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 for
Associate Director

DATE: March 18, 2019

SUBJECT: ZC Case No. 17-21 – 501 I Street SW (The Bard)

PROJECT SUMMARY

As You Like It, LLC (the "Applicant") proposes a Consolidated Planned Unit Development (PUD) and Related Map Amendment to construct a 5-story mixed-use building on a vacant property located on the east side of 6th Street SW, north of I Street SW, and west of Amidon Bowen Elementary School. The development program consists of following:

- 105 residential units;
- 13,268 SF office;
- 18,230 SF performance rehearsal space;
- 40 on-site vehicle parking spaces (plus 15 off-site);
- 67 long- and 16 short-term bicycle parking spaces; and
- One (1) 30-foot loading berth and one (1) 20-foot delivery space.

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 a single curb cut on 6th Street;
- All trucks will be able to enter the site head-in and exit head-out. All truck turning maneuvers will occur on private property, consistent with DDOT standards;
- Only one (1) 30-foot loading berth and one (1) 20-foot delivery space is proposed, rather than two (2) of each required by ZR16 (per DDOT's estimation). According to the Applicant's anticipated number of deliveries and move-in/outs, fewer loading berths still meet the practical needs of the proposed uses;
- DDOT has no objection to the Applicant's loading scheme so long as the proposed Loading Management Plan (LMP) is implemented;
- It is not clear if the ZR16-required loading platform is included. It should be shown on the plans;
- The proposed 55 on-site and off-site (Arena Stage) vehicle parking spaces is more than the 26 required by ZR16 but within the range DDOT would expect for a project of this size, land use mix, and proximity to a Metrorail station;
- The proposed 67 long- and 16 short-term bicycle parking spaces exceeds DDOT's estimate of the ZR16 requirements (approximately 42 spaces and 6 spaces, respectively);
- 59 of the long-term bicycle parking spaces are provided inside a storage room on the first level of the underground garage and eight (8) are located outside the storage room in the garage;
- Short-term bicycle spaces should be accommodated with eight (8) inverted U-racks located in easily accessible locations near building entrances within public space;
- DDOT expects all new projects to upgrade the adjacent streetscape to meet modern public realm design standards. As such, DDOT does not support the Applicant's recently revised streetscape design on the east side of 6th Street SW since it does not include a 4-foot buffer from the street for pedestrians or provide street trees subject to Urban Forestry Division (UFD) maintenance;
- The Applicant is pursuing Conceptual Approval by the Public Space Committee (PSC) for the non-standard streetscape design; and
- No electric vehicle charging stations are proposed. DDOT recommends one (1) charging station 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 site is located two (2) blocks north and west of the Waterfront Metrorail station;
- The neighborhood has a complete pedestrian network that is mostly up to DDOT design standards. The site is also well served by bicycle facilities and a robust transit network;
- The proposed project is expected to generate a moderate number of vehicle trips and transit trips during the weekday peak hours; and
- Based on the information provided by the Applicant (Figures 5 and 6 of this report), activities taking place at the site will be staggered at different times of the day, week, and season so as not to overlap with each other or the commuter rush hours.

Analysis

- The Applicant utilized sound methodology and assumptions to perform the analysis in the Comprehensive Transportation Review (CTR) study;
- DDOT finds the Loading Management Plan and Parking Management Plan, as proposed, to be acceptable;
- The Pick-Up/Drop-Off Operations Plan should be revised to reflect the latest conversations between the Applicant, the ANC, Amidon-Bowen Elementary School, and DDOT. Proposed curbside restrictions will be formally reviewed during public space permitting. Ultimately, DDOT's Parking and Ground Transportation Division (PGTD) will make the final decision on appropriate curbside uses on I Street and 6th Street SW; and
- The TDM Plan states that showers and lockers will be provided for employees of non-residential uses, but no quantities are defined. DDOT expects the Applicant follow the calculations of Subtitle C § 806.3 and 806.4 and provide a minimum of two (2) showers and four (4) lockers.

Mitigations

- The CTR identified traffic impacts at one (1) intersection due to the addition of site-generated traffic: 4th Street at G Street SW. In lieu of the Applicant's recommended signal timing adjustment, which would require DDOT to retime the entire corridor, the Applicant should include additional strategies in the TDM plan;
- The TDM Plan, as currently proposed, is mostly sufficient for a development program of this size, parking ratio, land use mix, and number of vehicle parking spaces given its proximity to Metrorail. Given the identified impact to the intersection of 4th and G Street SW, the TDM should be further strengthened to encourage non-automotive travel (see end of this report); and
- DDOT supports the Applicant's proposal in the Community Benefits Agreement to install curb extensions at several intersections along 6th Street SW. It is noted that this amenity, as well as the proposed streetscape changes on the east side of 6th Street (if approved by the PSC), may not be counted toward intersection impact mitigation.

Recommendation

DDOT has no objection to approval of the Consolidated PUD and Related Map Amendment with the following revisions and conditions to be included in the final Zoning Order:

- Update the planset to show the inclusion of a loading platform attached to the loading berth;
- Update the Pick-up/Drop-off Operations Plan in the December 3, 2018 CTR to reflect the latest changes to proposed curbside uses on I Street SW, subject to DDOT approval;
- Implement the Loading Management Plan (LMP) and Parking Management Plan, as proposed in the December 3, 2018 CTR, for the life of the project, unless otherwise noted; and
- Implement the Transportation Demand Management (TDM) Plan, as proposed in the December 4, 2018 CTR, for the life of the project, unless otherwise noted, with revisions requested by DDOT (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, as discussed with DDOT, the ANC, and Amidon-Bowen Elementary School during review of this PUD. DDOT will make an ultimate decision on the appropriate curb side uses during public space permitting. If DDOT determines there are locations in the vicinity of the site where multi-space meters are required, they must be installed at the Applicant's expense and consistent with current DDOT policies;
- 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;
- 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 of this report;
- The Applicant must obtain Public Space Committee (PSC) approval for the non-compliant streetscape proposed along the east side of 6th Street SW since it is a significant deviation from DDOT standards. DDOT requires a 4-foot treebox between the street and sidewalk to serve as a pedestrian buffer. Street trees planted in the treebox area also further Urban Forestry Division's (UFD) goal of expanding the District's tree canopy coverage in public space. Trees planted behind a sidewalk on private property are not maintained by UFD;
- Coordinate with 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; and
- Coordinate with DDOT's Transportation Operations and Safety Division (TOSD) and Traffic Engineering and Signals Division (TESD) regarding the final design of the proposed bulb-outs and to determine if there are any impacts to the existing striping and traffic signal.

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 December 3, 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 a single curb cut on 6th Street SW in the northwest corner of the site. The existing curb cut to I Street SW in the southeast corner of the site will be closed. The building is proposed to have two (2) entrances on I Street SW, one for the residential component and one for the Shakespeare Theatre offices. Entrances to individual first-floor units will be provided on 6th Street SW. Figure 1 below shows the proposed site layout.

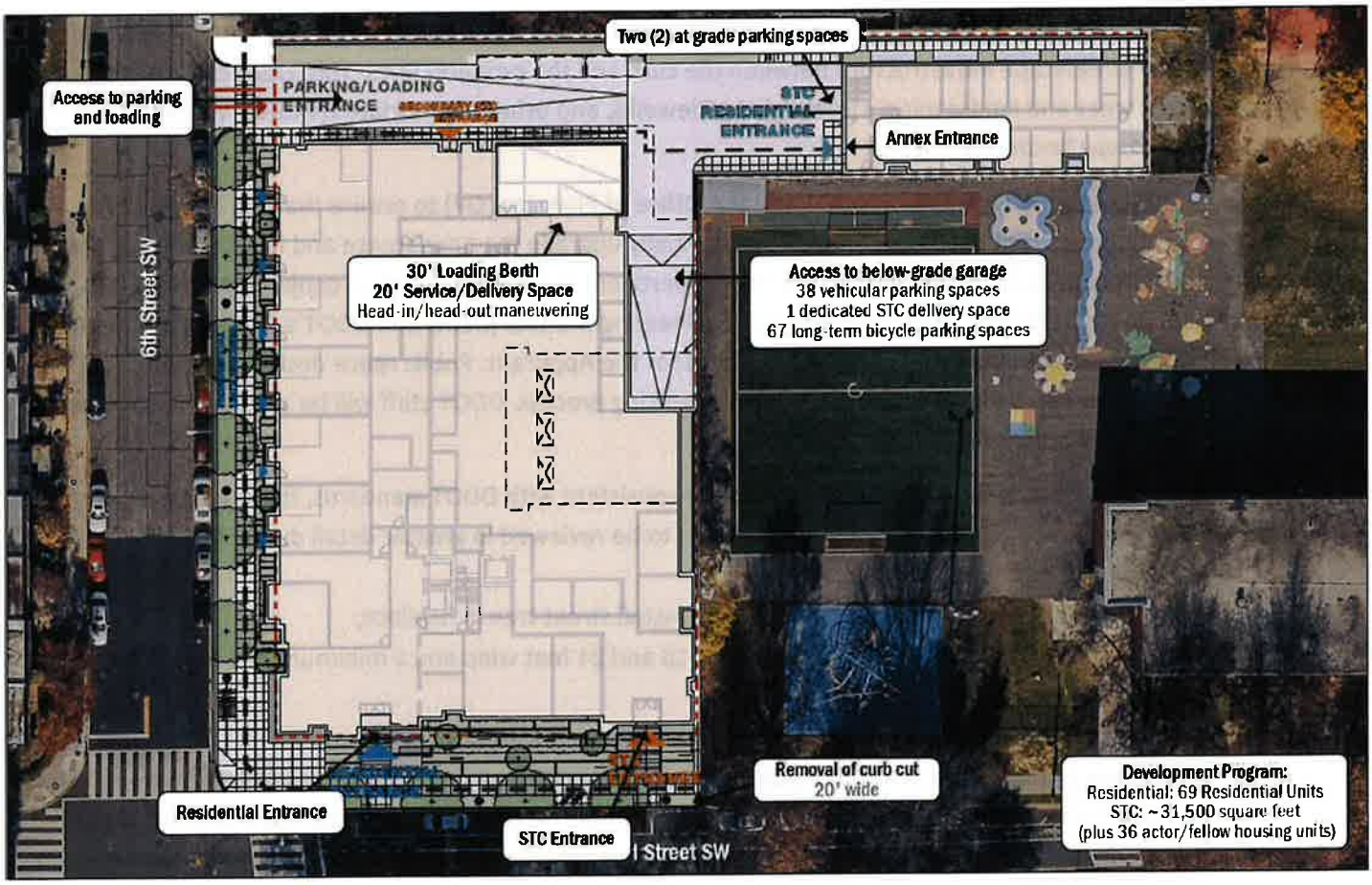

Figure 1 – Site Plan (Source: CTR, Gorove/Slade, Figure 5, 12/3/18)

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.

It is DDOT's understanding of Subtitle C § 901.1 of the 2016 Zoning Regulations (ZR16) that two (2) 30-foot loading berths and two (2) 20-foot delivery space are required for the site (one of each for each of the residential and Shakespeare Theatre components). The Applicant is only proposing to provide a total of one (1) loading berth and one (1) delivery space. Based on the Applicant's anticipated delivery schedule and move-in/move-outs, DDOT concurs that the proposed loading scheme can adequately serve the demand for loading facilities. Additionally, the Applicant has adequately demonstrated that all trucks can access the site from 6th Street SW with head-in and head-out maneuvers, consistent with DDOT policy. ZR16 also requires the loading berth be accompanied by a platform. It is unclear from the planset if this is being provided, therefore the Applicant should revised the planset to show a platform.

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:

- Close the existing curb cut on I Street SW and install street tree in its place;
- Curb cut on 6th Street SW should be between 18 and 24 feet wide and a minimum of 6 feet from the northern property line;
- All vaults should be moved out of public space and onto private property;
- 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. There should be no swinging doors into public space;
- Ensure the building projections on 6th Street SW meet DDOT standards;
- Determine final locations and design for artwork to be installed along I Street SW;
- Determine final locations for the short-term bicycle spaces which should be in easily accessible locations, near building entrances, and preferably within the 'furniture zone' near the curb;

- Curb extensions for intersections along 6th Street SW should be included as part of the public space permit application. Impacts to curbs, drainage, striping, and the existing signal will be reviewed by PSD, TOSD, and TESD; and
- The proposed streetscape design on the east side of 6th Street SW does not meet DDOT standards since the 6-foot sidewalk must be buffered by a 4-foot treebox. The treebox area provides a buffer from the street for pedestrians, as well as furthers Urban Forestry Division's (UFD) goal of expanding the District's tree canopy coverage in public space.

DDOT notes that the Applicant participated in a Preliminary Design Review Meeting (PDRM) with DDOT and OP on November 15, 2018 to discuss the initial streetscape design. The Applicant has an active public space permit application #319940.

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 December 14, 2018 report that there are two (2) Special Trees located on site that will require a permit for removal. However, no Heritage Trees were identified on the property. It is recommended 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 (EV) charging stations which are common with PUD applications. DDOT recommends that the Applicant provide at least one (1) EV charging station on-site for every 50 vehicle parking spaces provided (total of 1 for this project) and electrical conduit be installed in the garage to support future EV stations.

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 2021: The View at Waterfront, 1000 4th 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.

DDOT requires applicants account for regional growth through the build-out year of 2021. 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, direction, 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 2021 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 34 vehicle parking spaces for 105 residential units (1 per 3 units in excess of 4 units), 6 spaces for 13,000 SF of office (0.5 per 1,000 SF in excess of 3,000 SF), and 16 spaces for 18,000 SF of arts, design, and creation uses (1 per 1,000 SF, in excess of 3,000 SF) for a total of 56 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 26 vehicle spaces without seeking parking relief.

The Applicant is proposing to provide 40 on-site spaces and 15 off-site spaces at Arena Stage for a total of 55 spaces. The amount of combined parking is at the high end of the range (45-55 spaces) that DDOT would expect for a development of this size, mix of uses, and proximity to the Waterfront Metrorail station. Therefore, DDOT finds the proposed parking provision to be appropriate for the site.

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 developed 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) for the residential component and travel assumptions from a commuter survey of existing employees for the Shakespeare Theatre component.

Mode split assumptions used in the subject analysis were informed by the Census, WMATA's 2005 Development-Related Readership Survey, and assumptions used for nearby developments. Figures 2 and 3 below show the mode splits that were assumed for this proposal.

Land Use	Mode			
	Drive	Transit	Bike	Walk
Residential	45%	40%	5%	10%

Figure 2 – Residential Mode Split (Source: CTR, Gorove/Slade, Table 6, 12/3/18)

User Group	Mode Split				
	Auto	Transit	Walk	Bike	Housed On-Site
Office User Groups					
Full-Time Staff	30%	45%	4%	4%	17%
Part-time staff	50%	50%	0%	0%	0%
Volunteers	60%	40%	0%	0%	0%
Education User Groups					
Summer Camp	67%	25%	8%	0%	0%
MAC	70%	20%	10%	0%	0%
Home School	80%	20%	0%	0%	0%
After School Class	0%	100%	0%	0%	0%
Workshops & Training	25%	50%	10%	15%	0%
Rehearsal User Groups					
STC Actors	10%	20%	0%	20%	50%
ACA Rehearsals	10%	80%	5%	5%	0%
Ford Theater Rehearsals	20%	60%	8%	12%	0%

Figure 3 – Shakespeare Mode Splits (Source: CTR, Gorove/Slade, Table 8, 12/3/18)

Based on the trip generation and mode split assumptions, Figure 4 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	Residential	4 veh/hr	13 veh/hr	17 veh/hr	16 veh/hr	9 veh/hr	25 veh/hr
	STC (on-site)	22 veh/hr	4 veh/hr	26 veh/hr	20 veh/hr	7 veh/hr	27 veh/hr
	STC (off-site)	9 veh/hr	2 veh/hr	11 veh/hr	8 veh/hr	3 veh/hr	11 veh/hr
	Total	**35 veh/hr**	**19 veh/hr**	**54 veh/hr**	**44 veh/hr**	**19 veh/hr**	**63 veh/hr**
Transit	Residential	4 ppl/hr	13 ppl/hr	17 ppl/hr	16 ppl/hr	9 ppl/hr	25 ppl/hr
	STC	43 ppl/hr	2 ppl/hr	45 ppl/hr	8 ppl/hr	13 ppl/hr	21 ppl/hr
	Total	**47 ppl/hr**	**15 ppl/hr**	**62 ppl/hr**	**24 ppl/hr**	**22 ppl/hr**	**46 ppl/hr**
Bike	Residential	0 ppl/hr	2 ppl/hr	2 ppl/hr	2 ppl/hr	1 ppl/hr	3 ppl/hr
	STC	3 ppl/hr	0 ppl/hr	3 ppl/hr	0 ppl/hr	1 ppl/hr	1 ppl/hr
	Total	**3 ppl/hr**	**2 ppl/hr**	**5 ppl/hr**	**2 ppl/hr**	**2 ppl/hr**	**4 ppl/hr**
Walk	Residential	1 ppl/hr	3 ppl/hr	4 ppl/hr	4 ppl/hr	2 ppl/hr	6 ppl/hr
	STC	3 ppl/hr	0 ppl/hr	3 ppl/hr	4 ppl/hr	1 ppl/hr	5 ppl/hr
	Total	**4 ppl/hr**	**3 ppl/hr**	**7 ppl/hr**	**8 ppl/hr**	**3 ppl/hr**	**11 ppl/hr**

Figure 4 – Trip Generation Summary (Source: CTR, Gorove/Slade, Table 8, 12/3/18)

The proposed project is expected to generate a moderate number of vehicle trips during the weekday peak hours, as well as a moderate amount of transit trips due to the site's proximity to the Waterfront Metrorail Station. Additionally, as shown below in Figures 5 and 6, several of the activities to take place in the Shakespeare portion of the property are anticipated to be staggered at different times of the day, week, and season, some of which may occur outside of the weekday commuter rush hours.

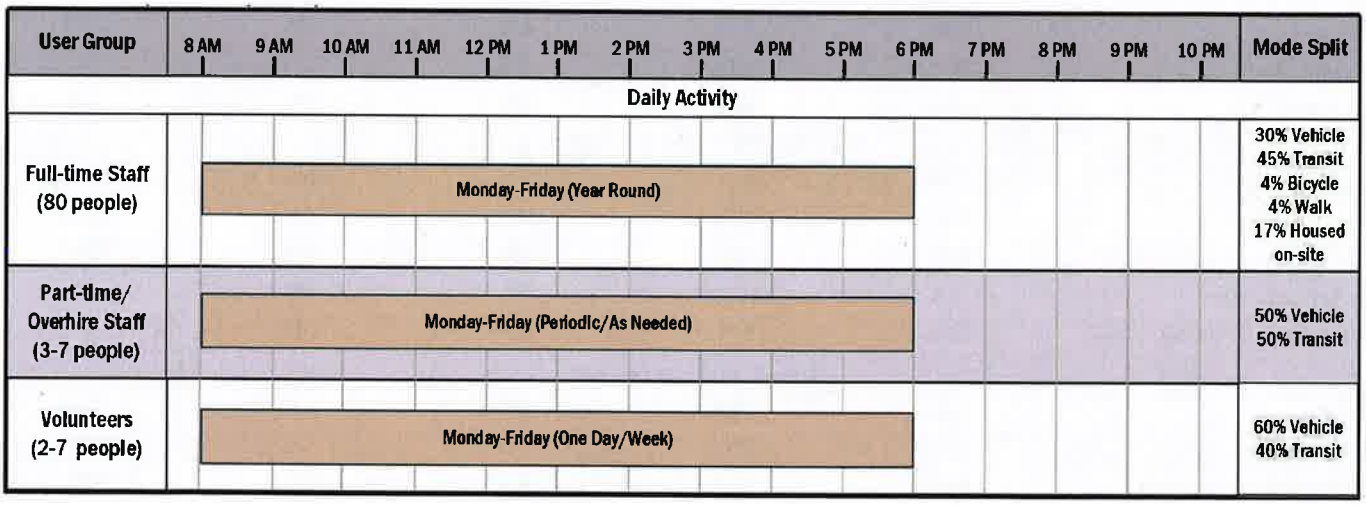

Figure 5 – Shakespeare Daily Activity (Source: CTR, Gorove/Slade, Table 4, 12/3/18)

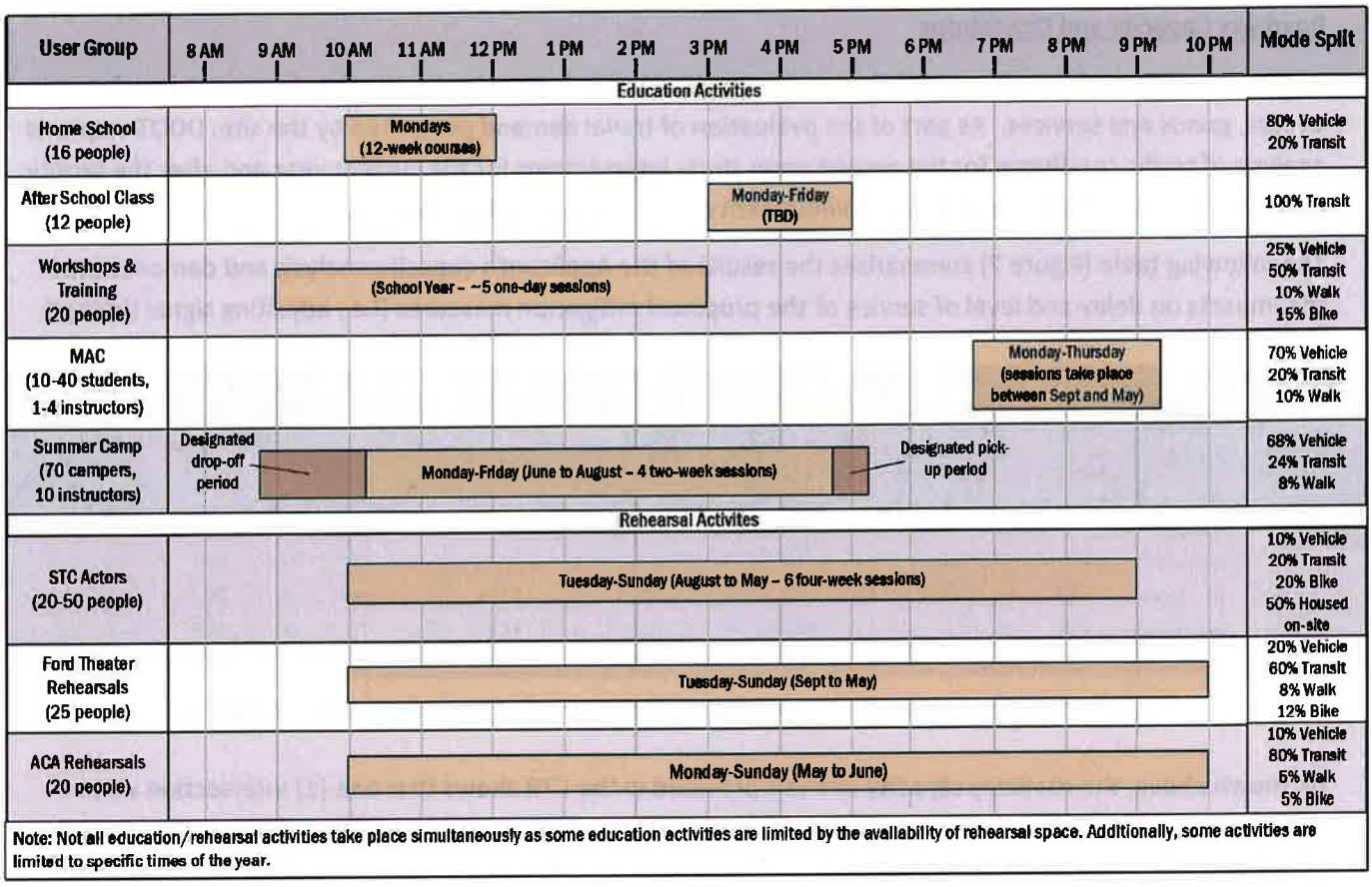

Figure 6 – Shakespeare Education and Rehearsal Activity (Source: CTR, Gorove/Slade, Table 5, 12/3/18)

Study Area and Data Collection

The Applicant in conjunction with DDOT identified 9 existing intersections (plus the driveway to 6th Street SW) 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 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 December 3, 2018 which includes an extensive multi-modal analysis of existing conditions (2018 Existing), future with no development (2021 Background), future conditions with development (2021 Future), and 2021 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 7) summarizes the results of the Applicant's capacity analysis and demonstrates the impacts on delay and level of service of the proposed mitigation measures (i.e., adjusting signal timings).

	Intersection	Approach	Existing Conditions				Future without Development Conditions (2021)				Future with Development Conditions (2021)				Future with Development Conditions (2021) Mitigated			
			AM Peak Hour		*PM Peak Hour*		*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	Delay	LOS	Delay	LOS
3.	**G Street & 4th Street, SW**	**Overall**	**31.4**	**C**	**16.8**	**B**	**33.4**	**C**	**17.4**	**B**	**35.2**	**D**	**17.7**	**B**	**30.2**	**D**	--	--
		Eastbound	83.3	F	30.6	C	92.8	F	32.6	C	99.3	F	33.5	C	78.6	E	--	--
		Westbound	26.2	C	25.9	C	27.5	C	26.4	C	27.5	C	26.4	C	26.3	C	--	--
		Northbound	10.0	A	7.7	A	11.0	B	7.1	A	11.0	B	7.1	A	11.3	B	--	--
		Southbound	12.3	B	15.6	B	12.1	B	15.8	B	12.2	B	16.0	B	12.9	B	--	--

Figure 7 – Vehicular Capacity Analysis w/Mitigations (Source: CTR, Gorove/Slade, Table 13, 12/3/18)

As shown above, the roadway capacity analysis provided in the CTR shows that one (1) intersection 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:

- G Street and 4th Street SW – the eastbound G Street approach is projected to operate at LOS F during all study scenarios due to the high volume of left-turning vehicles. The delay is projected to worsen by more than 5% between Background and Future 2021 conditions due to the addition of site-generated trips. To improve the eastbound approach's level of service, the CTR recommends adjusting the signal timings to provide more green time on G Street.

DDOT finds that a signal timing adjustment is 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 a traffic signal re-timing, the Applicant should instead mitigate this impact by implementing additional TDM strategies aimed at reducing the auto-mode share and encouraging non-auto travel (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 two (2) blocks north and west 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 8 below, with headways generally ranging between 6 and 45 minute depending on route.

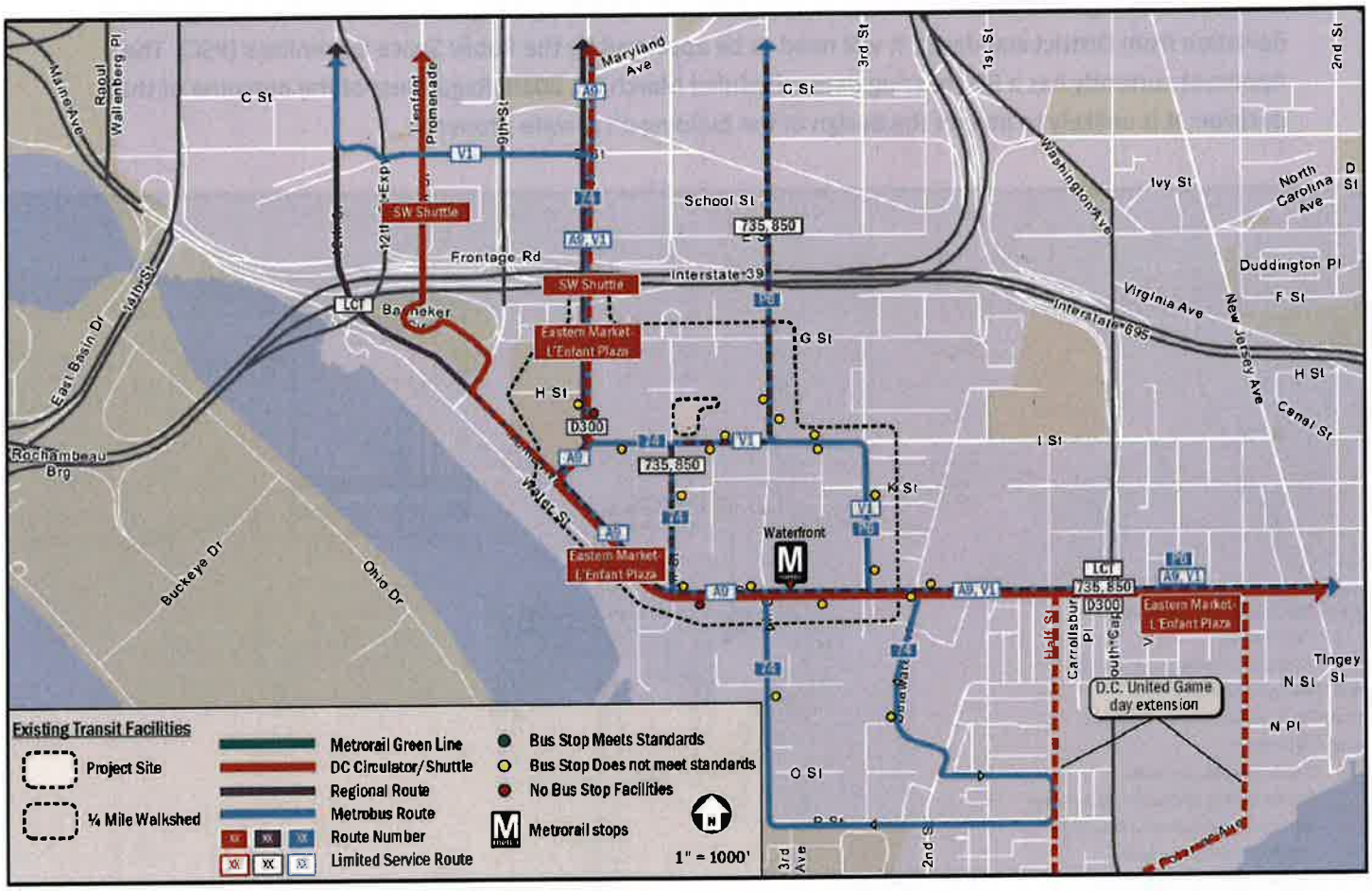

Figure 8 – Existing Transit Service (Source: CTR, Gorove/Slade, Figure 24, 12/3/18)

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 9 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 two (2) significant changes to the pedestrian realm in the vicinity of the site as part of the Community Benefits Agreement. The first is the installation of curb extensions on 6th Street at I, H, and G Streets to shorten the distance pedestrians have to cross at the intersections. DDOT supports this improvement and will work with the Applicant on the final design during public space permitting. The second proposed major change is the flipping of the sidewalk and tree box along the site's 6th Street SW frontage so that the sidewalk is up against the vehicle parking lane. Because this is a significant deviation from District standards, it will need to be approved by the Public Space Committee (PSC). The Applicant currently has a PSC hearing date scheduled March 28, 2019. Regardless of the outcome of that decision, it is unlikely to impact the design of the building on private property.

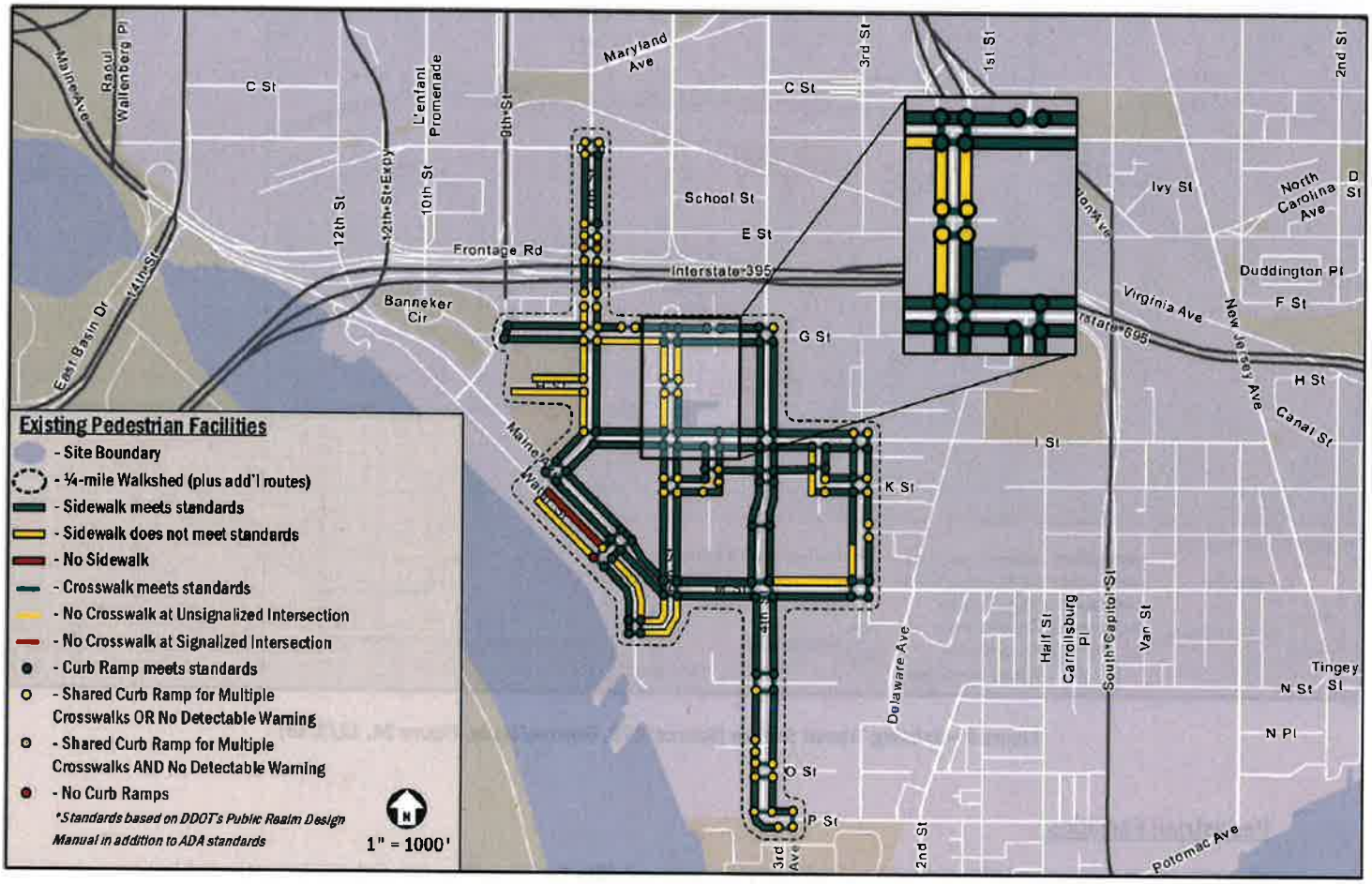

Figure 9 – Existing Pedestrian Infrastructure (Source: CTR, Gorove/Slade, Figure 26, 12/3/18)

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 the project is required to provide 42 long-term and 6 short-term bicycle parking spaces. The Applicant is proposing to exceed these

requirements by providing 67 long-term and 16 short-term spaces. The short-term spaces should be provided as inverted U-racks (8 total) in public space and concentrated along I Street near the building entrances. Final locations of the bicycle racks should be determined during public space permitting. Fifty-nine (59) of the long-term spaces are shown inside a storage room and eight (8) are provided outside of the room.

Per Subtitle C § 806.3 and 806.4, the Applicant is required to provide a minimum of two (2) showers and four (4) lockers for cyclists associated with the non-residential uses to shower and change. The Applicant is proposing to meet this requirement, as mentioned on the Zoning Tabulations page of the planset. However, this should also be stated in the TDM plan.

As shown in Figure 10 below, the site is currently in close proximity to bicycle facilities including striped bicycle lanes on both 6th Street and I Street SW, as well as portions of cycletrack and the Anacostia Riverwalk Trail to the south and west of the property adjacent to the Wharf.

There is currently a 21-dock Capital Bikeshare (CaBi) station located at the northwest corner of M Street and 4th Street SW, two blocks southeast of the site. As part of the 375/425 M Street SW PUD, the CaBi station will be expanded by four (4) docks and moved across the street to the northeast corner of the intersection behind the Metrorail entrance. Additionally, stations are planned to be installed at 4th and I Streets SW (1000 4th Street SW PUD), 1st and I Streets SW (Randall School PUD), several at the Wharf (Phase 2 PUD), and at 4th and G Streets SW (DDOT).

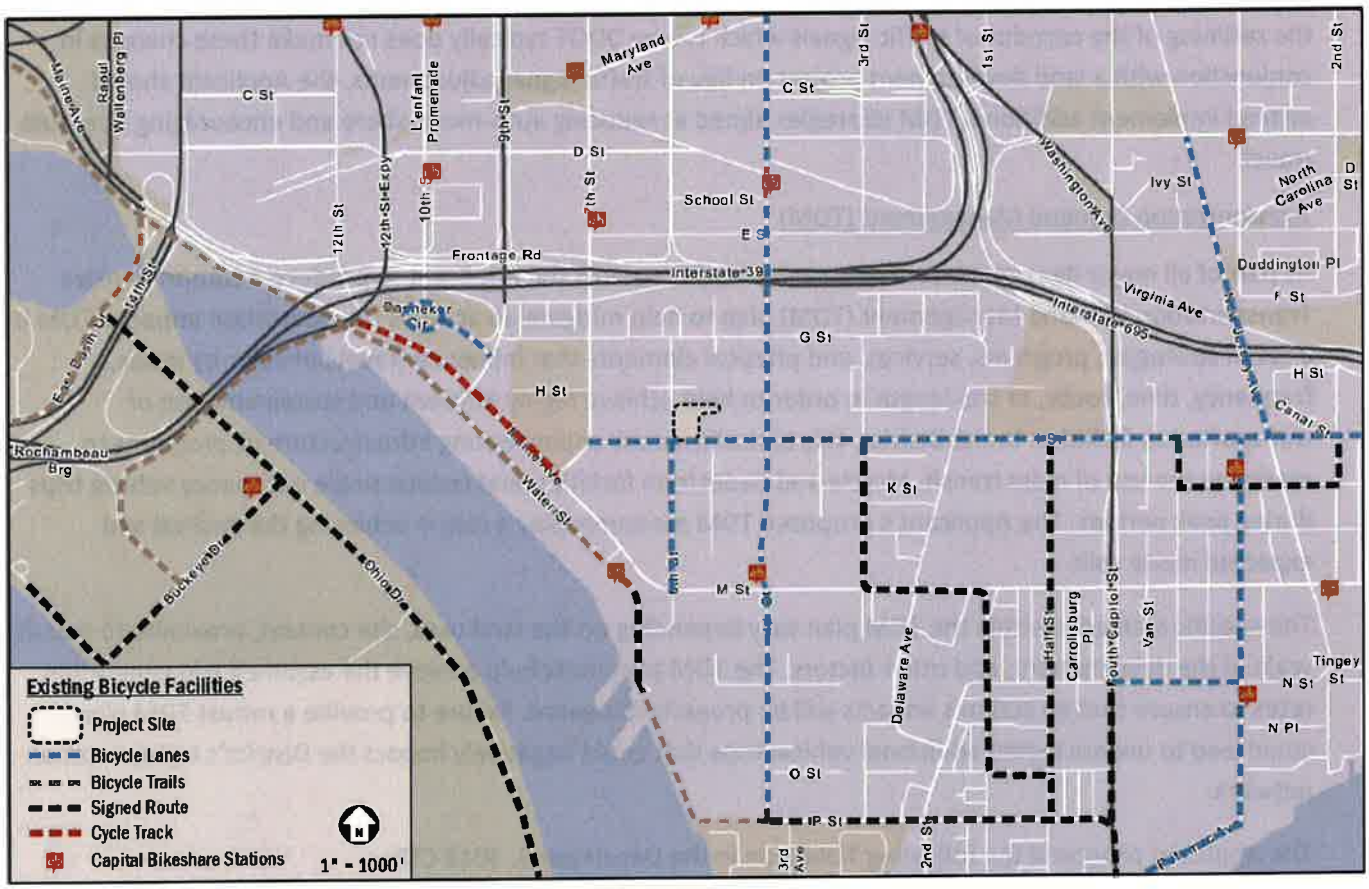

Figure 10 – Existing and Proposed Bicycle Facilities (Source: CTR, Gorove/Slade, Figure 27, 12/3/18)

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 demonstrated that adjusting signal timings at the intersection of 4th and G Streets SW could improve intersection delay and level of service back to acceptable conditions. These improvements would necessitate the retiming of the corridor 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 implement additional TDM strategies aimed at reducing auto-mode share and encouraging non-auto travel.

Transportation Demand Management (TDM)

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 proposed the following TDM Plan in the December 3, 3018 CTR:

- 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;
- 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;
- Meet or exceed ZR16 requirements for showers and changing facilities. These facilities will be available for use by employees and actors;
- Will provide a bicycle repair station with each long-term bicycle storage room;
- 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 and Shakespeare lobbies, containing information related to local transportation alternatives; and
- Will provide a ride-matching program for Shakespeare employees.

DDOT finds the proposed TDM plan is mostly sufficient for a development program of this size, land use mix, parking ratio, and proximity to a Metrorail station. However, an increase in strength of the TDM plan is necessary to offset the identified impacts to one (1) study intersection (4th and G Street SW). DDOT requests these additional elements and revisions be made to the TDM Plan:

- Provide TDM leader contact information to DDOT and goDCgo (info@godcgo.com), for both residential and Shakespeare uses, and report TDM efforts and amenities to goDCgo staff once per year;
- TDM Leaders will receive TDM training from goDCgo to learn about the TDM conditions for this project and nearby available options;
- 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;
- Clarify that a minimum of two (2) showers and four (4) lockers (DDOT's estimate of ZR16 requirements) will be provided for use by employees and actors;
- Provide at least five (5) shopping carts for resident use to run errands and for grocery shopping;
- Long-term bicycle storage rooms will accommodate non-traditional sized bikes including cargo, tandem, and kids bikes;
- Clarify that the welcome packets to be provided to all new residents will, 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;
- Post "getting here" information on Shakespeare website for attendees/visitors that includes information about how to travel to the site via Metro, biking, and walking and where to park if driving. A printable map should also be available and goDCgo can assist with this effort. "Getting here" information will also be disseminated during registration for Sharkespeare classes and educational events; and

- Host a transportation event for residents, employees, and members of the community once per year for the first three (3) years after the opening of the building. These could include a walking tour of local transportation options, transportation fair, WABA Everyday Bicycle Seminars.

JS:az