

TECHNICAL MEMORANDUM

To: William Herman
Urban Realty Advisors

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

Date: December 17, 2013

Subject: 1456-1460 Church Street Parking and Loading Statement

INTRODUCTION

This memorandum reviews the parking and loading aspects, in addition to the sufficiency of alternative modes of transportation, of a residential development located at 1456-1460 Church Street in the northwest quadrant of Washington, DC. Figure 1 identifies the regional site location within the District. The site is currently occupied by three historic row houses and will be redeveloped into a residential complex with 38 units (all of which will be studio and micro units) such that the historic façade remains intact. No parking will be provided on site. Two loading spaces will be supplied behind the building accessible from the alley off of 14th Street between P Street and Church Street NW. In addition, a parking and loading management plan has been developed to best serve the nature of this historic site. This includes a review of on-street parking restrictions in the area and an evaluation of alley operations. This was augmented by a Transportation Demand Management (TDM) plan to promote the use of non-vehicular travel modes to and from the site.

The following conclusions have been made regarding the Church Street Residential 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 a TDM plan, it is likely that no on-site parking will be necessary to serve the site;
- Residential Permit Parking (RPP) spaces in the neighborhood will be protected by restricting residents of this development from obtaining RPP stickers;
- 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 the loading spaces behind the site; and
- A TDM plan for the development will include providing 13 secure on-site long-term bicycle parking spaces and one-time membership fees for carshare or bikeshare program for each resident.

BOARD OF ZONING ADJUSTMENT
District of Columbia
CASE NO. 18638
EXHIBIT NO. 41

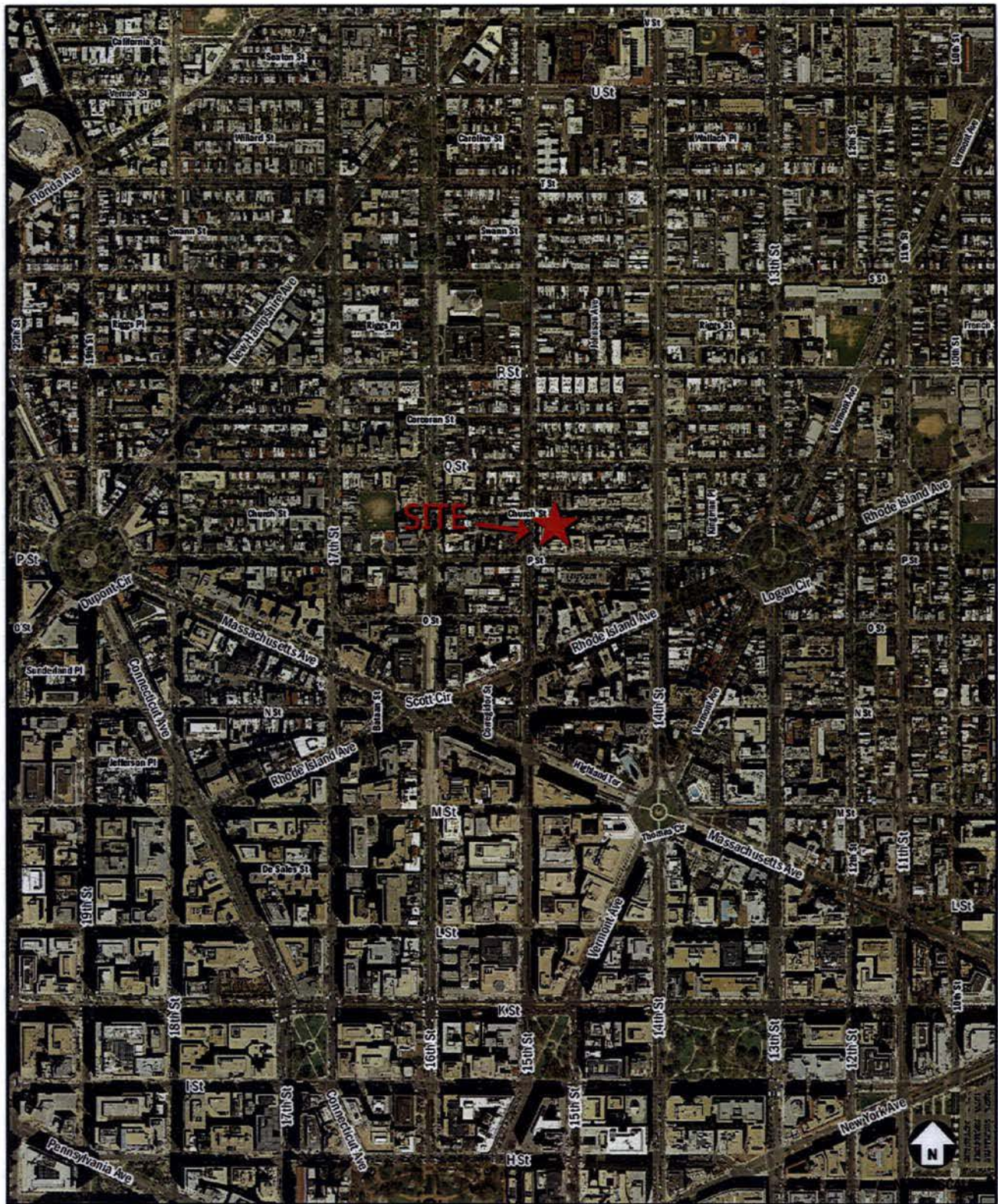


Figure 1: Site Location

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 several public transportation sources, including Metrorail, Metrobus, and the DC Circulator bus system. 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 the Church Street development include Metrorail, Metrobus, and the DC Circulator. These services are operated by the Washington Metropolitan Area Transit Authority (WMATA) and DDOT. WMATA operates Metrorail, the nation's second largest heavy rail transit system, as well as Metrobus, the fifth largest bus network. DDOT and WMATA collaborate to operate the DC Circulator, a system of 5 bus lines that provide frequent service and low fares throughout the city. Figure 2 illustrates the existing rail and bus service.

There are three Metrorail stations within walking distance of the Church Street development. The nearest is the Dupont Circle station. There are two portals, one located at Q Street and 20th Street NW and the other located at 19th Street and Dupont Circle NW, both of which are approximately 0.6 miles from the development. The Dupont Circle station serves the Red Line which travels southbound from the Shady Grove station in Maryland, travels through downtown DC, provides access to Union Station, and travels northbound to Glenmont, MD. The site also has access to the U Street/African American Civil War Memorial/Cardozo station with the nearest portal located at 13th Street and U Street NW, approximately 0.7 miles from the development. The U Street station is a multimodal transportation hub on both Metrorail's Green and Yellow Lines. The Green and Yellow Lines travel from the city of Greenbelt, MD to the north, extending downtown through Chinatown/Gallery Place and L'Enfant Plaza, before ending in Alexandria, VA (Huntington station) and Surtland, MD (Branch Avenue station) to the south. The McPherson Square station, which serves the Blue and Orange Lines is located approximately 0.65 miles from the development with the nearest portal located at the southwest corner of Vermont Ave and I Street NW. The Blue and Orange Lines travel through downtown DC linking Virginia and Maryland. The Blue Line connecting the Largo Town Center station with the Franconia-Springfield and the orange line connecting the New Carrollton station with the Vienna station. Therefore, the development site is located within walking distance of all five Metrorail Lines that service the DC metropolitan area resulting in excellent connectivity for the site. For all Lines, trains run frequently during the weekday morning and afternoon peak hours from 5:00 AM to 9:30 AM and 3:00 PM to 7:00 PM. Trains run every 6 to 12 minutes during the weekday midday hours from 9:30 AM to 3:00 PM and every 10 to 20 minutes during the weekday off-peak periods and on weekends. Metrorail generally closes at approximately midnight on weekdays and 3:00 AM on weekends.

In addition to Metrorail, the site is also served by numerous Metrobus, MetroExpress, and Circulator bus routes that operate along 16th, 14th, and P Streets within walking distance of the site. Most routes have a stop located within 900 feet of the site with the nearest stop servicing the G2 route at the intersection of 15th Street and P Street, less than 500 feet from the site. The majority of routes provide extensive service with short headways during peak periods. The variety of service also allows for excellent north-south and east-west connectivity resulting in access to many key regions within the District. Table 1 shows a summary of the bus route information for the lines that serve the study area, including service hours and the headways.

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 proposed 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 two lines that travel along the 14th Street corridor near the site as outlined in DC's *Transit Future System Plan* report published by DDOT in April 2010. These Lines include the Takoma Metrorail Station to Buzzard Point Line which is part of the 22 Mile Priority System and the Rhode Island Avenue/Eastern Avenue to Washington Circle Line. 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.

Table 1: Bus Route Information

Route Number	Route Name	Service Hours	Headway
52,53,54	14 th Street Line	Weekdays 4:10 am-3:45 am Saturdays 4:15 am-3:30 am Sundays 4:10 am-2:30 am	10-30 minutes on weekdays 15-30 minutes on Saturdays 20-40 minutes on Sundays
63	Takoma-Petworth Line	Weekdays 4:30-9:40 am, 3:00-7:20 pm Weekends 4:30 am-7:30 am	10-15 minutes on weekdays 30 minutes on weekends
G2	P Street-LeDroit Park Line	Weekdays 5:10 am-1:25 am Saturdays 6:05 am-1:25 am Sundays 6:30 am-12:50 am	15-30 minutes on weekdays 30-40 minutes on weekends
S1	16th Street-Potomac Park Line	Weekdays 5:45-10:00 am, 4:00-7:40 pm	5-20 minutes
S2, S4	16 th Street Line	24-hour service	5-30 minutes on weekdays 15-40 minutes on weekends
S9 Metro Express	16 th Street Limited Line	Weekdays and Saturdays 6:30-10:30 am, 3:00-7:30pm	10 minutes
DC Circulator	Woodley Park-Adams Morgan- McPherson Square Line	Sunday – Thursday: 7:00 am-12:00 am Friday and Saturday: 7:00 am-3:30 am	10-30 minutes

Bicycle Facilities

DDOT's May 2011 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. Many of the east/west directional streets in the vicinity of the site provide either on-street bike lanes or feature good cycling conditions. Particularly Q Street provides an exclusive eastbound bike lane and R Street provides an exclusive westbound bike lane. 15th Street and 14th Street provide similar bicycle friendly facilities and conditions amongst the north/south directional streets neighboring the site, with 15th Street providing an exclusive two-way cycle track and bike lanes along the northbound and southbound travel lanes on 14th Street.

In addition, the Capital Bikeshare program has placed over 200 bike share stations across Washington, DC, Arlington, VA, and Alexandria, VA, and most recently Montgomery County, MD with more than 1,800 bicycles provided. Capital 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. Capital Bikeshare currently has two existing bike share locations within a quarter mile of the site at the intersection of 15th and P Street NW, just around the corner from the site, and another at the intersection of 14th Street and Rhode Island Avenue NW, amounting to 33 available docks.



Figure 2: Existing Transit and Carshare Facilities



Figure 3: Existing Bicycle Facilities

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 area. Moreover, the presence of on-street parking along both sides of each many roadways in the vicinity of the site act as a barrier between the sidewalk and the travel way.

Adequate crosswalks with ladder striping and pedestrian countdown signals are present at signalized intersections near the site for all crossing movements. Uncontrolled crosswalks are provided at the Church Street and 15th Street intersection, where traffic volumes and speeds enable safe pedestrian movements.

Car Sharing

Four car-sharing companies serve the District: Zipcar, Hertz 24/7, Enterprise CarShare, and Car2Go. All four services are private companies that provide registered users access to a variety of automobiles. Zipcar, Hertz 24/7, and Enterprise CarShare have locations near the project site. Table 2 lists the car-sharing locations in the vicinity of the project and shows that 30 carsharing vehicles are available within a short walk of the site. This is also shown above on Figure 2.

Table 2: Car Share Locations and Vehicles

Carshare Location	Number of Vehicles
Zipcar	
1515 15 th Street	2 Vehicles
1400 16 th Street	4 Vehicles
16 th /Corcoran Streets	2 Vehicles
14 th /Corcoran Streets	6 Vehicles
15 th /N Streets	1 Vehicle
Andover House	1 Vehicle
14 th /Q Streets	2 Vehicles
Scott Circle West	2 Vehicles
Hertz 24/7	
1440 N Street	1 Vehicle
1502 17 th Street	1 Vehicle
Enterprise CarShare	
14 th /N Streets	2 Vehicles
1425 P Street	2 Vehicles
Scott Circle West	2 Vehicles
Dupont Circle East	2 Vehicles
Total Number of Car Share Vehicles in Study Area	30 Vehicles

Car-sharing is also provided by Car2Go, which provides point-to-point car sharing. Unlike Zipcar, Hertz 24/7, and Enterprise CarShare, which require two-way trips, Car2Go can be used for one-way rentals. Car2Go currently has a fleet of vehicles located throughout the District. Car2Go vehicles may park in any non-restricted Metered curbside parking space or Residential Parking Permit location in any zone throughout the defined "Home Area". Members do not have to pay the meter or pay stations. Car2Go does not have permanent designated spaces for their vehicles; however availability is tracked through their website, which provides an additional option for car-sharing patrons.

DESIGN REVIEW

This section provides an overview of the transportation features of the proposed Church Street development. The development program consists of 38 residential units, which will be made up entirely of studio and micro units, which typically require very little parking. As such, no parking will be provided on site. Two loading spaces will be provided on-site along the alley with access off of 14th Street between Church Street and P Street. Figure 4 displays the access strategies for the site including pedestrian access and loading areas.

Site Access and Internal Circulation

Site Access

The primary pedestrian access will be located along Church Street. Although the lobby will be located in the middle of the three townhouses, units in the adjacent townhouses will also have direct pedestrian access from Church Street. All other units will be accessible through the lobby. Additionally, there will be pedestrian access from the back of the building to accommodate those using the loading spaces. The loading area will be located in the alley behind the building, accessible from 14th Street and P Street. Based on the size and convenience of the curb cut located on P Street, vehicles accessing the site should be encouraged to use the P Street entrance as opposed to the 14th Street entrance. There will only be two spaces for loading for the development thus there is expected to be minimal vehicular traffic due to the site.

Parking

As mentioned previously, the project will provide no on-site parking. According to the zoning regulations set forth by the District, and based upon the existing zoning of the site location, the development is required to provide 1 parking space for each 2 dwelling units, thus amounting to 19 spaces. Therefore, the applicant is seeking parking relief from the Board of Zoning Adjustment (BZA). This is projected to adequately serve the demands of the site due to the following various considerations:

- Well-situated to be served by all five Metrorail Lines via Dupont Circle station, U Street/African American Civil War Memorial/Cardozo station, and the McPherson Square station
- Served by 10 bus routes within a quarter-mile walking distance including Metrobus, Metro Express and DC Circulator routes
- Capital Bikeshare has two existing bike share locations near the site. One is less than 500 feet from the site at the intersection of 15th and P Street NW and the other is approximately 1,200 feet from the site at the intersection of Rhode Island Avenue and 14th Street NW
- The applicant has worked with DDOT to incorporate bicycle parking within the site. The design of these spaces will reflect similar dimensions as currently incorporated in other developments throughout the District. The number of spaces provided will meet the bicycle parking requirements as stated within the DC zoning ordinance.

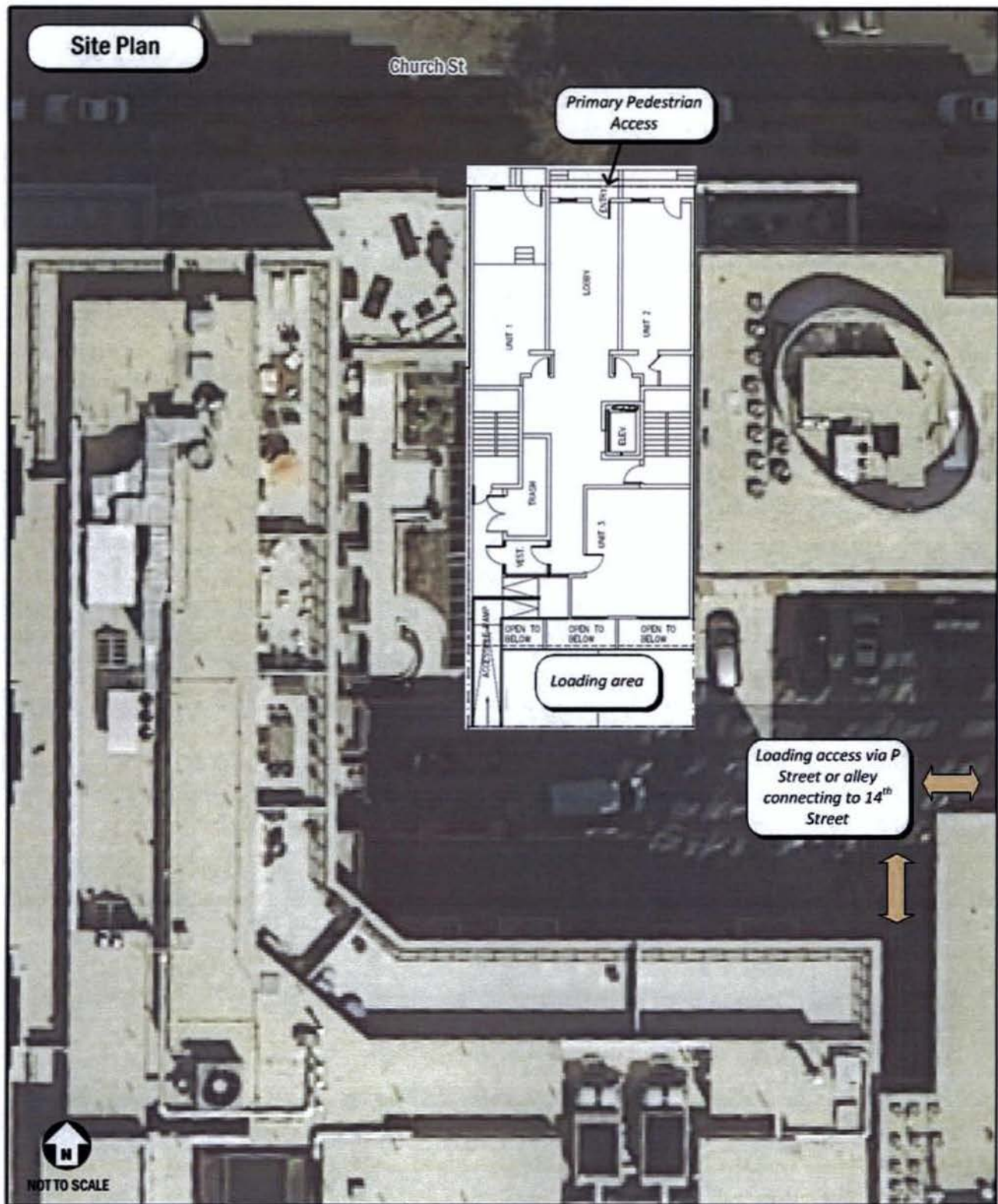


Figure 4: Site Plan

- According to 2000 US Census data, only 38 percent of study area's residents residing in apartment buildings owned a private vehicle. Additionally, the census tract of the development has the following data for means of transportation to work according to the 2007-2011 American Community Survey 5-year estimates: 22% travel by car, 29% use public transportation, 1% bike, 40% walk, and the remaining 8% either work from home or use another mode.
- The site area has a walkability score of 96 as calculated by WalkScore.com, which is referred to as a "Walker's Paradise".

Given the urban nature of the site and its proximity to many non-auto modes of transportation, it is anticipated that the design of the site will adequately serve the vehicular needs of the development. In order to ensure parking in the surrounding area of the site, the Applicant has agreed to restrict residents from obtaining residential parking permit (RPP) stickers. This will strongly discourage on-street parking in the area for residents of the site limiting the impact on the neighborhood parking supply. DDOT has encouraged the implementation of this measure on other residential projects where residential on-street parking is at a premium.

Loading

The site plan indicates that there will be two spaces provided for loading although, pursuant to §2201.1, no such facilities are required as the development is providing less than 50 residential units. The number of truck trips generated by a project of this scale is relatively low. Based on estimates by residential building managers in the District, rental apartments have an average turnover of 10 months, with two trucks expected per turnover (one move out and one move in). Based on this assumption, for a 38 unit apartment complex there will be approximately 51 truck deliveries per year or approximately one delivery per week.

Information regarding loading procedures for comparable sites to the Church Street development was collected, as shown in Table 3. Properties with more total residential units than the Church Street development operate sufficiently utilizing either off-street or on-street loading. Therefore, it can be concluded that for a development of this size, an off-street loading area will be adequate to serve all loading operations.

Table 3: 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, 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 within the public alley. Based on the size and convenience of the curb cut located on P Street, vehicles accessing the site should be encouraged to use the P Street entrance as opposed to the 14th Street access.

Bicycle Facilities

The development will provide long term bicycle parking amounting to 13 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. Based on these regulations the development would require 13 bicycle parking spaces, therefore the development meets the requirements.

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 Church Street 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.
- **Transportation Incentives**
To help encourage non-auto transportation uses, the Applicant will provide a one-time membership fee with a Bikeshare or carshare program for each residential unit.
- **Bicycle Amenities**
The developer will encourage all alternative transportation modes including bicycling. Bicycling will be promoted with the provision of 13 on-site bicycle parking spaces as described above.

Conclusions

This memorandum presents the findings of a parking and loading management plan for the Church Street development. The proposed development is a residential building with 38 units and two loading spaces behind the building in the public alley. The following conclusions were made regarding the Church Street 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 a TDM plan, it is likely that no on-site parking will be necessary to serve the site,
- Residential Permit Parking (RPP) will be protected by restricting residents from obtaining RPP stickers
- 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 the alley loading area behind the site
- A TDM plan for the development will include providing 13 secure on-site long-term bicycle parking spaces and a one-time membership fees for carshare or bikeshare program for each resident