

COMPREHENSIVE TRANSPORTATION REVIEW

1900 HALF STREET SW

WASHINGTON, DC

May 19, 2016

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EXECUTIVE SUMMARY

The following report is a Comprehensive Transportation Review (CTR) for the development at 1337 E Street, SW, located in Lot 15 in Square 666. This report reviews the transportation aspects of the design review application. The Zoning Commission Case Number is 16-06.

The purpose of this study is to evaluate whether the development will generate a detrimental impact to the surrounding transportation network. This evaluation is based on a technical comparison of the existing conditions and two future conditions: 2018 future background conditions without the development, and 2018 future conditions with the development. This report concludes that **the development will not have a detrimental impact** to the surrounding transportation network assuming that all background improvements are executed, all planned site design elements are implemented, and all mitigation measures are incorporated into the design review application.

Proposed Development

The 1900 Half Street SW development proposes to reconfigure an existing 8-story building office building into a mixed-use E-shaped building containing approximately 24,000 sf of retail space and approximately 462 residential units above 324 parking spaces.

The ground- and parking level one- floor retail is designed to provide an engaging street retail experience. The retail located along Water Street will be filled with business whose activity will spill out onto the sidewalk – characterized by a vibrant pedestrian zone. The retail spaces will be accessed through entrances on Water Street that will bring life to the neighborhood that does not presently exist. The residential component will be comprised of floors P1 through nine of the building and will also include numerous interior amenity spaces for residents.

Pedestrian access to the retail and residential entrances will be primarily from Water Street SW, with additional egress along the southern side at the U Street SW right-of-way and along the rear of the building, facing the Anacostia River and an expanded Riverwalk trail that will be constructed on the water's edge along the property. A below-grade parking garage will serve the site, accessed from a new curb cut along T Street SW. The garage will provide 324 parking spaces, which will be

designated primarily for residents and also for retail employees. Loading activities and service vehicle parking would occur within a newly created loading dock accessed from T Street SW, just east of the entrance to the parking garage.

At present, the 1900 Half Street SW site is occupied by an eight-story office building containing approximately 665,000 sf of office space. The existing building is currently operational, with only the fourth floor (approximately 70,000 sf) and a first-floor deli occupied, generating some existing trips. The existing building provides two curb cuts along Water Street for garage entry and exit and three curb cuts along T Street; two that serve a loading area, and one which provides access to an asphalt driveway that abuts the Anacostia River. In the proposed site plan, all of these curb cuts will be removed, with the primary entrance/exit to the below-grade parking garage moved to T Street, where a new curb cut will be placed. The asphalt driveway currently behind the property abutting the Anacostia River will be redesigned as a pedestrian-friendly environment with landscaping designed to connect the development with the river and the proposed Riverwalk trail.

This project also proposes to implement public space improvements along Half Street SW and T Street SW in front and back of the site, including new sidewalks, street trees, and plantings as well as the construction of a Riverwalk trail along the project's riverside.

Parking

The development will include a reconfiguration of the existing 4-story parking garage which is accessed from U Street SW but will have its entry/exit point shifted to T Street SW. The redeveloped parking garage will contain 324 parking spaces accessed from a new curb cut along T Street. The 324 parking spaces are planned to be primarily for residential use, which equates to a parking ratio of 0.47 spaces per unit. This amount of parking is typical for new residential developments in the District, especially ones with multi-modal access such as this project's location. Given that the retail in the building is primarily intended to be neighborhood serving, limited on-site parking was assumed to be reserved for retail customers, but the garage will be available for retail employee parking.

Loading Facilities

The loading area provided in the development is adequate to serve the expected loading demand. Zoning Regulations state that a building of this size must contain two 30' berths and one



20' service space for the retail use in addition to one 55' berth and a 20' service and delivery space for the residential use. The development proposes to use the existing configuration of one 30' retail berth and one 40' residential berth and one 20' service and delivery space, which will be adequate to serve the residential and retail uses of the development. Variances are requested to reduce the number of berths from three to two, reduce the size of the residential berth from 55' to 40', and reduce the number of service/delivery spaces from two to one.

Trash operations will also occur from the loading area at the T Street SW entrance with trash trucks entering the site, picking up, and leaving via the same entrance. Trash facilities are located adjacent to the loading areas.

All trucks can access the loading docks without negatively impacting public space between the docks and the nearest DDOT designated truck routes. All trucks will be able to sufficiently maneuver in and out of the driveway front-in, front-out.

Vehicular Impacts

The report includes an analysis of potential vehicular impacts of the 1900 Half Street SW development and recommendations for improvements and mitigation measures. The following conclusions are reached:

- The existing study area roadways generally operate under acceptable capacity conditions during the morning and afternoon peak hour with the exception of the Half Street/Potomac Avenue SW and 2nd Street/R Street SW intersections which see afternoon commuter cut through traffic that cause some approaches to operate near or above capacity levels. This is more pronounced on gamedays at Nationals Park.
- Existing areas of concern for roadway capacity are primarily focused along the heavily trafficked commuter routes: 2nd Street SW, R Street SW, and Potomac Avenue SW.
- The DC United Stadium background development typically carries a peak hour traffic differing from the peak hour of 1900 Half Street SW and will be constructed after the development is expected to open, leaving this effect negligible.
- Impacts attributable to the development are minimal and have no significant effect on the surrounding roadway network.

- **The 1900 Half Street SW development will have no detrimental impacts to the study area.**

Transit

The following summarizes the site's access to transit and the expected site impacts:

- The site is served by the Metrorail Green Line via the Navy Yard-Ballpark Station (approximately .80 miles from the site) and four Metrobus routes that travel along South Capitol Street and another that travels along O Street SW.
- The Metrobus routes to/from Anacostia have been studied by DDOT and WMATA, with proposed recommendations for improved service including a Metro Express route with limited-stop service.
- Transit-trips generated by the site are not expected to have a detrimental impact on the surrounding transit system.

Pedestrian

Based on an analysis of the existing pedestrian conditions, a review of the background improvements, and planned site design elements, the following conclusions were made:

- The majority of pedestrian facilities south of M Street SW (including the site area) do not provide a pedestrian friendly environment. Some pedestrian facilities may be improved as described in DDOT's *South Capitol Street Corridor Project*.
- Within the Buzzard Point area, pedestrian facilities reflect the industrial origins of the site. The 1900 Half Street SW development will greatly improve pedestrian conditions adjacent to the site by increasing the amount of pedestrian space and adding sidewalks, trees, and plantings as well as providing a new Riverwalk connection along the property's riverside.

Bicycle

The bicycle facilities within the study area were evaluated and the following conclusions were made in regards to the existing and proposed bicycle facilities and the overall impact of the site on bicycle infrastructure:

- In general, bicycle facilities are plentiful north of M Street, but do not exist in the vicinity of the site in the Buzzard Point neighborhood.
- There are several bicycle-focused elements of the development plan that will encourage cycling as a safe



and effective transportation option for residents and patrons of the development, including short- and long-term bicycle parking and streetscape improvements in the form of bicycle lanes.

- Residents of the building will have a secure bicycle room on the first- and parking level one-floor of the building to encourage cycling.
- Given the existing and proposed bicycle infrastructure in the study area, the site-generated bicycle trips will not result in detrimental impacts to the bicycle system.
- A new Capital Bikeshare station is planned to be placed near the site in a location coordinated with DDOT.

Transportation Demand Management

The 1900 Half Street SW development will include a TDM plan in order to help minimize its potential traffic impacts to the surrounding neighborhood. The following TDM plan is based on the DDOT expectations for TDM programs, modified to fit the specific needs of the development and transportation network. The Applicant proposes that upon construction, the project incorporate several TDM measures, including the following:

- The Applicant shall designate a TDM coordinator, who is responsible for organizing and marketing the TDM plan and who will act as a point of contact with DDOT.
- All parking on site will be priced at market rates at minimum. All residential parking will be unbundled from the costs of leasing apartments or purchasing condos.
- Move-in transportation welcome packets will be distributed to each resident upon move-in that includes information such as:
 - Promotion for DDOT's goDCgo website.
 - Brochures on carsharing, ridesharing, and bikesharing programs.
 - Tips on apps and websites to use to navigate public transportation.
 - Maps for nearby bicycle trail routes and bike lanes.
 - Maps for Metro, bus and streetcar routes.
- Bicycle parking will be provided meeting existing regulatory minimums. The bicycle room will include a bike maintenance area with a bike pump and set of tools.



INTRODUCTION

This report is a Comprehensive Transportation Review (CTR) for the proposed 1900 Half Street SW development located in Buzzard Point, in the Southwest quadrant of Washington DC. This CTR is submitted into the Zoning Commission record for this case, as an evaluation of the transportation impacts of construction of the application. The Zoning Commission Case Number is 16-06.

Contained within this report are a review of the of the transportation components of the application and the development's transportation impacts.

PROJECT SUMMARY

The site is located in the Buzzard Point neighborhood, bounded by T Street to the north, the Anacostia River to the east, and Half Street and Water Street to the west, at 1900 Half Street, SW, Lot 15 in Square 666. The development will reconfigure an existing eight-story office building as a mixed-use building containing approximately 24,000 square feet retail space and approximately 462 residential units. As currently utilized, the building only has tenants on the fourth floor along with a first-floor deli. An existing four-story parking garage will be utilized to provide 324 spaces to serve the development.

The ground- and parking level one- floor retail is designed to provide an engaging street retail experience. The retail located along Water Street will be filled with business whose activity will spill out onto the sidewalk – characterized by a vibrant pedestrian zone. The retail spaces will be accessed through entrances on Water Street that will bring new life to the neighborhood. The residential component will be comprised of floors P1 through nine of the building and will also include numerous interior amenity spaces for residents.

The Applicant has committed to improving the space immediately to the east of the site, adjacent to the Anacostia River, with the Anacostia River Trail being integrated into the rear of the development. Additionally, roadway improvements will be made to the immediate area surrounding the site, including Water Street SW, Half Street, and T Street SW, with sidewalks and plantings.

At present, the 1900 Half Street SW site is occupied by an eight-story office building containing approximately 665,000 sf of office space. The existing building is currently operational,

with only the fourth floor (approximately 70,000 sf) and a first-floor deli occupied, generating some existing trips. The existing building provides two curb cuts along Water Street for garage entry and exit and three curb cuts along T Street; two that serve a loading area, and one which provides access to an asphalt driveway that abuts the Anacostia River. In the proposed site plan, all of these curb cuts will be removed, with the primary entrance/exit to the below-grade parking garage moved to T Street, where a new curb cut will be placed. The asphalt driveway currently behind the property abutting the Anacostia River will be redesigned as a pedestrian-friendly environment with landscaping designed to connect the development with the river. A portion of the Anacostia River Trail will be built on this section.

PURPOSE OF STUDY

This report reviews the transportation elements of the development, supplementing material provided in the Site Plan Package that accompanied the Zoning Commission Application. Additionally, this report determines whether the construction of the development will or will not lead to adverse impacts on the transportation network. This is accomplished by comparing one existing condition and two future scenarios: (1) 2018 future background conditions without the development and (2) 2018 future conditions with the development completed.

The methodologies and analyses contained within this report are tailored to reach a conclusion on the impact of the development, and thus this report is not a general neighborhood study that makes recommendations to solve all existing and predicted transportation concerns near the project. Nevertheless, some discussions within this report do discuss non-project generated impacts including planning level suggestions on improvements.

This CTR bases what it considers acceptable conditions for transportation services on typical standards for urban environments. This means that during a roadway's (or other piece of infrastructure) peak hours of use, it is processing users efficiently and generating the most positive impact for resources dedicated. In other words, when a road has the most cars on it, the desire is for that road to be just under (or at) its capacity limit. Unacceptable conditions result when a roadway is not operating efficiently, either through too high of a delay at peak times, or having unused capacity at peak times.

In addition, this CTR attempts to strike a balance between modes of travel when making recommendations on



transportation improvements. For example, roadway widening including turn lanes will typically have negative impacts to pedestrian and bicycle modes, and sometimes to transit. This report approaches its recommendations with this context in mind, only suggesting improvements when it is necessary to mitigate unnecessary conditions on one mode without negatively impacting another.

CONTENTS OF STUDY

This report contains seven sections as follows:

- *Study Area Overview*
This section reviews the area near and adjacent to the proposed project and includes an overview of the site location.
- *Project Design*
This section reviews the transportation components of the development, including the site plan and access. This chapter also contains the proposed Transportation Demand Management (TDM) plan for the site.
- *Trip Generation*
This section outlines the travel demand of the proposed development. It summarizes the proposed trip generation of the project
- *Traffic Operations*
This section provides a summary of the existing roadway facilities and an analysis of the existing and future roadway capacity in the study area. This section highlights the vehicular impacts of the project, including presenting mitigation measures for minimizing impacts.
- *Transit*
This section summarizes the existing and future transit service adjacent to the site, reviews how the project's transit demand will be accommodated, outlines impacts, and presents recommendations as needed.
- *Pedestrian Facilities*
This section summarizes existing and future pedestrian access to the site, reviews walking routes to and from the project site, outlines impacts, and presents recommendations as needed.
- *Bicycle Facilities*
This section summarizes existing and future bicycle access to the site, reviews the quality of cycling routes to and from the project site, outlines impacts, and presents recommendations as needed.

- *Summary and Conclusions*

This section presents a summary of the recommended mitigation measures by mode and presents overall report findings and conclusions.

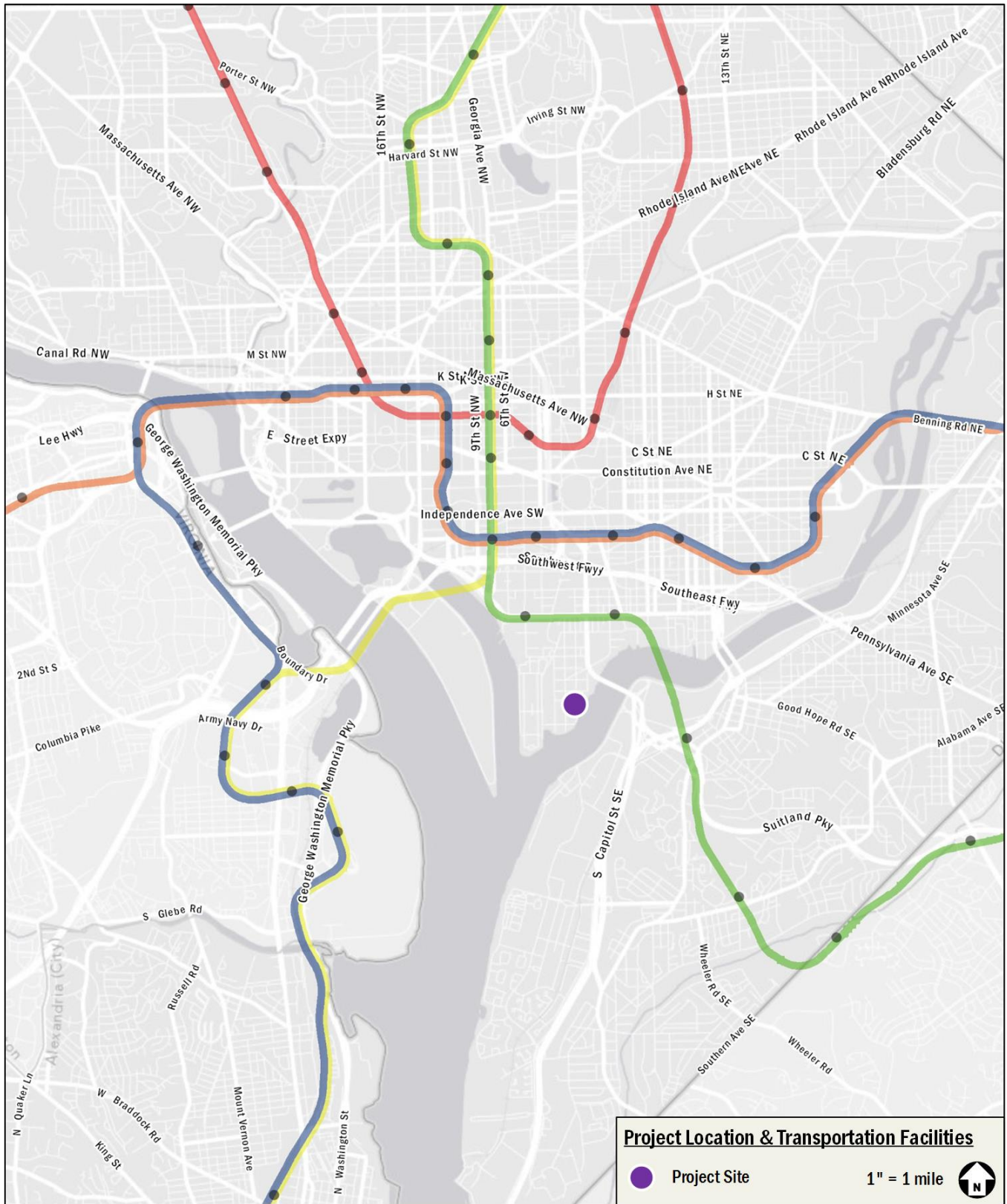


Figure 1: Site Location



STUDY AREA OVERVIEW

This section reviews the study area and includes an overview of the site location, including a summary of the major transportation characteristics of the area and of future regional projects.

The following conclusions are reached within this chapter:

- The site is south of an area with an extensive regional and local transportation system that accommodates the multi-modal vision of the development.
- The area is expected to see a surge in development due to the future location of the nearby DC United Stadium.
- Outside of the site area, walking and cycling conditions are very good. The future improvements from the *South Capitol Street Corridor Project* will bring improvements northeast of the site.
- Pedestrian facilities within the site area itself reflect its use as an industrial area, with no sidewalks or crosswalks. This development will greatly improve the streetscape surrounding the site to allow safer travel for all modes of transportation.

MAJOR TRANSPORTATION FEATURES

Overview of Regional Access

The 1900 Half Street SW site has ample access to regional vehicular- and transit-based transportation options, as shown in Figure 1, that connect the site to destinations within the District, Virginia, and Maryland.

The site is accessible from several Interstate and US highways via South Capitol Street, including I-395, I-695, and I-295. These roadways also connect the site to US-50, I-66, and the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs. All of these roadways bring vehicular traffic within a few miles of the site, at which point arterials and local roads can be used to access the site directly.

The nearest Metro Station to the site is the Navy Yard-Ballpark station on the Green Line, located approximately 9 blocks and 0.8 miles away. The Green Line provides connections to areas in the District and Maryland, and connects Greenbelt, MD with Suitland, MD while providing access to the District core. In addition, the Green Line provides primary access to much of the Southeast quadrant of Washington, DC.

Overall, the site has access to several regional roadways and transit options, making it convenient to travel between the site and destinations in the District, Virginia, and Maryland.

Overview of Local Access

There are a variety of local transportation options near the site that serve vehicular, transit, walking, and cycling trips, as shown on Figure 2, with most of the facilities located north of the site, past M Street SW. The site is served by a local vehicular network that includes several primary and minor arterials such as South Capitol Street, Potomac Avenue SW, and 2nd Street, SW. In addition, there is an existing network of connector and local roadways that provide access to the site.

The Metrobus system provides local transit service in the vicinity of the site. As shown in Figure 2, there are 15 bus routes traveling nearby, including the 74, A9, A42, A46, and A48. The nearest stop is on Half Street SW, near O Street SW, serving the 74 line towards the Convention Center. These bus lines connect the site to many areas of the District including several Metrorail stations serving all six Lines.

There are several existing bike facilities north of the site that connect to areas within the District. The 4th Street SW (north and southbound) and Potomac Avenue SE (eastbound) bike lanes provide connectivity to locations around the study area.

The site is situated along Water Street SW at its intersection with Half Street SW at the in the Buzzard Point neighborhood of the Capitol district, which is currently industrial but is expected to see a surge in development due to the future location of the nearby DC United Stadium. North of the area, a pedestrian network consisting of sidewalks, crosswalks, and curb ramps connects the site to residential, office, and retail destinations within the nearby neighborhoods, such as Navy Yard and Waterfront. Pedestrian facilities within the site area itself do not meet typical DDOT standards. The majority of the roadways in this area do not have sidewalks or crosswalks. A detailed review of existing and proposed pedestrian access and infrastructure is provided in a later section of this report.

Overall, the 1900 Half Street SW site is near an extensive local network that allows for efficient transportation options via transit, bicycle, walking, or vehicular modes.

Car-sharing and Ridesharing

Three car-sharing companies provide service in the District: Zipcar, Enterprise Carshare, and Car2Go. All three services are



private companies that provide registered users access to a variety of automobiles. Of these, Zipcar and Enterprise Carshare have designated spaces for their vehicles. Carshare locations located within a mile of the site are listed in Table 1.

Car-sharing is also provided by Car2Go, which provides point-to-point car sharing. Unlike Zipcar or Enterprise, which require two-way trips, Car2Go can be used for one-way rentals. Car2Go currently has a fleet of vehicles located throughout the District. Car2Go vehicles may park in any non-restricted metered curbside parking space or Residential Parking Permit (RPP) location in any zone throughout the defined “Home Area”. Members do not have to pay the meters or pay stations. Car2Go does not have permanent designated spaces for their vehicles; however availability is tracked through their website, which provides an additional option for car-sharing patrons.

The property is also located within several ridesharing service areas, including Uber, Lyft and Sidecar. These ridesharing services provide an abundance of on-demand transportation options to destinations throughout Washington, DC.

Walkscore

Walkscore.com is a website that provides scores and rankings for the walking, biking, and transit conditions within neighborhoods of the District. Based on this website, the 1900 Half Street SW development has a walk score of 45 (or a “car dependent”), transit score of 59, and a bike score of 66. The site is in an area that provides a poor walking environment compared with than areas to the north. In addition, the more likely walking destinations are north of the site where the walk score tends to be higher.

The 1900 Half Street SW and other planned area developments will help increase the walk and bike scores in the Southwest-Waterfront neighborhood.

FUTURE REGIONAL PROJECTS

There are several District initiatives and background developments located in the vicinity of the site. These planned and proposed projects are summarized below.

Local Initiatives

South Capitol Street Environmental Impact Statement (EIS)

The purpose of the South Capitol Street project is to improve safety, mobility, and accessibility and to support economic development in the vicinity of the project. The project will: (1) correct the design and deteriorating condition of the transportation infrastructure which creates safety concerns for vehicular, pedestrian, and bicycle traffic and transit riders; (2) construct missing critical regional roadway connections of vehicles, pedestrian, and bicycles; (3) correct mobility barriers that limit access to activity centers in the study area; and (4) support economic growth in order to improve the density of employment and residential development.

In the vicinity of Buzzard Point the Preferred Alternative from the Final EIS includes construction of a traffic oval to connect South Capitol Street, Potomac Avenue, R Street, and Q Street. Overall, the area is isolated and under-developed, thus this study develops a framework for development that will help achieve these purposes.

The 1900 Half Street SW CTR took into account the recommendations and guidelines laid out in this report while evaluating the proposed development plan. Future improvements, such as a traffic oval at Potomac Avenue, South Capitol Street, and the Frederick Douglass Bridge will not be in place by the 2018 opening of this development.

moveDC: Multimodal Long-Range Transportation Plan

MoveDC is an implementation-based plan that provides a vision for the future of DC’s transportation system. As the District grows, so must the transportation system, specifically in a way that expands transportation choices while improving the reliability of all transportation modes.

Table 1: Summary of Carshare Locations

Carshare Location	Number of Vehicles
Zipcar	
3rd Street SW and K Street SW	3 vehicles
4th Street SW and I Street SW (On-street)	2 vehicles
Enterprise Carshare	
N Place SE and 1st Street SE (Nationals Park)	5 vehicles
Total	10 vehicles



The *moveDC* report outlines recommendations by mode with the goal of completing them by 2040. The plan hopes to achieve a transportation system for the District that includes:

- 70 miles of high-capacity transit (streetcar or bus)
- 200 miles of on-street bicycle facilities or trails
- Sidewalks on at least one side of every street
- New street connections
- Road management/pricing in key corridors and the Central Employment Area
- A new downtown Metrorail loop
- Expanded commuter rail
- Water taxis

This report also included an update to the *Bicycle Master Plan* and *Pedestrian Plan*, which was used to determine improvements within the study area not covered by the previously discussed studies.

Planned Developments

There is one project approved or under construction located in the vicinity of the proposed development. Figure 3 shows the location of this development in relation to the proposed development.

DC United Stadium

DC United is relocating their Stadium to the Buzzard Point neighborhood, generally bounded by R Street/Potomac Avenue to the north, T Street to the south, 2nd Street to the west, and 1st Street/Half Street to the east. This project is expected to act as a catalyst for further redevelopment in the Buzzard Point neighborhood, but is not expected to be completed prior to the opening of the 1900 Half Street development.

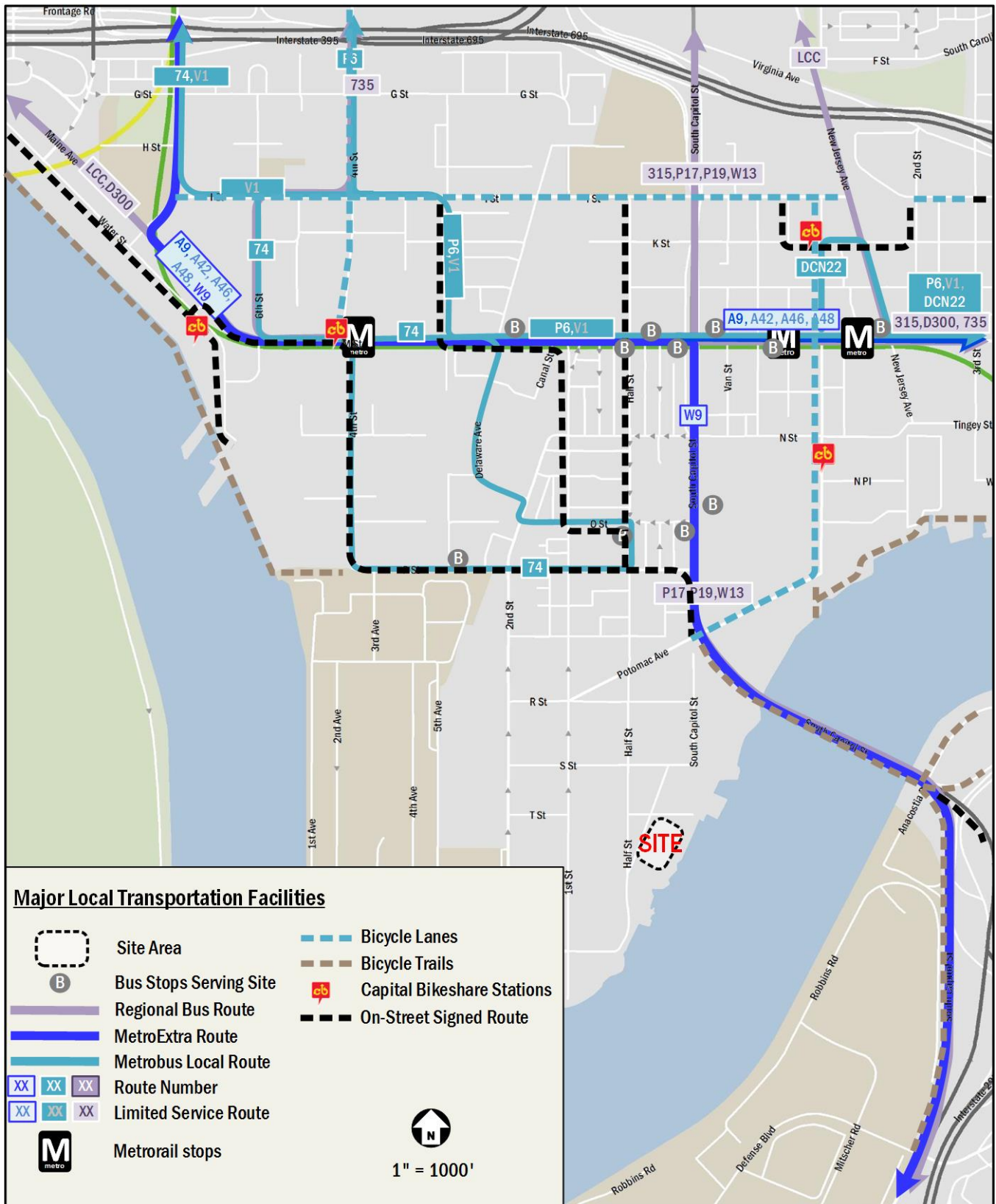


Figure 2: Major Local Transportation Facilities

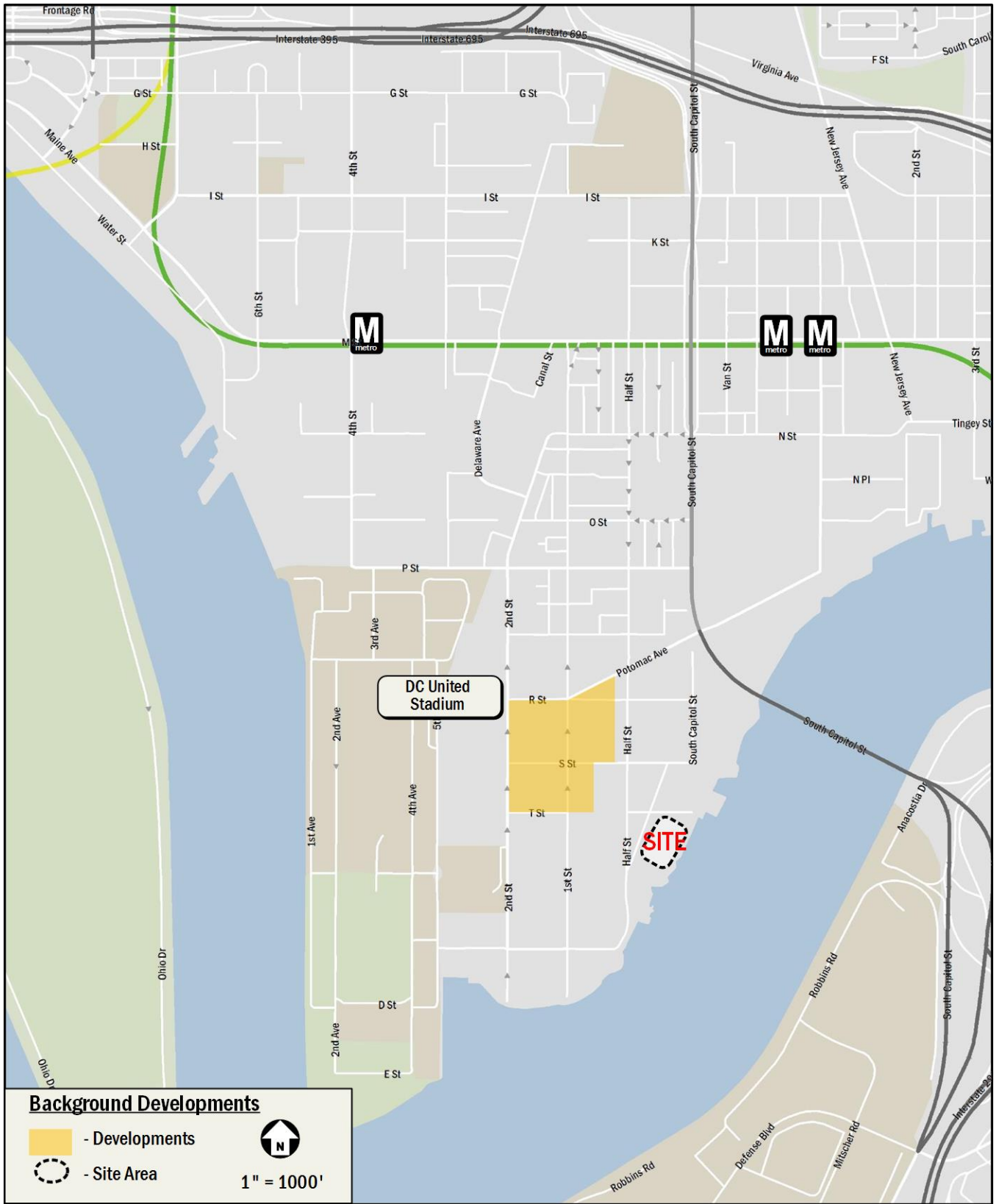


Figure 3: Planned Development Map



PROJECT DESIGN

This section reviews the transportation components of the 1900 Half Street SW development, including the proposed site plan and access. It includes descriptions of the site's vehicular access, loading, and parking. This chapter also includes the project's Transportation Demand Management (TDM) plan.

OVERVIEW

The 1900 Half Street SW development proposes to redevelop an existing eight-story office building with a mixed-use property containing 24,032 sf of retail space and approximately 462 residential units. Figure 4 shows the site's ground floor plan.

The ground- and parking level one- floor retail is designed to provide an engaging street retail experience. The retail located along Water Street will be filled with business whose activity will spill out onto the sidewalk – characterized by a vibrant pedestrian zone. The retail spaces will be accessed through entrances on Water Street that will bring life to the neighborhood that does not currently exist. The residential component will be comprised of floors P1 through nine of the building and will also include numerous interior amenity spaces for residents.

Pedestrian access will be from Water Street and from the future Anacostia Riverwalk Trail in the rear of the development. The existing below-grade parking garage will serve the site, accessed from a new curb cut to be built at T Street. The garage will provide 324 parking spaces (312 standard spaces and 12 standard spaces), which will be designated primarily for residents and also for retail employees. Loading activities and service vehicle parking would occur within a newly created loading dock accessed along T Street, east of the parking garage entrance.

At present, the 1900 Half Street SW building is occupied on the fourth floor and ground floor deli, with a below-grade parking garage. The existing building is currently operational and generates some trips to the neighborhood. The building in its current form contains two curb cuts along U Street that serve as an entry/exit to the parking garage. Additionally, three curb cuts exist on T Street, of which two serve as an entry/exit to the loading area and one serves as access to an asphalt driveway

running along the Anacostia River. These five curb cuts will be eliminated in the proposed redevelopment.

This project also proposes to implement public space improvements along the Anacostia River in rear of the site, including new street trees, plantings, bike racks, and streetlights.

PARKING

As stated above, the development will include utilizing the below-grade parking garage. Currently, the parking garage contains 691 spaces. Under the redevelopment of the building, parts of the garage will be used for retail on the P1 level. The redeveloped parking garage will contain 324 parking spaces new curb cuts along T Street. The 324 parking spaces are planned to be primarily for residential use, which equates to a parking ratio of 0.47 spaces per unit. This amount of parking is typical for new residential developments in the District, especially ones with multi-modal access such as this project's location. Given that the retail in the building is primarily intended to be neighborhood serving, limited on-site parking was assumed to be reserved for retail customers, but the garage will be available for retail employees.

LOADING

The loading area provided in the development is adequate to serve the expected loading demand. Zoning Regulations state that a building of this size must contain two 30' berths and one 20' service space for the retail use in addition to one 55' berth and a 20' service and delivery space for the residential use. The development proposes to use the existing configuration of one 30' retail berth and one 40' residential berth and one 20' service and delivery space, which will be adequate to serve the residential and retail uses of the development. Variances are requested to reduce the number of berths from three to two, reduce the size of the residential berth from 55' to 40', and reduce the number of service/delivery spaces from two to one.

Trash operations will also occur from the loading area at the T Street SW entrance with trash trucks entering the site, picking up, and leaving via the same entrance. Trash facilities are located adjacent to the loading areas.

All trucks can access the loading docks without negatively impacting public space between the docks and the nearest DDOT designated truck routes. All trucks will be able to sufficiently maneuver in and out of the driveway. Maneuvering



diagrams showing truck swept path analyses for all loading berths, under proposed public space and roadway operational conditions, are contained in the technical appendix of this document.

This report is recommending that the development does not need an extensive loading management plan, because loading operations occur on-site, there are sufficient docks, and the building is close to several major truck routes. Thus, the loading management plan for the development should include the following elements:

- A loading facility manager will be designated. The loading facility manager will coordinate with residents and retail vendors to schedule deliveries.
- All tenants and residents will be required to schedule deliveries that utilize the loading docks – defined here as any loading operation conducted using a truck 20' in length or larger.

BICYCLE PARKING

A total of 282 bicycle spaces will be provided in the development. Currently, there is no existing bicycle parking. The development calls for a total of 271 residential bicycle spaces, of which 248 will be long-term secure bicycle spaces and 23 being short-term spaces. The retail portion will consist of four long-term secure bicycle spaces and seven short-term spaces. The majority of bicycle parking spaces will be on parking level 1, with additional residential spaces in a secure bicycle room on the first level of the building, adjacent to an exit. Included in the development is a bicycle repair facility. The development will meet the existing requirements to provide bicycle parking for the site (combination of the DC Zoning Regulations and the Bicycle Commuter and Parking Expansion Act of 2007). The residential component is required to provide 1 space for every 3 units, or 152 spaces. In addition, a Capitol Bikeshare station is planned to be located on site in a spot determined in coordination with DDOT.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM is the application of policies and strategies used to reduce travel demand or to redistribute demand to other times or spaces. TDM typically focuses on reducing the demand of single-occupancy, private vehicles during peak period travel times or on shifting single-occupancy vehicular demand to off-peak periods.

The 1900 Half Street SW development will include a TDM plan in order to help minimize its potential traffic impacts to the surrounding neighborhood. The following TDM plan is based on the DDOT expectations for TDM programs, modified to fit the specific needs of the development and transportation network. The Applicant proposes that upon construction, the project incorporate several TDM measures, including the following:

- The Applicant shall designate a TDM coordinator, who is responsible for organizing and marketing the TDM plan and who will act as a point of contact with DDOT.
- Move-in transportation welcome packets will be distributed to each resident upon move-in that includes information such as:
 - Promotion for DDOT's goDCgo website.
 - Brochures on carsharing, ridesharing, and bikesharing programs.
 - Tips on apps and websites to use to navigate public transportation.
 - Maps for nearby bicycle trail routes and bike lanes.
 - Maps for Metro, bus and streetcar routes.
- Bicycle parking will be provided exceeding existing regulatory minimums. The bicycle room will include a bike maintenance area with a bike pump and set of tools.



Development Program:
Residential - approx. 462 Dwelling Units
Retail - approx. 24,032 square feet

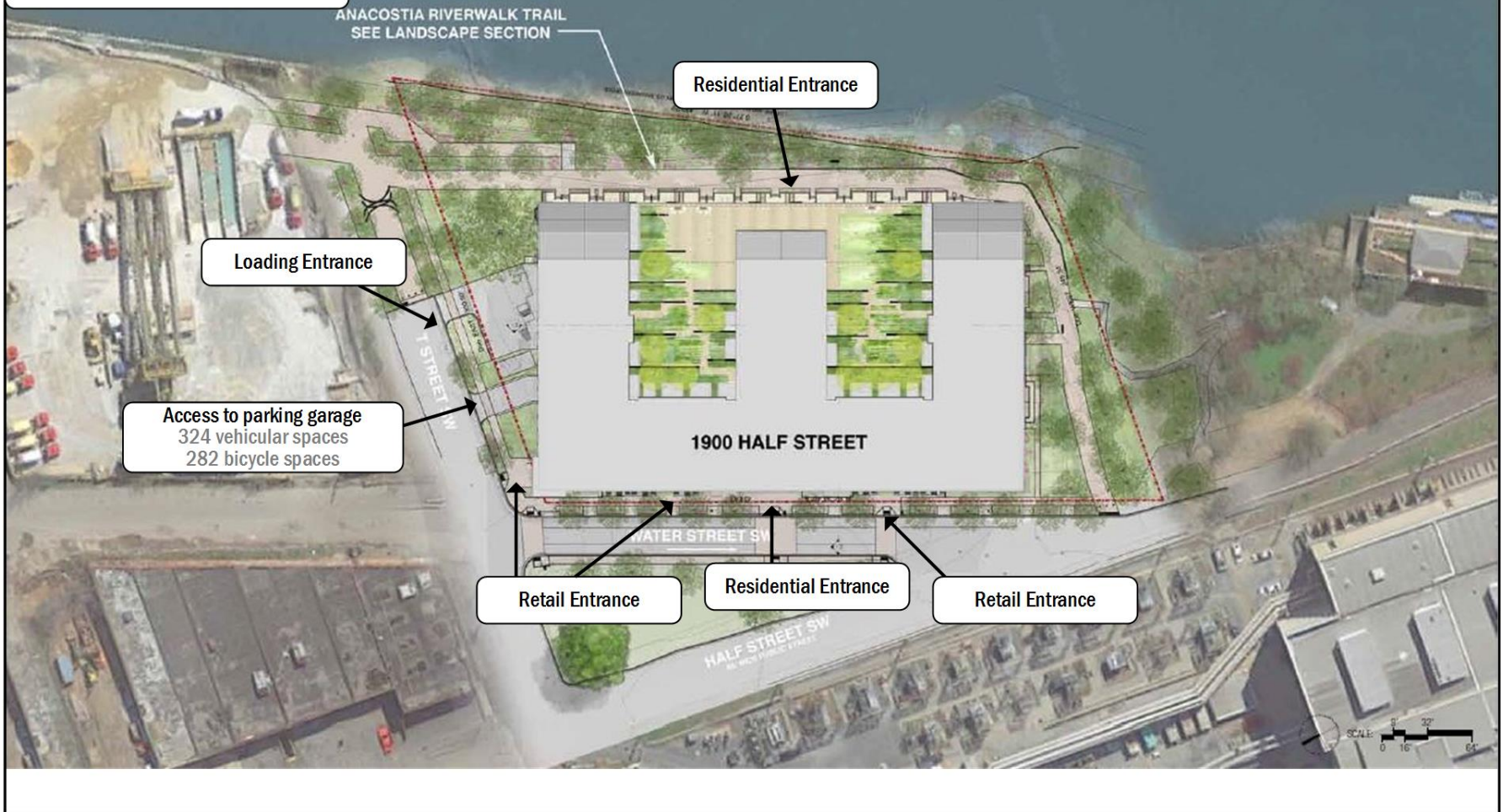


Figure 4: Site Plan



TRIP GENERATION

This section outlines the transportation demand of the proposed 1900 Half Street SW development. It summarizes the projected trip generation of the site by mode, which forms the basis for the chapters that follow.

Traditionally, weekday peak hour trip generation is calculated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 9th Edition. This methodology was supplemented to account for the urban nature of the site (the *Trip Generation Manual* provides data for non-urban, low transit use sites) and to generate trips for multiple modes.

Residential trip generation was calculated based on ITE land use 220, Apartment, with mode splits developed using other nearby CTR as a basis. This analysis does not take into account the internal capture calculations, pass-by, and diverted link trip percentages used in that study because those reductions are already included in the peak hour commuting mode splits and

including them would result in an underestimation of the expected future residential vehicle trip volumes.

Retail trip generation was calculated based on ITE land use 820, Shopping Center. Given that the retail in the 1900 Half Street SW is intended to be smaller, more neighborhood oriented retailers, a similar mode split to that proposed for the residential was used. This was noted to be similar to other retail areas in the District (such as the U Street corridor), rather than the higher automotive mode splits used in other nearby CTR that would be more appropriate for destination retail. As with the residential trip generation, this analysis does not take into account the internal capture calculations, pass-by, and diverted link trip percentages used in that study because those reductions are already included in the peak hour commuting mode splits and including them would result in an underestimation of the expected future vehicle trip volumes.

A summary of the multimodal trip generation is provided in Table 2. The development will see 150 trips in the AM peak hour and 207 trips in the PM peak hour. Detailed calculations are included in included in the Technical Appendix.

Table 2: Trip Generation Summary

Trip Gen Summary by Land Use/Mode							
Mode	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	Apartments	27 veh/hr	111 veh/hr	138 veh/hr	106 veh/hr	57 veh/hr	163 veh/hr
<u>Auto</u>	<u>Retail</u>	<u>7 veh/hr</u>	<u>5 veh/hr</u>	<u>12 veh/hr</u>	<u>22 veh/hr</u>	<u>22 veh/hr</u>	<u>44 veh/hr</u>
Auto	Total	34 veh/hr	116 veh/hr	150 veh/hr	128 veh/hr	79 veh/hr	207 veh/hr
Transit	Apartments	16 ppl/hr	62 ppl/hr	78 ppl/hr	60 ppl/hr	32 ppl/hr	92 ppl/hr
<u>Transit</u>	<u>Retail</u>	<u>8 ppl/hr</u>	<u>4 ppl/hr</u>	<u>12 ppl/hr</u>	<u>23 ppl/hr</u>	<u>24 ppl/hr</u>	<u>47 ppl/hr</u>
Transit	Total	24 ppl/hr	66 ppl/hr	90 ppl/hr	83 ppl/hr	56 ppl/hr	139 ppl/hr
Bike	Apartments	3 ppl/hr	10 ppl/hr	13 ppl/hr	10 ppl/hr	5 ppl/hr	15 ppl/hr
<u>Bike</u>	<u>Retail</u>	<u>3 ppl/hr</u>	<u>1 ppl/hr</u>	<u>4 ppl/hr</u>	<u>8 ppl/hr</u>	<u>8 ppl/hr</u>	<u>16 ppl/hr</u>
Bike	Total	6 ppl/hr	11 ppl/hr	17 ppl/hr	18 ppl/hr	13 ppl/hr	31 ppl/hr
Walk	Apartments	3 ppl/hr	10 ppl/hr	13 ppl/hr	10 ppl/hr	5 ppl/hr	15 ppl/hr
<u>Walk</u>	<u>Retail</u>	<u>3 ppl/hr</u>	<u>1 ppl/hr</u>	<u>4 ppl/hr</u>	<u>8 ppl/hr</u>	<u>8 ppl/hr</u>	<u>16 ppl/hr</u>
Walk	Total	6 ppl/hr	11 ppl/hr	17 ppl/hr	18 ppl/hr	13 ppl/hr	31 ppl/hr



TRAFFIC OPERATIONS

This section provides a summary of the existing roadway facilities, as well as an analysis of the existing and future roadway capacity in the study area. Included is an analysis of potential vehicular impacts of the 1900 Half Street SW development and recommendations for improvements and mitigation measures.

The purpose of the capacity analysis is to:

- Determine the existing capacity of the study area roadways;
- Determine the overall impact of the 1900 Half Street SW development on the study area roadways;
- Discuss potential improvements and mitigation measures to accommodate the additional vehicular trips; and
- Evaluate the proposed roadway network to determine if adequate capacity is provided in the future.

This analysis was accomplished by determining the traffic volumes and roadway capacity for the following scenarios:

- 2016 Existing Conditions
- 2018 Background Conditions (without the 1900 Half Street SW development)
- 2018 Total Future Conditions (with the 1900 Half Street SW development)

The capacity analysis focuses on the morning and afternoon commuter peak hours, as determined by the existing traffic volumes in the study area.

The following conclusions are reached within this chapter:

- The existing study area roadways generally operate under acceptable conditions during the morning and afternoon peak hours.
- Existing areas of concern for roadway capacity are primarily focused along the heavily trafficked routes used for commuting or access to Nationals Park: Half Street SW and Potomac Avenue SW.
- The addition of the trips generated by the background developments and inherent growth on the study area roadways has an impact on the study area roadways which can be mitigated by recommendations.

- Impacts attributable to the development are minimal and have no significant effect on the surrounding roadway network.
- The 1900 Half Street SW development will have no detrimental impacts to the study area. One study intersection movement will under unacceptable conditions following the construction of the development that does not also operate under unacceptable conditions in the future without the proposed development.
- Recommendations for lane use and control are included for study intersections and recommended cross-sections of streets immediately adjacent to the site are reviewed as well.

ROADWAYS

As outlined previously, regionally the site is accessible from several Interstate and US highways via South Capitol Street, including I-395, I-695, and I-295. These roadways also connect the site to I-66, US-50, and the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs. All of these roadways bring vehicular traffic within a few miles of the site, at which point arterials and local roads can be used to access the site directly.

STUDY AREA, SCOPE, & METHODOLOGY

This section outlines the vehicular trips generated in the study area along the vehicular access routes and defines the analysis assumptions.

The scope of the analysis contained within this report was discussed with and agreed to with the District Department of Transportation (DDOT). The general methodology of the analysis follows national and DDOT guidelines on the preparation of transportation impact evaluations of site development.

Capacity Analysis Scenarios

The vehicular analyses are performed to determine if the proposed development of the 1900 Half Street SW development will lead to adverse impacts on traffic operations. (A review of impacts to each of the other modes is outlined later in this report.) This is accomplished by comparing two future scenarios: (1) without the proposed application (referred to as the Background conditions) and (2) with the application approved and constructed (referred to as the Future conditions).



Specifically, the roadway capacity analysis examined the following scenarios:

- Existing Conditions
- 2018 Background Conditions (without the 1900 Half Street SW development)
- 2018 Total Future Conditions (with the 1900 Half Street SW development)

The capacity analysis focuses on the morning and afternoon commuter peak hours, as determined by the existing traffic volumes in the study area.

Study Area

The study area of the analysis is a set of intersections where detailed capacity analyses are performed for the scenarios listed above. The set of intersections decided upon during the study scoping process with DDOT are those intersections most likely to have potential impacts or require changes to traffic operations to accommodate the proposed development. Although it is possible that impacts will occur outside of the study area, those impacts are not significant enough to be considered a detrimental impact nor worthy of mitigation measures.

Based on the projected future trip generation and the location of the site access points, the following intersections were chosen for analysis:

1. Half Street SW & T Street SW
2. Water Street SW & T Street SW
3. Half Street SW & S Street SW
4. Half Street SW & Potomac Avenue SW
5. 2nd Street SW & R Street SW
6. 2nd Street SW & V Street SW
7. 2nd Street SW & P Street SW
8. Half Street SW & Water Street SW

Figure 5 shows a map of the study area intersections.

Traffic Volume Assumptions

The following section reviews the traffic volume assumptions and methodologies used in the roadway capacity analyses.

Existing Traffic Volumes

The existing traffic volumes are comprised of turning movement count data. For this study, new counts used to assemble existing traffic volumes. At the intersection Half

Street SW and Water Street SW, counts were balanced based on adjacent intersection data. Counts were taken from 6:30-9:00 AM and from 4:00-7:00 PM, on a typical weekday, when DC schools are in session.

The results of the traffic counts, including the peak hour traffic volumes, are shown in Figure 5

2018 Background Traffic Volumes (without the 1900 Half Street SW Development)

The traffic projections for the 2018 Background conditions consist of the existing volumes with traffic generated by developments expected to be completed prior to the development (known as background developments).

Following national and DDOT methodologies, a background development must meet the following criteria to be incorporated into the analysis:

- Be located in the study area, defined as having an origin or destination point within the cluster of study area intersections;
- Have entitlements; and
- Have a construction completion date prior or close to the proposed development.

There is one nearby development (DC United Stadium) listed previously in the report. It will not however, be included in the 2018 Background scenario as it is not expected to generate regular peak hour trips and is not expected to be operational prior to the development's opening.

While the background developments typically represent local traffic changes, regional traffic growth is usually accounted for using percentage growth rates. However, an examination of ADT volumes over recent years noted that vehicular volumes on study area roadways have not grown. Thus, a conservative regional traffic growth of 0.5% annually was assumed on study area roadways. The Background traffic volumes are shown in Figure 8.

2018 Future Traffic Volumes (with the 1900 Half Street SW Development)

The 2018 Future traffic volumes consist of the 2018 Background volumes with the addition of the traffic volumes generated by the proposed development (site-generated trips). Thus, the 2018 Future traffic volumes include traffic generated by: the existing volumes, background developments, the



inherent growth on the study area roadways, and the proposed 1900 Half Street SW development.

Existing traffic volumes and travel patterns in the study area were analyzed in order to determine the trip distribution for the site-generated trips. Based on this review and the existing site access locations, the site-generated trips were distributed through the study area intersections. Figure 9 shows the site-generated trips and Figure 10 shows the future with development volumes.

Geometry and Operations Assumptions

The following section reviews the roadway geometry and operations assumptions made and the methodologies used in the roadway capacity analyses.

Existing Geometry and Operations Assumptions

The geometry and operations assumed in the existing conditions scenario are those present when the main data collection occurred. Gorove/Slade made observations and confirmed the existing lane configurations and traffic controls at the intersections within the study area. All intersections within the study area were unsignalized. The lane configurations and traffic controls for the Existing conditions are shown in Figure 6.

As explained earlier, counts were not taken at the intersection of Half Street and Water Street SW, due to the proximity of adjacent intersections where counts were taken. Volumes were balanced between these adjacent intersections to determine the counts at Half Street and Water Street SW.

2018 Background Geometry and Operations Assumptions

Following national and DDOT methodologies, a background improvement must meet the following criteria to be incorporated into the analysis:

- Be funded; and
- Have a construction completion date prior or close to the proposed development.

While no contemplated improvements in the study area meet these criteria for background improvements, the following geometric improvements to the study area roads were included in the 2018 Background conditions:

- 2nd Street SW

- Conversion from one-way street (two southbound lanes) to two-way street (one northbound lane, one southbound lane) from Q Street SW to V Street SW;

The above update was agreed to be considered for this CTR by Gorove/Slade and DDOT. The lane configurations and traffic controls for the 2018 Background conditions are shown in Figure 7.

2018 Future Geometry and Operations Assumptions

The lane configurations for the 2018 Future conditions are based on the lane configurations for the 2018 Background conditions. The lane configurations and traffic controls for the 2018 Future conditions are shown in Figure 7.

Analysis Methodology

Following DDOT guidelines, the capacity analyses were performed using *Highway Capacity Manual* (HCM) methodologies. For unsignalized intersections, the HCM calculates the delay experienced by drivers traveling through an intersection. This delay is associated with vehicles slowing in advance of an intersection, the time spent stopped at an intersection, the time spent as vehicles move up in the queue, and the time needed to vehicles to accelerate to the speed limit. Traffic delay also results from the interaction of vehicles, primarily in a state where the traffic volumes exceed the available capacity.

The results of these delay calculations is a computed average delay (seconds per vehicle) for each approach and a Level of Service (LOS) grade. At unsignalized intersections, the approaches controlled by a stop-sign have a calculated average delay and associated LOS. For all-way stop intersections, an overall average delay and LOS are also determined. For one- or two-way stop intersections, an average delay and LOS are also calculated for vehicles turning across a free-flowing approach, as the driver must yield to oncoming traffic. The major through movements and right-turns on free-flowing approaches at one- or two-way stop controlled intersections are assumed to operate with no delay.

For this report, the analysis was performed using the *Synchro, Version 9.1* software package, which is based on the HCM methodologies. As stated previously, the weekday morning and afternoon peak hours were analyzed in the Existing, Background, and Future conditions. The *Synchro* models were compiled using signal timings provided by DDOT and with lane configurations and traffic volumes collected by Gorove/Slade.



Capacity Analysis Results

The results of the capacity analyses are expressed in level of service (LOS) and delay (seconds per vehicle) for each approach.

The capacity analysis results are split into three categories:

1. Intersections that operate at acceptable conditions during all time periods and scenarios analyzed. This study defines acceptable conditions as meeting LOS grade D or better for the overall intersection and each intersection approach.
2. Intersections that operate at unacceptable conditions regardless of the development of the project. This is either because the unacceptable conditions occur today, or unacceptable conditions occur in the future regardless of construction of the project.
3. Intersections that operate at unacceptable conditions due to construction of the project.

As shown in Figure 11 and Figure 12, the majority of the study area intersections operate under acceptable conditions during the morning and afternoon peak hour. Also shown in Table 3 and Table 4 are the LOS and Queue Lengths for each approach of the eight study intersections over the various scenarios. **One of the study area intersections operate at unacceptable conditions due to construction of the 1900 Half Street SW development.** However, the following intersections operate under unacceptable conditions during one or more peak hour, regardless of construction of the 1900 Half Street SW:

- Half Street SW and Potomac Avenue SW
During the afternoon peak hour, the southbound Half Street approach operates at or above acceptable levels during all scenarios. This can be contributed to a cut-through route taken by commuters to reach the South Capitol Street bridge (most noticeable prior to Nationals baseball games). **The capacity issues observed at this intersection are not a direct result of the development.**
- 2nd Street SW and R Street SW
The westbound approach of R Street operates beyond an acceptable level of delay under Existing, Background, and Future Conditions during the afternoon peak hour. This can be contributed to a cut-through route taken by commuters to reach the South Capitol Street bridge (most notably prior to Nationals baseball games). **The capacity issues observed at this intersection are not a direct result of the development.**

Generally speaking, the proposed development is considered to have an impact at an intersection within the study area if the capacity analyses show an LOS E at an intersection or along an approach in the Future conditions where one does not exist in the Background conditions. Following these guidelines, the proposed 1900 Half Street SW development will not have any significant additional impacts to the roadway network. The following section outlines potential improvements that could be undertaken outside the scope of this study to improve delays that are seen with or without the development of the 1900 Half Street SW development.

POTENTIAL IMPROVEMENTS

Two intersection in the study area were noted to operate under unacceptable conditions, at Half Street SW and Potomac Avenue SW and at 2nd Street SW and R Street SW. The unacceptable conditions at these intersections occur in scenarios with and without the development of the site—these capacity issues will occur regardless of development but are magnified with the site-generated traffic added. Although the development does not create the conditions at any of the study intersections, this section of the report reviews potential improvements that could be undertaken at the study intersections, as well as improvements recommended to mitigate the site impacts.

In addition, the lack of existing pavement markings, curbs, signage, and other traffic control measures in the immediate vicinity of the site propagated the need for recommended cross-sections for implementation near the site. These are also reviewed below.

Suggested Improvements for DDOT to Review

- Half Street SW and Potomac Avenue SW
The future unacceptable operation of this intersection can be improved by converting the intersection to an all-way stop control. In this change, the significant PM peak hour delay seen for southbound traffic is reduced dramatically, with three of the four approaches recording Levels of Service of C or better. While the eastbound approach exhibits a level of service “E” from this mitigation, the traffic attributed to this is primarily related to game day traffic during Nationals games. As this mitigation would also be required for the AM peak hour, the delays are also reduced during this time period.



- 2nd Street SW and R Street SW

The future (with and without development) unacceptable operation of the PM peak hour westbound approach can be mitigated with the conversion of the intersection into an all-way stop control and the addition of a left turn lane for traffic southbound on 2nd Street SW. In this mitigation, delays were removed in the westbound direction and none of the approaches exhibited an LOS considered unacceptable.

- T Street SW Cross-section

The cross-section of T Street SW adjacent to the site will need to accommodate vehicles entering and exiting the development's parking garage, truck turning maneuvers entering and exiting the loading facilities, bicycle traffic approaching the Riverwalk trail on the east side of the development, as well as pedestrians on the adjacent sidewalks. As such, it will be designed to accommodate two-way traffic within 40 feet of paved surface east of Water Street and 30 feet of paved surface west of Water Street. This is expected to be delineated into a 10 foot bidirectional bicycle lane along the north curb and two 11 foot through lanes east of Water Street. It is recommended that the remaining 8 feet of paved width be allocated to curbside parking in the between the garage entrance and Water Street. West of Water Street, it is

recommended that the 30 foot paved width of T Street accommodate two 11 foot travel lanes and one 8 foot parking lane.

- Water Street SW Cross-section

The cross-section of Water Street SW adjacent to the site will be designed to accommodate pick-up/drop-off activities for the site as well as on-street parking and pedestrians on the adjacent sidewalks. It is expected to accommodate one-way traffic northbound within 28 feet of paved surface with a 12 foot through lane bordered by eight (8) foot parking lanes. It should be noted that the existing sidewalk on the east side of Water Street is expected to be widened from 10 feet to 22 feet with the development.

- Half Street SW Cross-section

As the primary through route adjacent to the site, the cross-section of Half Street SW adjacent to the site will be designed to accommodate two-way through traffic as well as on-street parking and pedestrians on the adjacent sidewalks. 38 feet of paved surface is planned to serve Half Street. This is recommended to be delineated into two 11 foot travel lanes and two 8 foot parking lanes on either curb.

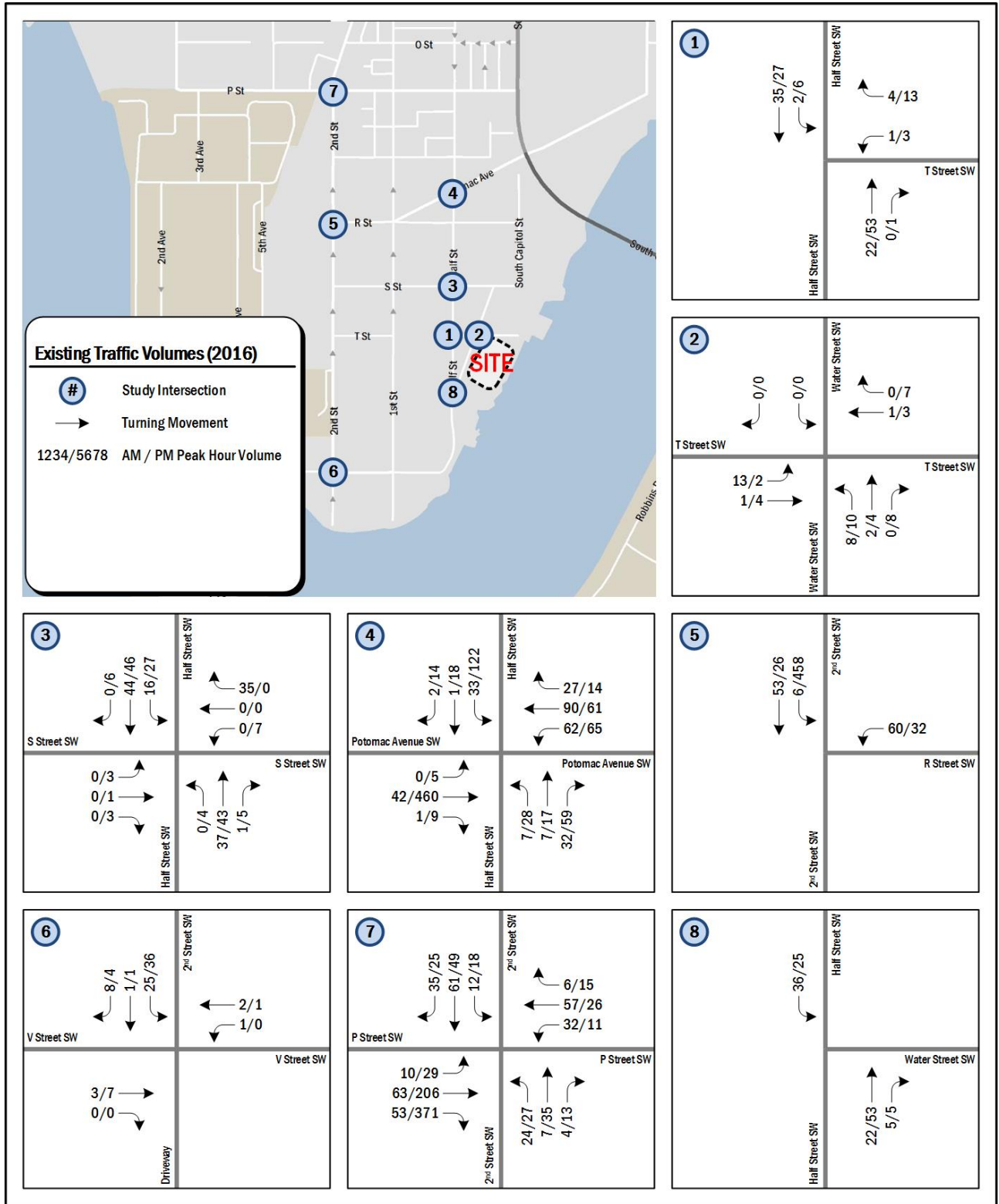


Figure 5: Study Intersections and Existing Volumes

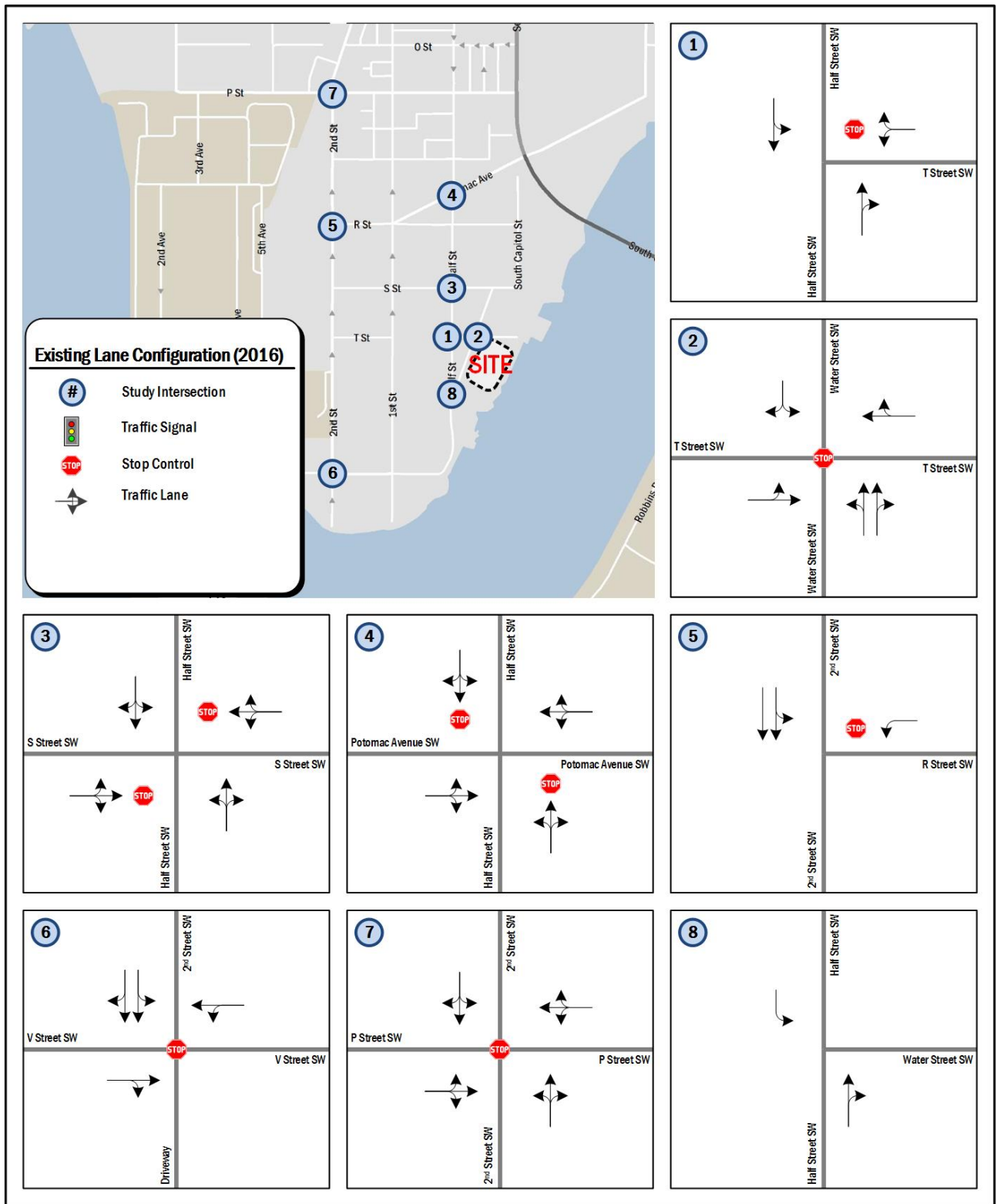


Figure 6: Existing Lane Configuration

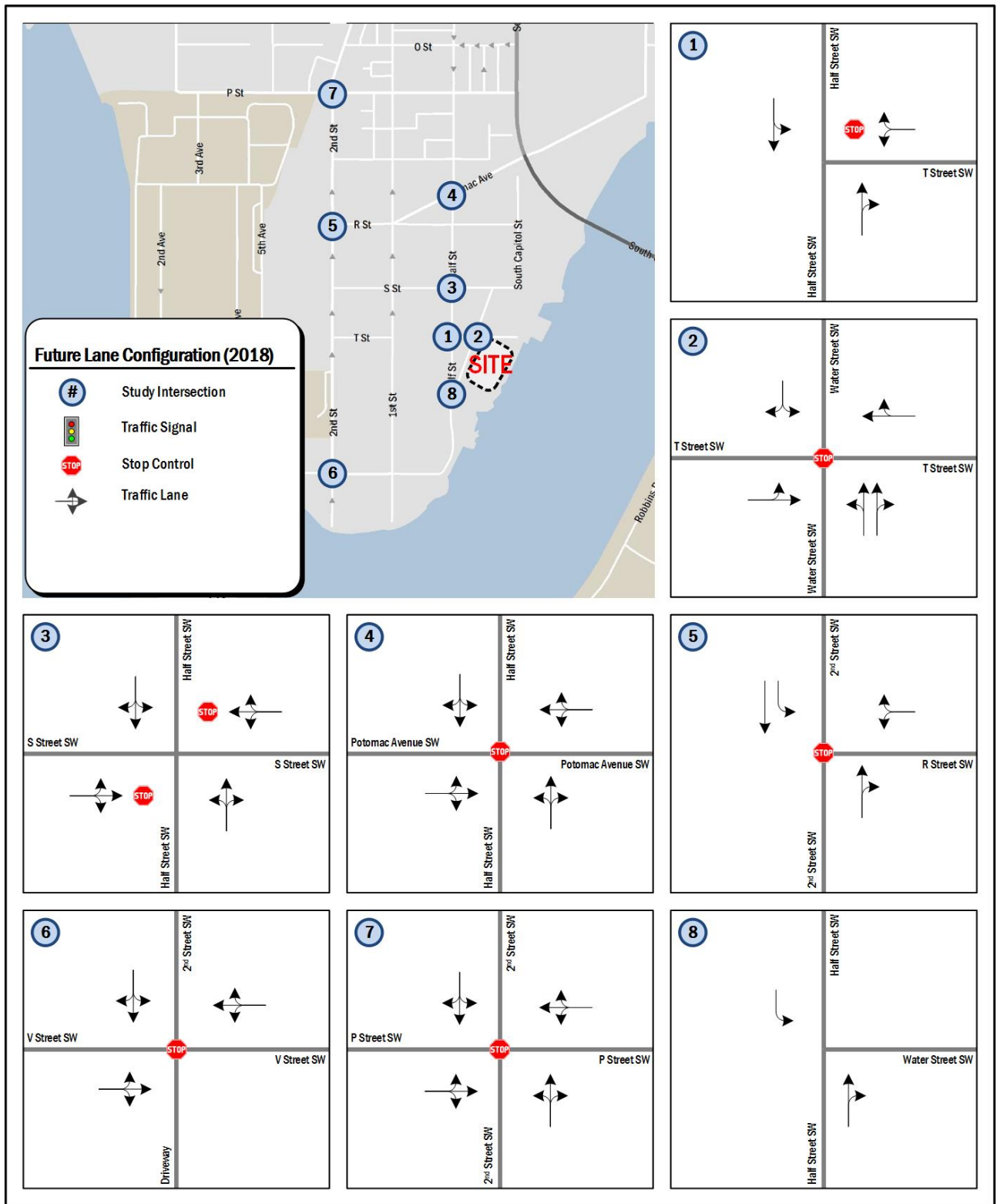


Figure 7: 2018 Future Lane Configuration

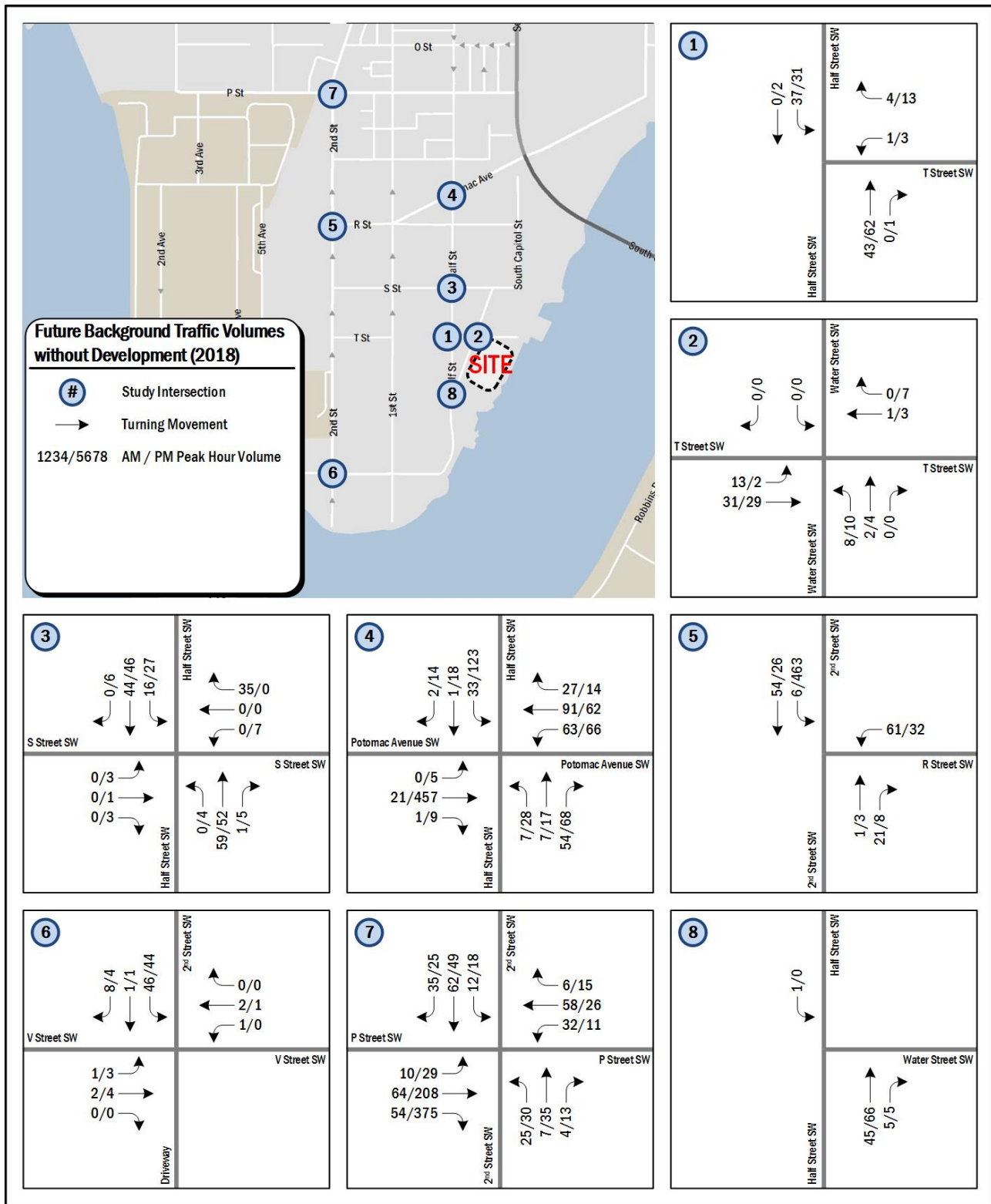


Figure 8: Future (without Development) Traffic Volumes

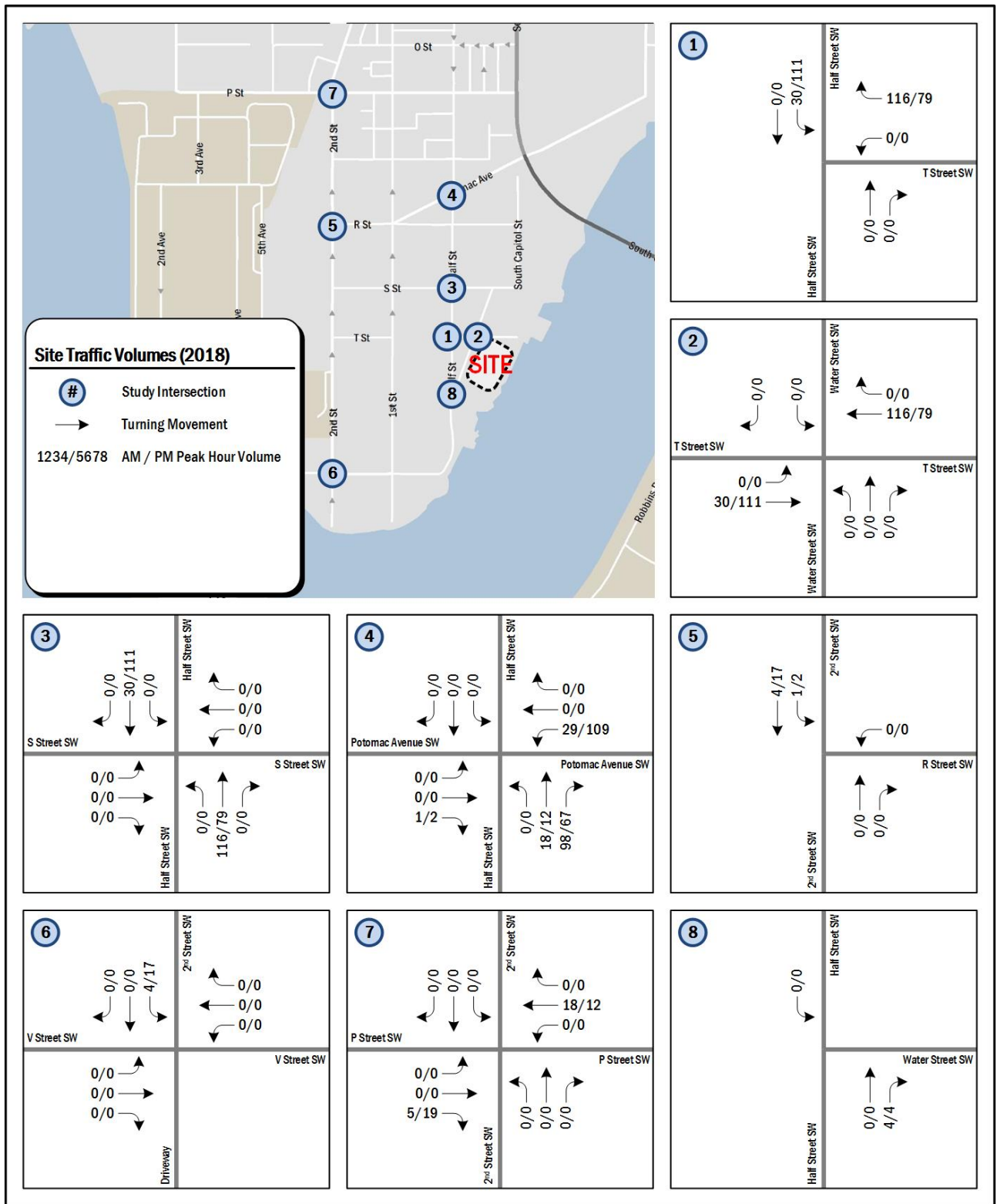


Figure 9: Site-Generated Volumes

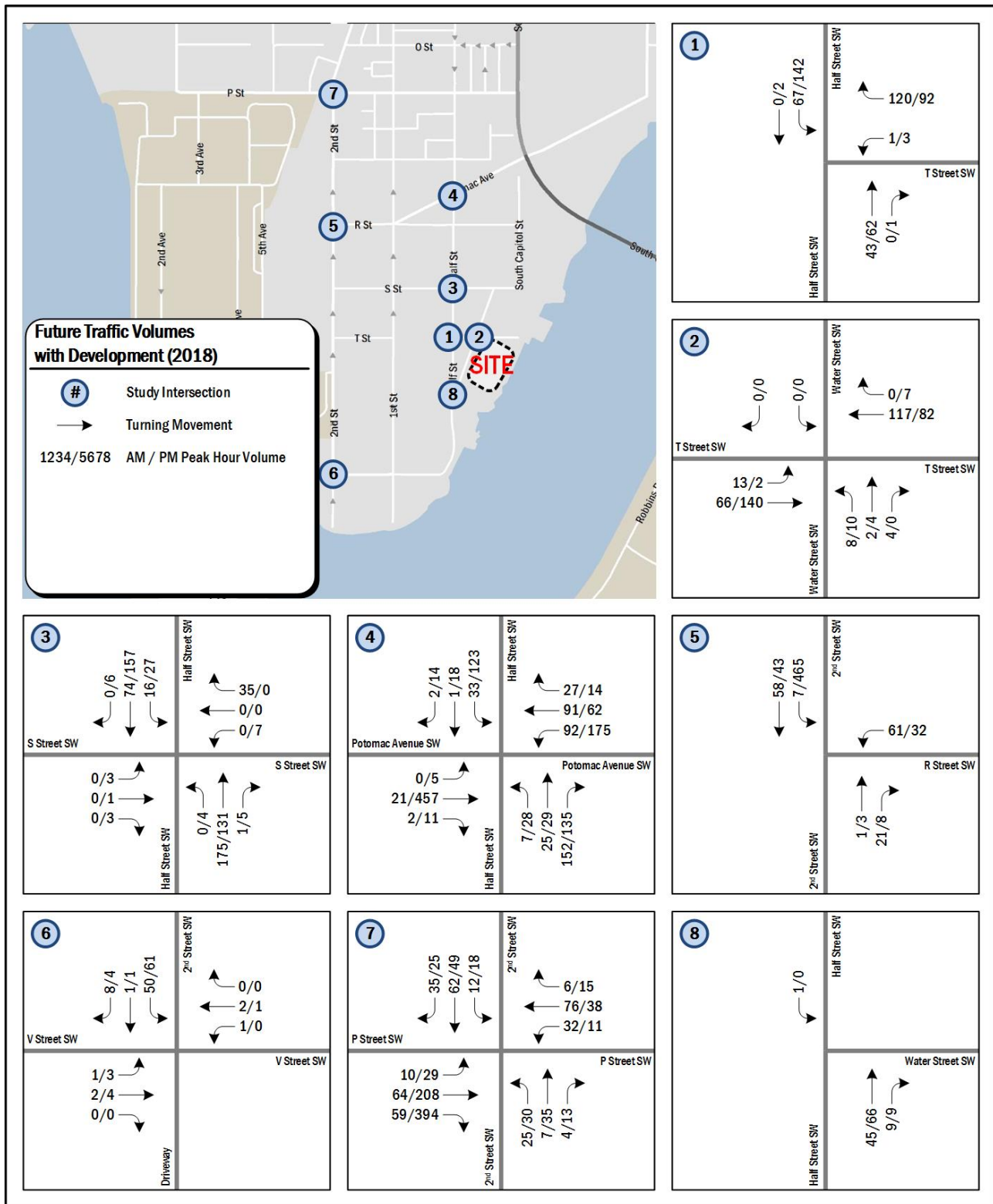


Figure 10: Future with Development (2018) Traffic Volumes

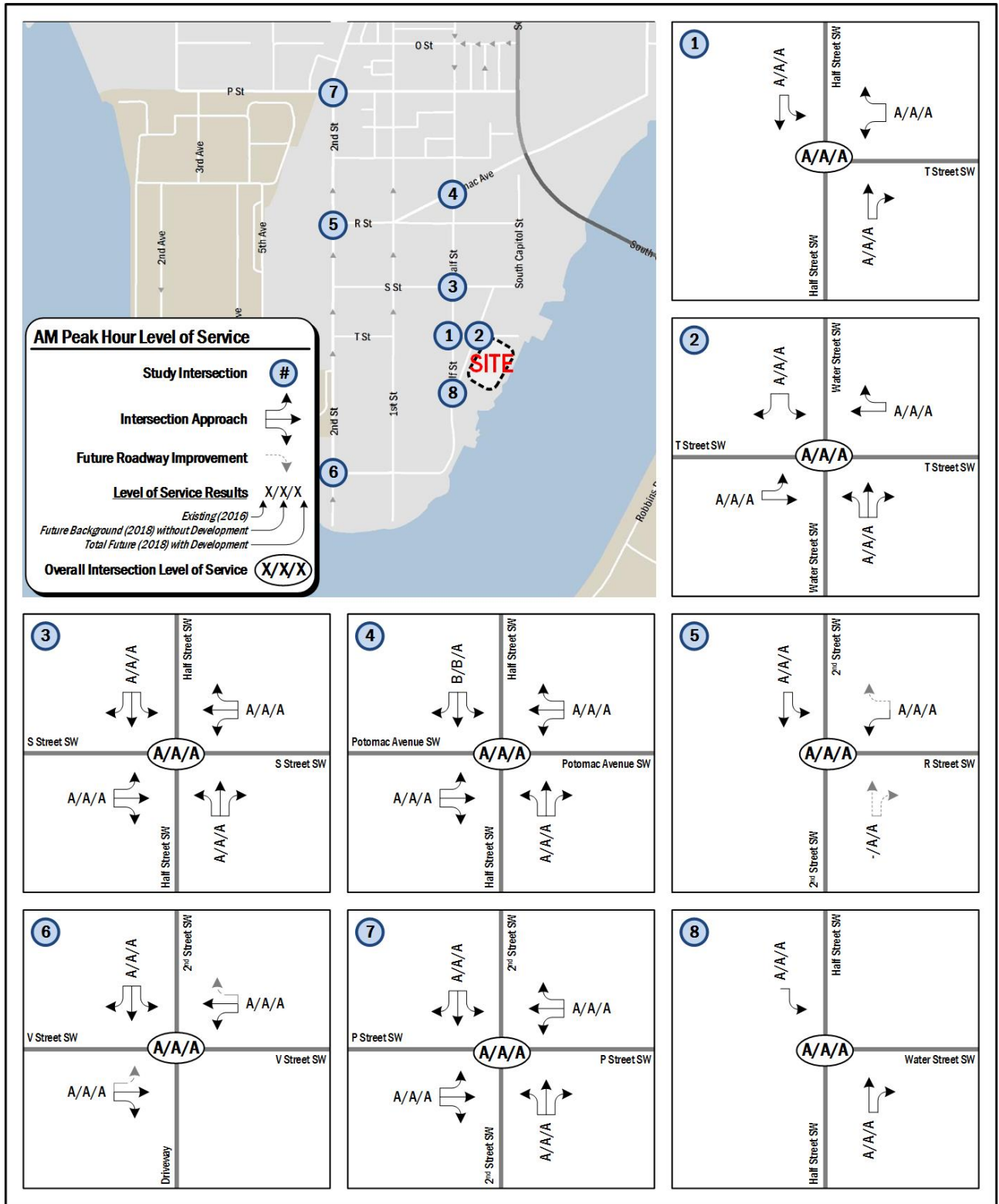


Figure 11: AM LOS

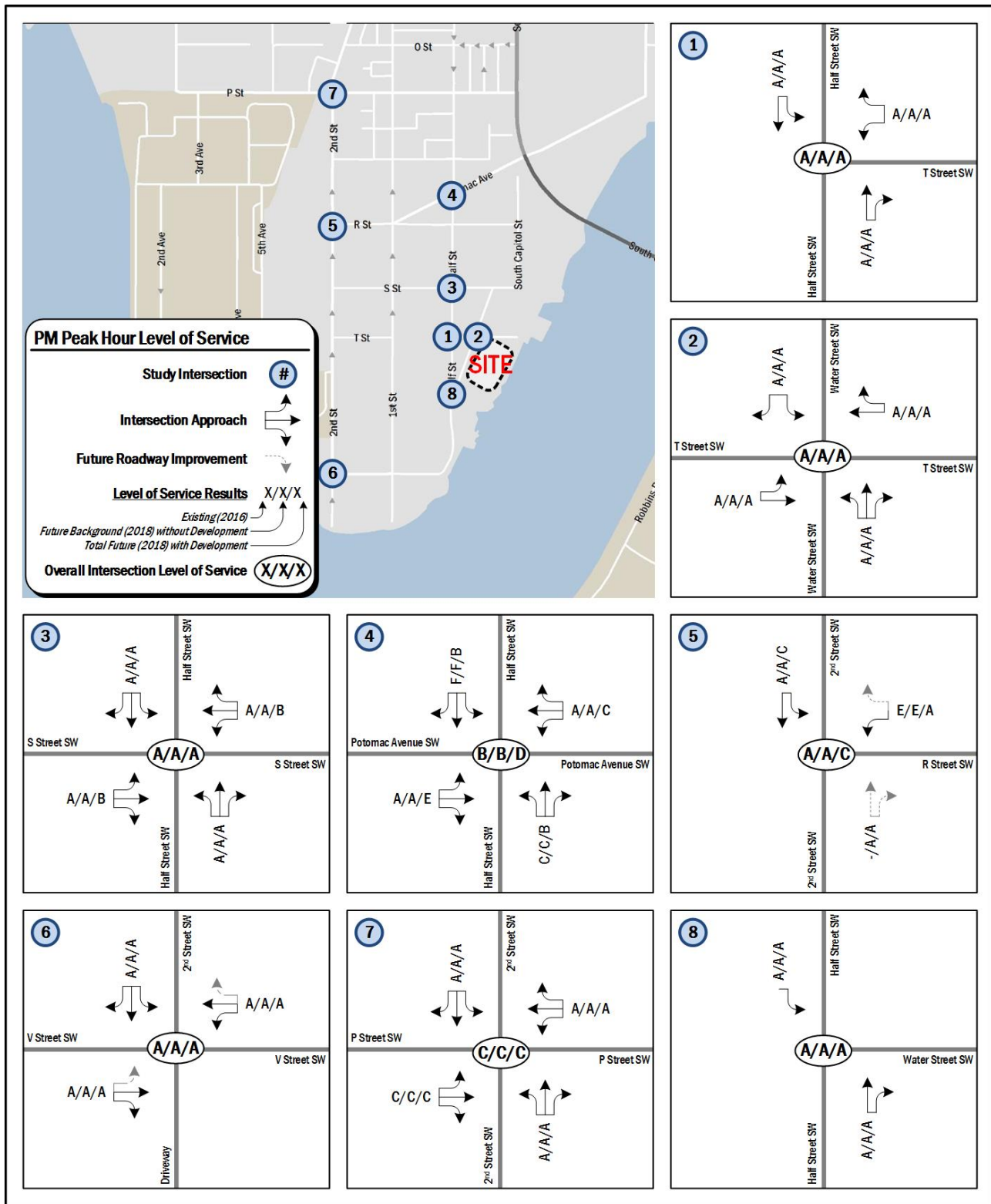


Figure 12: PM LOS



Table 3: Level of Service Summary

Intersection	Approach	Existing Conditions (2016)				Background Conditions (2018)				Future Conditions (2018)				Future Conditions (2018) with Mitigations			
		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
1. Half Street/T Street SW	Overall	0.9	A	1.8	A	0.7	A	1.7	A	6.8	A	6.5	A	6.8	A	6.5	A
	Westbound	8.5	A	8.8	A	8.6	A	8.8	A	9.1	A	9.2	A	9.1	A	9.2	A
	Northbound	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
	Southbound	0.3	A	1.3	A	0.3	A	1.4	A	7.4	A	7.6	A	7.4	A	7.6	A
2. Water Street/T Street SW	Overall	7.1	A	6.6	A	7.1	A	6.6	A	7.7	A	7.9	A	7.7	A	7.9	A
	Eastbound	7.2	A	7.0	A	7.2	A	7.1	A	7.6	A	8.0	A	7.6	A	8.0	A
	Westbound	7.0	A	6.6	A	7.0	A	6.6	A	7.8	A	7.6	A	7.8	A	7.6	A
	Northbound	6.8	A	6.4	A	6.8	A	6.4	A	7.0	A	7.5	A	7.0	A	7.4	A
	Southbound	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	7.6	A	0.0	A	0.0	A
3. Half Street/S Street SW	Overall	3.1	A	2.6	A	2.7	A	2.5	A	1.5	A	1.3	A	1.5	A	1.3	A
	Eastbound	0.0	A	9.3	A	0.0	A	9.4	A	0.0	A	10.7	B	0.0	A	10.7	B
	Westbound	8.7	A	9.8	A	8.8	A	9.9	A	9.5	A	11.9	B	9.5	A	11.9	B
	Northbound	0.0	A	0.6	A	0.0	A	0.5	A	0.0	A	0.3	A	0.0	A	0.3	A
	Southbound	2.0	A	2.6	A	2.0	A	2.6	A	1.5	A	1.3	A	1.5	A	1.3	A
4. Half Street/Potomac Avenue SW	Overall	4.5	A	14.1	B	5.2	A	14.9	B	7.2	A	89.4	F	9.0	A	30.1	D
	Eastbound	0.0	A	0.1	A	0.0	A	0.1	A	0.0	A	0.1	A	8.0	A	48.0	E
	Westbound	2.8	A	4.5	A	2.8	A	4.5	A	3.6	A	7.2	A	9.6	A	17.6	C
	Northbound	9.6	A	19.4	C	9.3	A	19.3	C	10.3	B	40.1	E	8.5	A	14.7	B
	Southbound	12.0	B	62.8	F	12.3	B	66.4	F	17.0	C	557.0	F	8.3	A	14.8	B
5. 2nd Street/R Street SW	Overall	5.0	A	9.9	A	4.3	A	9.7	A	4.3	A	9.6	A	7.3	A	20.6	C
	Westbound Left	9.1	A	40.3	E	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound	--	--	--	--	9.3	A	37.2	E	9.4	A	38.7	E	7.8	A	9.0	A
	Northbound	--	--	--	--	0.0	A	0.0	A	0.0	A	0.0	A	6.8	A	7.4	A
	Southbound	0.7	A	7.9	A	0.7	A	8.1	A	0.8	A	7.9	A	7.0	A	21.7	C
6. 2nd Street/V Street SW	Overall	6.8	A	7.0	A	7.3	A	7.3	A	7.4	A	7.5	A	7.4	A	7.5	A
	Eastbound	7.1	A	7.1	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A
	Westbound	7.1	A	7.1	A	7.2	A	7.1	A	7.2	A	7.1	A	7.2	A	7.1	A
	Southbound	6.7	A	7.0	A	7.3	A	7.4	A	7.4	A	7.5	A	7.4	A	7.5	A
7. 2nd Street/P Street SW	Overall	8.1	A	16.4	C	8.1	A	16.8	C	8.2	A	18.2	C	8.2	A	18.2	C
	Eastbound	8.0	A	19.1	C	8.0	A	19.5	C	8.1	A	21.6	C	8.1	A	21.6	C
	Westbound	8.2	A	8.6	A	8.2	A	8.6	A	8.4	A	8.8	A	8.4	A	8.8	A
	Northbound	8.0	A	9.6	A	8.0	A	9.6	A	8.0	A	9.7	A	8.0	A	9.7	A
	Southbound	8.1	A	9.7	A	8.1	A	9.6	A	8.2	A	9.8	A	8.2	A	9.8	A
8. Half Street/Water Street SW	Overall	4.2	A	2.2	A	3.1	A	1.9	A	0.0	A	0.0	A	0.0	A	0.0	A
	Southbound Left	0.0	A	0.0	A	7.4	A	7.4	A	0.0	A	0.0	A	0.0	A	0.0	A
	Northbound	7.3	A	7.4	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A



Table 4: Queue Length Summary

Intersection	Lane Group	Storage Length (ft)	Existing Conditions (2016)				Background Conditions (2018)				Future Conditions (2018)				Future Conditions with Mitigation (2018)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			50th %	95th %	50th %	95th %	50th %	95th %	50th %	95th %	50th %	95th %	50th %	95th %	50th %	95th %	50th %	95th %
1. Half Street/T Street SW	Westbound LR	125	--	0	--	1	--	0	--	2	--	12	--	10	--	12	--	10
	Northbound TR	300	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
	Southbound LT	300	--	0	--	0	--	0	--	0	--	2	--	9	--	2	--	9
2. Water Street/T Street SW	Eastbound LT	125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound TR	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound LR	315	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Northbound LT	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Northbound TR	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3. Half Street/S Street SW	Eastbound LTR	350	--	0	--	1	--	0	--	1	--	0	--	1	--	0	--	1
	Westbound LTR	225	--	3	--	1	--	3	--	1	--	4	--	1	--	4	--	1
	Northbound LTR	300	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
	Southbound LTR	400	--	1	--	2	--	1	--	2	--	1	--	2	--	1	--	2
4. Half Street/Potomac Avenue SW	Eastbound LTR	425	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
	Westbound LTR	375	--	4	--	6	--	4	--	6	--	5	--	19	--	--	--	--
	Northbound LTR	140	--	5	--	35	--	7	--	38	--	24	--	128	--	--	--	--
	Southbound LTR	165	--	6	--	144	--	6	--	151	--	10	--	391	--	--	--	--
5. 2nd Street/R Street SW	Westbound Left	350	--	6	--	26	--	6	--	24	--	7	--	25	--	--	--	--
	Southbound LT	200	--	0	--	37	--	0	--	0	--	0	--	0	--	--	--	--
	Southbound Thru	200	--	0	--	0	--	0	--	38	--	0	--	38	--	--	--	--
6. 2nd Street/V Street SW	Eastbound TR	165	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Eastbound LTR	165	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound LT	340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound LTR	340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound LT	900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound TR	900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7. 2nd Street/P Street SW	Eastbound LTR	350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound LTR	350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Northbound LTR	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound LTR	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6. Half Street/Water Street SW	Northbound LT	575	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
	Southbound Left	275	--	2	--	1	--	2	--	1	--	0	--	0	--	0	--	0



TRANSIT

This section discusses the existing and proposed transit facilities in the vicinity of the site, accessibility to transit, and evaluates the overall transit impacts due to the 1900 Half Street SW development.

The following conclusions are reached within this chapter:

- The site is served by the Metrorail Green Line via the Navy Yard-Ballpark Station and four Metrobus routes that travel along South Capitol Street SW.
- The Metrobus routes to/from Anacostia have been studied by DDOT and WMATA, with proposed recommendations for improved service including a Metro Express route with limited-stop service.
- Transit-trips generated by the site are not expected to have a detrimental impact on the surrounding transit system.

EXISTING TRANSIT SERVICE

The study area is underserved by Metrorail and Metrobus due to the lack of development in the Buzzard Point neighborhood. Combined, these transit services provide local, city wide, and regional transit connections and link the site with major cultural, residential, employment, and commercial destinations throughout the region. Figure 13 identifies the major transit routes, stations, and stops in the study area.

The Navy Yard-Ballpark Metrorail Green Line station is located nine blocks (approximately 0.8 miles) from the development site. The Green Line travels south from Greenbelt, MD, travels through downtown DC, and continues southeast to Suitland, MD. Trains run approximately every six minutes during the morning and afternoon peak hours. Trains run about every 12 minutes during weekday non-peak hours, every 12 minutes on weekday evenings after 7:00 pm and 20 minutes on the weekends. Due to the presence of Nationals Park, a larger frequency of trains are added on game days to accommodate the larger crowds utilizing Metro.

The site is also serviced by Metrobus along South Capitol Street, O Street, and M Street. The routes serving this area connect the site to many stations in the Metrorail system and with various locations throughout all quadrants of the District. Table 5 shows a summary of the bus route information for the

15 routes that serve the site, including service hours, headway, and distance to the nearest bus stop.

The nearest bus stop is located on Half Street at O Street SW. This stop provides service on the 74 line towards the Convention Center.

PROPOSED TRANSIT SERVICE

Due to growth of population, jobs, and retail in several neighborhoods in the District and the potential for growth in other neighborhoods, the District's infrastructure is challenged with the need for transportation investments to support the recent growth and to further strengthen neighborhoods. In order to meet these challenges and capitalize on future opportunities, DDOT has developed a plan to identify transit challenges and opportunities and to recommend investments. This plan is outlined in DC's *Transit Future System Plan* report published by DDOT in April 2010, which includes the reestablishment of streetcar service in the District.

The District's streetcar plan includes two planned lines that are expected to terminate in Buzzard Point. The planned routes for these lines will connect Buzzard Point with Takoma/Silver Spring to the north (North-South Corridor) and with Anacostia to the south.

DDOT is currently conducting a study for the North-South Corridor which provides three different route alternatives for Buzzard Point. These routes show two-way streetcar travel along 2nd Street or a one-way loop around Buzzard Point. All route concepts would include construction of a maintenance facility located within the Buzzard Point neighborhood at the terminus of the line. More information regarding the North-South Streetcar Corridor can be found at the following link: <http://www.dcstreetcar.com/projects/future-lines/northsouth/>.

Since it is currently unknown where streetcar tracks will be installed within Buzzard Point, this study considered all three alternatives when developing recommended cross-sections later in this report. The main concern is separating bicycle facilities from tracks, and developing alternatives for facilities that provide bicycle connectivity for all three streetcar routing options.



Regarding Metrobus service, WMATA and DDOT completed the *Anacostia-Congress Heights Line Study A2,6,7,8,42,46,48~A4,5~A9 (January, 2012)*, which examined the Anacostia-Congress Heights Metrobus Line. This study recommended improvements including a new Metro Express Route (A9) with limited-stop service. In its initial implementation, the route would run peak period/peak direction limited stop service. Eventually, bi-directional peak period service operating every 10 minutes would be implemented

SITE-GENERATED TRANSIT IMPACTS

The trip generation estimates for the 1900 Half Street SW development show that a sizable amount of new transit riders will be generated. The proposed development is projected to generate 90 transit trips (24 inbound, 66 outbound) during the morning peak hour and 139 transit trips (83 inbound, 56 outbound) during the afternoon peak hour.

U.S. Census data was used to determine the distribution of those taking Metrorail and those taking Metrobus. The site lies in U.S. Census Tract 64. Based on data from these two census tracts, it is expected that about 60% of the transit trips will be attributed to Metrorail and 40% to Metrobus.

Table 5: Metrobus Route Information

Route Number	Route Name	Service Hours	Headway
74	Convention Center-Southwest Waterfront Line	Weekdays: 5:03 AM – 11:56 PM Weekends: 5:04 AM – 12:05 AM	15-26 min
A42, A46, A48	Anacostia-Congress Heights Line	Mornings: 4:20 AM – 8:01 AM Late Nights: 11:53 PM – 3:17 AM	8-46 min
315	Columbia/Silver Spring to Washington DC	Inbound: 4:36 AM – 7:45 AM Outbound: 2:40 PM – 7:53 PM	20 – 30 min
735	Charlotte Hall/Waldorf to Washington DC	Northbound: 4:20 AM – 7:00 AM Southbound: 12:15 PM – 5:25 PM	20 – 30 min
A9	Martin Luther King Jr. Avenue Limited Line	Northbound: 5:55 AM – 8:50 AM Southbound: 3:35 PM – 6:52 PM	15 min
D300	Dale City-Washington Navy Yard	Inbound: 4:38 AM – 6:43 AM Outbound: 12:15 PM - 7:42 PM	30 – 90 min
P17,P19	Oxon Hill-Fort Washington Line	Northbound 4:47AM – 9:53AM Southbound 2:57PM – 7:10PM	5 – 15 min
V1	Benning Heights-M Street Line	Weekdays: 5:28 AM – 7:14 PM	30 min
W9	South Capitol Street Limited Line	Southbound 6:15AM – 9:07AM Northbound 3:15PM – 6:15PM	15 – 30 min
W13	Bock Road Line	Northbound 4:52AM – 9:02AM Southbound 3:35PM – 7:53PM	5 – 15 min
LCC	Loudoun County to Washington DC	Inbound: 5:00AM – 9:09 AM Outbound: 3:42PM – 5:00PM	25 – 45 min
DCN22	Union Station - Navy Yard Circulator	Winter: 6:00AM- 7:00PM Summer: 6:00AM-9:00PM Sundays: 7:00AM-9:00PM	5-40 min



WMATA studied capacity of Metrorail stations in its *Station Access & Capacity Study (April, 2008)*. The study analyzed the capacity of Metrorail stations for their vertical transportation, for example the capacity of the station at elevators, stairs, and escalators to shuttle patrons between the street, mezzanine, and platforms. The study also analyzed the capacity of stations to process riders at fare card gates. For both of these analyses, WMATA calculated vertical transportation, fare card gates, and volume-to-capacity ratios for existing data (from 2005) and projections for the year 2030. According to the study, high volume-to-capacity ratios were not observed at the Navy Yard-Ballpark Station in 2005, however a faregate study is recommended for the year 2030 due to the needs of Nationals Park game-day crowds. Currently, the Navy Yard-Ballpark station can accommodate the additional riders generated by the 1900 Half Street SW development.

WMATA also studied capacity along Metrobus routes. DC's *Transit Future System Plan (April, 2010)* lists the bus routes with the highest load factor (a ratio of passenger volume to bus capacity). A load factor is considered unacceptable if it is over 1.2 during peak periods or over 1.0 during off-peak or weekend periods. According to this study, none of the Metrobus lines near the site exceed these load factors.

Overall, Metrobus service limited south of M Street SW, with the exception of the 74 and W9 lines; however, the 74 bus line is relatively new, starting service between the Southwest Waterfront and the National Mall in 2011. With the opening of DC United Stadium in the future, it can be expected that future developments of similar land use to 1900 Half Street SW would encourage a more detailed study for increased bus service in Buzzard Point.

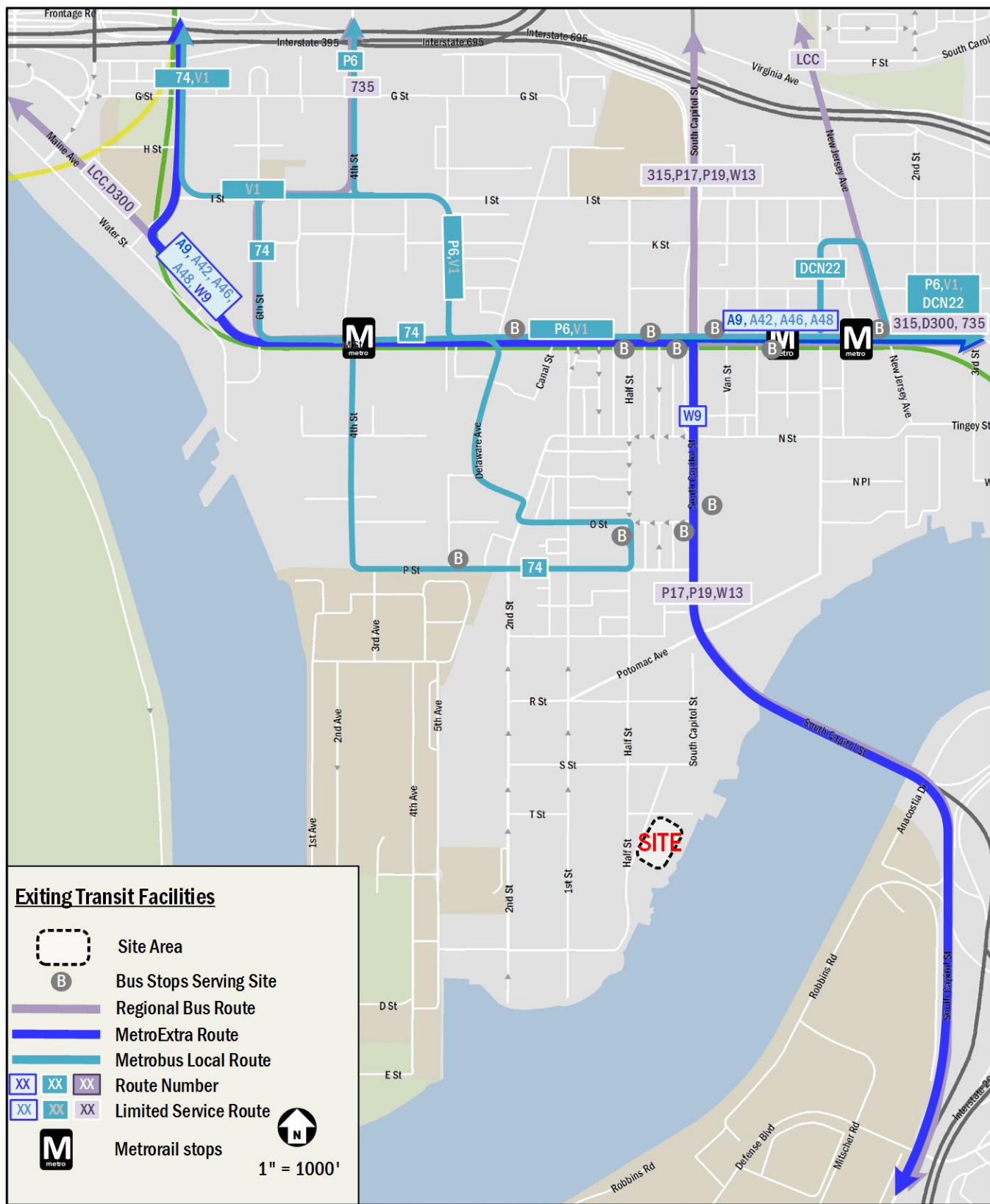


Figure 13: Existing Transit Service



PEDESTRIAN FACILITIES

This section summarizes the existing and future pedestrian access to the site and reviews walking routes to and from the site. Overall, the pedestrian facilities within the study area provide a poor walking environment. There is poor pedestrian access to the area along most adjacent streets. Those that do not, particularly in the immediate area of the site, are being studied to improve pedestrian safety as part of DC Office of Planning's *Buzzard Point Vision Framework + Implementation Plan*.

PEDESTRIAN STUDY AREA

This CTR evaluated pedestrian facilities within a quarter-mile of the site and pedestrian routes to nearby transit facilities. The site is within proximity to transit options such as bus stops on P Street SW and the Navy Yard-Ballpark Green Line Metrorail Station portal at Half Street SE and M Street SE as well as the portal at M Street SE and New Jersey Avenue SE. The site is also within walking distance of Fort McNair, Teague Park, and Nationals Park. There are significant barriers and areas of concern within the study area that negatively impact the quality and attractiveness of the walking environment, including roadway conditions that reduce the quality of walking conditions, narrow or nonexistent sidewalks, and incomplete or insufficient crossings at busy intersections. Figure 14 shows suggested pedestrian pathways, walking time and distances, and barriers and areas of concern.

SURROUNDING PEDESTRIAN INFRASTRUCTURE

This section outlines the existing and proposed pedestrian infrastructure surrounding the 1900 Half Street SW site.

Existing Conditions

A review of pedestrian facilities surrounding the site shows that many facilities meet DDOT standards and provide a quality walking environment. Figure 15 shows a detailed inventory of the existing pedestrian infrastructure in the study area.

Sidewalks, crosswalks, and curb ramps are evaluated based on the guidelines set forth by DDOT's *Public Realm Design Manual*

(July, 2011) in addition to ADA standards. Sidewalk widths and requirements for the District are shown below in Table 6.

Within the area shown, most roadways are considered commercial (non-downtown). Most of the sidewalks north of Q Street SW comply with these standards, however surrounding the site, there are few areas that comply with these standards. The majority of streets south of Q Street SW, including in and around the site area exhibit no sidewalks, no curb ramps, and no crosswalks. The areas of inadequate sidewalks that are expected to have the greatest effect on residents and patrons of the development are those choosing to walk alongside Half Street SW. However, as discussed later in this section, pedestrian conditions are expected to improve along Half Street SW with the opening of the DC United Stadium and associated development. The *South Capitol Street Corridor Project* will address some of the pedestrian conditions northeast of the site.

ADA standards require that all curb ramps be provided wherever an accessible route crosses a curb and must have a detectable warning. Additionally, curb ramps shared between two crosswalks are not desired. As shown in the figure, under existing conditions, there are severe issues with crosswalks and curb ramps near the site.

Proposed Pedestrian Facilities

The developer has proposed improvements for pedestrian facilities in the vicinity of the site. As part of the Anacostia River Trail, the developer has proposed a Riverwalk extending from the rear of the property to the riverbank of the Anacostia River, creating a wide space for pedestrians to traverse. Additionally, the developer will remediate the lack of sidewalks around the site, installing missing sidewalks and crosswalks along Half Street SW, Water Street SW, and T Street SW. In addition, improvements associated with the DC United Stadium are expected to improve sidewalks along Half Street north of S Street to Potomac Avenue and along Potomac Avenue to South Capitol Street, as well as around the remainder of its site perimeter extending to 2nd Street and R Street.

Table 6: Sidewalk Requirements

Street Type	Minimum Sidewalk Width	Minimum Buffer Width
Residential (Low to Moderate Density)	6 ft	4 ft (6 ft preferred for tree space)
Residential (High Density)	8 ft	4 ft (6 ft preferred for tree space)
Commercial (Non-downtown)	10 ft	4 ft
Downtown	16 ft	6 ft



SITE IMPACTS

This section summarizes the impacts of the development on the overall pedestrian operations within and surrounding the Market.

Pedestrian Trip Generation

The 1900 Half Street SW development is expected to generate 17 walking trips (6 inbound, 11 outbound) during the morning peak hour and 31 walking trips (18 inbound, 13 outbound) during the afternoon peak hour. The origins and destinations of these trips are likely to be:

- Employment opportunities where residents can walk to work.
- Access to Anacostia River Trail.
- Customers patronizing on-site retail.

In addition to these trips, the transit trips generated by the site will also generate pedestrian demand between the 1900 Half Street SW site and nearby transit stops. The majority of these transit riders will be walking to Half Street and P Street to access Metrobus Service or to the Metrorail portals at the Navy Yard-Ballpark Station.

Based on these origins/destinations, most pedestrian trips generated by the development will be traveling north and west of the site, along Half Street SW and P Street SW.

Pedestrian and Vehicular Interactions

Vehicular access to the site, including passenger cars and trucks, will be from through a curb cut on T Street SW, entering the below-ground garage. Sidewalks will be present throughout T Street SW, Half Street SW, and the Anacostia River Trail which will abut the rear of the site. Pedestrians can walk unimpeded from the river trail to the northern sidewalk of T Street SW, avoiding conflict with passenger cars accessing the garage and trucks accessing the loading area. Placement of the vehicular access along T Street SW is the most beneficial for the overall operations of the site.

With almost all roads surrounding the development in non-compliance with ADA requirements. The Applicant will ensure that a crosswalk and adequate pedestrian ramps will be provided along T Street SW and Half Street SW with the redevelopment of the site.



Figure 14: Pedestrian Pathways

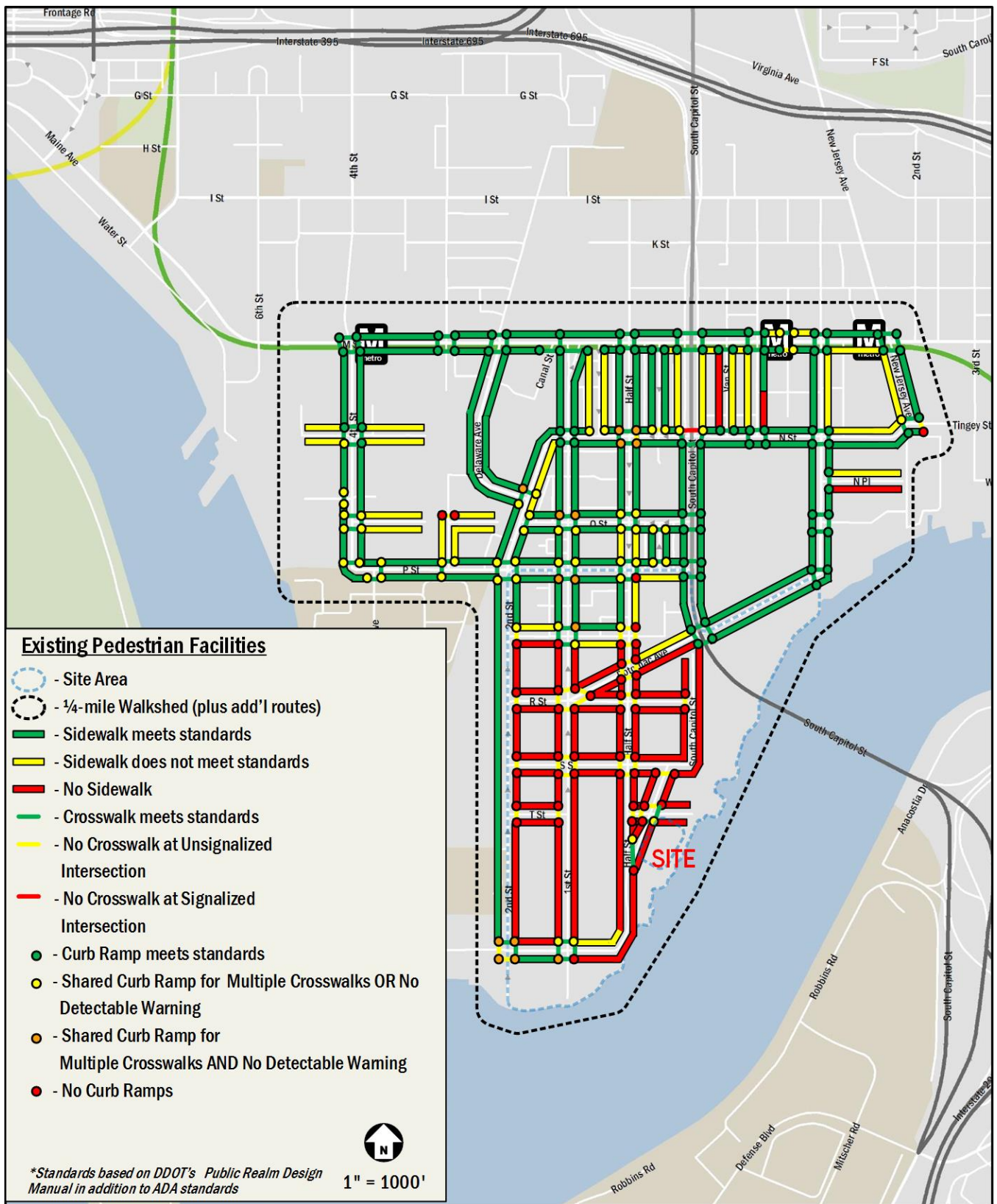


Figure 15: Existing Pedestrian Infrastructure



BICYCLE FACILITIES

This section summarizes existing and future bicycle access, reviews the quality of cycling routes to and from the site, and presents recommendations.

The following conclusions are reached within this chapter:

- There are multiple high-quality bicycle facilities north of the site.
- New protected bicycle infrastructure will likely be implemented near the site in the coming years that will further improve the cycling conditions in the area.
- There are several bicycle-focused elements of the development plan that will encourage cycling as a safe and effective transportation option for residents and patrons of the development.
- Given the existing and proposed bicycle infrastructure in the study area, the site-generated bicycle trips will not result in detrimental impacts to the bicycle system.

EXISTING BICYCLE FACILITIES

Within the study area bicycles have access to multi-use trails, on-street bike lanes, signed bike routes, and local and residential streets that facilitate cycling. The bicycle network provides good conditions for local trips and there are several routes for trips between the study area and other areas within the District. It should be noted that all of the facilities are north of the site, with almost no bicycle facilities located south of P Street SW.

Northeast of the site area is an access point to the Anacostia Riverwalk Trail which travels north-south and connects Anacostia with the National Mall Trails system. Although the trail has some breaks between the two destinations, signed bike routes lead users along safe routes back to the trail. Additionally, there are bike lanes that connect the study area in all directions. The 4th Street SW (north and southbound) and Potomac Avenue SE (eastbound east of South Capitol Street) bike lanes provide connectivity to locations north of the study area and link cyclists to other bicycle facilities in the District. A map of the existing bicycle facilities in the vicinity of the site is shown in Figure 16.

In addition, the Capital Bikeshare program allows for an additional cycling option. Users can choose to join the program for one day, three days, a month, or a year. Therefore, this

program is perfect for both visitors and residents of the area. Users can rent a bike from the nearest docking station, ride the bike to their destination, and return the bike to a different docking station, making the system convenient for one-way and two-way trips. The Capital Bikeshare program has placed over 300 bicycle-share stations across Washington, DC, Arlington and Alexandria, VA, and Montgomery County, MD with over 2,500 bicycles provided. There are five stations within a half-mile radius of the northern edge of the study area contributing to a total of 113 docking stations.

Given the existing use of the site, little bike traffic is currently observed and thus no bike parking is currently provided in the direct vicinity of the site.

PROPOSED BICYCLE FACILITIES

The *moveDC* plan outlines several other bicycle improvements in the vicinity of the site. These improvements are broken up into four tiers that rank the priority for implementation. The four tiers are broken down as follows:

- Tier 1
Investments should be considered as part of DDOT's 6-year TIP and annual work program development, if they are not already included. Some projects may be able to move directly into construction, while others become high priorities for advancement through the Project Development Process.
One Tier 1 improvement is adjacent to the study area, a cycletrack along 4th and P Streets connecting Maine Avenue, Anacostia Riverwalk Trail, and the future traffic oval. This analysis assumes that a connection will occur along this alignment when recommending bicycle routes within the study area.
- Tier 2
Investments within this tier are not high priorities in the early years of *moveDC* implementation. They could begin moving through the Project Development Process if there are compelling reasons for their advancement.
Included in Tier 2 are bicycle lanes along Potomac Avenue near the site area.
- Tier 3
Investments within this tier are not priorities for DDOT-led advancement in the early years of *moveDC*'s implementation. They could move forward earlier under



circumstances such as real estate development initiatives and non-DDOT partnerships providing the opportunity for non-District-led completion of specific funding.

Tier 3 improvements adjacent to the study area include bicycle trails alongside South Capitol Street. This analysis did not assume this route is in place when making recommendations for bicycle routes.

- Tier 4
Generally, investments within this tier are not priorities for DDOT-led advancement and are lower priority for project development in the early years of implementation.

There are no Tier 4 bicycle improvements within or near the study area.

development is not expected to have a negative impact on bicycle facilities in the area.

ON-SITE BICYCLE FACILITIES

The developer will provide a substantial amount of short- and long-term bicycle parking. A total of 282 bicycle spaces will be provided. Currently, there is no existing bicycle parking. The development calls for a total of 271 residential bicycle spaces, of which 248 will be long-term secure bicycle spaces and 23 being short-term spaces. The retail portion will consist of four long-term secure bicycle spaces and seven short-term spaces. The majority of bicycle parking spaces will be on parking level 1, with additional residential spaces in a secure bicycle room on the first level of the building, adjacent to an exit. Bicycle repair facilities will be on-site. Additionally, the developer plans to install a Capital Bikeshare station in a location determined in coordination with DDOT.

SITE IMPACTS

The 1900 Half Street SW site is expected to generate 17 bicycle trips (6 inbound, 11 outbound) during the morning peak hour and 31 bicycle trips (18 inbound, 13 outbound) during the afternoon peak hour.

The developer has proposed a bicycle circulation plan whereby a two-way bicycle lane will be present on T Street SW, north of the site. This bicycle lane will have access to the Anacostia River Trail that will abut the rear of the site.

Although bicycling will be an important mode for getting to and from the site, with significant bicycle facilities located on site and quality routes to and from the site, the impacts from bicycling will be relatively less than impacts to other modes due to the low overall volumes of bicyclists. Overall, the

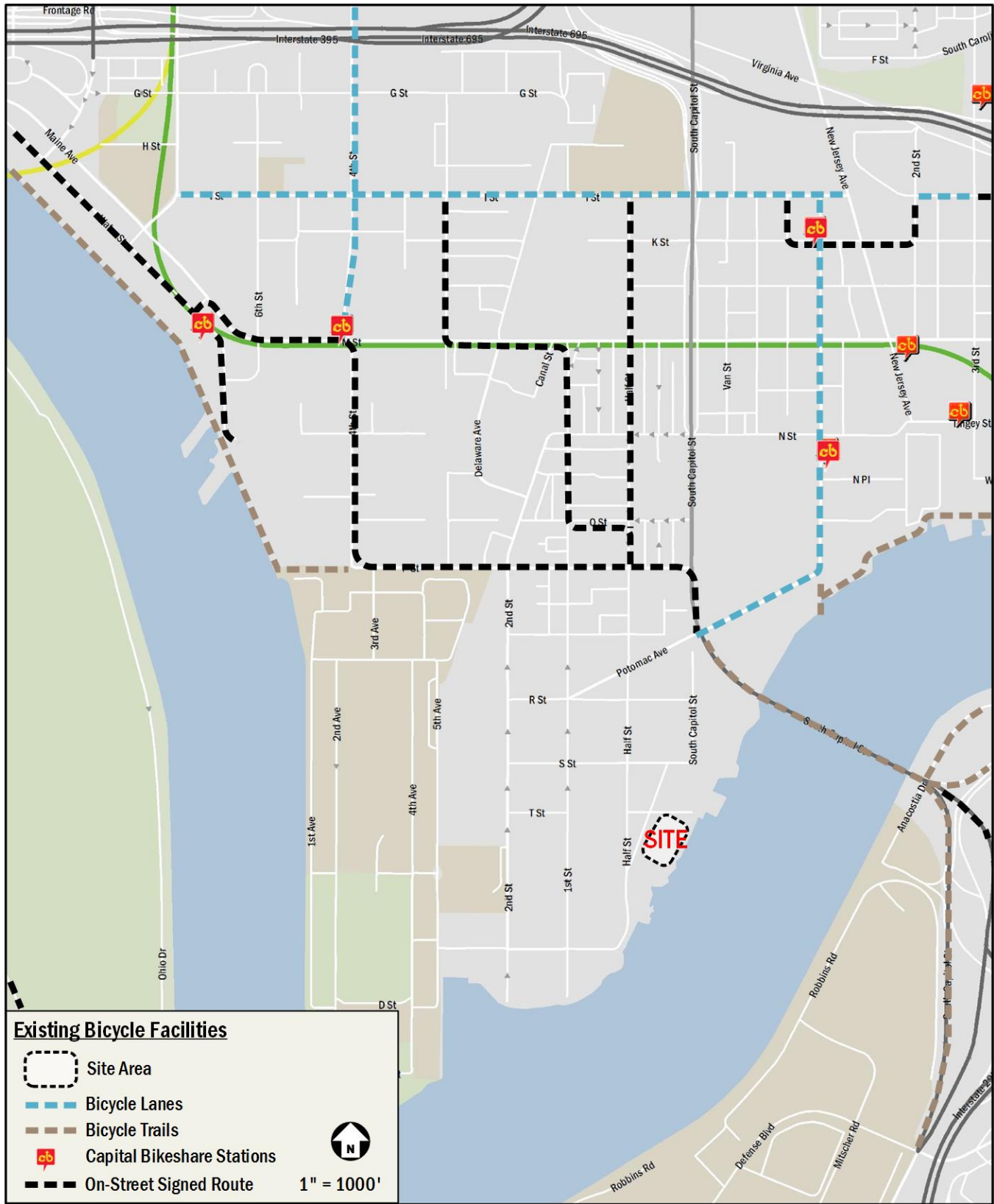


Figure 16: Existing Bicycle Facilities



SUMMARY AND CONCLUSIONS

The CTR for the proposed 1900 Half Street SW development, Zoning Case Number 15-01, reviewed the transportation aspects of the design review application. This report concluded that **the development will not have a detrimental impact** to the surrounding transportation network, assuming completion of all background improvements and site improvements.

The purpose of this study is to evaluate whether the development will generate a detrimental impact to the surrounding transportation network. This evaluation is based on a technical comparison of the existing conditions and two future conditions: 2018 future background conditions without the development, and 2018 future conditions with the development. This report concludes that **the development will not have a detrimental impact** to the surrounding transportation network assuming that all background improvements are executed, all planned site design elements are implemented, and all mitigation measures are incorporated into the design review application.

Proposed Development

The 1900 Half Street SW development proposes to reconfigure an existing 8-story building office building into a mixed-use E-shaped building containing approximately 24,000 sf of retail space and approximately 462 residential units above 324 parking spaces.

The ground- and parking level one- floor retail is designed to provide an engaging street retail experience. The retail located along Water Street will be filled with business whose activity will spill out onto the sidewalk – characterized by a vibrant pedestrian zone. The retail spaces will be accessed through entrances on Water Street that will bring life to the neighborhood that does not presently exist. The residential component will be comprised of floors P1 through nine of the building and will also include numerous interior amenity spaces for residents.

Pedestrian access to the retail and residential entrances will be primarily from Water Street SW, with additional egress along the southern side at the U Street SW right-of-way and along the rear of the building, facing the Anacostia River and an expanded Riverwalk trail that will be constructed on the water's edge along the property. A below-grade parking garage will serve the site, accessed from a new curb cut along T Street

SW. The garage will provide 324 parking spaces, which will be designated primarily for residents and also for retail employees. Loading activities and service vehicle parking would occur within a newly created loading dock accessed from T Street SW, just east of the entrance to the parking garage.

At present, the 1900 Half Street SW site is occupied by an eight-story office building containing approximately 665,000 sf of office space. The existing building is currently operational, with only the fourth floor (approximately 70,000 sf) and a first-floor deli occupied, generating some existing trips. The existing building provides two curb cuts along Water Street for garage entry and exit and three curb cuts along T Street; two that serve a loading area, and one which provides access to an asphalt driveway that abuts the Anacostia River. In the proposed site plan, all of these curb cuts will be removed, with the primary entrance/exit to the below-grade parking garage moved to T Street, where a new curb cut will be placed. The asphalt driveway currently behind the property abutting the Anacostia River will be redesigned as a pedestrian-friendly environment with landscaping designed to connect the development with the river and the proposed Riverwalk trail.

This project also proposes to implement public space improvements along Half Street SW and T Street SW in front and back of the site, including new sidewalks, street trees, and plantings as well as the construction of a Riverwalk trail along the project's riverside.

Parking

The development will include a reconfiguration of the existing 4-story parking garage which is accessed from U Street SW but will have its entry/exit point shifted to T Street SW. The redeveloped parking garage will contain 324 parking spaces accessed from a new curb cut along T Street. The 324 parking spaces are planned to be primarily for residential use, which equates to a parking ratio of 0.47 spaces per unit. This amount of parking is typical for new residential developments in the District, especially ones with multi-modal access such as this project's location. Given that the retail in the building is primarily intended to be neighborhood serving, limited on-site parking was assumed to be reserved for retail customers, but the garage will be available for retail employee parking.

Loading Facilities

The loading area provided in the development is adequate to serve the expected loading demand. Zoning Regulations state



that a building of this size must contain two 30' berths and one 20' service space for the retail use in addition to one 55' berth and a 20' service and delivery space for the residential use. The development proposes to use the existing configuration of one 30' retail berth and one 40' residential berth and one 20' service and delivery space, which will be adequate to serve the residential and retail uses of the development. Variances are requested to reduce the number of berths from three to two, reduce the size of the residential berth from 55' to 40', and reduce the number of service/delivery spaces from two to one.

Trash operations will also occur from the loading area at the T Street SW entrance with trash trucks entering the site, picking up, and leaving via the same entrance. Trash facilities are located adjacent to the loading areas.

All trucks can access the loading docks without negatively impacting public space between the docks and the nearest DDOT designated truck routes. All trucks will be able to sufficiently maneuver in and out of the driveway front-in, front-out.

Vehicular Impacts

The report includes an analysis of potential vehicular impacts of the 1900 Half Street SW development and recommendations for improvements and mitigation measures. The following conclusions are reached:

- The existing study area roadways generally operate under acceptable capacity conditions during the morning and afternoon peak hour with the exception of the Half Street/Potomac Avenue SW and 2nd Street/R Street SW intersections which see afternoon commuter cut through traffic that cause some approaches to operate near or above capacity levels. This is more pronounced on gamedays at Nationals Park.
- Existing areas of concern for roadway capacity are primarily focused along the heavily trafficked commuter routes: 2nd Street SW, R Street SW, and Potomac Avenue SW.
- The DC United Stadium background development typically carries a peak hour traffic differing from the peak hour of 1900 Half Street SW and will be constructed after the development is expected to open, leaving this effect negligible.
- Impacts attributable to the development are minimal and have no significant effect on the surrounding roadway network.

- **The 1900 Half Street SW development will have no detrimental impacts to the study area.**

Transit

The following summarizes the site's access to transit and the expected site impacts:

- The site is served by the Metrorail Green Line via the Navy Yard-Ballpark Station (approximately .80 miles from the site) and four Metrobus routes that travel along South Capitol Street and another that travels along O Street SW.
- The Metrobus routes to/from Anacostia have been studied by DDOT and WMATA, with proposed recommendations for improved service including a Metro Express route with limited-stop service.
- Transit-trips generated by the site are not expected to have a detrimental impact on the surrounding transit system.

Pedestrian

Based on an analysis of the existing pedestrian conditions, a review of the background improvements, and planned site design elements, the following conclusions were made:

- The majority of pedestrian facilities south of M Street SW (including the site area) do not provide a pedestrian friendly environment. Some pedestrian facilities may be improved as described in DDOT's *South Capitol Street Corridor Project*.
- Within the Buzzard Point area, pedestrian facilities reflect the industrial origins of the site. The 1900 Half Street SW development will greatly improve pedestrian conditions adjacent to the site by increasing the amount of pedestrian space and adding sidewalks, trees, and plantings as well as providing a new Riverwalk connection along the property's riverside.

Bicycle

The bicycle facilities within the study area were evaluated and the following conclusions were made in regards to the existing and proposed bicycle facilities and the overall impact of the site on bicycle infrastructure:

- In general, bicycle facilities are plentiful north of M Street, but do not exist in the vicinity of the site in the Buzzard Point neighborhood.
- There are several bicycle-focused elements of the development plan that will encourage cycling as a safe



and effective transportation option for residents and patrons of the development, including short- and long-term bicycle parking and streetscape improvements in the form of bicycle lanes.

- Residents of the building will have a secure bicycle room on the first- and parking level one-floor of the building to encourage cycling.
- Given the existing and proposed bicycle infrastructure in the study area, the site-generated bicycle trips will not result in detrimental impacts to the bicycle system.
- A new Capital Bikeshare station is planned to be placed near the site in a location coordinated with DDOT.

Transportation Demand Management

The 1900 Half Street SW development will include an extensive TDM plan in order to help minimize its potential traffic impacts to the surrounding neighborhood. The following TDM plan is based on the DDOT expectations for TDM programs, modified to fit the specific needs of the development and transportation network. The Applicant proposes that upon construction, the project incorporate several TDM measures, including the following:

- The Applicant shall designate a TDM coordinator, who is responsible for organizing and marketing the TDM plan and who will act as a point of contact with DDOT.
- All parking on site will be priced at market rates at minimum. All residential parking will be unbundled from the costs of leasing apartments or purchasing condos.
- Move-in transportation welcome packets will be distributed to each resident upon move-in that includes information such as:
 - Promotion for DDOT's goDCgo website.
 - Brochures on carsharing, ridesharing, and bikesharing programs.
 - Tips on apps and websites to use to navigate public transportation.
 - Maps for nearby bicycle trail routes and bike lanes.
 - Maps for Metro, bus and streetcar routes.
- Bicycle parking will be provided meeting existing regulatory minimums. The bicycle room will include a bike maintenance area with a bike pump and set of tools.