


GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION



d. Policy, Planning, and Sustainability Administration

MEMORANDUM

TO: District of Columbia Board of Zoning Adjustment

FROM: Jamie Henson
Manager, Systems Planning 

DATE: February 16, 2017

SUBJECT: BZA Case No. 19451 - 850 Delaware Ave SW - Ward 6 Emergency Shelter

APPLICATION

The District of Columbia Department of General Services (the "Applicant"), pursuant to 11 DCMR Subtitle X, Chapters 9 and 10, requests special exceptions under the parking requirements of Subtitle C § 703.1, and the RF-use requirements of Subtitle U § 320.1(a), and a variance from the height requirements of Subtitle E § 303.1, to allow the construction of a short-term family housing facility with a ground-floor health care facility in the RF-1 Zone at premises 850 Delaware Avenue, SW (Square 590E, Lot 800). The shelter will contain 50 units with 166 beds, a 7,860 square foot health care facility, 13 vehicle parking spaces, 6 short-term bicycle spaces (3 racks), and 5 long-term bicycle 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 review of the case materials submitted by the Applicant, DDOT finds:

- The Applicant expects that the facility will hold a maximum of 27 staff and 166 beds;
- Access to loading and off-street parking is consistent with DDOT standards;
- The on-street parking supply has the capacity to meet parking demand;
- The site is well-served by transit; and
- Residents will have access to the long-term bicycle parking facilities.

Board of Zoning Adjustment
District of Columbia
CASE NO 19451

DDOT has no objection to the requested variance and special exceptions.

Continued Coordination

The Applicant is expected to continue to work with DDOT outside of the Board of Zoning Adjustment process on the following matters:

- Public space, including curb and gutter, street trees and landscaping, street lights, sidewalks and lead walks, and other features within the public rights of way, are expected to be designed and built or maintained to DDOT standards.

TRANSPORTATION ANALYSIS

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 site is located on an improved lot bounded by Delaware Avenue to the west, H Street to the north, a vacant commercial building to the east, and I Street to the south. A north-south private alley straddles the property line between the site and the vacant commercial building, with ingress from H Street and egress onto I Street. The Applicant proposes to utilize this alley for parking and loading access. The pedestrian access for the shelter is from Delaware Avenue via an accessible path to the main entrance, and the pedestrian access for the health care facility is from I Street.

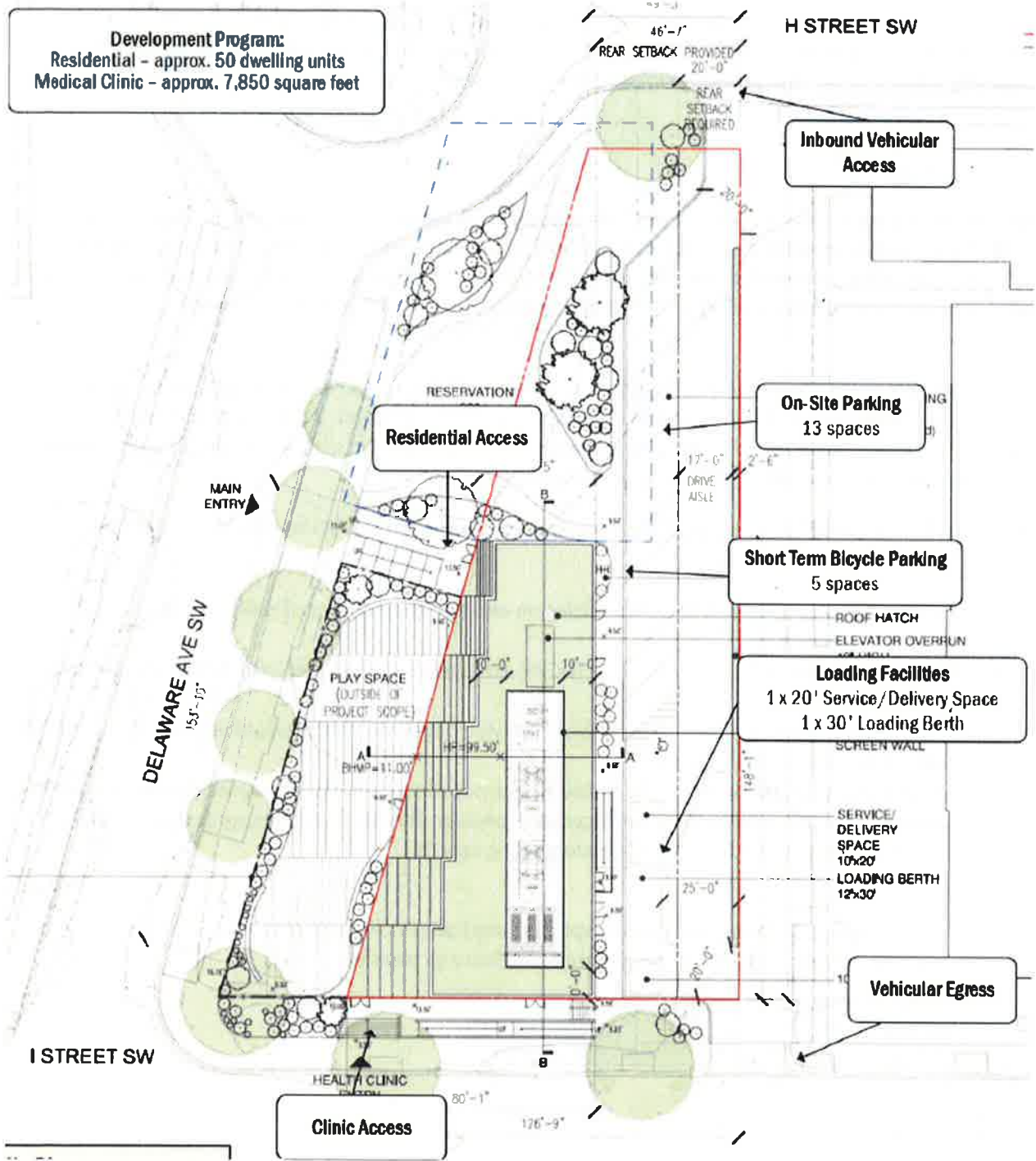


Figure 1 - Site Access (Source: Gorove/Slade)

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.

The Applicant proposes to provide one 30-foot loading berth with a 20-foot service/delivery space, which meets zoning requirements. Loading activities will consist of six to seven deliveries per day, including trash pick-up. The proposed loading area is sufficient to accommodate the project and is consistent with DDOT standards.

Trip Generation

Residential trip generation estimates were developed using Institute of Transportation Engineers (ITE) Land Use Code 220 (Apartments). The medical clinic trip generation was based on ITE Land Use Code 720 (Medical Office). Given that the staff uses do not follow ITE land uses, staff trip generation estimates were developed using information provided by the Applicant. DDOT finds this method to be appropriate for this project.

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.

To inform trip and mode split assumptions, the Applicant provided additional information based on existing policies and observations:

- Residents are not allowed to park vehicles on-site and the number of residents who own vehicles is negligible;
- Children enrolled in DC Public Schools (DCPS) are eligible for DC One Card, which allows students to ride transit free;
- Adult residents will continue to be eligible for Metrorail/ Metrobus subsidies (SmarTrip cards) to assist with transit expenses; and
- At the existing DC General facility, residents are not allowed to store bicycles on-site and staff is unaware of any residents that own bicycles. However, the Applicant has agreed that residents will have access to the long-term bicycle parking spaces.

The Applicant developed the following mode split assumptions informed by current observations at DC General, existing policies, location of the site, and proximity to transit:

User Group	Mode Split			
	Auto	Transit	Bike	Walk
Residential	<1%	90%	0%	10%
Staff	50%	42%	5%	3%

Figure 2 - Expected Mode Spilt for Emergency Shelter (Source: Gorove/Slade)

Land Use	Mode Split			
	Auto	Transit	Bike	Walk
Clinic	30%	20%	5%	45%

Figure 3 - Expected Mode Split for Medical Clinic (Source: Gorove/Slade)

Based on the residential mode split assumptions discussed above, the Applicant predicted that during the AM peak hour, up to 32 non-auto trips will be generated and during the PM peak hour up to 51 non-auto trips would be generated.

Mode	Morning Shift Change (6:45-7:45AM)			Afternoon Shift Change (2:45-3:45PM)			Night Shift Change (10:45-11:45PM)		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	10 veh/hr	6 veh/hr	16 veh/hr	9 veh/hr	10 veh/hr	19 veh/hr	6 veh/hr	9 veh/hr	15 veh/hr
Transit	7 ppl/hr	4 ppl/hr	11 ppl/hr	7 ppl/hr	7 ppl/hr	14 ppl/hr	4 ppl/hr	7 ppl/hr	11 ppl/hr
Bike	1 ppl/hr	1 ppl/hr	2 ppl/hr	1 ppl/hr	1 ppl/hr	2 ppl/hr	1 ppl/hr	1 ppl/hr	2 ppl/hr
Walk	1 ppl/hr	1 ppl/hr	2 ppl/hr	1 ppl/hr	1 ppl/hr	2 ppl/hr	1 ppl/hr	1 ppl/hr	2 ppl/hr

Figure 4 - Peak Staff Trip Generation for Emergency Shelter (Source: Gorove/Slade)

Peak hour for staff trip generation is based on staff shift changes which occur at 7:00am, 3:00pm, and 11:00pm, as these are the hours when the most vehicular trips are expected to be generated by staff use. The trip generation hours observed from 6:45 am to 7:45 am, 2:45 pm to 3:45 pm, and 10:30 pm to 11:30 pm includes the staff shift changes and the peak hours generated by the site uses. Figure 4 shows that a total of 16 vehicular trips are expected to be generated during the AM peak trip generation of the staff, a total of 19 vehicular trips mid-day, and a total of 15 vehicular trips during the PM peak trip generation of the staff.

Using the assumptions discussed above, the Applicant estimated the following level of weekday peak hour trip generation for residents, staff, and the medical clinic:

Mode	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	Residents	0 veh/hr	0 veh/hr	0 veh/hr	0 veh/hr	0 veh/hr	0 veh/hr
Auto	Staff	10 veh/hr	6 veh/hr	16 veh/hr	0 veh/hr	2 veh/hr	2 veh/hr
Auto	Clinic	4 veh/hr	1 veh/hr	5 veh/hr	3 veh/hr	6 veh/hr	9 veh/hr
Auto	Total	14 veh/hr	7 veh/hr	21 veh/hr	3 veh/hr	8 veh/hr	11 veh/hr
Transit	Residents	6 ppl/hr	23 ppl/hr	29 ppl/hr	30 ppl/hr	16 ppl/hr	46 ppl/hr
Transit	Staff	7 ppl/hr	4 ppl/hr	11 veh/hr	0 ppl/hr	2 ppl/hr	2 veh/hr
Transit	Clinic	3 ppl/hr	1 ppl/hr	4 ppl/hr	2 ppl/hr	5 ppl/hr	7 ppl/hr
Transit	Total	16 ppl/hr	28 ppl/hr	44 ppl/hr	32 ppl/hr	23 ppl/hr	55 ppl/hr
Bike	Residents	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr
Bike	Staff	1 ppl/hr	1 ppl/hr	2 veh/hr	0 ppl/hr	0 ppl/hr	0 veh/hr
Bike	Clinic	1 ppl/hr	0 ppl/hr	1 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr
Bike	Total	2 ppl/hr	1 ppl/hr	3 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr
Walk	Residents	1 ppl/hr	2 ppl/hr	3 ppl/hr	3 ppl/hr	2 ppl/hr	5 ppl/hr
Walk	Staff	1 ppl/hr	1 ppl/hr	2 veh/hr	0 ppl/hr	0 ppl/hr	0 veh/hr
Walk	Clinic	8 ppl/hr	1 ppl/hr	9 ppl/hr	4 ppl/hr	11 ppl/hr	15 ppl/hr
Walk	Total	10 ppl/hr	4 ppl/hr	14 ppl/hr	7 ppl/hr	13 ppl/hr	20 ppl/hr

Figure 5 - Peak Trip Generation for Overall Development (Source: Gorove/Slade)

DDOT guidance suggests that a Comprehensive Transportation Review (CTR) be completed if various thresholds for added traffic are met, which could signify the potential for impacts to the surrounding street network. Based on this project's anticipated level of trip generation, a comprehensive vehicle traffic analysis is not required, as thresholds are not met and impacts to the surrounding vehicle network are expected to be minimal. However, the Applicant conducted a vehicle parking occupancy study, which met DDOT's parameters and is consistent with the scale of the action.

Off-Street Vehicle Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, and price/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, and proximity to transit.

Pursuant to 11-C DCMR § 701.5, the proposed uses are required to provide a total of 27 vehicle parking spaces (26 spaces for the emergency shelter and one space for the medical clinic) The Applicant proposes to provide 13 off-street parking spaces. Current policy does not allow residents to park on on-site. Therefore, it is assumed that the 13 off-street parking spaces will be used by staff. Based on information provided by the Applicant, the facility will have a maximum of 27 staff on-site.

The Applicant performed a parking occupancy study on Tuesday, December 6, 2016, to determine if the surrounding street network has the capacity to meet parking demand. The study was conducted within a quarter-mile of the site, at hourly intervals from 5:00 pm to 12:00 am. The study shows that during 10:00 pm when peak occupancy was observed, there are approximately 156 available on-street parking spaces out of 344 spaces, excluding the private parking spaces on 3rd Street. The study concluded that the on-street parking supply has the capacity to meet parking demands generated by the staff use.

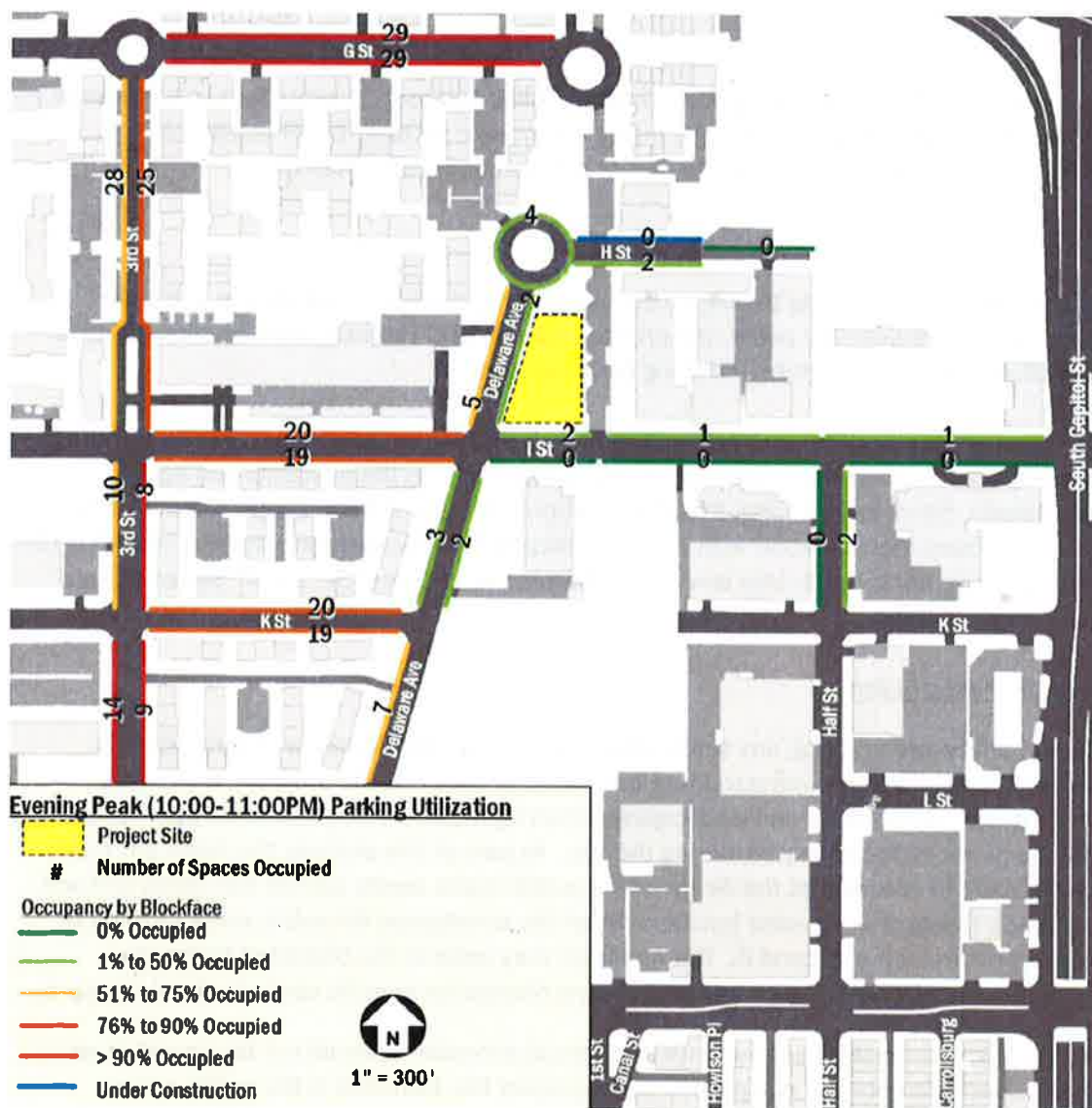


Figure 3 - On-Street Parking Occupancy – 10 PM (Source: Gorove/Slade)

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 0.4 miles to the Waterfront Metro Station, which is served by the Green Line. Additionally, the site is located 0.8 miles from the Federal Center and Capitol South Metro Stations, both of which are served by the Orange, Blue, and Silver Lines. The site also has access to Metrobus service; the closest stop is located at the southeast corner of the 3rd Street and K Street intersection. Buses near the site operate at 8-36 minute headways and include P6, V1, W9, A9, and 74.

Pedestrian Facilities

The District is committed to enhance the 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.

Bicycle Facilities

The District is committed to enhancing bicycle access by ensuring consistent investment in bicycle 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 bicycling trips.

To serve bicycling needs, the Applicant proposes to provide 6 short-term bicycle spaces (3 racks) and 5 long-term bicycle spaces located in a secure hold that is protected from the elements and easily accessible. Additionally, the nearest Capital Bikeshare station is located 0.4 miles from the site on M Street near the Waterfront Metro Station with 22 docks. Bicycle facilities surround the site, including the Anacostia Riverwalk Trail, north-south bike lanes on 4th Street SW, 1st Street SE, and 4th Street SE, and east west bike lanes on I Street.

Streetscape and the 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 gutter, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site. As part of this process, the Applicant must work closely with DDOT 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 circulating around it. The Applicant may refer to the District of Columbia Municipal Regulations and DDOT's Design and Engineering Manual for specific controls of public space.

DDOT's lack of objection to these zoning variance and special exceptions should not be viewed as an approval of public space elements. If any portion of the project has elements in the public space requiring approval, the Applicant is required to pursue a public space permit through DDOT's permitting process. The Applicant may refer to the District of Columbia Municipal Regulations and DDOT's Design and Engineering Manual for specific controls of public space. A summary can be found in the Public Realm Design Manual.

JH:ei