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 22, 2019

SUBJECT: ZC Case No. 02-38 J – 1000 4th Street SW (Waterfront Station)

PROJECT SUMMARY

WFS2, LLC (the "Applicant") proposes a Second Stage Planned Unit Development (PUD) to construct an 11-story mixed-use building on a vacant property located on the east side of 4th Street SW, west of Wesley Place, and south of the Christ United Methodist Church. The development program consists of following:

- 456 residential units;
- 8,936 SF arts and cultural uses (150 seat theater);
- 9,000 SF day care (176 students);
- 11,807 SF retail;
- 205-233 vehicle parking spaces;
- 156 long- and 28 short-term bicycle parking spaces; and
- Two (2) 30-foot loading berths.

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

- Vehicular access to the parking garage and loading facility is from the private section of Wesley Place SW south of K Street;
- A 200-foot pick-up/drop-off zone with enough stacking space for 8 vehicles is proposed along the one-way eastbound private drive. It will primarily serve the day care and theater uses;
- The Applicant should provide a surface easement along the private drive to ensure vehicles and pedestrians can utilize it;
- The 156 long-term and 28 short-term bicycle parking spaces meet ZR16 requirements;
- Short-term bicycle parking spaces are proposed around the perimeter of the site but not currently shown on the plan set. These can be accommodated with 14 inverted U-racks in public space or along the private drive in easily accessible locations near building entrances;
- Long-term bicycle parking spaces are provided in two (2) storage areas on the first level of the underground garage;
- The proposed loading scheme includes two (2) 30-foot loading berths and meets the practical needs of the proposed uses;
- The Loading Management Plan is acceptable but should be revised to include one additional strategy in the event a truck larger than 30-feet arrives at the site. The larger trucks should not load or unload on either Wesley Place or 4th Street, but on the private drive or private loading area south of Wesley Place;
- The Ground Floor Plan (page 36 of Exhibit 22G3) does not currently show the two (2) ZR16-required loading platforms. A revised graphic should be provided with the platforms;
- All truck turning maneuvers and backing into the berths occur on the private alley. Trucks travel head-in and head-out between the private alley and the public roadway network; and
- No electric vehicle charging stations are proposed. DDOT recommends five (5) charging stations be provided (1 per 50 vehicle parking spaces) and conduit be included in the garage for any additional EV stations installed in the future.

Travel Assumptions

- The Applicant utilized sound methodology and assumptions to perform the analysis in the Comprehensive Transportation Review (CTR) study;
- The site is located one (1) block north of the Waterfront Metrorail station and the surrounding neighborhood is pedestrian-oriented; and
- The proposed project is expected to generate a moderate number of vehicle trips and a significant amount of non-automotive trips during the weekday peak hours.

Analysis

- DDOT concurs with the Applicant's proposal to provide a curb cut that ramps up to a flush sidewalk across the southern leg of Wesley Place SW. This better delineates the public roadway network from the private loading area for the project and neighboring building;

- Consistent with the conditions of the First Stage PUD, a Transportation Management Plan (TMP) is proposed that includes a school pick-up/drop-off plan, private drive management plan, loading management plan, parking management plan, and Transportation Demand Management (TDM) Plan;
- With the exception of the TDM Plan, DDOT finds the other elements of the TMP acceptable with one minor revision to the Loading Management Plan;
- The TDM Plan states that showers and lockers will be provided for employees of non-residential uses, but no quantities are defined. DDOT recommends the Applicant follow the calculations of ZR16 § 806.4 and provide a minimum of two (2) showers and two (2) lockers;
- The proposed range of 205-233 vehicle parking spaces is more than both the 186 required by ZR16 and the 160-190 spaces DDOT would expect with a project of this size, land use mix, and proximity to a Metrorail station;
- ZR16 allows the Applicant to take a 50% reduction for being located within 1/2 mile of a Metrorail station, which gives the Applicant the ability to go down to 93 spaces without requesting relief;
- The additional vehicle parking spaces increase construction costs for the Applicant, encourages driving to the site, and discourages walking, bicycling, and riding transit;
- To offset the additional vehicle trips that may occur from additional available vehicle parking, DDOT recommends the Applicant reduce the parking provision or make the TDM plan more robust;
- DDOT is currently studying the re-introduction of the southbound left-turn movement at the intersection of 4th and M Street SW. Since a final design has not been decided on by DDOT, the Applicant was directed to study that intersection as it currently operates;
- The CTR identified traffic impacts at four (4) intersections due to the addition of site-generated traffic: I "Eye" Street at 7th Street SW, I "Eye" Street at 4th Street SW, 4th Street at G Street SW, and 3rd Street at M Street SW; and
- In lieu of the Applicant's recommended signal timing and cycle length adjustments, the Applicant should focus on reducing the amount of on-site vehicle parking and implementing additional TDM strategies.

Mitigations

- DDOT finds the proposed TDM plan insufficiently robust for a development program of this size, land use mix, and number of vehicle parking spaces given its proximity to Metrorail. A reduction in the number of vehicle parking spaces or an increase in strength of the TDM plan is necessary to offset the identified impacts to the roadway network in the capacity analysis. To improve the TDM Plan, the Applicant should install a 19-dock Capital Bikeshare station and implement additional strategies, as noted at the end of this report.

Recommendation

DDOT has no objection to approval of the Second Stage PUD with the following revisions and conditions to be included in the Zoning Order:

- As proposed by the Applicant, upgrade the southern leg of Wesley Place SW at K Street to include a curb cut that ramps up to a flush sidewalk across Wesley Place;
- Provide a revised Ground Floor Plan (page 36 of Exhibit 22G3) showing the inclusion of two (2) loading platforms at the rear of the loading berths;
- Pursue a surface easement through the Office of the Surveyor for the one-way eastbound private road to ensure vehicles and pedestrians can freely utilize it;
- Implement all components of the Transportation Management Plan (TMP), excluding the TDM Plan, as proposed by the Applicant in the November 28, 2018 CTR, for the life of the project, unless otherwise noted, with the following revision:
    - Include in Loading Management Plan: If trucks larger than 30-feet arrive at the site to make a delivery, they may not load or unload on the 4th Street or the public portion of Wesley Place SW. These trucks must make their deliveries on either the private drive or in the loading area on the southern private portion of Wesley Place.
- Implement the Transportation Demand Management (TDM) Plan, as proposed by the Applicant in the November 28, 2018 CTR, for the life of the project, unless otherwise noted, with revisions requested by DDOT including a 19-dock Capital Bikeshare station (see end of this report).

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:

- Provide a curbside management and signage plan, assumed to include multi-space meter installation at the Applicant's expense, consistent with current DDOT policies. This plan should also include any proposed changes to the curbside designations along 4th Street and Wesley Place SW;
- 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 shown in public space. As the Applicant pursues public space permits, the design of the project should be coordinated with DDOT to resolve the issues identified in the Streetscape and Public Realm section later in this report.
- DDOT encourages the Applicant to participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP; and
- Coordinate with DDOT's Urban Forestry Division (UFD) and the Ward 6 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 November 28, 2018 CTR, prepared by Gorove/Slade Associates, 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

The proposed underground parking garage and above ground loading bays will both be accessed from the private alley along the southeast corner of the site south of the intersection of Wesley Place and K Street SW. The building is proposed to have numerous pedestrian entrances on all three sides of the site. Generally, residents will use the lobby entrance from 4th Street SW while the retail will be accessed from either 4th Street or the private east-west drive that ranges from 13-feet to more than 19 feet wide. The theater and day care portions of the site will be accessed by the one-way eastbound private drive. A surface easement should be provided to ensure pedestrians and vehicles can freely utilize the private street. Figure 1 below shows the proposed site layout.

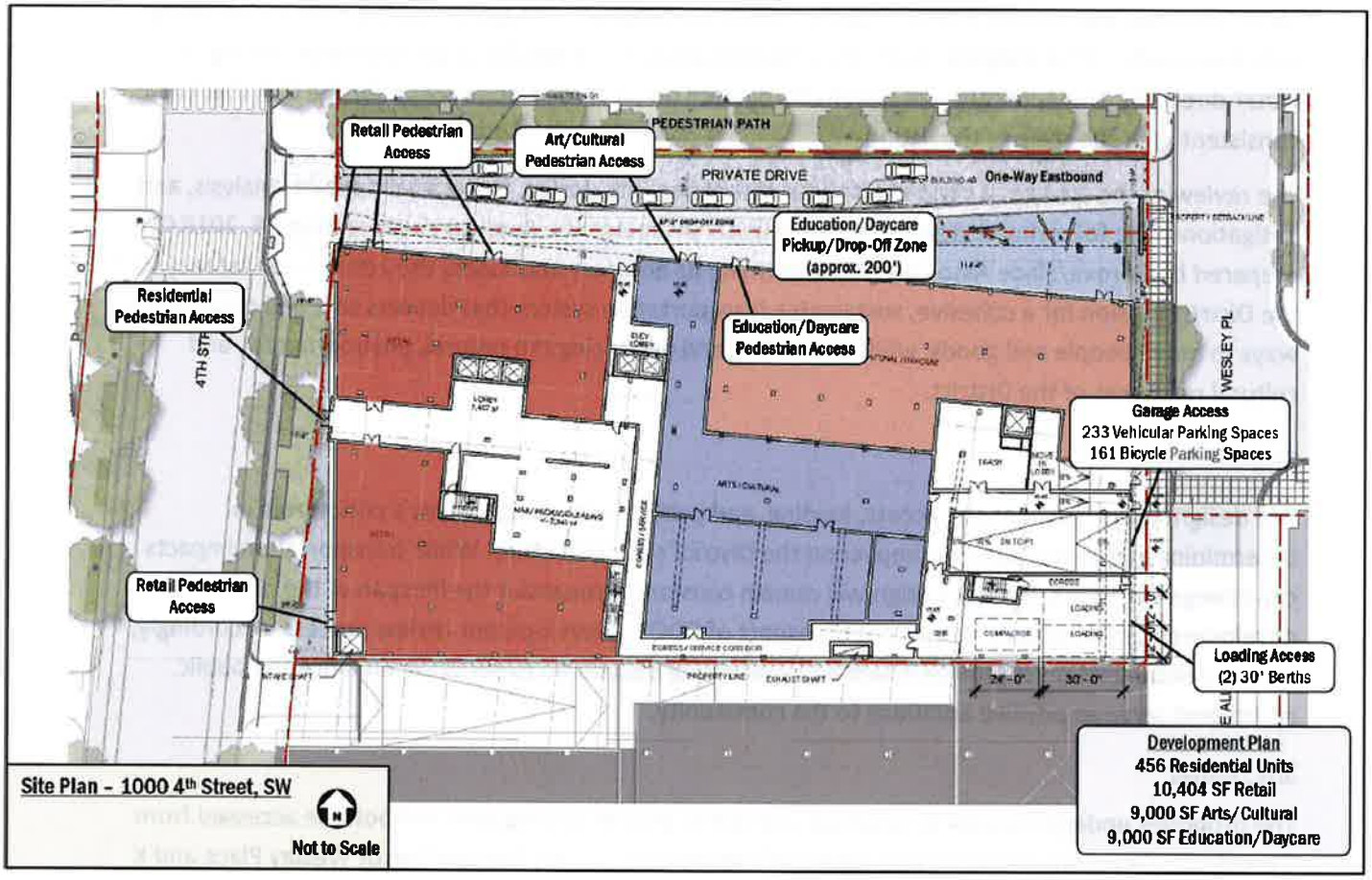

Figure 1 – Site Plan (Source: CTR, Gorove/Slade, Figure 6, 11/28/18)

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 of the 2016 Zoning Regulations (ZR16), residential properties with more than 50 units are required to provide one (1) loading berth and one (1) 20-foot delivery space. For the retail component of this project (under 20,000 SF), zoning requires one (1) loading berth. The Applicant is proposing to provide two (2) 30-foot loading berths and zero (0) delivery spaces. Access to the loading and trash storage area will be via the private alley stub of Wesley Place SW. All truck turning maneuvers will occur on private property including the backing of trucks into the loading berths. All movements to and from the public roadway network will occur head-in and head-out, consistent with DDOT standards.

It is noted that the latest Ground Floor Plan on the record (page 36 of Exhibit 22G3, dated 1/11/19) does not show the two (2) ZR16-required loading platforms at the rear of the loading berths. However, the Applicant has subsequently provided an updated graphic to DDOT on 1/14/19 with the platforms. DDOT is in concurrence with the proposed loading scheme as shown in Figure 1 above, so long as the final

planset decided on by the Zoning Commission includes the revised graphic showing loading platforms and the Applicant provides a contingency for trucks larger than 30-feet in length. DDOT recommends the Applicant revise the Loading Management Plan to prohibit trucks larger than 30-feet from loading or unloading on 4th Street or Wesley Place SW. These trucks should make their deliveries on either the private drive or in the private loading area south of Wesley Place.

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 *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.

While the preliminary public space plans 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:

- Alterations to and shifting of curb cuts for the private drive will require a public space permit. The two (2) curb cuts should be treated as commercial curb cuts with maximum widths of 12 feet due to the one-way circulation (DEM 31.5.2.c). Currently they are shown as 12.5 and 13.5 feet wide, respectively;
- The sidewalk material should be extended across the private drive entrances on both 4th Street and Wesley Place SW to provide a consistent pattern for pedestrians;
- The east-west sidewalk across the southern portion of Wesley Place should be raised and flush with existing sidewalk on Wesley Place and K Street SW;
- Street trees should be installed along both 4th Street and Wesley Place SW frontages;
- The sidewalk on Wesley Place should be a minimum of 6-feet wide;
- Any bollards proposed along the private drive should be on private property and outside the public right-of-way. DDOT encourages the Applicant to choose a bollard design that adds to the quality of the streetscape;
- All vaults should be on private property or in the private drive;
- All building entrances adjacent to a public sidewalk should be at-grade with the sidewalk so there is no need for stairs or ramps in public space;
- Determine final locations for the 28 short-term bicycle spaces (14 inverted U-racks) in easily accessible locations, near building entrances, and preferably within the 'furniture zone' near the curb; and

- Determine final location of a new 19-dock Capital Bikeshare station in the vicinity of the intersection of 4th Street and I Street SW, but not east of 3rd Street because a station is already planned by the Randall School project.

DDOT encourages the Applicant to participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP.

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 noted in their July 13, 2018 report that there may be trees on-site that fall into the Heritage Trees or Special Trees categories and recommends that the Applicant coordinate with the Ward 6 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 common with PUD applications. 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 five (5) in the parking garage.

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 11 specific nearby projects was taken into account as background developments anticipated to be constructed by 2022: The View at Waterfront, 501 I (Eye) Street SW, 375 M Street SW, 425 M Street SW, Town Center North, 301 M Waterfront, St. Matthews Evangelical Lutheran Church redevelopment, 680 I (Eye) Street

SW, The Wharf Phase 2, Randall School, and Southwest Library. All combined, the background developments are projected to add 1,165 vehicles per hour in the weekday morning peak hour and 1,427 vehicles per hour in the weekday evening peak hour to the roadway network.

DDOT requires applicants account for regional growth through the build-out year of 2022. 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 traffic volume growth on the network. Annually compounding background regional growth rates of between 0.10% and 0.80 % were assumed in the study area, differing based on roadway and peak hour. The growth rates were capped at 0.80% due to the significant amount trips assumed from nearby developments and to avoid double counting background trips.

DDOT also requires applicants to consider future changes to the roadway network. It was determined in coordination with DDOT staff that three (3) notable changes to the local transportation network are anticipated before 2022: 1) removal of channelized northbound right turn lane at I Street and 7th Street SW; 2) removal of southbound channelized right-turn lane at M Street and 6th Street SW; 3) other intersection and signal improvements in the vicinity of the Wharf Phase 2 site. These were all assumed as background conditions in all Year 2022 study scenarios. Since DDOT is currently studying the re-introduction of the southbound left-turn movement at the intersection of 4th and M Street SW and a final design has not yet been identified, the Applicant was directed to study that intersection as it currently operates.

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.

Per Subtitle C § 701.5 of ZR16, DDOT estimates the Applicant is required to provide 151 vehicle parking spaces for 456 residential units (1 per 3 units in excess of 4 units), 12 spaces for 11,807 SF of retail (1.33 per 1,000 SF in excess of 3,000 SF), 5 spaces for 9,000 SF day care (0.5 per 1,000 SF), and 18 spaces for 8,936 SF of performing arts (2 per 1,000 SF) for a total of 186 spaces. With a 50% transit reduction, as allowed by Subtitle C §702.1 due to close proximity to the Waterfront Metrorail Station, the Applicant may go down to 93 vehicle spaces without seeking parking relief.

The Applicant is requesting flexibility in the amount of vehicle parking in the garage by proposing a range of 205 to 230 spaces, which is slightly more than the 186 spaces required by ZR16 and the 160-190 spaces DDOT would expect given the mix of uses and location one block from the Waterfront Metrorail station. Providing more vehicle parking than practically needed increases construction costs and encourages driving an automobile while simultaneously discourages walking, bicycling, and riding transit. To offset the additional trips on the road that may occur in the future, DDOT recommends the

Applicant commit to reducing the amount of on-site parking to 205 or fewer spaces (the low end of the proposed range) or provide additional elements in the TDM plan.

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 by utilizing the rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition* (Land Use Code 220 Apartment, Code 444 Theater, Code 820 Shopping Center, and Code 565 Day Care) and the assumed mode split to convert base suburban vehicle trips to base person trips using average auto occupancy data and then back to urban vehicle, 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 2 below shows the mode splits that were assumed for this proposal.

Land Use	Mode			
	Drive	Transit	Bike	Walk
Residential	45%	35%	5%	15%
General Retail	30%	35%	5%	30%
Neighborhood Retail	15%	15%	10%	60%
Arts/Cultural	45%	25%	5%	25%
Education	50%	15%	0%	35%

Figure 2 – Mode Split Assumptions (Source: CTR, Gorove/Slade, Table 2, 11/28/18)

Based on the trip generation and mode split assumptions, Figure 3 shows the predicted number of weekday peak hour trips generated by mode:

Mode	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	*Apartments*	20 veh/hr	83 veh/hr	103 veh/hr	79 veh/hr	41 veh/hr	120 veh/hr
	General Retail	1 veh/hr	0 veh/hr	1 veh/hr	2 veh/hr	2 veh/hr	4 veh/hr
	Neighborhood Retail	1 veh/hr	0 veh/hr	1 veh/hr	2 veh/hr	1 veh/hr	3 veh/hr
	Arts/Cultural	1 veh/hr	0 veh/hr	1 veh/hr	10 veh/hr	5 veh/hr	15 veh/hr
	Education	35 veh/hr	32 veh/hr	67 veh/hr	29 veh/hr	33 veh/hr	62 veh/hr
	Total	**58 veh/hr**	**115 veh/hr**	**173 veh/hr**	**122 veh/hr**	**82 veh/hr**	**204 veh/hr**
Transit	*Apartments*	18 ppl/hr	72 ppl/hr	90 ppl/hr	69 ppl/hr	37 ppl/hr	106 ppl/hr
	General Retail	1 ppl/hr	1 ppl/hr	2 ppl/hr	5 ppl/hr	5 ppl/hr	10 ppl/hr
	Neighborhood Retail	1 ppl/hr	1 ppl/hr	2 ppl/hr	3 ppl/hr	3 ppl/hr	6 ppl/hr
	Arts/Cultural	1 ppl/hr	0 ppl/hr	1 ppl/hr	10 ppl/hr	5 ppl/hr	15 ppl/hr
	Education	22 ppl/hr	20 ppl/hr	42 ppl/hr	18 ppl/hr	21 ppl/hr	39 ppl/hr
	Total	**43 ppl/hr**	**94 ppl/hr**	**137 ppl/hr**	**105 ppl/hr**	**71 ppl/hr**	**176 ppl/hr**
Bike	*Apartments*	3 ppl/hr	10 ppl/hr	13 ppl/hr	10 ppl/hr	5 ppl/hr	15 ppl/hr
	General Retail	0 ppl/hr	0 ppl/hr	0 ppl/hr	1 ppl/hr	0 ppl/hr	1 ppl/hr
	Neighborhood Retail	1 ppl/hr	0 ppl/hr	1 ppl/hr	2 ppl/hr	2 ppl/hr	4 ppl/hr
	Arts/Cultural	0 ppl/hr	0 ppl/hr	0 ppl/hr	2 ppl/hr	1 ppl/hr	3 ppl/hr
	Education	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr
	Total	**4 ppl/hr**	**10 ppl/hr**	**14 ppl/hr**	**15 ppl/hr**	**8 ppl/hr**	**23 ppl/hr**
Walk	*Apartments*	8 ppl/hr	31 ppl/hr	39 ppl/hr	30 ppl/hr	15 ppl/hr	45 ppl/hr
	General Retail	1 ppl/hr	1 ppl/hr	2 ppl/hr	4 ppl/hr	4 ppl/hr	8 ppl/hr
	Neighborhood Retail	4 ppl/hr	3 ppl/hr	7 ppl/hr	12 ppl/hr	11 ppl/hr	23 ppl/hr
	Arts/Cultural	1 ppl/hr	0 ppl/hr	1 ppl/hr	10 ppl/hr	5 ppl/hr	15 ppl/hr
	Education	51 ppl/hr	47 ppl/hr	98 ppl/hr	43 ppl/hr	48 ppl/hr	91 ppl/hr
	Total	**65 ppl/hr**	**82 ppl/hr**	**147 ppl/hr**	**99 ppl/hr**	**83 ppl/hr**	**182 ppl/hr**

Figure 3 – Trip Generation Summary (Source: CTR, Gorove/Slade, Table 3, 11/28/18)

The proposed project is expected to generate a moderate number of vehicle trips and a significant amount of non-automotive trips during the weekday peak hours due to the site's proximity to the Waterfront Metrorail Station and surrounding neighborhood's walkable context.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified 14 existing intersections (including the two private drive intersections) 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, May 23, 2017 and Thursday, September 27, 2018 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 data collection time frames and dates.

Analysis

To determine the PUD's impacts on the transportation network, the Applicant completed a Comprehensive Transportation Review (CTR), prepared by Gorove/Slade, dated November 28, 2018 which includes an extensive multi-modal analysis of existing conditions (2018 Existing), future with no development (2022 Background), future conditions with development (2022 Future), and 2022 Future with Mitigations 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 following table (Figure 4) summarizes the results of the Applicant's capacity analysis and demonstrates the impacts on delay and level of service of the proposed mitigation measures.

Intersection	Approach	Future without Development Conditions (2022)				Future with Development Conditions (2022)				Future with Development Conditions, With Mitigations (2022)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
G Street & 4th Street, SW	Overall	33.7	C	17.2	B	35.1	D	17.7	B	30.2	C	--	--
	Eastbound	93.6	F	32.2	C	99.3	F	33.5	C	78.6	E	--	--
	Westbound	27.5	C	26.4	C	27.5	C	26.4	C	26.3	C	--	--
	Northbound	10.5	B	7.0	A	11.1	B	7.1	A	11.4	B	--	--
	Southbound	12.1	B	15.7	B	12.2	B	16.1	B	13.0	B	--	--
I Street & 7th Street, SW	Overall	24.8	C	64.9	E	25.1	C	67.8	E	--	--	60.7	E
	Eastbound	94.1	F	49.1	D	94.1	D	49.1	D	--	--	49.1	D
	Westbound	37.7	D	9.8	A	38.3	D	10.8	A	--	--	11.4	B
	Northbound	13.8	B	26.9	C	13.5	B	27.4	C	--	--	25.7	C
	Southbound	22.4	C	138.5	F	22.7	C	146.7	F	--	--	129.0	F
I Street & 4th Street, SW	Overall	27.4	C	60.9	E	30.2	C	85.1	F	--	--	57.7	E
	Eastbound	39.4	D	143.6	F	46.3	D	218.0	F	--	--	125.6	F
	Westbound	25.6	C	37.6	D	29.0	C	43.9	D	--	--	35.8	D
	Northbound	21.2	C	22.6	C	21.2	C	22.7	C	--	--	25.0	C
	Southbound	23.9	C	20.9	C	23.7	C	23.1	C	--	--	27.3	C
M Street & 3rd Street, SW	Overall	14.3	B	14.9	B	15.4	B	16.6	B	--	--	16.4	B
	Eastbound	1.1	A	6.1	A	1.2	A	6.0	A	--	--	6.1	A
	Westbound	16.6	B	15.4	B	16.8	B	15.6	B	--	--	16.8	B
	Northbound	40.7	D	40.5	D	40.7	D	40.5	D	--	--	38.8	D
	Southbound	41.4	D	60.0	E	44.8	D	70.6	E	--	--	61.8	E

Figure 4 – Vehicular Capacity Analysis w/Mitigations (Source: CTR, Gorove/Slade, Table 8, 11/28/18)

As shown above, the roadway capacity analysis provided in the CTR shows that four (4) intersections within the study area have one or more approaches during at least one peak hour that either degrades to LOS E or LOS F conditions as a result of site traffic or is already operating at LOS E or LOS F and delay is worsened by site traffic by 5 percent or more:

- I "Eye" Street and 7th Street SW – the southbound 7th Street approach is projected to operate at LOS F during the evening peak hour under Background 2022 conditions and delay to worsen by more than 5% under Future 2022 conditions. To improve the southbound approach's level of service, the CTR recommends adjusting the signal timings to provide more green time on 7th

Street. Additionally, the CTR suggests that increasing the traffic signal cycle length could further improve conditions.

- I "Eye" Street and 4th Street SW – the eastbound I Street approach and overall intersection is projected to operate at LOS F during the evening peak hour under Background 2022 conditions and delay to worsen by more than 5% under Future 2022 conditions. To improve these levels of service, the CTR recommends adjusting the signal timings to provide more green time on I Street.
- G Street and 4th Street SW – the eastbound G Street approach is projected to operate at LOS F during the morning peak hour under Background 2022 conditions and delay to worsen by more than 5% under Future 2022 conditions. To improve the eastbound approach's level of service, the CTR recommends adjusting the signal timings to provide more green time on G Street.
- M Street and 3th Street SW – the southbound 3rd Street approach is projected to operate at LOS E during the evening peak hour under Background 2022 conditions and delay to worsen by more than 5% under Future 2022 conditions. To improve the southbound approach's level of service, the CTR recommends adjusting the signal timings to provide more green time on 3rd Street.

DDOT finds signal timing and cycle length adjustments, noted above, are not appropriate as an isolated traffic mitigation solution in conjunction with a land development project because an entire corridor would need to be re-timed. In lieu of traffic signal adjustments, the Applicant should instead focus on reducing the amount of on-site vehicle parking and implementing TDM strategies that reduce auto-mode share and encourage non-auto travel in order to offset the impacts to the roadway network (see Mitigations section).

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 one (1) block north of the Waterfront Metrorail station which is served by the Green Line. Trains serve the Metrorail station approximately every 4-8 minutes during weekday peak hours, 12 minutes during weekday non-peak times, and 15 minutes on weekends.

There are a number of bus stops in the vicinity of the site along M Street, 3rd Street, 6th Street, and I Street SW. These stops are served by Metrobus routes 74, A9, P6, V1, 735, 850, PRTC D-300, Loudoun County Transit, Eastern Market-L'Enfant Plaza DC Circulator Line, and the Southwest Neighborhood Shuttle, as shown in Figure 5 below, with headways generally ranging between 6 and 45 minute depending on route.

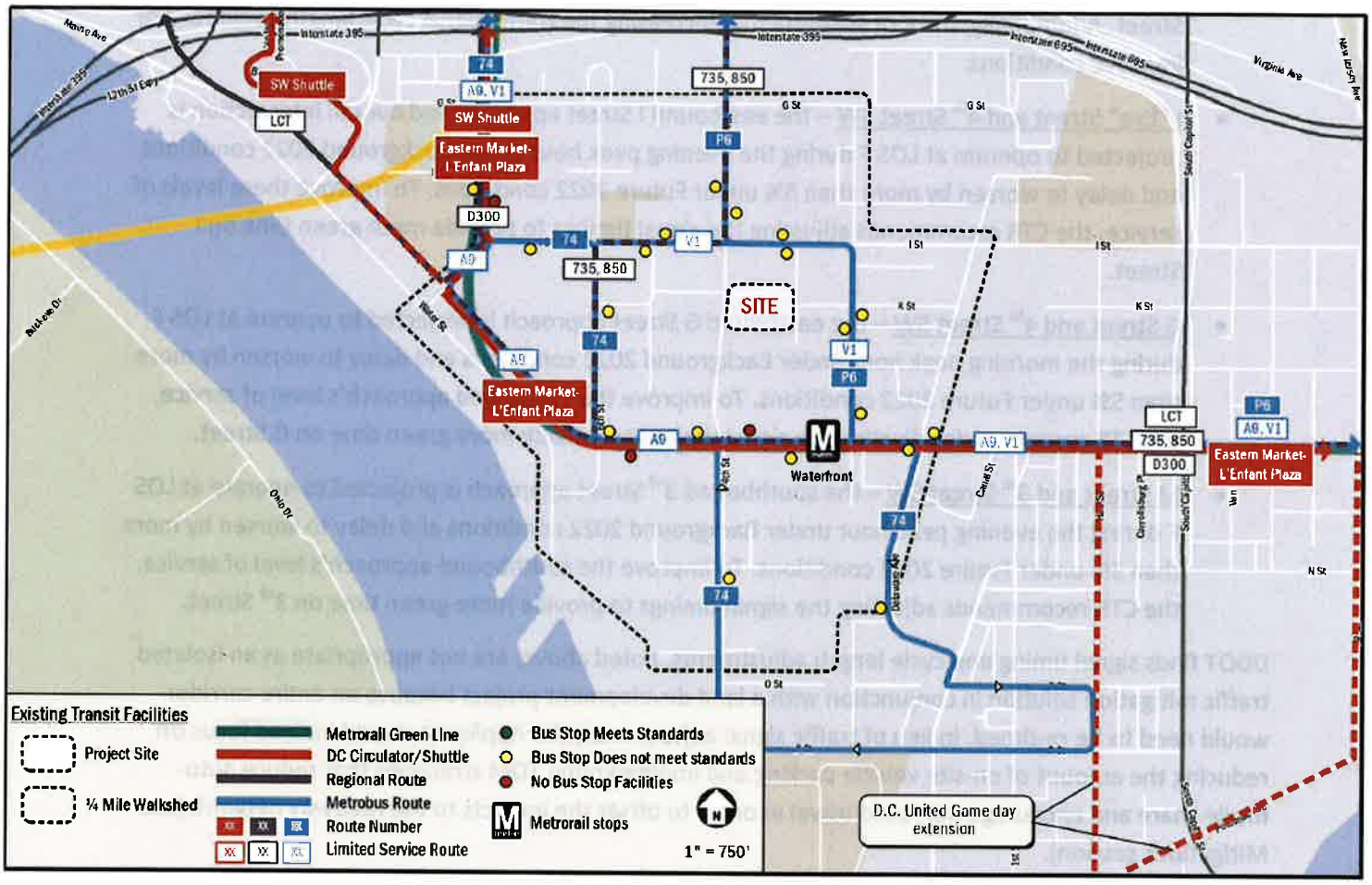

Figure 5 – Existing Transit Service (Source: CTR, Gorove/Slade, Figure 19, 11/28/18)

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 CTR's inventory of existing pedestrian infrastructure, as shown in Figure 6 below, demonstrates that most sidewalks and curb ramps in the vicinity of the site are currently consistent with DDOT standards. While there are a few missing or substandard segments of sidewalk and curb ramps in the wider area, the existing pedestrian network along major pathways to schools, attractions, and the Metrorail station is generally adequate.

It is noted that the Applicant is proposing to upgrade the sidewalk on the eastern site frontage (western side of Wesley Place SW) between the private drive and the southern edge of the site to meet DDOT standards. This includes a sidewalk of at least 6 feet wide and tree boxes. Additionally, the Applicant is proposing to upgrade the southern leg of the Wesley Place and K Street intersection to provide a raised

curb cut and sidewalk Wesley Place. DDOT concurs with this proposal as it will better delineate the public roadway network from the private loading area for the project and neighboring building.

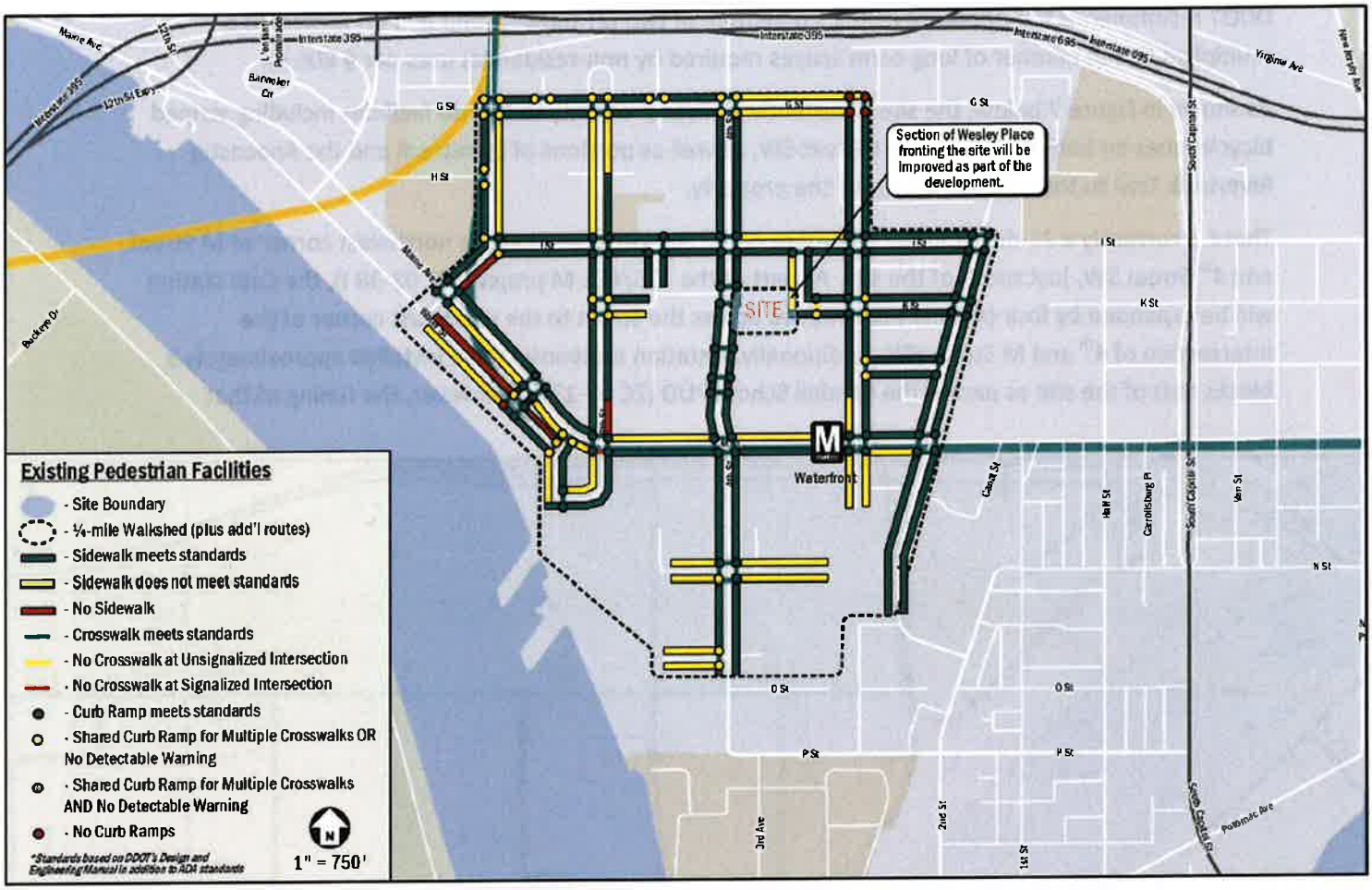

Figure 6 – Existing Pedestrian Infrastructure (Source: CTR, Gorove/Slade, Figure 21, 11/28/18)

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 Subtitle C § 802.1 of the 2016 Zoning Regulations (ZR16), DDOT estimates that the Applicant is required to provide 155 long-term and 28 short-term bicycle parking spaces. The Applicant is proposing to meet these requirements by providing 156 long-term and 28 short-term spaces. The short-term spaces are not currently shown on the plan set but should be provided as inverted U-racks in public space along 4th Street SW, Wesley Place SW, and the private drive near the building entrances. Final locations of the bicycle racks should be determined during public space permitting. The long-term spaces are shown in two (2) bicycle storage rooms on the first level of the underground garage.

It is DDOT's understanding that showers and lockers are not required by ZR16 (Subtitle C § 806) because individual non-residential uses do not exceed 25,000 SF. The Applicant has stated in the TDM Plan that they intend to provide showers and lockers, however the quantities of each have not been provided. DDOT recommends the Applicant install a minimum of two (2) showers and two (2) lockers (0.6 multiplied by the number of long-term spaces required by non-residential uses per § 806.4).

As shown in Figure 7 below, the site is currently in close proximity to bicycle facilities including striped bicycle lanes on both 4th Street and I Street SW, as well as portions of cycletrack and the Anacostia Riverwalk Trail to the south and west of the property.

There is currently a 21-dock Capital Bikeshare (CaBi) station located at the northwest corner of M Street and 4th Street SW, just south of the site. As part of the 375/425 M project (ZC 02-38 I), the CaBi station will be expanded by four (4) docks and moved across the street to the northeast corner of the intersection of 4th and M Street SW. Additionally, a station is planned to be installed approximately 3 blocks east of the site as part of the Randall School PUD (ZC 07-13G). However, the timing of that

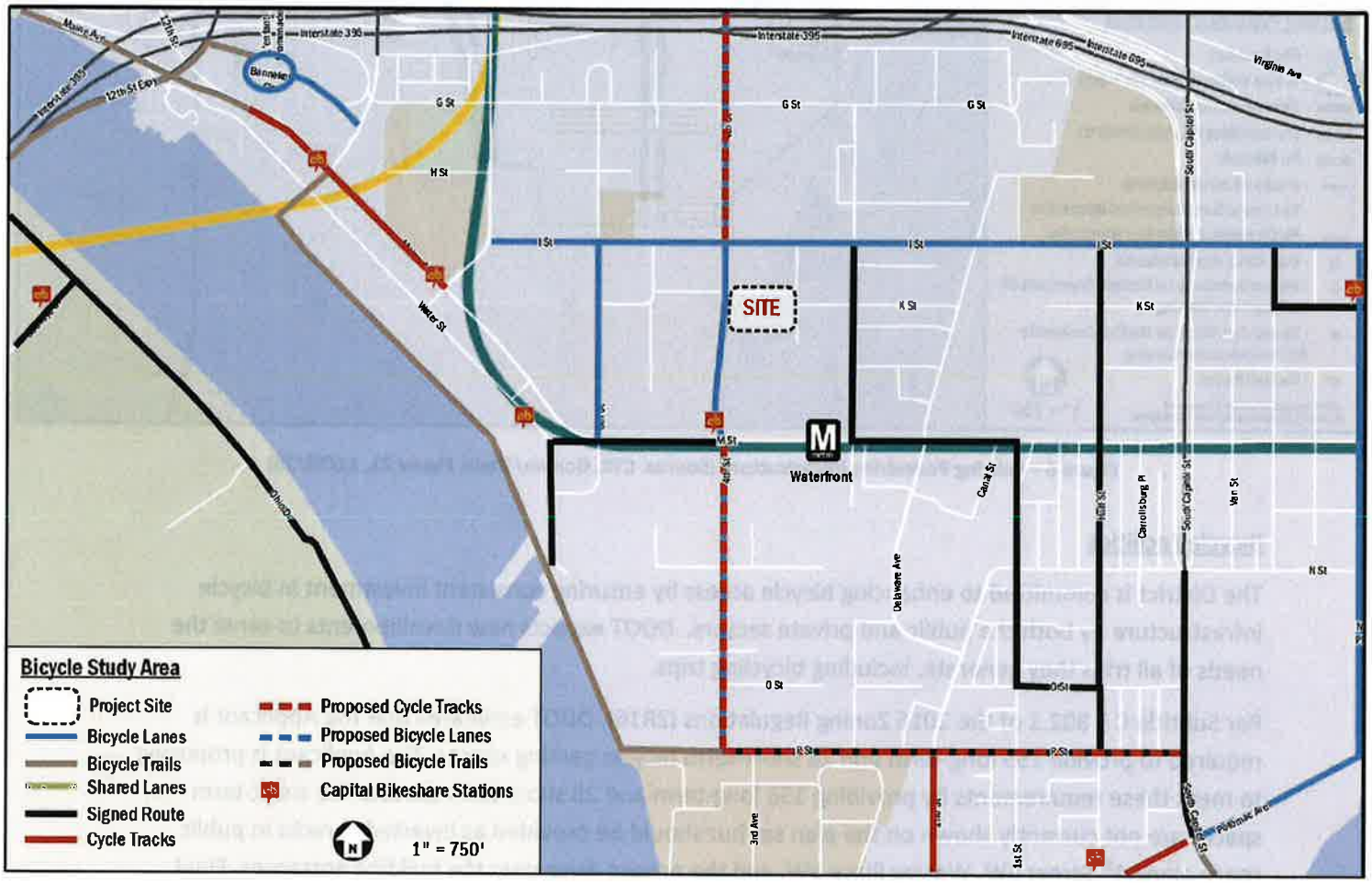

Figure 7 – Existing and Proposed Bicycle Facilities (Source: CTR, Gorove/Slade, Figure 22, 11/28/18)

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 PUD:

Roadway Capacity and Operations

The CTR capacity analysis demonstrated that adjusting signal timings and/or cycle lengths could improve intersection delay and level of service back to acceptable conditions at the four (4) intersections that trigger DDOT's Significant Impact Policy. These improvements would necessitate the retiming of entire corridors of traffic signals which is why DDOT typically does not make these changes in conjunction with a land development project. In lieu of traffic signal adjustments, the Applicant should instead focus on reducing the amount of on-site vehicle parking and implementing TDM strategies that reduce auto-mode share and encourage non-auto travel in order to offset the impacts to the roadway network.

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.

As part of the TMP proposed in the November 28, 2018 CTR, the Applicant proposes a TDM Plan component which includes the following elements:

- Identify TDM Leaders for planning, construction, and operations. The TDM Leader will work with residents and tenants of the M Street buildings to distribute and market various transportation alternatives and options. This includes providing TDM materials to new residents and tenants in the Welcome Package;
- Provide TDM leader contact information to DDOT and report TDM efforts and amenities to goDCgo staff once per year;
- Post all TDM commitments online, publicize availability, and allow the public to see what commitments have been promised;
- Provide website links to CommunterConnections.com and goDCgo.com on property websites;
- Unbundle all parking from the cost of the lease or purchase of residential units. Parking costs will be set at the average market rate within ¼ mile, at a minimum;
- Install a Transportation Information Center Display (electronic screen) within the residential lobby, containing information related to local transportation alternatives;
- Meet or exceed ZR16 requirements for bicycle parking. This includes secure interior bicycle parking and short-term exterior bicycle parking around the perimeter of the site; and
- Meet or exceed ZR16 requirements for showers and lockers. These facilities will be available for use by employees of the Project's ground floor uses.

DDOT finds the proposed TDM plan insufficiently robust for a development program of this size, land use mix, and proximity to a Metrorail station. Additionally, an increase in strength of the TDM plan is necessary to offset the identified impacts to four (4) nearby intersections in the capacity analysis, as well as the potential for future roadway impacts due to the high parking provision. DDOT requests these additional elements and revisions be made to the TDM Plan:

- Clarify in TDM Plan: Plan should be broken down by land use with the strategies specifically targeting patrons and employees of each use;
- Clarify in TDM Plan: Applicant will install at minimum of two (2) showers and two (2) lockers (per ZR16 requirements) for use by the building's non-residential uses;
- Fund and install a 19-dock Capital Bikeshare (CaBi) station and fund one-year of maintenance and operations costs. This will help relieve the currently stressed station at 4th and M Street SW. Work with DDOT CaBi staff on a final location of the station, ideally in the immediate vicinity of 4th and I Street SW, but not east of 3rd Street SW since a station is already planned as part of the Randall School project;
- The TDM Leader will notify goDCgo staff each time a new office tenant moves in;
- TDM Leaders will receive TDM training from goDCgo to learn about the TDM conditions for this project and nearby available options;
- Applicant will not lease unused residential parking spaces to anyone aside from tenants of the building and vanpool-only commuter parking (e.g., will not lease to other nearby buildings, single-family home residents, office employees, or sporting events);
- Long-term bicycle storage rooms will accommodate non-traditional sized bikes including cargo, tandem, and kids bikes;

- Applicant will distribute welcome packets to all new residents that should, at a minimum, include the Metrorail pocket guide, Capital Bikeshare coupon or rack card, Guaranteed Ride Home (GRH) brochure, and the most recent DC Bike Map;
- Provide at least 10 shopping carts for resident use to run errands and for grocery shopping;
- Install a bicycle repair station within each of the long-term bicycle storage rooms;
- Designate three (3) preferential carpool spaces in the garage for employee use;
- Employers must offer and promote pre-tax transit benefits to employees (WMATA offers a free benefits administration called SmartBenefits);
- Employers will participate in the CaBi corporate membership program and offer discounted annual memberships to employees; and
- For the arts/culture space, Applicant will post "getting here" information on the arts/culture tenant website for attendees/visitors that includes information about how to travel to the site via Metro, biking, and walking. A printable map should also be available and goDCgo can assist with this effort.

JS:az