

**TECHNICAL MEMORANDUM**

To Evelyn Israel DDOT – PPSA

Cc Amy Phillips Monument Realty
Dennis Hughes Holland & Knight

From Maris E Fry, EIT
Robert B Schiesel, P E
Daniel B VanPelt, P E , PTOE

Date September 29, 2015

Subject 10 Van Street SE – Washington, DC
Comprehensive Transportation Review (CTR) Statement

INTRODUCTION

This memorandum presents the findings of a transportation assessment conducted for 10 Van Street located in the Southeast quadrant of Washington, DC, in support of its Capitol Gateway (CG) Overlay Design Review (ZC Case Number 15-23) The 10 Van Street development is the residential component of what has been referred to as the One M Street development (ZC 15-11) One M Street is the northern portion of the site and will include a 10-story office building with ground-floor retail One M Street has already undergone Design Review and received approval from the Zoning Commission

The southern portion of the site, will be a new 170 dwelling unit residential building with frontage on South Capitol and Van Streets, SE The multimodal impacts of the residential building were already considered in the transportation study conducted for ZC 15-11 by Gorove/Slade Associates dated June 4, 2015 Therefore as agreed to with DDOT, this statement will serve as an update to the prior CTR, and will also focus on the residential design elements of the 10 Van Street development

The updated plan proposes 170 residential units with 92 below-grade parking spaces, instead of 165 units with 101 parking spaces (per the June 4, 2015 study) Figure 1 identifies the site location within the District The site is bounded by South Capitol Street to the west, M Street to the North, Van Street to the east, and an existing storage facility to the south. The purpose of this memorandum is to

- Provide a summary of major transportation features near and adjacent to the site including reviewing roadways, transit facilities, bicycle facilities, and pedestrian facilities,
- Develop a comparison of the previous development plans for the residential building to what is currently proposed, and evaluate the impact to the site's transportation demand, and
- Review the transportation elements of the development site plan, supplementing the material provided in the plans that accompany the development application, and demonstrate that the site promotes non-automobile modes of travel and sustainability

This Statement concludes that:

- The site is well-served by existing public transit service and has access to well-connected pedestrian and bicycle facilities;
- The modifications to the residential building development plan will result in a very slight increase in transportation demand, such that the capacity analysis results included in the previous CTR dated June 4, 2015, remain valid and are sufficient for determining the vehicular impacts of the residential building; and
- The overall site design, in conjunction with a comprehensive transportation demand management plan and a loading management plan provides suitable access and facilities for all modes of transportation.

SITE LOCATION & MAJOR TRANSPORTATION FEATURES

The proposed development is located at 10 Van Street SE in the Southeast quadrant of Washington, DC. The site is accessible from several interstates such as I-395, I-695, and I-295. These connect to several US highways such as US-50 (New York Avenue), and US-1. The highways and interstates create connectivity to the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs. All of these roadways bring vehicular traffic within half-mile of the site, at which point arterials and local roads can be used to access the site directly.

The site is well-served by public transportation, including Metrorail and Metrobus service. The project site is also served by a pedestrian network consisting of sidewalks and crosswalks along the local streets and surrounding the project site. In addition to pedestrian accommodations, the site is served by a bicycle network, which consists of mixed-use trails and bike lanes.

Car Sharing

Three (3) car-sharing companies serve the District: Zipcar, Enterprise Carshare, and Daimler's Car2Go. All three services are private companies that provide registered users access to a variety of automobiles. Both Zipcar and Enterprise Carshare have locations adjacent to the project site. Table 1 lists the car-sharing locations within a quarter-mile of the site and the number of vehicles available at each location.

Table 1: Car Share Locations and Vehicles

Carshare Location	Number of Vehicles
Zipcar	
Capitol Skyline Hotel (10 I Street SW)	2 vehicles
Greenleaf Senior Center (1200 Delaware Avenue SW)	1 vehicle
Navy Yard Metro Station (300 M Street SE)	4 vehicles
Lot L at The Yards (3rd and N Street SE)	1 vehicle
Enterprise Carshare	
N Place SE / First Street SE	5 vehicles
First Street SE and K Street SE	6 vehicles
Total	19 vehicles

Car-sharing is also provided by Car2Go, which provides point-to-point car sharing. Unlike Zipcar, which requires two-way trips, Car2Go can be used for one-way rentals. Car2Go currently has a small 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.

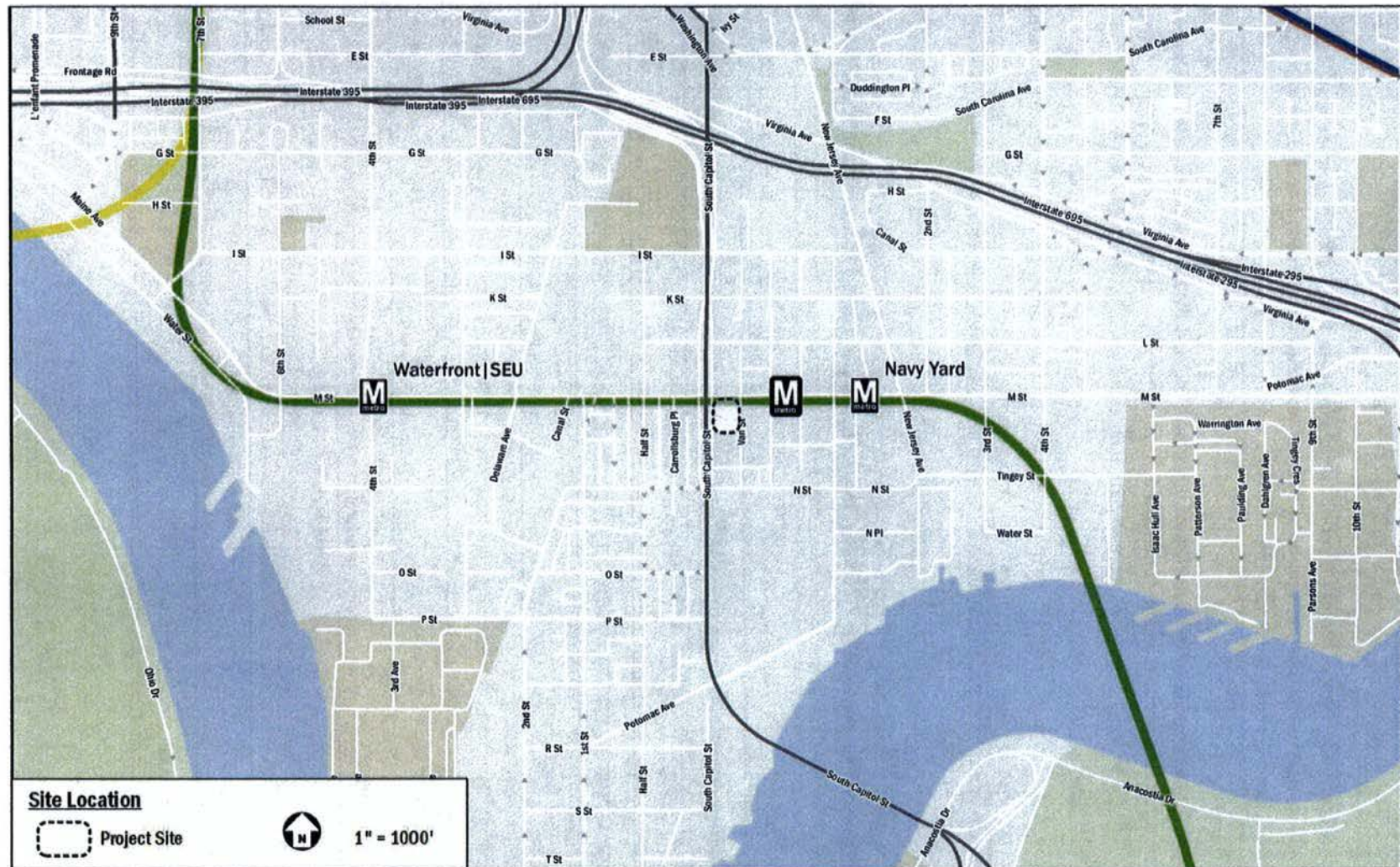


Figure 1: Site Location

Transit

The study area is well-served by Metrorail and Metrobus. Combined, these transit services provide local, city wide, and regional transit connections and link the site with major cultural, residential, employment, and commercial destinations throughout the region. Figure 2 identifies the major transit routes, stations, and stops in the study area.

The Navy Yard Metrorail station is located less than 0.1 miles from the development site and is served by the Green Line. The Green Line travels south from Greenbelt, travels through downtown DC, and then continues south through Anacostia to Branch Avenue. Trains run approximately every six minutes during the morning and afternoon peak hours. They run about every 12 minutes during weekday non-peak hours, every 20 minutes on weekday evenings after 9:30 pm, and 12 to 20 minutes on the weekends.

The site is also serviced by Metrobus along multiple primary corridors. These bus lines connect the site to many areas of the District, Maryland and Virginia, including several Metrorail stations serving five of the six Lines. Table 2 shows a summary of the bus route information for the routes that serve the site, including service hours, headway, and distance to the nearest bus stop.

Table 2: Bus Route Information

Route Number	Route Name	Service Hours	Headway	Walking Distance to Nearest Bus Stop
74	Convention Center-SW Waterfront Line	Weekdays: 5:03AM – 12:03AM	15 – 20 min	0.3 miles, 6 min
315	Columbia/Silver Spring to Washington DC	Weekdays: Inbound: 4:36AM – 7:45 AM Outbound: 2:40PM – 7:53PM	20 – 30 min	0.2miles, 3 min
735	Charlotte Hall/Waldorf to Washington DC	Weekdays: Northbound 4:20AM – 7:00AM Southbound 12:15PM – 5:25PM	20 – 30 min	0.1 miles, 2 min
A9	Martin Luther King Jr. Ave. Limited Line	Weekdays: Northbound 5:55AM – 8:50AM Southbound 3:35PM – 6:52PM	15 min	0.3 miles, 5 min
A42,46,48	Anacostia-Congress Heights Line	Weekdays: 4:00AM – 12:00 AM Weekends: 4:04AM – 12:40 AM	15 – 30 min	0.1 miles, 1 min
D300	Dale City-Washington Navy Yard	Weekdays: Inbound: 4:36AM – 6:43 AM Outbound: 12:13PM – 7:42PM	30 – 90 min	0.1 miles, 1 min
DCN22	Union Station - Navy Yard Circulator	Winter: 6:00AM- 7:00PM Summer: 6:00AM - 9:00PM Sundays: 7:00AM - 9:00PM	5 – 40 min	0.2miles, 4 min
LCC	Loudoun County to Washington DC	Weekdays: Inbound: 5:00AM – 9:09 AM Outbound: 3:42PM – 5:00PM	25 – 45 min	0.1 miles, 1 min
P6	Anacostia-Eckington Line	Weekdays: 5:05AM – 2:04 AM Weekends: 8:27AM – 11:56 PM	15 – 30 min	0.1 miles, 1 min
P17,P19	Oxon Hill-Fort Washington Line	Weekdays: Northbound 4:47AM – 9:53AM Southbound 2:57PM – 7:10PM	5 – 15 min	0.3 miles, 5 min
V7, V8, V9	Minnesota Avenue-M Street Line	Weekdays: 4:38AM – 2:01 AM	30 min	0.1 miles, 1 min
W9	South Capitol Street Limited Line	Weekdays: Southbound 6:15AM – 9:07AM Northbound 3:15PM – 6:15PM	15 – 30 min	0.1 miles, 1 min
W13	Bock Road Line	Weekdays: Northbound 4:52AM – 9:02AM Southbound 3:35PM – 7:53PM	5 – 15 min	0.3 miles, 5 min

Bicycle Facilities

Within the study area bicycles have access to multi-use trails, on-street bike lanes, signed bike routes, and local and residential streets that facilitate cycling. The bicycle network provides good conditions for local trips and there are several routes for trips between the study area and other areas within the District.

North-south connectivity is provided along the along bike lanes on 4th Street SE, 1st Street SE, and 4th Street SW. East-west connectivity is provided along the Anacostia Riverwalk Trail and I Street SE/SW. Figure 3 illustrates the existing bicycle facilities in the area.

Some short-term bicycle parking exists in the vicinity of the site, particularly surrounding recently developed structures such as Nationals Park and 55 M Street SE. No bike parking is provided along the perimeter of the site under existing conditions, but some will be added in conjunction with the office/retail portion of the One M Street project.

In addition to personal bike ownership, the Capital Bikeshare program allows for another cycling option. Users can choose to join the program for one day, three days, a month, or a year. Therefore this program is perfect for both visitors and residents of the area. Users can rent a bike from the nearest docking station, ride the bike to their destination, and return the bike to a different docking station, making the system convenient for one-way and two-way trips. The Capital Bikeshare program has placed over 300 bicycle-share stations across Washington, DC, Arlington and Alexandria, VA, and Montgomery County, MD with over 2,500 bicycles provided. There are two stations within a quarter-mile radius of the site located M Street & New Jersey Avenue, SE and at 1st & N Street, SE contributing to a total of 56 docking stations as summarized in Table 3.

Table 3: Bikeshare Locations and Docking Stations

Bikeshare Location	Number of Vehicles
M Street & New Jersey Avenue, SE	17 docking stations
1 st Street & N Street, SE	39 docking stations
Total Number of Bikeshare Docking Stations	56 docking stations

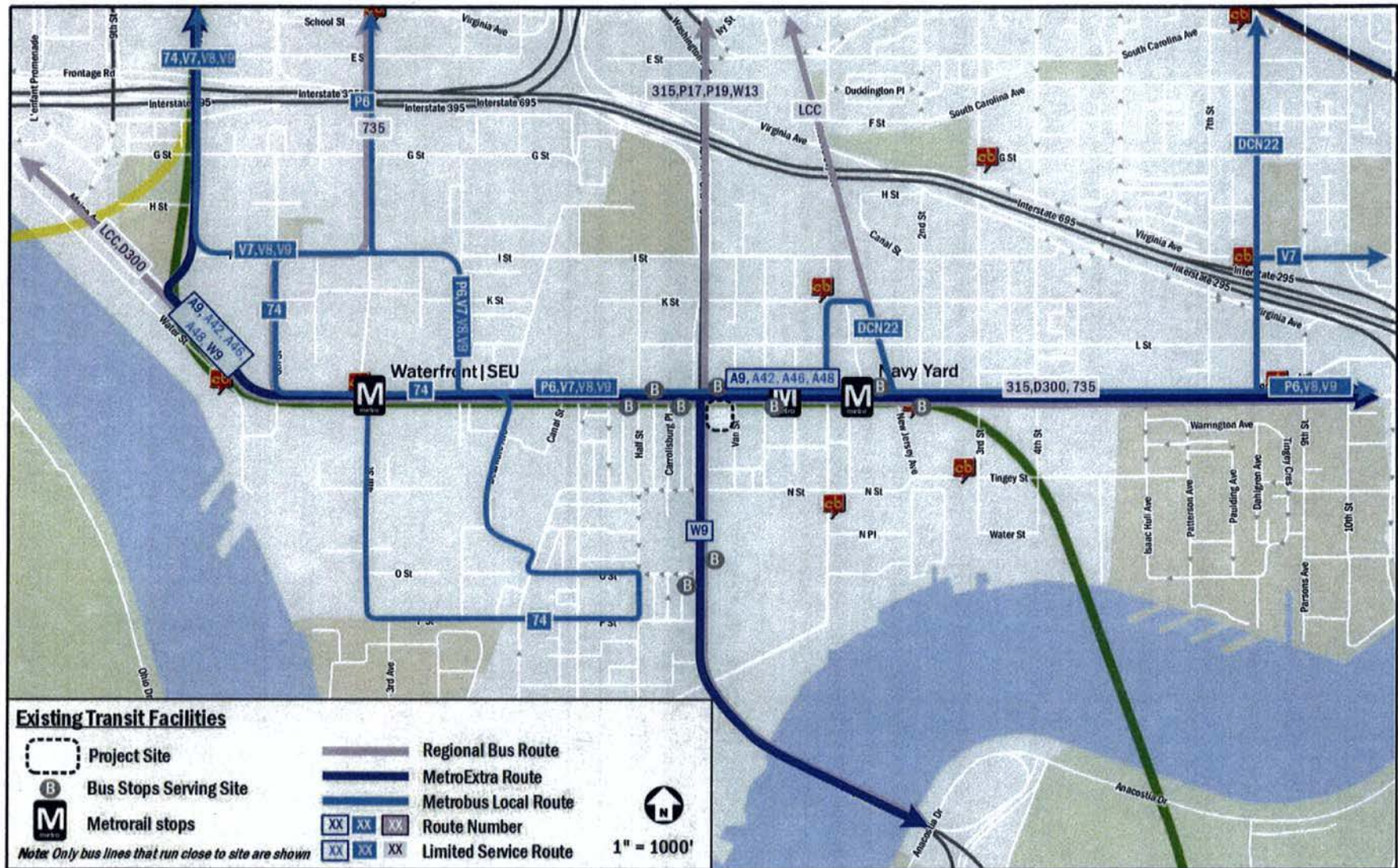


Figure 2: Existing Transit Facilities

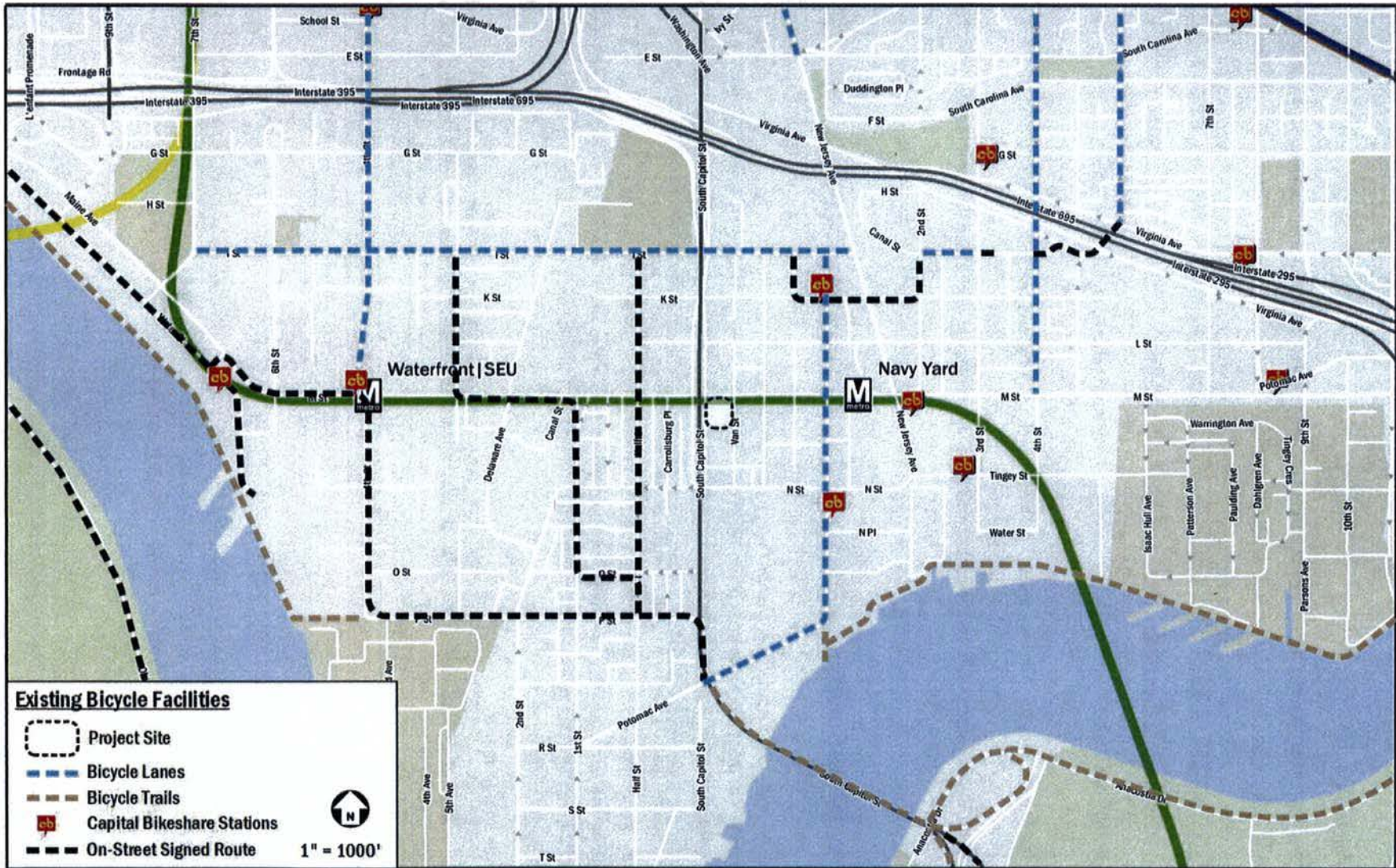


Figure 3: Existing Bicycle Facilities

Pedestrian Facilities

This section provides an inventory of the existing site access facilities and deficiencies. Overall, the pedestrian facilities within the study area provide a good walking environment. Pedestrian access to the site is provided along all adjacent streets.

The site is easily accessible to transit options such as bus stops along M Street, South Capitol Street and the Navy Yard Metrorail Station. The site is also within walking distance of many destinations such as Yards Park and Nationals Ballpark. There are some barriers and areas of concern within the study area that negatively impact the quality of and attractiveness of the walking environment. This includes roadway conditions that reduce the quality of walking conditions, narrow or nonexistent sidewalks, incomplete or insufficient crossings at busy intersections, and the Interstate that limits connectivity to the north. Figure 4 shows suggested pedestrian pathways, walking time and distances, and barriers and areas of concern.

A review of pedestrian facilities surrounding the 10 Van Street development shows that many facilities meet DDOT standards and provide a quality walking environment. Figure 5 shows a detailed inventory of the existing pedestrian infrastructure surrounding the site. Sidewalks, crosswalks, and curb ramps are evaluated based on the guidelines set forth by DDOT's *Public Realm Design Manual* in addition to ADA standards. Sidewalk widths and requirements for the District are shown below in Table 4.

Within the area shown, most roadways are considered residential with a low to moderate density. Some areas along Half Street SE and South Capitol Street are considered commercial and thus require wider sidewalks. Most of the sidewalks surrounding the site comply with DDOT standards; however there are some areas, which have inadequate sidewalks or no sidewalks at all. All primary pedestrian destinations are accessible via routes with sidewalks, most of which meeting DDOT standards. The sidewalks that do not meet DDOT standards are typically along routes that do not provide an acceptable buffer width, but do maintain the minimum sidewalk width. Some of these issues will be remedied as part of the project.

ADA standards require that all curb ramps be provided wherever an accessible route crosses a curb and must have a detectable warning. Additionally, curb ramps shared between two crosswalks is not desired. As shown in the figure, under existing conditions there are some issues with crosswalks and curb ramps near the site. The deficient pedestrian infrastructure along Van Street is expected to be addressed during DDOT Public Space permitting approvals as the adjacent parcels along the street redevelop.

Table 4: Sidewalk Requirements

Street Type	Minimum Sidewalk Width	Minimum Buffer Width
Residential (Low to Moderate Density)	6 ft	4 ft (6 ft preferred for tree space)
Residential (High Density)	8 ft	4 ft (6 ft preferred for tree space)
Commercial (Non-downtown)	10 ft	4 ft
Downtown	16 ft	6 ft

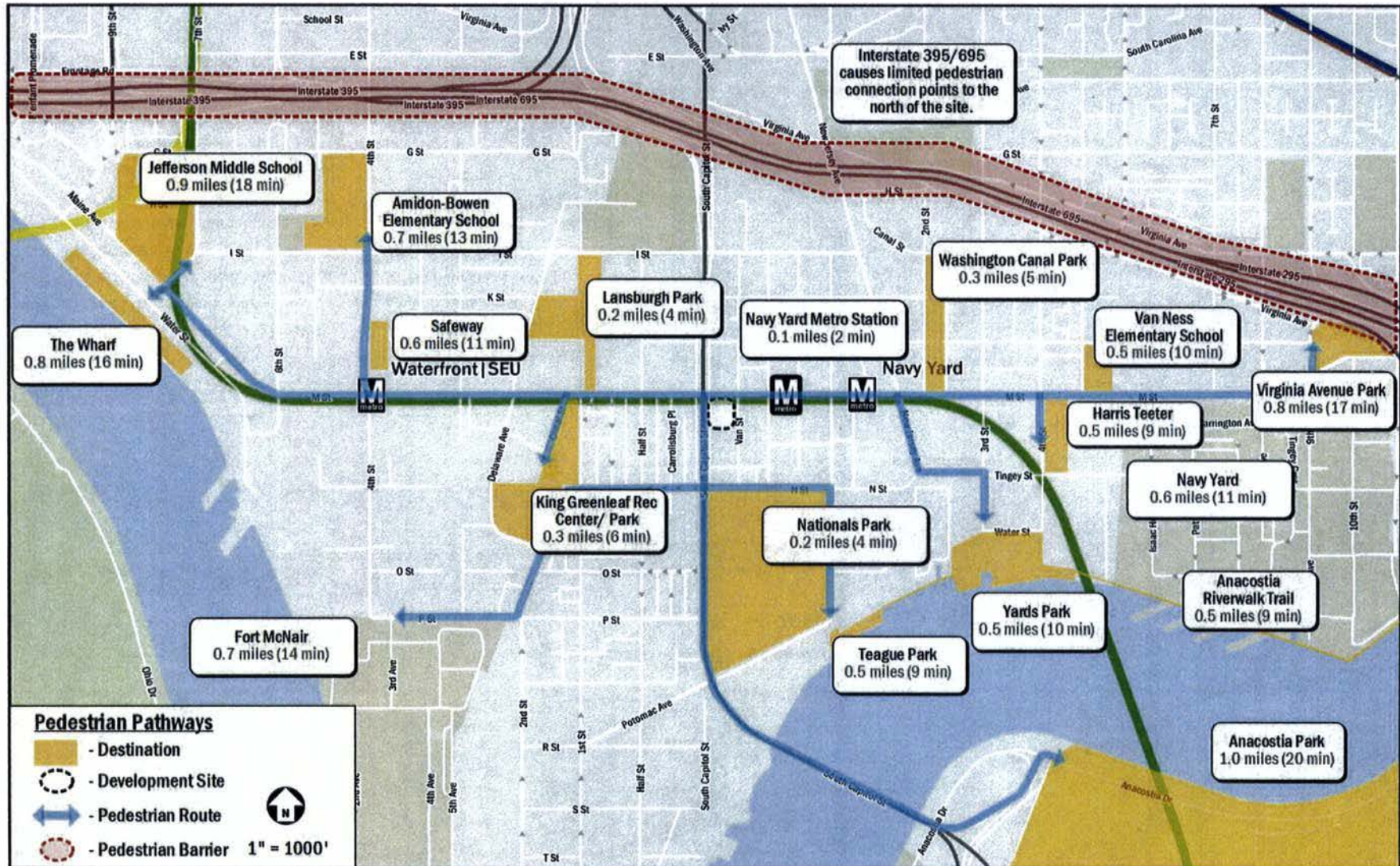


Figure 4: Pedestrian Pathways

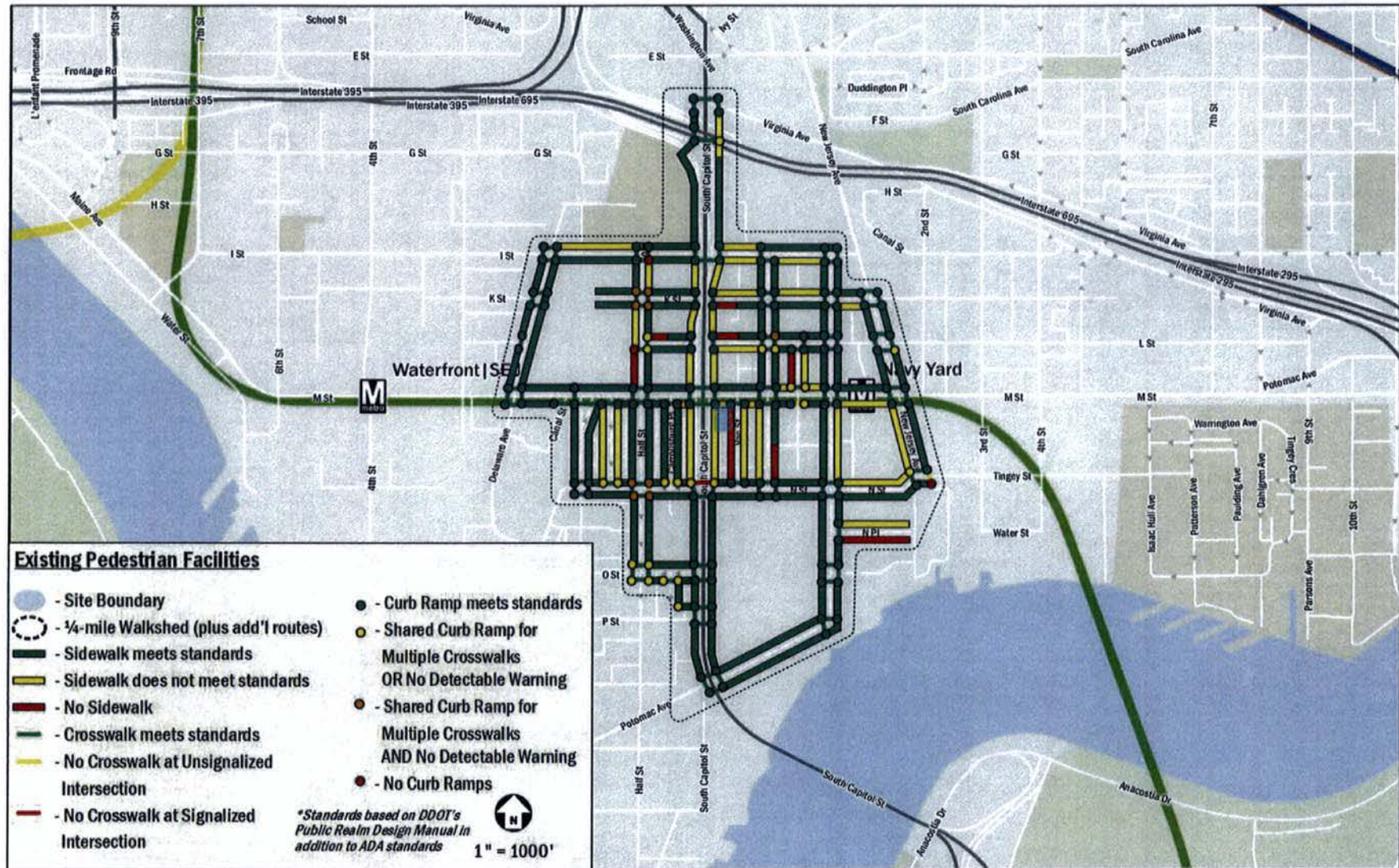


Figure 5: Pedestrian Infrastructure

SUMMARY OF RESIDENTIAL UPDATES

This section provides a summary of updates made to the residential component of the project. The residential component was originally analyzed during the One M Street Overlay Review (ZC Case Number 15-11) for the office building, and the residential building is now a separate filing as 10 Van Street SE (ZC Case Number 15-23). Since the residential program was considered in the CTR dated June 4, 2015, the following changes or updates have been made to the development plan as shown in Table 5.

Table 5: Comparison of Original and Updated Development Plan Elements

Plan Component	Original One M Street Capital Gateway Overlay Review	Updated 10 Van Street Plans	Change
Residential units	165 units	170 units	+5 units
Residential parking	101 spaces	92 spaces	-9 spaces
Residential bike parking	TBD	60 spaces on P1 level	Exceeds requirements
Visitor Bike Parking	TBD	16 spaces	Exceeds requirements
Residential Loading facilities	1 30' berth 1 20' service space	1 30' berth 1 20' service space	None
Residential Loading access	1 shared curb cut on Van Street (back-in/head-out on Van Street)	1 shared curb cut on Van Street (back-in/head-out on Van Street)	None
Garage Access	1 shared curb cut on Van Street	1 shared curb cut on Van Street	None

TRIP GENERATION COMPARISON

This section provides a trip generation comparison between the residential component as previously considered and the updated 10 Van Street plans. The updated plans result in an increase of five (5) residential units, therefore the trip generation will not be greatly impacted. There have been no major changes to the area since the approval of the original One M Street Overlay Review, therefore no changes to mode split were deemed necessary. Table 6 shows a trip generation comparison between the two development plans. As shown, there is an increase of one (1) AM peak hour outbound vehicular trip and one (1) PM peak hour outbound vehicular trip with the updated development plan. Although the number of residential units has increased, the resulting change in trip generation is not significant and the decrease in parking supply may lead to a higher dependency on non-auto modes throughout the lifetime of the site. Therefore, the capacity analysis results included in the previous study are considered sufficient for determining the vehicular impacts of the residential building.

Table 6: Trip Generation Comparison

Mode	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Original One M Street Overlay Review (Residential Component)						
Auto	8 veh/hr	30 veh/hr	38 veh/hr	32 veh/hr	17 veh/hr	49 veh/hr
Transit	8 ppl/hr	33 ppl/hr	41 ppl/hr	34 ppl/hr	18 ppl/hr	52 ppl/hr
Bike	1 ppl/hr	3 ppl/hr	4 ppl/hr	3 ppl/hr	2 ppl/hr	5 ppl/hr
Walk	2 ppl/hr	6 ppl/hr	8 ppl/hr	6 ppl/hr	4 ppl/hr	10 ppl/hr
Updated 10 Van Street Plans						
Auto	8 veh/hr	31 veh/hr	39 veh/hr	32 veh/hr	18 veh/hr	50 veh/hr
Transit	8 ppl/hr	34 ppl/hr	42 ppl/hr	35 ppl/hr	19 ppl/hr	54 ppl/hr
Bike	1 ppl/hr	3 ppl/hr	4 ppl/hr	3 ppl/hr	2 ppl/hr	5 ppl/hr
Walk	2 ppl/hr	6 ppl/hr	8 ppl/hr	6 ppl/hr	4 ppl/hr	10 ppl/hr
Net Change in Auto Trips	0 veh/hr	1 veh/hr	1 veh/hr	0 veh/hr	1 veh/hr	1 veh/hr
Net Change in Non-Auto Trips	0 ppl/hr	1 ppl/hr	1 ppl/hr	1 ppl/hr	1 ppl/hr	2 ppl/hr

DESIGN REVIEW

This section provides an overview of the on-site transportation features of the proposed 10 Van Street SE development. The 10 Van Street development is located on Van Street between M and N Street in the southeast quadrant of the District. The proposed plan includes 170 residential units and a 92 space below-grade parking garage. Figure 6 shows the site plan of the development.

Site Access and Internal Circulation

Vehicular Access and Circulation

Based on previous interactions with DDOT, vehicular access to the residential building will be via one curb cut on Van Street. Van Street is a short local roadway between Half Street SE and South Capitol Street that connects M and N Streets. It operates in many respects as an alley since the buildings on either side cannot have access from the other adjacent streets per the CG Overlay. The Van Street access will be used to access both the parking garage and the loading dock, thus will require some coordination, as discussed further below.

Loading

The proposed loading plan includes one (1) back-in/head-out 30' loading dock and one (1) 20' service space, which is consistent with what was originally proposed. Based on the experience of residential building managers that manage buildings with the District and previous studies performed by Gorove/Slade, rental apartments have an average turnover of 18 months, with two trucks per turnover (one move out and one move in). Based on this information and the proposed development program of 170 apartment style residential units, there will be approximately 227 move ins/move outs per year or about 4 moves per week for the residential building. The one loading dock proposed for the residential land use will be sufficient to handle this amount of loading activity.

Truck routing to and from the site will be focused on South Capitol Street and M Street, which are designated truck routes and have access to the surrounding interstate system. Truck turning diagrams showing maneuvers into and out of the loading docks for the residential building are shown on Figure 7 and Figure 8. As shown, inbound and outbound truck maneuvers will

block the internal access to the parking garage ramp temporarily. For this reason, in addition to the need for back-in maneuvers and the proximity to Nationals Park, this development is proposing a loading management plan for the residential building. Back-in maneuvers are not standard for street operations, and although Van Street acts like an alley, it is technically designated as a street by DDOT's functional classification.

The proposed loading management plan is as follows:

- Deliveries will be permitted between 7:00 AM and 4:00 PM, seven days a week, except for when events occur at Nationals Park. Deliveries cannot be scheduled for the period between two (2) hours when an event begins and one (1) hour after an event is completed (including during the event itself).
- A representative of Building Management will supervise all trucks using the loading facilities (this does not apply to delivery vans). This person must also manage vehicular traffic entering and exiting the parking garage while trucks are maneuvering to ensure that trucks are able to complete maneuvering into the loading berth without delay.
- All move in/move out activity must be scheduled with Building Management to ensure that the dock capacity is not exceeded. Building management will not schedule deliveries during Nationals Park events as defined above when there could be heavier than typical pedestrian traffic on Van Street.
- A flagger will be present when a vehicle is entering the loading dock to ensure pedestrian, bicycle, and vehicle safety with truck back-in maneuvers.
- Building management will post a sign in a highly visible location within the loading area that states that all tenants are required to schedule move activities that utilize the loading dock using a truck 20 feet in length or larger.
- Trucks using the loading dock will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (Engine Idling), the regulations set forth in DDOT's Freight Management and Commercial Vehicle Operations document, and the primary access routes listed in the DDOT Truck and Bus Route System.

Parking

The parking proposed for this project includes 92 parking spaces in a below ground parking structure accessed via Van Street. This translates to a parking supply of 0.54 spaces per residential unit. The original residential plans proposed a total of 101 spaces for 165 residential units, or 0.61 spaces per resident.

Based on zoning requirements, the project is required to provide 1 parking space per 3 dwelling units, amounting to a minimum requirement of 55 parking spaces. By supplying 92 parking spaces, the proposed development will satisfy the zoning requirements.

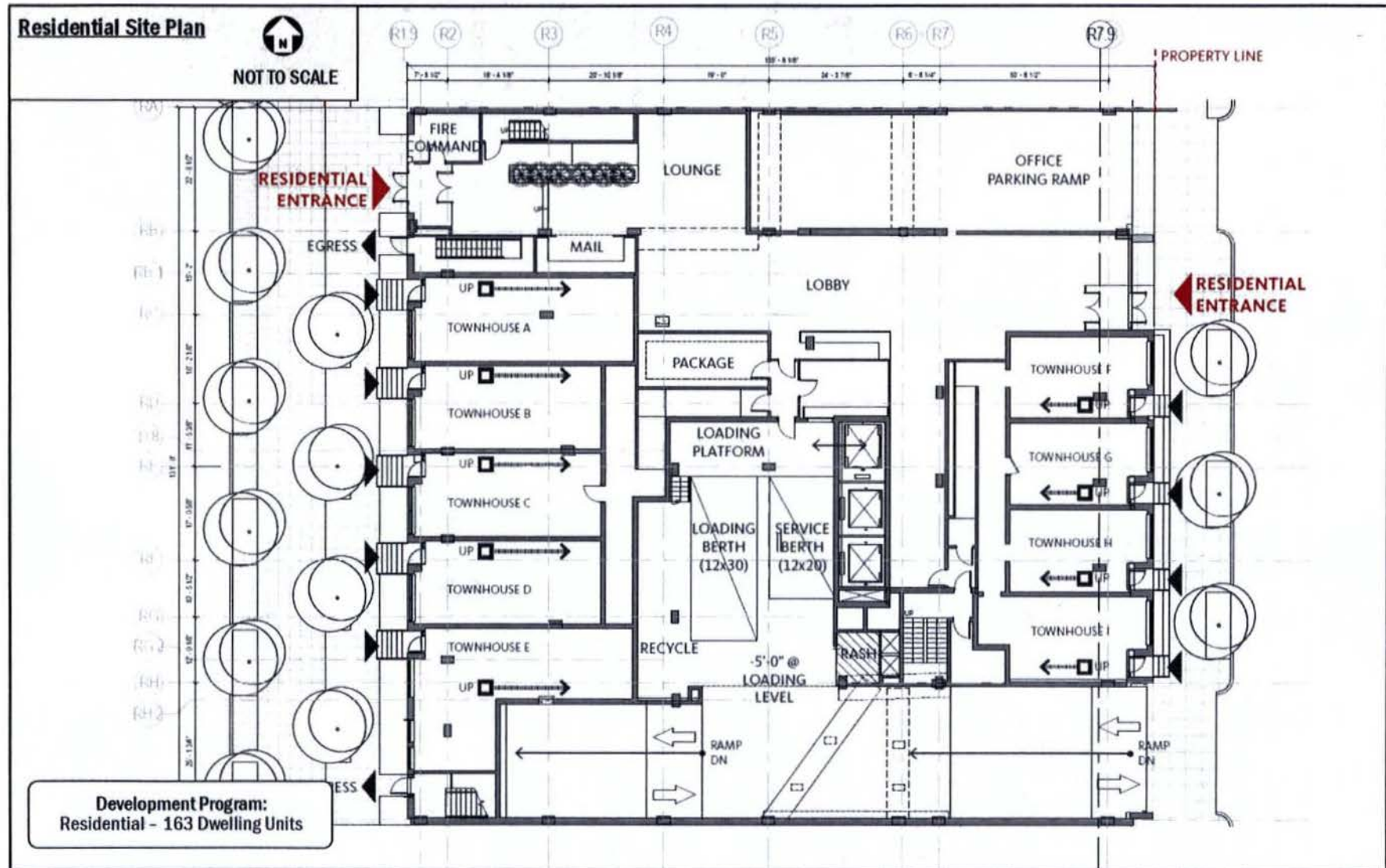


Figure 6: Site Plan

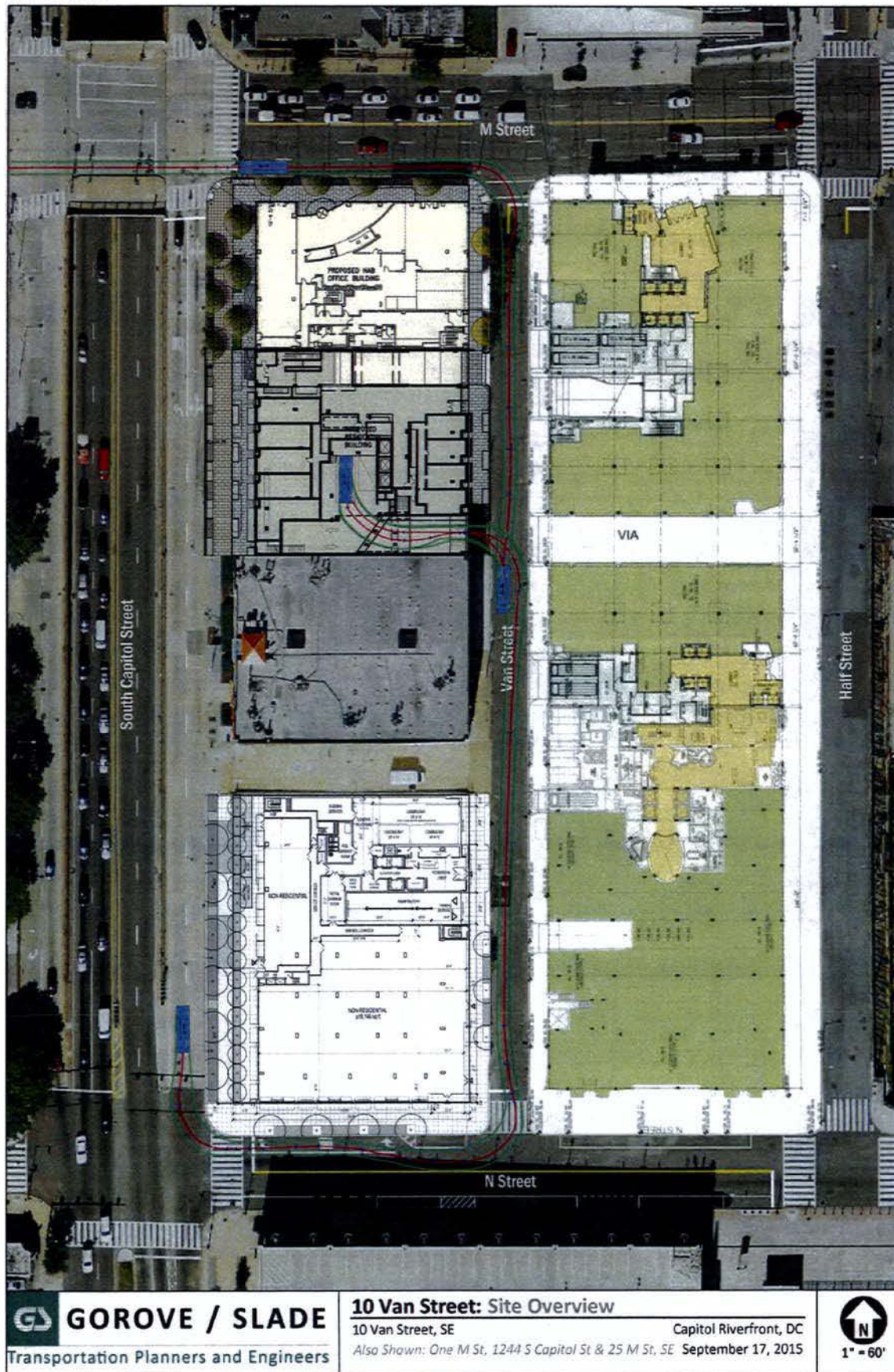


Figure 7: Truck Routing – Site Overview

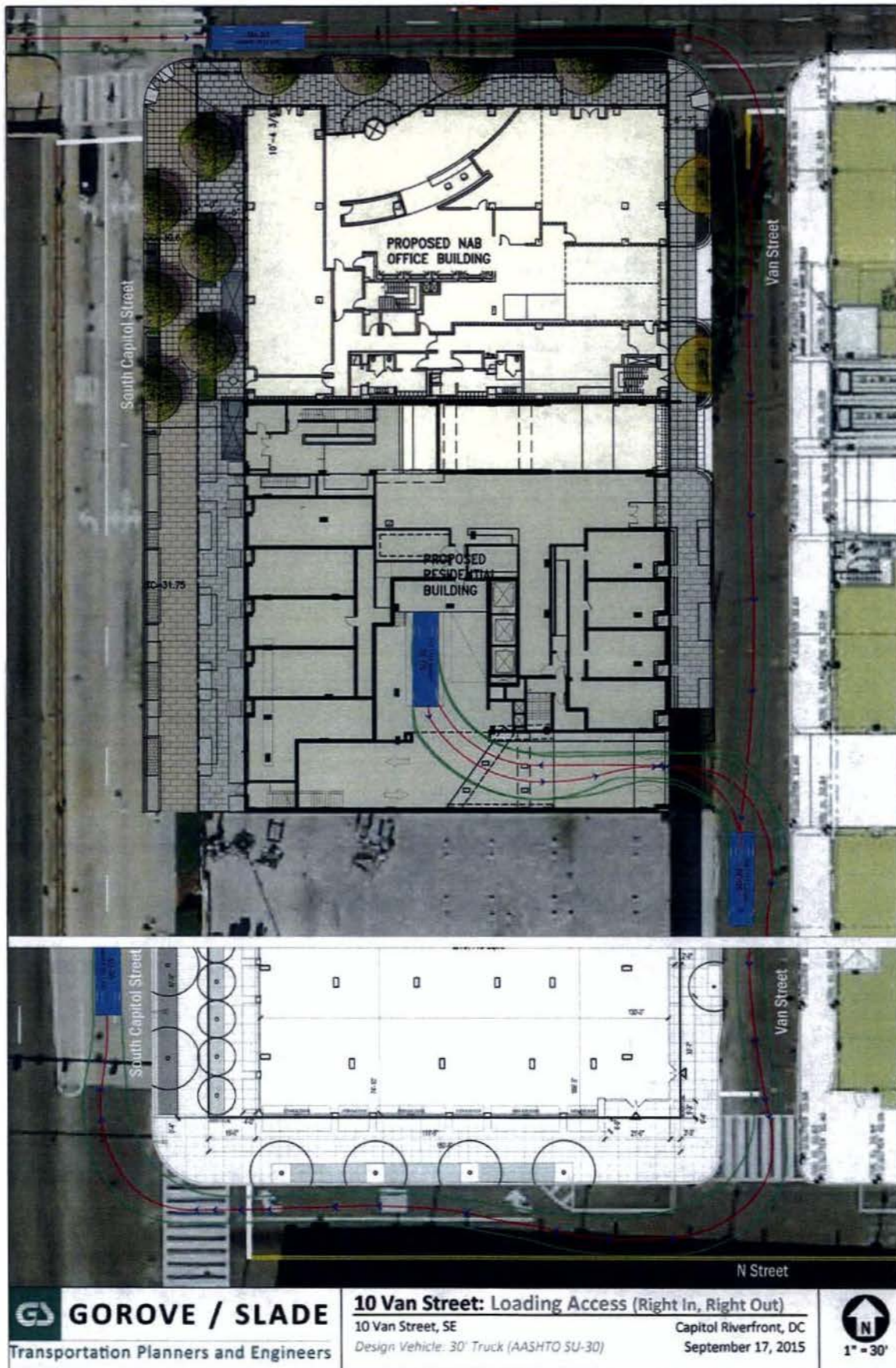


Figure 8: Loading Access

Bicycle & Pedestrian Facilities

The development will provide short-term bicycle parking around the perimeter of the property. These short-term spaces will include inverted U-racks placed in high-visibility areas. The Applicant has agreed to provide space for 16 bicycles and will work with DDOT in selecting locations for the racks in public space.

The project will also include secure long-term bicycle parking within the parking garage. The current development plan includes 60 secure bicycle parking spaces within the P1 level of the garage. According to the *DC Zoning Regulations and Bicycle Commuter and Parking Expansion Act of 2007*, all residential developments must provide at least one secure bicycle parking space for each 3 residential units. Based on these regulations the development must provide 57 bicycle parking spaces which the Applicant has exceeded.

Pedestrian facilities will be improved along the perimeter of the site. A sidewalk will be constructed along Van Street where one currently does not exist.

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.

The Transportation Demand Management (TDM) plan for the One M Street development is based on the DDOT expectations for TDM programs. The Applicant proposes the following TDM measures:

- The Applicant will exceed Zoning requirements to provide bicycle parking/storage facilities. This includes secure parking located in the garage for residents.
- The Applicant will unbundle the cost of residential parking from the cost of lease or purchase.
- The Applicant will identify a TDM Leader (for planning, construction, and operations). The TDM Leader will work with residents in the building to distribute and market various transportation alternatives and options.
- The Applicant will place electronic message boards in the lobby that provide real-time information on nearby public transportation services.

CONCLUSIONS

This Statement concludes that.

- The site is well-served by existing public transit service and has access to well-connected pedestrian and bicycle facilities,
- The modifications to the residential building development plan will result in a very slight decrease in transportation demand, such that the capacity analysis results included in the One M Street Overlay Review remain valid and are sufficient for the residential building, and
- The overall site design, in conjunction with a comprehensive transportation demand management plan and a loading management plan, provides suitable access and facilities for all modes of transportation