

Comprehensive Transportation Review

899 Maine Avenue SW

Washington, DC

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Executive Summary

The following report is a Comprehensive Transportation Review (CTR) on behalf of Jair Lynch (the "Applicant") for the property located at Square 390, Lot 53 in southwest Washington, DC.

The purpose of this CTR is to evaluate whether the project will generate a detrimental impact to the transportation network surrounding the site. This report concludes that **the project will not have a detrimental impact** to the surrounding transportation network assuming the proposed site design elements and mitigation measures. The potential impacts of the PUD are mitigated via a Transportation Demand Management (TDM) plan and a Loading Management Plan (LMP), which are detailed in the CTR.

In addition to the mitigation provided by the TDM and LMP plans, the PUD includes a transportation benefit, a reconstruction of 9th Street adjacent to the property that incorporates safety and multi-modal benefits.

Proposed Project

The proposed site is located at 899 Maine Avenue SW, at the northeast corner of the intersection of Maine Avenue SW and 9th Street SW. The site is bounded by 9th Street SW to the west, Maine Avenue SW to the south, Jefferson Middle School Academy to the east, and G Street SW to the north. The site is currently home to a 94,385 square foot office building. The proposed mixed-use development program includes 495 residential units, 24,052 square feet of retail/grocery space, and 234 vehicular parking spaces.

Vehicular Access/Private Alley

Vehicular access to the attached parking garage is proposed from a new private alley on the eastern edge of the site. The private alley provides access to three facilities: (1) the ramp to the underground parking garage, with 234 vehicular parking spaces, and a long-term bicycle parking room, (2) a singular large loading dock that can accommodate large trucks for the proposed grocery store tenant, and (2) a loading area serving all other uses in the building with two (2) 12' x 30' loading berths and one (1) 10' x 20' service/delivery space. All truck turning maneuvers will occur within the site along private roadways, allowing for head-in/head-out access to and from the public roadway network. The number of loading berths and service spaces meet all zoning and DDOT dimensional requirements.

The alley is proposed to operate with a right-in only driveway on Maine Avenue, and a right-in/right-out driveway on G Street SW.

This proposed site access represents a compromise between DDOT's standards for site access, ANC and other community stakeholder input, and the needs of the proposed grocery store tenant. Additional details on the alley, including the proposed Loading Management Plan (LMP), and signing and marking concepts reinforcing the desired circulation pattern, are included in the CTR.

The vehicular parking provided meets with 2016 zoning requirements, by providing 234 spaces relative to a requirement of 165 spaces.

Two pick-up/drop-off (PUDO) zones will be located for short-term vehicular operations: one along 9th Street SW for the residential entrance, and one along Maine Avenue SW for the retail entrance.

The proposed development will provide bicycle parking that exceeds the ZR16 zoning requirements and meet the minimums set by DCMR 18 Title 1214. The project will supply long-term bicycle parking in a secure location adjacent to the parking garage and short-term bicycle parking within and along the perimeter of the site near the building entrance. The vehicular and bicycle parking will also meet the practical needs of the project's residents.

9th Street Improvements

The PUD includes a transportation benefit, a reconstruction of 9th Street adjacent to the property that incorporates safety and multi-modal benefits. These improvements are detailed within the CTR, including a technical analysis demonstrating that these improvements are accomplished with minimal to no loss of vehicular capacity on 9th Street. Given District Department of Transportation (DDOT) approval of the improvements, the Applicant proposed to fund their construction as a PUD benefit.

Furthermore, this CTR explores the concept of installing a traffic signal at the intersection of 9th and G Streets SW. Since this intersection includes an off-ramp from an Interstate highway, it could not be approved through the CTR process, but this CTR includes an analysis of the concept, demonstrating its viability with the goal of providing DDOT and other necessary stakeholders information required to begin the process of approval and construction of the traffic signal.

Multi-Modal Overview

Trip Generation

The 899 Maine Avenue SW development is transit-, pedestrian-, and bicycle-oriented. The project is expected to generate new

trips on the surrounding transportation network across all modes during the AM and PM peak hours.

The AM peak hour trip generation, when compared to existing uses, is projected to include 22 fewer vehicle trips per hour, 15 more transit trips per hour, 16 more bicycle trips per hour, and 43 more pedestrian trips per hour. The PM peak hour trip generation, when compared to existing uses, is projected to include 13 more vehicle trips per hour, 70 more transit trips per hour, 39 more bicycle trips per hour, and 125 more pedestrian trips per hour.

Transit

The development site is well-served by transit. It is located approximately 0.41 miles from the L'Enfant Plaza Metrorail station, 0.45 miles from the Waterfront Metrorail station, and is within one (1) mile of two other Metrorail stations. The site is also served by several major WMATA bus routes.

Several planned or proposed transit projects will improve transit access to the site, including nearby Transit Priority Corridors 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 service can accommodate these new trips.

Pedestrian

The site is surrounded by a well-connected pedestrian network. Despite some incidences of missing crosswalks or sidewalks that do not meet width standards, overall there is a well-connected pedestrian network surrounding the site. Sidewalks, crosswalks, and curb ramps along the perimeter of the site already meet DDOT and ADA standards.

The site is expected to generate a manageable number of pedestrian trips, and the existing pedestrian facilities can accommodate these new trips.

The proposed 9th Street improvements include several pedestrian improvements, including widened sidewalks along the east side of 9th Street SW, the consolidation of the east-west crossing of 9th Street SW as a single crosswalk (now part of the stop controlled intersection at 9th Street & G Street SW), and a larger curb-bump out at the northwest corner of 9th Street & L'Enfant Plaza SW.

Bicycle

The site has access to several on- and off-street bicycle facilities.

Several planned and proposed bicycle projects will improve bicycle access to the site, including protected bicycle lanes along 7th Street SW, Maine Avenue SW, I Street SW, and M Street SW.

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

The development will include long-term bicycle parking within the parking garage and short-term bicycle parking along the perimeter of the site that meet DDOT and zoning requirements.

The proposed 9th Street improvements include several bicycle infrastructure improvements, including new bicycle lanes along 9th Street SW (connecting to the existing L'Enfant Plaza SW bicycle lanes), in addition to a new east-west bicycle lane crossing of 9th Street SW (with the modified crosswalk), and new crossing lanes for bicycles across Maine Avenue SW to connect to the existing cycletrack.

Vehicular

The site is accessible from minor arterial roadway Maine Avenue SW with nearby access to collector roads 9th Street SW and L'Enfant Plaza SW and Interstate 395. These roadways provide connectivity to I-295, DC-295, and the Capital Beltway (I-495), which provide for efficient travel around the Washington region.

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

The analysis concluded that the PUD will have a minimal influence on traffic capacity in the study area: only one (1) intersection requires mitigation measures through altered signal timings at the 7th & Maine Avenue SW intersection (removing one (1) second from the east-west movements and adding it to the north-south movements).

The 9th Street improvements show minimal change to traffic capacity in the study area. Thus, the safety and multi-modal benefits they provide come at relatively no impact to traffic capacity.

Additionally, the traffic signal concept at the intersection of 9th Street & G Street SW is viable from a traffic capacity standpoint, and DDOT should strongly consider advancing the idea towards implementation.

Summary and Recommendations

This report concludes that the proposed development will not have a detrimental impact on the surrounding transportation and roadway network assuming that all planned site design elements are implemented. The potential impacts of the PUD are mitigated via a Transportation Demand Management (TDM) plan and a Loading Management Plan (LMP), which are detailed in the CTR.

Additionally, the 899 Maine Avenue development has several positive design elements that minimize potential transportation impacts, including:

- Close proximity to transit, including the L'Enfant Plaza and Waterfront Metrorail stations;
- Access to existing bicycle infrastructure, including a cycletrack on Maine Avenue SW;
- A location within a well-connected pedestrian network;
- Secure long-term bicycle parking that meets zoning requirements; and
- Short-term bicycle parking spaces along the perimeter of the site that meets zoning requirements.

Finally, the PUD is proposing improvements to 9th Street SW as a PUD amenity that includes safety and multi-modal improvements including the following:

- Widened sidewalks along 9th Street SW
- New, shortened crosswalk across 9th Street SW
- Increased curb bump out at 9th Street & L'Enfant Plaza SW
- New bicycle lanes along 9th Street SW, connecting existing bicycle lanes at L'Enfant Plaza SW to existing cycletrack at Maine Avenue SW
- New pick-up/drop-off (PUDO) zone along 9th Street SW.

Introduction

This report is a CTR reviewing the transportation aspects of the 899 Maine Avenue development. The site, shown in Figure 1 and Figure 2, is located at Square 390, Lot 53 in southwest, Washington, DC and is zoned MU-12.

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.

Project Summary

The site is in the Waterfront/Wharf neighborhood. The site is bounded by 9th Street SW to the west, Maine Avenue SW to the south, existing structures (including a school) to the east, and G Street SW to the north.

The 899 Maine Avenue project will be a mixed-use development consisting of 495 total residential units and a 24,052 square foot grocery store with an underground garage containing 234 vehicle parking spaces.

Vehicular access to the parking garage is proposed via a new service alley to be built on the eastern boundary of the site that connects to both G Street SW and Maine Avenue SW.

Loading facilities will be accessible from the same service alley and consist of two (2) 12' x 30' loading berths and two (2) 10' x 20' service spaces. These loading facilities will meet ZR16 requirements, discourage on-street loading and unloading, and meet the practical needs of the project.

Pedestrian access to the site will be available from 9th Street SW and Maine Avenue SW.

Existing bicycle facilities near the site include a cycletrack on Maine Avenue SW, and bicycle lanes on 7th Street, I Street SW, Maine Avenue SW and L'Enfant Plaza SW. These bicycle

facilities provide connectivity to nearby neighborhoods including the Navy Yard, L'Enfant Plaza, the National Mall and downtown DC, in addition to connections to other local and regional bicycle facilities. The project will include a long-term bicycle parking spaces within a bike room on the first floor (adjacent to the parking garage). Short-term bicycle parking spaces will be available along the perimeter of the site in highly accessible locations near the building entrance. Proposed bicycle parking spaces will exceed ZR16 zoning requirements and meet the minimums set by DCMR 18 Title 1214. The nearest Capital Bikeshare (CaBi) stations are located at Maine Avenue SW & 9th Street SW and Maine Avenue SW & 7th Street SW.

Contents of Study

This report contains nine (9) chapters as follows:

- Study Area Overview
This chapter reviews the area near and adjacent to the project and includes an overview of the site location.
- Project Design
This chapter reviews the transportation components of the proposed project, including the site plan and access.
- 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 highlights the vehicular impacts of the project, including presenting mitigation measures for minimizing impacts as needed.
- Transit
This chapter summarizes the existing and future transit service adjacent to the site, reviews how the project's transit demand will be accommodated, outline 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 impacts of the project. This includes a qualitative review of existing and proposed safety features surrounding the site.

- Summary and Conclusions

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

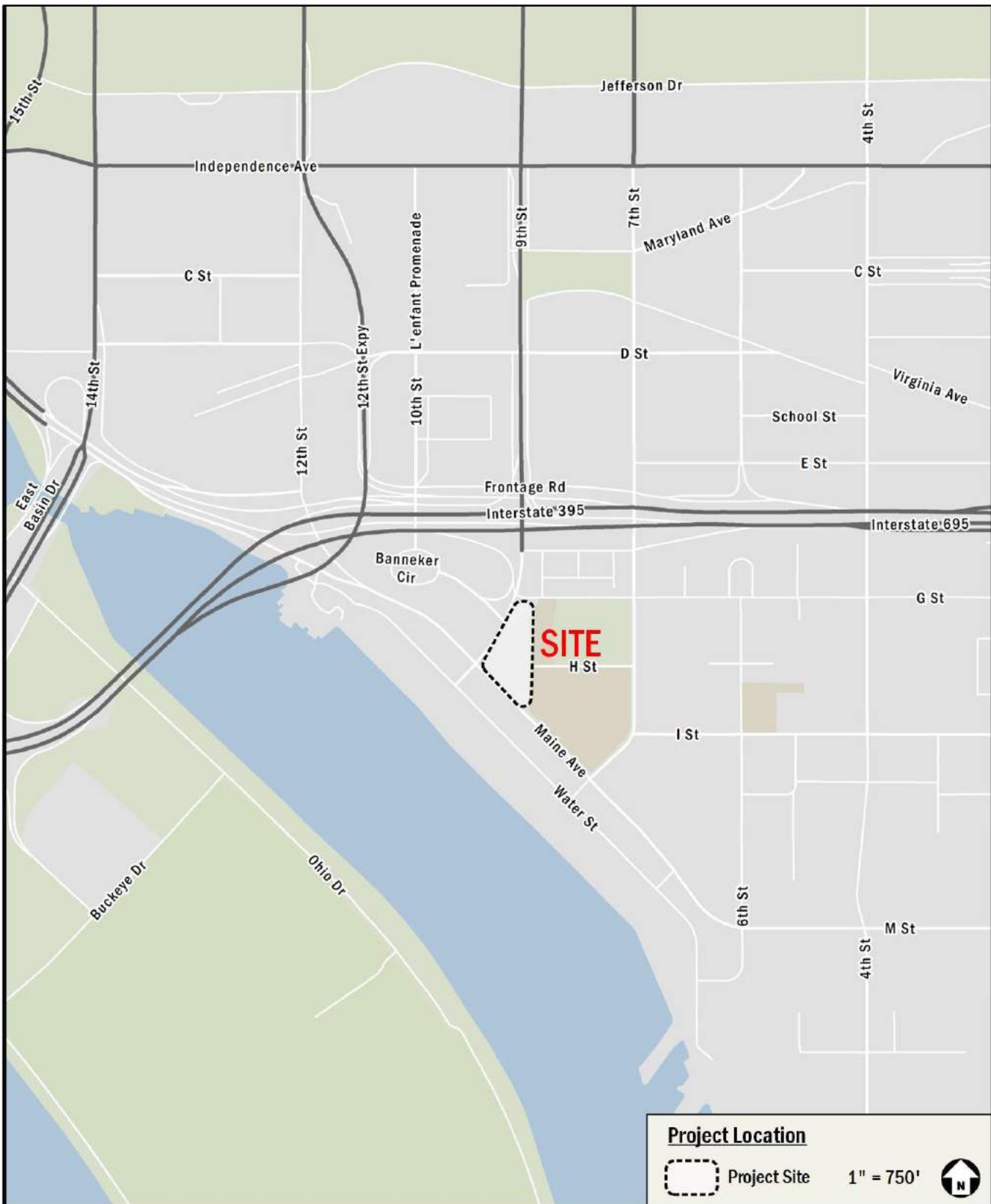


Figure 1: Project Location



Figure 2: Site Aerial

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 project's residents to the rest of the District of Columbia and surrounding areas.
- The site is served by public transportation with access to local Metrobus lines and Metrorail.
- There is sufficient bicycle infrastructure in the vicinity of the site, with connectivity to east-west and north-south bicycle facilities.
- Pedestrian conditions are generally good, particularly along major walking routes.

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 directly from the minor arterial roadway Maine Avenue SW with nearby access to collector roads 9th Street SW and L'Enfant Plaza SW, as well as Interstate 395. These roadways provide connectivity to the I-295, DC-295, and the Capital Beltway (I-495), which provide for efficient travel around the Washington region.

The site is located within an approximately 9-minute walk or 0.41 miles from the L'Enfant Plaza Metrorail station (on the Blue, Orange, Silver, Green, and Yellow Lines), a 10-minute walk or 0.45 miles from the Waterfront Metrorail station (on the Green Line), a 13-minute walk or 0.59 miles from the Smithsonian Metrorail station (on the Blue, Orange, and Silver Lines) and a 15-minute walk or 0.72 miles from the Federal Center SW Metrorail station (also on the Blue, Orange, and Silver Lines). Connections can be made at the Gallery PI-Chinatown and Metro Center Metrorail stations to access the Red Line, allowing access to locations in Virginia and Maryland.

Overall, the site has access to several regional roadways and transit options, making it convenient to travel between the site and destination in the greater Washington metropolitan area.

Overview of Local Access

There are a variety of local transportation options near the site that serve vehicular, transit, walking, and bicycling trips. The site is directly served by a local vehicular network that includes minor arterial Maine Avenue SW, as well as collector roads 9th Street SW and L'Enfant Plaza. The site is also near Interstate I-395.

The Metrobus system provides local transit service near the site, including connections to several neighborhoods within the District and additional Metrorail stations. As shown in Figure 6, there are seven (7) metrobus routes and one (1) DC Circulator route that serve the site.

The site is located near several on-street bicycle facilities, including a protected cycletrack on Maine Avenue SW and bicycle lanes on L'Enfant Plaza. To accommodate bicyclists, the project will provide on-site bicycle facilities as discussed in detail in the Project Design chapter. A detailed review of existing, planned, and proposed bicycle facilities and connectivity is provided in the Bicycle Facilities chapter.

Anticipated pedestrian routes, such as those to public transportation stops, schools, and community amenities, provide adequate pedestrian facilities.

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

Carsharing

Two (2) companies provide carsharing service in the District of Columbia: Free2Move and Zipcar. Both services are private companies that provide registered users access to a variety of automobiles. Free2Move operates a point-to-point model that allows customers to pick up a vehicle at a location and drop it off at any non-restricted metered curbside parking space or Residential Parking Permit (RPP) location in the defined "Home Area." Zipcar operates a reserved-space model where customers are required to borrow from and return vehicles to the same reserved carsharing space. Currently, there is one (1) location 0.1 miles or a 2-minute walk from the site. The location, number of available vehicles, and walking distance is listed in

Table 1.

Table 1: Zipcar Locations

| Zipcar Location | Number of Vehicles | Walking Distance |
|---------------------|--------------------|------------------|
| 772 Maine Avenue SW | 2 vehicles | 0.1 mi./2 min. |

Micromobility

Micromobility service in the District is provided by six (6) private dockless companies operating electric-assist bicycles (e-bikes) and electric scooters (e-scooters): Bird, Jump, Lime, Lyft, Skip, and Spin. 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 the walking path 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.

Walk & Bike Score

Walkscore.com is a website that provides scores and rankings for the walking, biking, and transit conditions within neighborhoods of the District. Based on this website, the site is

in the Southwest – Waterfront neighborhood. Using the existing 899 Maine Avenue SW address for the site, the site has a walk score of 85 (or “Very Walkable”), a transit score of 80 (or “Excellent Transit”), and a bike score of 83 (or “Very Bikeable”). Maps of the surrounding area’s walk and bike scores can be found in Figure 3 and Figure 4, respectively. The following conclusions can be made based on the data obtained from Walkscore.com:

- The site is situated in an area with very good walkability as most errands can be accomplished on foot;
- The site is situated in an area with excellent transit scores due to its proximity to several Metrobus routes and being within a ½ mile of Metrorail stations; and
- The site is situated in an area with very good bikeability due to its proximity to a number of bicycle facilities including a cycletrack on Maine Avenue SW.

Overall, the site and surrounding neighborhood have very good pedestrian, transit, and bicycle accessibility. Additionally, other planned developments and roadway improvements will help increase pedestrian, transit, and bicycle accessibility in the neighborhood.



Figure 3: Site Area Walk Score



Figure 4: Site Area Bike Score

Future Projects

There are several District initiatives and approved developments located near the site. These planned and proposed projects are summarized below.

moveDC

As the District of Columbia grows, so must the transportation system, specifically in a way that expands transportation choices while improving the reliability of all transportation modes. In order to meet this challenge and capitalize on future opportunities, DDOT maintains and regularly updates its long-range transportation plan, *moveDC*, to identify transit challenges and opportunities and to recommend investments.

The *moveDC* 2014 update outlined recommendations by mode with the goal of having them complete by 2040, including improvements to the District's transportation system such as:

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

As part of the *moveDC* 2021 update, DDOT has drafted mobility priority networks to show where investments in safety and mobility improvements will take place for specific modes of transportation. The Transit Priority Network highlights streets where infrastructure improvements such as dedicated transit lanes, better transit stops, and/or special intersection treatments for buses will be prioritized to improve transit travel times and reliability. The Bicycle Priority Network includes bicycle priority routes from the *moveDC* 2014 update and additions from recent planning and public engagement efforts. In direct relation to the proposed project, the draft Transit and Bicycle Priority Networks as of August 2022 include:

- Transit priority corridors along 7th Street SW, Maine Avenue SW, and Independence Avenue SW, covering a segment of seven (7) existing major Metrobus routes and one (1) DC Circulator route near the site;
- Future on-street bicycle facilities with committed funding along I Street SW and 4th Street SW.

- Future planned bicycle facilities without committed funding along 6th Street SW, Virginia Avenue SW, and Maine Avenue SW.

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 Comprehensive Plan's Lower Anacostia Waterfront/Near Southwest Planning Area, which includes the site, contains the following policies which are supported by the proposed development. The site is also located within the 2.5 "SW Neighborhood" policy focus area but is also adjacent to the 2.1 "SW Waterfront" policy focus areas. Policies from both focus areas are included here:

- *Policy AW-2.1.1: Mixed-Use Development.* Support the redevelopment of the Southwest Waterfront with medium to high-density housing, commercial and cultural uses, and improved open space and parking. The development should be designed to make the most of the waterfront location, preserving views and enhancing access to and along the shoreline.
 - The proposed development supports this policy by constructing a multi-story multi-use building with residential and retail uses. Additionally, the development enhances access to the shoreline by providing bicycle lanes along 9th Street SW as part of the 9th Street Improvements.
- *Policy AW-2.1.3: Connecting to the Southwest Waterfront.* Continue to enhance pedestrian connections from the Southwest neighborhood, Waterfront Metro station, and L'Enfant Plaza area to the Wharf by creating new public spaces and trails and providing safer pedestrian crossings across Maine Avenue SW.
 - The proposed development supports this policy by providing bicycle lanes along 9th Street SW (which connect to the existing L'Enfant Plaza SW bicycle lanes) and improved pedestrian crossings at the intersection of 9th Street SW and G Street SW as part of the included 9th Street Improvements.
- *Policy AW-2.5.10: Southwest Multimodal Transportation Options.* Support an active and growing Southwest community by accommodating multiple transportation modes, increasing mobility and safety within the community, and providing ease of access to adjacent

neighborhoods and the waterfront. Improve pedestrian and bike crossings through enhanced signage and redesigned crosswalks. Continue to expand and link bicycle routes.

- The proposed development supports this policy through its 9th Street Improvements, which includes new bicycle lanes along 9th Street SW (connecting to existing bicycle lanes on L'Enfant Plaza SW and an existing cycletrack on Maine Avenue SW), as well as redesigned crosswalks at the intersection of 9th Street SW and G Street SW.

Long Bridge Project

DDOT's *Long Bridge Study*, published in 2015, focuses on developing the long-term and short-term needs of the Long Bridge. The goals of the study were to focus on transportation need, operational improvements, structural conditions, long-term capacity, multimodal access, and intermodal connectivity to the Long Bridge. This included adding a ped/bike path to the renewed bridge. Given the proposed development's proximity to the existing bridge, the addition of bike lanes on 9th Street SW (as part of the 9th Street Redesign), would improve multimodal connectivity to the Long Bridge.

M Street SE/SW Transportation Study

DDOT's *M Street SE/SW Transportation Study*, published in 2012, identifies current and future transportation challenges and ways to address them along M Street SE/SW and the Southwest waterfront from 12th Street SE to 14th Street SW, and from the Southwest/Southeast Freeway south to the Anacostia River/Washington Channel. This study area includes the proposed development's site. The goals of the project were to:

- Improve safety for drivers, pedestrians and bicyclists;
- Increase mobility;
- Provide better local connections to the regional transportation network; and
- Support planned development.

More specifically, some of the goals included promoting walkable, safe pedestrian environments and creating bicycle lanes and cycletracks. The proposed development supports these goals by constructing new bicycle lanes on 9th Street SW and improving pedestrian connections around the site as part of its 9th Street Redesign.

Southwest Ecodistrict Plan

The National Capital Planning Commission's *Southwest Ecodistrict Plan*, published in 2013, is a long range,

comprehensive approach to transform a 110-acre, isolated federal precinct into a well-connected, mixed-use neighborhood, workplace, and cultural destination linking the National Mall and the Southwest Waterfront.

The project development is located adjacent to the area in question, which borders along 9th Street SW. Thus, the proposed development would further the goals of this plan by providing better connections via new bike lanes on 9th Street SW, as well as contributing to the mixed-use ambitions of the plan.

Southwest Neighborhood Plan

DC Office of Planning's *Southwest Neighborhood Plan*, published in 2015, is a small area plan that shapes the future of the neighborhood, with goals to enhance parks, pedestrian, and street connections; bolster retail; integrate community amenities; enhance transportation choices; and accommodate and guide the direction of future growth in the Southwest neighborhood.

The plan specifically outlines a goal of "safe pedestrian and bicycle infrastructure", which the proposed development offers via the 9th Street SW bike lanes and improved pedestrian connections at the 9th Street SW and G Street SW intersection (via the 9th Street Redesign).

Vision Zero Action Plan

DDOT's *Vision Zero Action Plan* is the implementation strategy of DC's Vision Zero Initiative, which commits to reaching zero fatalities and serious injuries to travelers of DC's transportation system by the year 2024. The *Action Plan* is based on DC interagency workgroups, public input, local transportation data and crash statistics, and national and international best practices. Workgroups identified the guiding themes for the *Vision Zero Action Plan* and the goals of the DC government.

The *Action Plan* focuses on the following themes:

- Create Safe Streets
- Protect Vulnerable Users
- Prevent Dangerous Driving
- Be Transparent and Responsive

Strategies within each theme assign lead and supporting agencies responsible for the planning and implementation of each program. The plan also calls for partners external to the District government to ensure accountability and aid in implementation.

Planned Developments

There are three (3) pipeline 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 or destination within the study area should be included. Trip generation calculations for all background projects are included in the Technical Attachments.

The developments are shown in Figure 7 and described below.

The Wharf Phase II

The Wharf Phase II includes seven (7) buildings with a total of approximately 547,504 square feet of office space, 317 residential dwelling units, 119,059 square feet of retail, 116 hotel rooms, and 250 boat splits. Trip generation data was acquired via Gorove Slade's 2017 CTR for this project.

425 & 375 M Street SW

This project consisted of two buildings, an east building (375 M Street SW) with 309 dwelling units, 21,930 square feet of retail, and 18,660 square feet of commercial space; and a west building (425 M Street SW), with 296 dwelling units, 19,940 square feet of retail, and 19,450 square feet of commercial space. Originally a background project for Gorove Slade's 2017 CTR for the Wharf Phase II, trip generation data was acquired from this source.

The Bard

The Bard is a planned residential building with 134 dwelling units at 501 I Street SW. Trip generation data was acquired by using ITE's 11th Edition Trip Generation Manual.

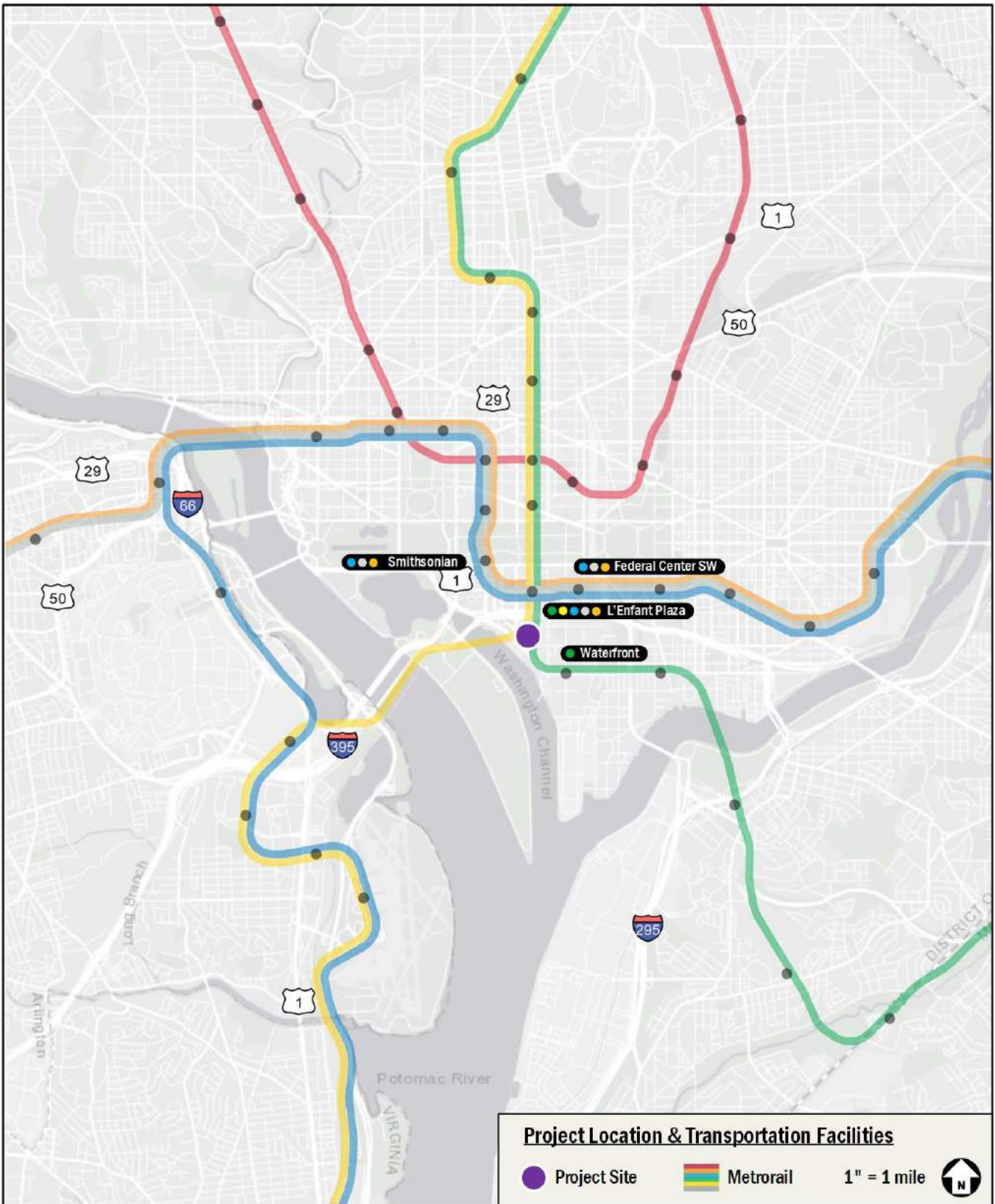


Figure 5: Project Location & Transportation Facilities

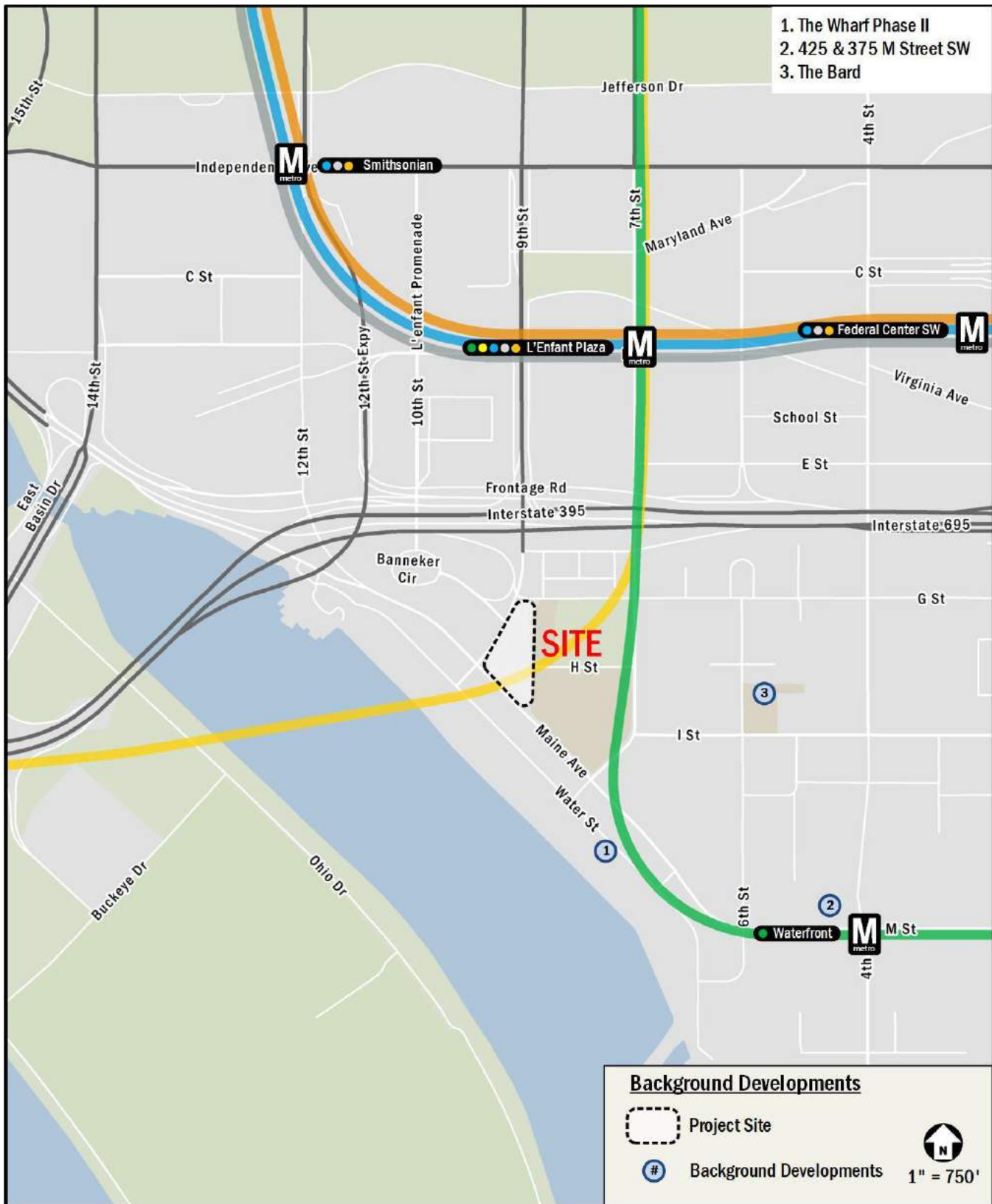


Figure 7: Background Developments

Project Design

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

The resulting development of 899 Maine Avenue will be a mixed-use development with a total of 495 residential units and a 24,052 SF grocery store. A general site plan is shown in Figure 8.

Parcel Overview

The parcel is bounded by 9th Street SW to the west, Maine Avenue SW to the south, a new service alley to the east, and the G Street SW to the north.

The development scheme is as follows:

- 495 residential units
- 24,052 square feet of retail/grocery
- 234 vehicle parking spaces in garage

Loading Facilities

Based on zoning requirements, the project is required to provide three (3) loading berths and two (2) service spaces (two (2) loading berths and one (1) service space for the retail component and one (1) loading berth and one (1) service space for the residential component). The development meets these requirements by providing two (2) 12' x 30' loading berths, one (1) tractor-trailer sized, 67' loading berth, and one (1) 10' x 20' service space in the service alley directly east of the development. The one (1) 10' x 20' service space can be shared between uses, satisfying zoning requirements. Loading berths and service/delivery spaces are directly accessible from the new service alley to the east of the site.

Trash and recycling collection will also take place in the service alley. The trash room is located in the garage, with trash being brought to the alley for it to be picked up. The location of the trash room and other loading facilities can be found in Figure 8.

The project is expected to generate up to seven (7) total loading trips per day. The daily loading trip generation and assumptions include the following:

- Residential: Two (2) loading trips based on the number of units, two (2) inbound and two (2) outbound loading trip per tenant per unit, and an average unit turnover of 18 months;

- Retail: Two (2) loading trips for the grocery store; and
- General: Three (3) general deliveries consisting of trash removal, mail, and parcel delivery for the entire site.

Vehicle and Bicycle Parking Facilities

ZR16 mandates one (1) vehicle parking space for every three (3) dwelling units in excess of four (4) residential units. With 495 units in the development, 165 parking spaces are required by ZR16 regulations. For retail space, ZR16 mandates 1.33 spaces per 3,000 square feet. After the 50% Metrorail parking reduction granted for projects within 0.5 miles of a Metrorail station, 16 spaces are required. The project proposes a total of 234 spaces. While the final parking split is dependent on the retail tenant, for the purposes of this report it is assumed that the project will provide 214 vehicle parking spaces for the residential component and 20 spaces for the retail/grocery component in the garage, meeting zoning requirements.

ZR16 also mandates one (1) long-term bicycle parking space for every three (3) dwelling units and one (1) short-term bicycle parking space for every 20 dwelling units for residential space and one (1) long-term space for every 10,000 square feet and one (1) short-term space for every 3,500 square feet for retail space. However, DCMR 18 Title 1214 also mandates one (1) bicycle parking space (long-term or short-term) for every residential dwelling unit. We split this requirement into long-term and short-term spaces using the ratio produced by ZR16 requirements for the project. With 495 dwelling units and 24,052 square feet of retail, 137 long-term spaces and 39 short-term spaces are required. The project's proposed bicycle parking spaces will exceed ZR16 zoning requirements and meet the minimums set by DCMR 18 Title 1214.

The location of bicycle and vehicle parking spaces within the site can be found in Figure 8.

Urban Forestry Street Tree Inventory

Street trees, in the existing site, are heavily concentrated along 9th Street SW and Maine Avenue SW along the site frontage, as seen in Figure 9.

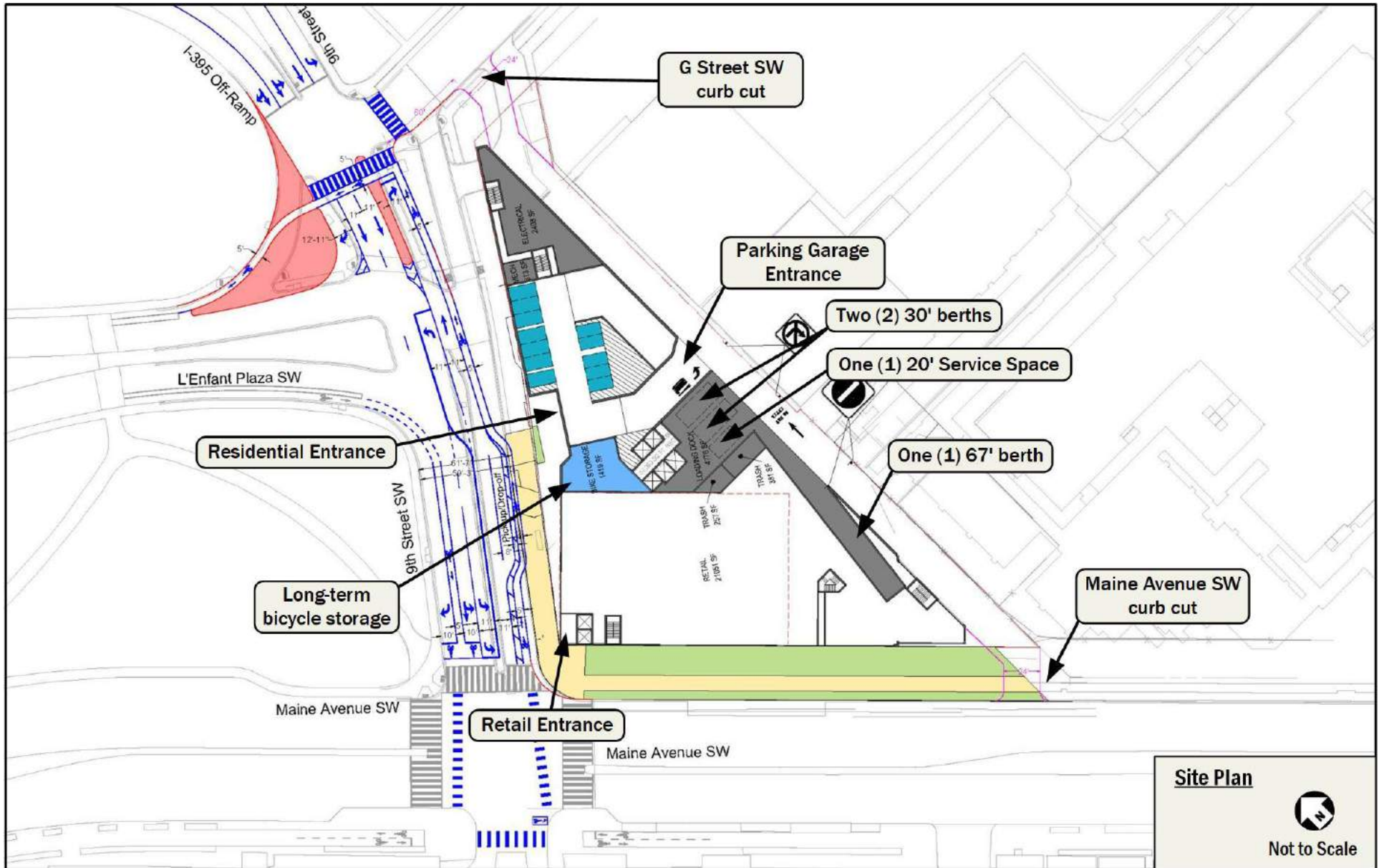


Figure 8: Site Plan



Figure 9: Street Trees

Site Access and Circulation

Pedestrian Access

Pedestrian access to the site is proposed via entrances on 9th Street SW (for the residential portion) and Maine Avenue SW (for the retail/grocery portion). A circulation plan including expected pedestrian routes is shown in Figure 10.

Bicycle Access

Bicycle access will be provided via 9th Street (via the residential portion's main entrance) and the new service alley east of the site, where bicycles can enter via the garage door and make their way to the bicycle storage room. A circulation plan including expected bicycle routes is shown in Figure 10.

New bicycle facilities will be constructed with the project. These include new bicycle lanes along 9th Street SW that will connect with existing bicycle lanes on L'Enfant Plaza SW and the Maine Avenue SW cycletrack.

Vehicular Access

Vehicular access is proposed via the new service alley east of the site, which provides access to the garage. This new service alley connects G Street SW to Maine Avenue SW and will be have two-way operations from G Street SW south to the 67' loading berth, and one-way operations (northbound) down from there to the Maine Avenue SW curb cut. A circulation plan including expected vehicular routes is shown in Figure 10.

Curbside Management

Existing curbside uses were reviewed within approximately two (2) blocks of the site as shown in Figure 11. Curbside zones nearby largely restrict parking all day or provide only metered parking (e.g. along Maine Avenue SW) or permit parking (along G Street SW and 7th Street SW).

The development proposes to alter curbside management on 9th Street SW and on Maine Avenue SW via the construction of two new pick-up/drop-off (PUDO) zones. Proposed curbside conditions are shown in Figure 12.

Loading and Trash

Loading

The proposed loading facilities will accommodate all move-ins/move-outs and delivery demand for tenants without any detrimental impact to the surrounding network.

As described above, all loading activities will take place within the internal two-way service alley. No back-up maneuvers from

Maine Avenue SW, G Street SW, or other public streets will be necessary for trucks to access their loading berth and/or service space.

Per ZR16 requirements, any residential development providing 50 or more dwelling units is required to provide one (1) loading berth and one (1) service/delivery space. A commercial development between 20,000 and 100,000 square feet is required to provide two (2) loading berths and one (1) service/delivery space.

The proposed development will include two (2) 12' x 30' loading berths, one (1) tractor-trailer sized 67' loading berth, and one (1) 10' x 20' service/delivery space, meeting ZR16 requirements as the service space can be shared by the residential and retail components. Figure 10 shows vehicle paths to loading areas as well as internal loading paths from those loading areas to the tenants.

DDOT standards stipulate that truck movements for a site should be accommodated without back-in movements through public space. The project has been designed to accommodate all loading activity and associated backing maneuvers. The proposed loading plan can be seen in Figure 13, and truck movements from AutoTURN can be found in the Technical Attachments.

Trash

Trash pick-up will occur in the building's loading area. No trash will be stored in public space.

Parking

The parking provided by the site has been designed to accommodate on-site parking needs. The project meets ZR16 requirements for parking as shown in Table 2. The project will include 234 vehicle parking spaces. Although the final parking split is dependent on the retail tenant, for the purposes of this report we assume the project will propose 214 spaces for the residential land use and 20 spaces for the retail land use.

Electric Vehicle (EV) Parking

Section 1.6 of the DDOT CTR guidelines recommends that one (1) out of every 50 spaces be served by an EV charging station. Consistent with DDOT guidance, the Applicant proposes providing a total of 16 EV parking spaces, exceeding baseline recommendations within the DDOT CTR guidelines.

Electric Vehicle Readiness Amendment Act of 2020

Per the Electric Vehicle Readiness Amendment Act of 2020, for building permits issued after January 1, 2022, all new construction or substantial improvement of commercial buildings and multi-unit buildings that have three (3) or more automobile off-road parking spaces are required to include EV make-ready

infrastructure to accommodate the future installation of EV charging for at least 20% of parking spaces.

As of August 2022, the law has not gone into effect because it has not been funded. The Applicant is aware that this requirement may go into effect prior to pulling their building permits.

Table 2: Parking Supply Calculations for 899 Maine Avenue SW

| Land Use | Proposed Size | Proposed | | DDOT Preferred Rate ² | DDOT Preferred Spaces | ZR16 | |
|-------------|---------------|---------------------|-------|----------------------------------|-----------------------|----------------------|-----------------------------|
| | | Supply ¹ | Ratio | | | Supply ¹ | Ratio |
| Residential | 495 du | 214 | 0.43 | 0.35 per unit | 173 | 165 | 0.33/du in excess of 4 du |
| Retail | 24,052 sf | 20 | 0.83 | 1.25 per ksf | 30 | 30 (15) ³ | 1.33/ksf in excess of 3 ksf |

¹ Supply is measured in spaces, while ratio is measured in spaces/du or spaces/1ksf.

² Rates are proximate to Metrorail and Priority Transit with the development being located within a ¼ to ½ mile of a Metrorail station.

³ 50% Metrorail reduction applied for retail use.

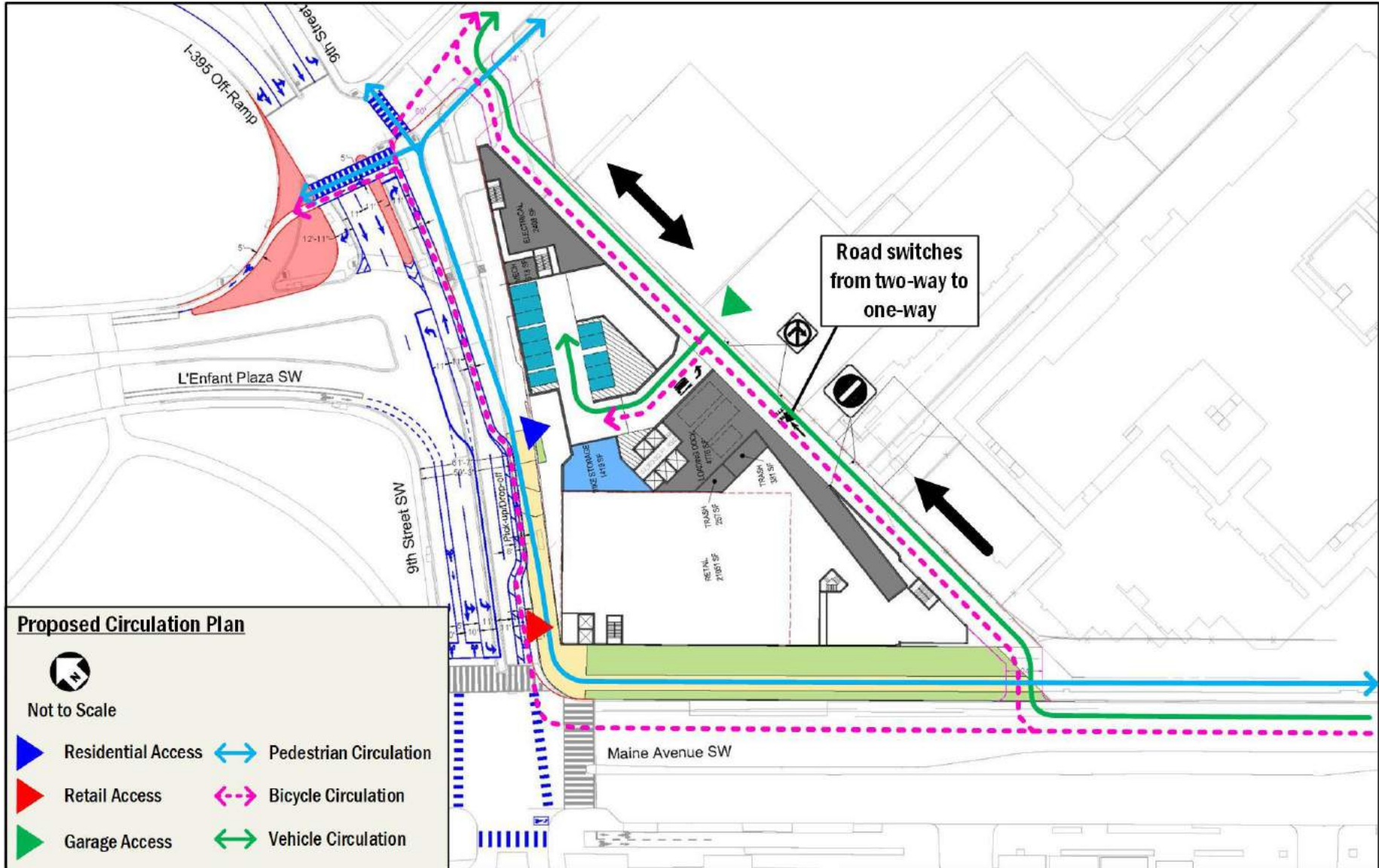


Figure 10: Proposed Circulation Plan

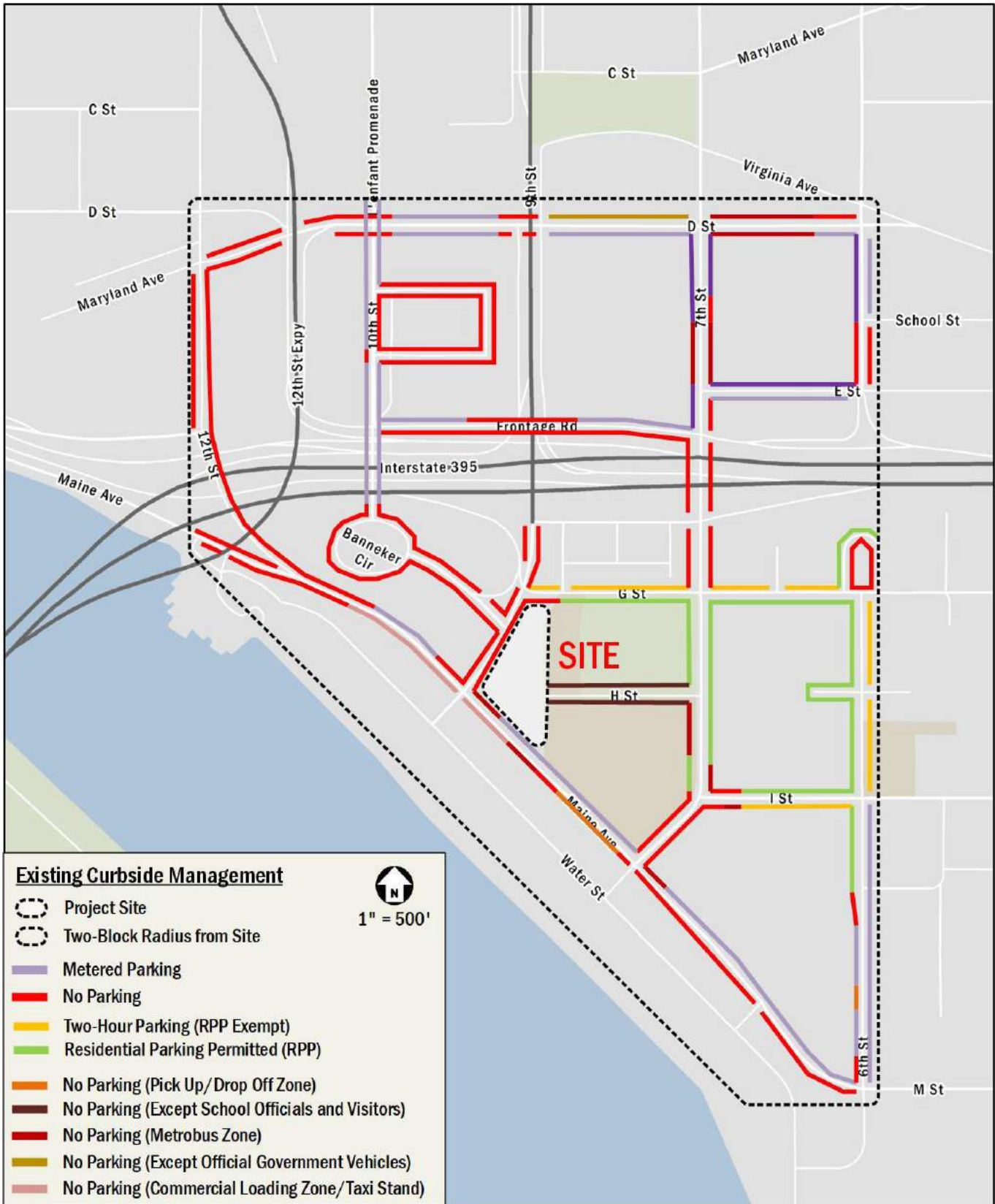


Figure 11: Existing Curbside Management

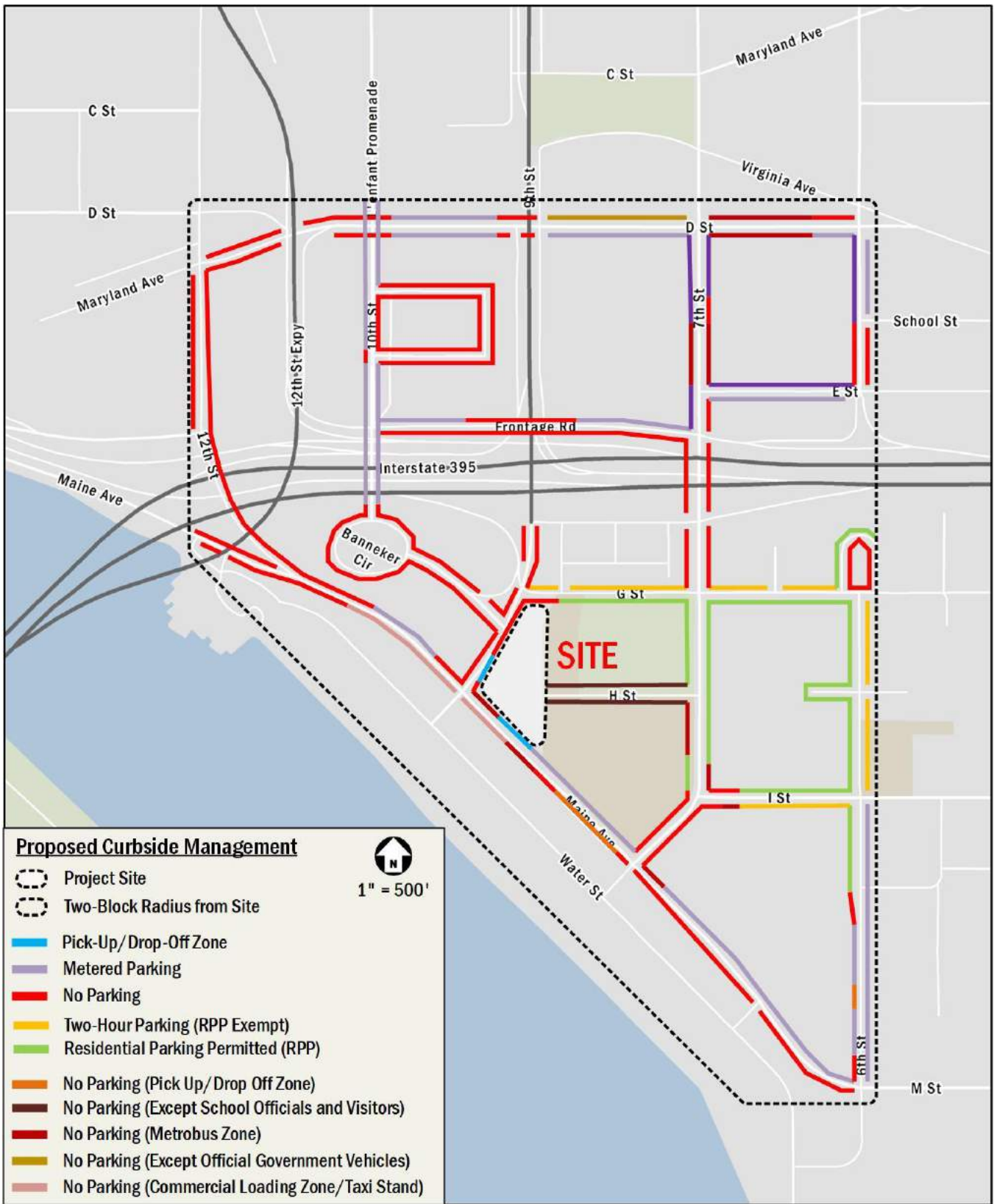


Figure 12: Proposed Curbside Management

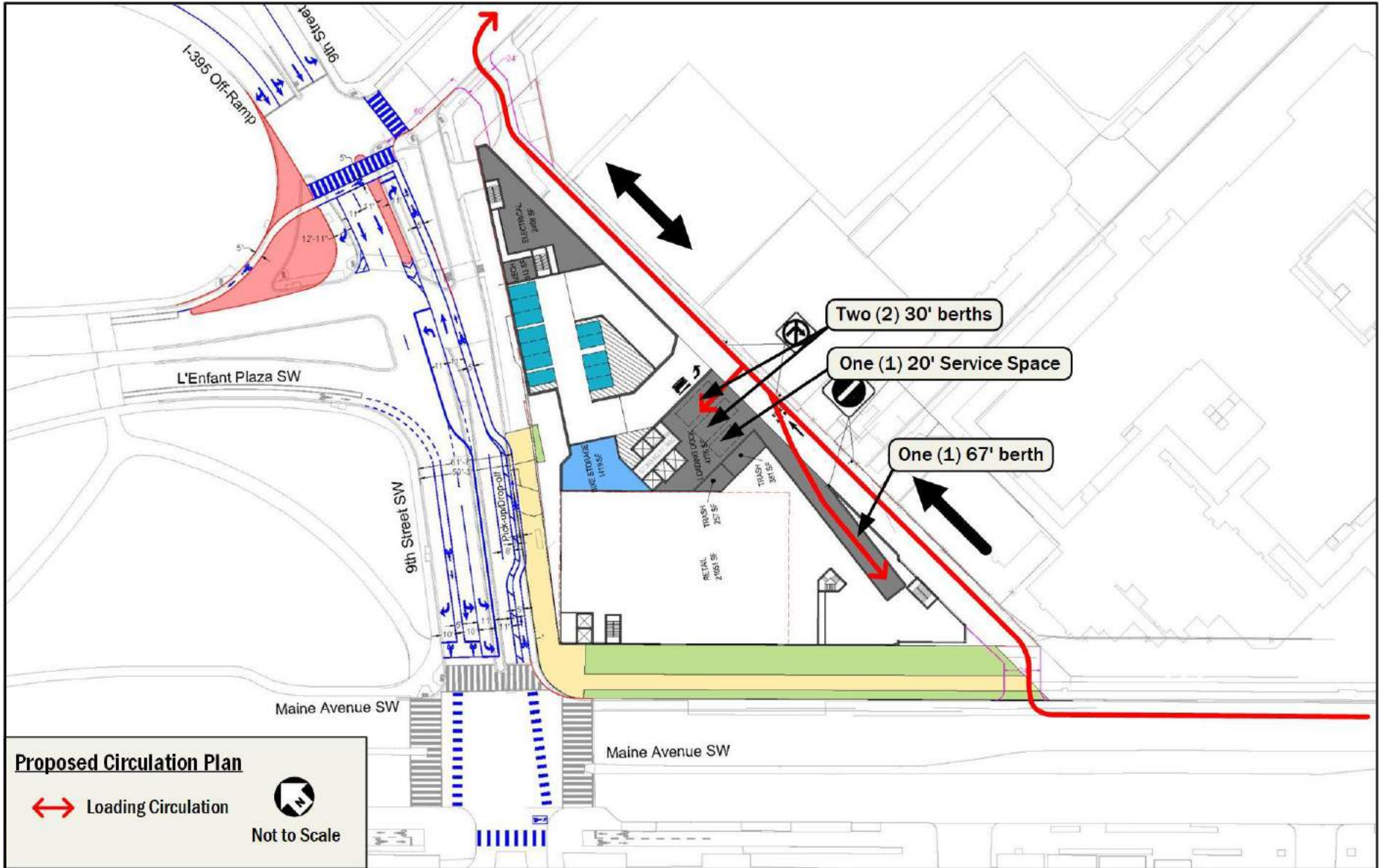


Figure 13: Proposed Circulation Plan

Bicycle and Pedestrian Facilities

Bicycle Parking

The project's bicycle parking exceed ZR16 bicycle parking zoning requirements and meet the minimums set by DCMR 18 Title 1214. Bicycle parking requirements by land use are as follows:

Long-Term (136 total spaces required)

- **Residential, multiple dwelling unit** – one (1) space for every three (3) dwelling units (ZR16) and one (1) space for every three (3) dwelling units (using existing long-term/short-term ratio) (DCMR 18 Title 1214)
 - **495-unit building** – 134 spaces required
- **Retail** – one (1) space for every 10,000 square feet
 - **24,052 square feet** –two (2) spaces required

Long-term bicycle parking will be accommodated in the bike room on the first level of the development, adjacent to the parking garage.

Short-Term (38 total spaces required)

- **Residential, multiple dwelling unit** – one (1) space for each 20 dwelling units (ZR16) / one (1) space for every three (3) dwelling units (using existing long-term/short-term ratio) (DCMR 18 Title 1214)
 - **495-unit building** – 31 spaces required
- **Retail** – one (1) space for every 3,500 square feet
 - **24,052 square feet** – seven (7) spaces required

Short-term bicycle parking spaces (racks) will be provided around the perimeter of the site in highly accessible locations near the building entrance. The Applicant is coordinating with DDOT to select locations for these racks in public space.

Additionally, the project will provide two (2) showers and eight (8) lockers for employees to use, exceeding zoning requirements (zoning requires no showers and two (2) lockers).

Pedestrian Facilities

Pedestrian facilities adjacent to the site on Maine Avenue SW meet DDOT and ADA standards. While pedestrian facilities on 9th Street SW do not meet DDOT standards, the project will improve these facilities to meet DDOT standards.

Operational Improvements

New Service Alley

The new alley, to be constructed directly east of the site (in between the development and the existing Jefferson Middle School), will operate as a partial two-way/one-way alley between a proposed curb cut at Maine Avenue SW and a moved curb cut at G Street SW. The project has been to the Public Space Committee and received conceptual approval for these curb cuts, with operational details to be proposed in this CTR. Curb cut dimensions, which satisfy DDOT and DEM requirements, are included in the Technical Attachments.

Site access does not strictly meet DDOT standards given the proposed curb cut on Maine Avenue SW. ANC input, on the other hand, desired less traffic using G Street SW. Multiple access schemes were studied, including all traffic entering via G Street SW, via Maine Avenue SW, or via both using a two-way alley. The final alley operations and design were chosen as a compromise between DDOT standards, ANC input, and the needs of the grocer tenant.

The alley will have two-way operations from G Street SW to the non-grocer loading docks due south of the garage entrance. The alley will be one-way from Maine Avenue SW up to these loading docks. This allows vehicular traffic to access the garage from both the Maine Avenue SW and G Street SW curb cuts, reducing redundant trips around the block formed by Maine Avenue SW, 9th Street SW, G Street SW, and 7th Street SW.

Trucks servicing the grocery/retail component (WB-67s), will not be allowed to enter via the G Street curb cut, as they will have to travel northbound from Maine Avenue SW to appropriately back into the WB-67 loading dock attached to the grocery/retail component of the site. Smaller trucks and service vehicles accessing the non-grocer loading docks by the garage entrance will be allowed to access the site from either curb cut.

All vehicles will only be allowed to exit the alley via the G Street SW curb cut, which will be a right-in/right-out.

Bicycles will be allowed to use the alley in order to access the bicycle room and racks within the garage.

A robust signage plan will be implemented to ensure that all vehicles comply with the one-way/two-way operations. This signage plan, along with vehicular alley operations, can be seen in Figure 15. Truck operations can be seen in Figure 13, with truck movements via AutoTURN available in the Technical Attachments.

9th Street Redesign

Part of this project's benefits package will be a series of improvements to 9th Street SW along the frontage of the site. This includes reconfiguring traffic operations along both 9th Street between Maine Avenue SW and G Street SW, and reconfiguring the intersection of 9th Street SW and G Street SW.

These improvements were explored upon the request of the ANC. Various concepts were presented to both ANC and DDOT. These concepts were refined per initial feedback from DDOT. An overview of the 9th Street Redesign can be seen in Figure 14.

9th Street SW Improvements

These improvements include bicycle lanes along 9th Street SW, the reduction of one northbound lane, and the reduction of one southbound lane (except between L'Enfant Plaza SW and Maine Avenue SW). This allows for a widened sidewalk along 9th Street SW's east side (along the frontage of the development).

Additionally, the slip lane from 9th Street SW onto G Street SW has been removed, and the existing median has been incorporated into the pedestrian area. A similar curb bump out is proposed at the northwest corner of 9th Street SW and L'Enfant Plaza SW.

9th Street SW & G Street SW Improvements

Certain improvements from 9th Street SW extend into the 9th Street SW & G Street SW intersection. These include the removal of the right-turn slip lane, improved crosswalks, and widened pedestrian access. These improve safety for bicyclists and pedestrians

Additionally, a signal has been studied for this intersection, given the existing conflicting left turns coming off the I-395 off-ramp and 9th Street SW's southbound approach. This is considered a separate phase from the other 9th Street and 9th & G Street Intersection Improvements as this intersection includes an off-ramp from an Interstate highway, and thus could not be approved through the CTR process. This CTR does include an analysis of the concept, demonstrating its viability with the goal of providing DDOT and other necessary stakeholders information required to begin the process of approval and construction of the traffic signal.

The initial proposed improvements from the PUD transition well into this potential traffic signal. Additionally, the signal would provide pedestrians and bicyclists protected phases in which they can cross both 9th Street SW and G Street SW. The signal also removes the existing overlapping left turn lanes from 9th Street SW and the I-395 off-ramp.

The 9th Street Redesign, with a signalized and unsignalized 9th Street SW and G Street SW intersection, has been analyzed as an alternative scenario and is discussed in the Traffic Operations chapter. Both the signalized unsignalized scenarios show to be viable. A stylized version of these improvements, created by LandDesign, can be seen in Figure 16. The design of these improvements will be refined and finalized through the Public Space process.

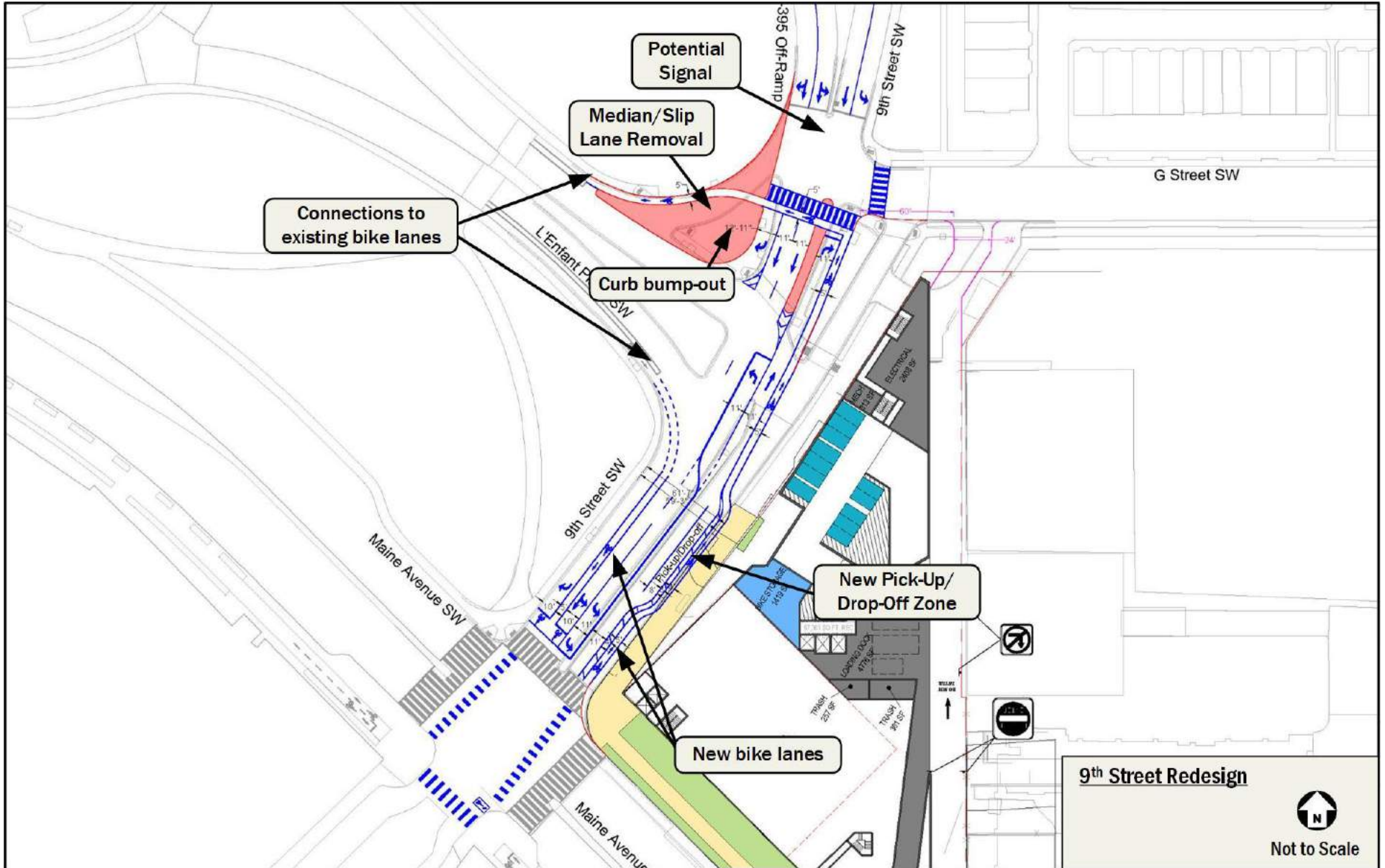


Figure 14: 9th Street Redesign

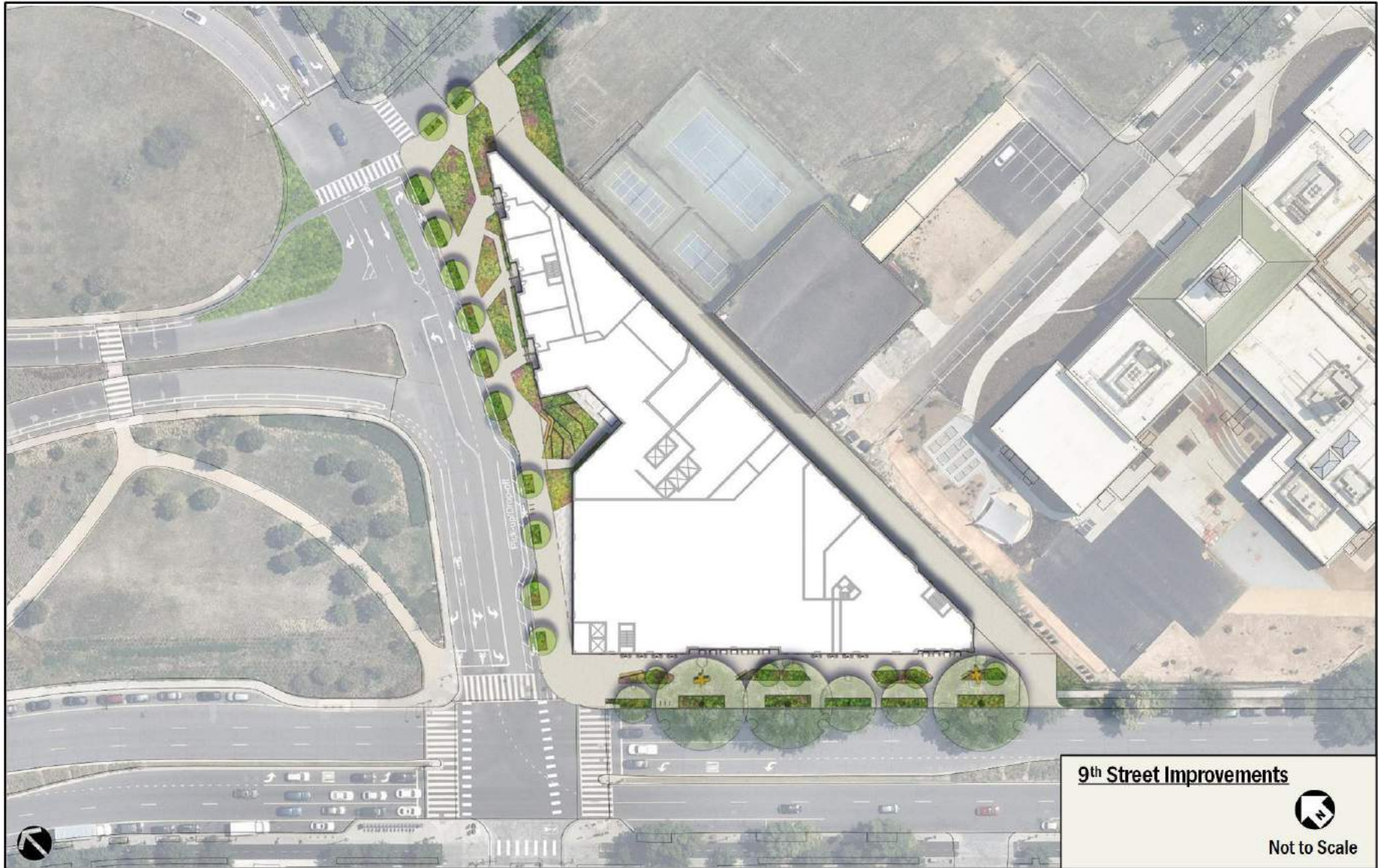


Figure 16: 9th Street Improvements LandDesign Renderings

Transportation Demand Management

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

The following is a list of enhanced TDM strategies the Applicant proposes for the 899 Maine Avenue development.

For the entire building, the Applicant proposes the following:

- The Applicant will identify Transportation Coordinators for the planning, construction, and operations phases of development. There will be a Transportation Coordinator for each retail 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;
 - The Applicant will have the Transportation Coordinator conduct an annual commuter survey of employees on-site, and report TDM activities and data collection efforts to goDCgo once per year;
 - The Applicant will ensure Transportation Coordinators develop, distribute, and market various transportation alternatives and options to the residents, 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;
 - The Applicant will ensure Transportation Coordinators subscribe to goDCgo's newsletters and receive TDM training from goDCgo to learn about the TDM conditions for this project and available options for implementing the TDM Plan;
 - The Applicant will provide residents or employees who wish to carpool with detailed carpooling information and will be referred to other carpooling matching services sponsored by the Metropolitan Washington Council of Governments (MWCOG) or other comparable service if MWCOG does not offer this in the future.
- The Applicant will provide a copy of the Loading Management Plan (LMP) to the Transportation Coordinator so they are aware of this commitment.
 - The Applicant will offer a SmarTrip card and one (1) complimentary Capital Bikeshare coupon good for a free ride to every new resident and employee;
 - Following the issuance of a Certificate of Occupancy for the Project, the Transportation Coordinator shall submit documentation 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 Applicant shall have 60 days from date of notice from the Zoning Administrator, DDOT, or goDCgo to prepare and submit such a letter;
 - The Applicant will not dedicate unused parking spaces to anyone aside from tenants of the building unless the other building(s) have no on-site parking (e.g. will not lease to other nearby office employees, single-family home residents, or sporting events); and
 - The Applicant will provide a bicycle repair station in each long-term bicycle parking storage room.

Specifically for the residential portion of the project, the Applicant proposes the following:

- The Applicant will 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.
- The Applicant will 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. Brochures can be ordered from DDOT's goDCgo program by emailing info@godcgo.com;

- The Applicant will post all TDM commitments on the development's website, publicize availability, and allow the public to see what commitments have been promised;
- The Applicant will install a Transportation Information Center Display (electronic screen) within the residential lobby containing information related to local transportation alternatives. At a minimum the display should include information about nearby Metrorail stations and schedules, Metrobus stops and schedules, car-sharing locations, and nearby Capital Bikeshare locations indicating the availability of bicycles;
- The Applicant will provide long-term and short-term bicycle parking spaces above the ZR16 minimum requirement;
- The Applicant will provide long-term bicycle storage rooms that will accommodate non-traditional sized bikes including cargo, tandem, and kids bikes with a minimum of 5% of spaces designed for longer cargo/tandem bikes (10 feet by 3 feet), a minimum of 10% of spaces will be designed with electrical outlets for the charging of electric bikes and scooters, and a minimum of 50% of spaces will be placed horizontally on the floor. There will be no fee to the residents or employees for usage of the bicycle storage room and strollers will be permitted to be stored in the bicycle room;
- The Applicant will install 16 electric vehicle (EV) charging stations for the residential portion of this project, exceeding DDOT baseline minimums;
- The Applicant will provide one (1) collapsible shopping cart (utility cart) for every 50 residential units, for a total of 10, to encourage residents to walk to the grocery store and run errands.

Specifically for the grocery/retail portion of the project, the Applicant proposes the following:

- The Applicant 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 Parking Permit (RPP) zones;

- The Applicant will have the Transportation Coordinator demonstrate to goDCgo that tenants with 20 or more employees are in compliance with the DC Commuter Benefits Law to 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 such as the Parking Cash-Out Law;
- The Applicant will provide long-term and short-term bicycle parking spaces above the ZR16 minimum requirement;
- The Applicant will provide at least two (2) lockers for use by employees.
- The Applicant will provide long-term bicycle storage rooms that will accommodate non-traditional sized bikes including cargo, tandem, and kids bikes with a minimum of 5% of spaces designed for longer cargo/tandem bikes (10 feet by 3 feet), a minimum of 10% of spaces will be designed with electrical outlets for the charging of electric bikes, and a minimum of 50% of spaces will be located horizontally on the floor. There will be no fee to the residents or employees for usage of the bicycle storage room;
- The Applicant will install a minimum of one (1) electric vehicle (EV) charging stations for the grocery/retail portion of this project; and
- The Applicant will discuss with the SW BID on a way finding plan along walking routes to the property from the L'Enfant Metrorail station.

Loading Management Plan

DC Zoning Regulations (Subtitle 11-C § 901.1) require the following loading facilities for the proposed development:

- Residential portion:
 - One (1) loading berth (12' X 30') with a minimum vertical clearance of 14 feet;
 - One (1) loading platform adjacent to the loading berth that is at least 100 square feet and eight (8) feet wide on one (1) horizontal level with a minimum vertical clearance of 10 feet; and
 - One (1) service/delivery space (10' X 20') with a minimum vertical clearance of 10 feet.
- Grocery/Retail portion:
 - Two (2) loading berths (12' X 30') with a minimum vertical clearance of 14 feet;
 - Two (2) loading platforms adjacent to the loading berth that is at least 100 square feet and eight (8) feet wide on one (1) horizontal level with a minimum vertical clearance of 10 feet; and
 - One (1) service/delivery space (10' X 20') with a minimum vertical clearance of 10 feet.

Based on the most recent development plans, the loading facilities are planned to be located along the service alley accessed by heavy vehicles from Maine Avenue SW. Zoning requires the project to provide three (3) loading berths and two (2) service spaces (two (2) loading berths and one (1) service space for the retail component and one (1) loading berth and one (1) service space for the residential component). Thus, the proposed development satisfies ZR16 requirements by providing two (2) 12' X 30' loading berths, one (1) tractor-trailer sized 67' loading berth, and one (1) 10' X 20' service/delivery space (shared by the residential and retail components). The site has been designed to accommodate head-in/head-out truck movements per DDOT standards. Heavy vehicles can only access the site alley via the Maine Avenue SW curb cut and can only exit the site alley via the G Street SW curb cut. A map of this routing can be seen in Figure 13.

In support of the loading facilities for the development, a Loading Management Plan (LMP) is proposed to mitigate any impact that the proposed loading configuration may have within the public space. The goals of this plan are to maintain a safe environment for all users of the site, the loading area, the adjacent streets, and any nearby intersections; minimize undesirable impacts to

pedestrians and to building tenants; reduce conflicts between truck traffic using the loading facilities and other users; and ensure efficient operation of the loading facilities through appropriate levels of management and scheduled operations. Consistent with recommended DDOT guidelines, the components of the loading management plan that will be implemented for the life of the project are as follows:

- A loading manager will be designated by building management who will be on duty during delivery hours. The loading manager will be responsible for coordinating with vendors and tenants to schedule deliveries and will work with the community and neighbors to resolve any conflicts should they arise.
- Lease provisions will require all tenants to use only the loading area for all deliveries and move-in and move-out activities.
- All tenants will be required to schedule deliveries that utilize the loading area (any loading operation conducted using a truck 20 feet in length or larger).
- The loading manager will schedule deliveries using the loading berth such that the loading area's capacity is not exceeded. In the event that an unscheduled delivery vehicle arrives while the loading berth is full, that driver will be directed to return at a later time when the berth will be available so as to not compromise safety or impede traffic along 9th Street SW or Maine Avenue SW functionality.
- The loading manager will schedule residential activities so as not to conflict with retail deliveries. All residential loading will need to be scheduled with the loading manager, and it is anticipated that residential loading will take place primarily during afternoons or evenings, when the retail loading activity is minimal.
- The loading manager will monitor inbound and outbound truck maneuvers and will ensure that trucks accessing the loading area do not block vehicular, bicycle, or pedestrian traffic within the service alley, except during those times when a truck is actively entering or exiting a loading berth.
- Service vehicle and truck traffic interfacing with Maine Avenue SW or G Street SW traffic will be monitored during peak periods, and management measures will be taken if necessary to reduce conflicts between truck and vehicular movements.
- The loading manager will monitor the timing of deliveries to see if any adjustments need to be made to ensure any

conflicts with the grocery/retail and residential loading activities are minimized.

- Trucks using the loading area will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (Engine Idling), the goDCgo Motorcoach Operators Guide, and the primary access routes shown on the DDOT Truck and Bus Route Map (godcgo.com/freight). The loading manager will also distribute flyer materials, such as the MWCOG Turn Your Engine Off brochure and others from DDOT and goDCgo, to drivers as needed to encourage compliance with idling laws. The loading manager will also post these materials and other relevant notices in a prominent location within the loading area.
- The loading manager will be responsible for disseminating suggested truck routing maps to the building's tenants and to drivers from delivery services that frequently utilize the development's loading area as well as notifying all drivers of any access or egress restrictions (e.g., no left turn onto G Street SW; truck access only through Maine Avenue SW).

Travel Demand Assumptions

This chapter outlines the transportation demand for the 899 Maine Avenue development. 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.

Mode Split Methodology

Mode split (also called mode share) is the percentage of travelers using a particular type (or mode) of transportation when traveling. The main source of mode split information for this report was based on Census data using Census Tracts and Traffic Analysis Zones (TAZs). Table 3 summarizes the mode split assumptions for this report. Sources for these mode split assumptions can be found in the Technical Attachments.

Table 3: Summary of Mode Split Data

| Land Use | Mode | | | |
|-------------|-------|---------|------|------|
| | Drive | Transit | Bike | Walk |
| Office | 50% | 40% | 5% | 5% |
| Residential | 35% | 45% | 10% | 10% |
| Grocery | 30% | 20% | 10% | 40% |

Trip Generation Methodology

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.

Trip generation for the existing land use was calculated based on ITE Land Use 710, *General Office*. Trip generation for the proposed land uses was calculated based on ITE Land Uses 221, *Multifamily Housing (High-Rise)* and 850, *Supermarket*. The calculated trips were then split into different modes using assumptions outlined in the Mode Split Methodology section of this report.

As shown in Table 4, the proposed development is expected to generate trips on the surrounding network across all modes. Compared to the existing land use, the AM peak hour trip generation is projected to include 22 fewer vehicle trips per hour, 15 more transit trips per hour, 16 more bicycle trips per hour, and 43 more pedestrian trips per hour. The PM peak hour trip generation is projected to include 13 more vehicle trips per hour, 70 more transit trips per hour, 39 more bicycle trips per hour, and 125 more pedestrian trips per hour. Trip generation calculations for the development are included in the Technical Attachments.

Table 4: ITE Multi-Modal Trip Generation

| Mode | AM Peak Hour | | | PM Peak Hour | | | Weekday Total |
|--|--------------|-----|-------|--------------|-----|-------|---------------|
| | In | Out | Total | In | Out | Total | |
| Existing Office (94,385 sf) | | | | | | | |
| Vehicle (veh/hr; veh) | 70 | 10 | 80 | 14 | 65 | 79 | 552 |
| Transit (ppl/hr; ppl) | 66 | 9 | 75 | 13 | 61 | 74 | 521 |
| Bike (ppl/hr; ppl) | 8 | 1 | 9 | 2 | 7 | 9 | 65 |
| Walk (ppl/hr; ppl) | 8 | 2 | 10 | 1 | 9 | 10 | 65 |
| Proposed Retail/Grocery (18,000 sf) | | | | | | | |
| Vehicle (veh/hr; veh) | 7 | 4 | 11 | 18 | 18 | 36 | 459 |
| Pass-By (veh/hr; veh) | 2 | 2 | 4 | 6 | 6 | 12 | 153 |
| Transit (ppl/hr; ppl) | 11 | 8 | 19 | 29 | 30 | 59 | 743 |
| Bike (ppl/hr; ppl) | 6 | 3 | 9 | 15 | 14 | 29 | 371 |
| Walk (ppl/hr; ppl) | 21 | 16 | 37 | 59 | 58 | 117 | 1,485 |
| Proposed Residential (496 dus) | | | | | | | |
| Vehicle (veh/hr; veh) | 16 | 31 | 47 | 31 | 25 | 56 | 785 |
| Transit (ppl/hr; ppl) | 24 | 47 | 71 | 47 | 38 | 85 | 1,191 |
| Bike (ppl/hr; ppl) | 5 | 11 | 16 | 11 | 8 | 19 | 265 |
| Walk (ppl/hr; ppl) | 6 | 10 | 16 | 10 | 8 | 18 | 264 |
| Proposed Total | | | | | | | |
| Vehicle (veh/hr; veh) | 23 | 35 | 58 | 49 | 43 | 92 | 1,244 |
| Pass-By (veh/hr; veh) | 2 | 2 | 4 | 6 | 6 | 12 | 153 |
| Transit (ppl/hr; ppl) | 35 | 55 | 90 | 76 | 68 | 144 | 1,934 |
| Bike (ppl/hr; ppl) | 11 | 14 | 25 | 26 | 22 | 48 | 636 |
| Walk (ppl/hr; ppl) | 27 | 26 | 53 | 69 | 66 | 135 | 1,749 |
| Net Trips | | | | | | | |
| Vehicle (veh/hr; veh) | -47 | 25 | -22 | 35 | -22 | 13 | 692 |
| Pass-By (veh/hr; veh) | 2 | 2 | 4 | 6 | 6 | 12 | 153 |
| Transit (ppl/hr; ppl) | -31 | 46 | 15 | 63 | 7 | 70 | 1,413 |
| Bike (ppl/hr; ppl) | 3 | 13 | 16 | 24 | 15 | 39 | 571 |
| Walk (ppl/hr; ppl) | 19 | 24 | 43 | 68 | 57 | 125 | 1,684 |

Traffic Operations

This chapter summarizes the analysis of the existing and future roadway capacity surrounding the site. Included is an analysis of potential vehicular impacts of the 899 Maine Avenue 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 to by DDOT staff.

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

Based on DDOT standards, the proposed development 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 with 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 five (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 in that exceeds storage in the background scenario.

This chapter concludes:

- Under Existing Conditions, two (2) study intersections operate at unacceptable levels of service.

- The addition of background developments and growth under Background Conditions results in three (3) study intersections operating at unacceptable levels of service.
- The addition of site-generated trips does not significantly affect the delays or queuing at most intersections. The development will have minimal influence on traffic capacity in the study area.
- Under Total Future Conditions, one (1) intersection meets DDOT's threshold for mitigation measures but is mitigated by a one second signal timing adjustment.
- The addition of the 9th Street Improvements do not significantly affect the delays or queuing at most intersections. Thus, the safety and multi-modal benefits they provide come at relatively no cost to traffic capacity.
- The traffic signal concept at 9th & G Street SW is viable from a traffic capacity standpoint, and DDOT should strongly consider advancing the idea towards implementation.
- The project, nor the proposed improvements and signalization, will not have a detrimental impact to the surrounding vehicular network, with the implementation of all site design elements and mitigation measures.

Study Area, Scope, and Methodology

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

The general methodology of the analysis follows national and DDOT guidelines on the preparation of transportation impact evaluations of site development.

Capacity Analysis Scenarios

The vehicular 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 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:

- 2022 Existing Conditions

- 2026 Future Conditions without the development (2026 Background Conditions)
- 2026 Future Conditions with the development (2026 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:

1. 9th Street SW & L'Enfant Plaza SW
2. 9th Street SW & G Street SW
3. 7th Street SW & G Street SW
4. 7th Street SW & I Street SW
5. 7th Street SW & Maine Avenue SW
6. 9th Street SW & Maine Avenue SW
7. 9th Street SW & Existing Site Driveway
8. G Street SW & Existing Site Driveway
9. Maine Avenue SW & Future Site Driveway

Figure 17 shows a map of the study area intersections.

Geometric and Operations Assumptions

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

Existing Geometry and Operations Assumptions

The geometry and operations assumed in the existing conditions scenario are those present when the main data collection occurred. Gorove Slade made observations and confirmed the existing lane configurations and traffic controls at the intersections within the study area. Existing signal timings and offsets were obtained from DDOT and are included in the Technical Attachments.

The lane configurations and traffic controls for the Existing Conditions are shown in Figure 18.

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, no improvements were assumed.

The lane configurations and traffic controls for the 2026 Background Conditions are the same as Existing Conditions and are shown in Figure 18.

Future with Development (Total Future) Geometry and Operations Assumptions

The configurations and traffic controls for the 2026 Future with Development Conditions are the same as Background Conditions and Existing Conditions and are shown in Figure 19.

Future with Development (Total Future) with 9th Street Improvements Geometry and Operations Assumptions

The configurations and traffic controls for the 2026 Future with Development Conditions with the 9th Street Improvements assumes the reconfiguration of the following intersections:

- 9th Street SW & G Street SW
- 9th Street SW & L'Enfant Plaza SW
- 9th Street SW & Maine Avenue SW

As mentioned in the Project Design chapter, these reconfigurations will add new bike lanes, a Pick-Up/Drop-Off Zone on 9th Street SW, and new crosswalks.

This will, more specifically, narrow the median between the right-turn slip lane and the southbound thru lanes for the 9th Street SW & G Street SW intersection. These improvements will also replace the southbound shared thru-right curb lane with an exclusive right-turn lane at the 9th Street SW & L'Enfant Plaza SW intersection.

The installation of a traffic signal at the 9th Street SW & G Street SW intersection was also evaluated under an alternative scenario.

All of these changes were reflected in the Synchro models, and the Total Future configurations and traffic controls (with the 9th Street Improvements and optional signalization) can be seen in Figure 20.

Traffic Volume Assumptions

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

Existing Traffic Volumes

The existing traffic volumes are comprised of turning movement count data which was collected on Tuesday, April 19 between the hours of 6:30 and 9:30 AM and 4:00 and 7:00 PM. For all intersections, the intersection morning and afternoon peak hours were used. Schools and governments were in session when the turning movement count data was collected.

Existing 2022 volumes are shown in Figure 21 with full turning movement count details available in the Technical Attachments.

Background Traffic Volumes (without the Project)

The traffic projections for the 2026 Background Conditions consist of the existing volumes with three (3) additions:

- Volume reroutes as a result of transportation network roadway projects,
- Inherent growth on the roadway (representing regional traffic growth), and
- The impacts of background developments, if any.

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

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

Based on these criteria, three (3) developments were considered and determined to meet the above criteria. These developments include the following:

1. The Wharf Phase 2
2. 425 & 375 M Street SW
3. The Bard

Existing studies with mode splits, trip generation, and trip distributions were used when available for all developments. Trip generation, mode splits, and trip distributions were calculated independently using ITE's 11th Edition Trip Generation Manual for background developments without a study available. Detailed mode split and trip generation information is included in the Technical Attachments.

Additionally, the volumes generated by the existing office land use were added to background developments. Although the office is leased, site trip generation was assumed to reflect atypical trip generation and travel patterns due to the ongoing COVID-19 pandemic.

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 (MWCOC) currently adopted regional transportation model, comparing the difference between the year 2022 and 2026 model scenarios. The growth rates observed in this model served as a basis for analysis assumptions. The applied growth rates are shown in Table 6 and growth rate calculations are provided in the Technical Attachments.

The background growth volumes to 2026 are shown in Figure 22 and background development volumes are shown in Figure 23. The addition of existing office volumes is shown in Figure 24.

The traffic volumes generated by the inherent growth along the network were added to the existing traffic volumes to establish the 2026 Background traffic volumes. The traffic volumes for the 2026 Background Conditions are shown in Figure 25.

Total Future Traffic Volumes (with the Project)

The 2026 Total Future traffic volumes consist of the 2026 Background volumes with the addition of the traffic volumes generated by the residential and retail development and the removal of existing office trips. Thus, the 2026 Total Future traffic volumes include traffic generated by: the existing volumes, background developments, the inherent growth on the study area roadways, the removal of previously existing office trips, and the project. Figure 28 shows the removal of existing office trips.

Trip distribution for the site-generated trips was determined based on: (1) CTPP TAZ data, (2) existing and future travel patterns in the study area, and (3) the location of the parking access.

Based on this review and the site access locations, the project-generated trips were distributed through the study area intersections.

- The proposed residential trip distribution was influenced by the CTPP TAZ flow data for residents commuting from the site's TAZ and adjusted based on traffic volumes and patterns. The destination of inbound trips was either the Maine Avenue SW or G Street SW curb cuts, while the origin of outbound trips was the G Street SW curb cut.
- The proposed retail trip distribution was influenced by CTPP TAZ flow data for employees commuting to the site's TAZ and adjusted based on traffic volumes and patterns. Origins/destinations were the same as the residential trip distribution. The existing office trips were assigned to the existing site driveways.

A summary of trip distribution assumptions is provided in Figure 26 for inbound trips and Figure 27 for outbound trips. Figure 29 shows the proposed residential trips, Figure 30 shows the proposed retail trips, and Figure 31 shows the retail pass-by trips. Figure 32 shows the combined residential and retail trips assigned to the network. The net project-generated traffic volumes are shown in Figure 33, and the 2026 Total Future traffic volumes are shown in Figure 34.

Peak Hour Factors

The TRB *Highway Capacity Manual* (HCM) and the AASHTO *Policy on Geometric Design of Highways and Intersections* recommend evaluating traffic conditions during the worst 15 minutes of either a design hour or a typical weekday rush hour. Peak Hour Factor (PHF) is used to convert the hourly volume into the volume rate representing the busiest 15 minutes of the hour. The existing guidelines provide typical values of PHF and advise using the PHF calculated from vehicle counts at analyzed or similar locations. The HCM recommends a PHF of 0.88 for rural areas and 0.92 for urban areas and presumes that capacity constraints in congested areas reduce the short-term traffic fluctuation. The HCM postulates 0.95 as the typical PHF for congested roadways.

For the Existing Conditions analysis, the PHF was calculated from the turning movement data that was collected in the field, using a minimum PHF of 0.85 for each intersection. Per DDOT guidelines, the intersection PHF remained the same through all study scenarios.

Vehicular Analysis Results

Intersection Capacity Analysis

Intersection capacity analyses were performed for the five (5) scenarios outlined previously at the intersections contained within the study area during the AM and PM peak hours. Synchro Version 10 was used to analyze the study intersections based on the 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; however, 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 and reports 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 Existing, 2026 Background, and 2026 Total Future/Total Future (mitigated) scenarios. Table 8 shows the results of the capacity analyses for the 2026 Total Future/Total Future (9th Street Improvements)/Total Future (signalization of the 9th & G Street SW intersection). Table 9 shows a comparison of the volume to capacity (v/c) ratios for each scenario while Table 10 shows a comparison of the volume to capacity (v/c) ratios for the 9th Street improvements and signalization of the intersection of 9th & G Street SW.

Two (2) of the study intersections exhibit unacceptable levels of service under Existing Conditions:

- 7th Street SW & I Street SW
 - Eastbound (PM)

- 9th Street SW & Maine Avenue SW
 - Overall (PM)
 - Northbound (AM/PM)

The introduction of trips from background developments results in three (3) study intersections that exhibit unacceptable levels of service:

- 7th Street SW & I Street SW
 - Eastbound (PM)
- 7th Street SW & Maine Avenue SW
 - Southbound (AM)
 - Northbound (PM)
- 9th Street SW & Maine Avenue SW
 - Overall (PM)
 - Northbound (AM/PM)
 - Southbound (AM/PM)

The introduction of site-generated trips does not result in any additional study intersections or lane groups exhibiting unacceptable levels of service.

The southbound approach at the 7th & Maine Avenue SW intersection experiences an increase in delay of over 5 percent meeting DDOT's criteria for mitigation. Mitigation measures at this intersection are discussed below.

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 free-flowing left turns and stop-controlled movements) based on the HCM calculations.

Table 11 shows the queuing results for the study area intersections. One (1) study intersection exhibits one or more lane group that exceeds the given storage length under Existing Conditions:

- 9th Street SW & Maine Avenue SW

- Northbound LTR (PM)

The introduction of trips from background developments results in four (4) study intersections that exhibit one or more lane group that exceeds the given storage length:

- 7th Street SW & G Street SW
 - Eastbound Left (PM)
- 7th Street SW & I Street SW
 - Northbound Thru (PM)
 - Northbound Thru Right (PM)
- 7th Street SW & Maine Avenue SW
 - Northbound LTR (PM)
 - Southbound Left (AM/PM)
- 9th Street SW & Maine Avenue SW
 - Northbound LTR (PM)
 - Southbound Left (PM)
 - Southbound Thru Left (PM)

The introduction of site-generated trips does not result in any additional study intersections or lane groups exhibiting a queue which exceeds the storage length. This indicates that minimal changes in queuing is anticipated across the network.

9th Street Improvements Scenarios

The introduction of the 9th Street Improvements or the signalization of the 9th & G Street SW intersection do not result in detrimental impact to delays or queues at the study intersection. A comparison between Total Future conditions and these two (2) scenarios (the improvements and the improvements with the signal) can be seen in Table 8. Similarly, the 9th Street Improvements and signalization of the intersection of 9th Street SW & G Street SW do not result in any additional study intersections or lane groups exhibiting a queue which exceeds the storage length. This shows that the improvements come at relatively no cost in traffic capacity, and that the signalization is viable from a traffic capacity standpoint, and DDOT should strongly consider advancing the idea towards implementation.

A comparison between Total Future conditions and these scenarios (the improvements and the improvements with the signal) can be seen in Table 12.

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 Total 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; or
- There is an increase in the 95th percentile queues by more than 150 feet at an intersection or along an approach in the Future Conditions with the project where one does not exist in the Background Conditions.

Based on these criteria, one (1) of the intersections was impacted:

- 7th & Maine Avenue SW

At this intersection, the mitigation threshold was met for LOS in the AM peak hour for the southbound movement for Maine Avenue SW.

The project impact at this intersection is proposed to be mitigated via adjusted signal timings: giving one (1) second more to the southbound movement. In doing so, delay was reduced by seven (7) seconds, 0.4 seconds below the Background Conditions, mitigating the project's impact at the intersection.

Table 5: Summary of Background Trip Generation

| # | Background Project | Trip Generation Source | AM Peak Hour | | | PM Peak Hour | | |
|---|-----------------------|------------------------------|--------------|-----|-------|--------------|-----|-------|
| | | | In | Out | Total | In | Out | Total |
| 1 | The Wharf Phase 2 | GS 2017 CTR | 379 | 108 | 487 | 176 | 396 | 570 |
| 2 | 425 & 375 M Street SW | GS 2017 CTR | 60 | 119 | 179 | 136 | 104 | 240 |
| 3 | The Bard | ITE 11 th Edition | 4 | 12 | 16 | 11 | 8 | 19 |

Table 6: Applied Annual and Total Growth Rates

| Roadway | Dir. | Proposed Annual Growth Rate | | Proposed Total Growth Between 2022 and 2026 | |
|---|------|-----------------------------|--------------|---|--------------|
| | | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour |
| 9th Street between Maine Avenue and G St. SW | SB | 1.00% | 1.00% | 4.06% | 4.06% |
| 7th Street SW between G Street SW and E Street SW | NB | 0.23% | 2.00% | 0.92% | 8.24% |
| | SB | 2.00% | 0.50% | 8.24% | 2.02% |
| I Street SW between 7th Street SW and 6th Street SW | EB | 2.00% | 0.50% | 8.24% | 2.02% |
| | WB | 0.10% | 2.00% | 0.40% | 8.24% |
| All Others | NB | 0.10% | 0.10% | 0.40% | 0.40% |
| Maine Avenue (aggregate) | EB | 2.00% | 0.50% | 8.24% | 2.02% |
| | WB | 0.10% | 0.10% | 0.40% | 0.40% |

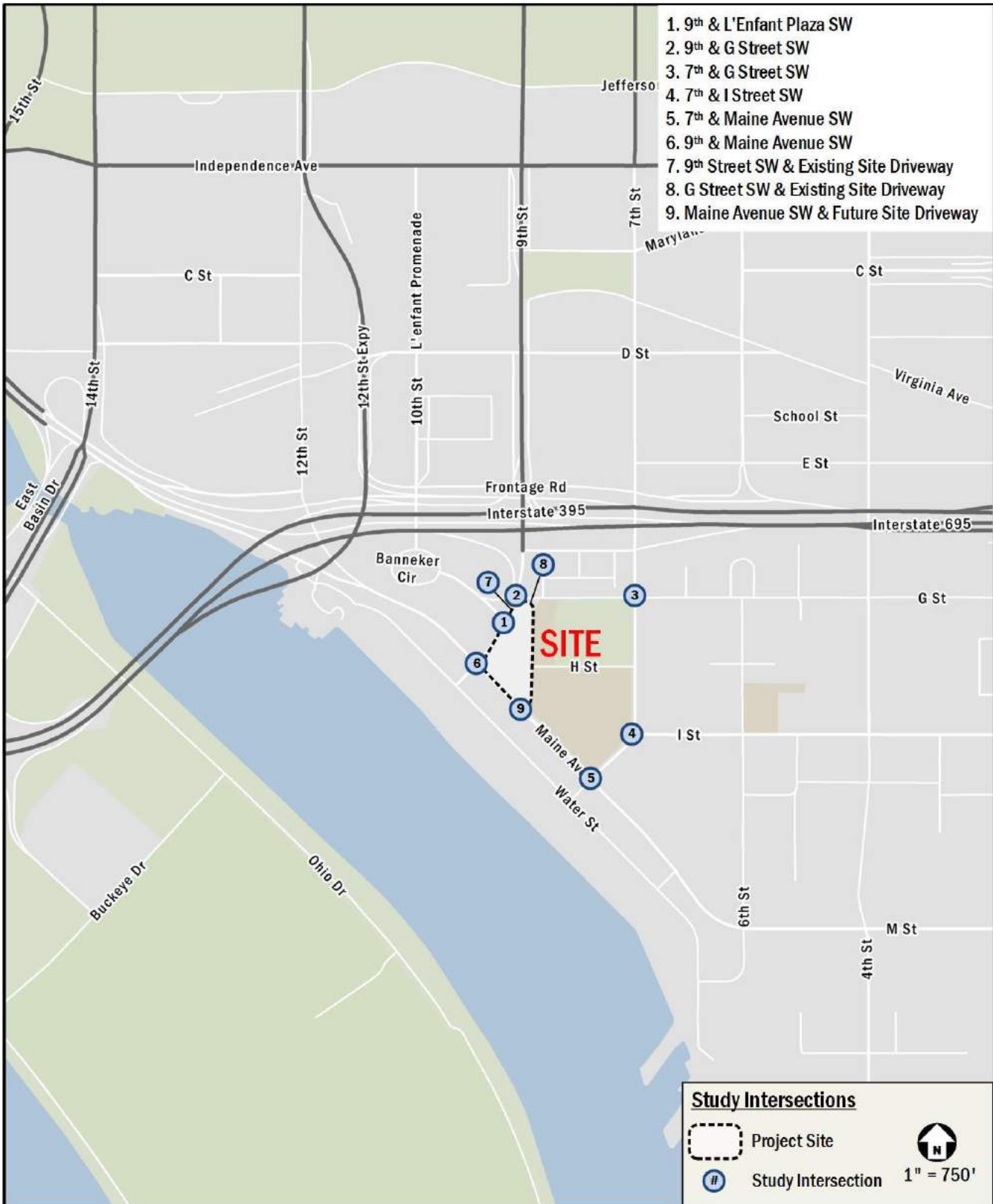


Figure 17: Study Intersections

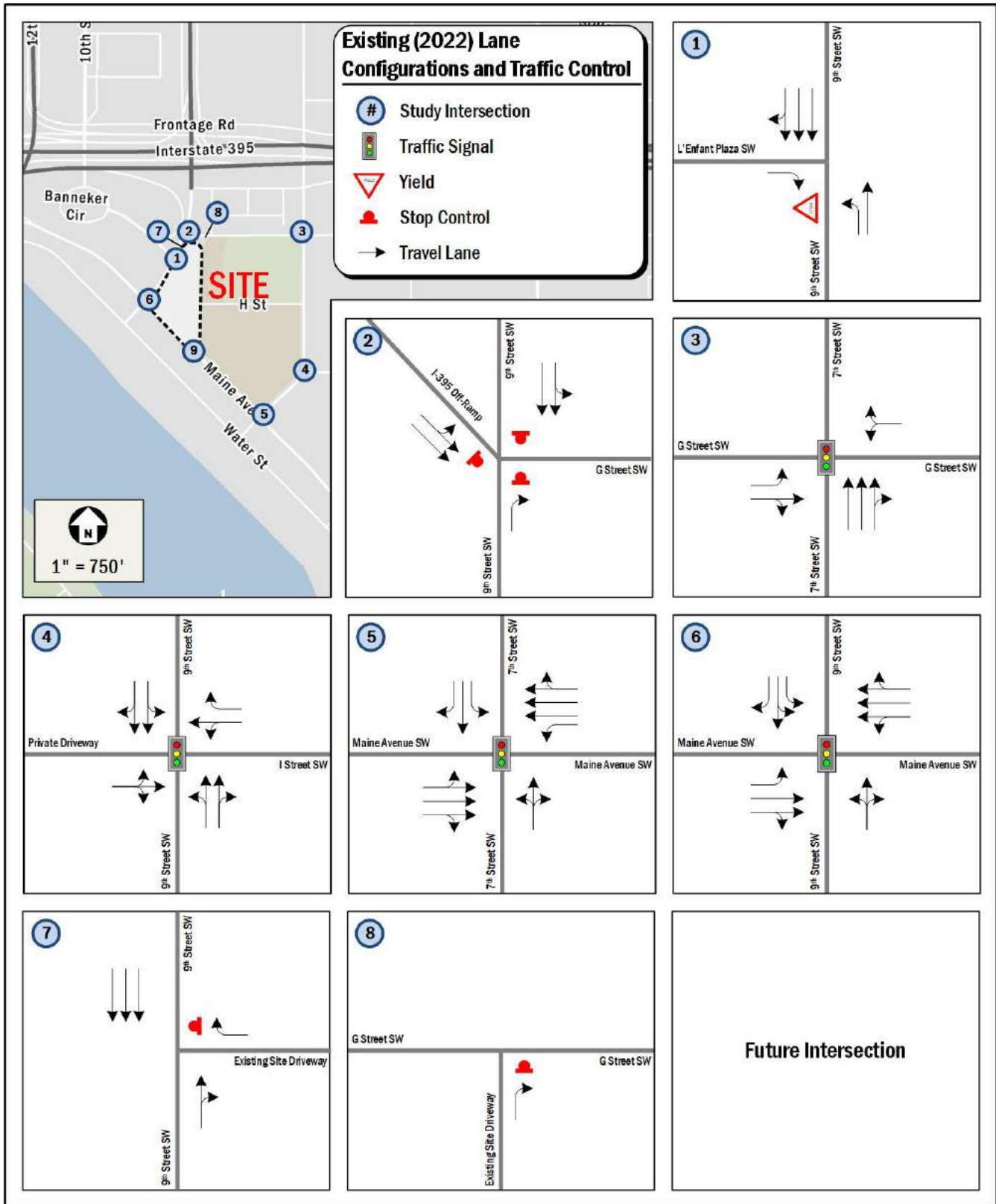


Figure 18: Existing Lane Configuration and Traffic Control

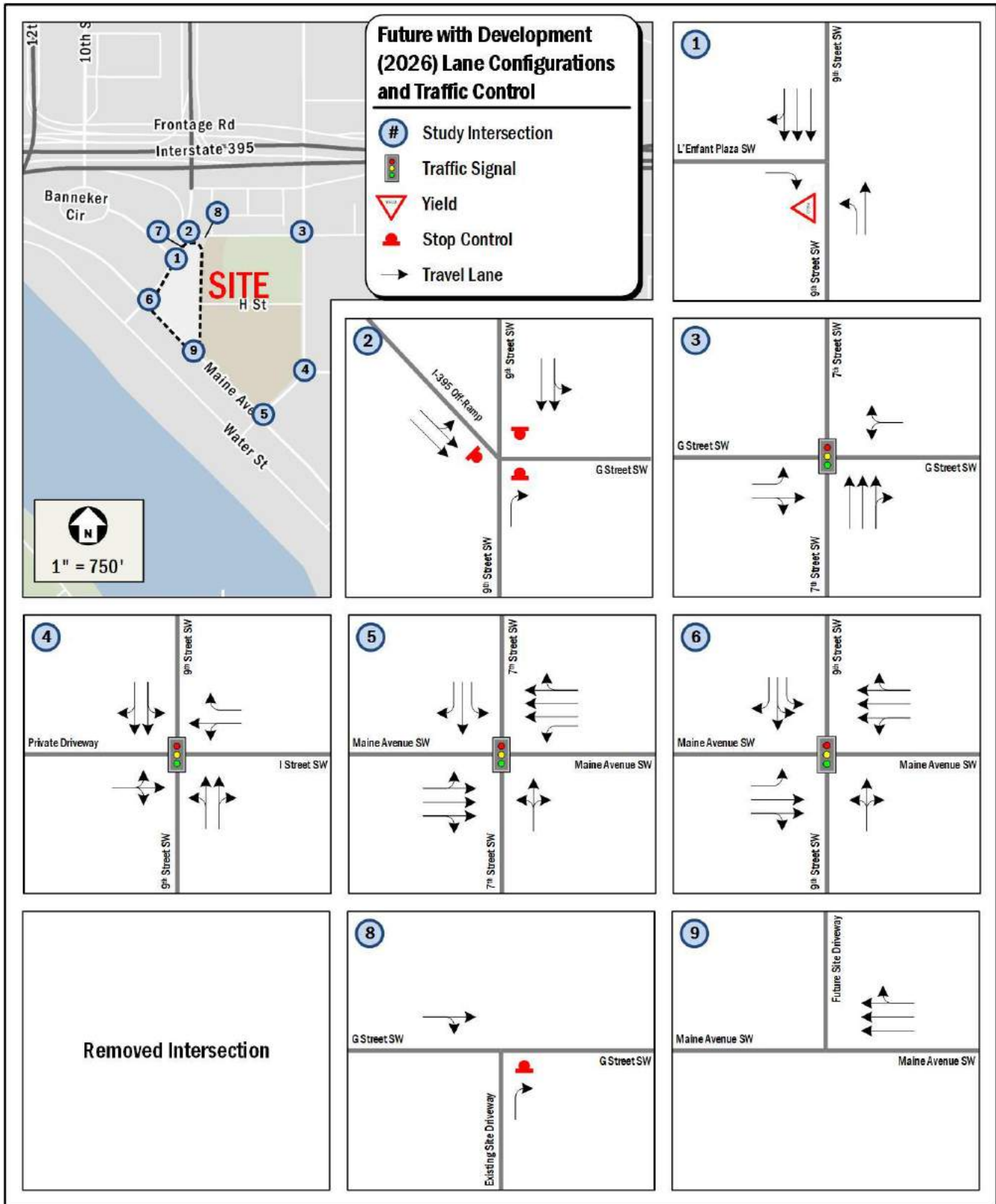


Figure 19: Future with Development Lane Configuration and Traffic Control

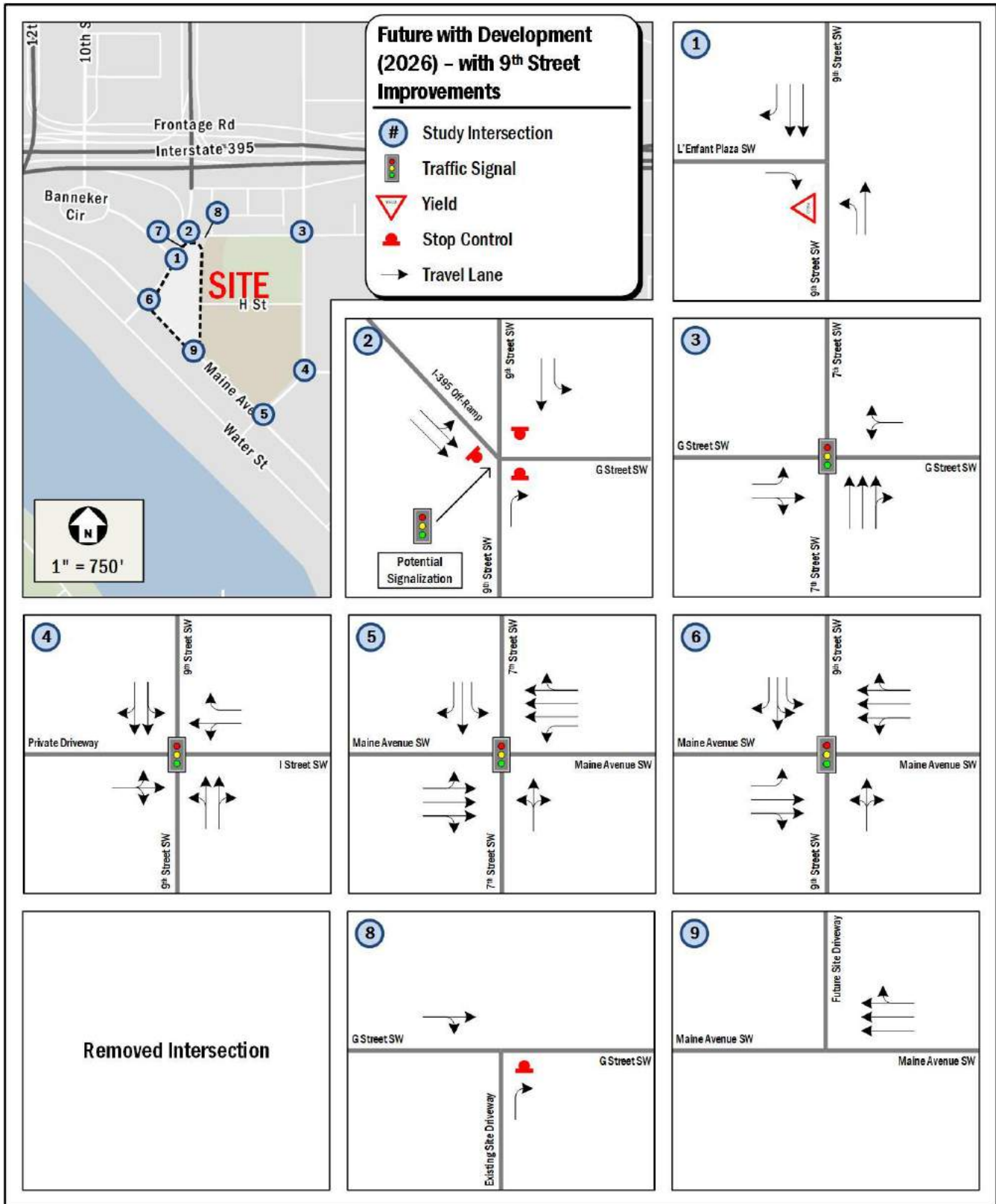


Figure 20: Future with Development - with 9th Street Improvements Lane Configuration and Traffic Control

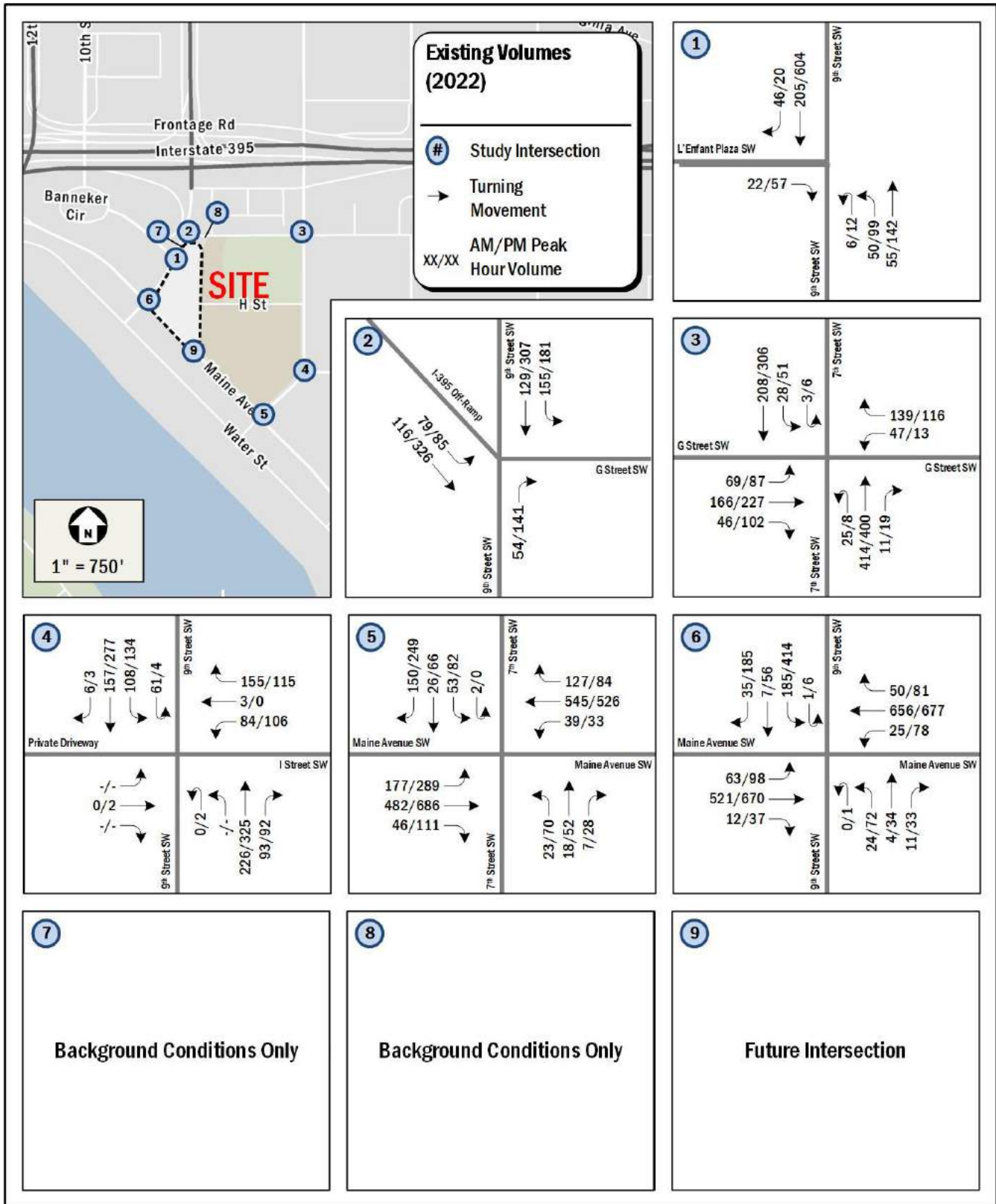


Figure 21: Existing Volumes (2022)

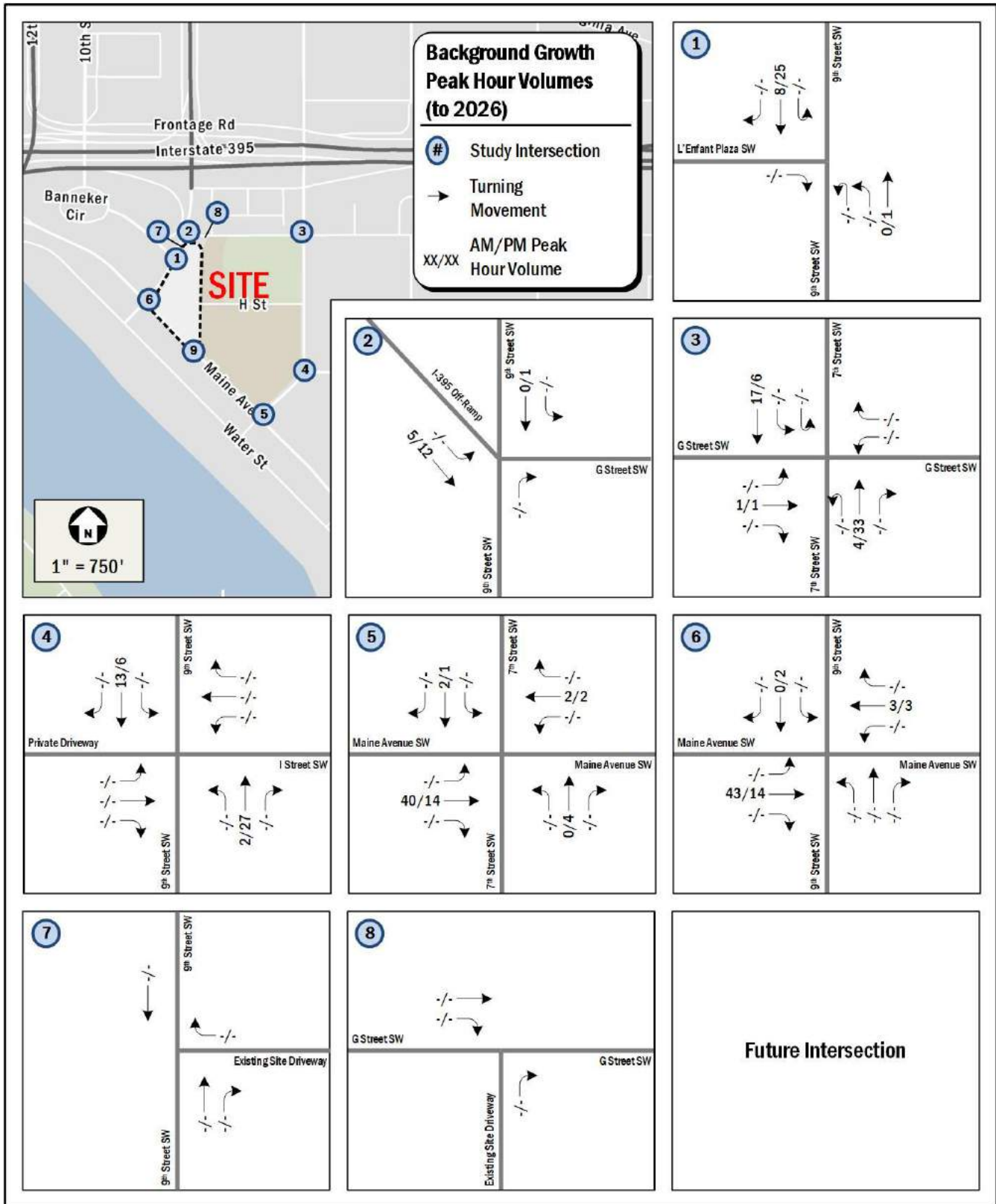


Figure 22: Background Growth Peak Hour Volumes (to 2026)

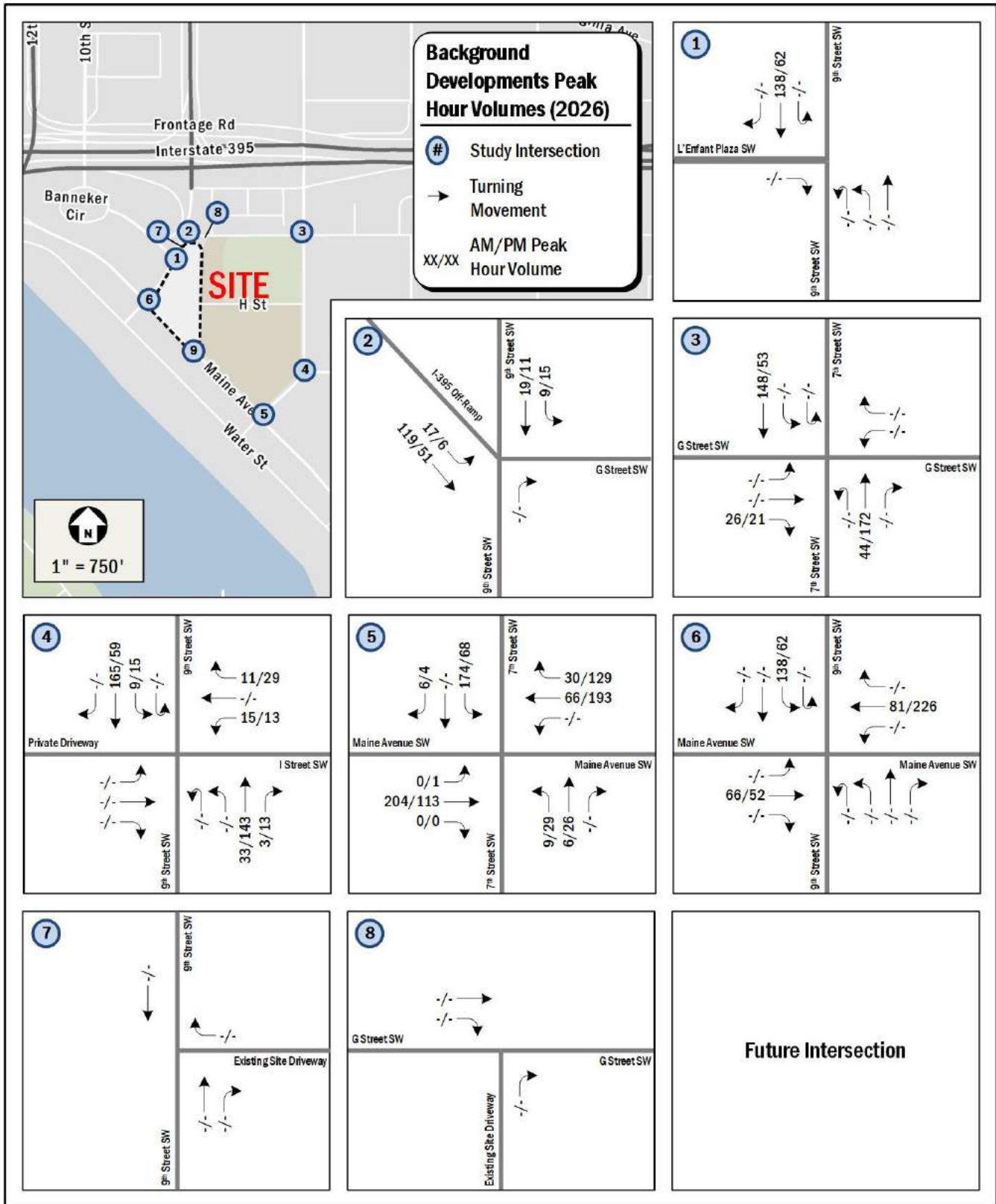


Figure 23: Background Developments Peak Hour Volumes (2026)

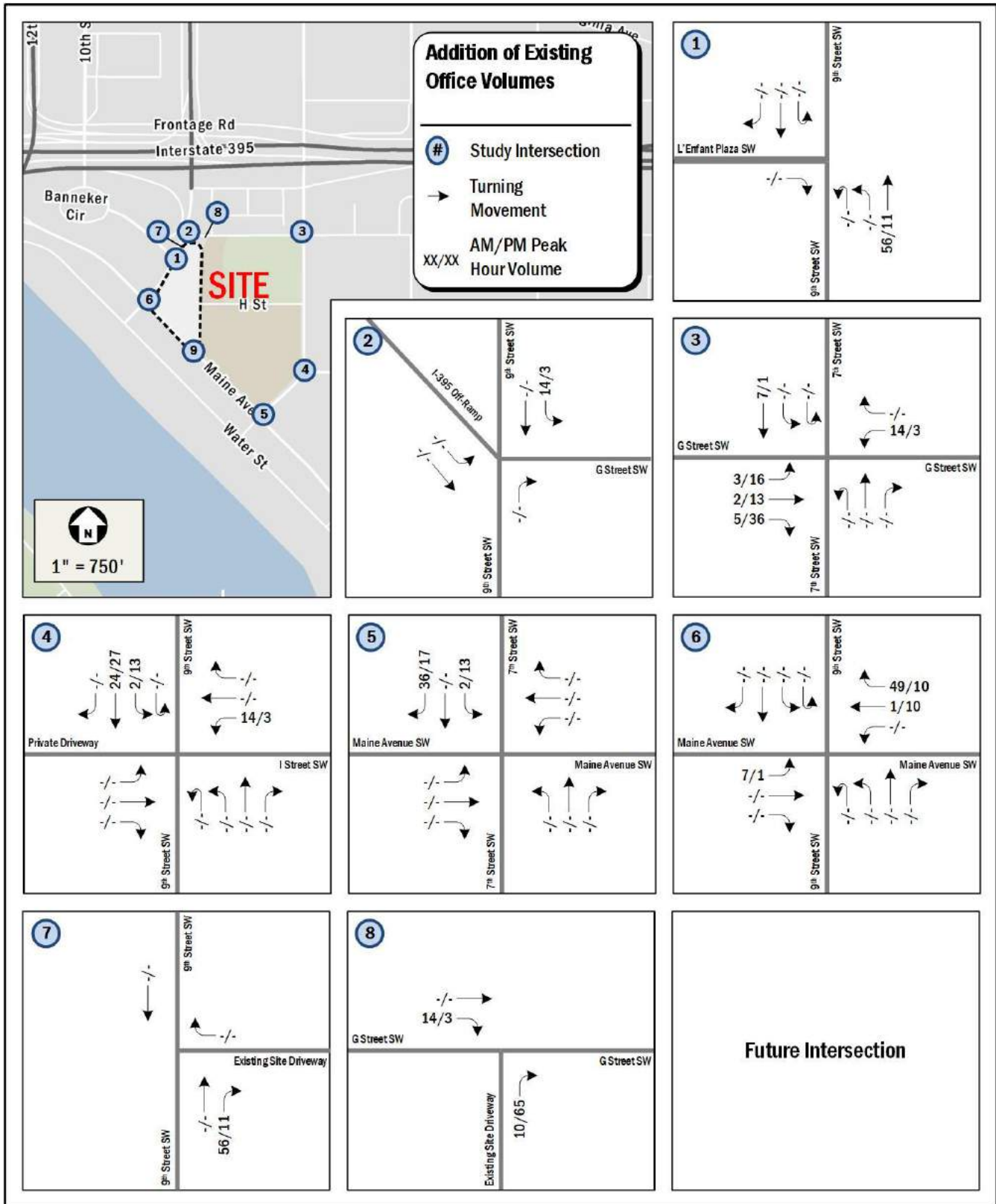


Figure 24: Addition of Existing Volumes

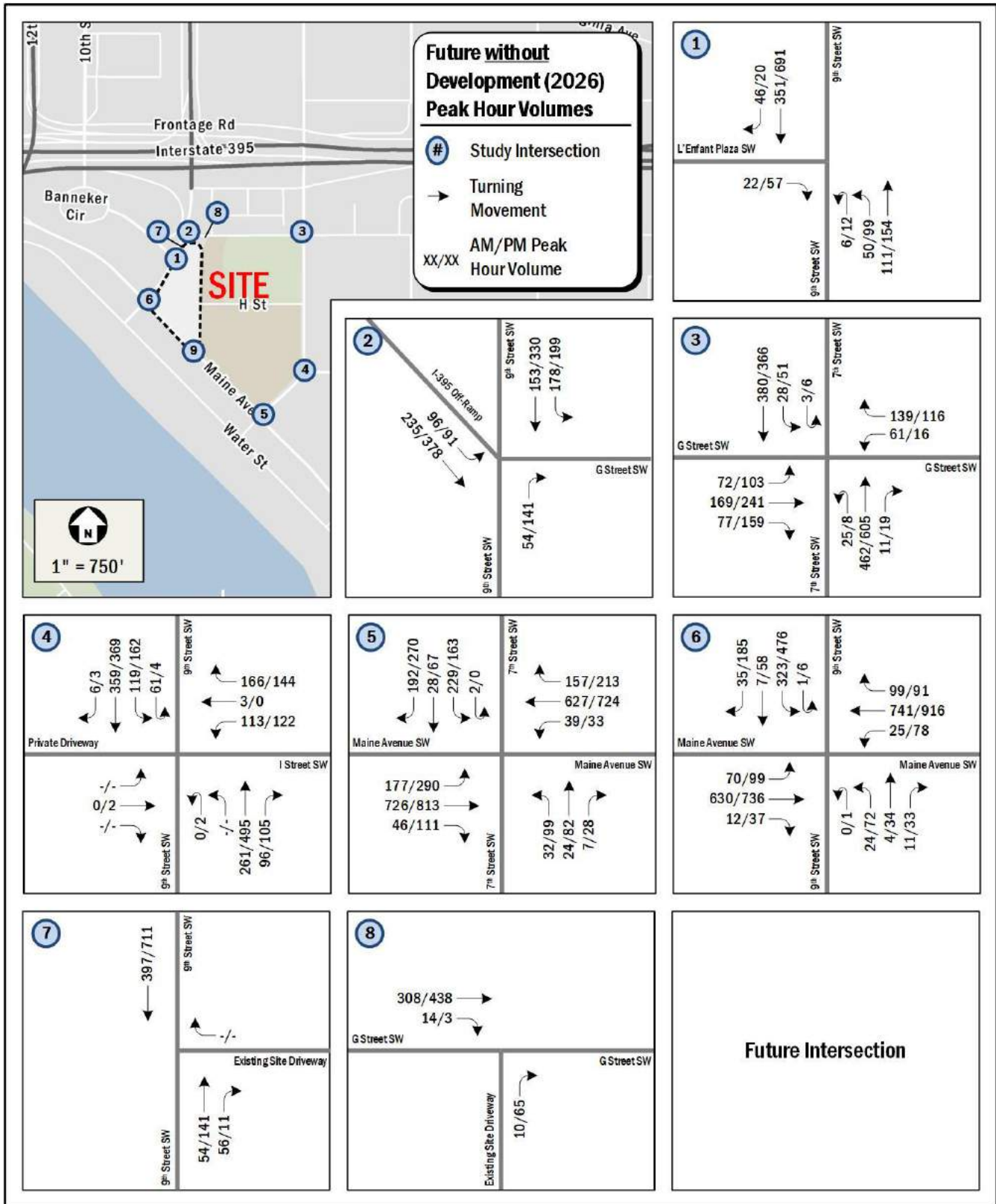


Figure 25: Future without Development (2026) Peak Hour Volumes

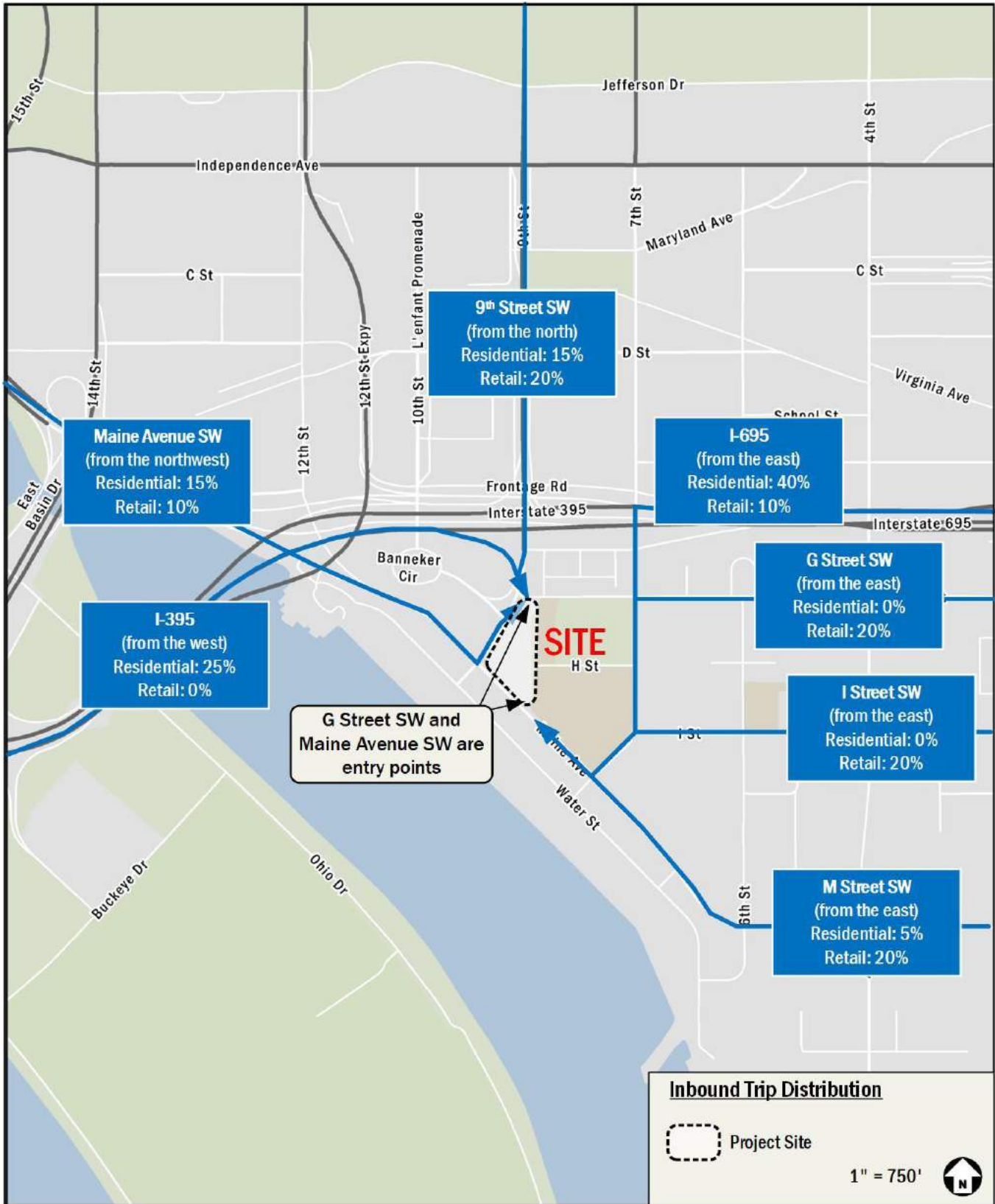


Figure 26: Inbound Trip Distribution

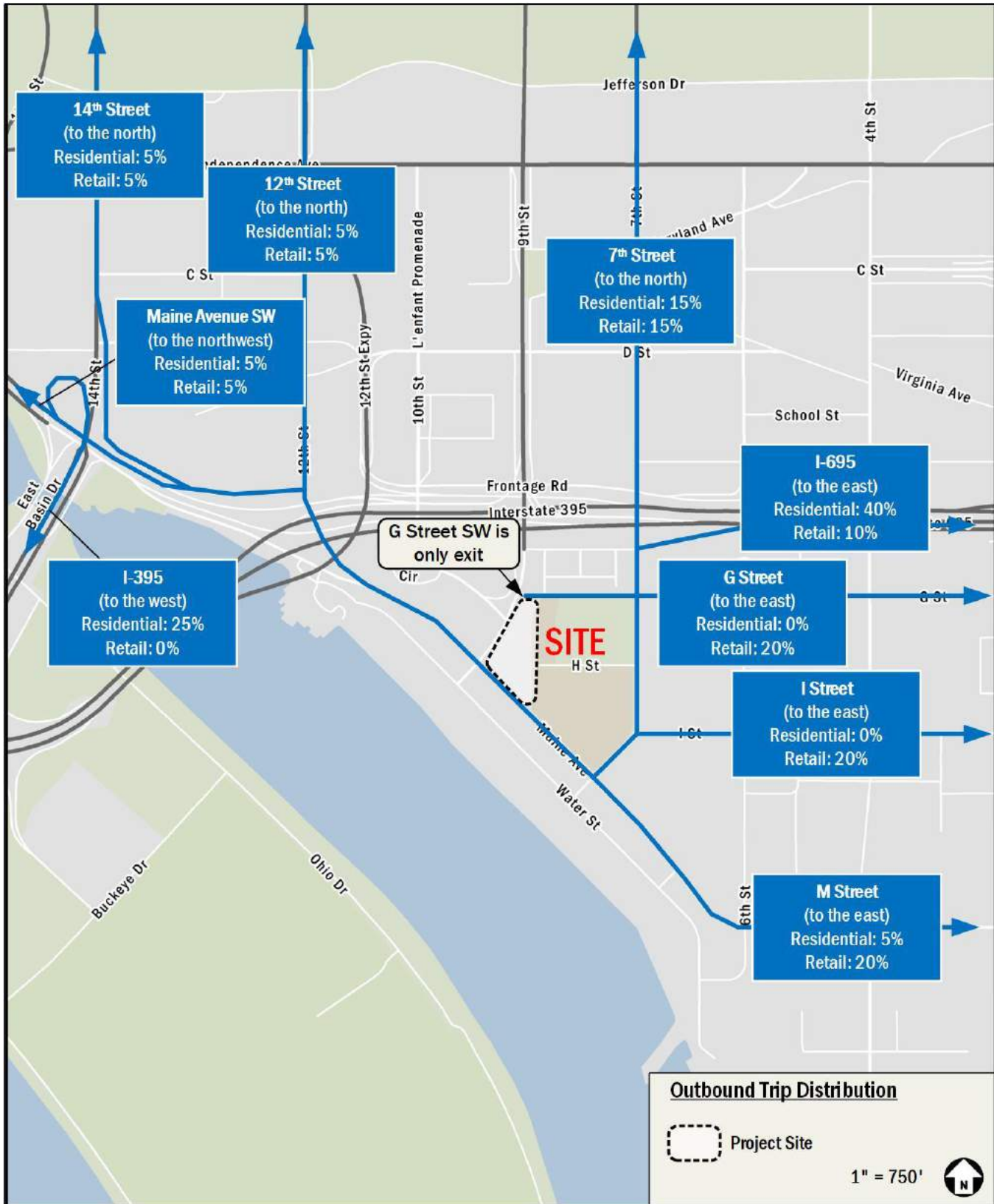


Figure 27: Outbound Trip Distribution

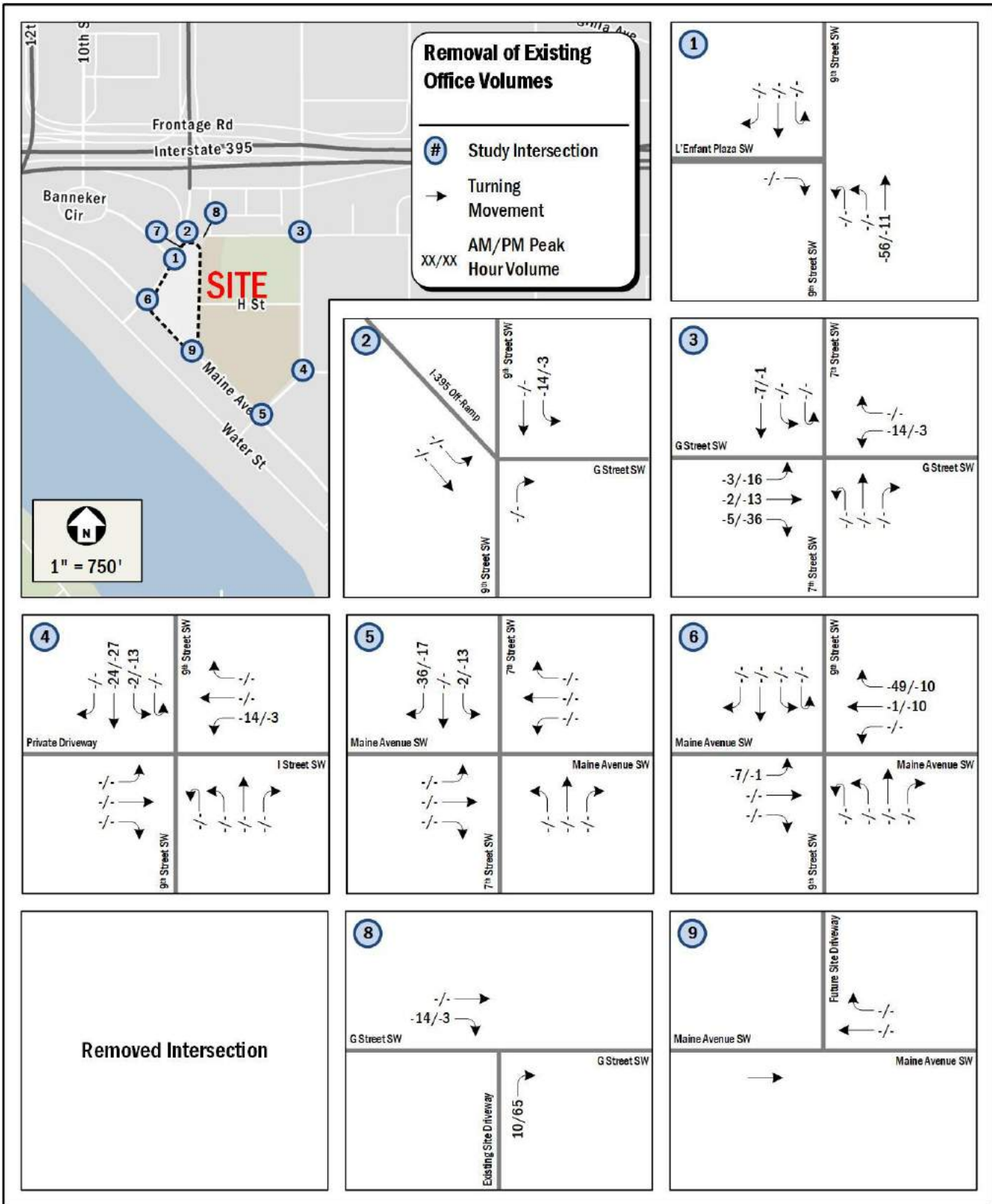


Figure 28: Removal of Existing Office Volumes

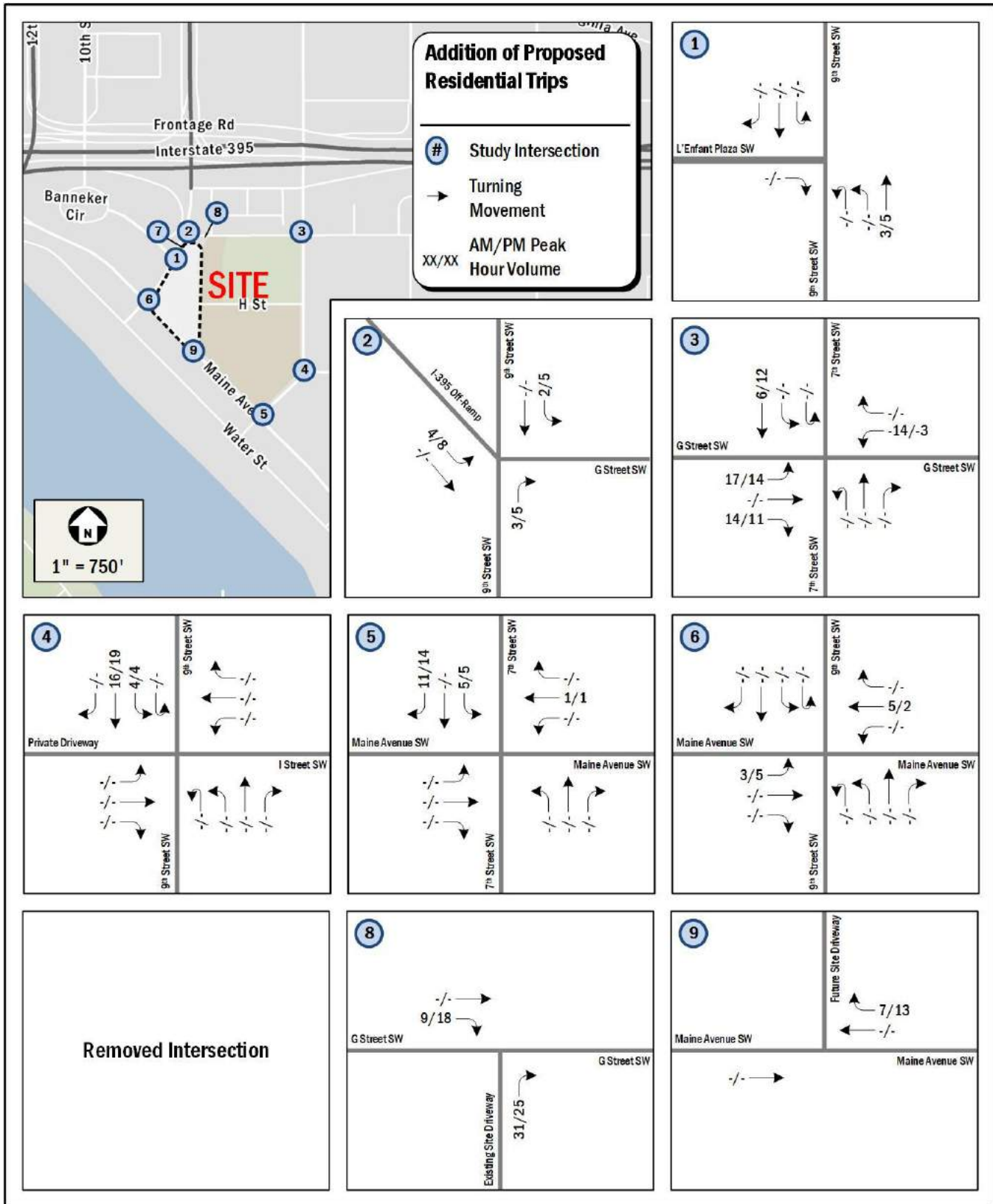


Figure 29: Addition of Proposed Residential Trips

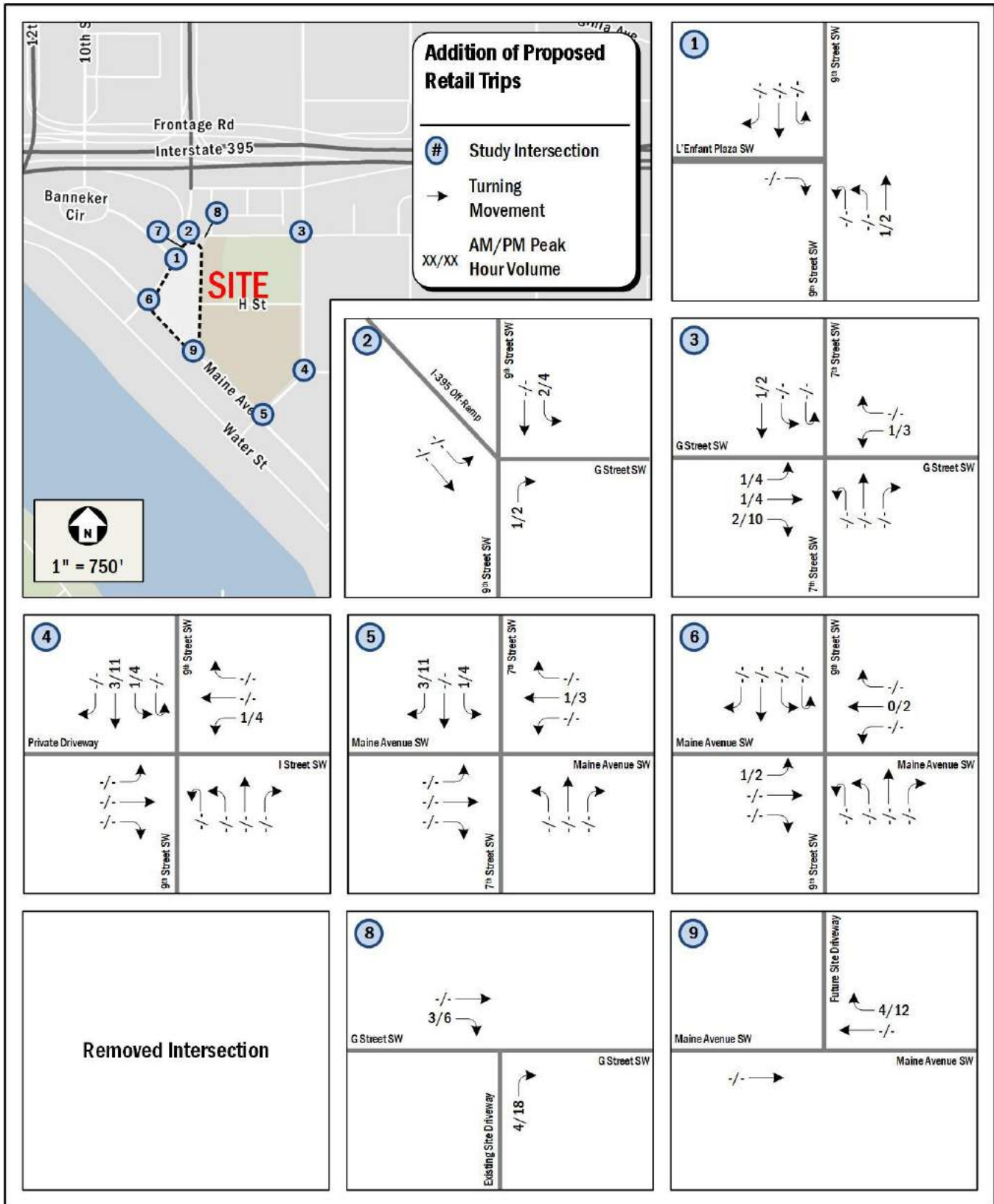


Figure 30: Addition of Proposed Retail Trips

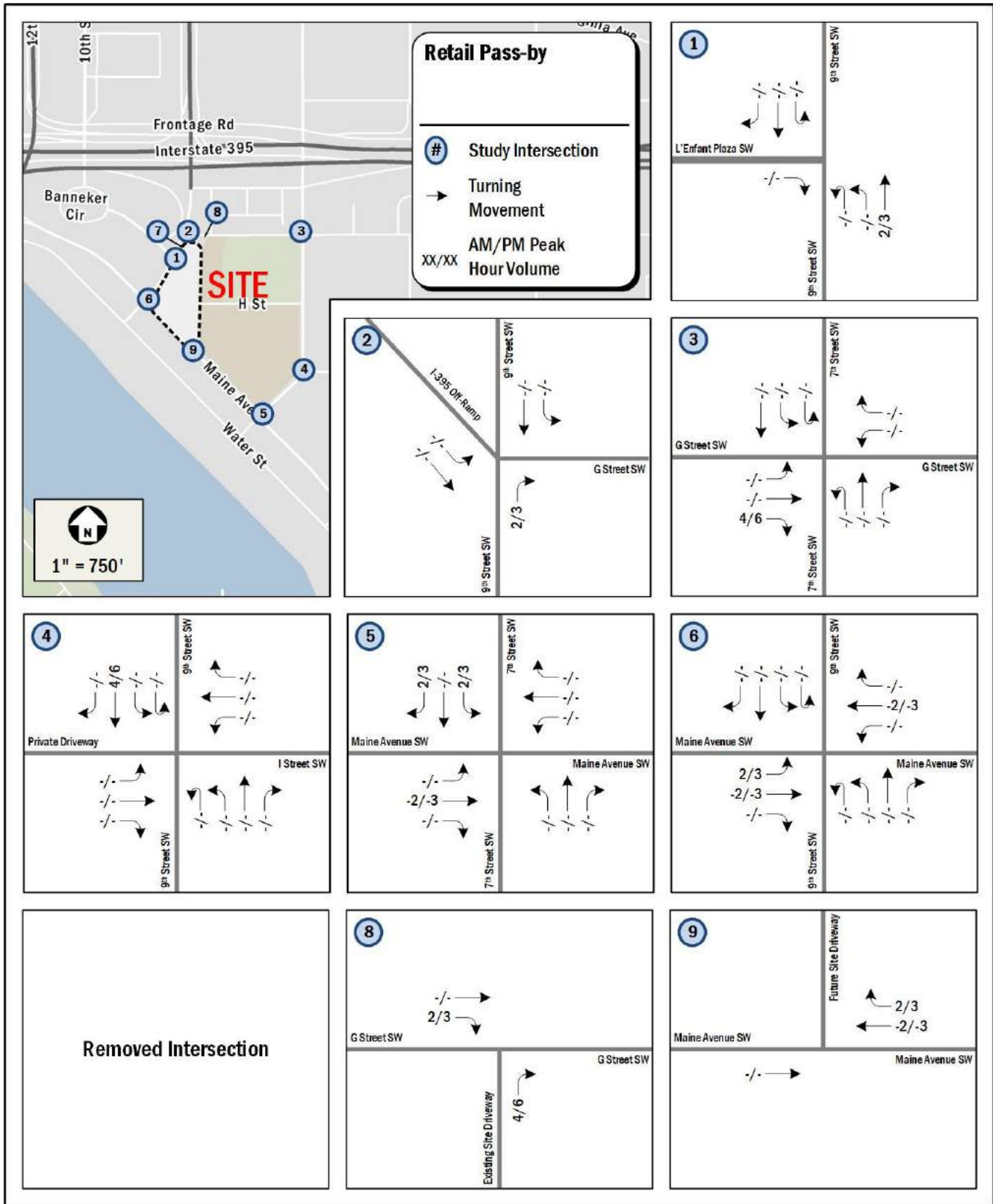


Figure 31: Retail Pass-by

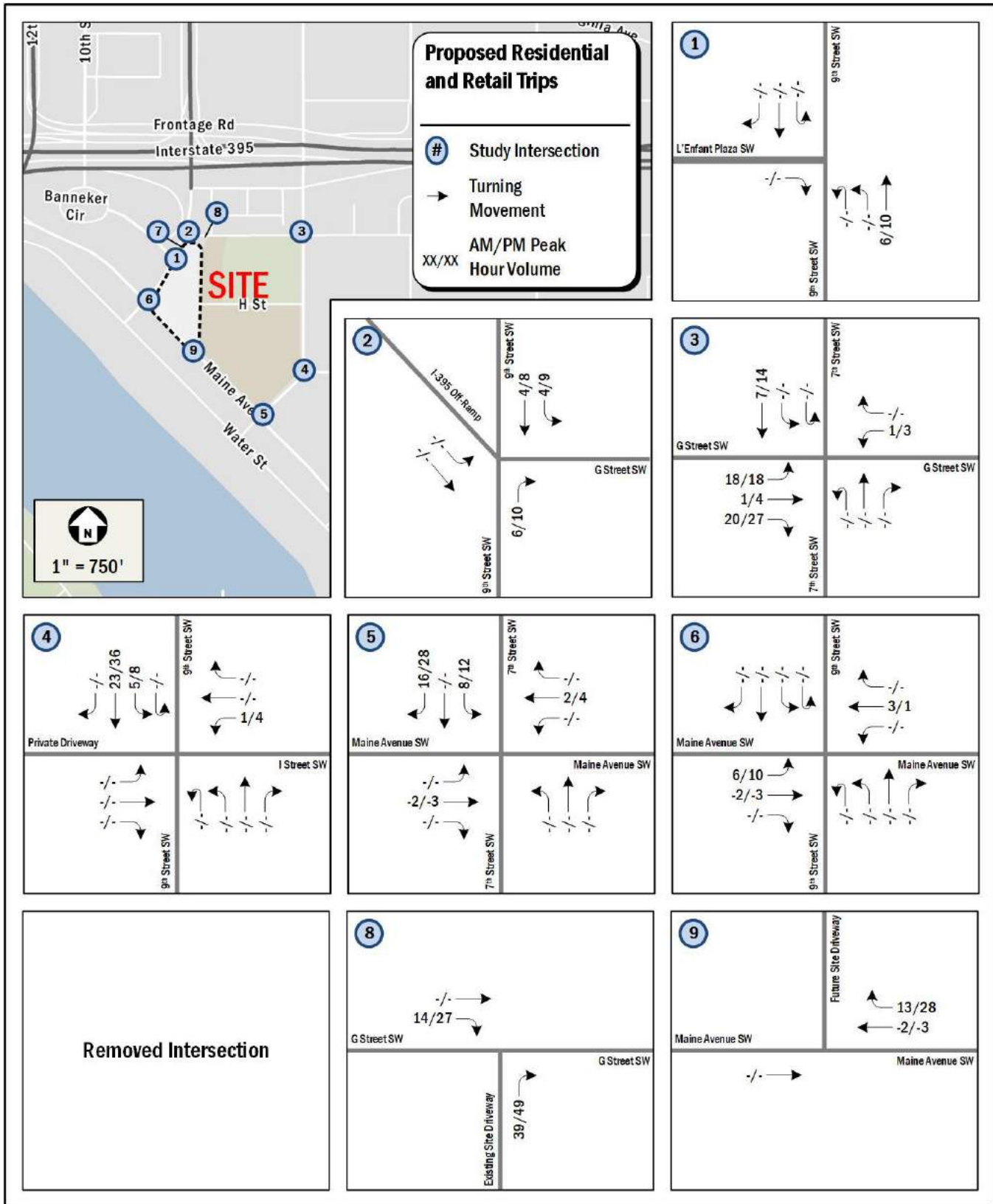


Figure 32: Proposed Residential and Retail Trips

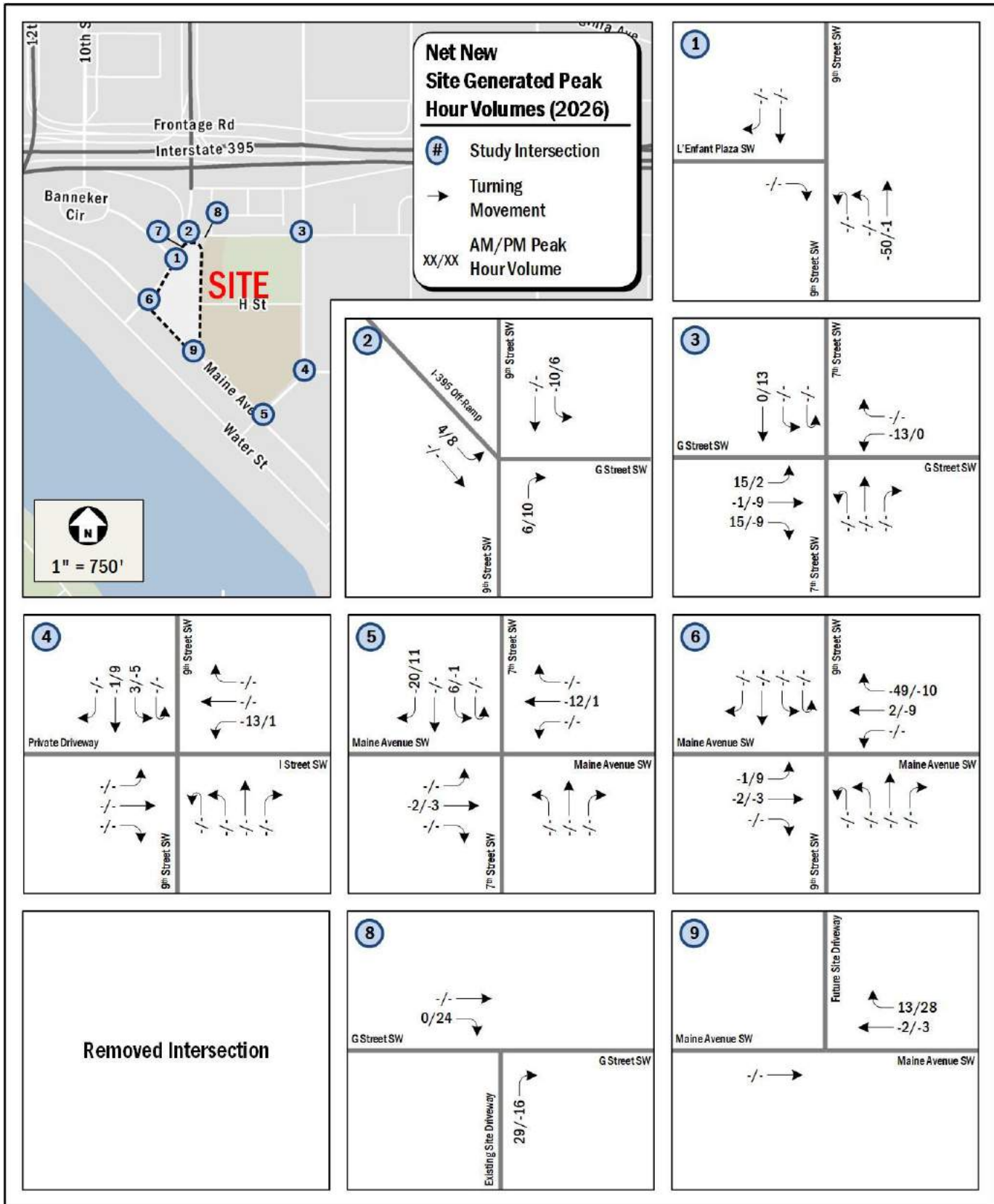


Figure 33: Net New Site Generated Peak Hour Volumes (2026)

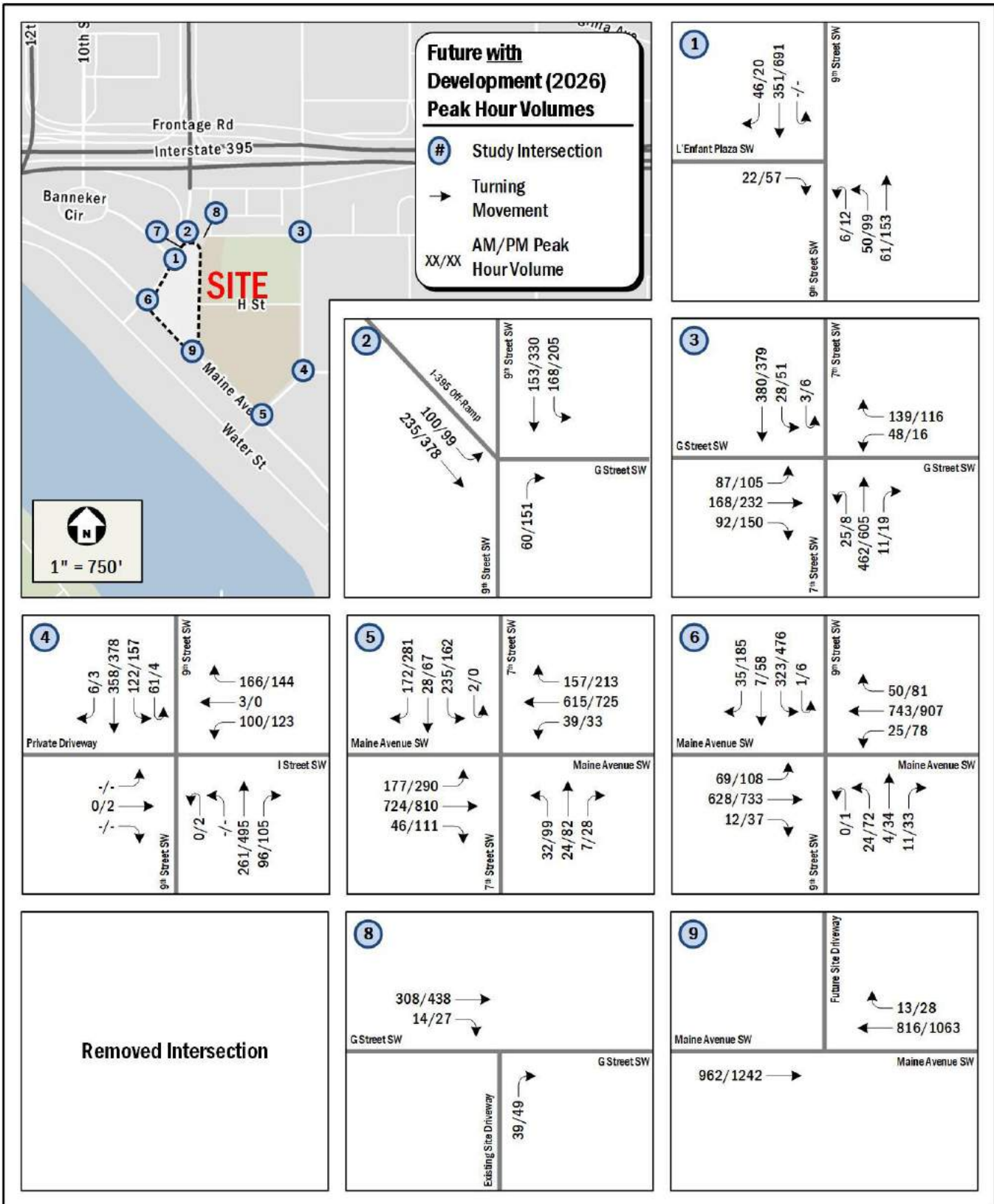


Figure 34: Future with Development (2026) Peak Hour Volumes

Table 7: LOS Results

| Intersection and Approach | Existing (2022) | | | | Background (2026) | | | | Total Future (2026) | | | | Total Future (2026) w/mitigation | | | |
|---|-----------------|----------|--------------|----------|-------------------|----------|--------------|----------|---------------------|----------|--------------|----------|----------------------------------|----------|---------|-----|
| | 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. 9th Street and L'Enfant Plaza SW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Eastbound | 9.3 | A | 10.2 | B | 9.7 | A | 10.5 | B | 9.7 | A | 10.5 | B | - | - | - | - |
| Northbound | 3.7 | - | 3.9 | - | 2.6 | - | 3.9 | - | 3.7 | - | 3.9 | - | - | - | - | - |
| Southbound | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - |
| 2. I-395 Off-Ramp/9th Street and G Street SW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Eastbound | 7.7 | A | 8.9 | A | 8.1 | A | 9.4 | A | 8.1 | A | 9.6 | A | - | - | - | - |
| Northbound | 7.4 | A | 9.1 | A | 7.7 | A | 9.4 | A | 7.8 | A | 9.7 | A | - | - | - | - |
| Southbound | 9.0 | A | 12.3 | B | 9.9 | A | 13.8 | B | 9.7 | A | 14.3 | B | - | - | - | - |
| 3. 7th Street and G Street SW | 21.5 | C | 22.8 | C | 22.5 | C | 25.8 | C | 22.4 | C | 24.5 | C | - | - | - | - |
| Eastbound | 22.3 | C | 36.7 | D | 23.4 | C | 46.5 | D | 23.9 | C | 43.3 | D | - | - | - | - |
| Westbound | 24.9 | C | 30.2 | C | 26.7 | C | 32.4 | C | 25.2 | C | 31.7 | C | - | - | - | - |
| Northbound | 20.7 | C | 14.2 | B | 21.2 | C | 15.2 | B | 21.2 | C | 15.2 | B | - | - | - | - |
| Southbound | 19.5 | B | 14.3 | B | 21.3 | C | 14.8 | B | 21.3 | C | 14.9 | B | - | - | - | - |
| 4. 7th Street and I Street SW | 17.0 | B | 20.9 | C | 18.0 | B | 25.3 | C | 17.8 | B | 25.3 | C | - | - | - | - |
| Eastbound | 0.0 | A | 57.3 | E | 0.0 | A | 57.3 | E | 0.0 | A | 57.3 | E | - | - | - | - |
| Westbound | 41.4 | D | 35.8 | D | 42.4 | D | 37.4 | D | 42.4 | D | 37.4 | D | - | - | - | - |
| Northbound | 3.7 | A | 14.5 | B | 3.6 | A | 20.1 | C | 3.5 | A | 20.2 | C | - | - | - | - |
| Southbound | 12.1 | B | 19.4 | B | 14.9 | B | 25.0 | C | 15.0 | B | 24.9 | C | - | - | - | - |
| 5. 7th Street and Maine Avenue SW | 17.1 | B | 17.0 | B | 26.4 | C | 23.3 | C | 27.8 | C | 23.8 | C | 26.7 | C | - | - |
| Eastbound | 4.8 | A | 4.5 | A | 4.5 | A | 8.9 | A | 5.4 | A | 9.8 | A | 5.6 | A | - | - |
| Westbound | 23.0 | C | 46.4 | D | 23.4 | C | 23.6 | C | 23.3 | C | 23.6 | C | 24.0 | C | - | - |
| Northbound | 37.9 | D | 32.2 | C | 39.0 | D | 58.9 | E | 39.0 | D | 58.9 | E | 38.1 | D | - | - |
| Southbound | 32.1 | C | 32.2 | C | 76.4 | E | 42.7 | D | 83.0 | F | 42.7 | D | 76.0 | E | - | - |
| 6. 9th Street and Maine Avenue SW | 30.0 | C | 119.3 | F | 36.2 | D | 111.0 | F | 36.2 | D | 111.7 | F | - | - | - | - |
| Eastbound | 30.9 | C | 43.5 | D | 33.0 | C | 46.2 | D | 32.9 | C | 46.8 | D | - | - | - | - |
| Westbound | 19.9 | B | 27.4 | C | 22.2 | C | 27.9 | C | 21.3 | C | 28.1 | C | - | - | - | - |
| Northbound | 87.9 | F | 1420.0 | F | 87.9 | F | 1420.0 | F | 87.9 | F | 1420.0 | F | - | - | - | - |
| Southbound | 50.4 | D | 52.2 | D | 70.2 | E | 60.5 | E | 70.2 | E | 60.5 | E | - | - | - | - |
| 8. G Street and Existing Site Driveway SW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Eastbound | - | - | - | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - |
| Northbound | - | - | - | - | 10.2 | B | 12.0 | B | 10.5 | B | 11.9 | B | - | - | - | - |

Table 8: LOS for proposed 9th Street improvements and the signalization at 9th & G Street SW intersection

| Intersection and Approach | Total Future (2026) | | | | Total Future (2026) w/reconfiguration* | | | | Total Future (2026) w/signalization* | | | |
|---|---------------------|----------|---------------|----------|--|----------|---------------|----------|--------------------------------------|----------|---------------|----------|
| | AM Peak | | PM Peak | | AM Peak | | PM Peak | | AM Peak | | PM Peak | |
| | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| 1. 9th Street and L'Enfant Plaza SW | - | - | - | - | - | - | - | - | - | - | - | - |
| Eastbound | 9.7 | A | 10.5 | B | 10.0 | A | 11.7 | B | 10.0 | A | 11.7 | B |
| Northbound | 3.7 | - | 3.9 | - | 3.8 | - | 4.0 | - | 3.8 | - | 4.0 | - |
| Southbound | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - |
| 2. I-395 Off-Ramp/9th Street and G Street SW | - | - | - | - | - | - | - | - | 37.8 | D | 44.0 | D |
| Eastbound | 8.1 | A | 9.6 | A | 8.1 | A | 9.6 | A | 35.3 | D | 43.9 | D |
| Northbound | 7.7 | A | 9.7 | A | 7.8 | A | 9.7 | A | 35.8 | D | 28.8 | C |
| Southbound | 9.7 | A | 14.3 | B | 9.2 | A | 14.2 | B | 40.8 | D | 48.2 | D |
| 6. 9th Street and Maine Avenue SW | 36.2 | D | 111.7 | F | 36.0 | D | 111.7 | F | 31.7 | C | 107.2 | F |
| Eastbound | 32.9 | C | 46.8 | D | 32.9 | C | 46.8 | D | 32.9 | C | 46.8 | D |
| Westbound | 21.3 | C | 28.1 | C | 21.0 | C | 28.2 | C | 21.0 | C | 28.2 | C |
| Northbound | 87.9 | F | 1420.0 | F | 87.9 | F | 1420.0 | F | 87.9 | F | 1420.0 | F |
| Southbound | 70.2 | E | 60.5 | E | 70.2 | E | 60.5 | E | 47.6 | D | 42.9 | D |

*Total Future with reconfiguration (9th Street Improvements) and signalization of the 9th & G Street SW intersection use the Total Future AM mitigated scenario (with altered signal timings at 7th & Maine Avenue SW)

Table 9: v/c Comparison

| Intersection and Lane Group | Existing (2022) | | Background (2026) | | Total Future (2026) | | Total Future (2026) w/ mitigation | |
|--|-----------------|------|-------------------|------|---------------------|------|-----------------------------------|----|
| | AM | PM | AM | PM | AM | PM | AM | PM |
| 1. 9th Street and L'Enfant Plaza SW | | | | | | | | |
| Eastbound Right | 0.03 | 0.08 | 0.03 | 0.09 | 0.03 | 0.09 | - | - |
| Northbound Left | 0.04 | 0.12 | 0.05 | 0.13 | 0.05 | 0.13 | - | - |
| Northbound Thru | 0.03 | 0.09 | 0.07 | 0.10 | 0.04 | 0.10 | - | - |
| Southbound Thru | 0.05 | 0.16 | 0.09 | 0.18 | 0.09 | 0.18 | - | - |
| Southbound Thru Right | 0.05 | 0.09 | 0.07 | 0.10 | 0.07 | 0.10 | - | - |
| 3. 7th Street and G Street SW | | | | | | | | |
| Eastbound Left | 0.20 | 0.27 | 0.21 | 0.32 | 0.25 | 0.33 | - | - |
| Eastbound Thru Right | 0.36 | 0.69 | 0.43 | 0.86 | 0.45 | 0.82 | - | - |
| Westbound LTR | 0.43 | 0.36 | 0.49 | 0.43 | 0.44 | 0.41 | - | - |
| Northbound Thru | 0.31 | 0.22 | 0.35 | 0.33 | 0.35 | 0.33 | - | - |
| Northbound Thru Right | 0.31 | 0.22 | 0.35 | 0.33 | 0.35 | 0.33 | - | - |
| Southbound Left | 0.13 | 0.20 | 0.14 | 0.24 | 0.14 | 0.24 | - | - |
| Southbound Thru | 0.19 | 0.21 | 0.36 | 0.26 | 0.36 | 0.27 | - | - |
| 4. 7th Street and I Street SW | | | | | | | | |
| Westbound Thru Left | 0.22 | 0.27 | 0.30 | 0.31 | 0.27 | 0.31 | - | - |
| Westbound Right | 0.54 | 0.34 | 0.58 | 0.44 | 0.58 | 0.44 | - | - |
| Northbound Thru | 0.22 | 0.34 | 0.25 | 0.48 | 0.25 | 0.48 | - | - |
| Northbound Thru Right | 0.22 | 0.34 | 0.25 | 0.48 | 0.25 | 0.48 | - | - |
| Southbound Thru Left | 0.34 | 0.49 | 0.53 | 0.69 | 0.53 | 0.69 | - | - |
| Southbound Thru Right | 0.34 | 0.49 | 0.53 | 0.69 | 0.53 | 0.69 | - | - |
| 5. 7th Street and Maine Avenue SW | | | | | | | | |
| Eastbound Left | 0.38 | 0.59 | 0.41 | 0.74 | 0.41 | 0.74 | 0.42 | - |
| Eastbound Thru | 0.33 | 0.53 | 0.48 | 0.61 | 0.48 | 0.60 | 0.49 | - |
| Eastbound Thru Right | 0.33 | 0.53 | 0.48 | 0.61 | 0.48 | 0.60 | 0.49 | - |
| Westbound Left | 0.46 | 0.29 | 0.46 | 0.29 | 0.46 | 0.29 | 0.46 | - |
| Westbound Thru | 0.34 | 0.31 | 0.40 | 0.49 | 0.39 | 0.49 | 0.40 | - |
| Westbound Thru Right | 0.34 | 0.31 | 0.40 | 0.49 | 0.39 | 0.49 | 0.40 | - |
| Northbound LTR | 0.17 | 0.54 | 0.22 | 0.76 | 0.22 | 0.76 | 0.22 | - |
| Southbound Left | 0.24 | 0.41 | 1.07 | 0.87 | 1.09 | 0.86 | 1.06 | - |
| Southbound Thru | 0.07 | 0.16 | 0.08 | 0.16 | 0.08 | 0.16 | 0.07 | - |
| Southbound Right | 0.30 | 0.59 | 0.38 | 0.63 | 0.34 | 0.66 | 0.34 | - |

| Intersection and Lane Group | Existing (2022) | | Background (2026) | | Total Future (2026) | | Total Future (2026) w/ mitigation | |
|--|-----------------|------|-------------------|------|---------------------|------|-----------------------------------|----|
| | AM | PM | AM | PM | AM | PM | AM | PM |
| 6. 9th Street SW and Maine Avenue SW | | | | | | | | |
| Eastbound Left | 0.39 | 0.62 | 0.43 | 0.63 | 0.42 | 0.68 | - | - |
| Eastbound Thru | 0.51 | 0.74 | 0.61 | 0.81 | 0.61 | 0.81 | - | - |
| Eastbound Thru Right | 0.51 | 0.74 | 0.61 | 0.81 | 0.61 | 0.81 | - | - |
| Westbound Left | 0.23 | 0.59 | 0.23 | 0.59 | 0.23 | 0.59 | - | - |
| Westbound Thru | 0.48 | 0.54 | 0.58 | 0.71 | 0.54 | 0.70 | - | - |
| Westbound Thru Right | 0.48 | 0.54 | 0.58 | 0.71 | 0.54 | 0.70 | - | - |
| Northbound LTR | 0.65 | 3.90 | 0.65 | 3.90 | 0.65 | 3.90 | - | - |
| Southbound Left | 0.48 | 0.75 | 0.81 | 0.85 | 0.81 | 0.85 | - | - |
| Southbound Thru Left | 0.46 | 0.75 | 0.80 | 0.86 | 0.80 | 0.86 | - | - |
| Southbound Right | 0.09 | 0.44 | 0.09 | 0.44 | 0.09 | 0.44 | - | - |
| 8. G Street SW & Existing Site Driveway | | | | | | | | |
| Eastbound Thru Right | - | - | 0.21 | 0.28 | 0.21 | 0.30 | - | - |
| Northbound Right | - | - | 0.02 | 0.12 | 0.06 | 0.09 | - | - |

Table 10: v/c Comparison for proposed 9th Street improvements and the signalization at 9th & G Street SW intersection

| Intersection and Lane Group | Total Future (2026) | | Total Future (2026) w/ reconfiguration* | | Total Future (2026) w/ signalization* | |
|---|---------------------|------|---|------|---------------------------------------|------|
| | AM | PM | AM | PM | AM | PM |
| 1. 9th Street and L'Enfant Plaza SW | | | | | | |
| Eastbound Right | 0.03 | 0.09 | 0.03 | 0.10 | 0.03 | 0.10 |
| Northbound Left | 0.05 | 0.13 | 0.05 | 0.13 | 0.05 | 0.13 |
| Northbound Thru | 0.07 | 0.10 | 0.04 | 0.10 | 0.04 | 0.10 |
| Southbound Thru | 0.09 | 0.18 | 0.11 | 0.22 | 0.11 | 0.22 |
| Southbound Thru Right | 0.07 | 0.10 | 0.03 | 0.01 | 0.03 | 0.01 |
| 2. I-395 Off-Ramp/9th Street and G Street SW | | | | | | |
| Eastbound Thru Right | - | - | - | - | 0.42 | 0.66 |
| Eastbound Right | - | - | - | - | 0.42 | 0.67 |
| Northbound Right | - | - | - | - | 0.20 | 0.36 |
| Southbound Thru Left | - | - | - | - | 0.41 | 0.70 |
| Southbound Thru | - | - | - | - | 0.41 | 0.70 |
| 6. 9th Street SW and Maine Avenue SW | | | | | | |
| Eastbound Left | 0.42 | 0.68 | 0.42 | 0.68 | 0.42 | 0.68 |
| Eastbound Thru | 0.61 | 0.81 | 0.61 | 0.81 | 0.61 | 0.81 |
| Eastbound Thru Right | 0.61 | 0.81 | 0.61 | 0.81 | 0.61 | 0.81 |
| Westbound Left | 0.23 | 0.59 | 0.23 | 0.59 | 0.23 | 0.59 |
| Westbound Thru | 0.54 | 0.70 | 0.54 | 0.70 | 0.54 | 0.70 |
| Westbound Thru Right | 0.54 | 0.70 | 0.54 | 0.70 | 0.54 | 0.70 |
| Northbound LTR | 0.65 | 3.90 | 0.65 | 3.90 | 0.65 | 3.90 |
| Southbound Left | 0.81 | 0.85 | 0.81 | 0.85 | 0.81 | 0.85 |
| Southbound Thru Left | 0.80 | 0.86 | 0.80 | 0.86 | 0.80 | 0.86 |
| Southbound Right | 0.09 | 0.44 | 0.09 | 0.44 | 0.09 | 0.44 |

*Total Future with reconfiguration (9th Street Improvements) and signalization of the 9th & G Street SW intersection use the Total Future AM mitigated scenario (with altered signal timings at 7th & Maine Avenue SW)

Table 11: Queuing Results (in feet)

| Intersection and Lane Group | Storage Length (ft) | Existing (2022) | | | | Background (2026) | | | | Total Future (2026) | | | | Total Future (2026) with mitigation | | | |
|--|---------------------|-----------------|------|---------|-------|-------------------|------|---------|-------|---------------------|------|---------|------|-------------------------------------|------|---------|------|
| | | 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. 9th Street and L'Enfant Plaza SW | | | | | | | | | | | | | | | | | |
| Eastbound Right | 400 | - | 2 | - | 7 | - | 2 | - | 7 | - | 2 | - | 7 | - | - | - | - |
| Northbound Left | 200 | - | 3 | - | 10 | - | 4 | - | 11 | - | 4 | - | 11 | - | - | - | - |
| 3. 7th Street and G Street SW | | | | | | | | | | | | | | | | | |
| Eastbound Left | 100 | 35 | 66 | 50 | 95 | 37 | 69 | 60 | 110 | 45 | 82 | 61 | 113 | - | - | - | - |
| Eastbound Thru Right | 500 | 113 | 168 | 216 | 328 | 135 | 197 | 282 | #466 | 144 | 210 | 265 | #432 | - | - | - | - |
| Westbound LTR | 460 | 99 | 157 | 69 | 127 | 110 | 176 | 73 | 136 | 100 | 159 | 73 | 135 | - | - | - | - |
| Northbound Thru | 630 | 86 | 108 | 62 | 84 | 97 | 120 | 98 | 126 | 97 | 120 | 98 | 126 | - | - | - | - |
| Northbound Thru Right | 630 | 86 | 108 | 62 | 84 | 97 | 120 | 98 | 126 | 97 | 120 | 98 | 126 | - | - | - | - |
| Southbound Left | 70 | 15 | 35 | 23 | 50 | 15 | 35 | 23 | 53 | 15 | 35 | 23 | 53 | - | - | - | - |
| Southbound Thru | 450 | 54 | 77 | 64 | 92 | 106 | 139 | 79 | 110 | 106 | 139 | 82 | 114 | - | - | - | - |
| 4. 7th Street and I Street SW | | | | | | | | | | | | | | | | | |
| Westbound Thru Left | 150 | 57 | 104 | 73 | 122 | 78 | 134 | 85 | 138 | 69 | 120 | 86 | 139 | - | - | - | - |
| Westbound Right | 460 | 101 | 179 | 74 | 127 | 110 | 191 | 97 | 158 | 110 | 191 | 97 | 158 | - | - | - | - |
| Northbound Thru | 230 | 21 | 42 | 86 | 180 | 16 | 48 | 180 | 289 | 10 | 46 | 180 | 289 | - | - | - | - |
| Northbound Thru Right | 230 | 21 | 42 | 86 | 180 | 16 | 48 | 180 | 289 | 10 | 46 | 180 | 289 | - | - | - | - |
| Southbound Thru Left | 620 | 66 | 96 | 100 | 171 | 128 | 178 | 150 | 255 | 129 | 180 | 151 | 257 | - | - | - | - |
| Southbound Thru Right | 620 | 66 | 96 | 100 | 171 | 128 | 178 | 150 | 255 | 129 | 180 | 151 | 257 | - | - | - | - |
| 5. 7th Street and Maine Avenue SW | | | | | | | | | | | | | | | | | |
| Eastbound Left | 170 | 15 | 43 | 24 | m48 | 8 | m26 | 61 | m103 | 11 | m36 | 56 | m107 | 11 | m37 | - | - |
| Eastbound Thru | 730 | 18 | 17 | 10 | m12 | 23 | 22 | 11 | m24 | 27 | 27 | 38 | m80 | 31 | 28 | - | - |
| Eastbound Thru Right | 730 | 18 | 17 | 10 | m12 | 23 | 22 | 11 | m24 | 27 | 27 | 38 | m80 | 31 | 28 | - | - |
| Westbound Left | 200 | 31 | 70 | 25 | 60 | 31 | 70 | 25 | 60 | 31 | 70 | 25 | 60 | 31 | 70 | - | - |
| Westbound Thru | 1,000 | 119 | 149 | 105 | 134 | 143 | 178 | 178 | 218 | 141 | 175 | 178 | 218 | 143 | 178 | - | - |
| Westbound Thru Right | 1,000 | 119 | 149 | 105 | 134 | 143 | 178 | 178 | 218 | 141 | 175 | 178 | 218 | 143 | 178 | - | - |
| Northbound LTR | 250 | 31 | 66 | 103 | 176 | 40 | 82 | 154 | #274 | 40 | 82 | 154 | #274 | 40 | 81 | - | - |
| Southbound Left | 130 | 40 | 83 | 60 | 115 | -210 | #376 | 130 | #260 | -218 | #388 | 129 | #255 | -212 | #382 | - | - |
| Southbound Thru | 220 | 19 | 47 | 46 | 82 | 19 | m40 | 46 | m57 | 19 | m39 | 46 | m57 | 19 | m39 | - | - |
| Southbound Right | 220 | 64 | 109 | 119 | 198 | 98 | 158 | 136 | 187 | 88 | 147 | 143 | 202 | 88 | 146 | - | - |
| 6. 9th Street SW and Maine Avenue SW | | | | | | | | | | | | | | | | | |
| Eastbound Left | 190 | 50 | 98 | 75 | #145 | 56 | 107 | 76 | #148 | 55 | 107 | 83 | #166 | - | - | - | - |
| Eastbound Thru | 490 | 175 | 231 | 257 | 332 | 223 | 288 | 290 | 372 | 222 | 287 | 288 | 370 | - | - | - | - |
| Eastbound Thru Right | 490 | 175 | 231 | 257 | 332 | 223 | 288 | 290 | 372 | 222 | 287 | 288 | 370 | - | - | - | - |
| Westbound Left | 200 | 21 | 52 | 63 | m#122 | 21 | 53 | 62 | m#112 | 21 | 51 | 62 | m109 | - | - | - | - |
| Westbound Thru | 740 | 88 | 106 | 117 | 141 | 110 | 129 | 148 | 193 | 101 | 120 | 150 | 195 | - | - | - | - |
| Westbound Thru Right | 740 | 88 | 106 | 117 | 141 | 110 | 129 | 148 | 193 | 101 | 120 | 150 | 195 | - | - | - | - |
| Northbound LTR | 170 | 30 | #94 | -200 | #312 | 30 | #94 | -200 | #312 | 30 | #94 | -200 | #312 | - | - | - | - |
| Southbound Left | 340 | 81 | 143 | 186 | #311 | 145 | #273 | 215 | #372 | 145 | #273 | 215 | #372 | - | - | - | - |
| Southbound Thru Left | 340 | 78 | 141 | 186 | #309 | 144 | #272 | 220 | #377 | 144 | #272 | 220 | #377 | - | - | - | - |
| Southbound Right | 340 | 18 | m45 | 94 | 157 | 18 | 45 | 94 | 157 | 18 | 45 | 94 | 157 | - | - | - | - |
| 8. G Street SW & Existing Site Driveway | | | | | | | | | | | | | | | | | |
| Eastbound Thru Right | 60 | - | - | - | - | - | 0 | - | 0 | - | 0 | - | 0 | - | - | - | - |
| Northbound Right | 100 | - | - | - | - | - | 1 | - | 10 | - | 5 | - | 8 | - | - | - | - |

Table 12: Queuing Results (in feet) for proposed 9th Street improvements and the signalization at 9th & G Street SW intersection

| Intersection and Lane Group | Storage Length (ft) | Total Future (2026) | | | | Total Future (2026) w/reconfiguration* | | | | Total Future (2026) w/signalization* | | | |
|--|---------------------|---------------------|------|---------|------|--|------|---------|------|--------------------------------------|------|---------|------|
| | | AM Peak | | PM Peak | | AM Peak | | PM Peak | | AM Peak | | PM Peak | |
| | | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th |
| 1. 9th Street and L'Enfant Plaza SW | | | | | | | | | | | | | |
| Eastbound Right | 400 | - | 2 | - | 7 | - | 2 | - | 9 | - | 2 | - | 9 |
| Northbound Left | 200 | - | 4 | - | 11 | - | 4 | - | 12 | - | 4 | - | 12 |
| 2. I-396 Off-Ramp/9th Street and G Street SW | | | | | | | | | | | | | |
| Eastbound Thru Right | 430 | - | - | - | - | - | - | - | - | 124 | 194 | 209 | 283 |
| Eastbound Right | 430 | - | - | - | - | - | - | - | - | 113 | 183 | 196 | 270 |
| Northbound Right | 350 | - | - | - | - | - | - | - | - | 49 | m94 | 118 | m149 |
| Southbound Thru Left | 650 | - | - | - | - | - | - | - | - | 124 | 195 | 181 | 250 |
| Southbound Thru | 480 | - | - | - | - | - | - | - | - | 113 | 180 | 267 | 343 |
| 6. 9th Street SW and Maine Avenue SW | | | | | | | | | | | | | |
| Eastbound Left | 190 | 55 | 107 | 83 | #166 | 55 | 107 | 83 | #166 | 55 | 107 | 83 | #166 |
| Eastbound Thru | 490 | 222 | 287 | 288 | 370 | 222 | 287 | 288 | 370 | 222 | 287 | 288 | 370 |
| Eastbound Thru Right | 490 | 222 | 287 | 288 | 370 | 222 | 287 | 288 | 370 | 222 | 287 | 288 | 370 |
| Westbound Left | 200 | 21 | 51 | 62 | m109 | 21 | m51 | 62 | m109 | 21 | m51 | 62 | m109 |
| Westbound Thru | 740 | 101 | 120 | 150 | 195 | 101 | 119 | 150 | 197 | 101 | 119 | 150 | 197 |
| Westbound Thru Right | 740 | 101 | 120 | 150 | 195 | 101 | 119 | 150 | 197 | 101 | 119 | 150 | 197 |
| Northbound LTR | 170 | 30 | #94 | ~200 | #312 | 30 | #94 | ~200 | #312 | 30 | #94 | ~200 | #312 |
| Southbound Left | 340 | 145 | #273 | 215 | #372 | 145 | #273 | 215 | #372 | 131 | #262 | 151 | #368 |
| Southbound Thru Left | 340 | 144 | #272 | 220 | #377 | 144 | #272 | 220 | #377 | 131 | #261 | 154 | #371 |
| Southbound Right | 340 | 18 | 45 | 94 | 157 | 18 | 45 | 94 | 157 | 11 | 27 | 66 | m103 |
| 8. G Street SW & Existing Site Driveway | | | | | | | | | | | | | |
| Eastbound Thru Right | 60 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 |
| Northbound Right | 100 | - | 5 | - | 8 | - | 5 | - | 8 | - | 5 | - | 8 |

*Total Future with reconfiguration (9th Street Improvements) and signalization of the 9th & G Street SW intersection use the Total Future AM mitigated scenario (with altered signal timings at 7th & Maine Avenue SW)

Transit Facilities

This chapter discusses the existing and planned transit facilities in the vicinity of the site, accessibility to transit, and evaluates the overall transit impacts of the 899 Maine Avenue development.

This chapter concludes that:

- The site has excellent existing transit service for existing development near the site;
- The development site is approximately 0.41 miles away from L'Enfant Plaza Metrorail station, in addition to being within a mile of four additional Metrorail stations;
- The site has access to the DC Circulator within 0.1 miles of the site;
- The site has access to two (2) high-frequency Metrobus routes within a half-mile of the site that provide connections to all six (6) Metrorail lines; and
- The nearby 7th Street SW, Maine Avenue SW, and Independence Avenue SW transit priority corridors included in the *moveDC* 2021 update, as well as other corridors that cover major Metrobus routes throughout the District, have the potential to improve transit access to the site.

Existing Transit Service

The site is immediately served by one (1) major bus routes – WMATA route 52 (the 14th Street Line). There are, however, several more transit routes within the ½ mile walkshed review area. As shown in Figure 35, the transit study area is served by seven (7) Metrobus routes and one (1) Circulator route. Table 13 shows a summary of the bus route information for the routes that serve the site, including service hours, headways, and distance to the nearest bus stop. Table 14 show an inventory of bus stops within the study area.

Within the one (1) mile, there are four (4) Metrorail stations accessible to the site. These are: L'Enfant Plaza on the Blue, Orange, Silver, Yellow, and Green Lines (0.41 miles away); Waterfront Station on the Green Line (0.45 miles away); Smithsonian Station on the Blue, Orange, and Silver Lines (0.59 miles away); and Federal Triangle Station on the Blue, Orange, and Silver Lines (0.72 miles away).

The Orange Line travels east from Vienna, VA through Arlington, VA to the District core before continuing east towards New Carrollton, MD.

The Blue Line travels north from Franconia, VA through Alexandria and Arlington, VA to the District core before continuing east toward Largo, MD.

The Silver Line travels east from Reston, VA through Tysons Corner and Arlington, VA to the District core before continuing east toward Largo, MD.

The Blue, Orange, and Silver Lines run every 20 minutes on weekdays, and every 24 minutes on weekends.

The Green Line travels north from Branch Avenue in Suitland, MD through Anacostia and the District core before continuing northwest towards College Park and Greenbelt, MD.

The Yellow Line travels south from Huntington, VA through Alexandria, VA and the District core before continuing northwest towards College Park and Greenbelt, MD.

The Green and Yellow Lines run every 15 minutes on weekdays, and every 20 minutes on weekends.

Starting in October 2021, Metrorail service has experienced reduced frequencies due to a safety issue with their 7000-series railcars. As of August 2022, this remains unresolved.

Planned Transit Service

moveDC Transit Priority Network

The draft Transit Priority Network in the ongoing *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:

- 7th Street SW between Maine Avenue SW and the National Mall
- Maine Avenue SW between 7th Street SW and South Capitol Street
- Independence Avenue SW between 7th Street SW and South Capitol Street

Various WMATA bus routes and the DC Circulator Eastern Market-L'Enfant Plaza route are partially covered by these transit corridors:

- WMATA bus routes S2, 5A, 33, 52, 70 and 74 (in addition to the Eastern Market-L'Enfant Plaza Circulator route) are partially covered by the 7th Street SW priority corridor.
- WMATA bus routes P6 and 74 (in addition to the Eastern Market-L'Enfant Plaza Circulator route) are partially covered by the Maine Avenue SW priority corridor.

Any transit priority infrastructure improvements proposed have the potential to improve bus speeds and service to the site in the future. These corridors can be seen in Figure 36.

Site-Generated Transit Impacts

Transit Trip Generation

The land uses of the proposed development, when compared to existing land uses, are projected to generate 15 more transit trips (31 fewer inbound, 46 more outbound) during the AM peak hour and 70 more transit trips (63 more inbound, seven (7) more outbound) during the PM peak hour.

Even though it is expected that the majority of new trips will be made via Metrobus and Metrorail, site-generated transit trips will not cause detrimental impacts to Metrobus or Metrorail service.

Table 13: Local Bus Route Information

| Route Number | Route Name | Service Hours at Stop Closest to Site ¹ | | | Headway (minutes) ¹ | Walking Distance to Nearest Stop ² |
|---------------------|--|--|----------------|----------------|--------------------------------|---|
| | | Weekdays | Saturdays | Sundays | | |
| WMATA routes | | | | | | |
| 33 | Wisconsin Avenue Line | 12:06am-4:28am | 12:59am-6:51am | 12:00am-6:43am | 12-30 | 0.5 mi. (10 min) |
| 52 | 14 th Street Line | 4:36am-2:33am | 4:45am-2:37am | 4:45am-2:32am | 12-35 | 0 ft (0 min) ³ |
| 70 | Georgia Ave-7 th Avenue Line | 11:57pm-4:46am | 1:00am-6:56am | 12:09am-6:43am | 17-30 | 0.5 mi. (9 min) |
| 74 | Convention Center-Southwest Waterfront Line | 5:18am-10:39pm | 6:47am-10:38pm | 6:48am-10:33pm | 29-30 | 0.1 mi. (3 min) |
| P6 | Anacostia-Eckington Line | 4:15am-1:48am | 4:08am-2:06am | 4:20am-2:07am | 12-30 | 0.5 mi. (9 min) |
| S2 | 16 th Street Line | 12:08am-4:57am | 1:08am-6:48am | 5:10am-2:39am | 15-30 | 0.5 mi. (9 min) |
| 5A | DC-Dulles Line | 5:30am-12:17am | 5:30am-12:18am | 5:30am-12:10am | 60-75 | 0.5 mi. (9 min) |
| EM-LP | Circulator: Eastern Market-L'Enfant Plaza Line | 6:00am-9:00pm | 7:00am-9:00pm | 7:00am-9:00pm | 10 | 0.1 mi. (3 min) |

¹ Service hours and headways reflect regular service effective September 5, 2021

² Walking distances are measured from the nearest on-site location.

³ Bus stop on site frontage.

Table 14: Bus Stop Inventory

| Location | Stop ID | Routes Served | Amenities | | | | | | | | |
|--|---------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | Bus stop flag | Rt. map & schedule | Landing pad | Sidewalk | Bench | Shelter | Dynamic info sign | Lighting | Trash Recep. |
| Maine Avenue SW & 9 th Street SW (north side) | 1003906 | 52 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Maine Avenue SW & 9 th Street SW (south side) | 1003905 | 52 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 th Street SW & Maine Avenue SW (N corner) | 1003904 | 52 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Maine Avenue SW & 7 th Street SW (NE corner) | 123823 | EM-LP | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Maine Avenue SW & 7 th Street SW (SE corner) | 1003908 | 74, EM-LP | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | |
| M Street SW & 6 th Street SW (north side) | 1000511 | 74 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| M Street SW & 6 th Street SW (south side) | 1000496 | 74 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| M Street SW & 4 th Street SW (northwest corner) | 1003690 | 74, EM-LP | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> |
| M Street SW & 4 th Street SW (southeast corner) | 1000498 | 74, EM-LP | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 th Street SW & K Street SW | 1000529 | 74 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 th Street SW & I Street SW (east side) | 1000561 | P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| Location | Stop ID | Routes Served | Amenities | | | | | | | | | |
|--|---------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | Bus stop flag | Rt. map & schedule | Landing pad | Sidewalk | Bench | Shelter | Dynamic info sign | Lighting | Trash Recep. | |
| 4 th Street SW & I Street SW (west side) | 1000567 | P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 th Street SW & G Street SW (east side) | 1000595 | P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 th Street SW & G Street SW (west side) | 1000588 | P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 th Street SW & E Street SW | 1000622 | P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> |
| 7 th Street SW & I Street SW (east side) | 1003903 | 52, 74, EM-LP | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 th Street SW & I Street SW (west side) | 1000566 | 52, 74, EM-LP | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 th Street SW & G Street SW | 1000596 | 52, 74 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> |
| E Street SW & 7 th Street SW (northeast corner) | 1003666 | 5A, 70, P6, S2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E Street SW & 7 th Street SW (western side) | 1000648 | 52, 74, P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> |
| D Street SW & 7 th Street SW (south side) | 1003665 | 5A, S2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | |
| D Street SW & 6 th Street SW (south side) | 1003962 | 70, EM-LP | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | |
| D Street SW & 6 th Street SW | 1003599 | 52, P6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | |

| Location | Stop ID | Routes Served | Amenities | | | | | | | | |
|--|---------|--------------------|---------------|--------------------|-------------|----------|-------|---------|-------------------|----------|--------------|
| | | | Bus stop flag | Rt. map & schedule | Landing pad | Sidewalk | Bench | Shelter | Dynamic info sign | Lighting | Trash Recep. |
| (north side) | | | | | | | | | | | |
| Virginia Avenue SW & 7 th Street SW | 1003963 | 33 | | | ☐ | ☐ | | | | | |
| D Street SW & 7 th Street SW (southwestern corner) | D7 | 5A | ☐ | ☐ | ☐ | ☐ | | | | ☐ | |
| 7 th Street SW & Independence Avenue SW (southeastern corner) | 1000694 | 33, 70, 74, P6, S2 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 12 th Street SW & D Street SW | 1003916 | 52 | ☐ | ☐ | ☐ | ☐ | | | | | |
| 12 th Street SW & C Street SW | 1000679 | 52 | ☐ | | ☐ | ☐ | | | | ☐ | |



Figure 35: Existing Transit Facilities



Figure 36: Future 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 existing pedestrian infrastructure surrounding the site provides an excellent walking environment. There is a well-connected pedestrian network;
- Pedestrian facilities on-site along Maine Avenue SW already meet DDOT and ADA standards—while inadequate sidewalks along 9th Street SW will be improved with the project;
- The project will improve pedestrian conditions through the 9th Street Improvements benefit and potential signalization of the 9th & G Street SW intersection; and
- 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.

Pedestrian Study Area

Pedestrian facilities within an approximately ¼ mile walk of the site were evaluated, as well as along the path to the Metrorail stations within one (1) mile. The pedestrian study area can be seen in Figure 37. The existing site has good connectivity to major local destinations with no missing sidewalks.

Pedestrian Infrastructure

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

Existing Conditions

There are minor areas of concern within the study area that may impact the quality and attractiveness of walking, such as inadequate sidewalks on Maine Avenue SW north of 7th Street SW, on 6th Street SW between I and G Street SW, along 7th Street SW and along L'Enfant Plaza SW. Most other sidewalks meet standards.

The inadequate sidewalk along 9th Street SW (east side) will be improved with the project.

Along the site's frontage on Maine Avenue SW, sidewalks meet DDOT standards of minimum width or buffer.

A full overview of existing pedestrian conditions can be seen in Figure 38.

Proposed Pedestrian Improvements

The project proposes widened sidewalks along 9th Street SW's east side (along site frontage), in addition to improved

Site-Generated Pedestrian Impacts

Pedestrian Trip Generation

The land uses of the proposed development, when compared to existing land uses, are projected to generate 43 more pedestrian trips (19 more inbound, 24 more outbound) during the AM peak hour and 125 more pedestrian trips (68 more inbound, 57 more outbound) during the PM peak hour. The origins and destinations of these pedestrian trips are likely to be office/retail locations nearby, in addition to Metrorail stations.

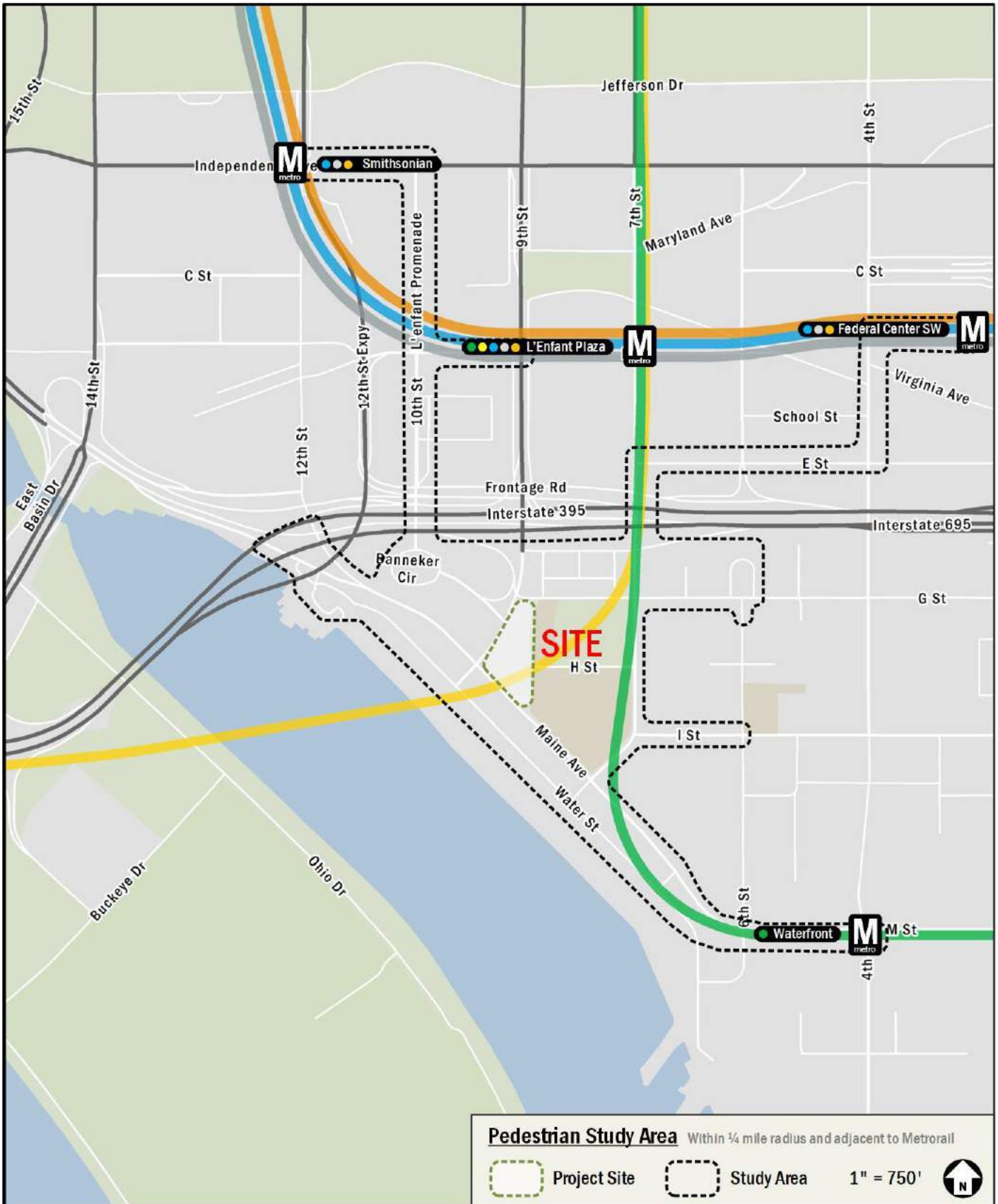


Figure 37: Pedestrian Study Area

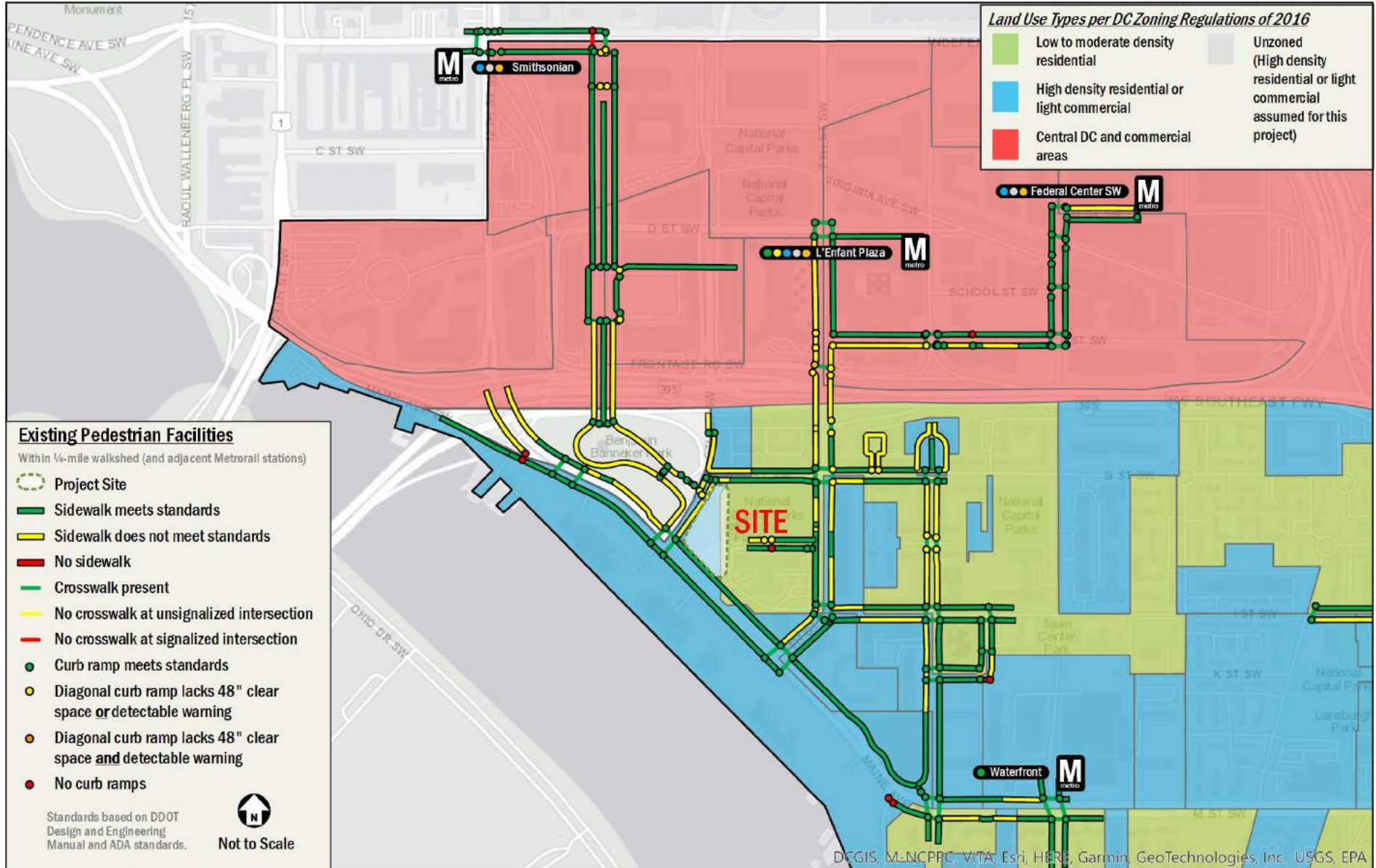


Figure 38: Existing Pedestrian Facilities

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 within this chapter:

- The site has access to several on- and off-street bicycle facilities within the study area;
- Several planned and proposed bicycle projects will improve bicycle access to the site, including the construction of protected bicycle lanes along Maine Avenue SW, 7th Street SW, I Street SW, and 4th Street SW;
- The project is expected to generate a manageable number of bicycle trips that can be accommodated by proposed on-site facilities and the surrounding bicycle network; and
- The project will include bicycle parking that meet zoning requirements.

Existing Bicycle Facilities

The site has access to existing on- and off-street bicycle facilities. The development is located adjacent to a cycletrack on Maine Avenue SW and within two (2) blocks of bike lanes along L'Enfant Plaza SW, 7th Street SW, and I Street SW. The development is also within a quarter mile of the Wharf Street bike trail, which connects to the Anacostia River Trail. The development is also within a quarter mile of the National Mall trails, which offer connections to downtown DC and Virginia via the I-395 bridge. Figure 39 illustrates existing bicycle facilities in the area.

Capital Bikeshare

In addition to personal bicycles, the Capital Bikeshare program provides additional bicycle options for residents. The program has placed over 600 bikeshare stations across the Washington metropolitan area with over 5,000 bicycles in the fleet. Two (2) Capital Bikeshare station is within a ¼ mile of the site:

- A 14-dock station on the southwest corner of Maine Avenue & 9th Street SW; and
- An 18-dock station on the southwest corner of Maine Avenue & 7th Street SW.

Figure 39 illustrates these and other Capital Bikeshare locations in the area.

Micromobility

As of August 2022, micromobility service in the District is provided by eight (8) private dockless companies operating electric-assist bicycles (e-bikes) and electric scooters (e-scooters). These include two (2) companies operating e-bikes (HelBiz and Jump) and six (6) companies operating e-scooters (Bird, Lime, Lyft, Razor, Skip, and Spin). 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.

Planned Bicycle Improvements

Several bicycle improvements are planned near the site. These are shown in Figure 40.

DDOT Bikeways Expansion

DDOT has embarked on a plan to build over 20 miles of new protected bike lanes by 2023. This plan includes protected bicycle lanes to be installed near the site along Maine Avenue SW (south of 7th Street SW) and I Street SW by 2022, along 4th Street SW (south of I Street SW) by 2023, and along 7th Street SW by 2024. These new protected bicycle lanes will connect with the existing cycletrack on Maine Avenue SW, as well as protected bike lanes along 4th Street SW (north of I Street SW).

moveDC Bicycle Priority Network

As part of its ongoing update to the District’s multimodal long-term transportation plan, *moveDC*, DDOT has designated both funded and future planned improvements to the District’s Bicycle Priority Network. Funded improvements are locations that currently have funding identified for construction within six (6) years, including the aforementioned bike lanes on I Street SW and 4th Street SW.

Additionally, DDOT has designated future planned improvements to the network that may be added in the future but currently do not have committed funding. These include trail facilities along

6th Street SW south of M Street SW, as well as on-street facilities along Virginia Avenue SW and Maine Avenue SW (west of I-395). These improvements are not currently funded.

Proposed Bicycle Improvements

The proposed development will make significant bicycle related improvements over existing conditions in and around the site.

Bicycle Parking

The project's bicycle parking meet ZR16 bicycle parking requirements, with long-term bicycle parking spaces located inside the building's bike room within the garage.

Additionally, the project will provide a total of two (2) showers and eight (8) lockers for employees, exceeding zoning requirements (zoning requires no showers and two (2) lockers).

New Bicycle Lanes & Crossings

The project will construct new bicycle lanes along 9th Street SW, connecting the existing Maine Avenue SW cycletrack to the existing L'Enfant Plaza SW bicycle lanes. These lanes have painted crossings across Maine Avenue SW, with a dedicated lane crossing across 9th Street SW (alongside the new crosswalk).

Site-Generated Bicycle Impacts

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

Bicycle Trip Generation

The land uses of the proposed development, when compared to existing land uses, are projected to generate 16 more bicycle trips (three (3) more inbound, 13 more southbound) during the AM peak hour and 39 more bicycle trips (24 more inbound, 15 more outbound) during the PM peak hour.

It is expected that existing bicycle facilities, alongside the planned and proposed bicycle facilities as part of this development and other ongoing efforts, can accommodate these new site-generated trips.

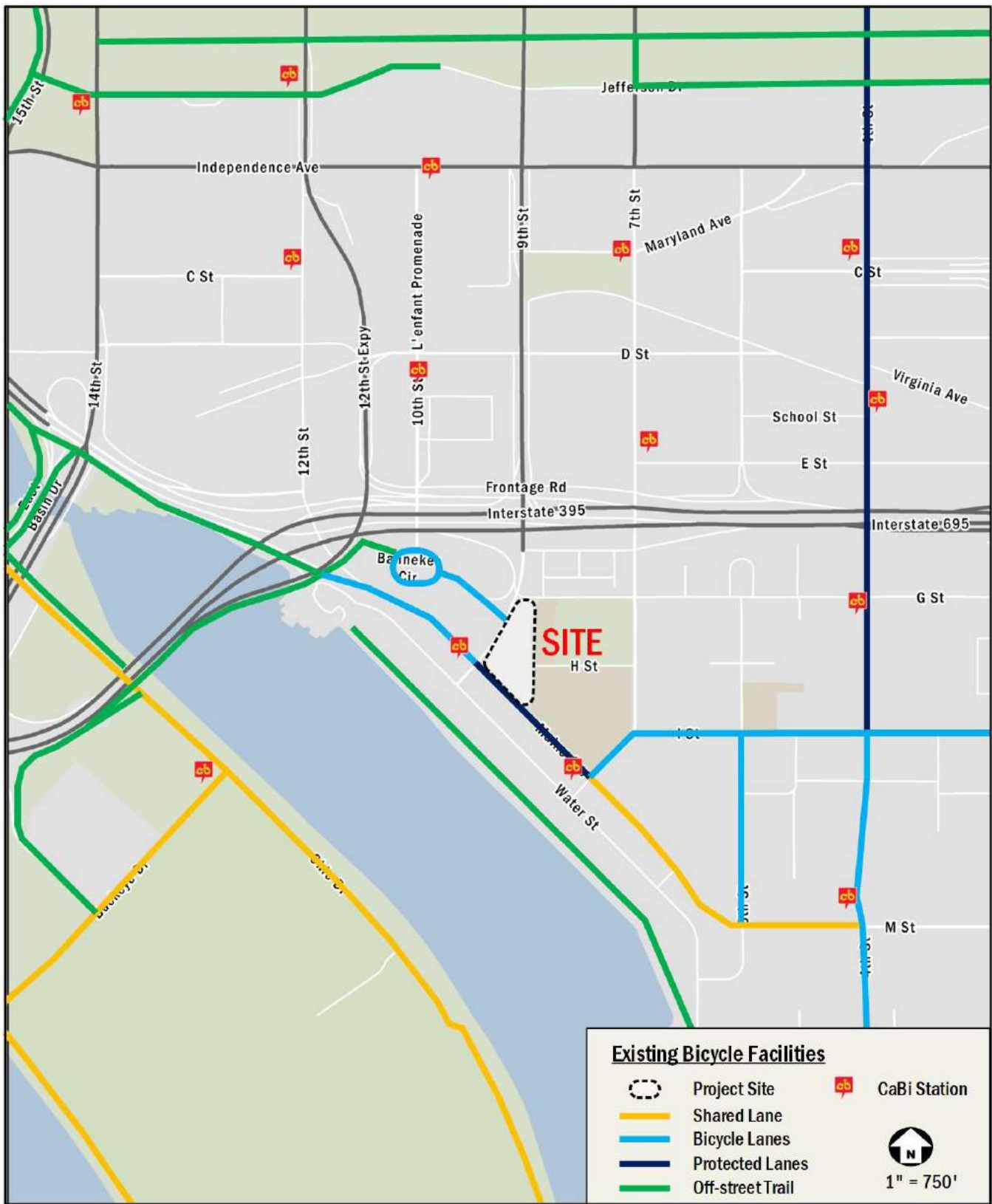


Figure 39: Existing Bicycle Facilities

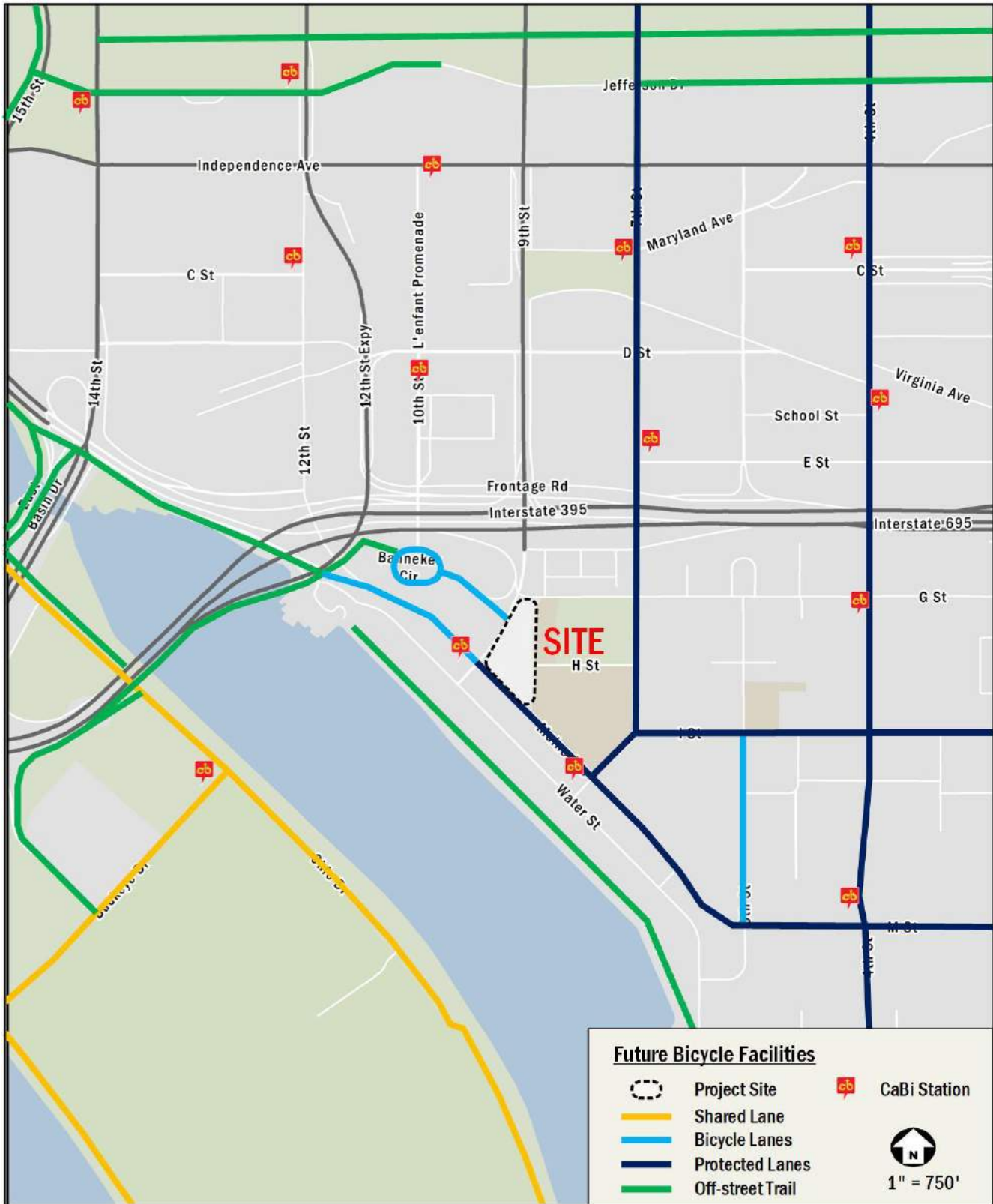


Figure 40: Future Bicycle Facilities

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 (2016-2018)*, *Vision Zero Action Plan*, and Open Data DC Vision Zero Safety data.

Based on available data, 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.

9th Street SW & Maine Avenue SW

In 2020, this was intersection ranked one of the top 100 most dangerous intersections by the crash composite index. 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.

Although all sidewalk crossings meet DDOT standards (high-visibility), the lack of median refuges, combined with the high volumes of traffic along Maine Avenue SW, contribute to the intersection's issues.

Although bicycle facilities exist along 9th Street SW (bike lanes) and on the southern side of Maine Avenue SW (via a cycletrack), there are no painted crossings for bicycles.

The 899 development would provide changes to this intersection, in the form of a repainted sidewalk crossing along the southern east-west crossing of 9th Street SW, as well as painted bike lanes for bicycles to cross Maine Avenue SW and access the cycletrack.

9th Street SW & G Street SW

Open Data DC's Crashes in DC dataset indicates this intersection as a high-crash location relative to other intersections in the District. This intersection operates as an unsignalized stop-controlled four-legged intersection with a unique arrangement.

Two southbound one-way legs approach from the north: from the northwest is the I-395 off-ramp, while from the northeast is 9th Street SW. G Street SW starts at this intersection and is a one-way eastbound street. 9th Street SW continues south of the intersection, with a channelized right-turn onto L'Enfant Plaza SW. 9th Street SW northbound is only a right-turn onto G Street SW with a significant median in between the northbound right-turn lane and southbound lanes.

Pedestrian crossings are fragmented by the series of medians, requiring up to three (3) separate crossings to cross 9th Street SW. The main east-west crossing of 9th Street SW is also located among free-flowing vehicles, beyond the stop-controlled intersection. Bicycle facilities, present on 9th Street SW south of this intersection, disappear.

Additionally, the I-395 off-ramp and 9th Street SW southbound approach create vehicular conflict zones, where both approaches may make left turns onto G Street SW (this movement sees significant levels of traffic volume from both streets). Although stop controlled, this can be difficult for vehicles to navigate.

This intersection will be reconstructed as part of the 899 Maine Avenue development's 9th Street Improvements. This will include the removal of the right-turn slip lane onto L'Enfant Plaza SW and the narrowing of the median between the southbound lanes and northbound right-turn lane on 9th Street SW. Pedestrian crosswalks will be moved closer to the intersection to make pedestrians more visible as well as making them part of the stop-controlled intersection. Bike lanes connecting to L'Enfant Plaza SW's existing bike lanes will be painted, with a crossing just south of the intersection (with the newly moved crosswalk)

There is also, through this project, the potential for the signalization of this intersection, giving the I-395 off-ramp and 9th Street SW separate phases for movement, in addition to giving pedestrians their own phase.

Conclusion

The following report is a Comprehensive Transportation Review (CTR) on behalf of Jair Lynch (the "Applicant") for the property located at Square 390, Lot 53 in southwest Washington, DC.

The purpose of this CTR is to evaluate whether the project will generate a detrimental impact to the transportation network surrounding the site. This report concludes that **the project will not have a detrimental impact** to the surrounding transportation network assuming the proposed site design elements and mitigation measures. The potential impacts of the PUD are mitigated via a Transportation Demand Management (TDM) plan and a Loading Management Plan (LMP), which are detailed in the CTR.

In addition to the mitigation provided by the TDM and LMP plans, the PUD includes a transportation benefit, a reconstruction of 9th Street adjacent to the property that incorporates safety and multi-modal benefits.

Proposed Project

The proposed site is located at 899 Maine Avenue SW, at the northeast corner of the intersection of Maine Avenue SW and 9th Street SW. The site is bounded by 9th Street SW to the west, Maine Avenue SW to the south, Jefferson Middle School Academy to the east, and G Street SW to the north. The site is currently home to a 94,385 square foot office building. The proposed mixed-use development program includes 495 residential units, 24,052 square feet of retail/grocery space, and 234 vehicular parking spaces.

Vehicular Access/Private Alley

Vehicular access to the attached parking garage is proposed from a new private alley on the eastern edge of the site. The private alley provides access to three facilities: (1) the ramp to the underground parking garage, with 234 vehicular parking spaces, and long-term bicycle parking room, (2) a singular large loading dock that can accommodate large trucks for the proposed grocery store tenant, and (2) a loading area serving all other uses in the building with two (2) 12' x 30' loading berths and one (1) 10' x 20' service/delivery space. All truck turning maneuvers will occur within the site along private roadways, allowing for head-in/head-out access to and from the public roadway network. The number of loading berths and service spaces meet all zoning and DDOT dimensional requirements.

The alley is proposed to operate with a right-in only driveway on Maine Avenue, and a right-in/right-out driveway on G Street SW.

This proposed site access represents a compromise between DDOT's standards for site access, ANC and other community stakeholder input, and the needs of the proposed grocery store tenant. Additional details on the alley, including the proposed Loading Management Plan (LMP), and signing and marking concepts reinforcing the desired circulation pattern, are included in the CTR.

The vehicular parking provided meets with 2016 zoning requirements, by providing 234 spaces relative to a requirement of 165 spaces.

Two pick-up/drop-off (PUDO) zones will be located for short-term vehicular operations: one along 9th Street SW for the residential entrance, and one along Maine Avenue SW for the retail entrance.

The proposed development will exceed the ZR16 zoning requirements and meet the minimums set by DCMR 18 Title 1214. The project will supply long-term bicycle parking in a secure location adjacent to the parking garage and short-term bicycle parking within and along the perimeter of the site near the building entrance. The vehicular and bicycle parking will also meet the practical needs of the project's residents.

9th Street Improvements

The PUD includes a transportation benefit, a reconstruction of 9th Street adjacent to the property that incorporates safety and multi-modal benefits. These improvements are detailed within the CTR, including a technical analysis demonstrating that these improvements are accomplished with minimal to no loss of vehicular capacity on 9th Street. Given District Department of Transportation (DDOT) approval of the improvements, the Applicant proposed to fund their construction as a PUD benefit.

Furthermore, this CTR explores the concept of installing a traffic signal at the intersection of 9th and G Streets SW. Since this intersection includes an off-ramp from an Interstate highway, it could not be approved through the CTR process, but this CTR includes an analysis of the concept, demonstrating its viability with the goal of providing DDOT and other necessary stakeholders information required to begin the process of approval and construction of the traffic signal.

Multi-Modal Overview

Trip Generation

The 899 Maine Avenue SW development is transit-, pedestrian-, and bicycle-oriented. The project is expected to generate new trips on the surrounding transportation network across all modes during the AM and PM peak hours.

The AM peak hour trip generation, when compared to existing uses, is projected to include 22 fewer vehicle trips per hour, 15 more transit trips per hour, 16 more bicycle trips per hour, and 43 more pedestrian trips per hour. The PM peak hour trip generation, when compared to existing uses, is projected to include 13 more vehicle trips per hour, 70 more transit trips per hour, 39 more bicycle trips per hour, and 125 more pedestrian trips per hour.

Transit

The development site is well-served by transit. It is located approximately 0.41 miles from the L'Enfant Plaza Metrorail station, 0.45 miles from the Waterfront Metrorail station, and is within one (1) mile of two other Metrorail stations. The site is also served by several major WMATA bus routes.

Several planned or proposed transit projects will improve transit access to the site, including nearby Transit Priority Corridors 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 service can accommodate these new trips.

Pedestrian

The site is surrounded by a well-connected pedestrian network. Despite some incidences of missing crosswalks or sidewalks that do not meet width standards, overall there is a well-connected pedestrian network surrounding the site. Sidewalks, crosswalks, and curb ramps along the perimeter of the site already meet DDOT and ADA standards.

The site is expected to generate a manageable number of pedestrian trips, and the existing pedestrian facilities can accommodate these new trips.

The proposed 9th Street improvements include several pedestrian improvements, including widened sidewalks along the east side of 9th Street SW, the consolidation of the east-west crossing of 9th Street SW as a single crosswalk (now part of the stop controlled intersection at 9th Street & G Street SW), and a

larger curb-bump out at the northwest corner of 9th Street & L'Enfant Plaza SW.

Bicycle

The site has access to several on- and off-street bicycle facilities.

Several planned and proposed bicycle projects will improve bicycle access to the site, including protected bicycle lanes along 7th Street SW, Maine Avenue SW, I Street SW, and M Street SW.

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

The development will include long-term bicycle parking within the parking garage and short-term bicycle parking along the perimeter of the site that meet DDOT and zoning requirements.

The proposed 9th Street improvements include several bicycle infrastructure improvements, including new bicycle lanes along 9th Street SW (connecting to the existing L'Enfant Plaza SW bicycle lanes), in addition to a new east-west bicycle lane crossing of 9th Street SW (with the modified crosswalk), and new crossing lanes for bicycles across Maine Avenue SW to connect to the existing cycletrack.

Vehicular

The site is accessible from minor arterial roadway Maine Avenue SW with nearby access to collector roads 9th Street SW and L'Enfant Plaza SW and Interstate 395. These roadways provide connectivity to I-295, DC-295, and the Capital Beltway (I-495), which provide for efficient travel around the Washington region.

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

The analysis concluded that the PUD will have a minimal influence on traffic capacity in the study area: only one (1) intersection requires mitigation measures through altered signal timings at the 7th & Maine Avenue SW intersection (removing one (1) second from the east-west movements and adding it to the north-south movements).

The 9th Street improvements show minimal change to traffic capacity in the study area. Thus, the safety and multi-modal benefits they provide come at relatively no cost to traffic capacity.

Additionally, the traffic signal concept at the intersection of 9th Street & G Street SW is viable from a traffic capacity standpoint, and DDOT should strongly consider advancing the idea towards implementation.

Summary and Recommendations

This report concludes that the proposed development will not have a detrimental impact on the surrounding transportation and roadway network assuming that all planned site design elements are implemented. The potential impacts of the PUD are mitigated via a Transportation Demand Management (TDM) plan and a Loading Management Plan (LMP), which are detailed in the CTR.

Additionally, the 899 Maine Avenue development has several positive design elements that minimize potential transportation impacts, including:

- Close proximity to transit, including the L'Enfant Plaza and Waterfront Metrorail stations;
- Access to existing bicycle infrastructure, including a cycletrack on Maine Avenue SW;
- A location within a well-connected pedestrian network;
- Secure long-term bicycle parking that meets zoning requirements; and
- Short-term bicycle parking spaces along the perimeter of the site that meets zoning requirements.

Finally, the PUD is proposing improvements to 9th Street SW as a PUD amenity that includes safety and multi-modal improvements including the following:

- Widened sidewalks along 9th Street SW
- New, shortened crosswalk across 9th Street SW
- Increased curb bump out at 9th Street & L'Enfant Plaza SW
- New bicycle lanes along 9th Street SW, connecting existing bicycle lanes at L'Enfant Plaza SW to existing cycletrack at Maine Avenue SW
- New pick-up/drop-off (PUDO) zone along 9th Street SW.

TECHNICAL DOCUMENTS