

TECHNICAL MEMORANDUM

To: David Gorman
Lock 7 Development

From: Maris Fry, EIT
Jim Watson, PTP
Erwin N. Andres, P.E.

Date: December 16, 2013

Subject: 1348 Florida Avenue Parking and Loading Management Plan

INTRODUCTION

This memorandum outlines the parking and loading aspects of the 1348 Florida Avenue development located in the northeast quadrant of Washington, DC in Ward 6. Figure 1 identifies the regional site location within the District. The site is currently occupied by various uses including office, retail, and storage and will be redeveloped into a mixed-use development comprising of approximately 1,200 square feet of ground floor retail and 49 residential units. Eight parking spaces will be supplied on-site along the northeast edge of the building, accessible from the alley connecting Oren Street and Staples Street. All residential loading will take place along the alley adjacent to the north of the site. A parking and loading management plan has been developed to best serve the nature of the site. This includes an analysis of comparable development in addition to an on-street parking analysis to determine the existing parking utilization in the neighborhood. This was augmented by an aggressive Transportation Demand Management (TDM) plan to promote the use of non-vehicular travel modes to and from the site.

The following conclusions were made regarding the 1348 Florida Avenue development:

- The site is surrounded by an existing network of transit, bicycle, and pedestrian facilities that result in an adequate environment for safe and effective non-auto transportation;
- Based on the site location near good transit services and the implementation of an aggressive TDM plan, the proposed parking supplied by the development will be adequate to serve the needs of residents.
- On-street parking is moderately utilized in the vicinity of the site with a peak of 71 percent utilization during the weekday parking peak (7:00- 8:00 PM). It is not likely that the development will cause any detrimental impacts to on-street parking conditions.
- Based on an analysis of comparable residential units and an estimation of loading activity for the development, it was determined that the amount of loading activity expected to take place at the site will be adequately served by a loading area along the alley.
- An aggressive TDM plan for the development will include the implementation of a TDM coordinator, on-site services, a marketing program, transportation incentives, bicycle amenities, and ride-matching/ridesharing programs.

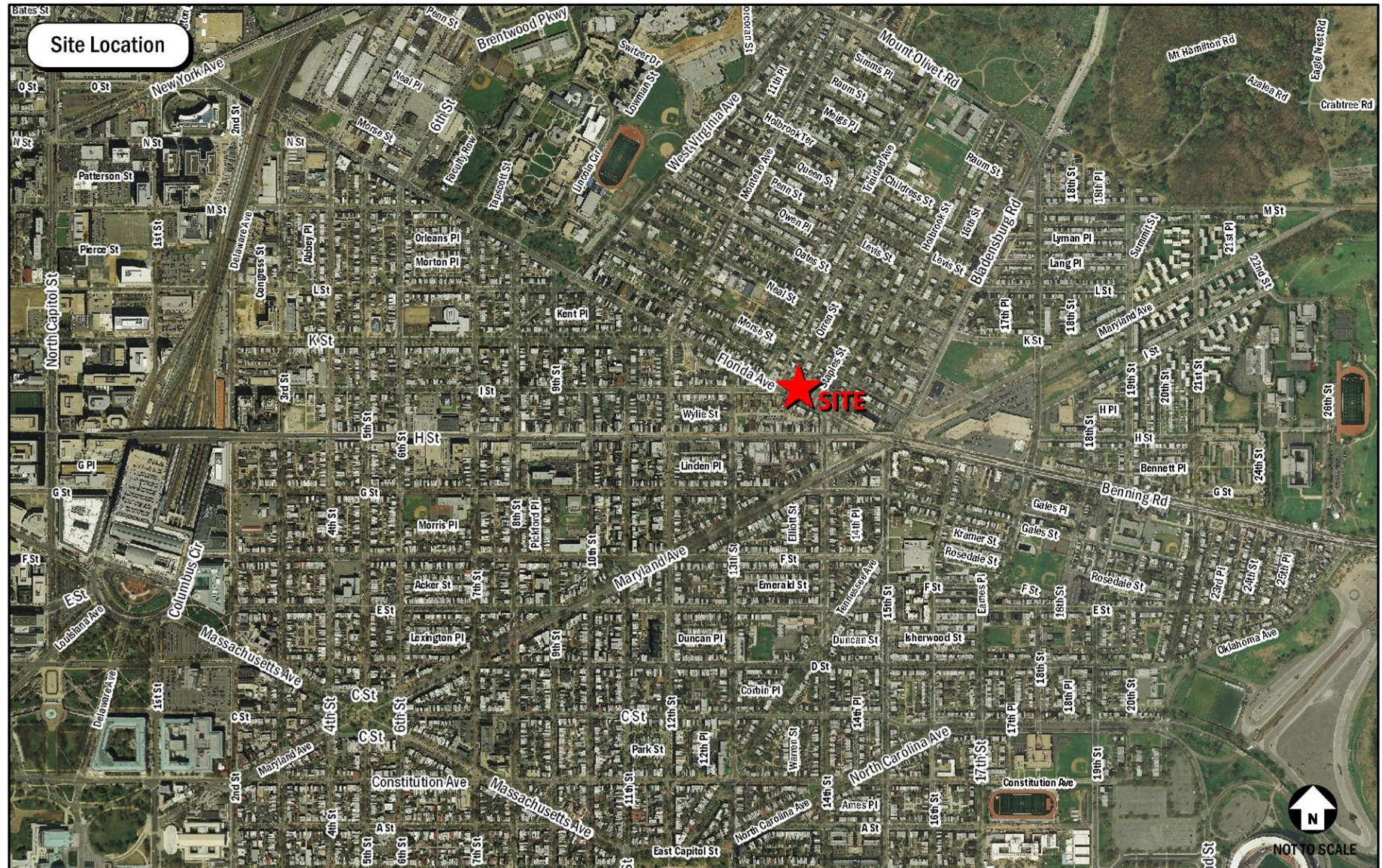


Figure 1: Site Location

EXISTING CONDITIONS

This section provides a review of the existing transit, bicycle, and pedestrian facilities in the vicinity of the site. The site is served by public transportation, primarily consisting of Metrobus. The project site is also served by a pedestrian network consisting of sidewalks and crosswalks along the streets surrounding the project site. Additionally, the site is served by an on-street bicycle network, consisting of bike lanes, cycle tracks, and signed bicycle routes.

Transit

Local transit services that provide access to and from the 1348 Florida Avenue development site primarily include Metrobus and MetroExpress routes. Metrobus service is operated by the Washington Metropolitan Area Transit Authority (WMATA) and is currently the fifth largest bus network in the nation. Figure 2 illustrates the existing Metrobus and MetroExpress routes.

Numerous Metrobus and MetroExpress routes operate along Florida Avenue, H Street, Maryland Avenue, 14th Street, Bladensburg Road, Benning Road, and Trinidad Avenue NE within walking distance of the site. Table 1 shows a summary of the bus route information for the lines that serve the study area, including service hours and the headways. The nearest Metrobus stop is located at the intersection of Florida Avenue and Trinidad Avenue NE, approximately 200 feet from the site and serves the X3 line. Additionally, there is at least one stop for every bus route listed below within 800 feet of the site.

Table 1: Bus Route Information

Route Number	Route Name	Service Hours	Headway
B2	Bladensburg Road-Anacostia Line	Weekdays: 4:25 am – 3:15 am Saturdays: 4:30 am – 2:35 am Sundays: 5:15 am – 1:30 am	Peak Hours: 10-12 minutes Off-Peak Hours: 15-30 minutes Weekends: 20-30 minutes
D3	Ivy City-Dupont Circle Line	Weekdays: WB 6:05 am – 9:15 am EB 3:00 pm – 5:50 pm Saturdays: WB 6:25 am – 8:30 am EB 4:00 pm – 5:50 pm	20-30 minutes
D4	Ivy City-Franklin Square Line	Weekdays: 4:15 am – 1:05 am Saturdays: 4:45 am – 1:05 am Sundays: 5:15 am – 1:05 am	Peak Hours: 15-20 minutes Off-Peak Hours: 30 minutes Weekends: 30 minutes
D8	Hospital Center Line	Weekdays: 5:15 am – 1:00 am Weekends: 6:15 am – 1:05 am	Peak Hours: 10-15 minutes Off-Peak Hours: 15-30 minutes Weekends: 15-30 minutes
X1, X3	Benning Road Line	Weekdays: WB 6:00 am – 8:40 am EB 3:40 pm – 6:10 pm	AM Peak Hour: 7-15 minutes PM Peak Hour: 20-30 minutes
X2	Benning Road-H Street Line	Monday - Saturday: 4:05 am – 3:00 am Sundays: 4:10 am – 2:00 am	Peak Hours: 6-10 minutes Off-Peak Hours: 10-20 minutes Weekends: 10-20 minutes
X8	Maryland Ave Line	Weekdays: 6:00 am – 10:30 pm Weekends: 6:40 am – 9:45 pm	Weekdays: 15-20 minutes Weekends: 20-40 minutes
X9	Benning Road-H Street Limited	Weekdays: 6:15 am – 9:00 am 3:30 pm – 6:30 pm	15 minutes

Due to growth of population, jobs, and retail in several neighborhoods in the District and the potential for growth in other neighborhoods, the District's transportation infrastructure is planned to be augmented by the reestablishment of streetcar service in the District and the implementation of limited-stop bus service along major corridors in the vicinity of the

proposed development, including the H Street corridor as is outlined in the *DC's Transit Future System Plan* report published by DDOT in April 2010.

The streetcar system element of the plan includes one route that travels near the project site. The streetcar system will consist of modern low-floor vehicles that operate on surface tracks embedded in the roadways, which will mostly operate in travel lanes that are shared with automobiles. Stops will generally be located every ¼- to ½-mile along the routes. The future planned route serving the study area will initially connect the site with Union Station prior to the completion of the development, and eventually travel between the Benning Road Metro Station and Georgetown.

Bicycle Facilities

DDOT's April 2012 Bicycle Map classifies the bicycling conditions around the proposed development as good, fair, or poor. An inventory of the bicycle facilities found throughout the study area and the adequacy of each such facility is provided in Figure 3. Although there are some roadways with poor conditions such as H Street/Benning Road, there are several existing bike facilities, planned bike facilities, and local streets with safe conditions surrounding the site. Safe north-south connectivity is provided by the one-way bike lanes along 14th Street and 15th Street NE. Further from the site, there is also the one-way pair of bike lanes along 4th and 5th Street NE and the Metropolitan Branch Trail that travels adjacent to the Red Line tracks. East-west connectivity is best served along I Street and G Street. These roadways are low-speed, low-volume, one-way roadways that currently provide safe cycling conditions. Additionally, future plans call for contraflow bike lanes to allow for two-way bicycle traffic along both roadways.

In addition, the Capital Bikeshare program has placed over 200 bike share stations across Washington, DC, Arlington and Alexandria, VA, and most recently Montgomery County, MD with more than 1,800 bicycles provided. Capitol Bikeshare has plans to expand the system and potential new station locations have been identified throughout the study area. Figure 3 identifies existing station locations in the study area. Capitol Bikeshare currently has three existing bike share locations within quarter-mile walk of the site. The nearest station is located at the northeast corner of H Street and 13th Street NE about 800 feet from the site. The two other stations are located at the Starburst Intersection Plaza at Maryland Avenue and Bladensburg Road NE and along Neal Street NE between Trinidad Avenue and Montello Avenue.

Pedestrian Facilities

The roadways in the immediate vicinity of the proposed development provide satisfactory pedestrian facilities and connectivity throughout the area. Wide, continuous sidewalks line all of the study area's roadways with crosswalks linking segments at intersections within the study area. Adequate crosswalks with ladder striping and pedestrian countdown signals are present at the study area's signalized intersections for all crossing movements.

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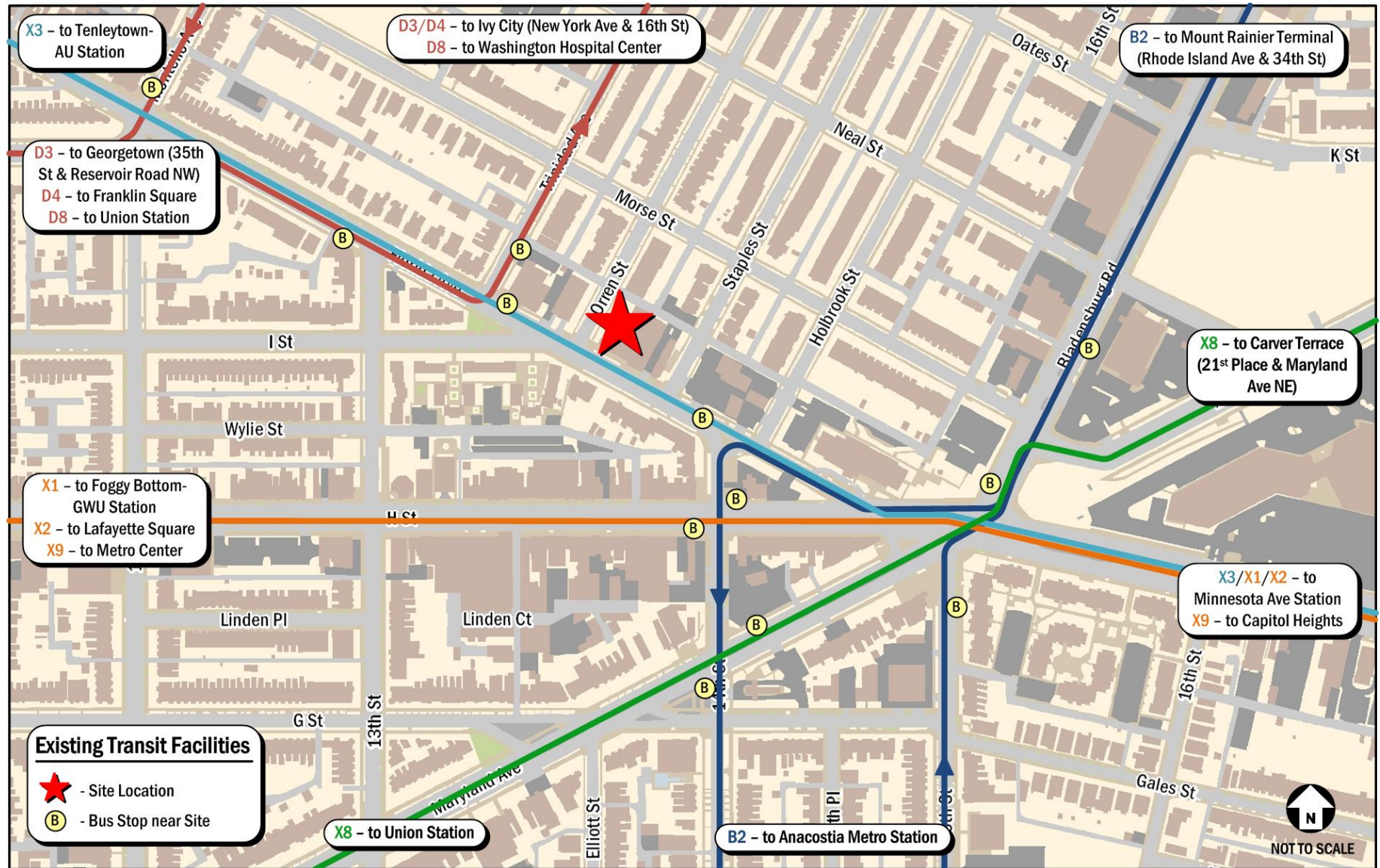


Figure 2: Existing Transit Service

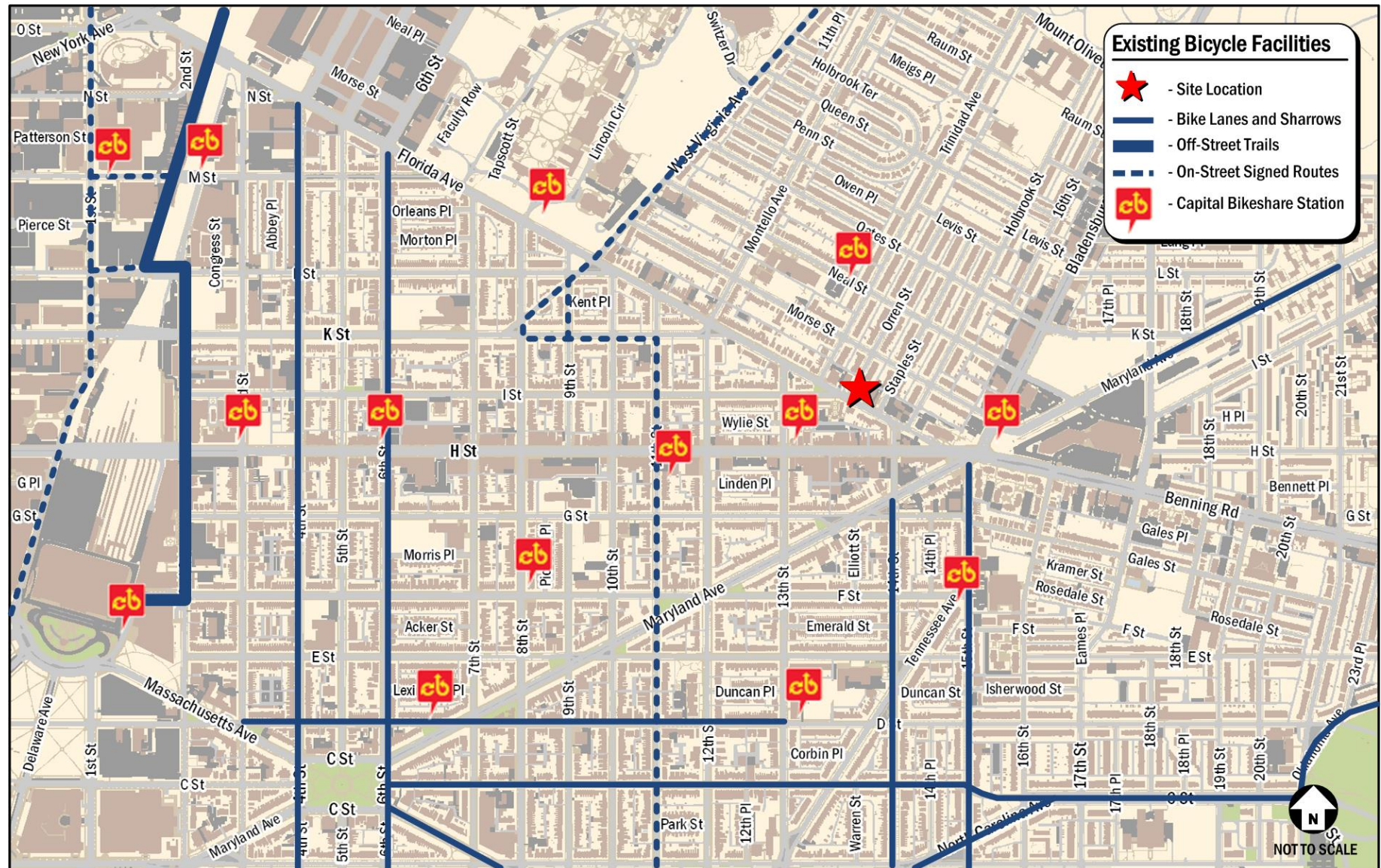


Figure 3: Existing Bicycle Facilities



Figure 4: Site Plan

DESIGN REVIEW

This section provides an overview of the transportation features of the proposed 1348 Florida Avenue development. The development program consists of a mixed-use development including approximately 1,200 SF of ground-floor retail space and 49 residential units. Eight parking spaces will be provided on the northeast side of the building, accessible from the alley connection Oren Street and Staples Street. Figure 4 displays the access strategies for the site including parking access, pedestrian access, and loading areas.

Site Access and Internal Circulation

Site Access

The primary pedestrian access for residents will be located along Oren Street with a secondary access located off of the alley near the on-site parking. The eight on-site parking spaces will be located along the alley accessible from Oren Street or Staples Street. Loading will take place along the alley or along Oren Street.

Parking

As mentioned previously, the project will provide eight parking spaces on-site. According to the current zoning regulations and based upon the existing zoning of the site location, the development is required to provide one parking space for each two dwelling units. Due to the small size of the retail establishment, no parking is necessary for the retail use of the development. Based on these requirements, the site would be required to provide 25 parking spaces for residents.

Under section 1901.5 of the new zoning regulations, the parking requirement would ordinarily be 15 spaces based on the proposed new one space for three dwelling units in excess of four units. However, under the new section 1902.1, this parking requirement would be further reduced to eight spaces. Under 1902.1, the parking requirement of 15 spaces is reduced by 50% for any site located within ¼ mile (1312.5 feet) of a streetcar line that is in operation or for which a construction contract has been awarded. Given that the site is approximately 300 feet from H Street and approximately 400 feet from the nearest proposed street car stop, the site is located within ¼ mile of the proposed street car. As a result, the parking requirement would be eight spaces.

Although the development does not meet current zoning requirements, the development will meet the proposed zoning requirements. In addition, the eight parking spaces are projected to adequately serve the demands of the site due to the following various considerations:

- The site is served by 9 bus Metrobus and MetroExpress routes within a quarter-mile walking distance.
- The H Street/Benning Road Streetcar line will be open by completion of the development allowing quick and efficient transportation between the site and Union Station. The site's location in relation to the Streetcar line also contributes to the site's fulfillment of the proposed zoning requirements as discussed above.
- Capital Bikeshare has three existing bike share locations near the site. One is approximately 800 feet from the site at the northeast corner of H Street and 13th Street NE. The additional stations are located at the Starburst Intersection Plaza at Maryland Avenue and Bladensburg Road NE and along Neal Street NE between Trinidad and Montello Avenue.

- The applicant will incorporate bicycle parking into the site. The design of these spaces will reflect similar dimensions as currently incorporated in other development throughout the District. The number of long-term spaces provided will exceed the bicycle parking requirements as stated within the DC zoning ordinance.
- The site area has a walkability score of between 84 and 92 as calculated by WalkScore.com. This categorizes the site and the surrounding areas as “very walkable” to the north and “walker’s paradise” to the south.

Given the urban nature of the site and its proximity to many non-auto modes of transportation, the site will adequately serve the vehicular needs of the development.

Additional supporting data has been obtained through a review of parking supply and demand at four other comparable properties, which contain a significant mix of studios and small one-bedrooms. Data collected from these transit-oriented properties, demonstrate that off-site parking is utilized at a ratio of 0.16 spaces per unit for the 322 studio units in the study. The 1348 Florida Avenue property will be comprised of similar size and type units with some additional two bedroom units, thus a ratio similar to these would be realized.

Given these ratios, it is anticipated that the applicants proposed off-street parking of 8 residential parking spaces (0.16 spaces per unit) for the approximately 49 unit development will adequately support the demands of the site.

Table 2: Comparable Site Parking Supply

Property	STUDIO UNITS			SMALL 1 BEDROOM UNITS		
	Units	Rented Spaces	Spaces per Unit Ratio	Units	Rented Spaces	Spaces per Unit Ratio
Hamilton House, 1255 New Hampshire Ave, NW	210.00	30.00	0.14	N/A	N/A	N/A
M Street. 1112 M Street, NW	84.00	17.00	0.20	N/A	N/A	N/A
Preston, 1743 P Street, NW	9.00	0.00	0.00	4.00	0.00	0.00
Sutton Plaza, 1230 13th Street, NW	19.00	3.00	0.16	137.00	27.00	0.20
Total	322.00	50.00		141.00	27.00	
Average Spaces per Unit Ratio		0.16			0.19	

1348 Florida Avenue	Total Units:	49
	Spaces:	8
	Spaces per Unit Ratio:	0.16

On-Street Parking

This section presents the findings of an on-street parking study, including full inventory of available parking spaces and a parking occupancy count within walking distance of the proposed development. The purpose of these counts was to determine the amount of parking supply and demand on streets within a walking distance of the site and to identify and trends or patterns associated with this parking demand.

Parking Inventory and Occupancy Counts

The on-street parking study was conducted across an area considered to be within walking distance of 1438 Florida Avenue. A map showing the study area block faces is shown in Figure 5. An inventory of available on-street parking facilities was conducted that included tabulating the number of parking spaces by block face and identifying any relevant parking restrictions. A total of 127 parking spaces were inventoried within the study area. Of these, 80 are unrestricted spaces and

47 are Residential Permit Parking (RPP) spaces. Figure 6 shows a breakdown of the most predominant parking type by block face for the study area.

Parking occupancy data was collected on Tuesday, November 12, 2013 from 8:00 AM to 8:00 PM. Table 2 gives a summary of the hourly utilization percentages for the entire study period. The number of available spaces decreases slightly at 9:00 AM because there are two spaces with restricted parking between 9:00 AM and 10:00 PM. It was determined that the weekday parking peak occurs from 7:00 to 8:00 PM with a parking utilization of 71 percent. Table 3 gives a summary of the inventory and occupancy results for the peak hour. Figure 6 shows the parking utilization during the weekday evening peak.

Table 3: Hourly Utilization Percentages

	8AM	9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM
Occupancy	73	69	76	80	75	81	76	70	68	66	81	89
Total Spaces	127	125	125	125	125	125	125	125	125	125	125	125
Utilization	57%	55%	61%	64%	60%	65%	61%	56%	54%	53%	65%	71%

Table 4: Peak Hour Inventory and Occupancy Summary

Space Type	Spaces Available	Peak Period	
	Weekday Peak (7-8 PM)	Occupancy	Utilization
RPP	47	45	96%
Unrestricted	78	44	56%
All On-Street Spaces	125	89	71%

Generally, parking utilization is relatively stable during the majority of the day with utilization percentages consistently around 60 percent for the entirety of the study period. There is a slight spike at the end of the day to 71 percent in which more of the RPP parking spaces are filled, indicating that people are coming home and parking for the night. Particularly during the parking peak, the utilization percentage elevates to 96 percent occupied at RPP spaces with just 56 percent of the unrestricted areas occupied. Therefore, the RPP parking spaces surrounding the area are highly utilized; however, there is still a large amount of unrestricted parking available near the site, particularly adjacent to the development site along Oren Street. Because there is a relatively large amount of on-street parking available, it is unlikely that the development will cause detrimental impacts to the surrounding neighborhood in regards to parking.

Off-Street Parking

The site is well served by an alley network which provides access to off-street parking for most of the adjacent residential and commercial properties, as shown on Figure 6. The alley immediately adjacent to the site is approximately 20 feet in width and connects directly to both Orren and Staples Streets, allowing for ample space for vehicular parking movements. Another alley continues north to Morse Street and is approximately 15 feet in width. As discussed previously and shown on Figure 4, the 1348 Florida Avenue development is planned to provide eight parking spaces accessed off of the alley. This is consistent with adjacent properties which have parking accessed via the alleys.

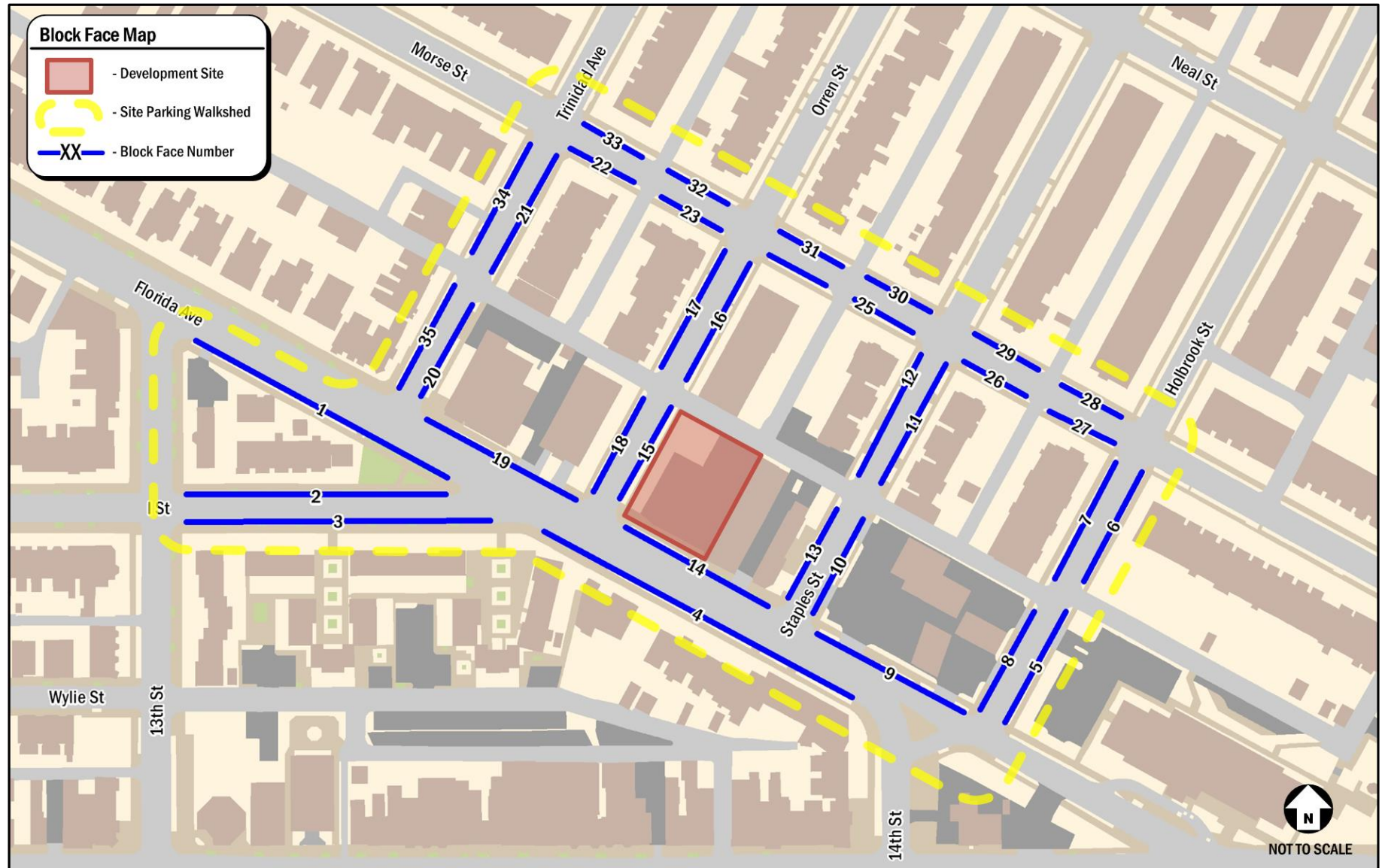


Figure 5: Block Face Map



Figure 6: Summary of Parking Type

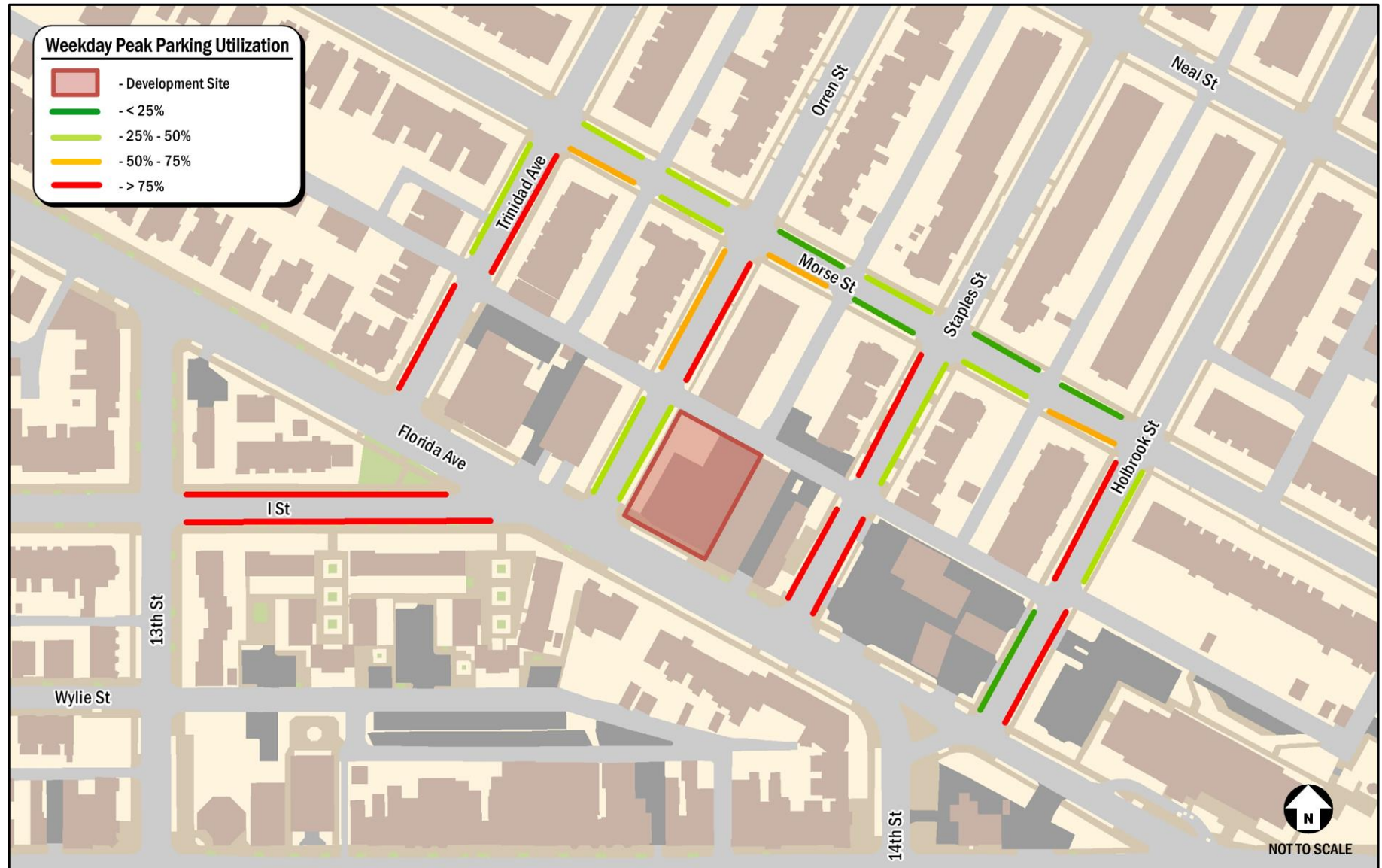


Figure 7: Weekday Peak Parking Utilization

Loading

The site plan indicates that there will be no loading facilities provided on-site and, pursuant to §2201.1, no such facilities are required because the development will not provide 50 or more dwelling units. Additionally, loading cannot be accommodated on-site given the compact nature of the site. Therefore, it will be necessary for loading activity for the site to take place in the alley or on-street. The number of truck trips generated by a project of this scale is relatively low. Based on previous studies, rental apartments have an average turnover of 18 months, with two trucks expected per turnover (one move-out and one move-in). Based on this assumption for a 49 unit apartment complex, there will be approximately 65 truck deliveries per year or one delivery every 5 to 6 days. In addition, general retail stores are expected to have 3 van-sized deliveries per week. Therefore, the site is expected to generate 4 to 5 deliveries per week.

In addition to compiling parking information for comparable sites to the 1348 Florida Avenue development, loading information for these same locations was also compiled, as shown in Table 3. Properties with more total residential units than the 1348 Florida Avenue development operate sufficiently utilizing either off-street or on-street loading. Therefore, it can be concluded that for a development of this size, an on-street loading area will be adequate to serve all loading operations.

Table 5: Comparable Site Loading Area Supply

Property	Total Units	Loading Location	Studio Apartment		Small 1 Bedroom Apartment	
			Average Size	Max Size	Average Size	Max Size
Hamilton House, 1255 New Hampshire Ave, NW	304	Off-Street	SU-25 or Less	SU-40 ²	N/A	N/A
M Street. 1112 M Street, NW ¹	124	Off-Street	SU-22 or Van	SU-30 ²	N/A	N/A
Preston, 1743 P Street, NW	27	On-Street	SU-20	SU-30	SU-22	SU-30
Sutton Plaza, 1230 13th Street, NW	176	On-Street	Van	SU-20 ²	SU-20	SU-22 ²

1. Most studio renters move in with personal vehicle.

2. Vehicle size used rarely throughout calendar year (10 times or less per year).

Based on the compiled information, it appears that most move-in and move-outs utilize vehicles 24 feet in length and smaller. Occasionally, vehicles up to 30 feet in length are used. The applicant has committed to encourage the residents and retail establishments to utilize vehicles 24 feet or smaller while also managing the loading operations taking place along the alley and along Oren Street.

Bicycle Facilities

The site plan specifies that a portion of the first level will be utilized for dedicated long-term bike parking, which will include 36 bike storage spaces. According to the Bicycle Commuter and Parking Expansion Act of 2007, a residential building owner shall provide at least one secure bicycle parking space for each 3 residential units for all new residential buildings. Additionally, all other land uses require that the number of bicycle spaces provided shall be at least equal to five percent (5%) of the number of automobile parking required. Based on these regulations the development would require 17 bicycle parking spaces, which this development meets. Short term bicycle parking along the perimeter of the development site will be provided in coordination with DDOT.

Transportation Demand Management

Transportation Demand Management (TDM) is the application of policies and strategies used to reduce travel demand or to redistribute demand to other times or spaces. TDM typically focuses on reducing the demand of single-occupancy private vehicles during peak period travel times or on shifting single-occupancy vehicular demand to off-peak periods. TDM's importance within the District is highlighted within section T-3.1 of the DC Comprehensive Plan, where it has its own dedicated section including TDM policies and actions.

Proposed TDM Plan

Based on the DDOT expectations for TDM programs, and analyzing the specific attributes of the development site, the following outlines the proposed TDM plan for the 1438 Florida Avenue development.

- **Transportation Management Coordinator (TMC)**
Effective Transportation Management Programs (TMPs) require a coordinator to implement and manage TDM strategies. A member of the property management group would be a point of contact and would be responsible for coordinating, implementing and monitoring the TMP strategies. This would include the development and distribution of information and promotional brochures to residents, visitors, patrons and employees regarding transit facilities and services, pedestrian and bicycle facilities and linkages, ridesharing (carpool and vanpool) and car sharing. In addition, the TMC would be responsible for ensuring that loading activities are properly coordinated and do not impede the pedestrian, bicycle, or vehicular lanes adjacent to the development. The contact information for the TMC would be provided to DDOT/Zoning Enforcement with annual contact updates.
- **On-Site Services**
A TransitScreen will be installed in the lobby to keep residents and visitors informed on all available transportation choices and provide real-time transportation updates. In addition, the TMC will make printed materials related to local transportation alternatives available to residents and employees upon request and at move-in for new tenants.
- **Marketing Program**
The TMC will establish a TDM marketing program that provides detailed transportation information and promotes walking, cycling, and transit. An effective marketing strategy should consist of a multi-modal access guide that provides comprehensive transportation information. This information can be compiled in a brochure for distribution. The marketing program should also utilize and provide website links to CommuterConnections.com and goDCgo.com, which provide transportation information and options for getting around the District.
- **Transportation Incentives**
To help encourage non-auto transportation uses, the Applicant will provide the first occupant of each residential unit with a \$100 car sharing membership, a \$150 Capitol Bikeshare membership, or a \$200 SmartTrip card to help alleviate the reliance on personal vehicles. These incentives will be included in a move-in transportation package that includes brochures for transit facilities as well as bicycle and car sharing services for the first occupant of each residential unit.

- *Residential Parking Permit (RPP) Restrictions*

The Applicant shall identify 17 units to be restricted from applying for residential parking permit (RPP) stickers from the District of Columbia. The Applicant shall include the above stated restriction in the leases or sales documents and in a covenant recorded against the Property.

- *Bicycle Amenities*

The Applicant will encourage all alternative transportation modes including bicycling. Bicycling will be promoted with the provision of on-site bicycle parking spaces as described above. The marketing program will include brochures on bicycling in the District and for Capital Bikeshare. In addition, 36 bicycle spaces will be made available on-site.

- *Ride-matching/Ridesharing Program*

Employees and residents who wish to carpool will be provided detailed carpooling information as part of the marketing effort, and will be referred to other carpool matching services sponsored by the Metropolitan Washington Council of Governments.

Conclusions

This memorandum presents the findings of a parking and loading management plan for the 1438 Florida Avenue development. The proposed development consists of a mix of residential and retail uses. The building will contain approximately 1,200 SF of ground floor retail and an estimated 49 apartments. The following conclusions were made regarding the 1348 Florida Avenue development:

- The site is surrounded by an existing network of transit, bicycle, and pedestrian facilities that result in an adequate environment for safe and effective non-auto transportation;
- Based on the site location near ample transit services in addition to an analysis of comparable residential sites, and coupled with an aggressive TDM plan, it is likely that the parking supplied by the development will be adequate to serve the needs of residents.
- On-Street parking is moderately utilized in the vicinity of the site with a peak of 71 percent utilization during the weekday parking peak period. It is not likely that the development will cause any detrimental impacts to on street parking conditions.
- Based on an analysis of comparable residential units and an estimation of loading activity for the development, it was determined that the amount of loading activity expected to take place at the site will be adequately served by a loading area along the alley.
- An aggressive TDM plan for the development will include the implementation of a TDM coordinator, on-site services, a marketing program, transportation incentives, bicycle amenities, and ride-matching/ridesharing programs.