GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

d. Planning and Sustainability Division

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Jim Sebastian
Associate Director

DATE: January 2, 2018

SUBJECT: ZC Case No. 16-23 – The Lady Bird

PROJECT SUMMARY

Valor Development, LLC (the "Applicant") has requested a Voluntary Design Review of a proposal to redevelop the site bounded by Yuma Street NW to the north, 48th Street NW to the east, American University (AU) Spring Valley Building to the south, and Spring Valley Shopping Center to the west.

The proposal to construct a mixed-use development on the site of an existing parking garage, vacant grocery store, and retail buildings includes the following development program:

- 219 residential units;
- 16,000 SF retail/grocery;
- 370 on-site vehicle parking spaces (224 residential, 90 retail/grocery, 56 AU);
- 83 long-term and 27 short-term bicycle parking spaces; and
- One (1) 55-foot loading berth, two (2) 30-foot berths, and two (2) 20-foot delivery spaces.

SUMMARY OF DDOT REVIEW

The District Department of Transportation (DDOT) is committed to achieving an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, constructing safer streets, and providing outstanding access to goods and services. As one means to achieve this vision, DDOT works through the zoning process to ensure that impacts from new developments are manageable within, and take advantage of, the District's multimodal transportation network.

The purpose of DDOT's review is to assess the potential safety and capacity impacts of the proposed action on the District's transportation network and, as necessary, propose mitigations that are

commensurate with the action. After an extensive review of the case materials submitted by the Applicant, DDOT finds:

Site Design

- All vehicular access to the site is proposed via a two-way parking garage entrance from the existing rear public and private alley network;
- Each land use component of the project (residential, grocery, and retail) will have separate lobbies and pedestrian entrances. A second residential lobby and entrance will be provided at the southernmost building on 48th Street NW;
- The 83 long-term bicycle parking spaces are proposed in two (2) storage rooms in the parking garage;
- The 27 short-term bicycle parking spaces are proposed as inverted U-racks, but are not shown on any of the submitted drawings;
- The Applicant is exceeding the zoning requirements for number of loading berths and delivery spaces. All loading activities are proposed to occur on private property via the rear alley network, consistent with DDOT standards; and
- The Applicant is not proposing to provide any electric vehicle charging stations. DDOT recommends that seven (7) charging stations be installed in the garage (1 per 50 parking spaces).

Travel Assumptions

- The Applicant utilized sound methodology and assumptions to perform the analysis in the CTR;
- The proposed mode split and subsequent trip generation are consistent with the level of on-site vehicle parking provided;
- The site is distant from Metrorail (Red Line via Tenleytown-AU station is 1.0 mile away) and adjacent to bus service (two routes) along Massachusetts Avenue NW; and
- The proposed project is expected to generate a significant number of vehicle trips and a moderate amount of transit, bicycle, and walking trips during the weekday commuter peak hours.

Analysis

- DDOT concurs with the proposed loading design and loading management plan, with a few minor revisions (see Mitigations section) to include the Spring Valley Shopping Center since it is also within the boundary of this application;
- Of the 370 vehicle parking spaces proposed, 236 spaces are required for the neighboring office building as part of an agreement with AU. All but 56 of these 236 AU spaces will be shared with the residential, grocery, and retail components of the project;
- DDOT estimates a project of the size, mix, and surrounding context should provide approximately 200-260 spaces (including the 56 AU-only spaces). As such, the Applicant should make improvements to the pedestrian network (see Mitigations section) to encourage walking and discourage driving;

- The Zoning Administrator ruled in a December 22, 2017 email to the Applicant that the proposed parking totals do not trigger the TDM Mitigations of ZR16 Subtitle C § 707.3 for sites more than double-parked because the agreement with AU for 236 spaces pre-dates ZR16;
- The amount of bicycle parking proposed by the Applicant (83 long-term and 27 short-term spaces) exceeds the zoning requirements of 75 long- and 16 short-term spaces;
- It is not clear whether sidewalks are proposed along the public alley connection Massachusetts Avenue NW. DDOT recommends a sidewalk be provided on the western side of the alley as shown on several of the submitted drawings;
- The site is served by a mostly complete but not up-to-standards pedestrian network;
- DDOT concurs with the Applicant's proposal to enclose trash containers along the north-south alley and widen the alley by approximately 7 feet onto private space so long as the widened alley segment is within a public access easement, a public space occupancy permit is obtained for the trash enclosures, and the alley curb cut on Yuma Street NW is shifted to the east to be consistent with the re-aligned alley; and
- The TDM plan proposed in the November 22, 2017 CTR is sufficient to encourage non-auto travel and offset the impacts of being over-parked if implemented in conjunction with the requested pedestrian network improvements and with several minor revisions to the TDM Plan as noted in the Mitigations section below.

Mitigations

DDOT has no objection to approval of the Voluntary Design Review application with the following revisions and conditions:

- As proposed by the Applicant, fund and construct the installation of a High-intensity Activated crossWalK (HAWK) signal on Massachusetts Avenue NW between 48th and 49th Street NW, subject to DDOT approval;
- Fund and construct pedestrian network improvements in the immediate vicinity of the site to encourage walking and offset the impacts of being over-parked. Specifically, upgrade sub-standard curb ramps, stripe missing crosswalks, and install curb extensions, subject to DDOT approval, at the following intersections:
    - 49th Street and Yuma Street NW
    - 48th Street and Yuma Street NW
    - 48th Street and Windom Place NW
    - 48th Street and Warren Street NW
- Implement the loading management plan as proposed by the Applicant November 22, 2017 CTR (discussed in detail later in this report), for the life of the project, unless otherwise noted, with the following additions:
    - The loading management plan shall also apply to the Spring Valley Shopping Center site;
    - All trash bins an dumpsters currently located along Yuma Street NW will be relocated to the alley and placed in the proposed enclosures; and
    - Trucks traveling to the Spring Valley Shopping Center will be directed not to pick-up or drop-off on Yuma Street NW and will be directed to use the rear alley network.

- Implement the Transportation Demand Management (TDM) Plan as proposed by the Applicant in the November 22, 2017 CTR, for the life of the project, unless otherwise noted, with the following minor revisions:
    - Clarify in TDM Plan: If an agreement has not been reached with a car sharing service to occupy the four (4) dedicated car sharing spaces in the garage then the Applicant will provide an additional year of Capital Bikeshare memberships to new residents;
    - Clarify in TDM Plan: Unbundled cost of parking will be based on the average market rate within a quarter mile (per the 12/27/17 PMP);
    - Clarify in TDM Plan: bike repair stations will be provided in each of the two long-term bike storage facilities;
    - Clarify in TDM Plan: the HAWK signal is subject to DDOT approval;
    - Add to TDM Plan: No free parking shall be offered to any resident, employee, student, or otherwise. Only daily, weekly, and monthly rates will be made available for purchase; and
    - Add to TDM Plan: Provide one (1) shopping car for grocery shopping and running errands for every 30 units.

Continued Coordination

Given the complexity and size of the action, the Applicant is expected to continue to work with DDOT on the following matters outside of the zoning process:

- Public space, including curb and gutter, street trees and landscaping, street lights, sidewalks, curb ramps, and other features within the public rights of way, are expected to be designed and built to DDOT standards;
- The Applicant will be required to obtain public space permits for all elements of the project proposed in public space. DDOT has a number of issues with the Applicant's current proposal for public space design which are noted later in the Streetscape and Public Realm section;
- Continue to coordinate with DDOT's Planning and Sustainability Division regarding the design of the north-south alley, trash enclosures, and alley curb cut location on Yuma Street NW;
- The Applicant should participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP;
- Provide a curbside management and signage plan, assumed to include multi-space meter installation at the Applicant's expense, consistent with current DDOT policies;
- DDOT understands the Applicant has had conversations with the community regarding the potential of making the Exxon gas station's 49th Street NW curb cut right-in/right-out. This portion of the Spring Valley Shopping Center is not part of the application and therefore should be addressed through public space permitting. The Applicant should coordinate with DDOT's Project Review Team on the appropriateness of this access change, including the scoping of supporting transportation analysis to evaluate future circulation changes and an appropriate design that meets DDOT's policies for public space design;

- Coordinate with DDOT's Active Transportation Branch, Traffic Operations and Safety Division (TOSD), and Traffic Engineering and Signals Division (TESD) on the appropriate location and final design of the proposed HAWK signal on Massachusetts Avenue NW;
- Coordinate with DDOT's Active Transportation Branch, Development Review Team, and TOSD regarding design and implementation of the pedestrian network improvements; and
- Coordinate with DDOT's Urban Forestry Division (UFD) and the Ward 3 arborist regarding the preservation and protection of existing small street trees, as well as the planting of new street trees, in bioretention facilities or a typical expanded tree planting space.

TRANSPORTATION ANALYSIS

DDOT requires applicants requesting an action from the Zoning Commission complete a Comprehensive Transportation Review (CTR) in order to determine the action's impact on the overall transportation network. Accordingly, an applicant is expected to show the existing conditions for each transportation mode affected, the proposed impact on the respective network, and any proposed mitigations, along with the effects of the mitigations on other travel modes. A CTR should be performed according to DDOT direction. The Applicant and DDOT coordinated on an agreed-upon scope for the CTR that is consistent with the scale of the action.

The review of the analysis is divided into four categories: site design, travel assumptions, analysis, and mitigations. The following review provided by DDOT evaluates the Applicant's CTR to determine its accuracy and assess the action's consistency with the District's vision for a cohesive, sustainable transportation system that delivers safe and convenient ways to move people and goods, while protecting and enhancing the natural, environmental, and cultural resources of the District.

Site Design

Site design, which includes site access, loading, and public realm design, plays a critical role in determining a proposed action's impact on the District's infrastructure. While transportation impacts can change over time, the site design will remain constant throughout the lifespan of the proposed development, making site design a critical aspect of DDOT's development review process. Accordingly, new developments must provide a safe and welcoming pedestrian experience, enhance the public realm, and serve as positive additions to the community.

Site Access

Pedestrian access to the main building is via two (2) entrances on Yuma Street NW (one for each of the grocery store and residential uses) and one (1) at the rear of the building in the alley network for the retail use. The second building, which is exclusively residential, has an entrance on 48th Street NW.

All vehicular access to the development's parking garage is proposed via a two-way entrance/exit from the 20-foot east-west public alley within the existing alley network. The public and private alleys serving the rear of this site connect to Massachusetts Avenue, 48th Street, and Yuma Street NW. The project proposes no new curb cuts to the public street network and instead will be closing all existing curb cuts

on Yuma Street and 48th Street (excluding the alley curb cuts). Figure 1 below shows the site layout of the mixed-use Lady Bird project.

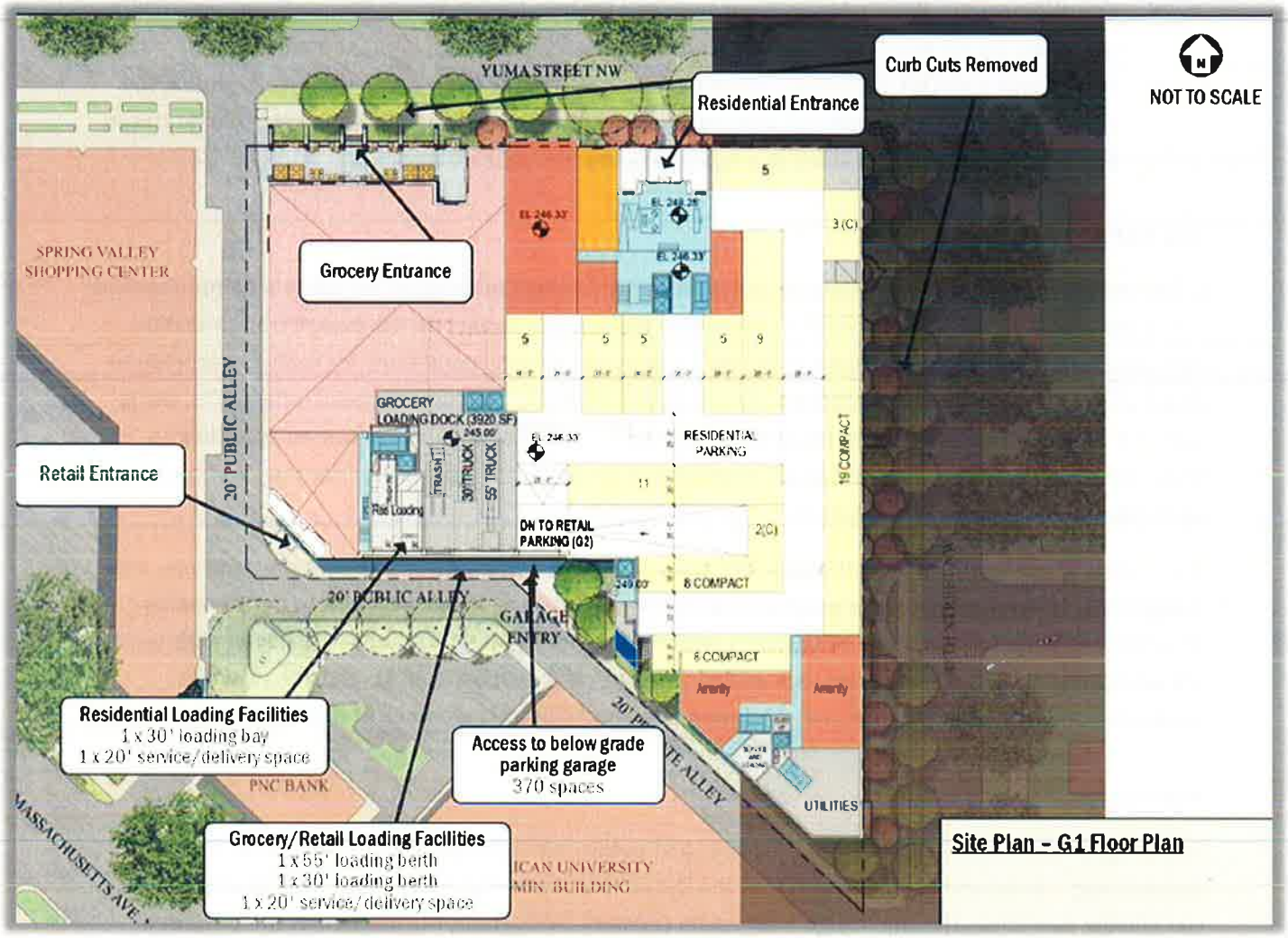

Figure 1 – Site Plan (Source: CTR, Gorove/Slade, Figure 8, 11/22/17)

Loading

DDOT's practice is to accommodate vehicle loading in a safe and efficient manner, while at the same time preserving safety across non-vehicle modes and limiting any hindrance to traffic operations. For new developments, DDOT requires that loading take place in private space and that no back-up maneuvers occur in the public realm.

Per Subtitle C § 901.1 and § 901.4 of the 2016 Zoning Regulations, residential properties with more than 50 units are required to provide one (1) loading berth, one (1) loading platform, and one (1) 20-foot delivery space. For the retail component of this project, zoning requires one (1) loading berth, one (1) loading platform, and zero (0) delivery spaces. The Applicant is proposing to exceed the ZR16

requirements for loading by providing a total of one (1) 55-foot berth, two (2) 30-foot berths, two (2) 20-foot delivery spaces with loading platforms.

The main building is designed so that all loading activities take place in the loading dock area which is accessed via the rear alley network. Additionally, the second residential building, while not required to provide any loading berths, will accommodate drop-offs/pick-ups by smaller vehicles with a delivery space access from the rear private alley segment. The Applicant anticipates 21 truck trips per day will utilize the main building's loading dock area, including trash pick-up, mail drop-off, produce and retail deliveries, and move-ins/outs by residents.

It has been observed that large beer trucks and other delivery trucks destined for the Spring Valley Shopping Center, which is a part of this application, are currently making deliveries curb side on Yuma Street NW. Given that site's proximity to the existing alley network and the Applicant's proposal to make physical upgrades to the alley, all trucks serving the Spring Valley Shopping Center should be directed not to load and unload on Yuma Street but to instead utilize the alley.

The Applicant has proposed the following loading management plan in the 11/22/17 CTR for the new mixed-use development site east of the existing public alley:

- A loading dock manager will be designated by the building management. The dock manager will coordinate with vendors and tenants to schedule deliveries and will be on duty during delivery hours;
- All tenants will be required to schedule deliveries that utilize the loading docks – defined here as any loading operation conducted using a truck 20' in length or larger;
- Commercial deliveries will be scheduled between 7 AM – 7 PM (7 days a week), and discouraged from making deliveries after 4PM on weekdays;
- Waste collection (both commercial & residential) allowed 7 AM – 4 PM (7 days a week);
- Residential move-ins/outs allowed 9 AM – 4 PM (7 days a week);
- The dock manager(s) will schedule deliveries such that the dock's capacity is not exceeded. In the event that an unscheduled delivery vehicle arrives while the dock is full, that driver will be directed to return at a later time when a berth will be available so as to not impede the drive aisle that passes in front of the loading dock;
- The dock manager(s) will monitor inbound and outbound truck maneuvers and will ensure that trucks accessing the loading dock do not block vehicular traffic except during those times when a truck is actively entering or exiting the alley;
- The loading manager(s) will monitor the alley to keep the designated loading areas clear for deliveries, keep the alley from being blocked due to vehicle loading/unloading activity, and enforce the no parking restrictions; and
- 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.

DDOT is in concurrence with the proposed loading scheme as shown in Figure 1, so long as the loading management plan discussed above is in effect and the Applicant adds the following additional items:

- The loading management plan shall also apply to the Spring Valley Shopping Center site;
- All trash bins an dumpsters currently located along Yuma Street NW will be relocated to the alley and placed in the proposed enclosures; and
- Trucks traveling to the Spring Valley Shopping Center will be directed not to pick-up or drop-off on Yuma Street NW and will be directed to use the rear alley network.

Streetscape and Public Realm

In line with District policy and practice, any substantial new building development or renovation is expected to rehabilitate streetscape infrastructure between the curb and the property lines. This includes curb and gutters, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site.

The Applicant must work closely with DDOT and the Office of Planning (OP) to ensure that the design of the public realm meets current standards and will substantially upgrade the appearance and functionality of the streetscape for public users needing to access the property or circulate around it. In conjunction with Titles 11, 12A, and 24 of the DCMR, DDOT's recently released 2017 version of the *Design and Engineering Manual (DEM)* and DDOT's *Public Realm Design Manual* will serve as the main public realm references for the Applicant. Public space designs will be reviewed in further detail during the public space permitting process. DDOT staff will be available to provide additional guidance during these processes. DDOT encourages the Applicant to participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP.

While the preliminary public space plans, shown above in Figure 1, are generally consistent with DDOT standards, there are several considerations that need to be incorporated and items to be reviewed in greater detail during the public space permitting process:

- The existing Yuma Street NW alley curb cut and apron should be shifted to the east to be consistent with the new alignment of the alley;
- DDOT concurs that the existing curb cuts on Yuma Street and 48th Street NW should be closed and replaced with green space and street trees;
- The sidewalk clear zone width on Yuma Street NW is proposed to be 8-feet near the grocery store entrance and then narrowed to 6-feet along the residential portion of the project. The edge of sidewalk should maintain a straight line along the northern edge of the sidewalk;
- An occupancy permit will be required for the outdoor café seating currently shown in public space near the Yuma Street NW grocery store entrance;
- Building projections on Yuma Street NW should not project more than 4-feet into public space;
- The concrete strips running north-south in the middle of the green space near the grocery store entrance on Yuma Street NW should be removed;
- DDOT finds the design of the proposed trash enclosures along the public alley appropriate and will require a public space occupancy permit;
- All dumpsters currently located in public space along Yuma Street west of the alley and east of Exxon, which is within this Design Review application's plan area, should be moved to the new enclosures in the public alley; and
- There are several segments of pavement in public space along Yuma Street west of the alley and east of Exxon. These areas should be restored to green space with leadwalks connecting from the sidewalk to building entrances.

As shown below in Figure 2, the Applicant has proposed to enclose the trash containers from the Spring Valley Shopping Center that are currently partially sitting in the public alley. The containers currently occupy approximately 5 feet of private space west of the alley and 7 feet of public space within the alley. In order to keep the full 20-foot width of the alley, the Applicant plans to widen the alley by 7 feet on private property to the east. DDOT concurs with the Applicant's proposal so long as the widened alley segment is within a public access easement, a public space occupancy permit is obtained for trash enclosures, and the alley curb cut is shifted to the east to be consistent with the new alley alignment.

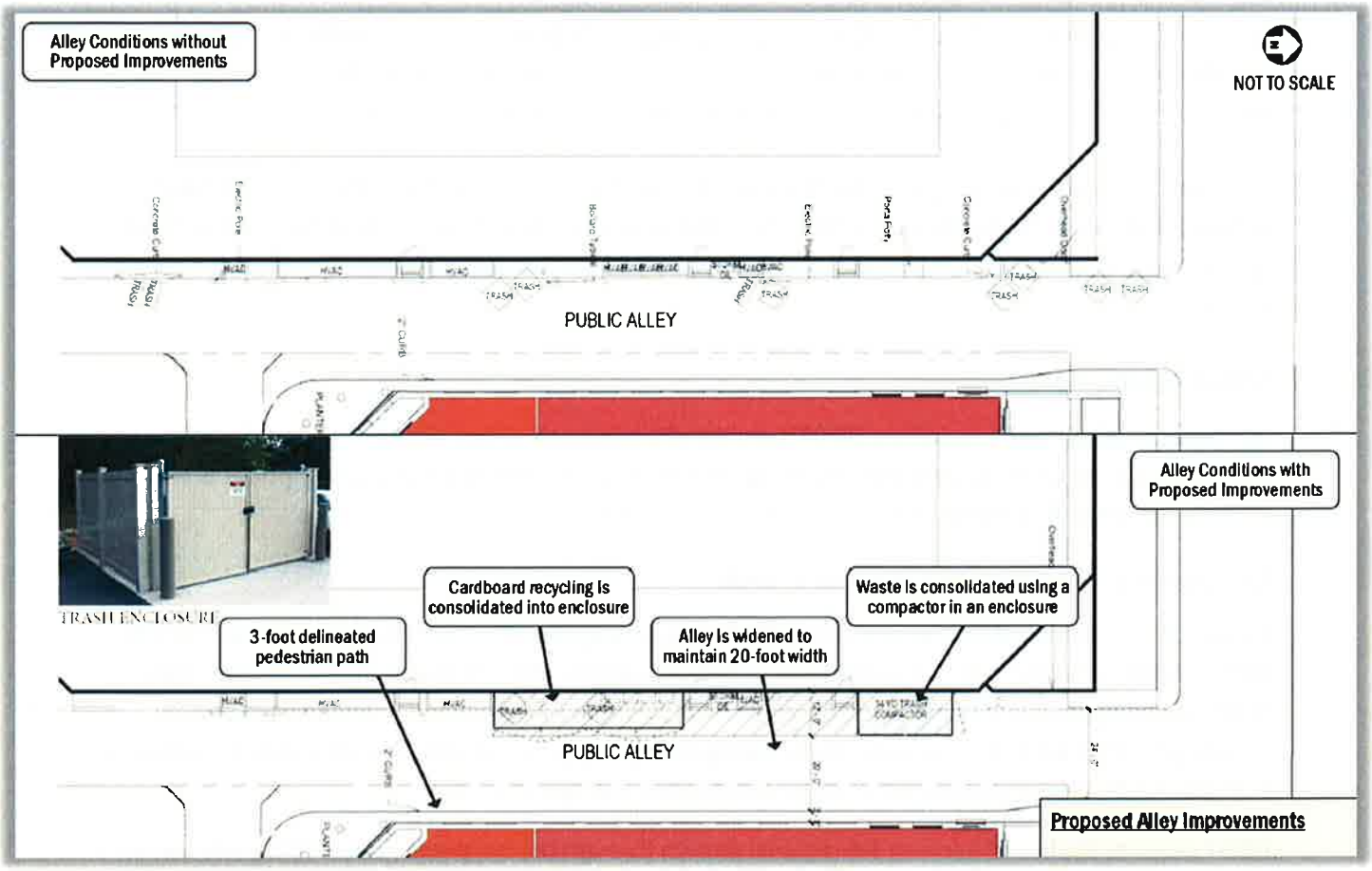

Figure 2 – Proposed Alley Improvements (Source: CTR, Gorove/Slade, Figure 10, 11/22/17)

Heritage Trees

Heritage Trees are defined as a tree with a circumference of 100 inches or more and are protected by the Tree Canopy Protection Amendment Act of 2016. With approval by the Mayor and DDOT's Urban Forestry Division (UFD), Heritage Trees might be permitted to be relocated. As such, the Applicant may be required to redesign the site plan in order to preserve the Non-Hazardous Heritage Trees. UFD did not identify any Heritage Trees or Special Trees on-site and recommends that the Applicant coordinate

with the Ward 3 arborist regarding the preservation and protection of existing small street trees, as well as the planting of new street trees, in bioretention facilities or a typical expanded tree planting space.

Sustainable Transportation Elements

Sustainable transportation measures target to promote environmentally responsible types of transportation in addition to the transportation mode shift efforts of TDM programs. These measures can range anywhere from practical implementations that would promote use of vehicles powered by alternative fuels to more comprehensive concepts such as improving pedestrian access to transit in order to increase potential use of alternative modes of transportation. Within the context of DDOT's development review process, the objective to encourage incorporation of sustainable transportation elements into the development proposals is to introduce opportunities for improved environmental quality (air, noise, health, etc.) by targeting emission-based impacts.

The Applicant is not proposing to provide any electric vehicle charging stations which are commonly included with larger mixed use developments. DDOT recommends that the Applicant provide at least one (1) electric vehicle charging station on-site for every 50 vehicle parking spaces provided for a total of seven (7).

Travel Assumptions

The purpose of the CTR is to inform DDOT's review of a proposed action's impacts on the District's transportation network. To that end, selecting reasonable and defensible travel assumptions is critical to developing a realistic analysis.

Background Developments and Regional Growth

As part of the analysis of future conditions, DDOT requires applicants to account for future growth in traffic on the network or what is referred to as background growth. The Applicant coordinated with DDOT on the appropriate background developments to include in the analysis. Traffic from one (1) specific project (15,000 SF expansion of the Spring Valley Shopping Center) was taken into account as a background development anticipated to be constructed and open by 2021.

DDOT requires applicants account for regional growth through the build-out year of 2019. This can be done by assuming a general growth rate or by evaluating growth patterns forecast in MWCOG's regional travel demand model. The Applicant coordinated with DDOT on an appropriate measure to account for regional growth that accurately accounted for background growth on the network. Annually compounding background regional growth rates of between 0.10% and 2.00% were assumed in the study area, differing based on roadway and peak hour.

DDOT also requires applicants to consider future changes to the roadway network. It was determined in coordination with DDOT staff that no major changes to the local transportation network are anticipated before 2021.

Vehicle Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, price, and supply of parking spaces. However in urban areas, other factors contribute to the demand for parking, such as the availability of high quality transit, frequency of transit service, proximity to transit, connectivity of bicycle and pedestrian facilities within the vicinity of the development, and the demographic composition and other characteristics of the potential residents.

DDOT understands that the Applicant has an agreement with the neighboring American University (AU) building to provide 236 vehicle parking spaces for their site. Since AU only needs 56 of those 236 spaces, the remaining 180 spaces will be shared with the residential, grocery, and retail components of the project. In the most recent breakdown provided by the Applicant in the December 27, 2017 Parking Management Plan (PMP), of the 370 proposed total spaces, 224 dedicated and shared spaces will be allocated to the residential use (219 units), 90 spaces to the retail/grocery uses (16,000 SF), and 56 to the AU office building. A total of four (4) spaces are currently proposed to be reserved for carsharing services. DDOT finds the amount of vehicle parking proposed on-site to be higher than expected for the context of the neighborhood and that a total number of spaces in the 200-260 range (including the dedicated 56 AU spaces) would be more appropriate. As such, DDOT recommends that the Applicant make physical improvements to the adjacent pedestrian network to encourage walking to and from the site rather than driving (see Pedestrian Network section). The Zoning Administrator ruled in a December 22, 2017 email to the Applicant that the 370 proposed parking spaces do not trigger the TDM Mitigations required by ZR16 Subtitle C § 707.3 (e.g., bikeshare stations, street trees for sites more than double-parked because the agreement to provide 236 AU parking spaces pre-dates ZR16.

Trip Generation

Each trip a person makes is made by a certain means of travel, such as vehicle, bicycle, walking, and transit. The means of travel is referred to as a 'mode' of transportation. A variety of elements impact the mode of travel, including density of development, diversity of land use, design of the public realm, proximity to transit options, availability and cost of vehicle parking, among many others.

The Applicant provided trip generation estimates which utilized the rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition* (Land Use Code 220 Apartment and Code 850 Supermarket) and the assumed mode split to convert base vehicular trips to base person trips using average auto occupancy data and then back to vehicular, transit, bicycle, and pedestrian trips. DDOT finds these methods appropriate.

Mode split assumptions used in the subject analysis were informed by the Census, WMATA's 2005 Development-Related Readership Survey, and mode splits used for nearby developments. Figure 3 below shows the mode splits that were assumed for the Lady Bird project. It is noted that the automobile mode share (90%) is significantly higher than what would typically be assumed for this part of the District (65%-70%). DDOT agreed with the Applicant on this assumption during the CTR scoping process to account for the significant amount of vehicle parking provided with this project which could lead to more driving to and from the site.

Land Use	Mode			
	Auto	Transit	Bike	Walk
Residential	90%	5%	2%	3%
Grocer/Retail	90%	0%	2%	8%

Figure 3 – Summary of Mode Split Assumptions (Source: CTR, Gorove/Slade, Table 1, 11/22/17)

Based on the ITE trip generation rates and mode split assumptions, Figure 4 shows the predicted number of weekday peak hour trips generated by each mode. As noted above, a conservative automobile mode share was assumed for this project and thus vehicle trip generation estimates may be higher than the levels of traffic that will actually materialize once the project is constructed.

Mode	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	Residential	20 veh/hr	80 veh/hr	100 veh/hr	81 veh/hr	43 veh/hr	124 veh/hr
	Grocer/Retail	30 veh/hr	18 veh/hr	48 veh/hr	93 veh/hr	88 veh/hr	181 veh/hr
	Total	**50 veh/hr**	**98 veh/hr**	**148 veh/hr**	**174 veh/hr**	**131 veh/hr**	**305 veh/hr**
Transit	Residential	1 ppl/hr	5 ppl/hr	6 ppl/hr	5 ppl/hr	3 ppl/hr	8 ppl/hr
	Grocer/Retail	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr
	Total	**1 ppl/hr**	**5 ppl/hr**	**6 ppl/hr**	**5 ppl/hr**	**3 ppl/hr**	**8 ppl/hr**
Bike	Residential	1 ppl/hr	2 ppl/hr	3 ppl/hr	2 ppl/hr	1 ppl/hr	3 ppl/hr
	Grocer/Retail	1 ppl/hr	1 ppl/hr	2 ppl/hr	4 ppl/hr	3 ppl/hr	7 ppl/hr
	Total	**2 ppl/hr**	**3 ppl/hr**	**5 ppl/hr**	**6 ppl/hr**	**4 ppl/hr**	**10 ppl/hr**
Walk	Residential	1 ppl/hr	3 ppl/hr	4 ppl/hr	3 ppl/hr	2 ppl/hr	5 ppl/hr
	Grocer/Retail	5 ppl/hr	3 ppl/hr	8 ppl/hr	15 ppl/hr	15 ppl/hr	30 ppl/hr
	Total	**6 ppl/hr**	**6 ppl/hr**	**12 ppl/hr**	**18 ppl/hr**	**17 ppl/hr**	**35 ppl/hr**

Figure 4 – Multi-Modal Trip Generation Summary (Source: CTR, Gorove/Slade, Table 2, 11/22/17)

The proposed project is expected to generate a significant number of vehicle trips and moderate number of transit, bicycle and walking trips during the peak hours. The proposed mode split and subsequent trip generation is consistent with the amount of vehicle parking provided.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified 17 existing intersections (including the alley entrances surrounding the site) where detailed vehicle counts would be collected and a level of service analysis would be performed. These intersections are immediately adjacent to the site and include intersections radially outward from the site with the greatest potential to see impacts in vehicle delay. DDOT acknowledges that not all affected intersections are included in the study area and there will be intersections outside of the study area which would realize new trips. However, DDOT expects minimal to no increase in delay outside the study area as a result of the proposed action.

The Applicant collected weekday intersection traffic count data on Tuesday, October 18, 2016 and Thursday, October 20, 2016 between 6:30 AM-9:30 AM and 4:00 PM-7:00 PM while District of Columbia Public Schools and Congress were in session. DDOT is in agreement with the Applicant on the data collection time frame and dates.

Analysis

To determine the proposed development's impacts on the transportation network, the Applicant completed a Comprehensive Transportation Review (CTR), prepared by Gorove/Slade, dated November 22, 2017 which includes an extensive multi-modal analysis of existing conditions (2016 Existing), future with no development (2021 Background) and future conditions with development (2021 Future) scenarios.

Roadway Capacity and Operations

DDOT aims to provide a safe and efficient roadway network that provides for the timely movement of people, goods and services. As part of the evaluation of travel demand generated by the site, DDOT requests analysis of traffic conditions for the agreed upon study intersections for the current year and after the facility opens both with and without the site development or any transportation changes.

The roadway capacity analysis provided in the CTR demonstrated that none of the 17 study intersections would have an approach that degrades from Level of Service (LOS) D or better to LOS E or worse due to the addition of site generated traffic. Therefore, no capacity increasing mitigation is requested by DDOT.

Transit Service

The District and Washington Metropolitan Area Transit Authority (WMATA) have partnered to provide extensive public transit service in the District of Columbia. DDOT's vision is to leverage this investment to increase the share of non-automotive travel modes so that economic development opportunities increase with minimal infrastructure investment.

The site is located approximately 1 mile, roughly a 15-20 minute walk, from the Tenleytown-AU Metrorail station which is served by the Red Line. Trains serve the Metrorail station every 6 minutes during weekday peak hours, 12 minutes during weekday non-peak times, and 15-18 minutes on weekends.

There are a couple bus stops near the site along Massachusetts Avenue NW at the intersections with 49th Street and Fordham Road/48th Street. These stops are served by Metrobus routes N4 and N6 with bus headways on these routes ranging from 5 to 30 minutes throughout the day.

Pedestrian Facilities

The District is committed to enhancing pedestrian accessibility by ensuring consistent investment in pedestrian infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including pedestrian trips. Walking is expected to be an important mode of transportation for this development.

The Applicant's inventory of existing pedestrian infrastructure, as shown in Figure 5 below, demonstrates that most sidewalks in the immediate vicinity of the site are currently constructed with appropriate widths. However, there are numerous curb ramps that do not meet DDOT standards and should be upgraded. While there are a few missing or substandard segments of sidewalk and curb ramps in the broader area, the existing pedestrian network along major pathways to schools, attractions, and the Metrorail station is generally adequate.

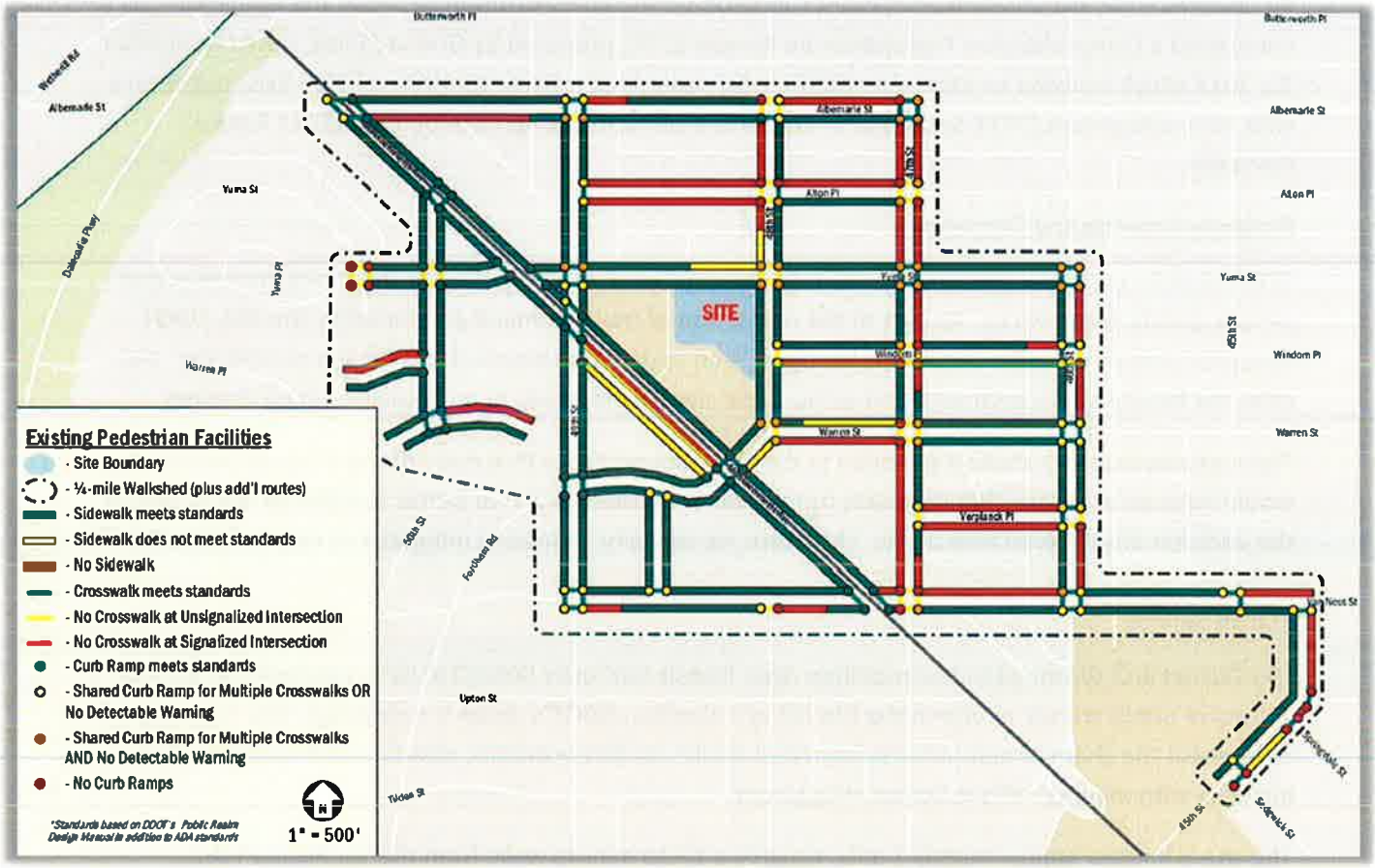

Figure 5 – Existing Pedestrian Infrastructure (Source: CTR, Gorove/Slade, Figure 33, 11/22/17)

DDOT expects that the Applicant will reconstruct the public space along the frontage on both Yuma Street (from the Exxon driveway east to 48th Street NW) and 48th Street (from Yuma Street south to the Warren Street NW) and upgrade any pedestrian facilities to current DDOT standards. Additionally, several submitted drawings show sidewalks constructed along the alley connection from Massachusetts Avenue NW. DDOT expects at a minimum a sidewalk will be provided along the western side of the alley until it reaches the trash enclosures at the rear of the Spring Valley Shopping Center.

As discussed previously in the Vehicle Parking section, to offset the impacts of being over-parked, DDOT recommends the Applicant fund and construct several pedestrian network improvements in the immediate vicinity of the site to encourage walking and discourage driving. Specifically, the Applicant should upgrade sub-standard curb ramps, stripe missing crosswalks, and install curb extensions on all

corners of the following intersections. These curb extensions will make the stop signs more visible to drivers, shorten the crossing distance for pedestrians, and slow turning vehicles.

- 49th Street and Yuma Street NW
- 48th Street and Yuma Street NW
- 48th Street and Windom Place NW
- 48th Street and Warren Street NW

Bicycle Facilities

The District is committed to enhancing bicycle access by ensuring consistent investment in bicycle infrastructure by both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including bicycling trips.

Per ZR16 Subtitle C § 802.1, DDOT estimates that the Applicant is required to provide 75 long-term and 16 short-term bicycle parking spaces. The Applicant is proposing to exceed these requirements by installing 83 long-term spaces in two separate areas of the parking garage and 27 short-term spaces. The locations of short-term spaces are not currently shown on the submitted drawings, but should be accommodated by installing inverted U-racks in public space or on private property. There are currently no bicycle lanes or Capital Bikeshare stations in the vicinity of the site, see Figure 6 below.

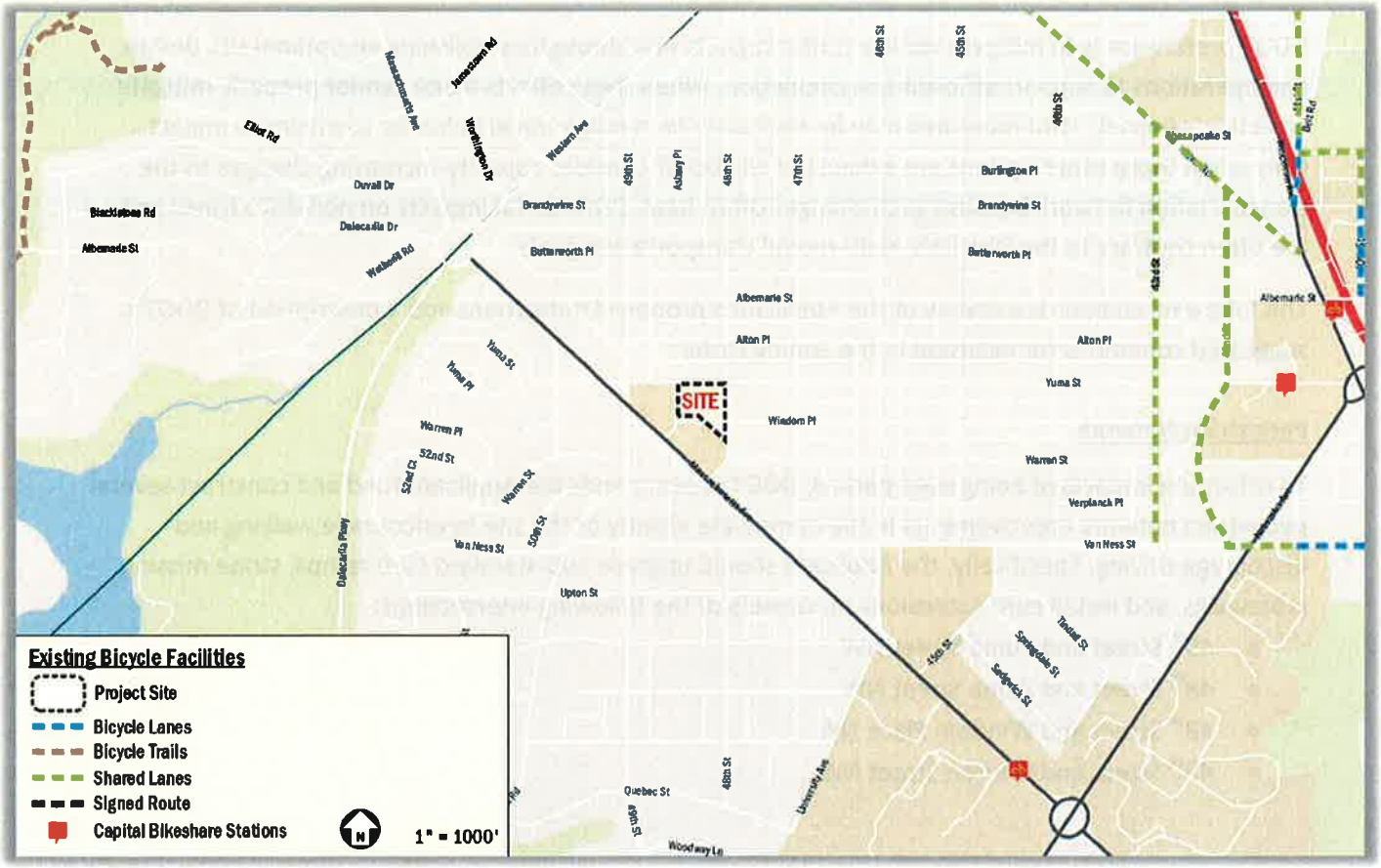

Figure 6 – Existing Bicycle Facilities (Source: CTR, Gorove/Slade, Figure 35, 11/22/17)

Safety

DDOT requires that the Applicant conduct a safety analysis to demonstrate that the site will not create new, or exacerbate existing safety issues for all travel modes. DDOT asks for an evaluation of crashes at study area intersections as well as a site distance analysis along the public space where there is expected to be conflicts between competing modes (e.g. crosswalks, driveway entrances, etc.).

The CTR's analysis of DDOT crash data over a three-year period reveals that only one intersection within the study area (Fordham Road and 49th Street NW) has a crash rate of 1.0 Million Entering Vehicles (MEV) or higher, which is the threshold for further design considerations. It is anticipated that the moderate amount of additional traffic (approximately 148 AM and 305 PM trips) associated with the development will not have a major impact on the MEV rates of study intersections.

Mitigations

As part of all major development review cases, DDOT requires the Applicant to mitigate the impacts of the development in order to positively contribute to the District's transportation network. The mitigations must sufficiently diminish the action's vehicle impact and promote non-auto travel modes. This can be done through Transportation Demand Management (TDM), physical improvements, operations, and performance monitoring.

DDOT preference is to mitigate vehicle traffic impacts first through establishing an optimal site design and operations to support efficient site circulation. When these efforts alone cannot properly mitigate an action's impact, TDM measures may be necessary to manage travel behavior to minimize impact. Only when these other options are exhausted will DDOT consider capacity-increasing changes to the transportation network because such changes often have detrimental impacts on non-auto travel and are often contrary to the District's multi-modal transportation goals.

The following analysis is a review of the Applicant's proposed mitigations and a description of DDOT's suggested conditions for inclusion in the Zoning Order:

Pedestrian Network

To offset the impacts of being over-parked, DDOT recommends the Applicant fund and construct several pedestrian network improvements in the immediate vicinity of the site to encourage walking and discourage driving. Specifically, the Applicant should upgrade sub-standard curb ramps, stripe missing crosswalks, and install curb extensions on corners of the following intersections:

- 49th Street and Yuma Street NW
- 48th Street and Yuma Street NW
- 48th Street and Windom Place NW
- 48th Street and Warren Street NW

Transportation Demand Management

As part of all major development review cases, DDOT requires the Applicant to produce a comprehensive Transportation Demand Management (TDM) plan to help mitigate an action's transportation impacts. TDM is a set of strategies, programs, services, and physical elements that influence travel behavior by mode, frequency, time, route, or trip length in order to help achieve highly efficient and sustainable use of transportation facilities. In the District, this typically means implementing infrastructure or programs to maximize the use of mass transit, bicycle and pedestrian facilities, and reduce single occupancy vehicle trips during peak periods. The Applicant's proposed TDM measures play a role in achieving the desired and expected mode split.

The specific elements within the TDM plan vary depending on the land uses, site context, proximity to transit, scale of the development, and other factors. The TDM plan must help achieve the assumed trip generation rates to ensure that an action's impacts will be properly mitigated. Failure to provide a robust TDM plan could lead to unanticipated additional vehicle trips that could negatively impact the District's transportation network.

The Applicant proposes a TDM Plan in the November 22, 2017 CTR which includes the following elements:

- Fund a new HAWK (High-Intensity Activated crossWalK) signal on Massachusetts Avenue between 48th Street and 49th Street. This is designed to help pedestrians safely cross Massachusetts Avenue;
- Exceed Zoning requirements to provide bicycle parking/storage facilities at the proposed development. This includes secure parking located on-site and short-term bicycle parking around the perimeter of the site;
- Unbundle the cost of residential parking from the cost of lease or purchase of each unit;
- Identify TDM Leaders (for planning, construction, and operations). The TDM Leaders will work with residents and employees in the development to distribute and market various transportation alternatives and options;
- Provide TDM materials to new residents in the Residential Welcome Package materials;
- Provide residents and grocery/retail employees who wish to carpool with detailed carpooling information and will be referred to other carpool matching services sponsored by the Metropolitan Washington Council of Governments (MWCOG);
- Install a Transportation Information Center Display (electronic screen) within the residential lobbies containing information related to local transportation alternatives;
- Offer either a one-year membership to Capital Bikeshare or a one-year membership to a car-sharing service to each residential unit for the initial lease of each unit;
- Provide a bicycle repair station within the residential long-term bicycle storage room;
- Dedicate four (4) parking spaces in the below-grade parking garage for car-sharing services to use with right of first refusal; and
- Restrict residents of the building from obtaining a Residential Parking Permit ("RPP"), with penalty of lease termination.

DDOT finds the proposed TDM plan to be sufficient for this project if implemented in conjunction with the requested pedestrian network improvements and with the following minor revisions and clarifications:

- Clarify in TDM Plan: If an agreement has not been reached with a car sharing service to occupy the four (4) dedicated car sharing spaces in the garage then the Applicant will provide an additional year of Capital Bikeshare memberships to new residents;
- Clarify in TDM Plan: Unbundled cost of parking will be based on the average market rate within a quarter mile (per the 12/27/17 PMP);
- Clarify in TDM Plan: bike repair stations will be provided in each of the two long-term bike storage facilities;
- Clarify in TDM Plan: the HAWK signal is subject to DDOT approval;
- Add to TDM Plan: No free parking shall be offered to any resident, employee, student, or otherwise. Only daily, weekly, and monthly rates will be made available for purchase; and
- Add to TDM Plan: Provide one (1) shopping car for grocery shopping and running errands for every 30 units.

JS:az