



**symmetra** design

**1412 Chapin Street, NW**  
Washington, DC

**TRANSPORTATION IMPACT STUDY**  
November 30, 2009

1152 15th Street, NW  
Suite 935  
Washington, D.C 20005

Phone: 202 370 6000  
Fax: 202 370 6001  
[www.symmetradesign.com](http://www.symmetradesign.com)

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**ZONING COMMISSION**  
District of Columbia  
CASE NO.09-15  
EXHIBIT NO.15C

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## **INTRODUCTION**

The following document provides a Transportation Impact Study for the proposed 1412 Chapin Street Planned Unit Development (PUD) project located in Northwest Washington, D.C (see Figure 1 for Site Location). The PUD includes a total of 44 apartment rental units with an underground parking garage for 16 vehicles (including one ADA accessible), 41 bicycle storage spaces and a dedicated loading space that accommodates a cargo van. The owner is seeking zoning modification from R-5-B to C-2-B.

The elements of this Transportation Impact Study include the following:

- ***Transportation Network and Site Access*** – Provides an overview of vehicular, pedestrian, transit and bicycle access to the site.
- ***Transportation Conditions*** – Provides an overview of existing and future transportation conditions.
- ***Transportation Demand Management Plan*** – Provides an overview of specific measures to reduce traffic and parking demand.
- ***Loading Management Plan*** - Includes measures for managing trash pick-up, deliveries, move-in/move-out and other loading activities.
- ***Conclusions*** – Provides a bulleted overview of this Transportation Study and concludes that the 1412 Chapin Street PUD will have no adverse impact on transportation conditions.

## **BACKGROUND**

The 1412 Chapin Street, NW project includes 44 workforce apartment housing units and is planned to be complete in 2011. The project site is bound by Chapin Street to the north, a north-south public alley to the east, a public alley to the south and a residential building to the west. The proposed Nehemiah PUD is located just east of the north-south alley. The Nehemiah PUD is planned to include 225 residential condominiums, 19,000 square feet of ground floor retail space and 185 underground parking garage spaces (as outlined in the May 10, 2006 Nehemiah PUD Transportation Impact Study).







**Figure 1 – Site Location Map**

**TRANSPORTATION NETWORK AND SITE ACCESS**

**Vehicle**

Regional access to the site is provided via 14<sup>th</sup> and 15<sup>th</sup> Streets from the north and south and Florida Avenue and U Street from the east and west.

Access to the parking garage is provided via the public alley (20 foot wide) located adjacent to the project site on the south. The east-west access alley runs between 15th Street, NW and the north-south public alley<sup>1</sup> (20 foot wide) located adjacent to the site on the east. See Figure 2 for Site Plan and Circulation.

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<sup>1</sup> The north-south alley provides garage access to the proposed Nehemiah PUD just north of Belmont Street, NW.





Figure 2 – Site Plan and Circulation

The major roadways in the surrounding area are described below:

- **14<sup>th</sup> Street** – is an arterial road that extends from the Maryland State line to the Virginia State line. North of Florida Avenue, it is classified as a minor arterial and south of Florida Avenue it is classified as a principal arterial. It consists of two lanes in each direction with parking on both sides within the study area. Parking is prohibited on the southbound side of 14<sup>th</sup> Street between Belmont Street and Florida Avenue. There is temporarily no parking on the northbound side south of Belmont Street due to building construction. Daily traffic through the study area is 14,500 vehicles per day. The speed limit along 14<sup>th</sup> Street is 25 miles per hour (MPH).

- **15<sup>th</sup> Street** – is a minor arterial that extends south from 16<sup>th</sup> Street NW to Independence Avenue SW. It is designated as one-way northbound in the vicinity of Chapin Street. Daily traffic through the study area is 9,600 vehicles per day. The lane configuration on 15<sup>th</sup> Street is one vehicle lane with bicycle lanes on both sides. There is also parking on both sides of the street. The speed limit along 15<sup>th</sup> Street is 25 MPH.
- **Florida Avenue** – is an arterial road that extends from H Street NE to the east to 23<sup>rd</sup> Street NW to the west. West of 9<sup>th</sup> Street NW it is classified as a minor arterial and east of 9<sup>th</sup> Street it is classified as a principal arterial. Within the study area Florida Avenue consists of one lane in each direction with parking on both sides of the street. Daily traffic through the study area is 6,400 vehicles per day. The speed limit along Florida Avenue is 25 MPH.
- **U Street** – is an arterial road that extends from 18<sup>th</sup> Street NW to the west to 9<sup>th</sup> Street NW to the east. West of 16<sup>th</sup> Street it is classified as a minor arterial and east of 16<sup>th</sup> Street it is classified as a principal arterial. Within the study area U Street consists of two lanes in each direction with parking on both sides of the street. Daily traffic through the study area is 12,100 vehicles per day. The speed limit along U Street is 25 MPH.
- **Chapin Street** - is a local street that runs one-way eastbound from 15<sup>th</sup> Street to the alley adjacent to the PUD and two-way between that alley and 14<sup>th</sup> Street. It consists of one lane with parking on both sides of the travel lane between 15<sup>th</sup> Street and the alley and one lane in each direction between the alley and 14<sup>th</sup> Street with parking on both sides. The speed limit along Chapin Street is 25 MPH.

### **Pedestrian and Bicycle**

Pedestrian access to the PUD is provided via Chapin Street, NW to the main entrance lobby. There are sidewalks on both sides of Chapin Street, 14<sup>th</sup> Street and 15<sup>th</sup> Street. Existing sidewalk widths are six feet to eight feet on Chapin Street, 14<sup>th</sup> Street, and 15<sup>th</sup> Street. Pedestrian crosswalks and signs are located at intersections along the 14<sup>th</sup> Street corridor.

There are bicycle lanes located along 15<sup>th</sup> Street in the immediate vicinity of Chapin Street. The 2008 District of Columbia Bicycle Map notes that there is also a signed bicycle route along 13<sup>th</sup> Street. The bicycle map rates traffic conditions for bicycling on Florida Avenue and 14<sup>th</sup> Street as fair to poor.

### **Transit**

The Washington Metropolitan Area Transit Authority (WMATA) has two Metrorail stations approximately one-half mile away from 1412 Chapin Street. These stations are the Columbia Heights station to the north and the U Street/African-American Civil War Memorial/Cardozo station to the



southeast. Both of these stations are on the green/yellow line. WMATA also has three bus routes that run along 14<sup>th</sup> Street that service the area. These bus routes and their origin/destination are as follows:

- 52 and 54 – Takoma Metrorail Station – L’Enfant Plaza Metrorail Station
- 53 – Takoma Metrorail Station – McPherson Square Metrorail Station

The nearest Metrobus stops are located at the southwest corner of 14<sup>th</sup> Street and Chapin Street for southbound passengers and at the southeast corner of 14<sup>th</sup> Street and Clifton Street for northbound passengers.

## **TRANSPORTATION CONDITIONS**

### **Traffic**

Traffic associated with the proposed 1412 Chapin Street PUD was generated using the Institute of Transportation Engineers’ Trip Generation Manual, 8th Edition Land Use Code 223 – Residential Mid-Rise Apartment. Since 1412 Chapin Street is located within a half a mile radius from the Columbia Heights and U Street/Cardozo Metrorail Stations on the green/yellow line, a 50 percent transit (Metrorail and Metrobus) reduction<sup>1</sup> was used to reduce vehicular trips.

The 1412 Chapin Street, NW PUD is projected to generate 3 AM and 6 PM peak hour trips considering a 50 percent transit reduction<sup>2</sup>. Given the projects close proximity to transit and the minimal number of parking spaces that will be provided (16 spaces) the project will result in a negligible increase in traffic.

It should be noted that the May 10, 2006 Nehemiah PUD Transportation Impact Study concluded that intersections within the 1412 Chapin Street PUD study area are projected to operate within acceptable Levels of Service. The May 2006 traffic study assumed 33 residential units would be constructed at the 1412 Chapin Street, NW site. The study also assumed seven additional background projects.

### **Parking**

The 1412 Chapin St. project will provide 16 below-grade parking garage spaces including one ADA compatible space. The owner is seeking rezoning of the PUD from R-5-B to C-2-B. District of Columbia zoning regulations require one parking space per three residential units in Zone C-2-B, which would

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<sup>1</sup> The transit reduction factor is based on percentage calculations presented in the Washington Metropolitan Area Transit Authority’s (WMATA) Development Related Ridership Survey II for residential developments.

<sup>2</sup> The project would generate 6 AM peak hour trips and 12 PM peak hour trips before transit reduction.

result in 15 required parking spaces for the project. Thus the project would meet parking requirements in accordance with the C-2-B requirements.

### **TRANSPORTATION DEMAND MANAGEMENT PLAN**

A Transportation Demand Management Plan (TDMP) is an active program used to foster alternative transportation choices that are more efficient and environmentally friendly than driving alone. The TDMP includes specific measures that the current owner will implement to reduce traffic and parking demand and encourage *green* travel choices (i.e. SmartBenefits, carsharing memberships, walk and bike). Providing transportation choices is a key goal of the District Comprehensive Plan.

The owner will act as the point of contact and Transportation Coordinator of the TDMP. The owner will be responsible for managing and implementing the specific strategies outlined below:

- ***Parking Management*** - The PUD will provide 16 below grade parking spaces, approximately one parking space per every three units. By providing a minimum number of parking spaces in accordance with zoning requirements, traffic demand for the project is anticipated to be reduced.
- ***Car-Sharing Programs*** – The Transportation Coordinator will distribute information about Zip Car to the residents (as part of an initial welcome package). The closest Zip Car stations are located near the intersection of 14<sup>th</sup> and Chapin St. NW and 1451 Belmont Street, which are less than 450 feet from the PUD.
- ***Transit Incentives*** – Approximately 50% of the PUD residents and employees are expected to use transit. The owner will provide a one-time, complimentary \$20 SmartTrip fare card per apartment unit at initial move-in to help encourage additional transit usage.
- ***Information Regarding Public Transportation*** - The Transportation Coordinator will distribute Metrorail and Metrobus literature, including bus route and schedule information, to tenants.
- ***Bike Facilities*** – The owner will provide 41 bicycle spaces located in the underground parking garage. The Transportation Coordinator will distribute bicycle route maps and safety information to residents. The Transportation Coordinator will also be responsible for allocating and managing the bicycle parking spaces.

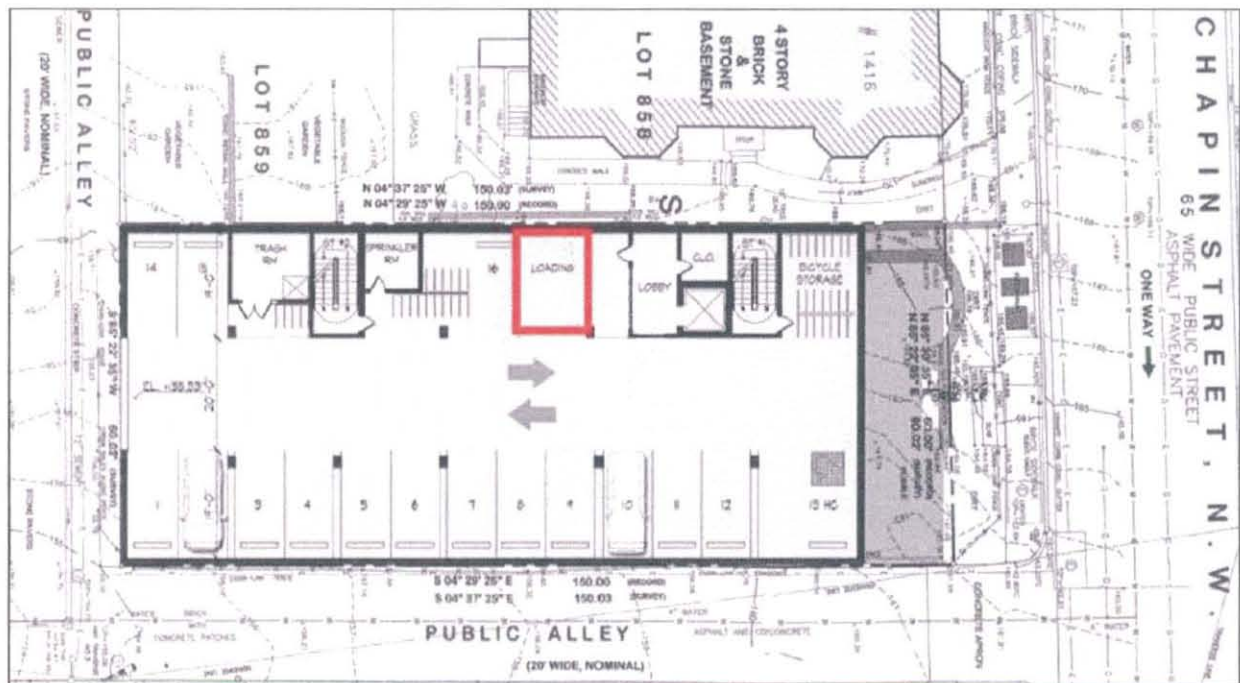


The owner has committed to the transportation demand management measures listed above. The Transportation Coordinator will be responsible for implementing and managing these measures. The property manager may assume transportation coordinator responsibilities once the project is developed.

## LOADING MANAGEMENT PLAN

The project will provide an on site 12 1/3 foot by 19 foot delivery service space in the underground garage (see Figure 3). The space can accommodate a cargo van. Access to the delivery service space will be from the public alley located adjacent to the south side of the PUD.

The garage provides 8.5 feet of clearance for vehicles, thus single unit trucks (such as U-Haul trucks) would not be able to access the garage. Move-in/out operations are proposed from Chapin Street, NW, directly in front of the entrance to the main lobby. The property manager would need to coordinate in advance for temporary parking restrictions during move-in/out operations (requiring a Single Unit Truck) so that the curb area directly in front of the property would be available. The property manager would be responsible for restoring curb parking as soon as the loading operation is completed.



### Figure 3 – Loading Area

The Loading Management Plan summarizes measures that will be used in order to manage loading delivery operations for the proposed residential use facility. The Loading Management Plan, to be implemented and enforced by the property manager, is planned to include the following elements:

- **Trash Collection** - Trash truck drivers would be required to approach the PUD from the two-way public alley which connects 15<sup>th</sup> Street, NW on the west with the entrance/exit to the parking garage. Trash will be stored within the underground garage and picked-up from the public alley serving the parking garage.
- **Delivery Vehicle Access** - Deliveries with a cargo van and smaller vehicles will be accommodated within the PUD underground parking garage. Ingress/egress will be via the public alley located on the south side of the PUD.

**Move-In/Out Coordination** – All move-in/out operations requiring loading space will need to be coordinated with the property manager. Loading operations using pick-up trucks or SUV's would occur in the designated loading area within the parking garage. Larger delivery vehicles with clearance requirements of greater than 8.5 feet (such as U-Haul trucks) would need to load/unload on Chapin Street, NW. The property manager will coordinate in advance to temporarily restrict up to three curb parking spaces so that the loading vehicle could park directly in front of the building. The property manager would be responsible for restoring curb parking spaces as soon as the loading operation is completed.

- **Delivery Hours** – Residential deliveries and move-in/out will be scheduled Monday through Sunday between the periods of 8:00 AM and 7:00 PM. Weekend activities would be planned in advance.

The Loading Management Plan may be updated and improved by the property manager once the project is complete and the manager is able to regularly observe and monitor typical loading operations for the specific tenants.

### CONCLUSIONS

- The project is located within 0.5 miles from two WMATA Metrorail stations (i.e. Columbia Heights and U Street/African-American Civil War Memorial/Cardozo), and will provide convenient access for residents and visitors.



- The project will provide 41 bicycle spaces for residents and visitors to encourage alternative transportation.
- The project is projected to generate 3 AM and 6 PM peak hour trips.
- The PUD will provide one on-site delivery service space within the underground parking garage capable of handling a cargo van.
- The project proposes using Chapin Street, NW for moving-in/out operations and other delivery activities that cannot be accommodated within the delivery service space provided in the underground parking garage. This will be accomplished by restricting up to three on-street parking spaces located in front of the project property on Chapin Street, NW for the duration of the loading operation.
- A total of 16 parking spaces, including one ADA compatible, will be provided for the 44 dwelling units. The project will request zoning modification from R-5-B to C-2-B, which requires one parking space per three dwelling units. The project would meet parking requirements under the modified C-2-B zone.
- The 1412 Chapin Street PUD will have no adverse impact on transportation conditions.

