



Rock
Creek EAST ONE

Livability Study

December 2020

VISION
ZERO
SAFE STREETS FOR WASHINGTON, DC

d. WE ARE STRONGER GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

ACKNOWLEDGMENTS

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STAY CONNECTED



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INTRODUCTION

The District Department of Transportation (DDOT) embarked on the Rock Creek East I Livability Study (the “RCEI Study”) in 2018 to improve transportation safety and accessibility. The study area includes the neighborhoods of Takoma, Brightwood, Shepard Park, Colonial Village, Manor Park, and Lamond Riggs. Residents identified numerous safety concerns and quality of life issues created by speeding vehicles, multi-modal movement conflicts, incomplete infrastructure networks, confusing intersection geometry, and general congestion.

Supported by a robust public outreach process, DDOT led the RCEI Study with a multi-layered, data-driven approach to evaluate existing conditions and gain a complete understanding of transportation challenges and opportunities—enabling the team to recommend specific and implementable actions.

WHAT IS *Livability*?

'Livability' refers to a community's quality of life as experienced by the people who live, work, and recreate there. Strong, vibrant communities rely on the interplay among key development areas, including transportation, public health, housing, cultural resources, and the natural environment.

When it comes to transportation planning, livability studies examine opportunities in the public right-of-way to improve safety, access, and sustainability. Livability studies examine traffic calming from a network-perspective, rather than through isolated observations and analyses of individual intersections, blocks, or corridors. The principal focus of the study is on streets that serve the community, the ways residents move through their neighborhoods, and the public's concerns, rather than concentrating solely on principal arterials that move the highest volumes of vehicle traffic.

The District of Columbia's Livability Program

DDOT began the RCEI Study in 2018 as part of its Livability Program, a city-wide framework for improving livability and transportation for all residents. Using a proactive and robust public outreach approach, each livability study is informed by the unique needs of the neighborhoods which comprise the study area. The specific approach and recommendations of each study is tailored to these community-driven needs and desires.

As part of a livability study, DDOT assembles agency representatives along with stakeholders to find opportunities to collaborate and receive feedback on the process, data collection methods, and recommendation development. These opportunities for collaboration are identified at the onset of each project and help shape both the approach and final action items.



Livability aims to improve access to community resources and cultural amenities.

DDOT's Livability Program strives to achieve the following goals:

- » Develop neighborhood-wide comprehensive approaches for the implementation of traffic calming and operational improvements;
- » Identify issues that impact safety and comfort of pedestrians, bicyclists, transit riders, motorists, and freight deliveries;
- » Design cost-effective and measurable system improvements that benefit all users;
- » Reduce vehicle speeds where appropriate;
- » Identify and evaluate safety and access issues and solutions around public facilities such as: schools, parks, recreational centers, and community facilities;
- » Incorporate elements of Green Infrastructure (GI) to enhance stormwater management; and,
- » Enhance quality of life comfort for residents and visitors.

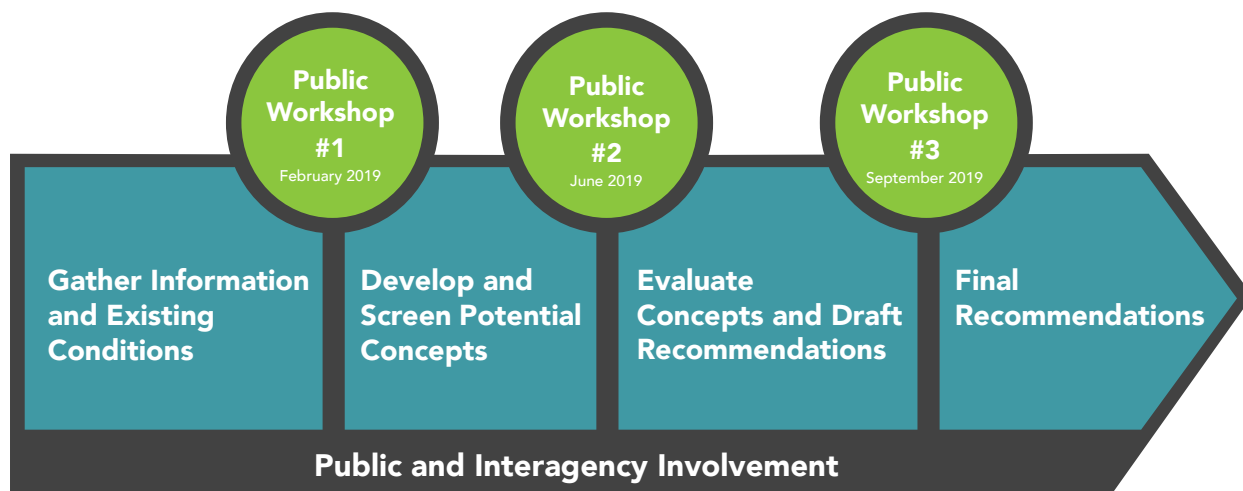


Figure 1. Study Process

Livability PROCESS

Livability studies are data-driven and analysis-based assessments; however, at their core, livability studies are guided by public input and engage multiple stakeholders throughout a participatory planning process. The project schedule and process, therefore, are built around a robust engagement plan.

To address transportation and livability concerns, DDOT collaborated with neighbors, community leaders, key stakeholders, and other government agencies. In a series of public workshops and pop-ups hosted by DDOT—and by reporting issues through DC 311 and Vision Zero channels—residents in the RCEI study area identified transportation accessibility and streetscape challenges, such as the improved bus facilities, upgraded sidewalks and safety concerns. The project team evaluated existing conditions of multi-modal traffic flows and identified tangible, on-the-ground improvements to foster safe and balanced management of the transportation network.

DDOT aggregated vehicle, bicycle, and pedestrian crash data, and Geographic Information Systems (GIS) infrastructure data with public comments to illuminate areas of concern and priority areas of need.

The measures developed by the team aim to maximize pedestrian and bicycle access, minimize impacts to residential neighborhoods, and promote efficient and safe operations for all modes within the study area.

Setting the stage for future improvements throughout the neighborhood, these key focus areas were vetted by the public and screened through DDOT’s performance metrics to become the benchmark design solutions included in this report.

With safety as the guiding principle, objectives of the Livability Study include:

- » Safely connect people to places
- » Improve movement predictability
- » Prioritize vulnerable road users
- » Create a sense of place to promote walking and biking
- » Develop area-wide modal networks

DEFINING OBJECTIVES + ACHIEVING GOALS WITH THE Livability TOOLKIT

To achieve the project goals, five objectives were defined. These thematic objectives, combined, acknowledge previous DDOT initiatives, establish a baseline of infrastructure improvements, and craft phasing strategies for implementing the recommendations.

Accompanying each objective is a toolkit of facilities and implementation strategies—all of which are geared toward improving safety and circulation.

Livability TOOLKIT



The tools listed under each objective are examples of tactics and countermeasures for addressing safety and accessibility challenges in RCEI. This Livability Toolkit will be referenced alongside the strategies presented in Chapter 3.

Table 1. Project Objectives and Toolkit

CONNECTIVITY

Provide safe transportation facilities that connect people to places.

- » Curb bulb-outs
- » Hardened centerlines (low rubber curbs used to restrict movement)
- » On-road bicycle infrastructure and protected bicycle lanes
- » Sidewalk improvements and connecting gaps in the sidewalk network
- » Bus stop facilities and improvements
- » Bicycle boulevards
- » Off-road bicycle trails
- » Signal phasing that promotes safety (e.g., leading pedestrian intervals)
- » High-visibility crosswalks
- » Pedestrian refuge islands

PREDICTABILITY

Improve the multi-modal environment to facilitate predictable movements and circulation patterns.

- » Multi-modal wayfinding
- » Roadway reorganization to provide clarity and facilitate user movements
- » Tools and devices (like Rectangular Rapid Flash Beacons, or RRFBs) to alert other roadway users of intended movement (e.g., when a pedestrian is about to enter a crosswalk)

PRIORITIZATION

Prioritize safety of vulnerable roadway users by managing vehicle speeds.

- » Chicanes
- » Lane reductions
- » Turning radius reduction
- » Recapturing and re-purposing excess roadway capacity (e.g., through tactical urbanism)
- » Bicycle and bus-friendly speed humps and tables
- » Visual corridor pinches (e.g., perceived narrowing to reduce speeds) with design and landscaping

PLACEMAKING

Promote pedestrian + bicycle trips using design elements that create a sense of place and ownership.

- » Tree canopy
- » Parklets and pocket parks
- » Gateways
- » Plazas
- » Lighting improvements
- » Short-term bicycle parking
- » Programmable event spaces
- » Vegetation and bioretention facilities
- » Public art, cultural, and characteristic enhancements

VISION

Develop a system-based network promoting user prioritization along designated corridors.

- » Design guidelines appropriate for each prioritized mode
- » Branded corridor marking and signage
- » System maps (i.e., bus routes, bicycle facilities, or sidewalk/pedestrian networks) of the community



EXISTING CONDITIONS & ASSESSMENT

Understanding a community requires a robust assessment process to analyze what has been done in the past, what conditions exist in the present, and what needs the future may bring. While a typical planning project will utilize some degree of subjective interpretation when identifying project sites, the RCEI Livability Study employed an alternative approach—one that leveraged a layered, more nuanced assessment

and tied data inputs directly to place in order to pinpoint areas of greatest need and apply a variety of livability tools to address existing challenges.

A multi-layered analysis approach was used in an effort to plan for future safe and connected multi-modal environments. The process involved a variety of methods that, when layered, reveal need and potential solutions. The assessment for RCEI involved:

- » Review of past plans;
- » GIS data analysis;
- » Field discoveries; and,
- » Public engagement.

THE FLASHLIGHT APPROACH

The RCEI study employed a comprehensive methodology to identify priority focus areas for improvement. The “flashlight approach” spotlights precise, geographic locations where multiple data-driven and community-reported challenges exist.

By spatially layering multiple data inputs, the team presented a targeted approach to assess need and identify priority areas for recommendations and safety improvements.

This approach is the organizing element around which this chapter has been structured. Following an overview of the study area, the flashlight input layers includes:

- » Review of past plans;
- » Assessment of the neighborhood composition (including demographic data and a summary of amenities available to the community);
- » Existing conditions analysis;
- » Summary of public engagement; and
- » Flashlight assessment mapping.

Ultimately, these inputs informed the final flashlight areas map, revealed on page 49.



STUDY AREA

The approximately 3.5 square mile RCEI study area is shown in Figure 2. The RCEI study area is defined by Rock Creek Park and the Maryland state border to the West; Eastern Avenue to the North; New Hampshire Avenue NE and the Red Line Metro tracks to the East; and Military Road NW, Missouri Avenue NW, and Riggs Road NE to the South. Located directly north of Fort Totten and Catholic University, the study area includes the eastern half of Ward 4 and comprises much of the Advisory Neighborhood Commission (ANC) 4A and ANC 4B. The study area also includes the neighborhoods of Takoma, Brightwood, Shepard Park, North Portal Estates, Colonial Village, Manor Park, and Lamond Riggs.

The RCEI study area is a gateway into the District from Maryland, served by two north-south principal arterial streets, 16th Street NW and Georgia Avenue NW. The north-south arterial streets and railroad/Metro tracks noticeably divide the neighborhoods and their character

and surrounding amenities. East-west travel is facilitated mainly by collector streets and local neighborhood streets.

The area is composed of thriving residential neighborhoods and well-defined commercial corridors. For example, Takoma, a neighborhood in the RCEI study area, has hundreds of homes within walking or bicycle-riding distance to several commercial business corridors that include grocery stores, pharmacies, post offices, restaurants, and a brewery; numerous schools, including Coolidge High School and the Takoma Education Campus; the Takoma Aquatic Center; the Takoma Park Neighborhood Library; and the Takoma Metro Station.

Figure 2. Regional Context Map

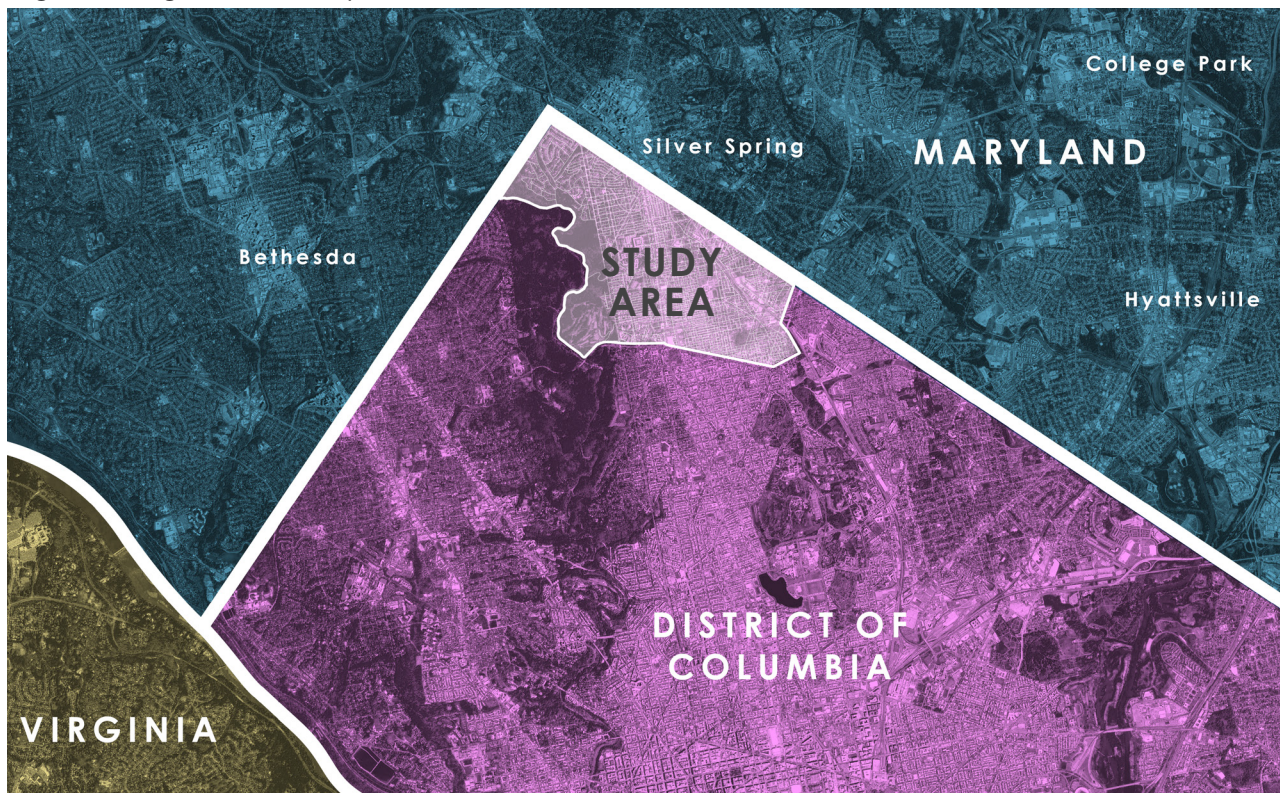




Figure 3. The Rock Creek East I Study Area

WHAT'S BEEN DONE BEFORE?

DDOT has completed several studies and design efforts addressing challenges related to safety and transportation. These existing plans and design solutions set the baseline for this Livability Study.

Network and policy recommendations from the documents listed here were used to create the study area base map and set the stage to apply the Livability Toolkit options within the study area. A summary of key recommendations are included on the map and table found on this and the adjacent page.

LEGEND

- ⋯⋯⋯ moveDC Planned Trail
- - - - - moveDC Planned Cycle Track
- moveDC Planned Bicycle Lane
- - - - - Corridor evaluation of Blair Road/Eastern Ave NW between Piney Branch Rd NW and Georgia Ave NW
- Analysis of Aspen St NW between 16th St & Georgia Ave NW
- Manor Park Neighborhood Traffic Safety Study
- 16th Street Bus Lanes Project
- Ohcv Solom Pedestrin Safety and Accessibility Report
- The Parks at Walter Reed Small Area Plan



Figure 4. Previous Plans + Studies

Table 2. Relevant Plans

OVERVIEW OF RELEVANT PLANS
<u>DDOT SAFETY PROJECTS</u>
<p><u>MANOR PARK SAFETY STUDY:</u> Beginning in fall 2018, this study was initiated to address pedestrian safety concerns in the southern portion of the Manor Park neighborhood, from Riggs Road NE north to McDonald Place NE, and from North Capitol Street east to 1st Street NE.</p>
<p><u>ASPEN STREET, SANDY SPRING ROAD, AND WILLOW STREET IMPROVEMENTS:</u> In February 2019, potential safety improvements were presented for Aspen Street NW where Sandy Spring Road NW and Willow Street NW converge. The identified opportunities for improvements included flexipost-delineated curb bulbouts, repainted centerline, new crosswalk and ADA ramps, removal of unclear traffic signage, and removal of a portion of on-street parking.</p>
<p><u>3RD STREET, WHITTIER STREET, BLAIR ROAD IMPROVEMENTS:</u> In February 2019, DDOT released recommendations for short- and long-term improvements at the intersections of 3rd Street NW and Blair Road NW and 3rd Street NW and Whittier Street NW. Improvements included signage, flexiposts, and painted yellow centerline to square 3rd street at Blair Road. Long-term improvements would construct a permanent bulbout.</p>
<p><u>BLAIR ROAD, CEDAR STREET, AND 4TH STREET INTERSECTION IMPROVEMENTS:</u> The intersection improvements were identified to improve safety and reduce conflicts between the many different roadway users, including cars, buses, bicyclists, and pedestrians. The improvements, scheduled to be completed by spring 2020, will convert 4th Street NW to a one-way street southbound and reconfigure the Blair Road and Cedar Street intersection to minimize vehicle and bicycle/pedestrian conflicts and upgrade existing infrastructure. Improvements include reconstructing the pavement, median, and sidewalk sections; widening the roadway to provide adequate turning movements for WMATA buses; upgrading traffic control devices, streetlights and utility lines; and installing new low impact stormwater management facilities and green planting areas.</p>
<p><u>BLAIR ROAD AND PINEY BRANCH IMPROVEMENTS:</u> Evaluating crash data, and peak hour volumes, this initiative identified safety concerns at the intersection of Blair Road NW and Piney Branch Road NW to identify intersection treatments. Improvements included curb bulbouts, flexipost-delineated curb extension, and travel/turn lane striping.</p>
<p><u>TAKOMA METRO ENTRANCE INTERSECTION IMPROVEMENTS:</u> DDOT assessed the safety concerns for vehicles, pedestrians, and bicyclists at the intersection of Carroll Street NW, Cedar Street NW, and the Takoma Metro Station entrance. This effort was initiated in response to concerns about safety for pedestrians at the intersection. Modifications are being proposed to clarify operations and increase safety for all users at the intersection. Improvements include flexipost and paint lane narrowing, painting to designate no-parking areas, an extended median, and a reconfiguration of loading and parking areas.</p>

OVERVIEW OF RELEVANT PLANS

ONGOING DDOT PROJECTS

REHABILITATION OF ASPEN STREET NW: This effort aims to provide an improved and sustainable transportation network, pedestrian /vehicular safety and accessibility, efficient travel options and street and sidewalk enhancement, etc. in advance of development at the Walter Reed Army Medical Center project. The project area includes a 0.5-mile long section of Aspen Street NW from Georgia Avenue NW to 16th Street NW and will support The Parks at Walter Reed by improving traffic operations and providing traffic calming measures towards future Walter Reed development ensuring ADA compliance throughout the corridor.

REHABILITATION OF EASTERN AVENUE NE: This design process is evaluating opportunities along Eastern Avenue NE, from New Hampshire Avenue NE to Whittier Street NW, with the intent to rehabilitate or reconstruct Eastern Avenue NE; replace deteriorated sidewalk, curb, gutter including intersection design of New Hampshire Avenue NE to improve pedestrian safety; access and visibility at all intersections; replace deteriorated catch basins and manholes; and introduce public realm improvements along Eastern Avenue from New Hampshire Avenue NE to Whittier Street NW.

16TH STREET CIRCLE: Spanning the District/Maryland line, the 16th Street Circle has been slated for improvement. The area has undergone engineering studies to identify safety improvements at the circle, which brings 16th Street NW together with North Portal Drive NW, Eastern Avenue NW, and Colesville Road.

METROPOLITAN BRANCH TRAIL (MBT): A planned 8-mile trail that runs from Union Station to Silver Spring, Maryland. Following the Metropolitan Branch Line of the Baltimore and Ohio (B&O) Railroad, the trail passes through numerous vibrant and historic neighborhoods as well as connection to the National Mall. The MBT is an important transportation route providing connections to homes, work, and play as well as access to seven Metro stations, including the Takoma station within the RCEI study area.

TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2015-2017): This report is a compilation crash statistics and analyses for roadways in the District of Columbia during the period 2013 through 2015. The data covers all roadway classifications and is critical for identifying safety problems and trends, as well as for determining the level of success in achieving highway safety goals of the District Department of Transportation.

THE PARKS AT WALTER REED DEVELOPMENT COORDINATION: The RCEI Livability study has coordinated with the redevelopment project at the former Walter Reed National Military Medical Center. The Parks at Walter Reed project aims to create a vibrant, mixed-use community and is anticipated to attract pedestrians, bicyclists, and drivers to the area.

Continued from previous.

OVERVIEW OF RELEVANT PLANS

OHEV SHOLOM PEDESTRIAN SAFETY AND ACCESSIBILITY REPORT (2018)

Ohev Sholom - The National Synagogue was concerned for the safety of their 1,000+ member congregation, whose religious tradition it is to walk on Shabbat Friday to Saturday, and on holidays. The synagogue engaged a consultant to study pedestrian safety and accessibility issues surrounding their campus. The 2018 report identifies specific locations for improvements, such as sidewalk expansion and repair, traffic calming, and the removal of sidewalk obstructions from the middle of sidewalks.

DDOT VISION ZERO ACTION PLAN (2015)

By the year 2024, the District of Columbia aims to reach zero fatalities and serious injuries to travelers of our transportation system through more effective use of data, education, enforcement, and engineering. The Vision Zero Action Plan identifies strategies and actions that the District will pursue to create safe streets, protect vulnerable users, and prevent dangerous driving.

MOVEDC MULTI-MODAL LONG-RANGE TRANSPORTATION PLAN (2014)

MoveDC, the District of Columbia's multi-modal long-range transportation plan, articulates a vision for the District's future transportation network centered on livability, sustainability, and economic competitiveness. The plan identifies specific locations for investments in bicycle trails, bicycle lanes, cycle tracks and transit investments in the study area.



WHO LIVES IN ROCK CREEK EAST I?

NEIGHBORHOOD COMPOSITION

The Rock Creek East I Study Area is within Ward 4, roughly bounded by Military Road, Missouri Avenue on the southwest, New Hampshire Avenue on the southeast, Eastern Avenue on the northeast and Rock Creek Park on the west. The area is predominantly characterized by detached single-family dwellings, with clusters of duplexes, rowhouses and low-rise apartment complexes along the southern edge of the area. Georgia Avenue/US 29 is the primary commercial district and consists of a mix of pedestrian and auto-centric stores, including a Wal-Mart Supercenter. The western edge is dominated by Rock Creek Park with its many hiking and walking trails. Between 16th Street and Georgia Avenue, just north of Aspen Street is the former Walter Reed Medical Center, a 66-acre campus that is currently being redeveloped into the Parks at Walter Reed, a mixed-use development with housing units, retail, and a hotel. An industrial corridor parallels the railroad adjacent to Blair Road. The area is served by the Takoma Metrorail station, as well as several north-south Metrobus routes running along 16th Street, 14th Street, 5th Street and Georgia Avenue. There is also an east-west bus route running along Military Road/Missouri Avenue. The majority of streets have sidewalks but some gaps do exist and conditions vary.

Demographic Overview

The study area's geography—defined by key roadways and community features—does not align perfectly with existing political or demographic boundaries. Therefore, multiple geographic regions were used to collect demographic data that would paint a portrait of the communities of Rock Creek East I.

When using American Community Survey (ACS) data to collect census information about the local population, the nine (9) census tracts that are either completely within the study area or have a significant portion within the study area, shown in Figure 5, were used as the geographic scope.

Using the geographic boundary of D.C.'s Ward 4, additional data was collected from the DC Health Matters Collective, which reports on community health indicators. The Rock Creek East I study area is only a portion of, but falls completely within, Ward 4.

As data have been collected from multiple sources with inconsistent geographic boundaries, the research is understood to be suggestive only.

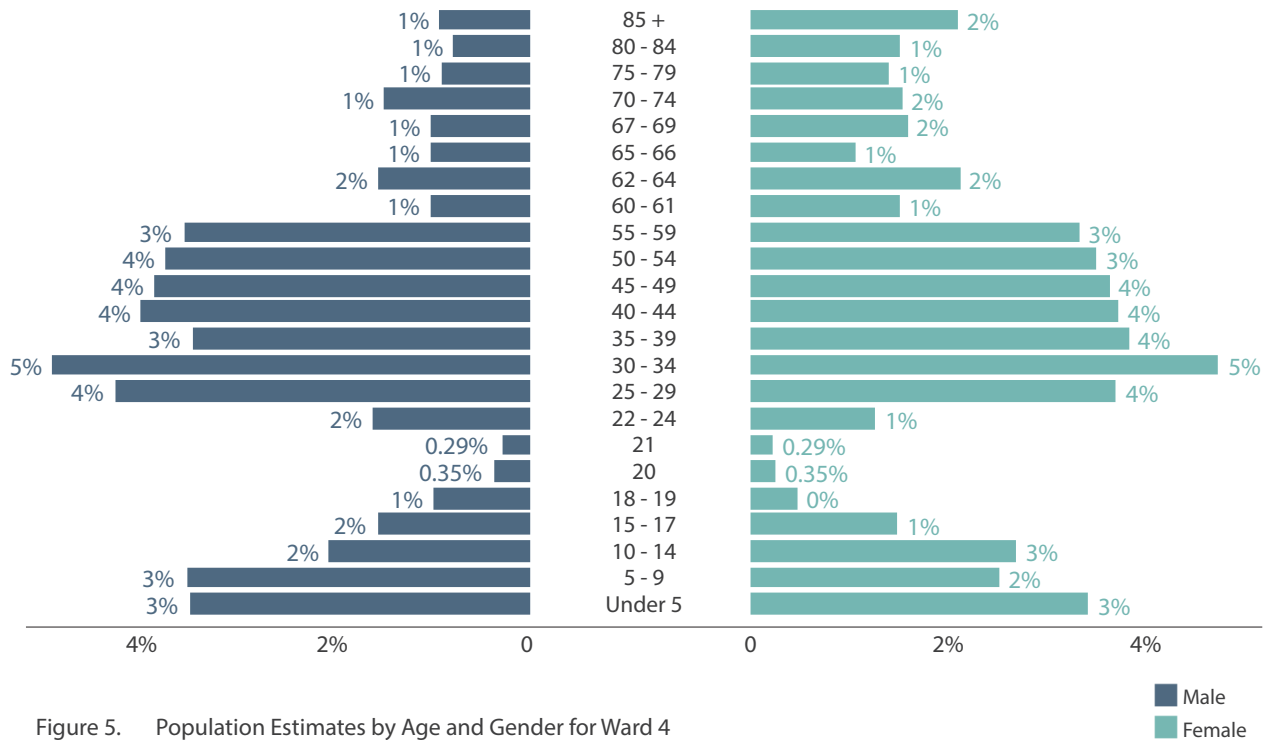


Figure 5. Population Estimates by Age and Gender for Ward 4

Source: U.S. Census Bureau, American Community Survey (ACS) 5-Year Estimates, 2013-2017

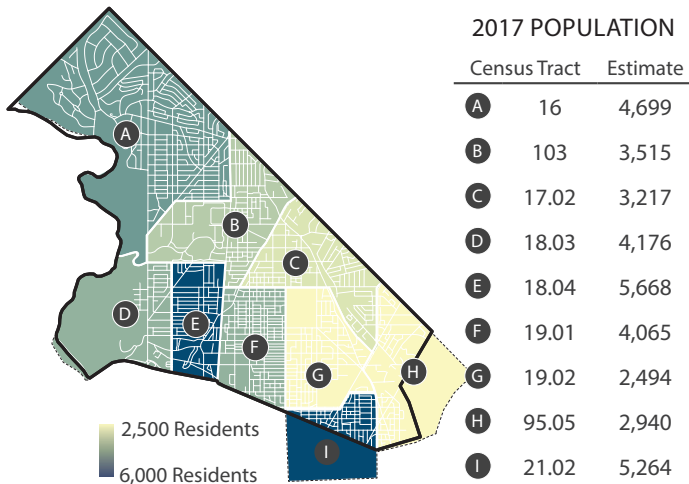


Figure 6. Population by Census Tract (Labeled)

Source: S0101, U.S. Census Bureau, American Community Survey (ACS) 5-Year Estimates, 2013-2017

POPULATION CHARACTERISTICS & AGE

According to the 2017 ACS five-year estimates, the Rock Creek East I Study Area is home to an estimated 36,038 residents. Of that, 21% are 17 years old or younger, 5% are age 18 to age 24, and 59% are age 25 to age 64. Persons age 65 and or older comprise 15% of the area's total population. These two large age groups—youth and seniors—are important to consider when proposing livability improvements as they're among the most vulnerable when it comes to transportation.

POPULATION GROWTH + DEVELOPMENT

Ward 4 has experienced slightly slower growth than the city as a whole, growing 12.5% between 2010-2019, while overall city growth was 18.1%. This rate of growth is expected to increase in the future due to upcoming development projects within the study area. The 66-acre Parks at Walter Reed, for instance, is currently being rehabilitated

into a new, mixed-use development with retail and residential space. Traffic patterns will evolve with changes in development. As such, recommendations later in this report have considered these anticipated impacts and will require further coordination with the development to identify and implement recommendations.

RACIAL COMPOSITION

A community's racial makeup often plays a role in shaping the local social network and is an important factor to take into consideration when planning for equity and inclusivity. Ward 4 is approximately 48% black, 30% Caucasian, and 2% Asian, with 20% identifying as some other race.

INCOME + EDUCATIONAL ATTAINMENT

Residents in the RCEI Study Area are living relatively comfortably, compared to the District as a whole. At \$88,544, the median household income of Ward 4 is approximately 6% higher than that of the District as a whole, and only 7.8% of families in Ward 4 are living in poverty. Nearly half of the residents have a bachelor's degree or higher.

JOURNEY TO WORK

An estimated 50% of working residents in the area drive alone to work, while 7% carpool, and another 33% take transit. Just 2% walk to work, and just over 1% use a bicycle. An estimated 5.5% of residents work from home, while fewer than 1% use a taxi, motorcycle, or other means to commute to work.

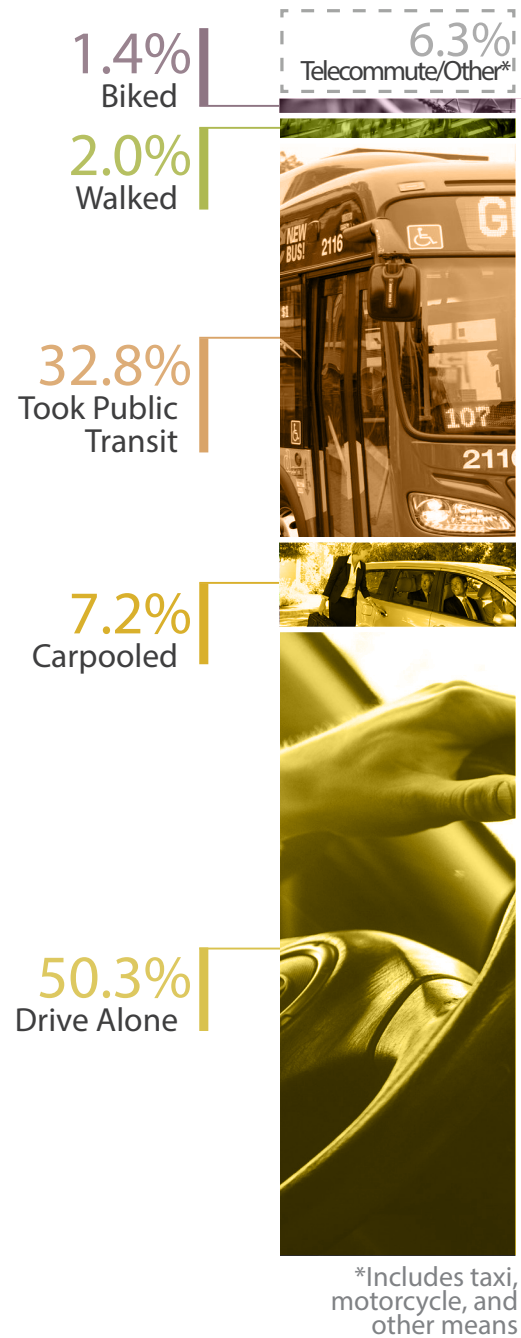


Figure 7. Mode of Travel to Work

Source: S0801, U.S. Census Bureau, American Community Survey (ACS) 5-Year Estimates, 2013-2017

The demographic characteristics captured above drive public outreach tactics and provide a typical profile of the people who live, work, and play in the area.

This profile supports the importance of providing connectivity to key destinations and jobs via a safe multi-modal network.

COMMUNITY FEATURES AND TRIP GENERATORS

The project team conducted an informal inventory of community assets and amenities, noted below.

LIBRARIES AND COMMUNITY FACILITIES

The area is served by one fire station, two libraries, and three post offices. The headquarters for the Fourth District Washington, D.C., Metropolitan Police Department is along Georgia Avenue.

SCHOOLS

There are schools in the study area, including the Takoma Education Campus, Coolidge High School, the District of Columbia

International School, the Latin American Montessori Bilingual Public Charter School, the Lowell School, and the Milton Gottesman Jewish Day School.

NEIGHBORHOOD-SERVING RETAIL

A primary retail area serving the neighborhood is Georgia Avenue/US 29. Near the southern edge of the study area is a Safeway grocery store, CVS pharmacy, a Family Dollar, and a large pedestrian-oriented Wal-mart Supercenter.

PARKS, RECREATION CENTERS, AND GREEN SITES/AMENITIES

Parks and recreational opportunities abound in the area, including three recreation centers with multi-use fields, playgrounds, and basketball and tennis courts. Takoma Community Center includes an Aquatic facility. In addition to Rock Creek Park, which has multiple walking and hiking trails, there are several other parks in the area, including Fort Stevens, which contains the remains of a Civil War era fort.

There are a number of “green” community sites, including a handful of community gardens, green buildings, schoolyard conservation sites at local schools, green roofs (such as the one at the Latin American Montessori School (LAMB)), and the Rock Creek park Nature Center.



Figure 8. Community Features



WHAT IS IT LIKE IN ROCK CREEK EAST?

EXISTING CONDITIONS ANALYSIS

Previous and concurrent planning initiatives tell a story of the RCEI Study Area's evolution. Coupled with a thorough evolution of existing conditions, this livability study helps set the stage for a holistic opportunity to address safety and access challenges in the Study Area.

The project team evaluated the area through multiple lenses—from experiential assessments to a more technical analysis. The six summaries below were formed after cataloging existing features, evaluating sidewalk and roadway conditions, observing behavior, and analyzing spatial data.

During this stage of assessment, field teams walked the main corridors and observed the state of infrastructure, presence of businesses, and qualities of the landscape—recognizing the strengths while taking note of challenges. Photos from these field visits are cataloged on pages page 22 through page 26. Multi-modal field assessments and transit access assessments, along with more in depth traffic analyses, can be found in Appendices A and B.



The field visits captured photos, like the one above of 16th Street NW and Geranium Street NW, to document existing conditions.



Figure 9. Sidewalk Network Gap Analysis
 DATA SOURCES: DCGIS Open Data; DDOT



Pedestrian Safety, Accessibility, + Connectivity

Most area streets have pedestrian sidewalks. However, there are a few gaps in the network. Additionally, the existing sidewalk network is sometimes in poor condition. For example, sidewalk surfaces are in need of repair, movement is blocked by obstructions, crosswalk markings are faded or missing, or there is a complete absence of signalized crossings where they would significantly improve safety.



Beyond gaps in the sidewalk network, there are some locations in the study area that provide sidewalks but lack other pedestrian connectivity elements, such as high visibility crosswalks or ADA-compliant curb ramps (pictured above at North Capital Street NE and Kennedy Street NE).

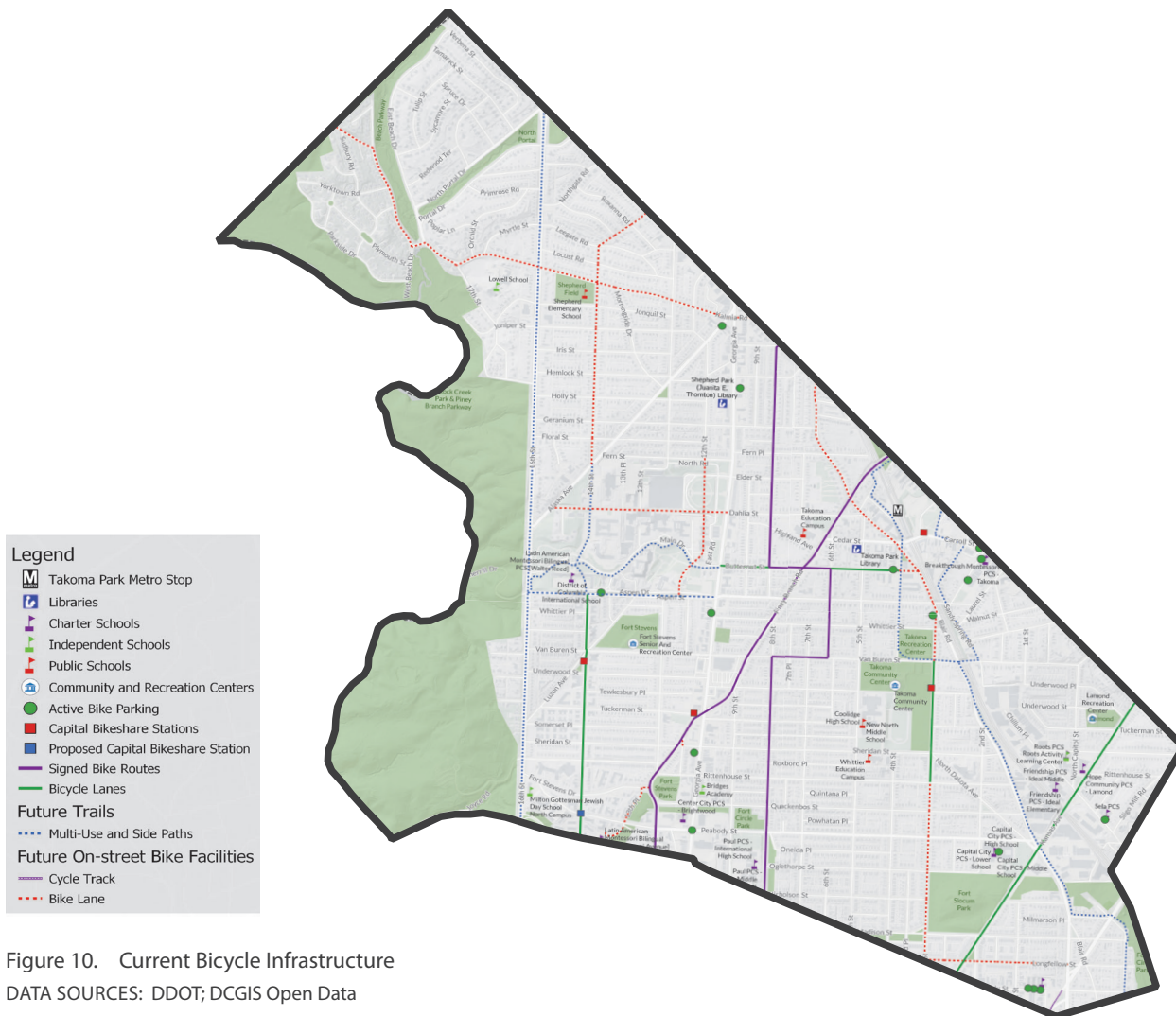


Figure 10. Current Bicycle Infrastructure
 DATA SOURCES: DDOT; DCGIS Open Data



Bicycle Network

The existing bicycle network in the study area is comprised of signed bicycle routes, bicycle trails, and on-road bicycle lanes. Movement is primarily accommodated north-south, with the only existing east west facility located on a segment of Butternut Street NW, providing access to the Takoma Metrorail station. DDOT’s bicycle conditions assessment notes major roadways in the study area as being in primarily fair condition, with the major north-south corridors south of Aspen Street having good conditions,

and corridors in the northwestern area are noted more often in fair or poor condition. Typical challenges include poor pavement quality, faded or missing lane markings, illegal vehicle parking, and intersections that are perceived to be unsafe. The future extension of the Metropolitan Branch Trail and bicycle network illustrated in the MoveDC Plan will improve connectivity and fill gaps in the overall bicycle network.



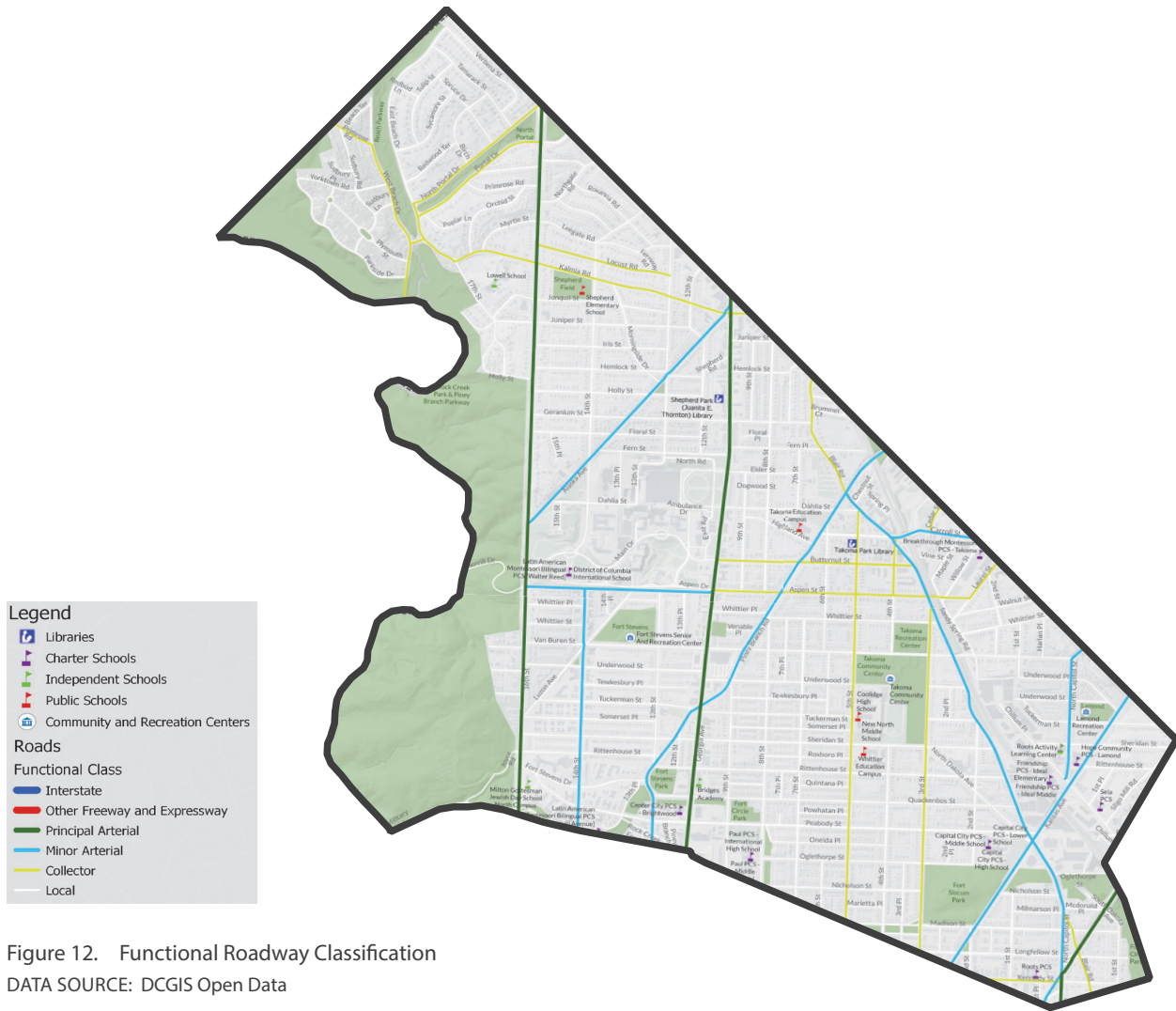
Transit Access

The area is served by multiple WMATA Metrobus routes.

- » METROBUS REGULAR ROUTE: E4, K6, S2, S4, 52, 54, 70
- » METROEXTRA ROUTE: K9, S9, 59, 79
- » METROBUS LOCAL ROUTE: F1, F2, R1, R2, 62, 63, 64
- » METROBUS COMMUTER ROUTE: K2
- » SCHOOL ROUTES: D31, D34, W45

Existing bus stops are typically marked by a flag, while some stops feature a shelter, seating, and/or other amenities. Most stops are accessible by

sidewalk; in some places, however, sidewalks are missing near Metrobus stops. This is particularly true along the northern segment of 16th Street NW, along Eastern Avenue, and around the Georgia Avenue NW/Piney Branch Road NW intersection. The Takoma Metrorail Station is located within the Study Area, and the Metrorail red line connects through the eastern edge of the Study Area. The Fort Totten Metrorail station is located to the south, just a four minute walk outside the study area boundary.



Traffic + Traffic Safety

The RCEI study area is a gateway from Maryland into the District of Columbia. Movement is directed primarily onto 16th Street and Georgia Avenue, which are the only north-south principal arterials through the study area. Military Road, Missouri Avenue, Riggs Road, and New Hampshire Avenue are principal arterials that frame the study area to the south and southeast.

Some recognized challenges include wide lanes and limited visibility—creating safety concerns at crossings; faded lane and crosswalk markings; narrow medians; and potentially unsafe, un-signalized intersections. Areas of concern include streets near schools, parks, and community centers.



Stormwater Management + Green Infrastructure

Typical green infrastructure projects for District streets include bioretention, or rain garden facilities; landscape areas; permeable pavement; and pavement reduction. These facilities are not currently widespread across the study area. At present, green amenities typically include sidewalk street tree pits with decorative fencing and planting strips at the edges of roadways. Opportunities do exist to implement green infrastructure within spaces in bulbouts and in areas where the travel-way may be narrowed to calm traffic and accommodate green stormwater management.

Green Infrastructure (GI) is the living network that connects landscape areas, natural areas, and waterways.

The “Sustainable DC Plan,” adopted in 2013, sets long-range goals for making the District the greenest city in the nation. The plan calls for increasing green infrastructure in the public right-of-way (ROW) and taking actions to improve the health of the city’s waterways.

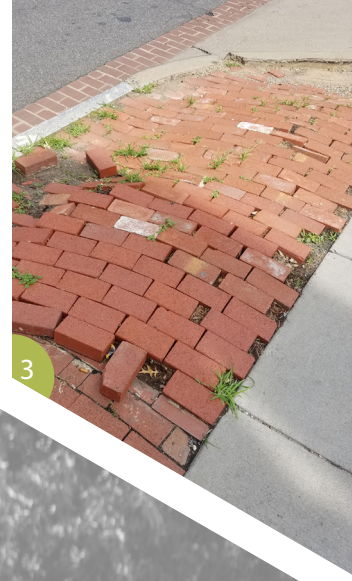


Placemaking + Public Art

Placemaking is an approach to creating public spaces which reflect community culture through a local identity and an expression of liveliness. In Rock Creek East I, the strongest “sense of place” is portrayed near natural amenities (such as Rock Creek Park) and in key commercial corridors with pedestrian spaces, murals, and art. On a smaller scale, schools and community facilities are incorporating art and gardens which engender a sense of pride among the residents. In general, these expressions are limited within the study area, meaning there’s opportunity to introduce art and placemaking features throughout.

The D.C. Public Art Master Plan (2009) encourages public art to be “woven into the District’s civic and community fabric.” While some public art pieces exist, this plan encourages exploration of art in particular opportunities throughout the study area, including the future Met Branch Trail; opportunities at WMATA Metro Station entrances; strategically on or along major streets; within triangles, circles, and squares; and at community facilities, such as libraries, recreation centers, and schools.

A pictorial summary of existing conditions continues on the following pages.



PEDESTRIAN
SAFETY, ACCESSIBILITY,
+ CONNECTIVITY — TYPICAL CONDITIONS

Damaged sidewalk may pose accessibility concerns

Missing bus stop amenities, including trash can, bench, and shelter

Loose brick pavers, uneven sidewalk

Sidewalk obstructed, particularly for people on wheelchairs; does not meet ADA requirements

Obstructed sidewalk (on both Blair and Piney Branch)

Narrow sidewalk



1 | Alaska Avenue NW between Kalmia Road NW & Juniper Street NW; 2 | Georgia Avenue NW and Juniper Street NW; 3 | Georgia Avenue NW between Geranium Street NW & Hemlock Street NW; 4 | Blair and Piney Branch; 5 | 14th and Aspen; 6 | Blair Road NW and Piney Branch Road NW

BICYCLE NETWORK — TYPICAL
CONDITIONS

Illegally parked cars in marked crosswalk,
Poor pavement quality
Faded or missing lane markings
Intersection safety concerns



1 | Bike lane markings, looking northwest from 12th Street NW and Eastern Avenue NW; 2 | Blair Road NE and New Hampshire Road NE; 3 | 14th and Tewkesbury Place NW; 4 | Georgia Avenue NW and Piney Branch Road NW; 5 | Cyclist heading north, Georgia Avenue NW at Piney Branch Road NW; 6 | Capital Bikeshare station at 14th Street NW and Luzon Avenue NW; 7 | 14th Street NW and Tuckerman Street NW



1



2

TRANSIT ACCESS — TYPICAL CONDITIONS

Access to shelter and bus pads and ADA ramps partially blocked by obstructions

Bus stop lacks benches and/or shelter

Buses have difficulty merging back into travel lanes at pull-over stops



3



4



5



6



1 | Looking south on Georgia Avenue at Eastern Avenue; 2 | Bus stop at Georgia Avenue NW and Juniper Street NW; 3 | Southbound bus stop at 16th and Aspen; 4 | Georgia Avenue NW and Geranium Street NW; 5 | Southbound bus stop at New Hampshire and Longfellow; 6 | Bus stop at 14th Street NW and Underwood Street NW



1



2



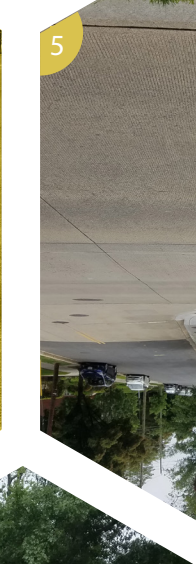
3



4



5



TRAFFIC +
TRAFFIC CALMING — TYPICAL
CONDITIONS

Missing crosswalks

Wide lanes and limited visibility create safety concerns at uncontrolled crosswalks

Faded crosswalk markings

Missing tactile pad at crosswalk ramp

Medians do not meet ADA requirements for pedestrian waiting area



6



7

1 | Alaska Avenue NW and Georgia Avenue NW; 2 | Blair Road NE, New Hampshire Avenue NE, and Longfellow Street NE; 3 | North Capitol Avenue NW and New Hampshire Avenue NW; 4 | North Capitol Street NW and Milmarson Place NW; 5 | 16th Street NW and Holly Street NW; 6 | 16th Street NW and Hemlock Street NW; 7 | 14th Street NW and Somerset Place NW



PLACEMAKING
+ PUBLIC ART —
TYPICAL CONDITIONS

Murals painted on buildings
throughout the neighborhood

Community gardens create places to gather
and strengthen a sense of ownership

Cafe seating brings life to the
sidewalk environment

Plantings provide shade, color, and
character to streetscapes



WHAT ARE PEOPLE SAYING ABOUT ROCK CREEK EAST 1?

COMMUNITY OUTREACH

DDOT and the project team worked extensively with members of the community and key stakeholders to identify specific opportunities to improve accommodations for people walking, biking, using wheelchairs, riding transit, driving, and making deliveries in the study area.

Outreach Methods

A variety of methods were utilized to notify the community and to capture community and stakeholder thoughts and reactions. Community organizations, elected officials, residents, community news outlets, and civic

and faith-based organizations were informed of meetings through phone calls, e-mail blasts, social media, and door-to-door canvassing. Methods of contact included phone calls, e-mail blasts, social media, door to door canvassing, and participation in community meetings.

PRINTED MATERIALS

The outreach team distributed door hangers in advance of each public meeting—600 for the first public meeting, 500 for the second, and another 500 for the third and final public meeting. Additionally, posters were distributed throughout the area, including 31 posters (25 in English, 4 in Spanish, and 3 in Amharic) for the first public meeting, 30 posters for workshop two (in English only, as the team learned from the first outreach effort that most of the Ethiopian and Hispanic businesses preferred English materials for their customers, a majority of whom were English-speaking), and 50 posters for the third public meeting.

The door-hangers and posters were placed in libraries, recreation centers, churches, restaurants, cafes, grocery stores, businesses, resident homes and other community spaces around the study area.



Outreach included flyers and marketing materials were printed in multiple languages, including Spanish (pictured left) and Amharic.



PROJECT WEBSITE

Throughout the study planning process, the planning team received comments through the website or direct emails. Emailed comments covered a range of topics or multiple topics related to the study recommendations. Emails also provided community members who were not able to attend the public workshops and opportunity to address issues and receive a response to questions about the study or recommendations.

ELECTRONIC COMMUNICATIONS

The outreach team created a project contact list that included interested residents and stakeholders who signed up on the project website, with their ANCs, and other neighborhood and community organizations and listservs. This list included over 100 contacts. Information regarding public workshops, project updates, and materials were forwarded to these constituents.

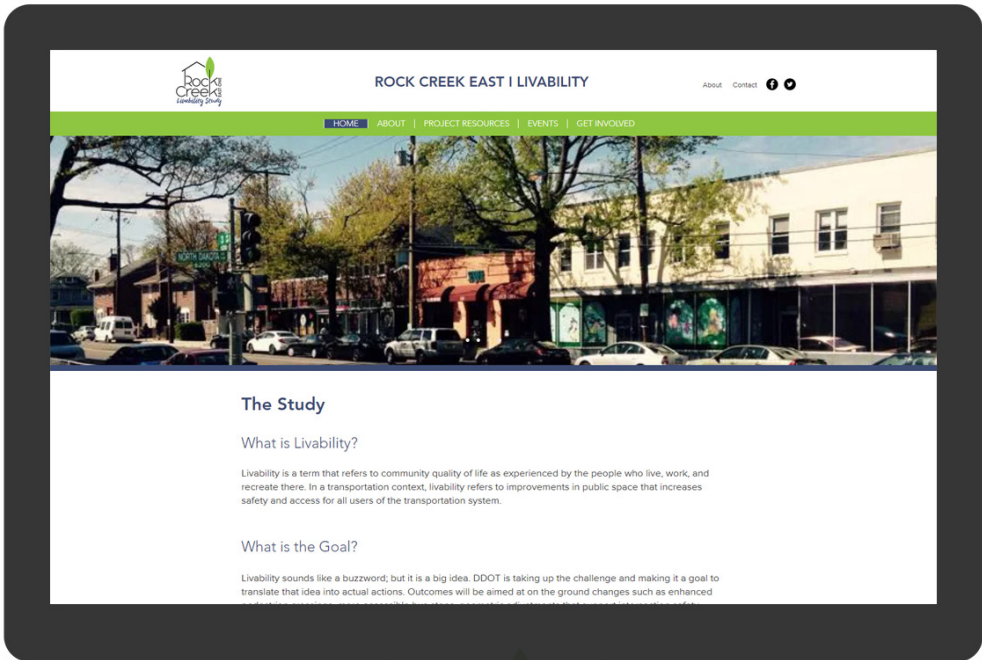


Figure 13. Project Website Homepage

Utilizing the DDOT and VisionZeroDC Twitter and DDOT Facebook profiles, workshop information was posted regularly up to and on the meeting date. Posting through these platforms allowed us to reach approximately 45,350 followers. In addition information was also posted on neighborhood and transportation-oriented listservs and NextDoor.

ADDITIONAL OUTREACH

In addition to going door-to-door to distribute information about the Livability Study, the team reached out to community institutions such as schools, churches, community centers, and small businesses (in and around the study area). Key locations in the study area were identified for their ability to serve native Amharic and Spanish speaking populations to ensure we reached a broad cross section of Title VI populations.

ENGAGEMENT TOUCHPOINTS

Engagement touchpoints included a project website, the distribution of printed materials, use of electronic and online communications channels, several inter-agency meetings, a Community Advisory Committee, and a series of public participation touchpoints.

INTER-AGENCY MEETINGS:

The project team engaged District government stakeholders in an RCEI Inter-agency Steering Committee that was composed of DDOT divisional representatives (particularly staff focused on safety, operations, and roadway design), the District Office of Planning, and WMATA. This Committee helped to identify and coordinate ongoing projects within the study area and helped to vet and provide critical input into the concept and final design recommendations as part of the study.

Table 3. Outreach Locations

COMMUNITY CENTERS	CHURCHES	SCHOOLS
Petworth Recreation Center	Seekers Church	Coolidge High School
Fort Stevens Recreation Center	Trinity Episcopal Church	Whitter Education Campus
Emery Heights Community Center	Washington Metaphysical Church	Lasalle Backus Education Campus
Takoma Park Neighborhood Library	National Spiritual Science Center	Brightwood education campus
Juanita E. Thornton/Shepard Park	Nineteenth Street Baptist Church	Takoma Education Campus
Hamilton Recreation Center	The Church of Jesus Christ Latter Day	Barnard Elementary School
Upshur Recreation Center	Mt. Zion Baptists Church	West Education Campus
Raymond Recreation Center	Star of Bethlehem Church of God in Christ	Theodore Roosevelt Center City Public Schools
Parkview Recreation Center	Evangelical Church Apostles	MacFarland Middle School
	Nativity Catholic Church	Raymond Education Campus
	Emory United Methodist Church	Washington Yu Ying
	Holy Comfort Episcopal Church	

COMMUNITY ADVISORY COMMITTEE:

The Rock Creek East I Study Community Advisory Committee (CAC) was formed to help extend the planning process and expand the reach of the team's engagement efforts. CAC members included representatives from Advisory Neighborhood Council (ANC) Single Member Districts in the study area (from areas 4A and 4B) as well as the DC Pedestrian Advisory Council and DC Bicycle Advisory Committee. CAC members were critical in providing feedback at project milestones and helping to provide additional outreach prior to public engagement workshops.



Public Outreach

Public participation included three public workshops and an engagement pop-up event, each scheduled around major project milestones.

PUBLIC WORKSHOP 1

The first public workshop was held from 6:30 pm to 8:30 pm on Wednesday, February 6, 2019, at the Juanita E. Thornton/Shepherd Park Library. The purpose of the workshop was to identify existing issues and opportunities for safer and more accessible multi-modal travel. The project team provided context for the overall project goals, objectives, study process, and transportation analysis.

Workshop boards and activities allowed residents to review existing multi-modal conditions, identify challenges and opportunities in the study area by marking on maps and discussing

their concerns with DDOT staff and the project consultant team.

Feedback from the first public workshop facilitated the refinement of conceptual-level recommendations that were based on the team's initial area assessment.

PUBLIC WORKSHOP 2

The second public workshop was held on Wednesday, June 12, 2019, at the Holy Comforter Episcopal Church 6:30 pm to 8:30 pm. DDOT presented the Livability Study's initial focus areas, which were based on comments received from the previous community outreach efforts as well as extensive data research and analysis. Public workshop attendees had an opportunity to evaluate and share their ideas for specific livability design improvements within these focus areas through interactive workshop activities.

This project relied heavily on input provided by the community. This information came from DC 311 requests or Vision Zero comments (both gathered from the DC Government's Open Data DC Portal), and input collected at project public meetings and website.

POP-UP EVENT

Following the second public workshop, a pop-up event was held on Saturday, June 29, 2019, from 10 am to 12 pm in front of the Safeway on Piney Branch Road. This location was chosen due to its proximity to the intersection of Piney Branch Road and Georgia Avenue, which was identified as a particularly challenging intersection in the study's existing conditions analysis. The purpose of the pop-up was to provide opportunities for local residents to give additional feedback on the initial focus areas and input on the project.

PUBLIC WORKSHOP 3

The final public workshop for the RCEI Livability Study was held on Monday, September 9, 2019 from 6:30 pm to 8:30 pm at the Metropolitan Police Department – Fourth District. At this workshop, DDOT presented draft recommendations for safety and traffic calming solutions and solicited reactions regarding these strategies. Those recommendations were based on previous public comments from the first and second workshops, the summer pop-up, and comment submissions from the website.



Attendees view and discuss concepts at the third public meeting.



Figure 14. Sample Concept Boards from Public Meeting 3

COMMENTS ON MAPS

During all three public workshops and the pop-up event, boards and maps were on display to help attendees understand the study goals, process, and existing conditions and, ultimately, final recommendations. Meeting participants were encouraged to comment on the boards using post-it notes. The planning team collected over 50 comments from these efforts.

Community Outreach Takeaways

The feedback gained through community outreach efforts aided in the development, refinement, and selection of final recommendations for short-, medium-, and long-term improvements to positively impact livability in the RCEI study area.

Connectivity:

- » Improved bus facilities
- » Upgraded sidewalks and pedestrian + bicycle facilities
- » Improved connections to schools and parks

Safety:

- » Safer crossings for pedestrians and bicyclists
- » Control of speeding
- » Enhanced personal safety
- » Access and visibility for motorists
- » Better traffic and safety enforcement

- » Better traffic signage (e.g., stop signs)
- » Reconfigured key intersections
- » Additional street lights and traffic signals

Placemaking

- » Traffic calming improvements
- » Minimal impact to available on-street parking
- » Ongoing maintenance of street/streetscape



I walk everywhere
and want to be able to
continue to enjoy doing
that.

School kids are here!
Kids and fast traffic
don't mix!



REVEALING AREAS OF FURTHER EXPLORATION

DEFINING THE FLASHLIGHT AREAS

With the existing conditions data analysis and initial public input completed, the next step for the project team was to identify priority areas for additional analysis and recommendation development. Developing a clear and effective process to prioritize areas for potential treatments was key to ensuring that future project implementation would have a large impact on existing safety and livability challenges. The sections below reveals the data- and human-driven process by which “flashlight” maps were developed to identify potential focus areas.

Layering Data and Revealing Areas of Need

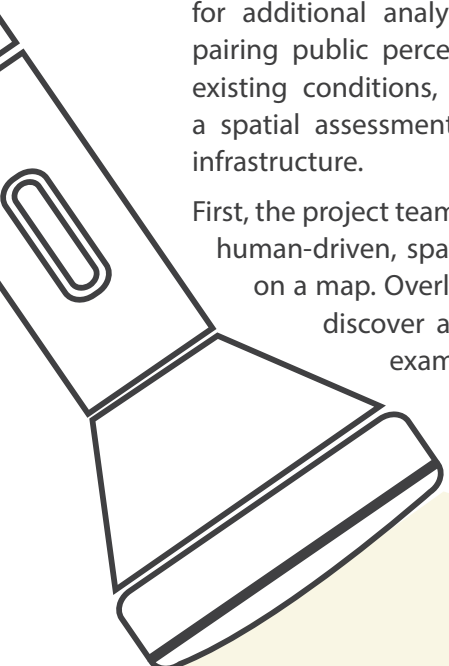
The “Flashlight Overlay” analysis technique (Figure 15) was used to identify priority areas for additional analysis and improvement. By pairing public perceptions with hard data on existing conditions, statistics on crashes, and a spatial assessment of existing features and infrastructure.

First, the project team determined key data- and human-driven, spatial information to overlap on a map. Overlapping this data helped to discover areas of greatest need. For example, areas where gaps in

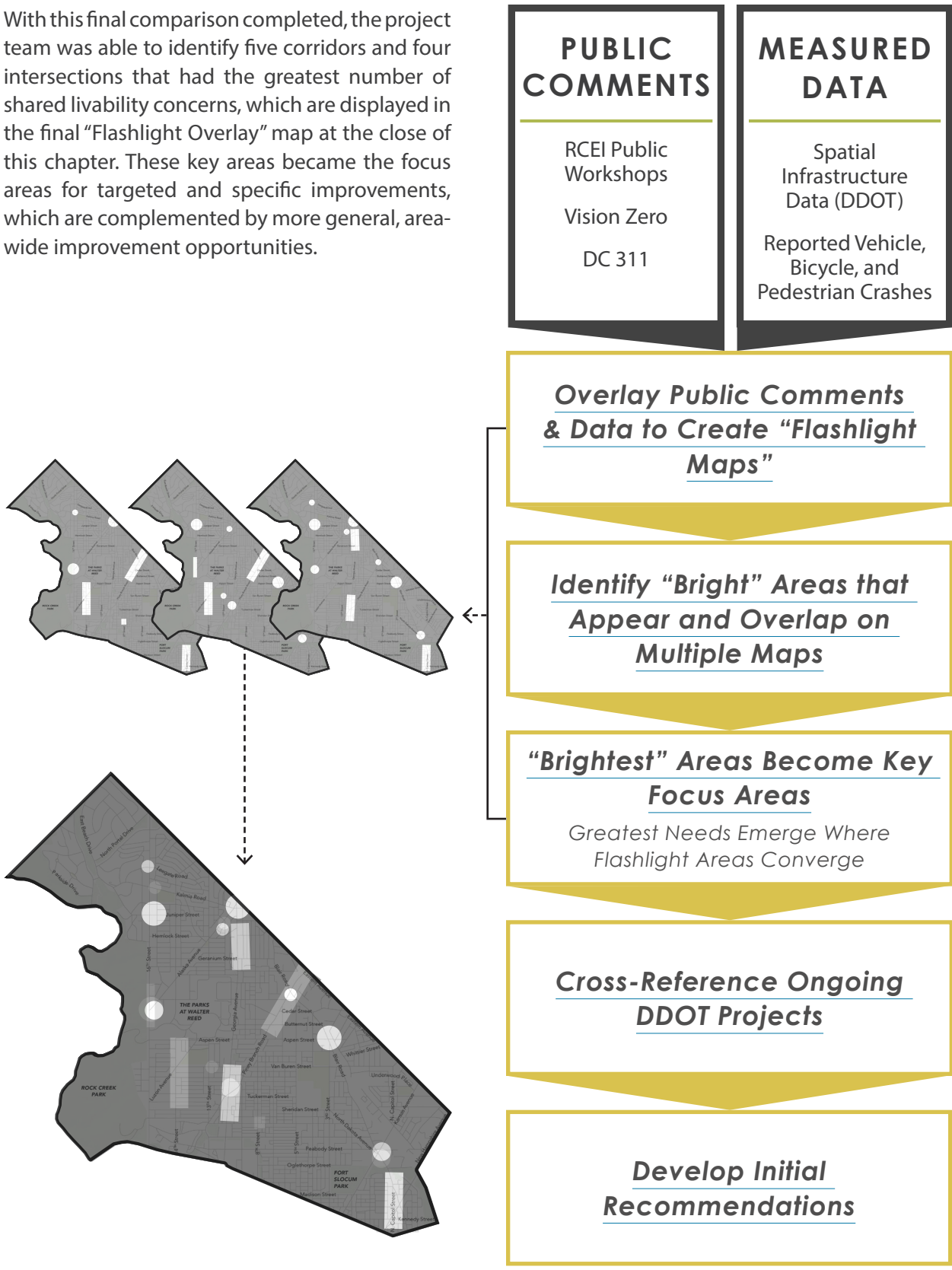
the bicycle network overlap with bicycle crashes indicate a potential need for a new facility. The analysis evaluated a number of inputs, ranging from DDOT geographic information system (GIS) spatial infrastructure data, Metropolitan Police Department (MPD) of the District of Columbia crash data, public input from project outreach efforts, and DC 311 and Vision Zero comments.

During the overlay process, areas that were identified on multiple “flashlight” maps (Figure 16 through Figure 21) appeared the “brightest” on the final overlay map as a result of being under multiple flashlight sections. Thus the project team was able to identify several preliminary priority corridors and intersections based on the brightest areas on the initial “Flashlight Overlay” map.

To finalize the focus areas, the project team added one final layer containing all ongoing DDOT projects. If any of the initial priority areas were directly overlapping or within close proximity to an ongoing project, they were eliminated from the list of potential focus areas. Issues identified in these overlapping areas were identified and being addressed by prior DDOT study recommendations.



With this final comparison completed, the project team was able to identify five corridors and four intersections that had the greatest number of shared livability concerns, which are displayed in the final “Flashlight Overlay” map at the close of this chapter. These key areas became the focus areas for targeted and specific improvements, which are complemented by more general, area-wide improvement opportunities.



PUBLIC COMMENTS

RCEI Public Workshops
 Vision Zero
 DC 311

MEASURED DATA

Spatial Infrastructure Data (DDOT)
 Reported Vehicle, Bicycle, and Pedestrian Crashes

Overlay Public Comments & Data to Create “Flashlight Maps”

Identify “Bright” Areas that Appear and Overlap on Multiple Maps

“Brightest” Areas Become Key Focus Areas
 Greatest Needs Emerge Where Flashlight Areas Converge

Cross-Reference Ongoing DDOT Projects

Develop Initial Recommendations

Figure 15. Selection method for Flashlight Areas and Recommendations



PEDESTRIAN CRASHES + SIGNALIZED INTERSECTIONS

MAP DEVELOPMENT OVERVIEW

To begin analyzing the various safety and livability issues in the Rock Creek study area, data from the MPD and DDOT Crash Data (2016-2018) and Signalized Intersection GIS layers was assembled and analyzed by the project team. The primary goal was to identify major crash locations and determine if there were overwhelming concentrations and connection between observed conditions and infrastructure data at specific locations. Areas with higher concentrations could indicate long pedestrian crossing distances, short pedestrian crossing cycles, or issues with vehicular sight lines and approach angles. Potential improvements for the identified areas included traffic calming devices, pedestrian signal timing modifications, and geometric modifications to reduce crossing distances and improve visibility.

Livability **TOOLKIT**

The tools below are potential solutions for solving pedestrian safety challenges at or near signalized intersections.



Pedestrian Crosswalks



Curb Bulb-outs



Pedestrian Signals



Pedestrian Refuges

Areas of Need

The following intersections and corridors were identified for further study and potential livability treatments:

- » 14th Street NW Corridor from Military Road NW to Aspen Street NW
- » Kansas Avenue NW and Blair Road NW / Peabody Street NW / North Dakota Avenue NW Intersection
- » North Capitol Street Corridor from Missouri Avenue NW to Milmarson Place NW
- » Kennedy Street NW at 1st Place NW



- Pedestrian Crashes, 2016-2019
- Signalized Intersections

Figure 16. Pedestrian Crashes + Signalized Intersections Flashlight Map Highlighting Areas of Need

DATA SOURCES: MPD + DDOT Crash Data, 2016-2018; DCGIS Open Data



PEDESTRIAN CRASHES + SAFETY COMMENTS

MAP DEVELOPMENT OVERVIEW

The project team compared the same MPD and DDOT Crash Data (2016-2018) of the previous analysis (Figure 16) to public safety comments obtained from DC 311, Vision Zero studies, and public-safety related comments from public meetings. This was synthesized into a heat map and compared to specific pedestrian crash locations.

The project team identified several areas where these two data sets overlapped as places for potential traffic calming treatments. Additionally, the analysis identified areas of concern perceived by local residents despite a lack of crash data, which may indicate the need for additional signage and physical infrastructure treatments.

Livability **TOOLKIT**

The tools below are potential solutions for solving pedestrian safety challenges at or near signalized intersections.



Accessible Facilities



Curb Bulb-outs



Pedestrian Crosswalks

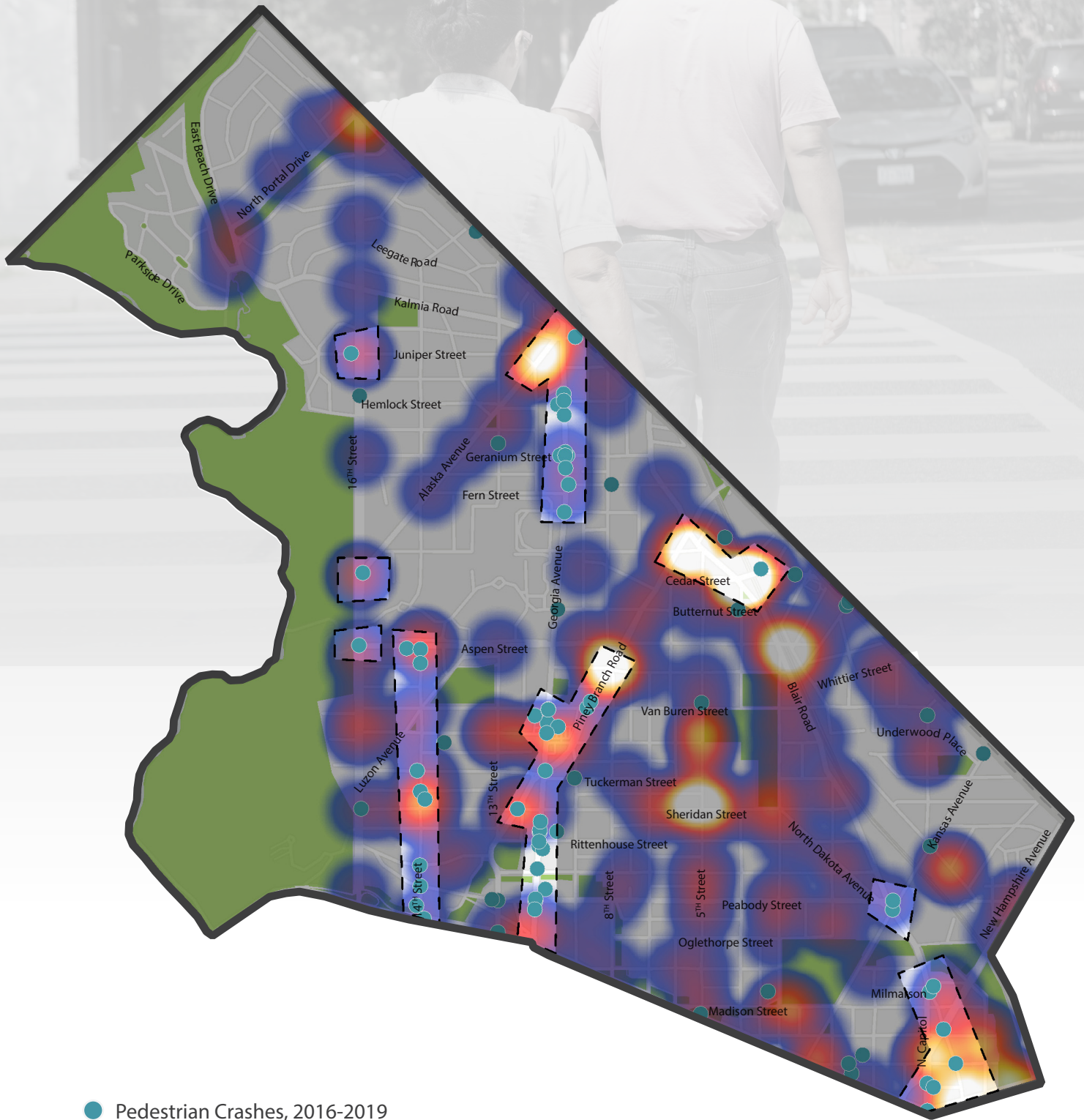


Pedestrian Refuges

Areas of Need

The following intersections and corridors were identified for further study and potential livability treatments:

- » 14th Street NW Corridor from Peabody Street NW to Aspen Street NW
- » 16th Street NW at Aspen Street NW and Alaska Avenue NW
- » Georgia Avenue NW Corridor from Peabody Street NW to Van Buren Street NW
- » Georgia Avenue NW Corridor from Elder Street NW to Alaska Avenue NW
- » Piney Branch Road NW Corridor from Sheridan Street NW to Whittier Street NW
- » Blair Road NW Corridor from Piney Branch Road NW to Cedar Street NW
- » 16th Street NW and Juniper Street NW



● Pedestrian Crashes, 2016-2019

PUBLIC COMMENTS RELATED TO SAFETY

■ Sparse
■ Dense

Figure 17. Pedestrian Crashes + Safety-Related Comments Flashlight Map Highlighting Areas of Need

DATA SOURCES: MPD + DDOT Crash Data, 2016-2018; DC 311 Comments; VisionZero Comments



NIGHTTIME PEDESTRIAN CRASHES + STREET LIGHTS

MAP DEVELOPMENT OVERVIEW

Adequate neighborhood lighting is a livability issue that has a major bearing on public safety and quality of life. To analyze the current lighting and associated safety ramifications, MPD and DDOT Crash Data (2016-2018) was overlaid on street light GIS mapping to determine if pedestrian crashes were correlated to a lack of street lighting.

By reviewing the resulting map (Figure 18), the street lighting coverage appears to be adequate throughout the entire study area. However, the project team did note a large number of crashes along Georgia Avenue, even in the well-lit areas, which may suggest a need for modified lighting, maintenance of existing lighting, or other environmental design modifications such as traffic calming, high visibility crosswalks, or other geometric modifications to help reduce the number of incidents.

Livability TOOLKIT

The tools below are potential solutions for solving pedestrian safety challenges at or near signalized intersections.



Lighting



Pedestrian Signals



Pedestrian Refuges

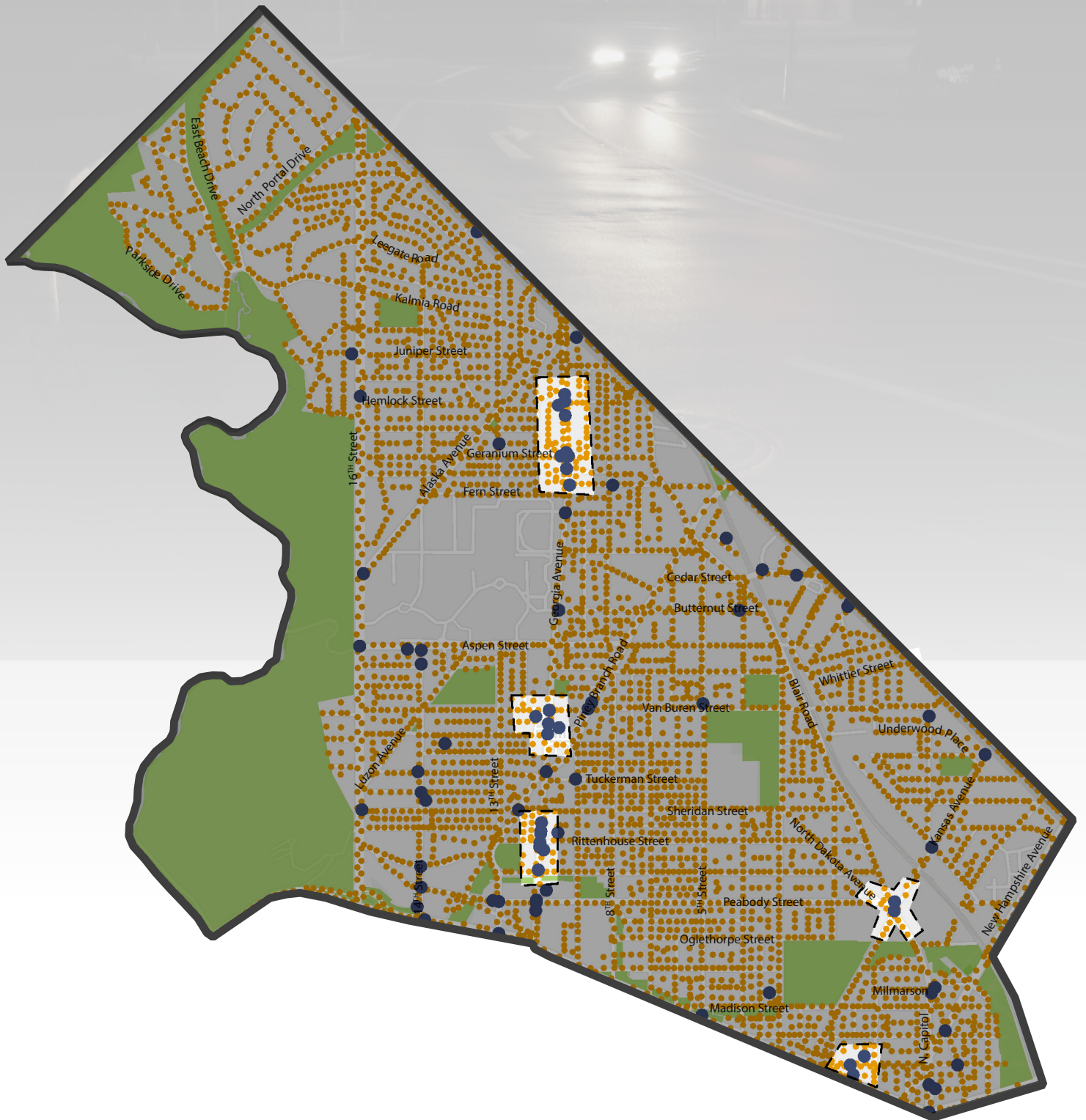


Curb Bulb-outs

Areas of Need

The following intersections and corridors were identified for further study and potential livability treatments:

- » Kansas Avenue NW and Blair Road NW / Peabody Street NW / North Dakota Avenue NW Intersection
- » Kennedy Street NW at 1st Place NW
- » Georgia Avenue NW Corridor from Fern Street NW to Shepherd Street NW
- » Georgia Avenue NW at Van Buren Street NW and Underwood Street NW
- » Georgia Avenue NW Corridor from Quackenbos Street NW to Sheridan Street NW



- Pedestrian Crashes at Night, 2016-2019
- Street Lights

Figure 18. Nighttime Pedestrian Crashes + Street Lights Flashlight Map Highlighting Areas of Need
 DATA SOURCES: MPD + DDOT Crash Data, 2016-2018; DCGIS Open Data



SIDEWALK GAPS + TRANSIT STOPS

MAP DEVELOPMENT OVERVIEW

The Rock Creek East I study area is currently well served by transit, including WMATA Metro Bus service and the WMATA Metrorail Red Line. One of the key livability factors for local residents is how easily they can access existing transit facilities as pedestrians or bicyclists.

Although sidewalks are typically present throughout, a comparison of existing sidewalk gap data from the Open Data DC Portal to Metro and bus station data revealed key gaps in the sidewalk network, particularly toward the northern portion of the 16th Street NW corridor. These missing connections limit the safety and accessibility of the transit system for local users and require sidewalk expansion and ramp improvements to address the existing system gaps.

Livability TOOLKIT

The tools below are potential solutions for solving pedestrian safety challenges at or near signalized intersections.



Sidewalks



Accessible Stops



Accessible Facilities



Shelters

Areas of Need

The following intersections and corridors were identified for further study and potential livability treatments:

- » Portal Drive NW at 16th Street NW
- » 17th Street NW/Holly Street NW at 16th Street NW
- » Leegate Road NW/Primrose Road NW at Fernway Road Street NW/16th Street NW
- » Piney Branch Road NW at Tuckerman Street NW and Sheridan Street NW
- » McDonald Place NE and South Dakota Avenue NE at New Hampshire Avenue NW



- Sidewalk Gaps
- Metro Bus Stops

Figure 19. Sidewalk Gaps + Metro/Bus Stops Flashlight Map Highlighting Areas of Need
 DATA SOURCES: Sidewalk Gaps and Metro Bus Stops, Open Data DC Portal GIS Shapefile



BICYCLE CRASHES + BICYCLE FACILITIES

MAP DEVELOPMENT OVERVIEW

The Rock Creek East I community is well-served by the existing bicycle network, including several bike lanes, cycle tracks, and shared-use paths. The project team analyzed crash data from the Open Data DC Portal overlaid on the existing bicycle network to identify high-crash areas and determine if any particular facilities had large accident concentrations or if the absence of a facility with the presence of bicyclists warrants the addition of a bike lane or more separated facility.

The majority of the high-crash areas were located in areas without dedicated bicycling infrastructure. In areas where crashes were identified along existing facilities, further evaluations were conducted to determine if upgrading the existing infrastructure or modifying the current road design would eliminate the user conflict, sight-line issues, or other hazardous conditions.

Livability TOOLKIT

The tools below are potential solutions for solving pedestrian safety challenges at or near signalized intersections.



Bicycle Facilities



Marked Buffers



Vertical Separation

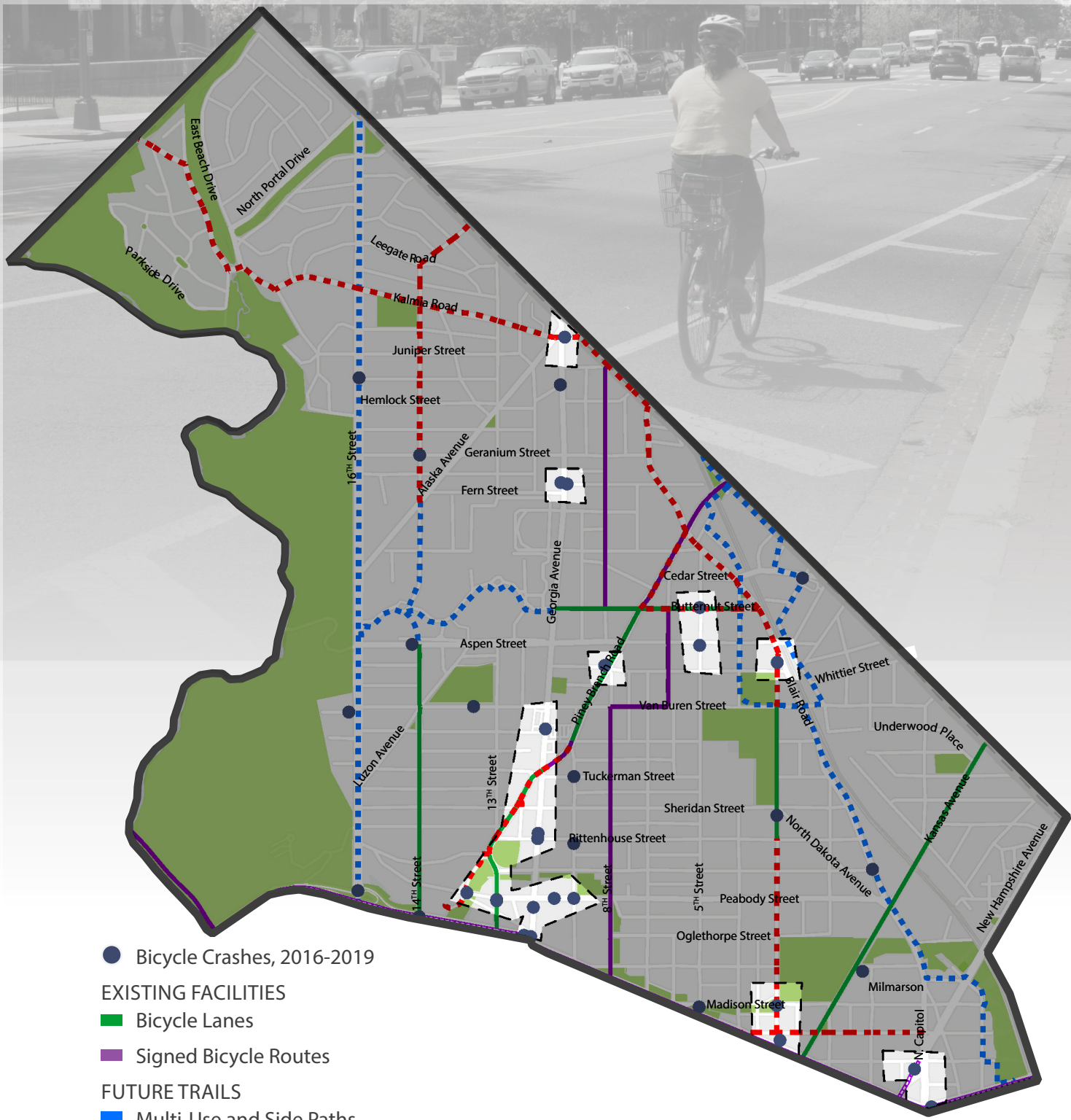


Advanced Stop Bars

Areas of Need

The following intersections and corridors were identified for further study and potential livability treatments:

- » Alaska Avenue NW and Georgia Avenue NW
- » 5th Street NW at Aspen Street NW
- » Blair Road NW and 3rd Street NW
- » 3rd Street NW at Madison Street NW
- » Peabody Street NW at Georgia Avenue NW
- » Georgia Avenue NW Corridor between Van Buren Street NW and Rittenhouse Street NW
- » 13th Street NW and Peabody Street NW



- Bicycle Crashes, 2016-2019
- EXISTING FACILITIES
- Bicycle Lanes
- Signed Bicycle Routes
- FUTURE TRAILS
- Multi-Use and Side Paths
- FUTURE ON-STREET BICYCLE FACILITIES
- Cycle Tracks
- Bicycle Lanes

Figure 20. Bicycle Crashes + Bicycle Facilities Flashlight Map Highlighting Areas of Need
 DATA SOURCE: DCGIS Open Data



BICYCLE CRASHES + SAFETY COMMENTS

MAP DEVELOPMENT OVERVIEW

Similar to the analysis comparing pedestrian related crashes to public comments, the project team mapped bicycle-related crashes from the MPD and DDOT Crash Data (2016-2018) against a heat map of safety-related public comments. In general, the majority of bicycle-related crashes occurred in areas where residents expressed public safety concerns, particularly in the central and southern portions of the study area.

In areas of major overlap, facility improvements or entirely new bicycle infrastructure may be required to address the existing safety issues. Additionally, signage or other lower-cost awareness modifications may be needed to address safety perceptions and highlight safer routes.

Livability **TOOLKIT**

The tools below are potential solutions for solving pedestrian safety challenges at or near signalized intersections.



Bicycle Facilities



Wayfinding & Signage



Vertical Separation

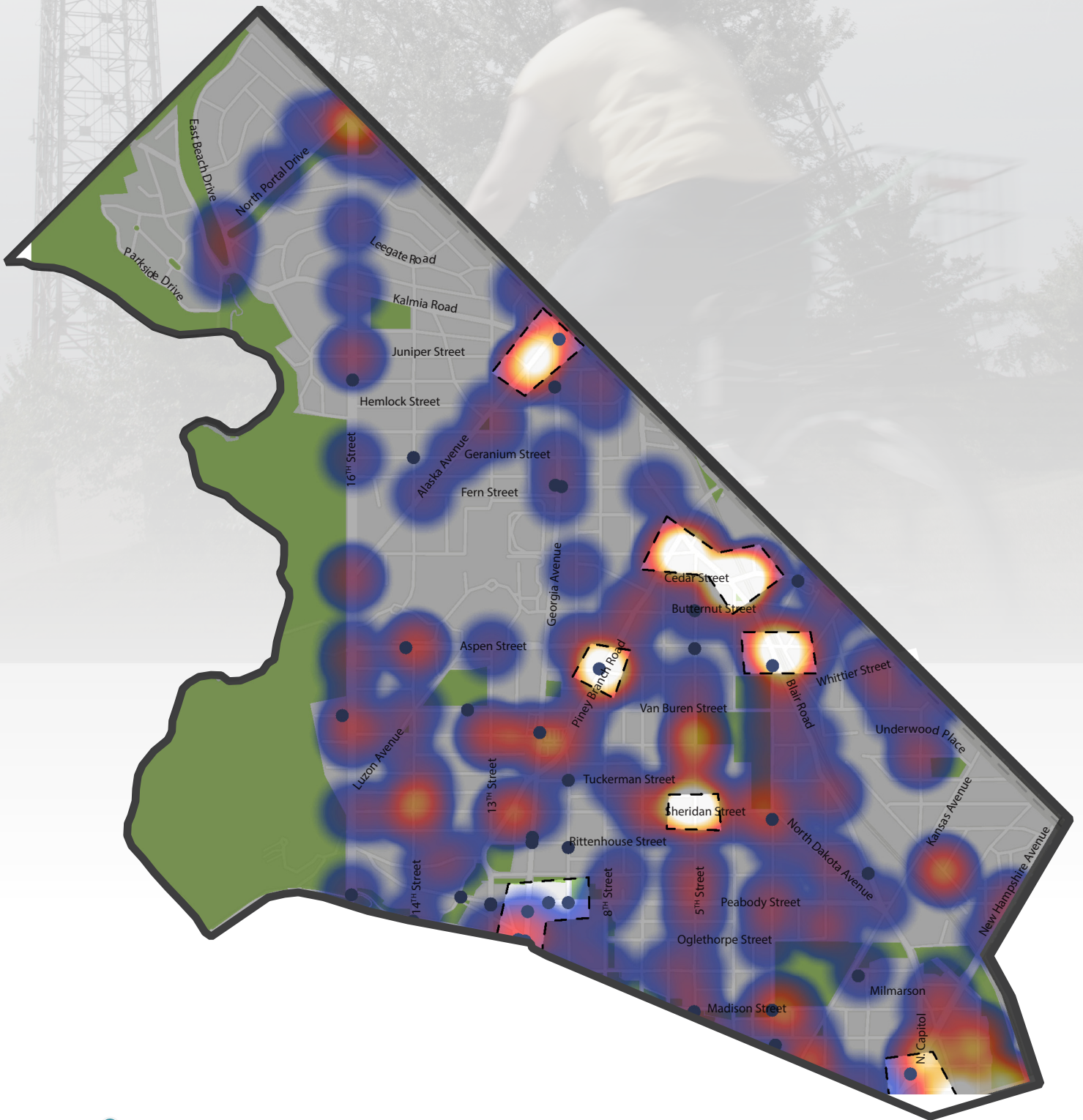


Marked Buffers

Areas of Need

The following intersections and corridors were identified for further study and potential livability treatments:

- » Piney Branch Road NW at Whittier Place NW
- » Sheridan Street NW and 5th Street NW
- » Underwood Street NW and 5th Street NW
- » Kalmia Road NW and Georgia Avenue NW
- » Alaska Ave NW and 12th Street NW
- » Whittier Street NW and 3rd Street NW
- » Blair Road NW and Cedar Street NW
- » Blair Road NW and Piney Branch Road NW



● Bicycle Crashes, 2016-2019

PUBLIC COMMENTS RELATED TO SAFETY

■ Sparse
■ Dense

Figure 21. Bicycle Crashes + Safety-Related Comments Flashlight Map Highlighting Areas of Need

DATA SOURCE: MPD + DDOT Crash Data, 2016-2018; VisionZero Comments; DC311 Comments



DEFINING THE NINE FLASHLIGHT FOCUS AREAS

Following the analysis described in the previous sections, the maps were layered on top of each other to spotlight the final major “flashlight” areas. These “flashlight” areas reveal the preliminary corridors and intersections that were associated with the largest number of safety and livability concerns. After removing any areas that were already scheduled for DDOT projects, and vetting the locations with both the public and inter-agency working group, nine (9) key locations were selected as the top priorities for subsequent analysis and recommended treatments. The identified areas are distributed throughout the Rock Creek community with both intersection and corridor characteristics.

The corridor and intersection treatments will range from small-scale, low-cost improvements to extensive infrastructure projects requiring additional funding and coordination. While the focus area improvements will be specific to these nine areas, the proposed treatments will, in many cases, be transferable to other areas in RCEI experiencing similar issues. By focusing on these areas and developing detailed recommendations, the following chapter will establish a foundation for addressing livability and safety issues throughout the community.

FLASHLIGHT FOCUS AREAS

Corridors

- C1 Georgia Avenue NW (North)

- C2 14TH Street NW

- C3 Georgia Avenue NW (South)

- C4 North Capitol Street/New Hampshire Avenue NW

- C5 Piney Branch Road NW

Intersections

- I1 Georgia Avenue NW/
Alaska Avenue NW

- I2 Blair Road NW/Aspen Street NW

- I3 16TH Street NW/
Juniper Street NW

- I4 16TH Street NW/Alaska
Avenue NW

See Appendices A and B for field analysis and detailed traffic analysis.

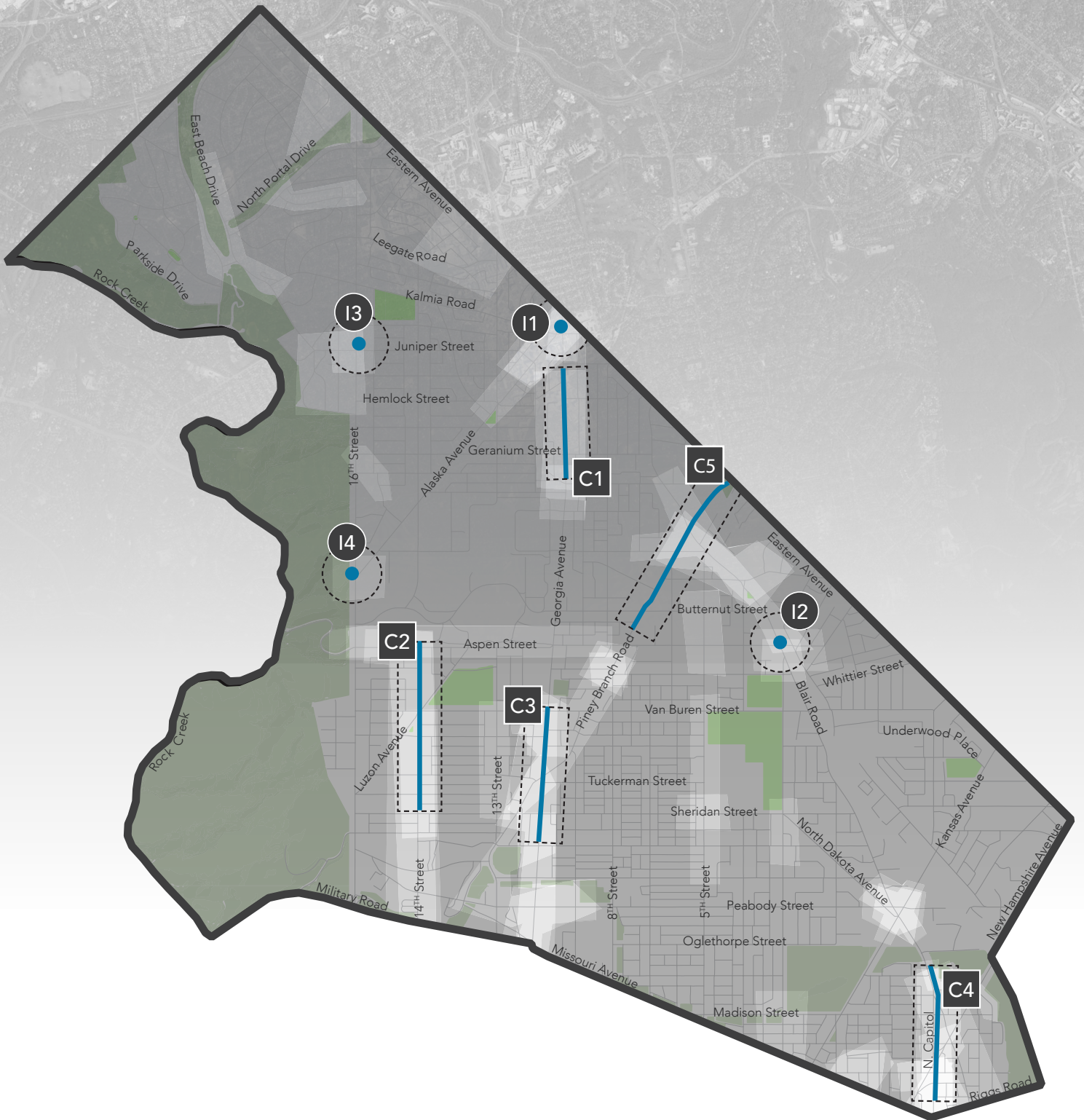


Figure 22. Rock Creek East | Livability Flashlight Focus Areas



RECOMMENDATIONS

Improvements that could significantly impact safety and address other placemaking and connectivity concerns are grouped into six general categories of recommendations: pedestrian safety, accessibility, and connectivity; transit access; bicycle network; traffic safety; stormwater management and green infrastructure; and placemaking and public art.

These countermeasures were identified and incorporated in each of the nine (9) focus areas concepts and provide a standard for how the livability toolkit strategies can be applied throughout the remainder of the 3.5 square mile RCEI study area.

RECOMMENDATIONS CATEGORIES

The first section of this chapter outlines each of the six (6) categories that frame recommendations. These countermeasures are drawn from the Livability Toolkit and are applied to both focus area concepts and systematically within the RCEI Study Area.

FOCUS AREA RECOMMENDATIONS

Following the recommendation categories, the corridor and intersection improvement concepts (Figure 29 through Figure 40) demonstrate how the livability toolkit strategies will be applied at a finer level of detail. The nine focus areas identified through the flashlight approach are precise opportunities where recommendations have been developed more fully as complete concept packages

ADDITIONAL RECOMMENDATIONS

The flashlight map analysis technique effectively identified areas of greatest need and ultimately the nine (9) focus areas prioritized for detailed concept development. As part of this effort, a handful of additional locations were identified based on safety issues and community comments. While high-level recommendations were provided for these locations, many will require further analysis and coordination with DDOT divisions, external stakeholders and agencies, as well as community stakeholders

RECOMMENDATION CATEGORIES

- »PEDESTRIAN SAFETY, ACCESSIBILITY, + CONNECTIVITY«
- »TRANSIT ACCESS«
- »BICYCLE NETWORK«
- »TRAFFIC SAFETY«
- »STORMWATER MANAGEMENT + GREEN INFRASTRUCTURE*«
- »PLACEMAKING + PUBLIC ART«

*No sheet shown for this category recommendation but will be incorporated in focus area concepts





AREA-WIDE RECOMMENDATIONS PEDESTRIAN NETWORK IMPROVEMENTS

A successful pedestrian network should be safe, connected, and easily accessible. Sidewalk networks should have no gaps and be adequately buffered from high-speed roadways.

Improvements, such as curb bulb-outs and refuge islands, should be installed at intersections to improve pedestrian visibility, limit crossing distance at intersections, and encourage slower automobile speeds. Ladder crosswalks (as illustrated below, label 2) have also been shown to improve pedestrian

visibility and promote the highest driver compliance rates of any crosswalk design. Pedestrian signals, such as High-Intensity Activated Crosswalk (HAWK) beacons or Rectangular Rapid-Flashing (RRFB) beacons, also improve pedestrian visibility and have been shown to reduce pedestrian crashes by up to 69% (see the Federal Highway Administration's [Pedestrian Hybrid Beacon Guide—Recommendations and Case Study](#)).

Livability TOOLKIT



- 1 ADA Ramps
- 2 Ladder Crosswalks
- 3 Improved Visibility and Sight Distances
- 4 Pedestrian Signals
- 5 Pedestrian Warning Signage
- 6 Sidewalks





AREA-WIDE RECOMMENDATIONS BICYCLE NETWORK IMPROVEMENTS

Safe and accessible bicycle networks provide excellent livability benefits to communities by providing additional commute options and recreational opportunities for residents. Bicycle infrastructure should aim to be continuous wherever possible and connect major employment, residential, and recreational facilities.

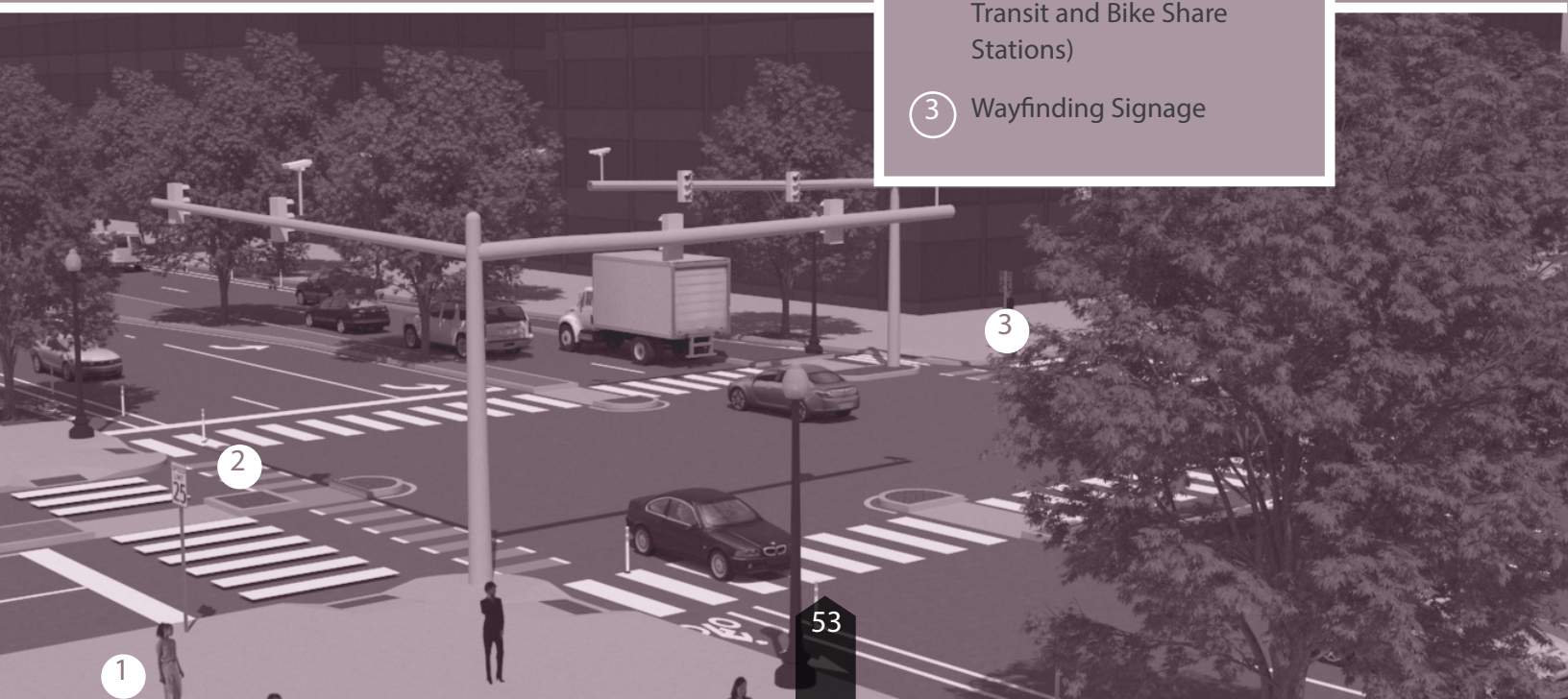
Networks should include adequate wayfinding signage to make these destinations accessible and provide parking at major locations so bicycles can be easily secured. Bicycle infrastructure is also most effective when users feel safe. Where

possible, protected bicycle lanes should be installed to separate cyclists from automobiles. This not only encourages more bicyclists to use the network but also improves safety for all street users. A recently installed protected bicycle facility in New York City resulted in a 57% injury reduction for cyclists and an additional 29% reduction for pedestrians (New York City Department of Transportation, [Measuring the Street: New Metrics for 21st Century Streets](#)).

Livability TOOLKIT



- 1 Bicycle Parking Corrals
- 2 Bicycle Facilities to Close Gaps in the Existing Network (Particularly Near Transit and Bike Share Stations)
- 3 Wayfinding Signage





AREA-WIDE RECOMMENDATIONS

TRANSIT ACCESS IMPROVEMENTS

Access to transit is an incredible asset for neighborhoods, and is exponentially more valuable when the transit network is accessible and efficient. Living in close proximity to major transit lines can decrease commute time and provide quick access to a variety of economic, social, and cultural opportunities.

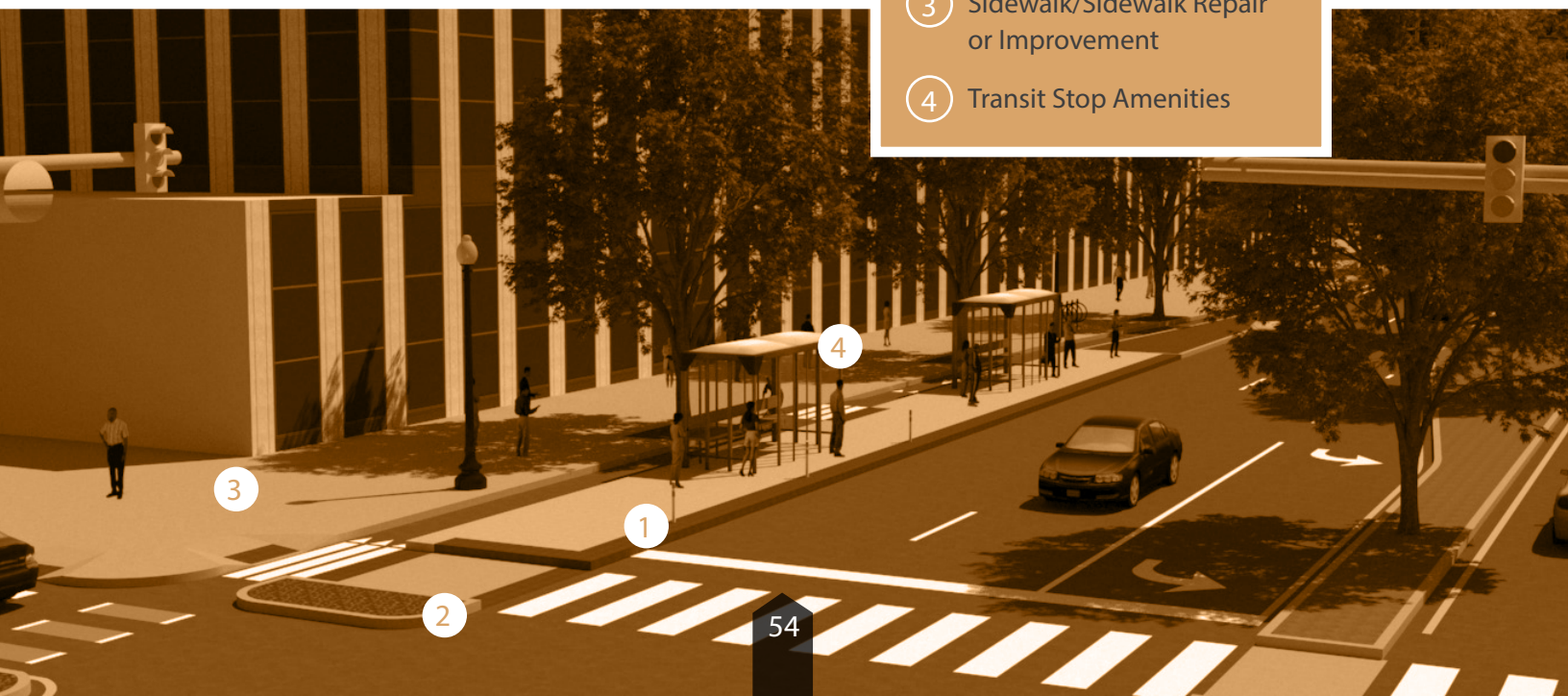
The [WMATA Guidelines for the Design and Placement of Transit Stops](#) contains guidance for the inclusion of certain amenities at bus stops based on ridership, service types, and other factors. While all bus stops require a bus stop sign, ADA landing pad, and sidewalk, only certain stops require expanded boarding areas, shelters, and real-time information based on the boardings present at the stop.

Transit can also be made more effective by prioritizing transit routes on high-ridership corridors in the study area. All transit riders are pedestrians at some point within their journey. Therefore, overall, systematic pedestrian improvements provide an enhanced transit experience for users. Bus bulb-outs decrease boarding times and eliminate bus delays from merging back into traffic. Bus bulb-outs also provide added safety benefits by making transit users more visible to automobiles.

Livability TOOLKIT



- 1 ADA- Accessible Stops
- 2 Bus Bulb-out/Floating Island
- 3 Sidewalk/Sidewalk Repair or Improvement
- 4 Transit Stop Amenities





AREA-WIDE RECOMMENDATIONS

TRAFFIC SAFETY IMPROVEMENTS

One of the most consistent safety and livability issues noted by communities is high-speed traffic. Speeding drivers are not only a major safety hazard for pedestrians and bicyclists, they also create noise pollution and degrade the environmental quality of the surrounding area.

DDOT's Traffic Safety Assessments Standard Operating Procedures (2019) notes, "[s]peeding is one of the most significant contributors to crash severity and traffic fatalities." There are several speeding countermeasures. Intersection control opportunities should be evaluated. Vertical traffic measures are primarily identified to mitigate speeding concerns. These devices are most widely applied along residential and low-speed streets, and include speed humps (permitted on local and collector roadways), speed tables, speed cushions, and raised intersections. These measures are typically applied where the use of other conventional traffic calming measures (such as medians, narrower roadways or lanes, curb extensions, or speed enforcement) are not practical or feasible.

Additional measures can also be explored. Stop signs, for example, present opportunities at locations where there are sight distance deficiencies, where pedestrians and bicyclists expect drivers to stop because of similar controls at adjacent intersections, or where there is no existing traffic control on any intersection approach. Enforcement and signage can also be useful. Speed limit reductions can be implemented to slow traffic along corridors, while warning and regulatory signage along major pedestrian corridors can improve driver awareness and encourage slower speeds.

Livability TOOLKIT



- ① Bulbouts
- * HAWK Signals
- ② Medians
- * Speed Humps
- * Stop Signs
- * Not pictured



1

55

2



AREA-WIDE RECOMMENDATIONS PLACEMAKING IMPROVEMENTS

When considering the livability of a particular community, residents often mention how a place “feels”. People want to live in a place that is not only safe but also vibrant, clean, and filled with opportunities for recreational activities. Placemaking treatments can be implemented to create these types of opportunities and provide a pleasurable experience for neighborhood residents. Neighborhood gateway treatments—including planting design, public art, signage, and/or street furniture and amenity improvements—can establish a sense of community and local ownership. Plazas and green spaces should be dispersed throughout neighborhoods to provide recreational opportunities and social gathering areas. Street trees provide visual benefits to neighborhoods but also have multiple environmental benefits. Studies have

shown a 60% reduction in particulates from car exhaust on streets with a large concentration of trees nearby (Green Blue Urban, [Why We Need Trees in Our Cities](#)). In addition to these treatments, adequate street lighting should be provided along all major roadways and residential corridors. Where possible, lighting should be pedestrian oriented (at a scale where the light source is lower to the ground and enables pedestrians to see other pedestrians’ faces and sidewalk features) to promote walking and eliminate the high-intensity brightness.

Livability
TOOLKIT 

- * Gateways
- ① Plazas/Green Spaces
- ② Lighting
- * Public Art
- ③ Street Trees

* Not pictured







FOCUS AREA OPPORTUNITIES

CORRIDORS & INTERSECTIONS

Complementing the systematic, area-wide recommendations, the nine focus areas are demonstrations of how the livability toolkit strategies will be applied at a finer level of detail. They are more precise opportunities where recommendations have been developed more fully as complete concept packages.

The character and conditions of each of the nine focus areas—including the five corridors and four intersections—are described below.

C1 Georgia Avenue (North)

Located on Georgia Avenue NW, between Fern Street NW and Juniper Street NW. New developments are planned along this corridor, including the redevelopment of the nearby Walter Reed Medical Center. Community members expressed concern about vehicle speeds and challenges at crossings in this area. Field observations verified perceptions of pedestrian/vehicle conflict points, such as the free-flowing right turn slip lane from Georgia Avenue onto Alaska Avenue, and vehicles turning from Kalmia onto Georgia, which creates conflicting movements between vehicles and pedestrians crossing the roadway. During site visits, pedestrians were observed facing difficulties when crossing the street, especially where markings were faded or where signage or signals were not present.

C2 14TH Street

Located on 14TH Street NW, between Sheridan Street NW and Aspen Street NW. In the morning and afternoon, this corridor is heavily used by school children. Site visits revealed speeding vehicles at Luzon and Van Buren Street NW intersections, unclear rights-of-way at the Luzon Street NW intersection, obstructed sight-lines from parked vehicles, and difficult crossing conditions at Tuckerman Street NW and at Sheridan Street NW.

C3 Georgia Avenue (South)

Located on the southern section of Georgia Avenue NW, between Rittenhouse Street NW and Van Buren Street NW. Community members expressed concerns about the frequency of bicycle crashes along this southern section of Georgia Avenue. Site visits revealed pedestrians crossing at uncontrolled, mid-block locations, bicyclists using sidewalks during peak morning and evening hours, and approximately 14,000 vehicles per day traveling at speeds nearing the 30 miles per hour speed limit. For a more complete summary of traffic observations, refer to Appendix A.

C4 North Capitol Street/New Hampshire Avenue

Located on North Capitol Street, between New Hampshire Avenue NW and Milmarson Place NW. This is a

high-pedestrian-volume corridor due to pedestrian-oriented land-uses, the presence of nearby transit stops, and several nearby schools. Traffic can be heavy, and crashes are common due to drivers observed speeding and frequently running red lights. For a more complete summary of traffic observations, refer to Appendix A

C5 **Piney Branch Road**

Located on Piney Branch Road NW, between Butternut Street NW and Eastern Avenue NW. The future Metropolitan Branch Trail will connect through this area. Site visits revealed some challenges in the area, which include crossing challenges for pedestrians due to wide crossing distances and drivers not yielding. Additionally, the bicycle network through this corridor is incomplete, despite its connection to the future Metropolitan Branch Trail.

11 **Georgia Avenue/Alaska Avenue**

The intersection of Georgia Avenue NW and Alaska Avenue NW is well-traversed, with approximately 50 bicyclists, 300 pedestrians, and 2,000 cars during peak hours. Crossings can be challenging due to the roads' large size and complex geometry. Pavement markings on Alaska Avenue NW and Kalmia Road NW are in poor condition, and signs are frequently obstructed, bent out of shape, and cluttered in that location on Georgia Avenue NW and Alaska Avenue NW.

12 **Blair Road/Aspen Street**

The intersection of Blair Road and Aspen Street NW is adjacent to an overhead railway corridor. A substantial number of pedestrians observed at this intersection were preschool age children. During peak hours, 89 bicyclists and 75 pedestrians were observed at this intersection during field observations.

13 **16th Street/Juniper Street**

The intersection of 16th and Juniper Street NW is used by school children, teenagers and transit commuters throughout the day. On Fridays, Saturdays and holidays, members of the Ohev Sholom and Tifereth Israel congregations use this intersection to walk to their synagogue. During the morning rush hour, drivers use Juniper Street to bypass congestion, resulting in long queuing of cars making left-turns at the uncontrolled intersection from 16th Street NW.

14 **16th Street/Alaska Avenue**

The intersection of 16th Street and Alaska Avenue NW is an important bus intersection as it serves multiple transit routes which connects the District with Maryland. The study team received comments about the traffic speeding and incomplete crosswalk and sidewalk facilities.

CONCEPT DIAGRAMS/ CUT SHEETS

The following pages include a series of concept diagrams that identify typical recommendations for each of the focus areas.

Call-out labels (right) are used to identify livability toolkit strategies for improvements, while the icons along the leader lines signify which of the six recommendation categories are being employed by those improvements.

Each diagram sheet also includes a box for project details, which notes significant challenges at that location, livability toolkit strategies used, tactical opportunities, a cost estimate, and objectives addressed, as discussed in detail below.

Key Challenges

Notes challenges observed during field visits or described at public meetings.

Livability Toolkit

Lists a sample of Livability Toolkit strategies employed. For a more complete toolkit list, refer to Table 1 on page 3.

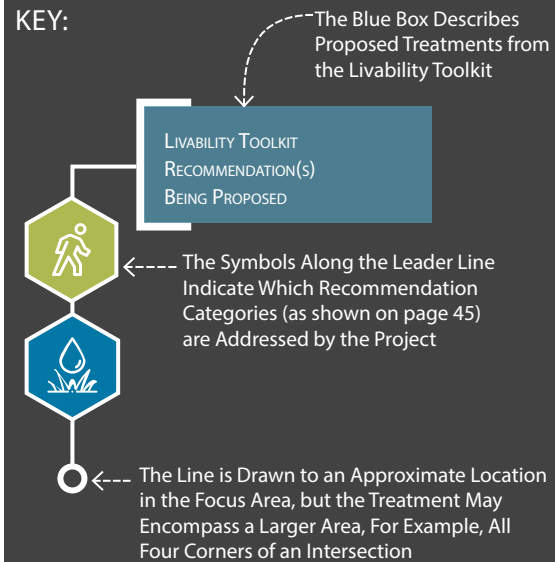
Tactical Opportunities

Where possible, shorter-term and “quick win” projects can be implemented as funding or other resources for larger projects is secured. Opportunities are identified for each focus area.

Reading the Recommendations

CALL-OUT BOX LEGEND

KEY:



Cost Estimate

Cost estimates for improvements in that focus area are suggested with one to three dollar signs. For a complete cost estimate, Appendix D.

Objectives Addressed

The improvements in the focus areas aim to meet all of the five RCEI project objectives, but do so to varying degrees. The symbols below are used to indicate the level to which an objective is met by the recommendations for that focus area.

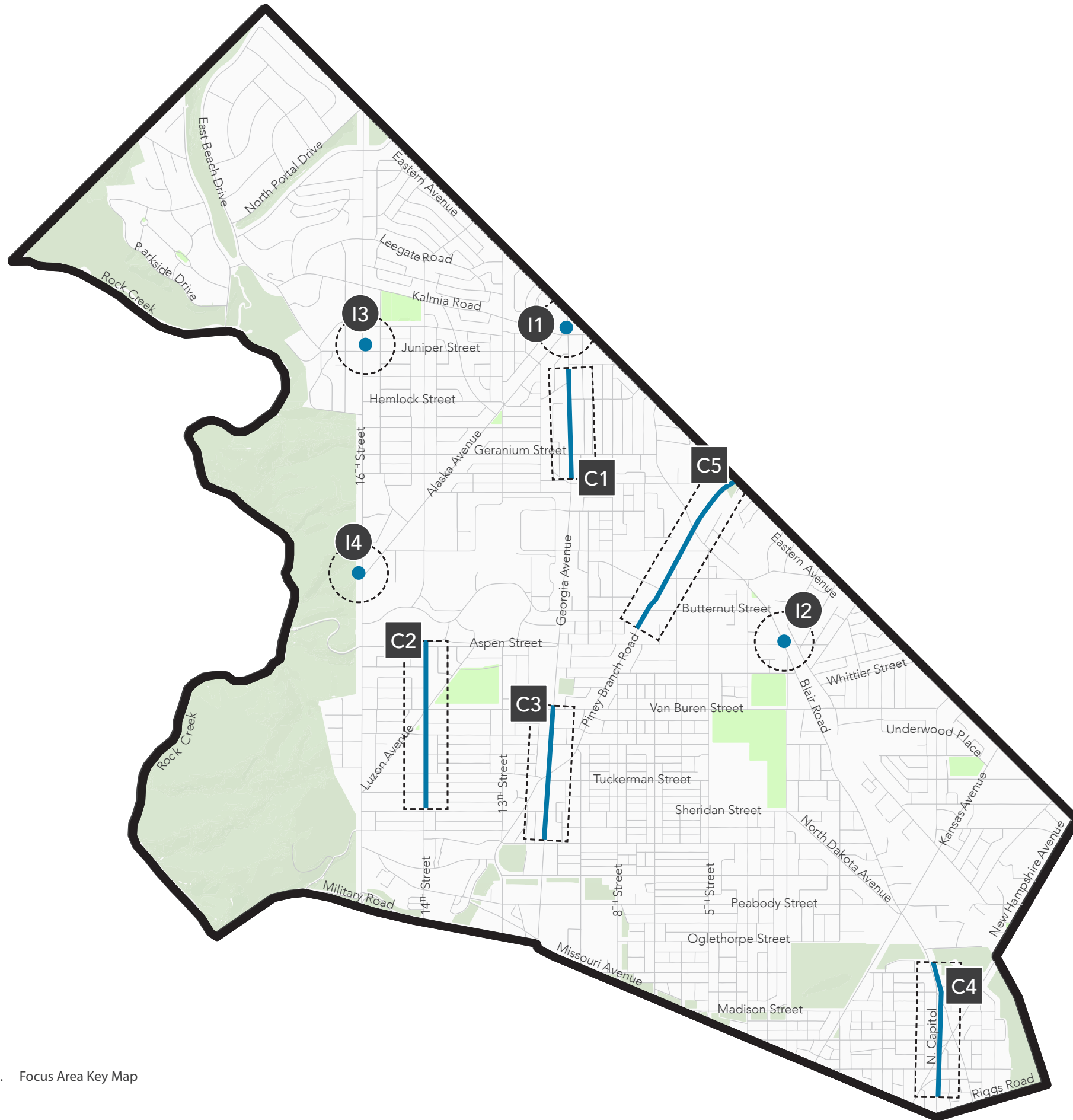
- Does Not Address
- ◐ Partially Addresses
- Fully Addresses



ROCK CREEK EAST ONE

Livability Study

PROJECT KEY MAP



Corridors

C1	Georgia Avenue NW (North)	Pg. 62
C2	14 TH Street NW	Pg. 64
C3	Georgia Avenue NW (South)	Pg. 68
C4	North Capitol Street NW/New Hampshire Avenue NW	Pg. 72
C5	Piney Branch Road NW	Pg. 74

Intersections

I1	Georgia Avenue NW/Alaska Avenue NW	Pg. 77
I2	Blair Road NW/Aspen Street NW	Pg. 78
I3	16 TH Street NW/Juniper Street NW	Pg. 79
I4	16 TH Street NW/Alaska Avenue NW	Pg. 80

Figure 23. Focus Area Key Map



KEY CHALLENGES

- Unsafe crossings for pedestrians
- Incomplete package of transit stop facilities
- Vehicular speeds higher than posted limit
- Inadequate pedestrian-scale lighting

LIVABILITY TOOLKIT

- Use high-visibility crosswalks, curb bulbouts, HAWK beacons, & accessible pedestrian signals
- Provide bus stop improvements
- Reduce vehicular speeds by narrowing lanes at intersections and installing curb bulb-outs
- Introduce pedestrian-scale lighting

TACTICAL OPPORTUNITIES

- Install, paint, and flex-posts at bulbout locations

COST ESTIMATE: \$\$\$

OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

CORRIDOR 1 | GEORGIA AVENUE NW (NORTH)



Figure 24. Corridor 1 Focus Area Recommendations



Add curb bulbouts with planting areas and space for additional street trees and pedestrian lighting



Create planting areas

Add bus bulbout

Potential driveway closure

Add bus bulbout

Georgia Ave NW

Georgia Ave NW

Potential driveway closure

Stop ID: 1002852
Routes: 70

High Visibility Crosswalk

Add bus bulbout; update stop to include flag, ADA boarding alignment, trash can, bench, and shelter (typical)

Stop ID: 1002858
Routes: 70

Add bus bulbout

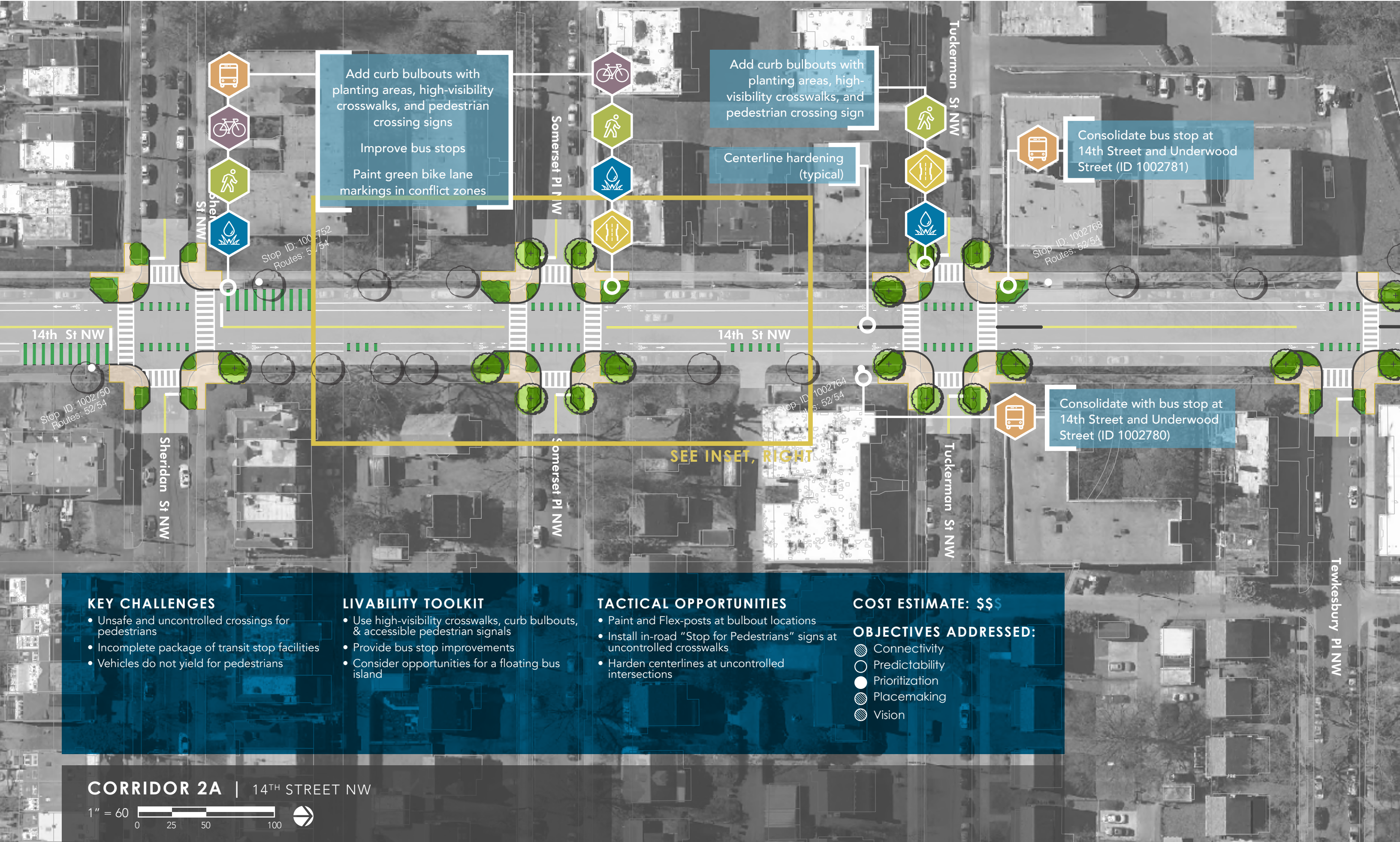


Hemlock St NW

9th St NW

9th St NW

Juniper St NW



Add curb bulbouts with planting areas, high-visibility crosswalks, and pedestrian crossing signs

Improve bus stops

Paint green bike lane markings in conflict zones

Add curb bulbouts with planting areas, high-visibility crosswalks, and pedestrian crossing sign

Centerline hardening (typical)

Consolidate bus stop at 14th Street and Underwood Street (ID 1002781)

Consolidate with bus stop at 14th Street and Underwood Street (ID 1002780)

SEE INSET, RIGHT

KEY CHALLENGES

- Unsafe and uncontrolled crossings for pedestrians
- Incomplete package of transit stop facilities
- Vehicles do not yield for pedestrians

LIVABILITY TOOLKIT

- Use high-visibility crosswalks, curb bulbouts, & accessible pedestrian signals
- Provide bus stop improvements
- Consider opportunities for a floating bus island

TACTICAL OPPORTUNITIES

- Paint and Flex-posts at bulbout locations
- Install in-road "Stop for Pedestrians" signs at uncontrolled crosswalks
- Harden centerlines at uncontrolled intersections

COST ESTIMATE: \$\$\$

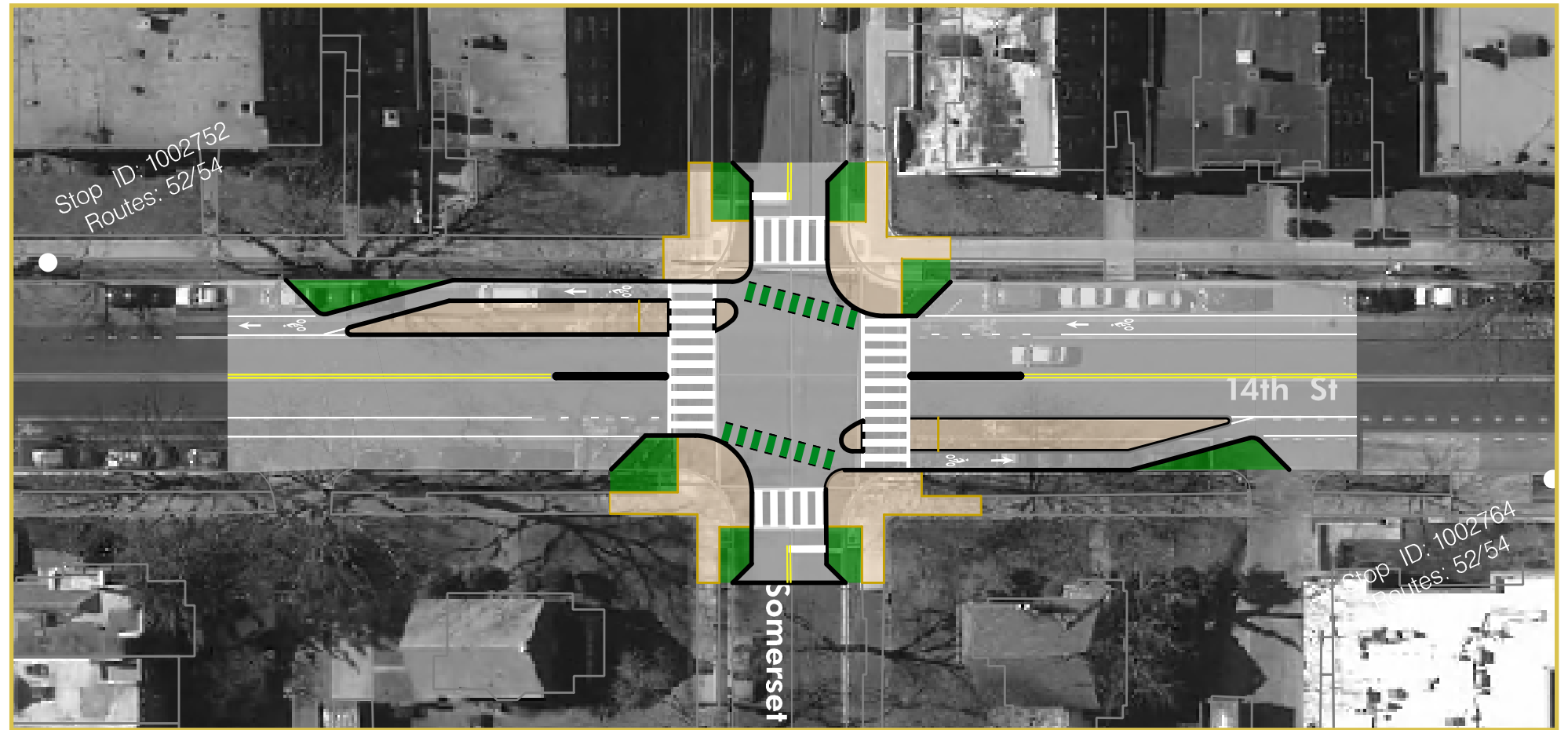
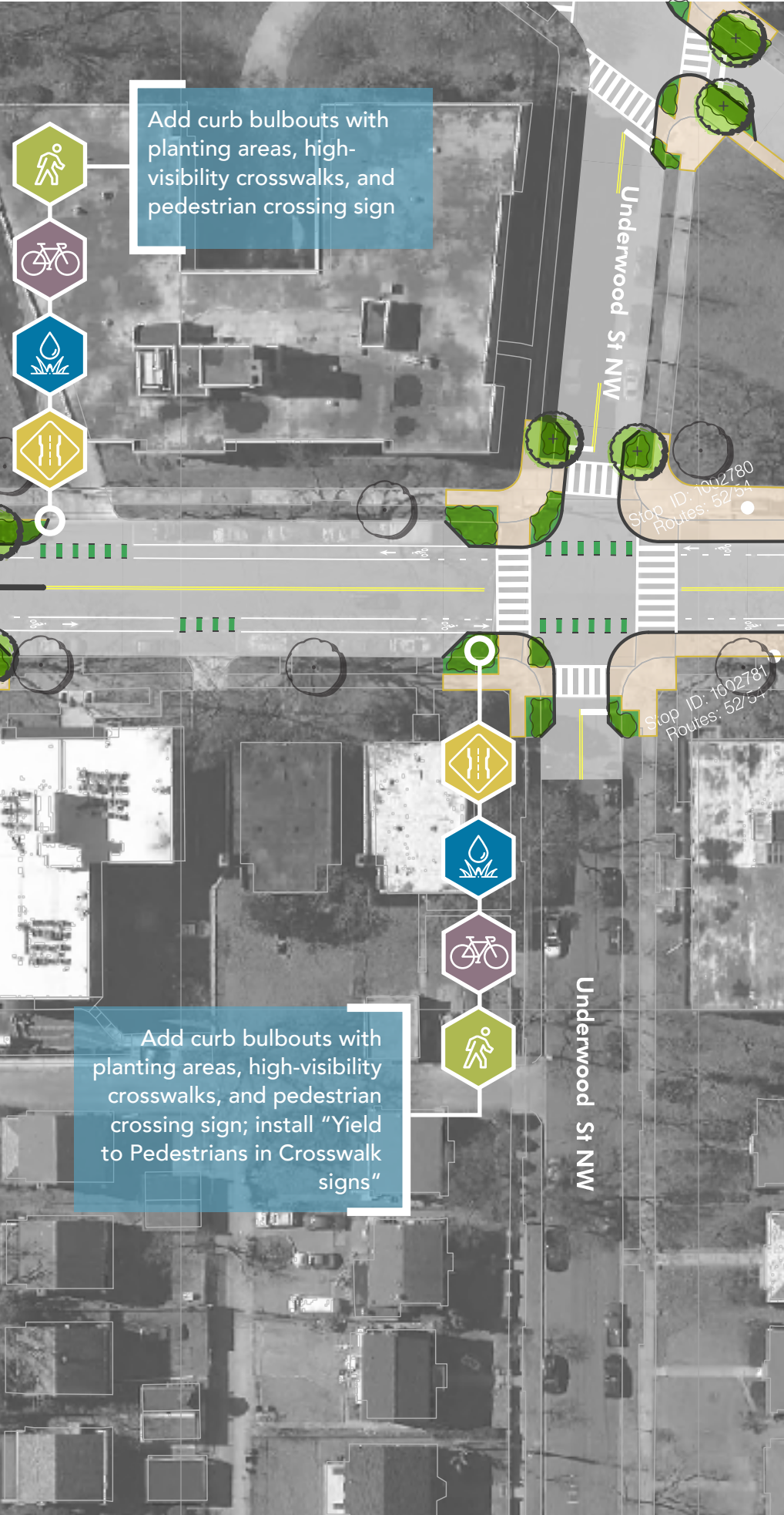
OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

CORRIDOR 2A | 14TH STREET NW



Figure 25. Corridor 2A Focus Area Recommendations



FLOATING BUS ISLAND ALTERNATIVE



Visualization of Potential Bus Stop Improvements, Showing Floating Bus Stop with Bicycle Facility

A floating bus island is an in-street, side boarding bus stop that's separated from the sidewalk by a bike lane. This configuration improves transit service efficiency by eliminating the need for drivers to pull back into traffic, and improves accessibility by presenting the opportunity to create near-level or level boarding. With the bike lane nestled between the stop and the sidewalk, conflicts between bicyclists and transit vehicles and their passengers are eliminated. The image to the right illustrates how a floating bus island might exist on the 14th Street corridor.

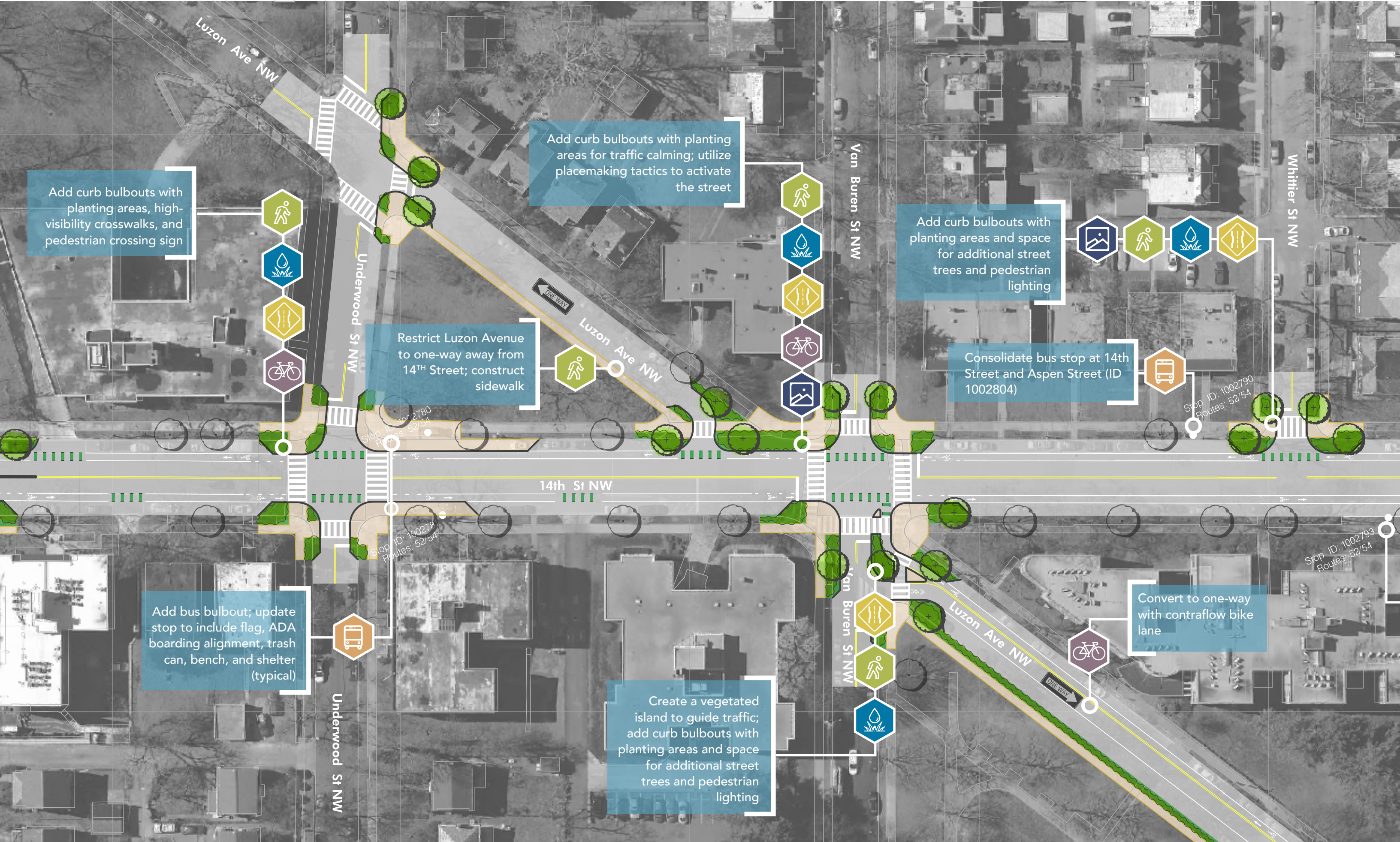
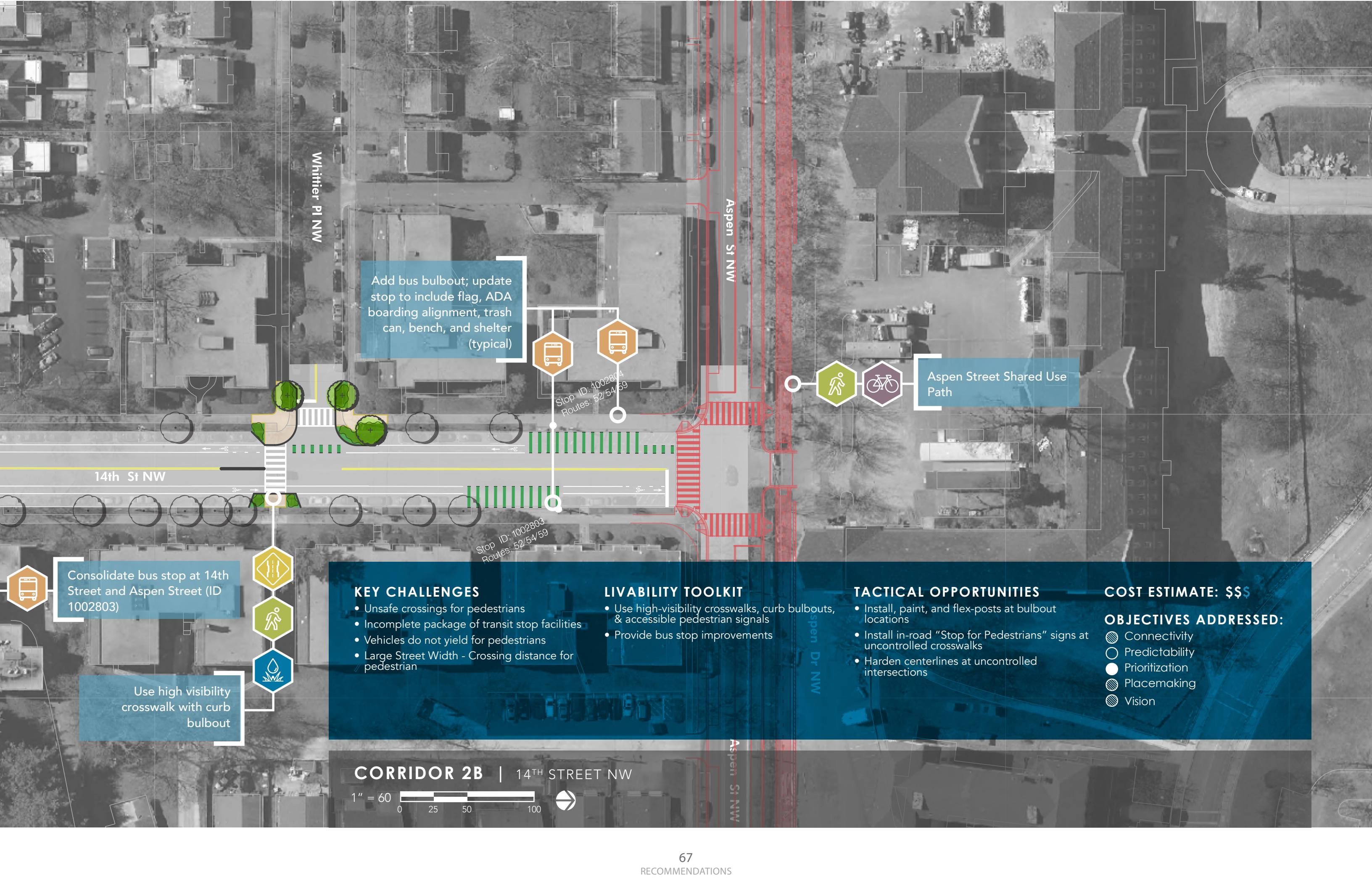


Figure 26. Corridor 2B Focus Area Recommendations



Add bus bulbout; update stop to include flag, ADA boarding alignment, trash can, bench, and shelter (typical)



Stop ID: 1002804
Routes: 52/54/59

Stop ID: 1002803
Routes: 52/54/59

Aspen Street Shared Use Path



Consolidate bus stop at 14th Street and Aspen Street (ID 1002803)

Use high visibility crosswalk with curb bulbout



<p>KEY CHALLENGES</p> <ul style="list-style-type: none"> • Unsafe crossings for pedestrians • Incomplete package of transit stop facilities • Vehicles do not yield for pedestrians • Large Street Width - Crossing distance for pedestrian 	<p>LIVABILITY TOOLKIT</p> <ul style="list-style-type: none"> • Use high-visibility crosswalks, curb bulbouts, & accessible pedestrian signals • Provide bus stop improvements 	<p>TACTICAL OPPORTUNITIES</p> <ul style="list-style-type: none"> • Install, paint, and flex-posts at bulbout locations • Install in-road "Stop for Pedestrians" signs at uncontrolled crosswalks • Harden centerlines at uncontrolled intersections 	<p>COST ESTIMATE: \$\$\$</p> <p>OBJECTIVES ADDRESSED:</p> <ul style="list-style-type: none"> ● Connectivity ○ Predictability ● Prioritization ● Placemaking ● Vision
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CORRIDOR 2B | 14TH STREET NW



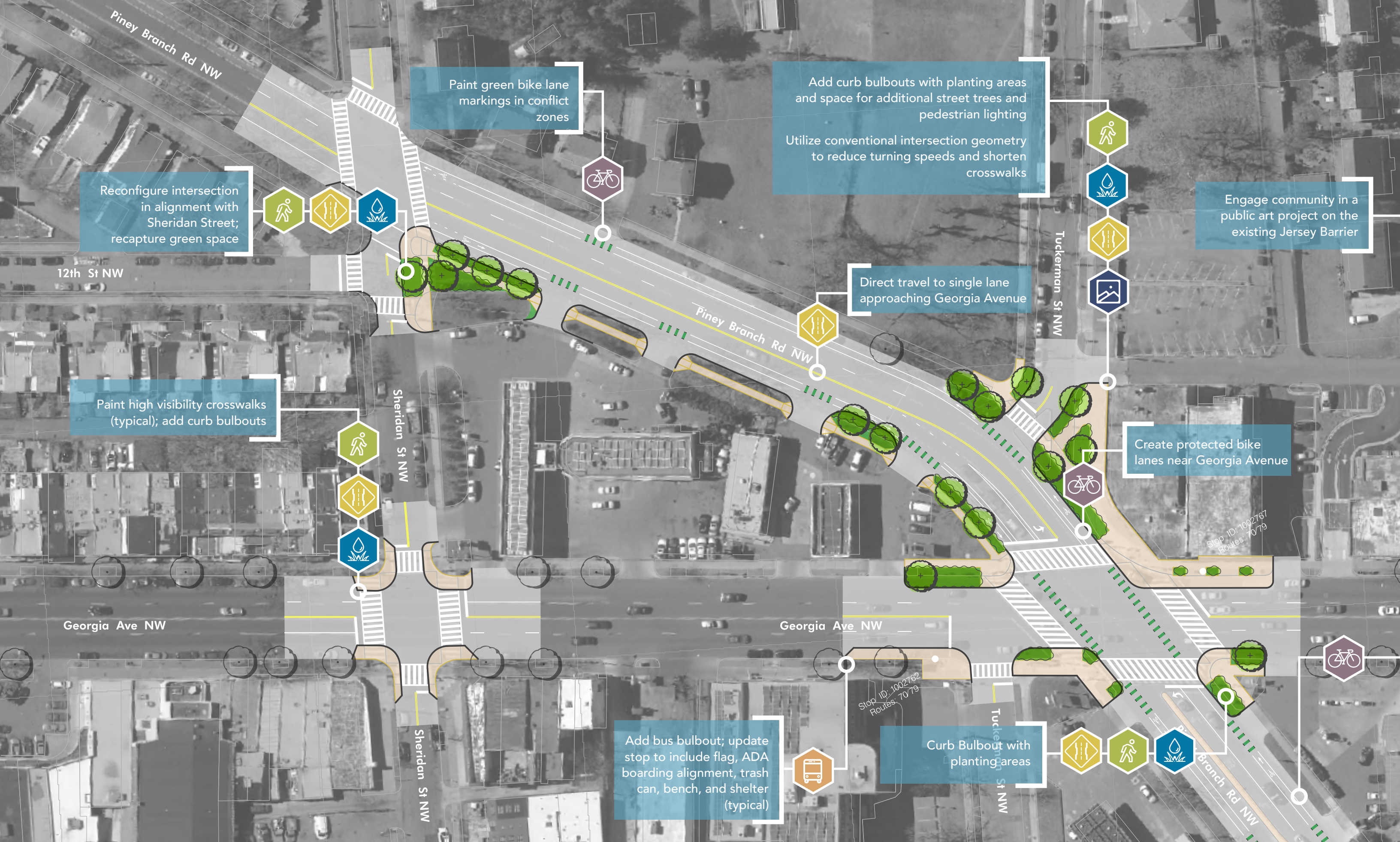
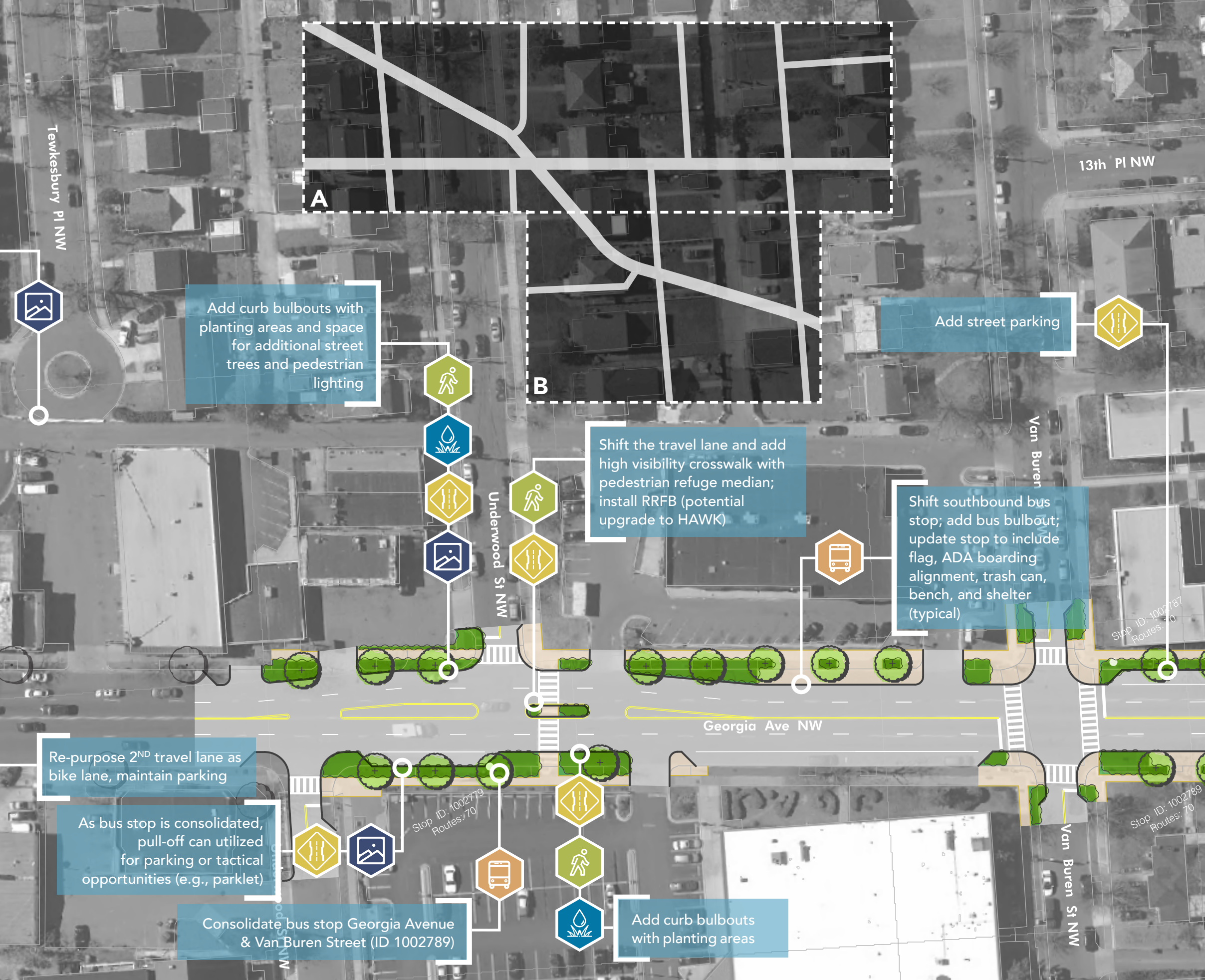


Figure 27. Corridor 3A Focus Area Recommendations



Add curb bulbouts with planting areas and space for additional street trees and pedestrian lighting

Add street parking

Shift the travel lane and add high visibility crosswalk with pedestrian refuge median; install RRFB (potential upgrade to HAWK)

Shift southbound bus stop; add bus bulbout; update stop to include flag, ADA boarding alignment, trash can, bench, and shelter (typical)

Re-purpose 2ND travel lane as bike lane, maintain parking

As bus stop is consolidated, pull-off can utilized for parking or tactical opportunities (e.g., parklet)

Consolidate bus stop Georgia Avenue & Van Buren Street (ID 1002789)

Add curb bulbouts with planting areas

KEY CHALLENGES

- Large Street Width - Crossing distance for pedestrian
- Closely spaced intersections with complex traffic controls
- Gaps in the bicycle network
- Uncontrolled crosswalks
- Drop in peak hour southbound traffic on Georgia and Piney Branch

LIVABILITY TOOLKIT

- Use high-visibility crosswalks, curb bulbouts, HAWK beacons, & accessible pedestrian signals
- Provide bus stop improvements
- Install "Yield to Pedestrian in X-Walk" sign
- Extend existing bike lane for bicycle network connection

TACTICAL OPPORTUNITIES

- Install, paint, and flex-posts at bulbout locations
- Potential opportunity to close 12th Street NW with quick build materials

COST ESTIMATE: \$\$\$

OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

CORRIDOR 3A GEORGIA AVENUE NW (SOUTH)





Existing



Visualization of Potential Georgia Avenue Roadway Improvements, Including Ladder Crosswalks, Curb Bulb-outs, Planting, and Intersection Signalization

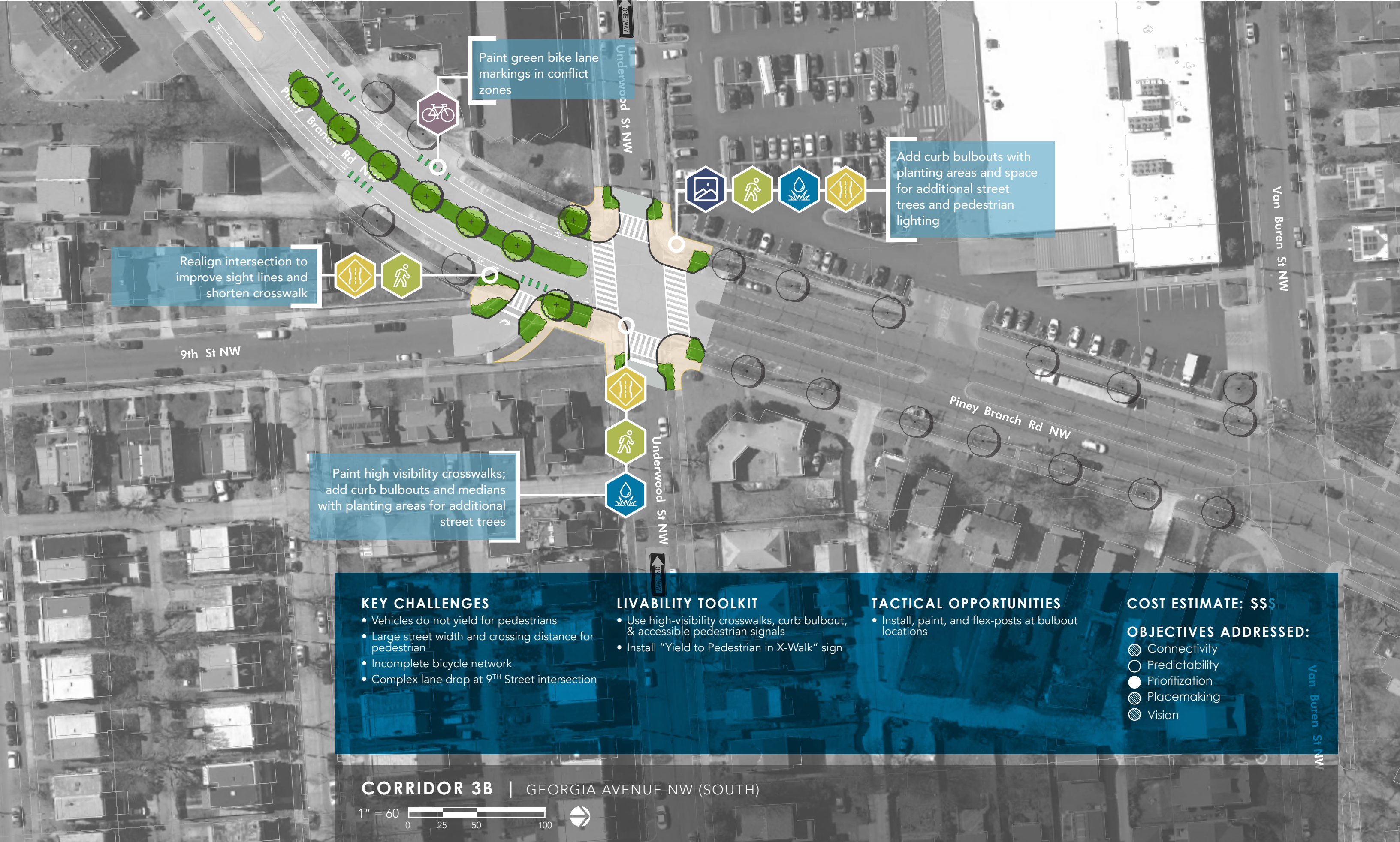


Figure 28. Corridor 3B Focus Area



KEY CHALLENGES

- Drivers not yielding to pedestrians
- Speeding and unsafe maneuvers due to wide travel lanes
- Red light running
- Uncontrolled crosswalks in close proximity to signalized intersections
- Closely spaced intersections with limited vehicular storage space

LIVABILITY TOOLKIT

- Add curb bulbouts
- Restrict access between Blair Road and Dahlia Street / 5th Street
- Recapture green space for public Use high-visibility crosswalks, curb bulbout, & accessible pedestrian signals

TACTICAL OPPORTUNITIES

- Use high visibility crosswalks and in-road "Stop for Pedestrians" signs
- Potential planting/beautification and placemaking improvements
- DDOT is currently evaluating other short-term measures in this area, as part of the Manor Park study

COST ESTIMATE: \$\$\$

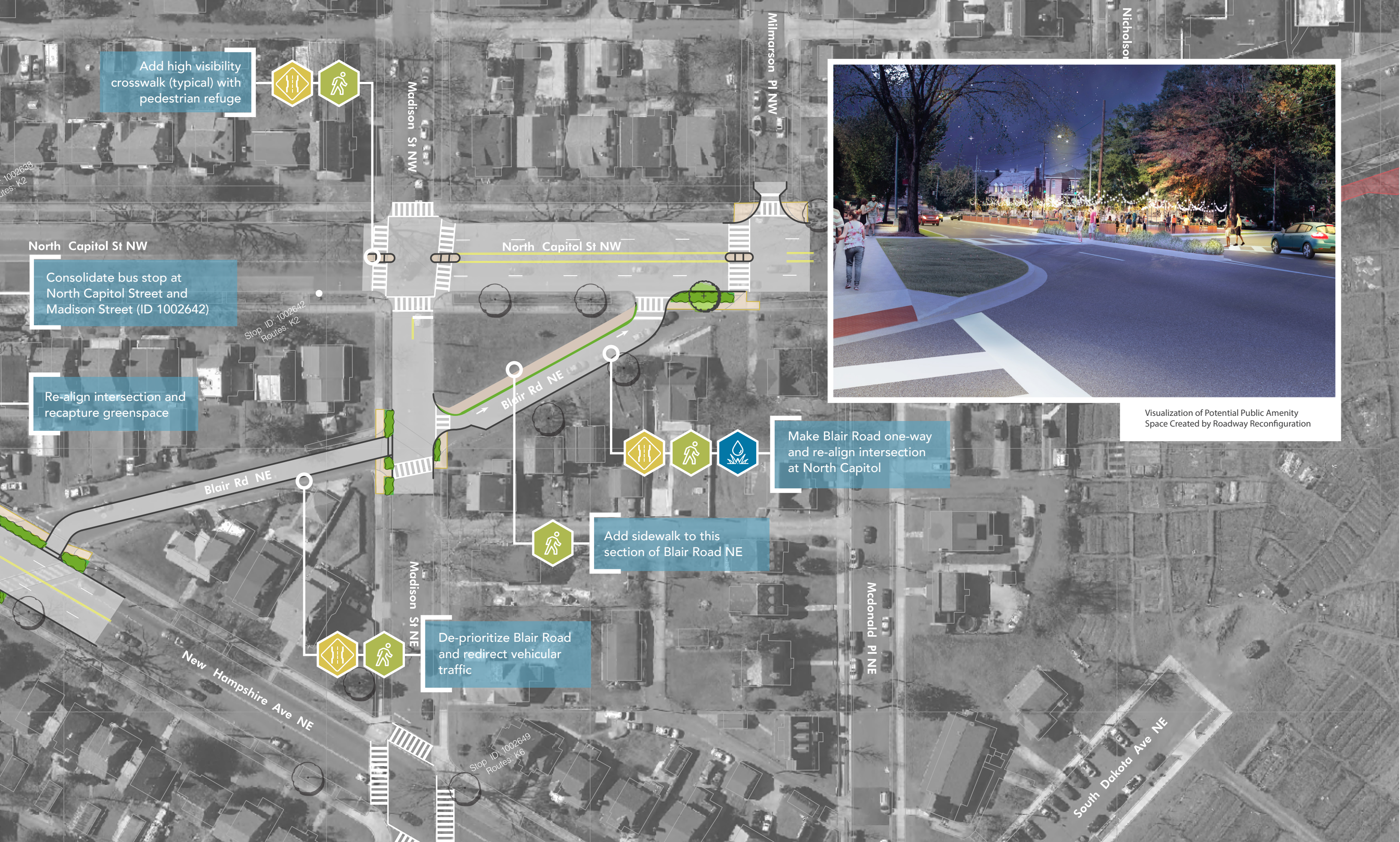
OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

CORRIDOR 4 | NORTH CAPITOL STREET NE/NEW HAMPSHIRE AVENUE NE



Figure 29. Corridor 4 Focus Area Recommendations



Add high visibility crosswalk (typical) with pedestrian refuge



Consolidate bus stop at North Capitol Street and Madison Street (ID 1002642)

Stop ID: 1002642
Routes: K2

Re-align intersection and recapture greenspace

Make Blair Road one-way and re-align intersection at North Capitol

Add sidewalk to this section of Blair Road NE

De-prioritize Blair Road and redirect vehicular traffic

Stop ID: 1002649
Routes: K6



Visualization of Potential Public Amenity Space Created by Roadway Reconfiguration



KEY CHALLENGES

- Unsafe crossings for pedestrians
- Vehicles do not yield for pedestrians
- Gap in bicycle network
- Wide intersections are confusing and increase exposure for pedestrians and bicyclists

LIVABILITY TOOLKIT

- Use high-visibility crosswalks, curb bulbouts, & accessible pedestrian signals
- Complete bicycle facilities using existing road space

TACTICAL OPPORTUNITIES

- Install, paint, and flex-posts at bulbout locations
- Intersection reconfiguration
- Install quick build materials for diverter at Blair Road, 5th Street and Dahlia Street

COST ESTIMATE: \$\$\$

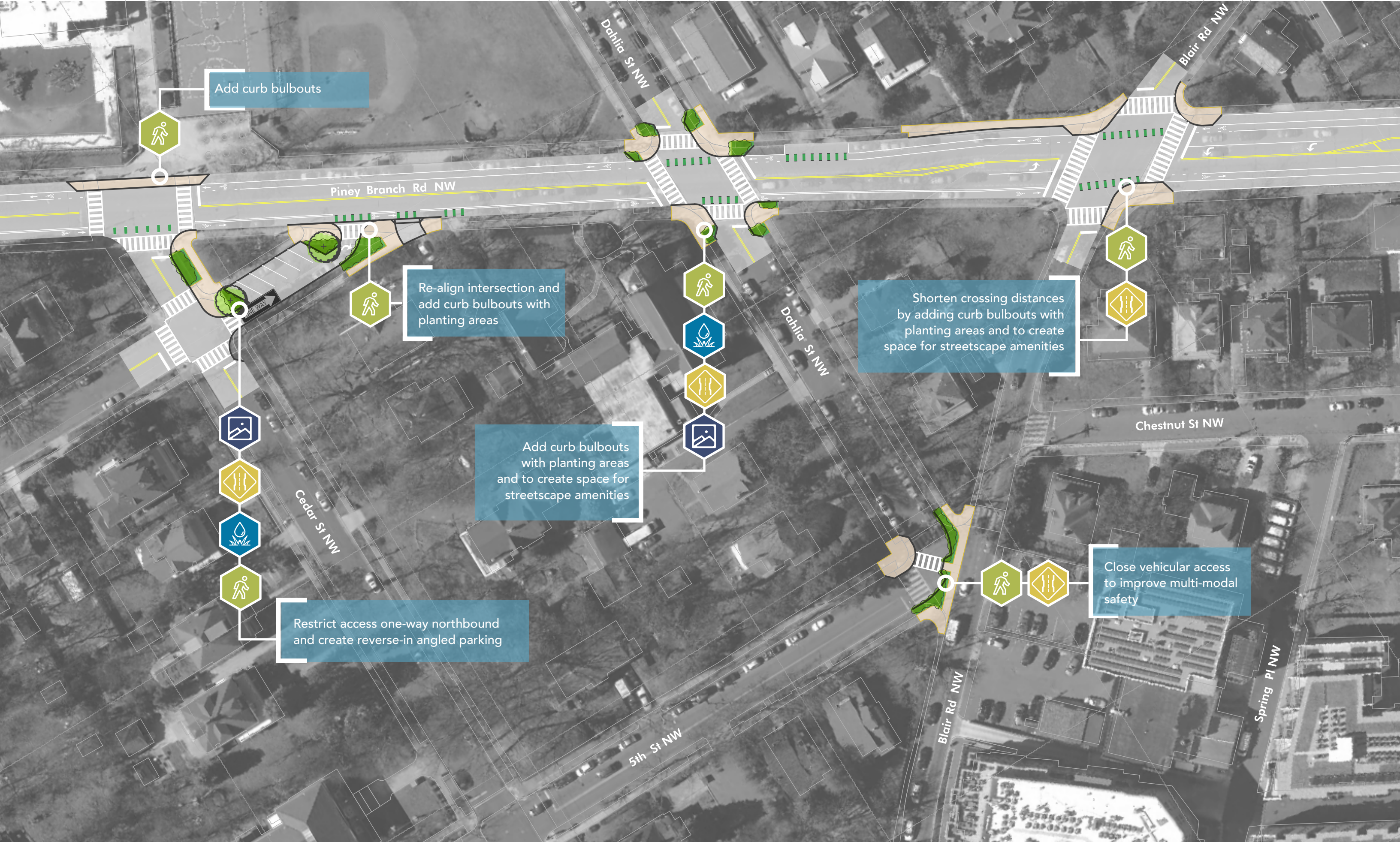
OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

CORRIDOR 5A | PINEY BRANCH ROAD NW



Figure 30. Corridor 5A Focus Area Recommendations



Add curb bulbouts

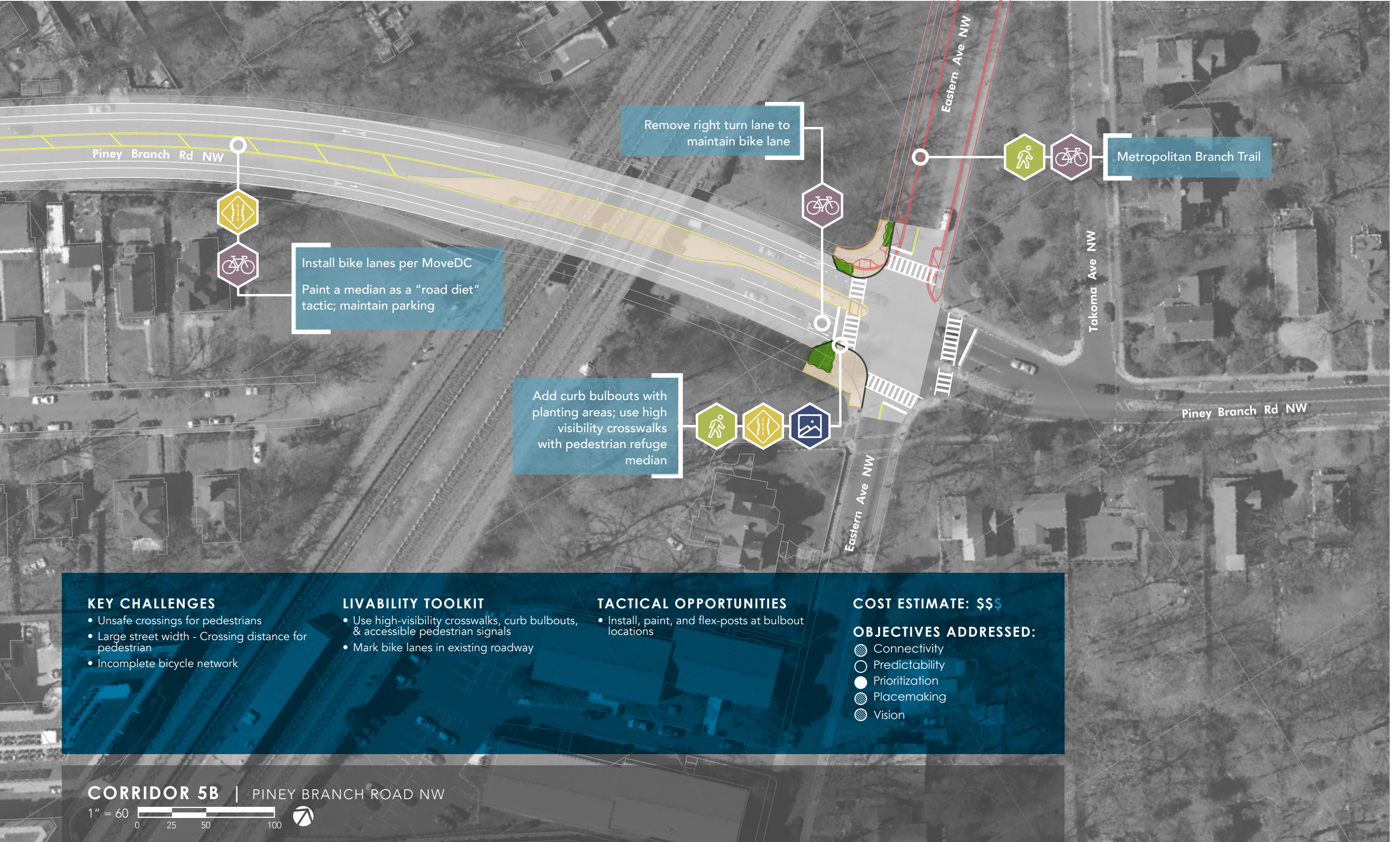
Re-align intersection and add curb bulbouts with planting areas

Add curb bulbouts with planting areas and to create space for streetscape amenities

Restrict access one-way northbound and create reverse-in angled parking

Shorten crossing distances by adding curb bulbouts with planting areas and to create space for streetscape amenities

Close vehicular access to improve multi-modal safety



Remove right turn lane to maintain bike lane

Install bike lanes per MoveDC
Paint a median as a "road diet" tactic; maintain parking

Add curb bulbouts with planting areas; use high visibility crosswalks with pedestrian refuge median

Metropolitan Branch Trail

<p>KEY CHALLENGES</p> <ul style="list-style-type: none"> • Unsafe crossings for pedestrians • Large street width - Crossing distance for pedestrian • Incomplete bicycle network 	<p>LIVABILITY TOOLKIT</p> <ul style="list-style-type: none"> • Use high-visibility crosswalks, curb bulbouts, & accessible pedestrian signals • Mark bike lanes in existing roadway 	<p>TACTICAL OPPORTUNITIES</p> <ul style="list-style-type: none"> • Install, paint, and flex-posts at bulbout locations 	<p>COST ESTIMATE: \$\$\$</p> <p>OBJECTIVES ADDRESSED:</p> <ul style="list-style-type: none"> ○ Connectivity ○ Predictability ● Prioritization ○ Placemaking ○ Vision
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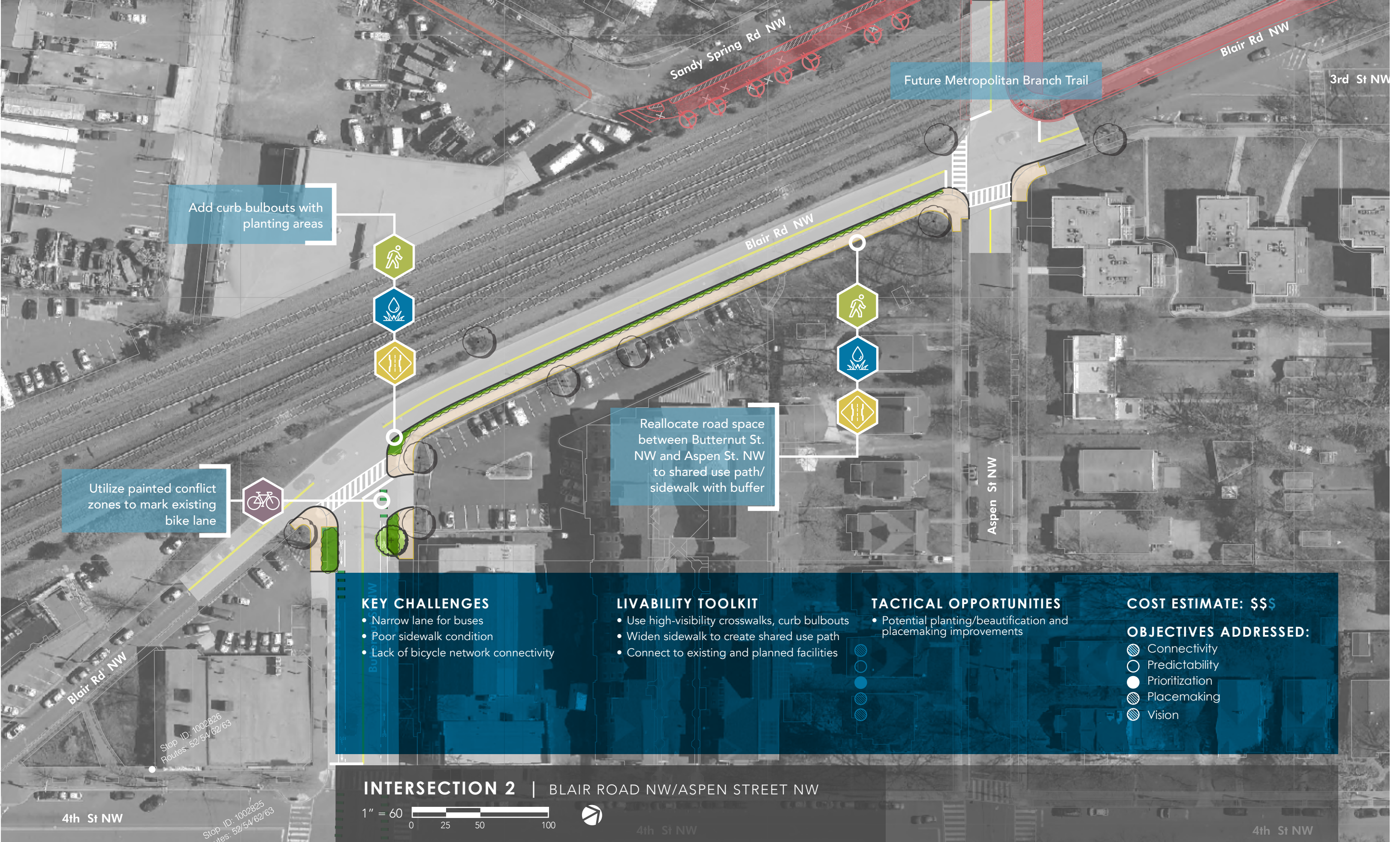
CORRIDOR 5B | PINEY BRANCH ROAD NW
1" = 60'

Figure 31. Corridor 5B Focus Area Recommendations



Visualization of Potential Tactical Re-use of Recaptured Slip Roadway

Figure 32. Intersection 1 Focus Area Recommendations



Add curb bulbouts with planting areas

Utilize painted conflict zones to mark existing bike lane

Reallocate road space between Butternut St. NW and Aspen St. NW to shared use path/sidewalk with buffer

Future Metropolitan Branch Trail

KEY CHALLENGES

- Narrow lane for buses
- Poor sidewalk condition
- Lack of bicycle network connectivity

LIVABILITY TOOLKIT

- Use high-visibility crosswalks, curb bulbouts
- Widen sidewalk to create shared use path
- Connect to existing and planned facilities

TACTICAL OPPORTUNITIES

- Potential planting/beautification and placemaking improvements

COST ESTIMATE: \$\$\$

OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

INTERSECTION 2 | BLAIR ROAD NW/ASPEN STREET NW



4th St NW

4th St NW

4th St NW

Figure 33. Intersection 2 Focus Area Recommendations

Extend center median with planting

Paint high visibility crosswalks; add pedestrian refuge; explore opportunity for RRFB

Relocate bus stops to farside of intersection; include ADA boarding alignment and benches

KEY CHALLENGES

- Unsafe crossings for pedestrians
- Large crossing distances for pedestrians
- Incomplete package at transit stop facilities

LIVABILITY TOOLKIT

- High visibility crosswalks
- Median extension with pedestrian refuge
- Bus stop relocation with amenities
- Added vegetation/planting areas
- Rectangular Rapid Flashing Beacons (RRFBs) - opportunity to be explored further

TACTICAL OPPORTUNITIES

- Potential beautification and placemaking improvements

COST ESTIMATE: \$\$\$

OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

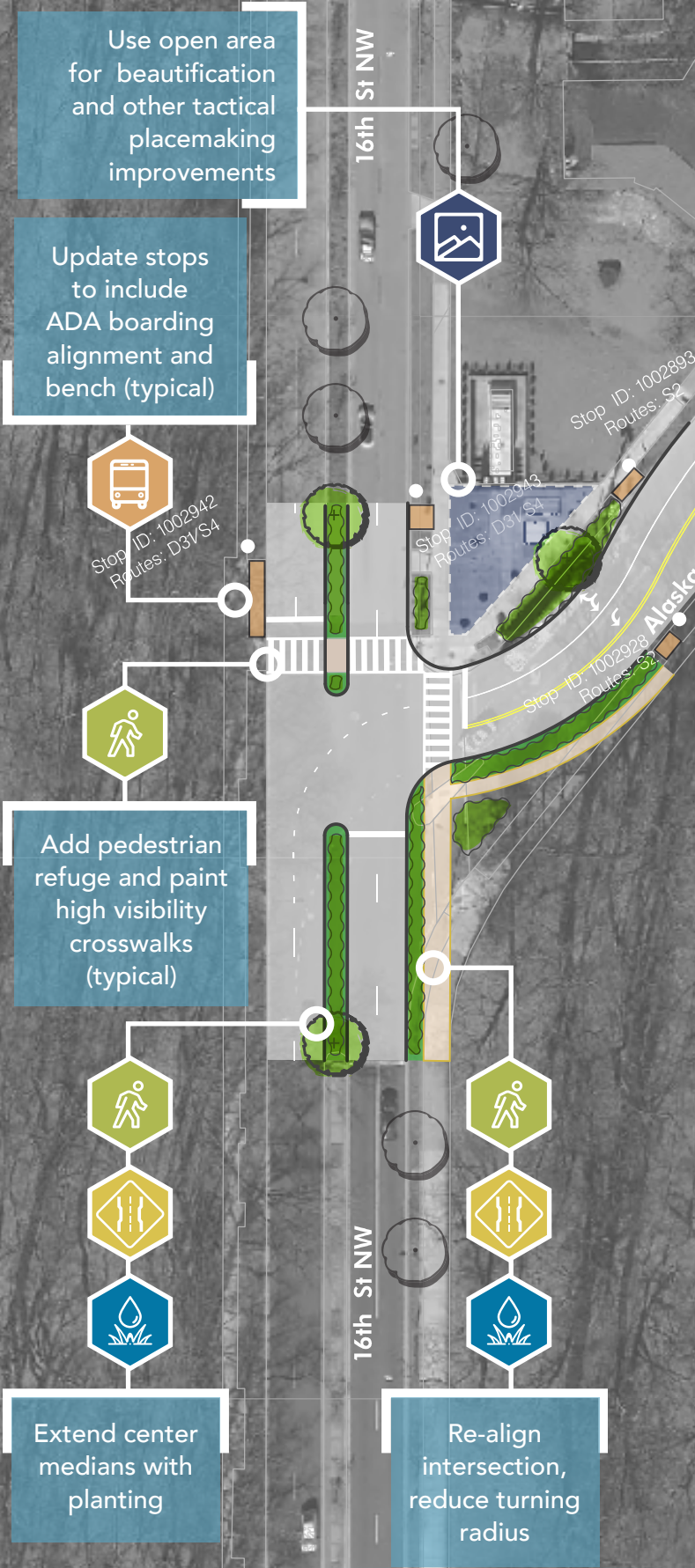
INTERSECTION 3

16TH STREET NW/
JUNIPER STREET NW

1" = 60'



Figure 34. Intersection 3 Focus Area Recommendations



KEY CHALLENGES

- Unsafe crossings for pedestrians
- Large crossing distances for pedestrians
- Large turning radius
- Incomplete package at transit stop facilities

LIVABILITY TOOLKIT

- Curb bulbouts
- Realign intersection and reduce turning radius
- Added vegetation/planting areas
- Bus stop amenities
- Lane Removed
- Restricted left turn (southbound)

TACTICAL OPPORTUNITIES

- Potential beautification and placemaking improvements

COST ESTIMATE: \$\$\$

OBJECTIVES ADDRESSED:

- Connectivity
- Predictability
- Prioritization
- Placemaking
- Vision

INTERSECTION 4

16TH STREET NW/
ALASKA AVENUE NW



Figure 35. Intersection 4 Focus Area Recommendations



The nine focus areas present some of the greatest opportunities for impactful improvements in the RCEI study area. By outlining a strategy for implementation, their effects and lessons can be repeated throughout Rock Creek East I. For focus area cost estimates refer to Appendix D.



ADDITIONAL RECOMMENDATIONS

Given the scale of the study area and scope of the Livability Study Program, nine (9) locations were identified for detailed concept design. However, additional for recommendations were proposed for locations based on results of the flashlight map analysis and ongoing community concerns. These recommendations complement the focus area improvements.

Development Impacts

Ongoing and anticipated development impacts, due to the Parks at Walter Reed, Children's National Hospital and U.S. Department of State Foreign Missions Center, continue to drive community concerns for additional traffic, speeding, and cut through traffic on nearby local streets. Due to the scope of concerns and timing of the various development projects, the study recommends that DDOT continue coordinating with developers on transportation mitigations identified as part of the development review and zoning process.

Given the scope of DDOT's Livability Program, to provide comprehensive recommendations at a network level and in response to current conditions, the study does not provide concrete recommendations to address expected impacts. However, the study does recommend that DDOT divisions continue to be proactive with the community in identifying mitigations and incorporating them into the zoning approval process.

Thus far, several multimodal mitigation measures such as the 16th Street NW and Alaska Street NW improvements (Focus Area Recommendation I4) and traffic impact study of local streets north of Walter Reed, have been incorporated as mitigation measures by DDOT staff in the Children's National zoning process. In addition, DDOT staff continue to respond to ongoing construction concerns.

Pedestrian Improvements

Although a majority of streets within the RCEI study are replete with sidewalks, the study has identified several streets that lack a sidewalk on one or both sides. Limited District resources and budget for sidewalk construction highlights the importance for prioritization for sidewalk projects.

This study recommends that identifying and prioritizing sidewalks based on 1) proximity to community resources (District schools, parks, recreation centers) and cross referenced with Safe Routes to School routes, and 2) proximity to transit facilities. Sidewalks gaps on higher classification roadways should be emphasized due to the higher vehicle volumes and speeds and need for pedestrian facilities that connect to community resources. Locations such as Georgia Avenue and Piney Branch Road have been highlighted in the recommendations.

Alaska Avenue NW

There were several community comments concerning the design speed along Alaska

Avenue, from 16th Street NW to Georgia Avenue NW, and the desire for traffic calming. A review of safety statistics also indicated a number of crashes along the corridor.

The study recommends either 1) a road diet opportunity that would entail either restriping to delineate road and parking lanes or 2) potential to incorporate bicycle lanes in the street design. These options would need additional resident and stakeholder engagement. Options for incorporating bicycle lanes include:

Option 1: Climbing bicycle lanes for the eastbound travel lane and sharrows for the westbound travel lane. This pattern preserves parking and fits with bus traffic. This would include parking striping and standard bike lane for the climbing lane.

Option 2: Remove parking on one side, (potentially south side) and install regular bike lanes in each direction, while retaining parking on the north side. This introduces the parking reduction, which would need community engagement and input.

Piney Branch Road NW/ Whittier Street NW/ 8th Street NW

Multiple safety comments were recorded at this intersection during the course of study. This was echoed in the Advisory Neighborhood Commission 4B Resolution 4B-20-0601 (June 23, 2020) and supported by the subsequent working group recommendation to “Redesign the intersection of Piney Branch Road NW and 8th and Whittier Streets NW to limit high speed exits onto neighborhood streets and allow better and safer pedestrian movement.”

As of Fall 2020, the ANC request for traffic calming measures on Piney Branch Road NW, from Eastern Avenue NW to Georgia Avenue, will evaluate the feasibility of the RCEI Livability Study recommendation for bicycle lanes on Piney Branch bicycle lane (Focus Area Recommendation C5). The study further recommends that the Piney Branch Road/ Whittier Street/ 8th Street intersection be evaluated for geometric improvements. DDOT

is evaluating the intersection for short-term improvements and will be working with the community over the winter 2020/ spring 2021.

3rd Street NW (Longfellow Street NW to Peabody Street NW)

The stretch of 3rd Street NW between Longfellow Street and Peabody Street does not have any traffic controls and the design speed is higher than posted, e.g. excess travel lane width and an unused parking lane along Fort Slocum Park) encourages speeding.

The study recommends reviewing this section of 3rd Street NW for restriping or the potential to extend the existing bicycle lane along 3rd Street from Rittenhouse Street NW down to Madison Street NW. Underutilized parking adjacent to Fort Slocum Park could be evaluated for removal as well as existing traffic volumes and parking utilization on 3rd Street NW. This may require parking reduction, which would need community engagement and input.

Kansas Avenue NW/ Blair Road NW/ Peabody Street NW/ North Dakota Ave NW

The study’s flashlight mapping analysis indicated a number of pedestrian and bicycle crashes at and surrounding this intersection. The study recommends that this intersection be evaluated further for safety improvements and geometric modification. Improvements should build upon planned improvements around the intersection.

DDOT is currently conducting an analysis and design concept for closing the gap in the bicycle lane network on Kansas Avenue between Blair Road and Chillum Place NE to help improve access to several schools near Chillum Place. As part of this effort, DDOT will evaluate potential signal improvements and modifications at this intersection. In addition, this intersection will be analyzed as part of the Metropolitan Branch Trail (MBT) project.



IMPLEMENTATION

The Rock Creek East I Livability Study provides a snapshot of the current safety issues facing residents and visitors. The study outlines several potential recommendations for improving quality of life and enhancing access. A clearly defined implementation plan will enable DDOT to allocate funding and staff resources to bring these projects to life.

Phasing strategies allow DDOT to prioritize and implement quick-win projects that solve critical safety issues and/or have a widespread impact on the surrounding community. This provides DDOT the opportunity to engage the community in further studying more infrastructure-intensive projects that require detailed design and creative funding.

As short-term projects are completed, community stakeholders can leverage the positive momentum to build support for larger projects that require additional time and resources while experiencing the positive impacts of change. Moreover, lessons learned from early implementations can inform key project decisions for future implementation and ensure resources are used in an effective and efficient manner.

To better understand the project development and implementation process, this chapter will review DDOT's established Project Development Process Guidelines in the context of the Rock Creek East I Livability Recommendations. Based on these established guidelines, a phasing plan and guidance on next steps will be presented to ensure this report can be used as an actionable tool for continually improving the Rock Creek East I communities.



DDOT PROJECT DEVELOPMENT PROCESS

The ultimate goal of any planning process is to see the community's vision realized through construction of proposed improvements. To accomplish this goal, projects will follow the established DDOT Development Process depicted in the figure to the right. Understanding the five development process components and phasing timelines are critical to developing a successful implementation plan.

PLANNING

Planning is the first step to any major project implementation, and the Livability Study completes this step. Effective planning requires establishing a vision and shared goals for a community based on robust public input, data analysis, and a clear understanding of the opportunities and constraints that could affect potential infrastructure improvements. While some additional planning work may be required for specific projects, this report is an excellent foundation for moving quick-win projects toward rapid implementation while other projects are further vetted for feasibility.

ENVIRONMENTAL

The environmental impacts of any project must be considered prior to implementation. While the level of environmental impact analysis and required reviews vary largely with project size and scope, it is critical to understand the potential effects a project will have on its surroundings. Understanding required permitting and regulations are critical to successful implementation and project timelines. For large scale projects, initiating the environmental review process early is essential to completing the project in an established time frame.

DESIGN

Successful project implementation hinges on successful design development. Similar to the planning process, the design process should be anchored in extensive stakeholder feedback, public input, and a well-defined understanding of the existing opportunities and constraints. Effective project design must consider all potential impact areas, including stormwater management, natural resources, cultural resources, traffic, utilities, transit, and historic areas.

RIGHT-OF-WAY

Some projects within this plan utilize only existing DDOT right-of-way (ROW) and others may require acquisition or easements. Successful project implementation requires an understanding of the existing right-of-way boundaries and clear strategies to acquire additional land or permissions, if needed. While the majority of the projects within this plan anticipate remaining within the existing ROW, boundaries used in this planning process are GIS-based and not complete survey data.

CONSTRUCTION

The final step in the development process, construction, is where the community vision finally comes to life with actual infrastructure improvements. Successful project construction depends on detailed design development including logistics considerations, detailed scheduling, and established project control processes to ensure proper accountability and risk management.

TYPICAL DDOT PROJECT DEVELOPMENT PROCESS

SHORT TERM (1-2 YEARS)

Can be executed through existing contracts and typically do not need capital funding, design work, or environmental clearance.

MEDIUM TERM (2-4 YEARS)

Typically need more advanced design, but may not be subject to full environmental impact statement (EIS) depending on nature of each project.

LONG TERM (4-8 YEARS)

Larger capital projects, which need to be programmed into the budget process with detailed designs and right-of-way examination.

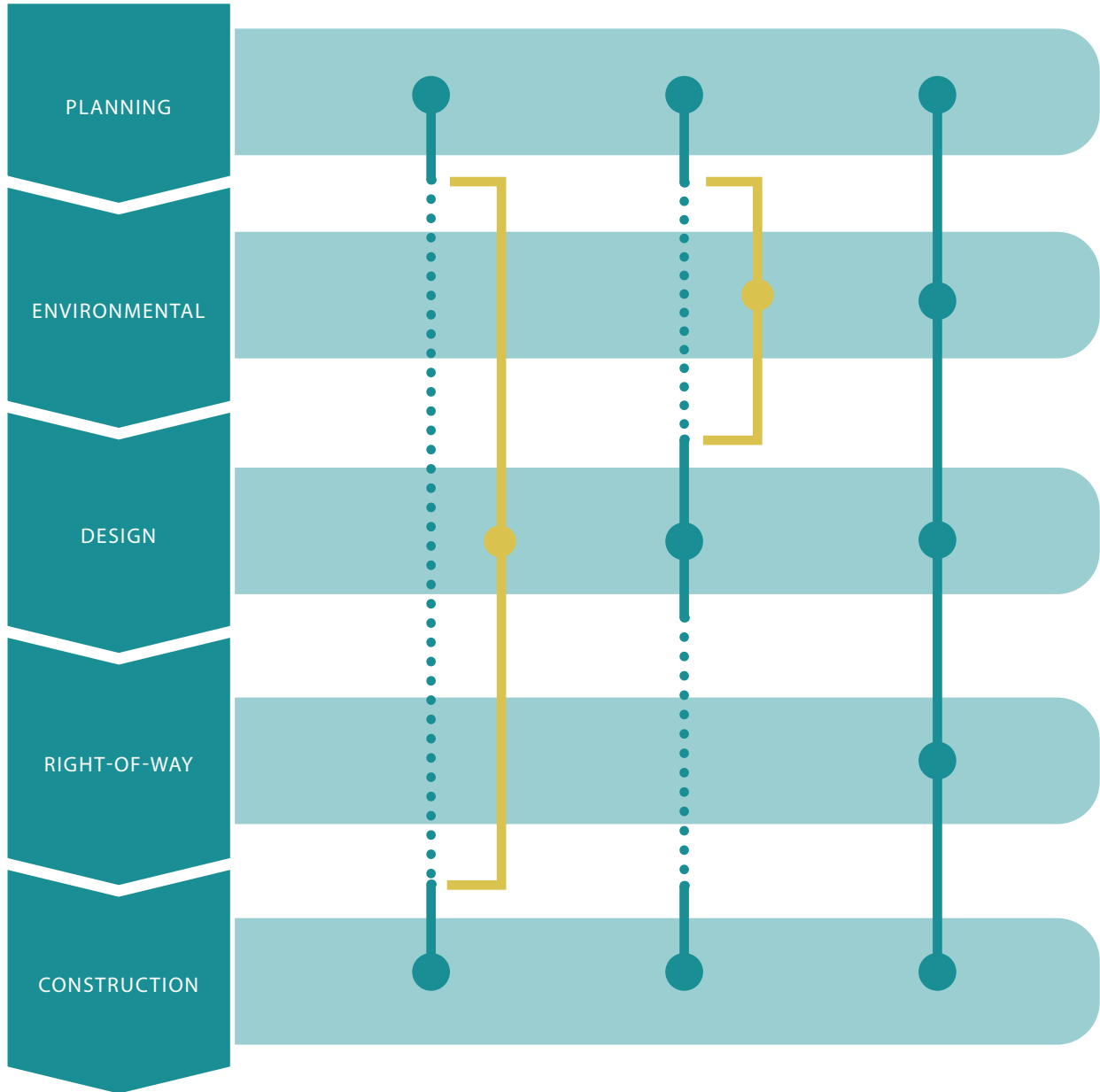


Figure 36. DDOT Project Development Process

PERFORMANCE MEASURES LEADING TO PHASING

DDOT has developed a Performance Measures Toolbox (current edition dated September 2016) that outlines several performance metrics used to evaluate the effectiveness of planned projects. These performance measures are needed to track progress, develop effective solutions to project needs, prioritize need and investments, and assess the effectiveness of projects that promote goals and strategies from the District's Multi-modal Long-Range Transportation Plan, MoveDC.

The Toolbox categorizes these measures into seven (7) overarching community goals based on MoveDC goals. Of these seven, the relevant goals are Neighborhood Accessibility and Connectivity, Safety and Security, Sustainability and Health, and Citywide Accessibility and Connectivity. The measures are further defined by the transportation mode that would be evaluated or that would benefit from the success of the planned project.

Recommendations stemming from the RCEI Livability Study can be linked directly to specific performance measures found in the DDOT toolbox. The metrics provide an opportunity to assess overall network changes. More specifically, the results will be used to inform DDOT and stakeholders how each of these projects performs in comparison to stated project goals. The matrix on the following page outlines which Toolbox Priority Measures and Project-Specific Measures are applicable to each proposed recommendation in this plan. The performance of each project is defined by the direction in which each measure should trend to indicate whether the concept is achieving the project goal of improving livability for residents of Rock Creek East I. It is recommended that DDOT collect and analyze the types of data, as described in the Performance Measures Toolbox, that are required to assess the relevant performance measures for each concept following project implementation.

PERFORMANCE MEASURE

PRIORITY MEASURES

			CORRIDORS					INTERSECTIONS			
			C1 GEORGIA AVENUE (NORTH)	C2 14TH STREET	C3 GEORGIA AVENUE (SOUTH)	C4 NORTH CAPITOL STREET/NEW HAMPSHIRE	C5 PINEY BRANCH ROAD	I1 GEORGIA AVENUE/ALASKA AVENUE	I2 BLAIR ROAD/ASPEN STREET	I3 16TH STREET/JUNIPER STREET	I4 16TH STREET/ALASKA AVENUE
PRIORITY MEASURES	Safety and Comfort	85th Percentile Speed	↓	↓	↓	●	↓	↓	↓		↓
		Bicycle and Pedestrian Crashes	↓	↓	↓	↓	↓	↓		↓	↓
		Crash Frequency	↓	↓	↓	↓	↓	↓		↓	↓
		Crash Rate	↓	↓	↓	↓	↓	↓		↓	↓
		Crash Severity	↓	↓	↓	↓	↓	↓			↓
		Level of Traffic Stress (Bike)		↓	↓		↓				
	Mobility and Congestion	Automobile Delay			●	↓		●			
		Pedestrian Crossing Time	↓	↓	↓	↓	↓	↓	↓	↓	↓
		Progression Speed				↑					
		Travel Time			●	↓					
		Travel Time Index				↓					
	Mode Share	Automobile Volume									
		Bicycle Volume		↑	↑		↑		↑		
		Pedestrian Volume	↑			↑	↑	↑	↑		
		Bus Ridership	↑	↑	↑			↑			
	PROJECT-SPECIFIC MEASURES	Access to Jobs and Community Destinations	Jobs and Destinations Served			↑					
		System Coverage	Residents Served								
		Environment	Air Quality				↑				
Green Space			↑	↑	↑	↑	↑	↑	↑	↑	↑
Impervious Surface			↓	↓	↓	↓	↓	↓	↓	↓	↓
Traffic Noise											
Traffic Diversion				↑		↑	↑	↑			
Tree Coverage			↑	↑		↑	↑	↑			
Travel Time Reliability		On-time Performance (Bus)		↑	↑	↑					
		Planning Time Index									
Quality of Service		Bicycle Network Connectivity		↑	↑		↑		↑		
		Bus Overcrowding									
		Transit Frequency									
		Pedestrian Network Connectivity	↑	↑		↑		↑	↑	↑	
System Utilization		Person Throughput	↑	↑	↑		↑	↑			

Key to Indicators

- ↑ Successful Performance if the Measure Increases
- ↓ Successful Performance if the Measure Decreases
- Change Likely but Does Not Determine Success

PRIORITY MEASURES

To better understand how the Priority Measures and Project-Specific Measures apply to the study's proposed improvements. This section outlines examples and the logic behind the attached matrix.

For example, in Corridor 1 (Georgia Avenue), proposed improvements include bump-outs at intersections, curb bump-outs with dedicated green space, bus bulb-outs, high-visibility crosswalks, and new pedestrian signals. Given the traffic calming and pedestrian safety benefits associated with these treatments, the anticipated speed and crash rates found in the Safety and Comfort priority measures would all be expected to drop, with the exception of bike lane level of stress since there are no specific improvements to cycling infrastructure. In terms of Mobility and Congestion, the pedestrian crossing time would be expected to drop given the reduced crossing distance from the bump-outs. The effects on overall travel time and automobile delay would be negligible since there are no significant changes to the roadway configuration or capacity. For Mode Share, the improved pedestrian infrastructure and added bus-bulb-outs would be expected to increase pedestrian activity and bus ridership respectively, with no effect on automobiles or bicycles.

PROJECT SPECIFIC MEASURES

Moving to the Project-Specific Measures, no change would be expected in the Access to Jobs and Community Destinations and System Coverage measures since the improvements are relatively concentrated and not near major network centers. For measures pertaining to the Environment, the additional green space in the bulb-outs is replacing existing impervious surfaces and thus the green space indicator increases while the impervious surface indicator decreases. Tree coverage will also increase slightly since new trees will be planted in the added green space. While the bus bulb-out will improve boarding times, the implementation of only one limits the improvement's ability to significantly improve on-time performance and planning time index measures for Travel-Time Reliability. The limited scope of bus-related improvements prevents an increase in most of the Quality of Service metrics, with pedestrian network connectivity being the key exception. Finally, the improved pedestrian connectivity and overall safety improvements to the corridor should result in additional person throughput under the System Utilization measure. While all of these anticipated impacts are dependent on a multitude of external forces, the process for determining the performance indicators is applicable to all of the proposed livability improvements.



Project Phasing

The phasing plan for the Rock Creek East I Livability Study is segmented into short, medium, and long-term projects. In many cases, the short-term portion of a project lays the groundwork for more permanent long-term improvements. These tactical urbanism style short-term projects are an excellent method for testing planned treatments and building additional support for larger, more complex projects. More importantly, they enable community residents to express concerns that may not have been present during the development of this plan and work with local agencies to modify the design of future implementations. Of note, many short-term projects use “quick-build” materials, such as flexposts and other “lighter, quicker, cheaper” materials prior to installing permanent construction.

SHORT-TERM PROJECTS (1-2 YEARS)

Recommendations classified as short-term projects include improvements that can be implemented at relatively low cost through existing safety, asset management, and maintenance programs within DDOT. As an example, adhering to pre-defined standards, WMATA-approved bus stop improvements can be installed in the near term.

Some improvements with more moderate costs that require additional planning and design efforts can also be identified as short-term based on the level of need. A high need, for example, may be determined from the project’s proximity to pedestrian and bicycle trip generators such as schools, recreation centers, libraries, bus stops, or commercial areas. Additionally, projects that would provide safety improvements are prioritized higher than those that would primarily improve network connectivity or provide congestion relief.

MEDIUM-TERM PROJECTS (2-4 YEARS)

Medium-term projects may involve more detailed design and engineering work compared

to short-term projects, adding another phase to the project and likely requiring additional time to plan and complete. Most of these projects have a higher estimated cost than short-term projects which may require additional funding coordination. Projects in this category may also require more extensive coordination with community stakeholders and local agencies during the planning and design phases.

LONG-TERM PROJECTS (4-8 YEARS)

Long-term projects are typically the most advanced implementations and are likely to involve each of the major stages of DDOT’s project development process. They will require more advanced design and environmental review. Long-term projects may also require acquisition of right-of-way or coordination with agency partners such as WMATA for significant bus stop modifications or the National Park Service for use of non-DDOT right-of-way for transportation improvements. In some cases, the projects in this category are not complex but include numerous improvements within a long corridor. Many of these projects will have large construction costs and thus will require an extensive effort to organize and secure funding. To avoid a piecemeal implementation along a corridor that could violate user expectancy and lead to adverse safety effects, the specific improvements within each project are recommended for implementation simultaneously. This may require additional planning, resources, and coordination, leading to the classification of these projects as long-term.

The following tables illustrate a phasing strategy for the project focus areas. Systematic improvements should be addressed by DDOT as roadway improvements are made, and future small area planning and design programs are initiated. For a complete cost estimate, refer to Appendix D.

Table 4. Project Phasing Strategy

AREA	DESCRIPTION	ESTIMATED PLANNING-LEVEL COST	PHASING
C-1	Georgia Avenue NW (North) TACTICAL Install paint markings and flexible delineators to form bulb-outs at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks.	\$57,700	S
	Georgia Avenue NW (North) PERMANENT Construct bulb-outs at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Close redundant driveways to reduce pedestrian-vehicle conflict points; Upgrade bus stops for ADA-compliance; Install HAWK signal at Fern St pedestrian crossing; Add plantings, trees, and pedestrian lighting.	\$225,250	M
C-2	14th Street NW TACTICAL Install paint markings and flexible delineators to form bulb-outs at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Install green paint to highlight bike lane conflict zones.	\$139,000	M
	14th Street NW PERMANENT Construct bulb-outs with planting areas at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Install pedestrian crossing signs; Construct floating bus stop (optional); Upgrade bus stops for ADA-compliance; Restrict Luzon Ave to one-way with realignment and construct contraflow bike lane and new sidewalk.	\$503,750 (\$539,050 with Floating Bus Stop)	L
C-3	Georgia Avenue NW (South) TACTICAL Install paint markings and flexible delineators to form bulb-outs at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Install green paint to highlight bike lane conflict zones along Piney Branch Road; Install public art at Tewkesbury Place cul-de-sac. Install quick build material for closing 12th Street NW spur.	\$112,450	S
C-3 (contd.)	Georgia Avenue NW (South) PERMANENT Construct bulb-outs with planting areas at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Construct median refuge island at Underwood St with Rectangular Rapid Flashing Beacon (RRFB); Upgrade bus stops for ADA-compliance; Repurpose travel lane on Piney Branch Road to create protected bike lanes near Georgia Avenue; 9 th Street NW intersection realignment; Construct new sidewalk along Piney Branch Road; Tuckerman Street NW realignment.	\$303,450	M-L

Table 4, continued

AREA	DESCRIPTION	ESTIMATED PLANNING-LEVEL COST	PHASING
C-4	North Capitol Street/New Hampshire Ave TACTICAL Install high-visibility crosswalks and in-road "Stop for Pedestrians" signs.	\$14,500	S
	North Capitol Street/New Hampshire Ave PERMANENT Realignment of multiple adjacent intersections reduce vehicle-pedestrian conflicts and reduce crossing distances, improve traffic flow to reduce red-light violations, create new community green spaces; Install high-visibility crosswalks and median refuge islands for pedestrians.	\$1,166,800	L
C-5	Piney Branch Road NW TACTICAL Install paint markings and flexible delineators to form bulb-outs at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Install green paint to highlight bike lane conflict zones along Piney Branch Road; Close access to 5 th Street and Dahlia Street at Blair Road. Quick build reconfiguration of 6th Street NW.	\$98,100	M
	Piney Branch Road NW PERMANENT Construct bulb-outs with planting areas at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Convert 6 th Street to one-way at Piney Branch Road and add angle parking; Close access to 5 th Street and Dahlia Street at Blair Road with curb, sidewalk, and landscaping; Install bike lanes per MoveDC; Implement a road diet using painted median east of Blair Road; construct floating bus island at Butternut St.	\$323,000	L
I-1	Georgia Avenue NW at Alaska Avenue NW TACTICAL Install paint markings and flexible delineators to form bulb-outs at corners to reduce pedestrian crossing distances and reduce turning speeds for right-turning vehicles; Install wayfinding signage.	\$45,550	S
	Georgia Avenue NW at Alaska Avenue NW PERMANENT Remove slip lane to Alaska Avenue and construct a plaza area; Construct a median on Alaska Avenue to restrict left turns to and from Kalmia Road; Construct median pedestrian refuge islands along Georgia Avenue; Remove slip lane from Eastern Avenue to create landscaped area and reduce turning speeds for improved pedestrian safety; Install high-visibility crosswalks.	\$255,000	M

Table 4, continued

AREA	DESCRIPTION	ESTIMATED PLANNING-LEVEL COST	PHASING
I-2	Blair Road NW at Aspen Street NW TACTICAL Planting, beautification, and placemaking improvements.	\$17,900	S
	Blair Road NW at Aspen Street NW PERMANENT Construct bulb-outs with planting areas at corners to reduce pedestrian crossing distances; Upgrade to high-visibility crosswalks; Install green paint to highlight bike lane conflict zones on Butternut Street; Upgrade to wider sidewalk along Blair Road.	\$302,000	S
I-3	16th Street NW at Juniper Street NW PERMANENT Replace southbound left-turn lane with an extended center median with plantings; Relocate and upgrade bus stop for safety and ADA compliance; Install high-visibility crosswalks.	\$97,300	S
I-4	16th Street NW at Alaska Avenue NW TACTICAL Planting, beautification, and placemaking improvements.	\$6,650	S
	16th Street NW at Alaska Avenue NW PERMANENT Realign Alaska Avenue to reduce the turning radius and speed of right-turns from 16 th Street; Extend medians to provide pedestrian refuge and planting areas; Upgrade bus stop for ADA compliance; Install high-visibility crosswalks.	\$101,550	M



NEXT STEPS

With a clear understanding of the project implementation process and a well-defined project phasing plan, the stage is set to begin addressing the livability and safety goals established in the Rock Creek East I Livability Study. Local stakeholders and community champions should begin initiating conversations with DDOT and other relevant agencies to establish lines of communication and develop an action plan based on the recommended treatments.

The process will be fluid and the scope of actual project implementation may vary depending on current circumstances and other external factors. The foundation laid in this report will ensure the implemented projects align with the goals of community members and is consistent with the objectives of other District plans, such as MoveDC. The roadmap is now in place to improve safety, access, and livability within the communities of Rock Creek East I for residents and visitors for generations to come.





APPENDIX

The Rock Creek East I Livability Study has been supported and informed by extensive research, assessment, and data collection. Not all of this research could be presented in the body of the final report. However, as

this research and referenced information is critical to understanding the final concept recommendations, they are provided as appendices.

APPENDICES

FIELD OBSERVATIONS

Traffic + Roadway Observations	99
Pedestrian + Bicycle Facilities Observations	147

DATA COLLECTION - TRAFFIC COUNTS

Traffic Counts	160
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PUBLIC ENGAGEMENT SUMMARY

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COST ESTIMATE

Cost Estimate	416
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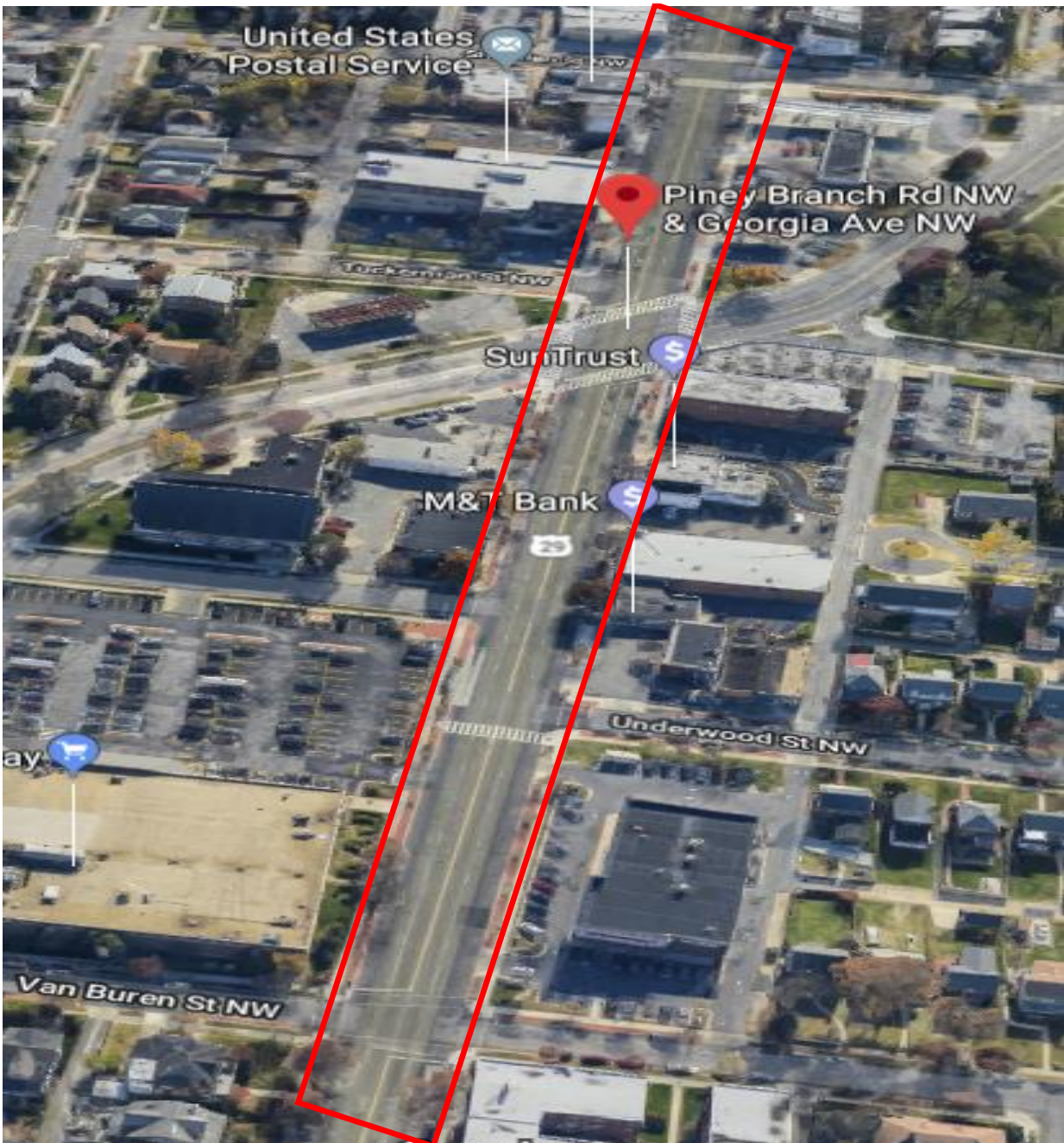
Early in project planning, the team conducted field assessments to evaluate the area through multiple lenses—from experiential to the more technical. Recognizing the strengths while taking note of challenges, field teams walked the corridors and observed the state of infrastructure, presence of businesses, and qualities of the landscape. After cataloging existing features, observing behavior, and analyzing spatial data, multi-modal conditions

were delineated and mapped. The assessment further supported the identification of focus areas by identifying areas of the highest need. Multi-modal field assessments are followed by more in depth traffic analysis.

APPENDIX A

FIELD OBSERVATIONS

TRAFFIC + ROADWAY OBSERVATIONS



COMMUNITY CONCERNS

- Bicycle crashes.

OBSERVATIONS

A. Traffic Control Device

- Intersection of Georgia Avenue and Van Buren Street, NW is signalized.
- Intersection of Georgia Avenue and Underwood Street is controlled by STOP sign on Underwood Street, NW.
- Intersection of Georgia Avenue and Piney Branch Road, NW is signalized.
- Intersection of Georgia Avenue and Sheridan Street, NW is signalized.
- Intersection of Georgia Avenue and Rittenhouse Street, NW is signalized.

B. Signages

- No Parking (R7-2) signs present at designated locations on both sides of Georgia Avenue, NW.
- Snow Emergency Route signs present on SB direction.
- Posted Speed Limit of 30 MPH on Georgia Avenue, NW.

C. Geometric Features

- Segment is approximately 1,780 feet long and 60 feet wide (Curb to Curb).
- The segment has three (3) lanes per direction.
- Width of lanes is 10 feet.
- There are twenty (20) driveways along the segment.

D. Pavement markings

- Double yellow centerline markings present throughout the segment.
- Crosswalk markings present on some approaches of the intersections on the segment.
- Stop bars present on minor road approaches at intersections along the segment.

E. Road Side Features

- Sidewalks present along both sides of the segment.
- Street lights are present and functioning.
- Gas stations, business centers and shops are located on either sides of the segment.

F. Parking

- Metered parking is present at certain locations on the segment.
- Parking restriction is 2-hour limit between 7 AM – 8:30 PM, Monday to Friday at certain locations.
- There are five (5) transit stops on the segment.

G. Vehicular Behavior

- High traffic volumes were observed on the segment.
- Vehicle-pedestrian conflict were observed on the segment.
- Some vehicles were observed speeding on segment

H. Pedestrian and Bicycles Behavior

- Pedestrians were observed crossing Georgia Avenue, NW mid block and outside the crosswalks.
- Bicycles were observed sharing the travel lanes with vehicles.
- Bicycles were observed using the sidewalks.

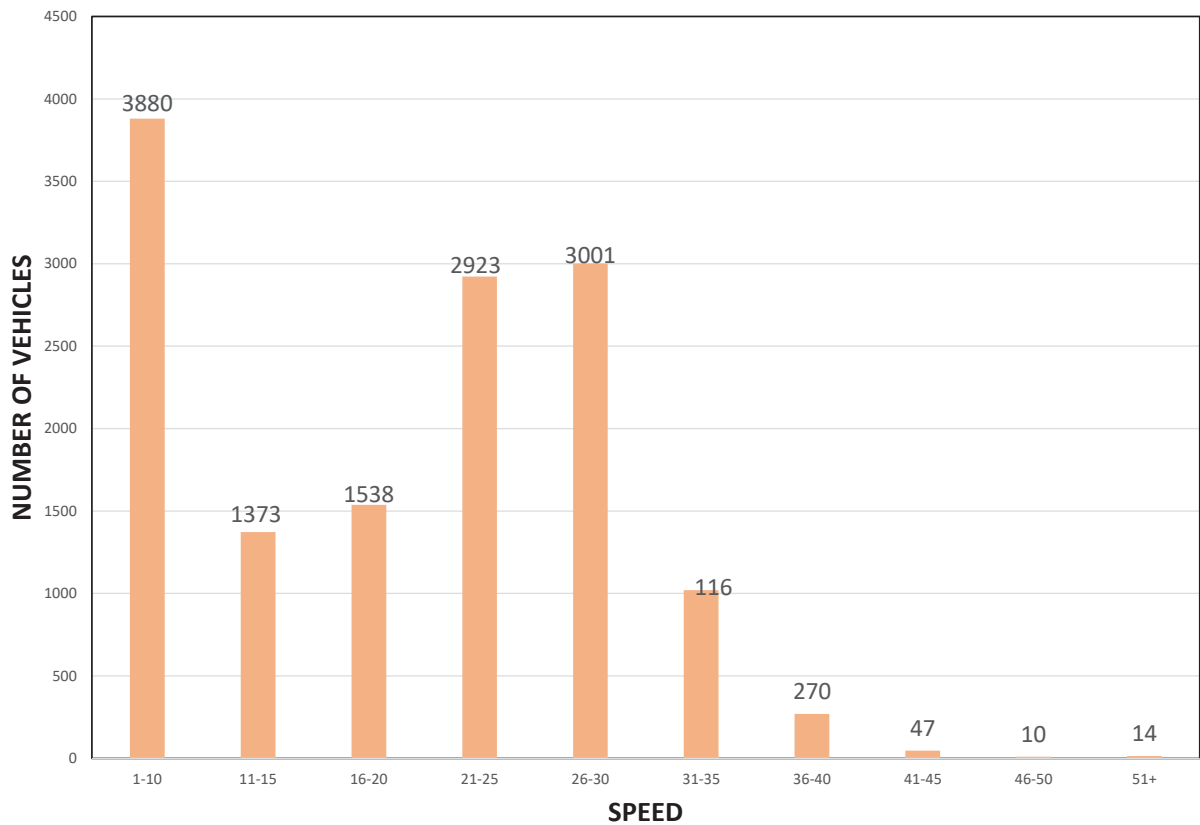
Condition of Facilities at Intersections

Facility	Condition	Remarks
Pavement markings	Fair	Pavement markings are in fair condition.
Signage	Fair	Signs along the segment are in fair condition. Some signs have been blocked by trees, while others are attached on bent poles.
Sidewalks	Good	Sidewalks along the segment are in good condition. However, there are defects in isolated locations.
Crosswalks	Good	Crosswalks are in good condition.
Street Lights	Good	Street lights are in good condition.

TRAFFIC VOLUMES & SPEED ON GEORGIA AVENUE**Summary**

Measure	Data
Peak Hours	6:30 AM – 7:30 AM & 5:45 PM – 6:45 PM
Peak Hour Volumes	AM: 810 vph PM: 1004 vph
ADT	14,032
Mean Speed	19 MPH
10 MPH Pace Speed	21-30 MPH
85 th Percentile Speed	28 MPH
Total number of bicycles using travel lanes during AM & PM peak periods	8
Total number of bicycles using sidewalks during AM & PM peak periods	18

24-Hour Segment for 30 MPH Speed Limit

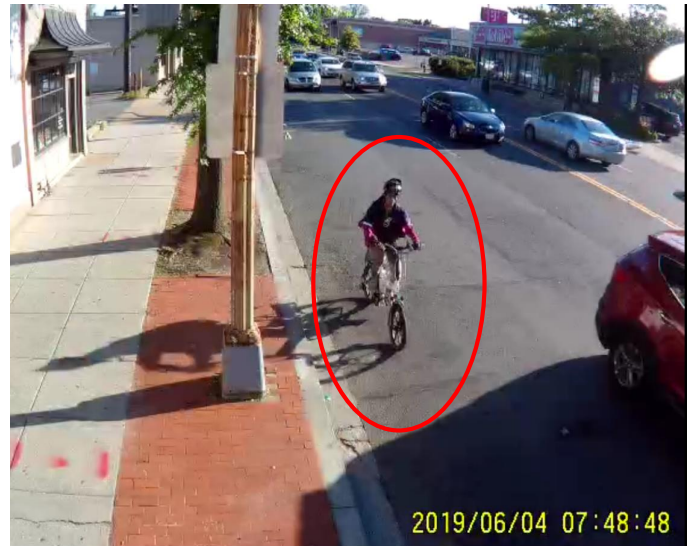


Field Assessment & Preliminary Data – GEORGIA AVENUE

PHOTOGRAPHS OF INTERSECTION



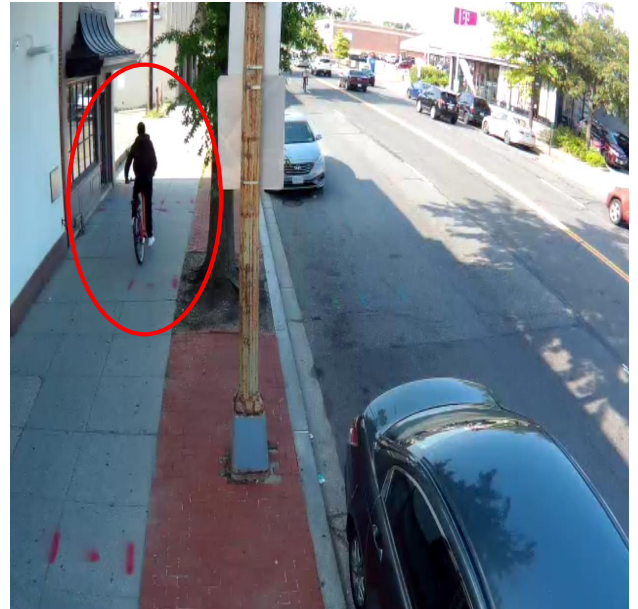
Cyclist using sidewalk on SB Georgia Avenue, NW



Cyclist sharing NB travel lane Georgia Avenue, NW

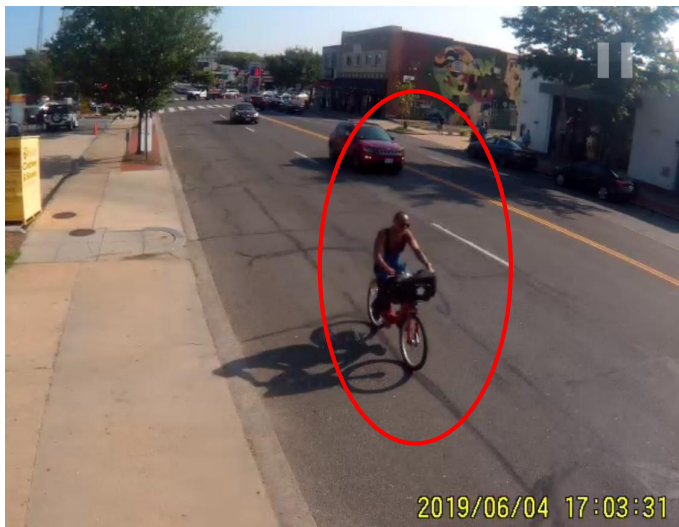


Pedestrian Crossing at mid-block on Georgia Avenue, NW



Cyclist using sidewalk on SB Georgia Avenue, NW

AVENUE, NW B/N RITTENHOUSE ST & VAN BUREN ST, NW



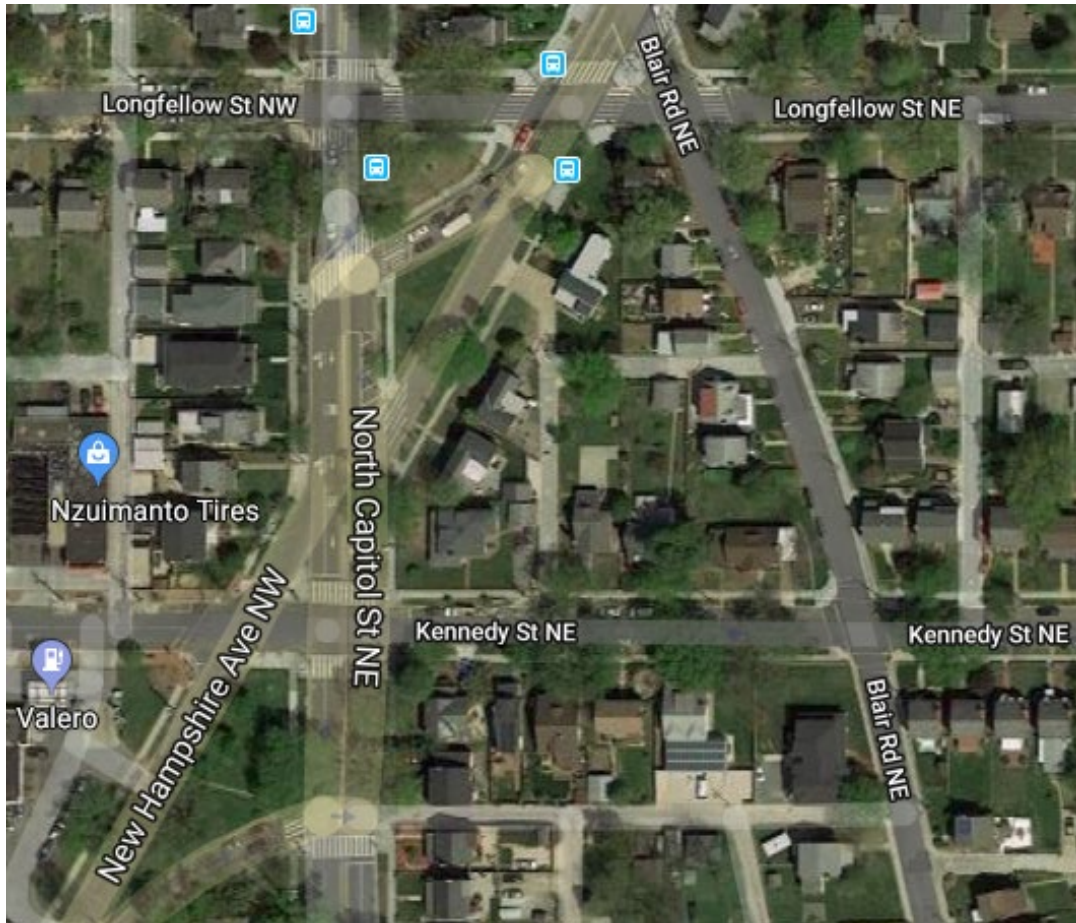
Cyclist sharing SB travel lane with vehicles on Georgia Avenue, NW



Pedestrian crossing at mid-block on Georgia Avenue, NW

North Capitol St & New Hampshire Ave

INTRODUCTION



The intersection of North Capitol Street and New Hampshire Avenue is located approximately two miles east of Rock Creek Park in the Northwest Quadrant of Washington, D.C. This intersection is considered a high priority location of the DDOT Rock Creek East Livability Study. North Capitol Street separates the Northwest and Northeast quadrants, therefore the street names of those that are west of North Capitol Street will be labeled as NW and those east of it will be labeled as NE (see map above for context).

In order to understand the public perception of the livability conditions at this intersection, public comments were taken from three main sources; 1) calls to DC's 311 system entered into DDOT's Open Data Portal, 2) Vision Zero comments from DDOT Open Data Portal, and 3) Rock Creek East 1 public meeting comments. Some of the public comments made about this location are as follows:

TOL ST NW & NEW HAMPSHIRE AVE NW

- There are no sidewalks for several blocks on Blair Rd NE. This is a highly pedestrian trafficked route due to public transit and several schools nearby.
- During morning and evening peak periods cars on New Hampshire “Block the Box” at Blair; causing a backup on Blair, when the light turns green. Accidents frequently occur at this intersection due to drivers not stopping at the red light and/or speeding through the intersection. Avg of at least 2 accidents per month.
- Cars frequently run the right turn red-light from North Capitol Street to New Hampshire Avenue; preventing pedestrians from crossing; ignoring the No Turn on Red (“Right Turn on Green Arrow Only”) sign creating an unsafe environment for crossing New Hampshire Avenue.
- During the AM Peak cars traveling southbound from New Hampshire to North Capitol routinely run the red light and create serious backups “Blocking the Box”. This impacts northbound and southbound traffic on North Capital Street.

EXISTING CONDITIONS

Study Intersections

There are five total intersections that were generally studied in order to examine the livability and analyze the public comments made about this location. The intersections and their control type are listed below:

- North Capitol Street & New Hampshire Ave: Signalized (All legs of intersection)
- North Capitol Street & Kennedy Street NE: Signalized
- New Hampshire Ave NW & Kennedy Street NW
- Longfellow Street NE & New Hampshire Ave NE: Unsignalized (Eastbound stop only)
- Blair Road NE & Kennedy Street NE: Unsignalized (All way stop)

A right turn signal and a “Right Turn on Green Arrow Only” sign are present at the intersection of northbound North Capitol Street at New Hampshire Ave NE. The signals at North Capitol St and New Hampshire Ave (all legs) do not have an All-Red Phase. During peak period observations, vehicles on southbound New Hampshire Ave NE were often still within the intersection as the light for north/southbound North Capitol Street turned green. A "Do Not Block Intersection" signs are present at southbound New Hampshire Ave NE and northbound North Capitol Street approaches of this intersection.

Field Assessment & Preliminary Data – NORTH CAPITOL

Field Observations

Field observations and data collection were conducted during the peak periods of 7:00-8:30 AM and 4:00-5:30 PM, as well as during off-peak hours to assess the existing conditions at this location. Some of the noteworthy observations made at and surrounding the intersection of North Capitol Street and New Hampshire Avenue include:

- Regarding the public comment made about the sidewalks along Blair Road, it appears DDOT recently installed a sidewalk on the east side of Blair Rd NE.
- However, the sidewalk along the east side of Blair Road NE between Riggs Road NE and Longfellow Street NE is very narrow and has multiple utility poles in the sidewalk.
- There is no sidewalk along the west side of Blair Road NE between Longstreet Street NE and Jefferson Street NE. The installation of a sidewalk here may be difficult due to the steep slopes and presence of housing along this road.
- Queued vehicles on southbound New Hampshire Ave NE often block the intersections and crosswalks, making crossing for pedestrians dangerous and difficult.
- Drivers were often observed disobeying the red right turn arrow from northbound North Capitol St NE onto New Hampshire Ave NE.
- A crash occurred at New Hampshire Ave NE & Longfellow St NE (just north of North Capitol St & New Hampshire Ave) during PM peak observations.
 - Vehicle 1 was travelling westbound on Longfellow Street NE approaching the stop sign at the intersection with New Hampshire Avenue NE. Due to the queueing on southbound New Hampshire Avenue NE, vehicle 1 was unable to see vehicle 2 which was travelling northbound on New Hampshire Avenue NE. Vehicle 1 proceeded to make a left turn onto northbound New Hampshire Avenue NE, colliding with vehicle 2.

Most of these observations are consistent with the initial issues identified from the public comments.

Pedestrian and Bike Accessibility

In order to examine the pedestrian and bicycle accessibility, counts were conducted at 7:00-8:30 AM and 4:00-5:30 PM at each leg of the North Capitol Street and New Hampshire Ave intersection along with the intersections of North Capitol Street & Kennedy Street, Longfellow Street NE & New Hampshire Avenue NE, and Kennedy Street NE & Blair Road NE. Table 1 shows the number of pedestrians at each intersection, by peak hour observed and the respective crosswalk used.

TOL ST NW & NEW HAMPSHIRE AVE NW

Table 1: Pedestrian Counts

Location	Peak Hour Observed	West Crosswalk	North Crosswalk	East Crosswalk	South Crosswalk
Kennedy & Blair	7:30-8:30AM	2	6	18	6
	4:30-5:30PM	4	3	11	4
Longfellow & New Hampshire	7:30-8:30AM	8	1	3	1
	4:00-5:30PM	2	0	3	6
North Capitol & Kennedy	7:30-8:30AM	4	9	10	14
	4:30-5:30PM	5	1	5	5
North Capitol & New Hampshire, NE (North)	7:30-8:30AM	N/A	0	0	N/A
	4:30-5:30PM	N/A	0	0	N/A
North Capitol & New Hampshire	7:30-8:30AM	0	1	0	8
	4:30-5:30PM	0	0	0	3
North Capitol & New Hampshire, NW (South)	7:30-8:30AM	8	N/A	N/A	5
	4:30-5:30PM	3	N/A	N/A	2

Table 2 shows the number bicyclists at each intersection by time and the respective crosswalk used.

Table 2: Bicycle Counts

Location	Peak Hour Observed	West Crosswalk	North Crosswalk	East Crosswalk	South Crosswalk
Kennedy & Blair	7:30-8:30AM	6	1	5	1
	4:30-5:30PM	3	0	5	0
Longfellow & New Hampshire	7:30-8:30AM	1	0	0	0
	4:30-5:30PM	2	2	2	1
North Capitol. & Kennedy Street	7:30-8:30AM	0	0	0	0
	4:30-5:30PM	0	0	0	0
North Capitol & New Hampshire (North)	7:30-8:30AM	N/A	1	1	N/A
	4:30-5:30PM	N/A	0	1	N/A
North Capitol. & New Hampshire (Middle)	7:30-8:30AM	0	0	1	0
	4:30-5:30PM	0	0	0	0
North Capitol & New Hampshire (South)	7:30-8:30AM	2	N/A	N/A	1
	4:30-5:30PM	1	N/A	N/A	0

Field Assessment & Preliminary Data – NORTH CAPITOL

Although there was relatively low pedestrian and bike activity at the intersection of North Capitol Street and New Hampshire Avenue, a higher number of pedestrians and bikes were observed at the other intersections surrounding it. The highest number of pedestrians and bikes were counted at the intersection of Kennedy Street NE and Blair Road NE, which is where the sidewalk on the west side of Blair Road NE is missing portions. Also, the DC Bilingual Public Charter School is located about two blocks south of this location and many school children were observed walking along Blair Road NE.

Crash Data

A three-year crash data report was provided for the intersection of North Capitol Street and New Hampshire Avenue. From January 1, 2016 to December 31, 2018, there were 19 total crashes at this intersection. None of these crashes involved pedestrians or bicycles. Based on the descriptions provided in the police accident report forms (PD-10), 15 of the 19 total crashes took place at the right turn from northbound North Capitol Street to New Hampshire Avenue NE. Crash data indicates that this location is not only dangerous for pedestrians to cross, as identified by the public comments, it is also dangerous for vehicles.

Facility Assessment

An assessment of transportation facilities, including pedestrian facilities, were conducted while on site. Table 3 below summarizes the condition of the transportation facilities.

Table 3: Facility Assessment

Facility	Condition	Notes
Crosswalks	Fair	Crosswalks on North Capitol St are in good condition but those on New Hampshire Ave and Kennedy St are in poor condition. See Figure 1
Sidewalks	Fair	Some portions of the sidewalks along Blair Road NE and New Hampshire Avenue are in poor condition; (too narrow, obstructed by fixed objects, unlevelled, missing portions, etc.) See Figures 2 and 3
Curb/ADA Ramps	Good	Present and in good condition on each leg of North Capitol Street and New Hampshire Avenue intersection. Poor conditions at North Capitol Street and Kennedy Street. See Figure 4

TOL ST NW & NEW HAMPSHIRE AVE NW

Signals/Signage	Poor	A few signs are faded and completely blocked by obstructions. Some signs are potentially confusing to drivers. See Figure 5
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Figure 1: Crosswalks on New Hampshire Ave and Kennedy St are in poor condition

Figure 1 above shows faded and barely visible crosswalks are at the intersection of North Capitol Street and New Hampshire Avenue.



Figure 2: Missing sidewalk Due to Existing Topography along Blair Road NE

Figure 2 above shows missing sidewalks on parts of Blair Road NE approaching the intersection of New Hampshire Avenue NW, causing pedestrian to walk in the street. As stated earlier in the text, the steep slope seen in this photo appears to contribute to the decision to not install a sidewalk here.



Figure 3: Sidewalks along New Hampshire Avenue

Figure 3 above shows a sidewalk pinch point that is narrow and less than the required 4 feet, (approximately 3 feet) approaching the intersection of North Capitol Street and New Hampshire Ave NE. The sidewalk slabs are elevated/uneven, and slight cracks provide an uneven walking surface.



Figure 4: Missing Curb/ADA Ramps on the East Leg of the North Capitol Street and Kennedy Street NE Intersection

Figure 4 above shows the crosswalk on the east leg of the North Capitol Street and Kennedy Street NE intersection, with missing curb/ADA ramps leading to the crosswalk.



Figure 5: Pedestrian Signal at New Hampshire Ave and Kennedy Street

Figure 5 above shows a pedestrian signal is completely hidden by a utility pole at the curb and cannot be seen by pedestrians unless standing directly under the signal.

POTENTIAL SOLUTIONS

In order to improve the livability conditions at and surrounding the intersection of North Capitol Street and New Hampshire Avenue, the following solutions should be considered:

- Consider adding pavement markings to reinforce "Do Not Block Intersection" signs
- Add "Stop Here on Red" sign for northbound North Capitol St right turn onto New Hampshire Ave NE. Consider adding a stop line/bar on northbound North Capitol St to reinforce the proposed "Stop Here on Red" sign.
- Add All-Red Phase at North Capitol St and New Hampshire Ave NE (North)
- Repaint the crosswalks on New Hampshire Ave NW at Kennedy Street NW

As mentioned before there are missing sidewalk sections on the west side of Blair Road NE, however the installation of sidewalks may be prevented because of the existing topography in the area.



COMMUNITY CONCERNS

Right turning vehicles from Alaska Avenue, NW create hazardous conditions for vehicles.

Not enough pedestrian crossing interval timing.

Speeding on intersection approaches and legs.

Red-light violations.

Confusing Intersection geometry.

OBSERVATIONS

A. Traffic Control Device

- Intersection is signalized.
- Signal heads are correctly positioned and visible to drivers and pedestrians.
- Countdown pedestrian signals are present on all approaches.
- Right Turn on Red is permitted on Georgia Avenue, NW and Kalmia Avenue, NW and prohibited on Alaska Avenue, NW.

B. Signage

- No Parking (R7-2) signs on west side of NB approach on Georgia Avenue, NW.
- No Thru Trucks Over 1 ¼ Ton Capacity (R12-3) sign on EB approach on Kalmia Avenue, NW.
- Snow Emergency Route signs on NB and SB approaches of Georgia Avenue, NW.
- Right Lane Must Turn Right sign on NB approach.
- Posted Speed Limit of 30 MPH on Georgia Avenue, NW.
- Posted Speed Limit of 25 MPH on Kalmia Road, NW.
- Keep Right (R4-7) signs on Kalmia Road and Alaska Avenue, NW.

C. Geometric Features

- NB and SB approaches on Georgia Avenue, NW have three (3) lanes per direction.
- WB approach on Kalmia Road, NW has two (2) lanes per direction, while EB approach has one (1) lane per direction
- NEB approach on Alaska Avenue, NW has two (2) lanes per direction.
- NEB approach on Alaska Avenue, NW is divided by 3 feet wide median.
- Georgia Avenue and Kalmia Road, NW are undivided.
- Island present on SB approach.
- Lanes on all approaches are 10 feet wide.

D. Pavement markings

- Double yellow centerline markings on NB and SB approaches on Georgia Avenue, NW.
- Crosswalk markings on the all approaches of the intersection.
- Stop bars present on all approaches.
- Lane use marking on the EB approach of Kalmia Road, NW.

E. Road Side Features

- Sidewalks present on all sides of the intersection.
- ADA compliant ramps present at intersection.
- Street lights are present and functioning.
- Transit stops are present on all approaches of the intersection..

F. Parking

- Metered parking present on all approaches of intersection except WB approach on Kalmia Road, NW.

G. Vehicular Behavior

- Left turning vehicles on Georgia Avenue cause congestion at the intersection.
- Vehicular-pedestrian conflict were observed for right turning vehicles Kalmia Road onto Georgia Avenue NW.
- Bicycles were observed sharing the travel lanes with vehicles

H. Pedestrian Behavior

- A few pedestrians crossed the intersection outside the crosswalks.
- Pedestrians were generally observed to have difficulty in navigating through the intersection due to its large size and complex geometry.

GEORGIA AVENUE, NW, ALASKA AVENUE, NW & KALMIA ROAD, NW

Condition of Facilities at Intersections

Facility	Condition	Remarks
Pavement markings	Fair	Pavement markings on Georgia Avenue, NW are visible and in good condition. Pavement markings on Alaska Avenue and Kalmia Road, NW are in poor condition.
Curbs/ ADA Ramps	Good	Most ramps at the intersection are ADA compliant and in good condition.
Signage	Good	Signs at intersection are in good condition. However, some signs on Georgia Avenue have been blocked by trees. Too many signs present at intersection.
Sidewalks	Good	Sidewalks surrounding intersection are in good condition.
Crosswalks	Poor	Crosswalks are in good condition.
Street Lights	Good	Street lights are in good condition.

Pedestrian Crossing

Location	Crossing distance	Walk Interval	Countdown Interval
Georgia Avenue, NW	70 feet	9 seconds	13 seconds
Kalmia Road, NW	70 feet	22 seconds	13 seconds
Alaska Avenue, NW	60 feet	17 seconds	3 seconds

TRAFFIC VOLUMES AT INTERSECTION

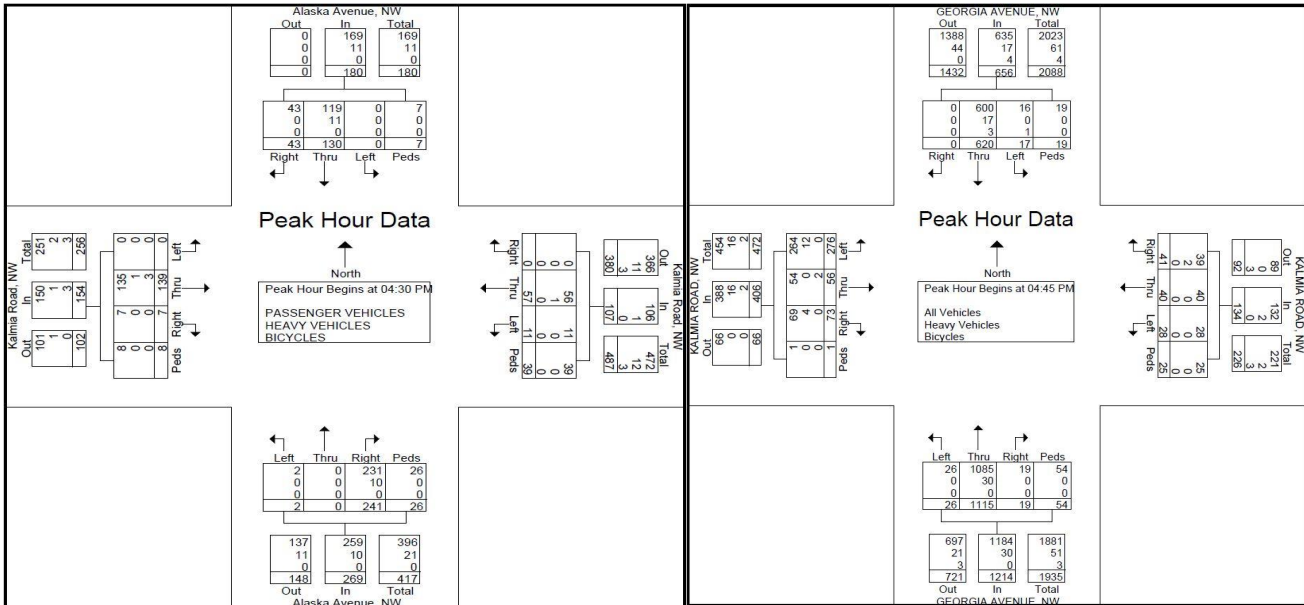
Summary

Measure	Data
Peak Hours	7:30 AM – 8:30 AM and 4:45 PM – 5:45 PM
AM Peak Hour Vehicular Volume	2,460
PM Peak Hour Vehicular Volume	2,496
Total number of pedestrians crossing during peak hours	316
Total number of bicycles using intersection during peak hours	56

...UE, NW, ALASKA AVENUE, NW & KALMIA ROAD, NW



AM Peak Hour Diagrams



PM Peak Hour Diagrams

Field Assessment & Preliminary Data – GEORGIA AVENUE

PHOTOGRAPHS OF INTERSECTION



Pedestrian crossing outside crosswalk on NB Georgia Avenue, NW



Bicycles using travel lane of Georgia Avenue, NW



Poor pavement markings on Kalmia Road, NW



Bent signage on Alaska Avenue, NW

...NUE, NW, ALASKA AVENUE, NW & KALMIA ROAD, NW



Vehicle –Pedestrian conflicts of Georgia Avenue, NW



Signal heads and Street lights at intersection



COMMUNITY CONCERNS

- Narrow lane for buses
- Poor sidewalk infrastructure

OBSERVATIONS

A. Traffic Control Device

- Intersection is signalized.
- Signal heads are correctly positioned and visible to drivers and pedestrians.
- Countdown pedestrian signals are present on all approaches.
- Right Turn on Red is permitted at the intersection.

B. Signage

- No Parking (R7-2) sign on west side of SB approach on Blair Road, NW.
- No Thru Trucks Over 1 ¼ Ton Capacity (R12-3) sign on EB approach on Aspen street, NW.
- Emergency Snow Route signs on NB and SB approaches of Blair Road, NW.
- Right Lane Must Turn Right sign on NB approach.

C. Geometric Features

- NB approach on Blair Road, NW has two (2) approach lanes and one (1) receiving lane.
- SB approach on Blair Road, NW has one (1) lane per direction.
- WB and EB approaches on Aspen street, NW have one (1) lane per direction.
- Lanes on all approaches are 10 feet wide.
- The intersection is adjacent to an overhead railway.

D. Pavement markings

- Double yellow centerline markings on NB and SB approaches on Blair Road, NW
- Crosswalk markings present on the all approaches of intersection.
- Stop bars present on all approaches.
- Right Turn Only lane use marking on the SB approach.

E. Road Side Features

- Sidewalks present on all sides, except east side of NB and SB approaches of the intersection.
- ADA compliant ramps present at intersection.
- Street lights are present and functioning.

F. Parking

- No parking on any approach except north side of EB approach of Aspen Street, NW.
- Distance of parking from perpendicular curb is 50 feet.
- Parking restriction is 2-hour limit between 7AM –8:30 PM, Monday to Friday.

G. Vehicular Behavior

- No intersection blockages nor congestion was observed.
- Vehicles were generally compliant to traffic control signals and signage at the intersection.

H. Pedestrian Behavior

- Pedestrians crossed the intersection at the designated crosswalks.
- A substantial number of pedestrians consist of pre-school children.

Condition of Facilities at Intersections

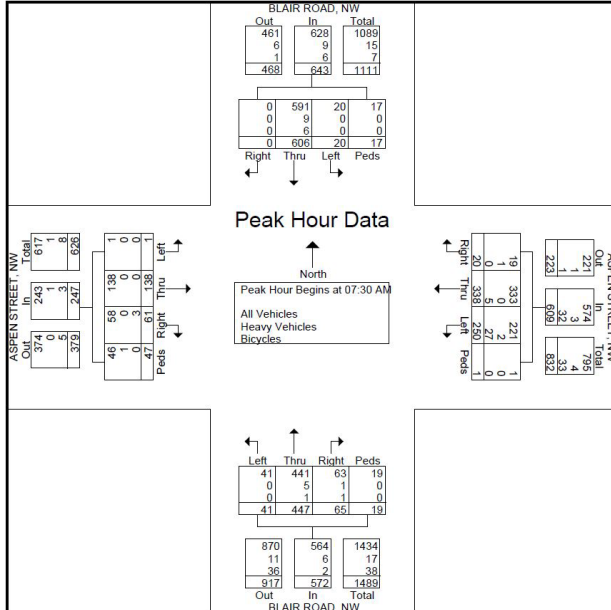
Facility	Condition	Remarks
Pavement markings	Good	All pavement markings are visible and in good condition.
Curbs/ ADA Ramps	Good	All ramps at the intersection are ADA compliant and in good condition.
Signage	Good	Signs at intersection are in good condition.
Sidewalks	Good	Sidewalks surrounding intersection are in good condition.
Crosswalks	Good	Crosswalks are in good condition
Street Lights	Good	Street lights on the NB and SB approaches are in good condition.

Pedestrian Crossing

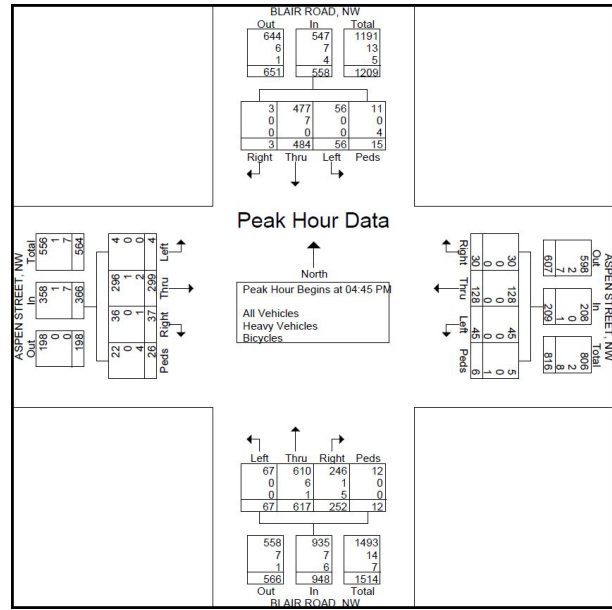
Location	Crossing distance	Walk Interval	Countdown Interval
Aspen Street, NW	36 feet	27 seconds	
Blair Road, NW	42 feet	60 seconds	

TRAFFIC VOLUMES AT INTERSECTION

Measure	Data
Peak Hours	7:30 AM – 8:30 AM and 4:45 PM – 5:45 PM
AM Peak Hour Vehicular Volume	2,033
PM Peak Hour Vehicular Volume	2,022
Total number of pedestrians crossing during peak hours	75
Total number of bicycles using intersection during peak hours	89



**AM Peak Hour
Diagram**



**PM Peak Hour
Diagram**

W & ASPEN STREET, NW



Children crossing at intersection



Westbound Approach on Aspen Street, NW with double yellow centerline marking



Eastbound approach on Aspen Street, NW



Southbound approach on Blair Road Street, NW with double yellow centerline marking



Field Assessment & Preliminary Data – 16TH STREET, N



COMMUNITY CONCERNS

- No bike lanes/ unused parking lanes
- Speeding/ Side Swiping parked vehicles

OBSERVATIONS

A. Traffic Control Device

- Intersection is signalized.
- Signal heads are correctly positioned and visible to drivers and pedestrians.
- Countdown pedestrian signals are present on all approaches.
- Right Turn on Red is permitted at the intersection.
- Left Turn from 16th Street, NW onto Rock Creek Park is restricted.

B. Signage

- No Parking (R7-2) sign on west side of NB approach on 16th Street, NW.
- No Standing (R7-4) on south side of WB approach on Aspen Street, NW.
- No Thru Trucks Over 1 ¼ Ton Capacity (R12-3) sign on Aspen Street, NW.
- Snow Emergency Route sign on NB and SB approaches of 16th Street, NW.
- Posted Speed Limit of 30 MPH on 16th Street, NW.

C. Geometric Features

- NB approach on 16thStreet is two (2) lanes per direction and divided by an 8 feet wide median.
- SB approach on 16thstreet has two (2) lanes per direction, an exclusive left turn lane and is undivided.
- WB approach on Aspen street, NW has one (1) lane per direction.
- EB approach is closed and under construction.
- Lanes on all approaches are 10 feet wide.

D. Pavement markings

- Double yellow centerline markings present on WB and SB approaches.
- Crosswalk markings on the all approaches.
- Stop bars present on all approaches.
- Left turn lane use marking on the SB approach.

E. Road Side Features

- Six feet wide sidewalks present on all approaches of the intersection.
- ADA compliant ramps present at intersection.
- Street lights are present and functioning.

F. Parking

- No parking on any approach except south side of WB approach of Aspen Street, NW.
- Distance of parking from perpendicular curb is 130 feet.
- Parking restriction is 2-hour limit between 7AM –8:30 PM, Monday to Friday.

G. Vehicular Behavior

- During the AM peak period, vehicles traveling SB on 16thStreet, NW were observed blocking the intersection and stopping on the crosswalks.
- Similar observations were made during them PM peak period for vehicles traveling NB on 16thStreet, NW.

H. Pedestrian Behavior

- Pedestrians crossed the intersection at the designated crosswalks.
- Few pedestrian vehicle conflicts were observed.

Field Assessment & Preliminary Data – 16TH STREET, N

Condition of Facilities at Intersections

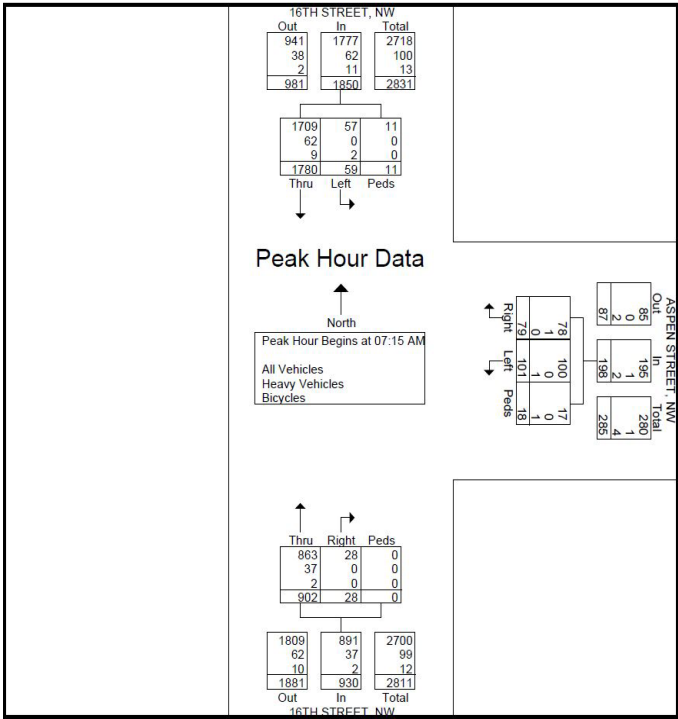
Facility	Condition	Remarks
Pavement markings	Good	All pavement markings are visible and in good condition.
Curbs/ ADA Ramps	Good	All ramps at the intersection are ADA compliant and in good condition.
Signage	Good	Signs at intersection are in good condition.
Sidewalks	Good	Sidewalks surrounding the intersection are in good condition.
Crosswalks	Good	Crosswalks are in good condition.
Street Lights	Good	Street lights on the NB and SB approaches are in good condition.

Pedestrian Crossing

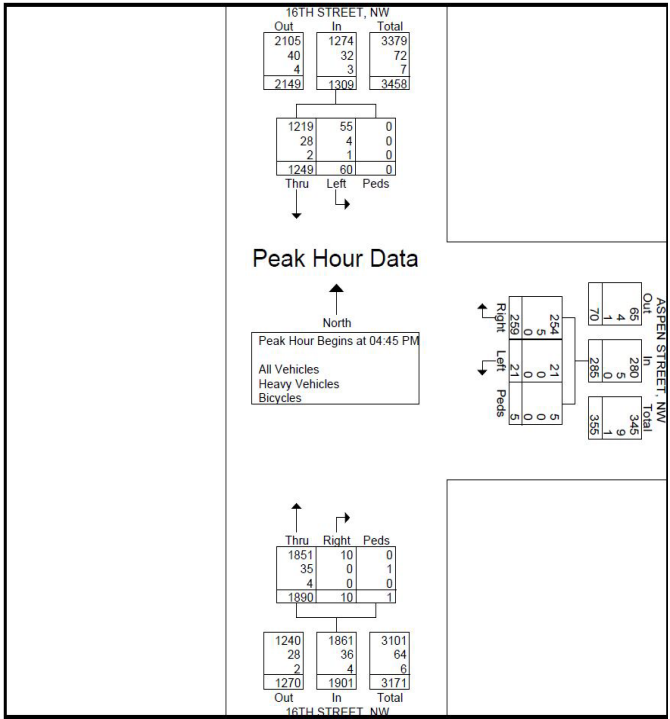
Location	Crossing distance	Walk Interval	Countdown Interval
Aspen Street, NW	37 feet	57 seconds	8 seconds
16 th Street, NW	50 feet	13 seconds	12 seconds

TRAFFIC VOLUMES AT INTERSECTION

Measure	Data
Peak Hours	7:15 AM – 8:15 AM and 4:45 PM – 5:45 PM
AM Peak Hour Vehicular Volume	2,919
PM Peak Hour Vehicular Volume	3,489
Total number of pedestrians crossing during peak hours	35
Total number of bicycles using intersection during peak hours	33



AM Peak Hour Diagram



PM Peak Hour Diagram

Field Assessment & Preliminary Data – 16TH STREET, N



Westbound Approach on Aspen Street, NW with double yellow centerline marking



Northbound approach on 16th Street, NW divided by a median



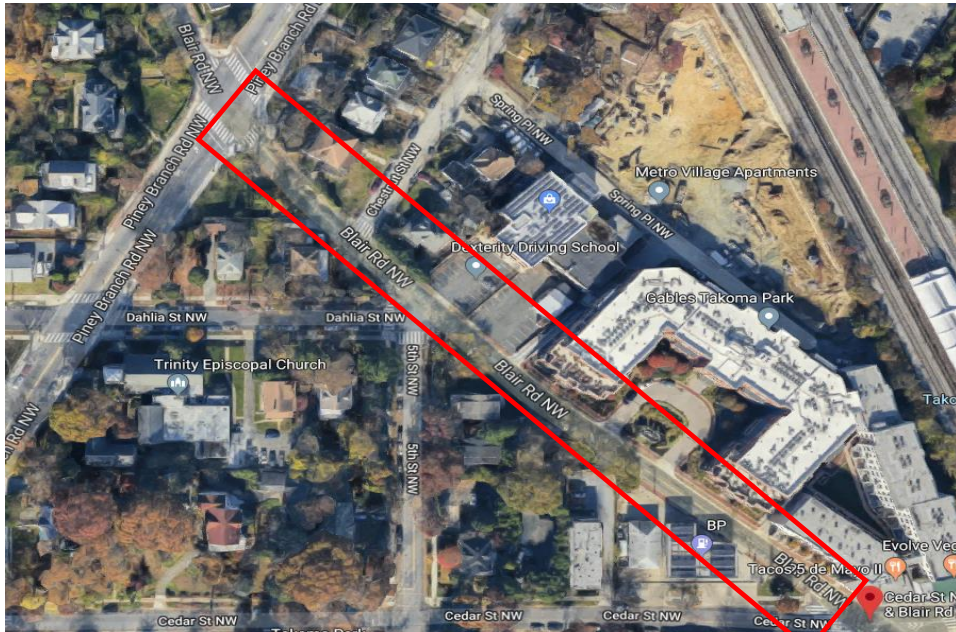
Southbound approach on 16th Street, NW with double yellow centerline marking and exclusive left turn (only) lane



Signal heads and street lights at intersection



Field Assessment & Preliminary Data – BLAIR ROAD, NW



COMMUNITY CONCERNS

- Narrow lanes.
- Narrow sidewalks.
- Speeding vehicles.
- Vehicles not yielding to pedestrians.
- No bike lanes.
- No parking spaces.

OBSERVATIONS

A. Traffic Control Device

- Intersection of Blair Road and Dahlia Street, NW is controlled by STOP sign on Dahlia Street, NW.
- Intersection of Blair Road and Cedar Street, NW is signalized.
- Intersection of Blair Road and Chestnut Street, NW controlled by STOP sign on Chestnut Street, NW.

B. Signage

- No Parking (R7 2) signs on west side of NB approach on Georgia Avenue, NW.
- Pedestrian crosswalk signs present on Blair Road, NW.
- Do Not Block Intersection sign at intersection of Blair Road, NW and Chestnut Street, NW.

- Emergency Snow Route signs on SB approaches Blair Road, NW.
- Posted Speed Limit of 25 MPH on Blair Road, NW.

C. Geometric Features

- Segment is approximately 900 feet long and 25 feet wide (Curb to curb)
- The segment has one (1) lane per direction.
- Width of lanes is 10 feet.
- There are ten (10) driveways along the segment.

D. Pavement markings

- Double yellow centerline markings present throughout segment
- Crosswalk markings present on the all approaches of the intersections on the segment.
- Stop bars present on minor road approaches on the segment.

E. Road Side Features

- Sidewalks present at certain locations along both sides of the segment.
- Street lights are present and functioning.
- Presence of residential buildings along the segment.

F. Parking

- No parking available on the segment.

G. Vehicular Behavior

- High traffic volumes were observed on the segment.
- Vehicle pedestrian conflict were observed on the segment.

H. Pedestrian and Bicycles Behavior

- Pedestrians were observed crossing Blair Road mid block and outside the crosswalks.
- Bicycles were observed sharing the travel lanes with sharing the travel lanes with vehicles.

Condition of Facilities at Intersections

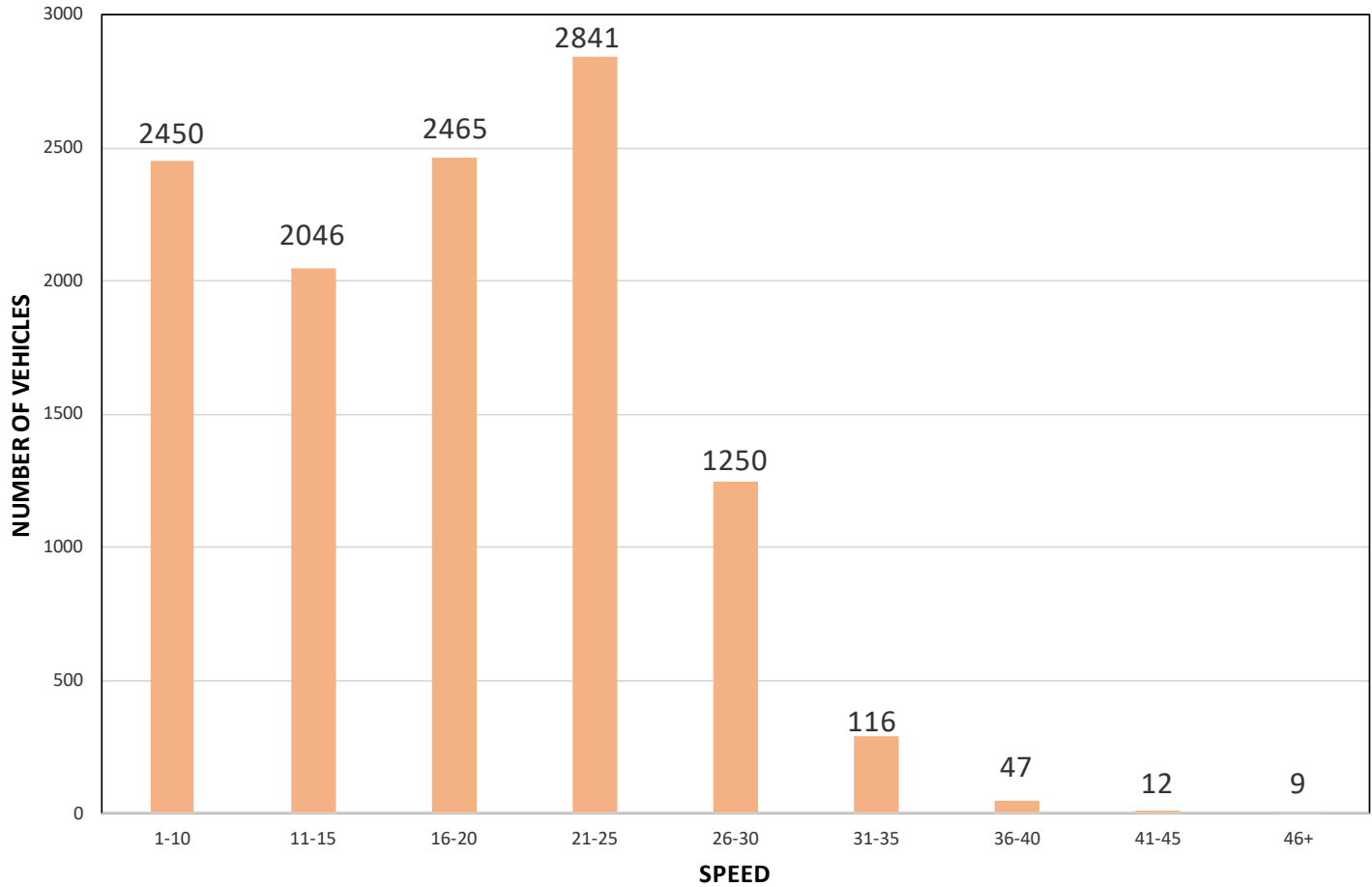
Facility	Condition	Remarks
Pavement markings	Good	Pavement markings are in good condition.
Signage	Good	Signs at intersection are in good condition. However, some signs have been blocked by trees.
Sidewalks	Good	Sidewalks surrounding intersection are in good condition.
Crosswalks	Good	Crosswalks are in good condition.
Street Lights	Good	Street lights are in good condition.

TRAFFIC VOLUMES SPEED ON BLAIR ROAD

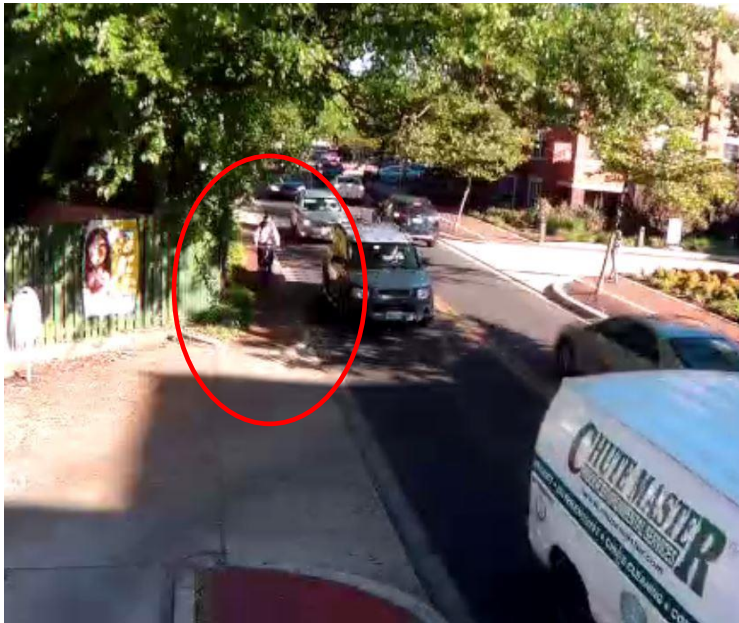
Measure	Data
Peak Hours	7:15 AM – 8:15 AM & 3:15 PM – 4:15 PM
Peak Hour Volumes	AM: 718 vph PM: 701 vph
ADT	11,388
Mean Speed	17 MPH
10 MPH Pace Speed	16-25 MPH
85 th Percentile Speed	24 MPH
Total number of bicycles using travel lanes during AM & PM peak periods	8
Total number of bicycles using sidewalks during AM & PM peak periods	18

Field Assessment & Preliminary Data – BLAIR ROAD, N

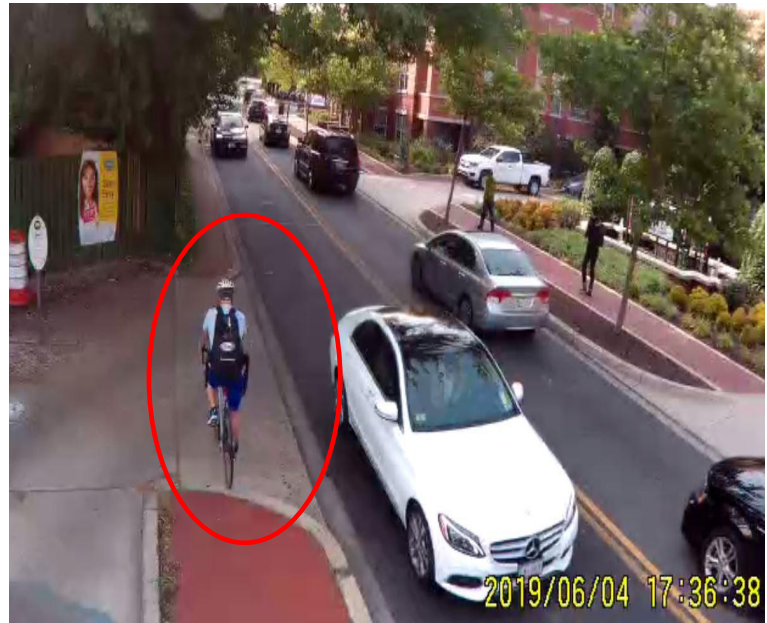
24-Hour Segment for 30 MPH Speed Limit



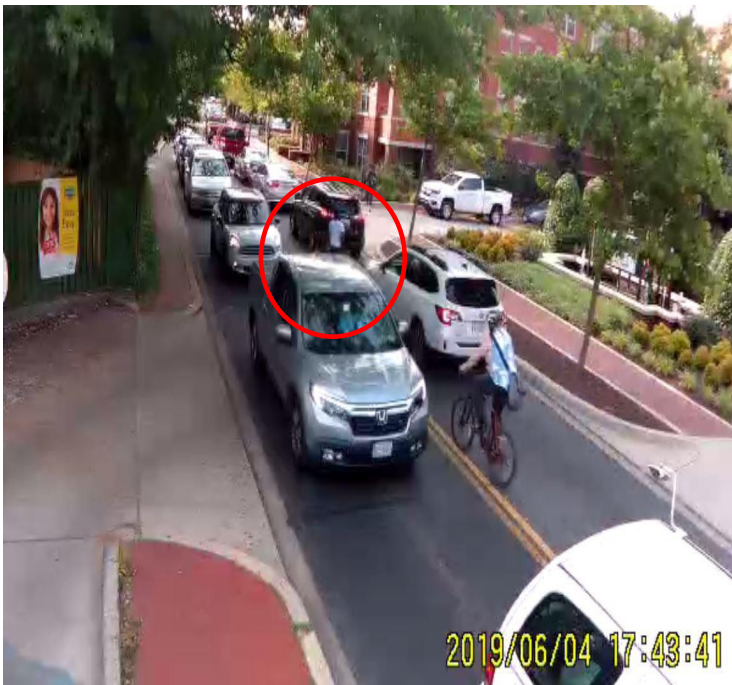
W:B/N CEDAR ROAD & PINEY BRANCH ROAD, NW



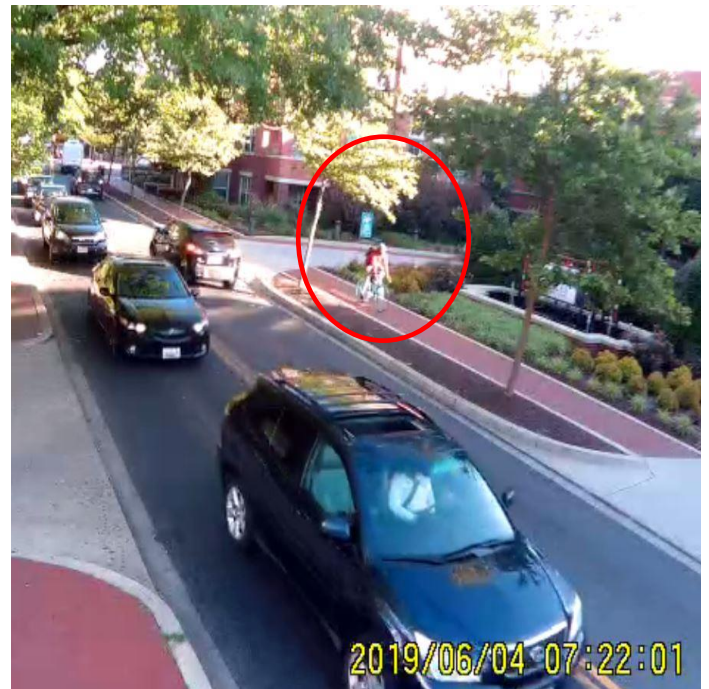
Cyclist using sidewalk on SB Blair Road, NW



Cyclist using sidewalk on SB Blair Road, NW



Pedestrian Crossing at mid-block on Blair Road, NW

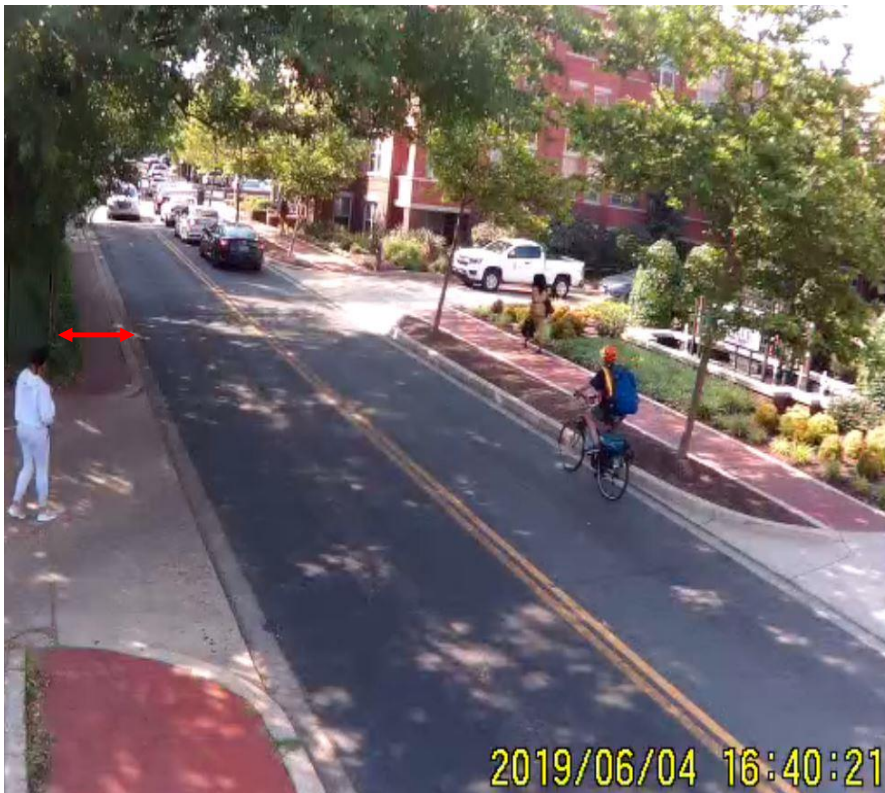


Cyclist using sidewalk on NB Blair Road, NW

Field Assessment & Preliminary Data – BLAIR ROAD NW



Cyclist sharing travel lane with vehicles on Blair Road, NW



Narrow sidewalk on SB Blair Road, NW

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**PEDESTRIAN + BICYCLE
FACILITIES OBSERVATIONS**



IDENTIFIED ISSUES

- No public comments at this location.
- No reported Pedestrian and Bicycle crashes
- Gap in pedestrian network
- Large crossing widths for pedestrians on Georgia Ave

OBSERVATIONS

- Signalized Intersection
 - No Turn on Red (All approaches)
 - Bus only signal present on southbound Georgia Ave NW
- Very few pedestrian/bike/vehicle conflicts
- During a few instances cars travelling on Georgia Ave NW were observed stopped within the crosswalks
- Pedestrians almost always use crosswalks at this intersection.
- Most crossings were to/from the bus stop on southbound Georgia Ave NW.
- Often utilize “Push to Cross” button.
- Bike lanes present on eastbound Piney Branch Rd NW (west of Georgia Ave NW)
- Sharrow (shared-lane bicycle marking) present on westbound Piney Branch Rd NW (west of Georgia Ave NW). This turns into a bike lane south of Tuckerman St NW.
- Capital Bikeshare at Piney Branch Rd NW & Tuckerman St NW

Pedestrian Crossing Conditions	Crossing Distance	Walk Interval	Flashing Do Not Walk Interval
Georgia Ave NW	78 feet	15 seconds	18 seconds
Piney Branch Rd NW	77 feet	7 seconds	18 seconds

Rd NW & Georgia Ave NW

POTENTIAL SOLUTIONS

- Consider extending existing bike lanes on Piney Branch Road, East of Georgia Ave.
- Consider implementing Leading Pedestrian Intervals and/or speeding/red-light cameras.
- Add Sidewalk on South side of Piney Branch Road west of Georgia Ave to close gap between existing lanes that begin at Underwood St NW
- Consider implementing bulb-outs on Georgia Ave to reduce 80' crossing width

Ped Count	West Crosswalk	North Crosswalk	East Crosswalk	South Crosswalk
8:00-9:00AM	34	43	48	20
5:00-6:00PM	53	19	25	28

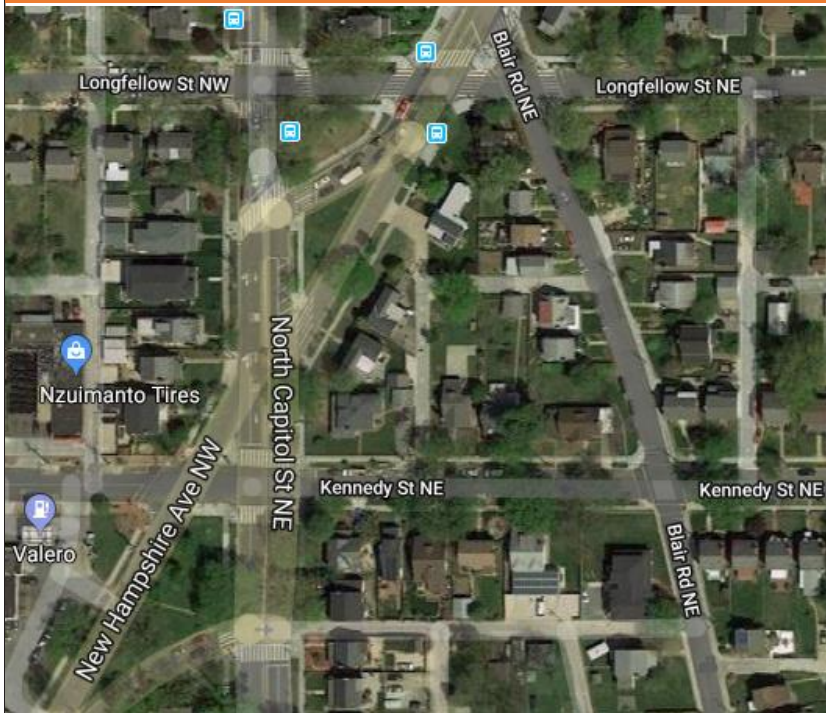
Bike Count	West Crosswalk	North Crosswalk	East Crosswalk	South Crosswalk
8:00-9:00AM	6	17	2	0
5:00-6:00PM	0	2	0	1

Facility	Condition	Notes
Crosswalks	Good	All are visible but have some areas of fading in paint
Sidewalks	Good	The sidewalks surrounding this intersections are in good condition but there are many curb cuts present
Curb/ADA Ramps	Good	Present and in good condition on each leg of intersection
Signage	Good	Signs at intersection are present and in good condition. A few signs on Piney Branch Rd are blocked by trees



Crosswalk on Georgia Ave NW south of Piney Branch Rd NW.





IDENTIFIED ISSUES

- There are no sidewalks for several blocks on Blair Rd NE. This is a highly pedestrian trafficked route due to public transit and several schools nearby.
- During morning and evening rush hours cars on New Hampshire block Blair so when the light turns green to cross New Hampshire the cars are blocked as well as pedestrians.
- Accidents frequently occur at this intersection due to drivers not stopping at the red light and/or speeding through the intersection. Avg of at least 2 accidents per month.
- Cars frequently run the red-light allowing pedestrians to cross, regardless of the signage saying no turn on red, creating an unsafe environment for crossing New Hampshire Ave.
- Typically, in the mornings cars going southbound from New Hampshire to North Capital routinely run this red light and create serious backups. This impacts northbound and southbound traffic on North Capital.

OBSERVATIONS

- Traffic signals and pedestrian crossing signals present at:
 - North Capitol St NE & New Hampshire Ave NE (NB & SB)
 - North Capitol St NW & New Hampshire Ave NW (NB)
 - New Hampshire NW & Kennedy St NW
 - North Capitol St NE & Kennedy St NE
- Queuing on southbound New Hampshire Ave cause drivers to stop within intersections and crosswalks.
- Drivers were often observed running the Red right turn light from North Capitol St NE onto New Hampshire Ave NE.
- There was very little pedestrian activity along Blair Road, NE and Kennedy Street during AM site observation.
- There is no sidewalk along the west side of Blair Road, NE between Jefferson and Longfellow Street.
- The sidewalk along the east side of Blair Road, NE between Riggs Rd and Longfellow is very narrow and has multiple utility poles in the sidewalk. There is no sidewalk along the west side of Blair Road, NE between Kennedy Street and Jefferson Street
- An accident occurred at New Hampshire Ave NE & Longfellow St NE during PM peak observations.

St & New Hampshire Ave

POTENTIAL SOLUTIONS

- It appears DDOT recently installed a sidewalk along the east side of Blair Rd NE.
- Consider adjusting Signal Timing ("Do Not Block Intersection" signs already exist)
- Consider installation of red-light camera at southbound New Hampshire Ave NE at North Capitol St, Add stop here on Red sign for northbound North Capitol St right turn onto New Hampshire Ave NE
- Add All-Red Phase, Consider restricting Right-turns on Red, Consider adding high visibility crosswalk on New Hampshire Ave NW at Kennedy Street NW

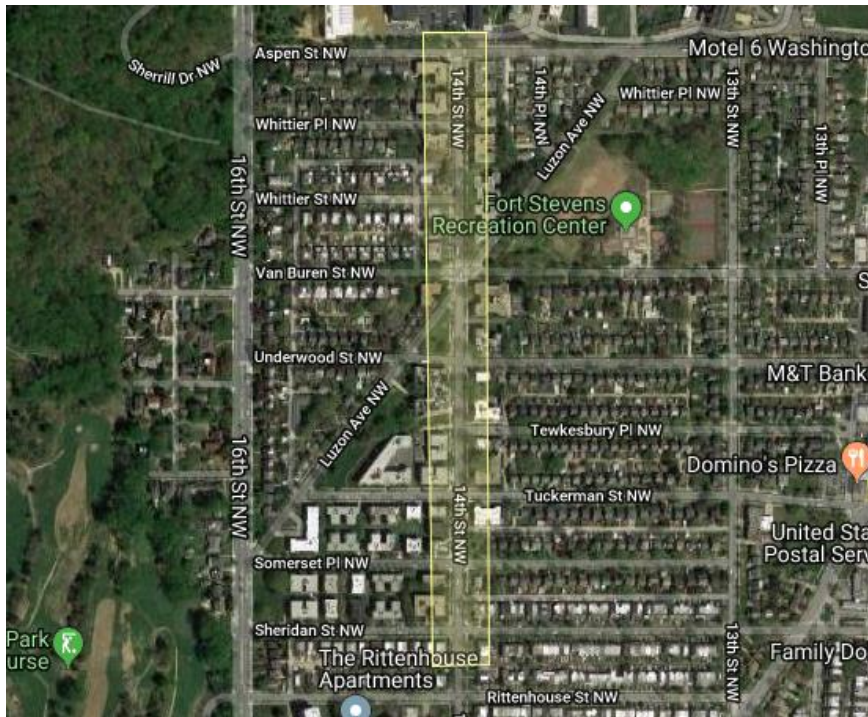
Faded crosswalk at the right-turn from North Capitol St to New Hampshire Ave, where cars frequently run right-turn red light.



Facility	Condition	Notes
Crosswalks	Fair	Crosswalks on North Capitol St are in good condition but those at New Hampshire Ave and Kennedy St are in poor condition.
Sidewalks	Fair	Some portions of the sidewalks in this area are in good condition others are not (too narrow, obstructed by fixed objects, unlevelled, etc.)
Curb/ADA Ramps	Good	Present and in good condition on each leg of intersection
Signage	Poor	A few signs are fading, completely blocked by obstructions, and out of shape. Some signs are potentially confusing to drivers.

Cars blocking intersection where "Do Not Block Box" is present. Creating difficult/dangerous crossing for cyclist.





IDENTIFIED ISSUES

- 14th St NW at Tuckerman St NW: “Stop sign is needed”
- 14th St NW at Tuckerman St NW: Difficult /dangerous crossing
- 14th St NW at Sheridan St NW: Difficult/dangerous crossing
- Large Street Widths - Crossing distance for pedestrians

OBSERVATIONS

- There is a very high percentage of schoolchildren that walk along and across this corridor after 8 AM.
- On-street parking creates sight distance obstruction for both vehicles and pedestrians at many of the intersections along this corridor.
- Several drivers ran the second stop sign on NB 14th St NW at Van Buren St NW.
 - Stop sign at SB Van Buren St creates a gap at SB Underwood St during both AM and PM peaks.
- Cars on SB Luzon and WB Van Buren accelerate through the intersection with 14th St and travel thru the intersection at Underwood faster than vehicles that stopped at SB 14th St at Van Buren St.
- A few vehicle-vehicle conflicts between NB Luzon St and NB 14th St because drivers appeared unsure of who had ROW.
- During peaks drivers on SB 14th , SB Luzon, and WB Van Buren travelling south on 14th St eliminate gaps at 14th St and Underwood St.
- Although there is no stop present at Tuckerman St NW, cars sometimes treat intersection as an All-way stop when pedestrians are present. However, there are times when cars do no stop for pedestrians waiting to cross.
- Bicyclists travelling on 14th St NW often do not obey stop signs at Sheridan St NW and Van Buren St.

Corridor b/w Sheridan St NW & Aspen St NW

POTENTIAL SOLUTIONS

- All-way stop sign would not be warranted by MUTCD. Consider adding high visibility crosswalks, pedestrian crossing signs, Metro Police Dept. enforcement.
- Consider adding high visibility crosswalks at Tuckerman, Sheridan, and Underwood. Install "Yield to Ped in X-walk" signs.
- Consider adding bulb-outs on 14th St NW, Consider extending bus stops further out

14th St NW & Tuckerman St NW

15-Min Period Ending	Number Of Gaps of Group Size (In Seconds)				
	6<12	12<18	18<24	24<30	>30
7:15am	17	7	4	3	4
7:30am	12	9	5	4	9
5:15pm	27	17	3	0	0
5:30pm	33	12	3	0	0

14th St NW & Underwood St NW

15-Min Period Ending	Number Of Gaps of Group Size (In Seconds)				
	6<12	12<18	18<24	24<30	>30
7:15am	18	7	3	1	5
7:30am	11	8	7	2	1
5:15pm	21	13	1	0	0
5:30pm	18	10	1	0	0

Facility	Condition	Notes
Crosswalks	Fair	Major fading in some crosswalks along the corridor. High visibility crosswalks should be added
Sidewalks	Good	Sidewalks are in good condition along the corridor
Curb/ADA Ramps	Good	Present and in good condition at each crosswalk
Signage	Good	Signs at intersection are present and in good condition. A few pedestrian signs should be added



Faded bike lane on 14th street at Underwood Street



symmetra design



IDENTIFIED ISSUES

- Difficult/Dangerous Crossings for pedestrians

OBSERVATIONS

- Stop Signs present at Milmarson Pl NW, Blair Rd NE, McDonald Pl NE, and Madison St NW (Minor approaches only)
- 8 pedestrians in the AM peak and 0 in the PM peak crossed North Capitol St at Milmarson Pl NW. Most pedestrians cross North Capitol at Madison St NW (approx. 250 ft south of Milmarson St NW) because of the high visibility crosswalk that is present
- Southbound North Capitol St queues began around 7:30 AM, sometimes creating gaps for pedestrians to cross North Capitol St
 - Crossings here were still difficult because of the lack of EB/WB crosswalk and while SB traffic was queued NB traffic was still flowing at times.
- “Fender bender” accident occurred on NB North Capitol St/Blair Rd NE directly across from Milmarson Pl NW. Cause of accident is unknown.

St & Milmarson Pl NW

POTENTIAL SOLUTIONS

- Consider installation of "Yield to Pedestrian" signs, consider adding crosswalk on North Capitol St/Blair Rd at Milmarson Pl

PED COUNT

Ped Count	Northbound	Southbound	Eastbound	Westbound
7:00-8:30AM	38	12	6	2
4:00-5:30PM	14	20	-	-

GAP STUDY

15-Min Period Ending	Number Of Gaps of Group Size (In Seconds)				
	6<12	12<18	18<24	24<30	>30
8:15am	2	2	2	3	1
8:30am	8	2	4	0	5
4:15pm	10	4	1	0	4
4:30pm	11	4	6	1	2

Facility	Condition	Notes
Crosswalks	Good	All are visible but have some areas of fading in paint
Sidewalks	Fair	Some areas where the sidewalk is narrow because of overgrown trees. Sidewalk on west side of Blair Rd NE is closed for construction
Curb/ADA Ramps	Good	Present and in good condition at each crosswalk
Signage	Good	Signs at intersection are present and in good condition. A few signs on Piney Branch Rd are blocked by trees



Southbound traffic on North Capitol St queued, blocking the intersection of Milmarson Pl.



symmetra design

Pedestrian & Bike Assessment – 16th Street NW



IDENTIFIED ISSUES

- Area-wide: Pedestrian Safety-kids to school, people to metro
- No bike facilities present

OBSERVATIONS

- Stop Controlled Intersection
 - Stop signs on minor street (Juniper Street)
- Very little pedestrian and bicycle activity during AM and PM observations.
- In the AM period there were a few cyclists and runners crossing Juniper on both sides of 16th.
- Due to SB queue during AM period, some cars made left turns to use Juniper as a cut through.
- Pedestrians almost always use crosswalks at this intersection.
- There was a heavy NB left turn movement during the AM period; presumably to the Lowell School.
- Cars traveling NB in the AM period queued in the left-turn lane, occasionally blocking the southern EW crosswalk.
- Bus stops were used by children and teenagers in both directions in AM and PM periods.
- Bus stops had no shelters.

W & Juniper Street NW

POTENTIAL SOLUTIONS

- Implementation of sharrows along 16th St NW or an off-road shared use path may be worth consideration.

Ped Count	West Crosswalk	North Crosswalk	East Crosswalk	South Crosswalk
7:00-8:00AM	12	5	9	2
4:30-5:30PM	4	3	14	2

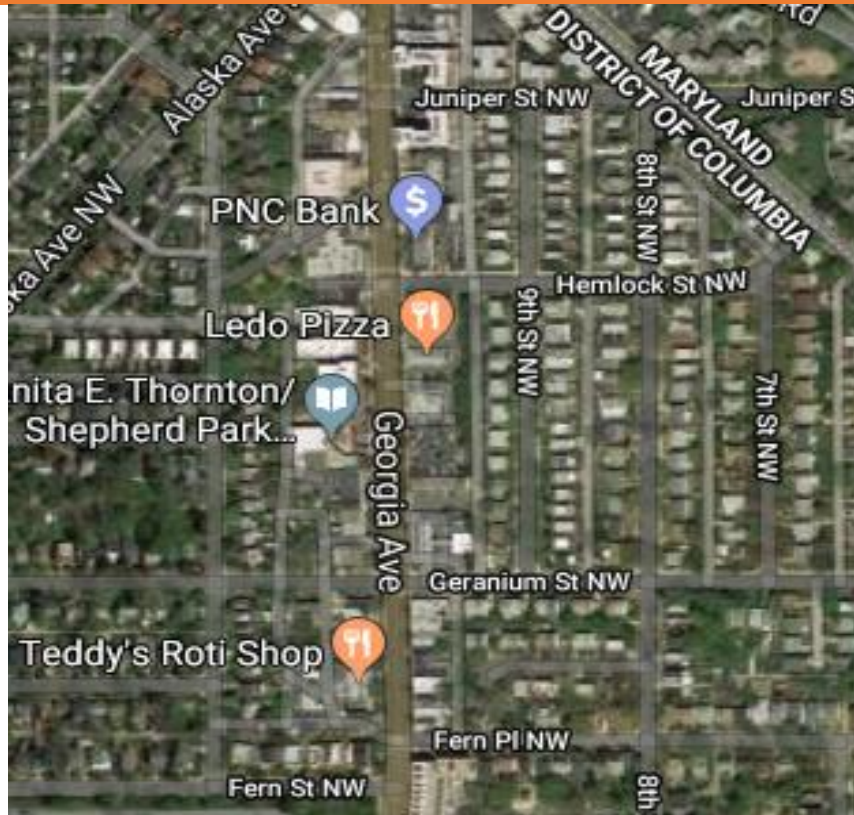
Bicycle Count	West Crosswalk	North Crosswalk	East Crosswalk	South Crosswalk
7:00-8:00AM	3	0	1	0
4:30-5:30PM	0	0	2	0

Facility	Condition	Notes
Crosswalks	Good	All are visible, but have some areas of fading paint
Sidewalks	Good	The sidewalks surrounding this intersections are in good condition
Curb/ADA Ramps	Good	Present and in good condition on each leg of intersection
Signage	Good	Signs at intersection are present and in good condition. There are pedestrian crossing signs on both approaches



Cars traveling northbound queued in the left-turn lane

Pedestrian & Bike Assessment – Georgia Ave N



IDENTIFIED ISSUES

- Redevelopment of Walter Reed
- New development
- Vehicle Speeds
- Trouble Crossing Georgia Avenue safely

OBSERVATIONS

- Georgia and southern Fern needs pedestrian signage. Crosswalks on both legs is in poor condition and should be restriped.
- Georgia and northern Fern needs pedestrian signage. Crosswalk on SB Georgia is more worn than NB.
- Crosswalk along west side of Georgia Avenue at Geranium was repaved and should be restriped.
- Signal at Geranium did not have pedestrian activated signal
- Pedestrian signal at Hemlock works properly and is used
- Pedestrian crosswalk at Juniper is used. Pedestrians seemed timid when crossing, but most drivers yielded to pedestrians.
- Sidewalks were well maintained. Two instances where tree boxes encroaches onto sidewalk.
- Signalized Intersection of Georgia Avenue and Elder (south of subject corridor) does not have pedestrian activated signal. Crosswalk should be upgraded to higher visibility crosswalk consistent with subject corridor.

W corridor b/w Fern St NW & Juniper St NW

POTENTIAL SOLUTIONS

- Provide pedestrian signage at Georgia Avenue and Fern
- Restripe crosswalks at Georgia Avenue and Fern
- Restripe crosswalks at Georgia and Germanium
- Provide pedestrian activated signal at Geranium and Georgia
- Improve crosswalks south of the corridor with Walter Reed development



Pedestrian and Child waiting to cross Georgia at Juniper.

Facility	Condition	Notes
Crosswalks	Good	Most are visible, Georgia and Fern should be restriped
Sidewalks	Good	The sidewalks surrounding all intersections are in good condition. Two tree boxes encroach on sidewalk
Curb/ADA Ramps	Good	Present and in good condition on each leg of intersection
Signage	Good	



Crosswalk at Georgia Avenue and Fern.

APPENDIX B

DATA COLLECTION-TRAFFIC COUNTS

TRAFFIC COUNTS

To support the concept development process for the Rock Creek East 1 Livability Study, traffic counts were performed at numerous locations throughout the study area. This appendix section includes a table summarizing where

traffic counts were performed, the source of the data, how that data was used in the study, and a brief description of the outcomes of those analyses.

SUMMARY OF TRAFFIC DATA COLLECTION + ANALYSIS FOR CONCEPTS

FOCUS AREA	LOCATION # AND NAME	COUNT BY	TYPE OF TRAFFIC ANALYSIS	KEY RESULTS
C-1	7. Georgia Ave NW at Fern St NW & Fern Pl NW	SAMMAT (1 location)	Performed MUTCD signal warrant analysis (combined offset intersections for analysis)	<ul style="list-style-type: none"> » A traffic signal is not warranted at this intersection.
C-2	4. 14th St NW at Underwood St NW	SAMMAT (1 location)	MUTCD multi-way stop warrant analysis at #4 – proposed conversion of Luzon to one-way departing to north and to south from 14th, with traffic formerly entering 14th from Luzon diverted to EB & WB Underwood	<ul style="list-style-type: none"> » Multi-way stop is not warranted at 14th & Underwood, even with the additional traffic diverted to here from Luzon due to one-way conversion.
C-2	5. 14th St NW at Luzon Ave NW	SAMMAT (2 locations)	Reviewed crash data for trends analysis (both locations #4 and #5)	<ul style="list-style-type: none"> » The location had one crash in 2012, one in 2014 and one in 2019. None of these crashes were related to pedestrians. There was one pedestrian crash in 2017. Conversion of Luzon to one-way departing the intersection » EB & WB is expected to improve safety.
C-3	3. Georgia Ave NW at Piney Branch Rd / Tuckerman St NW	SAMMAT (1 location)	Performed Synchro analysis – testing a change in lane configuration and signal operations; identify required turn lane storage lengths to accommodate queues; LOS and delay per movement, approach, and overall intersection	<ul style="list-style-type: none"> » Concept re-purposes EB & WB curb lanes on Piney Branch to provide protected bike lanes across Georgia Ave. » Lane reduction to single through lane EB & WB results in LOS F for those movements (compared to existing LOS D). » LOS will slightly improve if signal cycle length is increased to provide additional green time for EB & WB approaches to compensate for the lane reduction.
C-3	6. Georgia Ave NW at Underwood St NW	SAMMAT (1 location)	Performed a Pedestrian Gap Study.	<ul style="list-style-type: none"> » Adequate gap calculated based on HCM and ITE criteria. » During the AM & PM peak periods, adequate gaps were measured only 14% of the time; therefore, ped crossing improvements are justified.
C-3	6. Georgia Ave NW at Underwood St NW	SAMMAT (1 location)	Review crash data for trends analysis	<ul style="list-style-type: none"> » 12 reported crashes (2009 - 2019). » 4 injury crashes; 1 bike-involved crash; 1 ped-involved crash.

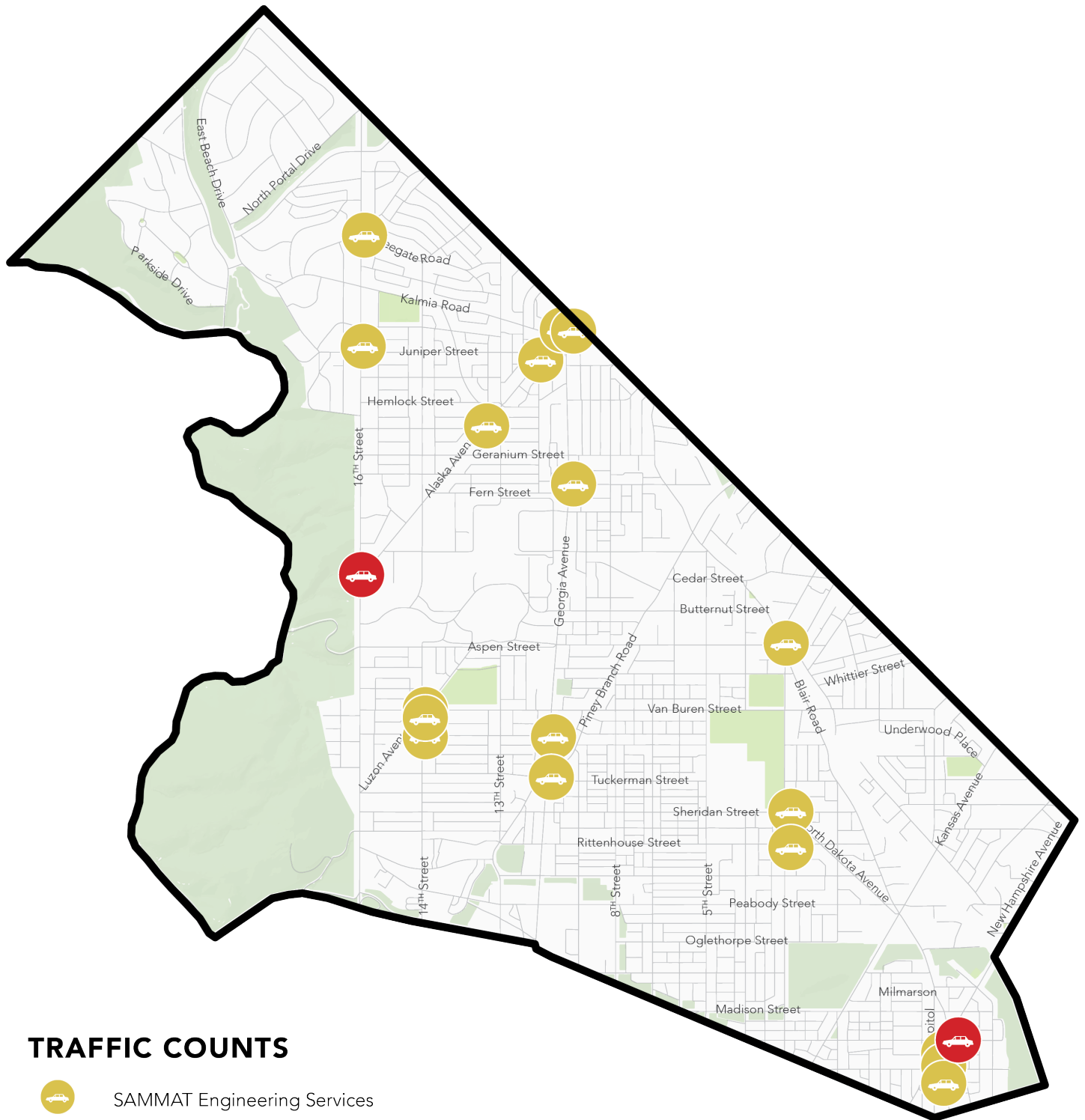
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FOCUS AREA	LOCATION # AND NAME	COUNT BY	TYPE OF TRAFFIC ANALYSIS	KEY RESULTS
C-4	1. North Capitol St at New Hampshire Ave & Kennedy St New Hampshire Ave NE at Blair Rd NE	SAMMAT (4 locations) DDOT (1 location)	Performed Synchro analysis – testing a new geometric configuration; LOS and delay per movement, approach, and overall intersection	<ul style="list-style-type: none"> » Concept includes 5 signalized intersections. » All intersections would operate at LOS E or better. » Worst-performing intersection would be New Hamp Ave at Blair
C-5	14. Piney Branch Rd NW at Blair Rd NW	DDOT (1 location)	Reviewed traffic count to determine if re-purposing the curb lanes along Piney Branch Rd for bump-outs and bike lanes might adversely impact traffic operations.	<ul style="list-style-type: none"> » Traffic operations not adversely affected since curb lanes are used only as right-turn pockets due to parking upstream and downstream of the intersection, the relatively low EB right-turn demand, and No RTOR » Allowed for WB right turns.
I-1	2. Georgia Ave NW at Kalmia Rd NW/Alaska Ave NW	SAMMAT (2 locations)	Performed Synchro analysis – testing a new geometric configuration; LOS and delay per movement, approach, and overall intersection	<ul style="list-style-type: none"> » Concept converts west leg of Kalmia at Alaska to right-in/right-out. Former left from Kalmia divert to 12th & Alaska and Eastern & Georgia. Signal warrant analysis performed at 12th & Alaska; no warrants met. » Georgia & Alaska and Georgia & Eastern operate at LOS D or better overall.
I-2	15. Blair Rd NW at Aspen St NW	SAMMAT (1 location)	Reviewed traffic count to measure existing pedestrian and bicycle demand to support proposed widening of sidewalk along southbound Blair Rd NW to link with proposed bike lanes on Butternut St NW.	<ul style="list-style-type: none"> » Pedestrian and bicycle demand is low but likely enough to support the implementation of the proposed improvement.
I-3	11. 16th St NW at Juniper St NW	SAMMAT (1 location)	Reviewed traffic counts to determine if left-turn lanes could be removed and replaced with median pedestrian refuge island.	<ul style="list-style-type: none"> » SB left turn demand is low enough to justify removing the lane to provide a center median pedestrian refuge island.



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FOCUS AREA	LOCATION # AND NAME	COUNT BY	TYPE OF TRAFFIC ANALYSIS	KEY RESULTS
I-4	16. 16th St NW at Alaska Ave NW	DDOT (1 location)	Reviewed traffic count data to measure existing northbound right turn demand and east leg pedestrian crossing volume in conflict with that movement, to determine if the proposed geometric improvement is viable.	<ul style="list-style-type: none"> » Pedestrian demand is low, such that the NB right turning vehicles in conflict with them may not expect to be required to yield to pedestrians. Therefore, the proposed geometric improvement to reduce the speed of right turning traffic is justified.
Sys	8. 3rd St NW at Rittenhouse St NW	SAMMAT (1 location)	MUTCD multi-way stop warrant analysis at #8 – proposed conversion of North Dakota to one-way departing to the south from 3rd, with traffic formerly entering 3rd from N Dakota diverted to WB Rittenhouse	<ul style="list-style-type: none"> » Multi-way stop is not warranted at 3rd & Rittenhouse, even with the additional traffic diverted to here from North Dakota due to one-way conversion.
Sys	9. 3rd St NW at North Dakota Ave NW	SAMMAT (1 location)	Reviewed crash data for trends analysis (both locations #8 and #9)	<ul style="list-style-type: none"> » 3 crashes were reported at this location (2009 - 2019). » All property-damage only; no peds or bikes involved.
Sys	10. 16th St NW at Myrtle St & Leegate Rd NW	SAMMAT (1 location)	Reviewed traffic counts to determine if left-turn lanes could be removed and replaced with median pedestrian refuge island.	<ul style="list-style-type: none"> » NB and SB left turn demands are low enough to justify removing the lanes to provide center median pedestrian refuge islands.
Sys	13. Alaska Ave NW at 12th St NW	SAMMAT (1 location)	Performed MUTCD signal warrant analysis.	<ul style="list-style-type: none"> » A traffic signal is not warranted at this intersection. Therefore, no operational analysis was needed using Synchro.
	12. Alaska Ave NW at Holly St NW	SAMMAT (1 location)	Reviewed count to determine if pedestrian crossing demand justified recommending an improvement here.	<ul style="list-style-type: none"> » The number of pedestrians crossing Alaska Ave at Holly St is very low and is unlikely to justify implementing any significant pedestrian infrastructure improvements at this location.

Note: "Sys" refers to select locations where systematic improvements could be applied, depending on the analysis results.



TRAFFIC COUNTS

-  SAMMAT Engineering Services
-  DDOT

TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

Georgia Avenue and Fern Street/Fern Place, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of Georgia Avenue and Fern Street/Fern Place, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

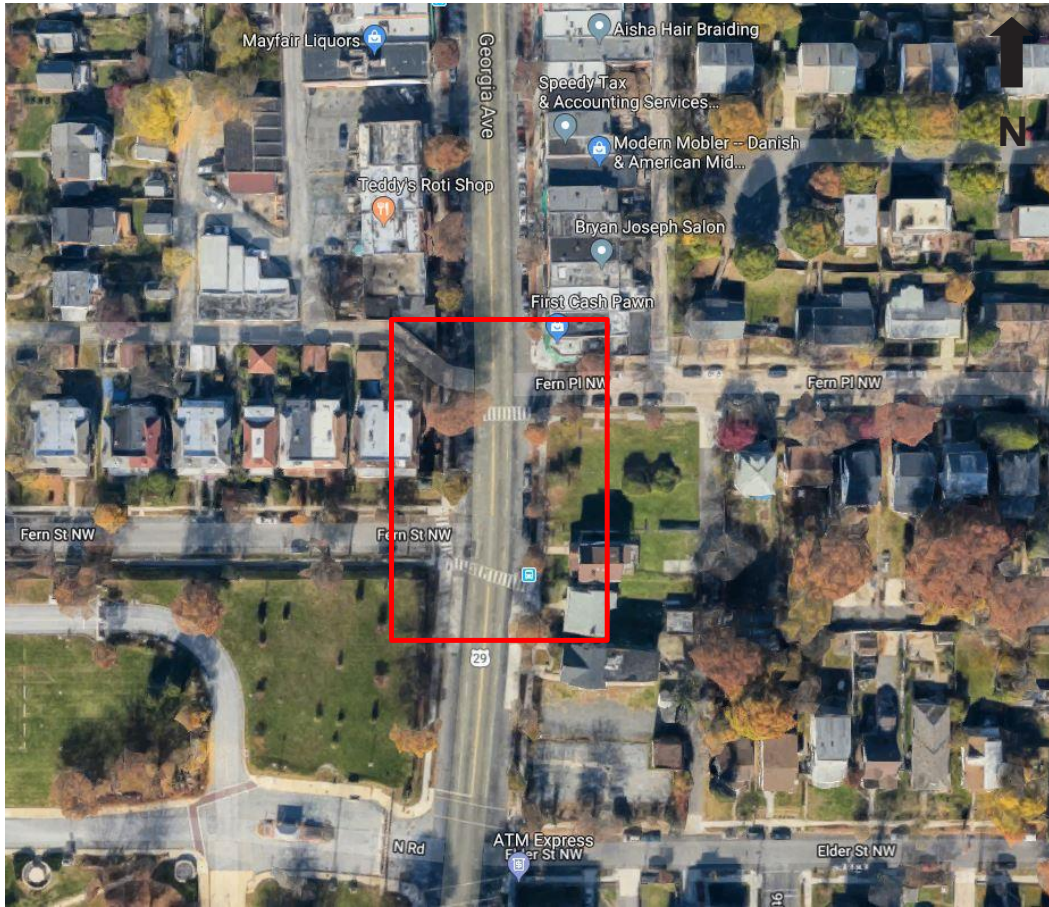


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

SAMMAT ENGINEERING SERVICES, LLC

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MT AIRY, MD 21771
www.sammateng.com

GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	GEORGIA AVE, NW										GEORGIA AVE, NW										FERN STREET, NW														
	From North					From East					From South					From West					From South					From West									
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total
07:00 AM	0	258	0	0	258	0	0	0	1	1	1	71	4	0	76	5	0	2	1	8	5	0	2	1	8	343									
07:15 AM	0	250	0	0	252	1	0	0	0	1	0	107	2	0	109	6	0	0	2	8	6	0	0	2	8	370									
07:30 AM	1	270	1	2	274	1	0	0	0	2	2	157	3	1	163	5	0	2	6	13	5	0	2	6	13	451									
07:45 AM	1	222	1	0	224	1	0	1	0	2	1	138	1	1	141	7	0	0	4	11	7	0	0	4	11	378									
Total	2	1000	2	4	1008	3	0	1	1	5	4	473	10	2	489	23	0	4	13	40	23	0	4	13	40	1542									
08:00 AM	0	272	2	0	274	1	0	0	0	1	3	180	2	2	186	9	0	1	4	14	9	0	1	4	14	475									
08:15 AM	0	251	3	1	255	1	0	2	0	3	2	191	3	0	196	15	0	1	0	16	15	0	1	0	16	470									
08:30 AM	0	236	5	0	241	2	0	0	0	2	1	213	3	0	217	8	0	0	1	9	8	0	0	1	9	469									
08:45 AM	0	219	2	1	222	2	0	1	0	3	4	174	2	1	181	6	0	1	1	8	6	0	1	1	8	414									
Total	0	978	12	2	992	6	0	3	0	9	10	758	10	2	780	38	0	3	6	47	38	0	3	6	47	1828									
09:00 AM	0	211	2	1	214	0	0	1	0	1	1	194	5	0	200	8	0	0	1	9	8	0	0	1	9	424									
09:15 AM	0	179	1	0	180	0	0	0	0	0	0	219	2	0	221	12	0	1	3	16	12	0	1	3	16	417									
09:30 AM	1	174	1	0	176	2	0	1	0	3	1	200	4	0	205	7	0	0	1	8	7	0	0	1	8	392									
09:45 AM	2	137	1	0	140	0	0	1	0	1	2	156	4	0	162	8	0	4	0	12	8	0	4	0	12	315									
Total	3	701	5	1	710	2	0	3	0	5	4	769	15	0	788	35	0	5	5	45	35	0	5	5	45	1548									
10:00 AM	2	126	2	1	131	4	0	1	1	6	0	230	4	1	235	11	0	1	3	15	11	0	1	3	15	387									
10:15 AM	0	166	1	0	167	5	0	2	8	15	3	163	4	0	170	6	0	2	3	11	6	0	2	3	11	363									
10:30 AM	3	156	4	1	164	1	0	3	2	6	1	179	6	0	186	10	0	3	3	16	10	0	3	3	16	372									
10:45 AM	0	170	2	0	172	2	0	0	4	6	0	233	8	0	241	7	0	2	0	9	7	0	2	0	9	428									
Total	5	618	9	2	634	12	0	6	15	33	4	805	22	1	832	34	0	8	9	51	34	0	8	9	51	1550									
11:00 AM	0	157	6	3	166	0	0	0	0	0	2	196	4	0	202	6	0	3	1	10	6	0	3	1	10	378									
11:15 AM	0	176	0	3	179	0	0	0	0	0	1	292	4	0	297	5	0	1	0	6	5	0	1	0	6	482									
11:30 AM	0	157	0	3	160	0	0	0	0	0	1	252	9	6	268	5	0	2	6	13	5	0	2	6	13	441									
11:45 AM	0	158	0	1	159	0	0	0	0	0	0	266	4	0	270	2	0	1	0	3	2	0	1	0	3	432									
Total	0	648	6	10	664	0	0	0	0	0	4	1006	21	6	1037	18	0	7	7	32	18	0	7	7	32	1733									
12:00 PM	0	167	3	8	178	0	0	0	0	0	2	238	0	0	240	5	0	2	0	7	5	0	2	0	7	425									
12:15 PM	1	190	2	0	193	0	0	0	0	0	0	231	4	1	236	5	0	1	0	6	5	0	1	0	6	435									
12:30 PM	0	133	6	4	143	0	0	0	0	0	3	312	8	0	323	9	0	3	5	17	9	0	3	5	17	483									

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GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	GEORGIA AVE, NW										GEORGIA AVE, NW										FERN PLACE, NW										FERN STREET, NW									
	From North					From East					From South					From West					From North					From East					From South					From West				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total				
12:45 PM	0	154	3	0	157	0	0	0	0	0	0	0	0	0	0	2	180	0	0	182	4	0	0	0	4	0	0	0	0	0	0	0	0	0	4	343				
Total	1	644	14	12	671	0	0	0	0	0	7	961	12	1	981	23	0	6	5	34	1686																			
01:00 PM	0	167	3	0	170	0	0	2	0	2	0	259	8	0	267	5	0	0	2	272	8	0	0	0	0	0	0	0	0	0	0	0	0	0	7	446				
01:15 PM	0	179	1	1	181	2	0	2	0	4	1	249	6	0	256	8	0	2	10	272	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	20	461			
01:30 PM	0	206	3	2	211	3	0	1	0	4	0	257	5	2	264	6	0	2	4	272	6	0	2	4	0	0	0	0	0	0	0	0	0	0	0	12	491			
01:45 PM	1	145	5	1	152	4	0	1	0	5	4	239	5	0	248	7	0	0	1	264	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	413			
Total	1	697	12	4	714	9	0	6	0	15	5	1004	24	2	1035	26	0	4	17	47	1811																			
02:00 PM	2	169	3	4	178	3	0	0	1	4	3	276	3	0	282	7	0	1	2	292	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	474			
02:15 PM	0	172	5	0	177	5	0	0	5	10	1	263	8	0	272	7	0	2	0	279	7	0	2	0	0	0	0	0	0	0	0	0	0	0	0	9	468			
02:30 PM	0	188	4	1	193	1	0	1	4	6	1	303	5	0	309	13	0	1	5	322	13	0	1	5	0	0	0	0	0	0	0	0	0	0	0	19	527			
02:45 PM	0	174	4	0	178	4	0	2	2	4	2	328	4	0	334	9	0	2	1	343	9	0	2	1	0	0	0	0	0	0	0	0	0	0	0	12	528			
Total	2	703	16	5	726	9	0	3	12	24	7	1170	20	0	1197	36	0	6	8	1241	36	0	6	8	0	0	0	0	0	0	0	0	0	0	0	50	1997			
03:00 PM	0	166	4	0	170	1	0	1	3	5	2	270	7	0	277	9	0	0	4	286	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	467			
03:15 PM	0	198	6	0	204	3	0	0	3	6	4	329	11	0	344	15	0	2	2	359	15	0	2	2	0	0	0	0	0	0	0	0	0	0	0	19	573			
03:30 PM	0	231	5	2	238	5	0	3	0	8	7	348	8	0	363	7	0	2	2	370	7	0	2	2	0	0	0	0	0	0	0	0	0	0	0	11	620			
03:45 PM	0	175	3	1	179	3	0	4	0	7	3	444	9	0	456	2	0	1	2	461	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	5	647			
Total	0	770	18	3	791	12	0	8	6	26	16	1391	35	0	1442	33	0	5	10	1481	33	0	5	10	0	0	0	0	0	0	0	0	0	0	0	48	2307			
04:00 PM	0	230	1	0	231	0	0	0	0	0	0	400	7	0	407	9	0	2	2	416	9	0	2	2	0	0	0	0	0	0	0	0	0	0	0	13	651			
04:15 PM	1	209	3	1	214	1	0	1	0	2	0	458	10	0	468	4	0	3	0	472	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7	691			
04:30 PM	1	222	4	0	227	0	0	3	0	3	1	436	5	0	442	6	0	0	2	448	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0	8	680			
04:45 PM	1	184	3	1	189	0	0	1	0	1	2	473	9	0	484	6	0	3	0	490	6	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	683			
Total	3	845	11	2	861	1	0	5	0	6	3	1767	31	0	1801	25	0	8	4	1826	25	0	8	4	0	0	0	0	0	0	0	0	0	0	0	37	2705			
05:00 PM	0	176	4	3	183	0	0	0	0	0	2	416	8	0	426	6	0	3	0	432	6	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	618			
05:15 PM	0	203	0	0	203	1	0	0	0	1	0	476	15	0	491	8	0	0	0	509	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	703			
05:30 PM	0	220	3	0	223	0	0	1	0	1	2	400	26	0	428	7	0	1	0	435	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	660			
05:45 PM	0	210	4	1	215	0	0	0	0	0	1	418	8	0	427	10	0	3	2	437	10	0	3	2	0	0	0	0	0	0	0	0	0	0	0	15	657			
Total	0	809	11	4	824	1	0	1	0	2	5	1710	57	0	1772	31	0	7	2	1800	31	0	7	2	0	0	0	0	0	0	0	0	0	0	0	40	2638			
06:00 PM	0	186	8	0	194	1	0	1	10	12	2	467	17	0	486	5	0	3	1	494	5	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	9	701		

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GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

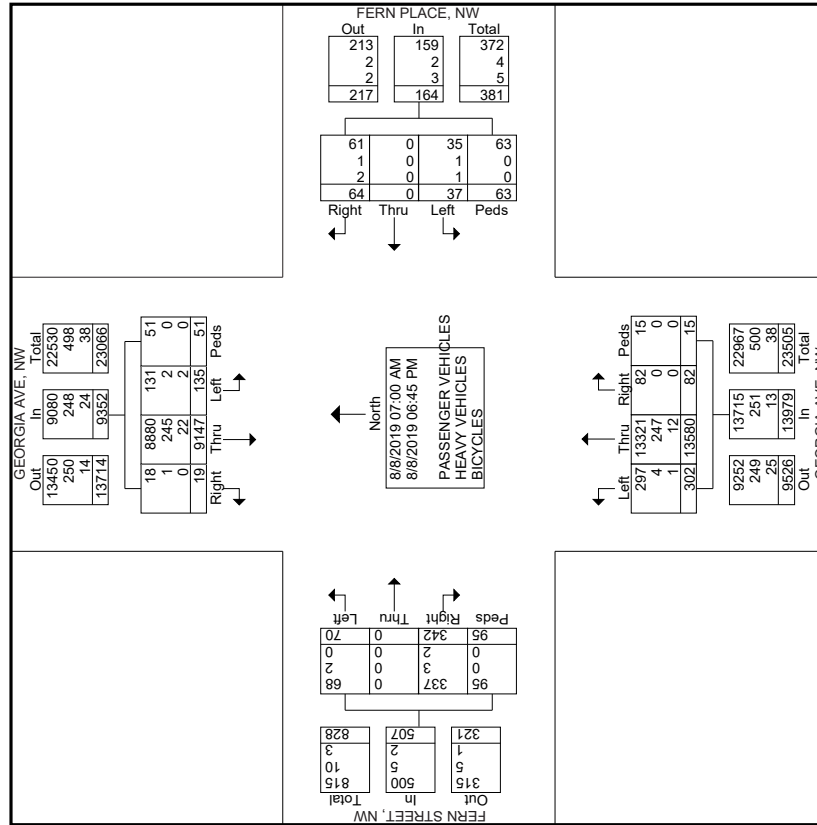
Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	GEORGIA AVE, NW From North							FERN PLACE, NW From East							GEORGIA AVE, NW From South							FERN STREET, NW From West						
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total		
06:15 PM	1	204	1	2	208	5	0	0	8	13	3	485	12	1	501	3	0	1	0	4	3	0	1	0	4	726		
06:30 PM	0	192	5	0	197	3	0	0	5	8	2	419	8	0	429	4	0	1	1	6	4	0	2	7	17	640		
06:45 PM	1	152	5	0	158	0	0	0	6	6	6	395	8	0	409	8	0	2	7	17	8	0	2	7	17	590		
Total	2	734	19	2	757	9	0	1	29	39	13	1766	45	1	1825	20	0	7	9	36	20	0	7	9	36	2657		
Grand Total	19	9147	135	51	9352	64	0	37	63	164	82	13580	302	15	13979	342	0	70	95	507	67.5	0	13.8	18.7	24002			
Approach %	0.2	97.8	1.4	0.5	38.4	0.6	97.1	2.2	0.1	58.2	1.4	96.6	1.3	0.1	197.15	3.37	0	0.68	0.95	500	0.3	0	0.3	0.4	2.1			
Total %	0.1	38.1	0.6	0.2	0.7	0.3	0	0.2	0.3	0.7	0.3	56.6	1.3	0.1	58.2	1.4	0	0.3	0.4	2.1	3.37	0	0.68	0.95	500			
PASSENGER VEHICLES	18	8680	131	51	9080	61	0	35	68	159	82	13321	297	15	13715	337	0	68	95	500	337	0	68	95	500	23454		
% PASSENGER VEHICLES	1	245	2	0	248	1	0	1	0	2	0	247	4	0	251	3	0	2	0	5	3	0	2	0	5	506		
HEAVY VEHICLES	5.3	2.7	1.5	0	2.7	1.6	0	2.7	0	1.2	0	1.8	1.3	0	1.8	0.9	0	2.9	0	1	0.9	0	2.9	0	1	2.1		
% HEAVY VEHICLES	0	22	2	0	24	2	0	1	0	3	0	12	1	0	13	2	0	0	0	2	2	0	0	0	2	42		
BICYCLES	0	0.2	1.5	0	0.3	3.1	0	2.7	0	1.8	0	0.1	0.3	0	0.1	0.6	0	0	0	0.4	0.6	0	0	0	0.4	0.2		
% BICYCLES																												

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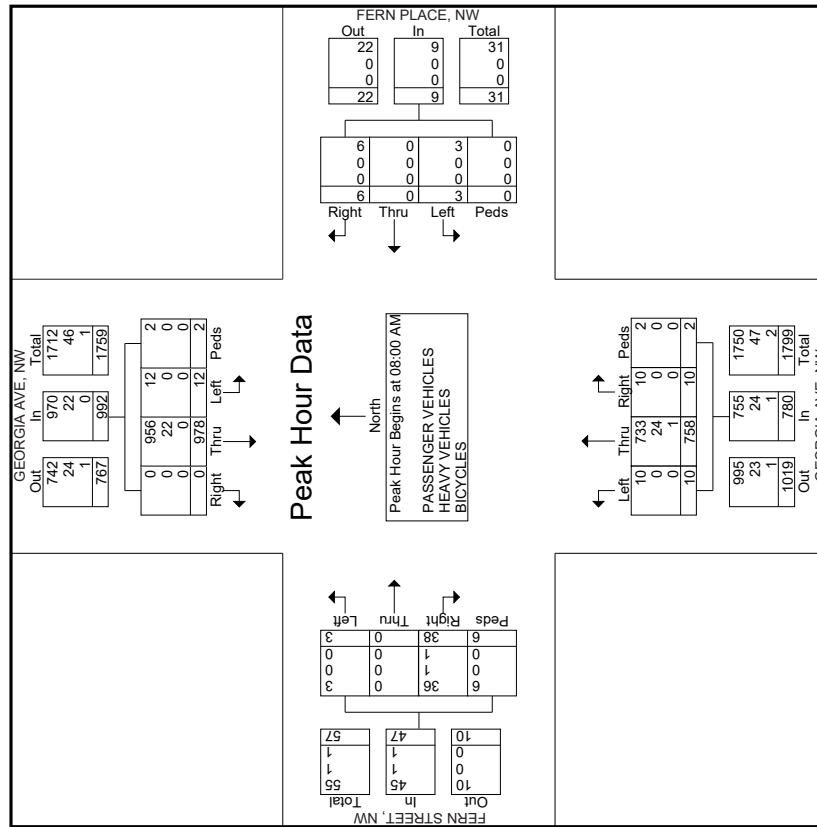
GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

Start Time	GEORGIA AVE, NW From North				FERN PLACE, NW From East				GEORGIA AVE, NW From South				FERN STREET, NW From West				Int. Total				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right		Thru	Left	Peds	App. Total
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	272	0	0	272	1	0	2	0	3	2	191	3	0	1	15	0	1	0	16	475
08:15 AM	0	251	3	1	255	2	0	0	0	2	1	213	3	0	0	8	0	0	0	1	470
08:30 AM	0	236	5	0	241	2	0	0	0	3	4	174	2	1	1	6	0	0	1	9	469
08:45 AM	0	219	2	1	222	2	0	1	0	3	10	758	10	2	1	6	0	1	1	8	414
Total Volume	0	978	12	2	992	6	0	3	0	9	10	758	10	2	3	38	0	3	6	47	1828
% App. Total	0	98.6	1.2	0.2	100.0	66.7	0	33.3	0	9	1.3	97.2	1.3	0.3	6.4	80.9	0	6.4	12.8	12.8	1828
PHF	.000	.899	.600	.500	.905	.750	.000	.375	.000	.750	.625	.890	.833	.500	.899	.633	.000	.750	.375	.734	.962
PASSENGER VEHICLES	0	986	12	2	970	6	0	3	0	9	10	733	10	2	2	36	0	3	6	45	1779
% PASSENGER VEHICLES	0	22	0	0	22	0	0	0	0	0	0	24	0	0	24	1	0	0	0	1	47
HEAVY VEHICLES	0	2.2	0	0	2.2	0	0	0	0	0	0	3.2	0	0	3.1	2.6	0	0	0	2.1	2.6
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	2
BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	2.6	0	0	0	2.1	0.1
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	2.6	0	0	0	2.1	0.1

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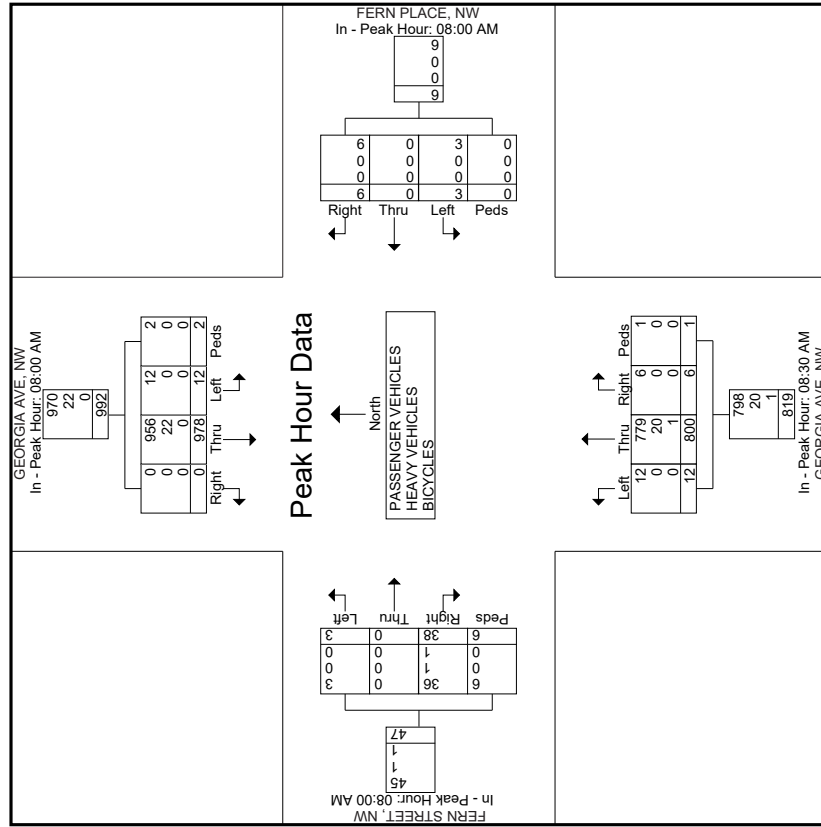
GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

Start Time	GEORGIA AVE, NW From North						FERN PLACE, NW From East						GEORGIA AVE, NW From South						FERN STREET, NW From West						
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		
	Peak Hour for Each Approach Begins at:																								
+0 mins.	0	272	2	0	274	08:00 AM	0	0	0	0	0	08:30 AM	1	1	213	3	0	217	08:00 AM	9	0	0	1	4	14
+15 mins.	0	251	3	1	255	1	0	2	0	3	1	174	2	1	181	2	0	181	15	0	1	0	16		
+30 mins.	0	236	5	0	241	2	0	0	0	2	1	194	5	0	200	5	0	200	8	0	0	1	9		
+45 mins.	0	219	2	1	222	2	0	1	0	3	0	219	2	0	221	2	0	221	6	0	1	1	8		
Total Volume	0	978	12	2	992	6	0	3	0	9	6	800	12	1	819	38	0	819	38	0	3	6	47		
% App. Total	0	98.6	1.2	0.2	99.0	66.7	0	33.3	0	0.7	97.7	1.5	0.1	80.9	0	6.4	12.8	63.3	0.000	.750	.375	6	.734		
PHF	.000	.899	.600	.500	.905	.750	.000	.375	.000	.750	.375	.913	.600	.250	.926	.36	0	.786	.633	.000	.750	.375	.734		
PASSENGER VEHICLES	0	986	12	2	990	6	0	3	0	9	6	778	12	1	786	38	0	786	36	0	3	6	45		
% PASSENGER VEHICLES	0	22	0	0	22	0	0	0	0	0	0	20	0	0	20	1	0	20	1	0	0	0	1		
HEAVY VEHICLES	0	2.2	0	0	2.2	0	0	0	0	0	0	2.5	0	0	2.4	2.6	0	2.4	2.6	0	0	0	2.1		
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1	0	0	0	2.1		
BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	2.6	0	0.1	2.6	0	0	0	2.1		
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	2.6	0	0.1	2.6	0	0	0	2.1		

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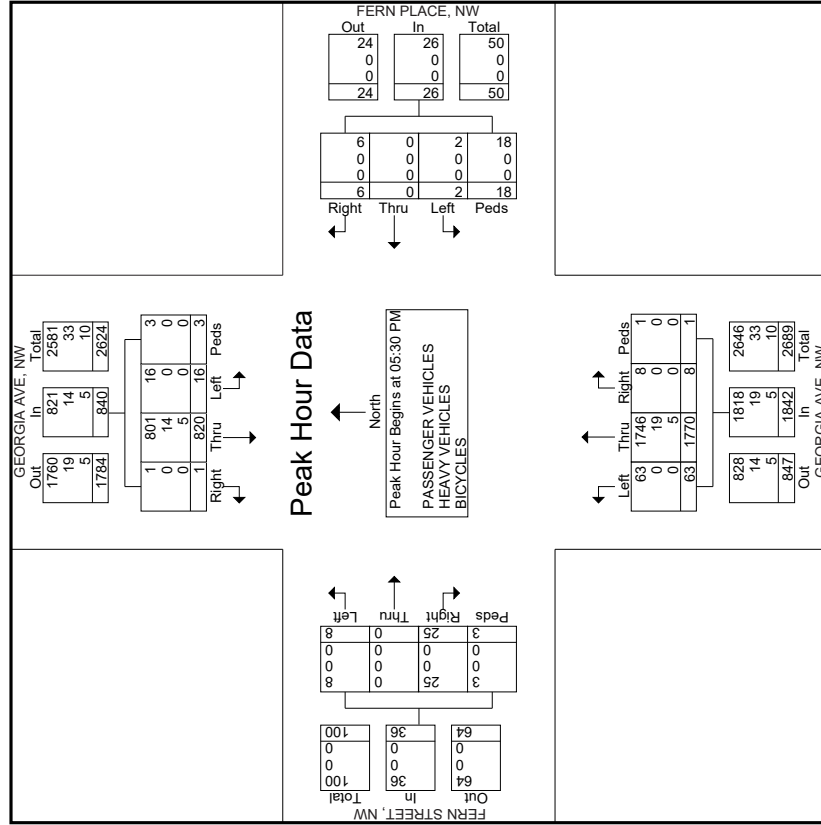
GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

Start Time	GEORGIA AVE, NW From North				FERN PLACE, NW From East				GEORGIA AVE, NW From South				FERN STREET, NW From West				Int. Total							
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		App. Total	App. Total	App. Total	App. Total			
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1	Peak Hour for Entire Intersection Begins at 05:30 PM																							
05:30 PM	0	220	4	1	215	0	0	0	1	418	8	0	0	0	0	0	0	427	10	0	3	2	15	657
05:45 PM	0	210	8	1	215	1	0	1	10	467	17	0	0	0	0	0	0	486	5	0	3	1	9	701
06:00 PM	0	186	8	0	194	5	0	0	8	485	12	1	0	0	0	0	0	501	3	0	1	0	4	726
06:15 PM	1	204	1	2	208	6	0	0	2	1770	63	1	0	0	0	0	0	1842	25	0	8	3	36	2744
Total Volume	1	820	16	3	840	23.1	0	7.7	69.2	8	1770	63	1	0	0	0	1842	69.4	0	22.2	8.3	36	2744	
% App. Total	0.1	97.6	1.9	0.4	942	300	.000	.500	.450	.667	.912	.606	.250	.000	.667	.375	.600	.919	.625	.000	.667	.375	.600	.945
PHF	1	.801	.16	.3	.821	6	0	2	.18	8	1746	63	1	26	8	1818	36	1818	25	0	6	3	36	2701
PASSENGER VEHICLES	0	14	0	0	14	0	0	0	0	19	0	0	0	0	0	0	0	19	0	0	0	0	0	33
HEAVY VEHICLES	0	1.7	0	0	1.7	0	0	0	0	1.1	0	0	0	0	0	0	1.0	1.0	0	0	0	0	0	1.2
% HEAVY VEHICLES	0	5	0	0	5	0	0	0	0	5	0	0	0	0	0	0	5	5	0	0	0	0	0	10
BICYCLES	0	0.6	0	0	0.6	0	0	0	0	0.3	0	0	0	0	0	0	0.3	0.3	0	0	0	0	0	0.4
% BICYCLES	0	0.6	0	0	0.6	0	0	0	0	0.3	0	0	0	0	0	0	0.3	0.3	0	0	0	0	0	0.4

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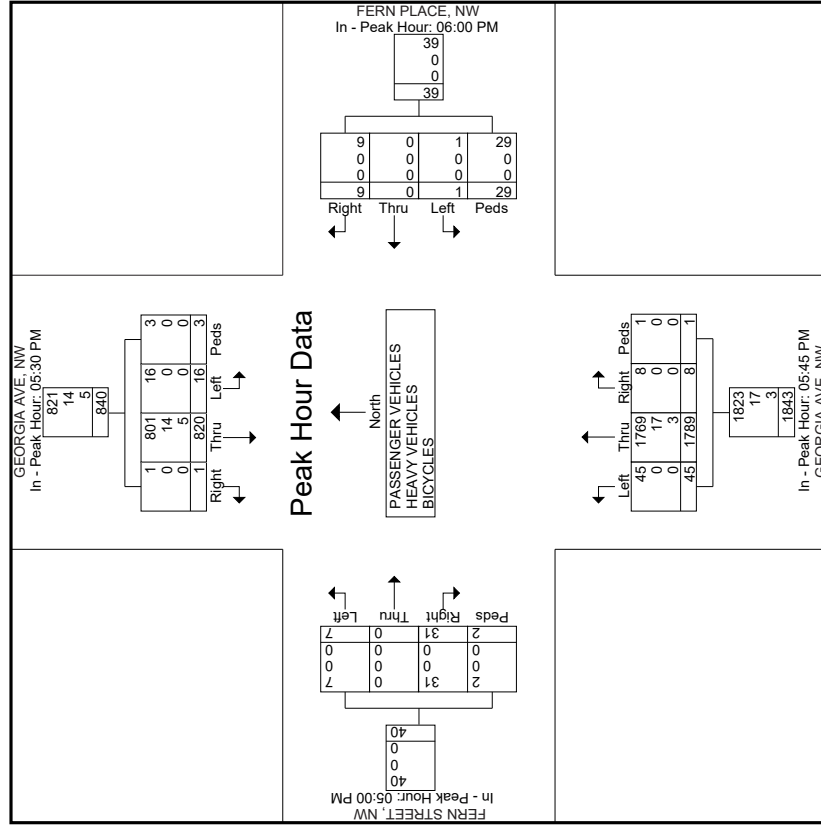
GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW

Start Time	GEORGIA AVE, NW From North						FERN PLACE, NW From East						GEORGIA AVE, NW From South						FERN STREET, NW From West											
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total							
	Peak Hour for Each Approach Begins at:																													
+0 mins.	0	220	3	0	223	05:30 PM	0	1	0	10	12	0	418	8	0	427	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	210	4	1	215	1	0	0	8	13	2	467	17	0	486	6	0	0	0	0	0	6	0	0	0	0	0			
+30 mins.	0	186	8	0	194	3	0	0	5	8	3	485	12	1	501	8	0	0	1	0	0	7	0	0	1	0	0			
+45 mins.	1	204	1	2	208	0	0	0	6	6	2	419	8	0	429	10	0	0	3	2	15	10	0	0	3	2	15			
Total Volume	1	820	16	3	840	9	0	1	29	39	8	1789	45	1	1843	31	0	0	7	2	40	31	0	0	7	2	40			
% App. Total	0.1	97.6	1.9	0.4	23.1	0	2.6	74.4	0.4	97.1	2.4	0.1	1843	0.2	0.1	77.5	0	17.5	0	0.2	0.1	5	0	17.5	0	0.2	0.1	5		
PHF	.250	.932	.500	.375	.942	.450	.000	.250	.725	.750	.667	.922	.662	.250	.920	.775	.000	.583	.250	.667	.31	.000	.583	.250	.667	.31	.000	.583	.250	.667
PASSENGER VEHICLES	1	801	16	3	821	9	0	1	29	39	8	1766	45	1	1823	31	0	0	7	2	40	31	0	0	7	2	40			
% PASSENGER VEHICLES	0	14	0	0	14	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0			
HEAVY VEHICLES	0	1.7	0	0	1.7	0	0	0	0	0	0	1	0	0	0.9	0	0	0	0	0	0	0	0	0	0	0	0			
% HEAVY VEHICLES	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0			
BICYCLES	0	0.6	0	0	0.6	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0			
% BICYCLES	0	0.6	0	0	0.6	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0			

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GEORGIA AVENUE AND FERN PLACE/FERN STREET, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

North-eastbound Luzon Street, NW at 14th Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

Mount Airy, MD 21771

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August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of North-eastbound Luzon Street, NW at 14th Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

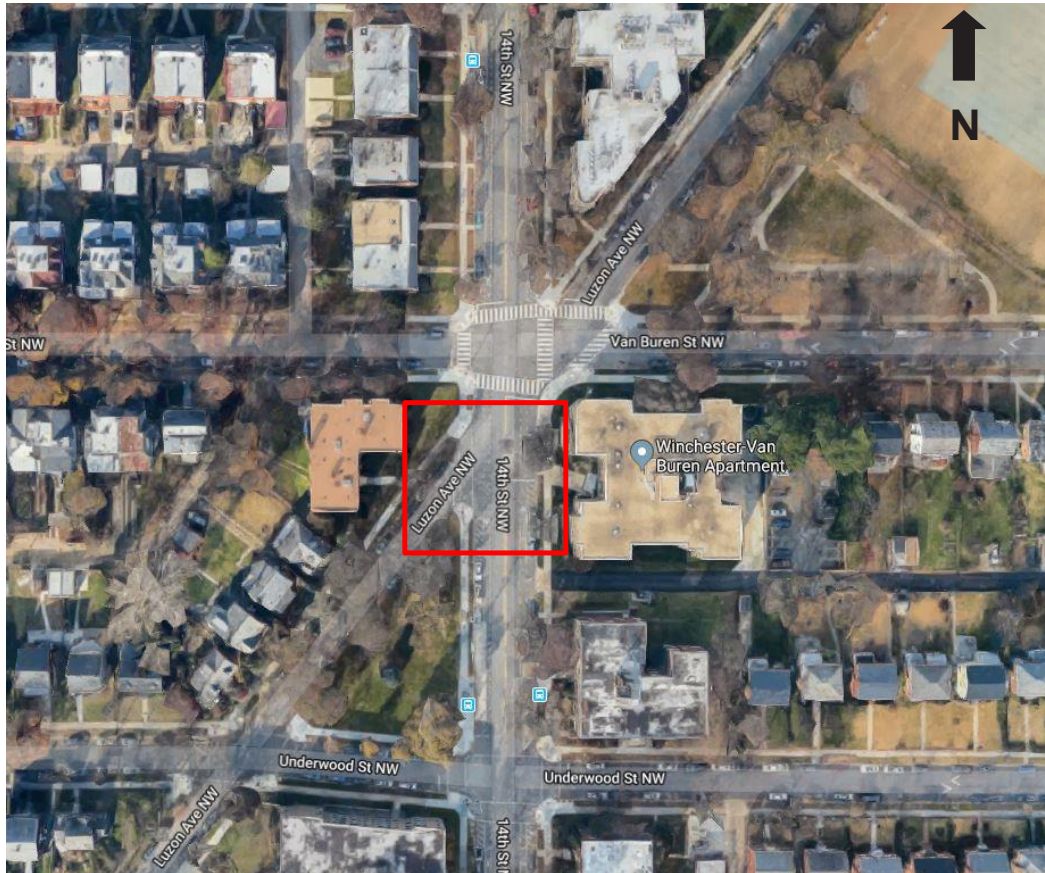


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW

Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	Luzon Street, NW						14th Street, NW						14th Street, NW														
	From Southwest			From South			From South			From North			From North			From North											
	Bear Left	Bear Right	Hard Left	Hard Right	Thru	Peds	Bear Left	Bear Right	Hard Left	Hard Right	Thru	Peds	Bear Left	Bear Right	Hard Left	Hard Right	Thru	Peds	Bear Left	Bear Right	Hard Left	Hard Right	Thru	Peds	App. Total	Int. Total	
07:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:30 AM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
08:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
08:15 AM	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	1	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
09:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:15 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
09:30 AM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
09:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
10:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:15 AM	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
10:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:45 AM	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	2	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
11:00 AM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
11:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
11:45 AM	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total	1	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
12:00 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:15 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

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Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	Luzon Street, NW From Southwest				14th Street, NW From South				14th Street, NW From North				Int. Total	
	Hard Right	Bear Left	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Bear Right	Thru	Peds	App. Total		
12:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	3
12:45 PM	1	6	0	7	0	0	0	0	0	0	0	0	0	7
Total	1	18	0	19	0	0	0	0	0	0	0	0	0	19
01:00 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	5
01:15 PM	1	6	0	7	0	0	0	0	0	0	0	0	0	7
01:30 PM	2	3	0	5	0	0	0	0	0	0	0	0	0	5
01:45 PM	0	8	0	8	0	0	0	0	0	0	0	0	0	8
Total	3	22	0	25	0	0	0	0	0	0	0	0	0	25
02:00 PM	1	9	0	10	0	0	0	0	0	0	0	0	0	10
02:15 PM	0	10	0	10	0	0	0	0	0	0	0	0	0	10
02:30 PM	0	4	0	4	0	0	0	0	0	0	0	0	0	4
02:45 PM	0	10	0	10	0	0	0	0	0	0	0	0	0	10
Total	1	33	0	34	0	0	0	0	0	0	0	0	0	34
03:00 PM	0	10	0	10	0	0	0	0	0	0	0	0	0	10
03:15 PM	1	9	0	10	0	0	0	0	0	0	0	0	0	10
03:30 PM	0	13	0	13	0	0	0	0	0	0	0	0	0	13
03:45 PM	1	12	0	13	0	0	0	0	0	0	0	0	0	13
Total	2	44	0	46	0	0	0	0	0	0	0	0	0	46
04:00 PM	0	6	0	6	0	0	0	0	0	0	0	0	0	6
04:15 PM	0	15	0	15	0	0	0	0	0	0	0	0	0	15
04:30 PM	0	13	0	13	0	0	0	0	0	0	0	0	0	13
04:45 PM	1	16	0	17	0	0	0	0	0	0	0	0	0	17
Total	1	50	0	51	0	0	0	0	0	0	0	0	0	51
05:00 PM	0	15	0	15	0	0	0	0	0	0	0	0	0	15
05:15 PM	0	14	0	14	0	0	0	0	0	0	0	0	0	14
05:30 PM	0	13	0	13	0	0	0	0	0	0	0	0	0	13
05:45 PM	0	10	0	10	0	0	0	0	0	0	0	0	0	10
Total	0	52	0	52	0	0	0	0	0	0	0	0	0	52

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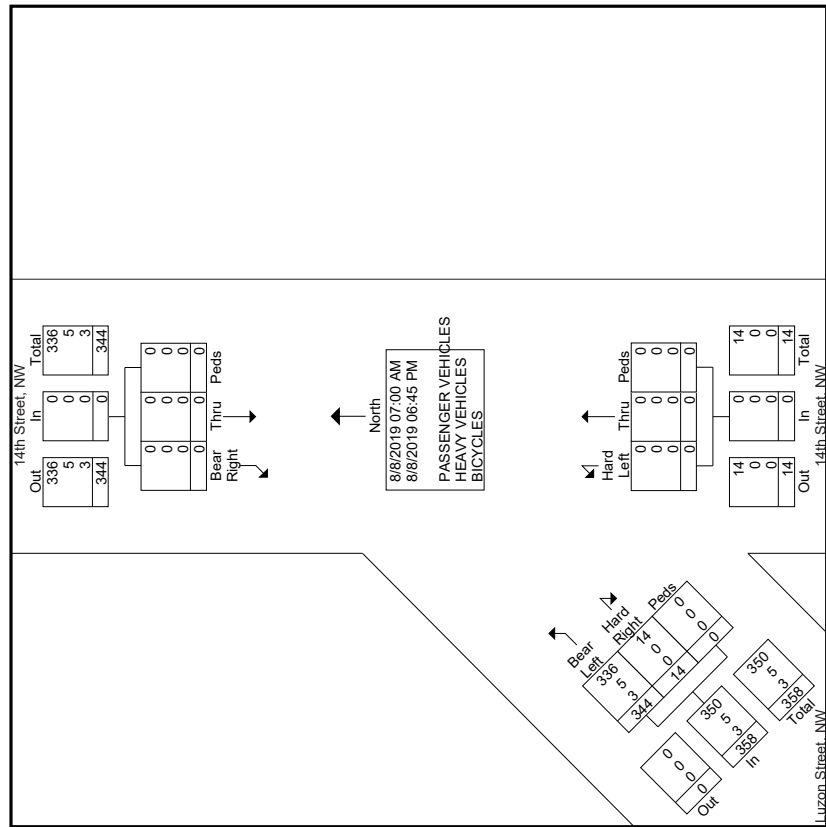
NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES													
	Luzon Street, NW From Southwest				14th Street, NW From South				14th Street, NW From North					
	Hard Right	Bear Right	Hard Left	Peds	Thru	Hard Left	Peds	App. Total	App. Total	Bear Right	Thru	Peds	App. Total	Int. Total
06:00 PM	0	6	0	0	0	0	0	6	0	0	0	0	0	6
06:15 PM	0	15	0	0	0	0	15	0	0	0	0	0	0	15
06:30 PM	1	16	0	0	0	0	17	0	0	0	0	0	0	17
06:45 PM	0	7	0	0	0	0	7	0	0	0	0	0	0	7
Total	1	44	0	0	0	0	45	0	0	0	0	0	0	45
Grand Total	14	344	0	0	0	0	358	0	0	0	0	0	0	358
Approach % Total %	3.9	96.1	0	0	0	0	100	0	0	0	0	0	0	0
PASSENGER VEHICLES	14	336	0	0	0	0	350	0	0	0	0	0	0	350
% PASSENGER VEHICLES	100	97.7	0	0	0	0	97.8	0	0	0	0	0	0	97.8
HEAVY VEHICLES	0	5	0	0	0	0	5	0	0	0	0	0	0	5
% HEAVY VEHICLES	0	1.5	0	0	0	0	1.4	0	0	0	0	0	0	1.4
BICYCLES	0	3	0	0	0	0	3	0	0	0	0	0	0	3
% BICYCLES	0	0.9	0	0	0	0	0.8	0	0	0	0	0	0	0.8

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NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW



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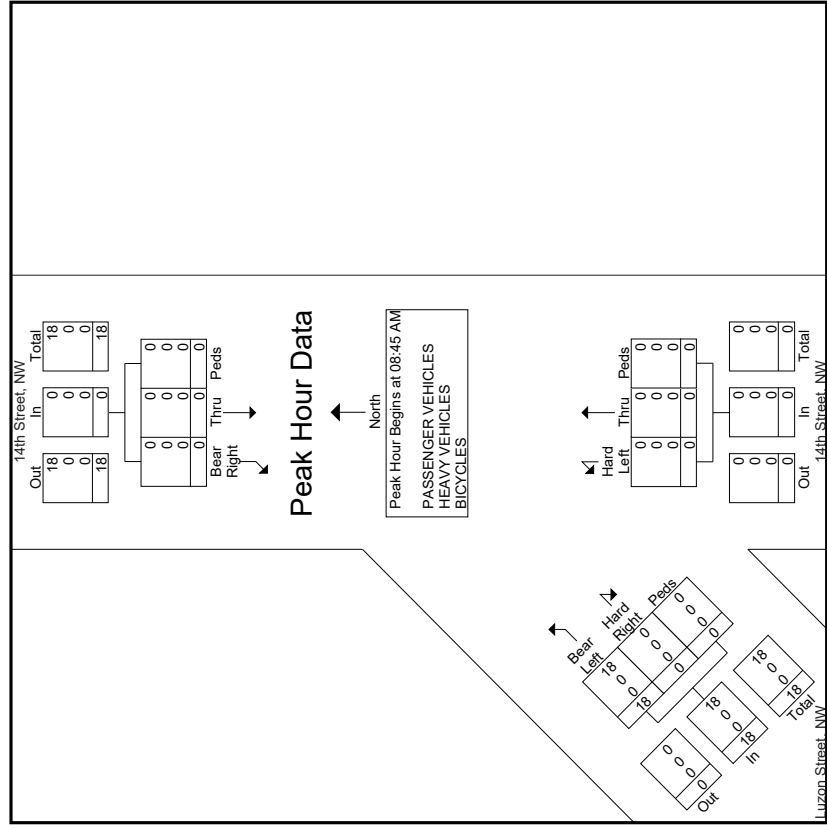
NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	Luzon Street, NW From Southwest				14th Street, NW From South				14th Street, NW From North				Int. Total
	Hard Right	Bear Left	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Bear Right	Thru	Peds	App. Total	
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:45 AM													
08:45 AM	0	4	0	4	0	0	0	0	0	0	0	0	0
09:00 AM	0	3	0	3	0	0	0	0	0	0	0	0	0
09:15 AM	0	5	0	5	0	0	0	0	0	0	0	0	0
09:30 AM	0	6	0	6	0	0	0	0	0	0	0	0	0
Total Volume	0	18	0	18	0	0	0	0	0	0	0	0	0
% App. Total	.000	.750	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.750
PASSENGER VEHICLES	0	18	0	18	0	0	0	0	0	0	0	0	18
% PASSENGER VEHICLES	0	100	0	100	0	0	0	0	0	0	0	0	100
HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0

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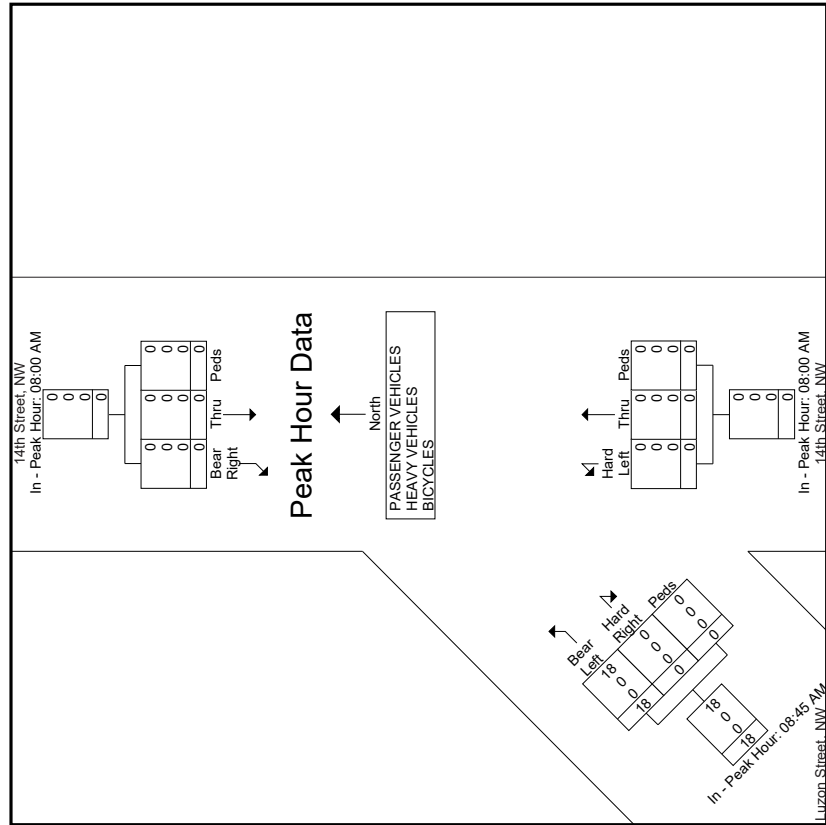
NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	Luzon Street, NW From Southwest			14th Street, NW From South			14th Street, NW From North			Int. Total	
	Hard Right	Bear Left	App. Total	Thru	Hard Left	Peds	App. Total	Bear Right	Thru		Peds
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1											
Peak Hour for Each Approach Begins at:											
	08:45 AM			08:00 AM			08:00 AM				
+0 mins.	0	4	0	4	0	0	0	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	0	0
+45 mins.	0	6	0	6	0	0	0	0	0	0	0
Total Volume	0	18	0	18	0	0	0	0	0	0	0
% App. Total	.000	.750	.000	.750	.000	.000	.000	.000	.000	.000	.000
PASSENGER VEHICLES	0	18	0	18	0	0	0	0	0	0	0
% PASSENGER VEHICLES	0	100	0	100	0	0	0	0	0	0	0
HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0

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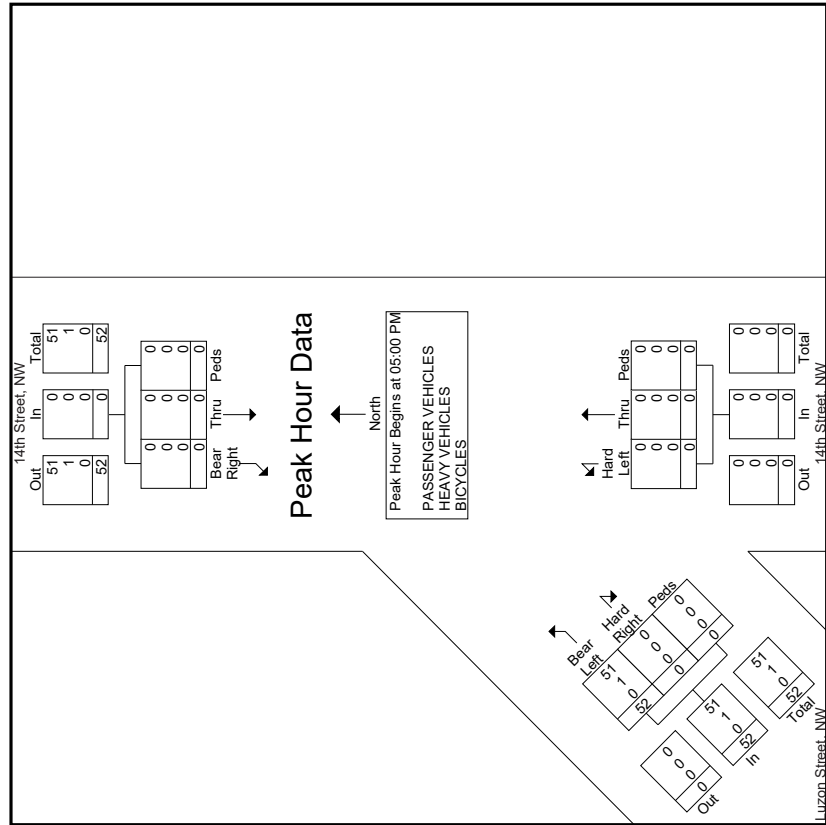
NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	Luzon Street, NW From Southwest				14th Street, NW From South				14th Street, NW From North				Int. Total
	Hard Right	Bear Left	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Bear Right	Thru	Peds	App. Total	
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	15	0	15	0	0	0	0	0	0	0	0	0
05:15 PM	0	14	0	14	0	0	0	0	0	0	0	0	0
05:30 PM	0	13	0	13	0	0	0	0	0	0	0	0	0
05:45 PM	0	10	0	10	0	0	0	0	0	0	0	0	0
Total Volume	0	52	0	52	0	0	0	0	0	0	0	0	0
% App. Total	.000	.867	.000	.867	.000	.000	.000	.000	.000	.000	.000	.000	.867
PASSENGER VEHICLES	0	51	0	51	0	0	0	0	0	0	0	0	51
% PASSENGER VEHICLES	0	98.1	0	98.1	0	0	0	0	0	0	0	0	98.1
HEAVY VEHICLES	0	1	0	1	0	0	0	0	0	0	0	0	1
% HEAVY VEHICLES	0	1.9	0	1.9	0	0	0	0	0	0	0	0	1.9
BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0

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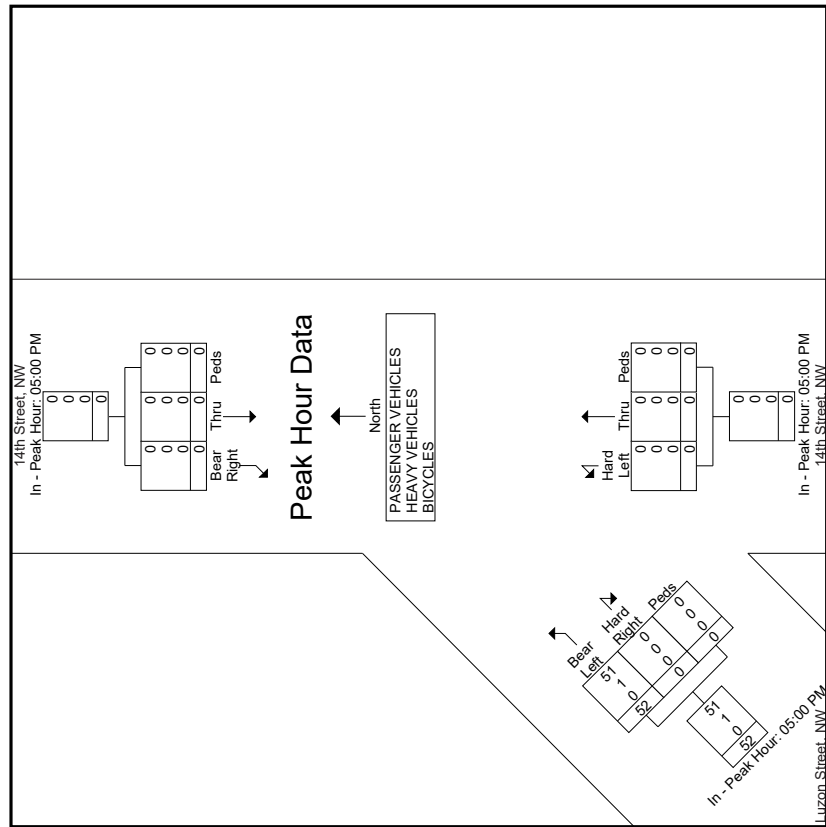
NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	Luzon Street, NW From Southwest			14th Street, NW From South			14th Street, NW From North			Int. Total
	Hard Right	Bear Left	App. Total	Hard Left	Peds	App. Total	Bear Right	Thru	Peds	
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	05:00 PM			05:00 PM			05:00 PM			
+0 mins.	0	15	0	0	0	0	0	0	0	0
+15 mins.	0	14	0	0	0	0	0	0	0	0
+30 mins.	0	13	0	0	0	0	0	0	0	0
+45 mins.	0	10	0	0	0	0	0	0	0	0
Total Volume	0	52	0	0	0	0	0	0	0	0
% App. Total	.000	.867	.000	.000	.000	.000	.000	.000	.000	.000
PASSENGER VEHICLES	0	51	0	0	0	0	0	0	0	0
% PASSENGER VEHICLES	0	98.1	0	0	0	0	0	0	0	0
HEAVY VEHICLES	0	1	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	1.9	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0

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NORTH-EASTBOUND LUZON STREET, NW AT 14TH STREET, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

South-westbound Luzon Street, NW at 14th Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

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August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of South-westbound Luzon Street, NW at 14th Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.



Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	LUZON STREET NW										VAN BUREN STREET NW										14TH STREET NW									
	From Northeast					From East					From West					From West					From West									
	Bear Right	Hard Left	Hard Right	Thru	Peds	App. Total	Hard Right	Thru	Peds	App. Total	Hard Right	Thru	Peds	App. Total	Bear Left	From Left	Peds	App. Total	Bear Left	From Left	Peds	App. Total	Bear Left	From Left	Peds	App. Total	Int. Total			
07:00 AM	12	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12			
07:15 AM	17	1	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18			
07:30 AM	37	2	0	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39			
07:45 AM	41	3	0	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44			
Total	107	6	0	0	0	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113			
08:00 AM	38	3	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41			
08:15 AM	37	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37			
08:30 AM	37	1	0	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38			
08:45 AM	22	1	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23			
Total	134	5	0	0	0	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139			
09:00 AM	18	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18			
09:15 AM	15	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15			
09:30 AM	5	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6			
09:45 AM	10	3	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13			
Total	48	4	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52			
10:00 AM	8	5	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13			
10:15 AM	16	1	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17			
10:30 AM	10	3	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13			
10:45 AM	6	3	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9			
Total	40	12	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52			
11:00 AM	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9			
11:15 AM	10	2	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12			
11:30 AM	7	1	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8			
11:45 AM	9	1	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10			
Total	35	4	0	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39			
12:00 PM	9	1	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10			
12:15 PM	12	1	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13			

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SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	LUZON STREET NW				VAN BUREN STREET NW				14TH STREET NW			
	From Northeast		From East		From East		From West		From West		From West	
	Bear Right	Hard Left	Hard Right	Thru	Thru	Peds	App. Total	Thru	Bear Left	Peds	App. Total	Int. Total
12:30 PM	4	3	0	0	0	0	7	0	0	0	0	7
12:45 PM	14	0	0	0	0	0	14	0	0	0	0	14
Total	39	5	0	0	0	0	44	0	0	0	0	44
01:00 PM	5	1	0	0	0	0	6	0	0	0	0	6
01:15 PM	9	1	0	0	0	0	10	0	0	0	0	10
01:30 PM	4	1	0	0	0	0	5	0	0	0	0	5
01:45 PM	3	1	0	0	0	0	4	0	0	0	0	4
Total	21	4	0	0	0	0	25	0	0	0	0	25
02:00 PM	11	1	0	0	0	0	12	0	0	0	0	12
02:15 PM	14	2	0	0	0	0	16	0	0	0	0	16
02:30 PM	6	2	0	0	0	0	8	0	0	0	0	8
02:45 PM	10	2	0	0	0	0	12	0	0	0	0	12
Total	41	7	0	0	0	0	48	0	0	0	0	48
03:00 PM	9	1	0	0	0	0	10	0	0	0	0	10
03:15 PM	13	1	0	0	0	0	14	0	0	0	0	14
03:30 PM	15	5	0	0	0	0	20	0	0	0	0	20
03:45 PM	9	1	0	0	0	0	10	0	0	0	0	10
Total	46	8	0	0	0	0	54	0	0	0	0	54
04:00 PM	7	2	0	0	0	0	9	0	0	0	0	9
04:15 PM	11	0	0	0	0	0	11	0	0	0	0	11
04:30 PM	12	5	0	0	0	0	17	0	0	0	0	17
04:45 PM	11	4	0	0	0	0	15	0	0	0	0	15
Total	41	11	0	0	0	0	52	0	0	0	0	52
05:00 PM	13	1	0	0	0	0	14	0	0	0	0	14
05:15 PM	15	1	0	0	0	0	16	0	0	0	0	16
05:30 PM	9	2	0	0	0	0	11	0	0	0	0	11
05:45 PM	8	2	0	0	0	0	10	0	0	0	0	10
Total	45	6	0	0	0	0	51	0	0	0	0	51

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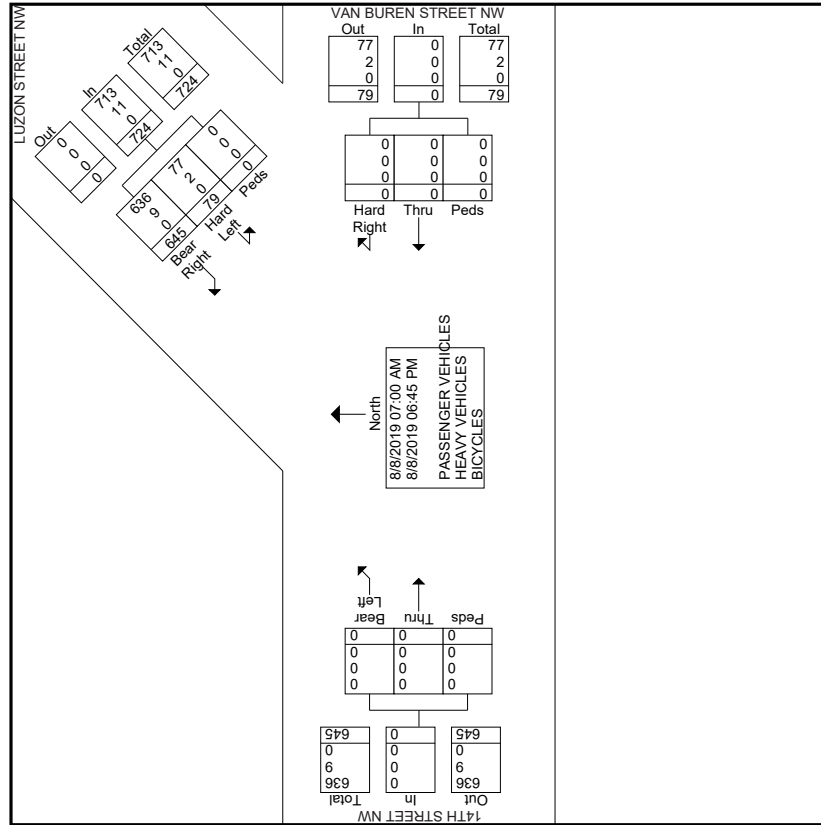
SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES																				
	LUZON STREET NW					VAN BUREN STREET NW					14TH STREET NW										
	Bear Right	Hard Left	Hard Right	App. Total	Peds	Thru	From East	Thru	Bear Left	From West	App. Total	Thru	Bear Left	From West	App. Total	Thru	Bear Left	From West	App. Total	Int. Total	
06:00 PM	13	3	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
06:15 PM	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
06:30 PM	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
06:45 PM	10	2	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	48	7	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
Grand Total	645	79	0	724	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	724
Approch %	89.1	10.9	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	89.1	10.9	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PASSENGER VEHICLES	636	77	0	713	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	713
% PASSENGER VEHICLES	98.6	97.5	0	98.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98.5
HEAVY VEHICLES	9	2	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
% HEAVY VEHICLES	1.4	2.5	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5
BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW



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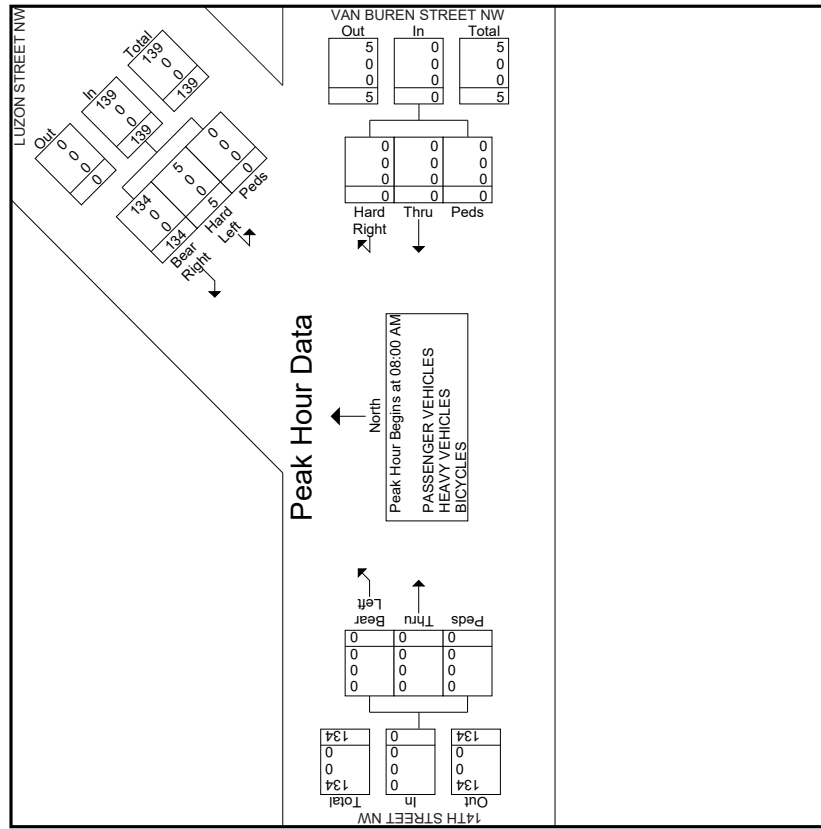
SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	LUZON STREET NW			VAN BUREN STREET NW			14TH STREET NW			Int. Total
	Bear Right	Hard Left	Peds	Hard Right	Thru	Peds	Bear Left	From West	Peds	
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	38	3	0	0	0	0	0	0	0	41
08:15 AM	37	0	0	0	0	0	0	0	0	37
08:30 AM	37	1	0	0	0	0	0	0	0	38
08:45 AM	22	1	0	0	0	0	0	0	0	23
Total Volume	134	5	0	0	0	0	0	0	0	139
% App. Total	.882	.417	.000	.000	.000	.000	.000	.000	.000	.848
PASSENGER VEHICLES	134	5	0	0	0	0	0	0	0	139
% PASSENGER VEHICLES	100	100	0	0	0	0	0	0	0	100
HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0

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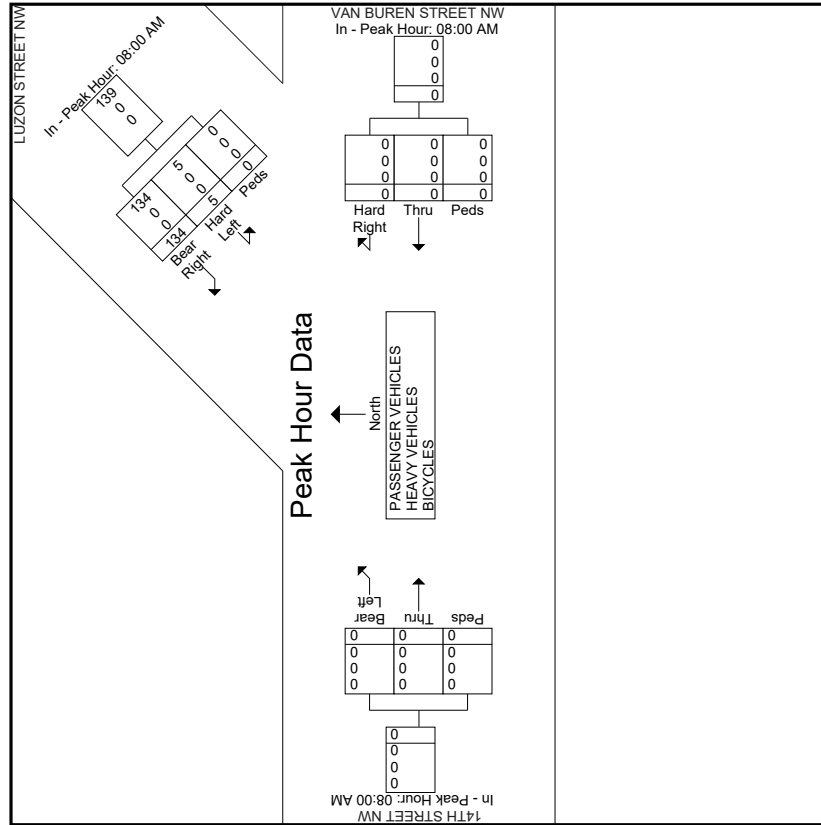
SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	LUZON STREET NW From Northeast			VAN BUREN STREET NW From East			14TH STREET NW From West			Int. Total	
	Bear Right	Hard Left	Hard Right	App. Total	Thru	Peds	App. Total	Thru	Bear Left		Peds
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1											
Peak Hour for Each Approach Begins at:											
	08:00 AM			08:00 AM			08:00 AM				
+0 mins.	38	3	0	41	0	0	0	0	0	0	0
+15 mins.	37	0	0	37	0	0	0	0	0	0	0
+30 mins.	37	1	0	38	0	0	0	0	0	0	0
+45 mins.	22	1	0	23	0	0	0	0	0	0	0
Total Volume	134	5	0	139	0	0	0	0	0	0	0
% App. Total	96.4	3.6	0	.848	.000	.000	.000	.000	.000	.000	.000
PHF	.882	.417	.000	.848	.000	.000	.000	.000	.000	.000	.000
PASSENGER VEHICLES	134	5	0	139	0	0	0	0	0	0	0
% PASSENGER VEHICLES	100	100	0	100	0	0	0	0	0	0	0
HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0

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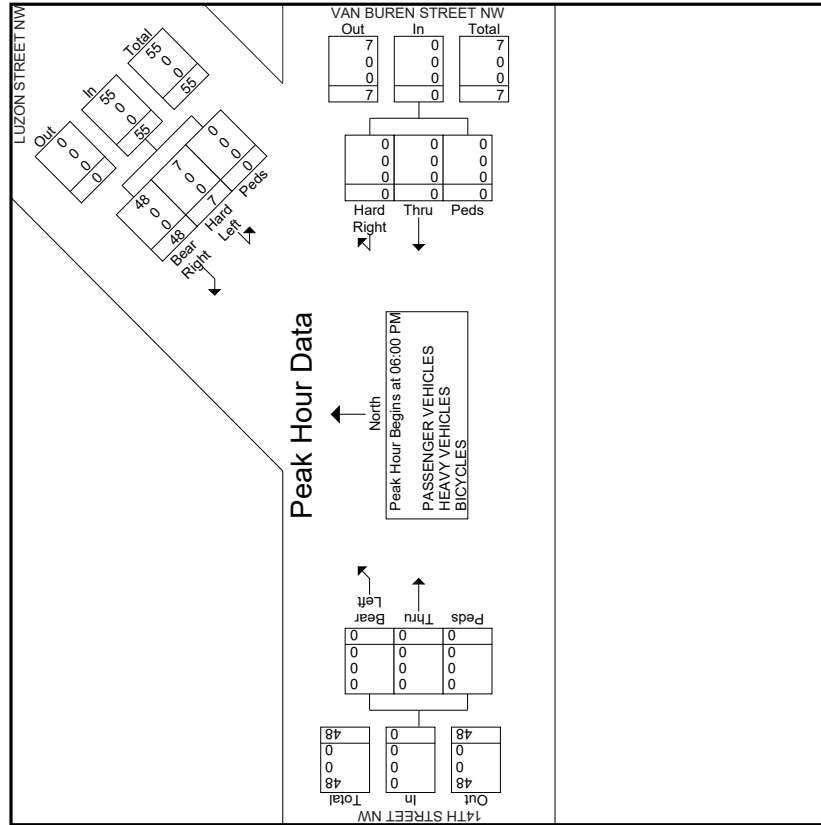
SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	LUZON STREET NW			VAN BUREN STREET NW			14TH STREET NW			Int. Total
	Bear Right	Hard Left	Peds	Hard Right	Thru	Peds	Bear Left	From West	Peds	
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:00 PM										
06:00 PM	13	3	0	0	0	0	0	0	0	16
06:15 PM	14	0	0	0	0	0	0	0	0	14
06:30 PM	11	2	0	0	0	0	0	0	0	13
06:45 PM	10	2	0	0	0	0	0	0	0	12
Total Volume	48	7	0	0	0	0	0	0	0	55
% App. Total	87.3	12.7	0	0	0	0	0	0	0	100
PHF	.857	.583	.000	.000	.000	.000	.000	.000	.000	.859
PASSENGER VEHICLES	48	7	0	0	0	0	0	0	0	55
% PASSENGER VEHICLES	100	100	0	0	0	0	0	0	0	100
HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0

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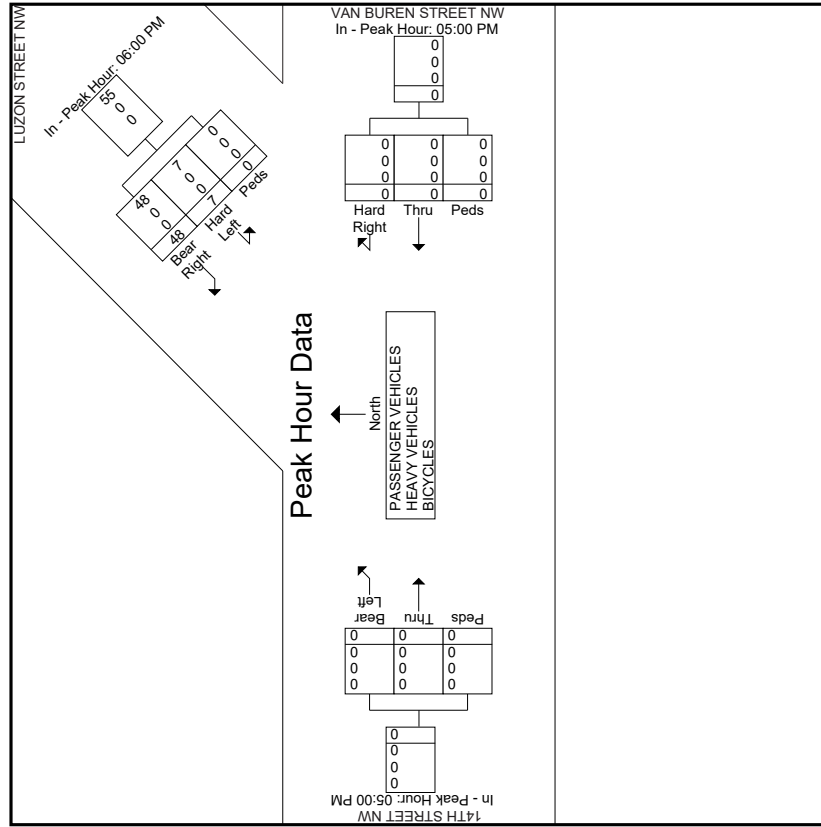
SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW

Start Time	LUZON STREET NW From Northeast			VAN BUREN STREET NW From East			14TH STREET NW From West			Int. Total
	Bear Right	Hard Left	Peds	Hard Right	Thru	Peds	Thru	Bear Left	Peds	
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	06:00 PM									
+0 mins.	13	3	0	0	0	0	0	0	0	0
+15 mins.	14	0	0	16	0	0	0	0	0	0
+30 mins.	11	2	0	14	0	0	0	0	0	0
+45 mins.	10	2	0	13	0	0	0	0	0	0
Total Volume	48	7	0	55	0	0	0	0	0	0
% App. Total	87.3	12.7	0	.859	.000	.000	.000	.000	.000	.000
PASSENGER VEHICLES	48	7	0	55	0	0	0	0	0	0
% PASSENGER VEHICLES	100	100	0	100	0	0	0	0	0	0
HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	0	0
BICYCLES	0	0	0	0	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0	0	0	0	0

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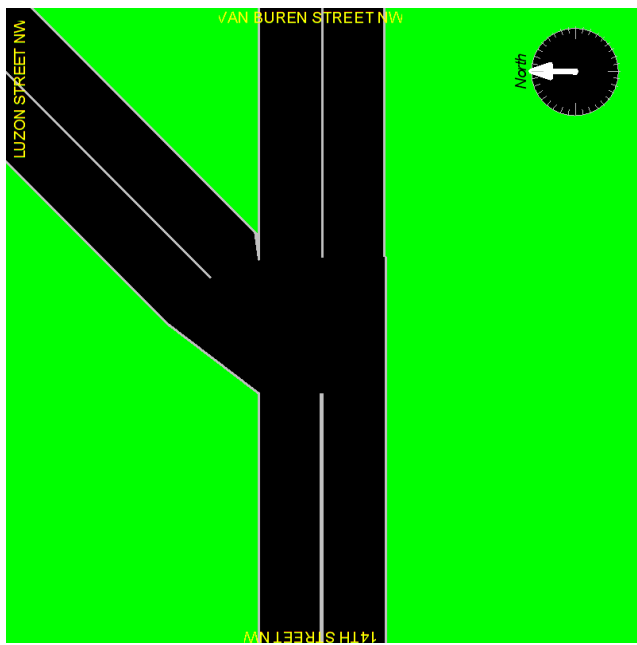
SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW



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SOUTH-WESTBOUND LUZON STREET, NW AT 14TH STREET, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

14th Street and Underwood Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

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August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of 14th Street and Underwood Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

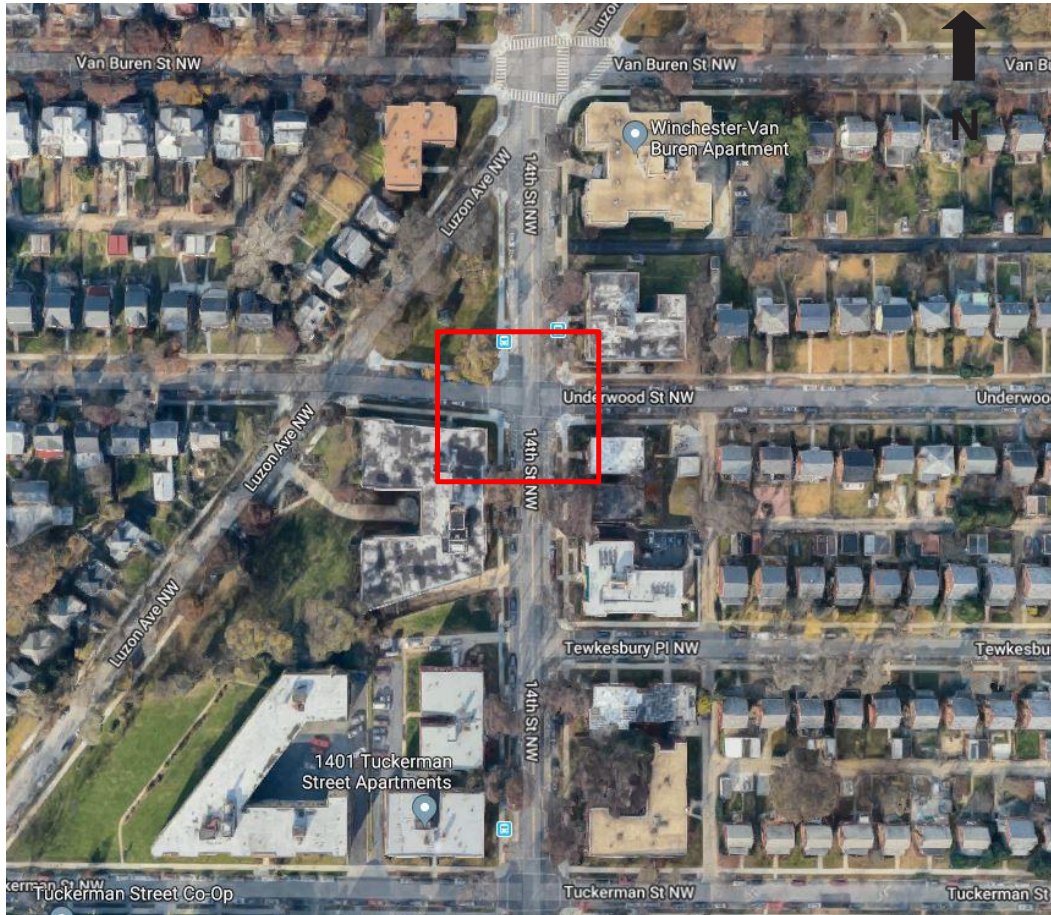


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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14TH STREET AND UNDERWOOD STREET, NW

Start Time	14th Street, NW												14th Street, NW												Underwood Street, NW											
	From North						From East						From South						From West																	
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total												
07:00 AM	0	27	0	3	30	0	0	0	0	3	0	20	1	2	0	3	24	1	1	2	0	0	3	60												
07:15 AM	0	46	1	0	47	0	1	0	2	3	2	20	0	0	0	0	22	4	0	2	0	1	7	79												
07:30 AM	0	47	0	1	48	3	1	2	0	6	2	22	3	0	0	0	27	2	1	0	1	0	4	85												
07:45 AM	0	51	1	4	56	0	2	2	2	6	1	23	1	0	0	0	25	2	1	0	1	0	4	91												
Total	0	171	2	8	181	3	4	4	4	7	18	85	5	3	3	98	9	4	2	3	3	18	315													
08:00 AM	1	56	0	1	58	1	4	2	2	9	1	15	2	0	0	18	2	1	1	0	1	4	89													
08:15 AM	0	62	1	9	72	6	1	3	3	13	1	23	1	0	0	25	2	1	1	1	0	4	114													
08:30 AM	1	60	1	2	64	2	0	2	1	5	4	21	2	0	0	27	2	0	1	3	6	6	102													
08:45 AM	0	42	0	0	42	1	0	2	0	3	0	24	0	2	0	26	3	0	1	0	1	0	4	75												
Total	2	220	2	12	236	10	5	9	6	30	6	83	5	2	2	96	9	2	3	4	4	18	380													
09:00 AM	0	40	2	1	43	0	2	1	0	3	1	23	3	0	0	27	2	1	0	2	0	2	5	78												
09:15 AM	0	25	0	3	28	0	1	1	1	2	1	17	2	2	2	22	5	2	0	0	0	0	7	59												
09:30 AM	0	24	0	3	27	1	2	1	6	10	1	19	1	0	0	21	1	0	0	0	0	1	1	59												
09:45 AM	0	28	2	4	34	3	3	0	3	9	2	24	2	0	0	28	0	2	0	1	0	3	74													
Total	0	117	4	11	132	4	7	3	10	24	5	83	8	2	2	98	8	5	0	3	3	16	270													
10:00 AM	0	22	0	2	24	3	1	2	1	7	5	36	1	2	2	44	2	3	0	0	0	5	80													
10:15 AM	0	16	1	1	18	7	3	2	0	12	1	21	1	1	1	24	2	3	1	1	1	7	61													
10:30 AM	0	21	1	0	22	2	1	2	4	9	0	25	0	3	0	28	2	0	0	0	1	3	62													
10:45 AM	0	13	1	0	14	1	0	0	3	4	2	22	0	0	0	24	3	1	0	0	0	4	46													
Total	0	72	3	3	78	13	5	6	8	32	8	104	2	6	6	120	9	7	1	2	19	249														
11:00 AM	0	16	0	0	16	1	2	2	1	6	3	27	2	0	0	32	0	1	0	4	0	5	59													
11:15 AM	0	20	1	1	22	1	2	0	4	7	1	32	0	0	0	33	0	1	0	1	0	2	64													
11:30 AM	0	29	1	1	31	3	0	5	2	10	2	23	2	1	28	0	3	0	0	0	0	3	72													
11:45 AM	0	15	4	1	20	3	2	4	3	12	2	31	0	2	35	2	1	0	1	0	1	4	71													
Total	0	80	6	3	89	8	6	11	10	35	8	113	4	3	128	2	6	0	6	0	6	14	266													
12:00 PM	0	21	1	0	22	1	1	2	0	4	2	40	1	1	1	44	2	0	0	1	3	3	73													
12:15 PM	0	25	0	1	26	2	2	1	2	7	2	27	2	1	0	31	3	0	0	1	4	4	68													
12:30 PM	0	13	0	1	14	0	0	1	2	3	2	25	1	1	1	29	5	2	1	4	12	58														

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14TH STREET AND UNDERWOOD STREET, NW

Start Time	Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles																									
	14th Street, NW From North							Underwood Street, NW																		
	Thru	Left	Peds	App. Total	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right	App. Total	Peds	Int. Total						
12:45 PM	0	18	1	2	4	83	1	1	0	0	4	4	4	2	8	128	7	3	146	3	1	3	2	9	74	
Total	0	77	2	4	4	83	4	4	4	4	16	16	16	8	8	128	7	3	146	13	3	4	8	28	273	
01:00 PM	0	19	3	0	0	22	5	1	2	3	11	3	35	0	1	35	0	1	39	4	4	1	0	0	9	81
01:15 PM	0	24	1	1	0	26	3	1	1	0	5	3	35	1	2	41	1	2	41	1	4	0	0	0	5	77
01:30 PM	0	19	2	2	23	3	3	2	2	1	8	1	26	2	3	32	1	2	32	1	2	0	2	0	5	68
01:45 PM	1	14	1	1	0	16	1	1	2	0	4	4	28	2	1	35	2	0	35	2	0	2	0	0	4	59
Total	1	76	7	3	87	87	12	5	7	4	28	11	124	5	7	147	8	10	147	8	10	3	2	23	285	
02:00 PM	1	19	1	2	23	23	1	1	3	12	17	2	31	1	4	38	1	3	38	1	3	0	1	0	5	83
02:15 PM	0	19	1	4	24	24	1	1	1	1	4	4	34	0	1	39	1	1	39	1	1	1	1	1	4	71
02:30 PM	0	18	0	0	18	18	3	1	2	0	6	3	39	0	0	42	3	0	42	3	0	1	0	0	4	70
02:45 PM	1	26	1	1	29	29	2	3	1	2	8	1	32	3	0	36	4	2	36	4	2	1	0	0	7	80
Total	2	82	3	7	94	94	7	6	7	15	35	10	136	4	5	155	10	136	155	9	6	3	2	20	304	
03:00 PM	0	21	0	1	22	22	2	1	1	0	4	5	63	1	1	70	1	2	70	1	2	1	0	0	4	100
03:15 PM	0	24	1	0	25	25	3	0	0	1	4	2	49	4	0	55	7	4	55	7	4	4	1	16	100	
03:30 PM	0	24	2	1	27	27	0	0	1	1	2	6	71	1	1	79	1	2	79	1	2	0	0	3	111	
03:45 PM	1	21	1	3	26	26	1	0	2	3	6	4	88	2	2	96	1	2	96	1	2	0	1	4	132	
Total	1	90	4	5	100	100	6	1	4	5	16	17	271	8	4	300	10	10	300	10	10	5	2	27	443	
04:00 PM	1	17	0	1	19	19	3	2	2	1	8	5	87	1	1	94	2	3	94	2	3	0	0	0	5	126
04:15 PM	1	21	2	0	24	24	2	0	1	8	11	1	116	0	4	121	2	2	121	2	2	0	0	4	160	
04:30 PM	0	30	5	1	36	36	1	2	2	0	5	6	113	3	0	122	0	4	122	0	4	0	2	6	169	
04:45 PM	0	31	3	0	34	34	1	3	2	2	8	1	142	2	0	145	3	2	145	3	2	1	0	6	193	
Total	2	99	10	2	113	113	7	7	7	11	32	13	458	6	5	482	7	11	482	7	11	1	2	21	648	
05:00 PM	0	23	1	2	26	26	3	0	1	5	9	9	160	2	0	171	2	0	171	2	0	1	1	4	210	
05:15 PM	0	39	1	1	41	41	2	3	5	10	20	8	141	3	0	152	2	1	152	2	1	0	1	4	217	
05:30 PM	0	31	1	0	32	32	3	0	2	8	13	1	157	3	1	162	1	0	162	1	0	0	3	5	212	
05:45 PM	0	21	1	5	27	27	4	1	0	9	14	2	142	4	0	148	2	2	148	2	2	0	6	10	199	
Total	0	114	4	8	126	126	12	4	8	32	56	20	600	12	1	633	7	4	633	7	4	1	11	23	838	
06:00 PM	0	20	0	0	20	20	6	2	1	11	20	5	126	3	4	138	3	3	138	3	3	1	2	9	187	

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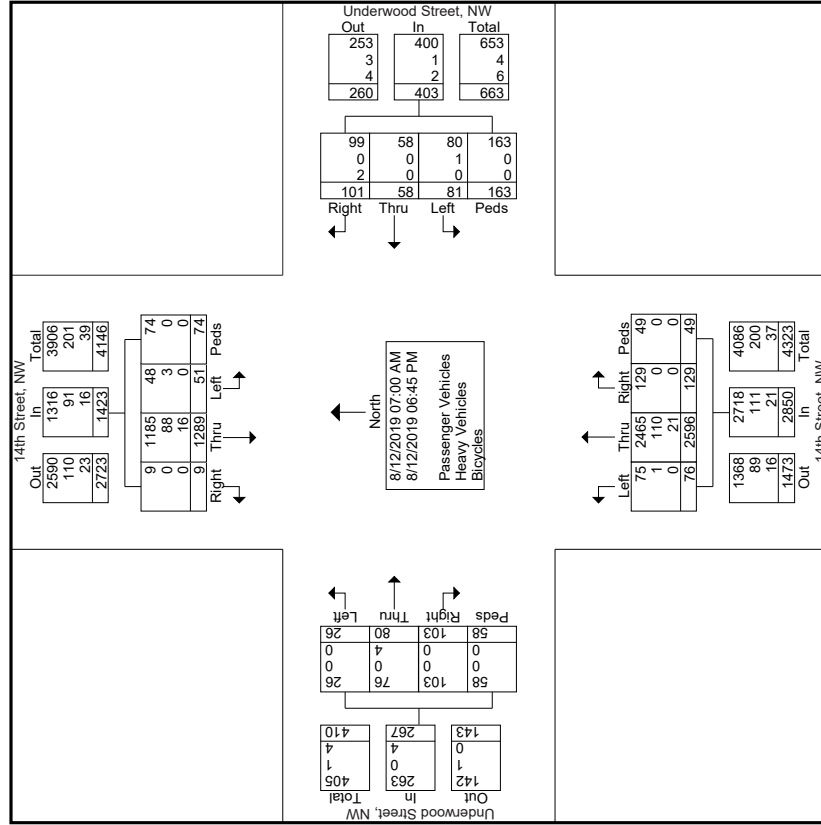
14TH STREET AND UNDERWOOD STREET, NW

Start Time	14th Street, NW												Underwood Street, NW												14th Street, NW												Underwood Street, NW											
	From North						From East						From South						From West						From South						From West																	
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total																		
06:15 PM	0	20	1	6	27	4	1	3	12	20	6	122	3	1	132	4	3	2	4	13	192																											
06:30 PM	0	29	1	2	32	3	1	3	18	25	2	93	1	2	98	4	4	0	3	11	166																											
06:45 PM	1	22	2	0	25	2	0	4	10	16	5	70	3	1	79	1	2	0	4	7	127																											
Total	1	91	4	8	104	15	4	11	51	81	18	411	10	8	447	12	12	3	13	40	672																											
Grand Total	9	1289	51	74	1423	101	58	81	163	403	129	2596	76	49	2850	103	80	26	58	267	4943																											
Approach %	0.6	90.6	3.6	5.2	25.1	14.4	20.1	40.4	4.5	91.1	4.5	38.6	30	9.7	21.7	38.6	30	9.7	21.7	38.6	30	9.7	21.7	38.6	30	9.7	21.7	38.6	30	9.7	21.7																	
Total %	0.2	26.1	1	1.5	28.8	2	1.2	1.6	3.3	8.2	2.6	52.5	1.5	1	57.7	2.1	1.6	0.5	1.2	5.4																												
Passenger Vehicles	100	91.9	94.1	100	92.5	98	100	98.8	100	99.3	100	95	98.7	100	95.4	100	95	100	100	98.5	95																											
% Passenger Vehicles	0	88	3	0	91	0	0	1	0	1	0	110	1	0	111	0	0	0	0	203																												
Heavy Vehicles	0	6.8	5.9	0	6.4	0	0	1.2	0	0.2	0	4.2	1.3	0	3.9	0	0	0	0	4.1																												
% Heavy Vehicles	0	16	0	0	16	2	0	0	0	2	0	21	0	0	21	0	4	0	0	4																												
Bicycles	0	1.2	0	0	1.1	2	0	0	0	0.5	0	0.8	0	0	0.7	0	5	0	0	1.5																												
% Bicycles	0	1.2	0	0	1.1	2	0	0	0	0.5	0	0.8	0	0	0.7	0	5	0	0	1.5																												

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14TH STREET AND UNDERWOOD STREET, NW



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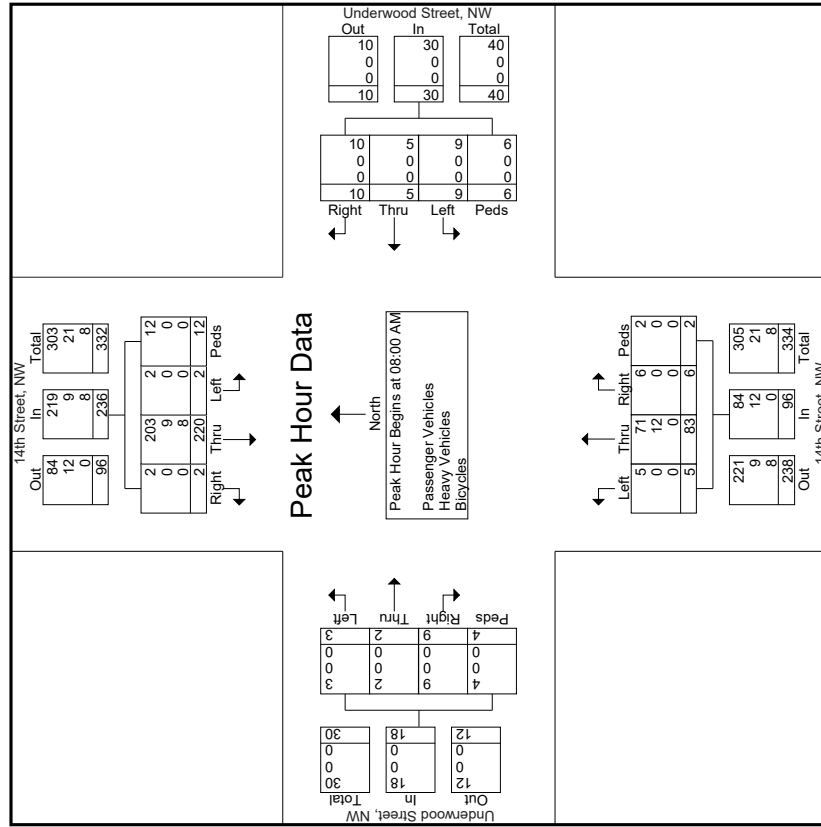
14TH STREET AND UNDERWOOD STREET, NW

Start Time	14th Street, NW From North				Underwood Street, NW From East				14th Street, NW From South				Underwood Street, NW From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
	App. Total				App. Total				App. Total				App. Total				
08:00 AM	0	62	1	9	72	13	1	23	1	0	25	2	1	1	0	4	114
08:15 AM	1	60	1	2	64	5	4	21	2	0	27	2	0	1	3	6	102
08:30 AM	1	42	0	0	42	3	0	24	0	2	26	3	0	1	0	4	75
08:45 AM	2	220	2	12	236	30	6	83	5	2	96	9	2	3	4	18	380
Total Volume	0.8	93.2	0.8	5.1	100.0	68.0	6.2	86.5	5.2	2.1	96.8	50	11.1	16.7	22.2	48	833
% App. Total	.500	.887	.500	.333	.819	.577	.375	.865	.625	.250	.889	.750	.500	.750	.333	.750	.833
PHF	2	203	2	12	219	30	6	71	5	2	84	9	2	3	4	18	351
Passenger Vehicles	100	92.3	100	100	92.8	100	100	85.5	100	100	87.5	100	100	100	100	100	92.4
% Passenger Vehicles	0	9	0	0	9	0	0	12	0	0	12	0	0	0	0	0	21
Heavy Vehicles	0	4.1	0	0	3.8	0	0	14.5	0	0	12.5	0	0	0	0	0	5.5
% Heavy Vehicles	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8
Bicycles	0	3.6	0	0	3.4	0	0	0	0	0	0	0	0	0	0	0	2.1
% Bicycles	0	3.6	0	0	3.4	0	0	0	0	0	0	0	0	0	0	0	2.1

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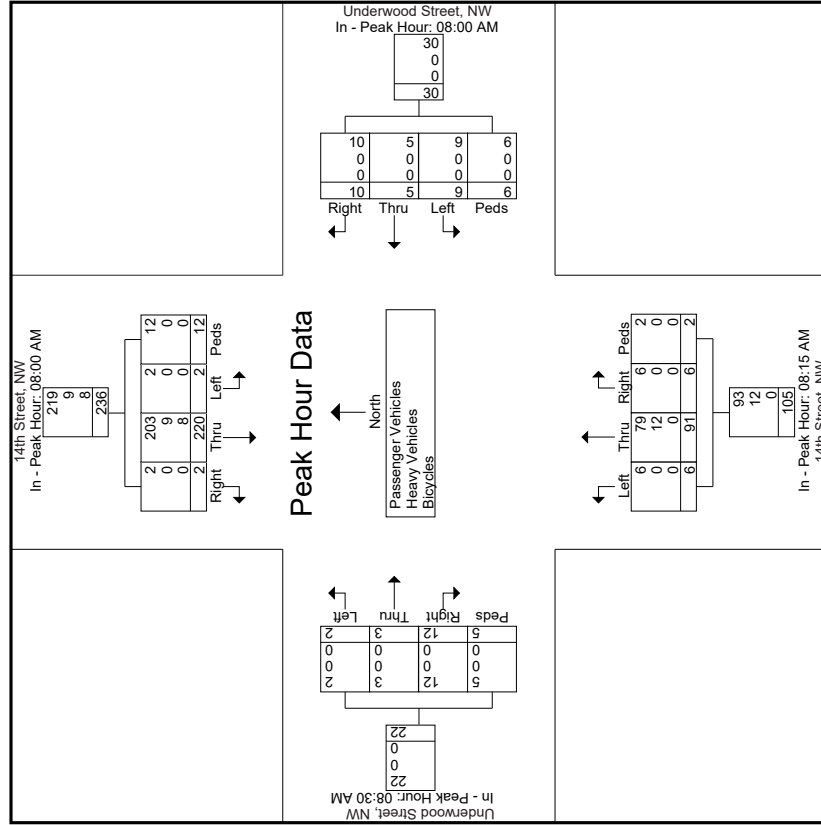
14TH STREET AND UNDERWOOD STREET, NW

Start Time	14th Street, NW From North						Underwood Street, NW From East						14th Street, NW From South						Underwood Street, NW From West											
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total						
	Peak Hour for Each Approach Begins at:																													
+0 mins.	1	56	0	1	58		10	5	9	6	30		6	91	6	2	105		12	3	2	5	22		2	0	1	3	6	
+15 mins.	0	62	1	9	72		6	1	3	3	13		4	21	2	0	27		27	3	0	1	0	4	2	0	1	0	4	
+30 mins.	1	60	1	2	64		2	0	2	1	5		0	24	0	2	26		2	26	2	1	0	5	2	1	0	2	5	
+45 mins.	0	42	0	0	42		1	0	2	0	3		1	23	3	0	27		5	2	0	0	7		2	0	0	0	2	
Total Volume	2	220	2	12	236		10	5	9	6	30		6	91	6	2	105		12	3	2	5	22		2	0	1	3	6	
% App. Total	0.8	93.2	0.8	5.1	33.3		33.3	16.7	30	20	57.7		3.75	39.48	5.00	2.50	97.2		54.5	13.6	9.1	22.7	78.6		6.00	3.75	5.00	4.17	78.6	
PHF	.500	.887	.500	.333	.819		.417	.313	.750	.500	.577		.6	.79	.6	.2	.93		.12	.3	.2	.5	.786		.600	.375	.500	.417	.786	
Passenger Vehicles	2	203	2	12	219		10	5	9	6	30		6	79	6	2	93		12	3	2	5	22		2	0	1	3	6	
% Passenger Vehicles	100	92.3	100	100	92.8		100	100	100	100	100		100	86.8	100	100	88.6		100	100	100	100	100		100	100	100	100	100	
Heavy Vehicles	0	9	0	0	9		0	0	0	0	0		0	12	0	0	12		0	0	0	0	0		0	0	0	0	0	
% Heavy Vehicles	0	4.1	0	0	3.8		0	0	0	0	0		0	13.2	0	0	11.4		0	0	0	0	0		0	0	0	0	0	
Bicycles	0	8	0	0	8		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	
% Bicycles	0	3.6	0	0	3.4		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	

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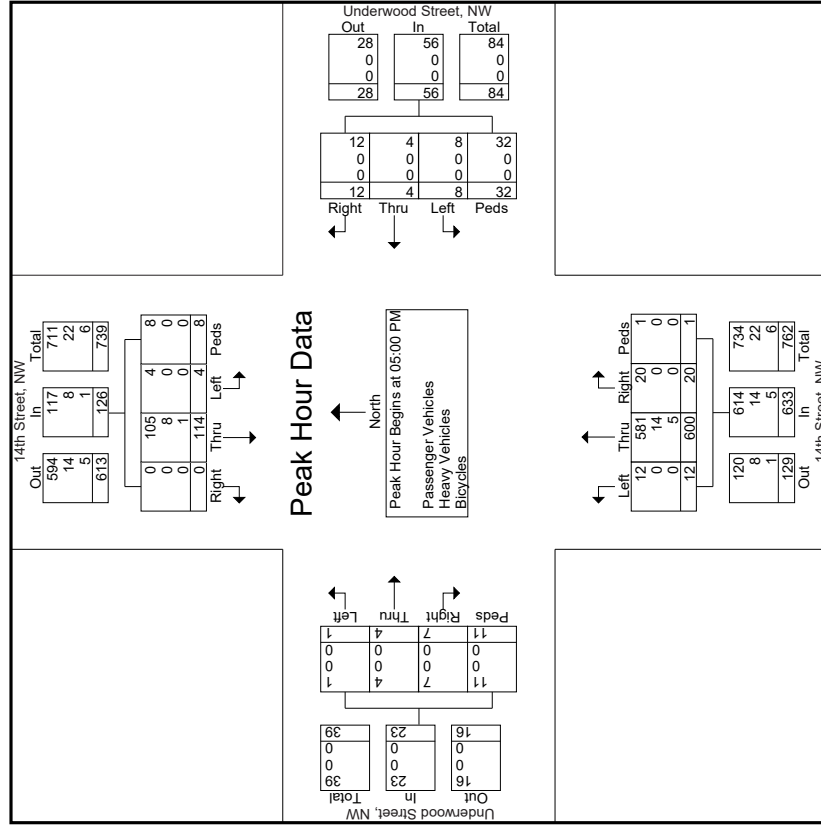
14TH STREET AND UNDERWOOD STREET, NW

Start Time	14th Street, NW From North				Underwood Street, NW From East				14th Street, NW From South				Underwood Street, NW From West				Int. Total							
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds								
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1	Peak Hour for Entire Intersection Begins at 05:00 PM																							
05:00 PM	0	23	1	1	41	2	3	5	10	20	9	160	8	141	3	0	171	2	1	0	1	4	217	
05:15 PM	0	39	1	1	32	3	0	2	8	13	1	157	1	157	3	1	162	1	1	0	3	5	212	
05:30 PM	0	31	1	0	27	4	1	0	9	14	2	142	2	142	4	0	148	2	2	0	6	10	199	
05:45 PM	0	21	1	5	27	12	4	8	32	56	20	600	12	600	12	1	633	7	4	1	11	23	838	
Total Volume	0	114	4	8	126	21.4	7.1	14.3	57.1	100	3.2	94.8	1.9	94.8	1.9	0.2	92.5	30.4	17.4	4.3	47.8	23	838	
% App. Total	.000	.731	1.00	.400	.768	.750	.333	.400	.800	.700	.556	.938	.750	.250	.250	.925	.875	.500	.250	.458	.575	23	965	
PHF	0	105	4	8	117	12	4	8	32	56	20	581	12	581	12	1	614	7	4	1	11	23	810	
Passenger Vehicles	0	92.1	100	100	92.9	100	100	100	100	100	100	96.8	100	100	100	97.0	100	100	100	100	100	100	96.7	810
% Passenger Vehicles	0	8	0	0	8	0	0	0	0	0	0	14	0	14	0	0	14	0	0	0	0	0	22	22
Heavy Vehicles	0	7.0	0	0	6.3	0	0	0	0	0	0	2.3	0	2.3	0	0	2.2	0	0	0	0	0	2.6	2.6
% Heavy Vehicles	0	1	0	0	1	0	0	0	0	0	0	5	0	5	0	0	5	0	0	0	0	0	6	6
Bicycles	0	0.9	0	0	0.8	0	0	0	0	0	0	0.8	0	0.8	0	0	0.8	0	0	0	0	0	0.7	0.7
% Bicycles	0	0.9	0	0	0.8	0	0	0	0	0	0	0.8	0	0.8	0	0	0.8	0	0	0	0	0	0.7	0.7

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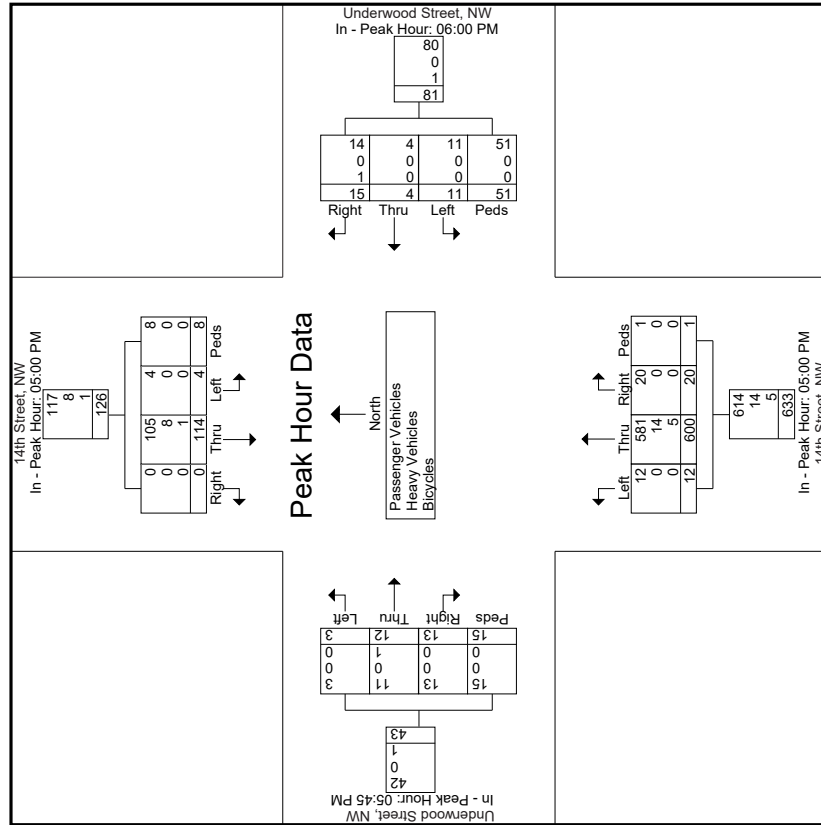
14TH STREET AND UNDERWOOD STREET, NW

Start Time	14th Street, NW From North						Underwood Street, NW From East						14th Street, NW From South						Underwood Street, NW From West								
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total				
	Peak Hour for Each Approach Begins at:																										
+0 mins.	0	23	1	2	26		06:00 PM	6	2	1	11	20		05:00 PM	9	160	2	0	171		05:45 PM	2	2	0	0	6	10
+15 mins.	0	39	1	1	41		4	1	3	12	20		20	8	141	3	0	152		3	3	1	2	2	9		
+30 mins.	0	31	1	0	32		3	1	3	18	25		25	1	157	3	1	162		4	3	2	4	4	13		
+45 mins.	0	21	1	5	27		2	0	4	10	16		16	2	142	4	0	148		4	4	0	3	3	11		
Total Volume	0	114	4	8	126		15	4	11	51	81		81	20	600	12	1	633		13	12	3	15	15	43		
% App. Total	0	90.5	3.2	6.3	768		18.5	4.9	13.6	63	810		810	556	938	750	250	925		30.2	27.9	7	34.9	625	827		
PHF	0.000	.731	1.000	.400	.768		.625	.500	.688	.708	.810		.810	.556	.938	.750	.250	.925		.813	.750	.375	.625	.825	.827		
Passenger Vehicles	0	105	4	8	117		14	4	11	51	80		80	20	581	12	1	614		13	11	3	15	15	42		
% Passenger Vehicles	0	92.1	100	100	92.9		93.3	100	100	100	98.8		98.8	100	96.8	100	100	97		100	91.7	100	100	100	97.7		
Heavy Vehicles	0	8	0	0	8		0	0	0	0	0		0	0	14	0	0	14		0	0	0	0	0	0		
% Heavy Vehicles	0	7	0	0	6.3		0	0	0	0	0		0	0	2.3	0	0	2.2		0	0	0	0	0	0		
Bicycles	0	1	0	0	1		1	0	0	0	1		1	0	5	0	0	5		0	1	0	0	0	1		
% Bicycles	0	0.9	0	0	0.8		6.7	0	0	0	1.2		1.2	0	0.8	0	0	0.8		0	8.3	0	0	0	2.3		

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14TH STREET AND UNDERWOOD STREET, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

Alaska Avenue and 12th Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

Mount Airy, MD 21771

www.sammateng.com

August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of Alaska Avenue and 12th Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

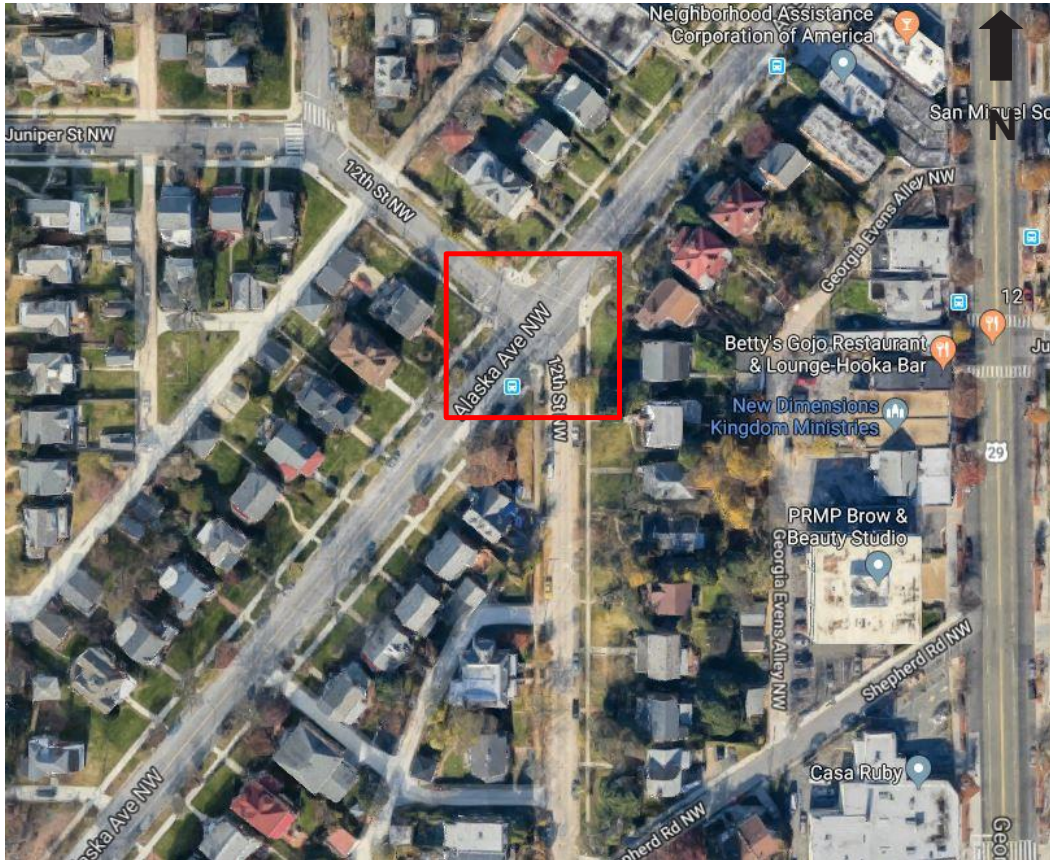


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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ALASKA AVENUE AND 12TH STREET, NW

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

Start Time	12th Street, NW										Alaska Avenue, NW										Alaska Avenue, NW										
	From North					From East					From South					From West					From West					From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	5	1	0	3	9	0	56	0	0	56	3	0	0	1	4	0	9	0	0	9	0	20	0	0	0	0	0	0	0	9	78
07:15 AM	3	0	0	2	5	1	67	0	2	70	1	3	0	0	4	0	20	0	0	20	0	0	0	0	0	0	0	0	0	20	99
07:30 AM	6	1	0	3	10	7	72	0	2	74	1	5	2	2	10	0	21	2	2	23	0	0	0	0	0	0	0	0	23	117	
07:45 AM	0	0	0	4	4	1	49	1	1	52	1	3	0	0	4	0	18	0	1	19	0	0	0	0	0	0	0	0	19	79	
Total	14	2	0	12	28	2	244	1	5	252	6	11	2	3	22	0	68	2	1	71	0	0	0	0	0	0	0	0	71	373	
08:00 AM	7	2	1	1	11	1	63	1	3	68	1	4	0	0	5	0	26	1	1	28	0	20	1	1	1	1	1	1	28	112	
08:15 AM	5	6	0	2	13	1	55	0	0	56	4	2	0	0	6	0	20	1	1	22	0	20	1	1	1	1	1	1	22	97	
08:30 AM	6	0	2	1	9	0	58	0	0	58	3	8	0	0	11	0	23	0	0	24	0	23	0	0	1	1	1	1	24	102	
08:45 AM	2	5	0	1	8	0	46	2	0	48	1	2	2	1	6	1	19	1	0	21	0	19	1	0	0	0	0	0	21	83	
Total	20	13	3	5	41	2	222	3	3	230	9	16	2	1	28	1	88	3	3	95	0	87	9	4	3	3	3	3	95	394	
09:00 AM	3	1	2	3	9	2	44	0	0	46	0	2	2	1	5	0	21	1	1	23	0	21	1	1	1	1	1	1	23	83	
09:15 AM	1	3	0	3	7	0	40	0	0	40	1	3	0	1	5	0	24	3	2	29	0	24	3	2	2	2	2	2	29	81	
09:30 AM	2	2	0	1	5	0	39	0	0	39	1	3	1	0	5	0	20	2	0	22	0	20	2	0	0	0	0	0	22	71	
09:45 AM	2	4	1	4	11	1	21	2	5	29	2	1	1	3	7	1	22	3	1	27	0	22	3	1	1	1	1	1	27	74	
Total	8	10	3	11	32	3	144	2	5	154	4	9	4	5	22	1	87	9	4	101	0	87	9	4	4	4	4	4	101	309	
10:00 AM	1	5	2	4	12	1	32	2	2	37	0	2	0	0	2	0	22	3	2	27	0	22	3	2	2	2	2	2	27	78	
10:15 AM	2	2	0	1	5	3	23	1	0	27	1	5	0	1	7	0	35	2	0	37	0	35	2	0	0	0	0	0	37	76	
10:30 AM	1	2	0	5	8	0	26	2	0	28	1	0	1	1	3	0	23	6	2	31	0	23	6	2	2	2	2	2	31	70	
10:45 AM	3	2	0	0	5	0	29	1	0	30	3	3	0	0	6	1	35	1	1	38	0	35	1	1	1	1	1	1	38	79	
Total	7	11	2	10	30	4	110	6	2	122	5	10	1	2	18	1	115	12	5	133	0	115	12	5	5	5	5	5	133	303	
11:00 AM	3	4	1	1	9	1	23	1	0	25	3	2	0	1	6	1	33	0	1	35	0	33	0	1	1	1	1	1	35	75	
11:15 AM	1	1	1	2	5	1	31	0	0	32	0	1	0	1	2	0	33	3	0	36	0	33	3	0	0	0	0	0	36	75	
11:30 AM	1	4	0	1	6	0	23	0	2	25	0	4	1	3	8	1	31	0	0	32	0	31	0	0	0	0	0	0	32	71	
11:45 AM	2	1	2	4	9	1	33	0	1	35	1	0	0	3	4	1	26	1	2	30	0	26	1	2	2	2	2	2	30	78	
Total	7	10	4	8	29	3	110	1	3	117	4	7	1	8	20	3	123	4	3	133	0	123	4	3	3	3	3	3	133	299	
12:00 PM	1	1	1	1	4	1	31	4	0	36	0	2	2	0	4	0	32	3	0	35	0	32	3	0	0	0	0	0	35	79	
12:15 PM	1	2	0	2	5	1	25	2	3	31	1	2	5	1	0	0	37	4	0	41	0	37	4	0	0	0	0	0	41	85	
12:30 PM	1	2	1	0	4	3	37	0	0	40	1	2	2	0	5	1	22	1	0	23	0	22	1	0	0	0	0	0	23	72	

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ALASKA AVENUE AND 12TH STREET, NW

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

Start Time	12th Street, NW										Alaska Avenue, NW										12th Street, NW										Alaska Avenue, NW									
	From North					From East					From South					From West					From North					From East					From South					From West				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total				
12:45 PM	1	3	0	0	4	0	26	2	0	28	3	2	0	0	5	0	27	1	0	28	0	27	0	0	0	27	0	27	0	0	27	0	27	0	0	27	0	28	65	
Total	4	8	2	3	17	5	119	8	3	135	6	11	5	0	22	6	118	9	0	127	0	118	9	0	0	127	0	118	9	0	127	0	118	9	0	127	0	127	301	
01:00 PM	1	2	2	0	5	0	24	3	0	27	1	3	3	0	7	1	32	1	0	34	1	32	1	0	0	34	1	32	1	0	34	1	32	1	0	34	0	32	73	
01:15 PM	1	2	1	2	6	0	26	1	0	27	3	2	0	2	7	0	26	2	1	29	0	26	2	1	1	29	0	26	2	1	29	0	26	2	1	29	0	29	69	
01:30 PM	1	2	1	1	5	3	18	1	1	23	1	3	2	0	6	0	27	1	1	29	0	27	1	1	1	29	0	27	1	1	29	0	27	63						
01:45 PM	3	1	0	2	6	2	29	0	1	32	2	6	0	1	9	0	27	2	0	29	0	27	2	0	0	29	0	27	2	0	29	0	27	76						
Total	6	7	4	5	22	5	97	5	2	109	7	14	5	3	29	1	112	6	2	121	1	112	6	2	2	121	1	112	6	2	121	1	112	281						
02:00 PM	5	2	2	1	10	0	37	0	0	37	2	0	0	0	2	0	21	2	0	23	0	21	2	0	0	23	0	21	2	0	23	0	21	72						
02:15 PM	2	1	0	1	4	3	28	0	2	33	2	2	0	2	6	1	37	0	0	38	1	37	0	0	0	38	1	37	0	0	38	1	37	81						
02:30 PM	2	3	2	0	7	0	25	0	1	26	2	3	0	0	5	2	36	2	1	41	2	36	2	1	1	41	2	36	2	1	41	2	36	79						
02:45 PM	0	2	2	3	7	0	38	2	0	40	0	0	0	0	2	0	45	4	1	50	0	45	4	1	1	50	0	45	4	1	50	0	45	99						
Total	9	8	6	5	28	3	128	2	3	136	6	7	0	2	15	3	139	8	2	152	3	139	8	2	2	152	3	139	8	2	152	3	139	331						
03:00 PM	0	2	1	0	3	0	24	0	0	24	1	5	1	1	8	1	36	2	3	42	1	36	2	3	0	42	1	36	2	3	42	1	36	77						
03:15 PM	2	3	1	1	7	0	33	0	1	34	1	5	0	1	7	0	38	3	0	41	0	38	3	0	0	41	0	38	3	0	41	0	38	89						
03:30 PM	4	4	1	1	10	1	33	0	0	34	3	3	0	0	6	0	46	3	1	50	0	46	3	1	1	50	0	46	3	1	50	0	46	100						
03:45 PM	1	1	0	0	2	1	22	3	0	26	3	8	0	1	12	1	81	4	0	86	1	81	4	0	0	86	1	81	4	0	86	1	81	126						
Total	7	10	3	2	22	2	112	3	1	118	8	21	1	3	33	2	201	12	4	219	2	201	12	4	4	219	2	201	12	4	219	2	201	392						
04:00 PM	2	2	0	0	4	0	23	2	0	25	3	8	0	0	11	0	77	12	0	89	0	77	12	0	0	89	0	77	12	0	89	0	77	129						
04:15 PM	1	1	1	2	5	1	28	1	0	30	0	5	0	3	8	1	58	13	0	72	1	58	13	0	0	72	1	58	13	0	72	1	58	115						
04:30 PM	0	2	0	0	2	0	34	0	1	35	3	5	1	0	9	2	46	6	0	54	2	46	6	0	0	54	2	46	6	0	54	2	46	100						
04:45 PM	5	2	0	0	7	2	32	1	0	35	5	7	0	0	12	0	61	7	0	68	0	61	7	0	0	68	0	61	7	0	68	0	61	122						
Total	8	7	1	2	18	3	117	4	1	125	11	25	1	3	40	3	242	38	0	283	3	242	38	0	0	283	3	242	38	0	283	3	242	466						
05:00 PM	4	0	0	1	5	1	33	3	2	39	4	5	2	2	13	0	71	1	0	72	0	71	1	0	0	72	0	71	1	0	72	0	71	129						
05:15 PM	0	2	1	0	3	0	27	1	1	29	7	3	0	0	10	0	58	11	2	71	0	58	11	2	0	71	0	58	11	2	71	0	58	113						
05:30 PM	3	2	1	4	10	2	26	3	0	31	3	5	0	2	10	1	61	11	0	73	1	61	11	0	0	73	1	61	11	0	73	1	61	124						
05:45 PM	3	3	2	5	13	2	32	0	0	34	0	4	1	0	5	0	60	14	1	75	0	60	14	1	1	75	0	60	14	1	75	0	60	127						
Total	10	7	4	10	31	5	118	7	3	133	14	17	3	4	38	1	250	37	3	291	1	250	37	3	3	291	1	250	37	3	291	1	250	493						
06:00 PM	1	3	1	5	10	0	36	0	2	38	3	8	0	3	14	1	66	6	2	75	1	66	6	2	0	75	1	66	6	2	75	1	66	137						

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ALASKA AVENUE AND 12TH STREET, NW

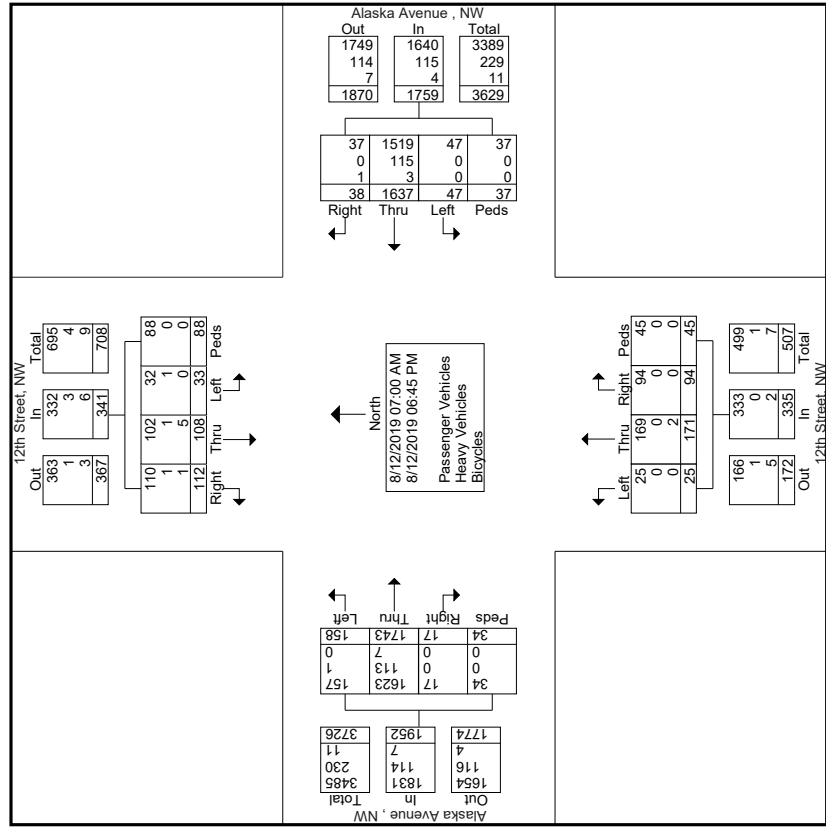
Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

Start Time	12th Street, NW From North						Alaska Avenue, NW From East						12th Street, NW From South						Alaska Avenue, NW From West					
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:15 PM	6	3	0	6	15	15	1	29	0	3	33	33	5	3	0	4	12	12	0	47	6	4	57	117
06:30 PM	3	3	0	2	8	8	0	35	5	0	40	40	3	7	0	1	11	11	0	43	2	1	46	105
06:45 PM	2	6	0	2	10	10	0	16	0	1	17	17	3	5	0	3	11	11	0	44	4	0	48	86
Total	12	15	1	15	43	43	1	116	5	6	128	128	14	23	0	11	48	48	1	200	18	7	226	445
Grand Total	112	108	33	88	341	341	38	1637	47	37	1759	1759	94	171	25	45	335	335	17	1743	158	34	1952	4387
Approach %	32.8	31.7	9.7	25.8			2.2	93.1	2.7	2.1			28.1	51	7.5	13.4			0.9	89.3	8.1	1.7		
Total %	2.6	2.5	0.8	2	7.8	7.8	0.9	37.3	1.1	0.8	40.1	40.1	2.1	3.9	0.6	1	7.6	7.6	0.4	39.7	3.6	0.8	44.5	44.5
Passenger Vehicles	98.2	94.4	97	100	97.4	97.4	97.4	92.8	100	100	93.2	93.2	100	98.8	100	100	99.4	99.4	100	93.1	99.4	100	93.8	94.3
% Passenger Vehicles	1	1	1	0	3	3	0	115	0	0	115	115	0	0	0	0	0	0	0	113	1	0	114	232
Heavy Vehicles	0.9	0.9	3	0	0.9	0.9	0	7	0	0	6.5	6.5	0	0	0	0	0	0	0	6.5	0.6	0	5.8	5.3
% Heavy Vehicles	1	5	0	0	6	6	1	3	0	0	4	4	0	2	0	0	2	2	0	7	0	0	7	19
Bicycles	0.9	4.6	0	0	1.8	1.8	2.6	0.2	0	0	0.2	0.2	0	1.2	0	0	0.6	0.6	0	0.4	0	0	0.4	0.4
% Bicycles																								

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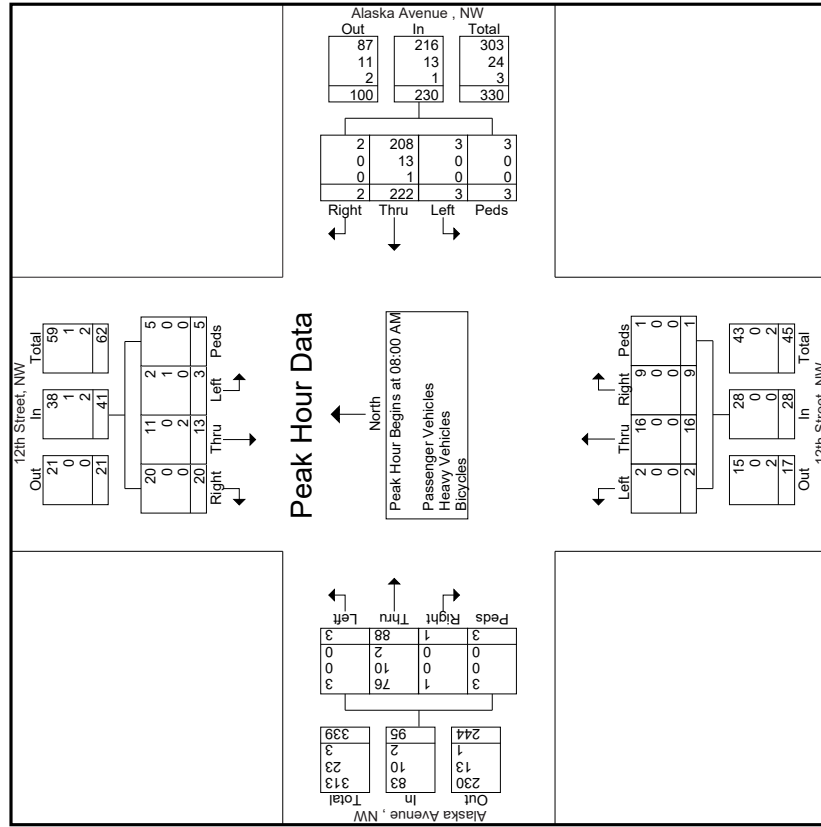
ALASKA AVENUE AND 12TH STREET, NW

Start Time	12th Street, NW From North				Alaska Avenue, NW From East				12th Street, NW From South				Alaska Avenue, NW From West				Int. Total							
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right		Thru	Left	Peds	App. Total			
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1	7																							
Peak Hour for Entire Intersection Begins at 08:00 AM																								
08:00 AM	5	6	0	2	13	1	63	0	0	3	68	4	2	0	0	6	0	20	1	1	26	1	28	112
08:15 AM	6	0	2	1	9	1	55	0	0	0	56	3	8	0	0	11	0	23	0	1	23	0	22	97
08:30 AM	2	5	0	1	8	0	46	2	0	0	48	1	2	2	1	6	1	19	1	0	19	1	24	102
08:45 AM	20	13	3	5	41	2	222	3	3	230	9	16	2	1	28	6	88	3	3	95	3	95	394	
Total Volume	48.8	31.7	7.3	12.2	788	0.9	96.5	1.3	1.3	32.1	57.1	7.1	3.6	1.1	636	1.1	92.6	3.2	3.2	111	846	7.50	750	848
% App. Total	.714	.542	.375	.625	.788	.500	.881	.375	.250	.563	.500	.250	.250	.636	.250	.636	.250	.846	.750	.750	.848	.848	.848	.879
Passenger Vehicles	20	11	2	5	38	2	208	3	3	216	9	16	2	1	28	1	76	3	3	83	3	83	365	
% Passenger Vehicles	100	84.6	66.7	100	92.7	100	93.7	100	100	93.9	100	100	100	100	100	100	86.4	100	100	100	87.4	100	87.4	92.6
Heavy Vehicles	0	0	1	0	1	0	13	0	0	13	0	0	0	0	0	0	0	10	0	0	10	0	10	24
% Heavy Vehicles	0	0	33.3	0	2.4	0	5.9	0	0	5.7	0	0	0	0	0	0	11.4	0	0	10.5	0	10.5	6.1	
Bicycles	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	2	5	
% Bicycles	0	15.4	0	0	4.9	0	0.5	0	0	0.4	0	0	0	0	0	0	2.3	0	0	2.1	0	2.1	1.3	

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ALASKA AVENUE AND 12TH STREET, NW



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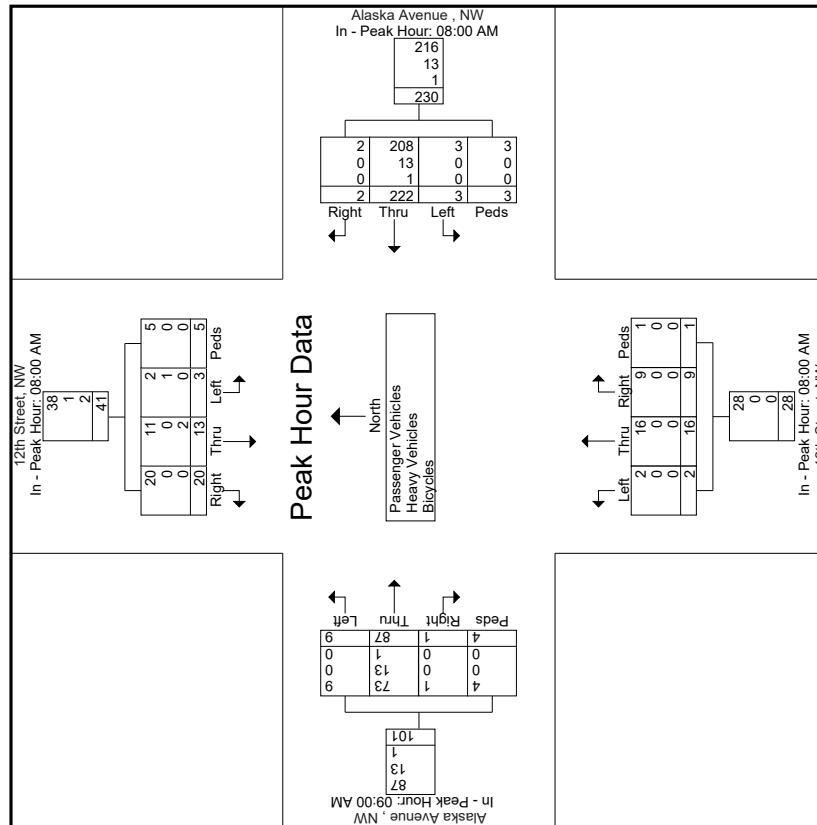
ALASKA AVENUE AND 12TH STREET, NW

Start Time	12th Street, NW From North						Alaska Avenue, NW From East						12th Street, NW From South						Alaska Avenue, NW From West					
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total
	Peak Hour for Each Approach Begins at:																							
+0 mins.	7	2	1	1	11	11	1	63	1	3	68	68	1	4	0	0	5	5	0	21	1	1	23	23
+15 mins.	5	6	0	2	13	13	1	55	0	0	56	56	2	2	0	0	6	6	0	24	3	2	29	29
+30 mins.	6	0	2	1	9	9	0	58	0	0	58	58	3	8	0	0	11	11	0	20	2	0	22	22
+45 mins.	2	5	0	1	8	8	0	46	2	0	48	48	1	2	2	1	6	6	1	22	3	1	27	27
Total Volume	20	13	3	5	41	41	2	222	3	3	230	230	9	16	2	1	28	28	1	87	9	4	101	101
% App. Total	48.8	31.7	7.3	12.2	788	788	0.9	96.5	1.3	1.3	846	846	32.1	57.1	7.1	3.6	636	636	1	86.1	8.9	4	500	500
PHF	.714	.542	.375	.625	.788	.788	.500	.881	.375	.250	.846	.846	.563	.500	.250	.250	.636	.636	.250	.906	.750	.500	.871	.871
Passenger Vehicles	20	11	2	5	38	38	2	208	3	3	216	216	9	16	2	1	28	28	1	73	9	4	87	87
% Passenger Vehicles	100	84.6	66.7	100	92.7	92.7	100	93.7	100	100	93.9	93.9	100	100	100	100	100	100	100	83.9	100	100	86.1	86.1
Heavy Vehicles	0	0	1	0	1	1	0	13	0	0	13	13	0	0	0	0	0	0	0	13	0	0	13	13
% Heavy Vehicles	0	0	33.3	0	2.4	2.4	0	5.9	0	0	5.7	5.7	0	0	0	0	0	0	0	14.9	0	0	12.9	12.9
Bicycles	0	2	0	0	2	2	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1
% Bicycles	0	15.4	0	0	4.9	4.9	0	0.5	0	0	0.4	0.4	0	0	0	0	0	0	0	1.1	0	0	1.1	1.1

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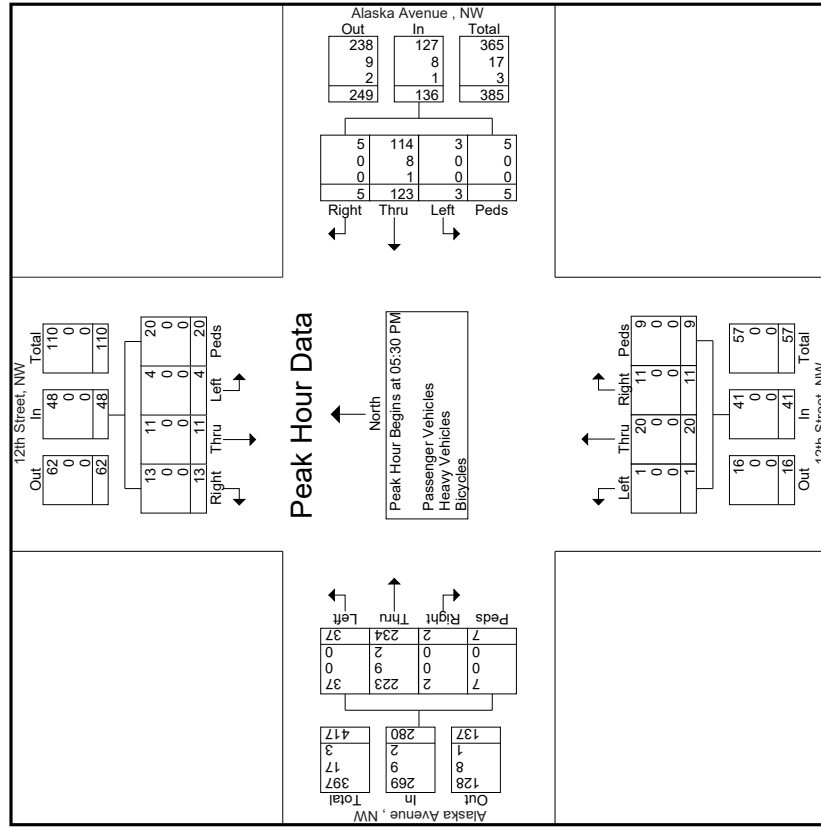
ALASKA AVENUE AND 12TH STREET, NW

Start Time	12th Street, NW From North				Alaska Avenue, NW From East				12th Street, NW From South				Alaska Avenue, NW From West				Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right		Thru	Left	Peds	App. Total	
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 05:30 PM																						
05:30 PM	3	2	1	4	10	2	32	0	0	34	0	4	1	0	5	1	0	60	14	1	75	127
05:45 PM	3	3	2	5	13	2	36	0	2	38	3	8	0	3	14	1	66	1	6	2	75	137
06:00 PM	1	3	1	5	10	0	29	0	3	33	5	3	0	4	12	0	47	6	6	4	57	117
06:15 PM	6	3	0	6	15	1	1	0	3	33	11	20	1	9	41	2	234	37	7	280	505	
Total Volume	13	11	4	20	48	5	123	3	5	136	11	20	1	9	41	0.7	83.6	13.2	2.5			
% App. Total	27.1	22.9	8.3	41.7	800	3.7	90.4	2.2	3.7	895	550	625	250	563	732	500	886	661	438	933	922	
PHF	.542	.917	.500	.833	.800	.625	.854	.250	.417	.895	.550	.625	.250	.563	.732	.500	.886	.661	.438	.933	.922	
Passenger Vehicles	13	11	4	20	48	5	114	3	5	127	11	20	1	9	41	2	223	37	7	269	485	
% Passenger Vehicles	100	100	100	100	100	100	92.7	100	100	93.4	100	100	100	100	100	100	95.3	100	100	100	96.1	96.0
Heavy Vehicles	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	9	0	0	0	9	17
% Heavy Vehicles	0	0	0	0	0	0	6.5	0	0	5.9	0	0	0	0	0	0	3.8	0	0	0	3.2	3.4
Bicycles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	2	3
% Bicycles	0	0	0	0	0	0	0.8	0	0	0.7	0	0	0	0	0	0	0.9	0	0	0	0.7	0.6

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ALASKA AVENUE AND 12TH STREET, NW



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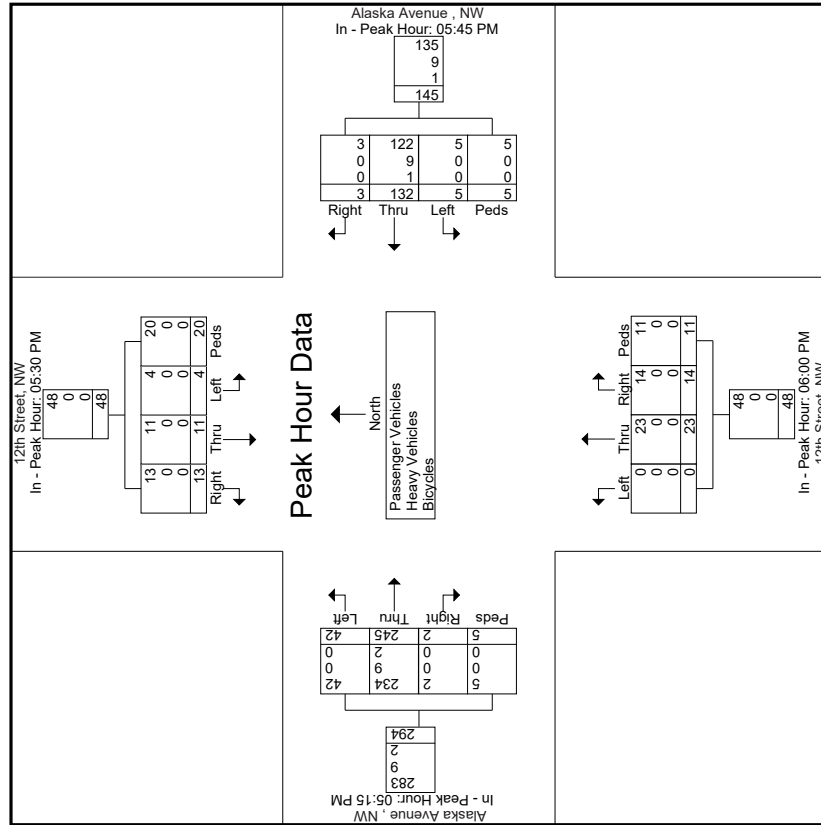
ALASKA AVENUE AND 12TH STREET, NW

Start Time	12th Street, NW From North						Alaska Avenue, NW From East						12th Street, NW From South						Alaska Avenue, NW From West					
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total	
	Peak Hour for Each Approach Begins at:																							
+0 mins.	3	2	1	4	10	05:30 PM	2	32	0	0	34	06:00 PM	3	8	0	3	14	05:15 PM	0	58	11	2	71	
+15 mins.	3	3	2	5	13	0	36	0	2	38	5	3	0	4	12	1	61	11	0	73				
+30 mins.	1	3	1	5	10	1	29	0	3	33	3	7	0	1	11	0	60	14	1	75				
+45 mins.	6	3	0	6	15	0	35	5	0	40	3	5	0	3	11	1	66	6	2	75				
Total Volume	13	11	4	20	48	3	132	5	5	145	14	23	0	11	48	2	245	42	5	294				
% App. Total	27.1	22.9	8.3	41.7	800	2.1	91	3.4	3.4	906	29.2	47.9	0	22.9	857	0.7	83.3	14.3	1.7	980				
PHF	.542	.917	.500	.833	.800	.375	.917	.250	.417	.906	.700	.719	.000	.688	.857	.500	.928	.750	.625	.980				
Passenger Vehicles	13	11	4	20	48	3	122	5	5	135	14	23	0	11	48	2	234	42	5	283				
% Passenger Vehicles	100	100	100	100	100	100	92.4	100	100	93.1	100	100	0	100	100	100	95.5	100	100	96.3				
Heavy Vehicles	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	9	0	0	9				
% Heavy Vehicles	0	0	0	0	0	0	6.8	0	0	6.2	0	0	0	0	0	0	3.7	0	0	3.1				
Bicycles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2				
% Bicycles	0	0	0	0	0	0	0.8	0	0	0.7	0	0	0	0	0	0	0.8	0	0	0.7				

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ALASKA AVENUE AND 12TH STREET, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

Georgia Avenue and Underwood Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of Georgia Avenue and Underwood Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

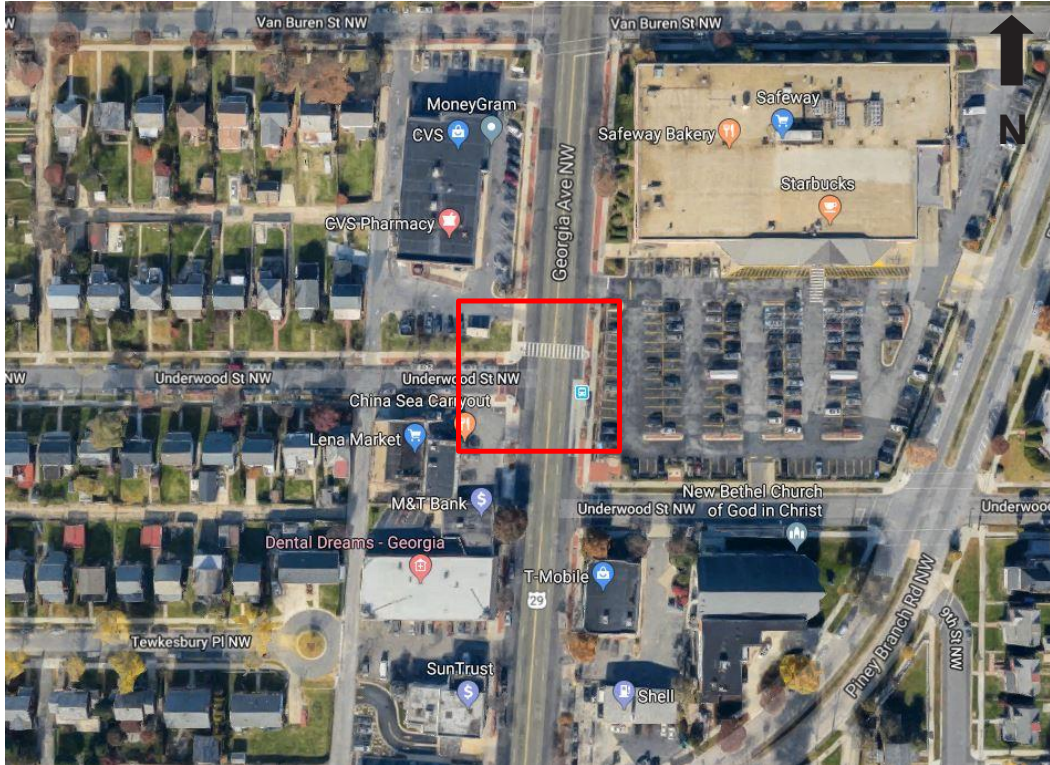


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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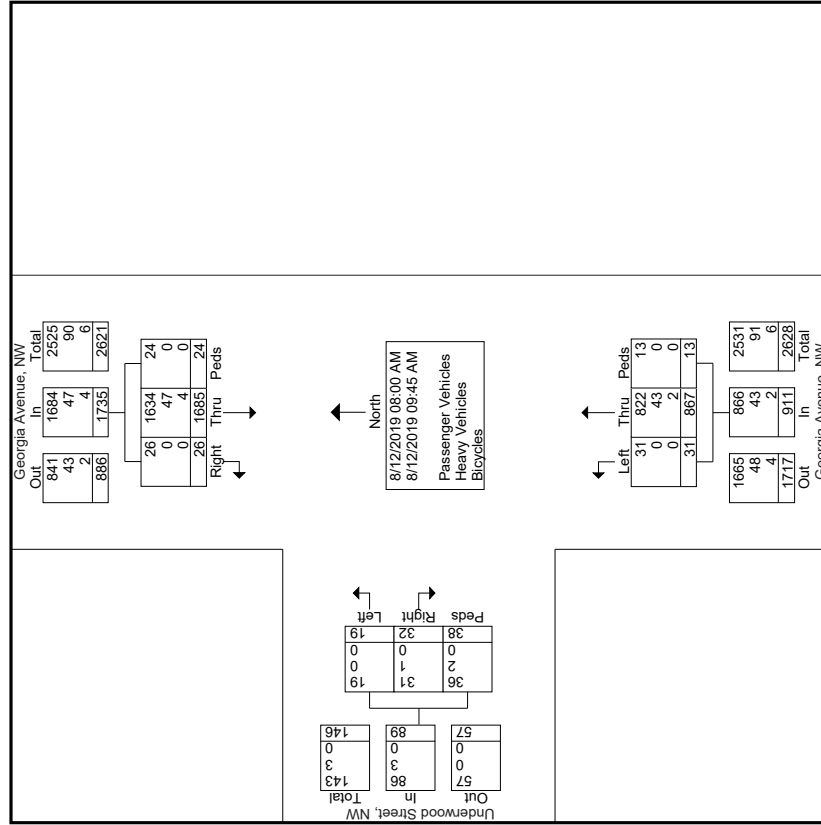
GEORGIA AVENUE AND UNDERWOOD STREET - AM PEAK

Start Time	Georgia Avenue, NW										Underwood Street, NW									
	From North					From South					From West					From East				
	Right	Thru	Peds	App. Total	Total	Right	Thru	Peds	App. Total	Total	Right	Left	Peds	App. Total	Total	Right	Left	Peds	App. Total	Total
08:00 AM	2	255	2	259	109	4	3	3	116	2	0	3	5	380	5	0	0	3	5	380
08:15 AM	5	249	3	257	112	6	0	0	118	2	4	7	13	388	7	4	4	7	13	388
08:30 AM	3	223	2	228	121	1	2	2	124	7	2	3	12	364	7	2	3	3	12	364
08:45 AM	2	229	0	231	86	3	3	3	92	4	2	2	8	331	4	2	2	2	8	331
Total	12	956	7	975	428	14	8	8	450	15	8	15	38	1463	15	8	15	15	38	1463
09:00 AM	4	199	1	204	100	4	2	2	106	5	5	7	17	327	5	5	7	7	17	327
09:15 AM	2	196	7	205	117	3	0	0	120	3	4	6	13	338	3	4	4	6	13	338
09:30 AM	6	181	6	193	124	6	2	2	132	1	1	5	7	332	1	1	5	5	7	332
09:45 AM	2	153	3	158	98	4	1	1	103	8	1	5	14	275	8	1	5	5	14	275
Total	14	729	17	760	439	17	5	5	461	17	11	23	51	1272	17	11	23	23	51	1272
Grand Total	26	1685	24	1735	867	31	13	13	911	32	19	38	89	2735	32	19	38	38	89	2735
Apprch %	1.5	97.1	1.4	205	95.2	3.4	1.4	1.4	120	36	21.3	42.7	3.3	338	1.2	0.7	1.4	1.4	3.3	338
Total %	1	61.6	0.9	63.4	31.7	1.1	0.5	0.5	33.3	12	0.7	1.4	3.3	332	4	0.7	1.4	1.4	3.3	332
Passenger Vehicles	26	1634	24	1684	822	31	13	13	866	31	19	36	86	2636	31	19	36	36	86	2636
% Passenger Vehicles	100	97	100	97.1	94.8	100	100	100	95.1	96.9	100	94.7	96.6	96.4	96.9	100	94.7	94.7	96.6	96.4
Heavy Vehicles	0	47	0	47	43	0	0	0	43	1	0	2	3	93	1	0	2	2	3	93
% Heavy Vehicles	0	2.8	0	2.7	5	0	0	0	4.7	3.1	0	5.3	3.4	3.4	3.1	0	5.3	5.3	3.4	3.4
Bicycles	0	4	0	4	2	0	0	0	2	0	0	0	0	6	0	0	0	0	0	6
% Bicycles	0	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0.2	0	0	0	0	0	0.2

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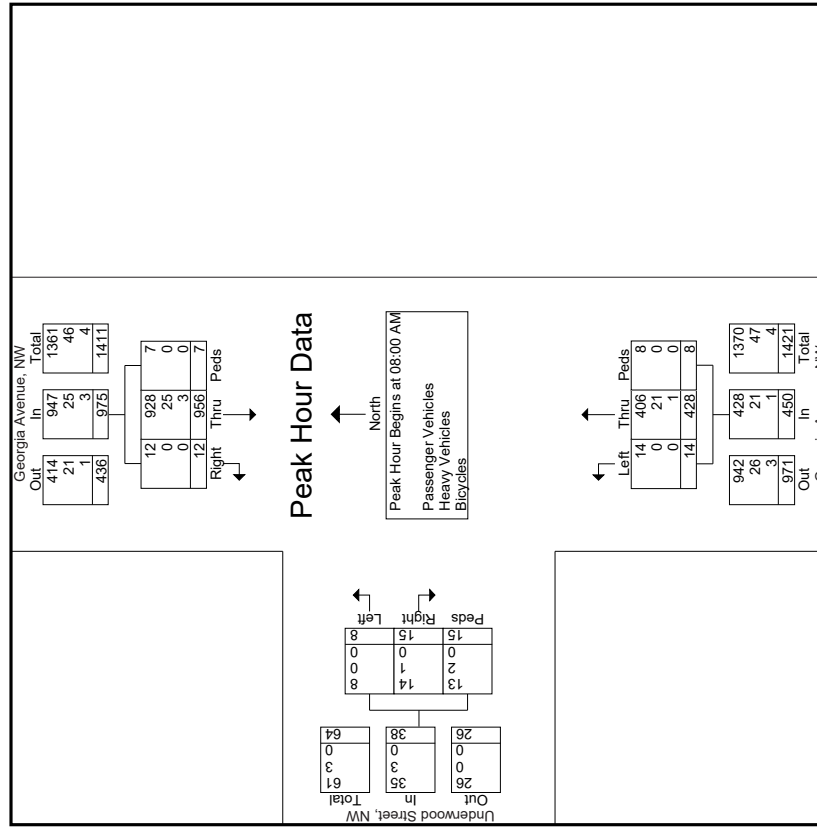
GEORGIA AVENUE AND UNDERWOOD STREET - AM PEAK

Start Time	Georgia Avenue, NW From North				Georgia Avenue, NW From South				Underwood Street, NW From West				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	2	255	2	259	109	4	3	116	2	0	3	5	380
08:15 AM	5	249	3	257	112	6	0	118	2	4	7	13	388
08:30 AM	3	223	2	228	121	1	2	124	7	2	3	12	364
08:45 AM	2	229	0	231	86	3	3	92	4	2	2	8	331
Total Volume	12	956	7	975	428	14	8	450	15	8	15	38	1463
% App. Total	1.2	98.1	0.7	99.1	95.1	3.1	1.8	99.5	39.5	21.1	39.5	7.31	94.3
PHF	.600	.937	.583	.941	.884	.583	.667	.907	.536	.500	.536	.731	94.3
Passenger Vehicles	12	928	7	947	406	14	8	428	14	8	13	35	1410
% Passenger Vehicles	100	97.1	100	97.1	94.9	100	100	95.1	93.3	100	86.7	92.1	96.4
Heavy Vehicles	0	25	0	25	21	0	0	21	1	0	2	3	49
% Heavy Vehicles	0	2.6	0	2.6	4.9	0	0	4.7	6.7	0	13.3	7.9	3.3
Bicycles	0	3	0	3	1	0	0	1	0	0	0	0	4
% Bicycles	0	0.3	0	0.3	0.2	0	0	0.2	0	0	0	0	0.3

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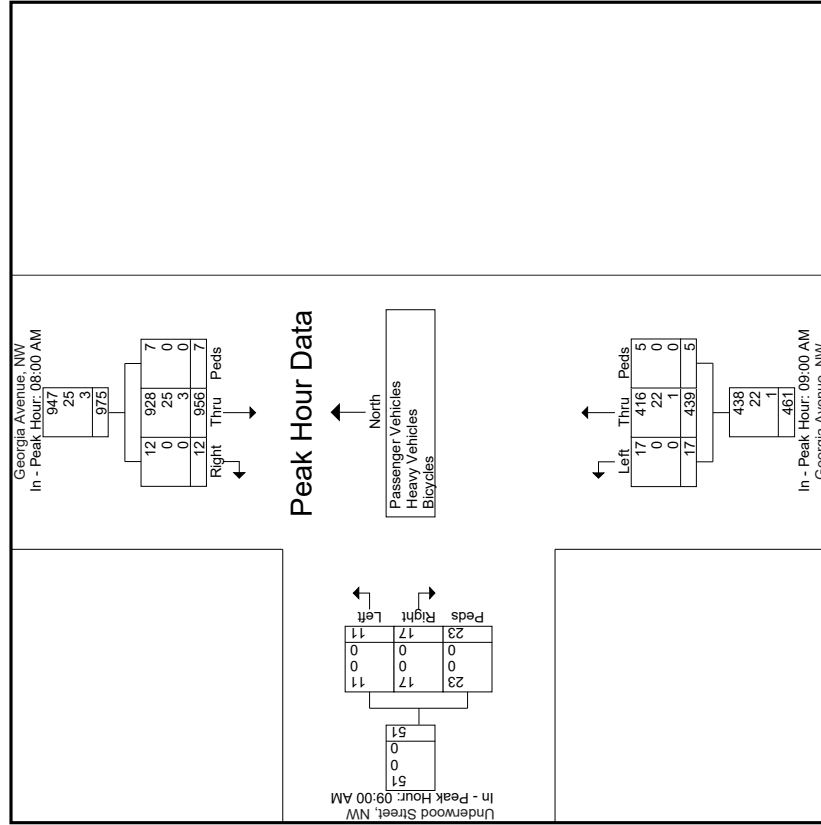
GEORGIA AVENUE AND UNDERWOOD STREET - AM PEAK

Start Time	Georgia Avenue, NW From North				Georgia Avenue, NW From South				Underwood Street, NW From West				
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:												
08:00 AM	09:00 AM												
+0 mins.	2	255	2	259	100	4	2	106	09:00 AM	5	7	17	
+15 mins.	5	249	3	257	117	3	0	120		3	4	13	
+30 mins.	3	223	2	228	124	6	2	132		1	1	5	
+45 mins.	2	229	0	231	98	4	1	103		8	5	14	
Total Volume	12	956	7	975	439	17	5	461		17	11	23	51
% App. Total	1.2	98.1	0.7	99.1	95.2	3.7	1.1	98.3		33.3	21.6	45.1	
PHF	.600	.937	.583	.941	.885	.708	.625	.873		.531	.550	.821	.750
Passenger Vehicles	12	928	7	947	416	17	5	438		17	11	23	51
% Passenger Vehicles	100	97.1	100	97.1	94.8	100	100	95		100	100	100	100
Heavy Vehicles	0	25	0	25	22	0	0	22		0	0	0	0
% Heavy Vehicles	0	2.6	0	2.6	5	0	0	4.8		0	0	0	0
Bicycles	0	3	0	3	1	0	0	1		0	0	0	0
% Bicycles	0	0.3	0	0.3	0.2	0	0	0.2		0	0	0	0

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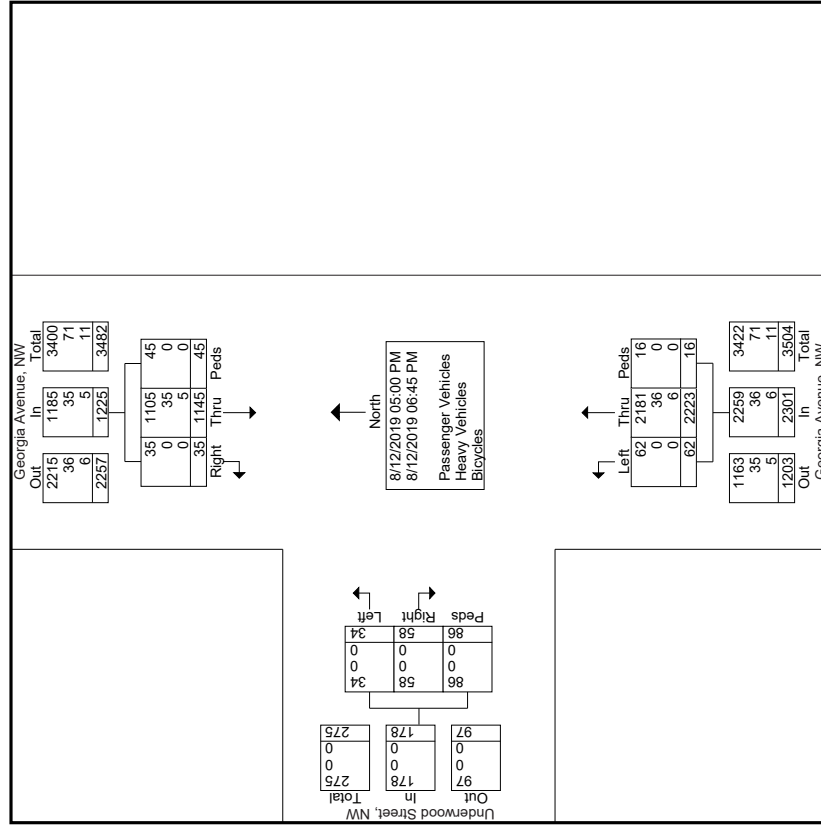
GEORGIA AVENUE AND UNDERWOOD STREET - PM PEAK

Start Time	Georgia Avenue, NW										Underwood Street, NW									
	From North					From South					From West					From East				
	Right	Thru	Peds	App. Total	Total	Right	Thru	Peds	App. Total	Total	Right	Left	Peds	App. Total	Total	Right	Left	Peds	App. Total	Total
05:00 PM	4	134	3	141	293	4	303	1	303	303	4	7	10	21	465	4	7	10	21	465
05:15 PM	5	141	1	147	286	9	296	1	296	296	9	6	5	20	463	9	6	5	20	463
05:30 PM	4	154	8	166	305	7	316	4	316	316	9	1	12	22	504	9	1	12	22	504
05:45 PM	4	160	5	169	313	6	319	0	319	319	5	3	16	24	512	5	3	16	24	512
Total	17	589	17	623	1197	31	1234	6	1234	1234	27	17	43	87	1944	27	17	43	87	1944
06:00 PM	6	144	6	156	294	9	303	0	303	303	7	4	6	17	476	7	4	6	17	476
06:15 PM	4	145	6	155	260	9	269	0	269	269	8	5	13	26	450	8	5	13	26	450
06:30 PM	6	138	7	151	261	7	276	8	276	276	12	6	15	33	460	12	6	15	33	460
06:45 PM	2	129	9	140	211	6	219	2	219	219	4	2	9	15	374	4	2	9	15	374
Total	18	556	28	602	1026	31	1067	10	1067	1067	31	17	43	91	1760	31	17	43	91	1760
Grand Total	35	1145	45	1225	2223	62	2301	16	2301	2301	58	34	86	178	3704	58	34	86	178	3704
Approch %	2.9	93.5	3.7	33.1	96.6	2.7	0.7	0.4	0.4	0.4	32.6	19.1	48.3	4.8		32.6	19.1	48.3	4.8	
Total %	0.9	30.9	1.2	33.1	60	1.7	0.4	0.4	0.4	62.1	1.6	0.9	2.3	4.8		1.6	0.9	2.3	4.8	
Passenger Vehicles	35	1105	45	1185	2181	62	2259	16	2259	2259	58	34	86	178	3622	58	34	86	178	3622
% Passenger Vehicles	100	96.5	100	96.7	98.1	100	98.2	100	98.2	98.2	100	100	100	100	97.8	100	100	100	100	97.8
Heavy Vehicles	0	35	0	35	36	0	36	0	36	36	0	0	0	0	71	0	0	0	0	71
% Heavy Vehicles	0	3.1	0	2.9	1.6	0	1.6	0	1.6	1.6	0	0	0	0	1.9	0	0	0	0	1.9
Bicycles	0	5	0	5	6	0	6	0	6	6	0	0	0	0	11	0	0	0	0	11
% Bicycles	0	0.4	0	0.4	0.3	0	0.3	0	0.3	0.3	0	0	0	0	0.3	0	0	0	0	0.3

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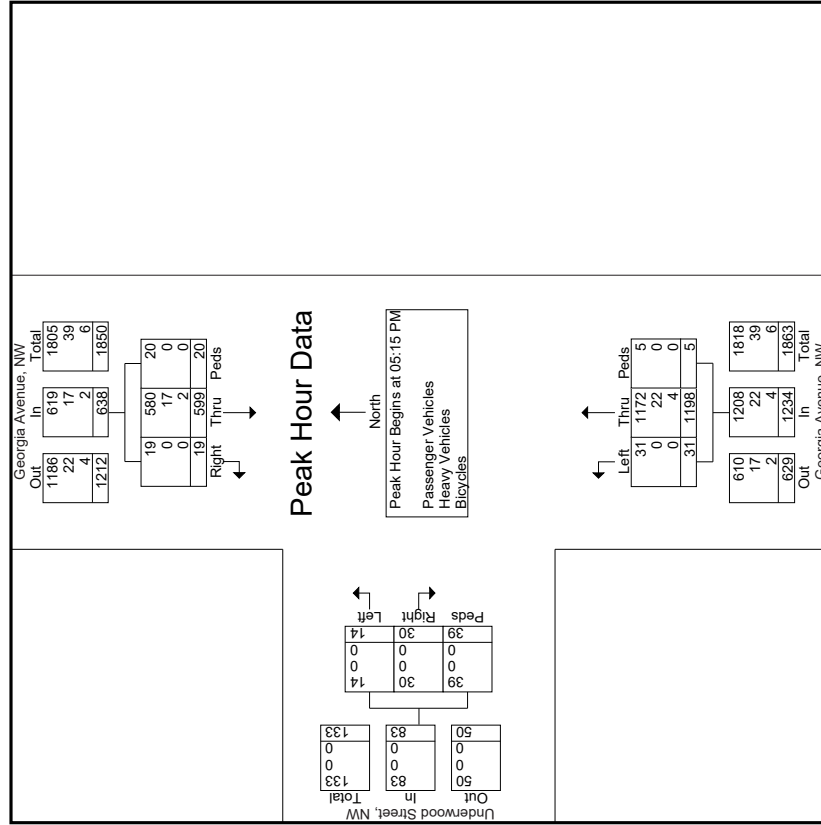
GEORGIA AVENUE AND UNDERWOOD STREET - PM PEAK

Start Time	Georgia Avenue, NW From North				Georgia Avenue, NW From South				Underwood Street, NW From West				
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	5	141	1	147	286	9	1	296	9	6	5	20	463
05:30 PM	4	154	8	166	305	7	4	316	9	1	12	22	504
05:45 PM	4	160	5	169	313	6	0	319	5	3	16	24	512
06:00 PM	6	144	6	156	294	9	0	303	7	4	6	17	476
Total Volume	19	599	20	638	1198	31	5	1234	30	14	39	83	1955
% App. Total	3	93.9	3.1	97.1	97.1	2.5	0.4	96.7	36.1	16.9	4.7	865	955
PHF	.792	.936	.625	.944	.957	.861	.313	.967	.833	.583	.609	.865	.955
Passenger Vehicles	19	580	20	619	1172	31	5	1208	30	14	39	83	1910
% Passenger Vehicles	100	96.8	100	97.0	97.8	100	100	97.9	100	100	100	100	97.7
Heavy Vehicles	0	17	0	17	22	0	0	22	0	0	0	0	39
% Heavy Vehicles	0	2.8	0	2.7	1.8	0	0	1.8	0	0	0	0	2.0
Bicycles	0	2	0	2	4	0	0	4	0	0	0	0	6
% Bicycles	0	0.3	0	0.3	0.3	0	0	0.3	0	0	0	0	0.3

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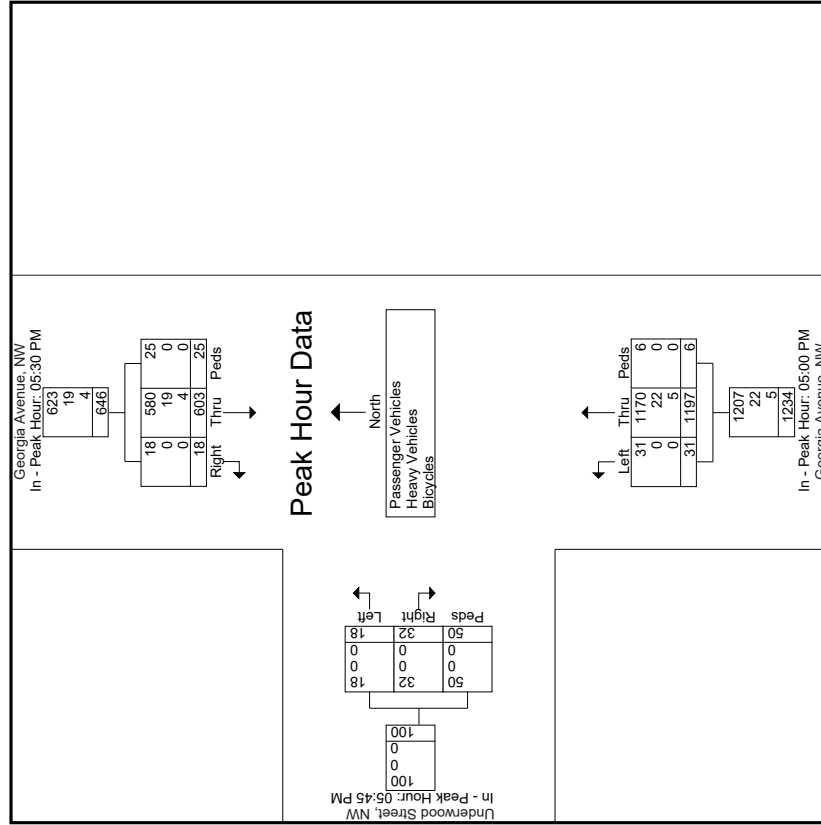
GEORGIA AVENUE AND UNDERWOOD STREET - PM PEAK

Start Time	Georgia Avenue, NW From North			Georgia Avenue, NW From South			Underwood Street, NW From West			
	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
05:30 PM										
+0 mins.	4	154	8	293	9	1	05:45 PM	5	3	16
+15 mins.	4	160	5	286	9	1		7	4	6
+30 mins.	6	144	6	305	7	4		8	5	13
+45 mins.	4	145	6	313	6	0		12	6	15
Total Volume	18	603	25	1197	31	6		32	18	50
% App. Total	2.8	93.3	3.9	97	2.5	0.5		32	18	50
PHF	.750	.942	.781	.956	.861	.375		.667	.750	.781
Passenger Vehicles	18	580	25	1170	31	6		32	18	50
% Passenger Vehicles	100	96.2	100	97.7	100	100		100	100	100
Heavy Vehicles	0	19	0	22	0	0		0	0	0
% Heavy Vehicles	0	3.2	0	1.8	0	0		0	0	0
Bicycles	0	4	0	5	0	0		0	0	0
% Bicycles	0	0.7	0	0.4	0	0		0	0	0

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File Name : 1. New Hampshire Avenue and North Capitol Street, NW (MIDDLE) AM-PM PEAKS
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 1

Groups Printed- All Vehicles - Heavy Vehicles - Bicycles

Start Time	NORTH CAPITOL STREET NE From North			From Southwest			From Northeast			NORTH CAPITOL STREET NE From South			Int. Total
	Bear Right	Peds	App. Total	App. Total	App. Total	App. Total	Bear Right	Peds	App. Total	Exclu. Total	Inclu. Total		
07:00 AM	45	0	45	0	0	0	82	0	82	0	127	127	
07:15 AM	58	0	58	0	0	0	92	0	92	0	150	150	
07:30 AM	60	0	60	0	0	0	99	0	99	0	159	159	
07:45 AM	40	0	40	0	0	0	132	1	132	1	172	173	
Total	203	0	203	0	0	0	405	1	405	1	608	609	
08:00 AM	50	1	50	0	0	0	131	0	131	1	181	182	
08:15 AM	43	0	43	0	0	0	130	7	130	7	173	180	
*** BREAK ***	93	1	93	0	0	0	261	7	261	8	354	362	
04:30 PM	41	0	41	0	0	0	312	1	312	1	353	354	
04:45 PM	54	0	54	0	0	0	244	2	244	2	298	300	
Total	95	0	95	0	0	0	556	3	556	3	651	654	
05:00 PM	48	0	48	0	0	0	294	0	294	0	342	342	
05:15 PM	56	0	56	0	0	0	273	0	273	0	329	329	
05:30 PM	53	0	53	0	0	0	311	0	311	0	364	364	
05:45 PM	45	0	45	0	0	0	284	0	284	0	329	329	
Total	202	0	202	0	0	0	1162	0	1162	0	1364	1364	
Grand Total	593	1	593	0	0	0	2384	11	2384	12	2977	2989	
Approch %	100						100						
Total %	19.9		19.9				80.1		80.1	0.4	99.6		
All Vehicles	577		578				2327		2338			2916	
% All Vehicles	97.3	100	97.3				97.6	100	97.6			97.6	
Heavy Vehicles	16		16				56		56			72	
% Heavy Vehicles	2.7	0	2.7				2.3	0	2.3			2.4	
Bicycles	0		0				1		1			1	
% Bicycles	0	0	0				0	0	0			0	

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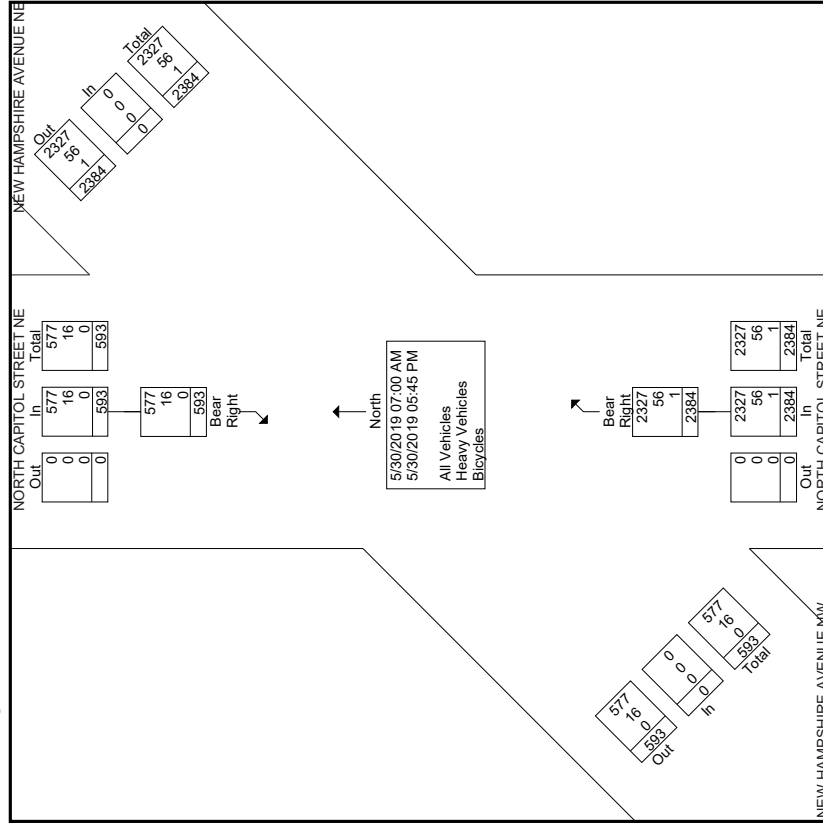
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File Name : 1. New Hampshire Avenue and North Capitol Street, NW (MIDDLE) AM-PM PEAKS

Site Code : 00000000

Start Date : 5/30/2019

Page No : 2



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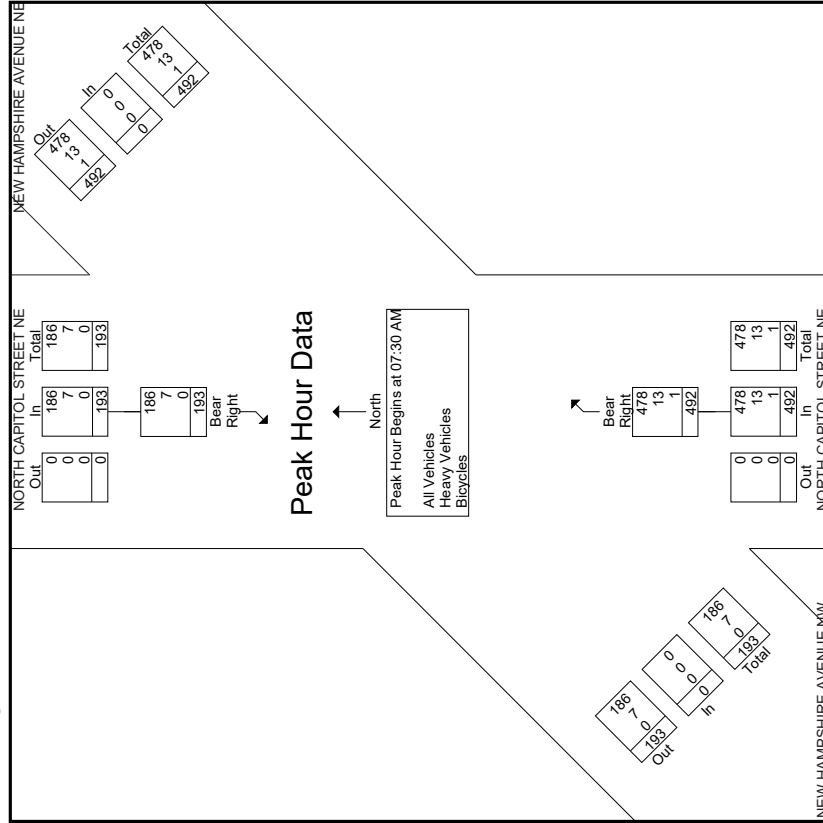
File Name : 1. New Hampshire Avenue and North Capitol Street, NW (MIDDLE) AM-PM PEAKS
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 3

Start Time	NORTH CAPITOL STREET NE			NORTH CAPITOL STREET NE			NORTH CAPITOL STREET NE		
	From North	From Southwest	From Northeast	Bear Right	From South	Bear Right	From South	Bear Right	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1	App. Total	App. Total	App. Total	App. Total	App. Total	App. Total	App. Total	App. Total	Int. Total
Peak Hour for Entire Intersection Begins at 07:30 AM									
07:30 AM	60	0	0	0	99	0	99	0	159
07:45 AM	40	0	0	0	132	0	132	0	172
08:00 AM	50	0	0	0	131	0	131	0	181
08:15 AM	43	0	0	0	130	0	130	0	173
Total Volume	193	0	0	0	492	0	492	0	685
% App. Total	100	0.000	0.000	0.000	93.2	0.000	93.2	0.000	94.6
PHF	.804	.804	.804	.804	.478	.478	.478	.478	.664
All Vehicles	186	0	0	0	478	0	478	0	664
% All Vehicles	96.4	0	0	0	97.2	0	97.2	0	96.9
Heavy Vehicles	7	0	0	0	13	0	13	0	20
% Heavy Vehicles	3.6	0	0	0	2.6	0	2.6	0	2.9
Bicycles	0	0	0	0	1	0	1	0	1
% Bicycles	0	0	0	0	0.2	0	0.2	0	0.1

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File Name : 1. New Hampshire Avenue and North Capitol Street, NW (MIDDLE) AM-PM PEAKS
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 4



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File Name : 1. New Hampshire Avenue and North Capitol Street, NW (MIDDLE) AM-PM PEAKS

Site Code : 00000000

Start Date : 5/30/2019

Page No : 5

Start Time	NORTH CAPITOL STREET NE			NORTH CAPITOL STREET NE			Int. Total
	From North	From Southwest	From Northeast	Bear Right	From South	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1							
Peak Hour for Entire Intersection Begins at 05:00 PM							
05:00 PM	48	0	0	0	294	294	342
05:15 PM	56	0	0	0	273	273	329
05:30 PM	53	0	0	0	311	311	364
05:45 PM	45	0	0	0	284	284	329
Total Volume	202	0	0	0	1162	1162	1364
% App. Total	100	0	0	0	100	100	100
PHF	.902	.000	.000	.000	.934	.934	.937
All Vehicles	201	0	0	0	1138	1138	1339
% All Vehicles	99.5	0	0	0	97.9	97.9	98.2
Heavy Vehicles	1	0	0	0	24	24	25
% Heavy Vehicles	0.5	0	0	0	2.1	2.1	1.8
Bicycles	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0

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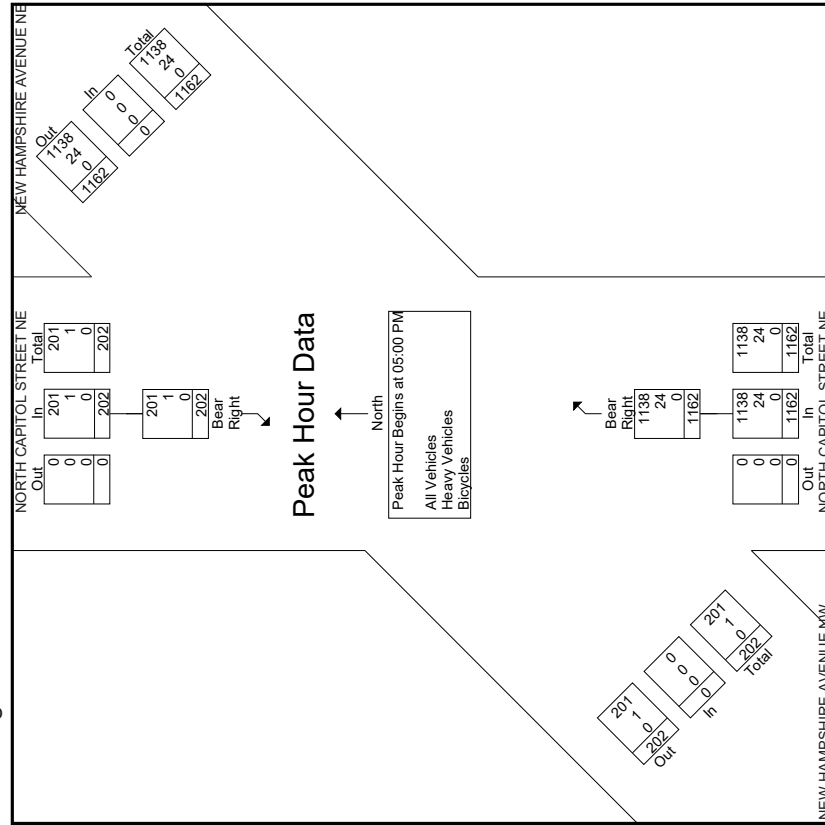
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File Name : 1. New Hampshire Avenue and North Capitol Street, NW (MIDDLE) AM-PM PEAKS

Site Code : 00000000

Start Date : 5/30/2019

Page No : 6



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File Name : 2. From North Capitol Street Right turn to Kennedy Street, NW
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 1

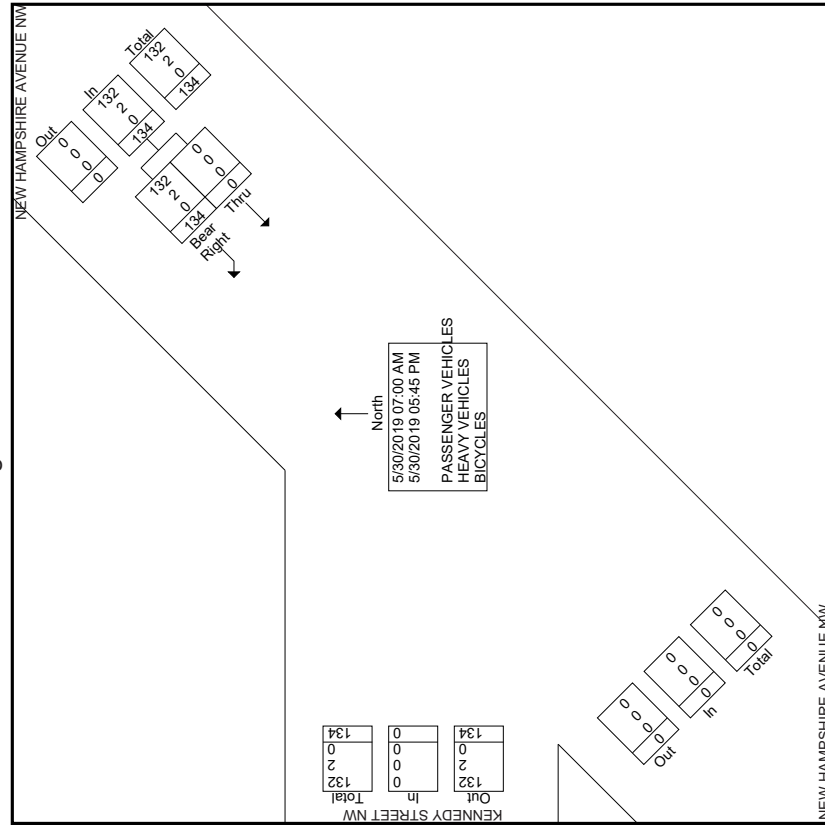
Groups Printed - PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	NEW HAMPSHIRE AVENUE NW				From Northeast		From Southwest		From West		Inclu. Total	Int. Total
	Bear Right	Thru	Peds	App. Total	App. Total	App. Total	Exclu. Total	Inclu. Total				
07:00 AM	17	0	3	17	0	0	0	3	17	20		
07:15 AM	7	0	0	7	0	0	0	0	7	7		
07:30 AM	17	0	2	17	0	0	0	2	17	19		
07:45 AM	2	0	2	2	0	0	0	2	2	4		
Total	43	0	7	43	0	0	0	7	43	50		
08:00 AM	18	0	0	18	0	0	0	0	18	18		
08:15 AM	6	0	2	6	0	0	0	2	6	8		
Total	24	0	2	24	0	0	0	2	24	26		
*** BREAK ***												
*** BREAK ***												
04:30 PM	10	0	1	10	0	0	0	1	10	11		
04:45 PM	6	0	0	6	0	0	0	0	6	6		
Total	16	0	1	16	0	0	0	1	16	17		
05:00 PM	16	0	0	16	0	0	0	0	16	16		
05:15 PM	10	0	0	10	0	0	0	0	10	10		
05:30 PM	12	0	1	12	0	0	0	1	12	13		
05:45 PM	13	0	0	13	0	0	0	0	13	13		
Total	51	0	1	51	0	0	0	1	51	52		
Grand Total	134	0	11	134	0	0	0	11	134	145		
Appreh %	100	0		100	0	0	0	7.6	92.4			
Total %	100	0		100	0	0	0					
PASSENGER VEHICLES	132	0		143	0	0	0	0	0	143		
% PASSENGER VEHICLES	98.5	0	100	98.6	0	0	0	0	0	98.6		
HEAVY VEHICLES	2	0	0	2	0	0	0	0	0	2		
% HEAVY VEHICLES	1.5	0	0	1.4	0	0	0	0	0	1.4		
BICYCLES	0	0	0	0	0	0	0	0	0	0		
% BICYCLES	0	0	0	0	0	0	0	0	0	0		

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File Name : 2. From North Capitol Street Right turn to Kennedy Street, NW
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 2



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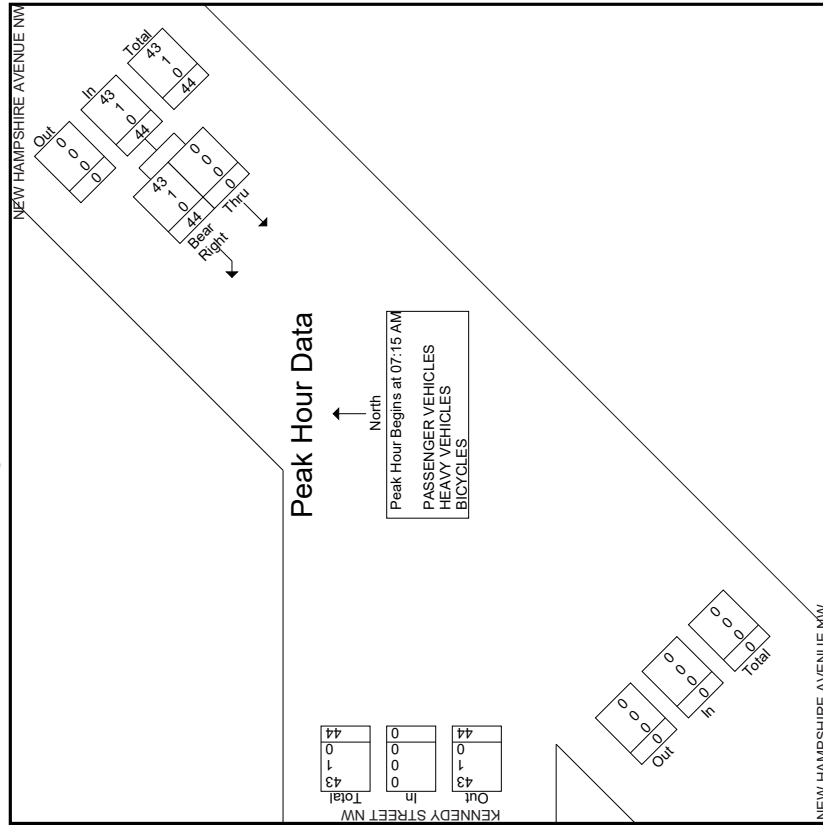
File Name : 2. From North Capitol Street Right turn to Kennedy Street, NW
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 3

Start Time	From Northeast		From Southwest		From West	
	Bear Right	Thru	App. Total	App. Total	App. Total	Int. Total
NEW HAMPSHIRE AVENUE NW						
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1						
Peak Hour for Entire Intersection Begins at 07:15 AM						
07:15 AM	7	0	7	0	0	7
07:30 AM	17	0	17	0	0	17
07:45 AM	2	0	2	0	0	2
08:00 AM	18	0	18	0	0	18
Total Volume	44	0	44	0	0	44
% App. Total	100	0	.611	.000	.000	.611
PASSENGER VEHICLES	43	0	43	0	0	43
% PASSENGER VEHICLES	97.7	0	97.7	0	0	97.7
HEAVY VEHICLES	1	0	1	0	0	1
% HEAVY VEHICLES	2.3	0	2.3	0	0	2.3
BICYCLES	0	0	0	0	0	0
% BICYCLES	0	0	0	0	0	0

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File Name : 2. From North Capitol Street Right turn to Kennedy Street, NW
 Site Code : 00000000
 Start Date : 5/30/2019
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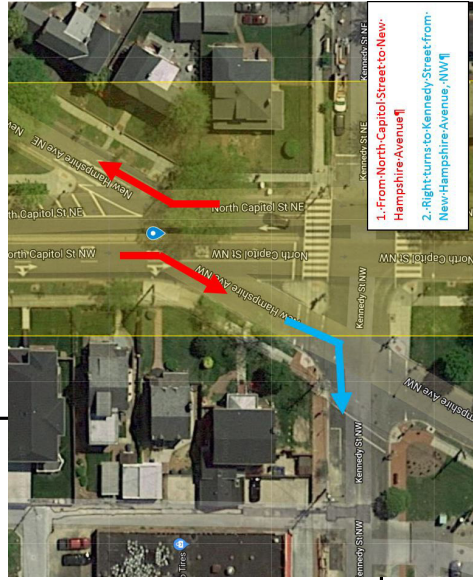
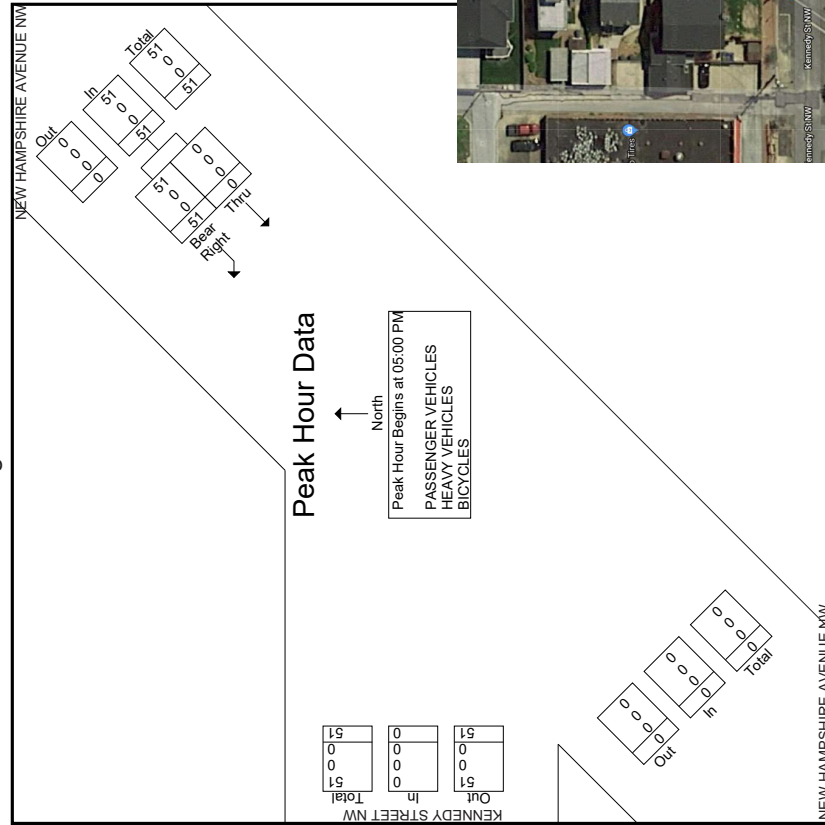
File Name : 2. From North Capitol Street Right turn to Kennedy Street, NW
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 5

Start Time	NEW HAMPSHIRE AVENUE NW			From Northeast		From Southwest		From West	
	Bear Right	Thru	App. Total	App. Total	App. Total	App. Total	App. Total	Int. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 05:00 PM									
05:00 PM	16	0	16	0	0	0	0	16	
05:15 PM	10	0	10	0	0	0	0	10	
05:30 PM	12	0	12	0	0	0	0	12	
05:45 PM	13	0	13	0	0	0	0	13	
Total Volume	51	0	51	0	0	0	0	51	
% App. Total	100	0	.797	.000	.000	.000	.000	.797	
PASSENGER VEHICLES	51	0	51	0	0	0	0	51	
% PASSENGER VEHICLES	100	0	100	0	0	0	0	100	
HEAVY VEHICLES	0	0	0	0	0	0	0	0	
% HEAVY VEHICLES	0	0	0	0	0	0	0	0	
BICYCLES	0	0	0	0	0	0	0	0	
% BICYCLES	0	0	0	0	0	0	0	0	

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File Name : 2. From North Capitol Street Right turn to Kennedy Street, NW
 Site Code : 00000000
 Start Date : 5/30/2019
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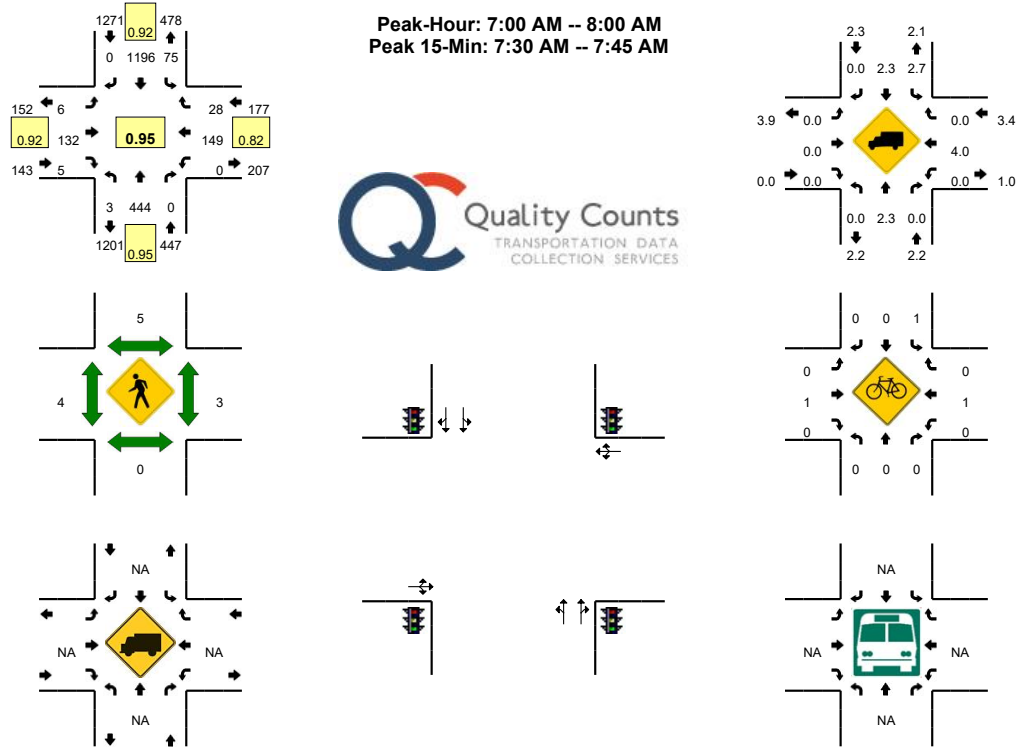
COUNT | BLAIR & NEW HAMPSHIRE

C4

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: New Hampshire Ave NE -- Blair Rd NE
CITY/STATE: Washington, DC **CLIENT ID:** 5241 **QC JOB #:** 13410045
DATE: Tue, Jun 16 2015



15-Min Count Period	New Hampshire Ave NE (Northbound)				New Hampshire Ave NE (Southbound)				Blair Rd NE (Eastbound)				Blair Rd NE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	78	0	0	16	331	0	0	1	27	0	0	0	27	5	0	486	
7:15 AM	1	112	0	0	19	325	0	0	1	29	0	0	0	42	6	0	535	
7:30 AM	0	113	0	0	25	298	0	0	0	37	3	0	0	51	9	0	536	
7:45 AM	1	141	0	0	15	242	0	0	4	39	2	0	0	29	8	0	481	2038
8:00 AM	3	118	0	0	17	246	0	0	0	35	3	0	0	33	4	0	459	2011
8:15 AM	4	138	0	0	16	274	1	0	0	35	2	0	0	53	8	0	531	2007
8:30 AM	2	132	0	0	16	254	0	0	0	40	5	0	0	38	9	0	496	1967
8:45 AM	2	118	0	0	14	250	0	0	1	37	3	0	0	49	5	0	479	1965
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	452	0	0	100	1192	0	0	0	148	12	0	0	204	36	0	2144	
Heavy Trucks	0	8	0	0	4	28	0	0	0	0	0	0	0	4	0	0	44	
Pedestrians	0	0	0	0	0	8	0	0	0	4	0	0	0	0	0	0	12	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Railroad																		
Stopped Buses																		

Comments:

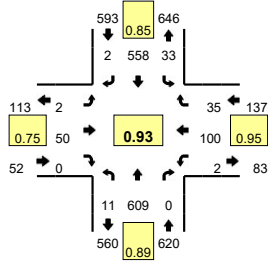
Report generated on 7/6/2015 10:14 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

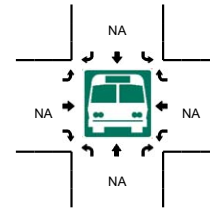
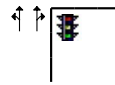
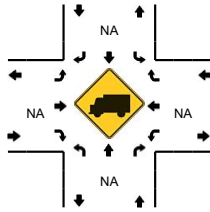
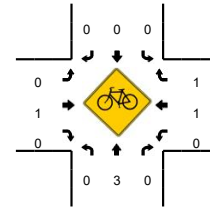
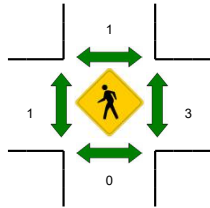
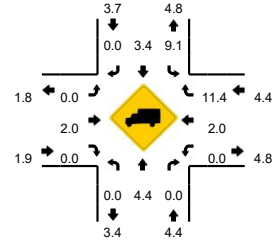
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: New Hampshire Ave NE -- Blair Rd NE
CITY/STATE: Washington, DC **CLIENT ID:** 5241 **QC JOB #:** 13410046
DATE: Tue, Jun 16 2015



Peak-Hour: 11:45 AM -- 12:45 PM
Peak 15-Min: 12:15 PM -- 12:30 PM



15-Min Count Period	New Hampshire Ave NE (Northbound)				New Hampshire Ave NE (Southbound)				Blair Rd NE (Eastbound)				Blair Rd NE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	1	144	0	0	11	171	0	0	0	15	0	0	0	21	12	0	375	
11:15 AM	3	127	0	0	10	132	0	0	0	20	0	0	0	19	7	0	318	
11:30 AM	0	145	0	0	5	145	0	0	0	11	0	0	0	29	8	0	343	
11:45 AM	2	143	0	0	8	139	0	0	1	13	0	0	1	27	9	0	343	1379
12:00 PM	4	140	0	0	9	136	0	0	0	9	0	0	1	24	9	0	332	1336
12:15 PM	1	181	0	0	10	136	2	0	0	13	0	0	0	21	11	0	375	1393
12:30 PM	4	145	0	0	6	147	0	0	1	15	0	0	0	28	6	0	352	1402
12:45 PM	3	167	0	0	9	106	1	0	1	18	0	0	0	29	5	0	339	1398

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	724	0	0	40	544	8	0	0	52	0	0	0	84	44	0	1500
Heavy Trucks	0	36	0	0	0	32	0	0	0	0	0	0	0	4	8	0	80
Pedestrians		0				0				0				8			8
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

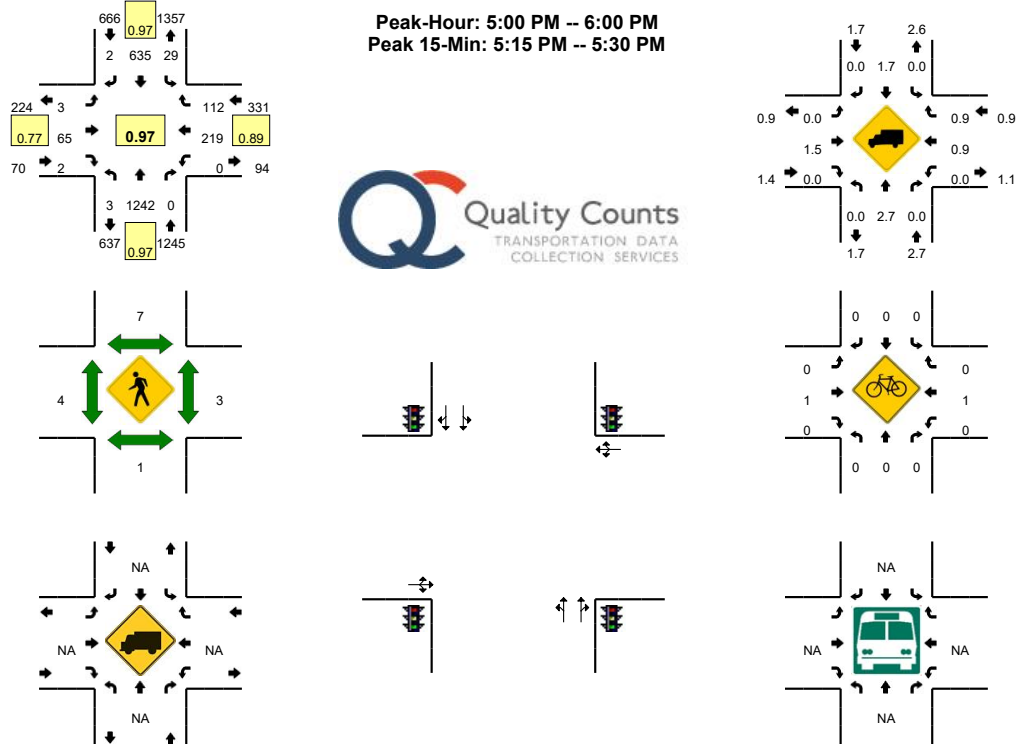
Report generated on 7/6/2015 10:14 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: New Hampshire Ave NE -- Blair Rd NE
CITY/STATE: Washington, DC **CLIENT ID:** 5241 **QC JOB #:** 13410047
DATE: Tue, Jun 16 2015



15-Min Count Period	New Hampshire Ave NE (Northbound)				New Hampshire Ave NE (Southbound)				Blair Rd NE (Eastbound)				Blair Rd NE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	1	323	0	0	4	148	2	0	0	13	0	0	0	57	25	0	573	
4:45 PM	0	316	0	0	8	152	1	0	0	14	0	0	1	46	25	0	563	
5:00 PM	0	311	0	0	4	161	0	0	0	23	0	0	0	56	19	0	574	
5:15 PM	2	308	0	0	6	166	0	0	1	17	2	0	0	67	24	0	593	2303
5:30 PM	0	314	0	0	8	162	0	0	1	13	0	0	0	46	26	0	570	2300
5:45 PM	1	309	0	0	11	146	2	0	1	12	0	0	0	50	43	0	575	2312
6:00 PM	2	315	0	0	9	143	2	0	2	12	0	0	0	43	28	0	556	2294
6:15 PM	0	308	0	0	10	159	5	0	0	6	0	0	0	46	32	0	566	2267
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	1232	0	0	24	664	0	0	4	68	8	0	0	268	96	0	2372	
Heavy Trucks	0	16	0	0	0	20	0	0	0	4	0	0	0	0	0	0	40	
Pedestrians		0				20				12				0			32	
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 7/6/2015 10:14 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

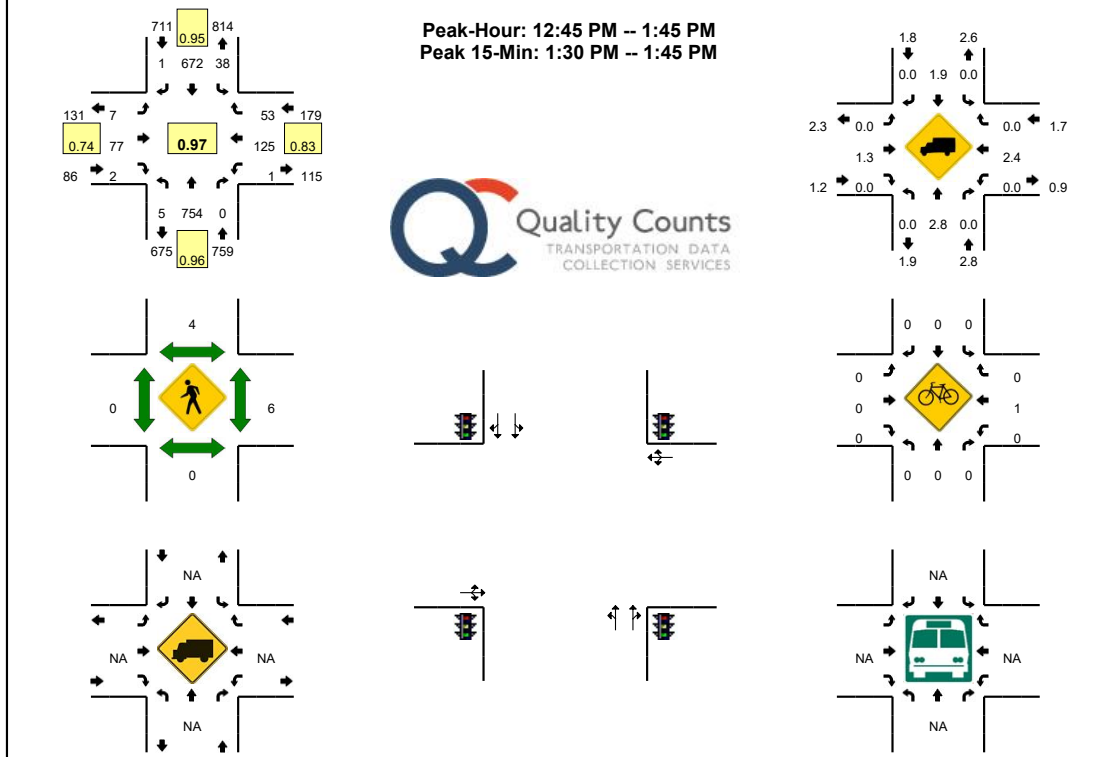
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: New Hampshire Ave NE -- Blair Rd NE
CITY/STATE: Washington, DC

CLIENT ID: 5241

QC JOB #: 13410048
DATE: Sat, Jun 13 2015



15-Min Count Period	New Hampshire Ave NE (Northbound)				New Hampshire Ave NE (Southbound)				Blair Rd NE (Eastbound)				Blair Rd NE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	0	150	0	0	8	177	1	0	1	14	0	0	0	19	10	0	380	
12:15 PM	1	141	0	0	6	159	0	0	0	18	1	0	0	30	13	0	369	
12:30 PM	3	168	0	0	6	164	2	0	1	17	0	0	0	20	5	0	386	
12:45 PM	0	174	0	0	11	176	0	0	3	19	0	0	1	20	15	0	419	1554
1:00 PM	1	193	0	0	5	165	1	0	1	27	2	0	0	23	13	0	431	1605
1:15 PM	2	191	0	0	12	164	0	0	1	14	0	0	0	44	10	0	438	1674
1:30 PM	2	196	0	0	10	167	0	0	2	17	0	0	0	38	15	0	447	1735
1:45 PM	1	160	0	0	9	158	0	0	0	19	0	0	0	27	10	0	384	1700

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	784	0	0	40	668	0	0	8	68	0	0	0	152	60	0	1788
Heavy Trucks	0	16	0	0	0	8	0	0	0	0	0	0	0	0	0	0	24
Pedestrians		0				4				0				8			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 7/6/2015 10:14 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

COUNT | BLAIR & PINEY BRANCH

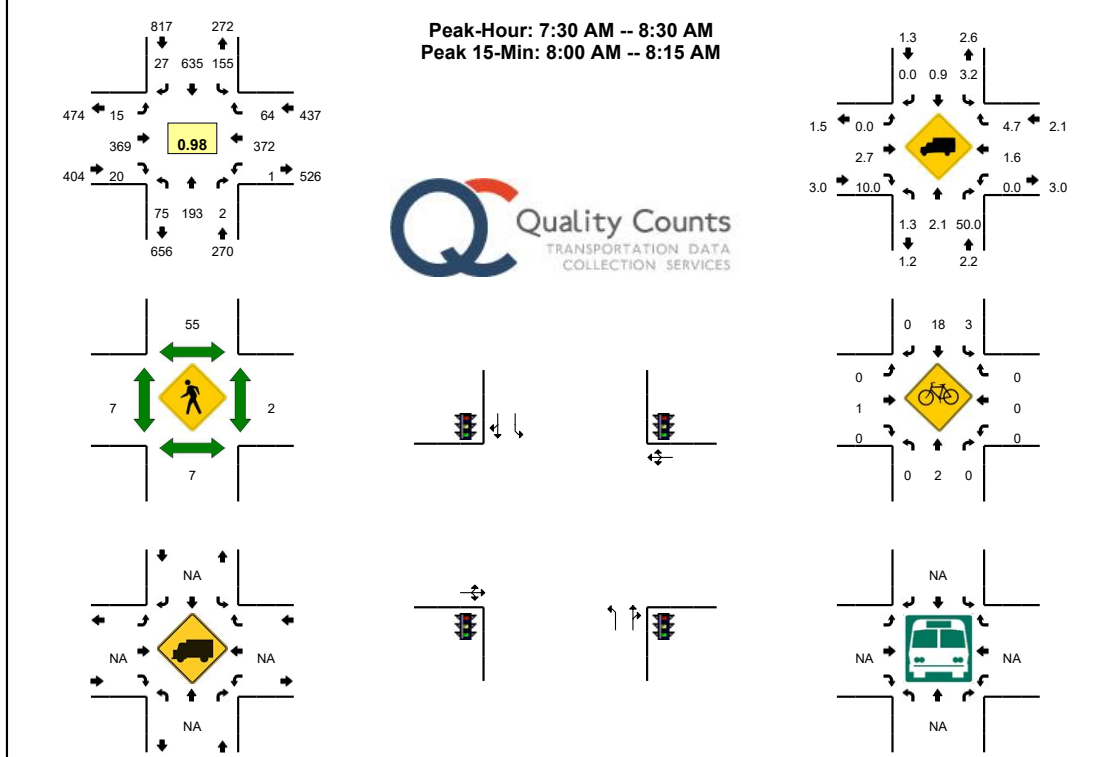
C5

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Piney Branch Rd NW -- Blair Rd NW
CITY/STATE: Washington, DC

QC JOB #: 10695713
DATE: Wed, May 22 2013



15-Min Count Period	Piney Branch Rd NW (Northbound)				Piney Branch Rd NW (Southbound)				Blair Rd NW (Eastbound)				Blair Rd NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	8	26	0	0	26	115	2	0	0	82	2	0	1	70	10	0	342	
6:45 AM	4	31	1	0	25	129	3	0	1	79	3	0	0	77	10	0	363	
7:00 AM	6	32	1	0	30	148	4	0	1	83	2	0	0	67	12	0	386	
7:15 AM	12	51	0	0	35	172	5	0	1	101	3	0	0	88	15	0	483	1574
7:30 AM	15	35	1	0	25	176	2	0	3	96	8	0	1	91	16	0	469	1701
7:45 AM	16	45	1	0	32	162	11	0	4	95	5	0	0	96	15	0	482	1820
8:00 AM	22	59	0	0	49	149	6	0	3	95	3	0	0	92	15	0	493	1927
8:15 AM	22	54	0	0	49	148	8	0	5	83	4	0	0	93	18	0	484	1928
8:30 AM	18	48	3	0	32	134	7	0	4	88	4	0	0	86	19	0	443	1902
8:45 AM	19	51	0	0	36	111	6	0	2	95	5	0	3	73	21	0	422	1842
9:00 AM	7	51	1	0	31	92	8	0	3	91	4	0	1	87	19	0	395	1744
9:15 AM	11	38	1	1	31	84	8	0	2	85	3	0	3	71	17	0	355	1615
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	88	236	0	0	196	596	24	0	12	380	12	0	0	368	60	0	1972	
Heavy Trucks	0	0	0	0	0	8	0	0	0	16	4	0	0	8	0	0	36	
Pedestrians		16				52				16				0			84	
Bicycles	0	2	0		0	6	0		0	0	0		0	0	0		8	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 7:42 AM

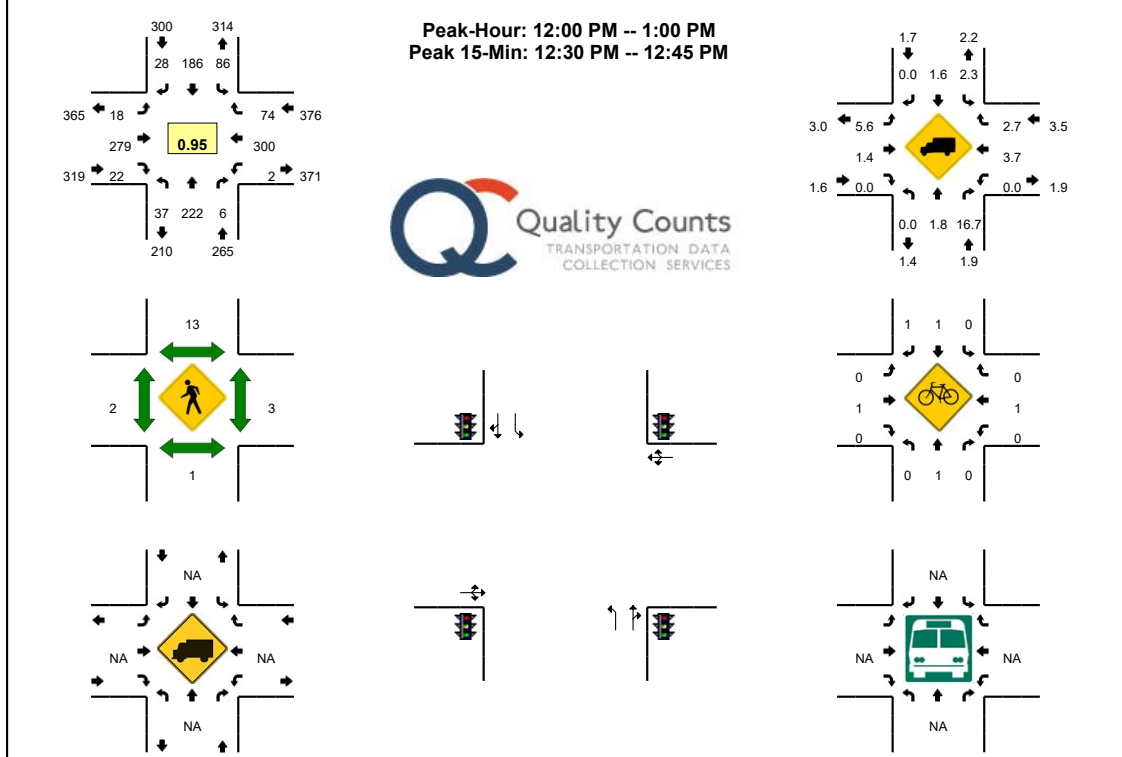
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Piney Branch Rd NW -- Blair Rd NW
CITY/STATE: Washington, DC

QC JOB #: 10695714
DATE: Wed, May 22 2013



15-Min Count Period	Piney Branch Rd NW (Northbound)				Piney Branch Rd NW (Southbound)				Blair Rd NW (Eastbound)				Blair Rd NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	11	38	2	0	25	55	6	0	4	67	1	0	0	69	20	0	298	
11:15 AM	6	38	0	0	13	41	4	0	2	71	6	0	3	76	21	0	281	
11:30 AM	7	43	0	0	22	42	7	0	6	63	1	0	1	92	12	0	296	
11:45 AM	4	41	2	0	17	39	4	0	6	88	2	0	0	63	18	0	284	1159
12:00 PM	8	54	1	0	22	42	8	0	4	67	4	0	0	74	16	0	300	1161
12:15 PM	13	47	2	0	15	50	3	0	4	68	6	0	0	74	23	0	305	1185
12:30 PM	7	70	2	0	26	53	6	0	3	62	8	0	1	72	22	0	332	1221
12:45 PM	9	51	1	0	23	41	11	0	7	82	4	0	1	80	13	0	323	1260
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	28	280	8	0	104	212	24	0	12	248	32	0	4	288	88	0	1328	
Heavy Trucks	0	4	0	0	0	0	0	0	0	4	0	0	0	8	0	0	16	
Pedestrians		0				4				0				8			12	
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 7:42 AM

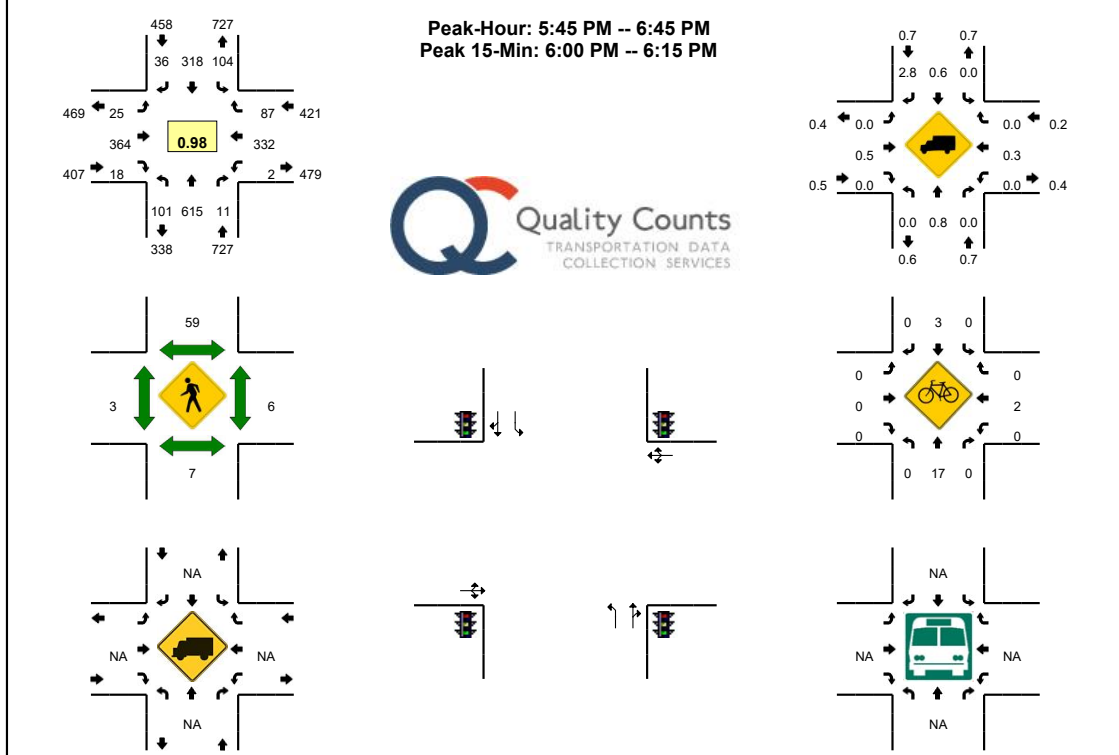
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Piney Branch Rd NW -- Blair Rd NW
CITY/STATE: Washington, DC

QC JOB #: 10695715
DATE: Thu, Jul 11 2013



15-Min Count Period	Piney Branch Rd NW (Northbound)				Piney Branch Rd NW (Southbound)				Blair Rd NW (Eastbound)				Blair Rd NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:30 PM	14	123	1	0	24	54	9	0	6	90	5	0	1	86	23	0	436	
3:45 PM	13	138	2	0	25	54	7	0	5	80	5	0	1	82	23	0	435	
4:00 PM	21	123	4	0	24	52	7	0	5	86	4	0	0	89	20	0	435	
4:15 PM	17	156	4	0	20	67	8	0	5	97	6	0	0	88	21	0	489	1795
4:30 PM	14	155	2	0	30	56	8	0	7	83	1	0	0	81	22	0	459	1818
4:45 PM	22	125	3	0	15	63	6	0	6	92	4	0	0	76	28	0	440	1823
5:00 PM	29	137	1	0	18	64	7	0	6	82	4	0	0	86	21	0	455	1843
5:15 PM	17	137	1	0	35	67	3	0	6	85	9	0	0	82	24	0	466	1820
5:30 PM	22	146	1	0	28	74	5	0	8	82	1	0	0	87	22	0	476	1837
5:45 PM	21	162	2	0	27	73	12	0	8	88	2	0	1	79	22	0	497	1894
6:00 PM	28	156	2	0	22	83	7	0	4	103	3	0	1	81	26	0	516	1955
6:15 PM	26	154	4	0	30	87	7	0	6	80	5	0	0	82	20	0	501	1990
6:30 PM	26	143	3	0	25	75	10	0	7	93	8	0	0	90	19	0	499	2013
6:45 PM	17	132	2	0	26	64	8	0	10	84	4	0	1	75	24	0	447	1963
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	112	624	8	0	88	332	28	0	16	412	12	0	4	324	104	0	2064	
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
Pedestrians		16				68				4				8			96	
Bicycles	0	2	0		0	0	0		0	0	0		0	1	0		3	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 7:42 AM

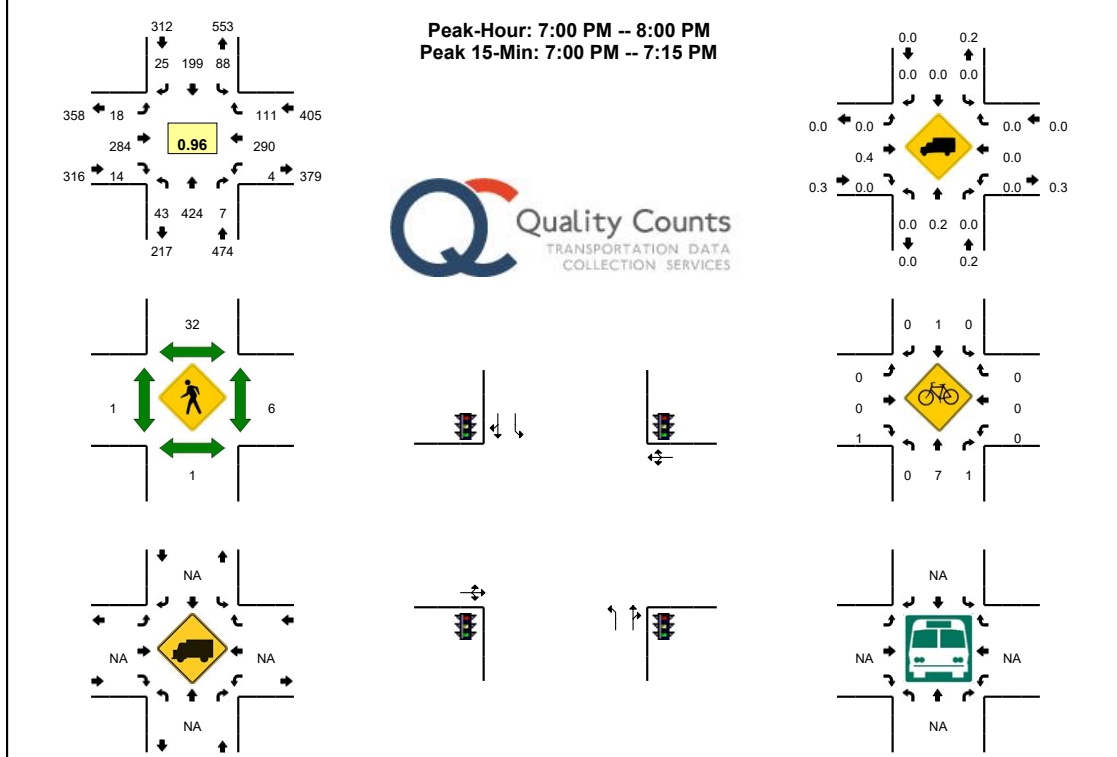
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Piney Branch Rd NW -- Blair Rd NW
CITY/STATE: Washington, DC

QC JOB #: 10695724
DATE: Thu, Jul 11 2013



15-Min Count Period	Piney Branch Rd NW (Northbound)				Piney Branch Rd NW (Southbound)				Blair Rd NW (Eastbound)				Blair Rd NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
Beginning At																		
7:00 PM	16	107	3	0	18	59	6	0	6	72	0	0	3	76	25	0	391	
7:15 PM	11	105	2	0	27	48	5	0	5	77	5	0	1	71	33	0	390	
7:30 PM	9	108	2	0	22	45	5	0	3	70	5	0	0	81	24	0	374	
7:45 PM	7	104	0	0	21	47	9	0	4	65	4	0	0	62	29	0	352	1507
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	64	428	12	0	72	236	24	0	24	288	0	0	12	304	100	0	1564	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		4				40				0				4			48	
Bicycles	0	2	1		0	0	0		0	0	0		0	0	0		3	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 7:42 AM

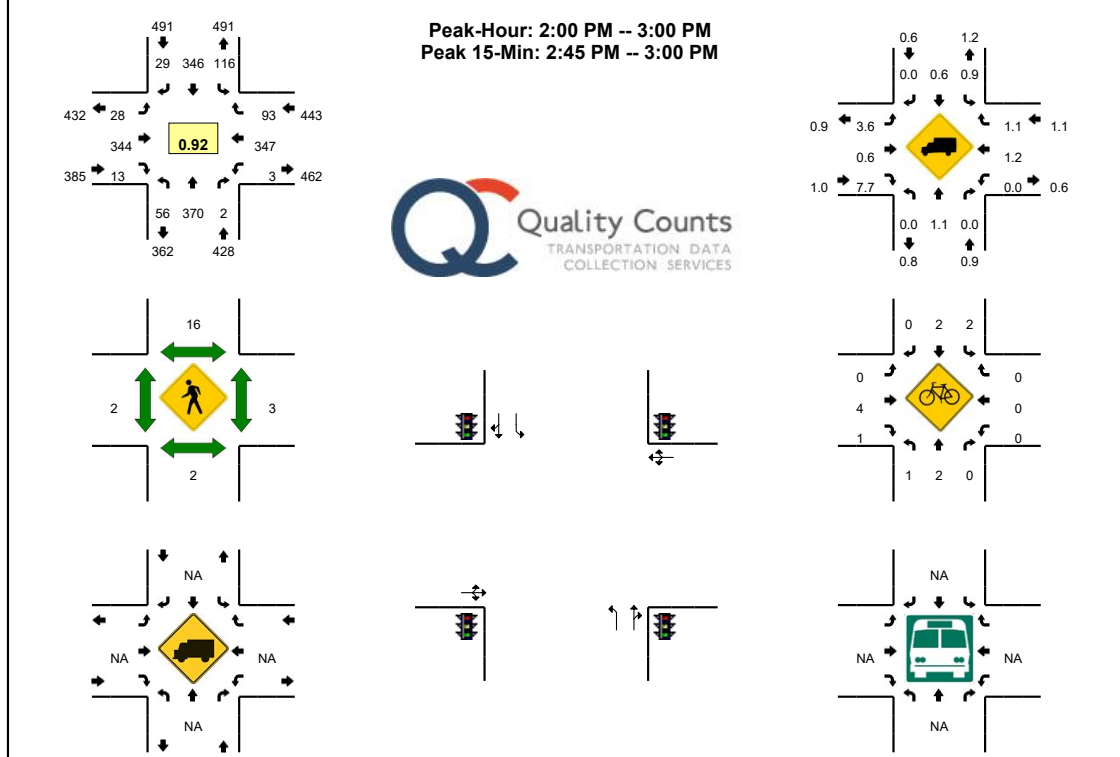
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Piney Branch Rd NW -- Blair Rd NW
CITY/STATE: Washington, DC

QC JOB #: 10695725
DATE: Sat, Jun 08 2013



15-Min Count Period	Piney Branch Rd NW (Northbound)				Piney Branch Rd NW (Southbound)				Blair Rd NW (Eastbound)				Blair Rd NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
1:00 PM	11	56	1	0	30	60	8	0	2	88	6	0	1	87	28	0	378	
1:15 PM	10	86	2	0	33	85	3	0	3	97	5	0	1	88	20	0	433	
1:30 PM	9	87	3	0	21	73	6	0	3	94	5	0	1	87	23	0	412	
1:45 PM	11	83	1	0	32	80	10	0	9	84	5	0	0	81	25	0	421	1644
2:00 PM	18	90	1	0	30	79	5	0	7	91	7	0	1	92	22	0	443	1709
2:15 PM	17	86	1	0	34	82	9	0	5	80	3	0	0	84	27	0	428	1704
2:30 PM	11	90	0	0	22	80	10	0	5	81	2	0	0	80	22	0	403	1695
2:45 PM	10	104	0	0	30	105	5	0	11	92	1	0	2	91	22	0	473	1747
3:00 PM	11	80	1	0	27	78	8	0	8	85	3	0	0	79	27	0	407	1711
3:15 PM	13	102	0	0	29	89	8	0	6	78	8	0	1	84	25	0	443	1726
3:30 PM	14	71	1	0	39	61	9	0	7	83	15	0	2	84	23	0	409	1732
3:45 PM	14	92	0	0	18	61	5	0	4	74	5	0	0	79	34	0	386	1645
4:00 PM	9	83	1	0	33	78	7	0	8	62	2	0	1	80	28	0	392	1630
4:15 PM	10	88	1	0	28	68	4	0	5	80	6	0	0	81	21	0	392	1579
4:30 PM	11	74	2	0	23	74	6	0	2	86	6	0	0	79	22	0	385	1555
4:45 PM	8	93	2	0	23	64	8	0	2	85	5	0	0	84	21	0	395	1564
5:00 PM	6	97	2	0	17	67	7	0	7	78	2	0	1	80	24	0	388	1560
5:15 PM	12	80	1	0	23	73	7	0	5	79	4	0	1	83	20	0	388	1556
5:30 PM	14	85	0	0	24	84	7	0	7	85	3	0	0	76	37	0	422	1593
5:45 PM	6	85	1	0	28	79	4	0	6	79	4	0	2	79	27	0	400	1598
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	40	416	0	0	120	420	20	0	44	368	4	0	8	364	88	0	1892	
Heavy Trucks	0	0	0	0	0	4	0	0	4	0	0	0	0	8	4	0	20	
Pedestrians		4				24				0				0			28	
Bicycles	1	1	0		0	0	0		0	0	0		0	0	0		2	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 7:42 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Sammat Engineering Services, LLC

PO BOX 780
 MT AIRY, MD 21771
www.sammateng.com

File Name : Alaska Avenue and Kalmia Road, NW
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 1

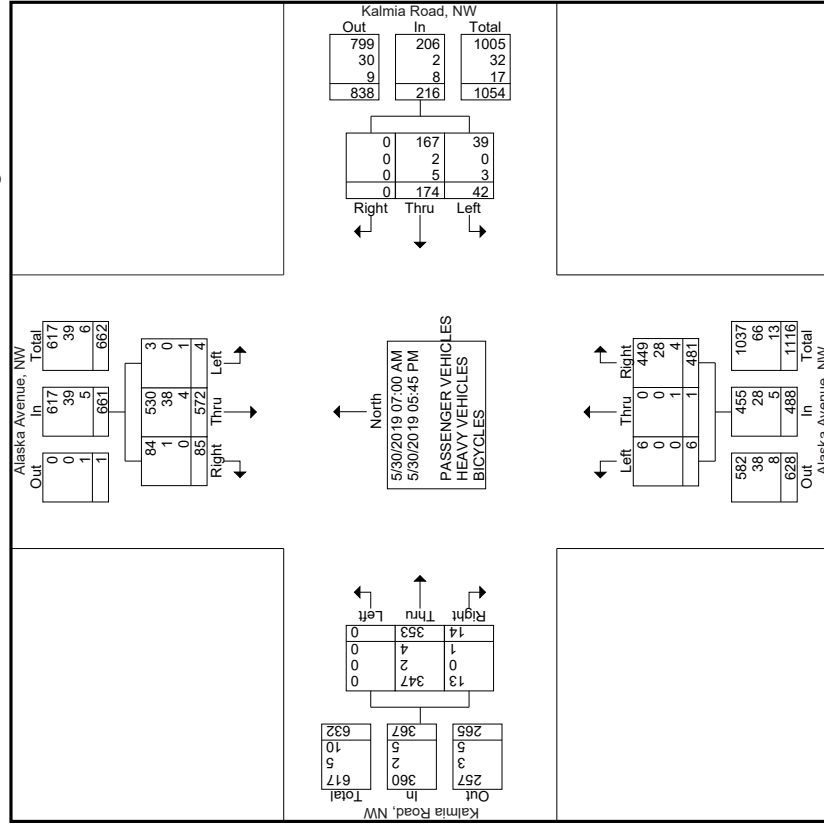
Groups Printed- PASSENGER VEHICLES - HEAVY VEHICLES - BICYCLES

Start Time	Alaska Avenue, NW										Kalmia Road, NW										Alaska Avenue, NW										Kalmia Road, NW														
	From North					From East					From South					From West					From North					From East					From South					From West									
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total
07:00 AM	2	61	0	2	63	0	11	1	3	12	14	1	1	3	16	0	9	0	0	9	0	9	0	0	9	0	9	0	0	9	8	100	8	100	108	0	7	123	130	130	7	123	130	130	130
07:15 AM	3	77	0	1	80	0	8	1	3	9	16	0	2	1	18	1	15	0	2	16	1	15	0	2	16	1	15	0	2	16	27	133	160	160	160	31	133	160	160	160					
07:30 AM	1	69	1	3	71	0	10	4	8	14	17	0	0	13	17	1	30	0	3	31	0	30	0	3	31	0	30	0	3	31	17	168	185	185	185	17	168	185	185	185					
07:45 AM	5	77	1	3	83	0	15	7	0	22	27	0	1	13	28	0	35	0	1	35	0	35	0	1	35	0	35	0	1	35	59	524	583	583	583	59	524	583	583	583					
Total	11	284	2	9	297	0	44	13	14	57	74	1	4	30	79	2	89	0	6	91	2	89	0	6	91	2	89	0	6	91	19	199	291	291	291	19	199	291	291	291					
08:00 AM	3	53	1	3	57	0	22	5	1	27	20	0	0	2	20	2	22	0	2	24	2	22	0	2	24	2	22	0	2	24	8	128	136	136	136	8	128	136	136	136					
08:15 AM	8	58	1	3	67	0	19	4	4	23	32	0	0	4	32	0	41	0	0	41	0	41	0	0	41	0	41	0	0	41	11	163	174	174	174	11	163	174	174	174					
*** BREAK ***																																													
Total	11	111	2	6	124	0	41	9	5	50	52	0	0	6	52	2	63	0	2	65	2	63	0	2	65	2	63	0	2	65	19	291	310	310	310	19	291	310	310	310					
*** BREAK ***																																													
04:30 PM	11	31	0	1	42	0	16	3	7	19	56	0	0	8	56	2	31	0	0	33	2	31	0	0	33	2	31	0	0	33	16	150	166	166	166	16	150	166	166	166					
04:45 PM	11	34	0	5	45	0	16	1	7	17	64	0	0	8	64	0	43	0	5	43	0	43	0	5	43	0	43	0	5	43	25	169	194	194	194	25	169	194	194	194					
Total	22	65	0	6	87	0	32	4	14	36	120	0	0	16	120	2	74	0	5	76	2	74	0	5	76	2	74	0	5	76	41	319	360	360	360	41	319	360	360	360					
05:00 PM	6	29	0	1	35	0	12	4	14	16	53	0	1	4	54	2	28	0	2	30	2	28	0	2	30	2	28	0	2	30	21	135	156	156	156	21	135	156	156	156					
05:15 PM	15	36	0	0	51	0	13	3	11	16	68	0	1	6	69	3	37	0	1	40	3	37	0	1	40	3	37	0	1	40	18	176	194	194	194	18	176	194	194	194					
05:30 PM	11	19	0	7	30	0	17	2	9	19	58	0	0	6	58	0	37	0	0	37	0	37	0	0	37	0	37	0	0	37	22	144	166	166	166	22	144	166	166	166					
05:45 PM	9	28	0	5	37	0	15	7	10	22	56	0	0	4	56	3	25	0	0	28	3	25	0	0	28	3	25	0	0	28	19	143	162	162	162	19	143	162	162	162					
Total	41	112	0	13	153	0	57	16	44	73	235	0	2	20	237	8	127	0	3	135	8	127	0	3	135	8	127	0	3	135	80	598	678	678	678	80	598	678	678	678					
Grand Total	85	572	4	34	661	0	174	42	77	216	481	1	6	72	488	14	353	0	16	367	14	353	0	16	367	14	353	0	16	367	199	1732	1931	1931	1931	199	1732	1931	1931	1931					
Approch %	12.9	86.5	0.6	0.6		0	80.6	19.4			98.6	0.2	1.2			3.8	96.2	0			3.8	96.2	0			10.3	89.7				10.3	89.7				10.3	89.7								
Total %	4.9	33	0.2		38.2	0	10	2.4		12.5	27.8	0.1	0.3		28.2	0.8	20.4	0		21.2	0.8	20.4	0		21.2	0	0				0	0				0	0								
% PASSENGER VEHICLES	84	530	3	100	651	0	167	39	100	283	449	0	6	100	527	13	347	0	100	376	13	347	0	100	376	0	0			1837	0	0			95.1										
% HEAVY VEHICLES	1	38	0		39	0	2	0		2	28	0	0		28	0	2	0		2	0	2	0		2	0	0			71	0	0			3.7										
% BICYCLES	0	4	1		5	0	5	3		8	4	1	0		5	1	4	0		5	1	4	0		5	0	0			23	0	0			1.2										
% BICYCLES	0	0.7	25	0	0.7	0	2.9	7.1	0	2.7	0.8	100	0	0	0.9	7.1	1.1	0	0	1.3	7.1	1.1	0	0	1.3	0	0			0	0	0			0										

Sammat Engineering Services, LLC

PO BOX 780
 MT AIRY, MD 21771
www.sammateng.com

File Name : Alaska Avenue and Kalmia Road, NW
 Site Code : 00000000
 Start Date : 5/30/2019
 Page No : 2



Sammat Engineering Services, LLC

PO BOX 780

MT AIRY, MD 21771

www.sammateng.com

File Name : Alaska Avenue and Kalmia Road, NW

Site Code : 00000000

Start Date : 5/30/2019

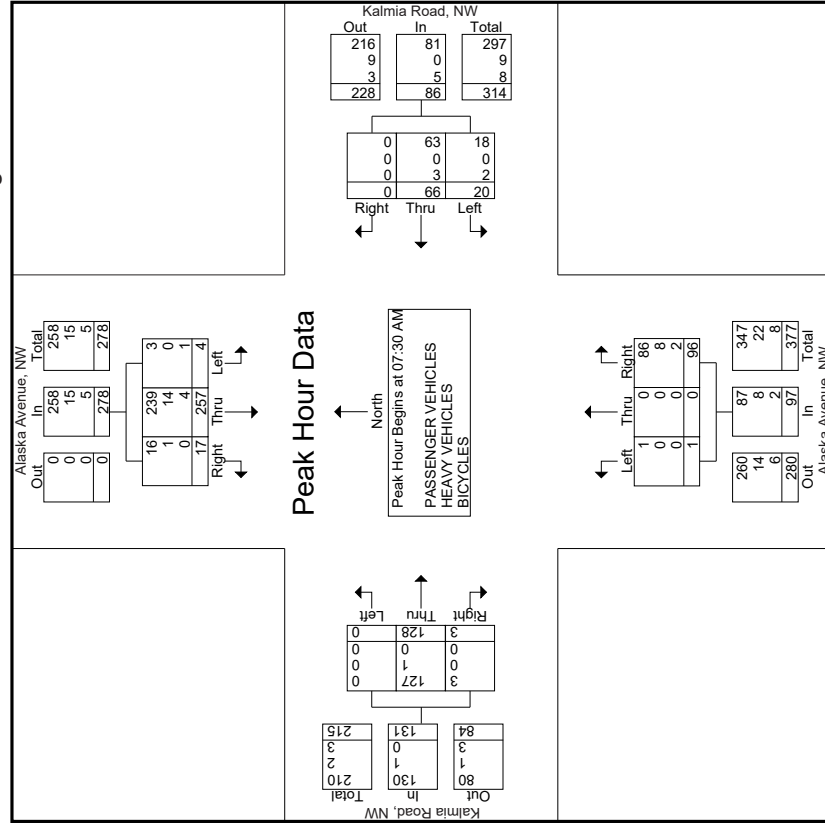
Page No : 3

Start Time	Alaska Avenue, NW				Kalmia Road, NW				Alaska Avenue, NW				Kalmia Road, NW			
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:30 AM																
07:30 AM	1	69	1	71	0	10	4	14	17	0	0	17	1	30	0	31
07:45 AM	5	77	1	83	0	15	7	22	27	0	1	28	0	35	0	35
08:00 AM	3	53	1	57	0	22	5	27	20	0	0	20	2	22	0	24
08:15 AM	8	58	1	67	0	19	4	23	32	0	0	32	0	41	0	41
Total Volume	17	257	4	278	0	66	20	86	96	0	1	97	3	128	0	131
% App. Total	6.1	92.4	1.4	100	0	23.3	7.1	30.6	34.3	0	0.3	35.1	1.1	48.7	0	50.0
PHF	.531	.834	1.00	.837	.000	.750	.714	.796	.750	.000	.250	.758	.375	.780	.000	.799
PASSENGER VEHICLES	16	239	3	258	0	63	18	81	86	0	1	87	3	127	0	130
% PASSENGER VEHICLES	94.1	93.0	75.0	92.8	0	95.5	90.0	94.2	89.6	0	100	89.7	100	99.2	0	99.2
HEAVY VEHICLES	1	14	0	15	0	0	0	0	8	0	0	8	0	1	0	1
% HEAVY VEHICLES	5.9	5.4	0	5.4	0	0	0	0	8.3	0	0	8.2	0	0.8	0	0.8
BICYCLES	0	4	1	5	0	3	2	5	2	0	0	2	0	0	0	0
% BICYCLES	0	1.6	25.0	1.8	0	4.5	10.0	5.8	2.1	0	0	2.1	0	0	0	0
Int. Total																

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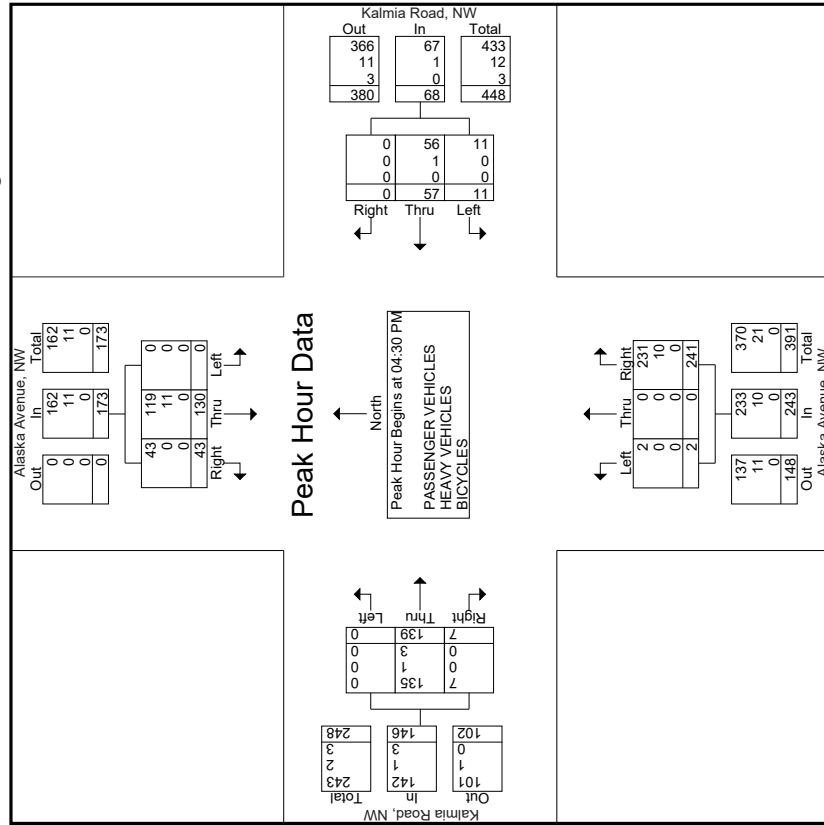
File Name : Alaska Avenue and Kalmia Road, NW
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Start Time	Alaska Avenue, NW			Kalmia Road, NW			Alaska Avenue, NW			Kalmia Road, NW			Int. Total									
	From North	From East	From South	From North	From East	From South	From North	From East	From South	From North	From East	From South										
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	App. Total	App. Total	App. Total	App. Total	App. Total		
04:30 PM	11	31	0	0	16	3	19	56	0	0	0	0	56	0	0	0	56	0	0	0	33	150
04:45 PM	11	34	0	0	16	1	17	64	0	0	0	0	64	0	0	0	64	0	0	0	43	169
05:00 PM	6	29	0	0	12	4	16	53	0	0	1	0	54	0	0	0	54	0	0	0	30	135
05:15 PM	15	36	0	0	13	3	16	68	0	0	1	0	69	0	0	0	69	0	0	0	40	176
Total Volume	43	130	0	0	57	11	68	241	0	0	2	0	243	0	0	0	243	0	0	0	146	630
% App. Total	24.9	75.1	0	0	83.8	16.2	0	99.2	0	0	0.8	0	0	100	0	0	100	0	0	0	23.2	100
PHF	.717	.903	.000	.848	.000	.891	.688	.886	.000	.500	.880	.000	.880	.583	.808	.000	.849	.000	.849	.000	.849	.895
PASSENGER VEHICLES	43	119	0	162	0	56	11	231	0	0	2	0	233	0	0	0	233	0	0	0	142	604
% PASSENGER VEHICLES	100	91.5	0	93.6	0	98.2	100	95.9	0	0	100	0	95.9	0	0	0	97.3	0	0	0	97.3	95.9
HEAVY VEHICLES	0	11	0	11	0	1	0	10	0	0	0	0	10	0	0	0	10	0	0	0	1	23
% HEAVY VEHICLES	0	8.5	0	6.4	0	1.8	0	4.1	0	0	0	0	4.1	0	0	0	4.1	0	0	0	0.7	3.7
BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
% BICYCLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.2	0.5

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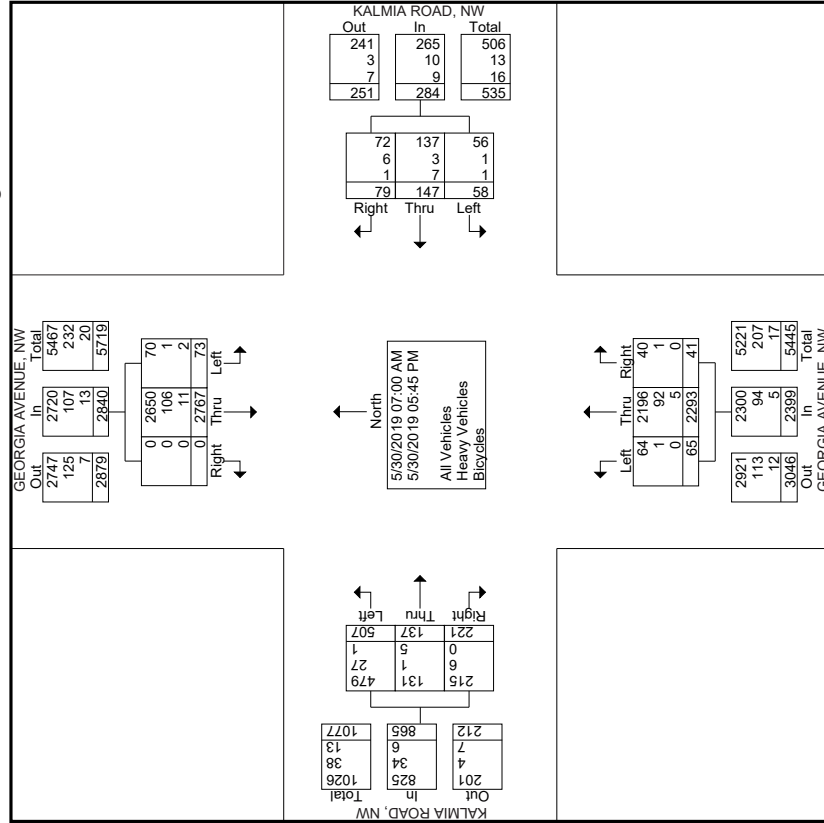
File Name : Georgia Avenue and Kalmia Road, NW
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Start Time	Groups Printed- All Vehicles - Heavy Vehicles - Bicycles																							
	GEORGIA AVENUE, NW				KALMIA ROAD, NW				GEORGIA AVENUE, NW				KALMIA ROAD, NW											
	From North		From East		From South		From West		From North		From East		From South		From West									
Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Excls. Total	Meda. Total	Int. Total		
07:00 AM	0	292	11	3	303	5	7	3	6	15	1	91	3	3	95	5	5	13	1	23	13	436	449	
07:15 AM	0	248	5	5	253	7	3	6	4	16	1	80	5	10	86	15	4	14	3	33	22	388	410	
07:30 AM	0	393	7	5	400	3	12	3	6	18	2	113	6	11	121	20	13	9	4	42	26	581	607	
07:45 AM	0	298	10	4	308	4	16	3	2	23	5	115	6	9	126	35	13	25	2	73	17	530	547	
Total	0	1231	33	17	1264	19	38	15	18	72	9	399	20	33	428	75	35	61	10	171	78	1935	2013	
08:00 AM	0	330	4	2	334	2	20	5	4	27	1	108	4	6	113	16	5	21	2	42	14	516	530	
08:15 AM	0	299	9	5	308	6	24	2	3	32	3	136	1	7	140	35	10	30	2	75	17	555	572	
*** BREAK ***																								
Total	0	629	13	7	642	8	44	7	7	59	4	244	5	13	253	51	15	51	4	117	31	1071	1102	
*** BREAK ***																								
04:30 PM	0	176	6	1	182	7	10	4	13	21	5	253	11	12	269	12	13	59	0	84	26	556	582	
04:45 PM	0	162	6	2	168	6	9	10	11	25	3	257	2	9	262	21	14	77	1	112	23	567	590	
Total	0	338	12	3	350	13	19	14	24	46	8	510	13	21	531	33	27	136	1	196	49	1123	1172	
05:00 PM	0	162	5	10	167	15	10	4	6	29	5	276	10	17	291	16	12	54	0	82	33	569	602	
05:15 PM	0	135	5	4	140	11	9	7	2	27	2	259	7	14	268	14	19	80	0	113	20	548	568	
05:30 PM	0	161	1	3	162	9	12	7	6	28	9	323	7	14	339	22	11	65	0	98	23	627	650	
05:45 PM	0	111	4	2	115	4	15	4	4	23	4	282	3	5	289	10	18	60	0	88	11	515	526	
Total	0	569	15	19	584	39	46	22	18	107	20	1140	27	50	1187	62	60	259	0	381	87	2259	2346	
Grand Total	0	2767	73	46	2840	79	147	58	67	284	41	2293	65	117	2399	221	137	507	15	865	245	6388	6633	
Approch %	0	97.4	2.6		27.8	51.8	20.4			1.7	95.6	2.7			1.7	25.5	15.8	58.6		13.5	3.7	96.3		
Total %	0	43.3	1.1		44.5	1.2	2.3	0.9		4.4	0.6	35.9	1		37.6	3.5	2.1	7.9		13.5	3.7	96.3		
All Vehicles	0	2650	70		2766	72	137	56		332	40	2196	64		2417	215	131	479		840	0	6355		
% Heavy Vehicles	0	95.8	95.9	100	95.8	91.1	93.2	96.6	100	94.6	97.6	95.8	98.5	100	96.1	97.3	95.6	94.5	100	95.5	0	0	95.8	
Heavy Vehicles	0	106	1		107	6	3	1		10	1	92	1		94	6	1	27		34	0	245		
% Heavy Vehicles	0	3.8	1.4	0	3.7	7.6	2	1.7	0	2.8	2.4	4	1.5	0	3.7	2.7	0.7	5.3	0	3.9	0	0	3.7	
Bicycles	0	11	2		13	1	7	1		9	0	5	0		5	0	5	1		6	0	0	33	
% Bicycles	0	0.4	2.7	0	0.5	1.3	4.8	1.7	0	2.6	0	0.2	0	0	0.2	0	3.6	0.2	0	0.7	0	0	0.5	

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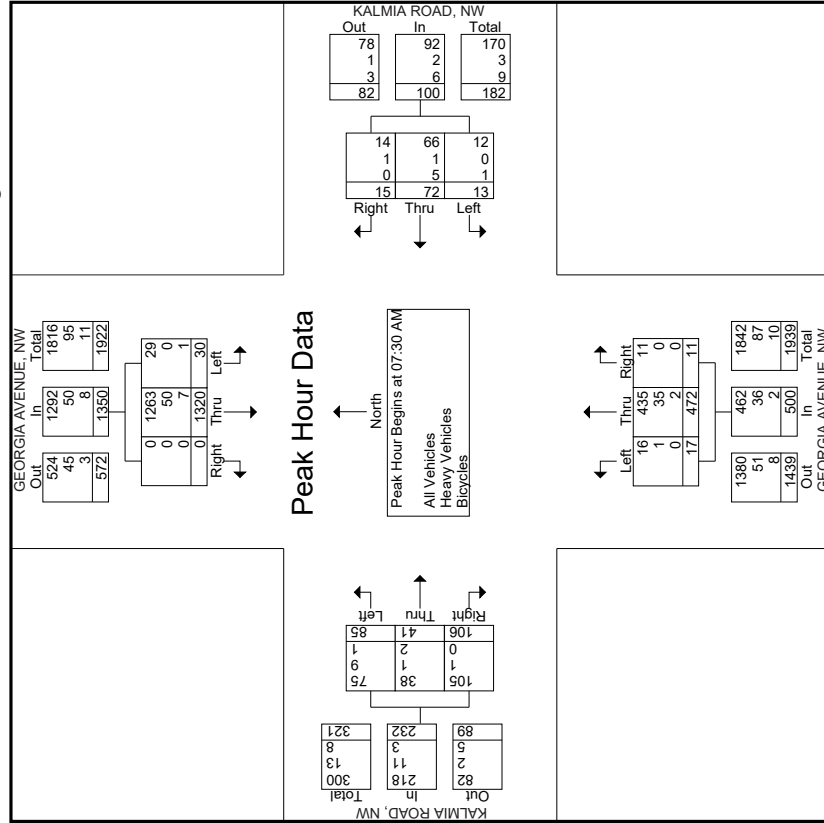
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Start Time	GEORGIA AVENUE, NW					KALMIA ROAD, NW					GEORGIA AVENUE, NW					KALMIA ROAD, NW					
	From North		From East			From South		From West			From North		From East			From South		From West			
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Inf. Total
07:30 AM	0	393	7	400	3	12	3	18	2	113	6	121	20	13	9	42	581				
07:45 AM	0	298	10	308	4	16	3	23	5	115	6	126	35	13	25	73	530				
08:00 AM	0	330	4	334	2	20	5	27	1	108	4	113	16	5	21	42	516				
08:15 AM	0	299	9	308	6	24	2	32	3	136	1	140	35	10	30	75	555				
Total Volume	0	1320	30	1350	15	72	13	100	11	472	17	500	106	41	85	232	2182				
% App. Total	0	97.8	2.2	.844	.625	.750	.650	.781	.550	.868	.708	.893	.757	.788	.708	.773	939				
All Vehicles	0	1263	29	1292	14	66	12	92	11	435	16	462	105	38	75	218	2064				
% All Vehicles	0	95.7	96.7	95.7	93.3	91.7	92.3	92.0	100	92.2	94.1	92.4	99.1	92.7	88.2	94.0	94.6				
Heavy Vehicles	0	50	0	50	1	1	0	2	0	35	1	36	1	1	9	11	99				
% Heavy Vehicles	0	3.8	0	3.7	6.7	1.4	0	2.0	0	7.4	5.9	7.2	0.9	2.4	10.6	4.7	4.5				
Bicycles	0	7	1	8	0	5	1	6	0	2	0	2	0	2	1	3	19				
% Bicycles	0	0.5	3.3	0.6	0	6.9	7.7	6.0	0	0.4	0	0.4	0	4.9	1.2	1.3	0.9				

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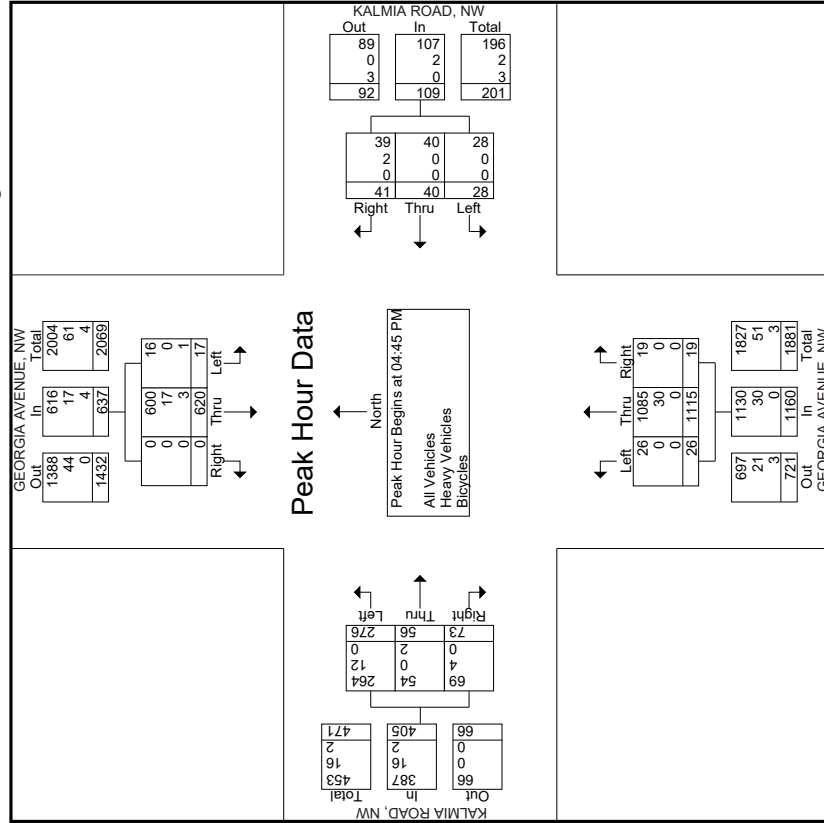
File Name : Georgia Avenue and Kalmia Road, NW
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Start Time	GEORGIA AVENUE, NW				KALMIA ROAD, NW				GEORGIA AVENUE, NW				KALMIA ROAD, NW			
	From North		From East		From South		From West		From North		From East		From South		From West	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:45 PM																
04:45 PM	0	162	6	168	6	9	10	25	3	257	2	262	21	14	77	112
05:00 PM	0	162	5	167	15	10	4	29	5	276	10	291	16	12	54	82
05:15 PM	0	135	5	140	11	9	7	27	2	259	7	268	14	19	80	113
05:30 PM	0	161	1	162	9	12	7	28	9	323	7	339	22	11	65	98
Total Volume	0	620	17	637	41	40	28	109	19	1115	26	1160	73	56	276	405
% App. Total	0	97.3	2.7	948	37.6	36.7	25.7	94.0	1.6	96.1	2.2	85.5	18	13.8	68.1	2311
PHF	.000	.957	.708	.948	.683	.833	.700	.940	.528	.863	.650	.855	.830	.737	.863	.896
All Vehicles	0	600	16	616	39	40	28	107	19	1085	26	1130	69	54	264	387
% All Vehicles	0	96.8	94.1	96.7	95.1	100	100	98.2	100	97.3	100	97.4	94.5	96.4	95.7	95.6
Heavy Vehicles	0	17	0	17	2	0	0	2	0	30	0	30	4	0	12	16
% Heavy Vehicles	0	2.7	0	2.7	4.9	0	0	1.8	0	2.7	0	2.6	5.5	0	4.3	4.0
Bicycles	0	3	1	4	0	0	0	0	0	0	0	0	0	2	0	2
% Bicycles	0	0.5	5.9	0.6	0	0	0	0	0	0	0	0	0	3.6	0	0.5

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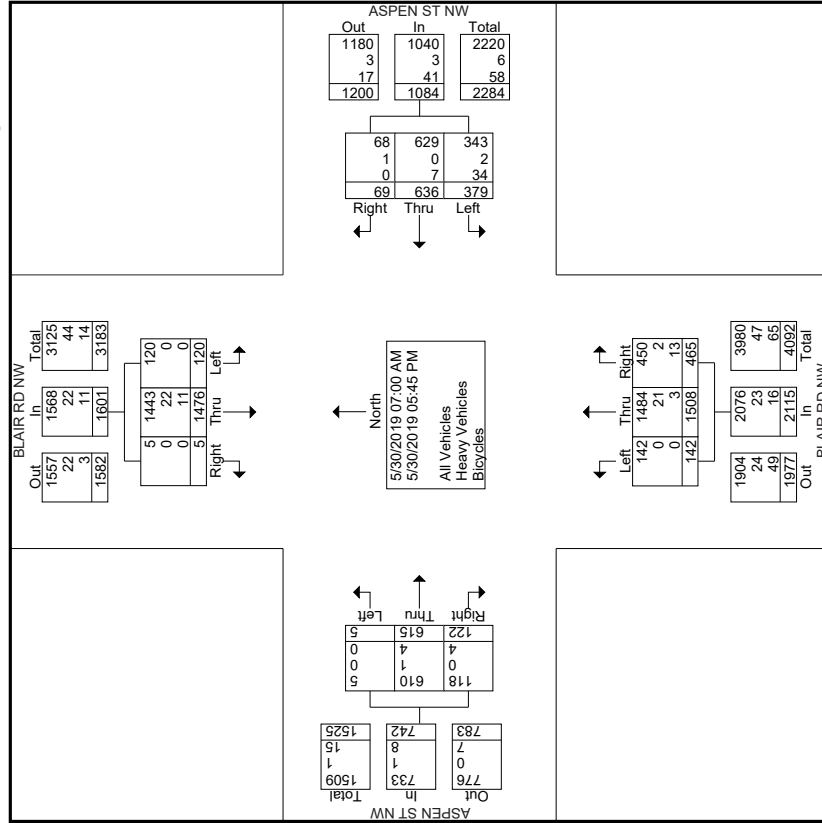
Groups Printed- All Vehicles - Heavy Vehicles - Bicycles

Start Time	BLAIR RD NW						ASPEN ST NW						BLAIR RD NW						ASPEN ST NW								
	From North			From East			From South			From West			From South			From West			From South			From West					
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Excls. Total	Incls. Total	Int. Total
07:00 AM	0	83	3	2	86	3	5	53	15	1	73	5	6	93	5	3	104	6	7	0	9	13	15	276	291		
07:15 AM	0	120	3	1	123	2	4	77	39	2	120	9	13	88	9	6	110	5	7	0	12	12	21	365	386		
07:30 AM	0	137	3	1	140	4	4	88	63	0	155	12	13	110	12	4	135	5	24	0	13	29	18	459	477		
07:45 AM	0	146	3	10	149	1	5	73	61	1	139	6	17	119	6	7	142	13	34	0	11	47	29	477	506		
Total	0	486	12	14	498	4	18	291	178	4	487	32	49	410	32	20	491	29	72	0	45	101	83	1577	1660		
08:00 AM	0	154	7	3	161	0	8	75	66	0	149	14	14	113	14	3	141	19	28	1	13	48	19	499	518		
08:15 AM	0	169	7	3	176	0	3	102	60	0	165	9	21	105	9	5	135	24	52	0	10	76	18	552	570		
*** BREAK ***																											
Total	0	323	14	6	337	0	11	177	126	0	314	35	218	23	8	276	43	80	1	23	124	37	1051	1088			
*** BREAK ***																											
04:30 PM	0	102	23	0	125	0	5	17	11	0	33	56	142	5	0	203	5	86	0	1	91	1	452	453			
04:45 PM	2	117	11	4	130	7	42	13	3	3	62	69	173	16	4	258	12	71	1	7	84	18	534	552			
Total	2	219	34	4	255	12	59	24	3	3	95	125	315	21	4	461	17	157	1	8	175	19	986	1005			
05:00 PM	0	113	13	3	126	12	26	8	8	1	46	69	131	15	2	215	10	64	0	4	74	10	461	471			
05:15 PM	1	148	19	5	168	5	25	12	0	42	63	63	141	17	3	221	7	78	1	5	86	13	517	530			
05:30 PM	0	106	13	3	119	6	35	12	2	53	51	172	19	3	242	8	86	2	10	96	18	510	528				
05:45 PM	2	81	15	2	98	5	23	19	2	47	73	121	15	5	209	8	78	0	11	86	20	440	460				
Total	3	448	60	13	511	28	109	51	5	188	256	565	66	13	887	33	306	3	30	342	61	1928	1989				
Grand Total	5	1476	120	37	1601	69	636	379	12	1084	465	1508	142	45	2115	122	615	5	106	742	200	5542	5742				
Apprch %	0.3	92.2	7.5			6.4	58.7	35			22	71.3	6.7			16.4	82.9	0.7									
Total %	0.1	26.6	2.2			1.2	11.5	6.8			8.4	27.2	2.6			38.2	2.2	11.1	0.1			13.4	3.5	96.5			
All Vehicles	5	1443	120	1600	68	629	343	1051	450	1484	142	2119	118	610	5	833	118	610	5	833	0	0	5603				
% Heavy Vehicles	0	22	0	0	22	1	0	2	3	3	2	21	0	0	23	0	1	0	0	2	0	0	0	50			
% Bicycles	0	11	0	0	16	0	7	34	42	13	3	0	0	0	1.1	0	0.2	0	0.9	0.2	0	0	0	0.9			
% Bicycles	0	0.7	0	13.5	1	0	1.1	9	8.3	3.8	2.8	0.2	0	4.4	0.8	3.3	0.7	0	4.7	1.5	0	0	0	1.5			

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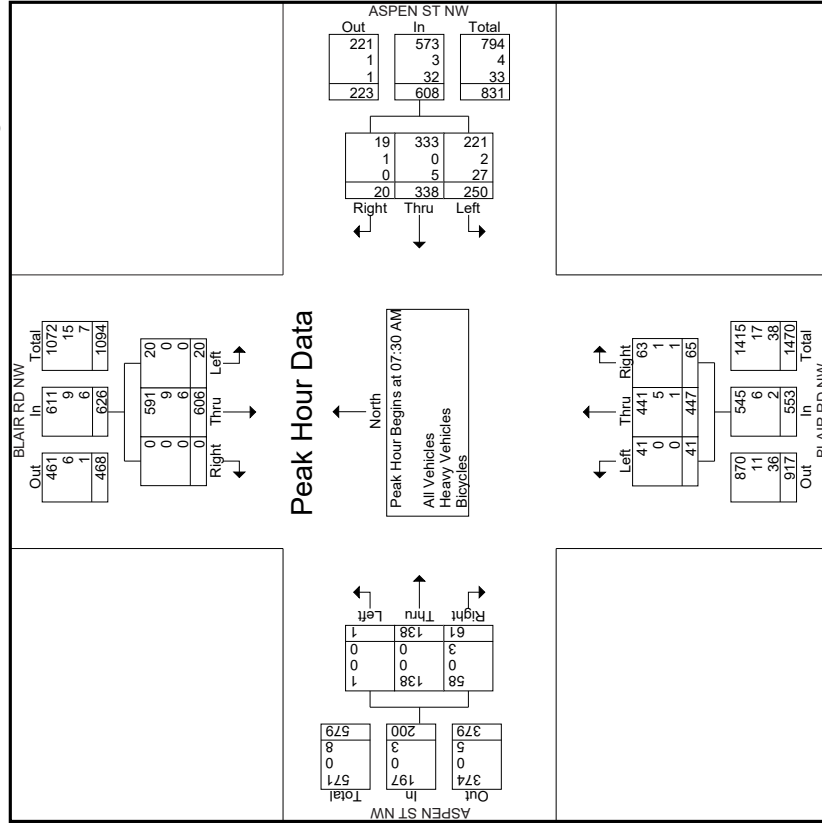


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Start Time	BLAIR RD NW			ASPEN ST NW			BLAIR RD NW			ASPEN ST NW			BLAIR RD NW			ASPEN ST NW			Int. Total		
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		App. Total	App. Total
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	137	3	4	88	63	13	110	12	135	5	24	0	29	459						
07:45 AM	0	146	3	5	73	61	17	119	6	142	13	34	0	47	477						
08:00 AM	0	154	7	8	75	66	14	113	14	141	19	28	1	48	499						
08:15 AM	0	169	7	3	102	60	21	105	9	135	24	52	0	76	552						
Total Volume	0	606	20	20	338	250	65	447	41	553	61	138	1	200	1987						
% App. Total	0	96.8	3.2	3.3	55.6	41.1	11.8	80.8	7.4	97.4	30.5	69	0.5	658	900						
PHF	.000	.896	.714	.625	.828	.947	.774	.939	.732	.974	.635	.663	.250	.658	900						
All Vehicles	0	591	20	19	333	221	63	441	41	545	58	138	1	197	1926						
% All Vehicles	0	97.5	100	95.0	98.5	88.4	96.9	98.7	100	98.6	95.1	100	100	98.5	96.9						
Heavy Vehicles	0	9	0	1	0	2	1	5	0	6	0	0	0	0	18						
% Heavy Vehicles	0	1.5	0	5.0	0	0.8	1.5	1.1	0	1.1	0	0	0	0	0.9						
Bicycles	0	6	0	0	5	27	1	1	0	2	3	0	0	3	43						
% Bicycles	0	1.0	0	0	1.5	10.8	1.5	0.2	0	0.4	4.9	0	0	1.5	2.2						

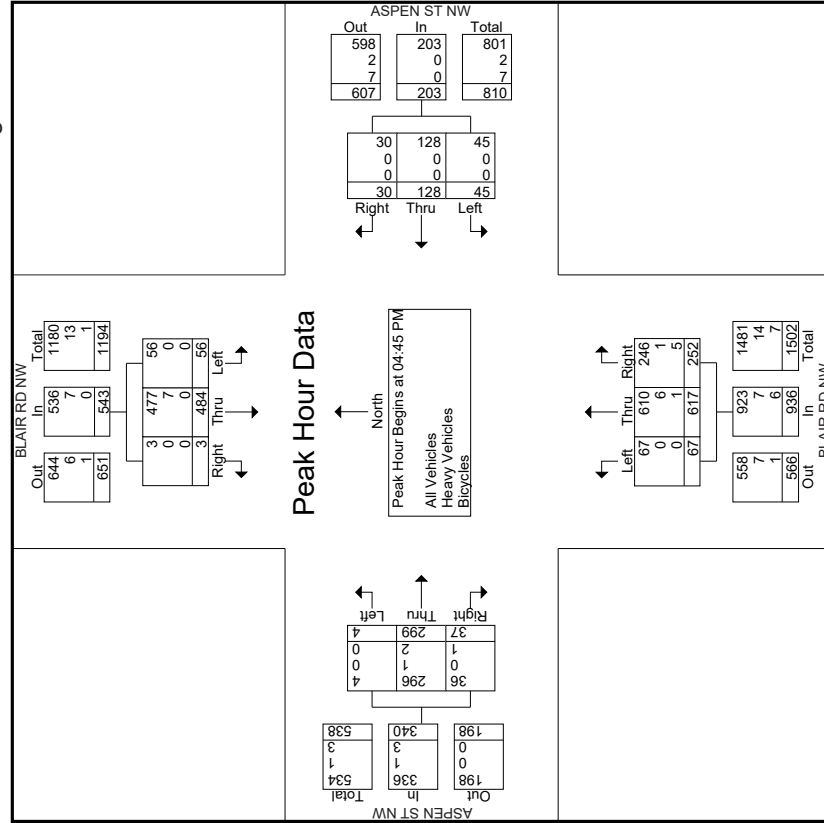


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Start Date : 5/30/2019
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Start Time	BLAIR RD NW			ASPEN ST NW			BLAIR RD NW			ASPEN ST NW			BLAIR RD NW			ASPEN ST NW			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		App. Total
04:45 PM	2	117	11	7	42	13	69	173	16	258	12	71	1	84	534					
05:00 PM	0	113	13	12	26	8	69	131	15	215	10	64	0	74	461					
05:15 PM	1	148	19	5	25	12	63	141	17	221	7	78	1	86	517					
05:30 PM	0	106	13	6	35	12	51	172	19	242	8	86	2	96	510					
Total Volume	3	484	56	30	128	45	252	617	67	936	37	299	4	340	2022					
% App. Total	0.6	89.1	10.3	14.8	63.1	22.2	26.9	65.9	7.2	93.6	10.9	87.9	1.2	340	2022					
PHF	.375	.818	.737	.625	.762	.865	.913	.892	.882	.907	.771	.869	.500	.885	.947					
All Vehicles	3	477	56	30	128	45	246	610	67	923	36	296	4	336	1998					
% All Vehicles	100	98.6	100	100	100	100	97.6	98.9	100	98.6	97.3	99.0	100	98.8	98.8					
Heavy Vehicles	0	7	0	0	0	0	1	6	0	7	0	1	0	1	15					
% Heavy Vehicles	0	1.4	0	0	0	0	0.4	1.0	0	0.7	0	0.3	0	0.3	0.7					
Bicycles	0	0	0	0	0	0	5	1	0	6	1	2	0	3	9					
% Bicycles	0	0	0	0	0	0	2.0	0.2	0	0.6	2.7	0.7	0	0.9	0.4					

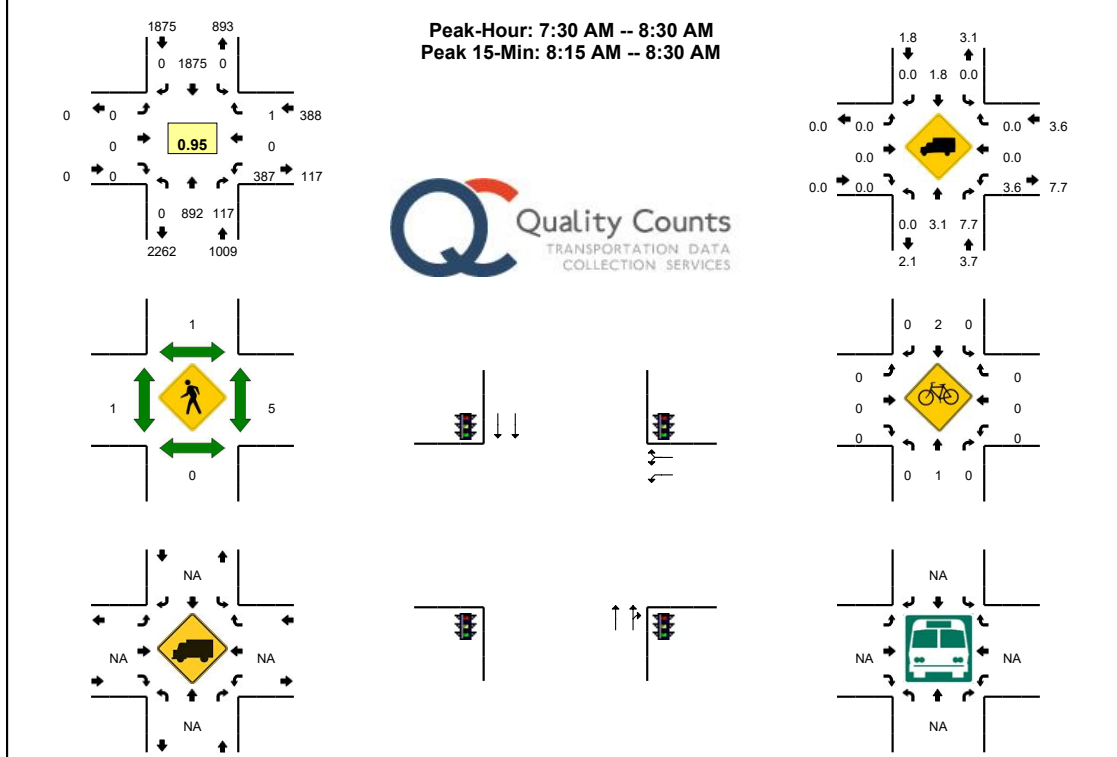


Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 16th St -- Alaska Ave NW
CITY/STATE: Washington, DC

QC JOB #: 10695022
DATE: Tue, Feb 19 2013



15-Min Count Period Beginning At	16th St (Northbound)				16th St (Southbound)				Alaska Ave NW (Eastbound)				Alaska Ave NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	103	10	0	0	322	0	0	0	0	0	0	46	0	0	0	481	
6:45 AM	0	120	9	0	0	337	0	0	0	0	0	0	42	0	0	0	508	
7:00 AM	0	131	8	0	0	414	0	0	0	0	0	0	51	0	1	0	605	
7:15 AM	0	177	23	0	0	508	0	0	0	0	0	0	104	0	1	0	813	2407
7:30 AM	0	184	23	0	0	487	0	0	0	0	0	0	110	0	1	0	805	2731
7:45 AM	0	217	34	0	0	424	0	0	0	0	0	0	105	0	0	0	780	3003
8:00 AM	0	237	26	0	0	459	0	0	0	0	0	0	100	0	0	0	822	3220
8:15 AM	0	254	34	0	0	505	0	0	0	0	0	0	72	0	0	0	865	3272
8:30 AM	0	225	36	0	0	380	0	0	0	0	0	0	59	0	1	0	701	3168
8:45 AM	0	199	36	0	0	371	0	0	0	0	0	0	59	0	0	0	665	3053
9:00 AM	0	196	23	0	0	357	0	0	0	0	0	0	45	0	1	0	622	2853
9:15 AM	0	156	27	0	0	325	0	0	0	0	0	0	40	0	1	0	549	2537

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1016	136	0	0	2020	0	0	0	0	0	0	288	0	0	0	3460
Heavy Trucks	0	32	8		0	36	0		0	0	0		12	0	0		88
Pedestrians		0				0				0				12			12
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 8/14/2013 4:12 AM

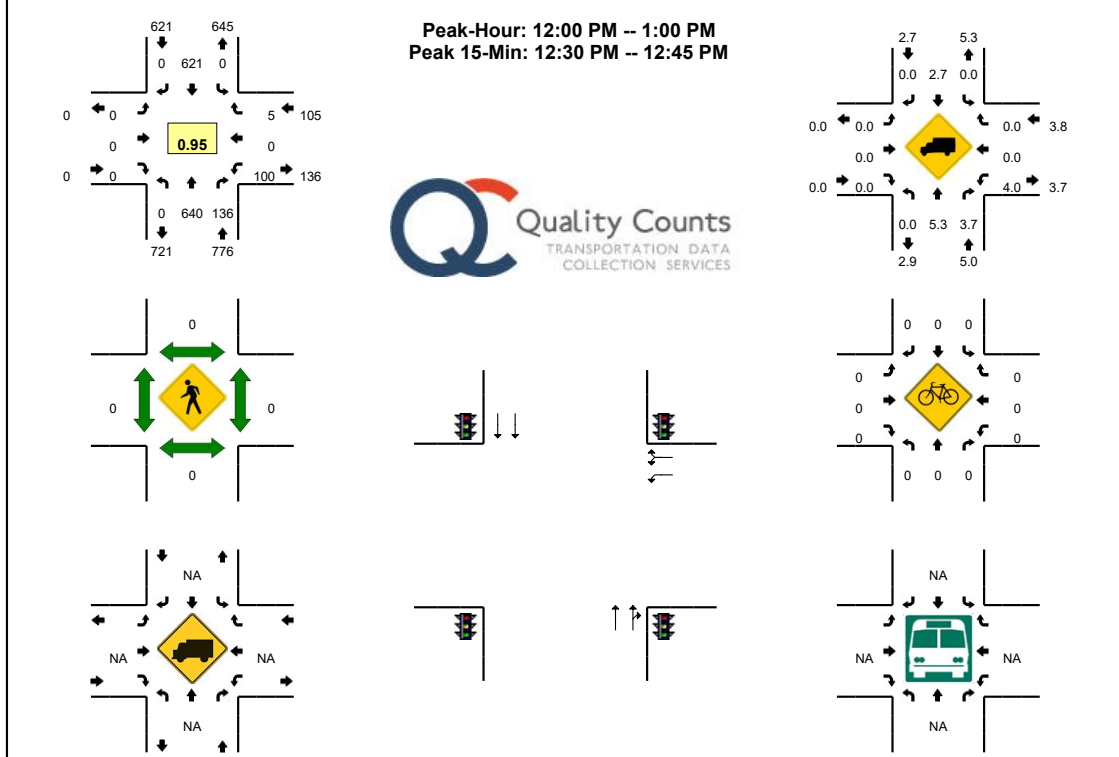
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 16th St -- Alaska Ave NW
CITY/STATE: Washington, DC

QC JOB #: 10695023
DATE: Tue, Feb 19 2013



15-Min Count Period	16th St (Northbound)				16th St (Southbound)				Alaska Ave NW (Eastbound)				Alaska Ave NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	142	23	0	0	187	0	0	0	0	0	0	16	0	0	0	368	
11:15 AM	0	118	25	0	0	182	0	0	0	0	0	0	25	0	0	0	350	
11:30 AM	0	151	17	0	0	171	0	0	0	0	0	0	26	0	0	0	365	
11:45 AM	0	131	28	0	0	149	0	0	0	0	0	0	19	0	0	0	327	1410
12:00 PM	0	159	21	0	0	183	0	0	0	0	0	0	25	0	2	0	390	1432
12:15 PM	0	170	28	0	0	146	0	0	0	0	0	0	33	0	2	0	379	1461
12:30 PM	0	156	48	0	0	164	0	0	0	0	0	0	27	0	0	0	395	1491
12:45 PM	0	155	39	0	0	128	0	0	0	0	0	0	15	0	1	0	338	1502
Peak 15-Min Flowrates																		
	Northbound				Southbound				Eastbound				Westbound					
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Total	
All Vehicles	0	624	192	0	0	656	0	0	0	0	0	0	108	0	0	0	1580	
Heavy Trucks	0	36	4		0	16	0		0	0	0		4	0	0		60	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 4:12 AM

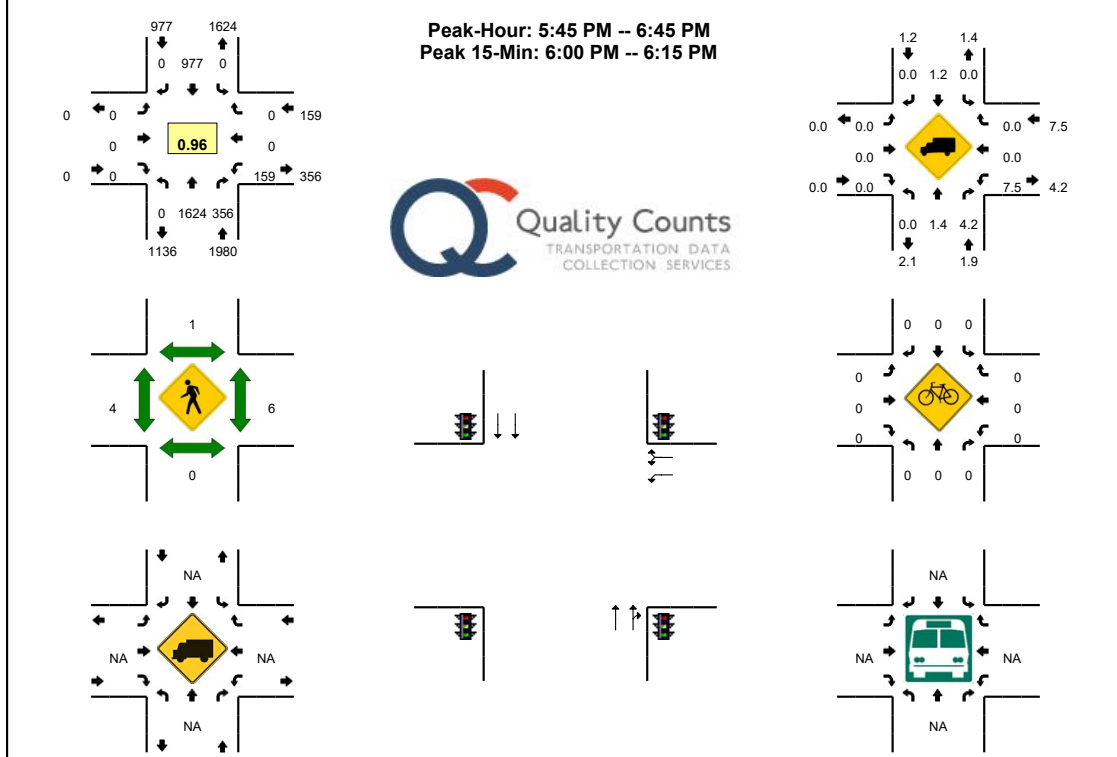
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 16th St -- Alaska Ave NW
CITY/STATE: Washington, DC

QC JOB #: 10695024
DATE: Tue, Feb 19 2013



15-Min Count Period Beginning At	16th St (Northbound)				16th St (Southbound)				Alaska Ave NW (Eastbound)				Alaska Ave NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:30 PM	0	298	55	0	0	182	0	0	0	0	0	0	28	0	4	0	567	
3:45 PM	0	320	50	0	0	179	0	0	0	0	0	0	19	0	0	0	568	
4:00 PM	0	330	42	0	0	152	0	0	0	0	0	0	27	0	2	0	553	
4:15 PM	0	403	72	0	0	198	0	0	0	0	0	0	21	0	1	0	695	2383
4:30 PM	0	375	67	0	0	182	0	0	0	0	0	0	36	0	1	0	661	2477
4:45 PM	0	358	63	0	0	192	0	0	0	0	0	0	28	0	1	0	642	2551
5:00 PM	0	365	74	0	0	209	0	0	0	0	0	0	45	0	2	0	695	2693
5:15 PM	0	393	77	0	0	257	0	0	0	0	0	0	39	0	2	0	768	2766
5:30 PM	0	420	84	0	0	211	0	0	0	0	0	0	42	0	0	0	757	2862
5:45 PM	0	419	95	0	0	213	0	0	0	0	0	0	35	0	0	0	762	2982
6:00 PM	0	425	84	0	0	249	0	0	0	0	0	0	50	0	0	0	808	3095
6:15 PM	0	392	92	0	0	261	0	0	0	0	0	0	42	0	0	0	787	3114
6:30 PM	0	388	85	0	0	254	0	0	0	0	0	0	32	0	0	0	759	3116
6:45 PM	0	354	66	0	0	197	0	0	0	0	0	0	33	0	0	0	650	3004
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	1700	336	0	0	996	0	0	0	0	0	0	200	0	0	0	3232	
Heavy Trucks	0	12	16	0	0	20	0	0	0	0	0	0	8	0	0	0	56	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 4:12 AM

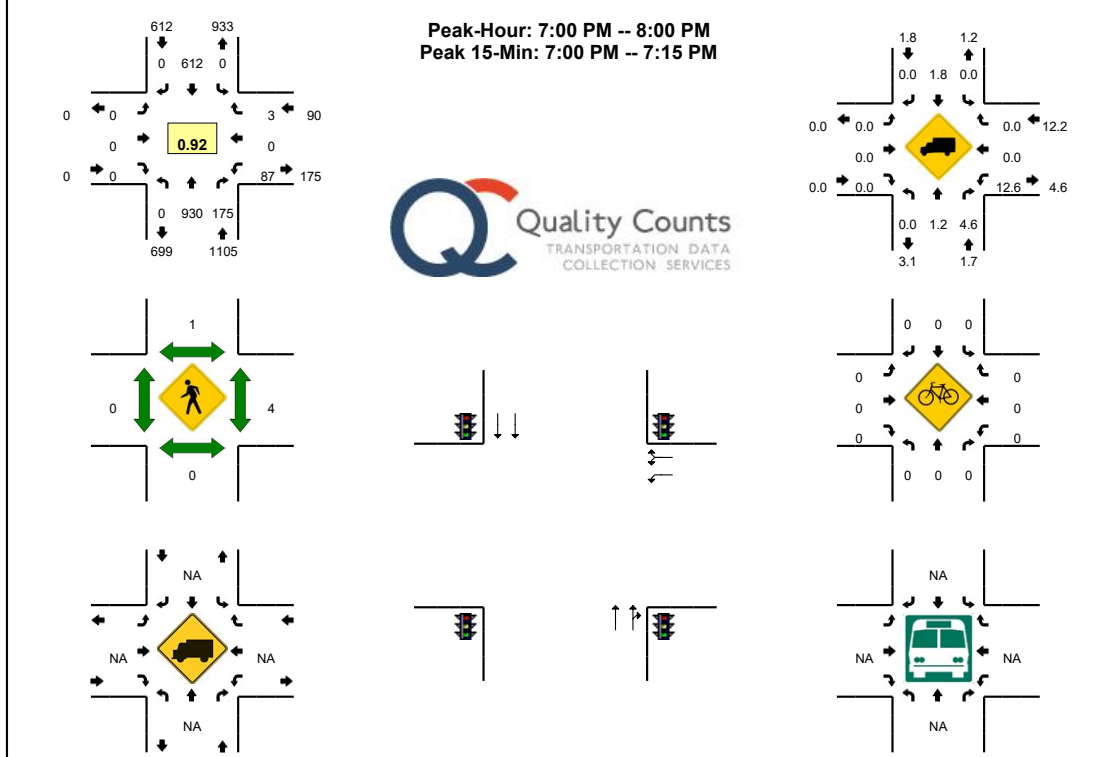
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 16th St -- Alaska Ave NW
CITY/STATE: Washington, DC

QC JOB #: 10695045
DATE: Tue, Feb 19 2013



15-Min Count Period	16th St (Northbound)				16th St (Southbound)				Alaska Ave NW (Eastbound)				Alaska Ave NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
Beginning At																		
7:00 PM	0	263	41	0	0	168	0	0	0	0	0	0	20	0	0	0	492	
7:15 PM	0	232	57	0	0	173	0	0	0	0	0	0	23	0	1	0	486	
7:30 PM	0	224	40	0	0	107	0	0	0	0	0	0	23	0	2	0	396	
7:45 PM	0	211	37	0	0	164	0	0	0	0	0	0	21	0	0	0	433	1807
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	1052	164	0	0	672	0	0	0	0	0	0	80	0	0	0	1968	
Heavy Trucks	0	8	8		0	16	0		0	0	0		20	0	0		52	
Pedestrians		0				0				0				4			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 4:12 AM

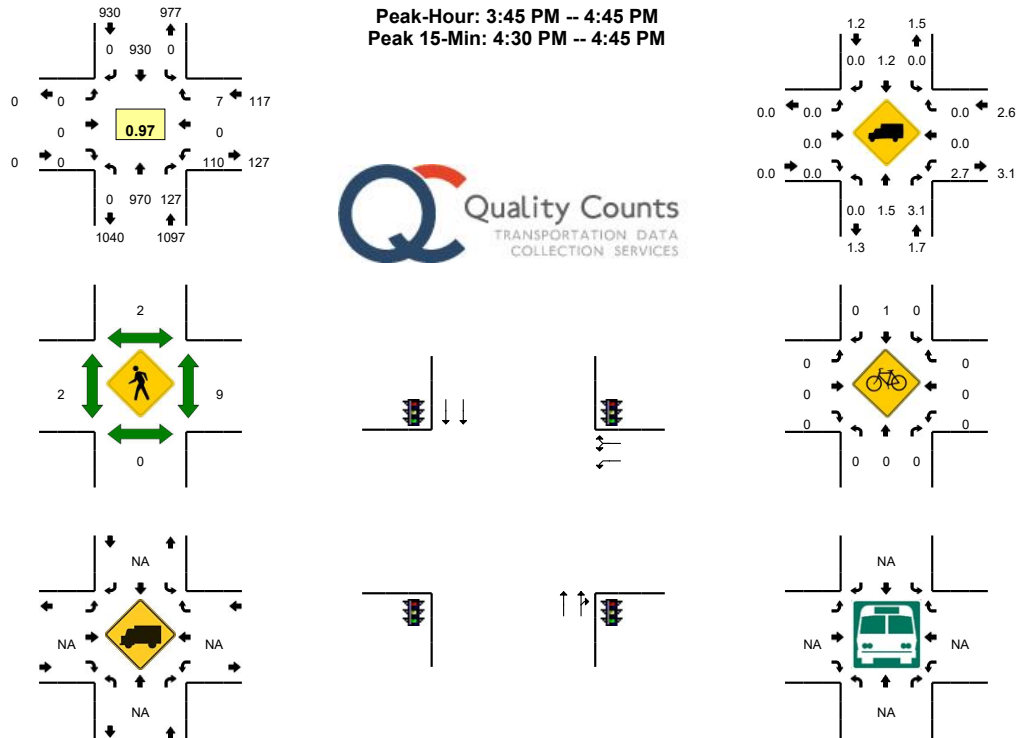
SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 16th St -- Alaska Ave NW
CITY/STATE: Washington, DC

QC JOB #: 10695035
DATE: Sat, May 18 2013



15-Min Count Period Beginning At	16th St (Northbound)				16th St (Southbound)				Alaska Ave NW (Eastbound)				Alaska Ave NW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
1:00 PM	0	192	28	0	0	218	0	0	0	0	0	0	18	0	1	0	457	
1:15 PM	0	182	26	0	1	214	0	0	0	0	0	0	29	0	3	0	455	
1:30 PM	0	299	35	0	0	215	0	0	0	0	0	0	34	0	3	0	586	
1:45 PM	0	229	28	0	0	228	0	0	0	0	0	0	32	0	2	0	519	2017
2:00 PM	0	229	24	0	0	192	0	0	0	0	0	0	26	0	1	0	472	2032
2:15 PM	0	245	29	0	0	211	0	0	0	0	0	0	30	0	1	0	516	2093
2:30 PM	0	264	31	0	0	222	0	0	0	0	0	0	36	0	1	0	554	2061
2:45 PM	0	237	33	2	0	210	0	0	0	0	0	0	20	0	3	0	505	2047
3:00 PM	0	245	26	1	0	219	0	0	0	0	0	0	30	0	1	0	522	2097
3:15 PM	0	236	36	0	0	207	0	0	0	0	0	0	21	0	1	0	501	2082
3:30 PM	0	252	31	0	0	203	0	0	0	0	0	0	30	0	2	0	518	2046
3:45 PM	0	243	30	0	0	206	0	0	0	0	0	0	27	0	2	0	508	2049
4:00 PM	0	250	38	0	0	227	0	0	0	0	0	0	23	0	3	0	541	2068
4:15 PM	0	244	25	0	0	235	0	0	0	0	0	0	38	0	0	0	542	2109
4:30 PM	0	233	34	0	0	262	0	0	0	0	0	0	22	0	2	0	553	2144
4:45 PM	0	224	30	0	0	220	0	0	0	0	0	0	23	0	1	0	498	2134
5:00 PM	0	236	35	0	0	202	0	0	0	0	0	0	27	0	0	0	500	2093
5:15 PM	0	235	25	0	0	238	0	0	0	0	0	0	38	0	0	0	536	2087
5:30 PM	0	221	36	0	0	222	0	0	0	0	0	0	35	0	0	0	514	2048
5:45 PM	0	242	36	1	1	257	0	0	0	0	0	0	24	0	0	0	561	2111
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	932	136	0	0	1048	0	0	0	0	0	0	88	0	8	0	2212	
Heavy Trucks	0	8	8	0	0	4	0	0	0	0	0	0	0	0	0	0	20	
Pedestrians		0				0				0				16			16	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 8/14/2013 4:12 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Sammat Engineering Services, LLC

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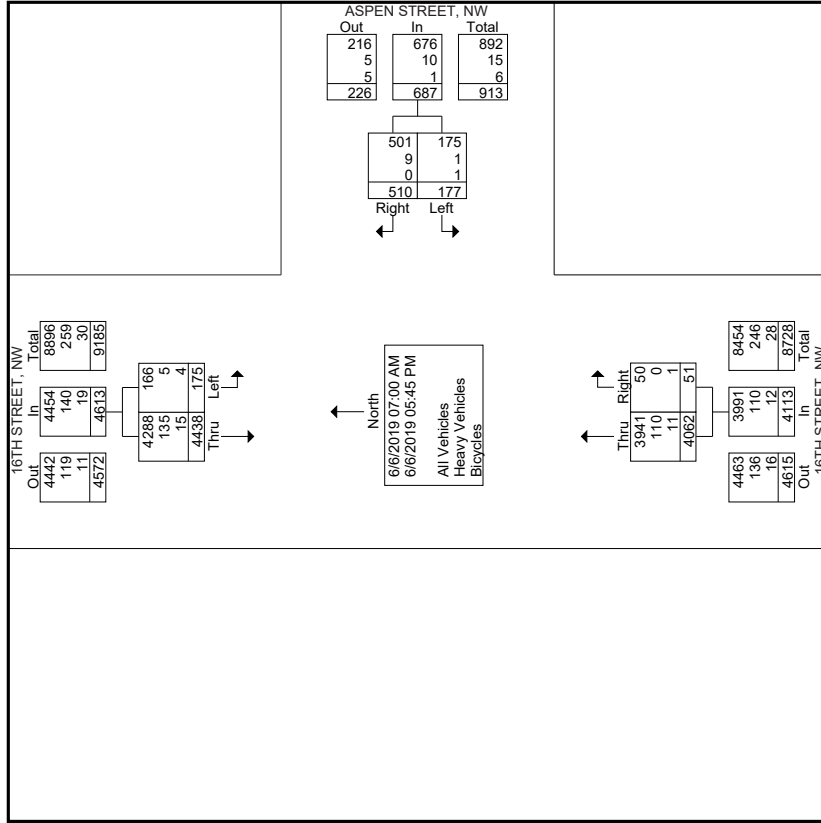
File Name : 16th Street and Aspen Street, NW
 Site Code : 00000000
 Start Date : 6/6/2019
 Page No : 1

		16TH STREET, NW							ASPEN STREET, NW							16TH STREET, NW																
		From North			From East				From South			From East				From South			From North													
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Right	Thru	Peds	App. Total	Exclu. Total	Inclu. Total	Inf. Total	Thru	Left	Peds	App. Total	Right	Thru	Right	Thru	Peds	App. Total	Exclu. Total	Inclu. Total	Inf. Total		
07:00 AM	496	15	0	511	10	11	2	21	2	189	2	189	0	191	2	723	725															
07:15 AM	552	17	0	569	16	20	2	36	0	206	0	206	0	206	2	811	813															
07:30 AM	437	8	7	445	20	26	4	46	6	191	0	197	0	197	11	688	699															
07:45 AM	394	15	2	409	25	34	2	59	8	213	0	221	0	221	4	689	693															
Total	1879	55	9	1934	71	91	10	162	16	799	0	815	0	815	19	2911	2930															
08:00 AM	397	19	2	416	18	21	10	39	14	292	0	306	0	306	12	761	773															
08:15 AM	362	8	4	370	27	31	5	58	1	231	0	232	0	232	9	660	669															
*** BREAK ***																																
Total	759	27	6	786	45	52	15	97	15	523	0	538	0	538	21	1421	1442															
*** BREAK ***																																
04:30 PM	294	18	0	312	60	8	1	68	4	411	0	415	0	415	1	795	796															
04:45 PM	322	14	0	336	66	6	2	72	5	467	1	472	1	472	3	880	883															
Total	616	32	0	648	126	14	3	140	9	878	1	887	1	887	4	1675	1679															
05:00 PM	328	9	0	337	54	5	0	59	3	477	0	480	0	480	0	876	876															
05:15 PM	262	20	0	282	73	6	2	79	2	453	0	455	0	455	2	816	818															
05:30 PM	337	17	0	354	66	4	1	70	0	493	0	493	0	493	1	917	918															
05:45 PM	257	15	1	272	75	5	4	80	6	439	0	445	0	445	5	797	802															
Total	1184	61	1	1245	268	20	7	288	11	1862	0	1873	0	1873	8	3406	3414															
Grand Total	4438	175	16	4613	510	177	35	687	51	4062	1	4113	1	4113	52	9413	9465															
Approach %	96.2	3.8		74.2	74.2	25.8		7.3	1.2	98.8		43.7		43.7	0.5	99.5																
Total %	47.1	1.9		49	5.4	1.9		7.3	0.5	43.2		43.7		43.7	0.5	99.5																
% All Vehicles	4288	166		4470	501	175		710	50	3941		3991		3991	0	9171																
% Heavy Vehicles	96.6	94.9	100	96.6	98.2	98.9	97.1	98.3	98	97	0	97	0	97	0	96.9																
Heavy Vehicles	135	5		140	9	1		10	0	110		111		111	0	261																
% Heavy Vehicles	3	2.9	0	3	1.8	0.6	0	1.4	0	2.7	100	2.7	0	2.7	0	2.8																
Bicycles	15	4		19	0	1		2	1	11		12		12	0	33																
% Bicycles	0.3	2.3	0	0.4	0	0.6	2.9	0.3	2	0.3	0	0.3	0	0.3	0	0.3																

Sammat Engineering Services, LLC

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File Name : 16th Street and Aspen Street, NW
 Site Code : 00000000
 Start Date : 6/6/2019
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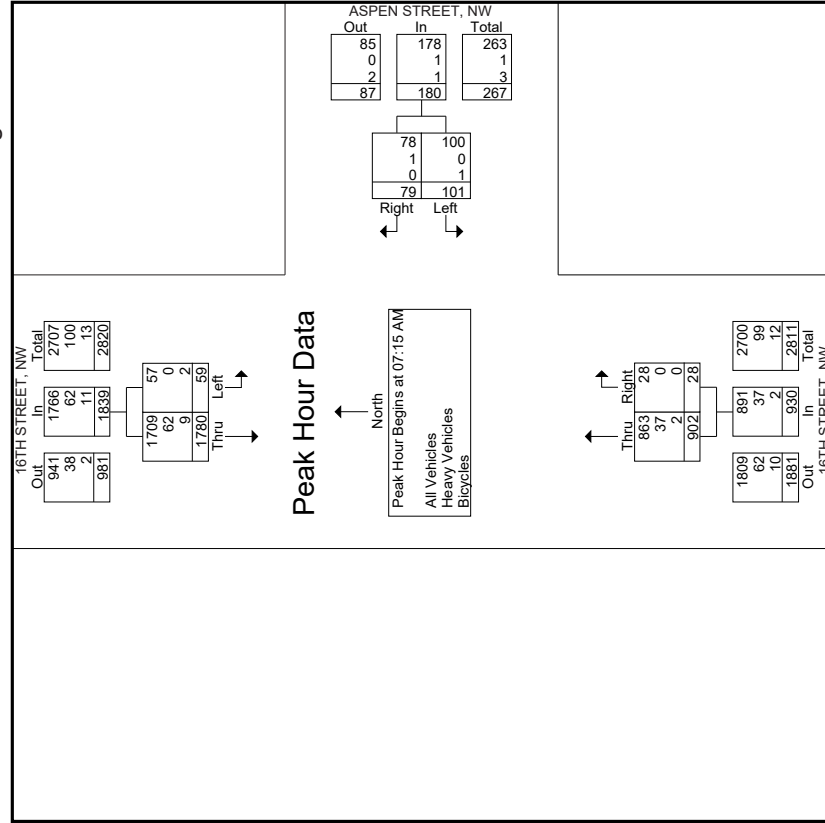


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File Name : 16th Street and Aspen Street, NW
 Site Code : 00000000
 Start Date : 6/6/2019
 Page No : 3

Start Time	16TH STREET, NW			ASPEN STREET, NW			16TH STREET, NW			
	Thru	From North	App. Total	Right	From East	App. Total	Right	From South	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	552	17	569	16	20	36	0	206	206	811
07:30 AM	437	8	445	20	26	46	6	191	197	688
07:45 AM	394	15	409	25	34	59	8	213	221	689
08:00 AM	397	19	416	18	21	39	14	292	306	761
Total Volume	1780	59	1839	79	101	180	28	902	930	2949
% App. Total	96.8	3.2		43.9	56.1		3	97		
PHF	.806	.776	.808	.790	.743	.763	.500	.772	.760	.909
All Vehicles	1709	57	1766	78	100	178	28	863	891	2835
% All Vehicles	96.0	96.6	96.0	98.7	99.0	98.9	100	95.7	95.8	96.1
Heavy Vehicles	62	0	62	1	0	1	0	37	37	100
% Heavy Vehicles	3.5	0	3.4	1.3	0	0.6	0	4.1	4.0	3.4
Bicycles	9	2	11	0	1	1	0	2	2	14
% Bicycles	0.5	3.4	0.6	0	1.0	0.6	0	0.2	0.2	0.5



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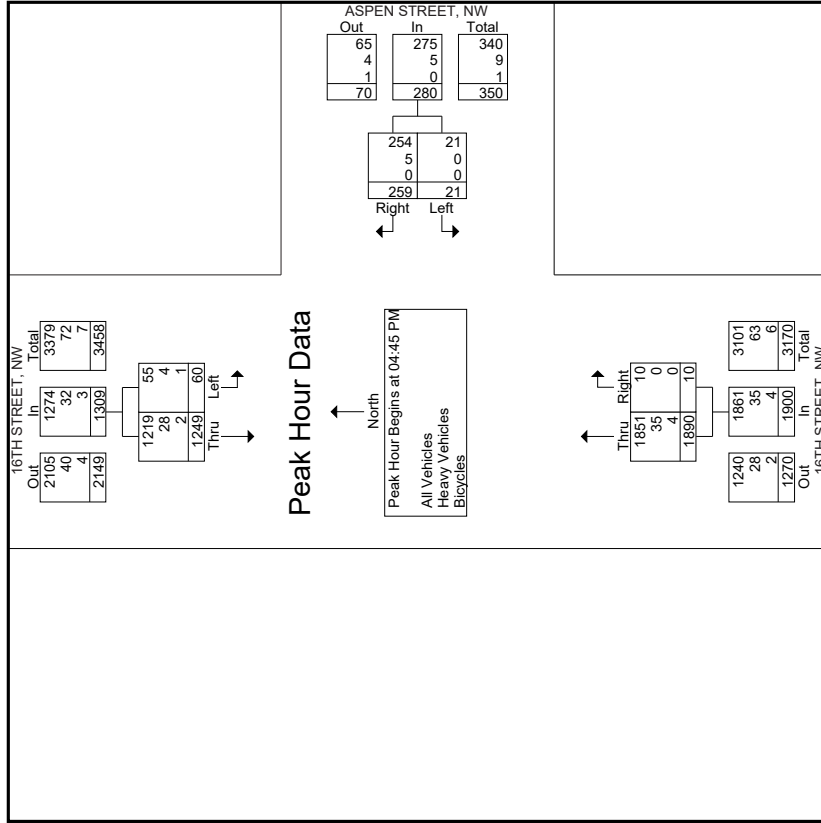
File Name : 16th Street and Aspen Street, NW
 Site Code : 00000000
 Start Date : 6/6/2019
 Page No : 5

Start Time	16TH STREET, NW			ASPEN STREET, NW			16TH STREET, NW			Int. Total
	Thru	From North	App. Total	Right	From East	App. Total	Right	From South	App. Total	
Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	322	14	336	66	6	72	5	467	472	880
05:00 PM	328	9	337	54	5	59	3	477	480	876
05:15 PM	262	20	282	73	6	79	2	453	455	816
05:30 PM	337	17	354	66	4	70	0	493	493	917
Total Volume	1249	60	1309	259	21	280	10	1890	1900	3489
% App. Total	95.4	4.6	92.5	7.5	0.5	99.5	.500	95.8	96.3	95.1
PHF	927	.750	924	887	.875	886	10	1851	1861	3410
All Vehicles	1219	55	1274	254	21	275	100	97.9	97.9	97.7
% All Vehicles	97.6	91.7	97.3	98.1	100	98.2	0	35	35	72
Heavy Vehicles	28	4	32	5	0	5	0	1.9	1.8	2.1
% Heavy Vehicles	2.2	6.7	2.4	1.9	0	1.8	0	0	0	0.2
Bicycles	2	1	3	0	0	0	0	4	4	7
% Bicycles	0.2	1.7	0.2	0	0	0	0	0.2	0.2	0.2

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File Name : 16th Street and Aspen Street, NW
 Site Code : 00000000
 Start Date : 6/6/2019
 Page No : 6



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

3rd Street and North Dakota Avenue/Sheridan Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

Mount Airy, MD 21771

www.sammateng.com

August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of 3rd Street and North Dakota Avenue/Sheridan Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.



Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

Groups Printed- All Vehicles - Heavy Vehicles - Bicycles

Start Time	3RD STREET, NW						SHERIDAN STREET, NW						3RD STREET, NW						SHERIDAN STREET, NW																	
	From North			From East			From Southeast			From South			From West			From North			From East			From Southeast			From South			From West								
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total				
07:00 AM	0	0	0	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45 AM	0	0	0	0	0	0	0	0	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	13	9	2	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM	0	0	0	0	0	0	0	0	2	8	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	3	16	3	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM	0	0	0	0	0	0	0	0	2	6	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM	0	0	0	0	0	0	0	0	1	2	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	6	12	3	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	5	4	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	1	3	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

Groups Printed- All Vehicles - Heavy Vehicles - Bicycles

Start Time	3RD STREET, NW												NORTH DAKOTA AVENUE, NW												3RD STREET, NW												SHERIDAN STREET, NW											
	From North						From East						From Southeast						From South						From West																							
	Right	Thru	Left	Peds	App Total	Int Total	Right	Thru	Left	Peds	App Total	Int Total	Right	Thru	Left	Peds	App Total	Int Total	Right	Thru	Left	Peds	App Total	Int Total	Right	Thru	Left	Peds	App Total	Int Total																		
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	8	13	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	6	9	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	9	6	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	10	9	4	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

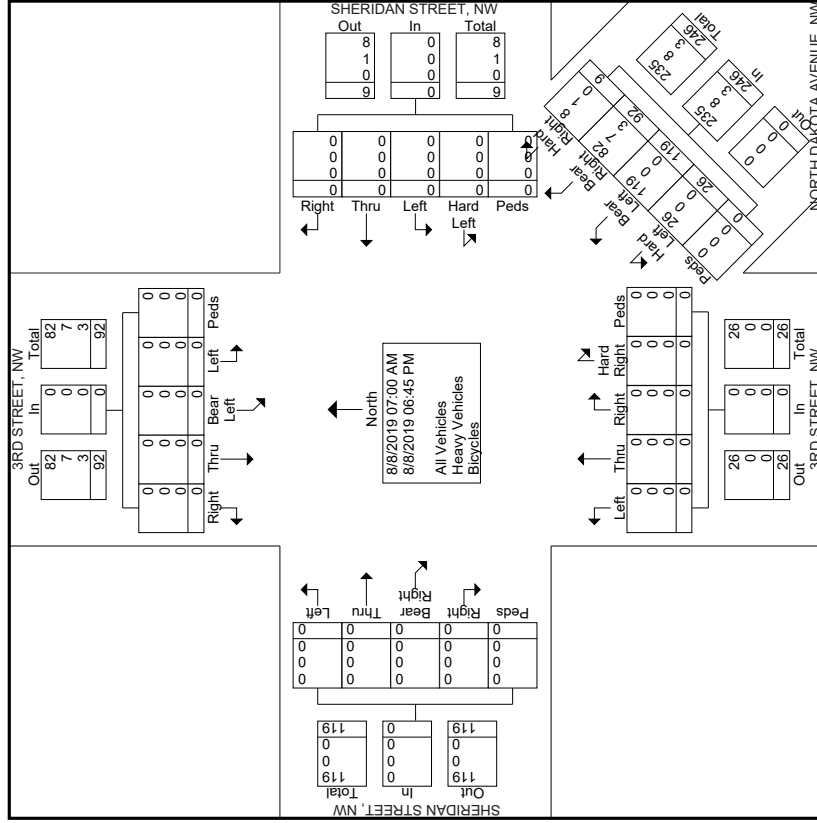
Groups Printed- All Vehicles - Heavy Vehicles - Bicycles

Start Time	3RD STREET, NW From North						SHERIDAN STREET, NW From East						NORTH DAKOTA AVENUE, NW From Southeast						3RD STREET, NW From South						SHERIDAN STREET, NW From West					
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total
	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	8	8	2	19	0	0	0	0	0	0	0	0	0	0	0	0	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	9	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	2	11	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	12	13	7	34	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	5	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	2	10	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	7	14	4	26	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	9	92	119	26	246	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	3.7	37.4	48.4	10.6	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	3.7	37.4	48.4	10.6	100	0	0	0	0	0	0	0	0	0	0	0	0	
All Vehicles																														
% All Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	88.9	89.1	100	100	95.5	0	0	0	0	0	0	0	0	0	0	0	0	
Heavy Vehicles																														
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	11.1	7.6	0	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles																														
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

Start Time	3RD STREET, NW						SHERIDAN STREET, NW						NORTH DAKOTA AVENUE, NW						3RD STREET, NW						SHERIDAN STREET, NW								
	From North			From East			From Southeast			From South			From West			From North			From East			From Southeast			From South			From West					
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	App. Total	Peds	Int. Total
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	2	8	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	2	6	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	5	20	3	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	17.9	71.4	10.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.625	.625	.375	.000	.700	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			
All Vehicles	0	0	0	0	0	0	0	100	100	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% All Vehicles	0	0	0	0	0	0	0	100	100	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

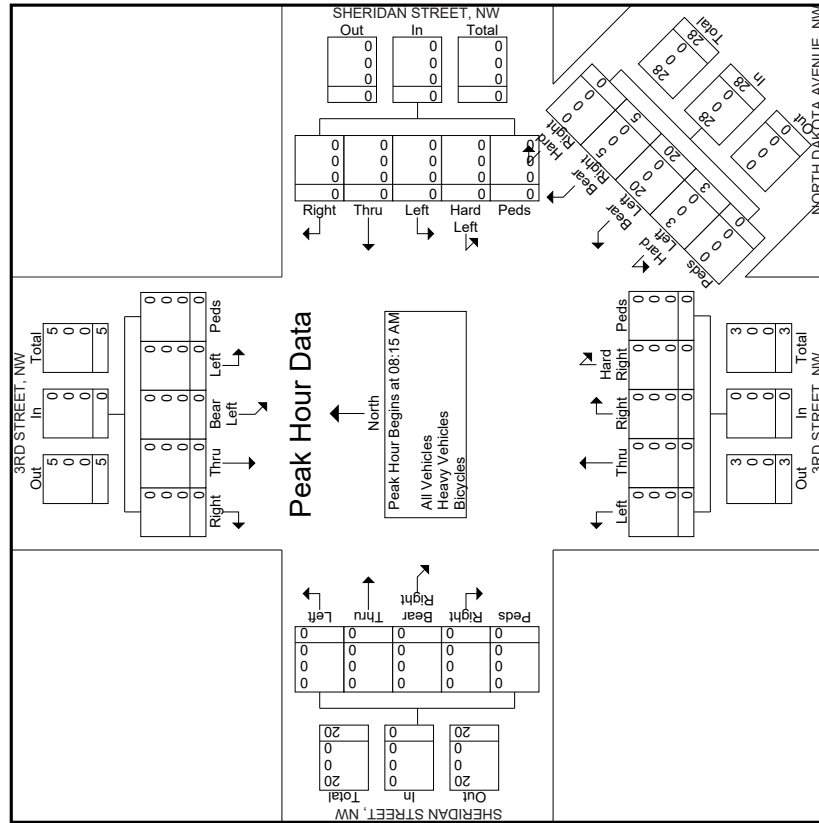
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:15 AM

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW



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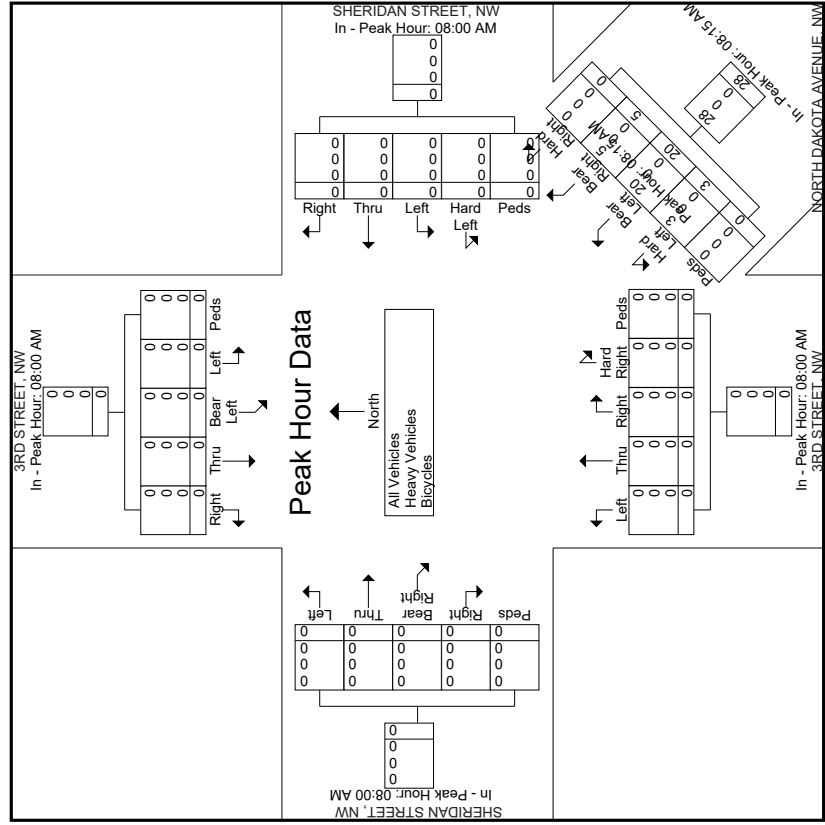
3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

Start Time	3RD STREET, NW From North			SHERIDAN STREET, NW From East			NORTH DAKOTA AVENUE, NW From Southeast			3RD STREET, NW From South			SHERIDAN STREET, NW From West			Int. Total						
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		App. Total	Peds	App. Total	Peds	App. Total	Peds
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:																					
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
All Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW



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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

Start Time	3RD STREET, NW						SHERIDAN STREET, NW						NORTH DAKOTA AVENUE, NW						3RD STREET, NW						SHERIDAN STREET, NW														
	From North			From East			From Southeast			From South			From West			From North			From East			From Southeast			From South			From West											
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	App. Total	Peds	Int. Total						
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			
All Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% All Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM

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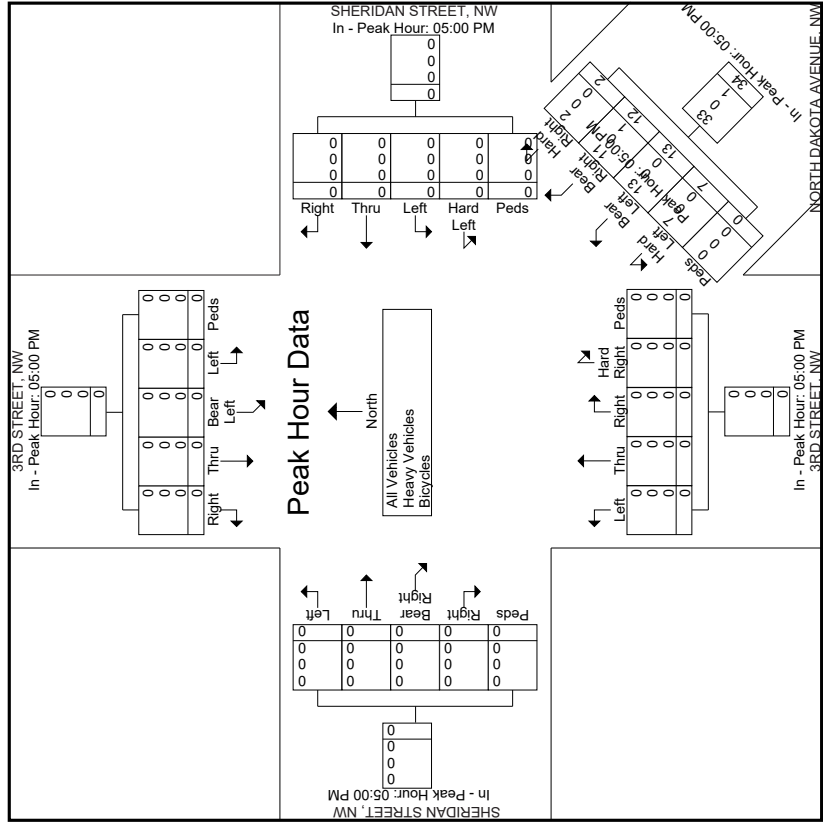
3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW

Start Time	3RD STREET, NW					SHERIDAN STREET, NW					NORTH DAKOTA AVENUE, NW					3RD STREET, NW					SHERIDAN STREET, NW											
	From North		From East			From Southeast					From South					From West																
	Right	Thru	Left	Peds	App Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	Peds	App Total	Int Total						
	Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1																															
	Peak Hour for Each Approach Begins at:																															
+0 mins.	06:00 PM					06:00 PM					06:00 PM					06:00 PM					06:00 PM											
+15 mins.	0	0	0	0	0	0	0	0	0	0	1	3	3	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	5	4	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	2	6	2	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	2	12	13	7	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.600	.542	.583	.000	.773	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
All Vehicles	0	0	0	0	0	0	0	0	0	0	100	91	100	100	0	97.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% All Vehicles	0	0	0	0	0	0	0	0	0	0	100	91	100	100	0	97.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	8.3	0	0	0	2.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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3RD STREET, SHERIDAN STREET AND NORTH DAKOTA AVENUE, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

3rd Street and Rittenhouse Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

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August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of 3rd Street and Rittenhouse Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

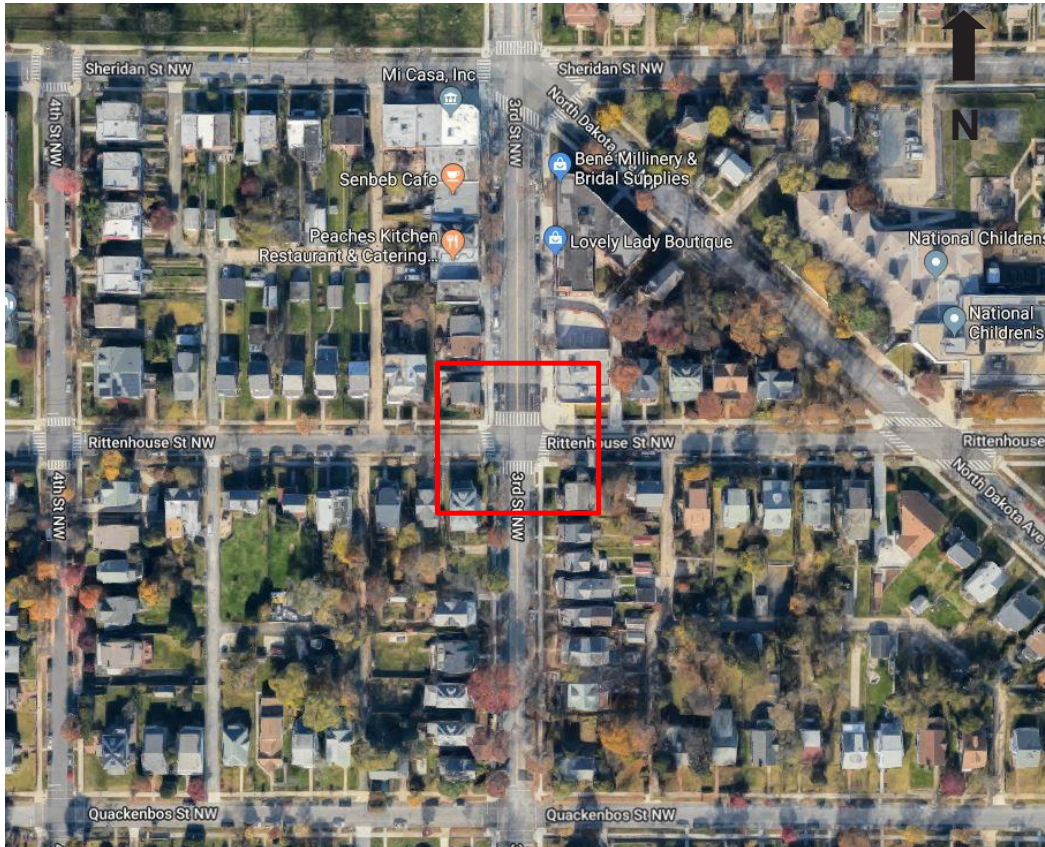


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW										Rittenhouse Street, NW										Rittenhouse Street, NW									
	From North					From East					From South					From West					From West									
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total				
07:00 AM	3	44	1	1	49	1	10	0	1	12	2	13	1	1	17	0	6	0	2	8	86									
07:15 AM	7	36	2	2	47	0	9	0	2	11	2	19	2	0	23	2	4	3	4	13	94									
07:30 AM	4	41	2	0	47	1	9	1	1	12	0	15	0	0	15	3	2	2	3	10	84									
07:45 AM	2	34	1	3	40	2	7	0	1	10	2	22	1	1	25	2	2	1	3	8	83									
Total	16	155	6	6	183	4	35	1	5	45	5	69	4	2	80	7	14	6	12	39	347									
08:00 AM	3	24	2	0	29	1	5	2	0	8	0	13	2	0	15	1	11	0	2	14	66									
08:15 AM	6	18	1	1	26	1	7	1	2	11	1	16	1	1	19	1	11	3	5	20	76									
08:30 AM	3	22	2	0	27	1	4	1	1	7	0	18	2	0	20	4	6	3	2	15	69									
08:45 AM	1	15	1	0	17	2	8	1	0	11	0	7	3	0	10	3	5	1	4	13	51									
Total	13	79	6	1	99	5	24	5	3	37	1	54	8	1	64	9	33	7	13	62	262									
09:00 AM	1	13	0	0	14	1	4	1	3	9	1	9	2	0	12	4	2	1	2	9	44									
09:15 AM	2	11	1	0	14	1	4	2	0	7	0	5	3	0	8	2	7	1	18	28	57									
09:30 AM	0	12	0	0	12	0	5	0	1	6	0	10	0	1	11	1	7	2	1	11	40									
09:45 AM	0	11	1	0	12	0	3	0	0	3	2	8	0	0	10	2	5	1	2	10	35									
Total	3	47	2	0	52	2	16	3	4	25	3	32	5	1	41	9	21	5	23	58	176									
10:00 AM	3	6	0	1	10	1	3	0	1	5	0	15	1	0	16	0	4	0	1	5	36									
10:15 AM	0	9	1	0	10	1	8	0	1	10	1	14	1	1	17	1	3	1	2	7	44									
10:30 AM	1	7	3	0	11	1	3	0	0	4	1	11	1	0	13	0	8	2	0	10	38									
10:45 AM	1	13	0	0	14	1	4	0	0	5	0	7	3	0	10	2	5	2	4	13	42									
Total	5	35	4	1	45	4	18	0	2	24	2	47	6	1	56	3	20	5	7	35	160									
11:00 AM	4	12	0	0	16	3	5	0	0	8	0	14	1	0	15	2	4	2	4	12	51									
11:15 AM	4	11	0	0	15	2	3	1	1	7	1	11	1	0	13	3	7	2	1	13	48									
11:30 AM	2	7	0	1	10	0	9	0	0	9	1	15	0	0	16	2	7	2	1	12	47									
11:45 AM	0	21	2	0	23	0	2	0	0	2	1	15	1	0	17	0	9	4	1	14	56									
Total	10	51	2	1	64	5	19	1	1	26	3	55	3	0	61	7	27	10	7	51	202									
12:00 PM	3	9	1	0	13	0	7	0	1	8	0	8	1	0	9	3	3	3	3	12	42									
12:15 PM	0	17	0	1	18	2	6	0	0	8	2	22	0	0	24	0	4	1	3	8	58									
12:30 PM	6	19	1	1	27	0	9	1	0	10	2	15	1	0	18	1	10	3	2	16	71									

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3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW													Rittenhouse Street, NW													Rittenhouse Street, NW																											
	From North						From East						From South						From West						From South						From East						From West																	
	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total	Thru	Left	Peds	App. Total	Right	Total						
	0	9	64	2	0	21	1	6	1	1	2	2	35	9	1	15	1	1	18	0	3	1	1	69	4	20	8	9	4	1	1	5	3	1	1	1	5	3	1	1	53	3	20	8	9	4	224							
Total	9	64	2	0	21	1	6	1	1	2	2	35	9	1	15	1	1	18	0	3	1	1	69	4	20	8	9	4	1	1	5	3	1	1	5	3	1	1	53	3	20	8	9	4	224									
01:00 PM	7	13	1	1	22	1	6	0	1	8	0	8	22	2	2	1	25	1	5	2	2	10	1	5	2	2	10	1	5	2	2	2	10	1	5	2	2	10	1	5	2	2	10	1	5	2	2	10						
01:15 PM	4	16	2	0	22	1	6	0	2	9	2	9	16	1	0	19	0	19	0	11	2	0	13	63	6	13	0	0	13	6	13	0	0	13	63	6	13	0	0	13	63	6	13	0	0	13	63	6	13	0	0	13	63	
01:30 PM	1	13	0	0	14	2	13	0	0	15	2	17	1	1	0	20	1	20	1	9	1	1	12	61	9	12	1	1	12	61	9	12	1	1	12	61	9	12	1	1	12	61	9	12	1	1	12	61	9	12	1	1	12	61
01:45 PM	4	19	1	0	24	0	7	0	0	7	1	14	13	0	0	14	3	14	3	9	1	1	14	59	9	12	1	1	14	59	9	12	1	1	14	59	9	12	1	1	14	59	9	12	1	1	14	59	9	12	1	1	14	59
Total	16	61	4	1	82	4	32	0	3	39	5	68	4	4	1	78	5	34	6	4	49	248	5	34	6	4	49	248	5	34	6	4	49	248	5	34	6	4	49	248	5	34	6	4	49	248	5	34	6	4	49	248		
02:00 PM	2	16	2	1	21	0	9	0	0	9	4	20	0	0	24	9	24	9	9	2	2	22	76	9	24	2	2	22	76	9	24	2	2	22	76	9	24	2	2	22	76	9	24	2	2	22	76							
02:15 PM	1	18	2	0	21	2	5	1	0	8	0	16	2	0	18	1	18	1	6	0	6	13	60	6	13	0	0	13	60	6	13	0	0	13	60	6	13	0	0	13	60	6	13	0	0	13	60	6	13	0	0	13	60	
02:30 PM	1	10	0	1	12	1	3	0	0	4	4	18	0	0	22	4	22	0	10	2	1	13	51	10	13	2	1	13	51	10	13	2	1	13	51	10	13	2	1	13	51	10	13	2	1	13	51	10	13	2	1	13	51	
02:45 PM	1	19	2	0	22	0	7	0	0	7	4	24	2	0	30	4	30	0	10	1	1	12	71	4	12	1	1	12	71	4	12	1	1	12	71	4	12	1	1	12	71	4	12	1	1	12	71	4	12	1	1	12	71	
Total	5	63	6	2	76	3	24	1	0	28	12	78	4	0	94	10	94	10	35	5	10	60	258	10	35	5	10	60	258	10	35	5	10	60	258	10	35	5	10	60	258	10	35	5	10	60	258	10	35	5	10	60	258	
03:00 PM	0	15	1	3	19	1	6	1	0	8	2	14	0	0	16	2	16	2	12	1	1	16	59	2	12	1	1	16	59	2	12	1	1	16	59	2	12	1	1	16	59	2	12	1	1	16	59	2	12	1	1	16	59	
03:15 PM	6	13	1	0	20	0	6	0	1	7	0	21	0	0	22	1	22	1	11	2	1	15	64	1	11	2	1	15	64	1	11	2	1	15	64	1	11	2	1	15	64	1	11	2	1	15	64	1	11	2	1	15	64	
03:30 PM	0	14	4	0	18	0	5	1	0	6	0	28	0	0	28	2	28	2	10	2	3	17	69	2	10	2	3	17	69	2	10	2	3	17	69	2	10	2	3	17	69	2	10	2	3	17	69	2	10	2	3	17	69	
03:45 PM	2	17	2	0	21	0	6	0	3	9	3	30	0	0	33	2	33	2	9	2	2	15	78	2	9	2	2	15	78	2	9	2	2	15	78	2	9	2	2	15	78	2	9	2	2	15	78	2	9	2	2	15	78	
Total	8	59	8	3	78	1	23	2	4	30	5	93	1	0	99	7	99	7	42	7	7	63	270	7	42	7	7	63	270	7	42	7	7	63	270	7	42	7	7	63	270	7	42	7	7	63	270	7	42	7	7	63	270	
04:00 PM	6	24	5	1	36	4	3	1	0	8	3	35	0	0	38	1	38	1	13	2	5	21	103	1	13	2	5	21	103	1	13	2	5	21	103	1	13	2	5	21	103	1	13	2	5	21	103	1	13	2	5	21	103	
04:15 PM	3	27	3	0	33	4	5	3	1	13	2	36	3	0	41	1	41	1	6	2	8	17	104	1	6	2	8	17	104	1	6	2	8	17	104	1	6	2	8	17	104	1	6	2	8	17	104	1	6	2	8	17	104	
04:30 PM	2	35	6	2	45	0	11	0	1	12	1	33	0	0	34	1	34	1	13	4	3	21	112	1	13	4	3	21	112	1	13	4	3	21	112	1	13	4	3	21	112	1	13	4	3	21	112	1	13	4	3	21	112	
04:45 PM	0	22	1	2	25	0	7	1	1	9	2	43	4	1	50	2	50	2	3	1	7	13	97	2	3	1	7	13	97	2	3	1	7	13	97	2	3	1	7	13	97	2	3	1	7	13	97	2	3	1	7	13	97	
Total	11	108	15	5	139	8	26	5	3	42	8	147	7	1	163	5	163	5	35	9	23	72	416	5	35	9	23	72	416	5	35	9	23	72	416	5	35	9	23	72	416	5	35	9	23	72	416	5	35	9	23	72	416	
05:00 PM	4	26	3	1	34	2	8	1	1	12	3	35	1	1	40	5	40	5	7	5	5	22	108	5	7	5	5	22	108	5	7	5	5	22	108	5	7	5	5	22	108	5	7	5	5	22	108	5	7	5	5	22	108	
05:15 PM	1	22	1	3	27	0	8	1	4	13	1	44	3	0	48	3	48	3	11	3	7	24	112	3	11	3	7	24	112	3	11	3	7	24	112	3	11	3	7	24	112	3	11	3	7	24	112	3	11	3	7	24	112	
05:30 PM	1	23	0	1	25	0	5	0	0	6	0	31	2	0	33	1	33	1	12	2	4	19	83	1	12	2	4	19	83	1	12	2	4	19	83	1	12	2	4	19	83	1	12	2	4	19	83	1	12	2	4	19	83	
05:45 PM	1	23	1	0	25	1	9	0	2	11	2	29	1	1	33	2	33	2	9	0	5	16	85	2	9	0	5	16	85	2	9	0	5	16	85	2	9	0	5	16	85	2	9	0	5	16	85	2	9	0	5	16	85	
Total	7	94	5	5	111	3	30	2	7	42	6	139	7	2	154	11	154	11	39	10	21	81	388	11	39	10	21	81	388	11	39	10	21	81	388	11	39	10	21	81	388	11	39	10	21	81	388	11	39	10	21	81	388	
06:00 PM	3	22	2	1	28	0	5	1	0	6	0	31	1	0	32	1	32	1	10	1	4	16	82	1	10	1	4	16	82	1	10	1	4	16	82	1	10	1	4	16	82	1	10	1	4	16	82	1	10	1	4	16	82	

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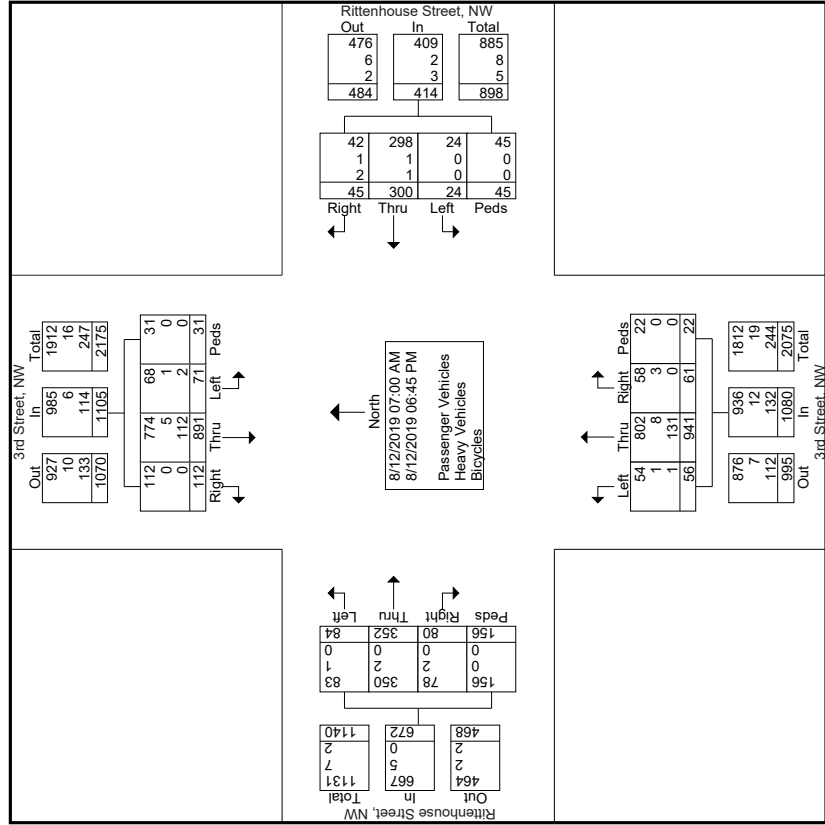
3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW												Rittenhouse Street, NW											
	From North						From East						From South						From West					
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:15 PM	0	14	1	2	17	17	0	8	0	5	13	13	1	26	1	1	29	29	1	8	3	3	15	15
06:30 PM	1	22	4	1	28	28	2	6	1	4	13	13	5	29	1	0	35	35	0	8	0	2	10	10
06:45 PM	5	17	2	0	24	24	1	6	0	2	9	9	0	13	1	11	25	25	1	6	2	11	20	20
Total	9	75	9	4	97	97	3	25	2	11	41	41	6	99	4	12	121	121	3	32	6	20	61	61
Grand Total	112	891	71	31	1105	1105	45	300	24	45	414	414	61	941	56	22	1080	1080	80	352	84	156	672	672
Approch %	10.1	80.6	6.4	2.8	10.9	10.9	10.9	72.5	5.8	10.9	12.7	12.7	5.6	87.1	5.2	2	11.9	52.4	12.5	23.2	12.5	23.2	4.8	20.5
Total %	3.4	27.2	2.2	0.9	33.8	33.8	1.4	9.2	0.7	1.4	12.7	12.7	1.9	28.8	1.7	0.7	33	33	2.4	10.8	2.6	4.8	20.5	20.5
Passenger Vehicles	100	86.9	95.8	100	89.1	89.1	93.3	99.3	100	100	98.8	98.8	95.1	85.2	96.4	100	86.7	86.7	97.5	99.4	98.8	100	99.3	91.6
% Passenger Vehicles	0	5	1	0	6	6	1	1	0	0	2	2	3	8	1	0	12	12	2	2	1	0	5	25
Heavy Vehicles	0	0.6	1.4	0	0.5	0.5	2.2	0.3	0	0	0.5	0.5	4.9	0.9	1.8	0	1.1	1.1	2.5	0.6	1.2	0	0.7	0.8
% Heavy Vehicles	0	112	2	0	114	114	2	1	0	0	3	3	0	131	1	0	132	132	0	0	0	0	0	249
% Bicycles	0	12.6	2.8	0	10.3	10.3	4.4	0.3	0	0	0.7	0.7	0	13.9	1.8	0	12.2	12.2	0	0	0	0	0	7.6

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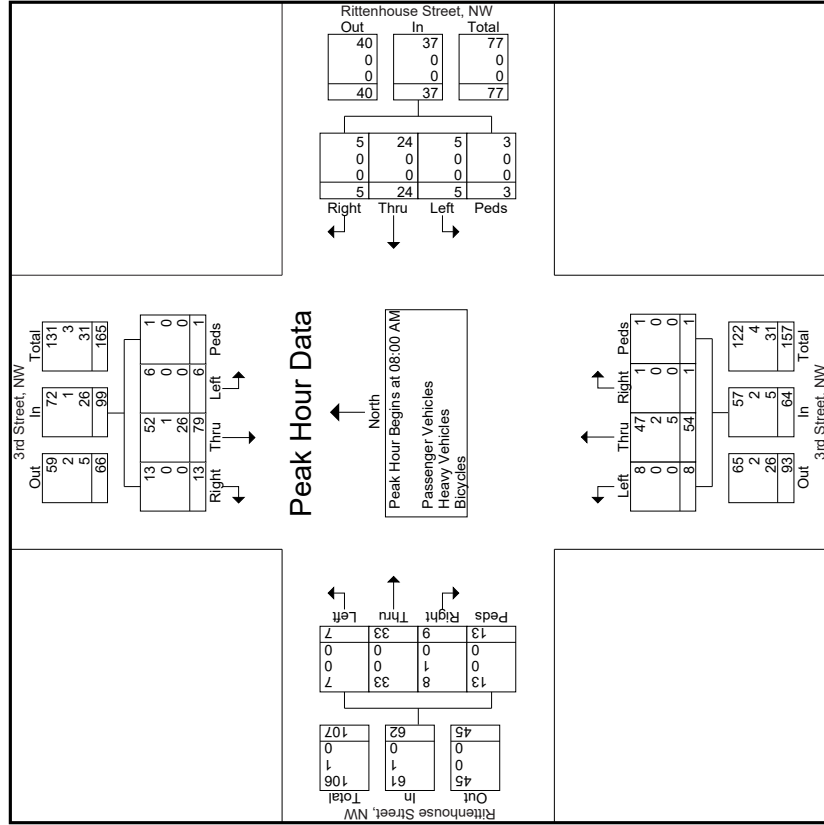
3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW From North					Rittenhouse Street, NW From East					3rd Street, NW From South					Rittenhouse Street, NW From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
	Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	24	2	1	29	1	7	1	2	11	1	16	1	1	19	1	11	3	5	20	76
08:15 AM	6	18	1	1	26	1	4	1	1	7	0	18	2	0	20	4	6	3	2	15	69
08:30 AM	3	22	2	0	27	2	8	1	0	11	0	7	3	0	10	3	5	1	4	13	51
08:45 AM	1	15	1	0	17	5	24	5	3	37	1	54	8	1	64	9	33	7	13	62	262
Total Volume	13	79	6	1	99	13.5	64.9	13.5	8.1	84.1	1.6	84.4	12.5	1.6	80.0	14.5	53.2	11.3	21	77.5	862
% App. Total	13.1	79.8	6.1	1	85.3	.625	.750	.625	.375	.841	.250	.750	.667	.250	.800	.563	.750	.583	.650	.775	86.2
Passenger Vehicles	13	52	6	1	72	5	24	5	3	37	1	47	8	1	57	8	33	7	13	61	227
% Passenger Vehicles	100	65.8	100	100	72.7	100	100	100	100	100	100	87.0	100	100	89.1	88.9	100	100	100	98.4	86.6
Heavy Vehicles	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	4
% Heavy Vehicles	0	1.3	0	0	1.0	0	0	0	0	0	0	3.7	0	0	3.1	11.1	0	0	0	1.6	1.5
Bicycles	0	26	0	0	26	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	31
% Bicycles	0	32.9	0	0	26.3	0	0	0	0	0	0	9.3	0	0	7.8	0	0	0	0	0	11.8

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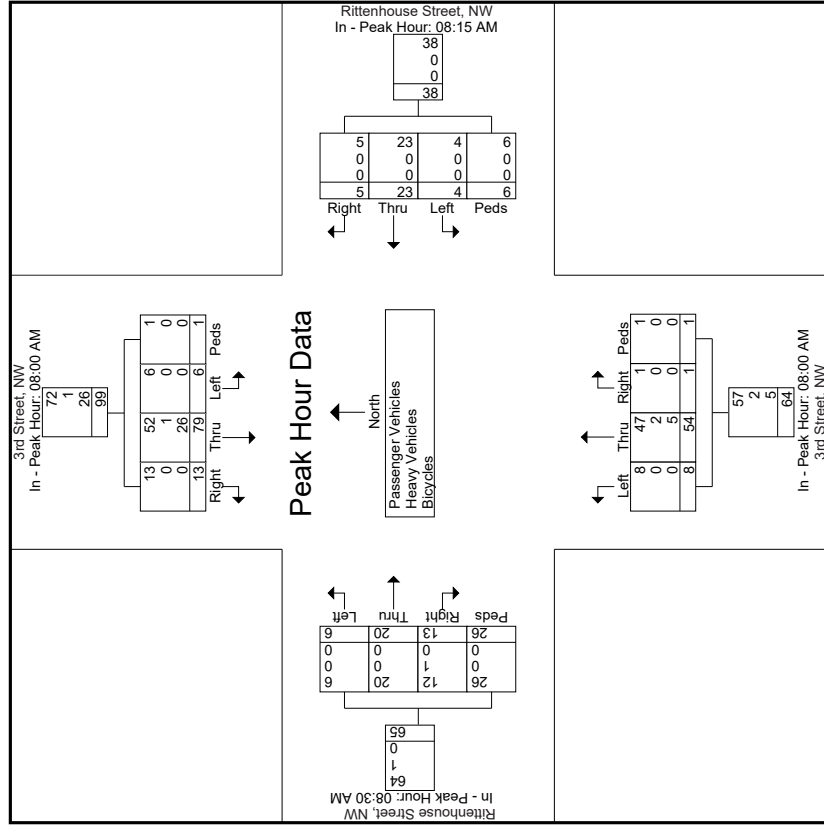
3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW From North					Rittenhouse Street, NW From East					3rd Street, NW From South					Rittenhouse Street, NW From West						
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total	
	Peak Hour for Each Approach Begins at:																					
+0 mins.	3	24	2	0	29	1	7	1	2	11	0	13	2	0	15	0	13	2	0	15	0	15
+15 mins.	6	18	1	1	26	1	4	1	1	7	1	16	1	1	19	3	5	1	4	13	4	13
+30 mins.	3	22	2	0	27	2	8	1	0	11	0	18	2	0	20	4	2	1	2	9	2	9
+45 mins.	1	15	1	0	17	1	4	1	3	9	0	7	3	0	10	2	7	1	18	28	1	28
Total Volume	13	79	6	1	99	5	23	4	6	38	1	54	8	1	64	13	20	6	26	65	6	65
% App. Total	13.1	79.8	6.1	1	853	13.2	60.5	10.5	15.8	864	1.6	84.4	12.5	1.6	800	813	714	500	361	580	20	30.8
PHF	.542	.823	.750	.250	.853	.625	.719	1.000	.500	.864	.250	.750	.667	.250	.800	.813	.714	.500	.361	.580	.081	.100
Passenger Vehicles	13	52	6	1	72	5	23	4	6	38	1	47	8	1	57	12	20	6	26	64	6	64
% Passenger Vehicles	100	65.8	100	100	72.7	100	100	100	100	100	100	87	100	100	89.1	92.3	100	100	100	98.5	100	98.5
Heavy Vehicles	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	1
% Heavy Vehicles	0	1.3	0	0	1	0	0	0	0	0	3.7	0	0	0	3.1	7.7	0	0	0	1.5	0	1.5
Bicycles	0	26	0	0	26	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0
% Bicycles	0	32.9	0	0	26.3	0	0	0	0	0	9.3	0	0	0	7.8	0	0	0	0	0	0	0

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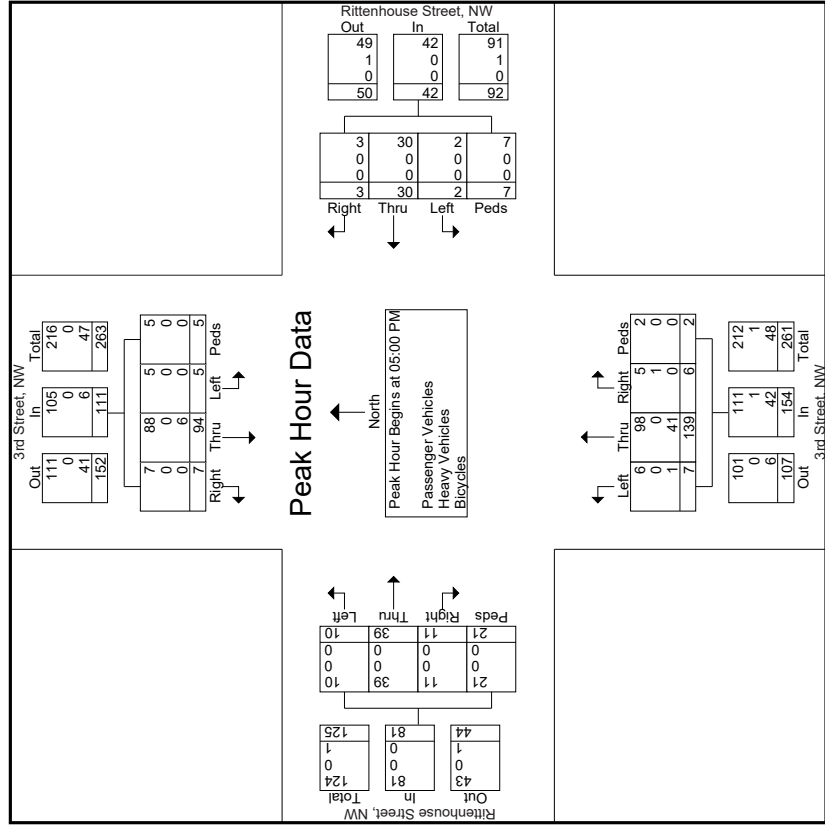
3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW From North				Rittenhouse Street, NW From East				3rd Street, NW From South				Rittenhouse Street, NW From West				
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1	34				13				48				112				
Peak Hour for Entire Intersection Begins at 05:00 PM	34				13				48				112				
05:00 PM	4	26	3		2	8	1		3	1	44	3	1	11	3	7	24
05:15 PM	1	22	1	3	0	5	0	0	0	0	31	0	0	33	2	4	19
05:30 PM	1	23	0	1	0	9	0	2	11	2	29	1	1	9	0	5	16
05:45 PM	1	23	1	0	0	9	0	2	11	2	29	1	1	9	0	5	16
Total Volume	7	94	5	5	3	30	2	7	42	6	139	7	2	154	10	21	81
% App. Total	6.3	84.7	4.5	4.5	7.1	71.4	4.8	16.7	80.8	3.9	90.3	4.5	1.3	13.6	48.1	12.3	25.9
PHF	.438	.904	.417	.417	.375	.833	.500	.438	.808	.500	.790	.583	.500	.550	.813	.500	.750
Passenger Vehicles	7	88	5	5	3	30	2	7	42	5	98	6	2	111	10	21	81
% Passenger Vehicles	100	93.6	100	100	100	100	100	100	100	83.3	70.5	85.7	100	100	100	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	16.7	0	0	0	0	0	0	0
Bicycles	0	6	0	0	0	0	0	0	0	0	41	1	0	42	0	0	0
% Bicycles	0	6.4	0	0	0	0	0	0	0	0	29.5	14.3	0	27.3	0	0	0

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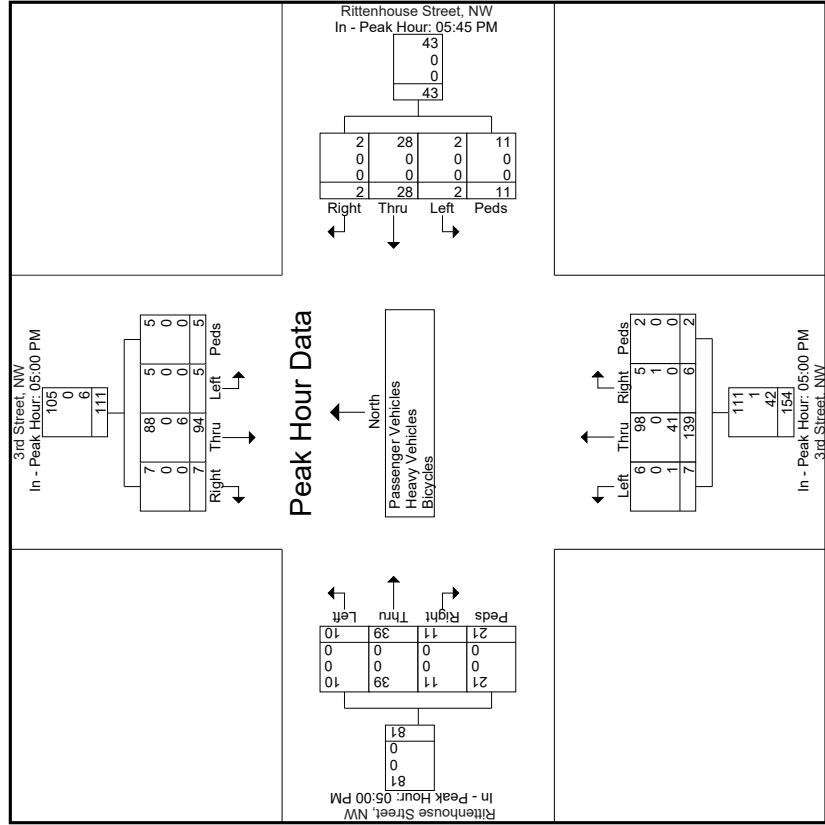
3RD STREET AND RITTENHOUSE STREET, NW

Start Time	3rd Street, NW From North						Rittenhouse Street, NW From East						3rd Street, NW From South						Rittenhouse Street, NW From West					
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total	
	Peak Hour for Each Approach Begins at:																							
+0 mins.	4	26	3	1	34	05:00 PM	0	9	0	2	11	05:00 PM	3	35	1	1	40	05:00 PM	5	7	5	5	22	05:00 PM
+15 mins.	1	22	1	3	27		0	5	1	0	6		1	44	3	0	48		3	11	3	7	24	
+30 mins.	1	23	0	1	25		0	8	0	5	13		0	31	2	0	33		1	12	2	4	19	
+45 mins.	1	23	1	0	25		2	6	1	4	13		2	29	1	1	33		2	9	0	5	16	
Total Volume	7	94	5	5	111		2	28	2	11	43		6	139	7	2	154		11	39	10	21	81	
% App. Total	6.3	84.7	4.5	4.5	81.6		4.7	65.1	4.7	25.6	82.7		3.9	90.3	4.5	1.3	13.6		13.6	48.1	12.3	25.9	84.4	
PHE	.438	.904	.417	.417	.816		.250	.778	.500	.550	.827		.500	.790	.583	.500	.802		.550	.813	.500	.750	.844	
Passenger Vehicles	7	88	5	5	105		2	28	2	11	43		5	98	6	2	111		11	39	10	21	81	
% Passenger Vehicles	100	93.6	100	100	94.6		100	100	100	100	100		83.3	70.5	85.7	100	72.1		100	100	100	100	100	
Heavy Vehicles	0	0	0	0	0		0	0	0	0	0		1	0	0	0	1		0	0	0	0	0	
% Heavy Vehicles	0	0	0	0	0		0	0	0	0	0		16.7	0	0	0	0.6		0	0	0	0	0	
Bicycles	0	6	0	0	6		0	0	0	0	0		0	41	1	0	42		0	0	0	0	0	
% Bicycles	0	6.4	0	0	5.4		0	0	0	0	0		0	29.5	14.3	0	27.3		0	0	0	0	0	

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3RD STREET AND RITTENHOUSE STREET, NW



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

16th Street and Myrtle Street/Leegate Road, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

Mount Airy, MD 21771

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August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of 16th Street and Myrtle Street/Leegate Road, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.

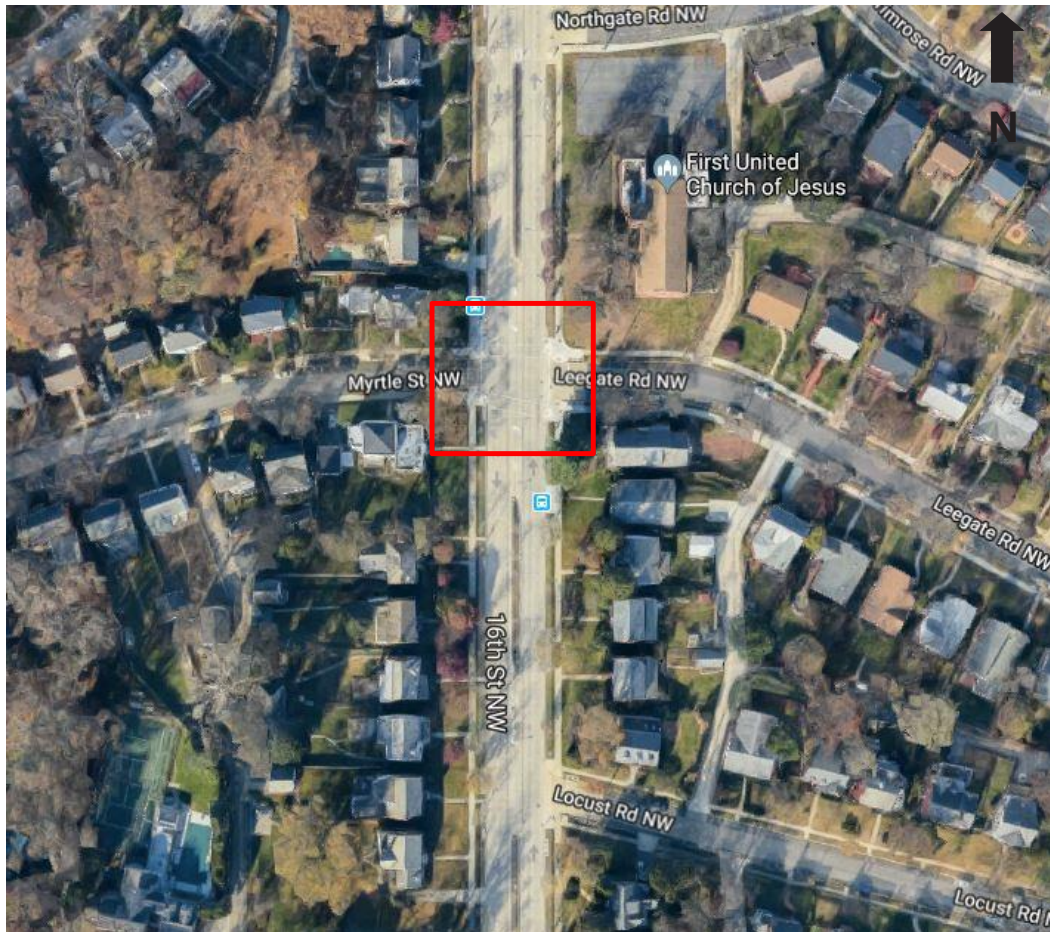


Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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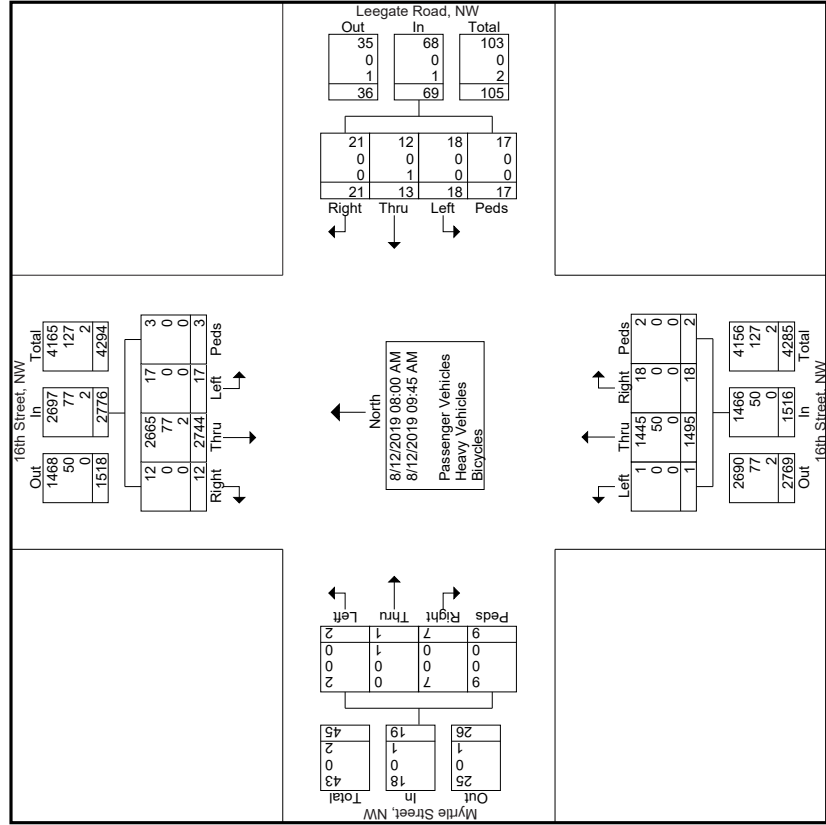
16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - AM PEAK

Start Time	16th Street, NW												Leegate Road, NW												Myrtle Street, NW											
	From North						From East						From South						From West																	
	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total						
08:00 AM	0	363	3	1	367	2	4	2	5	13	2	180	0	0	182	1	0	0	0	182	1	0	1	3	5	567										
08:15 AM	3	352	2	1	358	1	3	2	6	6	1	211	0	0	212	1	0	0	0	212	1	0	1	2	4	580										
08:30 AM	3	324	1	0	328	3	1	2	2	8	3	214	0	0	217	2	0	0	0	217	2	0	0	2	4	557										
08:45 AM	1	379	2	1	383	4	1	7	1	13	4	189	1	0	194	0	0	0	0	194	0	0	0	0	0	590										
Total	7	1418	8	3	1436	10	9	13	8	40	10	794	1	0	805	4	0	2	7	805	4	0	2	7	13	2294										
09:00 AM	2	383	0	0	385	3	0	0	3	6	3	153	0	0	156	0	0	0	0	156	0	0	0	0	0	547										
09:15 AM	1	359	3	0	363	4	2	4	6	16	2	199	0	0	201	2	1	0	2	201	2	1	0	2	5	585										
09:30 AM	2	293	2	0	297	1	1	1	0	3	2	192	0	0	194	0	0	0	0	194	0	0	0	0	0	494										
09:45 AM	0	291	4	0	295	3	1	0	0	4	1	157	0	2	160	1	0	0	2	160	1	0	0	0	1	460										
Total	5	1326	9	0	1340	11	4	5	9	29	8	701	0	2	711	3	1	0	2	711	3	1	0	2	6	2086										
Grand Total	12	2744	17	3	2776	21	13	18	17	69	18	1495	1	2	1516	7	1	2	9	1516	7	1	2	9	19	4380										
Approach %	0.4	98.8	0.6	0.1	30.4	18.8	26.1	24.6	24.6	1.2	98.6	0.1	0.1	36.8	5.3	10.5	47.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4											
Total %	0.3	62.6	0.4	0.1	63.4	0.5	0.3	0.4	0.4	1.6	0.4	34.1	0	0	34.6	0.2	0	0	0.2	0.2	0.2	0	0.2	0.4												
Passenger Vehicles	100	97.1	100	100	97.2	100	92.3	100	100	98.6	100	96.7	100	100	96.7	100	0	100	100	96.7	100	0	100	100	94.7	97										
% Passenger Vehicles																																				
Heavy Vehicles	0	77	0	0	77	0	0	0	0	0	0	50	0	0	50	0	0	0	0	50	0	0	0	0	0	127										
% Heavy Vehicles	0	2.8	0	0	2.8	0	0	0	0	0	3.3	0	0	3.3	0	0	0	0	3.3	0	0	0	0	0	0	2.9										
Bicycles	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	4										
% Bicycles	0	0.1	0	0	0.1	0	7.7	0	0	1.4	0	0	0	0	0	0	100	0	0	0	0	100	0	0	5.3	0.1										

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16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - AM PEAK



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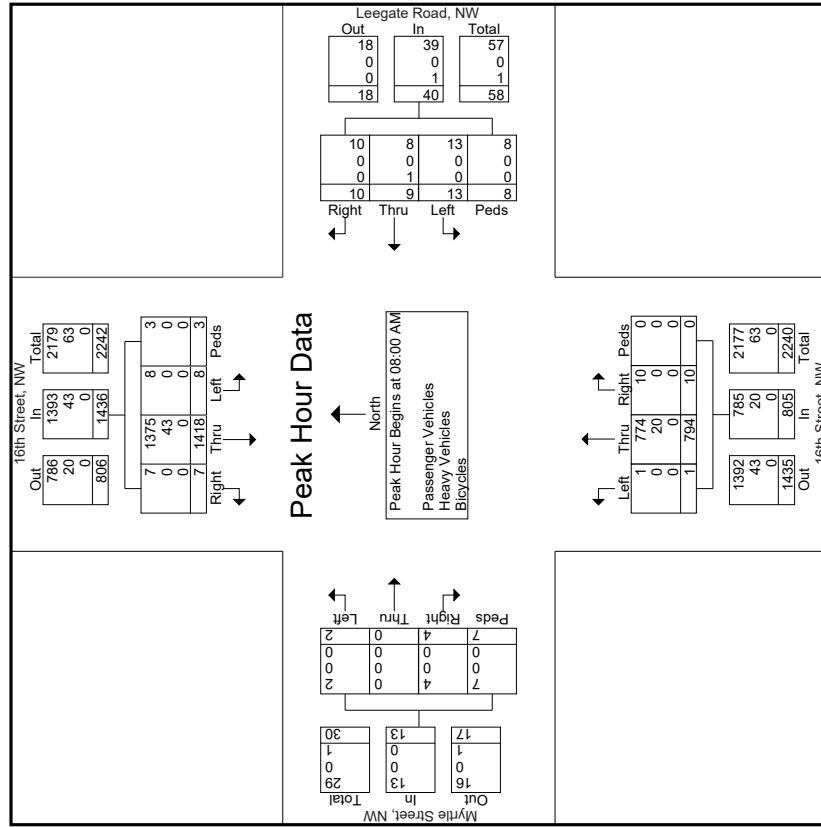
16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - AM PEAK

Start Time	16th Street, NW From North				Leegate Road, NW From East				16th Street, NW From South				Myrtle Street, NW From West				Int. Total						
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds							
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1	Peak Hour for Entire Intersection Begins at 08:00 AM																						
08:00 AM	0	363	3	1	1	4	2	0	5	13	1	211	0	0	0	0	212	1	0	1	3	5	580
08:15 AM	3	352	2	1	358	3	1	2	2	8	3	214	0	0	0	0	217	2	0	0	2	4	557
08:30 AM	3	324	1	0	328	4	1	7	1	13	4	189	1	0	0	0	194	0	0	0	0	0	590
08:45 AM	1	379	2	1	383	10	9	13	8	40	10	794	1	0	0	0	805	4	0	2	7	13	2294
Total Volume	7	1418	8	3	1436	25	22.5	32.5	20	769	625	928	250	0.00	0.00	0.00	927	500	0.00	500	583	650	972
% App. Total	0.5	98.7	0.6	0.2	99.7	1.7	1.5	2.2	1.4	5.2	4.3	16.5	1.7	0.0	0.0	0.0	9.9	5.1	0.0	5.0	3.8	6.7	100.0
PHF	.583	.935	.667	.750	.937	.625	.563	.464	.400	.769	.625	.928	.250	.000	.000	.927	.500	.000	.500	.583	.650	.972	.972
Passenger Vehicles	7	1375	8	3	1393	10	8	13	8	39	10	774	1	0	0	0	785	4	0	2	7	13	2230
% Passenger Vehicles	100	97.0	100	100	97.0	100	88.9	100	100	97.5	100	97.5	100	0	0	0	97.5	100	0	100	100	100	97.2
Heavy Vehicles	0	43	0	0	43	0	0	0	0	0	0	20	0	0	0	0	20	0	0	0	0	0	63
% Heavy Vehicles	0	3.0	0	0	3.0	0	0	0	0	0	0	2.5	0	0	0	0	2.5	0	0	0	0	0	2.7
Bicycles	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Bicycles	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0

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16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - AM PEAK



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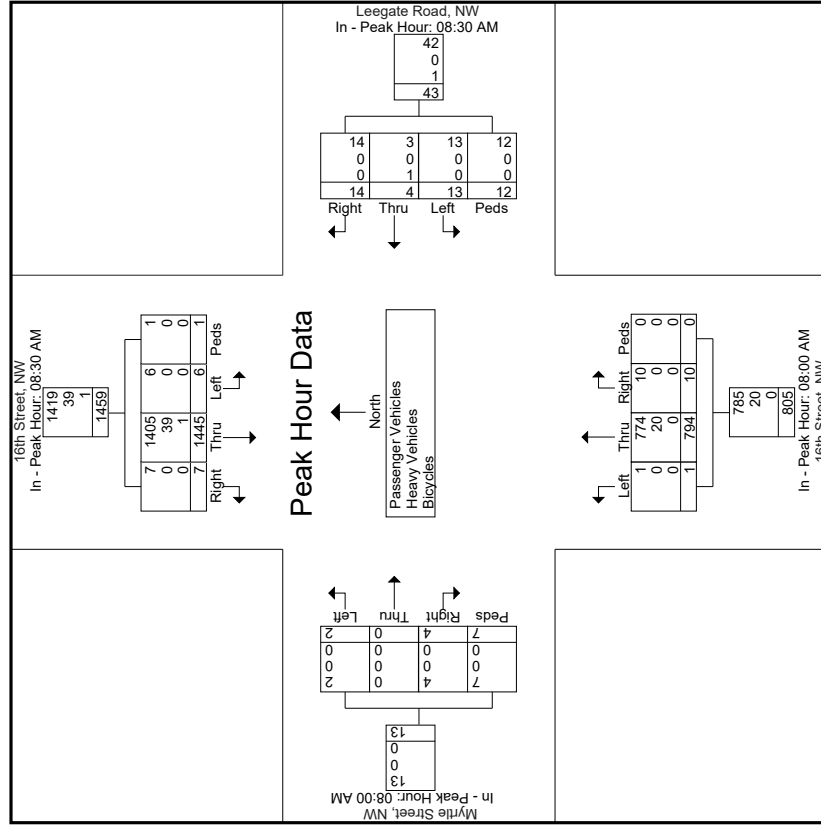
16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - AM PEAK

Start Time	16th Street, NW From North						Leegate Road, NW From East						16th Street, NW From South						Myrtle Street, NW From West					
	Right	Thru	Left	Peds	App. Total	Peak Hour for Each Approach Begins at:	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total		
	08:30 AM						08:30 AM						08:00 AM						08:00 AM					
+0 mins.	3	324	1	0	328		3	1	2	2	8	2	180	0	0	0	182	1	0	1	3	5		
+15 mins.	1	379	2	1	383		4	1	7	1	13	1	211	0	0	0	212	1	0	1	2	4		
+30 mins.	2	383	0	0	385		3	0	0	3	6	3	214	0	0	0	217	2	0	0	2	4		
+45 mins.	1	359	3	0	363		4	2	4	6	16	4	189	1	0	0	194	0	0	0	0	0		
Total Volume	7	1445	6	1	1459		14	4	13	12	43	10	794	1	0	0	805	4	0	2	7	13		
% App. Total	0.5	99	0.4	0.1	94.7		32.6	9.3	30.2	27.9	1.2	98.6	0.1	0	0	0	30.8	0	15.4	53.8	650			
PHF	.583	943	.500	.250	.947		.875	.500	.464	.500	.672	.625	928	.250	.000	.000	.927	.500	.000	.500	.583	.650		
Passenger Vehicles	7	1405	6	1	1419		14	3	13	12	42	10	774	1	0	0	785	4	0	2	7	13		
% Passenger Vehicles	100	97.2	100	100	97.3		100	75	100	100	97.7	100	97.5	100	0	0	97.5	100	0	100	100	100		
Heavy Vehicles	0	39	0	0	39		0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0		
% Heavy Vehicles	0	2.7	0	0	2.7		0	0	0	0	0	0	2.5	0	0	0	2.5	0	0	0	0	0		
Bicycles	0	1	0	0	1		0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0		
% Bicycles	0	0.1	0	0	0.1		0	25	0	0	2.3	0	0	0	0	0	0	0	0	0	0	0		

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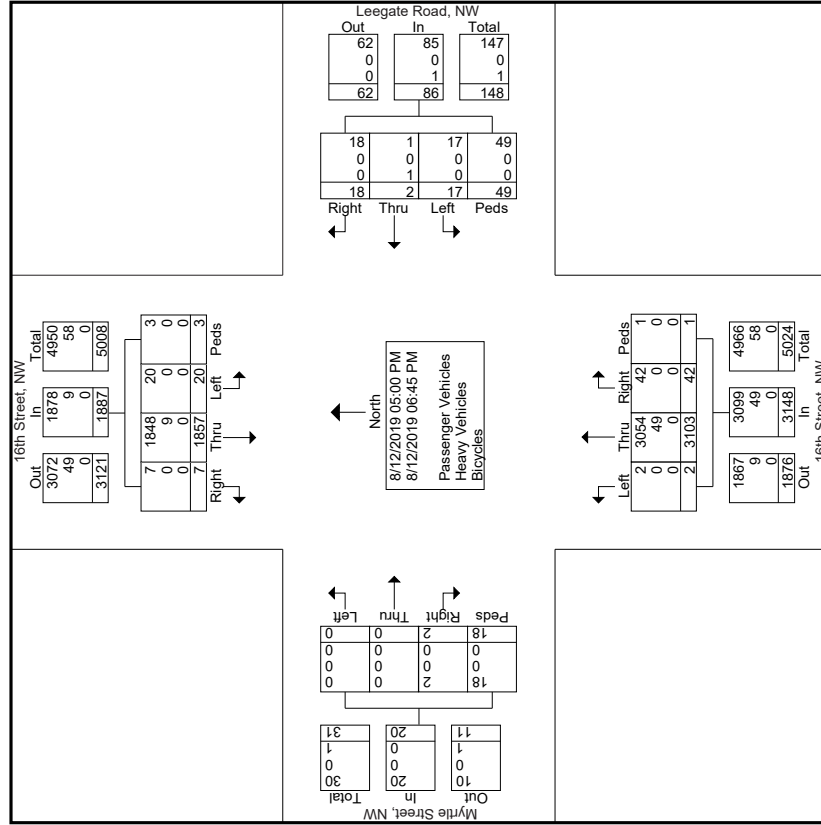
16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - PM PEAK

Start Time	16th Street, NW												Leegate Road, NW												Myrtle Street, NW											
	From North						From East						From South						From West																	
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total	
05:00 PM	1	251	2	0	254		0	0	1	5	6		2	249	0	0	251		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	511
05:15 PM	0	238	5	0	243		3	0	1	2	6		4	370	0	0	374		0	0	0	0	0		0	0	0	2	374	0	0	2	0	0	625	
05:30 PM	2	274	4	1	281		2	1	1	9	13		5	452	1	0	458		0	0	0	0	0		0	0	0	4	458	0	0	4	0	0	756	
05:45 PM	1	219	1	1	222		3	1	3	2	9		11	410	0	0	421		0	0	0	0	0		0	0	0	2	421	0	0	2	0	0	654	
Total	4	982	12	2	1000		8	2	6	18	34		22	1481	1	0	1504		0	0	0	0	0		0	0	0	8	1504	0	0	8	0	0	2546	
06:00 PM	2	220	0	0	222		3	0	3	11	17		6	421	1	1	429		1	0	0	0	0		1	0	0	0	4	429	0	0	4	0	0	673
06:15 PM	0	212	2	1	215		2	0	2	4	8		3	398	0	0	401		0	0	0	0	0		0	0	0	0	6	401	0	0	6	0	0	630
06:30 PM	1	234	2	0	237		5	0	2	10	17		6	404	0	0	410		0	0	0	0	0		0	0	0	0	4	410	0	0	0	0	0	664
06:45 PM	0	209	4	0	213		0	0	4	6	10		5	399	0	0	404		0	0	0	0	0		0	0	0	0	4	404	1	0	0	0	0	628
Total	3	875	8	1	887		10	0	11	31	52		20	1622	1	1	1644		2	0	0	0	0		2	0	0	0	10	1644	2	0	10	12	0	2595
Grand Total	7	1857	20	3	1887		18	2	17	49	86		42	3103	2	1	3148		2	0	0	0	0		2	0	0	0	18	3148	2	0	18	20	0	5141
Approach %	0.4	98.4	1.1	0.2	20.9		2.3	19.8	57	1.3	98.6		0.1	0	0	0	61.2		10	0	0	0	0		0	0	0	0	90	0	0	0	0	0	0	5141
Total %	0.1	36.1	0.4	0.1	36.7		0.4	0	0.3	1.7	1.7		0.8	60.4	0	0	61.2		0	0	0	0	0		0	0	0	0	0.4	0	0	0.4	0.4	0	0	0.4
Passenger Vehicles	100	99.5	100	100	99.5		100	50	100	100	98.8		100	98.4	100	100	98.4		100	0	0	0	0		100	0	0	0	100	98.4	100	0	100	100	0	98.9
% Passenger Vehicles	0	9	0	0	9		0	0	0	0	0		0	49	0	0	49		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	58
Heavy Vehicles	0	0.5	0	0	0.5		0	0	0	0	0		0	1.6	0	0	1.6		0	0	0	0	0		0	0	0	0	1.6	0	0	0	0	0	0	1.1
% Heavy Vehicles	0	0	0	0	0		0	1	0	0	1		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	1
Bicycles	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0		0	50	0	0	1.2		0	0	0	0	1.2		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0

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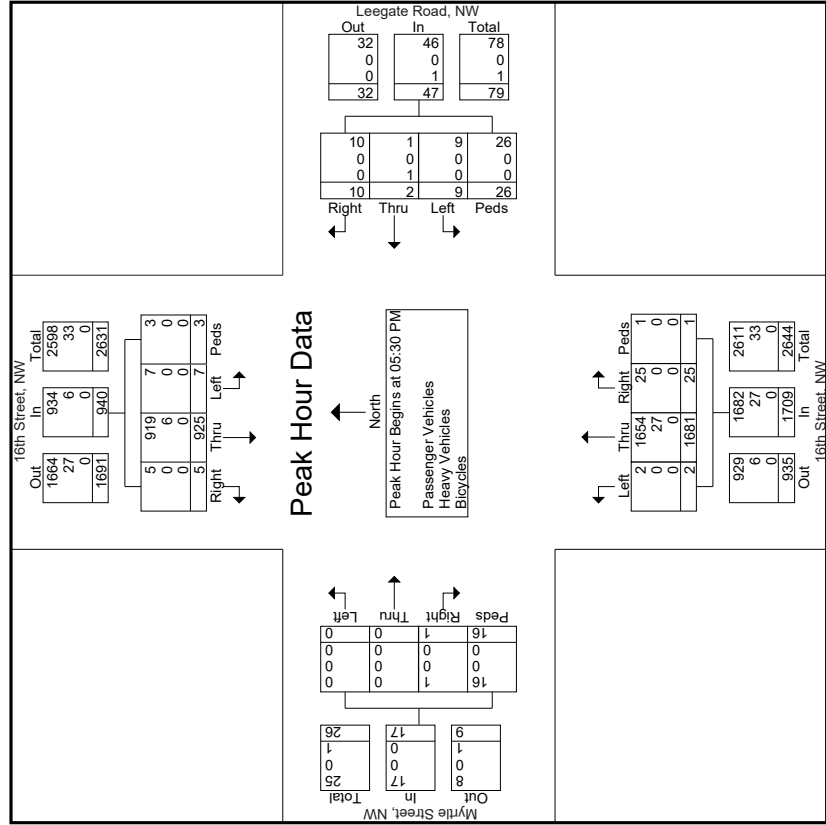
16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - PM PEAK

Start Time	16th Street, NW From North				Leegate Road, NW From East				16th Street, NW From South				Myrtle Street, NW From West				Int. Total									
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		App. Total	App. Total							
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1	Peak Hour for Entire Intersection Begins at 05:30 PM																									
05:30 PM	2	274	4	1	1	1	3	2	9	11	410	0	0	0	0	0	0	2	458	0	0	0	0	2	756	
05:45 PM	1	219	1	1	222	3	0	3	17	6	421	1	1	429	1	0	0	4	421	0	0	0	0	4	654	
06:00 PM	2	220	0	0	222	2	0	2	4	3	398	0	0	401	0	0	0	6	401	0	0	0	0	6	673	
06:15 PM	0	212	2	1	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	630	
Total Volume	5	925	7	3	940	10	2	9	26	47	25	1681	2	1	1709	1	0	0	16	1709	1	0	0	16	17	2713
% App. Total	0.5	98.4	0.7	0.3	98.4	21.3	4.3	19.1	55.3	11.5	98.4	0.1	0.1	170.9	5.9	0	0	94.1	170.9	5.9	0	0	0	94.1	17	2713
PHF	.625	.844	.438	.750	.836	.833	.500	.750	.591	.691	.930	.500	.250	.933	.250	.000	.000	.667	.708	.250	.000	.000	.667	.708	.17	.897
Passenger Vehicles	5	919	7	3	934	10	1	9	26	46	25	1654	2	1	1682	1	0	0	16	1682	1	0	0	16	17	2679
% Passenger Vehicles	100	99.4	100	100	99.4	100	50.0	100	100	97.9	100	98.4	100	100	98.4	100	0	0	100	98.4	100	0	0	100	100	98.7
Heavy Vehicles	0	6	0	0	6	0	0	0	0	0	0	27	0	0	27	0	0	0	0	27	0	0	0	0	0	33
% Heavy Vehicles	0	0.6	0	0	0.6	0	0	0	0	0	0	1.6	0	0	1.6	0	0	0	0	1.6	0	0	0	0	0	1.2
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Bicycles	0	0	0	0	0	0	50.0	0	0	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

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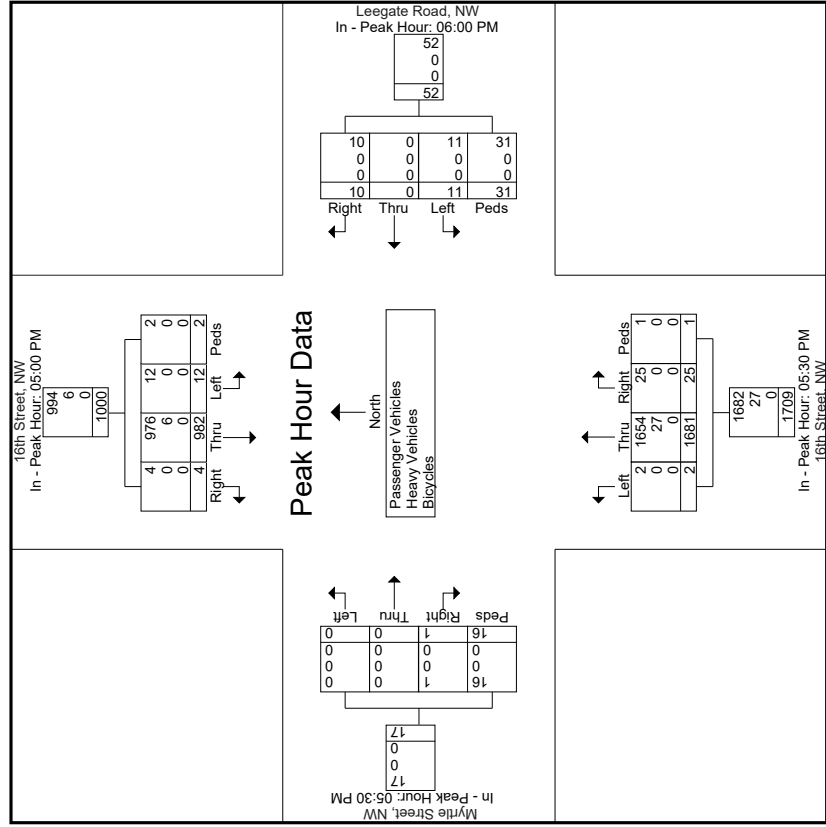
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Start Time	16th Street, NW From North						Leegate Road, NW From East						16th Street, NW From South						Myrtle Street, NW From West												
	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total	Right	Thru	Left	Peds	App. Total	Int. Total							
	Peak Hour for Each Approach Begins at:																														
+0 mins.	1	251	2	0	254		3	0	3	11	17		5	452	1	0	458		0	0	0	0	0		0	0	0	0	0		
+15 mins.	0	238	5	0	243		2	0	2	4	8		11	410	0	0	421		0	0	0	0	0		0	0	0	0	0		
+30 mins.	2	274	4	1	281		5	0	2	10	17		6	421	1	1	429		1	0	0	0	0		0	0	0	0	0		
+45 mins.	1	219	1	1	222		0	0	4	6	10		3	398	0	0	401		0	0	0	0	0		0	0	0	6	6		
Total Volume	4	982	12	2	1000		10	0	11	31	52		25	1681	2	1	1709		1	0	0	0	0		1	0	0	16	16		
% App. Total	0.4	98.2	1.2	0.2			19.2	0	21.2	59.6			1.5	98.4	0.1	0.1			5.9	0	0	0	94.1		0	0	0	0	0		
PHF	.500	.896	.600	.500	.890		.500	.000	.688	.705	.765		.568	.930	.500	.250	.933		.250	.000	.000	.000	.667	.708	.000	.000	.000	.000	.000		
Passenger Vehicles	4	976	12	2	994		10	0	11	31	52		25	1654	2	1	1682		1	0	0	0	0	16	17	1	0	0	0	0	100
% Passenger Vehicles	100	99.4	100	100	99.4		100	0	100	100	100		100	98.4	100	100	98.4		100	0	0	0	0	100	100	100	0	0	0	0	100
Heavy Vehicles	0	6	0	0	6		0	0	0	0	0		0	27	0	0	27		0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0.6	0	0	0.6		0	0	0	0	0		0	1.6	0	0	1.6		0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0

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16TH STREET AND MYETLE STREET/LEEGATE ROAD, NW - PM PEAK



TURNING MOVEMENT COUNT

Weekday Traffic Data Collection

Location:

Alaska Avenue and Holly Street, NW
District of Columbia

Prepared For:



Rummel Klepper & Kahl (RKK)

Prepared By:



SAMMAT

ENGINEERING SERVICES, LLC

SAMMAT Engineering Services, LLC

P.O. Box 780

Mount Airy, MD 21771

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August 19th, 2019

SUMMARY

This report provides turning movement count data obtained on August 8th, 2019 at the intersection of Alaska Avenue and Holly Street, NW. Figure 1 presents a map indicating the location of the study with respect to the surrounding roadway network.



Figure 1: Turning Movement Count Location

The details and summary of the results of the counts are presented in the next sections.

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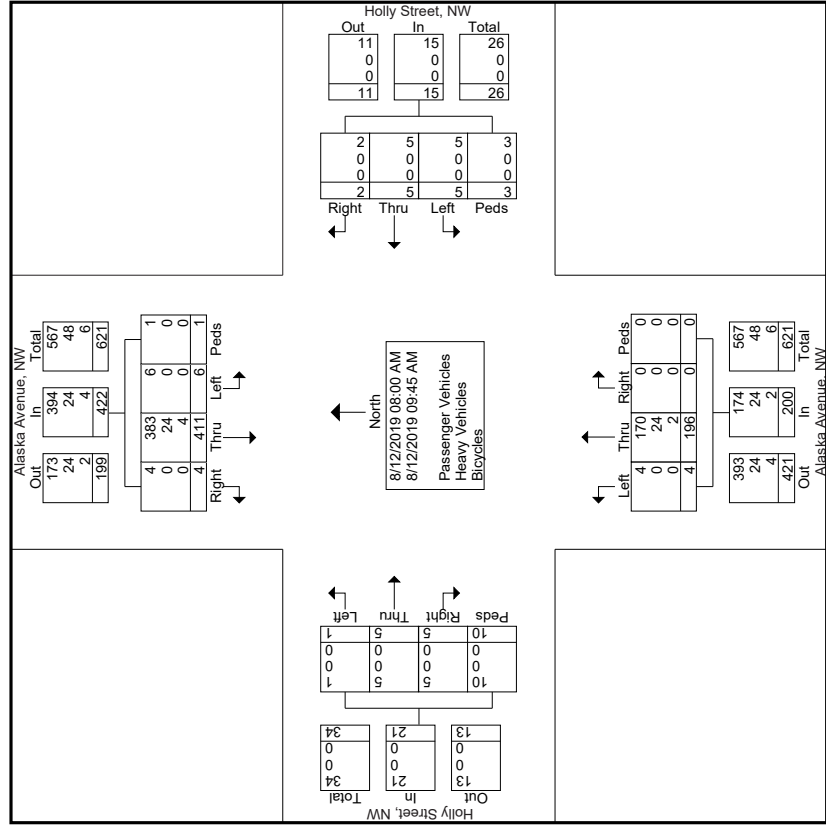
ALASKA AVENUE AND HOLLY STREET, NW - AM PEAK

Start Time	Alaska Avenue, NW												Holly Street, NW												
	From North						From East						From South						From West						
	Right	Thru	Left	Peds	App. Total	Total	Right	Thru	Left	Peds	App. Total	Total	Right	Thru	Left	Peds	App. Total	Total	Right	Thru	Left	Peds	App. Total	Total	
08:00 AM	1	69	0	0	70	70	1	1	0	0	2	2	0	23	1	0	0	24	24	0	0	0	0	4	100
08:15 AM	1	64	2	1	68	68	0	1	0	1	2	2	0	25	1	0	0	26	26	1	2	0	2	5	101
08:30 AM	0	72	1	0	73	73	0	0	0	1	1	1	0	24	1	0	0	25	25	1	1	0	0	2	101
08:45 AM	0	51	1	0	52	52	0	0	0	1	1	1	0	21	0	0	0	21	21	0	0	0	1	1	75
Total	2	256	4	1	263	263	1	2	0	3	6	6	0	93	3	0	0	96	96	2	3	0	7	12	377
09:00 AM	1	49	1	0	51	51	0	1	1	0	2	2	0	23	1	0	0	24	24	1	2	0	1	4	81
09:15 AM	0	42	0	0	42	42	0	1	1	0	2	2	0	28	0	0	0	28	28	1	0	1	1	3	75
09:30 AM	0	36	0	0	36	36	1	0	1	0	2	2	0	20	0	0	0	20	20	1	0	0	1	2	60
09:45 AM	1	28	1	0	30	30	0	1	2	0	3	3	0	32	0	0	0	32	32	0	0	0	0	0	65
Total	2	155	2	0	159	159	1	3	5	0	9	9	0	103	1	0	0	104	104	3	2	1	3	9	281
Grand Total	4	411	6	1	422	422	2	5	5	3	15	15	0	196	4	0	0	200	200	5	5	1	10	21	658
Approch %	0.9	97.4	1.4	0.2	64.1	64.1	13.3	33.3	33.3	20	0.5	2.3	0	29.8	0.6	0	30.4	30.4	23.8	23.8	4.8	47.6	1.5	3.2	
Total %	0.6	62.5	0.9	0.2	64.1	64.1	0.3	0.8	0.8	0.5	2.3	2.3	0	29.8	0.6	0	30.4	30.4	0.8	0.8	0.2	1.5	3.2		
Passenger Vehicles	100	93.2	100	100	93.4	93.4	100	100	100	100	100	100	0	86.7	100	0	87	87	100	100	100	100	100	100	91.8
% Passenger Vehicles																									
Heavy Vehicles	0	24	0	0	24	24	0	0	0	0	0	0	0	24	0	0	24	24	0	0	0	0	0	0	48
% Heavy Vehicles	0	5.8	0	0	5.7	5.7	0	0	0	0	0	0	12.2	0	0	0	12	12	0	0	0	0	0	0	7.3
Bicycles	0	4	0	0	4	4	0	0	0	0	0	0	2	0	0	0	2	2	0	0	0	0	0	0	6
% Bicycles	0	1	0	0	0.9	0.9	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0.9

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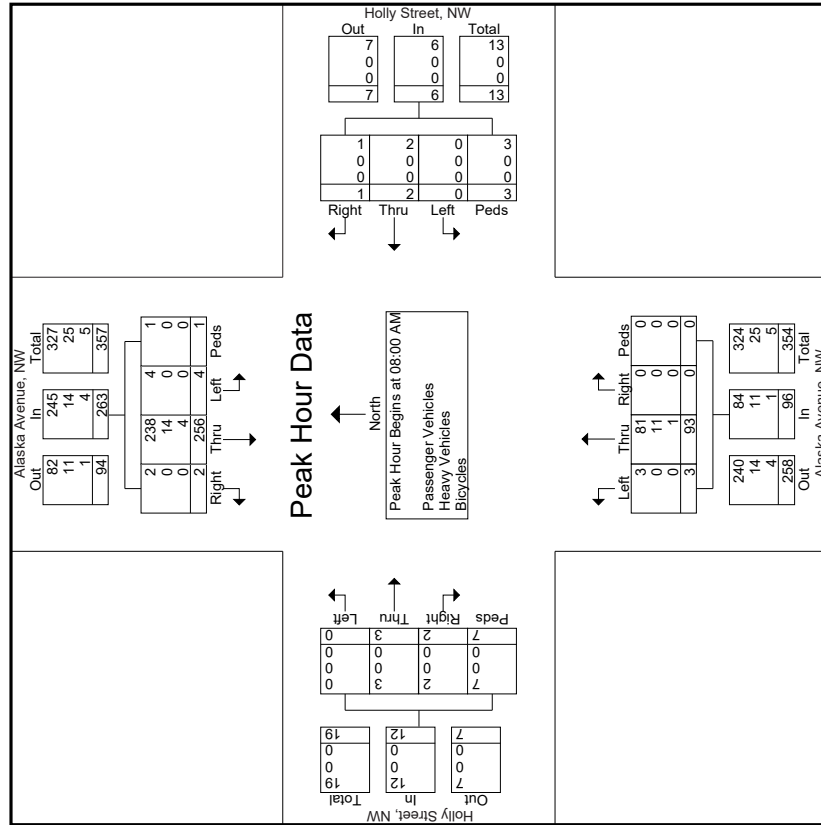
ALASKA AVENUE AND HOLLY STREET, NW - AM PEAK

Start Time	Alaska Avenue, NW From North				Holly Street, NW From East				Alaska Avenue, NW From South				Holly Street, NW From West				Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right		Thru	Left	Peds	App. Total	
	08:00 AM	1					1	1	0	1	2	0	25	1	0	26		1	2	0	0	4
08:15 AM	0	64	2	1	68	0	0	0	1	1	0	24	1	0	25	1	1	1	0	0	2	101
08:30 AM	0	72	1	0	73	0	0	0	1	1	0	21	0	0	21	0	0	0	0	1	1	75
08:45 AM	0	51	1	0	52	0	0	0	1	1	0	21	0	0	21	0	0	0	0	1	1	75
Total Volume	2	256	4	1	263	1	2	0	3	6	0	93	3	0	96	2	3	0	7	12	12	377
% App. Total	0.8	97.3	1.5	0.4		16.7	33.3	0	50		0	96.9	3.1	0		16.7	25	0	58.3			
PHF	.500	.889	.500	.250	.901	.250	.500	.000	.750	.750	.000	.930	.750	.000	.923	.500	.375	.000	.438	.600	.600	.933
Passenger Vehicles	2	238	4	1	245	1	2	0	3	6	0	81	3	0	84	2	3	0	7	12	12	347
% Passenger Vehicles	100	93.0	100	100	93.2	100	100	0	100	100	0	87.1	100	0	87.5	100	100	0	100	100	100	92.0
Heavy Vehicles	0	14	0	0	14	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	25
% Heavy Vehicles	0	5.5	0	0	5.3	0	0	0	0	0	0	11.8	0	0	11.5	0	0	0	0	0	0	6.6
Bicycles	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
% Bicycles	0	1.6	0	0	1.5	0	0	0	0	0	0	1.1	0	0	1.0	0	0	0	0	0	0	1.3

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	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total					
	Peak Hour for Each Approach Begins at:																											
+0 mins.	1	69	0	0	0	70	09:00 AM	0	1	1	0	0	2	09:00 AM	0	23	1	0	0	24	08:00 AM	0	0	0	0	0	4	
+15 mins.	1	64	2	1	68	0	1	1	1	0	2	0	28	0	0	28	0	28	1	0	0	29	0	2	0	0	2	5
+30 mins.	0	72	1	0	73	1	0	1	0	2	0	20	0	0	20	0	20	1	0	0	21	1	1	0	0	2	2	
+45 mins.	0	51	1	0	52	0	1	2	0	3	0	32	0	0	32	0	32	0	0	0	32	0	0	0	0	1	1	
Total Volume	2	256	4	1	263	1	3	5	0	9	0	103	1	0	104	2	3	0	0	7	12	2	3	0	0	7	12	
% App. Total	0.8	97.3	1.5	0.4	901	11.1	33.3	55.6	0	99	0	99	1	0	100	16.7	25	0	0	58.3	600	16.7	25	0	0	58.3	600	
PHF	.500	.889	.500	.250	.901	.250	.750	.625	.000	.750	.000	.805	.250	.000	.813	.500	.375	.000	.438	.600	.500	.375	.000	.438	.600			
Passenger Vehicles	2	238	4	1	245	1	3	5	0	9	0	89	1	0	90	2	3	0	0	7	12	2	3	0	0	7	12	
% Passenger Vehicles	100	93	100	100	93.2	100	100	100	0	100	0	86.4	100	0	86.5	100	100	0	0	100	100	100	0	0	100	100		
Heavy Vehicles	0	14	0	0	14	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0		
% Heavy Vehicles	0	5.5	0	0	5.3	0	0	0	0	0	0	12.6	0	0	12.5	0	0	0	0	0	0	0	0	0	0	0		
Bicycles	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0		
% Bicycles	0	1.6	0	0	1.5	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0		

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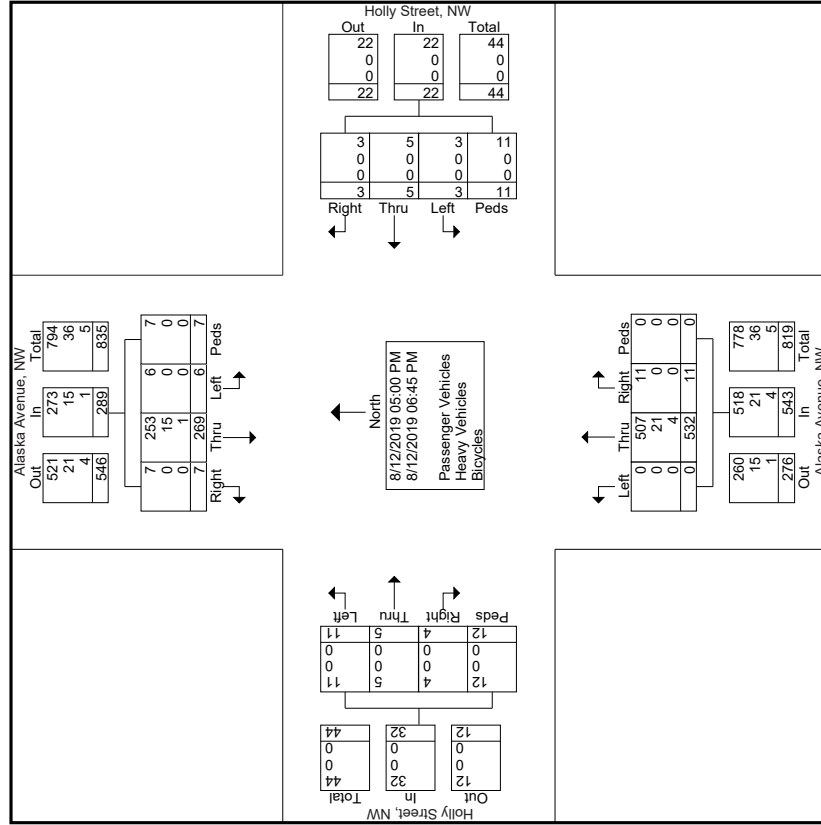
ALASKA AVENUE AND HOLLY STREET, NW - PM PEAK

Start Time	Alaska Avenue, NW											Groups Printed: Passenger Vehicles - Heavy Vehicles - Bicycles										
	From North						Holly Street, NW					From South						Holly Street, NW				
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
05:00 PM	3	35	1	2	41		0	1	1	0	2	1	72	0	0	73	1	3	1	1	6	122
05:15 PM	1	38	1	1	41		0	1	0	1	1	75	0	0	76	0	0	0	2	2	2	120
05:30 PM	0	30	0	1	31		1	0	1	2	1	70	0	0	71	0	1	1	4	6	6	110
05:45 PM	1	31	2	1	35		2	0	0	1	2	74	0	0	76	0	0	1	2	3	3	115
Total	5	134	4	5	148		2	2	2	6	5	291	0	0	296	1	4	3	9	17	467	
06:00 PM	1	43	0	0	44		0	0	1	3	4	2	71	0	0	73	1	0	2	0	3	124
06:15 PM	0	30	1	0	31		0	1	0	3	4	2	60	0	0	62	0	0	1	1	2	99
06:30 PM	1	41	1	0	43		0	2	0	1	3	2	53	0	0	55	1	0	4	0	5	106
06:45 PM	0	21	0	2	23		1	0	0	4	5	0	57	0	0	57	1	1	1	2	5	90
Total	2	135	2	2	141		1	3	1	11	16	6	241	0	0	247	3	1	8	3	15	419
Grand Total	7	269	6	7	289		3	5	3	11	22	11	532	0	0	543	4	5	11	12	32	886
Approach %	2.4	93.1	2.1	2.4		13.6	22.7	13.6	50		2	98				12.5	15.6	34.4	37.5			
Total %	0.8	30.4	0.7	0.8	32.6	0.3	0.6	0.3	1.2	2.5	1.2	60	0	0	61.3	0.5	0.6	1.2	1.4	3.6		
Passenger Vehicles	100	94.1	100	100	94.5	100	100	100	100	100	100	100	95.3	0	0	95.4	100	100	100	100	100	95.4
% Passenger Vehicles	0	15	0	0	15	0	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	36
Heavy Vehicles	0	5.6	0	0	5.2	0	0	0	0	0	0	3.9	0	0	3.9	0	0	0	0	0	0	4.1
% Heavy Vehicles	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5
Bicycles	0	0.4	0	0	0.3	0	0	0	0	0	0	0.8	0	0	0.7	0	0	0	0	0	0	0.6
% Bicycles	0	0.4	0	0	0.3	0	0	0	0	0	0	0.8	0	0	0.7	0	0	0	0	0	0	0.6

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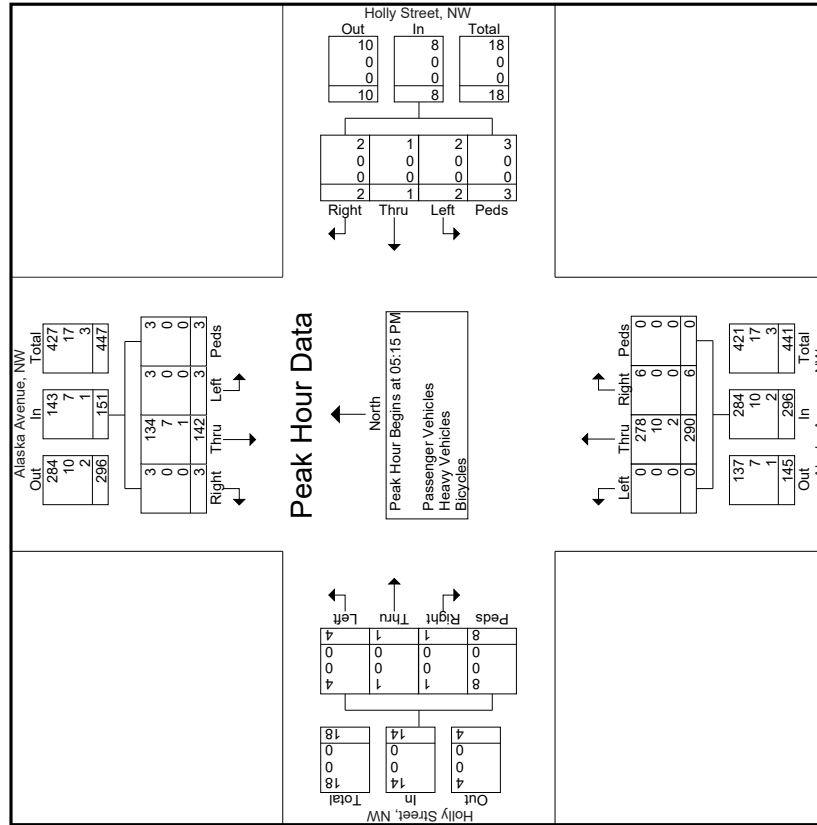
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Start Time	Alaska Avenue, NW From North				Holly Street, NW From East				Alaska Avenue, NW From South				Holly Street, NW From West														
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total						
Peak Hour Analysis From 05:00 PM to 06:45 PM - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 05:15 PM																											
05:15 PM	1																										
05:30 PM	0	30	0	1	31	1	0	1	0	2	1	70	0	0	71	0	71	0	0	0	71	0	1	1	4	6	110
05:45 PM	1	31	2	1	35	1	0	0	0	1	2	74	0	0	76	0	76	0	1	2	77	0	1	2	3	115	
06:00 PM	1	43	0	0	44	0	0	1	3	4	2	71	0	0	73	1	73	0	2	0	75	0	0	3	3	124	
Total Volume	3	142	3	3	151	2	1	2	3	8	6	290	0	0	296	1	296	0	4	8	304	1	4	8	14	469	
% App. Total	2	94	2	2	100	25	12.5	25	37.5	50	2	98	0	0	98	7.1	77.1	28.6	57.1	100	7.1	28.6	57.1	100	469		
PHF	.750	.826	.375	.750	.858	.500	.250	.500	.250	.500	.750	.967	.000	.000	.974	.250	.250	.500	.500	.500	.583	.583	.583	.583	.946		
Passenger Vehicles	3	134	3	3	143	2	1	2	3	8	6	278	0	0	284	1	284	1	4	8	293	14	14	14	14	449	
% Passenger Vehicles	100	94.4	100	100	94.7	100	100	100	100	100	100	95.9	0	0	95.9	100	100	100	100	100	100	100	100	100	95.7		
Heavy Vehicles	0	7	0	0	7	0	0	0	0	0	0	10	0	0	10	0	10	0	0	0	10	0	0	0	0	17	
% Heavy Vehicles	0	4.9	0	0	4.6	0	0	0	0	0	0	3.4	0	0	3.4	0	3.4	0	0	0	3.4	0	0	0	0	3.6	
Bicycles	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	0	2	0	0	0	0	3	
% Bicycles	0	0.7	0	0	0.7	0	0	0	0	0	0	0.7	0	0	0.7	0	0.7	0	0	0	0.7	0	0	0	0	0.6	

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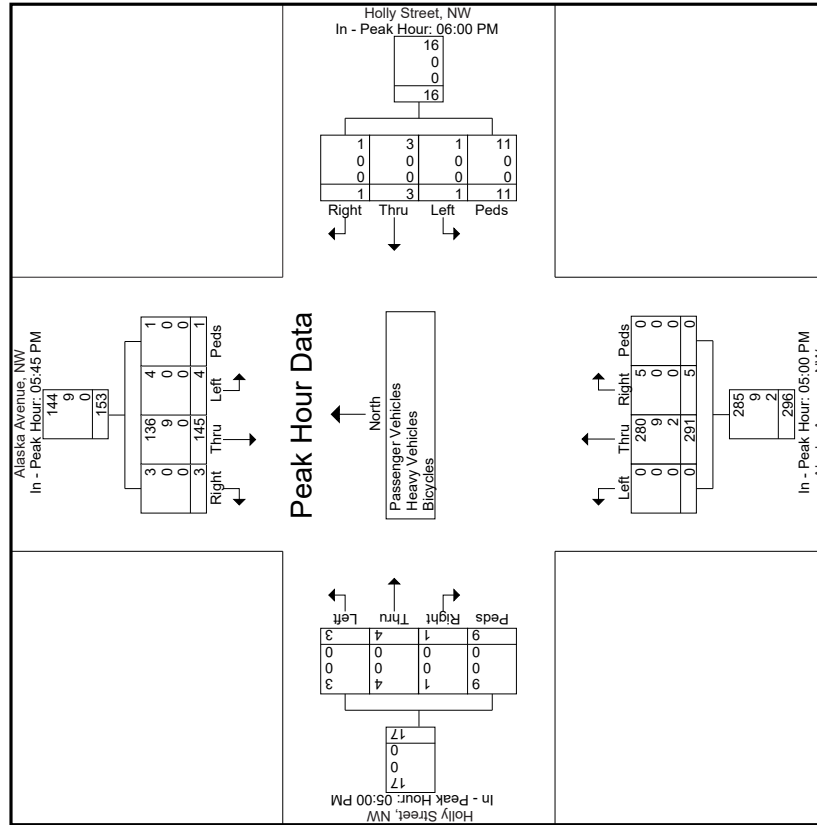
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Start Time	Alaska Avenue, NW From North						Holly Street, NW From East						Alaska Avenue, NW From South						Holly Street, NW From West													
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total									
	Peak Hour for Each Approach Begins at:																															
+0 mins.	1	31	2	1	35	05:45 PM	0	0	0	1	3	4	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0		
+15 mins.	1	43	0	0	44	06:00 PM	0	1	0	0	3	4	0	1	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0		
+30 mins.	0	30	1	0	31	06:15 PM	0	2	0	0	1	3	0	2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0		
+45 mins.	1	41	1	0	43	06:30 PM	1	0	0	0	4	5	1	0	0	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0		
Total Volume	3	145	4	1	153	1	3	1	11	16	1	16	1	3	1	11	16	5	291	0	0	296	1	4	3	9	17	1	1	1	1	6
% App. Total	.750	.843	.500	.250	.869	.250	.375	.188	.62	.688	.800	.800	.625	.970	.000	.000	.974	.17	.983	0	0	.000	.250	.333	.750	.563	.708	.250	.333	.750	.563	.708
Passenger Vehicles	3	136	4	1	144	1	3	1	11	16	1	16	5	280	0	0	285	1	280	0	0	285	1	4	3	9	17	1	4	3	9	17
% Passenger Vehicles	100	93.8	100	100	94.1	100	100	100	100	100	100	100	100	96.2	0	0	96.3	100	96.2	0	0	96.3	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles	0	9	0	0	9	0	0	0	0	0	0	0	0	9	0	0	9	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	6.2	0	0	5.9	0	0	0	0	0	0	0	0	3.1	0	0	3	0	3.1	0	0	3	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0.7	0	0.7	0	0	0.7	0	0	0	0	0	0	0	0	0	0

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APPENDIX C

PUBLIC ENGAGEMENT SUMMARY

TITLE VI FORMS

The District Department of Transportation (DDOT) is committed to providing all citizens, regardless of race, color, age, gender, or national origin, the opportunity to participate in and respond to transportation plans, programs, and activities that may affect their community. Title VI Public Involvement Questionnaire was distributed at all three public workshops to voluntarily collect information from residents. In addition to collecting contact and demographic information, the Title VI questionnaire allows participants to submit comments/concerns on the study. During the three public workshops, the planning team collected 27 Title VI Public Involvement Questionnaires containing 23 comments about the study. Scanned Title VI forms are included in workshop summaries that follow.



Public Workshop #1 Summary

February 2019

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CHAPTER 1 INTRODUCTION

The Rock Creek East I (RCEI) Livability Study is an effort by the District Department of Transportation (DDOT) to evaluate and improve transportation safety and accessibility throughout the Rock Creek East I study area. The study area is defined by Rock Creek Park and the Maryland border to the West, Eastern Avenue the North, New Hampshire Avenue NE and the Red Line Metrorail tracks to the East, and Military Road NW, Missouri Avenue NW, and Riggs Road NE to the South.

DDOT will work with members of the community and key stakeholders to identify specific opportunities to improve accommodations for people walking, biking, riding the bus, driving, and making deliveries. There are a number of public engagement events throughout the duration of the livability study. Public workshops and engagement pop up events are centered around major project milestone. In order to garner public feedback on existing conditions, initial concepts designs, and draft recommendations. These events will be held throughout the study area over the course of project. The feedback gained at these events will be used to develop, refine, and assist in the selection of recommendations for short, medium, and long-term improvements that will have a positive impact on livability in the RCEI Study area. Feedback from the first public workshop is being utilized to refine conceptual-level recommendations.

1.1 Purpose of the Workshop

The first of three public workshops for the RCEI Livability Study was held on Wednesday, February 6, 2019. The purpose of the first workshop was to identify existing issues and opportunities for a safer and more accessible multimodal travel throughout the study area. The project team presented materials that provided context for the overall goals, objectives, study process, and transportation analysis. Workshop boards and activities allowed residents to review existing multimodal conditions, identify challenges and opportunities in the study area, and discuss their concerns with DDOT staff, the project consultant team, and mark up maps.

1.2 Event Information

The workshop was held on Wednesday, February 6, 2019 from 6:30 to 8:30pm at the Juanita E. Thornton/Shepherd Park Library. The library is located at 7420 Georgia Ave NW, Washington, DC 20002, which is about one mile from the Takoma Metro Station on the Red line and accessible by the 70, S2, 52, 54, and 59 buses.

The next public workshop will be held in June. The location and exact date are to be determined.

1.3 Format

The public workshop was open-house style with informational boards and interactive activities around the room. Ward Four Councilmember Brandon Todd, introduced the study at 7:00 pm, and Cynthia Lin, DDOT project manager, gave a brief overview of the RCEI Livability Study. The public workshop resumed promptly after, and residents were encouraged to take part in activities throughout the room and engage with DDOT staff and the project team to discuss their feedback for the study.

Boards helped residents gain an understanding about the study goals and process, as well as existing conditions within the study area. Interactive activities were provided for residents and stakeholders to supply feedback. DDOT and members of the study's consultant team were stationed next to boards and activities and helped to guide participants and listen to stakeholder comments. Other members of the team were circulating around the meeting to answer questions when necessary.

1.4 Boards and Activities

Boards and activities were designed to give attendees an overview of the study and its purpose and need, as well as to collect their feedback on transportation related issues. All board and activities were posted on the website for additional public feedback and understanding. The following boards and activities were presented:

Informational

- **Welcome Board**
- **Study Area:** Map of the study area that includes community facilities
- **Study Goals and Objectives:** Overarching goal and the objectives of the study

- **Study Process:** Project timeline and major milestones
- **What is Livability?:** Information about DDOT's Livability Study Program

Existing Conditions

- **Plan Review Map:** Map of previous transportation plans and studies in the study area as well as District-wide plans that were relevant to the livability study
- **Pedestrian and Bicycle Crashes:** Map illustrating crashes reported to the Metropolitan Police Department between 2016 and early January 2019, involving a pedestrian or a cyclist
- **Sidewalk Gaps:** Map of streets within the study area that do not have any sidewalks on either side of the street
- **Existing and Proposed Bike Facilities:** Map of existing and future bike infrastructure within the study area
- **Existing Transit:** Map of average daily ridership at WMATA Metrobus stops within the study area
- **Walter Reed Development Access Map:** Overview of the Walter Reed National Military Medical Center and redevelopment plans
- **Urban Street Design Toolbox:** A matrix of traffic calming elements that may be considered for the Livability Study

Workshop Activities

- **Let Us Improve Your Neighborhood Aerial Map (Activity):** This was a large aerial map that depicted streets, buildings, and open spaces in the study area. Participants were asked to use Post-it notes to mark locations on the map where they have concerns and recommendations for existing transportation issues
- **Let Us Improve Your Neighborhood Vision Zero Heat Map (Activity):** This was a large heat map that depicted locations in the study area where DDOT has already received requests from the public through the DC 311 system or the Vision Zero website to study or fix transportation issues. Participants were asked to use Post-it notes to mark locations on the map where they have concerns and recommendations for existing transportation issues
- **Take Me to Walter Reed...by Bus (Activity):** This was a large map that depicted streets and existing bus facilities, as well as the site plan for the redevelopment of the Walter Reed National Military Medical Center.

Participants were asked to use markers and illustrate how they would change the existing WMATA Metrobus routes to take them to different destinations at the proposed Walter Reed site.

CHAPTER 2 OUTREACH EFFORTS

Outreach for the first public workshop was key in promoting community participation and engagement throughout the project process. For this workshop, the outreach team took careful effort to include stakeholders, organizations, institutions, and as many residents as possible.

2.1 Notifications

The outreach team contacted organizations, elected officials, residents, community news outlets, civic, faith-based and community organizations. Methods of contact included phone calls, e-mail blasts, social media, door to door canvassing, and participation in community meetings.

2.1.2 Electronic Communications and Social Media

The outreach team created a project contact list that includes interested residents and stakeholders who signed up on the project website, with their ANCs, and other neighborhood and community organizations and listservs. This list currently has over 100 contacts and the list is expected to grow throughout the process of the study. Information regarding public workshops, project updates, and materials were forwarded to these constituents.

Utilizing the DDOT and VisionZeroDC Twitter and DDOT Facebook profiles, workshop information was posted regularly up to and on the meeting date. Posting through these platforms allowed us to reach approximately 45,350 followers. In addition information was also posted on neighborhood and transportation-oriented listservs and NextDoor.

2.2 Door Hangers and Posters

The outreach team distributed 600 door hangers, for the first public workshop, in English and 31 posters (25 in English, 4 in Spanish, 3 in Amharic) throughout the study area and to stakeholders. The doorhangers and posters were placed in libraries, recreation centers, churches, restaurants, cafes, grocery stores, businesses, and other community spaces around the study area. Most of the Ethiopian and Hispanic

businesses preferred English materials since the majority of their customers spoke English.

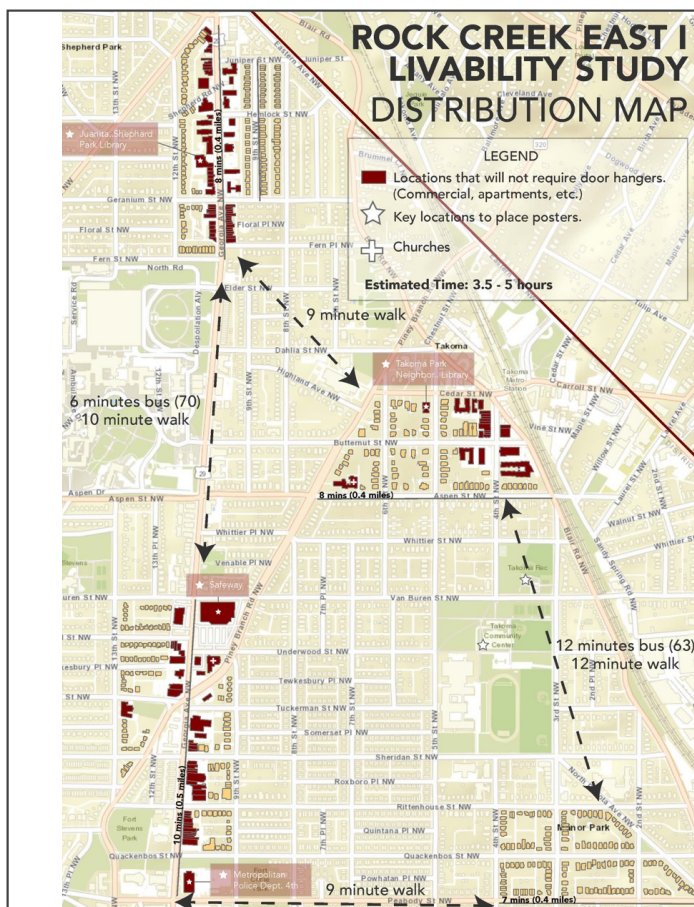
2.3 Title VI Outreach

In addition to going door to door in specific parts of the study area and distributing information, the team reached out to community institutions such as schools, churches, community centers, and small businesses (in and around the study area) to inform them about the livability study. Key locations in the study area were identified that served native Amharic and Spanish speaking populations to ensure we reached a broad cross section of Title VI populations.

Community Centers	Churches	Schools
Petworth Recreation Center	Seekers Church	Coolidge High School
Fort Stevens Recreation Center	Trinity Episcopal Church	Whitter Education Campus
Emery Heights Community Center	Washington Metaphysical Church	Lasalle Backus Education Campus
Takoma Park Neighborhood Library	National Spiritual Science Center	Brightwood education campus
Juanita E. Thornton/Shepard Park	Nineteenth Street Baptist Church	Takoma Education Campus
Hamilton Recreation Center	The Church of Jesus Christ Latter Day	Barnard Elementary School
Upshur Recreation Center	Mt. Zion Baptists Church	West Education Campus
Raymond Recreation Center	Star of Bethlehem Church of God in Christ	Theodore Roosevelt Center City Public Schools
Parkview Recreation Center	Evangelical Church Apostles	MacFarland Middle School
	Nativity Catholic Church	Raymond Education Campus
	Emory United Methodist Church	Washington Yu Ying
	Holy Comfort Episcopal Church	

2.4 Distribution Map

A distribution map was created to help with the distribution of the doorhangers and posters. The outreach identified four focal areas for distribution: Shepherd Park, Takoma, Manor Park, and Brightwood, targeting residential and commercial corridors.



CHAPTER 3 ATTENDANCE

Approximately 60 members of the public attended the first public workshop. These attendees included area residents, elected officials (ANCs, councilmember's staff), members of community and civic organizations. Of the 60 participants only 28 submitted Title VI forms and some of them opted not to include their demographic information.

CHAPTER 4 COMMENTS

Comments were received at each activity station as well as online. The sections below show the input received by the activities.

4.1 Key Takeaways

Accessibility:

- *Need more public transportation routes*
- *Desire for improved bus facilities*
- *Upgrade sidewalks and a facilities*
- *Shuttle service connecting Walter Reed Development to nearby metro stations*

Safety:

- *Unsafe crossings for pedestrians and bicyclists*
- *Concerns about speeding and safety*
- *Concerns of personal safety throughout the study area*
- *Vehicle access and visibility concerns*
- *Better traffic and safety enforcement*

Streetscape:

- *Traffic calming improvements*
- *Better traffic signage, a large demand for stop signs*
- *Desire for on-street parking*
- *Additional street lights and traffic lights*
- *Street maintenance*

4.2 Activity Comments

We contacted organizations, elected officials, residents, and institutions through phone calls, e-mail blasts, and sending information about the study.

Let us improve your Neighborhood Aerial Map	
Location	Comments
North of Sycamore Street	Missing sidewalks
West Beach Dr.	Lack of sidewalks, sufficient streets, and lights in this area.
Unspecified	No safe way for bicyclist to cross the park
16th and Eastern	Traffic circle improvements at 16th & Eastern including improved signal lights
13th street	Enforce one way
13th Street	Enforce one way in the a.m.
Kalmia Rd.	Speeding volume, school, too narrow for the current rating (same as Alaska)
Kalmia and Jonquil, 13th and Morning side	Alley between Kalmia and Jonquil, 13th and Morning side needs repair
Unspecified	Request 4 way stop sign
Jonquil St.	Fix my curb
Juniper St.	Unsignaled crosswalk, speeding major issue of 16th
Kalmia and Jonquil, 13th and Morning side	Many Shepherd Park stop signs are obscured by foliage
Alaska Avenue (between 12th and 13th)	Speeding cars and buses my dog was killed by car speeding here.
Georgia Ave.	Repair North side of Georgia Avenue from Fern to McDonald's
East of Georgia Ave.	Traffic calm geranium speeders at Georgia and Blair
Blair Rd.	No ADA access sidewalk anywhere on Blair Rd.
Dahlia & Georgia/ Dahlia & 9th Street	Low visibility for cross traffic due to parking too close to corners. 2-way stop sign is confusing, doesn't slow traffic on dahlia
7th & Dahlia	Street and school empty, dark and dangerous at night, uncomfortable walk to and from metro due to crime, concerns when school is open
Near Butternut St.	Bike beltway missing
Aspen into Blair	Under metro bridge is confusing, need left turn lane

3rd St.	Let bikes easier access to Walter from and water toy thing
8th and Piney	8th and Piney dangerous
8th	Need road managing for contraflow bike lanes on 8th in both direction
near Aspen St.	Street car?
12th & Aspen St.	Parking for public pool?
Brightwood to Shepherd Park	Need safe N-S bike routes
Aspen & 14th	DCI/Lamb School, double parking, student foot traffic
14th street	Bike lanes always blocked during school drop off/ pick up, need more public transit.
Near 14th Street	Parking restriction are an issue throughout B'Wood
Near 14th & Underwood	Confusing Intersection
Georgia Ave to 16th	All thru streets from Georgia Avenue to 16th street- rush hour traffic speeding is side swiping
14th & Tuckerman	Stop sign is needed
Underwood	1200-1300 Block of Underwood- speeding, side swiping, pedestrians, danger.
Georgia Ave.	Bike lanes ridiculously skinny
1200 block of underwood	Speeding/speed bumps needed
Tewkesbury	Improve infrastructure at these temp jersey barriers Tewkesbury Pl.
Tewkesbury	Parking in Public space on Tewkesbury
Piney Branch & Sheridan	Traffic light is needed
Piney Branch/Sheridan/Rittenhouse	Terrible safety for pedestrians
8th & 9th	9th flatter than 8th, make 9th bike route with contraflow.
Piney	Crossing Piney is dangerous
13th & Sheridan	Repair 13th between Sheridan and Rittenhouse
13th & Sheridan	Bumper strips or bumpers on the 1300 block of Sheridan
14th & Sheridan	Difficult crossing
16th/Somerset/ Luzon Ave.	Complicated neighborhood vehicles turning from 16th to Luzon fast, hard to see
Unspecified	Sidewalks on both sides of all streets within 1/2-1 mile of schools.
14th Street	Cars always blocking bike lanes
Georgia Ave.	Georgia Ave. (in general) speeding south bound, unsafe at Schools for crossing guard and kids, lights not effective.
Unspecified	Personal safety especially at night throughout the area.
Georgia Ave.	Georgia Ave. becomes a speedway south of MD Ave. to Kennedy to Gallatin
Missouri and N. Capital	Terrible traffic back-ups all four ways
Riggs and Blair	Safe route between Riggs & Blair is along metro/traub, /tracks to Oglethorpe & Blair as residents attending community meeting have made it known.
Unspecified	Major issues with spill over problems from PG county. Traffic bottle neck, drags, and shootings.

Unspecified	Signage and other-support for residential properties near buses. E.g. signage, painted curbs to prevent/minimize advance efforts on home.
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Improve your Neighborhood Vision Zero Heat Map

Location	Comments
14th Street	Agree many children need to cross here and it's unsafe
14th Street	Narrow Street, big dumpster trucks already damage cars on street
14th Street	Not enough parking for Jonquil Street residents, soccer field patrons, school and staff
14th Street	Already congested with school drop off and teacher parking
14th Street	4 way stop sign needed
Kalmia Rd.	Kalmia to narrow only one car can go through when parking is on both sides.
Eastern Ave.	Alley needs to be northbound only to divert traffic out of the neighborhood, Make alley one way to eastern.
Kalmia Rd.	Speeding on Kalmia and property damage
Kalmia Rd.	Residential parking needed for 12th St., NW and & Kalmia
Georgia Ave./Kalmia Rd./Alaska Ave.	Protected left turn signals needed at Georgia Ave. Kalmia/Alaska at all sides.
Kalmia Rd.	New development for target-7 truck, traffic on kalmia-18 wheelers - need to address parking.
Alaska Ave.	Speeding on Alaska
14th Street.	14th St.-speeding and children plus WR will open gate and increase traffic
Unspecified	Fix the circle it's a death trap
North Portal/16th/West Beach Drive	Sidewalk needed on N. Portal from 16th to West Beach Dr.
Unspecified	The hill next to the sidewalk has completely corroded
Georgia Ave.	Repave Georgia Ave. from Fern to McDonalds going north.
Unspecified	Walk and bike thru access efficient all direction
14th/Walter Reed	Please do not allow thru traffic on 14th St. inside Walter Reed
Dahlia/Piney Branch	Dahlia & Piney-Vehicles speed on Piney Branch, many do not yield to pedestrians, yield to pedestrian's signs insufficient.
Unspecified	Pedestrian Safety-kids to school, people to metro
Aspen/16th/Georgia Ave.	Aspen st,16th, Georgia Ave.- needs a comp. traffic, parking and exit/entrance plan. Lots of traffic, buses, foot and bike.
Brightwood	Parking is an issue thru-out Brightwood. Affects traffic flow, pedestrian safety and bike lanes.
Georgia Ave.	Georgia Ave. & Underwood-safer crossing across Georgia Ave. to Safeway & CVS heavy pedestrian traffic
16th St.	Poor timing on this light. Hard to make left turn form south-bound 16th.
Whitter St.	Whitter St needs repaving
Aspen St.	Widen Aspen and but better sidewalks, buses can't fit, and children walk through area.
12th/Underwood	Dangerous sidewalk 1200 block of Underwood
12th/Underwood	Dangerous alley opening 1200 block of underwood
14th/Tuckerman	14th & Tuckerman- difficult /dangerous crossing

14th/Sheridan	14th & Sheridan-difficult/dangerous crossing
Piney Branch/Ft. Stevens/Georgia Ave.	Safer crossings across Piney Branch b/n Fort Stevens to Georgia traffic calming
Tuckerman St.	Eliminate street parking on both sides of Tuckerman St. People park there and catch the bus w/ MD tags and litter.
Sheridan/ 12th Pl.	Remove stop sign at Sheridan and 12th Place
13th/Sheridan	Bumper stops on 1300 block of Sheridan
Tewkesbury	Tewkesbury cul-de-sac beautification 1200 block of Tewkesbury Pl.
Whitter St.	PB /Whitter intersection-very difficult to turn from Whitter to Piney Branch or to cross Whitter. Tough for pedestrians to cross at all, very dangerous.
Walter Reed/Aspen	Once Water Reed gets built out will Aspen St east of Georgia lose its parking on one side, I sincerely hope not.
Piney Branch/Aspen	Would be nice to pave cross walk markings across Piney Branch at Aspen, Now DCI students cross and the general neighbors need it to.
Unspecified	Badly timed lights, confusing, dangerous, congested; stormwater runoff
Chestnut/Blair	Traffic blocks intersection of Chestnut & Blair
Eastern/Piney	Enter street needs to be repaved (Eastern between Piney Branch & NH
4th/Cedar/Blair Rd.	Confusing intersection for pedestrians and traffic (4th/Cedar/Blair Rd.)
Riggs Rd.	Traffic backup all along Riggs Rd. / blocking the box
Riggs Rd.	North sidewalks along Riggs Rd.-need bike infrastructure or Riggs Rd.

Take me to Walter Reed by bus	
Location	Comments
12th	12th Street too narrow for commuter bus.
12th/Walter Reed	Please look prospectively at traffic calming along 12th St. to North of Walter Reed.
Georgia Ave. /Fern St	There have been several bad car accidents at Georgia Ave. and Fern St./Pl. People drive fast. How about lowering speed limits on Georgia Ave. to 25 mph.
Georgia Ave.	Improve Georgia Ave. bus service.
Georgia Ave. Kalmia	Awkward intersection From Georgia Avenue & Kalmia
Unspecified	School kids fast, heavy and traffic don't mix!
16th St.	I live nearby and would mainly walk to Walter Reed.
Walter Reed	Vans to go from/to Walter Reed development to metro like when prior facilities were open.
Floral St. /Alaska	Poor visibility coming off of Floral St. onto Alaska Ave. Also, how about lowering speed limit on Alaska to 25 MPH.
Unspecified	Need to move north bound bus to north of road.
Unspecified	Need Hawk to move high schoolers to north bound bus stop
Aspen St.	Make Aspen St. straight not bumped out. Contributing buildings should demolished to make Aspen St. safe maintain consistent width of multi-use trail of Aspen St. Aspen St. will be heavily traveled then.
14th/Aspen	Strengthen bus facilities where 14th meet at Aspen St.
Aspen/Georgia Ave.	Need room for bus to turn from Aspen onto Georgia Ave.
Aspen St./13th	Aspen St. and 13th Street straight bus lane and take the two down. They are minor contributing buildings, initially planned to be demolished.
Unspecified	Market rate parking to encourage use of buses and other modes
Takoma/Silver Spring/Walter Reed	Need free shuttles from Takoma and Silver Spring Metro to Walter Reed, DC circulator or similar.
Dahlia St./16th/Piney Branch/Blair Rd.	Dahlia St. will be only straight EW Rd throughout Walter Reed campus from Alaska/16th to Piney/Blair. Concerned about speed cut through traffic.
Walter Reed	Loop -Metro to Walter Reed to Silver Spring

4.3 Title VI Comments

Approximately 12 attendees out of the 28 members of the public who opted to submit the Title VI form provided comments. All of the attendees who provided comments are in Ward 4.

Title VI Comments	
Ward	Comments
4	Helpful- Good introduction and opportunity to provide input. More are needed, follow ups on specific challenges are needed.
4	Provided written comments to Ms. Lin
4	I appreciate the interactive element being able to look at maps and provide feedback on specific locations. I also appreciate the opportunity for folks to provide online feedback. It seems like many of the people in the room were political/govt folks, and it would be great to get more involvement from neighbors. I'm happy to help spread the work.
4	You need a bigger meeting room
4	This study operates on the premise that traffic moves to quickly and freely in DC. I find DC increasingly unlivable because the opposite is true. Speed cameras have made me a less safe driver, staring at my speedometer, amazed that I'm going both above the speed limit and so slowly, keeps my eyes off the road. I've paid over \$1000 to put me in the state of fear. Side note, I hate writing by hand as much as you hate reading my writing this would be better online.
4	There have been 4-5 Jersey barriers placed on the 1200 block of Tewkesbury Pl., NW. (West of GA Ave.) and just left there for a few years. This was done in order to stop Tewkesbury Pl. from becoming a through street to FA Ave. DDOT assured the residence of Brightwood that this was a temporary solution, and that a more permanent solution would be coming yet nothing was ever done. These temporary Jersey barriers pose a few different problems to the residence of Tewkesbury Pl. Vehicles still use the street as a potential through street because the barriers are so low, that it appears that you can still drive through to GA Ave., making the street unsafe still for our residence and children. People patronizing the dentist office, banks and eateries on GA Ave are still parking on Tewkesbury PL and walking over because they can see right over the barriers and park there anyway. There is also a safety issue for pedestrians walking through that barrier and alley and parking lot. Lastly, it looks TERRIBLE, it appears that someone just dumped them there and forgot about them which they did! We were promised a COMPLETE SOLTION! and this isn't it!
4	Take me to Walter Reed by bus. I would take an S-4 bus from near my residence near 16th St, NW to Main Drive and take a "timed transfer" bus along Main Drive to the shops and walk to the grocery store/shops. Calming measures bump out works best in the narrow streets of Shepherd park. Kalmia Road is too narrow for a formal bike lane, even though it is a street.

4	Teach people the laws-can't go into cross walk while a person is in it!!!. No right on Red in DC at all. Make bicyclist wear reflective light not dark clothing at night. If you put in a speed bump-mark it. Teach people to stop for school buses and pull over for emergency equipment.
4	Short notice about meeting, Website incomplete, info needed was not on the website when accessed close to it being set up. DDOT has not followed up with community after 65% update of Metropolitan Branch Trail. Bike trail between Riggs Rd. and Blair, between McDonald and Oglethorpe NE. Mass do not clearly designate streets of concern, 1st NE, McDonald Pl., NE and Oglethorpe NE.
4	Love that a livability study is being done especially because the population in the area will triple within the next few years. I walk everywhere and want to be able to continue to enjoy doing that without a lot of Concrete Jungle to open spaces.
4	Interested in the senior citizen building on the Walter Reed complex.
4	Seems to primarily serve wealthier portions of the area. Maps are empty of comments over by and south of Whittier.
4	The meeting room was way to small and parking was a problem.



Public Workshop #2 and Pop-up Event Summary

June 12, 2019

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CHAPTER 1 INTRODUCTION

The Rock Creek East I (RCEI) Livability Study is an effort by the District Department of Transportation (DDOT) to evaluate and improve transportation safety and accessibility throughout the Rock Creek East I study area. The study area is defined by Rock Creek Park and the Maryland border to the West, Eastern Avenue the North, New Hampshire Avenue NE and the Red Line Metrorail tracks to the East, and Military Road NW, Missouri Avenue NW, and Riggs Road NE to the South.

DDOT is undertaking the Rock Creek East I Livability Study to evaluate the transportation network in the study area from a system perspective and look for opportunities for a safer and more accessible multimodal network. There are several public engagement events throughout the duration of the livability study. Public workshops and engagement pop up events are centered around major project milestones in order to garner public feedback on existing conditions, initial concepts designs, and draft recommendations. These events will be held throughout the study area over the course of project. The feedback gained at these events will be used to develop, refine, and assist in the selection of recommendations for short, medium, and long-term improvements that will have a positive impact on livability in the RCEI Study area. Feedback from the first public workshop is being utilized to refine conceptual-level recommendations.

1.1 Purpose of the Workshop and Pop-up Event

Workshop #2

The second of three public workshops for the RCEI Livability Study was held on Wednesday, June 12, 2019. The purpose of this neighborhood study is to enhance the community quality of life through improvements to transportation safety and connections to destinations for all modes. At the second public workshop, DDOT presented the livability study's initial focus areas based on comments received from the previous community outreach efforts as well as extensive data research and analysis. Public workshop attendees had an opportunity to evaluate and share their ideas for specific livability design improvements at these focus areas through interactive workshop activities. The workshop was held on Wednesday, June 12, 2019 from 6:30 to 8:30pm at the Holy Comforter Episcopal Church at 7420 Georgia Ave NW, Washington, DC 20002. The workshop location is located within the study boundary.

Pop-up Event

The project team held a public pop-up event at one of near one of the study's focus areas on Saturday, June 29, 2019. The purpose of the pop-up was to provide opportunities for local residents to give input on the study's initial focus areas. The pop-up event was held, within three weeks of the second public workshop, on Saturday, June 29, 2019 from 10:00 am to 12:00 pm. The location was in front of the Safeway located at 6500 Piney Branch Road NW, Washington, DC 20012. The pop-up event location was chosen due to its proximity to Piney Branch and Georgia Avenue, one of the study's focus area intersections.

The next public workshop will be held in early to mid-September 2019. The location and exact date are to be determined.

1.2 Format

Workshop #2

The public workshop was open-house style with informational boards and interactive activities around the room. Cynthia Lin, DDOT project manager, gave a brief overview of the RCEI Livability Study. The public workshop resumed promptly after. Residents were encouraged to take part in activities throughout the room and engage with DDOT staff and the project team to discuss their feedback for the study.

A number of project boards were displayed at the open house which described project goals and study process, and the detail methodology behind the selection of initial focus areas. This was complemented by Interactive activity stations, allowing residents and stakeholders to provide comments about initial focus areas. DDOT and members of the study's consultant team were stationed next to boards and interactive stations, helping to guide participants through the analysis process to select the initial set of focus areas. Other members of the team were circulating around the meeting to answer questions when necessary. Comments were provided either by sticker notes on the boards/plot map or on Title VI forms.

Pop-up Event

The pop-up event at Safeway was an informal event which allowed the project team to intercept the public to discuss the RCEI project and engage them in providing feedback about the study and the initial focus areas selected for recommendations. The project team was equipped with board maps and informational flyers about the study. Participants were asked to look at the focus areas and provide comments about

other locations which should be considered. The pop-up event allowed participants to come and go on their own schedule, allowing for greater flexibility in attendance.

1.3 Boards and Activities

Workshop #2

Boards and activities were designed to give attendees an overview of the study and its purpose and need, as well as to collect their feedback on transportation related issues. All board and activities were posted on the website for additional public feedback and understanding. The following boards and activities were presented:



Informational

- **Welcome Board**
- **Study Area:** Map of the study area that includes community facilities
- **Study Goals and Objectives:** Overarching goal and the objectives of the study
- **Study Process:** Project timeline and major milestones
- **What is Livability?:** Information about DDOT's livability Study Program
- **Initial Focus Areas & Methodology:** Map of the initial focus areas that based on the comments received from previous community outreach efforts as well as extensive data research and analysis

- **Current DDOT Planning & Design Projects:** Map and table of the current DDOT project in the study area
- **Walter Reed Development Access Map:** Overview of the Walter Reed National Military Medical Center and redevelopment plans
- **Urban Street Design Toolbox (3 boards):** A matrix of traffic calming elements (Pedestrian, Bicyclists, Traffic Calming) that may be considered for the livability Study

Interactive Station

- **Interactive Station #1 - Initial Focus Areas Intersections:** A flashlight map shows 6 focus intersections in the study area:
 - 16th St. NW at Juniper St. NW
 - Georgia Ave. NW at Alaska Ave. NW
 - Georgia Ave. NW at Piney Branch Rd. NW
 - North Capitol St. at New Hampshire Ave. NW
 - North Capitol St. at Milmarson Pl. NW and Blair Rd. NE at McDonald Pl. NE
 - Blair Rd. NE at Aspen St. NW
- **Interactive Station #2 - Initial Focus Areas Corridors:** A flashlight map shows 2 focus corridors in the study area:
 - Corridor C-1: Georgia Ave. NW between Fern St. NW and Juniper St. NW
 - Corridor C-2: 14th St. NW between Sheridan St. NW and Aspen St. NW
- **Interactive Station #3 - Initial Focus Areas Corridors:** A flashlight map shows 2 focus corridors in the study area:
 - Corridor C-3: Georgia Ave. NW between Rittenhouse St. NW and Van Buren St. NW
 - Corridor C-4: Blair Rd. NW between Cedar St. NW and Piney Branch Rd. NW
- **Interactive Station maps:** Plot maps show the intersections and corridors
 - C – 1 Georgia Ave between Floral St NW and Iris St NW
 - C – 2 14th St NW between Sheridan St NW and Aspen St
 - C – 3 Georgia Ave between Rittenhouse St NW and Van Buren St NW
 - I – 1 Blair Rd NW Corridor between Cedar St NW and Piney Branch Rd NW

- I – 2 Alaska Ave NW at Georgia Ave NW
- I – 3 Piney Branch Rd NW at Georgia Ave NW
- I – 4 North Capitol St at New Hampshire Ave NW
- I – 5 North Capitol St at Milmarson Pl NW
- I – 6 Blair Rd NW at Aspen St NW



Pop-up

The study team provided two boards that introduced the project and gave out an information sheet to attendees who came to the table. Maps were also provided if the attendee was interested in more details about a specific intersection or corridor. Sticker notes were provided for any comment attendees might want to leave. Information sheets were distributed for those that didn't have time to stop. The sheet included the website and email address to leave comments.

Boards

- **Study Goals and Objectives:** Overarching goal and the objectives of the study
- **What is Livability?:** Information about DDOT's Livability Study Program

Information Sheet:



STAY INVOLVED!

ROCK CREEK EAST I LIVABILITY STUDY PROJECT UPDATE

Project Schedule



Stay Involved!

Visit the **Project Website** for Workshop and Project Materials
 Submit Comments Online

Contact Information

Project Website:
www.rceast1.com
Contact:
 Cynthia Lin, DDOT
 202-671-2381
Cynthia.lin@dc.gov



What is Livability?

Livability is a term that refers to community quality of life as experienced by the people who live, work, and recreate there.

In a transportation context, livability refers to **improvements in public space that increases safety and access for all users of the transportation system.**

Recommendations Implementation

- Short Term (1-2 Years)**
Can be executed through existing contracts and do not need capital funding design work or environmental clearance
- Medium Term (2-5 Years)**
Projects that need more advanced design, but may not be subject to a full environmental impact statement (EIS) depending on the nature of each project.
- Long Term (5+ Years)**
Larger capital projects, which need to be programmed into the budget process with detailed designs and right-of-way examination

Project Approach

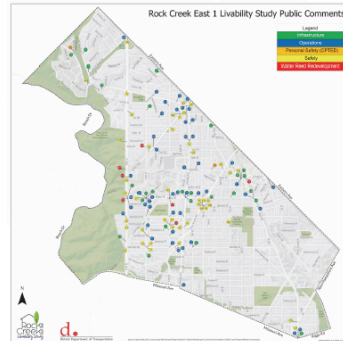
- Livability Studies Aim to Achieve:**
- Comprehensive look at community concerns- proactive NOT reactive
 - Community driven and data supported analysis
 - Integrate past planning work under one umbrella



Community Comments

Collected and Analyzed Hundreds of Public Comments Related to Transportation Safety and Access in the Study Area

- ~200 Public Workshop #1 and #2 comments
- ~50 Website and Online Public comments
- ~325 DC's Vision Zero and DC 311 comments



Initial Focus Areas based on "Flashlight" Analysis

Mapped Community Comments and Analyzed with Measured Data

Analysis Methodology

Public Comments

- Rock Creek East I Public Workshops
- Vision Zero
- DC 311

Measured Data

- DOT Intersection Data
- Reported Vehicle, Bicycle, and Pedestrian Counts

Initial Focus Areas and Current DDOOT Planning & Design Projects

ID	Block Location/Center
I-1	10th St NW at Dupont St NW
I-2	Georgia Ave NW at Adams Ave NW
I-3	Georgia Ave NW at Perry St NW
I-4	North Capitol St NW at Wisconsin St NW and Blair St NW
I-5	Blair St NW at Dupont St NW
I-6	Georgia Ave NW between Perry St NW and Dupont St NW
I-7	North Capitol St NW between Wisconsin St NW and Dupont St NW
I-8	Georgia Ave NW between Wisconsin St NW and Perry St NW
I-9	Blair St NW between Dupont St NW and Perry St NW

CHAPTER 2 OUTREACH EFFORTS

Outreach for the second public workshop was similar as the first workshop. The outreach team took careful effort to include stakeholders, organizations, institutions, and as many residents as possible.

2.1 Notifications

The outreach team contacted organizations, elected officials, residents, civic, faith-based and community organizations. Methods of contact included phone calls, e-mail blasts, social media, door to door canvassing, and participation in community meetings.

2.1.2 Electronic Communications and Social Media

The outreach team created a project contact list for the first round of outreach that includes interested residents and stakeholders who signed up on the project website, ANCs, representatives from the Ward 4 Councilmember's office, the Mayors Office of Community Relations, small businesses, and other neighborhood and community organizations and listservs. This list currently has over 100 contacts and the list is expected to grow throughout the process of the study. Information regarding public workshops, project updates, and materials were forwarded to these constituents. The team also sent the information to our public meeting database which contains residents across the District that participated in moveDC. This list contains over 4000 recipients. In addition, information was also posted on neighborhood listservs, (Brightwood, Manor Park, and Shepherd Park), transportation-oriented listservs and NextDoor.

2.2 Door Hangers and Posters

The outreach team distributed 500 door hangers and 30 posters in English, throughout the study area and to stakeholders. From the last meeting, we learned that most of the Ethiopian and Hispanic businesses preferred English materials since the majority of their customers spoke English. The doorhangers and posters were placed in libraries, recreation centers, churches, restaurants, cafes, grocery stores, businesses, resident homes and other community spaces around the study area.



Rock Creek East One
Usability Study

PUBLIC WORKSHOP #2


When:
Wednesday
June 12, 2019
6:30 PM - 8:30 PM
Brief presentation starts at 7:00 PM

Where:
Holy Comforter Episcopal Church
701 Oglethorpe Street NW, Washington, DC 20011

Getting There:
metrobus 62/63, 70, 79
More Transit Info: wwwta.com and gdcgo.com
Be sure to check out www.gdcgo.com to learn about transportation options for getting to the workshop.

The Rock Creek East One Usability Study will identify opportunities to enhance community quality of life through transportation safety and access improvements for all modes within the study area.

Study Area



If you need special accommodations or language assistance services (sign language, interpretation, closed caption, Cane/Battery at 202-412-2878 or Cane-Battery@dc.gov five days in advance of the meeting, if you need language assistance please contact Karen Randolet at 202-471-5203 or Karen.Randolet@dc.gov five days in advance of the meeting. These services will be provided free of charge. This project (Department of Transportation (DOT)) is required to identify and eliminate program, activities and services on the basis of race, color, national origin, gender, age, or disability as provided for Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act and other federal statutes. In accordance with the D.C. Human Rights Act of 1977, as amended, D.C. Official Code, sections 1-1101 et seq. and 1-1102, the District of Columbia shall not discriminate on the basis of actual or perceived race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, gender identity or expression, familial status, family responsibilities, marital status, political affiliation, genetic information, disability, source of income, status as a victim of an intimate partner, or place of residence or ancestry, descent, lineage, or ancestry, in all terms of any governmental action prohibited by the Act is strictly enforced based on any of the above prohibited categories as prohibited by the Act. Discrimination on violation of any act will not be tolerated. Violators will be subject to disciplinary action.

VISION ZERO **d. HURIEL BOWSER, MAYOR**

Workshop #2 Door Hanger



Rock Creek East One
Usability Study

Come Join Us!
The Rock Creek East One Usability Study will identify opportunities to enhance community quality of life through transportation safety and access improvements for all modes within the study area.

PUBLIC WORKSHOP #2

When:
WEDNESDAY
JUNE 12, 2019
6:30 PM - 8:30 PM
Brief presentation starts at 7:00 PM

Where:
Holy Comforter Episcopal Church
701 Oglethorpe Street NW, Washington, DC 20011
metrobus 62/63, 70, 79
More Transit Info: wwwta.com and gdcgo.com

Study Process

Public and community involvement:

- Gather Information and Existing Conditions: Public Workshop #1
- Develop and Screen Potential Concepts: Public Workshop #2
- Evaluate Concepts and Draft Recommendations: Public Workshop #3
- Final Recommendations

We are here

STAY CONNECTED

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www.mdot.com
Facebook: [metrodc](https://www.facebook.com/metrodc)
Twitter: [metrodc](https://twitter.com/metrodc)

Study Area



VISION ZERO **d. HURIEL BOWSER, MAYOR**

Workshop #2 Poster



Pop-up Event Flyer

2.3 Title VI Outreach

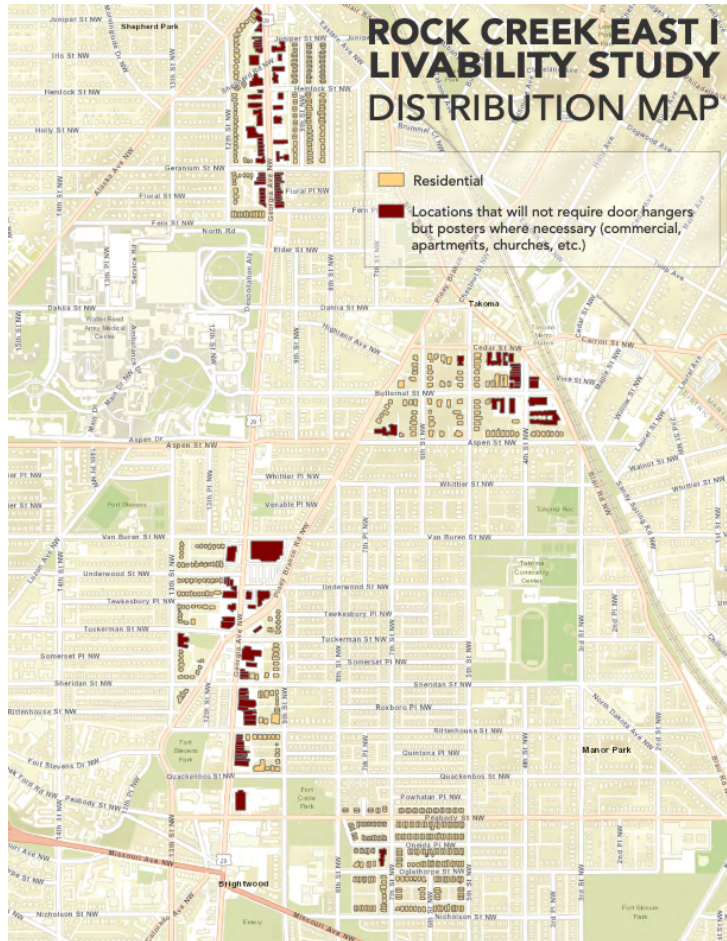
In addition to going door to door in specific parts of the study area and distributing information, the team reached out to community institutions such as schools, churches, community centers, and small businesses (in and around the study area) to inform them about the livability study. Key locations in the study area were identified that served native Amharic and Spanish speaking populations to ensure we reached a broad cross section of Title VI populations. From the first workshop outreach, we learned that they all prefer to use the English material.

Community Centers	Churches	Schools
Petworth Recreation Center	Seekers Church	Coolidge High School
Fort Stevens Recreation Center	Trinity Episcopal Church	Whitter Education Campus
Emery Heights Community Center	Washington Metaphysical Church	Lasalle Backus Education Campus
Takoma Park Neighborhood Library	National Spiritual Science Center	Brightwood education campus
Juanita E. Thornton/Shepard Park	Nineteenth Street Baptist Church	Takoma Education Campus
Hamilton Recreation Center	The Church of Jesus Christ Latter Day	Barnard Elementary School
Upshur Recreation Center	Mt. Zion Baptists Church	West Education Campus
Raymond Recreation Center	Star of Bethlehem Church of God in Christ	Theodore Roosevelt Center City Public Schools

Parkview Recreation Center	Evangelical Church Apostles	MacFarland Middle School
	Nativity Catholic Church	Raymond Education Campus
	Emory United Methodist Church	Washington Yu Ying
	Holy Comfort Episcopal Church	

2.4 Distribution Map

A distribution map was created to help with the distribution of the doorhangers and posters. The outreach identified four focal areas for distribution: Shepherd Park, Takoma, Brightwood, targeting residential near workshop location and commercial corridors.



CHAPTER 3 ATTENDANCE

Workshop #2

Approximately 30 members of the public attended the second public workshop. These attendees included area residents, elected officials (ANCs, councilmember's staff), members of community and civic organizations. Of the 30 participants only 12 submitted Title VI forms and some of them opted not to include their demographic information.

Pop-up Event

The project team gave out around 50 project information sheets to the residents who visited the Safeway. Most attendees were local residents who live nearby the Safeway. Since the attendees at the pop-up usually came and left at their own schedule, the team also pointed out the website and email address on the factsheet in case they need to submit comments.



CHAPTER 4 COMMENTS

The sections below show the input received at the second public workshop and pop-up event.

4.1 Key Takeaways

Accessibility:

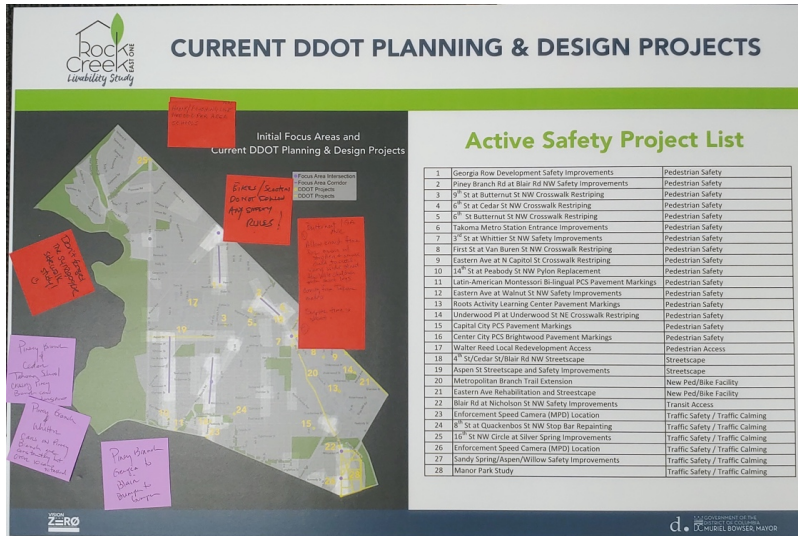
- *Need more public transportation routes*
- *Desire for improved bus facilities*
- *Upgrade sidewalks and facilities*

Safety:

- *Unsafe crossings for pedestrians and bicyclists*
- *Concerns about speeding and safety*
- *Concerns of personal safety throughout the study area*
- *Vehicle access and visibility concerns*
- *Better traffic and safety enforcement*
- *Reconfigure some key intersections*

4.2 Activity Comments

Public workshop participants were asked to provide comments regarding the study's initial focus areas through boards and sticky notes. The following tables and images document their comments.



Let us improve your Neighborhood Aerial Map

Location	Comments
Corridor C-3	It should be from Missouri Ave to Van Buren St given the activity generators that are there.
Corridor C-4	Blair Road should be a priority corridor to the Maryland line.
Unspecified	Bikes and scooters do not follow any safety rules.
Unspecified	Don't forget the signalized crosswalk.
Piney Branch & Whittier Street	Cars on Piney Branch are constantly hit, over 10 cars total
Piney Branch & Cedar Street	Takoma School - crossing on Piney Branch can be dangerous
Piney Branch Rd & Georgia Ave & Blair	Bumper to bumper traffic
Aspen Intersection	More hawk signals, hawk at Aspen St new intersection

Plot Map comments

Location	Comments
Corridor C-1	8 th St signage says 2 ways for bikes, but no paint to identify. Especially for oncoming traffic.
	Better pedestrian level lighting on Georgia Ave and Geranium St.
Corridor C-2	Aspen St is a nightmare for bicycles and be cautious; Aspen and 14th St.
	School crossing officials are not helpful. They direct traffic, not the kids; Aspen Dr. and 14th St.
	Intersection too congested at rush hour and school closing; Aspen Dr. and 14th St.

	<p>Cars are constantly blocking the 14th St. bike lane for this entire map and further; 14th St. and Whittier Pl.</p> <p>Bus stop at 14th St. and Aspen St. - school kids, double parked, parents parked at intersections, BUSES CANNOT TURN; 14 St. into Aspen.</p> <p>Double parking and Parking at the corners (not allowed); 14th Pl. and Aspen St..</p> <p>Cars make very fast right turns onto Alaska from 16th NB - dangerous for pedestrians; Alaska Ave. and 16th St</p> <p>Too much speed coming onto the hill; 16th St and Aspen St</p> <p>No right on red from NB Aspen to NB 16th; Aspen St. and 16th</p> <p>Intersection - people are unsure who should go first. There are 5 streets that feed; 14th St. and Van Buren St.</p> <p>Double stop signs at 14th St and Van Buren are extremely confusing especially for bikes, but also cars.</p> <p>Dangerous intersection at Luzon/Van Buren/14th St. It's hard to cross.</p> <p>Speed humps added at Underwood St., Somerset Pl., and Sheridan St., GOOD!</p> <p>Tuckerman and Somerset - 1300 blocks - very narrow for cars to pass.</p> <p>Hard to enter 14th St. (left turns) from side street at away intersection in and out of four way stop sign.</p> <p>Improve crosswalks and pedestrian visibilities along 14th St. Sheridan and 14th St.</p>
Corridor C-3	<p>Very tight for turning at intersection at Van Buren and Georgia Ave.</p> <p>Tight and dangerous for cars on 1200 block of Underwood St.</p> <p>Removal & replacement of temp Jersey barriers on this cul-de-sac at Tewkesbury Pl.</p> <p>Cars do not stop for crossing people here on Georgia Ave. and Underwood St.</p> <p>Slip through lane making cross challenging at Piney Branch Ave. and Tuckerman St.</p> <p>A bike and pedestrian priority signal would be ideal at Piney Branch and Georgia Ave.</p> <p>Two-way access on Tuckerman creating crossing issues for Red and North Bound Georgia Ave. drivers. Tuckerman St. and Georgia Ave.</p> <p>Post office needs more parking</p> <p>This light is WAY too long. Adjust timer for traffic patterns at Georgia Ave. and Sheridan St.</p> <p>Recently added stoplight is great at Sheridan St. and Georgia Ave.</p> <p>Stop sign at Sheridan and 12th St. is dangerous for getting rear ended.</p> <p>Dangerous to enter Piney Branch at Rittenhouse St. and Sheridan St.</p> <p>Evaluate intersection 13th St. and Rittenhouse St.</p>
Corridor C-4	<p>Add speed camera on Piney Branch Ave.</p> <p>Dahlia/Piney Branch future cut through one Dahlia St. continues through WR.</p> <p>Sidewalk on Blair Rd. is very narrow and right against traffic & obstruction.</p> <p>Blair Rd. one way?</p> <p>Will the cross walk be made parallel to Cedar St? Cedar St and Blair Rd?</p> <p>Will the median be closed as planned on Cedar St and 4th St.</p> <p>Diagonal parking is planned for 6900 block of 4th St. (Northside). At 4th St and Cedar St.</p> <p>Roundabout to reduce speeds at Fifth St./Blair St./Dahlia St.</p>

	Traffic calming 6900 block on 5th St. (Fifth St and Cedar St.)
	Traffic light not pedestrian friendly (Fifth St and Cedar St)
	Cars run stop sign at Fifth and Butternut
	Evaluate improving or moving bike lane on Butternut St..
Blair Rd NW at Aspen St NW	Suggest: Traffic calming on Aspen/Blair and Whittier between 5th and 3 rd St.
	Poor sidewalks, narrow and poorly maintained at 3rd St and Blair Rd
	Out of the box traffic calming? A mural along the B&O Viaduct
	Suggest: - 4 way stop - Pedestrian crossing posts at Whittier and 3rd
	Global comment: getting people out of cars and onto bus/bike will reduce the number of potential conflicts and get us closer to Vision Zero
	North Capitol and xxx Ave. light on the North Dakota (xxx) side needs to be addressed.
North Capitol St at Milmarson Pl NW	Stop sign at McDonald Pl NE and New Hampshire and S Dakota Ave that need bike trail.
	Flexi posts at North Capitol St. and New Hampshire Ave.
North Capitol St at New Hampshire Ave NW	Do not block this box sign at New Hampshire Ave. and Longfellow St.
	Post office needs more parking
Piney Branch Rd NW at Georgia Ave NW	Tuckman St. onto Piney Branch or Georgia Ave., impossible to merge or cross.
	Bus stop at Georgia Ave. and Piney Branch Ave. piles up the right turn onto Piney Branch Ave.
	Sometimes unclear what right of way you have when existing Tuckerman St. onto Georgia Ave.
	Take away 1 lane in each direction and make it a dedicated bus lane. WMATA should double up service on all S Routes.
16th St NW at Juniper St NW	Long straight lanes are conducive to speeding, need more traffic calming.

4.3 Pop-up Event Comments

General Comments
800-900 Block of Aspen Street, we need to control the flow in the morning and evening. They knock the mirrors off of our cars. We need a stop sign at the intersection of 9th Street and Aspen Street or more rumble strips.
Repave the streets at 14th Street at Military Rd. all the way down
Bike lanes on Georgia Avenue would be great.
Street lights are too dim at night time at 8th and Roxboro Ave.
14th Street at Kennedy and Colorado Avenue-the lights let you turn in several direction. Colorado Avenue is not signalized, and it is problematic. There is a daycare there with kids. 9th street and Piney Branch-only a stop sign is a problem
People trespass on the property and litter.

Georgia Avenue and Missouri Ave- Left turn is too tight and difficult.
Minority cyclist are being injured in car accidents and are not reporting them to the police or seeking medical treatment. In many cases this data is not being captured.
I cannot park in front of my home at 7823 12th St., NW. The businesses on Eastern Avenue on Sundays from 7am to 3 pm, cars are parked illegally in front of fire hydrants. 2,000-3000 more people will be living at the Walter Reed developments. What changes are being done to accommodate the additional residents.
Only one lane north in front of Howard University Hospital.
When Walter reed opens up, Dahlia Street will be a straight East/West connection between Blair and Piney Branch and Alaska and 16th Street. This will be a commuter cut through and thought needs to be put into this NOW. Lots of pedestrians walk from Georgia Ave to Takoma Education Campus and Metro.

Location	Pop-up Comments (plot map)
C-1 Georgia Ave NW Corridor between Floral St NW and Iris NW	Driving lanes taken up by drivers waiting to turn into gas stations; Georgia Ave. and Shepherd Rd.
	Dangerous road block pedestrian crossing; Georgia Ave. and Geranium St.
C-2 14 th St NW Corridor between Sheridan St NW and Aspen St NW	14th and Aspen on the school drop making for very challenging biking. I drop my kids by the bike and going north on 14th St in the AM, cars block bike lanes. Dangerous!! 14th St. and Aspen Dr.
Blair Rd NW Corridor between Cedar St. NW and Piney Branch Rd NW	Topography makes this 2-way stop difficult; Piney Branch and Dahlia
	Parking isn't useful at all since meters went in. These spots are great for commuter and bus. At Piney Branch and Blair Rd.
	Pedestrian & right turn conflict; Carroll St at Takoma Station.
Alaska Ave NW at Georgia Ave. NW	People turning right on red off Alaska are hazard. Too many roads coming in; Alaska and Kalmia Rd.
	Left turn arrow off Georgia like at Eastern?
Blair Rd NW at Aspen St NW	This intersection needs improvement. Another turn lane under the overpass.
	We need turning lanes under overpass. Very confusing.

4.4 Title VI Comments

Approximately 8 attendees out of the 12 members of the public who opted to submit the Title VI form provided comments. All of the attendees who provided comments are in Ward 4.

Title VI Comments	
Ward	Comments
4	Wish there was a little more info given during presentation. Don't know how you capture all the info given during conversations. I wish WMATA was part of this study.
4	Concern about different city services aligning, make sure WMATA is at least on renew/advisory for connecting transit for moving forward with projects and final recommendation. Also, overall bus and bike lanes on the same block (like 14th) can be problematic when both are parallel, they travel at similar speeds and are constantly crossing paths.
4	We (on Tewkesbury Pl, NW) are still waiting to hear from someone at DDOT about the replacement of the temp Jersey barriers at the Cul-de-sac on the 1200 block of Tewkesbury Pl. NW. There are traffic, parking, and accessibility concerns. DDOT promised 10 years ago that a permanent solution would be implemented. We can be reached at 1210Tewkesbury@gmail.com (202) 445-8481.
4	Bicyclist and Electric Scooters do not follow the safety rules, while car/vehicle safety is always emphasized. Why?
4	I'm concerned that DC and DDOT seem willing to make any bold decisions in order to assure pedestrian and cyclist safety. Everything seems to be done piecemeal, with each project in no way touching the greater whole that is why we have bike lanes that lead to nowhere, unprotected bike lanes. No way for people to get across Rock Creek Park if they're not in a car, etc. I don't own a home or a car, so I don't seem to matter. Why are other cities in the U.S. doing better than we are when it comes to pedestrian and cyclist safety? Why can't we be the leaders? Why must we constantly bow to drivers and parking at the expense of everyone else safety?
4	Don't understand why presenter one was willing to answer 3 questions. Several more people had questions that weren't answered because presentation ended. The Questions and Answers may have been useful to hear. Despite my neighborhood (South Manor) being included in the study area, and despite the presentation map showing several overlay issues in that area. Nothing in the workshop addressed the area. From my perspective there was no point coming to this.
4	Implementation time needs to be better communicated and publication of results. Transparency in time of traffic studies. Interdependencies of land use and transportation. These results should be objective as to where, how and how much land development can occur without impeding livability and multi modal transportation. (Ex. Don't let this be used as a tool to drive/encourage development. Use it as a tool to guide development without straining the transportation system.
4	safety improvements are taking too long.



Public Workshop #3 Summary

Monday, September 9, 2019

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CHAPTER 1 INTRODUCTION

The Rock Creek East I (RCEI) Livability Study is an effort by the District Department of Transportation (DDOT) to evaluate and improve transportation safety and accessibility throughout the Rock Creek East I study area. The study area is defined by Rock Creek Park and the Maryland border to the West, Eastern Avenue to the North, New Hampshire Avenue NE and the Red Line Metrorail tracks to the East, and Military Road NW, Missouri Avenue NW, and Riggs Road NE to the South.

DDOT is undertaking the Rock Creek East I Livability Study to evaluate the transportation network in the study area from a system perspective and look for opportunities for a safer and more accessible multimodal network. There are several public engagement events throughout the duration of the livability study. Public workshops and engagement pop up events are centered around major project milestones in order to garner public feedback on existing conditions, initial concepts designs, and draft recommendations. These events were held throughout the study area over the course of project. The feedback gained at these events has been used in developing, refining, and assisting in the selection of recommendations for short, medium, and long-term improvements that will have a positive impact on livability in the RCEI Study area. Feedback from the public workshops and pop-up is being utilized to refine final recommendations.

1.1 Purpose of the Workshop

The last of three public workshops for the RCEI Livability Study was held on Monday, September 9, 2019 from 6:30 pm to 8:30 pm at the Metropolitan Police Department – Fourth District (6001 Georgia Ave. NW Washington DC 20011). The purpose of this neighborhood study is to enhance the community quality of life through improvements to transportation safety and connections to destinations for all modes. At this final public workshop, DDOT presented draft recommendations for safety and traffic calming solutions within the study area and solicited feedback and comments regarding these strategies. The project team has prepared RCEI draft recommendations based on previous public comments from the first and second workshops, the summer pop-up workshop, and comment submissions from the website. This feedback was used to develop, refine, and assist in the selection of recommendations for short, medium, and long-term improvements to transportation safety in the RCEI Study.

Please note that the project manager and DDOT will continue to solicit public comments and feedback regarding both the study and project recommendations past the Livability Study project end date. Comments can be submitted online through the project website and email as well as through contacting the study's project manager, Cynthia Lin.

1.2 Format

The public workshop was open-house style with informational boards about draft recommendations. Cynthia Lin, DDOT project manager, gave a brief overview of the RCEI Livability Study and progress to date. The public workshop resumed promptly after. Attendees were encouraged to review the information throughout the room and engage with DDOT staff as well as the project team to discuss their feedback for the study.



1.3 Boards and Activities

Boards and activities were designed to give attendees an overview of the study, its purpose and need, as well as to obtain their feedback on the draft recommendations. All board and activities were posted on the website for additional public feedback and understanding.

A number of project boards were displayed at the open house which described project goals and study process, and the detail methodology behind the selection of focus areas. The project team also showed recommended concepts for each focus area. The following boards were presented:

Informational

- **Welcome Board**
- **Study Area:** Map of the study area that includes community facilities
- **Study Goals and Objectives:** Overarching goal and the objectives of the study
- **Study Process:** Project timeline and major milestones
- **What is Livability?:** Information about DDOT's livability Study Program
- **Initial Focus Areas & Methodology:** Map of the initial focus areas that based on the comments received from previous community outreach efforts as well as extensive data research and analysis
- **Urban Street Design Toolbox (3 boards):** A matrix of traffic calming elements (Pedestrian, Bicyclists, Traffic Calming) that may be considered for the livability Study

Recommendations

- **Flashlight Methods Board:** A flashlight map shows 4 focus intersections and 5 corridors in the study area:
 - Intersections:
 - Georgia Ave. NW / Alaska Ave. NW
 - Blair Rd. NE / Aspen St. NW
 - 16th St. NW / Juniper St. NW
 - 16th St. / Alaska Ave. NW
 - Corridors:
 - Georgia Ave. (North)
 - 14th St.
 - Georgia Ave. (South)
 - North Capitol St. / New Hampshire Ave.
 - Piney Branch Rd.
- **Concept Review: Overall Network Recommendation**
 - Pedestrian Safety, Accessibility & Connectivity

- Bike Network
- Transit Access
- **Concept Review Boards - Focus Areas Corridors:** Boards showed each focus corridor and intersection:
 - Intersections:
 - Georgia Ave. NW / Alaska Ave. NW
 - Blair Rd. NE / Aspen St. NW
 - 16th St. NW / Juniper St. NW
 - 16th St. / Alaska Ave. NW
 - Corridors:
 - Georgia Ave. (North)
 - 14th St.
 - Georgia Ave. (South)
 - North Capitol St. / New Hampshire Ave.
 - Piney Branch Rd.

Activities

DDOT and members of the study's consultant team were stationed next to boards and interactive stations, helping to guide participants through the draft recommendations on selected focus areas. Other members of the team were circulating around the meeting to answer questions when necessary. Comments were provided either by sticker notes on the boards/plot map or on Title VI forms. Attendees used post-it notes to leave the comments for study team.



CHAPTER 2 OUTREACH EFFORTS

Outreach for the third public workshop was similar as two previous. The outreach team took careful effort to include stakeholders, organizations, institutions, and as many residents as possible.

2.1 Notifications

The outreach team contacted organizations, elected officials, residents, civic, faith-based and community organizations. Methods of contact included phone calls, e-mail blasts, social media, door to door canvassing, and participation in community meetings.

2.1.1 Electronic Communications and Social Media

The outreach team created a project contact list that includes interested residents and stakeholders who signed up on the project website, ANCs, representatives from the Ward 4 Councilmember's office, the Mayors Office of Community Relations, small businesses, and other neighborhood and community organizations and listservs. This list currently has 120 contacts. Information regarding public workshops, project updates, and materials were forwarded to these constituents. In addition, information was also posted on neighborhood listservs, (Brightwood, Manor Park, and Shepherd Park), transportation-oriented listservs and NextDoor.

2.2 Door Hangers and Posters Distribution

The outreach team distributed 500 door hangers and 50 posters throughout the study area and to stakeholders. The doorhangers and posters were placed in libraries, recreation centers, churches, restaurants, cafes, grocery stores, businesses, resident homes and other community spaces around the study area.



Rock Creek East ONE Livability Study

PUBLIC WORKSHOP #3

When:
MONDAY
SEPTEMBER 9, 2019
 6:30 PM - 8:30 PM
 Brief presentation starts at 6:45 PM

Where:
Metropolitan Police Station - Fourth District
 6001 Georgia Ave. NW, Washington, DC 20011

Getting There:
 metrobus 70, 79
 More Transit Info: wmata.com and gdcgo.com
 Use text to check out gdcgo.com to learn about transportation options for getting to the workshops

The Rock Creek East Livability Study will identify opportunities to enhance community quality of life through transportation safety and access improvements for all modes within the study area.

Study Area

If you need special accommodations or language assistance services (sign language interpretation, large printed text, Braille) at 202-771-2529 or Cheryl Burrows@dc.gov five days in advance of the meeting. If you need language assistance services translation, please contact Keren Karpelov at 202-671-1522 or Keren.Karpelov@gdcgo.com five days in advance of the meeting. Please be aware that GDCGO is committed to ensuring that no person is excluded from participation in or denied the benefits of its programs, activities, and services on the basis of race, color, national origin, gender, age, or disability as provided by Title VI of the Civil Rights Act of 1964, Title VII of the Americans with Disabilities Act and other related statutes. In accordance with the D.C. Human Rights Act of 1977, an amended D.C. Official Code title 25-260 to 26-100, the District of Columbia does not discriminate on the basis of marital or parental status, race, color, sex, religion, ethnic or national origin, marital status, sexual orientation, gender identity or expression, familial status, family responsibilities, genetic information, political affiliation, gender discrimination, disability, source of income, status as a victim of an involuntary offense, or place of residence or birthplace. Special arrangements to be made at the discretion, which is published by the Act. In addition, harassment based on any of the above protected categories is prohibited by the Act. Discrimination in a violation of the Act will not be tolerated. Visitors will be required to register on-site.

VISION ZERO d. MURIEL BOWSER, MAYOR

Workshop #3 Door Hanger



Rock Creek East ONE Livability Study

Come Join Us!

The Rock Creek East Livability Study will identify opportunities to enhance community quality of life through transportation safety and access improvements for all modes within the study area.

Study Process

Gather Information and Existing Conditions (Public Workshop #1)
 Develop and Screen Potential Concepts (Public Workshop #2)
 Evaluate Concepts and Draft Recommendations (Public Workshop #3)
 Final Recommendations

PUBLIC WORKSHOP #3

When:
MONDAY
SEPTEMBER 9, 2019
 6:30 PM - 8:30 PM
 Brief presentation starts at 6:45 PM

Where:
Metropolitan Police Station - Fourth District
 6001 Georgia Ave. NW, Washington, DC 20011
 metrobus 70, 79
 More Transit Info: wmata.com and gdcgo.com

Study Area

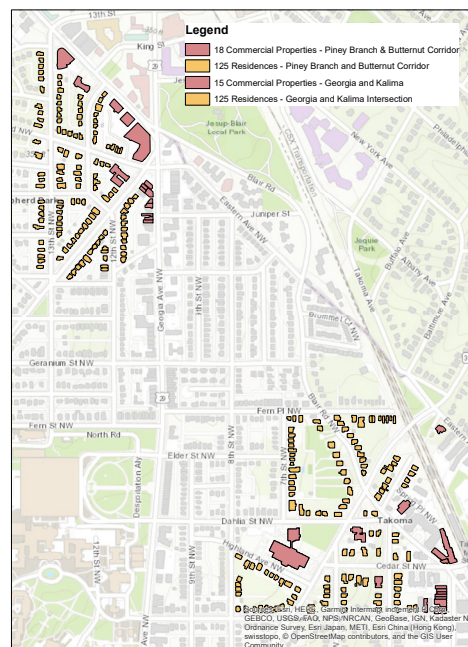
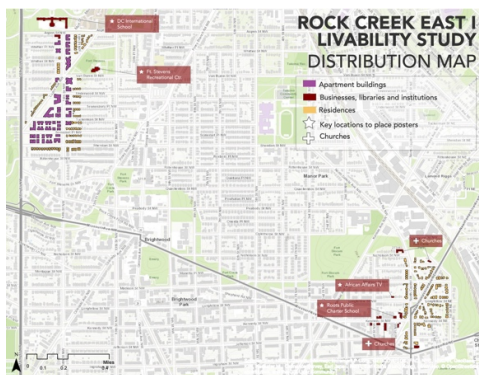
STAY CONNECTED
 Cynthia Liu
 DDOT Project Manager
 clyu@dot.dc.gov
 (202) 512-2281
 www.creast1.com
 #WeHaveDC
 @GDCVisionDC

Workshop #3 Poster

In addition to distributing flyers to key public facilities, the study team focused on distributing maps around neighborhoods that surrounded focus area locations that had study recommendations. Distribution maps (shown below) were created to help with the distribution of the doorhangers and posters.

The study team identified and distributed the outreach areas around the following focus corridors and intersections:

- Intersection 1 - Georgia/ Alaska, Kalmia (residential distribution west of Georgia)
- Corridor 5 - Piney Branch between Butternut and Eastern Ave
- Corridor 4 New Hampshire/ North Capital and Blair
- Intersection 14th - Luzon to Aspen (between Aspen and 14th)



Distribution maps

2.3 Title VI Outreach

In addition to going door to door in specific parts of the study area and distributing information, the team reached out to community institutions such as schools, churches, community centers, and small businesses (in and around the study area) to inform them about the livability study (list in the cart below). Key locations in the study area were identified that served native Amharic and Spanish speaking populations to ensure we reached a broad cross section of Title VI populations. From the first 2 workshops outreach, we learned that they all prefer to use the English material.

Community Centers	Churches	Schools
Petworth Recreation Center	Seekers Church	Coolidge High School
Fort Stevens Recreation Center	Trinity Episcopal Church	Whitter Education Campus
Emery Heights Community Center	Washington Metaphysical Church	Lasalle Backus Education Campus
Takoma Park Neighborhood Library	National Spiritual Science Center	Brightwood education campus
Juanita E. Thornton/Shepard Park	Nineteenth Street Baptist Church	Takoma Education Campus
Hamilton Recreation Center	The Church of Jesus Christ Latter Day	Barnard Elementary School
Upshur Recreation Center	Mt. Zion Baptists Church	West Education Campus
Raymond Recreation Center	Star of Bethlehem Church of God in Christ	Theodore Roosevelt Center City Public Schools
Parkview Recreation Center	Evangelical Church Apostles	MacFarland Middle School
	Nativity Catholic Church	Raymond Education Campus
	Emory United Methodist Church	Washington Yu Ying
	Holy Comfort Episcopal Church	

CHAPTER 3 ATTENDANCE

Approximately 35 members of the public attended the third public workshop. These attendees included area residents, elected officials (ANCs, councilmember’s staff,

SPCA), members of community and civic organizations. Of the 35 participants only 7 submitted Title VI forms and some of them opted not to include their demographic information.



CHAPTER 4 COMMENTS

The sections below show the input received at the last public workshop. Please note that the project manager and DDOT will continue to solicit public comments and feedback regarding both the study and project recommendations past the Livability Study project end date. Comments can be submitted online through the project website and email as well as through contacting the study's project manager, Cynthia Lin.

4.1 Key Takeaways

Accessibility:

- Upgrade sidewalks and bicycle facilities
- Trucks parking by the Safeway block on Piney Branch Road

Safety:

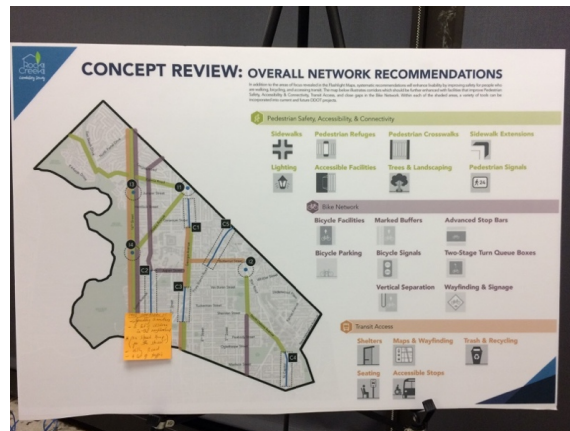
- Unsafe crossings for pedestrians and bicyclists
- Concerns about traffic volume, speeding
- Concerns of personal safety in some of the study area
- Vehicle access and visibility concerns

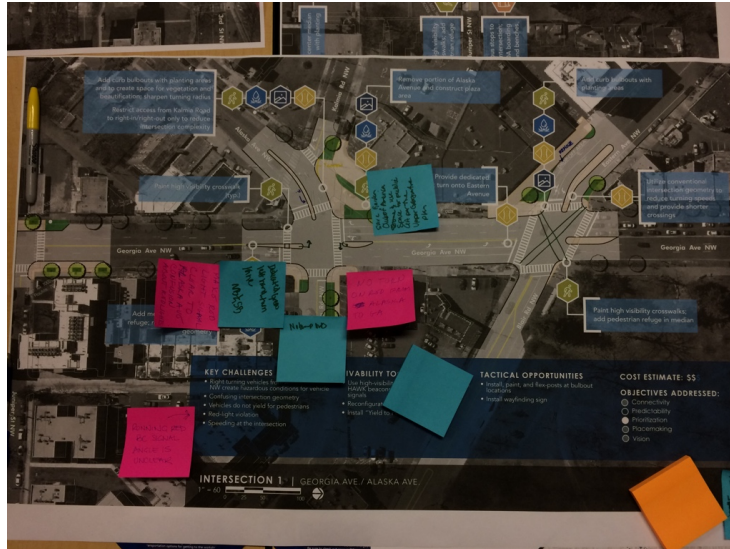
- Better traffic and safety enforcement
- Install traffic light/sign at some of the intersections

Key takeaway from the final public workshop had similar safety and accessibility themes compared to previous public meetings. Meeting attendees desire multimodal Improvements that reinforce safety and accessibility for all modes.

4.2 Activity Comments

Public workshop participants were asked to provide comments regarding the study's initial focus areas through boards and sticky notes. The following tables and images document their comments.





Concept Review: Overall Network Recommendations	
Corridor	Comments
Corridor 4: North Capitol & New Hampshire	No markers for stoplight on New Hampshire, South Dakota and McDonald Place NE, associated with Metropolitan Branch Trail
Corridor 3B: Georgia Avenue (North)	Safeway trucks parked on Piney Branch block line of sight exiting Safeway.

Intersection 1: Georgia & Alaska Avenue	
Location	Comments
Kalima Rd. NW & Georgia Avenue NW	Running red because angle is unclear
	No bump outs
	Dedicated greens left hand turn lane, NB and SB
Alaska Avenue NW & Georgia Avenue NW	Make red light signal clear to Alaska Avenue. Confusion about red lights
	No turn on red from Alaska to Georgia Avenue NW
	1- Save Garden Club of America 2- Use space for public GA for the Upper Georgia Avenue Plan

Eastern Ave. NW & Georgia Ave. NW (Drop-off area)	Drawing of Barnes Dance crosswalk at Eastern Ave. NW & Georgia Ave. NW
	Remove
16th St NW at Juniper St NW	A continental crosswalk across south side of 16th St NW and of a Barnes Dance crosswalk at that same intersection
Butternut St NW & Blair Rd NW	Use this sidewalk for the MBT western alignment!

4.3 Website Comments

General Comments
<p>Hello, I live on Luzon Ave near Aspen. My house wasn't on the map tonight. Changes on Luzon that I could see have a sidewalk. Will that sidewalk go all the way to the end? Not super excited if it were going through the front yard. Additionally, it would likely involve killing 3 mature trees with root systems that project into the yard. Also, they tried to make Luzon one way a way back but apparently the fire department said no. I'm definitely all for one way as Luzon has high volume of people who drive well over the speed limit. Thanks for listening.</p>
<p>Install traffic humps on 6th Street, NW between Cedar and Butternut and Butternut and Aspen to slow cut through traffic. Also 6th and Butternut could use a 4 way stop.</p>
<p>Install more parking meters on Piney Branch Road for the drivers who park all day and walk to metro.</p>
<p>The intersection of Cedar and Blair is very dangerous for pedestrians, particularly the NW and SE corners, where traffic is forced to cut very close to the curb. Many motorists seem to ignore the fact that they face two lights when they are coming north on Blair. The intersection could probably use a raised island in the middle to better direct the flow of traffic.</p>
<p>The stretch of Piney Branch NW from Blair to Butternut needs more lines painted to make sure motorists understand that it is a single lane road. Many motorists use this stretch to speed by other traffic on the inside lane - right next to the sidewalk in front of TEC.</p>
<p>Piney Branch needs a more continuous bike lane. In parts it has a very well-defined lane, but then the bike lane is eliminated in the places where cyclists need the most protection - the intersections at Georgia and Missouri. While there is a partial bike lane for northbound cyclists on the south side of the piney branch and Georgia intersection, it is too narrow, and is almost more dangerous than no lane at all.</p>
<p>Georgia Avenue NW (Fern Street NW to Juniper Street NW)</p> <ul style="list-style-type: none"> Given the increase in development along the corridor. All cross walks at Georgia Avenue should be controlled. When you mentioned narrower lanes, that's concerning. There is a fair amount of truck traffic with the development along the corridor. In addition to be a federal emergency route, Georgia Avenue is the only thoroughfare that can get trucks and vehicles from the Beltway into the city. I think increased signaling along the corridor would be a better alternative to reduce speeds. <p>Georgia Avenue NW, Alaska NW, Kalmia Rd NW</p> <ul style="list-style-type: none"> While closing the eastbound lane on Kalmia heading towards Georgia would reduce vehicular traffic. It doesn't address the speeding westbound on Kalmia (particularly between 13th and 14th Street NW). In addition, this still does not address the narrowness to the street between 14th and 16th whereby only one car can pass. Lastly, messaging about the timing and implementation of these measures is key. This solution actually exacerbates concerns on Alaska and DDOT has yet to present any other speed mitigants for this street. While it partially addresses one problem, it exacerbates another. The solutions presented from this intersection still do not address the safety concern of driving north on Georgia and attempting to turn left on Kalmia to go to Target. I have repeatedly suggested that there be

a protected left turn signal that allows vehicles to turn left and drive straight through to Target. Currently, only one car can turn and then they are stuck in the "island" of Kalmia/Georgia/Alaska AND are blocking that crosswalk. Nothing about this is safe. Please address this by implementing a protected left arrow.

- DDOT should engage the property owners about adding additional public space at this corner. In addition, there are some current issues regarding people loitering on public space. Add this area would make the property more attractive for a cafe or restaurant but would also provide additional public space for encampments. If this space is added, under no circumstances should DDOT add benches. If anything, this would be a great intersection for public art that would accentuate this key corner at a Gateway entrance to the city.

16th Street NW and Juniper St NW

- When you include the changes that you are proposing above, over time vehicles will divert to 16th to get to Fern, Aspen, or Military/Missouri to go eastbound towards Takoma. Removing a protective turning lane will only encourage cars too veer around other cars to get to/from Maryland.

16th Street NW and Alaska Avenue NW

- How do you propose to reduce the speed of right turns from 16th to Alaska? If anything, with the development of Children's and the Foreign Missions site a signal needs to be added at those gates to protect pedestrians and vehicles.

I think that it is critical that DDOT emphasize the implementation timeline of some of these measures. I recall from an ANC4A meeting that a Livability study had been performed in the Crestwood Area some time ago and those recommendations have yet to be implemented. Lastly, as the Walter Reed campus develops, the entire area needs to be continuously evaluated in order to mitigate traffic and keep pedestrians and cyclists safe.

I am extremely disappointed to see that the concerns of the residents of Floral St were not addressed. Can you please provide insight into that decision? Should we begin the process of requesting speed bumps? We are all quite frustrated already with the increase in traffic, especially large trucks, and it will only get worse when the WR project advances further. Thank you,

Please address how southbound traffic on 16th Street coming from the direction of Maryland will access the eastern half of the Walter Reed development. Currently, because southbound 16th St. traffic is not permitted to turn left from 16th onto Alaska Ave., the closest direct access is via a left turn onto Main Dr., which is a somewhat circuitous route to the eastern half of the development. I am concerned that southbound 16th St. traffic will attempt to access the development more directly by cutting through Shepherd Park's residential streets. As a resident of the 1400 block of Floral St., the closest available short cut to the development, this possibility is particularly concerning. Therefore, I urge you to support the installation of a left turn lane and a left turn traffic light at the intersection of 16th and Alaska so that southbound 16th St. traffic can turn left onto Alaska and enter the development at Dahlia St. Thank you for considering this request.

My concerns regarding New Hampshire and Madison Street NE (5600 block) are: Cars coming across from North Capital/ Blair Road to turn on New Hampshire or come across Madison Street has been very disastrous, which has cause several accidents to cars, trash bins and even cars running into the fence of 25 Madison Street NE

Traffic blocks the crosswalk on New Hampshire so walking across from both ends of Madison Street is very scary, which can have a pedestrian waiting for minutes at time and with hope of a kind driver to stop so pedestrian can run across

If possible, a stop sign will be very helpful on New Hampshire Ave

Thirdly, the cars that turn into Madison Street (5600 block) running towards First Street has become a Fast and Furious Strip. Cars turn into our street with rapid speed, so speed humps will be helpful to slow down the speed racers.

I attended the meeting which provided updates on the study this week. I've also attended similar meetings on the Neighborhood Traffic Safety Assessment for Manor Park. I live on the unit block of Longfellow St NW and

witnessed another accident at the intersection of North Capital and Longfellow, yesterday. This email is to emphasize the urgency of resolving the cause of the many accidents in this intersection. Lives are at stake here and there is a need to move quickly beyond studies and focus on action.

Livability Study - need to get the results of workshop #3 out to the community so they can comment before end of Sept. Biggest issues are changing Luzon to one way. This would affect 14th Place, increase traffic on Aspen and firetrucks wouldn't be able to use Luzon anymore to access the southern part of Brightwood and 16th St Heights.

The intersection of 5th, Dahlia, and Blair desperately needs traffic calming and pedestrian safety measures. 3 roads converge here, just 1 block from the congested intersection of 2 major thoroughfares: Piney Branch and Blair. Cars coming down the residential blocks of Dahlia and Blair have limited visibility and access to turn onto Blair.

Having attended all of the workshops I am concerned over the apparent limited inclusion of the many community concerns outlined and offered (with post notes) by Ward 4 citizens. The study team seemed to be in love with bulb outs in all of the proposed solutions. As I mentioned at the last workshop all comments should be captured in the appendix and if not included in the first round of safety and livability funding future phases of improvements should be considered by category and priority.

It was also noted that no traffic signal improvements (Advance/delayed green, new signals, etc. with the exception of a HAWK light on Georgia Avenue at Fern) were noted although certainly raised during the workshops nor did I see any inclusion of speed humps on streets such as Aspen Street (between Blair Road and Piney Branch Road) and 6th street (between Butternut and Cedar Streets). It should be noted they do exist on Aspen Street between Piney Branch Road and Georgia Avenue. I believe a truly comprehensive program should include all safety related improvements not just those that may include targeted federal funding.

Funding:

The study team indicated that there was no funding for the livability study although staff indicated some of the non-design work would be included in current budgets. With this and other livability studies citizen expectations are raised, and it would be shameful if this report, like previous ones done for Georgia Avenue and the July 2003 Takoma Transportation Study, are not clearly placed into the capital budget (or operations budget) of DDOT. I would urge DDOT to pursue capital funding for the recommendation from the studies so the impacted communities would not be (again) disappointed.

Corridor 5A - Piney Branch Road (South)

1. Two floating bus islands on Butternut Street near the Piney Branch Rd. intersection are noted. Is there a problem currently? I am not convinced that the two floating bus islands are necessary particularly if there is no history of crashes, near misses, etc. Additionally, if the curb bulb outs are planted with trees a concern over visibility of the existing traffic signals and turning movements may be impacted. I might add that with all of the improvements made in the Takoma community to improve bicycle/pedestrian safety with the installation of flex posts a future maintenance issue for DDOT is created. Hopefully DDOT has budgeted for replacement flex posts in Ward 4 and throughout the city.

2. 6th Street between Cedar St. and Piney Branch Road recommends a one-way street (north bound) and reconfiguring exit to Piney Branch to improve visibility. I support this change since 6th street from Butternut to Piney Branch is both a cut through for commuter traffic heading north bound in the evenings who speed along this stretch. I would recommend adding at least one or maybe two speed humps on the stretch between Butternut and Cedar Streets to slow speeding motorists.

3. I support the closure of 5th and Dahlia streets from Blair Road. This intersection is inherently unsafe for all travelers (pedestrians, bicyclists and motorists). It also served as a cut through of morning southbound rush hour traffic on Blair Road (who would speed up 5th to Cedar or Butternut streets and return to Blair Road) to avoid the chronic backups at the Blair/Cedar/4th Streets intersection.

4. Piney Branch Road and Blair Road intersections. While supportive of the changes I would strongly recommend

adding an advance left-hand green arrow for southbound traffic on Blair Road. Frequently southbound traffic during morning rush hours and during the day create backups due to the narrow road width for those motorists making left hand turns from Blair to Piney Branch Rd. Thus backups of traffic to Fern and Geranium Streets are frequent occurrences necessitating waits for up to 3 traffic signal evolutions. This has been identified on previous studies.

5. Aspen Street intersection and underpass at Blair Road

This area which includes Sandy Spring Road and Willow streets is a dangerous series of adjacent intersections which have posed several safety concerns involving pedestrian/bicyclists and motorists. I understand there is a separate DDOT study being conducted at this location. If not, this should be included in the livability study. Additionally, as a part of the safety improvements a left turn advance green signal or dedicated lane at the Aspen/Blair intersection, in the west bound direction, is needed to avoid the backup of vehicles heading west bound on Aspen at the underpass who wish to make a left hand turn onto Blair Road. The road width under the CSX/Metrorail tracks is sufficiently wide enough to allow a dedicated left turn lane and accommodate the Metro Branch trail.

C1 - Georgia Avenue (North)

1. I support the use of HAWK signals generally and agree with the one proposed on Georgia Avenue at Fern Street.

2. I do not support the closure of the driveway to the former retail video store adjacent to Hemlock Street (next store to LEDO's pizza). It would hamper access to shoppers to any future retail outlet at this currently vacant store. Additionally, it was noted that a bus bulb out was planned on Georgia Avenue in front of this store. The study needs to clarify this concept here and in other locations. Are you considering a paved bulb out or just creating a lane for bus turn ins at these locations through the use of Flex posts? If paved bulb outs it would essentially remove a traffic lane of traffic on Georgia Avenue which would not enhance efficient and smooth traffic flow along this critical major arterial road.

I would like to submit concerns and recommendations regarding the traffic flow and safety concerns on Piney Branch Road NW I have been a homeowner at this residence for 20+ years. I have always been concerned about the traffic flow at my corner for the duration of my residency. The amount of traffic has increased tremendously as new residence have moved into the city and those commuting to and from Maryland.

Piney Branch Road has always been a thoroughfare in and out of the city from Maryland as well as a calm street to travel while trying to avoid major streets. Piney Branch Road as you know is only a one lane street in and out of the city and can only handle a certain amount of traffic.

A well-attended elementary school (Takoma Elementary School) is located just several blocks up the street and many children (some accompanied and some not with parents/guardians) walk to and from school. I have seen a local daycare crossing the street with infants riding in a group carriage being pushed by daycare providers. There are also several physically disabled residences who regularly travel up and down Piney Branch Road in wheelchairs. In addition, there is a resident who has been in Ward 4 the entire time I have owned my home who apparently has mental and physical disabilities. She wears a helmet and walks quite a bit in the neighborhood. There are also some elderly residences who still live in the neighborhood and walk.

I have attached some video footage of the traffic congestion in front of my home. It is apparent that we have a serious problem with navigating the streets.

The problem lies here:

The streets that feed into the same intersection are:

- 1) Piney Branch
- 2) Whittier
- 3) 8th

The streets do not intersect at a perfect right angle therefore, many accidents have occurred at this intersection, frustration builds regularly (lots of screaming, yelling and honking of horns) and very unsafe conditions for walking pedestrians, bikers, wheelchair patients, etc.

This is what I propose to remedy the situation:

- 1) speed bumps on Piney Branch Road for several blocks
- 2) clear indicators or crosswalks
- 3) yellow blinking lights for walking traffic on the street and signs
- 4) a circle at my intersection to direct traffic better and slow traffic down

I hope this helps to describe our situation better and I hope that the city can accommodate our traffic concerns.

4.4 Title VI Comments

Only 3 attendees out of the 7 members of the public who opted to submit the Title VI form provided comments. All of the attendees who provided comments are in Ward 4.

Title VI Comments	
Ward	Comments
4	1- Please prioritize changes to C4 area. 2- I would like to be kept updated and join the advisory group if possible. 3- Thanks for your work on this - I think it will be a huge improvement.
4	1- I wish that traffic efficiency or congestion was more considered or designed for. 2- One way on Luzon will cut off 14th PL and dump more traffic on Aspen 3- ST traffic, transit efficiency and safety on Aspen needs to be addressed. 4- Targeted parking enforcement needed around schools and traffic plans for ALL public, private and charters. 5- Docking stations for rent and other bikes needed. 6- Non-car options for people aging in place? 7- Firetrucks use Luzon southbound to get to s. part of B'wood.
4	1- Gridlock cameras please! New Hampshire + Longfellow.

Appendix

APPENDIX D

COST ESTIMATE

COST ESTIMATE

CORRIDOR 1: GEORGIA AVE B/W FERN & JUNIPER

CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY		\$ 40.00	\$ -	\$ -	\$ -
606004	PCC Curb and/or Gutter	LF	690	\$ 37.50	\$ 25,875.00	\$ 10,350.00	\$ 36,225.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	Each	11	\$ 1,250.00	\$ 13,750.00	\$ 5,500.00	\$ 19,250.00
607020	Sod with 4 Inch Topsoil	SY	135	\$ 19.75	\$ 2,666.25	\$ 1,066.50	\$ 3,732.75
607048	Lawn Soil	CY	23	\$ 95.00	\$ 2,185.00	\$ 874.00	\$ 3,059.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
612008	Remove Lane Markings	SF	1,200	\$ 4.00	\$ 4,800.00	\$ 1,920.00	\$ 6,720.00
616992	Traffic Control Special Item - Each - HIGH VI	Each	4	\$ 1,650.00	\$ 6,600.00	\$ 2,640.00	\$ 9,240.00
613058	F&I 20 Ft Steel Traffic Signal Pole	Each	2	\$ 1,411.36	\$ 2,822.71	\$ 1,129.09	\$ 3,951.80
613078	F&I 8 Ft Mast Arm w/Clamp& Cap	Each	2	\$ 919.72	\$ 1,839.44	\$ 735.78	\$ 2,575.22
613050	F&I PCC Found For Controller Cabinet	Each	1	\$ 1,553.28	\$ 1,553.28	\$ 621.31	\$ 2,174.59
613054	Concrete Base 20Ft Sig Pole Trans Base	Each	2	\$ 1,858.44	\$ 3,716.87	\$ 1,486.75	\$ 5,203.62
613150	Furnish Red Ball Led Module (12 inch)	Each	8	\$ 49.67	\$ 397.33	\$ 158.93	\$ 556.27
613156	Furnish Yellow Ball Led Module (12 inch)	Each	4	\$ 82.57	\$ 330.29	\$ 132.11	\$ 462.40
613208	F&I 3 Sec Con Traf Sig Head MastArm(12")	Each	4	\$ 832.10	\$ 3,328.40	\$ 1,331.36	\$ 4,659.76
613236	F&I Pedestrian Push Button	Each	2	\$ 1,013.33	\$ 2,026.66	\$ 810.66	\$ 2,837.32
613240	F&I APS Control Unit	Each	2	\$ 1,045.45	\$ 2,090.90	\$ 836.36	\$ 2,927.26
613034	Furnish And Install Handbox	Each	4	\$ 1,576.79	\$ 6,307.16	\$ 2,522.86	\$ 8,830.02
613192	12 In Wlkg Per & Portlnd Orange Led Mod	Each	2	\$ 135.78	\$ 271.56	\$ 108.62	\$ 380.18
613322	F&I Traffic Signal Controller&Cabinet	Each	1	\$ 26,088.17	\$ 26,088.17	\$ 10,435.27	\$ 36,523.43
618002	Electrical Work	LS	1	\$ 30,000.00	\$ 30,000.00	\$ 12,000.00	\$ 42,000.00
616994	Traffic Control Special Item - LF - 616 065 - PAINTED LANE MARKINGS, 12 INCH	LF	160	\$ 2.00	\$ 320.00	\$ 128.00	\$ 448.00
Total				\$ 119,624.90	\$ 186,969.02	\$ 74,787.61	\$ 261,756.63

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
620020	Flexible Delineator Posts	Each	192	\$ 40.00	\$ 7,680.00	\$ 3,072.00	\$ 10,752.00
616994	Traffic Control Special Item - LF - REMOVAB	LF	1,920	\$ 1.93	\$ 3,705.60	\$ 1,482.24	\$ 5,187.84
612002	Maintenance of Highway Traffic	LS	1	\$ 10,000.00	\$ 10,000.00	\$ 4,000.00	\$ 14,000.00
616992	Traffic Control Special Item - Each - HIGH VI	Each	12	\$ 1,650.00	\$ 19,800.00	\$ 7,920.00	\$ 27,720.00
Total				\$ 11,691.93	\$ 41,185.60	\$ 16,474.24	\$ 57,659.84

CORRIDOR 2: 14TH STREET B/W ASPEN AND SHERIDAN
CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	240	\$ 40.00	\$ 9,600.00	\$ 3,840.00	\$ 13,440.00
506004	PCC Median Strip	CY	28	\$ 500.00	\$ 14,000.00	\$ 5,600.00	\$ 19,600.00
605004	PCC Sidewalk	SY	235	\$ 280.00	\$ 65,800.00	\$ 26,320.00	\$ 92,120.00
606004	PCC Curb and/or Gutter	LF	2,100	\$ 37.50	\$ 78,750.00	\$ 31,500.00	\$ 110,250.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	52	\$ 1,250.00	\$ 65,000.00	\$ 26,000.00	\$ 91,000.00
607020	Sod with 4 Inch Topsoil	SY	710	\$ 19.75	\$ 14,022.50	\$ 5,609.00	\$ 19,631.50
607048	Lawn Soil	CY	118	\$ 95.00	\$ 11,210.00	\$ 4,484.00	\$ 15,694.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
612008	Remove Lane Markings	SF	2,200	\$ 4.00	\$ 8,800.00	\$ 3,520.00	\$ 12,320.00
612084	Painted Lane Marking, 4 Inch (S.P. 95) Green	LF	1,642	\$ 1.34	\$ 2,200.28	\$ 880.11	\$ 3,080.39
616992	Traffic Control Special Item - EACH - HIGH V	EACH	24	\$ 1,650.00	\$ 39,600.00	\$ 15,840.00	\$ 55,440.00
620993	Traffic Signing Special Item - EACH - 620996	EACH	2	\$ 416.00	\$ 832.00	\$ 332.80	\$ 1,164.80
TOTAL				\$ 54,293.59	\$ 359,814.78	\$ 143,925.91	\$ 503,740.69

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
620020	Flexible Delineator Posts	EACH	432	\$ 40.00	\$ 17,280.00	\$ 6,912.00	\$ 24,192.00
616994	Traffic Control Special Item - LF - REMOVAB	LF	4,320	\$ 1.93	\$ 8,337.60	\$ 3,335.04	\$ 11,672.64
612002	Maintenance of Highway Traffic	LS	1	\$ 22,500.00	\$ 22,500.00	\$ 9,000.00	\$ 31,500.00
616992	Traffic Control Special Item - EACH - HIGH V	EACH	31	\$ 1,650.00	\$ 51,150.00	\$ 20,460.00	\$ 71,610.00
TOTAL				\$ 24,191.93	\$ 99,267.60	\$ 39,707.04	\$ 138,974.64

Total LONG-TERM Cost with Optional Floating Bus

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	245	\$ 40.00	\$ 9,800.00	\$ 3,920.00	\$ 13,720.00
506004	PCC Median Strip	CY	48	\$ 500.00	\$ 24,000.00	\$ 9,600.00	\$ 33,600.00
605004	PCC Sidewalk	SY	235	\$ 280.00	\$ 65,800.00	\$ 26,320.00	\$ 92,120.00
606004	PCC Curb and/or Gutter	LF	2,500	\$ 37.50	\$ 93,750.00	\$ 37,500.00	\$ 131,250.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	52	\$ 1,250.00	\$ 65,000.00	\$ 26,000.00	\$ 91,000.00
607020	Sod with 4 Inch Topsoil	SY	710	\$ 19.75	\$ 14,022.50	\$ 5,609.00	\$ 19,631.50
607048	Lawn Soil	CY	118	\$ 95.00	\$ 11,210.00	\$ 4,484.00	\$ 15,694.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
612008	Remove Lane Markings	SF	2,200	\$ 4.00	\$ 8,800.00	\$ 3,520.00	\$ 12,320.00
612084	Painted Lane Marking, 4 Inch (S.P. 95) Green	LF	1,642	\$ 1.34	\$ 2,200.28	\$ 880.11	\$ 3,080.39
616992	Traffic Control Special Item - EACH - HIGH V	EACH	24	\$ 1,650.00	\$ 39,600.00	\$ 15,840.00	\$ 55,440.00
620993	Traffic Signing Special Item - EACH - 620996	EACH	2	\$ 416.00	\$ 832.00	\$ 332.80	\$ 1,164.80
TOTAL				\$ 577.50	\$ 385,014.78	\$ 154,005.91	\$ 539,020.69

Additional Cost with Optional Floating Bus (scroll right for totals)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	5	\$ 40.00	\$ 200.00	\$ 80.00	\$ 280.00
506004	PCC Median Strip	CY	20	\$ 500.00	\$ 10,000.00	\$ 4,000.00	\$ 14,000.00
606004	PCC Curb and/or Gutter	LF	400	\$ 37.50	\$ 15,000.00	\$ 6,000.00	\$ 21,000.00
TOTAL				\$ 577.50	\$ 25,200.00	\$ 10,080.00	\$ 35,280.00

CORRIDOR 3: GEORGIA AVENUE NW (SOUTH) & PINEY BRANCH ROAD
CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	70	\$ 40.00	\$ 2,800.00	\$ 1,120.00	\$ 3,920.00
605004	PCC Sidewalk	SY	230	\$ 280.00	\$ 64,400.00	\$ 25,760.00	\$ 90,160.00
606004	PCC Curb and/or Gutter	LF	1,310	\$ 37.50	\$ 49,125.00	\$ 19,650.00	\$ 68,775.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	20	\$ 1,250.00	\$ 25,000.00	\$ 10,000.00	\$ 35,000.00
607020	Sod with 4 Inch Topsoil	SY	272	\$ 19.75	\$ 5,372.00	\$ 2,148.80	\$ 7,520.80
607048	Lawn Soil	CY	45	\$ 95.00	\$ 4,275.00	\$ 1,710.00	\$ 5,985.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
613 345	F&I 2 POLE SOLAR POWERED RECTANGULAR RAPID FLASHING	EACH	1	\$ 14,305.00	\$ 14,305.00	\$ 5,722.00	\$ 20,027.00
616992	Traffic Control Special Item - EACH - 616988	EACH	2	\$ 725.00	\$ 1,450.00	\$ 580.00	\$ 2,030.00
TOTAL				\$ 66,752.25	\$ 216,727.00	\$ 86,690.80	\$ 303,417.80

pcc sidewalk = length*width(5)/9

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
620020	Flexible Delineator Posts	EACH	336	\$ 40.00	\$ 13,440.00	\$ 5,376.00	\$ 18,816.00
616994	Traffic Control Special Item - LF - REMOVABLE	LF	3,360	\$ 1.93	\$ 6,484.80	\$ 2,593.92	\$ 9,078.72
612002	Maintenance of Highway Traffic	LS	1	\$ 17,500.00	\$ 17,500.00	\$ 7,000.00	\$ 24,500.00
616992	Traffic Control Special Item - EACH - HIGH V	EACH	26	\$ 1,650.00	\$ 42,900.00	\$ 17,160.00	\$ 60,060.00
TOTAL				\$ 19,191.93	\$ 80,324.80	\$ 32,129.92	\$ 112,454.72

CORRIDOR 4: NORTH CAPITOL STREET AT NEW HAMPSHIRE AVE NE
CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	441	\$ 40.00	\$ 17,640.00	\$ 7,056.00	\$ 24,696.00
202004	Hard Surface Pavement Excavation	CY	30	\$ 40.00	\$ 1,200.00	\$ 480.00	\$ 1,680.00
601008	PCC Pedestrian Island	CY	6	\$ 400.00	\$ 2,400.00	\$ 960.00	\$ 3,360.00
605004	PCC Sidewalk	SY	20	\$ 280.00	\$ 5,600.00	\$ 2,240.00	\$ 7,840.00
606004	PCC Curb and/or Gutter	LF	530	\$ 37.50	\$ 19,875.00	\$ 7,950.00	\$ 27,825.00
606098	Construction	EACH	10	\$ 1,250.00	\$ 12,500.00	\$ 5,000.00	\$ 17,500.00
612002	Maintenance of Highway Traffic	LS	1	\$ 75,000.00	\$ 75,000.00	\$ 30,000.00	\$ 105,000.00
616992	VISIBILITY CROSSWALK	EACH	3	\$ 1,650.00	\$ 4,950.00	\$ 1,980.00	\$ 6,930.00
506004	PCC Median Strip	CY	11	\$ 500.00	\$ 5,500.00	\$ 2,200.00	\$ 7,700.00
605004	PCC Sidewalk	SY	475	\$ 280.00	\$ 133,000.00	\$ 53,200.00	\$ 186,200.00
606993	SIDEWALK REMOVAL	SY	279	\$ 267.00	\$ 74,493.00	\$ 29,797.20	\$ 104,290.20
606004	PCC Curb and/or Gutter	LF	1,445	\$ 37.50	\$ 54,187.50	\$ 21,675.00	\$ 75,862.50
606098	Construction	EACH	20	\$ 1,250.00	\$ 25,000.00	\$ 10,000.00	\$ 35,000.00
607020	Sod with 4 Inch Topsoil	SY	1,375	\$ 19.75	\$ 27,156.25	\$ 10,862.50	\$ 38,018.75
607048	Lawn Soil	CY	230	\$ 95.00	\$ 21,850.00	\$ 8,740.00	\$ 30,590.00
611053	Tree,Shrub,Vine&GroundCover ULMUS AMERICANA ACCOLADE (AMERICAN	EACH	30	\$ 552.00	\$ 16,560.00	\$ 6,624.00	\$ 23,184.00
612002	Maintenance of Highway Traffic	LS	1	\$ 75,000.00	\$ 75,000.00	\$ 30,000.00	\$ 105,000.00
612008	Remove Lane Markings	SF	1,870	\$ 4.00	\$ 7,480.00	\$ 2,992.00	\$ 10,472.00
613058	F&I 20 Ft Steel Traffic Signal Pole	EACH	10	\$ 1,411.36	\$ 14,113.57	\$ 5,645.43	\$ 19,759.00
613078	F&I 8 Ft Mast Arm w/Clamp& Cap	EACH	6	\$ 919.72	\$ 5,518.33	\$ 2,207.33	\$ 7,725.66
613050	F&I PCC Found For Controller Cabinet	EACH	1	\$ 1,553.28	\$ 1,553.28	\$ 621.31	\$ 2,174.59
613054	Concrete Base 20Ft Sig Pole Trans Base	EACH	10	\$ 1,858.44	\$ 18,584.36	\$ 7,433.74	\$ 26,018.10
613150	Furnish Red Ball Led Module (12 inch)	EACH	20	\$ 49.67	\$ 993.33	\$ 397.33	\$ 1,390.67
613156	Furnish Yellow Ball Led Module (12 inch)	EACH	20	\$ 82.57	\$ 1,651.43	\$ 660.57	\$ 2,312.00
613162	Furnish Green Ball Led Module (12 inch)	EACH	20	\$ 49.67	\$ 993.40	\$ 397.36	\$ 1,390.76
613166	Furnish Yellow Arrow Led Module	EACH	4	\$ 85.78	\$ 343.13	\$ 137.25	\$ 480.38
613168	Furnish Green Arrow Led Module	EACH	4	\$ 100.32	\$ 401.30	\$ 160.52	\$ 561.82
613208	F&I 3 Sec Con Traf Sig Head MastArm(12")	EACH	16	\$ 832.10	\$ 13,313.60	\$ 5,325.44	\$ 18,639.04
613206	F&I 5 Sec Con Traf Sig Head on Pole(12")	EACH	4	\$ 935.75	\$ 3,743.00	\$ 1,497.20	\$ 5,240.20
613236	F&I Pedestrian Push Button	EACH	20	\$ 1,013.33	\$ 20,266.60	\$ 8,106.64	\$ 28,373.24
613240	F&I APS Control Unit	EACH	20	\$ 1,045.45	\$ 20,909.00	\$ 8,363.60	\$ 29,272.60
613034	Furnish And Install Handbox	EACH	10	\$ 1,576.79	\$ 15,767.90	\$ 6,307.16	\$ 22,075.06
613192	12 In Wlkg Per & Portlnd Orange Led Mod	EACH	20	\$ 135.78	\$ 2,715.60	\$ 1,086.24	\$ 3,801.84
613322	F&I Traffic Signal Controller&Cabinet	EACH	1	\$ 26,088.17	\$ 26,088.17	\$ 10,435.27	\$ 36,523.43
618002	Electrical Work	LS	1	\$ 60,000.00	\$ 60,000.00	\$ 24,000.00	\$ 84,000.00
612084	Painted Lane Marking, 4 Inch (S.P. 95)	LF	320	\$ 1.34	\$ 428.80	\$ 171.52	\$ 600.32
616336	POLE AND LUMINAIRE	EACH	2	\$ 374.00	\$ 748.00	\$ 299.20	\$ 1,047.20
616992	VISIBILITY CROSSWALK	EACH	24	\$ 1,650.00	\$ 39,600.00	\$ 15,840.00	\$ 55,440.00
617130	Traffic Control Special Item - EACH - 617 130 - REMOVE TRAFFIC SIGNAL POLE	EACH	12	\$ 525.00	\$ 6,300.00	\$ 2,520.00	\$ 8,820.00
TOTAL				\$ 256,991.27	\$ 833,424.54	\$ 333,369.82	\$ 1,166,794.36

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
620020	Flexible Delineator Posts	EACH	48	\$ 40.00	\$ 1,920.00	\$ 768.00	\$ 2,688.00
616994	Traffic Control Special Item - LF - REMOVAB	LF	480	\$ 1.93	\$ 926.40	\$ 370.56	\$ 1,296.96
612002	Maintenance of Highway Traffic	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 1,000.00	\$ 3,500.00
616992	Traffic Control Special Item - EACH - HIGH V	EACH	3	\$ 1,650.00	\$ 4,950.00	\$ 1,980.00	\$ 6,930.00
TOTAL				\$ 4,191.93	\$ 10,296.40	\$ 4,118.56	\$ 14,414.96

CONSTRUCTION COST ESTIMATE (LONG-TERM) - Milmarson Place Only
40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	30	\$ 40.00	\$ 1,200.00	\$ 480.00	\$ 1,680.00
601008	PCC Pedestrian Island	CY	6	\$ 400.00	\$ 2,400.00	\$ 960.00	\$ 3,360.00
605004	PCC Sidewalk	SY	20	\$ 280.00	\$ 5,600.00	\$ 2,240.00	\$ 7,840.00
606004	PCC Curb and/or Gutter	LF	530	\$ 37.50	\$ 19,875.00	\$ 7,950.00	\$ 27,825.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	10	\$ 1,250.00	\$ 12,500.00	\$ 5,000.00	\$ 17,500.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
616992	Traffic Control Special Item - EACH - HIGH V	EACH	3	\$ 1,650.00	\$ 4,950.00	\$ 1,980.00	\$ 6,930.00
TOTAL				\$ 53,657.50	\$ 96,525.00	\$ 38,610.00	\$ 135,135.00

CORRIDOR 5: PINEY BRANCH ROAD
CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	230	\$ 40.00	\$ 9,200.00	\$ 3,680.00	\$ 12,880.00
606004	PCC Curb and/or Gutter	LF	1,700	\$ 37.50	\$ 63,750.00	\$ 25,500.00	\$ 89,250.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	46	\$ 1,250.00	\$ 57,500.00	\$ 23,000.00	\$ 80,500.00
607020	Sod with 4 Inch Topsoil	SY	275	\$ 19.75	\$ 5,431.25	\$ 2,172.50	\$ 7,603.75
607048	Lawn Soil	CY	50	\$ 95.00	\$ 4,750.00	\$ 1,900.00	\$ 6,650.00
612002	Maintenance of Highway Traffic	LS	1	\$ 40,000.00	\$ 40,000.00	\$ 16,000.00	\$ 56,000.00
612084	Painted Lane Marking, 4 Inch (S.P. 95)	LF	8,400	\$ 1.34	\$ 11,256.00	\$ 4,502.40	\$ 15,758.40
616992	Traffic Control Special Item - EACH - HIGH V	EACH	23	\$ 1,650.00	\$ 37,950.00	\$ 15,180.00	\$ 53,130.00
620993	Traffic Signing Special Item - EACH - 620993	EACH	2	\$ 416.00	\$ 832.00	\$ 332.80	\$ 1,164.80
TOTAL				\$ 43,509.59	\$ 230,669.25	\$ 92,267.70	\$ 322,936.95

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
620020	Flexible Delineator Posts	EACH	288	\$ 40.00	\$ 11,520.00	\$ 4,608.00	\$ 16,128.00
616994	Traffic Control Special Item - LF - REMOVAB	LF	2,880	\$ 1.93	\$ 5,558.40	\$ 2,223.36	\$ 7,781.76
612002	Maintenance of Highway Traffic	LS	1	\$ 15,000.00	\$ 15,000.00	\$ 6,000.00	\$ 21,000.00
616992	Traffic Control Special Item - EACH - HIGH V	EACH	23	\$ 1,650.00	\$ 37,950.00	\$ 15,180.00	\$ 53,130.00
TOTAL				\$ 16,691.93	\$ 70,028.40	\$ 28,011.36	\$ 98,039.76

INTERSECTION 1: GEORGIA AVE & ALASKA AVE

CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	182	\$ 40.00	\$ 7,280.00	\$ 2,912.00	\$ 10,192.00
506004	PCC Median Strip	CY	48	\$ 500.00	\$ 24,000.00	\$ 9,600.00	\$ 33,600.00
506008	PCC Pedestrian Island	CY	4	\$ 500.00	\$ 2,000.00	\$ 800.00	\$ 2,800.00
606004	PCC Curb and/or Gutter	LF	1,345	\$ 37.50	\$ 50,437.50	\$ 20,175.00	\$ 70,612.50
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	12	\$ 1,250.00	\$ 15,000.00	\$ 6,000.00	\$ 21,000.00
607020	Sod with 4 Inch Topsoil	SY	215	\$ 19.75	\$ 4,246.25	\$ 1,698.50	\$ 5,944.75
607048	Lawn Soil	CY	36	\$ 95.00	\$ 3,420.00	\$ 1,368.00	\$ 4,788.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
612008	Remove Lane Markings	SF	1,800	\$ 4.27	\$ 7,681.06	\$ 3,072.42	\$ 10,753.48
616992	Traffic Control Special Item - EACH - HIGH V	EACH	10	\$ 1,650.00	\$ 16,500.00	\$ 6,600.00	\$ 23,100.00
616994	Traffic Control Special Item - LF - 616 065 - PAINTED LANE MARKINGS, 12 INCH	LF	780	\$ 2.00	\$ 1,560.00	\$ 624.00	\$ 2,184.00
TOTAL				\$ 54,098.52	\$ 182,124.81	\$ 72,849.92	\$ 254,974.73

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
620020	Flexible Delineator Posts	EACH	144	\$ 40.00	\$ 5,760.00	\$ 2,304.00	\$ 8,064.00
616994	Traffic Control Special Item - LF - REMOVAB	LF	1,440	\$ 1.93	\$ 2,779.20	\$ 1,111.68	\$ 3,890.88
612002	Maintenance of Highway Traffic	LS	1	\$ 7,500.00	\$ 7,500.00	\$ 3,000.00	\$ 10,500.00
616992	Traffic Control Special Item - EACH - HIGH V	EACH	10	\$ 1,650.00	\$ 16,500.00	\$ 6,600.00	\$ 23,100.00
TOTAL				\$ 9,191.93	\$ 32,539.20	\$ 13,015.68	\$ 45,554.88

INTERSECTION 2: BLAIR ROAD NW AT ASPEN STREET NW

CONSTRUCTION COST ESTIMATE (LONG-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	98	\$ 40.00	\$ 3,920.00	\$ 1,568.00	\$ 5,488.00
605004	PCC Sidewalk	SY	204	\$ 280.00	\$ 57,120.00	\$ 22,848.00	\$ 79,968.00
606004	PCC Curb and/or Gutter	LF	1,130	\$ 37.50	\$ 42,375.00	\$ 16,950.00	\$ 59,325.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	25	\$ 1,250.00	\$ 31,250.00	\$ 12,500.00	\$ 43,750.00
607020	Sod with 4 Inch Topsoil	SY	150	\$ 19.75	\$ 2,962.50	\$ 1,185.00	\$ 4,147.50
607048	Lawn Soil	CY	25	\$ 95.00	\$ 2,375.00	\$ 950.00	\$ 3,325.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
616987	Traffic Control Special Item - EACH - 616988	EACH	2	\$ 725.00	\$ 1,450.00	\$ 580.00	\$ 2,030.00
616988	Traffic Control Special Item - EACH - HIGH V	EACH	5	\$ 1,650.00	\$ 8,250.00	\$ 3,300.00	\$ 11,550.00
616994	Traffic Control Special Item - LF - 616 065 - PAINTED LANE MARKINGS, 12 INCH	LF	8,000	\$ 2.00	\$ 16,000.00	\$ 6,400.00	\$ 22,400.00
TOTAL				\$ 54,099.25	\$ 215,702.50	\$ 86,281.00	\$ 301,983.50

CONSTRUCTION COST ESTIMATE (SHORT-TERM)

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
607020	Sod with 4 Inch Topsoil	SY	150	\$ 19.75	\$ 2,962.50	\$ 1,185.00	\$ 4,147.50
607048	Lawn Soil	CY	25	\$ 95.00	\$ 2,375.00	\$ 950.00	\$ 3,325.00
612002	Maintenance of Highway Traffic	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 1,000.00	\$ 3,500.00
616988	Traffic Control Special Item - EACH - HIGH V	EACH	3	\$ 1,650.00	\$ 4,950.00	\$ 1,980.00	\$ 6,930.00
TOTAL				\$ 4,264.75	\$ 12,787.50	\$ 5,115.00	\$ 17,902.50

INTERSECTION 3: 16TH ST NW & JUNIPER ST NW
CONSTRUCTION COST ESTIMATE

40% Contingency

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	CONTINGENCY*	FINAL COST
202004	Hard Surface Pavement Excavation	CY	26	\$ 40.00	\$ 1,040.00	\$ 416.00	\$ 1,456.00
606004	PCC Curb and/or Gutter	LF	362	\$ 37.50	\$ 13,575.00	\$ 5,430.00	\$ 19,005.00
606098	PCC Wheelchair/Bicycle Ramp - New Constr	EACH	2	\$ 1,250.00	\$ 2,500.00	\$ 1,000.00	\$ 3,500.00
607032	Mulch	SY	132	\$ 5.00	\$ 660.00	\$ 264.00	\$ 924.00
607048	Lawn Soil	CY	18	\$ 95.00	\$ 1,710.00	\$ 684.00	\$ 2,394.00
612002	Maintenance of Highway Traffic	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
TOTAL				\$ 51,427.50	\$ 69,485.00	\$ 27,794.00	\$ 97,279.00