</li> <li>New Hampshire Avenue (between Quincy Street and Otis Place)</li> </ul> <p>The bike and pedestrian assessment will include the following :</p> <ul style="list-style-type: none"> <li>Map of existing pedestrian facilities such as sidewalks (or missing portions), crosswalks and marking types and ADA compliance at curb ramps</li> <li>Map of existing and proposed bicycle facilities including trails, bike lanes and bikeshare</li> <li>Description of pedestrian and bicycle access routes to/from the site and transit stops,</li> </ul>	<p>DDOT concurs with this bike and pedestrian study area. Note that some level of analysis to identify areas of deficiency should be completed.</p>

## TRAFFIC ASSESSMENT SCOPING FORM

<p>Metrorail stations</p> <ul style="list-style-type: none"> <li>• Identification of existing and proposed sidewalk widths surrounding the subject site</li> <li>• Identification of existing Capital Bikeshare locations and demand (based on field observations)</li> <li>• Description of future on-site bicycle parking in private and public space including short term and long term number and location (indoor and outdoor) of bicycle parking spaces, storage and proposed bike rack standards</li> <li>• Comparison of proposed on-site bike parking to zoning requirements</li> </ul>	
<p><u>Data Collection and Analysis of Bike Network and Facilities</u></p> <p><b>Proposed Bike network and facilities analysis:</b></p> <ul style="list-style-type: none"> <li>• N/A</li> <li>• We will conduct two-hour AM (7-9) and PM (4-6) peak period pedestrian counts at key locations between the Site and the Georgia Avenue Petworth Metrorail Station.</li> </ul>	<p>Note that pedestrian counts could be conducted at the key intersections between the site and the transit locations to identify existing pedestrian volumes and identify any problematic locations.</p>
<p><b><u>Transit Service</u></b></p>	<p><b>DDOT Comments/Action Items</b></p>
<p><u>CTR Transit study area</u></p> <p><b>Proposed transit study area:</b></p> <p>The study will identify existing and proposed transit facilities that serve the site within the study area (Georgia Ave Petworth Metrorail Station and bus routes along Georgia Avenue and New Hampshire Avenue). The transit assessment will include a description of the following :</p> <ul style="list-style-type: none"> <li>• Existing and proposed transit facilities including routes and services along Georgia Avenue (between Quincy Street and Otis Place) and New Hampshire Avenue (between Quincy Street and Otis Place)</li> <li>• Current and proposed bus stops, amenities and conditions</li> <li>• Existing bus route frequency, span of service and destinations</li> </ul>	<p>Please also note the buses on New Hampshire Avenue (not listed in the first parenthesis).</p>

<p><u>Analysis of Transit Network</u></p> <p><b>Proposed transit analysis:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>Analysis to identify any components of the transit network that are important for consideration for this building's transportation network should be completed. Desire lines between the site and transit stops must be identified and any service inadequacies noted. Also note any future transit plans in the area, such as the streetcar, that could affect the situation at this location.</p>
Site Access and Loading	DDOT Comments/Action Items
<p>The Site access and loading report sections will include the following :</p> <ul style="list-style-type: none"> <li>Description of site access for pedestrians and bicyclists. No vehicular site access is proposed.</li> <li>Identification of trash pick-up and operations.</li> </ul> <p><b>Freight\Delivery</b></p> <p>The assessment will identify the applicant's plan to accommodate service delivery and loading.</p> <p><b>Proposed Loading Analysis:</b></p> <ul style="list-style-type: none"> <li>N/A. There are no loading requirements for the project per zoning regulations.</li> </ul>	<p>DDOT concurs with this approach, and asks for a detailed description of planned loading management. How the applicant plans to handle both trash pick-up and operations as well as freight loading and delivery are key components of this proposal. To facilitate this discussion, a proposed curbside management plan should be completed, which identifies the spatial allocation of all anticipated curbside uses, along with along with time of day restrictions, length of stay restrictions, and other restrictions. Uses to be noted include but are not limited to:</p> <ul style="list-style-type: none"> <li>Residential Permit Parking (RPP)</li> <li>Meter parking</li> <li>Bicycle parking</li> <li>Transit stops</li> <li>Drop-off/Pick-up zones</li> <li>Loading zones</li> <li>Motorcoach zones</li> <li>Taxicab stand</li> <li>Truck maneuvers required on-street</li> </ul>
Parking	DDOT Comments/Action Items
<p><b>Proposed Parking Analysis:</b></p> <p>Inventory and occupancy data will be collected for on-street parking along the following</p>	<p>Several extensions of the parking study area should be added,</p>

## TRAFFIC ASSESSMENT SCOPING FORM

<p>roadways segments:</p> <ul style="list-style-type: none"> <li>• Georgia Avenue (between Rock Creek Church Road and Park Road)</li> <li>• New Hampshire Avenue (between Georgia Avenue and Newton Place)</li> <li>• Princeton Place (between New Hampshire Avenue and Warder Street)</li> <li>• Spring Road (between 10<sup>th</sup> Street and New Hampshire Avenue)</li> <li>• Otis Place (between New Hampshire Avenue and Georgia Avenue and between Warder Street)</li> <li>• Newton Place (between New Hampshire Avenue and Georgia Avenue to Warder Street)</li> <li>• Warder Street ( Quebec Place to Newton Place)</li> <li>• 6<sup>th</sup> Street (between Newton Place and Otis Place)</li> <li>• Quebec Street (between Georgia Avenue and Warder Street)</li> <li>• Rock Creek Church Road (between Georgia Avenue and Warder Street)</li> <li>• Check alleys within surveys areas to identify additional parking opportunities for users</li> </ul> <p>All existing parking garages within the parking survey area will be identified.</p> <p>The parking inventory will identify existing parking related street signage. Occupancy data will be collected during a weekday evening at 6:30 pm and night survey at 9:00 PM.</p> <p>Zoning requires 1 parking space for every two units thus the applicant will request a variance for 14 parking spaces.</p>	<p>however a few areas may be eliminated. In short, the parking study area should include an area approximately two to four blocks away from the site. In this case, the area bounded by Rock Creek Church Rd., Warder St., and Newton Place, with potentially a couple extensions past those streets. Thus, please also include:</p> <ul style="list-style-type: none"> <li>• Newton Place to Warder St.</li> <li>• Warder St. to Newton Place</li> <li>• 6<sup>th</sup> St. between Newton Place and Otis Place</li> <li>• Quebec Place between Georgia and Warder</li> <li>• Rock Creek Church Rd. from its southern intersection with Georgia to Warder St.</li> <li>• Check all alleys within the areas counted to identify any areas of parking</li> </ul> <p>However, including Georgia north of New Hampshire and New Hampshire north of Rock Creek Church may not be necessary.</p> <p>Additionally, all existing parking garages within this area should be identified. If they are publicly accessible, they should also be counted for parking inventory and occupancy.</p> <p>Finally, all existing street signage regulating parking should be identified along all streets where parking assessment is completed.</p>
Transportation Demand Management	DDOT Comments/Action Items
<p><b>Proposed TDM Plan:</b></p> <p>The study will include a description of the applicant's provision for bicycle parking on-site. Any other proffered TDM measures (in-line with DDOT's TDM guideline) will also be identified.</p>	<p>DDOT concurs with this approach.</p>

**TRAFFIC ASSESSMENT SCOPING FORM**

<b>Safety</b>	<b>DDOT Comments/Action Items</b>
<b>Proposed Safety Analysis:</b> <ul style="list-style-type: none"><li>• N/A</li></ul>	N/A
<b>Streetscape/Public Realm</b>	<b>DDOT Comments/Action Items</b>
<ul style="list-style-type: none"><li>• N/A</li></ul>	Please provide a summary overview of the site's treatment of the streetscape/public realm in proximity to this development.

**Proposed Schedule:**

- DDOT comments on Scoping Document: 9/16/14
- Transportation Consultant/Applicant responses to comments:
- Submission of Assessment due to DDOT: 9/21/14
- BZA Hearing Date: 11/5/14

**List of Figures, Tables, and Appendices:**

Site Parcel Map

Parking Survey Study Area

Mode Share and Trip Generation Calculations

[note additions based on the analysis completed above]

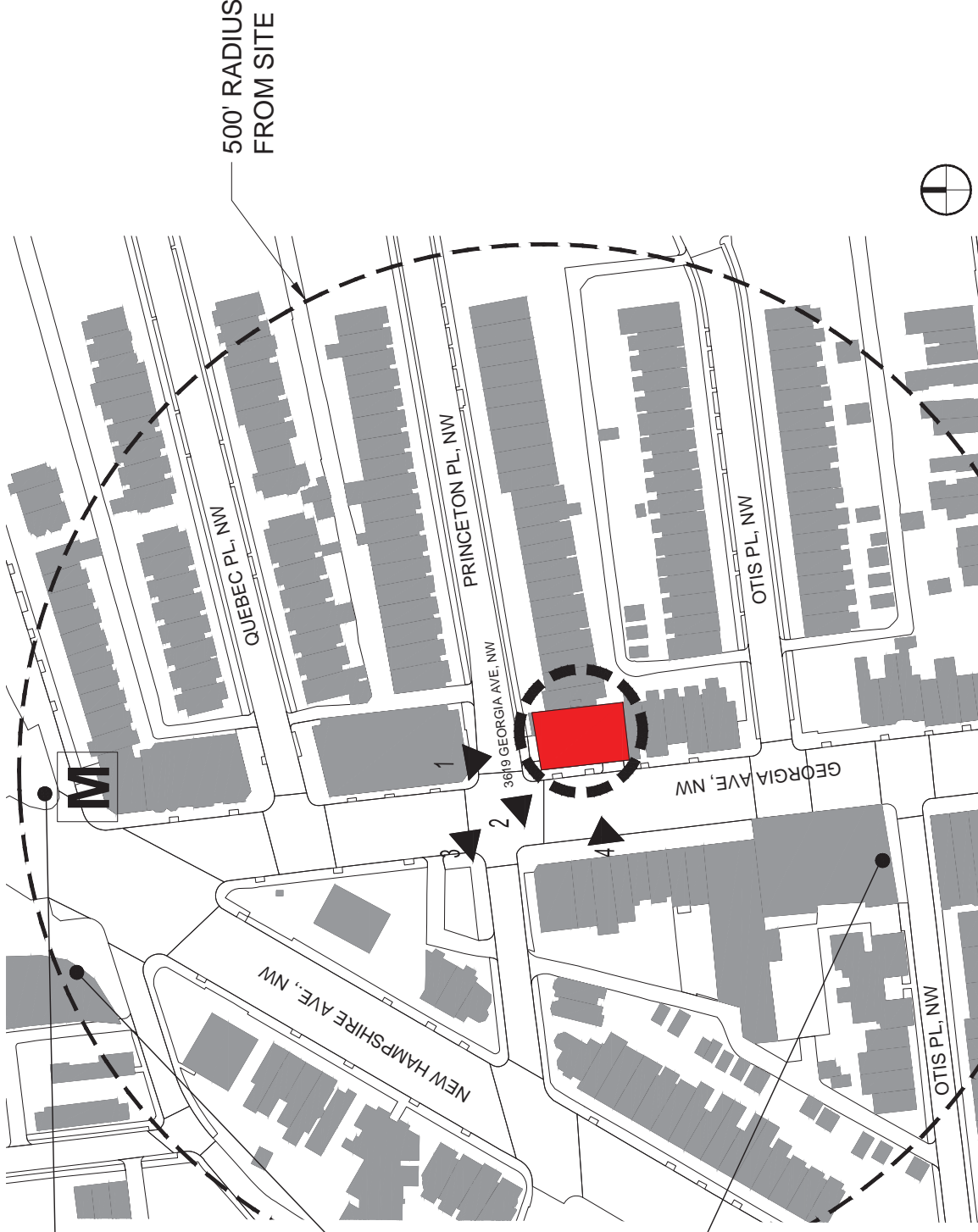
GEORGIA AVE / PETWORTH  
METRO STATION



PARK PLACE APARTMENTS (6 STORIES)



E.L. HAYNES PUBLIC CHARTER SCHOOL (5 STORIES)



# THE WARRENTON GROUP

AUGUST 5, 2014  
© 2014 Bonstra | HareSIGN Architects

SITE MAP

1" = 100'

3619 GEORGIA AVE, NW

## Residential Mode Share

WMATA's 2005 Development-Related Ridership Survey was used to development transportation modal share for the residential component of the proposed 3619 Georgia Avenue project. The following tables/references from the document were applied:

- Table 11 -Regression Equation Summary for All Residential and Residential Commute/School Metrorail Trips by Distance from Station (page 44 of the pdf and page 32 in the document)
- Table S-3 Office Commute and Residential Mode Share by Concentric Location Typology (page 6 of the pdf or S-4 in the document)
- Section 4.2.2 Regression Analysis (page 42 of the pdf and page 30 in the document)

Metrorail mode share - The Metrorail mode share was calculated using the regression analysis. Metrorail usage decreases by 0.87 percent for every 100 feet a site is displaced from a Metrorail station entrance/exit. The subject site, 3619 Georgia Avenue (Square 3032, Lot 0803), is 500-foot from the Georgia Avenue-Petworth Metrorail Station. Based on this methodology Metrorail usage would be 50% ( $0.54^1 - 0.87 * (500/100) / 100$ ).

Metrobus & Other - The mode split is 6% per Table S-3 for locations inside the beltway.

Walk & Other - The mode split is 14% per Table S-3 for locations inside the beltway.

## Retail Mode Share

WMATA's 2005 Development-Related Ridership Survey was used to development transportation modal share for the retail component of the proposed 3619 Georgia Avenue project. The following tables/references from the document were applied:

- Table C-22 Mode Shares at Retail Sites (page 149 of the pdf or C-53 in the document)
- Section 4.3.2 Regression Analysis (page 47 of the pdf and page 35)

Metrorail mode share - The Metrorail mode share was calculated using the regression analysis. Metrorail usage decreases by 1.29 percent for every 100 feet a retail site is displaced from a Metrorail station entrance/exit. The subject site, 3619 Georgia Avenue (Square 3032, Lot 0803), is 500-foot from the Georgia Avenue-Petworth Metrorail Station. Based on this methodology, Metrorail usage would be 23% ( $0.29^2 - 1.29 * (500/100) / 100$ ).

Metrobus & Other - The mode split is 8% per Table C-22 Mode Share at Retail Sites.

Walk & Other - The mode split is 27% per Table C-22 Mode Share at Retail Sites.

---

<sup>1</sup> 54% is the Metrorail ridership for a residence located at a Metrorail entrance/exit

<sup>2</sup> 29% is the average Metrorail ridership among all retail sites studied



**Table 11**  
**Regression Equation Summary for All Residential and Residential Commute/School**  
**Metrorail Trips by Distance from Station**

Distance (mile)	Metrorail Mode Share	
	Overall	Commute/School
0	54%	65%
1/4	43%	54%
1/2	31%	44%

Housing and street densities showed moderate correlations with auto and other transit (Metrobus and all other transit) modes, but the correlations were weaker when partnered with Metrorail use. As noted above, street density was used as a proxy for the attractiveness of the pedestrian environment. Higher street densities normally indicate good walking or pedestrian environments. The strongest correlation equation indicates that auto use decreases by 2.54 percent for every increase of one residential unit per acre, and decreases by 2.38 percent for every increase of one linear mile per square mile of street. The overall results among the housing and street densities suggest that residents living in areas with comparatively higher density housing and a dense street network are less likely to use their car, and more likely to use transit and Metrorail.

More detailed information about the regression analysis conducted for residential sites is provided in [Appendix C.2.2](#).

### **4.3 Retail, Hotel and Entertainment (Movie Theater) Sites**

The five retail sites are located at distances from Metrorail stations varying from zero to 1,700 feet, and almost 1,300 people were interviewed at these sites (see [Table 12](#)). The five hotels are located at distances from Metrorail stations varying from zero to 4,100 feet, and 167 guests and visitors were interviewed at these sites (see [Table 13](#)). The four entertainment (movie theater) sites are located at distances from Metrorail stations varying from 700 to 2,200 feet, and 974 moviegoers were interviewed at these sites (see [Table 14](#)).

#### **4.3.1 Frequency Analysis**

As shown in [Table 15](#), an average of 29 percent of trips to and from retail sites used Metrorail, which was similar to the 36 and 27 percent rates for auto and walk /other modes, respectively. The deviation in Metrorail use ranged from a high of 44 percent on U Street to a low of nine percent at the Silver Spring Neighborhood Center.

An average of 30 percent of all trips to and from the hotels used Metrorail (see [Table 15](#)). Similar to the retail sites, the auto and walk/other modes were not much different at 31 and 34 percent, respectively.

**Table S-3**  
**Office Commute and Residential Mode Share**  
**by Concentric Location Typology**

Mode Share	CBD	Inside the Beltway	Outside the Beltway
<b>Office Site Commute</b>			
Metrorail	63%	21%	8%
Metrobus & Other Transit	12%	9%	3%
Auto	21%	66%	89%
Walk & Other	5%	6%	0%
<b>Residential Sites</b>			
Metrorail	50%	43%	31%
Metrobus & Other Transit	6%	6%	1%
Auto	18%	39%	62%
Walk & Other	26%	14%	6%

**Table S-4**  
**Comparison of Transit Share Results from 2005 & 1989 Surveys**

Land Use Type	Transit <sup>1</sup> Share Range		Transit Share Average		
	2005 Survey	1989 Survey	2005 Survey	1989 Survey	% Change
Office: Commute	8% - 76%	8% - 50%	34% (17 locations)	17.6% (10 locations)	93%
Residential	17% <sup>2</sup> - 67%	30% - 74%	45% (18 locations)	46.2% (10 locations)	-3% <sup>3</sup>
Retail	19% - 57%	34% - 56%	37% (5 locations)	44.2% (8 locations)	-16%
Hotel	12% - 51%	11% - 38%	31% (5 locations)	25.2% (10 locations)	23%
Entertainment	13% - 44%	N/A	32% (4 locations)	N/A	N/A

Notes: <sup>1</sup> Transit mode share includes Metrorail, Metrobus and Other Transit.

<sup>2</sup> The 17% figure is from a site converting its apartments to condominiums, and is an outlier. The next lowest end of the range is 32%.

<sup>3</sup> This figure may be skewed due to the low figure reported from the site converting its apartments to condominiums.

### S.3.2 Land Use Specifics

For each land use type, survey results were tabulated to display frequencies and regression analyses were performed to test the strength of relationships between transit ridership and certain independent variables. A summary of the frequency results follows:

#### Office (17 sites; 15 percent response rate)

- 25 percent of all workplace survey respondents use Metrorail to commute to work.
- 44 percent of District residents responding to the workplace survey used Metrorail to commute to work. This figure exceeds the auto mode share for District residents, which was 41 percent. District residents accounted for only 14 percent of all survey responses, but accounted for more than 25 percent of all Metrorail commute trips.

among these trips, 67 percent were made using Metrorail. Trips to other political jurisdictions did not come close to this rate of Metrorail use.

**Table 10**  
**Residential Mode Share for All Trips by Concentric Location Typology**

Typology	Mode			
	Metrorail	Metrobus & Other Transit	Auto	Walk & Other
CBD	50%	6%	18%	26%
Suburban-Inside the Beltway	43%	6%	39%	14%
Suburban-Outside the Beltway	31%	1%	62%	6%

Similar to the office commute results, auto ownership appears to influence mode choice among the surveyed households, with those households having relatively high auto ownership rates tending to use the auto mode more often. However, auto ownership rates were much lower than that reported by office workers, probably reflecting the higher density status of the households. One-vehicle households reported a 40 percent Metrorail use rate. Zero-vehicle and two-vehicle households reported 66 and 30 percent Metrorail use rates, respectively.

More detailed information about the frequency analysis conducted for residential sites is provided in [Appendix C.1.2](#).

#### **4.2.2 Regression Analysis**

Independent variables similar to those used in the office site analysis were tested to determine if any explain the variation in modal split for trips made from the residential sites. After initial analysis using all sites, data from the two Gallery Place-Chinatown sites were removed from the equations as a sensitivity test as these sites produced very different mode share characteristics than the other residential sites (see [Table 9](#)).

Distance between site and station produced a stronger correlation with mode shares than that found for office sites (see [Section 4.1.2](#)). For Metrorail use, the R-square value was 0.41, and the correlation indicates that Metrorail use decreases by 0.87 percent for every 100 feet increase in distance a residential site is located from the station exit/entrance (see [Figure 15](#)). If only commute and school trips are counted, the R-square value for Metrorail trips drops to 0.23, but as noted above, the overall percent of trips made by Metrorail increases. [Table 11](#) summarizes the predictive outcomes for all and commute/school residential Metrorail trips by distances of zero, 1/4 and 1/2 mile from a Metrorail station.

nearby buildings. With many nearby office and residential buildings, the Crystal City sites also had high percentages of dining visitors who arrived by the “walk and other” mode (62 and 64 percent). Also, since both Crystal City retail sites are part of the pedestrian network, a very high percentage of respondents reported “personal business” as the purpose of the visit, suggesting that they are workers or visitors walking between office and other buildings.

**Table C-22**  
**Mode Shares at Retail Sites**

Retail Site	Mode			
	Metrorail <sup>1</sup>	Metrobus & Other Transit <sup>2</sup>	Auto <sup>3</sup>	Walk & Other <sup>4</sup>
<b>Ballston Station Area</b>				
Ballston Common	23%	7%	43%	27%
<b>Crystal City Station Area</b>				
Crystal Plaza Shops	36%	5%	24%	36%
The Underground	31%	6%	27%	35%
<b>Silver Spring Station Area</b>				
Silver Spring Neighborhood Center	9%	10%	67%	14%
<b>U Street/African American Civil War Memorial/Cardozo Station Area</b>				
U St Main Street	44%	13%	19%	25%
<b>Average Among All Sites</b>	<b>29%</b>	<b>8%</b>	<b>36%</b>	<b>27%</b>

Notes: <sup>1</sup> Includes multimodal trips that may have involved auto and/or bus use in combination with Metrorail.

<sup>2</sup> Includes bus only trips, and commuter rail, such as MARC, VRE or Amtrak.

<sup>3</sup> Includes trips as driver and passenger of a private automobile.

<sup>4</sup> Includes cycling and any other form of transportation one may use.

Table C-24 sorts the mode shares at the surveyed retail sites by the jurisdiction from which the respondents came, and the jurisdiction to which they planned to go after visiting the site. For all five sites, the most popular origin and destination for trips to and from each individual retail site was the jurisdiction of the site’s location. At Ballston Common and the two Crystal City sites, the largest modal share among visitors coming from and going to Arlington County (all three sites are located in Arlington County) was the “walk and other” mode, suggesting large patronage from nearby office workers and residents. The Silver Spring Neighborhood Center did not exhibit this pattern. Its visitors from within Montgomery County overwhelming drove or rode in an automobile (68 percent) to travel to and from the site. U Street Main Street exhibited a different pattern; its largest customer base, those arriving from or going to a District location, tended to use Metrorail (44 percent).

### 4.3.2 Regression Analysis

As with the office and residential sites, the regression analysis conducted for the retail, hotel and entertainment sites tested the strength of the relationship between mode share and variables such as distance from the station, street densities, which served as a proxy for the pedestrian-friendliness of the walk environment, and area housing and job densities. Unlike the other two land uses, however, no sensitivity testing was conducted for these types of land uses because of the small survey samples for each type.

At retail sites, distance between site and station showed a correlation with mode choice. The R-square value indicates that Metrorail use decreases by 1.29 percent for every 100 feet increase in distance a retail site is located away from the station exit/entrance. At entertainment (movie theater) sites, job, housing and street densities showed a relationship with increased transit use. The correlation indicates that an increase of one job per acre increases the percentage of transit trips made to entertainment (movie theater) sites by 0.84 percent. For housing density, the analysis indicates that an increase of one residential unit per acre increases the percentage of transit trips made to movie theater sites by 5.30 percent. For street density, the analysis indicates that an increase of one linear mile per square mile of streets increases the percentage of transit trips made to movie theater sites by 3.59 percent. In other words, a more attractive walking environment promotes increased transit ridership for this land use. However, because sample sizes for these land use types are so small, further analysis should be conducted using a larger sample size.

More detailed information about the regression analyses conducted for retail, hotel and entertainment (movie theater) sites can be found in [Appendices C.2.3 through C.2.5](#).

## Appendix B. Parking Occupancy Worksheets

---

**Table 1: Parking Supply by Type and Signage/Restrictions**  
**6:00 PM Occupancy Thursday, September 18, 2014**

[illegible]



Table 1: Parking Supply by Type and Signage/Restrictions  
6:00 PM Occupancy Thursday, September 18, 2014

Street	Block	Side	Occupancy by type of Parking Space														Total Occupancy
			RPP	Metered	Handicap Meter	Signed Handicap	Pay to Park	Not signed	No Parking 6AM-2PM; 7AM-6:30PM	2 Hour Parking	1 Hour Parking	15 Minute Parking	30 Minute Parking	Loading Zone	Car Share	Illegal	
Warder Street	Rock Creek Church Rd. to Quebec St.	East	5										1				6
		West	5														5
	Quebec St. to Princeton Pl.	East	5														5
		West	6														6
	Princeton Pl. to Otis Pl.	East						6									6
		West						6								1	7
	Otis Pl. to Newton Pl.	East						6									6
		West												7		1	8
Total Occupancy			21	0	0	0	0	18	0		0	0	1	7	0		49
Total Supply			29	0	0	1	0	19	0		0	0	1	10	0		60
Percent Occupied			72%			0%		95%					100%	70%			82%
Princeton Place	Warder St. to Georgia Ave.	North	25			0											25
		South**	17			1											18
Total Occupancy			42	0	0	1	0	0	0	0	0	0	0	0	0	0	43
Total Supply			49	0	0	2	0	0	0	0	0	0	0	0	0	0	51
Percent Occupied			86%			50%											84%
Otis Place	Warder St. to 6th St.	North	4						3							3	10
		South	2											3		1	6
	6th St. to Georgia Ave.	North	15			1		1									17
		South	11			2									1		14
	Georgia Ave. to New Hampshire Ave.	North	10											3			13
		South	15	3												1	19
Total Occupancy			57	3	0	3	0	1	3	0	0	0	0	6	1	5	79
Total Supply			69	4	0	3	0	1	7	0	0	0	0	10	2	0	96
Percent Occupied			83%	75%		100%		100%	43%					60%	50%		82%

Table 1: Parking Supply by Type and Signage/Restrictions  
6:00 PM Occupancy Thursday, September 18, 2014

Street	Block	Side	Occupancy by type of Parking Space														Total Occupancy
			RPP	Metered	Handicap Meter	Signed Handicap	Pay to Park	Not signed	No Parking 6AM-2PM; 7AM-6:30PM	2 Hour Parking	1 Hour Parking	15 Minute Parking	30 Minute Parking	Loading Zone	Car Share	Illegal	
6th Street	Otis Pl. to Newton Pl.	East															0
		West	6													2	8
Total Occupancy			6	0	0	0	0	0	0	0	0	0	0	0	0	2	8
Total Supply			7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Percent Occupied			86%														114%
Newton Place	Warder St. to 6th St.	North	2					8									10
		South	11					2									13
	6th St. to Georgia Ave.	North															0
		South	13			0				0							13
	Georgia Ave. to New Hampshire Ave.	North**	25													1	26
		South	26			1											
Total Occupancy			77	0	0	1	0	10	0	0	0	0	0	0	0		89
Total Supply			85	0	0	2	0	10	0	0	2	0	0	0	0		99
Percent Occupied			91%			50%		100%			0						90%
New Hampshire Avenue	Newton Pl. to Otis Pl.	East	6														6
	Otis Pl. to Spring Road	East	8														8
		West	6														6
	Park Rd. to Rock Creek Church Rd.	West	6														6
	Spring Rd. to Georgia Ave.	East	2														2
		West	3														3
Total Occupancy			31	0	0	0	0	0	0	0	0	0	0	0	0		31
Total Supply			51	0	0	2	0	0	0	0	0	0	0	0	0		53
Percent Occupied			61%			0%											58%
Spring Road	10th St. to Rock Creek Church Road	North												2			2
		South	9														9
	Rock Creek Church Rd. to New Hampshire Ave.	North	3														3
		South	2														2
	New Hampshire Ave. to Georgia Ave.	North															0
		South														3	3
Total Occupancy			14	0	0	0	0	0	0	0	0	0	0	2	0	3	19
Total Supply			18	0	0	0	0	0	0	0	0	0	0	13	0	0	31
Percent Occupied			78%											15%			61%
Total Study Area Occupancy			329	9	3	5	2	29	4	16	0	4	1	15	1	13	434
Total Supply			411	15	3	11	5	30	9	18	2	4	1	38	2	0	549
Occupancy by Type of Space			80%	60%	100%	45%	40%	97%	44%	89%	0	100%	100%	39%	50%		79%



Table 2: Parking Supply by Type and Signage/Restrictions  
9:00 PM Occupancy Thursday, September 18, 2014

Street	Block	Side	Occupancy by type of Parking Space														Total Occupancy
			RPP	Metered	Handicap Meter	Signed Handicap	Pay to Park	Not signed	No Parking 6AM-2PM; 7AM-6:30PM	2 Hour Parking	1 Hour Parking	15 Minute Parking	30 Minute Parking	Loading Zone	Car Share	Illegal	
Warder Street	Rock Creek Church Rd. to Quebec St.	East	6										1				7
		West	7														7
	Quebec St. to Princeton St.	East	7														7
		West	8														8
	Princeton St. to Otis St.	East						7									7
		West						6									6
	Otis St. to Newton St.	East						6								4	10
		West															0
Total Occupancy			28	0	0	0	0	19	0		0	0	1	0	0		52
Total Supply			29	0	0	1	0	19	0		0	0	1	10	0		60
Percent Occupied			97%			0%		100%						0%			87%
Princeton Place	Warder St. to Georgia Ave.	North	22			1		2									25
		South**	24			1											25
Total Occupancy			46	0	0	2	0	2	0	0	0	0	0	0	0	0	50
Total Supply			49	0	0	2	0	0	0	0	0	0	0	0	0	0	51
Percent Occupied			94%			100%											98%
Otis Place	Warder St. to 6th St.	North	5						1								6
		South	2											2			4
	6th St. to Georgia Ave.	North	16			1		1									18
		South	14			1									2		17
	Georgia Ave. to New Hampshire Ave.	North	14											4			18
		South	18	3													21
Total Occupancy			69	3	0	2	0	1	1	0	0	0	0	6	2	0	84
Total Supply			69	4	0	3	0	1	7	0	0	0	0	10	2	0	96
Percent Occupied			100%	75%		67%		100%	14%					60%	100%		88%

Table 2: Parking Supply by Type and Signage/Restrictions  
9:00 PM Occupancy Thursday, September 18, 2014

Street	Block	Side	Occupancy by type of Parking Space														Total Occupancy
			RPP	Metered	Handicap Meter	Signed Handicap	Pay to Park	Not signed	No Parking 6AM-2PM; 7AM-6:30PM	2 Hour Parking	1 Hour Parking	15 Minute Parking	30 Minute Parking	Loading Zone	Car Share	Illegal	
6th Street	Otis St. to Newton St.	East															0
		West	7													2	9
Total Occupancy			7	0	0	0	0	0	0	0	0	0	0	0	0	2	9
Total Supply			7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Percent Occupied			100%														129%
Newton Place	Warder St. to 6th St.	North	2					8									10
		South	13														13
	6th St. to Georgia Ave.	North															0
		South	17			1				2							20
	Georgia Ave. to New Hampshire Ave.	North**	24														24
		South	27			1											28
Total Occupancy			83	0	0	2	0	8	0	0	2	0	0	0	0		95
Total Supply			85	0	0	2	0	10	0	0	2	0	0	0	0		99
Percent Occupied			98%			100%		80%			1						96%
New Hampshire Avenue	Newton St. to Otis St.	East	6														6
		West	14			1											15
	Otis St. to Spring Road	East	14														14
		West	13												1		
	Park Rd. to Rock Creek Church Rd.	West	6														6
		East	3													4	7
Total Occupancy			51	0	0	1	0	0	0	0	0	0	0	0	0		57
Total Supply			51	0	0	2	0	0	0	0	0	0	0	0	0		53
Percent Occupied			100%			50%											108%
Spring Road	10th St. to Rock Creek Church Road	North												8			8
		South	10														10
	Rock Creek Church Rd. to New Hampshire Ave.	North	2														2
		South	4														4
	New Hampshire Ave. to Georgia Ave.	North															0
		South															0
Total Occupancy			16	0	0	0	0	0	0	0	0	0	0	8	0	0	24
Total Supply			18	0	0	0	0	0	0	0	0	0	0	13	0	0	31
Percent Occupied			89%											62%			77%
Total Study Area Occupancy			398	11	1	8	2	30	1	16	2	4	1	18	2	5	508
Total Supply			411	15	3	11	5	30	9	18	2	4	1	38	2	0	549
Occupancy by Type of Space			97%	73%	33%	73%	40%	100%	11%	89%	1	100%	100%	47%	100%		93%