Comprehensive Transportation Review

Bridge District Parcel 5

Washington, DC

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Executive Summary

The following report is a Comprehensive Transportation Review (CTR) on behalf of Redbrick LMD (the "Applicant") for Design Review by the Zoning Commission (Case Number ZC 25-07) for the property located at Square 5860 and Lot 1070 in Southeast, Washington, DC ("the Project", also referred to herein as "Bridge District Parcel 5").

The purpose of this CTR is to evaluate whether the Bridge District Parcel 5 development will generate a detrimental impact to the transportation network surrounding the site. This evaluation is based on a technical comparison of the existing conditions, background conditions, and total future conditions. This report concludes that **the Project will not have a detrimental impact** to the surrounding transportation network, assuming that the proposed site design elements and TDM measures are implemented.

Proposed Project

The site is located in the southeast quadrant of Washington, DC and is bounded by Howard Road SE to the south, Bridge District Parcels 6 to the east, Anacostia Park to the north, and Bridge District Phase 1 development (Parcels 3 and 4), approved in Z.C. Case No. 21-13, to the west. The Project's development program includes a high-rise mixed-use building with approximately 272 residential units, approximately 8,476 square feet of ground-floor retail space, and approximately 160 parking spaces. The project also includes long-term bicycle storage room(s) and short-term bicycle spaces for both the residential and retail portions of the Project.

Vehicle access to the parking garage will be provided through a below-grade connection within the parking garage of the Bridge District Phase 1 development (Parcels 3 and 4).

The loading facilities within the site consist of two (2) 12'x 30' loading berths and one (1) 10' x 20' delivery/service space. All truck turning maneuvers will occur within private space, allowing for head-in/head-out access to and from the public roadway network.

The Bridge District Parcel 5 development will satisfy the ZR16 zoning requirements for bicycle parking by providing at least 92 long-term and 16 short-term spaces. The Bridge District Parcel 5 development will supply secure long-term bicycle parking within the building and short-term bicycle parking along the perimeter of the site. The vehicle and bicycle parking will meet the practical needs of the Project's residents, patrons, and employees.

Multi-Modal Overview

Trip Generation

The Bridge District Parcel 5 development is transit-, pedestrian-, and bicycle-oriented. The proposed project is expected to generate new trips on the surrounding transportation network across all modes during the morning and afternoon peak hours. However, the new trips generated by the project will not have a detrimental impact on the transportation network with the TDM plan that will be implemented as part of the Project.

The Project's multi-modal trip generation for the proposed project during the morning includes 47 vehicle trips, 50 transit trips, 8 bicycle trips, and 8 pedestrian trips. During the afternoon peak hour, the project will generate 72 vehicle trips, 70 transit trips, 14 bicycle trips, and 13 pedestrian trips.

Transit

The project site is well-served by transit. It is located 0.25 miles from the Anacostia Metrorail station and is served by several local bus routes.

Several planned transit projects will improve transit access to the site, including the improvements proposed in *moveDC*, the District's long-range transportation plan.

The site is expected to generate a manageable amount of transit trips, and the existing WMATA Better Bus Network can accommodate these new trips.

Pedestrian

As the area surrounding the site continues to develop, pedestrian facilities and street connections remain limited. The site's proximity to the Anacostia River, Anacostia Park, and the I-295/Suitland Parkway interchange result in very few destinations within walking distance. However, the reconstruction of the Suitland Parkway/I-295 interchange and Phase 1 of the South Capitol Street Corridor Improvements has improved pedestrian facilities within the study area to include wide sidewalks and multi-use paths.

The site is expected to generate a manageable number of pedestrian trips, and the forthcoming pedestrian facilities will be able to accommodate these new trips.

Bicycle

The site has access to several on- and off-street bicycle facilities. Several planned projects will improve bicycle access to the site,

including new protected bike lanes and multi-use paths as part of the 11th Street Bridge Reconstruction, and the Suitland Parkway Trail Extension as well as an expanded network of other cycle tracks and bicycle trails in the area. As part of the Bridge District Development Master Plan, a bicycle and pedestrian promenade will be constructed linking the South Capitol Street East Oval to the Anacostia Metrorail Station. With the portion north of the Bridge District Phase 1 (Parcels 3 and 4) already constructed, the remaining segments of the promenade will be completed in phases as each parcel along the frontage in the Bridge District is developed.

The Capital Bikeshare program provides additional bicycling options for the residents, employees, and patrons of the project with a 19-dock station at the Anacostia Metrorail station (southern entrance). Additionally, dockless e-bikes and e-scooters are available for public use.

The project will include long-term bicycle parking within the garage and in the ground level, immediately adjacent to the northern pedestrian and bicycle promenade. Short-term bicycle parking will be located along the perimeter of the site on both sides of Howard Road SE.

The site is expected to generate a manageable amount of bicycle trips, and the existing and planned bicycle facilities will be able to accommodate these new trips.

Vehicular

The site has close proximity to two (2) major freeways, I-295 and Suitland Parkway. The site is also served by the principal arterial South Capitol Street and collectors Howard Road SE and Firth Sterling Avenue SE. These roadways connect the site to I-395 and I-695, as well as the Capital Beltway (I-495) which surrounds Washington, DC and its inner suburbs while also providing connectivity to the District core.

In order to determine the project's impact on the transportation network, future conditions were analyzed with and without the project based on the number of trips the site is expected to generate under the project's program. Intersection analyses were performed to obtain the average delay and queue a vehicle will experience. These average delays and queues are compared to the acceptable levels of delay set by DDOT standards as well as existing and background queues to determine if the project will negatively impact the study area.

Based on DDOT's outlined capacity impact thresholds, this analysis concludes that three (3) intersections require mitigation. Due to heavy regional traffic, these intersections are already experiencing existing delays and/or queues under existing and background conditions. The additional vehicular volumes associated with the Bridge District Parcel 5 development will potentially exacerbate these existing conditions. However, the impacts can be mitigated through the measures outlined below.

The following summarizes the project's impacts and recommended mitigation measures. A detailed review of intersection capacity and impacts that trigger mitigation based on DDOT's criteria is included in the Traffic Operations section of this report.

- **Suitland Parkway & Firth Sterling Avenue SE**

  Under Future (2028) Conditions, during the weekday morning peak hour, there is an increase in delay in the westbound approach of greater than 5% compared to the background conditions. The increase in delay at this intersection attributable to the proposed development can be mitigated through signal timing adjustments.

- **Howard Road SE & Firth Sterling Avenue SE**

  Under Future (2028) Conditions, during the weekday morning peak hour, there is an increase in delay in the eastbound approach greater than 5% compared to the background conditions and the 95th percentile queue in the eastbound left lane exceeds the storage length in the future conditions but not in the background conditions. The increase in delay and queues at this intersection attributable to the proposed development can be mitigated through signal timing adjustments.

- **Suitland Parkway & Howard Road SE**

  Under Future (2028) Conditions, during the weekday afternoon peak hour, there is an increase in delay in the westbound approach of greater than 5% compared to the background conditions. Since this intersection is unsignalized and adding additional vehicular capacity is not feasible, additional TDM strategies are proposed to address the potential impacts at this intersection due to project-generated trips.

Safety

A qualitative review of study area intersections was performed to identify areas of concern due to vehicular, pedestrian, and bicycle interactions.

The analysis concluded that Firth Sterling Avenue SE is a high injury network and conditions at two (2) intersections pose significant safety concerns. These intersections are as follows:

Howard Road SE & Firth Sterling Avenue SE

In 2020, this intersection was ranked as the single most hazardous intersection in the entire District of Columbia by crash rate and by crash composite index. This intersection has been improved as part of DDOT's South Capitol Street Corridor Project and the highway on-ramp at this intersection and the off-ramp 400 feet to the west were removed. Additionally, a multi-use path, sidewalks, and crossing improvements have been installed at this intersection, all of which will mitigate the existing hazards.

Firth Sterling Avenue SE & Suitland Parkway

This intersection ranked as the 17th most hazardous intersection in the District by crash severity cost (between 2018 and 2020) as well as the 19th by crash composite index (between 2018 and 2020). As a limited-access road, Suitland Parkway primarily transports commuters from southeast DC and suburban Maryland through the District towards downtown DC. This intersection has been improved as part of DDOT's South Capitol Street Corridor Project and currently has standard crosswalks, ADA compliant curb ramps, and sidewalks present on Firth Sterling Avenue SE, and Suitland Parkway, west of this intersection.

Transportation Demand Management (TDM) Plan

Per the DDOT CTR guidelines, the goal of TDM measures is to reduce the number of single occupancy vehicles and vehicle ownership within the District. The promotion of various programs and existing infrastructure includes maximizing the use of transit, bicycle, and pedestrian facilities. DDOT has outlined expectations for TDM measures in their CTR guidelines, and this project has proposed a TDM plan based on these guidelines, which is set forth in Project Design chapter of this report.

Summary and Recommendations

This report concludes that the project will not have a detrimental impact on the surrounding transportation network assuming the proposed site design elements and TDM measures are implemented.

The Bridge District Parcel 5 project has several positive design elements that minimize potential transportation impacts, including:

- The site's close proximity to transit and the existing bicycle infrastructure;
- Its contribution to a future bicycle and pedestrian promenade linking the site, the Frederick Douglass Memorial Bridge, and the Anacostia Metrorail Station;
- The inclusion of secure long-term bicycle parking that meets zoning requirements;
- The installation of short-term bicycle parking spaces along the frontage of the site that exceeds zoning requirements;
- A TDM plan that reduces the demand of single-occupancy, private vehicles during peak period travel times or shifts single-occupancy vehicular demand to off-peak periods.

Introduction

This report is a CTR reviewing the transportation aspects of the Bridge District Parcel 5 development. The site, shown in Figure 1 and Figure 2, is located in Square 5860 and Lot 1070, The site is currently zoned NHR. The proposed project is undergoing Design Review by the Zoning Commission (Case Number 25-07).

Purpose of Study

The purpose of this report is to:

1. Review the transportation elements of the proposed project and demonstrate that it conforms to DDOT's general policies of promoting non-automobile modes of travel and sustainability.
2. Provide information to DDOT and other agencies on how the proposed project will influence the local transportation network. This report accomplishes this by identifying the potential trips generated by the proposed project on all major modes of travel and where these trips will be distributed on such network.
3. Determine whether the proposed project will lead to adverse impacts on the local transportation network.
4. Propose design elements and TDM measures that will mitigate any potential adverse impacts to the transportation network and minimize adverse effects.

Project Summary

The site is located in the southeast quadrant of Washington, DC and is bounded by Howard Road SE to the south, Bridge District Parcels 6 & 7 to the east, Anacostia Park to the north, and Bridge District Phase 1 development (Parcels 3 and 4), approved in Z.C. Case No. 21-13, to the west.

The Bridge District Parcel 5 project will redevelop the currently vacant site into a high-rise mixed-use building with approximately 272 residential units, approximately 8,476 square feet of ground-floor retail space, and approximately 160 parking spaces.

Vehicle access to the parking garage will be provided through a below-grade connection within the parking garage of the Bridge District Phase 1 development (Parcels 3 and 4). Loading access will be from a new private street connecting to Howard Road SE that will eventually service Bridge District Parcel 6 as well. Figure 3 shows the overall Bridge District Development. The Bridge District site circulation plan can be seen in Figure 4 .

The loading facilities within the site consist of two (2) 12'x 30' loading berths and one (1) 10' x 20' delivery/service space. All truck turning maneuvers will occur within private space, allowing for head-in/head-out access to and from the public roadway network.

Pedestrian access to all components of the site will occur from Howard Road SE, and the future bicycle and pedestrian shared path north of the site.

There are existing bicycle facilities near the site. These include multi-use paths along Suitland Parkway, South Capitol Street, and the South Capitol Street East Oval and the Anacostia Riverwalk Trail. The proposed project will meet zoning requirements by providing at least 92 long-term and 16 short-term spaces. Short-term bicycle parking spaces will be provided in highly visible and accessible areas along the perimeter of the site. The nearest existing Capital Bikeshare station is located at the Anacostia Metrorail Station's south entrance, less than a half mile from the site. Dockless e-scooters and e-bikes are also available in the site premises.

Contents of Study

This report contains nine (9) chapters as follows:

- Study Area Overview
  This chapter reviews the area near and adjacent to the proposed project and includes an overview of the site.
- Project Design
  This chapter reviews the transportation components of the proposed project, including the site plan and access. This chapter also contains the proposed Transportation Demand Management (TDM) plan for the Project.
- Travel Demand Assumptions
  This chapter outlines the travel demand of the proposed project. It summarizes the proposed trip generation of the project.
- Traffic Operations
  This chapter provides a summary of the existing roadway facilities and an analysis of the existing and future roadway capacity in the study area. This section also highlights the vehicular impacts of the project, including presenting mitigation measures for minimizing impacts as needed.
- Transit Facilities
  This chapter 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 chapter summarizes existing and future pedestrian access to the site, reviews walking routes to and from the proposed project, outlines impacts, and presents recommendations as needed.
- Bicycle Facilities
  This chapter summarizes existing and future bicycle access to the site, reviews the quality of cycling routes to and from the proposed project, outlines impacts, and presents recommendations as needed.
- Safety Analysis
  This chapter summarizes the potential safety considerations around the project. This includes a qualitative review of existing and proposed safety features surrounding the site.
- Summary and Conclusions
  This chapter presents overall findings and conclusions.

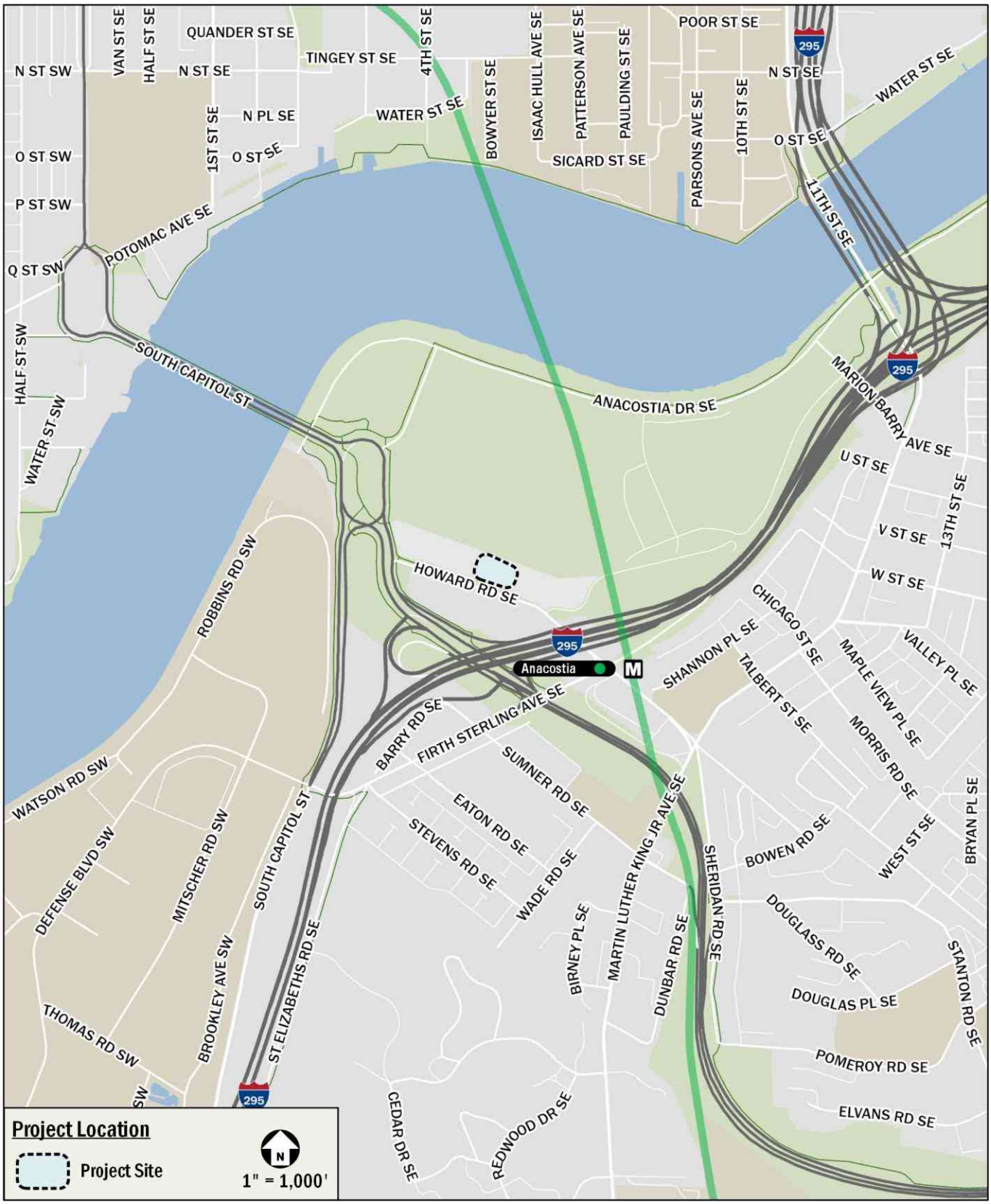

Figure 1: Project Location

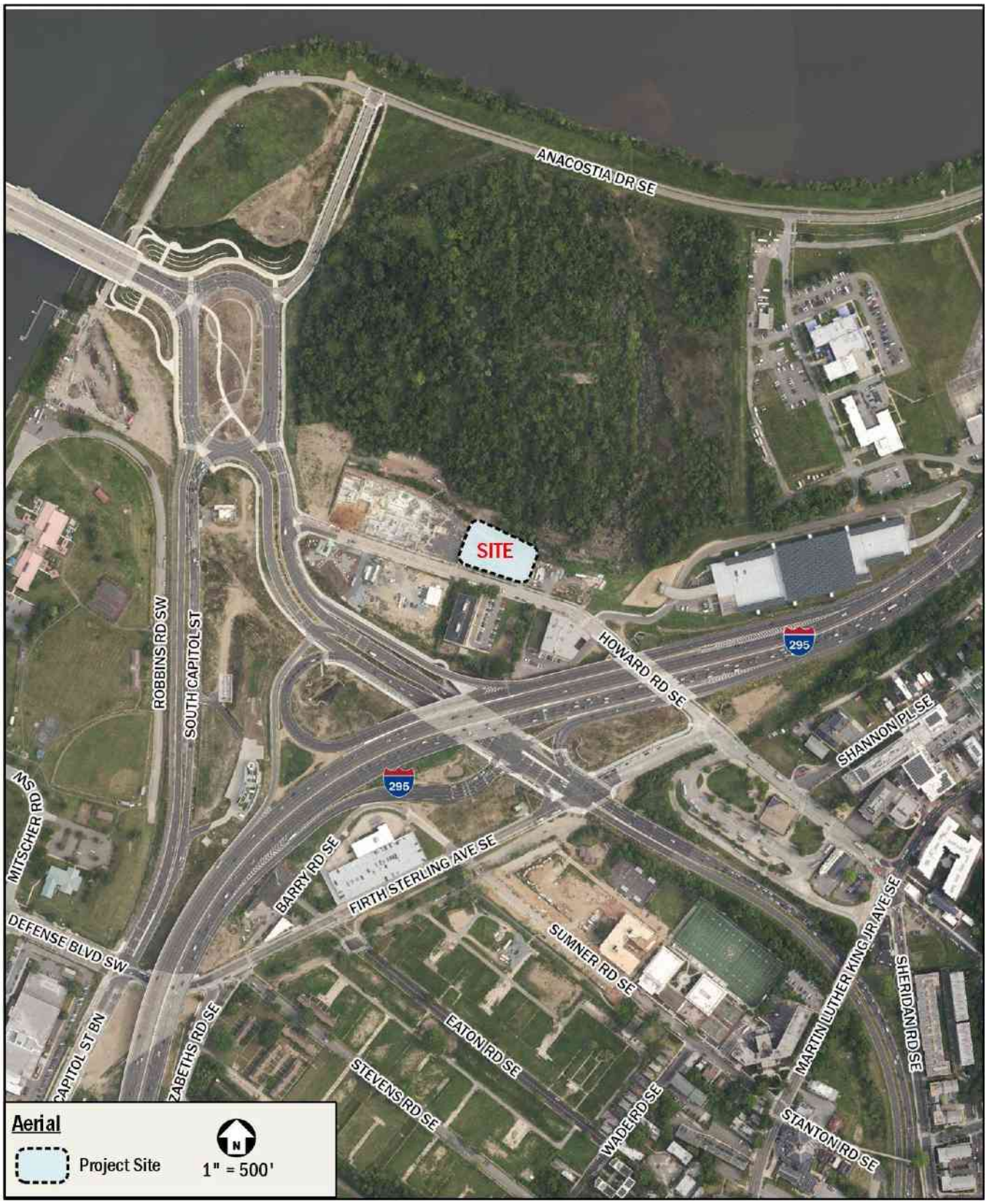

Figure 2: Aerial

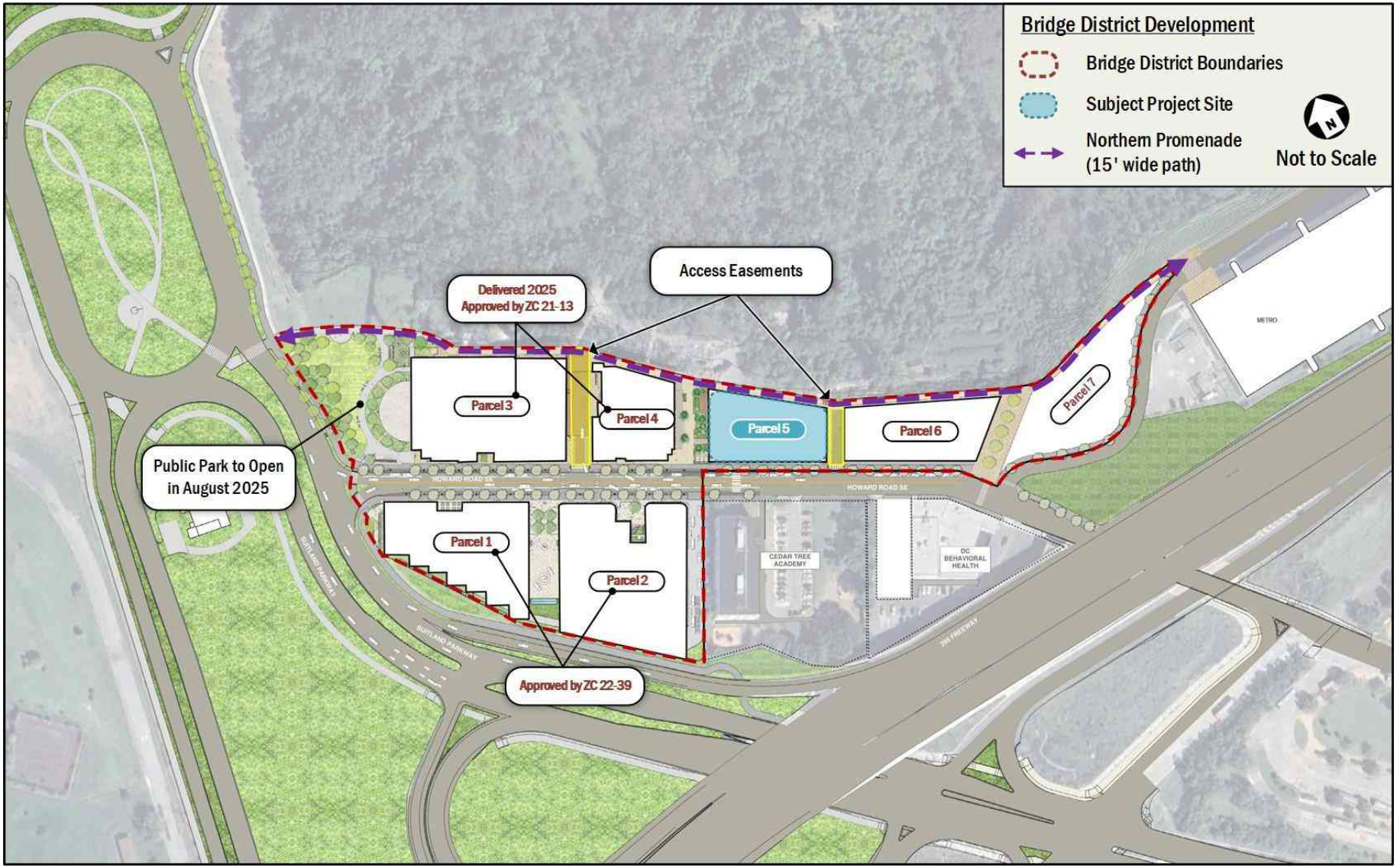

Figure 3: Bridge District Development

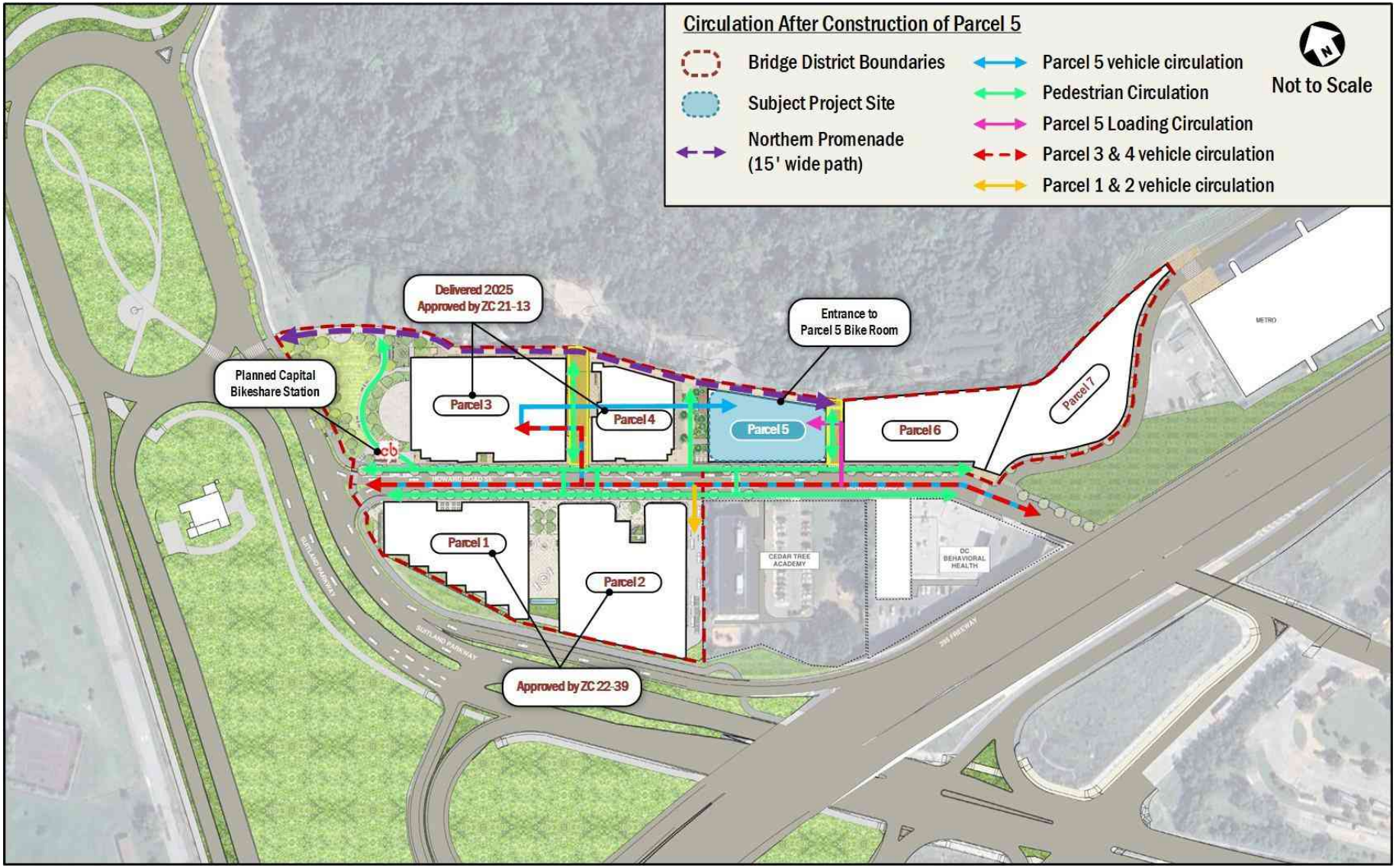

Figure 4: Circulation after Construction of Parcel 5

Study Area Overview

This chapter 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.

This chapter concludes:

- The site is surrounded by an extensive regional and local transportation system that will connect the proposed project's residents, patrons, and employees to the rest of the District and surrounding areas.
- The site is served by public transportation with access to several local Metrobus routes and Metrorail. These routes provide direct service to all areas of Washington, DC.
- There is bicycle infrastructure in the vicinity of the site, with connectivity to east-west and north-south bicycle facilities.
- Pedestrian facilities are generally lacking due to the isolated location of the site, but some facilities are present along anticipated walking routes to major destinations.

Major Transportation Features

Overview of Regional Access

As shown in Figure 5, the site has ample access to regional, vehicular, and transit-based transportation options that connect the site to destinations within the District, Virginia, and Maryland.

The site is accessible from two (2) major freeways and the principal arterial South Capitol Street, which connect the site to I-395 and I-695, as well as the Capital Beltway (I-495) which surrounds Washington, DC and its inner suburbs while also providing connectivity to the District core.

The site is located 0.25 miles from the Anacostia Metrorail Station, which is served by the Green Line. The Green Line travels south from Greenbelt, MD through Downtown Washington to Suitland, MD while providing access to the District core. Connections can be made at the L'Enfant Plaza and Gallery Place-Chinatown Metrorail stations to access the other five (5) Metrorail lines, allowing additional access to points in Virginia and Maryland. The Green Line trains run approximately every eight (8) minutes daily at all times of day.

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 in Figure 6. The site is served by DC-295, Suitland Parkway, principal arterial South Capitol Street, and collectors Howard Road SE and Firth Sterling Avenue SE, which are supplemented by a network of connector and local roadways.

The Metrobus system provides extensive transit service in the vicinity of the site, including connections to several neighborhoods within the District and additional Metrorail stations. As shown in Figure 6, there are 12 Metrobus routes that service the site. Multiple bus stops servicing these 12 routes are located within walking distance of the site. These bus routes connect the site to many areas of DC, including several Metrorail stations where passengers can transfer to reach areas in the District, Virginia, and Maryland. A detailed review of bus routes and transit stops within a half-mile walk of the site is provided in a later chapter of this report.

Existing bicycle facilities consist of multi-use paths along Suitland Parkway, South Capitol Street, and the South Capitol Street East Oval, as well as the Anacostia Riverwalk Trail. Using the available connections along on-street and off-street routes within the study area, bicyclists have access to a number of regional bicycle facilities. A detailed review of existing and proposed bicycle facilities and connectivity is provided in a later chapter of the report.

There are relatively few pedestrian facilities in the project's vicinity, although the multi-use paths listed above provide some connectivity. Sidewalks on both sides of Howard Road SE connect the site to the Anacostia Metrorail station and commercial destinations along Martin Luther King, Jr. Avenue SE; however, the lack of street connections and the presence of several freeways and interchanges surrounding the site impact the quality of the pedestrian environment. Many streets are also missing sidewalks and/or curb ramps. A detailed review of existing and proposed pedestrian access and infrastructure is provided in a later chapter of this report.

Overall, the site is surrounded by a well-connected local transportation network that allows for efficient transportation options via transit, bicycle, walking, or vehicular modes.

Carsharing

Three (3) carsharing companies provide services in the District: Zipcar, Free2Move and Getaround. All the services are operated by private companies that provide registered users access to a variety of automobiles. Of these, only Zipcar has designated spaces for their vehicles. Currently, there is one (1) Zipcar location within a mile of the site, with three (3) vehicles located at Martin Luther King, Jr. Avenue and W Street SE.

Carsharing is also provided by Free2Move, which provides point-to-point carsharing. Free2Move currently has a fleet located within areas of the District and Arlington County. Free2Move 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 for the meters or pay stations. Free2Move does not have permanent designated spaces for their vehicles; however, availability is tracked through their website and mobile phone application, which provides an additional option for car-sharing patrons.

Getaround is the largest connected car-sharing marketplace and provides communities with a cost-effective alternative to owning a car and operates in and around the site location. Getaround allows guests to book vehicles on demand and unlock the car with the Getaround app.

Bikeshare and Scooter Share

The Capital Bikeshare program provides additional cycle options for residents, employees, and visitors of the proposed project. The program has placed over 700 bikeshare stations across the Washington, DC metropolitan area with over 6,000 bicycles in the fleet.

In addition to Capital Bikeshare, four (4) electric-assist scooter (e-scooter) and electric-assist bicycle (e-bike) companies provide Shared Fleet Device (SFD) service in the District: Lime, Hopp, Spin, and VeoRide. These SFDs are provided by private companies that give registered users access to a variety of e-scooter and e-bike options. These devices are used through each company-specific mobile phone application. At this time, SFD pilot/demonstration programs are underway in Arlington County, the District, Fairfax County, the City of Alexandria, and Montgomery County.

Future Projects

There are several District initiatives located in the vicinity of the site. These planned projects are summarized in the following sections.

moveDC: Multimodal Long-Range Transportation Plan

moveDC is the long-range transportation plan for DC. This plan provides an overarching framework of goals and policies that will guide transportation decisions in DC over a 25-year period.

The *moveDC* report outlines strategies by mode, with a goal of full implementation by 2045. The plan hopes to achieve a transportation system that achieves the District’s goals of safety, equity, mobility, project delivery, management and operations, sustainability, and enjoyable spaces.

In direct relation to the Project, the *moveDC* plan outlines recommended transit and bicycle improvements including the following:

- A segment of the Transit Priority Network along Martin Luther King, Jr. Avenue SE; and
- Segments of the Bicycle Priority Network along Firth Sterling Avenue SE and Marion Barry Avenue SE

Other *moveDC* recommendations have already been implemented and are detailed in their respective sections of this report.

CHASE Action Agenda

The Congress Heights, Anacostia, and Saint Elizabeths (CHASE) area is expected to see many more new housing developments, major redevelopment projects, jobs, and transportation infrastructure investments in the next five to ten years. The CHASE Action Agenda takes steps to ensure that these changes bring meaningful economic opportunity to Ward 8 and its residents and businesses. This agenda targets seven areas:

- Jobs and workforce development
- Housing
- Retail
- Entrepreneurship and small businesses
- Arts and culture
- Preservation & redevelopment
- Transportation Connections

The report proposed a series of 12-month action steps between 2014 to 2015 to improve each of the following topic areas within the CHASE area. For transportation connections, some recommendations include:

- Completing the Anacostia Streetcar Environmental Assessment and Section 106 Evaluation
- Phase 2 of the 11th Street Bridge Project
- Completing the Anacostia Riverwalk

DC Comprehensive Plan

The *DC Comprehensive Plan* is a high-level guiding document that sets a positive, long-term vision for the District through the lens of its physical growth and change. The existing Comprehensive Plan was enacted in 2006 and updated in 2011 and again in 2021 with the DC Council passing the updated plan in May 2021. The new plan officially became law on August 21, 2021.

The Comprehensive Plan's Transportation Element contains the following policies which are supported by the proposed development:

- "*Policy T-1.1.7: Equitable Transportation Access*. Transportation within the District shall be accessible and serve all users. Residents, workers, and visitors should have access to safe, affordable, and reliable transportation regardless of age, race, income, geography, or physical ability."
    - The proposed project's location provides equitable and manageable access to nearby public transportation options. In particular, the site is within 0.25 miles from the Anacostia Metrorail Station (served by the Green Line). The Anacostia Metro bus bay is also served by many bus lines that will connect people to the District, Northern Virgina, and Maryland.
- "*Policy T-2.4.1: Pedestrian Network*. Develop, maintain, and improve pedestrian facilities. Improve the District's sidewalk system to form a safe and accessible network that links residents across Washington, DC."
    - The project is proposing a shared use path north of the site that will tie all the Bridge District Developments together for bicyclists and pedestrian users. The proposed project will improve pedestrian connectivity along the site's frontage and this will create a seamless pedestrian network east of the site where there are retail and other commercial land use within this neighborhood.
- "*Policy AW-2.4.3: Poplar Point Mixed Use Neighborhood*. Create a new transit-oriented mixed-use neighborhood oriented around Poplar Point Park and linked to Anacostia and Congress Heights Metro Stations.
    - The project is part of the larger Bridge District development which will be mixed-use consisting of residential, retail, hotel, and office. The project will serve as a gateway into the Historic Anacostia neighborhood.

Anacostia Waterfront Transportation Master Plan

As part of the Anacostia Waterfront Initiative (AWI), DDOT is pursuing a plan to reshape the area's transportation infrastructure into a network that improves access for residents, commuters, and visitors while also improving the area's environmental quality. The AWI Framework Plan concluded that the AWI area suffered from a transportation system that favored regional mobility over neighborhood accessibility. The highways that dominated the area were ill-suited to serve local neighborhoods and had the effect of cutting off communities from one another and from the waterfront. This plan puts forth strategies to redress the negative effects of the existing transportation system and to create a future system characterized by connectivity.

11th Street Bridge Park

As part of the reconstruction of the 11th Street SE bridge across the Anacostia River, a portion of the old bridge will be reconstructed as a new civic space devoted to outdoor recreation and the arts. The new bridge will include a bicycle/pedestrian connection across the river between the Anacostia neighborhood and the Washington Navy Yard, with bicycle connections to downtown along 11th Street SE, and it will be easily accessible from the proposed recreation center.

South Capitol Street Trail Project

The South Capitol Street Trail Project will extend the Anacostia Riverwalk Trail south into the District. The project will consist of a 10-foot-wide bicycle and pedestrian trail stretching 3.8 miles from the South Capitol Street and Firth Sterling Avenue SE intersection, south along South Capitol Street/Overlook Avenue to Laboratory Road, east under the I¬295 overpass to Shepherd Parkway and terminating at the Oxon Hill Farm Trail along DC Village Lane. This project will be filling a bicycle and pedestrian travel void for local communities, employment centers, and connecting users to the regional trail network. It will also provide connections to other trails in the District, Maryland, and Virginia.

DDOT Bike Parking Guide

The District of Columbia aims to increase bicycling and walking to 25 percent of all commuter trips by 2032. The DDOT Bike Parking Guide is a resource for residents, businesses, and developers to learn about bicycle parking in the District. In particular, the guide provides information on zoning requirements for bicycle parking, bicycle rack design, and other amenities relevant to new development projects.

The project's bicycle amenities follow guidelines outlined in the DDOT Bike Parking Guide.

Shepherd Branch Trail

The Shepherd Branch Trail was envisioned in 2004 as part of the DC Streetcar Project in order to address the lack of safe and comfortable bicycle and pedestrian facilities in the existing roadway network between C Street SE and South Capitol Street. The proposed trail will run along Anacostia Freeway approximately 0.3 miles from the site and will connect the site to the future South Capitol Street, Suitland Parkway, and 11th Street Bridge bicycle and pedestrian facilities.

Planned Developments

There are three (3) planned development projects in the vicinity of the site. For the purpose of this analysis and consistent with DDOT and industry standards, only approved developments expected to be completed prior to the planned development with an origin/destination within the study were included. The developments are described below. These projects are shown in Figure 7.

Bridge District Phase 1 (Parcels 3 and 4)

Bridge District Phase 1 (Parcels 3 and 4) includes 757 residential units and 40,000 square feet of retail space, including a 24,000 square foot anchor tenant. This development has delivered in 2025.

Bridge District Parcels 1 + 2

The Bridge Parcels 1 & 2 will be redeveloped into a mixed-use building with 825 residential units, 24,407 square feet of retail space, 151 hotel rooms, and 527 parking spaces. It is expected to be completed prior to the completion of the proposed project.

Barry Farm Phase 1

The Barry Farm redevelopment consists of several phases, set to be fully completed in 2030. Relevant to the project, however, Phase 1 includes a residential building with 139 units and 20,000 square feet of retail and 98 rental stacked style townhomes and is expected to be completed by 2027.

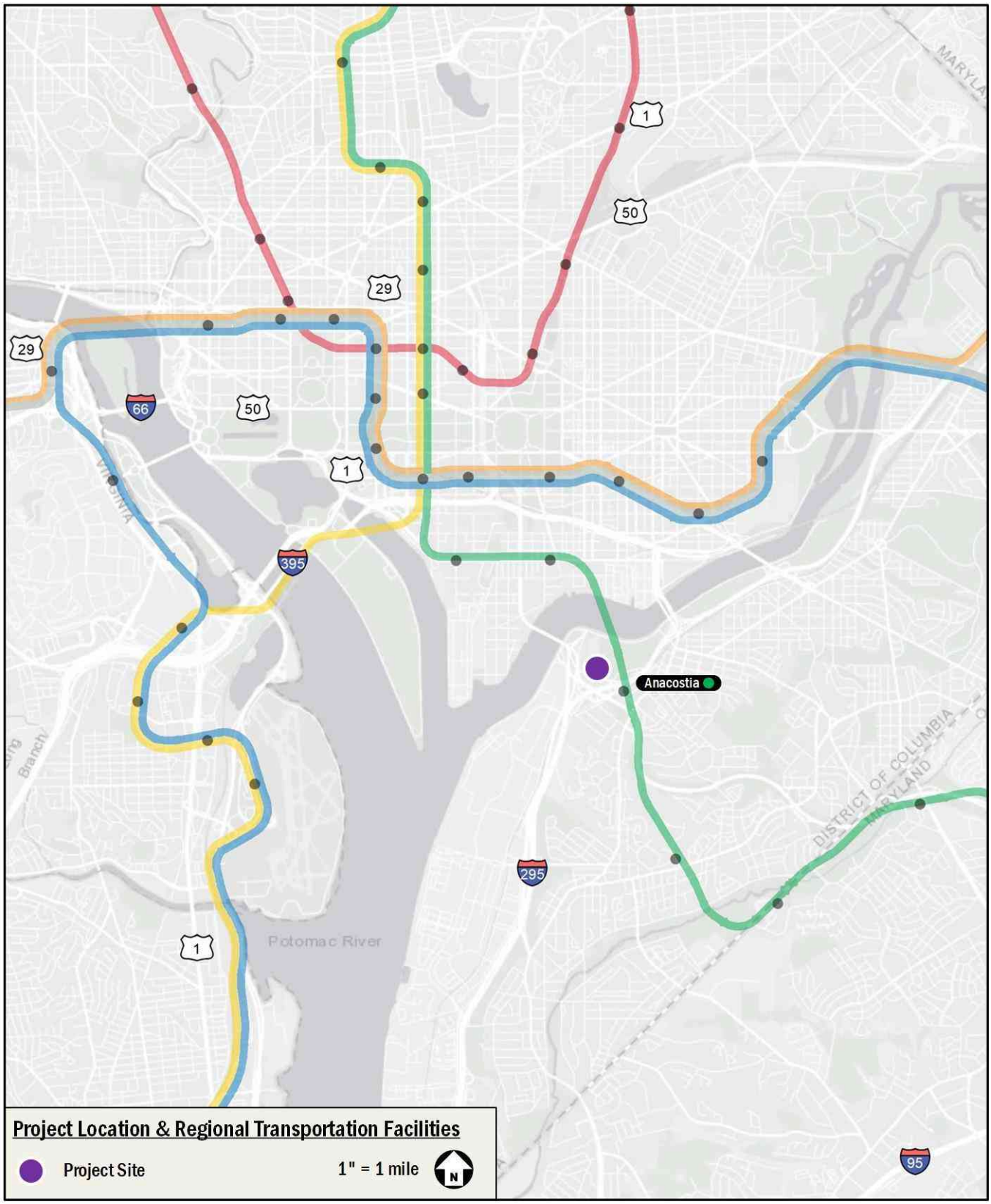

Figure 5: Project Location and Regional Transportation Facilities

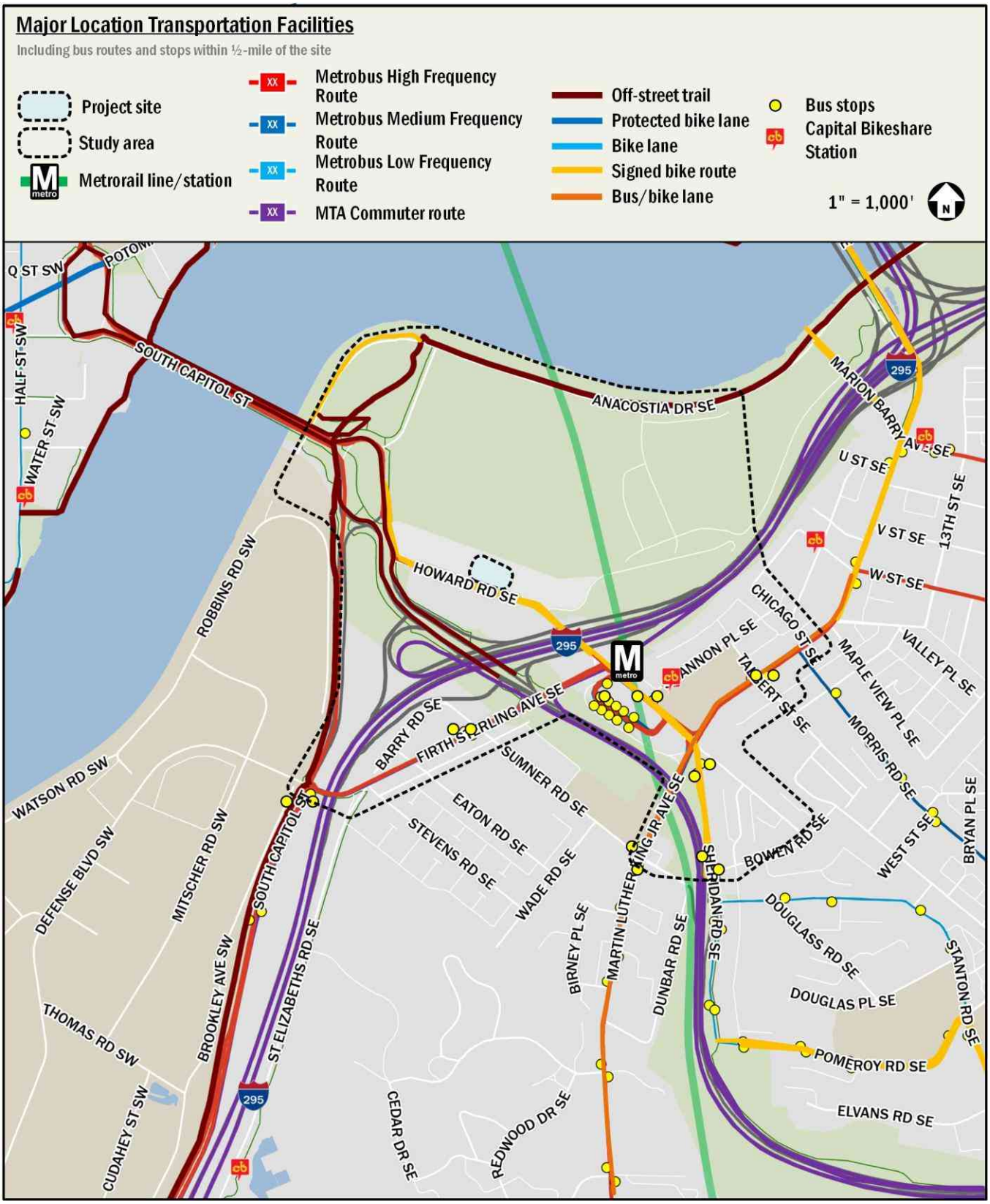

Figure 6: Major Location Transportation Facilities

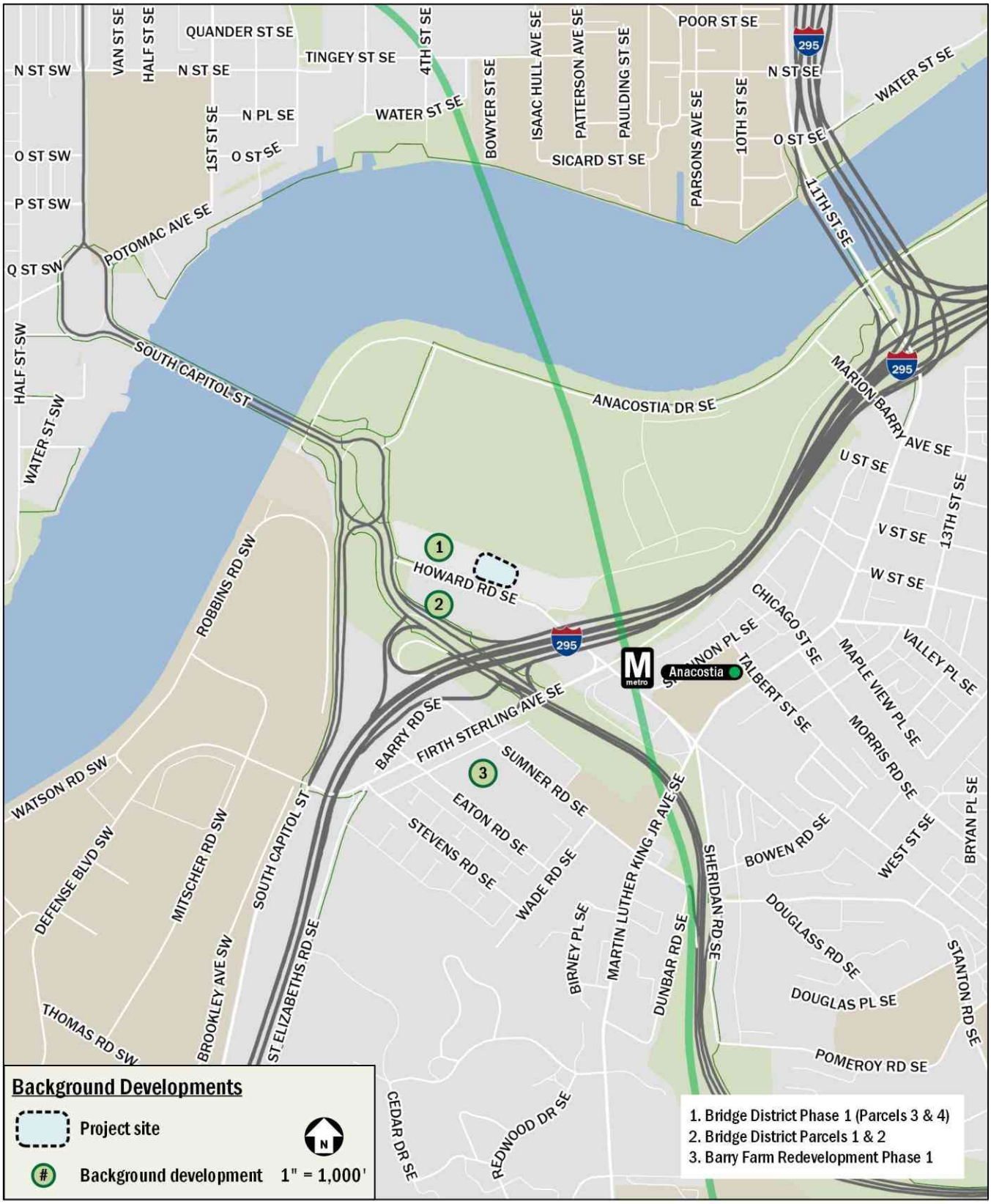

Figure 7: Background Developments

Project Design

This chapter reviews the transportation components of the Bridge District Parcel 5 development, including the proposed site plan and access points. It includes descriptions of the project's vehicular access, loading facilities, parking, bicycle, and pedestrian facilities, and the proposed TDM plan.

Bridge District Development

The Bridge District is an eight-acre neighborhood development consisting of new apartments, shops, restaurants, parks, a cyber innovation hub, bike paths, and more. It is located in southeast Washington DC adjacent to Anacostia Park and in proximity with the Frederick Douglass Memorial Bridge which connects the neighborhood to other parts of the District. The Bridge District consists of seven (7) parcels which will be developed into approximately seven (7) new buildings with approximately 2.5 million square feet of entitled, matter-of-right, mixed-use density currently under development, including approximately 2,000 residential units, 90,000 square feet of retail, parks, and more. The following discusses the bridge district parcels and their overall access and circulation plan:

Bridge District Phase 1 (Parcels 3 and 4)

The Bridge District Parcels 3 & 4 are located west of the Parcel 5 development. The development program includes up to 757 residential units, up to 40,000 square feet of retail space (including a 24,000 square foot anchor tenant), and 355 garage parking spaces.

Vehicle access to the parking garage and loading facilities is proposed from a new public access easement connecting Howard Road SE. The parking garage is planned to be potentially shared with proposed Bridge District Parcels 5 and 6. Parcels 3 & 4's vehicular access will be shared with Parcel 5, as seen in Figure 4. The development completed construction and opened its doors in Q1 2025.

Bridge District Parcels 1 & 2

The Bridge District Parcels 1 & 2 are located south of the Parcel 5 development. The development program includes a mixed-use building with 818 residential units, 24,666 square feet of retail space, 151 hotel rooms, and 529 parking spaces.

Vehicle access to the parking garage and loading facilities is proposed from a new private driveway east of the site connecting to Howard Road SE.

Bridge District Parcel 6

The Bridge District Parcel 6 is located east of the Parcel 5 development. This parcel is a future development as part of the Bridge District Development Master Plan.

Bridge District Parcel 7

The Bridge District Parcel 7 is located east of Parcel 5 and Parcel 6. This parcel is a future development as part of the Bridge District Development Master Plan.

Bridge District Parcel 5

The proposed project, Bridge District Parcel 5, is bounded by Howard Road SE to the south Bridge District Phase 1 (Parcels 3 and 4), which has recently been delivered, to the west, Bridge District Parcels 6 & 7 to the east, and Anacostia Park to the north. The project's program includes approximately 272 residential units, approximately 8,476 square feet of retail space, and approximately 160 garage parking spaces. The project is undergoing Design Review by the Zoning Commission.

Figure 8 shows the site plan and overview of the project's program.

Site Access and Circulation

Pedestrian Access

Pedestrian access is available from Howard Road SE to the retail space. Pedestrian access is available from the green courtyard on the west to the residential lobby. Pedestrian access will also be available via the bike and pedestrian promenade north of the site. Pedestrian access to the site is shown on Figure 8.

Vehicular and Loading Access

Vehicular access to the site is proposed through Bridge District Phase 1 (Parcels 3 and 4). Loading access will be from a new private street via Howard Road SE that will eventually service Bridge District Parcel 6 as well. Figure 8 shows the location of the site access points for parking garage access and loading facilities.

Curbside Management

The existing curbside conditions around the site are shown on Figure 9. As part of the streetscape improvements, on-street parking will be added along both sides of Howard Road SE. Future curbside conditions are shown in Figure 10.

Loading and Trash

Loading

The proposed loading facilities will accommodate all loading activity and delivery demand for the proposed uses without any detrimental impact to the surrounding transportation network. DDOT standards stipulate that all truck turning movements should be accommodated without back-in movements through public space. The Bridge District Parcel 5 development has been designed to accommodate all loading activity and associated backing maneuvers within the private driveways and the building's interior loading area. Truck turning diagrams using AutoTURN are provided in the Technical Attachments.

The project meets zoning requirements for the provision of loading berths and service spaces as follows:

- Residential use: one (1) 12' x 30' loading berth and one (1) 10' x 20' service space.
- Retail use: one (1) 12' x 30' loading berth.

Additionally, the Zoning Regulations allow buildings with multiple uses to meet the requirement for the highest use provided that the uses can share the loading facilities. This is the case with Parcel 5, so the minimum requirement is one (1) 12' x 30' loading berth and one (1) 10' x 20' service space.

The project proposes two (2) 12' x 30' loading berths and one (1) 10' x 20' service space, exceeding the requirements.

Trash

Trash for the Bridge District Parcel 5 development will be accommodated using trash receptacles within the loading area. No trash will be stored in public space.

Truck routing to and from the site will be focused on designated primary truck routes, such as South Capitol Street and I-295. Loading access and circulation is shown in Figure 8.

Based on the expected truck deliveries, the loading facilities for the Bridge District Parcel 5 development are adequate, and vehicles accessing the loading facilities will not adversely affect the local roadway network.

Parking

The site is located within the NHR zone. In this zone, District zoning requirements mandate that 1.33 vehicle parking spaces must be provided per 1,000 square feet of retail space (in excess of 3000, square feet); and that one (1) space must be provided for every three (3) dwelling units in excess of four (4) units.

Based on these requirements, the project is required to provide 96 vehicle parking spaces.

The project will supply a total of 160 vehicle parking spaces. The number of proposed parking spaces is expected to meet the practical demand, reflecting the site's context: its proximity to I-295 and Suitland Parkway, along with the largely undeveloped character of the surrounding area, results in very few destinations within walking distance. Required and proposed parking is shown in

Table 1.

Bicycle and Pedestrian Facilities

Bicycle Facilities

The Bridge District Parcel 5 development will meet 2016 Zoning Regulations requirements for long-term and short-term bicycle parking. Per the 2016 Zoning Regulations in conjunction with the bicycle parking requirements established in DCMR Title 18 Section 1214, the project is required to provide the following bicycle facilities and as seen in Table 2.

- Long-Term Bicycle Parking Spaces (92 required)
    - Residential: One (1) space for every three (3) residential units; 91 spaces are required (per DCMR 18 1214).
    - Retail: One (1) space for each 10,000 square feet; 1 (1) space is required.
- Short-Term Bicycle Parking Spaces (16 required)
    - Residential: One (1) space for every 20 residential units; 14 spaces are required.
    - Retail: One (1) space for each 3,500 square feet; two (2) spaces are required.

The Bridge District Parcel 5 development will meet both requirements by providing at least 92 long-term bicycle parking spaces and 16 short-term bicycle parking spaces throughout the site in highly accessible areas. The long-term spaces will conform to 2016 Zoning Regulations requirements by making 50% or more of the spaces either horizontal or on the ground.

Table 1: Required and Proposed Vehicle Parking

Land Use	Size	ZR16 Parking Rates	Calculation	ZR16 Required Spaces	Proposed Supply
Retail	8,476 sf	1.33 per 1 ksf in excess of 3 ksf	(8.476 – 3)*1.33	7	
Residential	272 du	1 per 3 du in excess of 4 du	(272 - 4)/3	89	**160**
Total				**96**	

Table 2: Required Bicycle Parking

Land Use	Size	ZR16 bicycle parking rates		ZR16 required bicycle parking spaces	
		Long-term	Short-term	Long-term	Short-term
Retail	8,476 sf	1 per 10,000 sf	1 per 3,500 sf	1	2
Residential	272 du	1 per 3 du	1 per 20 du	91	14
Total				**92**	**16**

Pedestrian Facilities

The Bridge District Parcel 5 development will provide pedestrian facilities along the site's Howard Road SE frontage that meet DDOT and ADA standards. New sidewalks will be installed along the site's street frontage that will meet or exceed the width requirements, as well as curb ramps with detectable warnings and crosswalks at the new site entrances, as needed.

Transportation Demand Management

Transportation Demand Management (TDM) is the application of policies and strategies used to reduce travel demand or to redistribute demand to other times or spaces. TDM elements typically focus 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 TDM plan for the proposed project is based on DDOT expectations for TDM programs for developments of this type and size. As such, the applicant proposes the following TDM measures for the entire development and the uses onsite:

Site Wide TDM

- Identify Transportation Coordinators for the planning, construction, and operations phases of development. There will be a Transportation Coordinator for each tenant and the entire site. The Transportation Coordinators will act as points of contact with DDOT, goDCgo, and Zoning Enforcement and will provide their contact information to goDCgo.
- Transportation Coordinator will conduct an annual commuter survey of employees and residents on-site, and report TDM activities and data collection efforts to goDCgo once per year.
- Transportation Coordinators will develop, distribute, and market various transportation alternatives and options to the residents and customers, including promoting transportation events (i.e., Bike to Work Day, National Walking Day, Car Free Day) on the property website and in any internal building newsletters or communications.
- Transportation Coordinators will receive TDM training from goDCgo to learn about the TDM conditions for this project and available options for implementing the TDM Plan.
- Will post "getting here" information in a visible and prominent location on the website with a focus on non-automotive travel modes. Also, links will be provided to goDCgo.com, CommuterConnections.com, transit agencies around the metropolitan area, and instructions for customers discouraging parking on-street in Residential Permit Parking (RPP) zones.
- Provide employees and residents who wish to carpool with detailed carpooling information and will be referred to other carpool matching services sponsored by the Metropolitan Washington Council of Governments (MWCOG) or other comparable service if MWCOG does not offer this in the future.
- Post all TDM commitments on website, publicize availability, and allow the public to see what commitments have been promised.
- Offer a free SmarTrip card to every new employee and resident and a complimentary Capital Bikeshare coupon good for one ride for the first year after opening.
- Additional short- and long-term bicycle parking spaces at or above ZR16 requirements, providing (at a minimum) 92 long-term spaces and 16 short-term spaces.
- Long-term bicycle storage rooms will accommodate non-traditional sized bikes including cargo, tandem, and kids bikes, with a minimum of five (5) spaces (5%) designed for longer cargo/tandem bikes (10 feet by 3 feet), a minimum of nine (9) spaces (10%) designed with electrical outlets for the charging of electric bikes and scooters, and a minimum of 46 spaces (50%) will be located horizontally on the floor. There will be no fee to residents and employees for usage of the bicycle storage room.
- Following the issuance of the final certificate of occupancy for the Project, the Transportation Coordinator shall submit documentation from DOB summarizing compliance with the transportation and TDM conditions of the Order (including, if made available, any written confirmation from the Office of the Zoning Administrator) to the Office of Zoning for inclusion in the IZIS case record of the case.
- Following the issuance of a Certificate of Occupancy for the Project, the Transportation Coordinator will submit a letter to the Zoning Administrator, DDOT, and goDCgo every five (5) years (as measured from the final Certificate of Occupancy for the Project) summarizing continued substantial compliance with the transportation and TDM conditions in the Order, unless no longer applicable as confirmed by DDOT. If such letter is not submitted on a timely basis, the building shall have sixty (60) days from

date of notice from the Zoning Administrator, DDOT, or goDCgo to prepare and submit such letter.

- Install a minimum of eight (8) electric vehicle (EV) charging stations.
- Provide a bicycle repair station.
- Coordinate a way finding plan along walking routes and biking routes to the property from the Anacostia Metrorail station and nearby bike paths.
- As part of Bridge District Parcels 1 and 2 TDM Plan and Z.C. Order 22-39, a 23-dock Capital Bikeshare (CaBi) station with 12 bikes will be funded and installed in a mutually agreed location coordinated with DDOT within the NHR zone and will fund one-year of maintenance and operations costs. If the construction of Bridge District Parcel 5 precedes that of Bridge District Parcels 1 and 2, then the Applicant will provide a new 23-dock Capital Bikeshare station as part of the Bridge District Parcel 5 project, with the preliminary location identified as the new public park between Bridge District Parcel 3 and the East Oval as seen in Figure 4. If the construction of Bridge District Parcel 5 follows that of Bridge District Parcels 1 and 2, then no additional Capital Bikeshare capacity will be added.
- Designate up to two (2) parking spaces in the vehicle parking garage for car-sharing services to use with right of first refusal.
- Hold a transportation event for residents, employees, and members of the community once per year for a total of two (2) years following the issuance of the final certificate of occupancy for the Project. Examples include resident social, walking tour of local transportation options, goDCgo lobby event, transportation fair, WABA Everyday Bicycling seminar, bicycle safety/information class, bicycle repair event, etc.).
- The Applicant agrees to not lease unused parking spaces to anyone other than tenants of buildings within the Northern Howard Road Zone unless the other buildings have no on-site parking.
- The applicant has proposed improvements as part of the larger Bridge District Development which includes the Northern Promenade shared use path, a raised crosswalk on Howard Road within the vicinity of Bridge District Parcel 5, new curb extensions on Howard Road along the site's frontage, and upgraded sidewalks and curb ramps on Howard Road along the site frontage. All of these improvements aim to improve the overall pedestrian and bicyclist experience within the Bridge District development.
- Redbrick is developing a ~1-acre public park on land owned by DDOT. Designed as a vibrant community gathering space, the park will include a playground, Capital Bikeshare access, and open green space for recreation and relaxation. Construction is currently underway, with completion anticipated in late summer 2025.

Residential TDM

- Unbundle the cost of vehicle parking from the lease or purchase agreement for each residential unit, and charge a minimum rate based on the average market rate within a quarter mile.
- Transportation Coordinators will subscribe to goDCgo's residential newsletter.
- Provide welcome packets to all new residents that should, at a minimum, include the Metrorail pocket guide, brochures of local bus lines (Circulator and Metrobus), carpool and vanpool information, CaBi coupon or rack card, Guaranteed Ride Home (GRH) brochure, and the most recent DC Bike Map.
- Designate two (2) parking spaces for vehicles to be used by residents who carpool to work.

Retail TDM

- Unbundle the cost of parking from the cost to lease the building or unit and only hourly, daily, or weekly rates will be charged. Free parking, validation, or discounted rates will not be offered.
- Transportation Coordinator will demonstrate to goDCgo that tenants with 20 or more employees are in compliance with the DC Commuter Benefits Law and participate in one of the three transportation benefits outlined in the law (employee-paid pre-tax benefit, employer-paid direct benefit, or shuttle service), as well as any other commuter benefits related laws that may be implemented in the future.
- Employers will offer a telework program to eligible employees, contribute to health savings accounts, free gym memberships, bike tune-ups, or other programs to encourage walking or bicycling.

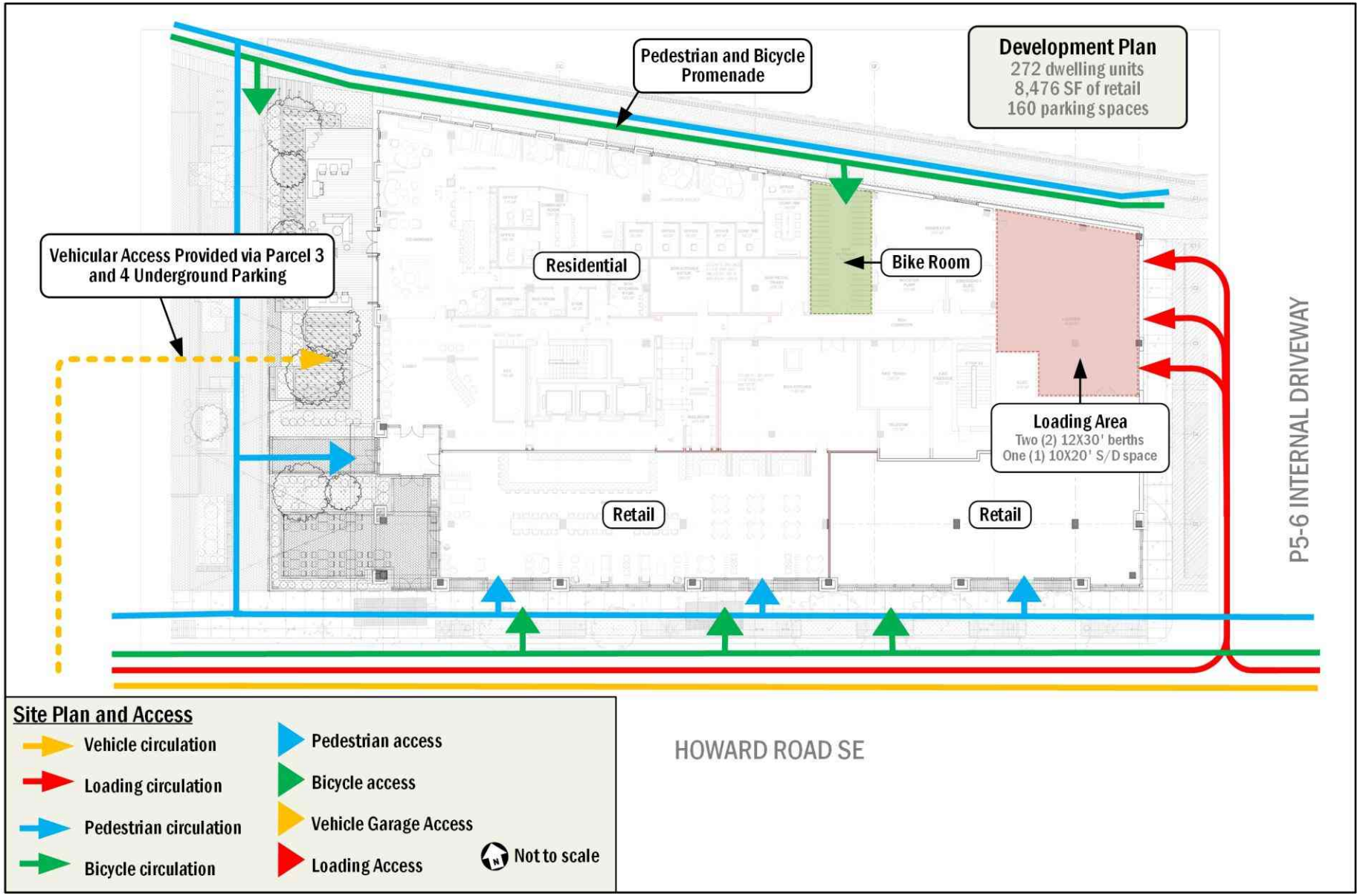

Figure 8: Site Plan and Access

Figure 9: Existing Curbside Management

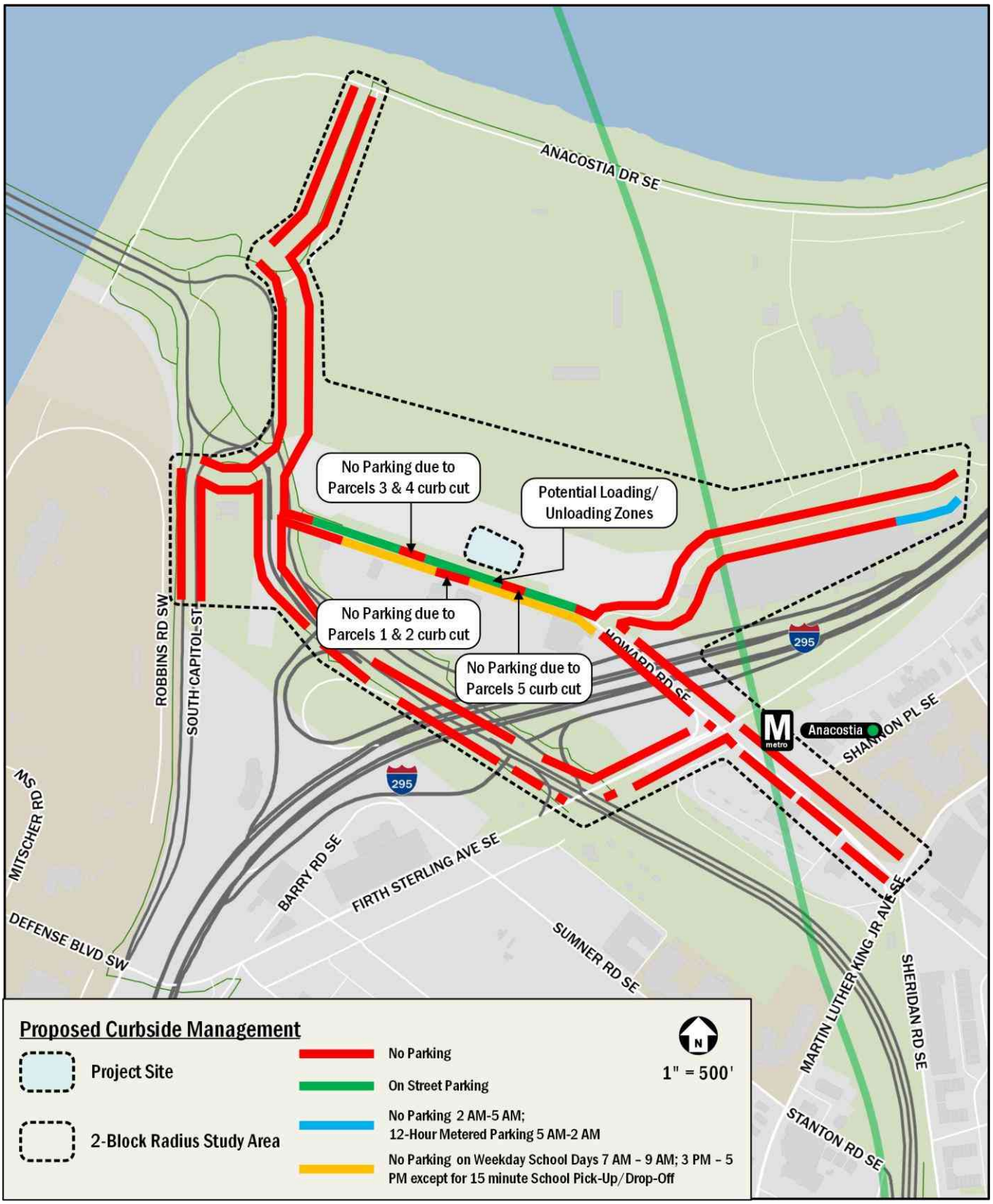

Figure 10: Proposed Curbside Management

Travel Demand Assumptions

This chapter outlines the Bridge District Parcel 5 development's transportation demand. It summarizes the projected trip generation of the proposed project by mode, which forms the basis for the chapters that follow. These assumptions were vetted and approved by DDOT as a part of the scoping process for the study.

Traditionally, weekday peak hour trip generation is calculated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. This methodology was supplemented to account for the urban nature of the project (the *Trip Generation Manual* provides data for non-urban, low transit use sites) and to generate trips for multiple modes, as vetted and approved by DDOT.

Proposed Trip Generation

Proposed residential and retail trip generation were calculated based on ITE land use 222, *High-rise Multifamily Housing* and ITE land use 822, *Strip Retail <40kSF*. Trips were split into different modes using assumptions derived from census data for the residents that currently live near the site, census data for the commuters that currently work near the site, WMATA ridership survey data, and the proposed parking supply. A summary of the mode split assumptions is provided in Table 3, and a summary of the multimodal trip generation for the proposed development based on ITE is provided in Table 4.

Table 3: Mode Split Assumptions

Land Use	Mode			
	Drive	Transit	Bike	Walk
Residential	45%	45%	5%	5%
Retail	60%	20%	10%	10%

As shown in Table 4, the Bridge District Parcel 5 development is expected to generate trips on the surrounding transportation network across all modes. Detailed mode split assumptions and trip generation calculations are included in the Technical Attachments.

Table 4: ITE Multi-Modal Trip Generation Summary

Mode	Land Use	AM Peak Hour			PM Peak Hour			Weekday Total
		In	*Out*	*Total*	*In*	*Out*	*Total*	
Auto (veh/hr; veh)	Residential[1]	10	28	38	28	18	46	675
	Retail	5	4	9	13	13	26	343
	Total	15	32	47	41	31	72	1018
Transit (ppl/hr; ppl)	Residential[1]	12	33	45	33	21	54	797
	Retail	3	2	5	8	8	16	208
	Total	15	35	50	41	29	70	1005
Bike (ppl/hr; ppl)	Residential[1]	1	4	5	4	2	6	89
	Retail	2	1	3	4	4	8	104
	Total	3	5	8	8	6	14	193
Walk (ppl/hr; ppl)	Residential[1]	1	4	5	4	1	5	88
	Retail	1	2	3	4	4	8	104
	Total	2	6	8	8	5	13	192

[1]It is noted that 299 units were analyzed for residential use as part of the traffic impact analysis in this report to reflect a more conservative analysis as opposed to 272 units assumed in the most current plans.

Traffic Operations

This chapter provides a summary of an analysis of the existing and future roadway capacity surrounding the site. Included is an analysis of potential vehicular impacts of the Bridge District Parcel 5 development and a discussion of potential improvements.

The purpose of the capacity analysis is to:

- Determine the existing capacity of the study area roadways;
- Determine the overall impact of the project on the study area roadways; and
- Discuss any potential improvements and mitigation measures to accommodate the additional vehicular trips.

This analysis was accomplished by determining the traffic volumes and roadway capacity for Existing Conditions, Background Conditions, and Total Future Conditions. The scope of the capacity analysis was developed based on DDOT guidelines and agreed upon by DDOT staff.

The capacity analysis focuses on the weekday morning and afternoon commuter peak hours.

This chapter concludes:

- Under Existing Conditions, four (4) study intersections have at least one approach operating at an unacceptable level of service and six (6) study intersections experience queues that exceed available storage.
- Under Future Background Conditions, six (6) study intersections have at least one approach operating at an unacceptable level of service and six (6) study intersections experience queues that exceed available storage.
- The addition of project- generated trips does not significantly affect the delays or queuing at most intersections.
- Three (3) intersection meets DDOT's threshold for mitigation measures as a result of impacts created by the project. Mitigations in the form of signal timing adjustments and TDM measures was identified.
- The project will not have a detrimental impact to the surrounding vehicular network with the implementation of all site design elements and TDM measures.

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 upon by DDOT. The 2028 Future Conditions with the project and with the potential Suitland Parkway U-turn (2028 Total Future with U-turn Conditions) however, was excluded from the scope and therefore the CTR, following a meeting with DDOT staff and the applicant on July 30th, 2025. The general methodology of the analysis follows national and DDOT guidelines on the preparation of transportation impact evaluations of site development. The approved scope is included in the technical attachments.

Capacity Analysis Scenarios

The vehicular capacity analyses were performed to determine whether the project will lead to adverse impacts on traffic operations. A review of potential impacts to each of the other modes is outlined later in this report. This is accomplished by comparing two (2) future scenarios: (1) without the project (referred to as "Background Conditions" and (2) with the project approved and constructed (referred to as "Total Future" Conditions).

Specifically, the roadway capacity analysis examined the following scenarios:

1. 2025 Existing Conditions (Existing Conditions);
2. 2028 Future Conditions without the Project (2028 Background Conditions); and
3. 2028 Future Conditions with the Project (2028 Total Future Conditions)

Study Area

The study area of the analysis is a set of intersections where detailed capacity analyses were 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 project. Although it is possible that impacts will occur outside of the study area, those impacts are neither significant enough to be considered a material adverse 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 and agreed upon by DDOT for analysis:

- Suitland Parkway & Firth Sterling Avenue SE
- Howard Road SE & Firth Sterling Avenue SE
- Howard Road SE & Anacostia Metrorail Access Road
- Howard Road SE & Parcel 6 Site Driveway (Future)
- Howard Road SE & Parcels 1 & 2 Site Driveway (Future)
- Howard Road SE & Parcels 3 & 4 Site Driveway
- Howard Road SE & Suitland Parkway
- East Oval & Suitland Parkway
- East Oval & Anacostia Drive SE
- East Oval & Frederick Douglass Bridge
- East Oval & South Capitol Street
- Suitland Parkway & I-295 NB On Ramp/I-295 NB Off Ramp
- Suitland Parkway & I-295 SB On/Off Ramps

Figure 11 shows a map of the study area intersections.

Geometry and Operations Assumptions

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

2025 Existing Geometry and Operations Assumptions

Gorove Slade made observations and confirmed the existing lane configurations and traffic controls at the intersections within the study area. Existing signal timings and offsets were obtained from DDOT.

The lane configurations and traffic controls for the 2025 Existing Conditions are shown on Figure 12.

2028 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 project.

Based on these criteria, the following improvements were assumed:

- The addition of the intersection of Howard Road SE & Bridge District Parcels 1 & 2 Driveway:
  - This intersection will be configured with one eastbound through/right lane, one westbound through/left lane, and one stop-controlled northbound left/right lane.
- The addition of the intersection of Howard Road SE & Bridge District Parcels 3 & 4 Driveway:
  - This intersection will be configured with one westbound through/right lane, one eastbound through/left lane, and one stop-controlled southbound left/right lane.

The lane configurations and traffic controls for the 2028 Background Conditions are shown in Figure 13.

2028 Future Geometry and Operations Assumptions

The configurations and traffic controls for the 2028 Future Conditions were based on those for the 2028 Background Conditions with the addition of the proposed development.

As noted earlier in the report, the proposed development will utilize Parcels 3 & 4's Site Driveway to access the parking garage through a below-grade connection. A new intersection, which will be shared by Parcel 5 and future Parcel 6 and Parcel 7, will be added:

- Intersection 4 Howard Road SE & Parcel 6 Site Driveway (Future): This intersection will be configured with one westbound through/right lane, one eastbound through/left lane, and one stop-controlled southbound left/right lane

Note that this intersection is shown as a future intersection in the 2028 Future Conditions, as it will be developed as part of the future Parcels 6 and 7 developments.

Traffic Volume Assumptions

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

Existing Traffic Volumes

Traffic volumes for Existing Conditions were based on the individual intersection peaks from turning movement counts (TMCs) collected on Thursday, April 10, 2025, between 6:30 and 9:30 AM and between 4:00 and 7:00 PM. This TMC data is included in the Technical Attachments. Existing traffic volumes are shown in Figure 14.

2028 Background Traffic Volumes (without the Project)

The traffic projections for the 2028 Background Conditions consist of the existing volumes with two (2) additions:

- Inherent growth on the roadway (representing regional traffic growth); and
- Traffic generated by developments expected to be completed prior to the Project (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 to or close to the future analysis year of 2028.

Based on these criteria, and as discussed with and agreed upon by DDOT, three (3) developments were considered and determined to meet the above criteria. These developments include the following:

- Bridge District Parcels 1 & 2
- Bridge District Phase 1 (Parcels 3 & 4)
- Barry Farm Redevelopment Phase 1

Other background developments were included in the present project's scoping materials; however, these developments all either were identified to be a segment of another background development, will no longer be built, unapproved, or were assumed to be captured by regional traffic growth. Therefore, these developments were removed from the 2028 Background Conditions scenario.

Trip generation for the background developments is based on available studies or ITE *Trip Generation,* 11th Edition. The trip generation and distribution for background developments are included in the Technical Attachments.

The mode splits and trip distribution assumptions for these developments were primarily based on those used in similar developments throughout the Anacostia area and the proposed Bridge District Parcel 5 development.

A summary of the trip generation for the background developments is shown in Table 4 and the combined background projects peak hour volumes are shown in Figure 15.

While the background developments represent local traffic changes, regional traffic growth is typically accounted for using growth rates. The growth rates used in this analysis are derived using the Metropolitan Washington Council of Government's (MWCOG) currently adopted regional transportation model, comparing the difference between the 2025 and 2028 model scenarios as vetted and agreed to by DDOT. The growth rates observed in this model served as a basis for analysis assumptions, and where negative growth was observed, a conservative 0.10 percent annual growth rate was applied to the roadway.

In addition, a maximum growth rate of 2.0 percent was used based on DDOT recommendation. Regional growth was applied to all movements between any two freeways, arterials, or collector roads, as determined by DDOT's roadway function classifications. The applied growth rates are shown in Table 6. The traffic volumes generated by the background growth along the network are shown in Figure 16.

2028 Total Future Traffic Volumes (with the Project)

The 2028 Total Future traffic volumes consist of the following:

- Background volumes, shown in Figure 17; and
- Site-generated volumes for the Bridge District Parcel 5 developments, shown in Figure 20.

Trip distribution for the site-generated trips was determined based on: (1) Census Transportation Planning Products (CTPP) Traffic Analysis Zone (TAZ) data, (2) existing and future travel patterns in the study area, and (3) previously approved methodologies employed in approved studies in the vicinity of the site.

Based on this review and the site access locations, the site-generated trips were distributed through the study area intersections. Trip distribution assumptions and specific routing was analyzed by land use for inbound and outbound trips. Distribution assumptions for the project are provided in Figure 18 and Figure 19 for inbound and outbound trips, respectively.

Site-generated volumes for the project's program are presented in Figure 20. The 2028 Total Future traffic volumes with the Bridge District Parcel 5 developments are presented in Figure 21.

Table 5: Summary of Background Developments Trip Generation

Background Development	AM Peak Hour (veh/hr)			PM Peak Hour (veh/hr)		
	In	*Out*	*Total*	*In*	*Out*	*Total*
Bridge District Parcels 1 & 2	53	74	127	104	92	196
Bridge District Parcels 3 & 4	54	72	126	118	106	224
Barry Farm Redevelopment Phase 1	25	44	69	63	55	118
Total	**132**	**190**	**322**	**285**	**253**	**538**

Table 6: Applied Annual and Total Background Growth Rates

Roadway	Direction	Proposed Annual Growth Rate		Proposed Total Growth Between 2025 and 2028	
		AM Peak Hour	*PM Peak Hour*	*AM Peak Hour*	*PM Peak Hour*
Suitland Parkway	Northbound	0.10%	0.65%	0.30%	1.96%
	Southbound	0.18%	0.50%	0.54%	1.51%
Firth Sterling Avenue SE	Eastbound	0.50%	2.00%	1.51%	6.12%
	Westbound	1.65%	0.50%	5.03%	1.51%
South Capitol Street SE	Northbound	0.50%	0.86%	1.51%	2.60%
	Southbound	0.97%	0.50%	2.94%	1.51%
Other roadways		0.10%	0.10%	0.30%	0.30%

Vehicular Analysis Results

Intersection Capacity Analysis

Intersection capacity analyses were performed for the three (3) scenarios outlined previously at the intersections contained within the study area during the morning and afternoon peak hours. *Synchro* version 11 was used to analyze the study intersections based on the Highway Capacity Manual (HCM) 2000 methodology.

The results of the capacity analyses are expressed in level of service (LOS) and delay (seconds per vehicle) for each approach. A LOS grade is a letter grade based on the average delay (in seconds) experienced by motorists traveling through an intersection. LOS results range from “A” being the best to “F” being the worst. LOS D is typically used as the acceptable LOS threshold in the District; although LOS E or F is sometimes accepted in urbanized areas if vehicular improvements would be a detriment to safety or non-auto modes of transportation.

The LOS capacity analyses were based on: (1) the intersection peak hour traffic volumes; (2) the lane use and traffic controls; and (3) the HCM methodologies (using *Synchro* software). The average delay of each approach and LOS is shown for the signalized intersections in addition to the overall average delay and intersection LOS grade. The HCM does not give guidelines for calculating the average delay for a two-way stop-controlled intersection, as the approaches without stop signs would technically have no delay. Detailed LOS descriptions and the analysis worksheets are contained in the Technical Attachments.

Table 7 shows the results of the capacity analyses, including LOS and average delay per vehicle (in seconds) for the 2025 Existing, 2028 Background, and 2028 Total Future scenarios.

Table 8 shows a comparison of the volume to capacity (v/c) ratios for each scenario.

As shown in Table 7, four (4) study intersections have at least one approach operating at unacceptable levels during the existing conditions:

- Suitland Parkway & Firth Sterling Avenue SE
  - Overall (AM)
  - Eastbound (PM)
  - Westbound (AM/PM)
  - Northbound (AM)
- Howard Road SE & Firth Sterling Avenue SE
  - Eastbound (AM)
- Suitland Parkway & I-295 NB On/Off Ramps
  - Overall (AM)
  - Eastbound (AM)
  - Northbound (AM)
- Suitland Parkway & I-295 SB On/Off Ramps
  - Eastbound (AM/PM)

The introduction of local and regional background growth results in six (6) study intersections having at least one approach operating at unacceptable levels during the background conditions:

- Suitland Parkway & Firth Sterling Avenue SE
  - Overall (AM)
  - Eastbound (AM/PM)
  - Westbound (AM/PM)
  - Northbound (AM)
- Howard Road SE & Firth Sterling Avenue SE
  - Eastbound (AM)
- Suitland Parkway & Howard Road SE
  - Westbound (PM)
- East Oval & Frederick Douglass Bridge
  - Eastbound (PM)
- Suitland Parkway & I-295 NB On/Off Ramps
  - Overall (AM)
  - Eastbound (AM)
  - Northbound (AM)
- Suitland Parkway & I-295 SB On/Off Ramps
  - Eastbound (AM/PM)

The introduction of the site-generated trips from Bridge District Parcel 5 results in additional delays that would meet DDOT's mitigation threshold at three (3) study intersections where an approach delay was increased to unacceptable levels (LOS E) or an unacceptable delay increased by over five (5) percent as compared to Background Conditions (based on the preliminary signal timings):

- Suitland Parkway & Firth Sterling Avenue SE
  - Westbound (AM)
- Howard Road SE & Firth Sterling Avenue SE
  - Eastbound (AM)
- Suitland Parkway & Howard Road SE
  - Westbound (PM)

Queuing Analysis

In addition to the capacity analyses presented above, a queuing analysis was performed at each of the study intersections. The queuing analysis was performed using *Synchro* software. The 50th percentile and 95th percentile maximum queue lengths are shown for each lane group at the study area signalized intersections. The 50th percentile maximum queue is the maximum back of queue on a typical cycle. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. For unsignalized intersections, the 95th percentile queue is reported for each lane group (including stop-controlled movements) based on the HCM calculations.

Table 9 shows the queuing results for the study area intersections. Five (5) of the study intersections exhibit one or more lane groups that exceeds the given storage length during the existing conditions:

- Suitland Parkway & Firth Sterling Avenue SE
  - Eastbound Thru/Right (AM/PM)
  - Westbound Left (PM)
  - Westbound Right (AM/PM)
  - Southbound Thru (AM/PM)
  - Southbound Right (AM)
- Suitland Parkway & East Oval
  - Northbound Thru (AM/PM)
- East Oval & Frederick Douglass Bridge
  - Westbound Left (PM)
  - Westbound Thru (AM)
- East Oval & South Capitol Street
  - Southbound Left (PM)
  - Southbound Thru (PM)
- Suitland Parkway & I-295 NB On/Off Ramps
  - Eastbound Left (AM)
  - Eastbound Thru (AM)
  - Northbound Thru (AM/PM)
  - Northbound Right (AM/PM)

The introduction of trips from background growth and pipeline developments results in six (6) study intersections exceeding the given storage length during the background conditions:

- Suitland Parkway & Firth Sterling Avenue SE
  - Eastbound Thru/Right (AM/PM)

  - Westbound Left (PM)
  - Westbound Right (AM/PM)
  - Southbound Thru (AM/PM)
  - Southbound Right (AM)
- Howard Road SE & Anacostia Metrorail Access
  - Southbound Left/Thru/Right (PM)
- Suitland Parkway & East Oval
  - Northbound Thru (AM/PM)
- East Oval & Frederick Douglass Bridge
  - Westbound Left (PM)
  - Westbound Thru (AM)
- East Oval & South Capitol Street
  - Southbound Left (PM)
  - Southbound Thru (PM)
- Suitland Parkway & I-295 NB On/Off Ramps
  - Eastbound Left (AM)
  - Eastbound Thru (AM)
  - Northbound Thru (AM/PM)
  - Northbound Right (AM)

The introduction of site-generated trips from Bridge District Parcel 5 results in one (1) additional study intersection exhibiting a queue which exceeds the storage length or increases a queue exceeding storage in the background scenario by 150 feet:

- Howard Road SE & Firth Sterling Avenue SE
  - Eastbound Left (AM)

Mitigation Measures

Based on DDOT standards, the project is considered to have an impact at an intersection within the study area if any of the following conditions are met:

- The capacity analyses show a LOS E or F at an intersection or along an approach in the future conditions with the project where one does not exist in the background conditions;
- There is an increase in delay at any approach or overall intersection operating under LOS E or F of greater than **5 percent** when compared to the background conditions;
- The 95th percentile queues exceed storage along an approach in the future conditions with the project where one does not exist in the background scenario; or
- There is an increase in the 95th percentile queues by more than **150 feet** along an approach that exceeds storage in the background scenario.

Based on these criteria, the project has an impact on the following intersections based on the peak hour traffic volumes generated by the Project:

- Suitland Parkway & Firth Sterling Avenue SE (Int. 1)

  Under Future (2028) Conditions, during the weekday morning peak hour, there is an increase in delay in the westbound approach of greater than 5% compared to the background conditions.

  The increase in delay at this intersection attributable to the proposed development can be mitigated through signal timing adjustments.

- Howard Road SE & Firth Sterling Avenue SE (Int. 2)

  Under Future (2028) Conditions, during the weekday morning peak hour, there is an increase in delay in the eastbound approach greater than 5% compared to the background conditions and the 95th percentile queue in the eastbound left lane exceeds the storage length in the future conditions but not in the background conditions.

  The increase in delay and queue at this intersection attributable to the proposed development can be mitigated through signal timing adjustments.

- Suitland Parkway & Howard Road SE (Int. 7)

  Under Future (2028) Conditions, during the weekday afternoon peak hour, there is an increase in delay in the westbound approach of greater than 5% compared to the background conditions.

  As an unsignalized intersection, signal timing adjustments is not an option, and an additional westbound turn lane is not a viable option for mitigation. Furthermore, the HCM methodology for unsignalized intersections does not account for gaps from upstream signals such as the one at Suitland Parkway & Firth Sterling Avenue SE, or Suitland Parkway & I-295 NB On/Off Ramps, and thus could be overestimating the delay at Suitland Parkway and Howard Road SE. As a result, westbound traffic is anticipated to experience lower delays per vehicle than the Synchro results indicate. Therefore, it is proposed that impacts at this intersection be mitigated through additional TDM measures.

Figure 11: Study Area Intersections

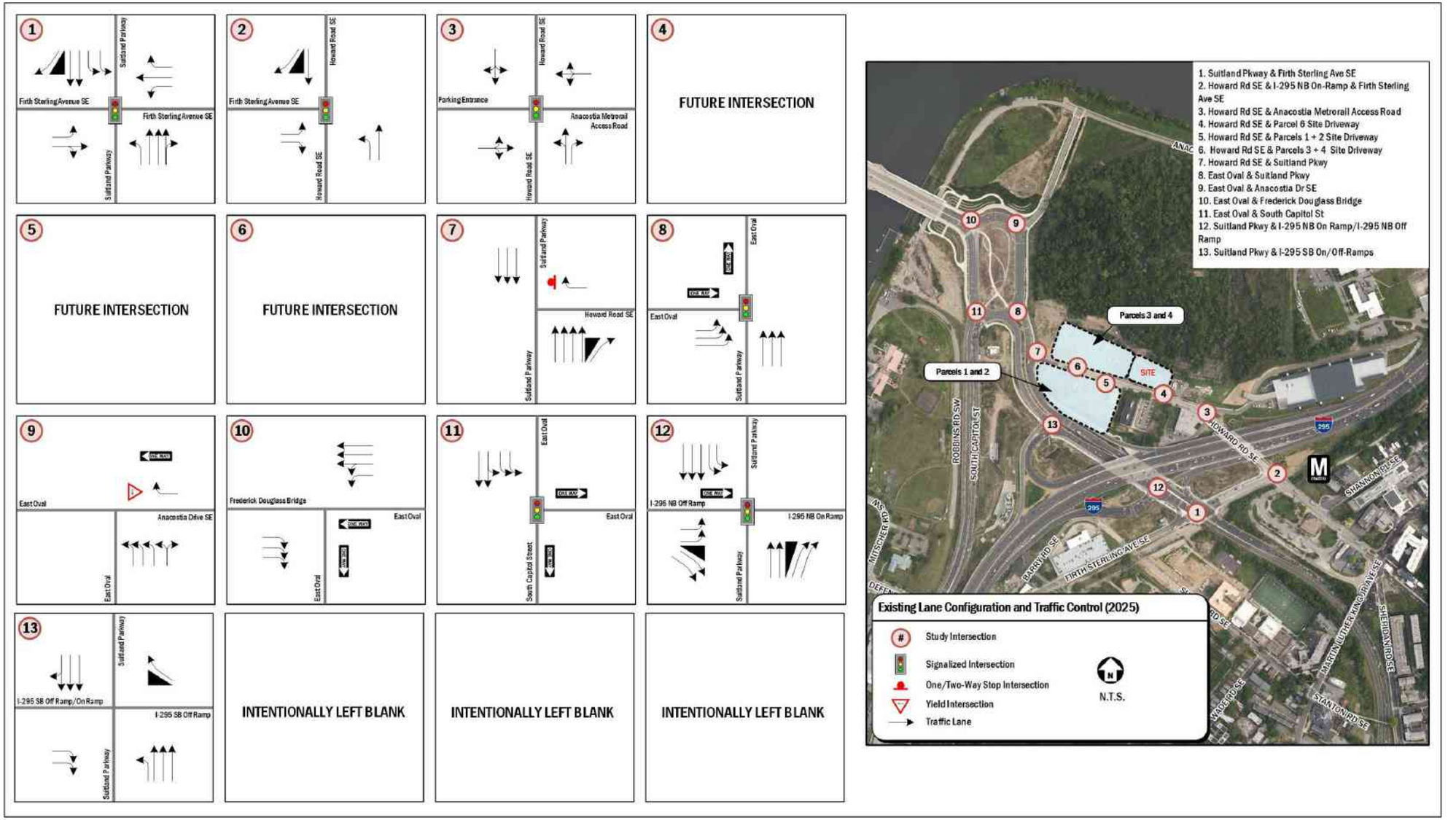

Figure 12: Existing Lane Configuration and Traffic Control (2025)

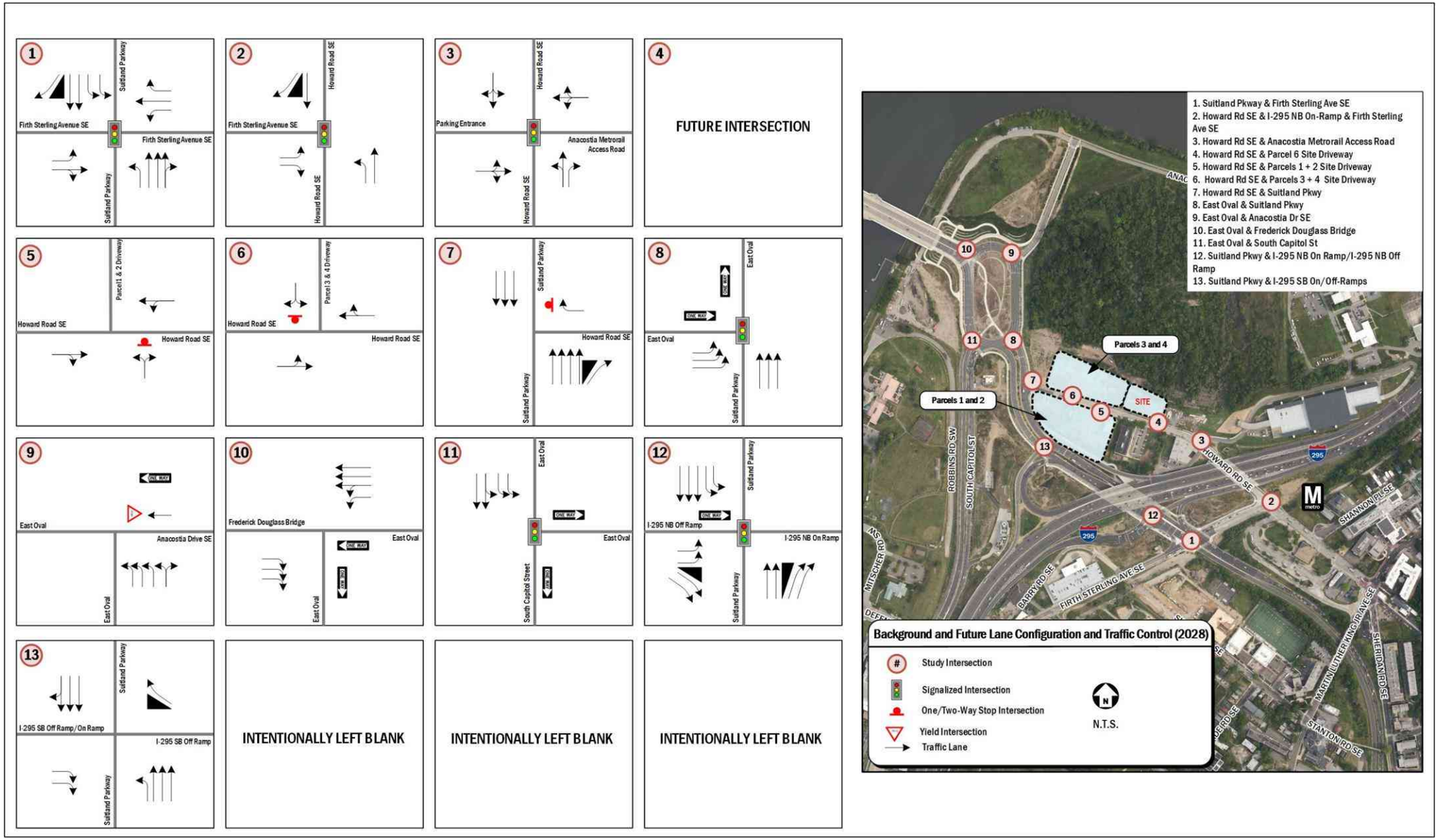

Figure 13: Background and Future Lane Configuration and Traffic Control (2028)

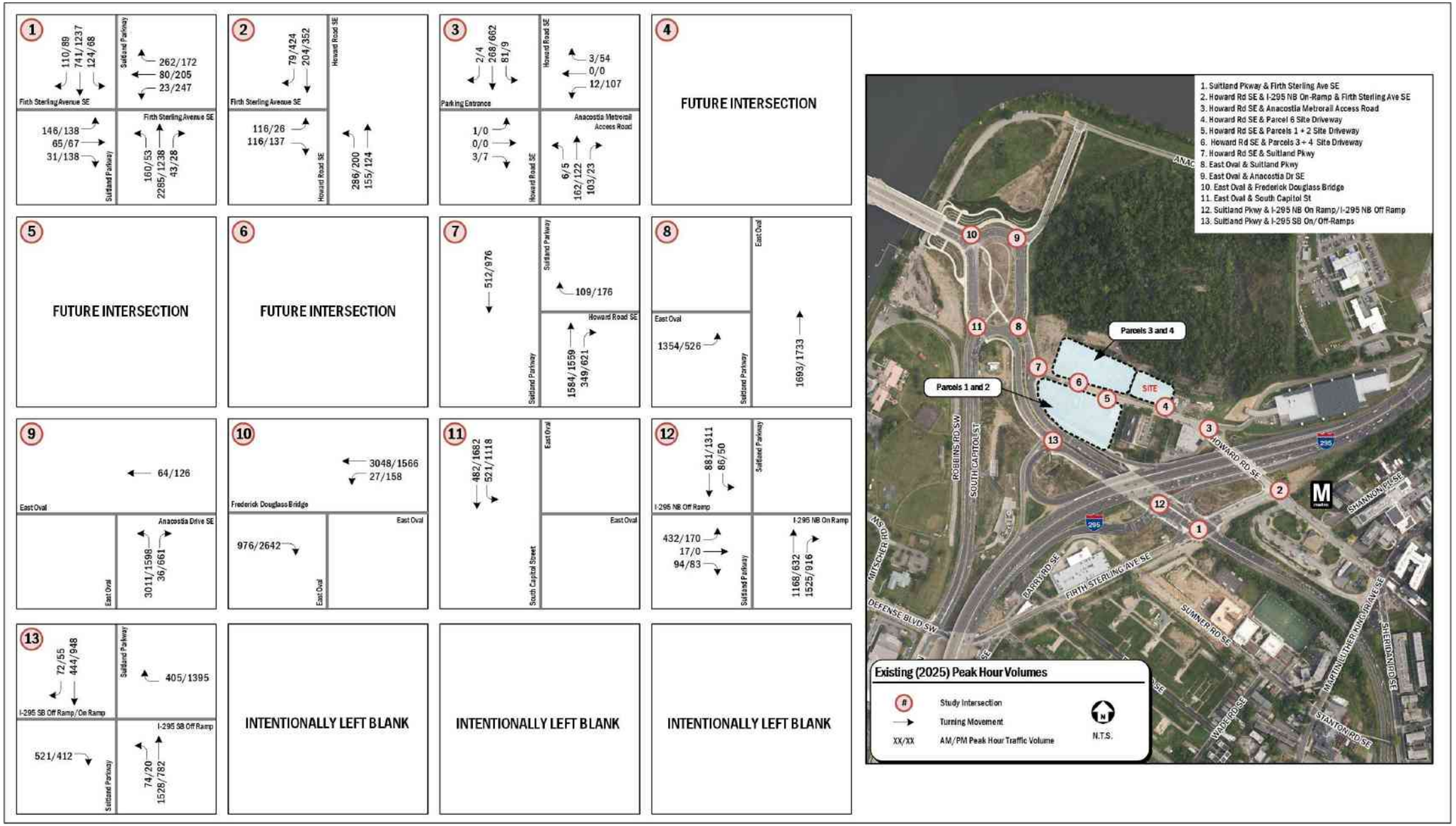

Figure 14: Existing (2025) Peak Hour Volumes

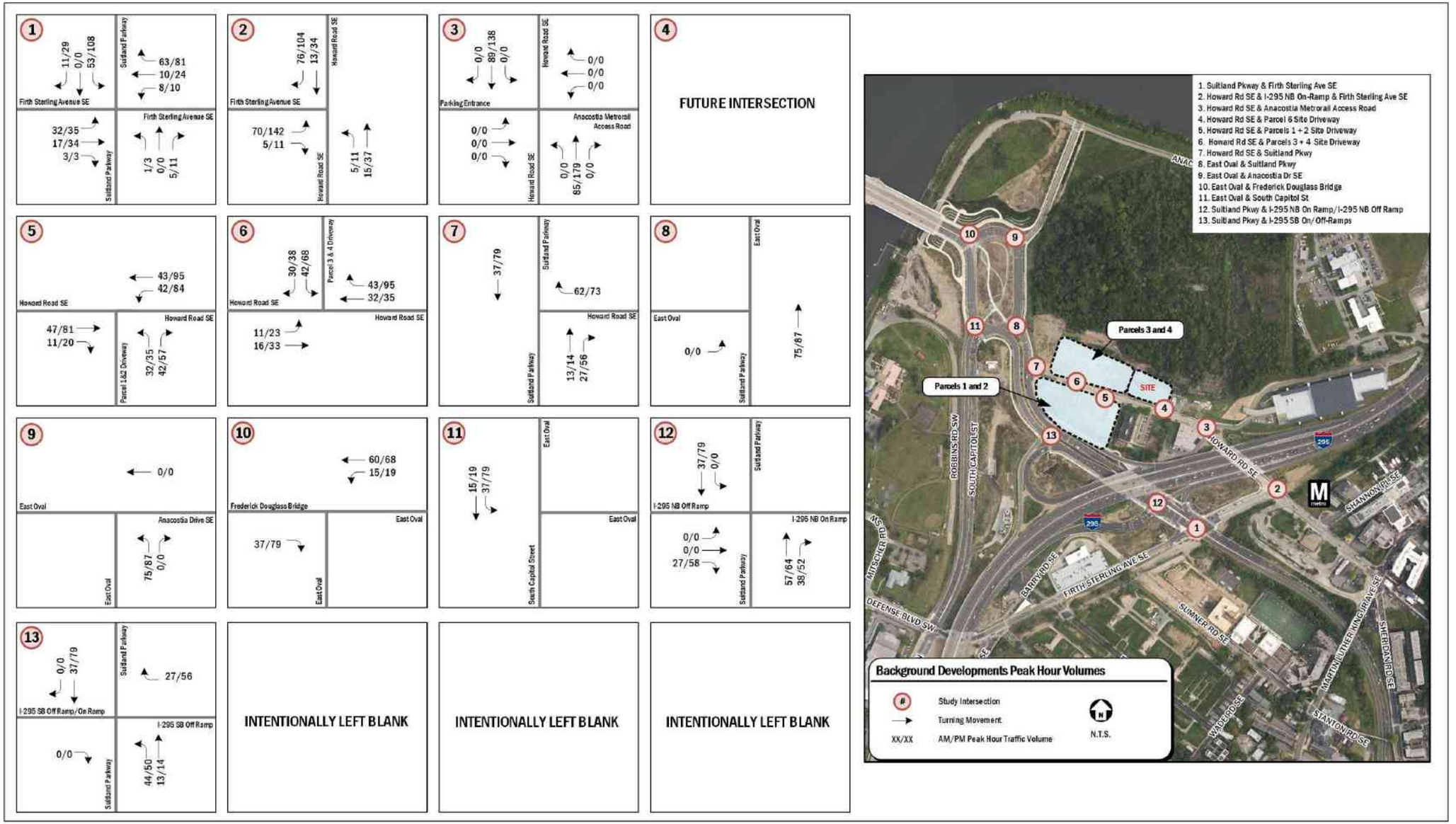

Figure 15: Background Developments Peak Hour Volumes

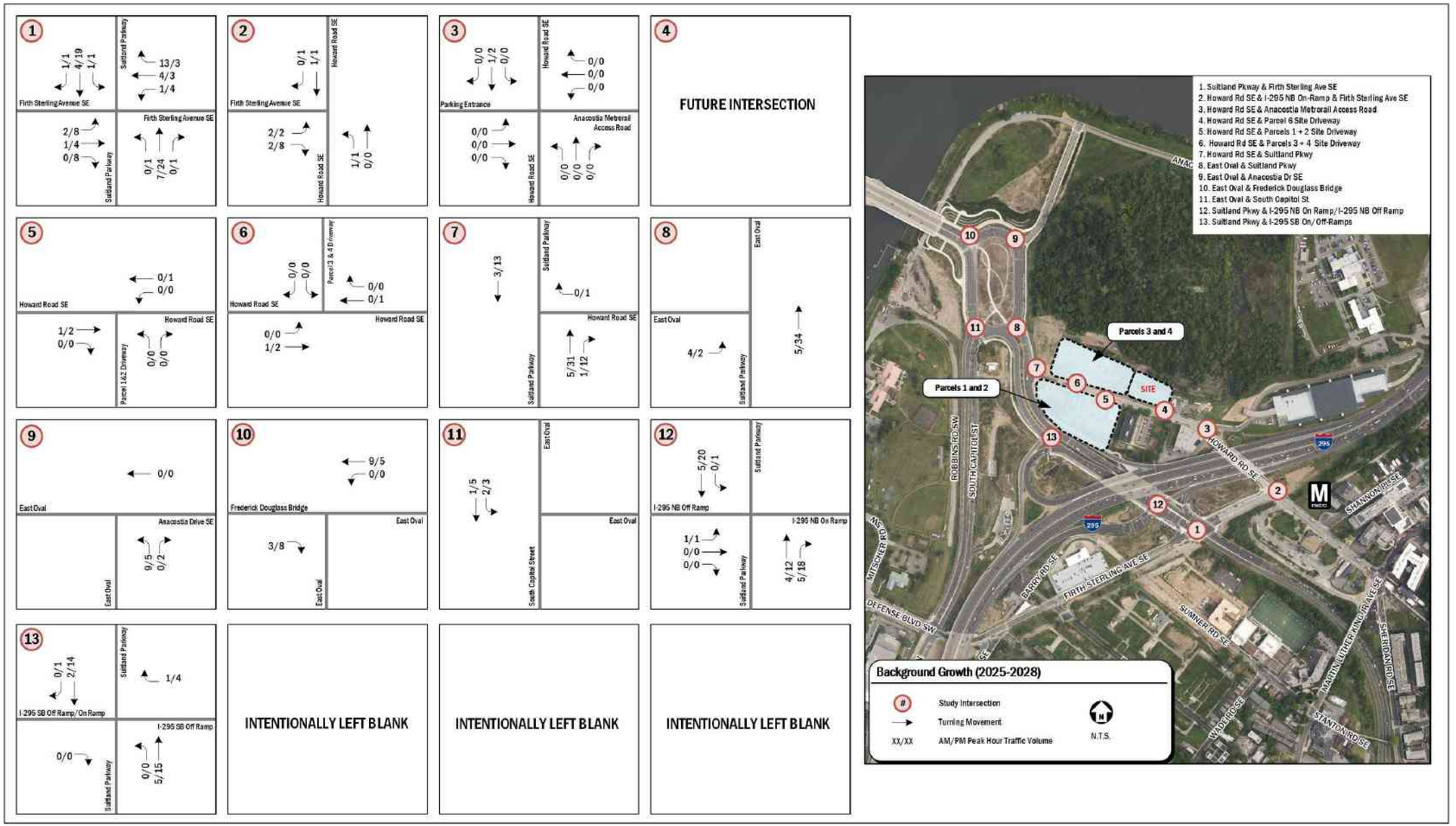

Figure 16: Background Growth (2025–2028)

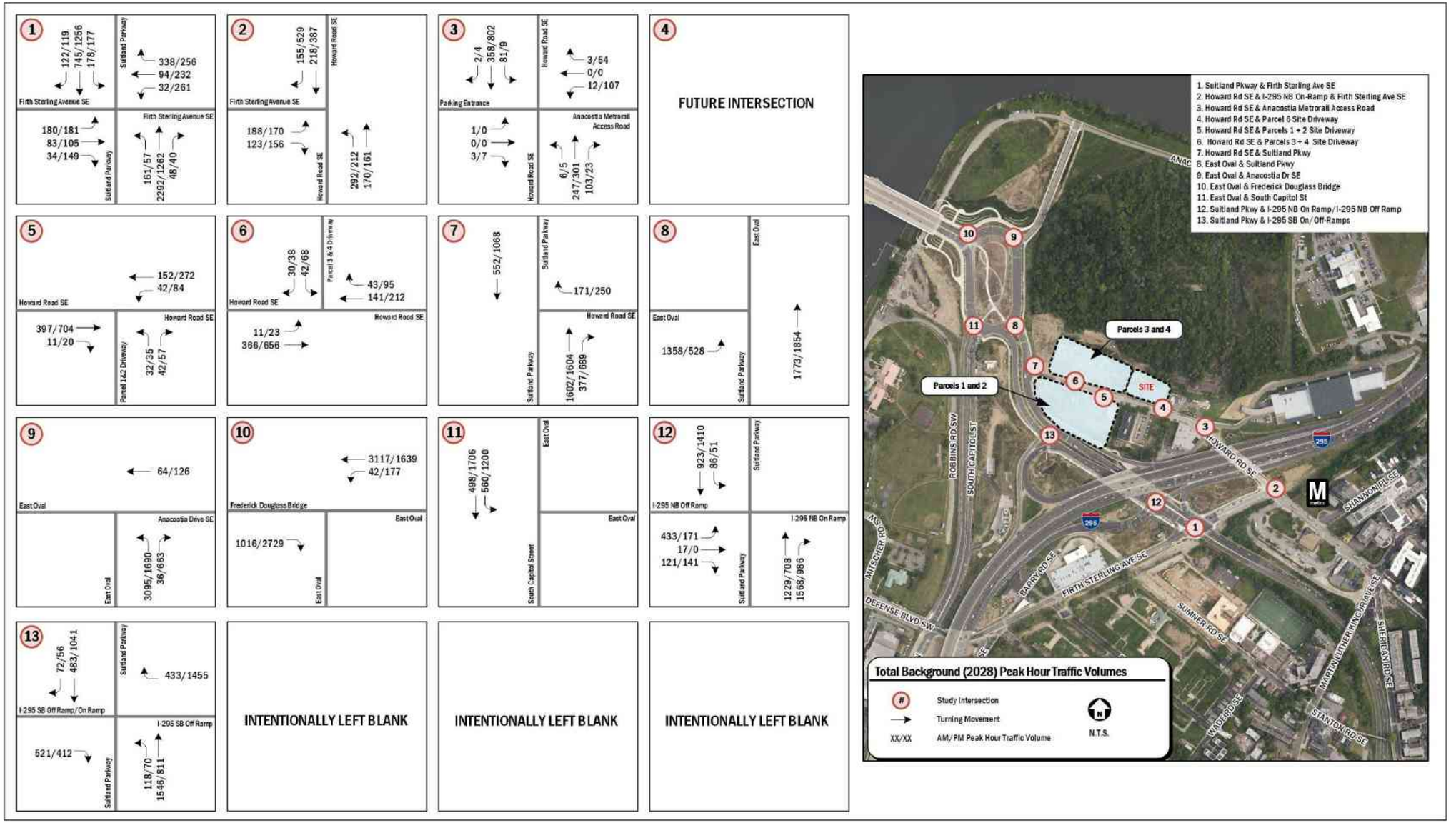

Figure 17: Total Background (2028) Peak Hour Traffic Volumes

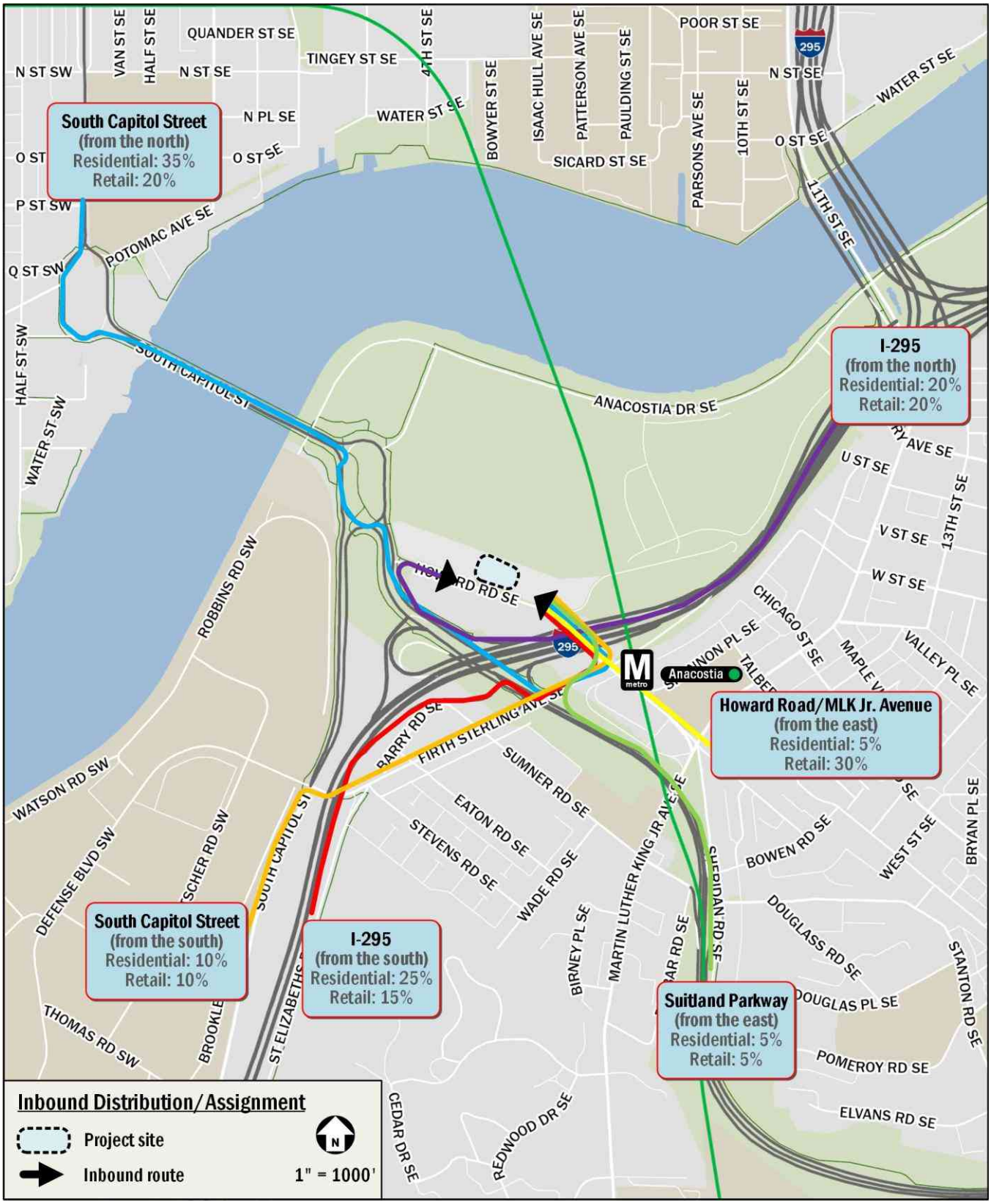

Figure 18: Inbound Distribution/Assignment

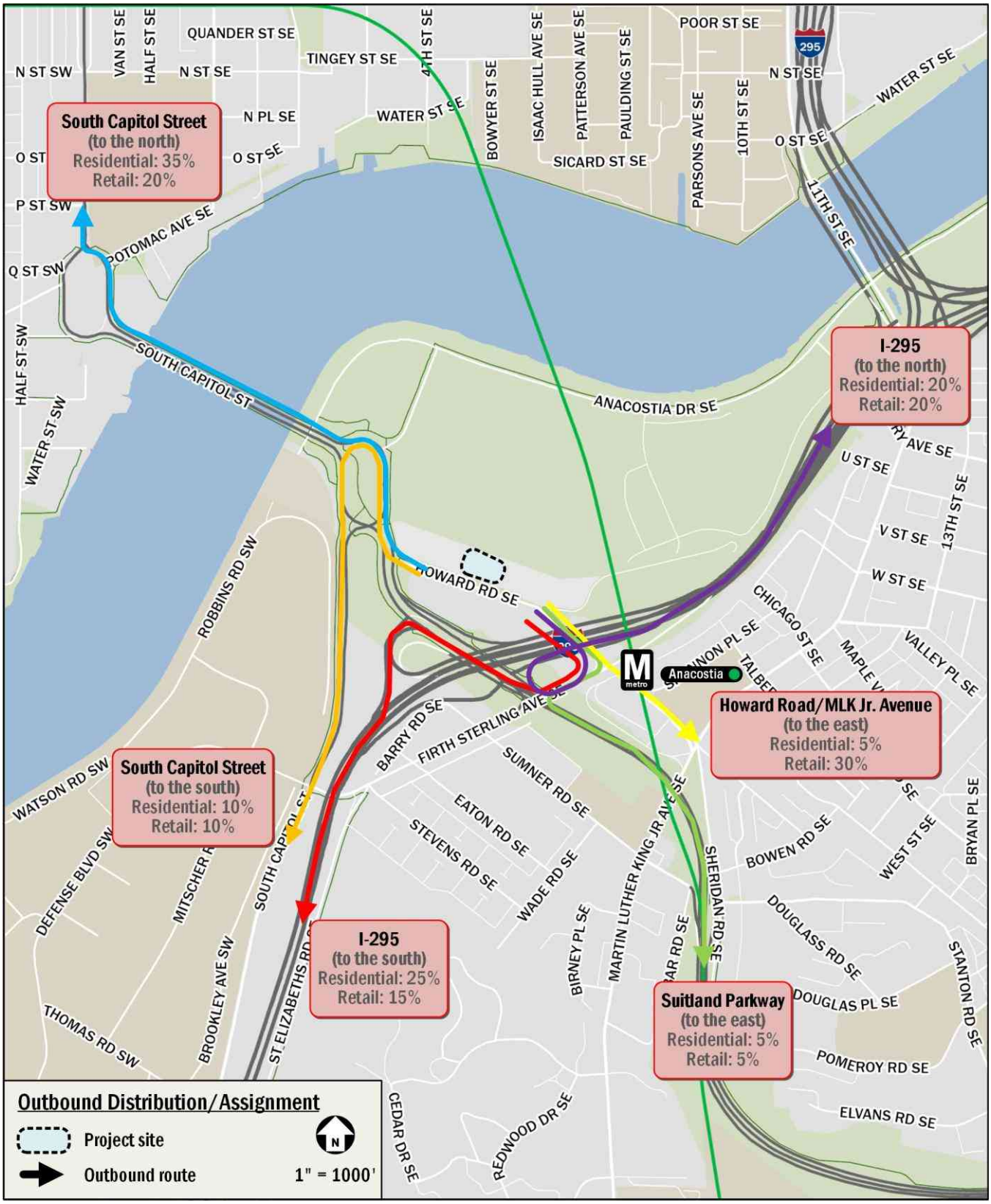

Figure 19: Outbound Distribution/Assignment

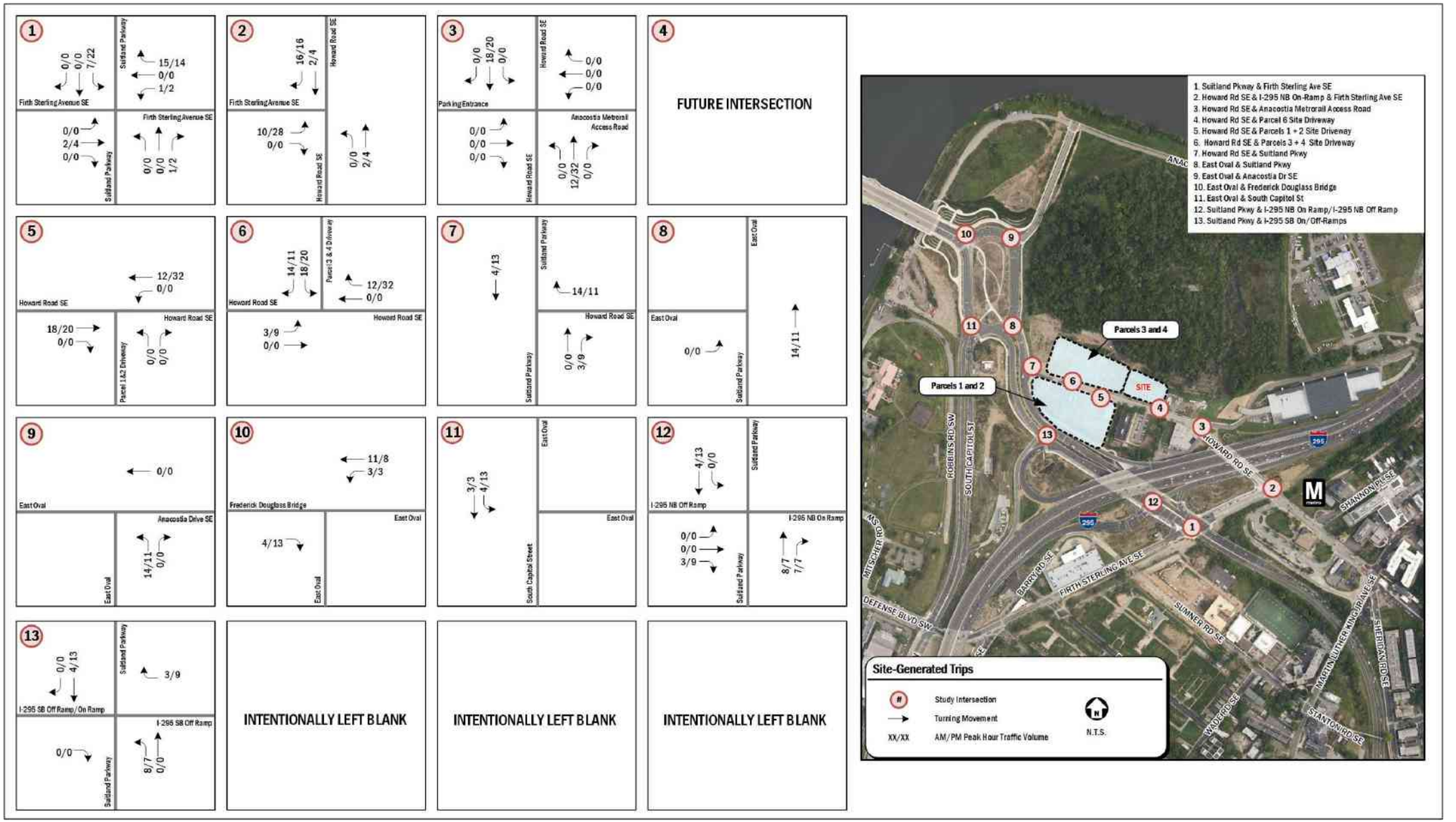

Figure 20: Site-Generated Trips

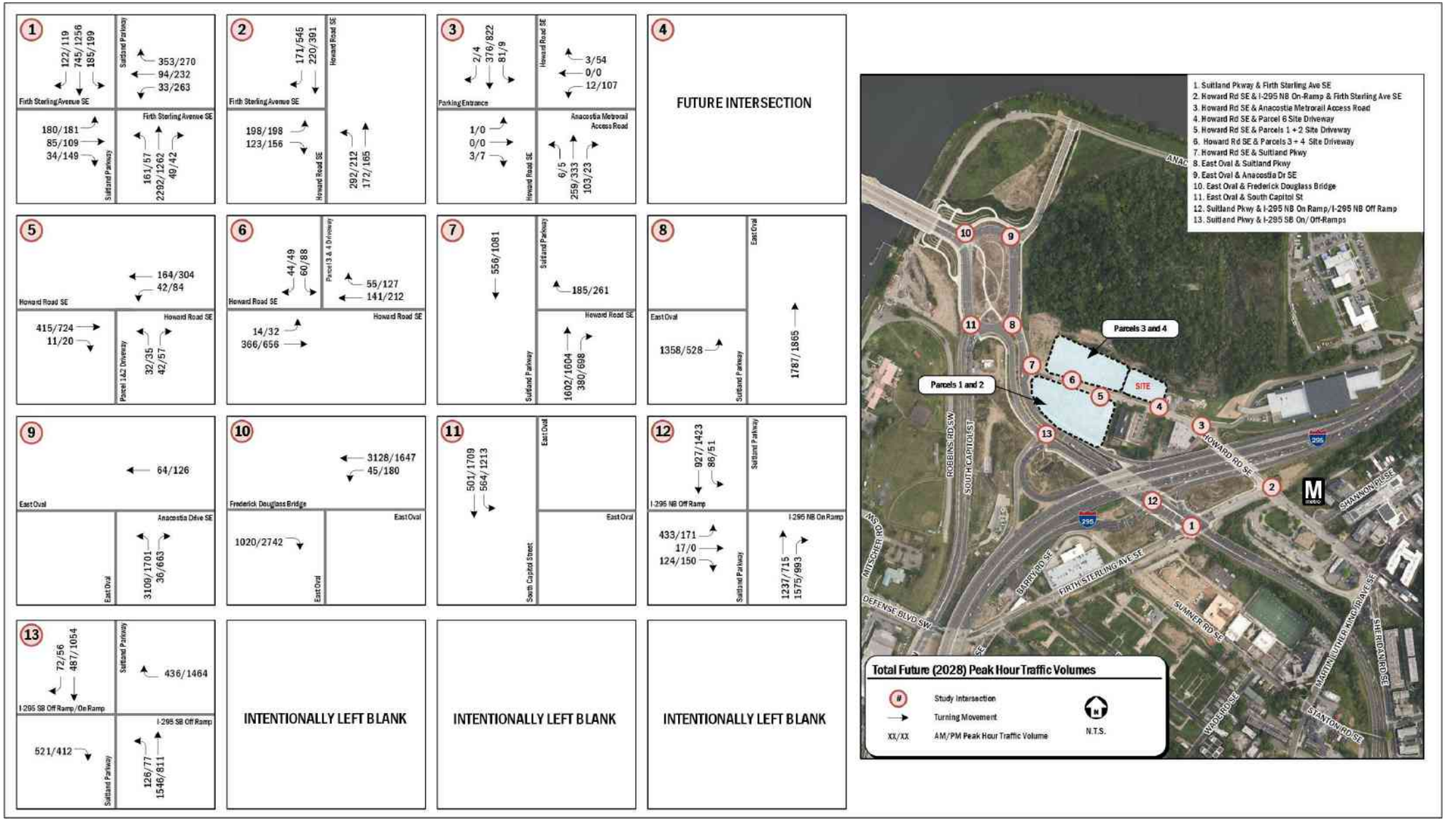

Figure 21: Total Future (2028) Peak Hour Traffic Volumes

Table 7: LOS Results

Intersection and Approach	Existing (2025)				Background (2028)				Future (2028)				Future (2028) with Mitigations			
	AM Peak		*PM Peak*		*AM Peak*		*PM Peak*		*AM Peak*		*PM Peak*		*AM Peak*		*PM Peak*	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Suitland Parkway & Firth Sterling Avenue SE																
Overall	**68.7**	**E**	**49.8**	**D**	**74.8**	**E**	**57.1**	**E**	**77.2**	**E**	**57.4**	**E**	**74.8**	**E**	**57.4**	**E**
Eastbound	52.5	D	79.2	E	57.4	E	86.3	F	57.5	E	83.1	F	58.5	E	83.1	F
Westbound	79.9	E	125.6	F	149.9	F	130.9	F	167.0	F	130.0	F	144.7	F	130.0	F
Northbound	81.1	F	35.0	D	77.8	E	39.0	D	78.0	E	39.8	D	78.0	E	39.8	D
Southbound	36.7	D	22.6	C	39.3	D	29.0	C	39.8	D	30.1	C	40.1	D	30.1	C
2. Howard Road SE & Firth Sterling Avenue SE																
Overall	**24.4**	**C**	**10.7**	**B**	**39.3**	**D**	**15.0**	**B**	**42.9**	**D**	**17.0**	**B**	**34.4**	**C**	**17.0**	**B**
Eastbound	80.1	F	41.0	D	126.9	F	46.2	D	139.1	F	53.4	D	105.6	F	53.4	D
Northbound	7.6	A	7.8	A	7.8	A	8.3	A	7.9	A	8.3	A	9.0	A	8.3	A
Southbound	5.0	A	5.6	A	5.2	A	6.6	A	5.3	A	6.8	A	6.1	A	6.8	A
3. Howard Road SE & Anacostia Metrorail Access																
Overall	**5.4**	**A**	**14.1**	**B**	**6.1**	**A**	**14.1**	**B**	**6.3**	**A**	**14.3**	**B**	**6.3**	**A**	**14.3**	**B**
Eastbound	19.6	B	30.5	C	19.6	B	30.5	C	19.6	B	30.5	C	19.6	B	30.5	C
Westbound	19.8	B	52.4	D	19.8	B	52.4	D	19.8	B	52.4	D	19.8	B	52.4	D
Northbound	3.9	A	3.2	A	4.3	A	4.6	A	4.3	A	4.9	A	4.3	A	4.9	A
Southbound	5.8	A	7.2	A	7.0	A	10.3	B	7.3	A	10.9	B	7.3	A	10.9	B
4. Howard Road SE & Parcel 6 Driveway																
Eastbound	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Westbound	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southbound	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5. Howard Road SE & Parcel 1 and 2 Driveway																
Eastbound	--	--	--	--	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Westbound	--	--	--	--	2.1	A	3.3	A	2.0	A	3.2	A	2.0	A	3.2	A
Northbound	--	--	--	--	13.7	B	27.5	D	14.1	B	30.1	D	14.1	B	30.1	D
6. Howard Road SE & Parcel 3 and 4 Driveway																
Eastbound	--	--	--	--	0.3	A	0.5	A	0.4	A	0.8	A	0.4	A	0.8	A
Westbound	--	--	--	--	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Southbound	--	--	--	--	12.3	B	21.9	C	12.9	B	27.1	D	12.9	B	27.1	D
7. Suitland Parkway & Howard Road SE																
Westbound	18.7	C	27.2	D	24.9	C	54.2	F	26.9	D	61.7	F	26.9	D	61.7	F
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	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
8. Suitland Parkway & East Oval																
Overall	**18.2**	**B**	**22.4**	**C**	**19.8**	**B**	**22.5**	**C**	**20.1**	**C**	**22.5**	**C**	**20.1**	**C**	**22.5**	**C**

	Eastbound	1.7	A	22.4	C	1.8	A	21.7	C	1.8	A	21.6	C	1.8	A	21.6	C
	Northbound	31.4	C	22.4	C	33.6	C	22.7	C	34.1	C	22.7	C	34.1	C	22.7	C
9.	**East Oval & Anacostia Drive SE**																
	Westbound	10.2	B	10.2	B	10.5	B	10.4	B	10.5	B	10.5	B	10.5	B	10.5	B
	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
10.	**East Oval & Frederick Douglass Bridge**																
	Overall	**20.3**	**C**	**34.5**	**C**	**21.9**	**C**	**43.7**	**D**	**21.8**	**C**	**45.3**	**D**	**21.8**	**C**	**45.3**	**D**
	Eastbound	11.2	B	43.5	D	11.4	B	55.7	E	13.0	B	57.8	E	13.0	B	57.8	E
	Westbound	23.2	C	20.8	C	25.3	C	25.6	C	24.6	C	26.6	C	24.6	C	26.6	C
11.	**East Oval & South Capitol Street**																
	Overall	**12.7**	**B**	**10.8**	**B**	**13.4**	**B**	**11.2**	**B**	**13.5**	**B**	**11.3**	**B**	**13.5**	**B**	**11.3**	**B**
	Southbound	12.7	B	10.8	B	13.4	B	11.2	B	13.5	B	11.3	B	13.5	B	11.3	B
12.	**Suitland Parkway & I-295 NB On/Off Ramps**																
	Overall	**92.8**	**F**	**25.3**	**C**	**97.6**	**F**	**30.3**	**C**	**99.3**	**F**	**31.4**	**C**	**99.4**	**F**	**31.4**	**C**
	Eastbound	55.3	E	53.7	D	55.6	E	49.5	D	55.6	E	48.8	D	55.6	E	48.8	D
	Northbound	119.6	F	16.9	B	127.6	F	24.7	C	130.3	F	26.5	C	130.4	F	26.5	C
	Southbound	39.1	D	29.6	C	37.4	D	32.6	C	37.4	D	33.4	C	37.4	D	33.4	C
13.	**Suitland Parkway & I-295 SB On/Off Ramps**																
	Overall	**18.9**	**B**	**20.5**	**C**	**19.1**	**B**	**21.8**	**C**	**19.2**	**B**	**22.1**	**C**	**19.2**	**B**	**22.1**	**C**
	Eastbound	78.2	E	73.8	E	77.6	E	73.2	E	77.6	E	73.2	E	77.6	E	73.2	E
	Northbound	2.4	A	1.5	A	3.8	A	4.6	A	4.1	A	5.0	A	4.1	A	5.0	A
	Southbound	10.1	B	13.8	B	10.3	B	16.3	B	10.3	B	16.7	B	10.3	B	16.7	B

Table 8: v/c Comparison

Intersection and Movement	Existing (2025)		Background (2028)		Future (2028)		Future (2028) with Mitigations	
	AM Peak	*PM Peak*	*AM Peak*	*PM Peak*	*AM Peak*	*PM Peak*	*AM Peak*	*PM Peak*
	v/c	v/c	v/c	v/c	v/c	v/c	v/c	v/c
1. Suitland Parkway & Firth Sterling Avenue SE								
Eastbound L	0.46	0.68	0.60	0.83	0.60	0.81	0.61	0.81
Eastbound TR	0.24	0.81	0.32	0.86	0.33	0.85	0.33	0.85
Westbound L	0.08	1.20	0.11	1.27	0.12	1.26	0.12	1.26
Westbound T	0.25	0.80	0.30	0.77	0.30	0.75	0.29	0.75
Westbound R	0.91	0.74	1.21	0.94	1.26	0.97	1.20	0.97
Northbound L	0.72	0.36	0.72	0.52	0.72	0.56	0.72	0.56
Northbound TR	1.06	0.58	1.05	0.63	1.05	0.63	1.05	0.63
Southbound L	0.35	0.14	0.51	0.39	0.53	0.44	0.53	0.44
Southbound T	0.48	0.66	0.48	0.72	0.48	0.72	0.48	0.72
Southbound R	0.14	0.09	0.15	0.13	0.15	0.13	0.16	0.13
2. Howard Road SE & Firth Sterling Avenue SE								
Eastbound L	0.65	0.11	1.05	0.73	1.11	0.85	0.96	0.85
Eastbound TR	0.65	0.57	0.70	0.65	0.70	0.65	0.61	0.65
Northbound LT	0.51	0.41	0.53	0.45	0.53	0.45	0.55	0.45
Northbound T	0.16	0.12	0.17	0.16	0.17	0.16	0.18	0.16
Southbound T	0.21	0.34	0.23	0.37	0.23	0.37	0.24	0.37
Southbound R	0.09	0.48	0.19	0.60	0.21	0.62	0.22	0.62
3. Howard Road SE & Anacostia Metrorail Access								
Eastbound LTR	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.03
Westbound LTR	0.05	0.80	0.05	0.80	0.05	0.80	0.05	0.80
Northbound LT	0.17	0.12	0.26	0.28	0.27	0.31	0.27	0.31
Northbound R	0.13	0.03	0.13	0.03	0.13	0.03	0.13	0.03
Southbound LTR	0.42	0.61	0.52	0.74	0.54	0.76	0.54	0.76
4. Howard Road SE & Parcel 6 Driveway								
Eastbound LT	--	--	--	--	--	--	--	--
Westbound TR	--	--	--	--	--	--	--	--
Southbound LR	--	--	--	--	--	--	--	--
5. Howard Road SE & Parcel 1 and 2 Driveway								
Eastbound TR	--	--	0.26	0.46	0.27	0.48	0.27	0.48
Westbound LT	--	--	0.04	0.11	0.04	0.11	0.04	0.11
Northbound LR	--	--	0.16	0.39	0.17	0.41	0.17	0.41
6. Howard Road SE & Parcel 3 and 4 Driveway								
Eastbound LT	--	--	0.01	0.02	0.01	0.03	0.01	0.03
Westbound TR	--	--	0.12	0.20	0.13	0.22	0.13	0.22

	Southbound LR	--	--	0.14	0.35	0.20	0.48	0.20	0.48
7.	**Suitland Parkway & Howard Road SE**								
	Westbound R	0.33	0.55	0.53	0.84	0.58	0.88	0.58	0.88
	Northbound TR	0.31	0.28	0.32	0.29	0.32	0.29	0.32	0.29
	Southbound T	0.12	0.21	0.13	0.23	0.13	0.23	0.13	0.23
8.	**Suitland Parkway & East Oval**								
	Eastbound L	0.74	0.38	0.74	0.38	0.74	0.38	0.74	0.38
	Northbound T	0.84	0.66	0.88	0.70	0.88	0.71	0.88	0.71
9.	**East Oval & Anacostia Drive SE**								
	Westbound R	0.09	0.17	0.10	0.17	0.10	0.18	0.10	0.18
	Northbound TR	0.56	0.30	0.57	0.32	0.57	0.32	0.57	0.32
10.	**East Oval & Frederick Douglass Bridge**								
	Eastbound R	0.31	1.00	0.33	1.04	0.33	1.05	0.33	1.05
	Westbound L	0.18	1.13	0.28	1.26	0.23	1.28	0.23	1.28
	Westbound T	0.95	0.46	0.97	0.49	0.97	0.49	0.97	0.49
11.	**East Oval & South Capitol Street**								
	Southbound L	0.38	0.62	0.41	0.66	0.41	0.67	0.41	0.67
	Southbound T	0.26	0.77	0.27	0.78	0.27	0.78	0.27	0.78
12.	**Suitland Parkway & I-295 NB On/Off Ramps**								
	Eastbound L	0.52	0.23	0.51	0.21	0.51	0.21	0.51	0.21
	Eastbound T	0.61	0.28	0.60	0.25	0.60	0.24	0.60	0.24
	Eastbound R	0.13	0.14	0.18	0.21	0.18	0.22	0.18	0.22
	Northbound T	1.33	0.81	1.36	0.93	1.37	0.95	1.37	0.95
	Northbound R	0.84	0.53	0.88	0.58	0.88	0.58	0.88	0.58
	Southbound L	0.34	0.14	0.34	0.15	0.34	0.15	0.34	0.15
	Southbound T	0.33	0.48	0.34	0.54	0.34	0.55	0.34	0.55
13.	**Suitland Parkway & I-295 SB On/Off Ramps**								
	Eastbound R	0.88	0.80	0.88	0.80	0.88	0.80	0.88	0.80
	Northbound L	0.20	0.06	0.31	0.22	0.34	0.24	0.34	0.24
	Northbound T	0.36	0.19	0.37	0.20	0.37	0.20	0.37	0.20
	Southbound TR	0.18	0.33	0.20	0.38	0.20	0.39	0.20	0.39

Table 9: 50th and 95th Percentile Queueing Results (in feet)

	Intersection and Lane Group	Storage Length (ft)	Existing (2025)				Background (2028)				Future (2028)				Future (2028) with Mitigations			
			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.	**Suitland Parkway & Firth Sterling Avenue SE**																	
	Eastbound L	350	141	213	132	196	178	260	174	#291	178	260	174	#286	178	260	174	#286
	Eastbound TR	100	84	149	225	322	109	183	287	#445	111	186	293	#455	111	186	293	#455
	Westbound L	225	18	m37	~290	#442	25	m49	~267	#470	26	m49	~269	#475	26	m48	~269	#475
	Westbound T	390	78	129	212	290	95	152	234	355	95	151	235	357	89	144	235	357
	Westbound R	230	323	#523	177	245	~513	#732	275	#488	~551	#774	307	#524	~532	#754	307	#524
	Northbound L	400	190	264	63	119	191	266	69	125	191	266	69	125	191	266	69	125
	Northbound TR	2,300	~1104	#1180	399	468	~1115	#1191	435	486	~1117	#1193	435	487	~1117	#1193	435	487
	Southbound L	190	71	110	37	64	105	150	98	139	109	155	111	154	109	155	111	154
	Southbound T	190	387	474	697	773	392	481	714	788	392	480	716	792	392	480	716	792
	Southbound R	90	81	143	9	19	93	159	18	34	93	159	19	36	97	163	19	36
2.	**Howard Road SE & Firth Sterling Avenue SE**																	
	Eastbound L	385	129	m174	15	m28	~237	m#364	133	m180	~268	m#390	160	m#247	235	m#346	160	m#247
	Eastbound TR	385	121	m167	80	123	136	m186	115	m160	135	m184	118	m164	135	m184	118	m164
	Northbound LT	360	76	125	48	93	80	131	53	104	80	132	53	105	88	145	53	105
	Northbound T	360	30	48	24	44	33	52	31	55	34	53	32	56	37	58	32	56
	Southbound T	460	41	63	72	77	45	68	72	95	45	68	72	94	49	75	72	94
	Southbound R	460	8	20	81	89	23	42	95	130	27	47	97	130	29	51	97	130
3.	**Howard Road SE & Anacostia Metrorail Access**																	
	Eastbound LTR	100	1	6	4	16	1	6	4	16	1	6	4	16	1	6	4	16
	Westbound LTR	415	3	15	92	#190	3	15	92	#190	3	15	92	#190	3	15	92	#190
	Northbound LT	460	30	56	24	35	49	84	140	122	52	88	152	m167	52	88	152	m167
	Northbound R	50	18	37	4	7	18	37	1	m4	18	37	1	m2	18	37	1	m2
	Southbound LTR	280	78	133	142	242	109	185	250	326	116	197	264	340	116	197	264	340
4.	**Howard Road SE & Parcel 6 Driveway**																	
	Eastbound LT	215	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound TR	280	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound LR	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.	**Howard Road SE & Parcel 1 and 2 Driveway**																	
	Eastbound TR	150	--	--	--	--	--	0	--	0	--	0	--	0	--	0	--	0
	Westbound LT	215	--	--	--	--	--	3	--	9	--	3	--	9	--	3	--	9
	Northbound LR	200	--	--	--	--	--	15	--	44	--	15	--	48	--	15	--	48
6.	**Howard Road SE & Parcel 3 and 4 Driveway**																	
	Eastbound LT	340	--	--	--	--	--	1	--	2	--	1	--	2	--	1	--	2
	Westbound TR	150	--	--	--	--	--	0	--	0	--	0	--	0	--	0	--	0

	Southbound LR	200	--	--	--	--	--	12	--	39	--	18	--	62	--	18	--	62
7.	**Suitland Parkway & Howard Road SE**																	
	Westbound R	340	--	35	--	78	--	75	--	182	--	88	--	204	--	88	--	204
	Northbound TR	250	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
	Southbound T	700	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
8.	**Suitland Parkway & East Oval**																	
	Eastbound L	150	9	6	71	84	9	7	69	81	9	7	69	81	9	7	69	81
	Northbound T	250	446	517	536	556	482	557	565	635	489	565	569	643	489	565	569	643
9.	**East Oval & Anacostia Drive SE**																	
	Westbound R	740	--	8	--	15	--	8	--	16	--	8	--	16	--	8	--	16
	Northbound TR	450	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0
10.	**East Oval & Frederick Douglass Bridge**																	
	Eastbound R	1700	0	0	~1217	#1293	0	0	~1327	#1399	0	0	~1343	#1415	0	0	~1343	#1415
	Westbound L	125	22	m27	~243	#434	33	m41	~296	#497	34	m43	~304	#505	34	m43	~304	#505
	Westbound T	220	~1375	#1467	194	207	~1420	#1510	194	206	~1428	#1517	194	206	~1428	#1517	194	206
11.	**East Oval & South Capitol Street**																	
	Southbound L	475	144	193	339	m341	159	211	386	m361	161	212	394	m366	161	212	394	m366
	Southbound T	475	54	72	650	m656	60	79	711	m599	61	80	719	m589	61	80	719	m589
12.	**Suitland Parkway & I-295 NB On/Off Ramps**																	
	Eastbound L	305	241	343	86	138	231	331	84	141	231	331	84	141	231	331	84	141
	Eastbound T	305	250	356	90	145	238	342	87	145	238	342	87	145	238	342	87	145
	Eastbound R	350	48	77	44	69	63	96	75	111	64	98	80	117	64	98	80	117
	Northbound T	170	~1567	m#1522	674	798	~1659	m#1532	799	#937	~1675	m#1531	812	m#941	~1674	m#1545	812	m#941
	Northbound R	50	168	m141	31	59	178	m114	31	m45	175	m107	30	m39	175	m113	30	m39
	Southbound L	370	49	m71	28	52	50	m72	29	53	49	m72	29	53	49	m72	29	53
	Southbound T	590	238	292	485	542	251	305	524	579	252	306	531	586	252	306	531	586
13.	**Suitland Parkway & I-295 SB On/Off Ramps**																	
	Eastbound R	1,040	364	444	287	342	362	444	297	344	362	444	297	344	362	444	297	344
	Northbound L	280	81	m84	23	m33	136	m129	83	m98	146	m140	91	m107	146	m140	91	m107
	Northbound T	650	0	m0	0	0	0	m0	0	m0	0	m0	0	m0	0	m0	0	m0
	Southbound TR	575	84	106	209	301	93	115	273	342	93	116	281	349	93	116	281	349

95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ Volumes exceeds capacity, queue is theoretically infinite

Transit Facilities

This chapter discusses the existing and proposed transit facilities in the vicinity of the site, accessibility to transit, and the overall transit impacts of the site.

This chapter concludes that:

- The site is well-served by existing transit;
- The project site is approximately 0.25 miles from the Anacostia Metrorail station, and is served by several bus routes;
- The project site is surrounded by 12 Metrobus routes that travel along multiple primary corridors;
- Several planned transit projects will improve transit access to the site; and
- The project is expected to generate a manageable amount of transit trips that the existing transit service is capable of handling.

Existing Transit Service

The study area is well-served by Metrobus and has access to Metrorail. These services provide local and regional transit connections and link the site with major cultural, residential, employment, and commercial destinations throughout the region. Figure 22 identifies the major transit routes, stations, and stops in the study area.

The site is located approximately 0.25 miles from the Anacostia Metro station, which is served by the Green Line. The Green Line travels south from Greenbelt, MD through Downtown Washington to Suitland, MD while providing access to the District core. Connections can be made at the L'Enfant Plaza and Gallery Place-Chinatown Metrorail stations to access the other five (5) Metrorail lines, allowing additional access to points in Virginia and Maryland.

Under current operating conditions, Green Line trains run approximately every eight (8) minutes on all days at all times.

The site is also served by 12 Metrobus Better Bus routes along multiple primary corridors. These bus routes connect the site to many areas of the region, as well as several Metro stations serving all six (6) Metrorail lines which provide further connections to Virginia and Maryland. Table 10 shows a summary of the bus route information for the routes that serve the site, including service hours, headway, and distance to the nearest bus stop.

Table 11 shows WMATA's recommended amenities for each type of bus stop.

Table 12 shows a detailed inventory of the amenities appearing at each of the existing bus stops within the transit study area.

DDOT Car-Free Lanes for Buses and Bicycles

Peak-period, peak-direction car-free lanes were introduced in 2020 along Martin Luther King, Jr. Avenue SE between W Street SE and St. Elizabeth's East Campus. These car-free lanes are accessible only to buses and bikes during peak hours – northbound from 7:00am to 9:30am and southbound from 4:00pm to 6:30pm.

Planned Transit Service

moveDC Transit Element

The draft Transit Priority Network in the approved *moveDC* 2021 update, the District's multimodal long-range transportation plan, proposes transit priority infrastructure such as dedicated transit lanes, better transit stops, and/or special treatments for buses at intersections along designated corridors. Specific treatments along given streets or route paths are not proposed but rather prioritized as part of the long-range plan. Transit priority corridors proposed near the proposed project include:

- High-capacity transit along Martin Luther King, Jr. Avenue SE and greater frequency of express bus service in the Anacostia neighborhood

Site-Generated Transit Impacts

Transit Trip Generation

The proposed project is projected to generate 50 transit trips (15 inbound, 35 outbound) during the morning peak hour and 70 transit trips (41 inbound, 29 outbound) during the afternoon peak hour.

It is expected that the existing transit service can accommodate these new site-generated trips.

Table 10: Local Bus Route Information

Route Number	Route Name	Service Hours			Headway (minutes)	Walking Distance to Nearest Stop
		Weekdays	Saturdays	Sundays		
Better Bus Network WMATA routes						
C11	South Capitol Street	24/7 Service	24/7 Service	24/7 Service	20	0.3 miles (7 min)
C13	MLK Av – Washington Highlands	24/7 Service	24/7 Service	24/7 Service	12-20	0.4 miles (8 min)
C15	MLK Av – Southern Av	6:00am–12:00 am	6:00am–12:00 am	6:00am-12:00am	15-30	0.4 miles (8 min)
C17	MLK Av - Bellevue	6:00am-12:00am	6:00am-12:00am	6:00am-12:00am	15-30	0.3 miles (7 min)
C21	Alabama Av – Benning Rd	24/7 Service	24/7 Service	24/7 Service	10-20	0.3 miles (7 min)
C23	Alabama Av – Division Av	6:00am-12:00am	6:00am-12:00am	6:00am-12:00am	30	0.3 miles (7 min)
C25	Pomeroy Rd - Skyland	6:00am–12:00 am	6:00am–12:00 am	6:00am-12:00am	30-60	0.2 miles (5 min)
C26	Stanton Rd - Skyland	6:00am-12:00am	6:00am-12:00am	6:00am-12:00am	30-60	0.2 miles (5 min)
C29	Anacostia – Southern Av	6:00am-12:00am	6:00am-12:00am	6:00am-12:00am	20-30	0.3 mi (7 min)
C31	Minnesota Av	24/7 Service	24/7 Service	24/7 Service	8-20	0.3 miles (6 min)
C41	Bladensburg Rd	24/7 Service	24/7 Service	24/7 Service	8-40	0.2 miles (5 min)
C51	U St – Anacostia	4:30am-11:00pm	4:30am-11:00pm	5:00am-11:00pm	20-30	0.2 miles (5 min)

Table 11: WMATA Recommended Bus Stop Amenities

Amenity	Basic Stop		Enhanced Stop	Transit Center Stop
	< 50 daily boardings	≥ 50 daily boardings		
Bus stop flag	●	●	●	●
Route map and schedule	●	●	●	●
5’ x 8’ landing pad	●	●	●	●
40’/60’ x 8’ landing pad			●	●
4’ sidewalk	●	●	●	●
Bench		●	●	●
Shelter		●	●	●
Lighting (on shelter or within 30’ if overhead)	Recommended for stops with early morning and evening service		●	●
Dynamic information signage	Contingent on presence of shelter			
Trash and recycling receptacles	Recommended where surrounding uses may generate trash			

Source: 2019 WMATA *Bus Stop Amenity Reference Guide*

Table 12: Bus Stop Inventory

Location	Stop ID	Routes Served	Amenities								
			Bus stop flag	Route map & schedule	Land-ing pad	Side-walk	Bench	Shelter	Dynamic info sign	Lighting	Trash Recp.
South Capitol St & Firth Sterling Ave (SB)	1003319	W4, W5	●	●		●					
South Capitol St & Firth Sterling Ave SE	1000331	W4, W5	●	●		●					
Firth Sterling Ave SE & Sumner Rd SE	1000349	A4,W4, W5	●	●		●				●	
Firth Sterling Ave SE & Sumner Rd SE	1000348	A4,W4, W5	●	●		●				●	
ML King Jr Ave SE & Sumner Rd SE	1000320	A2, A4, A6, A7, A8, W2, W3	●	●		●				●	●
ML King Jr Ave SE & Stanton Rd SE	1000315	A2, A4, A6, A7, A8, W2, W3	●	●		●				●	●
Sheridan Rd SE & ML King Jr Ave SE	1002962	W8	●		●	●					●
Sheridan Rd SE & ML King Jr Ave SE	1000338	W6	●			●					●
Sheridan Rd SE & Bowen Rd	1000311	W6	●		●	●				●	●
Sheridan Rd SE & Bowen Rd SE	1000316	W8	●		●	●					●
M L King Ave SE & Talbert St SE	1003969	90,A8,B2,P6,V2,W2,W3,W8	●			●				●	
M L King Ave SE & Talbert St SE	1003970	90,A6,B2,P6,V2,W2,W3,W6	●			●				●	
Howard Rd SE & East Entrance to Anacostia Station	1000363	W2,W3	●	●	●	●				●	●
Howard Rd SE & East Entrance to Anacostia Station	1000362	W2,W3	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay A	1003216	V2	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay B	1002953	B2	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay C	1002952	P6	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay D	1009959	W4	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay E	1000351	90	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay F	1002989	W6, W8	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay G	1003273	A8	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay H	1003348	A2	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay J	1003350	A6, A7	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay K	1003071	A4	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay L	1000365	W5	●	●	●	●	●	●		●	●
Anacostia Station + Bus Bay M	1003318	W6, W8	●	●	●	●	●	●		●	●

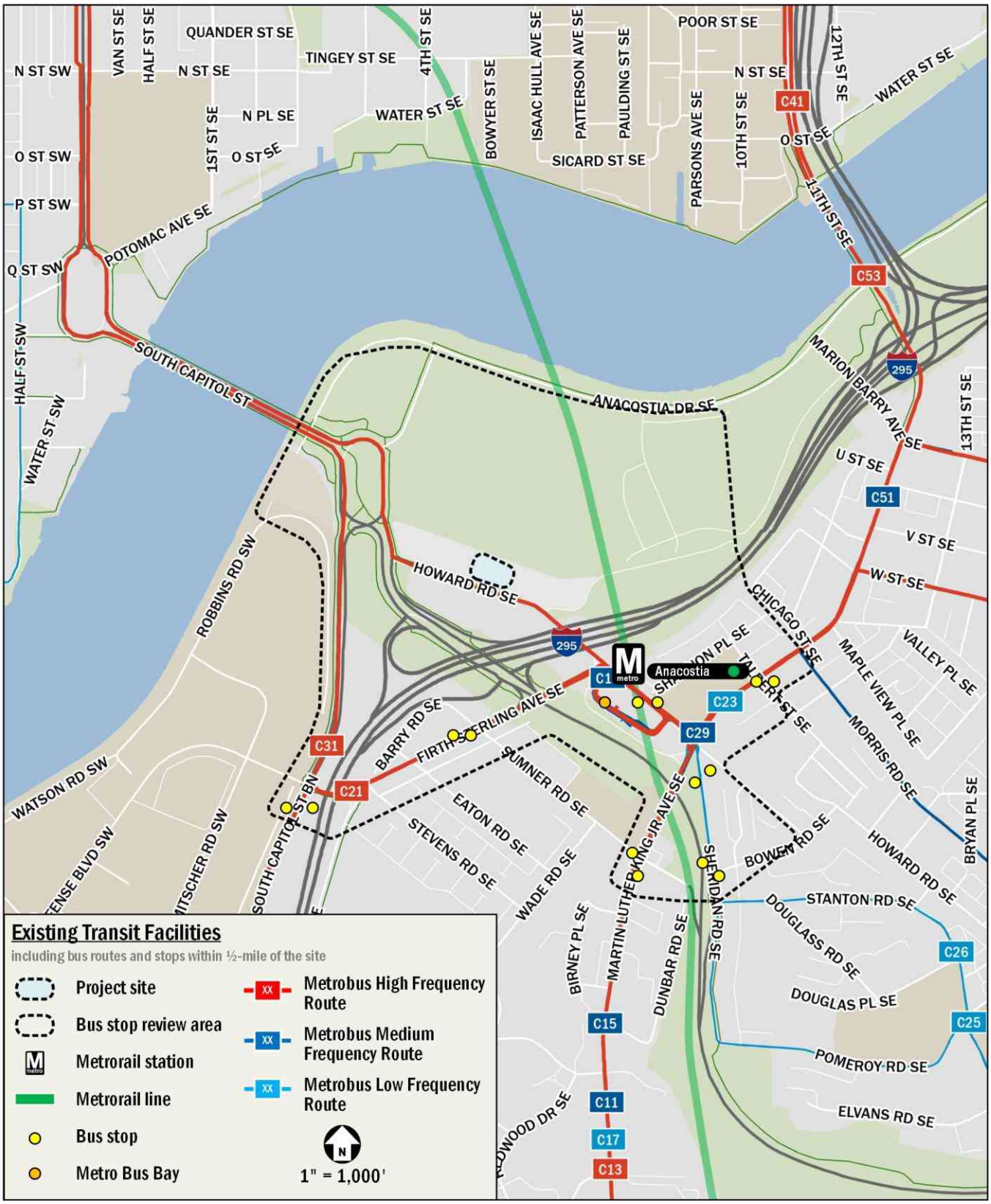

Figure 22: Existing Transit Facilities

Pedestrian Facilities

This chapter summarizes the existing and future pedestrian access to the site and reviews walking routes to and from the site.

The following conclusions are reached within this chapter:

- The current pedestrian network surrounding the site allows access to major destinations like the Frederick Douglass Memorial Bridge, despite some gaps and connectivity challenges particularly east of the site;
- There are no barriers which block pedestrian pathways to nearby attractions;
- The project is expected to generate pedestrian trips to origins and destinations nearby, in addition to pedestrian trips generated by walking to and from transit stops. The pedestrian facilities surrounding the project can accommodate these new trips; and
- Once fully complete, the South Capitol Street Corridor Project will provide an extensive network of multi-use paths that improve pedestrian connectivity to the site.

Pedestrian Study Area

Pedestrian facilities within a quarter mile of the site were evaluated, as well as walking routes to major destinations including the Anacostia Metro station. Some roads within the study area currently lack sidewalks or do not meet DDOT standards. However, future planned sidewalks within the area will improve overall access and improve the quality and attractiveness of the walking environment within the study area.

Pedestrian Infrastructure

This section outlines existing and proposed pedestrian infrastructure within the pedestrian study area.

Existing Conditions

Overall, the pedestrian facilities within the study area provide a fair amount of connectivity to major local destinations. A summary of pedestrian facilities within the study area is shown on. Sidewalks, crosswalks, and curb ramps are evaluated based on the guidelines set forth by DDOT's *Design and Engineering Manual (2019)* in addition to Americans with Disabilities Act (ADA) standards. These facilities are shown within their respective land use types based on DC's Zoning Regulations of 2016, which determines which of DDOT's sidewalk width requirements apply to them. These sidewalk width requirements are shown in Table 13.

The study area primarily consists of high density residential and light commercial, with some low to moderate density residential areas, as described in Table 13. A good number of the sidewalks and curb ramps surrounding the site comply with DDOT standards, which regulate the quality and attractiveness of walking.

As the site's surroundings are still developing, there are few pedestrian facilities and street connections nearby. The site's proximity to the Anacostia River, Anacostia Park, and the I-295/Suitland Parkway interchange result in very few destinations within walking distance. However, with the reconstruction of the Suitland Parkway / I-295 interchange, the ramp is no longer connected to Howard Road SE, and this improved the quality of walking experience from the site location to other attraction zones eastward. With Phase 1 of the South Capitol Street Corridor Improvements, there are currently sidewalks and upgraded curb ramps west of the site towards the upgraded Frederick Douglas Memorial Bridge. Sidewalks on both sides of Howard Road SE connect the site to the Anacostia Metrorail station and commercial destinations along Martin Luther King, Jr. Avenue, and most streets connecting to destinations within the study area have a sidewalk on at least one side. However, the lack of street connections and the presence of freeways and interchanges surrounding the site do not provide an ideal pedestrian environment.

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 but where they are present, a 48" clear space is required outside active vehicle traffic lanes and within marked crossings. As shown in Figure 23, nearly all existing curb ramps near the site meet ADA standards, but some signalized intersections lack a crosswalk on at least one side.

Pedestrian Infrastructure Improvements

A summary of future pedestrian facilities, including on-site pedestrian infrastructure provided by the project, is shown in Figure 24.

On-Site Pedestrian Infrastructure

With the proposed Parcel 5 development and as part of the Overall Bridge District Development Master Plan, a bicycle and pedestrian promenade will be constructed in phases linking the South Capitol Street East Oval to the Anacostia Metrorail

Station. This promenade will provide a comfortable walking route between the site, the Metrorail station, and points west of the Anacostia River. Sidewalks will also be rebuilt around the site's entire street frontage to meet DDOT standards.

South Capitol Street Corridor Project

The South Capitol Street Corridor Project has significantly enhanced pedestrian infrastructure in the surrounding area. Phase 1 of the project includes the new Frederick Douglass Memorial Bridge and improvements along Suitland Parkway and the I-295 interchange.

The project introduced new or wider sidewalks, improved crosswalks, upgraded lighting, and safer pedestrian connections, creating a more accessible and walkable environment. These improvements enhance connectivity between the project site and key destinations, such as transit stops and nearby commercial areas.

Phase 2 of the project will deliver a new interchange southeast of I-295 as well as an improved streetscape north of the new FDMB along South Capitol Street and New Jersey Ave SE.

Pedestrian Trip Generation

The proposed project is projected to generate 8 pedestrian trips (2 inbound, 6 outbound) during the morning peak hour and 13 pedestrian trips (8 inbound, 5 outbound) during the afternoon peak hour.

The origins and destinations of pedestrian trips are likely to be:

- Retail locations outside of the site; and
- Neighborhood destinations such as schools, recreation centers, and parking facilities in the vicinity of the site.

In addition to these trips, the transit trips generated by the site will also generate pedestrian demand between the site and nearby bus stops and Metrorail. It is expected that the existing and future pedestrian facilities can accommodate these new site-generated trips.

Table 13: DDOT Sidewalk Width Requirements

Street Type	Curb Walk	Tree/Furnishing Zone	Sidewalk Unobstructed Clear Width	Total Minimum Sidewalk Width
Low to Moderate Density Residential	None	4 - 6 feet	6 feet	10 feet
High Density Residential or Light Commercial	1 foot	4 - 8 feet	8 feet	13 feet
Central DC and Commercial Areas	1 - 2 feet	4 - 10 feet	10 feet	16 feet

Source: DDOT *Design and Engineering Manual*

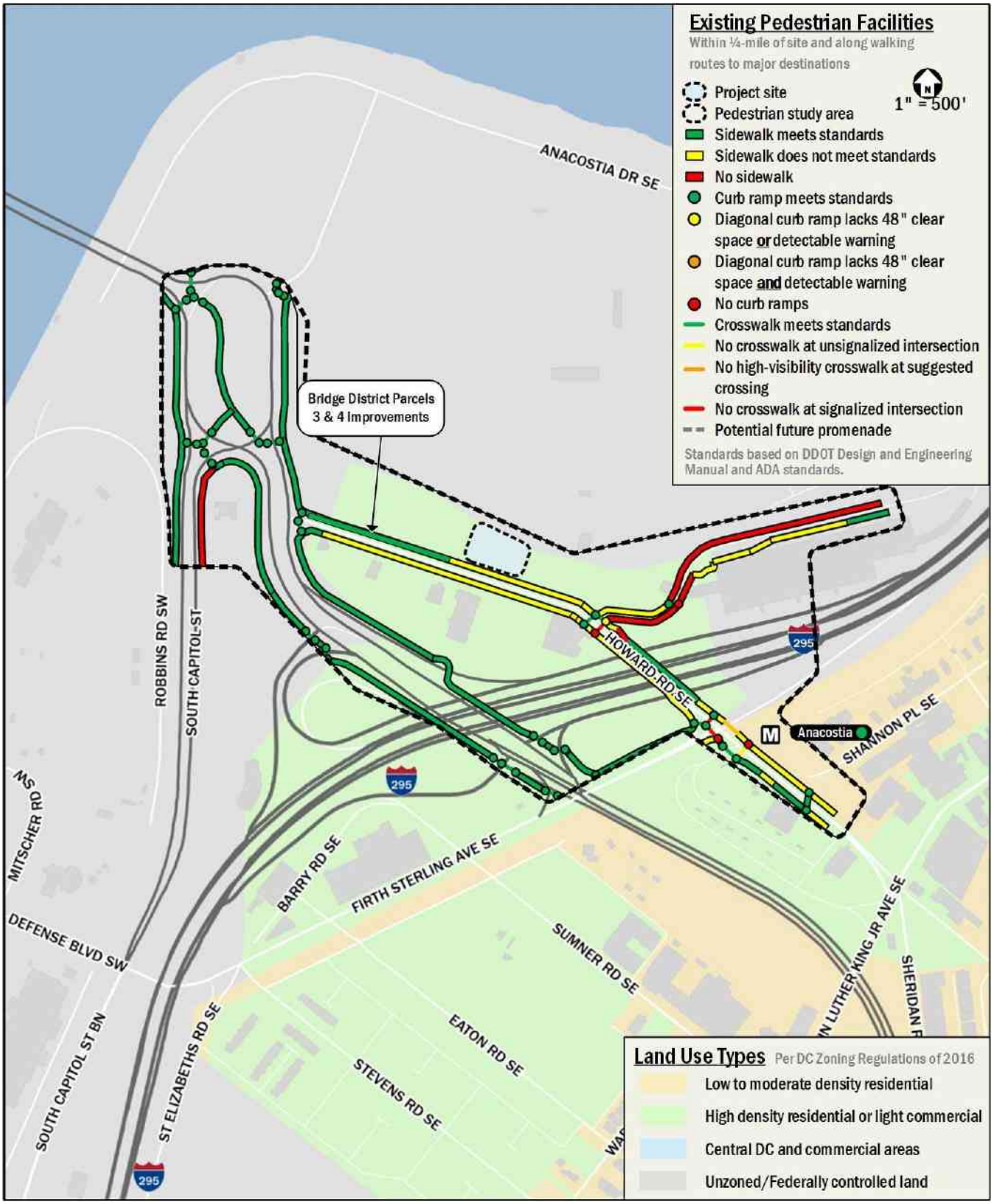

Figure 23: Existing Pedestrian Facilities

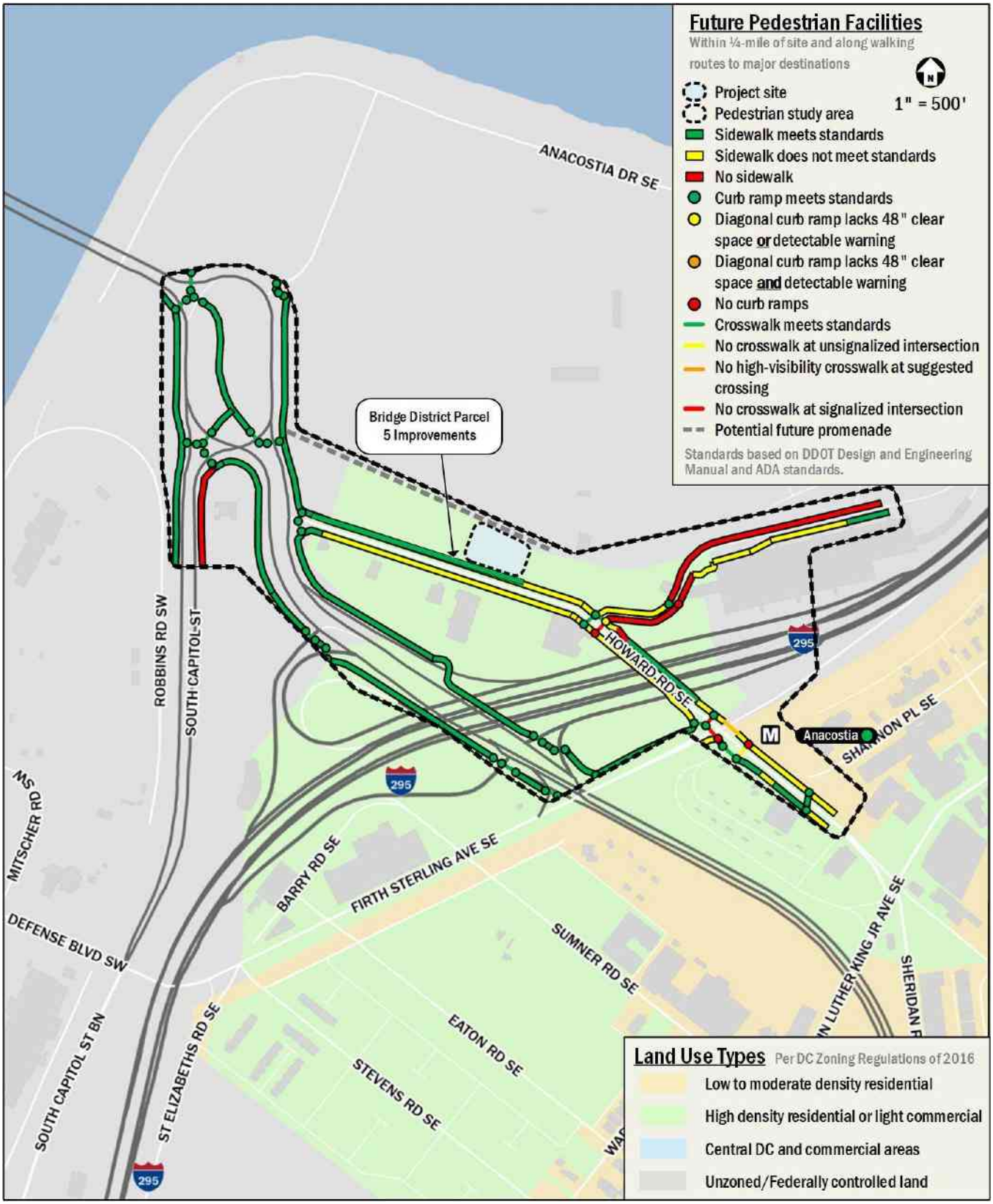

Figure 24: Future Pedestrian Facilities

Bicycle Facilities

This chapter 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 in this chapter:

- The site has access to several on- and off-street bicycle facilities within the study area;
- Several planned bicycle projects will improve bicycle access to the site;
- The project is expected to generate a manageable number of bicycle trips; therefore, site-generated bike trips can be accommodated on existing infrastructure; and
- The project site will include long-term bicycle parking on the ground level in a secure bike storage room and short-term bicycle parking along the perimeter of the site and along Howard Road SE, meeting zoning requirements.

Existing Bicycle Facilities

The site is located near existing on- and off-street bicycle facilities. The project is located 0.3 miles from the Anacostia Riverwalk Trail and an off-street trail that connects to the Frederick Douglass Bridge, which can be used to access the bicycle lanes and cycle tracks on First Street SE and Potomac Avenue.

Signed bike routes are present on Howard Road SE, east of the Anacostia Metrorail Station Driveway, on Martin Luther King, Jr. Avenue SE north of Howard Road SE, and on Sheridan Road SE south of Howard Road SE.

Figure 25 illustrates existing bicycle facilities in the area.

Capital Bikeshare

In addition to personal bicycles, the Capital Bikeshare program provides additional cycle options for residents, employees, and patrons of the Bridge District Parcel 5 development. The program has placed over 700 bikeshare stations across the Washington, DC metropolitan area with over 6,000 bicycles in the fleet. There is one (1) Capital Bikeshare station within a half mile of the site, which is a 14-dock station at the Anacostia Metro Station on Howard Road SE. Figure 25 illustrates this and other Capital Bikeshare locations in the area.

Micromobility

As of June 2025, micromobility service in the District is provided by four (4) private dockless companies operating electric-assist bicycles (e-bikes) and electric scooters (e-scooters), including Lime, Spin, Hopp, and Veo. These dockless vehicles are provided by private companies that give registered users access to a variety of e-bike and e-scooter options. These devices are used through each company-specific mobile phone application. Many dockless vehicles do not have designated stations where pick-up/drop-off activities occur like with Capital Bikeshare; rather, they are parked in public space, most commonly in the “furniture zone” or the portion of sidewalk between where people walk and the curb, often where other street signs, street furniture, trees, and parking meters are found. In addition to DDOT’s program, dockless pilots and demonstration programs are underway in Arlington County, Fairfax County, the City of Fairfax, the City of Alexandria, and Montgomery County.

DDOT Car-Free Lanes for Buses and Bikes

Peak-period, peak-direction car-free lanes were introduced in 2020 along Martin Luther King, Jr. Avenue SE between W Street SE and St. Elizabeth’s East Campus. These car-free lanes are accessible only to buses and bikes during peak hours – northbound from 7:00am to 9:30am and southbound from 4:00pm to 6:30pm.

Planned Bicycle Improvements

A few bicycle improvements are planned near the site. These are shown on Figure 25.

Anacostia Waterfront Transportation Master Plan

As part of the District’s multi-agency Anacostia Riverfront Initiative, the existing Anacostia Riverwalk Trail will be extended from its current terminus at the intersection of South Capitol Street and Firth Sterling Avenue SE to the Oxon Hill Farm Trail.

Suitland Parkway Trail Extension

This project would extend the trail on either end: north within DC to Frederick Douglass Memorial Bridge and south into Prince George’s County to connect with the planned Henson Creek Trail. Currently, the trail has been extended south of the site from within DC via Frederick Douglass Memorial Bridge up till Firth Sterling Avenue SE. The next phase will be extended from Firth Sterling Avenue SE to Sheridan Road SE.

Capital Bikeshare Expansion

Capital Bikeshare’s 2019 development plan calls for four (4) new Capital Bikeshare stations near the site:

- 632 Howard Road SE (as part of the Bridge District Parcels 1 and 2 development)
- Barry Farm Recreation Center
- Stanton and Sheridan Road SE
- Anacostia Metro Station (proposed as part of the full built-out Bridge District Development once the northern promenade is extended to the northern entrance of the Anacostia Metrorail station or once Parcel 7 is developed, whichever occurs first)

moveDC Bicycle Element

The bicycle element of *moveDC*, the District's multimodal long-range transportation plan, includes the following bicycle improvements near the project that are proposed but not yet funded or planned:

- Off-street facilities along Suitland Parkway SE south of I-295;
- Off-street Trail along Firth Sterling Avenue SE from South Capitol Street towards 11th Street SE bridge; and
- On-street facilities along Firth Sterling Avenue SE from S Capitol Street to Suitland Parkway

11th Street Bridge Park

As part of the reconstruction of the 11th Street SE bridge across the Anacostia River, a portion of the old bridge will be reconstructed as a new civic space devoted to outdoor recreation and the arts. The new bridge will include a bicycle/pedestrian connection across the river between the Anacostia neighborhood and the Washington Navy Yard, with bicycle connections to downtown along 11th Street SE, and it will be easily accessible from the proposed recreation center.

Shepherd Branch Trail

The Shepherd Branch Trail was envisioned in 2004 as part of the DC Streetcar Project in order to address the lack of safe and comfortable bicycle and pedestrian facilities in the existing roadway network between C Street SE and South Capitol Street. The proposed trail will run along Anacostia Freeway approximately 0.3 miles from the site and will connect the site to the future South Capitol Street, Suitland Parkway, and 11th Street Bridge bicycle and pedestrian facilities.

Site-Generated Bicycle Impacts

This section summarizes the impacts of the project on the overall bicycle operations in the vicinity of the site.

On-site Bicycle Infrastructure

With the proposed Parcel 5 development and as part of the Overall Bridge District Development Master Plan, a bicycle and pedestrian promenade will be constructed in phases linking the South Capitol Street East Oval to the Anacostia Metrorail Station. This promenade will provide convenient bicycle access to the retail and residential portions from the site. In connecting to the South Capitol Street path, the promenade will provide a bicycle connection from the site to the Navy Yard neighborhood, downtown DC, the Anacostia Riverwalk Trail, and other parts of southeast DC.

The project will provide at least the required 16 short-term bicycle spaces and 92 long-term spaces. Short-term bicycle parking spaces will be provided in highly visible and accessible areas along the perimeter of the site and along the site frontage. Long-term parking spaces will be provided in a bike room on the ground floor.

As part of the Project's enhanced TDM program, the project includes will coordinate with DDOT to fund and install a 19-dock Capital Bikeshare station with 12 bikes in a mutually agreed location within the NHR zone and fund one-year of maintenance and operations costs.

Bicycle Trip Generation

The proposed project is projected to generate 8 bicycle trips (3 inbound, 5 outbound) during the morning peak hour and 14 bicycle trips (8 inbound, 6 outbound) during the afternoon peak hour.

It is expected that existing bicycle facilities can accommodate these new site-generated trips.

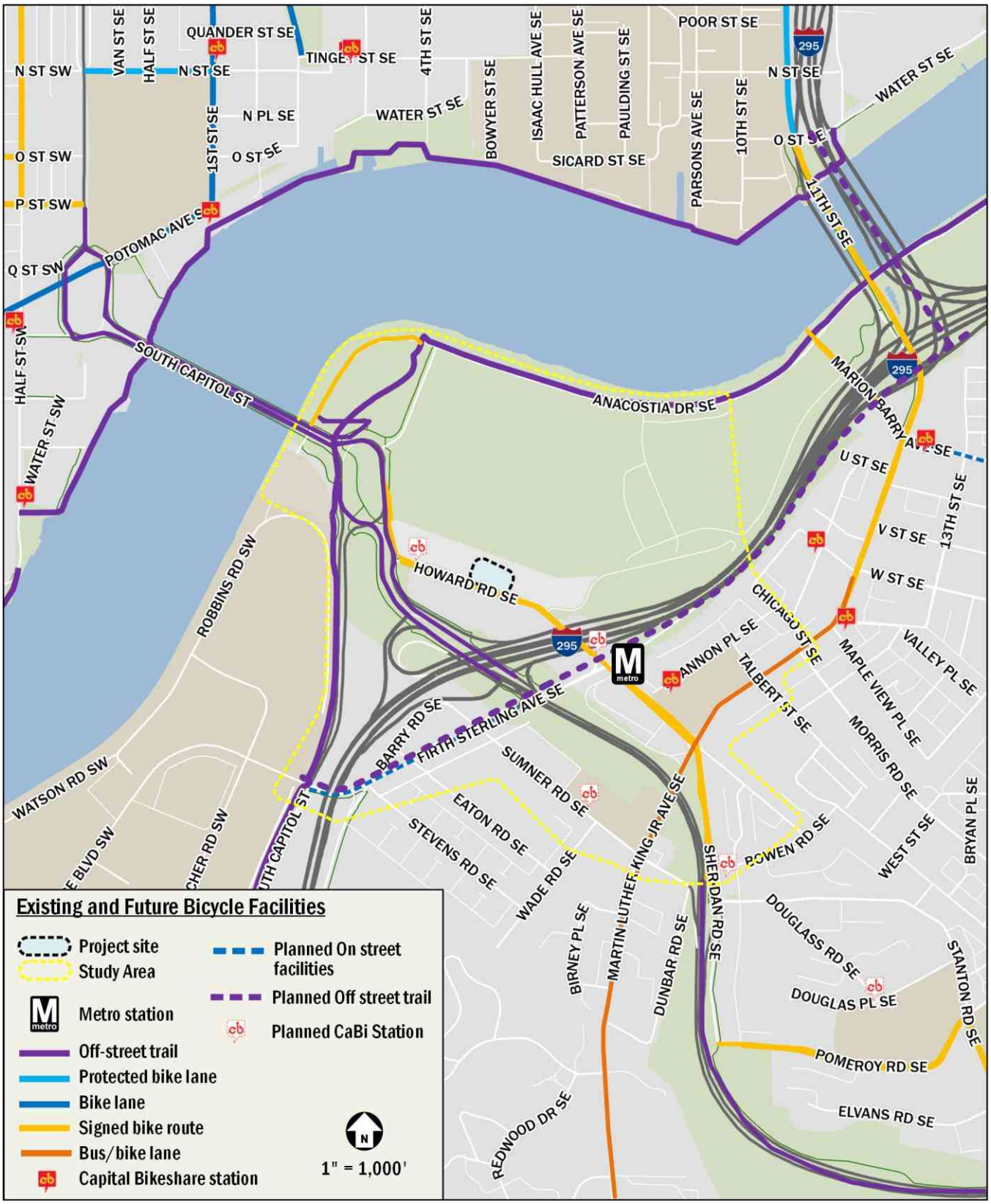

Figure 25: Existing and Future Bicycle Facilities

Safety Analysis

This chapter qualitatively reviews any vehicle, pedestrian, or bicycle conflicts at the study area intersections or street links within the study area. This review includes identifying any intersections within the study area that have been identified by DDOT as high crash locations.

Summary of Safety Analysis

A safety analysis was performed to determine if there are any intersections that pose any obvious conflicts with vehicles, pedestrians, or bicyclists. Data to determine this included DDOT's most recent *Traffic Safety Statistics Report* (2018-2020), *Vision Zero Action Plan*, and Open Data DC Vision Zero Safety data.

Based on available data, Firth Sterling Avenue SE was identified as a high injury network and two (2) study intersections were identified with potential conflicts. The following details the conflict at these intersections.

Potential Impacts

This section reviews two (2) intersections that were identified to pose potential conflicts to vehicles, pedestrians, or bicyclists.

Howard Road SE & Firth Sterling Avenue SE

In 2020, this intersection was ranked as the single most hazardous intersection in the entire District of Columbia by crash rate (i.e., crashes per traffic volume) and the 5th most hazardous intersection by crash severity cost, a metric that considers the level of injury and property damage occurring from the crash, according to the *Traffic Safety Statistics Report*. In this report, the intersection was also ranked as the most hazardous by crash composite index, a ranking that incorporates both factors in addition to crash frequency (the raw number of crashes at an intersection). Open Data DC's Crashes in DC dataset similarly indicates it as a high-crash location relative to other intersections in the District.

At the time of the publication of the *Traffic Safety Statistics Report* (2018-2020), this intersection operated as a signalized four-legged intersection with the eastern leg, the I-295 northbound on-ramp, operating as one-way in the northbound direction. Howard Road SE and Firth Sterling Avenue SE are two collector roads that, at the time of crash data collection, carried a significant volume of commuters to and from I-295 due to this northbound on-ramp as well as a southbound off-ramp intersecting Howard Road SE approximately 400 feet to the west. As of February 2023, the northbound on-ramp has been removed as part of the South Capitol Street Corridor Project.

For the purpose of this analysis, *DDOT's Vision Zero Crash Analysis Dashboard* was utilized to understand the crash frequency and severity for the intersection of Howard Road SE and Firth Sterling Avenue SE. Crash severity is divided into three tiers—minor, major, and fatal. Between the years of 2020 and 2025, this intersection experienced the following:

- Four (4) Minor driver injuries
- One (1) Minor pedestrian injuries

As part of the South Capitol Street Corridor project, sidewalks meeting DDOT standards have been constructed on Howard Road SE, and all intersection crossings has been improved with ADA-compliant curb ramps and high-visibility crosswalks.

The removal of the highway ramps has also helped to reduce traffic volumes through the intersection, and the sidewalk and path improvements will improve pedestrian and bicycle comfort and safety, thereby likely to reduce the number and severity of crashes at this intersection.

Firth Sterling Avenue SE & Suitland Parkway

This intersection ranked as the 17th most hazardous intersection in the District by crash severity cost (between 2018 and 2020) as well as the 19th by crash composite index (between 2018 and 2020) and the 30th (between 2018 and 2020) by crash frequency. In 2020, it was ranked the 62nd most hazardous intersection by crash frequency. Open Data DC's Crashes in DC dataset also indicates it as a high-crash location relative to other intersections in the District. This intersection operates as a standard, signalized four-legged intersection.

Suitland Parkway is a limited-access expressway that primarily transports commuters from suburban Maryland and southeast DC across the Anacostia River to downtown DC. Its westbound/northbound traffic volumes peak in the morning, and its eastbound/southbound volumes peak in the afternoon. At the time of the publication, pedestrian and bicycle facilities were subpar along the nearby stretch of Firth Sterling Avenue SE and nonexistent along Suitland Parkway. As of present, the intersection currently has standard crosswalks and ADA compliant curb ramps. In addition, there are also sidewalks present on Firth Sterling Avenue SE, and Suitland Parkway, west

of the intersection. There are still currently no on-street bike facilities present.

For the purpose of this analysis, *DDOT's Vision Zero Crash Analysis Dashboard* was utilized to understand the crash frequency and severity for the intersection of Suitland Parkway and Firth Sterling Avenue SE. Crash severity is divided into three tiers—minor, major, and fatal. Between the years of 2020 and 2025, this intersection experienced the following:

- Three (3) Minor driver injuries
- Two (2) Minor pedestrian injuries

This intersection was part of the South Capitol Street Corridor Project. Several other improvements will greatly enhance pedestrian and bicyclist safety at this intersection. These improvements include new multi-use paths on both sides of Suitland Parkway and a multi-use path on the west side of the northern leg of Firth Sterling Avenue SE.

Summary and Conclusions

This report is a Comprehensive Transportation Review (CTR) on behalf of Redbrick LMD (the "Applicant") for Design Review by the Zoning Commission (Case Number ZC 25-07) for the property located at Square 5860 and Lot 1070 in Southeast, Washington, DC ("the Project", also referred to herein as "Bridge District Parcel 5").

The purpose of this CTR is to evaluate whether the Bridge District Parcel 5 development will generate a detrimental impact to the transportation network surrounding the site. This evaluation is based on a technical comparison of the existing conditions, background conditions, and total future conditions. This report concludes that **the Project will not have a detrimental impact** to the surrounding transportation network, assuming that the proposed site design elements and TDM measures are implemented.

Proposed Project

The site is located in the southeast quadrant of Washington, DC and is bounded by Howard Road SE to the south, Bridge District Parcels 6 to the east, Anacostia Park to the north, and Bridge District Phase 1 development (Parcels 3 and 4), approved in Z.C. Case No. 21-13, to the west. The Project's development program includes a high-rise mixed-use building with approximately 272 residential units, approximately 8,476 square feet of ground-floor retail space, and approximately 160 parking spaces. The project also includes long-term bicycle storage room(s) and short-term bicycle spaces for both the residential and retail portions of the Project.

Vehicle access to the parking garage will be provided through a below-grade connection within the parking garage of the Bridge District Phase 1 development (Parcels 3 and 4).

The loading facilities within the site consist of two (2) 12'x 30' loading berths and one (1) 10' x 20' delivery/service space. All truck turning maneuvers will occur within private space, allowing for head-in/head-out access to and from the public roadway network.

The Bridge District Parcel 5 development will satisfy the ZR16 zoning requirements for bicycle parking by providing at least 92 long-term and 16 short-term spaces. The Bridge District Parcel 5 development will supply secure long-term bicycle parking within the building and short-term bicycle parking along the perimeter of the site. The vehicle and bicycle parking will meet the practical needs of the Project's residents, patrons, and employees.

Multi-Modal Overview

Trip Generation

The Bridge District Parcel 5 development is transit-, pedestrian-, and bicycle-oriented. The proposed project is expected to generate new trips on the surrounding transportation network across all modes during the morning and afternoon peak hours. However, the new trips generated by the project will not have a detrimental impact on the transportation network with the TDM plan that will be implemented as part of the Project.

The Project's multi-modal trip generation for the proposed project during the morning includes 47 vehicle trips, 50 transit trips, 8 bicycle trips, and 8 pedestrian trips. During the afternoon peak hour, the project will generate 72 vehicle trips, 70 transit trips, 14 bicycle trips, and 13 pedestrian trips.

Transit

The project site is well-served by transit. It is located 0.25 miles from the Anacostia Metrorail station and is served by several local bus routes.

Several planned transit projects will improve transit access to the site, including the improvements proposed in *moveDC*, the District's long-range transportation plan.

The site is expected to generate a manageable amount of transit trips, and the existing WMATA Better Bus Network can accommodate these new trips.

Pedestrian

As the area surrounding the site continues to develop, pedestrian facilities and street connections remain limited. The site's proximity to the Anacostia River, Anacostia Park, and the I-295/Suitland Parkway interchange result in very few destinations within walking distance. However, the reconstruction of the Suitland Parkway/I-295 interchange and Phase 1 of the South Capitol Street Corridor Improvements has improved pedestrian facilities within the study area to include wide sidewalks and multi-use paths.

The site is expected to generate a manageable number of pedestrian trips, and the forthcoming pedestrian facilities will be able to accommodate these new trips.

Bicycle

The site has access to several on- and off-street bicycle facilities. Several planned projects will improve bicycle access to the site,

including new protected bike lanes and multi-use paths as part of the 11th Street Bridge Reconstruction, and the Suitland Parkway Trail Extension as well as an expanded network of other cycle tracks and bicycle trails in the area. As part of the Bridge District Development Master Plan, a bicycle and pedestrian promenade will be constructed linking the South Capitol Street East Oval to the Anacostia Metrorail Station. With the portion north of the Bridge District Phase 1 (Parcels 3 and 4) already constructed, the remaining segments of the promenade will be completed in phases as each parcel along the frontage in the Bridge District is developed.

The Capital Bikeshare program provides additional bicycling options to the residents, employees, and patrons of the project with a 19-dock station at the Anacostia Metrorail station (southern entrance). Additionally, dockless e-bikes and e-scooters are available for public use.

The project will include long-term bicycle parking in the ground level within the garage, and short-term bicycle parking will be located along the perimeter of the site on both sides of Howard Road SE.

The site is expected to generate a manageable amount of bicycle trips, and the existing and planned bicycle facilities will be able to accommodate these new trips.

Vehicular

The site has close proximity to two (2) major freeways, I-295 and Suitland Parkway. The site is also served by the principal arterial South Capitol Street and collectors Howard Road SE and Firth Sterling Avenue SE. These roadways connect the site to I-395 and I-695, as well as the Capital Beltway (I-495) which surrounds Washington, DC and its inner suburbs while also providing connectivity to the District core.

In order to determine the project's impact on the transportation network, future conditions were analyzed with and without the project based on the number of trips the site is expected to generate under the project's program. Intersection analyses were performed to obtain the average delay and queue a vehicle will experience. These average delays and queues are compared to the acceptable levels of delay set by DDOT standards as well as existing and background queues to determine if the project will negatively impact the study area.

Based on DDOT's outlined capacity impact thresholds, this analysis concludes that three (3) intersections require mitigation. Due to heavy regional traffic, these intersections are already experiencing existing delays and/or queues under existing and background conditions. The additional vehicular volumes associated with the Bridge District Parcel 5 development will potentially exacerbate these existing conditions. However, the impacts can be mitigated through the measures outlined below.

The following summarizes the project's impacts and recommended mitigation measures. A detailed review of intersection capacity and impacts that trigger mitigation based on DDOT's criteria is included in the Traffic Operations section of this report.

- **Suitland Parkway & Firth Sterling Avenue SE**

  Under Future (2028) Conditions, during the weekday morning peak hour, there is an increase in delay in the westbound approach of greater than 5% compared to the background conditions. The increase in delay at this intersection attributable to the proposed development can be mitigated through signal timing adjustments.

- **Howard Road SE & Firth Sterling Avenue SE**

  Under Future (2028) Conditions, during the weekday morning peak hour, there is an increase in delay in the eastbound approach greater than 5% compared to the background conditions and the 95th percentile queue in the eastbound left lane exceeds the storage length in the future conditions but not in the background conditions. The increase in delay and queues at this intersection attributable to the proposed development can be mitigated through signal timing adjustments.

- **Suitland Parkway & Howard Road SE**

  Under Future (2028) Conditions, during the weekday afternoon peak hour, there is an increase in delay in the westbound approach of greater than 5% compared to the background conditions. Since this intersection is unsignalized and adding additional vehicular capacity is not feasible, additional TDM strategies are proposed to address the potential impacts at this intersection due to project-generated trips.

Safety

A qualitative review of study area intersections was performed to identify areas of concern due to vehicular, pedestrian, and bicycle interactions.

The analysis concluded that Firth Sterling Avenue SE is a high injury network and conditions at two (2) intersections pose significant safety concerns. These intersections are as follows:

Howard Road SE & Firth Sterling Avenue SE

In 2020, this intersection was ranked as the single most hazardous intersection in the entire District of Columbia by crash rate and by crash composite index. This intersection has been improved as part of DDOT's South Capitol Street Corridor Project and the highway on-ramp at this intersection and the off-ramp 400 feet to the west were removed. Additionally, a multi-use path, sidewalks, and crossing improvements have been installed at this intersection, all of which will mitigate the existing hazards.

Firth Sterling Avenue SE & Suitland Parkway

This intersection ranked as the 17th most hazardous intersection in the District by crash severity cost (between 2018 and 2020) as well as the 19th by crash composite index (between 2018 and 2020). As a limited-access road, Suitland Parkway primarily transports commuters from southeast DC and suburban Maryland through the District towards downtown DC. This intersection has been improved as part of DDOT's South Capitol Street Corridor Project and currently has standard crosswalks, ADA compliant curb ramps, and sidewalks present on Firth Sterling Avenue SE, and Suitland Parkway, west of this intersection.

Transportation Demand Management (TDM) Plan

Per the DDOT CTR guidelines, the goal of TDM measures is to reduce the number of single occupancy vehicles and vehicle ownership within the District. The promotion of various programs and existing infrastructure includes maximizing the use of transit, bicycle, and pedestrian facilities. DDOT has outlined expectations for TDM measures in their CTR guidelines, and this project has proposed a TDM plan based on these guidelines, which is set forth in Project Design chapter of this report.

Summary and Recommendations

This report concludes that the project will not have a detrimental impact on the surrounding transportation network assuming the proposed site design elements and TDM measures are implemented.

The Bridge District Parcel 5 project has several positive design elements that minimize potential transportation impacts, including:

- The site's close proximity to transit and the existing bicycle infrastructure;
- It's contribution to a future bicycle and pedestrian promenade linking the site, the Frederick Douglass Memorial Bridge, and the Anacostia Metrorail Station;
- The inclusion of secure long-term bicycle parking that meets zoning requirements;
- The installation of short-term bicycle parking spaces along the frontage of the site that exceeds zoning requirements;

A TDM plan that reduces the demand of single-occupancy, private vehicles during peak period travel times or shifts single-occupancy vehicular demand to off-peak periods.