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
Acting Associate Director

DATE: May 31, 2017

SUBJECT: ZC Case No. 17-05 – 2100 2nd Street SW

PROJECT SUMMARY

2100 2nd Street, SW, LLC (the "Applicant") seeks Design Review and approval pursuant to the Capitol Gateway Overlay to redevelop the former Coast Guard Headquarters building at premises 2100 2nd Street SW (Square 613, Lots 0010, 0818, 0819, 0820, 0822, 0830). The site is bounded by V Street, 2nd Street, 1st Street, the Anacostia River, and National Park Service Property to the south. The development program includes:

- 485 residential dwelling units
- 73,368 square feet of retail
- 38,087 square feet of restaurant space
- 372 vehicle parking spaces
- 168 long-term and 44 short-term bicycle parking spaces

SUMMARY OF DDOT REVIEW

The District Department of Transportation (DDOT) is committed to achieve an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, safer streets, and 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, multi-administration review of the case materials submitted by the Applicant, DDOT finds:

Site Design

- The Applicant's initial filing assumed raising the adjacent public streets out of the 100-year floodplain. The current proposal is designed to meet the existing grade of the streets, and DDOT's review responds to the application as currently submitted. Any potential changes to the adjacent grades of the streets would require significant further evaluation, review, and approval by DDOT and may result in changes to the building and public space designs which are likely to require additional reviews by the Zoning Commission and DDOT;
- The existing street network surrounding the site is in relatively poor condition, with inadequate facilities for vehicles, pedestrians, and bicyclists, but the Applicant will improve V Street and 1st Street, and 2nd Street adjacent to the site;
- The Applicant received conceptual approval from the Public Space Committee for four (4) curb cuts to provide vehicular and loading site access;
- The proposed loading dock is accessed via back-in turning maneuvers. This does not meet DDOT standards, but is acceptable due to the dead end operations of 1st Street provided that an appropriate loading management plan is provided;
- The Applicant proposes 168 long-term bicycle spaces on the P1 level, which meets the number of spaces required by the Zoning Regulations. Placement of the required 44 short-term spaces will be finalized during the public space permitting process;
- The proposed streetscape designs largely comply with DDOT standards and the Buzzard Point Streetscape Guidelines; and
- The proposed design for the Anacostia Riverwalk trail provides a passive and active trail consistent with the Anacostia Promenade Design Guidelines, but several minor adjustments to the design are needed.

Travel Assumptions

- The action is expected to generate a significant number of new vehicle, transit, and pedestrian trips and a moderate number of bicycle trips;
- The assumed non-auto modes splits are achievable if supported by commensurate TDM and infrastructure facilities investment. Failure to provide a robust TDM plan and infrastructure improvements could result in higher auto usage and impacts to the network not anticipated in the CTR.

Analysis

- The Applicant utilized sound methodology to perform the analysis;
- The action is projected to increase travel delay at the 2nd Street/P Street intersection to unacceptable levels, which the Applicant proposes to mitigate by installing a left turn lane. DDOT finds this mitigation appropriate;
- While the proposed vehicle parking for retail meets zoning requirements, the number of vehicle trips in the evening peak is expected to greatly exceed the supply of on-site vehicle parking;
- Retail patrons are likely to utilize curbside parking and off-site parking locations in the vicinity, and the Applicant proposes to secure off-site parking spaces at several unspecified parking facilities in close proximity to the site. Upgrades to adjacent curbside will be required to support the increase in curbside parking demand, and pedestrian connections must be available to connect satellite parking locations to the site;
- Transit service will be extended to serve the site, and the Applicant proposes to install a bus pad and other supportive infrastructure on V Street to facilitate a new bus stop on V Street west of 1st Street;

- The Applicant proposes to install a Capital Bikeshare station adjacent to the site; and
- The proposed Transportation Demand Management (TDM) plan is a good basis for promoting non-auto trips, but additional measures are needed to achieve the assumed non-auto mode splits.

Mitigations
DDOT has no objection to the requested PUD with the following conditions:

- Implement the following mitigations as proposed by the Applicant:
  - Install an eastbound right turn lane with a storage length of 150 feet at the intersection of 2nd Street & P Street;
  - Construct the 2nd Street cycle track from V Street to the Anacostia Riverwalk Trail. The cycle track requires a total of 10 feet and the total carthpath cross section requires 38-40 feet.
  - As part of the public space reconstruction, construct a bus pad in V Street and other supportive elements to support a future bus stop at the corner of V Street and 1st Street.
- Implement the following mitigations as proposed by the Applicant with the following modifications:
  - Strengthen the proposed TDM plan to include:
    - Provide a 19-dock Capital Bikeshare station and first year's operating costs;
    - A total of two electronic displays showing real-time transportation. Displays should be located in the residential lobby and a common, shared space easily visible to restaurant and retail patrons such the Anacostia Riverwalk Promenade;
    - Showers, changing facilities, and lockers for use by retail and restaurant employees to encourage bicycling as required by current zoning regulations; and
    - Unbundle parking costs from the price of lease or purchase of residential units.
  - Update the Loading Management Plan to include flagger assistance for all loading deliveries to mitigate the back-in movements for all trucks serving the site, which is required as a condition of approval for the curb cuts by the Public Space Committee.
  - Modify the Anacostia Riverwalk Treatment in the following ways:
    - Replace the "rough paving" on the active trail with a paving that provides a visual cue to indicate an intersection between active and passive uses. A "rough paving" with a noticeable texture should not be used in the active trail; and
    - Install a narrow band of textured paving at the edge of the active trail where the passive trail intersects with the active trail. This textured paving provides a tactile and visual cue to passive trail users that they are crossing an active trail.
  - Improve the entirety of the ROW on 2nd Street south of the roundabout.
- Implement the following additional mitigations:
  - Provide a minimum 6-foot wide sidewalk connection to all satellite parking locations. Final designs of these improvements will be determined during the public space permitting process when satellite parking locations are known.

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

- Final design of the public realm surrounding the site, including utility vault treatment, flood protection equipment, and curb cuts. All public space, including curb and gutter, street trees and landscaping, street lights, sidewalks, and other features within the public rights of way, are expected to be designed and built to DDOT standards and be consistent with the Buzzard Point Streetscape Guidelines, and will be coordinated during the public space permitting process;
- Reconstruction of 1st Street, 2nd Street, and V Street adjacent to the site. Anticipated improvements include centering the streets within the right-of-ways, provision of tree boxes and sidewalks, and removal of existing bollards;
- Final design of the parking vault, which does not meet the District's Building Code and required a Code Waiver from DCRA with review by DDOT;
- Development of a curbside management and signage plan during the public space permitting process; and
- Location of electric vehicle charging stations in the parking garage.

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

The Applicant's initial filing assumed raising the adjacent public streets out of the 100-year floodplain. At DDOT's behest, the current proposal is designed to meet the existing grade of the streets, and accordingly DDOT's review responds to the application as currently submitted. Any potential changes to the adjacent grades of the streets would require significant further evaluation, review, and approval by DDOT. Potential changes in the elevation of the streets may trigger changes to the building, which may

require additional review by the Zoning Commission, as well as changes to the proposed public space designs, which are subject to DDOT review and permitting.

The site is bounded by V Street to the north, 1st Street to the east, 2nd Street to the west, and the Anacostia River and National Park Service land to the south, with no alley access present. The existing building has four (4) curb cuts for garage entrances on 1st Street and 2nd Street and two (2) loading curb cuts on 2nd Street.

The Applicant proposes four (4) curb cuts to serve the site. Garage access is proposed from 2nd Street and three (3) loading areas are proposed to be served by separate curb cuts. The proposed vehicular site access scheme is inconsistent with regulations limiting businesses abutting two (2) or more streets to no more than three (3) curb cuts. Furthermore, the loading access requires trucks to back-in to the loading berths, which is contrary to DDOT standards. Accordingly, the Applicant sought and received conceptual approval for the proposed curb cuts from the Public Space Committee at the May 25, 2017 hearing with the conditions that additional landscaping be added between the garage and southern loading curb cuts on 2nd Street and the Applicant provide a flagger to manage all back-in maneuvers at all curb cuts. Final design of the curb cuts will be determined during the public space permitting process for the remainder of the proposed work in public space.

The main pedestrian access points to the apartment building are on 1st Street and 2nd Street. Retail and restaurant entrances will be provided on all adjacent streets and from the Anacostia Riverwalk Trail. Figure 1 shows the proposed site plan.

Figure 1 Site Design and Access (Source: the Applicant)

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. This often results in loading being accessed through an alley network. Here, there are no alleys present.

Zoning Regulations 2016 require two loading berths and the Applicant proposes five (5) loading berths, including three (3) 30-foot berths and two (2) 55-foot berths to accommodate the site's needs. Figure 2 summarizes the proposed loading facilities.

The Applicant's submittal includes AutoTurn analysis showing that truck maneuvers can be accommodated, but require back-in turning maneuvers. This does not meet DDOT standards, but is acceptable due to the dead end operations of 1st Street and 2nd Street. The AutoTurn analysis also indicated that 55-foot trucks on 2nd Street would maneuver through the proposed cycle track on 2nd Street. This conflict should be managed through the installation of a drivable cycletrack barrier that provides protection to cyclists but also accommodates truck maneuvers. Final design of the cycle track will be determined through public space permitting, and the Applicant will be required to install a DDOT-approved barrier design. As discussed in the Mitigations section, the Applicant proposes a loading management plan to address the back-in maneuvers and manage the cycletrack conflicts.

Trash will also be picked up at the loading driveways.

Land Use	Required Loading	Proposed Loading
Residential	> 50 DU 1 loading berth + platform 1 service/delivery space	1 30-foot berth with 1 platform 1 service/delivery space
Retail*	> 20,000 SF and < 100,000 SF of GFA 2 loading berths + platforms 1 service/delivery space	4 loading berths: (2 30-foot berths with 2 platforms; 2 55-foot berths with 2 platforms) 1 service/delivery spaces
Total†	**2 loading berths + platforms 1 service/delivery space**	**5 loading berths: (3 30-foot berths with 3 platforms; 2 55-foot berths with 2 platforms) 2 service/delivery spaces**

Figure 2 Proposed Loading Facilities (Source: the Applicant)

Vehicle Parking

The Applicant proposes 372 on-site vehicular parking spaces in excess of the 251 parking spaces required per the 2016 Zoning Regulations (160 for residential and 91 for retail). The parking provision equates to 0.58 spaces per unit, which exceeds the parking rates of similar proposed buildings in the District but is appropriate given the site location. The 91 retail parking spaces equates to 1.33 spaces per 1,000 square feet of retail. The Applicant anticipates neighborhood retail, perhaps a pharmacy or grocery store, and destination-type restaurant uses. As discussed in the Travel Assumptions and Analysis sections, these land uses are expected to generate a significant number of person trips, many of which will be made via auto. As a result, parking demand from the retail is expected to be significantly higher than the on-site parking provision for the retail and restaurant components.

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 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 the District of Columbia Municipal Regulations, DDOT's *Design and Engineering Manual* and the Buzzard Point Streetscape Guidelines will serve as the main public realm references for the Applicant. DDOT staff will be available to provide additional guidance during the public space permitting process. Specifically, DDOT suggests that the Applicant participate in a Preliminary Design Review Meeting (PDRM) to address design related issues prior to the submission of public space permit applications.

The existing street network surrounding this site in the Buzzard Point neighborhood is in relatively poor condition, with inadequate facilities for vehicles, pedestrians, and bicyclists. To remediate this, the Applicant proposes to make significant upgrades to 1st Street, 2nd Street, and V Street adjacent to the site to bring these streetscapes up to DDOT standards consistent with the Buzzard Point Streetscape Guidelines including centering the streets within the right-of-ways, provision of tree boxes and sidewalks, and removal of existing bollards. The Applicant has coordinated closely through the PUD process on the proposed designs for the adjacent streetscapes, which are described below. While the draft streetscape designs are generally consistent with DDOT standards and the Buzzard Point Streetscape Guidelines, final design of the streetscape will be determined during the public space permitting process.

On 2nd Street, the Applicant proposes to improve the streetscape on the east side of 2nd Street adjacent to the site. A 25-foot wide sidewalk space, inclusive of a 5-foot tree box zone, may require the relocation of the eastern curbline. Of note, the Applicant does not propose improvements to the streetscape along the western side of the street. However, the Applicant proposes to construct the 2nd Street cycletrack between V Street and the portion of the Anacostia Riverwalk Trail. The cycle track requires a total of 10 feet, inclusive of a proposed 2-foot buffer. The cross section for 2nd Street must also accommodate two 10-11 foot travel lanes and an 8-foot wide parking lane on the east side of the street. This total carthpath cross section requires 38-40 feet. During the public space permitting process, DDOT will ensure that the above cross section is implemented. If the existing location of the western curbline precludes this cross section, adjustments to the western curbline may be required such that a 38-40 foot cartpath is created on 2nd Street.

The Applicant does not propose improvements to the public space on the western side of the 2nd Street ROW south of the roundabout with the exception of construction of a pad for the Capital Bikeshare station and a path to access the station. As discussed in the Mitigations section, the Applicant should improve the entirety of the 2nd Street ROW south of the roundabout.

The west side of 1st Street adjacent to the site will be improved. This includes a 27-foot wide sidewalk space, inclusive of a 6-foot tree box zone, which may require the relocation of the western curbline. Of

note, the Applicant does not propose improvements to the 1st Street right-of-way south of the site adjacent to the National Park Service land along the waterfront.

The Applicant proposes to improve the streetscape on the south side of V Street. This includes a 22-foot wide sidewalk, inclusive of a 5-foot wide tree box zone, which may require the relocation of the southern curbline. A bus pad in V Street and other supportive elements will be included in the streetscape in order to support a future bus stop at the corner of V Street and 1st Street.

Plans show the retention and possible expansion of grated top utility vaults in the sidewalk on 1st Street. DDOT preference is for utility vaults to be located on private property. When located in public space, vaults are expected to be located outside the pedestrian clear zone and surrounded on all sides by a minimum three foot landscape buffer or be outfitted with solid tops. Location and treatment of utility vaults will be determined during the public space permitting process.

To address floodplain issues the Applicant proposes flood protect the building through a series of manual flood shields. Some elements of these shields will require inserts to be placed in the ground, which may be located in public space. At the time of this report additional information is needed regarding the design of the flood protection elements in the ground. Any flood protection features in public space will require public space permits and final design of the flood protection features will occur as part of the permitting process.

In addition to streetscape improvements, the Applicant proposes to improve the Anacostia River frontage. The proposed design for the Anacostia Riverwalk trail provides a passive and active trail consistent with the Anacostia Promenade Design Guidelines. The active trail, intended for bicycle use, connects to the 2nd Street two-way cycletrack proposed by the Applicant.

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.

Based on the size of the proposed development and the number of vehicular parking spaces, DDOT recommends that the Applicant provide at least seven (7) 240-volt electric car charging stations in the parking garage, which equates to one (1) station for every 50 vehicle parking spaces.

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. Non-Hazardous Heritage Trees may not be damaged or removed. A preliminary assessment by DDOT's Urban Forestry Administration (UFA) identified zero Heritage Trees on site. The Applicant should confirm the lack of Heritage Trees to ensure there are no conflicts between these protected trees, including on adjacent lots, and the proposed

project. In the event that conflicts exist, the Applicant may be required to redesign the site plan in order to preserve any Non-Hazardous Heritage Trees. With approval by the Mayor and the Urban Forestry Administration, Heritage Trees might be permitted to be relocated.

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 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 travel forecasting methodology to include in the analysis.

DDOT also requires applicants account for regional growth. 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 use of an appropriate growth rate to accurately account for background growth.

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, availability and cost of parking, among many others.

The Applicant provided trip generation estimates utilizing the Institute of Traffic Engineers (ITE) Trip Generation Manual and the assumed mode split to convert base vehicular trips to base person trips using average auto occupancy data and then back to vehicular trips. The Applicant utilized the following ITE land uses in their trip generation estimation:

- Residential: Apartment (Code 220)
- Retail: Shopping Center (Code 820)
- Restaurant: Quality Restaurant (Code 931)

DDOT generally finds the use of ITE codes appropriate, but notes the lack of dependable information on trip generation in urban contexts. Thus, the methodology was supplemented to account for the urban nature of the site and to split the trips into the appropriate mode. The Applicant developed the following mode split assumptions:

- Residential – 50% auto, 50% non-auto
- Retail – 40% auto, 60% non-auto
- Restaurant – 80% auto, 20% non-auto

These mode splits are achievable based on the expected behavior of residents in the area, but must be supported by commensurate TDM and infrastructure facilities investment. Failure to provide a robust

TDM plan and infrastructure improvements could result in higher auto usage and impacts to the network.

Based on the trip generation and mode split assumptions discussed above, the Applicant predicted the following level of weekday peak hour trip generation:

Table 1. Multimodal Trip Generation Summary (Source: the Applicant)

Land Use		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Development							
485 DU Apartment (LUC 230)	Total Trips	48	193	241	185	99	284
	Non-auto Trips	*24*	*97*	*121*	*93*	*50*	*143*
	Transit	*18*	*72*	*90*	*69*	*37*	*106*
	Bicycle	*2*	*8*	*10*	*7*	*4*	*11*
	Pedestrian	*4*	*17*	*21*	*17*	*9*	*26*
	Vehicle Trips	24	96	120	92	49	141
38,087 SF Quality Restaurant* (LUC 931)	Total Trips	25	6	31	191	94	285
	Non-auto Trips	*5*	*1*	*6*	*38*	*19*	*57*
	Transit	*2*	-	*4*	*15*	*8*	*23*
	Bicycle	-	-	-	*4*	*2*	*6*
	Pedestrian	*3*	*1*	*2*	*19*	*9*	*28*
	Vehicle Trips	20	5	25	153	75	228
33,368 SF Retail* (LUC 820)	Total Trips	49	31	80	138	149	287
	Non-auto Trips	*29*	*18*	*47*	*83*	*90*	*173*
	Transit	*7*	*4*	*11*	*21*	*23*	*43*
	Bicycle	*5*	*3*	*8*	*14*	*15*	*29*
	Pedestrian	*17*	*11*	*28*	*48*	*52*	*101*
	Vehicle Trips	20	13	33	55	59	114
Total Proposed Development	Total Trips	122	230	352	514	342	856
	Non-auto Trips	*58*	*116*	*174*	*214*	*159*	*373*
	Transit	*27*	*76*	*105*	*105*	*68*	*172*
	Bicycle	*7*	*11*	*18*	*25*	*21*	*46*
	Pedestrian	*24*	*29*	*51*	*84*	*70*	*155*
	Vehicle Trips	64	114	178	300	183	483

* The square footage for the retail and restaurant uses do not include areas devoted to parking or loading.

The proposed action is expected to generate a significant number of new vehicular and non-vehicular (transit, bicycle, and walk) trips during the morning and evening peak hours. Based on the anticipated level of trip generation, a full vehicle traffic analysis was conducted to assess impacts to the surrounding vehicle network.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified eight intersections where detailed vehicle, bicycle, and pedestrian counts would be conducted 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 that have the greatest potential to see moderate to significant increases 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 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 data in February and March 2017. In general, DDOT agrees with the time frame and collection date.

Analysis

To determine the action's impacts on the transportation network, a CTR includes an extensive multi-modal analysis of the existing baseline conditions, future conditions without the proposed action, and future conditions with the proposed development. The Applicant completed their analysis based on the assumptions described above.

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 action, 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. For this development, three traffic scenarios were assumed for capacity analyses. These scenarios include:

1. Existing Conditions
2. 2021 Background Conditions (without the project)
3. 2021 Total Future Conditions (with the project)

Analysis provided by the Applicant (Figure 3) shows that the 2nd Street/P Street intersection is negatively impacted by the subject development as measured Level of Service (LOS). The eastbound approach of the intersection currently operates at an LOS D, but is expected to worsen to an unacceptable LOS E in total future conditions. The Applicant proposes to install an eastbound right turn lane with a storage length of 150 feet. This change is discussed in greater detail in the Mitigations section.

To handle traffic surrounding the project, the Applicant is proposing to reconstruct V Street, 1st Street, and 2nd Street adjacent to the site. This allows a full streetscape and an additional vehicle parking lane in these locations. Additionally, further improvements to the street network are anticipated as part of the stadium development throughout Buzzard Point. With these improvements, most streets in the area will be significantly upgraded from existing conditions.

Approach	Existing Conditions		Background Conditions		Total Future Conditions	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. 2nd Street/P Street						
EBLTR	A	C	B	D	B	E [44.9]
WBLTR	A	A	A	A	B	B
NBLTR	A	B	A	B	A	B
SBLTR	B	B	B	B	B	B
Overall	**B**	**C**	**B**	**C**	**B**	**D**
2. 2nd Street/Q Street						
EBLTR	B	C	B	D	B	D
WBLTR	B	B	B	B	B	C
NBLTR†	N/A	N/A	A	A	A	A
SBLTR	A	A	A	A	A	A
3. 2nd Street/R Street						
WBL*	A	A	N/A	N/A	N/A	N/A
WBLR†	N/A	N/A	A	A	A	D
NBTR†	N/A	N/A	A	A	A	A
SBLT	A	A	A	A	A	A
4. 2nd Street/T Street						
WBL* WBLR†	A	A	A	A	A	B
NBTR†	N/A	N/A	A	A	A	A
SBLT	A	A	A	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Denotes existing lane configuration.
† Denotes lane configuration proposed with DC United Stadium project.

Figure 3 Capacity Analysis Results (Source: the Applicant)

Vehicle Parking

As noted above, the Applicant proposes 91 retail parking spaces for the combined 71,000 square feet of retail and restaurant space, which equates to the zoning-required 1.33 spaces per 1,000 square feet of retail. The combined trip generation of the retail and restaurant uses is 58 and 342 in the morning and evening peaks, respectively. Therefore, the number of trip in the evening peak is expected to greatly exceed the supply of on-site vehicle parking. DDOT anticipates that retail and restaurant visitors will utilize off-site and curbside parking in order to meet the site's parking needs.

The Applicant performed an inventory and assessment of current curbside management in the vicinity to evaluate the adequacy of the nearby curbside parking inventory as summarized in Figure 4. The analysis reveals a lack of curbside parking availability in the vicinity, and curbside parking in the future is expected to remain limited. Curbside parking on the west side of 2nd Street between P Street and V Street will be removed to accommodate the cycle track. Curbside parking on the east side of 2nd Street will remain. Approximately 20 new curbside parking spaces will be added immediately adjacent to the site on 1st Street, 2nd Street, and V Street enabled by the reconstruction of the public space and the associated shifts in the curbline. Curbside parking will be added on the east side of 1st Street adjacent to ZC Case No. 10-21A, but will not be added to the south of that site due to the existing location of the curb. Over time curbside parking will be added on the north side of V Street as the adjacent parcels redevelop and move the curbline to the north as part of their streetscape reconstruction. During the public space permitting process, the Applicant will be required to provide a curbside signage and management plan, including the installation of multi-space parking meters at the Applicant's expense, for the adjacent curbside.

Figure 4 Curbside Management (Source: the Applicant)

Due to the relatively limited supply of curbside parking spaces compared to expected demand, the Applicant proposes to secure off-site parking spaces at several unspecified parking facilities in close proximity to the site. Likely satellite parking locations include the James Creek Marina and 100 V Street surface parking lots. As is discussed in the Pedestrian Facilities section, pedestrian connections must be in place in order to connect the various satellite parking locations with the subject site in order to ensure safe and accessible connections.

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 performed an inventory of the pedestrian infrastructure in the vicinity and noted any substandard conditions (Figure 3). The Applicant's analysis revealed substandard pedestrian facilities in the vicinity of the site, such as missing sidewalks along the route to the Navy Yard and Southwest Waterfront Metro stations. Many of these gaps will be improved by the subject development and adjacent developments including ZC Case Nos. 16-02, 16-06, and 10-21A. However, some gaps are expected to remain, namely on the west side of 1st Street and the east side of 2nd Street between T Street and V Street, which provides access to the 100 V Street surface parking lot, and on the north and south sides of V Street west of 2nd Street, which provides access to the James Creek Marina surface parking lot. Without pedestrian improvements to these segments, these likely satellite parking locations will be inaccessible by pedestrians.

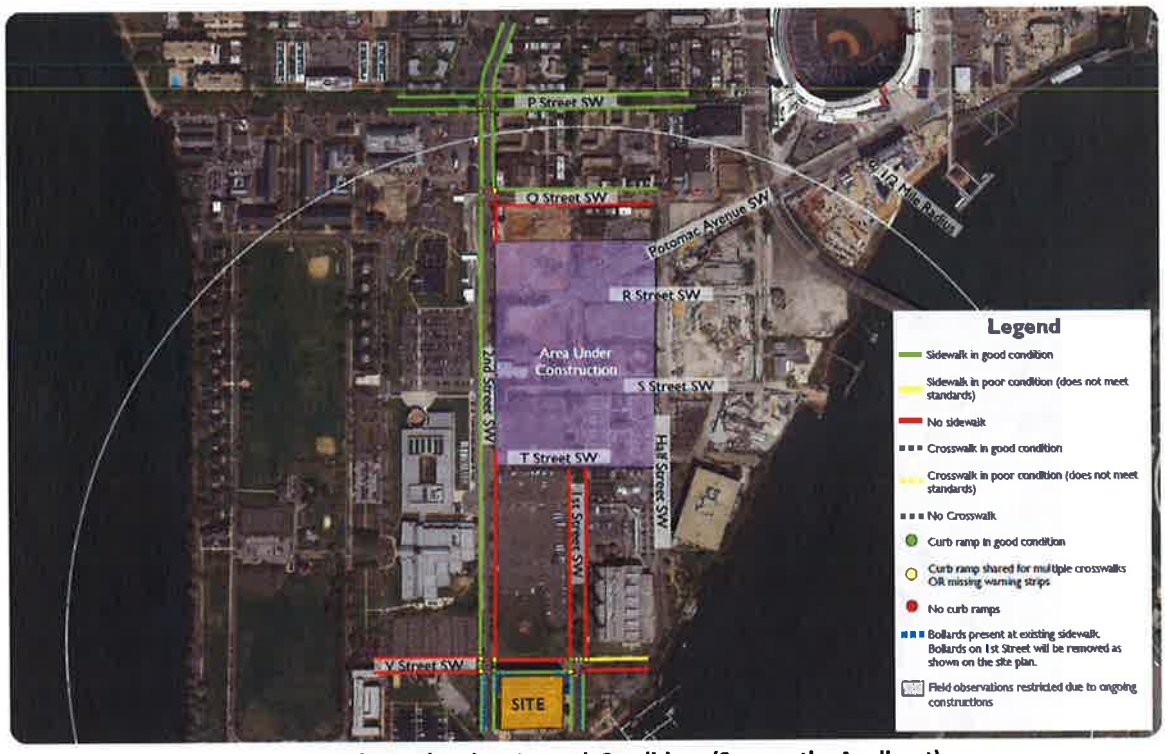

Figure 5 Existing Pedestrian Network Conditions (Source: the Applicant)

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.

The site is currently relatively unserved by bicycle infrastructure. Bicycle lanes exist on 4th Street SW and Potomac Avenue SE providing some north-south and east-west bicycle connections nearby, but no accommodations exist in direct proximity to the site. However, extensive planned bicycle facilities are scheduled to be constructed prior to the completion of the subject development. As part of the District-DC United stadium agreement and DDOT projects, the District is installing several dedicated bicycle facilities that will provide connections to existing bicycle facilities. A two-way cycle track will be constructed along Potomac Avenue and R Street from South Capitol Street to 2nd Street. At 2nd Street, this facility will intersect with a two-way cycle track on the west side of 2nd Street that will extend between P Street and V Street. The Applicant will construct the 2nd Street cycle track south of V Street to connect to the Anacostia Riverwalk Trail being constructed as part of the subject development. The Anacostia Riverwalk Trail will be constructed by each property owner along the Anacostia River as each site redevelops. Property ownership groups include private property owners, the NPS, and DDOT. When the Buzzard Point sections of the trail are complete, the Anacostia Riverwalk Trail will extend along the entirety of the Anacostia River connecting to trails along the Potomac River and up the Anacostia River into Prince George's County.

Currently the closest Capital Bikeshare station is located at 1st Street & N Street, approximately a mile from the site. The Applicant proposes to provide a Capital Bikeshare station as part of the subject development that will greatly increase bicycle connectivity to the site by providing a "last mile"

connection to transit stations and other destinations nearby. Additional stations will be provided in the vicinity as part of ZC Case Nos. 16-02 and 16-06.

The Applicant proposes 168 long-term bicycle spaces on the P1 level, which meets the number of spaces required by the Zoning Regulations. Additionally, 44 short-term spaces are required. Placement of the short-term spaces will be finalized during the public space permitting process. Proposed and required bicycle parking quantities are shown in Figure 5.

Land Use	Required Parking		Proposed Parking
	Long-term†	Short-term	
Residential	1 per 3 units 485/3 = 161 long-term	1 per 20 units 485/20 = 24 short-term	**161 long term spaces** **24 short term spaces**
Retail*	1 per 10,000 SF 71,455/10,000= 7 long-term	1 per 3,500 SF 71,455/3,500= 20 short-term	**7 long term spaces** **20 short term spaces**
Total	**168 long-term**	**44 short-term**	**168 long-term spaces** **44 short-term spaces‡**

* Note for practical purposes the potential floating restaurant space has been included in the calculations, as parking and loading facilities for this use would be housed within the building.
† Note that per §802.2, after the first 50 bicycle parking spaces are provided for a use additional spaces are required at one half the specified ratio. However, DC law requires one bicycle space per three residential units, so no reduction was taken for the residential component.
‡ The exact location of short-term spaces will be determined during the public space process.

Figure 6 Required and Proposed Bicycle Parking (Source: the Applicant)

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 from the Navy Yard and Waterfront Metro stations, which are served by the Green line. The nearest bus route is the 74 – Convention Center-Southwest Waterfront Line, which currently does not provide service south of P Street SW about 0.5 miles to the north of the site.

To support future development, the Applicant, DDOT, and WMATA have coordinated to discuss future bus service in Buzzard Point. It is likely that the 74 Line would be extended south into Buzzard Point. The probable route is for buses to head south on 2nd Street at P Street, turn left at V Street, turn left at 1st Street, turn left at T Street, and then continue north on 2nd Street toward the Waterfront Metro station. While the exact timing of this expanded service is not yet known, service is expected to be coordinated with the opening of the subject development as well as adjacent private developments in order to ensure sufficient ridership for the extension. The Applicant is accommodating a bus stop on V Street at 1st Street in the public space design.

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.

Transportation Demand Management

As part of all major development review cases, DDOT requires the Applicant to produce a comprehensive 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 the following TDM measures:

- Designate a transportation management coordinator, who is responsible for organizing and marketing the TDM plan;
- Provide personalized outreach to new residents regarding transportation options;
- Include transportation alternative information on the property management website;
- Provide an electronic display showing real-time transportation schedules in a common, shared space;
- Provide at least 168 long-term bicycle parking spaces;
- Provide a bicycle repair space on the P1 level of the parking garage;
- Fund a 12-bike Capital Bikeshare station; and
- Offer at least one vehicle parking space in the parking garage to a commercial carshare company.

DDOT finds that the provision of a Capital Bikeshare station is appropriate for inclusion in the TDM plan, but notes that a 19-dock station with 15 bikes is expected to be provided rather than a 12-bike station. In addition, the contribution of a station must include funding for the installation and first year's operation expenses of the station. The current cost for this proffer is approximately $85,000-90,000 but costs are subject to change over time in response to fluctuating labor and equipment charges. The fee for the installation and first year's operation costs shall be determined at the time of issuance of a Certificate of Occupancy for the Project. The Applicant proposes to locate the station along the 2nd Street ROW near the Anacostia Riverwalk Trail. A 19-dock Capital Bikshare station requires a 6' by 50' pad for placement, which the Applicant proposes to install on 2nd Street south of the roundabout. DDOT finds this location appropriate. The placement of the station is discussed in greater detail in the Physical Improvements section.

DDOT considers the proposed measures a good basis to encourage non-auto travel and support the non-auto mode split assumed in the analysis, but the TDM plan requires strengthening through following additional measures:

- Include a total of two electronic displays showing real-time transportation. Displays should be located in the residential lobby and a common, shared space easily visible to restaurant and retail patrons such the Anacostia Riverwalk Promenade;
- Include showers, changing facilities, and lockers for use by retail and restaurant employees to encourage bicycling as required by current zoning regulations
- Unbundle parking costs from the price of lease or purchase of residential units.

Loading Management Plan

As noted above, the Applicant proposes a site design that requires trucks to back into loading berths. In addition, large trucks utilizing the 2nd Street loading berths are likely to maneuver across the concrete buffer and into the 2nd Street cycletrack. The Applicant proposes a Loading Management Plan with the following elements to mitigate these potential impacts:

- Assign an on-site loading management coordinator;
- Require tenants to schedule all deliveries. Deliveries will be scheduled such that deliveries do not exceed dock capacity ;
- Monitor all inbound and outbound truck maneuvers to ensure that vehicular, pedestrian, or cyclist traffic is not blocked;
- Limit trucks larger than WB-40 to utilize the northern most loading berth on 2nd Street; and
- For trucks larger than WB-40, a flagger will assist with inbound and outbound movements to ensure vehicle, bike, and pedestrian traffic is not impeded.

DDOT finds the loading management plan a strong basis for mitigating potential loading impacts. However, the Loading Management Plan should be strengthened to include flagger assistance for all loading deliveries to mitigate the back-in movements for all trucks serving the site, which was a condition of conceptual approval of the curb cuts by the Public Space Committee at the May 25, 2017 hearing.

Physical Improvements

In some cases, physical improvements (i.e., striping changes, turn lanes, traffic signals, additional lanes) can be used to mitigate the impacts of a proposed project or upgrade the transportation network surrounding a Site to support its development. These improvements allow an Applicant to ensure the surrounding infrastructure meets current DDOT standards, supports the proposed program, and exists in optimal condition for future residents and tenants as well as their neighbors who utilize this shared public transportation network and infrastructure.

As noted above, the Applicant proposes to improve the 1st Street, 2nd Street, and V Street public spaces and carthpaths adjacent to the site. A bus pad in V Street and other supportive elements will be included in the streetscape in order to support a future bus stop at the corner of V Street and 1st Street. The Applicant does not propose improvements to the public space on the western side of the 2nd Street ROW south of the roundabout with the exception of construction of a pad for the Capital Bikeshare station and a path to access the station. Creation of this pad will disturb sufficient space within the ROW not proposed for improvement by the Applicant that reconstruction of a greater area of ROW will need to be improved. As such, the Applicant is expected to improve the entirety of the ROW on 2nd Street south of the roundabout.

Additional improvements to the pedestrian network are necessary to provide safe passage to the satellite parking locations needed to accommodate anticipated parking demand generated by the retail and restaurant uses. DDOT requests that the Applicant provide a minimum six (6) foot wide sidewalk connection to all satellite parking locations. Final designs of these improvements will be determined during the public space permitting process.

The Applicant's proposed plan for the Anacostia Riverwalk Trail are generally consistent with the Anacostia Promenade Guidelines, however the following modifications are needed:

- Replace the "rough paving" on the active trail with a paving that provides a visual cue to indicate an intersection between active and passive uses. A "rough paving" with a noticeable texture should not be used in the active trail; and
- Install a narrow band of textured paving at the edge of the active trail where the passive trail intersects with the active trail. This textured paving provides a tactile and visual cue to passive trail users that they are crossing an active trail.

The Applicant proposes to construct the 2nd Street cycletrack between V Street and the Anacostia Riverwalk Trail. This facility will provide a critical connection between the riverfront and the street network, providing excellent bicycle access to the site. As noted above, the cycle track requires a total of 10 feet, inclusive of a proposed two (2) foot buffer and the total carthpath cross section requires 38-40 feet. During the public space permitting process, DDOT will ensure that the above cross section is implemented. If the existing location of the western curbline precludes this cross section, adjustments to the western curbline may be required such that a 38-40 foot cartpath is created on 2nd Street.

As noted in the Loading section, larger trucks accessing the 2nd Street northermost loading berth are expected to traverse into the cycle track. The Applicant is expected to coordinate with DDOT during the public space permitting process to determine an appropriate design of a concrete buffer that provide protection for cyclists using the cycletrack while also accommodating truck maneuvers.

Analysis provided by the Applicant shows that the eastbound approach of the 2nd Street/P Street

intersection is negatively impacted by the subject development. The Applicant proposes to install an eastbound right turn lane with a storage length of 150 feet. DDOT finds this change appropriate to mitigate the action's impacts. Final design of the turn lane will be determined during the public space permitting process.

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