

Appendix A **DDOT Comprehensive
Transportation Review
Scoping Documents**

District Department of Transportation (DDOT) Comprehensive Transportation Review (CTR) Scoping Form



The purpose of the Comprehensive Transportation Review (CTR) study is to evaluate potential impacts to the transportation network that can be expected to result from an approved action by the Zoning Commission (ZC), Board of Zoning Adjustment (BZA), Public Space Committee (PSC), a Federal or District agency, or an operational change to the transportation network. The Scoping Form accompanies the *Guidance for Comprehensive Transportation Review* and provides the Applicant an opportunity to propose a scope of work to evaluate the potential transportation impacts of the project.

Directions: The CTR Scoping Form contains study elements that an Applicant is expected to complete in order to determine the scope of the analysis. An Applicant should fill out this *Scoping Form* with a proposed scope of analysis commensurate with the requested action and submit to DDOT for review and concurrence. Accordingly, not all elements and figures identified in the *Scoping Form* are required for every action, and there may be situations where additional analyses and figures may be necessary. Once a completed Scoping Form is submitted, DDOT will provide feedback on the initial parameters of an appropriate analysis scope. DDOT’s turnaround times are four (4) weeks for CTRs with a Traffic Impact Analysis (TIA) and three (3) weeks for all other lower tier studies. After the *Scoping Form* has been finalized and agreed to by DDOT, the Applicant is required to expand upon the elements outlined in this Form within the study.

Scoping Information

Date(s) Scoping Form Submitted to DDOT: 05-11-2020
DDOT Case Manager: Ted Van Houten
Date(s) Scoping Form Comments Returned to Applicant: 06-22-2020
Date Scoping Form Finalized: 07-11-2020

Project Overview	Proposed Development Program
Project Name: American University 2021 Campus Plan	Use(s) University
Case Type & No. (ZC, BZA, PSC, etc.):	Residential (dwelling units):
ANC/SMD: 3D / 3E	Retail (square feet):
Applicant/Developer Name: American University	Office (square feet):
Transportation Consultant and Contact Info: Nelson\Nygaard – Iain Banks 202-864-5097	Hotel (rooms):
Land Use Counsel and Contact Info: Paul Tummonds, Goulston & Storrs 1999 K Street, NW, Suite 500, Washington, DC 20036; 202-721-1157; ptummonds@goulstonstorrs.com	Other:
Site Street Address: 4400 Massachusetts Avenue, NW; 3201 New Mexico Avenue, NW; 4200 Wisconsin Avenue, NW; 4801 Massachusetts Avenue, NW	# of Vehicle Parking Spaces: 3,000
Site Square & Block: Square 1600, Lots 1, 810, 816, and 801; Square 1601, Lot 6; Square 1786, Lot 10; Square 1499, Lot 806	# of Carshare spaces: n/a
Current Zoning and/or Overlay District: RA-1/R-1-B; MU-3A; MU-4; MU-4	# of Electric Vehicle Stations: 18

Estimated Date of Hearing:	# of Bicycle Parking Spaces (long- and short-term) Yes
Small Area Plan (if applicable):	Long-term: n/a
Livability Study (if applicable): Rock Creek Far West/Rock Creek West II	Short-term: n/a
Within ½ Mile of Metrorail or ¼ mile of Streetcar/Circulator/Priority Bus?:	Loading Berths/Spaces: n/a

Documents to be Submitted to DDOT: Any action requiring a CTR or some other evaluation of on-site or off-site transportation facilities must submit one of the following documents to DDOT. It must be appropriately scoped for the specific action proposed and document all relevant site operations and transportation analyses.

- CTR Study** (100 or person total person trips, or 25 or more peak hour vehicle trips in peak direction, or as deemed necessary by DDOT)
- Transportation Statement** (limited scope based on specifics of project or if Low Impact Development Exemption from CTR and TIA is requested)
- Standalone TIA** (project proposes a change to roadway capacity, operations, or directionality, has a site access challenge, or as deemed necessary by DDOT)
- Other, specify:** _____
- Include one (1) hard copy of final report, PDF of report w/appendices, traffic analysis files, and traffic counts in DDOT-required spreadsheet format (total size of all digital files under 15 MB, if possible)

Existing Site and Description of Action: Describe the type(s) of regulatory approval(s) being requested and any background information on the project relevant to the requested action such as the existing uses, amount of vehicle parking, and other notable proposed changes on-site.

See memorandum

Prior Related Action(s), Conditions, and Commitments: Note any prior approvals by ZC, BZA, or PSC (Campus Master Plan, First Stage PUD, student/faculty cap, etc.) for the site and list all relevant conditions and proffers still in effect from the previous approval and status of completion. Attach a copy of the Decision section from the previous Zoning Order if still in effect.

See Memorandum

Section 1: SITE DESIGN		
DDOT reviews the site plan to evaluate consistency with DDOT’s standards, policies, and approach to access as documented in the most recent Design and Engineering Manual (DEM). If the proposal for use of public space is found to be inconsistent with the agency approach, DDOT will note this regardless of its relevance to the action. It is DDOT’s position that issues regarding public space be addressed at the earliest possible opportunity to ensure the highest quality project design and to minimize project delays and the need to re-design a site in the future.		
CATEGORY & GUIDELINES	CONSULTANT PROPOSAL	DDOT COMMENTS
<p>Site Access</p> <p>Show site access points for all modes. Include proposed curb cut locations, curb cuts to be closed, access controls (e.g., right-in/out, signalized), sight distances and sight triangles from access points and new intersections, driveway widths and spacing, on- and off-site parking locations, inter-parcel connections, public/private status of driveways, alleys, and streets, and whether easements, dedications, or closures are proposed.</p> <p><i>Access must be located off an adjacent existing or “paper” alley, otherwise off the lower volume street. Note any deviations from curb cut policies (DEM 31.5) w/justification and if Conceptual Approval by the Public Space Committee (PSC) has/is being sought. Subtitle I § 600-603 of ZR16 further restricts where curb cuts can be located.</i></p> <p><i>DDOT will not support curb cut design relief unless there is a clear hardship preventing a project from meeting all DDOT standards and other alternatives have been explored.</i></p> <p><i>All proposed private streets connecting to a public street must be built to DDOT standards and have a public access easement. Design of driveways and drive aisles on private property must comply with Subtitle C § 711 of ZR16.</i></p>	<p>See memorandum</p> <p><input checked="" type="checkbox"/> Scoping Graphic: Project Location Map</p> <p><input checked="" type="checkbox"/> Scoping Graphic: Site Circulation Plan</p> <p><input type="checkbox"/> Scoping Graphic: Plat for Site’s Square and Lot from Office of the Surveyor (if official plat not available, provide plans from SURDOCs)</p>	<p>See comments from DDOT Traffic Engineering and Signals Division in attachment.</p> <p>DDOT opposes adding a layby to Massachusetts or Nebraska Avenue.</p>
<p>Loading</p> <p>Discuss and show the quantity and sizes of loading berths/delivery spaces, trash storage locations, on- and off-site loading locations, turnaround design, nearby commercial loading zones, and anticipated demand, operations, and routing of delivery and trash vehicles. Identify the sizes of trucks anticipated to serve the site and design vehicles to be used in truck turning diagrams. Provide truck turning diagrams in the body of the report not the appendix.</p> <p><i>DDOT requires head-in and head-out truck movements through public space (DEM 31.5) and that direct internal pedestrian connections be provided between retail bays and loading facilities. Note any proposed deviations or requested relief from ZR16 or DDOT standards with justification. If any relief is being sought then a Loading Management Plan (LMP) is required. A template LMP is provided in Appendix E.</i></p>	<p>See Memorandum</p> <p><i>Truck Turning Diagrams not currently available</i></p> <p><input checked="" type="checkbox"/> Scoping Graphic: Location of loading area w/ internal building routing</p> <p><input type="checkbox"/> Scoping Graphic: Truck Turning Diagrams (to/from the site, alley, truck routes)</p>	<p>Acknowledged</p>
<p>Vehicle Parking</p> <p>Identify all off-street parking locations (on- and off-site) and justify the amount of on-site vehicle parking, including a comparison to the number of spaces required by ZR16 and any previous approvals. Provide parking calculations and parking ratios by land use, including any eligible ZR16 vehicle parking reductions (i.e., within ¼ mile of</p>	<p>See Memorandum</p> <p><input type="checkbox"/> Scoping Table: Parking Calculations with Comparison to ZR16 and DDOT’s Preferred Vehicle Parking (Table 2)</p>	<p>A new parking cashout law will go into effect later this year. Universities are largely exempt from it because they own their parking. However, with this new law, parking leases will not be able to be renewed.</p>

<p>Priority Bus Route, within ½ mile of Metrorail Station, providing carshare spaces, located within a D zone, etc.).</p> <p><i>Review the DDOT Preferred Parking Rates (Table 2). If the total parking provision proposed exceeds the amount calculated using ratios in that table then the number of spaces should be reduced or substantial TDM / non-auto improvements be provided. If parking provision is significantly out of line with appropriate parking ratios, one way or the other, then mode split and trip generations estimates will be adjusted.</i></p> <p><i>Confirm whether ZR16 TDM Mitigations will be required, per Subtitle C § 707.3, for providing more than double the amount of required vehicle parking. Coordinate with the Zoning Administrator as early in the process as possible for an official determination.</i></p> <p><i>A TDM Plan is required for BZA parking reduction cases, per Subtitle C § 703.4. If relief is being requested from 5 or more spaces, then a Parking Occupancy Study is required (see Multi-Modal section).</i></p>	<p><input checked="" type="checkbox"/> <i>Scoping Graphic: Off-Street Parking Locations (both on- and off-site)</i></p>	<p>The campus plan proposes to increase the number of parking spaces from 2200 spaces to 3000 spaces. DDOT does not support an increase in the amount of parking. The campus plan should seek opportunities to reduce the amount of parking on campus, particularly any surface lots.</p>
<p>Bicycle Parking</p> <p>Identify the locations of proposed bicycle parking and justify the amount of long- and short-term spaces proposed. Provide a calculation of the number of spaces required by ZR16.</p> <p><i>Long-term bicycle parking spaces must be easily accessible from building lobby or located in the parking garage level closest to the ground floor. Lockers and showers must be included with non-residential long-term bicycle storage rooms, per Subtitle C § 806. Provide calculations for required lockers and showers.</i></p> <p><i>Short-term bicycle parking must be accommodated by installing inverted U-racks along the perimeter of the site in the 'furniture zone' of public space, near the site entrance(s).</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Locations of internal bicycle parking spaces, routing to these spaces, and related support facilities including locker rooms, showers, storage areas, and service repair rooms</i></p>	<p>Ensure any additional bike racks are installed according to DDOT's Bike Parking Guide (attached) with close attention paid to spacing dimensions and long-term bike parking requirements (e.g. at least 50% of long-term spaces must allow for bikes to be placed horizontally on the floor or ground without the bike being suspended.)</p>
<p>Streetscape and Public Realm</p> <p>Provide a conceptual layout of the streetscape and public realm including at minimum: curb cuts, vaults, sidewalk widths, street trees, grade changes, building projections, short-term bicycle parking, and any existing bus stops. Also provide the permit tracking numbers and PSC hearing date, if known, for any approved public space designs.</p> <p><i>DDOT expects new developments to rehabilitate the streetscape between the curb and property line and meet all public space design standards. Streetscape must meet ADA requirements and ensure nothing impedes accessible curb access or pedestrian circulation.</i></p> <p><i>Note any non-compliant public space elements requiring a DCRA code modification or PSC approval.</i></p> <p><i>A summary of public space best practices is provided in Section 1.5. DDOT standards are documented in the DEM, Public Realm Design Manual, and corridor Streetscape Guidelines (if applicable).</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Preliminary Public Space Concept</i></p>	<p>Acknowledged</p>

<p>Sustainable Transportation Elements Identify all sustainable transportation elements, such as electric vehicle (EV) charging stations and carshare spaces proposed to be included in the project. Electrical conduit should be installed in parking garage so that additional EV stations can be provided later.</p> <p><i>DDOT recommends 1 per 50 vehicle spaces be served by an EV station. DDOT encourages providing car share spaces on-site to reduce the ZR16 parking requirement and support non-car ownership lifestyles.</i></p>		<p>Acknowledged</p>
<p>Heritage, Special, and Street Trees Heritage Trees are defined as having a circumference of 100 inches or more and are typically located on private property. They are protected by the District’s Tree Canopy Protection Amendment Act of 2016 and must be preserved if deemed non-hazardous by Urban Forestry Division (UFD). Special Trees are between 44 inches and 99.99 inches in circumference and may be removed with a permit.</p> <p><i>Note whether there are existing Heritage Trees on-site or in adjacent public space. The presence of Heritage Trees will impact site design since they may not be cut down. Work w/the UFD Ward Arborist to determine if there are Heritage or Special Trees on-site that must be preserved and if Tree Preservation or Relocation Plans are required.</i></p> <p><i>Conduct an inventory of existing and missing street trees within a 3-block radius of the site (design standards are in DEM 37.5). Identify any opportunities for UFD or the Applicant (as part of the mitigations package) to install missing treeboxes and street trees.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Street Tree Inventory Study Area</i></p>	<p>AU should contact DDOT’s Urban Forestry Division (UFD) as soon as possible to identify Heritage and Special Trees within the campus boundaries and discuss requirements for preservation and/or removal. UFD will also address street tree impacts and any proposed new street tree plantings. UFD wants to ensure that the trees identified to remain are property protected throughout any construction and remain viable long afterward.</p> <p>Below are the names and contact information for the DDOT Arborists that cover the AU campuses as well as the DDOT Arborist who handles the review of Heritage/Special tree preservation.</p> <p>Main/East Campus and 3201 New Mexico Avenue NW – Vera Ertem, munevver.ertem@dc.gov</p> <p>Tenley Campus and 4801 Massachusetts Avenue NW – Michael Chuko, michael.chuko@dc.gov</p> <p>4200 Wisconsin Avenue NW – Evan Anderson, evan.anderson@dc.gov</p> <p>District-wide Special/Heritage Tree plan review – Dan Just, daniel.just@dc.gov</p>

Section 2: TRAVEL ASSUMPTIONS

<p>CATEGORY & GUIDELINES</p>	<p>CONSULTANT PROPOSAL</p>	<p>DDOT COMMENTS</p>
<p>Mode Split Provide mode split assumptions with sources and justification. Sources of data could include the most recent <i>Census Transportation Planning Products (CTPP) the 2005 WMATA Development-Related Ridership Survey</i>, or previous planning studies and CTRs. Note that the walking mode share will account for internal trip synergies for mixed use developments.</p> <p><i>Adjustments to mode split assumptions may be made, as appropriate, if the number of vehicle parking spaces proposed is significantly lower or higher than expected for the context of the neighborhood.</i></p> <p><i>The agreed upon mode split assumptions may not be revised between scoping and CTR submission without DDOT concurrence.</i></p>	<p>See Memorandum.</p> <p><input checked="" type="checkbox"/> <i>Scoping Table: Mode Split Assumptions</i></p>	<p>Acknowledged</p>

<p>Trip Generation</p> <p>Provide site-generated person trip generation estimates, utilizing the most recent version of ITE <i>Trip Generation Manual</i> or another agreed upon methodology such as manual doorway or driveway counts at similar facilities. Estimates must be provided by mode, type of trip, land use, and development phase during weekday AM and PM commuter peaks, Saturday mid-day peak, and daily totals. CTR must also include existing site trip generation based on observed counts. Modes include transit, bicycle, walk, and automobile.</p> <p><i>DDOT TripsDC tool will be used to determine trip generation estimates for residential-over-retail projects (see Section 2.2.4 for parameters).</i></p> <p><i>Auto occupancy rates by travel purpose published in the 2017 National Household Travel Survey should be used when calculating person trips based on suburban vehicle trip data in Trip Generation Manual (see Table 3).</i></p> <p><i>Adjustments to trip generation may be made, as appropriate, if the number of vehicle parking spaces proposed is significantly lower or higher than expected for the context of the neighborhood.</i></p> <p><i>Pass-by rates in the District are minimal and should only apply to major retail-dominant destinations, grocery stores, and gas stations. An adjusted pass-by/diverted trips methodology should be developed if development is not located on a road classified as arterial or higher.</i></p> <p><i>The agreed upon trip generation methodology may not be revised between scoping and CTR submission without DDOT concurrence. Consult the DDOT Case Manager if site plan, development program, land uses, or density changes significantly.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Table: Multi-Modal Trip Gen Summary (w/mode split and applicable reductions, as appropriate)</i></p>	<p>The bicycle trip generation estimates that 357 walking/bike trips will be made into or out of the Main Campus in the AM peak (275 in; 82 out) and 600 in and out in the PM peak (273 in; 327 out). This would overwhelm the existing Capital Bikeshare stations at Ward Circle and the American University East Campus. To offset this, DDOT would like AU to provide a 19-dock Capital Bikeshare station at the southern end of the main campus for use by students, staff, faculty, and neighbors. Please provide a 6'x52' strip of hardscape for the station on the exterior of the site, free of any utility covers or worker/handholes and with access to at least 4+ hours of direct sunlight a day. Work with Greg Matlesky on siting the Capital Bikeshare station at greg.matlesky@dc.gov</p>
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Section 3: MULTI-MODAL NETWORK EVALUATION

A CTR study is required if the project generates at least 100 peak hour person trips or 25 vehicle trips in the peak direction (highest of inbound or outbound) in any study period. Existing site traffic, pass-by, TDM, internal capture or other reductions may not be taken in the calculation to determine if the project meets these thresholds. However, they may be taken in the TIA, as appropriate, if a study is triggered. Analyses in the Multi-Modal Network Evaluation section are required in all CTRs, unless otherwise specified. A Transportation Statement may only require some of the following sections depending on the specifics of the project and zoning action.

The requirement for a CTR may be waived if site is within ½ mile from Metrorail or ¼ mile from Priority Transit, the total vehicle parking supply below level expected within ¼ mile of Metrorail Station (see Table 2), maximum 100 parking spaces, an Enhanced TDM Plan is implemented, site access and loading design are acceptable, there is a complete pedestrian network in the vicinity of the site, and meets all ZR16 bike parking and locker/shower requirements. Additional criteria may be found in the Low Impact Development Exemption section of *Guidance for CTR*.

<p>CATEGORY & GUIDELINES</p>	<p>CONSULTANT PROPOSAL</p>	<p>DDOT COMMENTS</p>
<p>Strategic Planning Elements</p> <p>Identify relevant planning efforts and demonstrate how the proposed action is consistent with District-wide planning documents, as well as localized studies. Note in scoping form any recommendations from these documents relevant to the development proposal.</p> <p>The evaluation will consider at least the following high level/District-wide documents: tran</p>	<p>See Memorandum</p>	<p>Acknowledged</p>

<ul style="list-style-type: none"> ● MoveDC and its relevant modal elements ● DDOT Livability Study (relevant to the project) ● OP Small Area Plans (relevant to the project) ● DC Highway Plan (shown on official plat) ● District of Columbia Comprehensive Plan ● Vision Zero Action Plan ● Capital Bikeshare Development Plan ● Washington Metropolitan Area Transit Authority’s (WMATA) Metrorail and Metrobus Plans ● DDOT Corridor studies (e.g., Transit Development Plan, Streetscape Design Plans and Guidelines) <p><i>Details on additional relevant plans and studies may be provided by the DDOT Case Manager.</i></p>		
<p>Pedestrian Network</p> <p>Evaluate the condition of the existing pedestrian network and forecast the project’s impact. Evaluation must include, at a minimum, critical walking routes, sidewalk widths, network completeness, whether facilities meet DDOT and ADA standards, and whether pedestrian signal timings are adequate (within vehicle study area).</p> <p><i>Study area will include, at a minimum, all roadway segments and multi-use trails within a ¼ mile radius from the site, with a focus on connectivity to Metrorail, transit stops, schools, and major activity centers.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Pedestrian Study Area w/Walking Routes to Transit, Schools, Activity Centers</i></p>	<p>AU should look for opportunities to create new pedestrian connections with the adjacent properties and roadways.</p>
<p>Bicycle Network</p> <p>Evaluate the condition of the existing bicycle network and forecast the project’s impact, including to Capital Bikeshare (CaBi). Evaluation must include, at a minimum, bicycle network completeness, types of facilities, and adequacy of CaBi locations and availability. Bikeshare station demand data can be obtained from the <i>CaBi Tracker</i> website.</p> <p><i>Study area will include, at a minimum, all roadway segments and multi-use trails within a ½ mile radius from the site, with a focus on connectivity to Metrorail, transit stops, schools, major activity centers, and other bicycle trails or facilities.</i></p> <p><i>Note where bike lanes conflict with access to the site or on-street loading movements associated with the project.</i></p> <p><i>If a CaBi station is currently located along the site frontage, the Applicant must assume the station will stay in place after the development has been constructed and must be designed in the public space plans. If it is not physically possible to stay in place, then DDOT expects the Applicant to demonstrate this hardship, propose a viable alternative location, and fund the station relocation. The minimum size of a new CaBi station is 19 docks with 12 bikes.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Bicycle Study Area w/Bicycling Routes to Transit, Schools, Activity Centers</i></p>	<p>Acknowledged</p>
<p>Transit Network</p> <p>Evaluate, at a minimum, existing transit stop locations, adjacent bus routes and Metro headways, planned transit improvements, and an assessment of existing transit stop conditions (e.g., ADA compliance,</p>	<p>See Memorandum</p>	<p>WMATA may be making some alterations to the existing bus network soon, but this area is expected to have similar service levels and routes.</p>

<p>bus shelters, benches, wayfinding, etc.). For Metrorail stations, refer to the 2009 WMATA Station Site and Access Planning Manual, as well as various station capacity studies.</p> <p><i>Study area is 1.0 mile for Metrorail stations and ½ mile for Streetcar, Circulator, and WMATA buses.</i></p> <p><i>All existing bus stops and shelters must be accommodated during construction, assumed to be returned to the original location after construction, and designed into the public space plans. If a bus stop and/or shelter must be moved then the Applicant will fund the relocation and obtain approval from DDOT and WMATA for the new location. Applicant must fund the electrification of all new or relocated shelters.</i></p>	<p><input checked="" type="checkbox"/> <i>Scoping Graphic: Transit Study Area with Adjacent Routes and Stations</i></p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Screenshots from DDOT transit maps showing where the site falls within buffers from Metrorail and Priority Transit</i></p>	<p>If AU proposes any changes to existing shuttle service, please note this in the CTR.</p>
<p>Safety Analysis</p> <p>Qualitatively evaluate safety conditions at intersections and along blocks within the vehicle study area.</p> <p><i>Perform a review of DDOT Vision Action Plan. Note whether any study intersections have been identified by DDOT as high crash locations, if any safety studies have been previously conducted, and discuss the recommendations. Depending on the results of the TIA, DDOT may require improvements to nearby intersections previously identified as having known safety issues.</i></p>	<p>See Memorandum</p>	<p>Acknowledged</p>
<p>Curbside Management</p> <p>Propose a curbside management plan that is consistent with current DDOT policies and practices. The curbside management plan must delineate existing and proposed on-street parking designations/restrictions, including but not limited to pick-up/drop-off zones, commercial loading zones, multi-space meters, RPP, and net change in number of on-street spaces as a result of the proposal.</p> <p><i>Note that the preliminary curbside management plan will not be approved by DDOT during the zoning process. Applicant must submit a more detailed signage and marking plan via TOPS for formal review and approval by DDOT-PGTD during public space permitting. DDOT expects the Applicant to fund the installation of multi-space meters on blocks where meters are required.</i></p>	<p>See Memorandum</p> <p><input type="checkbox"/> <i>Scoping Graphic: Existing Curbside Designations (min. 2 block radius of site)</i></p>	<p>Acknowledged</p>
<p>Pick-Up and Drop-Off Plan</p> <p>This plan is required for all schools and daycares with 20 or more students. It may also be required for churches, hotels, or any other use expected to have significant pick-up and drop-off operations, as necessary. The plan will identify pick-up and drop-off locations and demonstrate adequate circulation so that the flow of bicycles and vehicles is not impeded and queueing does not occur through the pedestrian realm.</p> <p><i>DDOT will require this plan for schools and daycares currently in operation even if the relief requested from the BZA is not related to a student cap increase.</i></p>	<p>See Memorandum</p>	<p>Acknowledged</p>
<p>On-Street Parking Occupancy Study</p> <p>This analysis is required if BZA relief from 5 or more on-site vehicle parking spaces is being requested. It may also be required as part of a</p>	<p>See Memorandum</p>	<p>Acknowledged</p>

<p>ZC or permitting case if DDOT has concerns about site-generated vehicles parking in adjacent residential neighborhoods.</p> <p><i>Vehicle parking occupancy counts will be collected hourly during periods of peak demand. These are typically the weekday evening period (6-10 PM) for residential developments, weekday morning period (7-9 AM) if within ¼ mile of Metrorail, and weekend peak periods if there is a commercial component. Parking availability must be assessed a maximum of 2 blocks in each direction from the site, unless otherwise agreed upon. Also include inventory of off-street parking garages in vicinity of site.</i></p>	<p><input type="checkbox"/> Scoping Graphic: Study Area/Block Faces</p>	
<p>Parking Garage Queuing Analysis</p> <p>If site contains 150 or more vehicle parking spaces <u>and</u> direct access to a public street, evaluate on-site vehicle queuing demand and provide analysis demonstrating parking entrance and ramps can properly process vehicles without queuing onto public streets. Provide proposed parking supply, queuing analysis, and physical controls to parking area, if applicable.</p>	<p>See Memorandum</p>	<p>Acknowledged</p>
<p>Motorcoaches</p> <p>Propose methodology for data collection and analysis. Describe and show the parking locations, anticipated demand, existing areas on- and off-site for loading and unloading (and desired loading times restrictions, if any), and potential routes to and from designated truck routes. If on-street motorcoach parking is proposed, a plan for installation of signage and meters is required, subject to DDOT-PGTD approval. This section is typically only required for uses that generate significant tourist activity (hotels, museums, cruises, etc.).</p>	<p>See Memorandum</p>	<p>Acknowledged</p>

Section 4: TRAFFIC IMPACT ANALYSIS (TIA)

The TIA component of a CTR is required when a development generates 25 or more peak hour vehicle trips in the peak direction (higher of either inbound or outbound vehicles in any study peak period), after mode split is applied. Existing site traffic, pass-by, TDM, internal capture or other reductions may not be applied when calculating whether a TIA is required. Applicable reductions may be used in the multi-modal trip generation summary and assignment of trips within the TIA, as appropriate. A standalone TIA may also be required if the project proposes a change to roadway capacity, operations, or directionality; has a site access challenge; or as otherwise deemed necessary by DDOT.

<p>CATEGORY & GUIDELINES</p>	<p>CONSULTANT PROPOSAL</p>	<p>DDOT COMMENTS</p>
<p>TIA Study Area and Data Collection</p> <p>Identify study intersections commensurate with the impact of the proposed project and the travel demand it will generate. Study area must include all major signalized and unsignalized intersections, intersections expected to realize large numbers of new traffic, and intersections that may experience changing traffic patterns. Additional guidance on selecting study intersections is provided in DEM 38.3.2.</p> <p><i>Turning Movement Counts (TMC) will be collected in 15-minute increments during the weekday morning (6:30 AM to 9:30 AM) and evening (4:00 PM to 7:00 PM) peak periods on Tuesdays through Thursdays during non-holiday weeks, while schools and Congress are in session, the Fed govt is not in a shutdown, and weather is not an issue, unless otherwise agreed upon. Saturday mid-day peak period (generally 11:00 AM to 1:00 PM) will be studied if development</i></p>	<p>See Memorandum</p>	<p>Acknowledged</p>

<p><i>program is retail-heavy. TMCs will include vehicles, pedestrians, bicyclists, and % truck traffic. TMCs will be collected at all existing site driveways and reported as existing conditions in trip generation summary.</i></p> <p><i>Previously collected TMCs may be used if they are less than 2 years old at the time of study submission. DDOT may require counts be refreshed once TMCs reach 3 years old or if a major transportation or land use change occurs. A growth rate will be applied to TMCs older than 12 months to create present year Existing Conditions.</i></p>	<p><input checked="" type="checkbox"/> Scoping Graphic: Study Intersections</p> <p><input checked="" type="checkbox"/> Provide hard copies of TMCs in CTR appendix and electronic copies in DDOT-required spreadsheet format at time of submission.</p>	
<p>TIA Study Scenarios</p> <p>Propose an appropriate set of scenarios to analyze. Note the anticipated build-out year and project phasing. Analysis scenarios to be considered:</p> <ul style="list-style-type: none"> ● Existing Conditions (Current Year) ● Background Conditions (No-Build) ● Total Future Conditions (With Development) ● Total Future Conditions (With Development and Mitigation) ● Additional Scenarios For Each Phase, as necessary ● Total Future Conditions (+5 Years), as required ● Long Range +20 Years Planning Scenario, as required 	<p>See Memorandum</p>	<p>Acknowledged</p>
<p>TIA Methodology</p> <p>Propose an appropriate methodology for the capacity analysis including the type of software program to be used. Per DEM 38.3.5.1, HCM methodology will be used to determine Level of Service (LOS), v/c, and vehicle queue lengths. LOS must be reported by intersection approach and v/c by lane group. DDOT prefers Synchro 9 or newer software for capacity and queueing analyses. SimTraffic (10 simulations averaged) should be used to further evaluate an observed queueing issue and determine a solution, as necessary.</p> <p><i>DDOT's required standard Synchro and SimTraffic inputs/settings are provided in Appendix H.</i></p> <p><i>Merge/weave/diverge analysis is required if any of the study intersections include a highway, freeway, or Interstate ramp (DEM 38.3.5.3). HCS software should be used for this analysis.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> Will provide copies of Synchro, SimTraffic, and other analysis software printouts in study appendix and electronic copies of analysis files at time of CTR submission.</p>	<p>Acknowledged</p>
<p>Transportation Network Improvements</p> <p>List and map all roadway, transit, bicycle, and pedestrian projects funded by DDOT or WMATA, or proffered by others, in the vicinity of the study area and expected to open for public use prior to the proposal's anticipated build-out year. Review the STIP, CLRP, and proffers/commitments for other nearby developments.</p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> Scoping Graphic: Locations of background transportation network improvements</p>	<p>Acknowledged</p>
<p>Local Traffic Growth</p> <p>List and map developments to be analyzed as local background growth. This will include known matter-of-right and zoning-approved developments within ¼ mile of site and others more than ¼ mile from site if their traffic is distributed through study intersections. Document the portions of developments anticipated to open by the projected build-out year.</p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> Scoping Graphic: Background development projects near study area</p> <p><input checked="" type="checkbox"/> Scoping Table: Completion amounts/portions occupied of background developments</p>	<p>Acknowledged</p>

<p>Regional Traffic Growth</p> <p>Propose a methodology to account for growth in regional travel demand passing through the study area. An appropriate methodology could include reviewing historic AADT traffic counts, MWCOG model growth rates, data from other planning studies, or recently conducted nearby CTRs. These sources should only be used as a guide.</p> <p><i>Generally, maximum annually compounding growth rates of 0.5% in peak direction and 2.0% in non-peak direction are acceptable. Growth rates based should be based on DDOT historical data from 10+ years, if available. Adjustments to the rates may be necessary depending on the amount of traffic assumed from local background developments or if there were recent changes to the transportation network.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Table: Projected regional growth assumptions (dependent on methodology), show growth rates by facility, direction, and time of day</i></p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic: Projected regional growth assumptions (dependent on methodology), show growth rates by facility, direction, and time of day</i></p>	<p>Acknowledged</p>
<p>Trip Distribution</p> <p>Provide sources and justification for proposed percentage distribution of site-generated trips. Additionally, document proposed pass-by distributions and the re-routing of existing or future vehicles based on any changes to the transportation network.</p> <p><i>Percentage distributions must be shown turning at intersections throughout the transportation network and at site driveways and garage entrances to ensure appropriate routing assumptions.</i></p> <p><i>The agreed upon trip distribution methodology may not be revised between scoping and CTR submission without concurrence by DDOT Case Manager.</i></p> <p><i>Given the District’s urban context and grid network, a small portion of trips (up to 5% of trips through an intersection) may be re-routed from their original routes to an alternate route due to traffic congestion.</i></p>	<p>See Memorandum</p> <p><input checked="" type="checkbox"/> <i>Scoping Graphic(s): Percentage Distribution by Land Use, Direction, Time of Day</i></p>	<p>Acknowledged</p>
<p>Section 5: MITIGATION</p>		
<p>The completed CTR must detail all proposed mitigations. The purpose of discussing mitigation at the scoping stage is to highlight DDOT’s Significant Impact Policy, DDOT’s approach to mitigation, and to give the Applicant an opportunity to gain initial feedback on potential mitigations that may ultimately be proposed. Any mitigation strategies discussed and included in the <i>Scoping Form</i> are considered non-binding until formally evaluated in the study and committed to as part of a related action.</p>		
<p>CATEGORY & GUIDELINES</p>	<p>CONSULTANT PROPOSAL</p>	<p>DDOT COMMENTS</p>

<p>DDOT Significant Impact Policy</p> <p><u>Vehicle Parking Supply</u> DDOT considers a high parking provision as an ‘impact’ that needs to be mitigated since it is a permanent site feature that encourages additional driving and yield vehicle trips in the future that were not contemplated in the study. Appropriate mitigations include reducing vehicle parking, implementing substantive TDM strategies, off-site non-automotive network upgrades, and making monetary contributions to DDOT for non-auto improvements. See Table 2 to determine if a site is over-parked based on land use and distance to transit.</p> <p><u>Capacity Impacts at Intersections</u> All site-generated vehicular impacts to the transportation network during study peak hours must be mitigated, per DEM 38.3.5, if any of the following occur:</p> <ul style="list-style-type: none"> • Degradation of an approach or intersection to LOS E or F or intersection v/c ratio increases to 1.0 or greater from Background to Total Future Conditions. • If an approach or intersection exceeds LOS E or F or movement/lane group exceeds 1.0 v/c ratio under Background Conditions then an increase in delay or v/c ratio by 5% or more under Total Future Conditions. • If 95th percentile vehicle queuing length exceeds available capacity of approach or turn lane under Total Future Conditions. • If 95th percentile queue length of an approach or turn lane increases by 150 feet or more from Background to Total Future Conditions. 	<p><input checked="" type="checkbox"/> <i>The Applicant acknowledges DDOT’s Significant Impact Policy.</i></p> <p><input checked="" type="checkbox"/> <i>The study will comply with all other policies in the Guidance for Comprehensive Transportation Review and the Category & Guidelines column of this Scoping Form not explicitly documented in the Consultant Proposal or DDOT Comments columns.</i></p> <p><input checked="" type="checkbox"/> <i>The study will include all of the required graphics, tables, and deliverables for the relevant sections determined during scoping, as shown in Table 1 of Guidance for Comprehensive Transportation Review.</i></p>	<p>Acknowledged</p>
<p>DDOT Approach to Mitigation</p> <p>DDOT’s approach to mitigation is to first establish optimal site design and operations to support efficient site circulation. When these efforts alone cannot properly mitigate an action’s impact, reducing on-site vehicle parking, implementing TDM measures, making upgrades to the pedestrian, bicycle, and transit networks to encourage use of non-automotive modes, or monetary contribution to DDOT for non-auto improvements must be proposed. Only when these options are exhausted will DDOT consider capacity-increasing changes to the roadway network because such changes often have detrimental impacts on non-automotive travel and are often contrary to the District’s multi-modal transportation goals.</p>	<p><input checked="" type="checkbox"/> <i>The Applicant acknowledges DDOT’s approach to mitigation that prioritizes (in order of DDOT preference) optimal site design, reducing vehicle parking, implementing more TDM strategies, making non-automotive network improvements, and making a monetary contribution to DDOT for non-auto improvements before considering options that increase roadway capacity or alter roadway operations.</i></p>	<p>Acknowledged</p>
<p>Transportation Demand Management (TDM)</p> <p>A TDM Plan is typically required to offset site-generated impacts to the transportation network or in situations where a site provides more parking than DDOT determines is practical for the use and surrounding context. TDM strategies are also an integral part of the District’s transportation options. As such, a Baseline TDM plan is required in all CTRs regardless of impacts to the network. An Enhanced Plan or greater is required if the site is over-parked per Table 2 or there are roadway impact identified. Sample TDM plans by land use and tier can be found in Appendix C.</p>	<p><input checked="" type="checkbox"/> <i>The Applicant will include at least a Baseline TDM Plan. The TDM plan will increase to Enhanced Plan or beyond depending on the parking ratio and other impacts identified in the study.</i></p>	<p>Please continue to send parking and TDM reports annually. They should be sent to DDOT’s TDM coordinator.</p>

<p><i>Document all existing TDM strategies being implemented on-site (even outside of a formal TDM Plan) and those being proposed and committed to by the Applicant. Elements of the TDM Plan included in CTR must be broken down by land use and user (i.e., employee, faculty, resident, visitor, etc.).</i></p>		
<p>Performance Monitoring Plan (PMP) DDOT may require a PMP in situations where anticipated vehicle trips are large in magnitude, unpredictable, or necessitate a vehicle trip cap. Typically, this is required for schools expected to have a significant amount of single occupancy vehicle trips or very large developments. The monitoring plan will establish thresholds for new trips a project can generate, define post-completion evaluation criteria and methodology, determine the frequency of reporting, and establish potential remediating measures (e.g., adjust trip caps or implement additional TDM strategies). <i>Document any existing performance monitoring Plans in effect and any proposed changes.</i></p>	<p>See Memorandum</p>	<p>All campus plans must implement a PMP. Provide an update on the implementation of the current PMP and use this campus plan update as an opportunity to evaluate, refresh, and revisit the mode share or trip goals.</p>
<p>Roadway Operational and Geometric Changes Describe all proposed roadway operational and geometric changes in CTR with supporting analysis and warrants in the study appendix. Detail must be provided on any ROW implications of proposed mitigations. All proposed changes in traffic control must be conducted following the procedures outlined in the <i>Manual of Uniform Traffic Control Devices</i> (MUTCD). <i>Note any preliminary ideas being considered.</i></p>	<p>See Memorandum</p>	<p>Acknowledged</p>
<p>Section 6: ADDITIONAL TOPICS FOR DISCUSSION DURING SCOPING</p>		
<p>CATEGORY & GUIDELINES</p>	<p>CONSULTANT PROPOSAL</p>	<p>DDOT COMMENTS</p>
<p>ANC Discussions and Feedback Provide an update on the status of Community Benefits Agreement, any ANC concerns, or other concerns expressed by the community.</p>	<p>See Memorandum</p>	<p>Acknowledged</p>
<p>Miscellaneous Items for Discussion These items could include relevant on-going discussions with other agencies and stakeholders or seeking direction other types of analyses to be included (i.e., traffic calming proposal, TOPP, TMP).</p>	<p>See Memorandum</p>	<p>Acknowledged</p>



MEMORANDUM

To: Ted Van Houten, DDOT

From: Nelson\Nygaard

Date: May 4, 2020 **Updated: July 6, 2020**

Subject: American University 2021 Campus Plan CTR Scoping Memorandum

EXISTING SITE AND DESCRIPTION OF ACTION:

the type(s) of regulatory approval(s) being requested and any background information on the project relevant to the requested action such as the existing uses, amount of vehicle parking, and other notable proposed changes on-site.

American University (AU) is seeking Zoning Commission approval for a special exception for a Campus Plan for the educational uses on its Main Campus, East Campus, Tenley Campus, 4801 Massachusetts Avenue (Spring Valley Building), 4200 Wisconsin Avenue, and 3201 New Mexico Avenue properties pursuant to the Campus Plan Regulations of the District of Columbia Zoning Regulations (Subtitle X Section 101).

AU's 2021 Campus Plan is an integral component in the successful implementation of the AU's five-year strategic plan, *Changemakers for a Changing World*, setting forth a thoughtful approach to managing campus growth and development over the next ten years in a manner that reflects the university's commitment to the communities of which it is a part. At the same time, the Campus Plan will play a critical role in informing and incorporating the key priorities of an ambitious fundraising campaign that will capitalize on AU's momentum as an emerging global university to support the study and scholarship of American University students and faculty for generations to come.

The fundamental components of the Plan have been envisioned and will be more fully developed in partnership with university and community stakeholders, to ensure that the campus will adapt to and meet the changing needs of AU students, faculty, and staff while at the same time respecting and enhancing the quality of life of those who live within the neighborhoods surrounding campus. It is AU's fundamental goal that the Campus Plan successfully accomplish both of these objectives.

AU's approach to many key planning components – including enrollment and staff management, as well as parking space inventory, is directly influenced by changes brought about by the 2016 update to the Zoning Regulations. Specifically, pursuant to Subtitle X, Section 102, three AU-owned properties which had historically allowed for university use as a matter of right based on their underlying zoning, will now be included in the Campus Plan – 4801 Massachusetts Avenue (Spring Valley Building), 4200 Wisconsin Avenue, and 3201 New Mexico Avenue.

2021 - 2031 Campus Plan Enrollment Projections

AU’s outlook for the next ten years is premised on a clear understanding of the need to maintain flexibility with respect to what types of students AU attracts – as well as how and where they are educated – to remain competitive and thrive as a vibrant educational institution. Mindful, however, of the desire for predictability among residents of the neighborhoods surrounding campus, AU believes it can meet this objective without requiring a major shift from historical planning models with respect to the overall number of students that will come to the AU campus for their coursework. In terms of the enrollment projections for the 2021 Campus Plan, AU has proposed to accommodate potential growth in the on-campus student population over the ten year term of the 2021 Campus Plan **below** the cap established in 2011, when adjusted for the revised counting methodology set forth in the 2016 Zoning Regulations (i.e., expanding the type of students to be counted under Subtitle Z, Section 302.10(d) and including students located at the three university properties noted above pursuant to Subtitle X, Section 102). To ensure its continued competitiveness as a leading global university, AU will continue to focus on opportunities that leverage its strengths in online and lifelong learning platforms, which include high-quality programs that do not bring students to the AU campus for their coursework.

The impact of the 2016 Zoning Regulations on the current campus student population and 2011 Campus Plan enrollment cap, and the relationship between the current cap and the cap proposed for the 2021 Campus Plan are summarized in the table below:

	2011 – 2021 CAMPUS PLAN			2021 – 2031 CAMPUS PLAN			
	UNDER 11-07 ZONING ORDER METHODOLOGY	ADJUSTED FOR 2016 ZONING REGULATIONS	IMPACT OF 2016 ZONING REGULATIONS	AU PROPOSED ENROLLMENT CAP 3.03.2020	DIFFERENCE FROM 2011 ADJUSTED CAP	AU REVISED ENROLLMENT CAP 06.01.2020	DIFFERENCE FROM 2011 ADJUSTED CAP
FALL 2019 ENROLLMENT	11,801	12,581	+780 (6.61%)				
CAMPUS PLAN ENROLLMENT CAP	13,600	14,499	+899 (6.61%)	14,499	+ 0	14,380	- 119

As shown in the table, the proposed 2021 Campus Plan enrollment cap, which would be in effect through 2031, is **lower** than the student enrollment cap established in the 2011 Campus Plan, when adjusted for the new methodology for counting students mandated under the 2016 Zoning Regulations.

In support of AU’s objective to strengthen the living and learning experience on campus, and to provide an appropriate measure of predictability and control with respect to the number of undergraduate students enrolled, the university will continue to maintain a supply of housing sufficient to make housing available for 67% of the full-time undergraduate student population. The 67% housing requirement is the minimum supply of housing that AU must maintain for full-time undergraduate students under the 2011 Campus Plan; AU is not seeking to change this requirement in the 2021 Campus Plan. AU plans to meet this requirement over the ten year term of the 2021 Campus Plan through a combination of tools, including existing and proposed on-campus residence halls as well as off-campus master leased beds in strategic locations that do not adversely impact the residential neighborhoods surrounding campus.

While significant new development is not anticipated at the Tenley Campus, given that the current and anticipated enrollment of the Washington College of Law is substantially less than the

existing enrollment cap of 2,000 students, AU will seek flexibility to allow students enrolled in other academic programs, particularly those that present opportunities for interdisciplinary collaboration, to attend classes at the Tenley Campus subject to the existing 2,000 student cap.

2021 - 2031 Employee Population

The AU employee population is similarly impacted by the changes to the 2016 Zoning Regulations. Given that 4801 Massachusetts Avenue (Spring Valley Building), 4200 Wisconsin Avenue, and 3201 New Mexico Avenue will now be included in the Campus Plan, the university employees that work at these locations will also be included in the employee count and any cap established in the 2021 Campus Plan order of approval.

The impact of the 2016 Zoning Regulations on the current employee population and 2011 Campus Plan employee cap, and the relationship between the current cap and the cap proposed for the 2021 Campus Plan, are summarized in the table below:

	2011 – 2021 CAMPUS PLAN			2021 -2031 CAMPUS PLAN
	ZC 11-07 ORDER METHODOLOGY	2016 ZONING REGULATIONS	IMPACT OF 2016 ZONING REGULATIONS	2016 ZONING REGULATIONS
FALL 2019 EMPLOYEE COUNT	2,461	2,843	+ 15.52%	
EMPLOYEE POPULATION CAP	2,900	3,350	+ 15.52%	3,350

As shown in the table, the proposed 2021 Campus Plan employee cap, which would be in effect through 2031, reflects no change from the employee cap established in the 2011 Campus Plan, when adjusted to count employees who work at the properties that will be included in the 2021 Campus Plan pursuant to the 2016 Zoning Regulations.

2021 – 2031 Development Plan

Consistent with AU’s intent to maintain enrollment within the cap established in 2011 (when adjusted to reflect the 2016 Zoning Regulations methodology), proposed new development is not aimed at accommodating significant increases in enrollment levels, but rather providing the types of high-quality facilities that are required to further the university’s academic and research missions, balanced with the need to maximize its limited financial resources. Reflecting this measured and strategic approach, potential new development opportunities included in the 2021 Campus Plan are intended to total significantly less than the 892,000 square feet of new gross floor area (GFA) proposed in the 2011 Campus Plan. Specific development site locations, uses and density are currently being reviewed with members of the community prior to finalization for inclusion in the proposed 2021 Campus Plan. The new Campus Plan will reinforce and embody AU’s culture of sustainability and commitment to promoting forward-thinking technologies and industry-leading practices in facility design, construction and operation, including repurposing existing facilities and strategic development of important campus sites, helping to strengthen and invigorate a student-centered living and learning campus experience.

Proposed Campus Plan Parking Requirement

The 2011 Campus Plan requires that the university “maintain an inventory of approximately 2,200 parking spaces on campus” (with “campus” including only Main Campus, East Campus and Tenley Campus). In light of the increased campus parking inventory associated with the additional properties included in the 2021 Campus Plan, the university is proposing to adjust the Campus Plan requirement to maintain a parking inventory of no more than 3,000 spaces (inclusive of all Campus Plan properties, specifically Main Campus, East Campus, Tenley Campus, 4801 Massachusetts Avenue, 4200 Wisconsin Avenue, and 3201 New Mexico Avenue).

This approach will ensure that AU provides an adequate parking supply from its inventory across all properties included in the Campus Plan to meet the needs of its current population and any potential growth over the term of the Plan, and also reflects the University’s continued commitment to effective TDM policies that reduce the number of single occupancy vehicles (SOVs) arriving to campus and in turn limit the need for additional parking resources. To ensure that the parking inventory appropriately meets the needs of the AU population, the university will continue to regularly monitor utilization of its parking facilities.

PRIOR RELATED ACTION(S), CONDITIONS, AND

COMMITMENTS: Note any prior approvals by ZC, BZA, or PSC (Campus Master Plan, First Stage PUD, student/faculty cap, etc.) for the site and list all relevant conditions and proffers still in effect from the previous approval and status of completion. Attach a copy of the Decision section from the previous Zoning Order if still in effect.

The following Zoning Commission orders of approval are included as Attachment A.

1. Zoning Commission Order No. 11-07 (American University Campus Plan 2011); in particular see Condition 13, Condition 14 (as modified by Order No. 11-07H), and Condition 15.
2. Zoning Commission Order No. 11-07B (Relocation of Washington College of Law to Tenley Campus); in particular see Condition 3 and Condition 13.
3. Zoning Commission Order No. 11-07H (Campus Plan Modification of Consequence to Confirm Number of Parking Spaces).

Annual reports for 2017-2019 submitted by AU to DDoT in connection with the 2011 Campus Plan are included as Attachment B.

1 SITE DESIGN

SITE ACCESS

Access to the American University campus will be unchanged under the 2021 Campus Plan. Existing access locations to the campus are shown on the maps below and include:

- Glover Gate at Massachusetts Avenue (Main Campus)
- Fletcher Gate at Rockwood Parkway (Main Campus)
- School of International Service garage at Nebraska Avenue (Main Campus)
- Massachusetts Avenue (Katzen Center)
- Nebraska Avenue (East Campus)
- New Mexico Avenue (East Campus)
- Nebraska Avenue (Tenley Campus)
- 3201 New Mexico Avenue garage driveway
- 4801 Massachusetts Avenue garage driveway
- 4200 Wisconsin Avenue at Van Ness Street garage driveway

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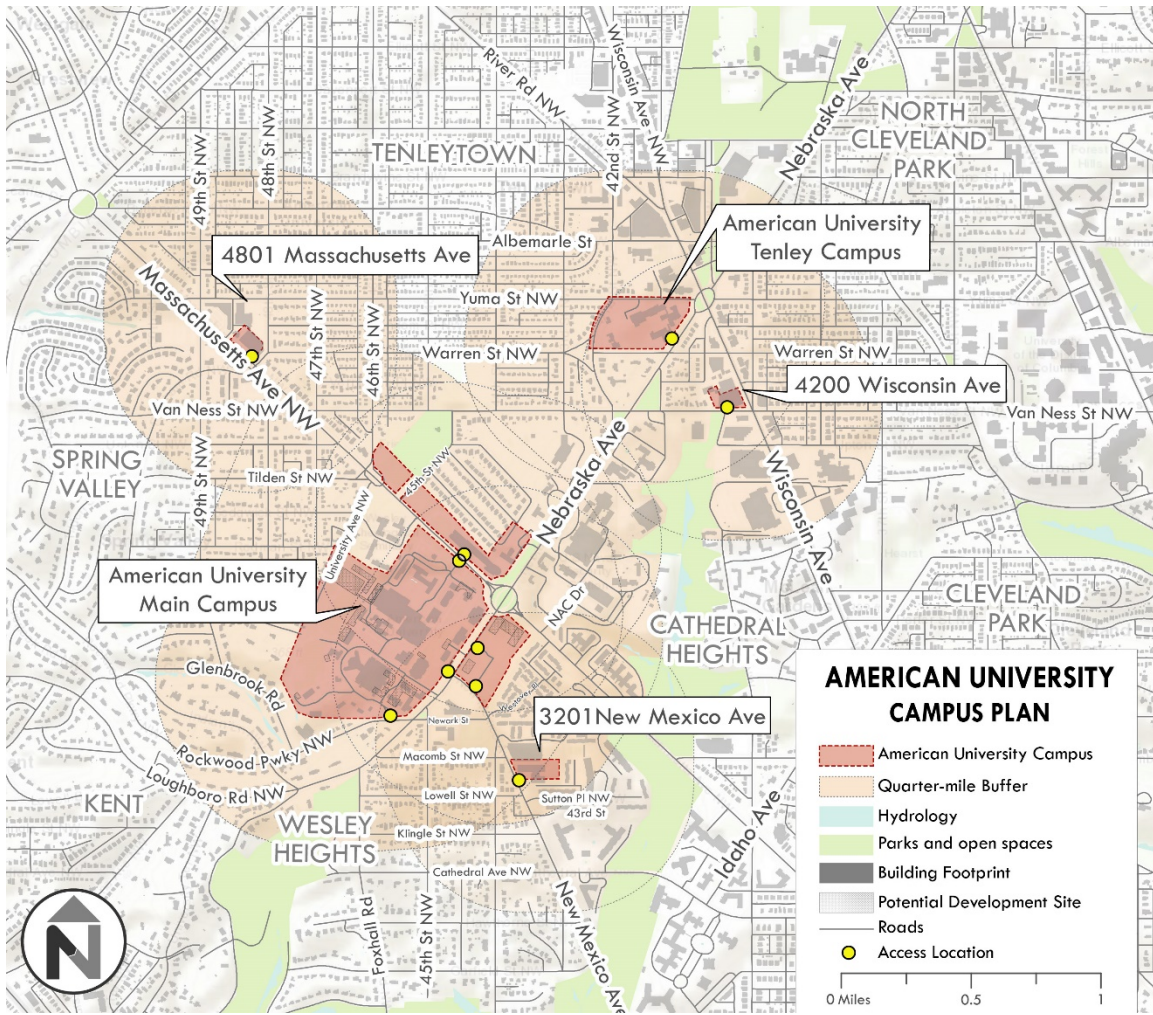


Figure 1: Project Location Map

Site Circulation

The current site circulation at Main Campus enables vehicular access throughout the campus including transit, delivery vehicles, transportation networking companies and personal vehicles. Conceptual planning for potential site circulation changes on Main Campus are underway and illustrated below:



CAMPUS PLACES AND MOBILITY CONCEPT

Figure 2: Proposed Circulation Plan, Main Campus

Potential changes to the Main Campus circulation in concept design may include the following:

- Bifurcation of campus vehicular traffic, creating a north (Glover Gate) access (to the halls of residence and Bender garage) and south (Fletcher Gate) access (to halls of residence and facilities).
- The existing central spine (accessing Mary Graydon Center) would be limited to transit, service, and emergency response vehicles only in a shared used environment (with the exception of special events).
- Transportation network company (TNC) drop-off/pick-up locations would continue to be included near both Glover and Fletcher Gates on Main Campus and also on East Campus. Additionally, AU is collaborating with members of the community to explore other locations and alternatives for pick-up/drop-off solutions, such as a layby, along Nebraska Avenue and Massachusetts Avenue which currently sees high TNC activity.

The goal of these potential circulation changes will be to create a more pedestrian-friendly campus experience on campus, reduce vehicles driving through the campus, limit delivery vehicles to loading areas and decrease dependence on driving for students and staff alike. It is the opinion of the University that the circulation changes will enhance safety throughout the campus particularly in the central core adjacent to the Mary Graydon Center, while still allowing cross-campus access on a limited basis for shuttles and emergency response vehicles, as well to accommodate special events.

LOADING

Loading to campus sites will remain unchanged in the 2021 Campus Plan. All loading will occur internal to the campus sites via dedicated loading and services or from internal roadways. No loading will occur within the public right-of-way with the exception of the following:

- Limited and infrequent loading activities that occur along Massachusetts Avenue at the Katzen Center (approximately twice annually for large events).
- On-street loading as per existing curbside regulations along Massachusetts Avenue in front of 4801 Massachusetts Avenue.

Truck loading locations will be located at the buildings listed below and shown in the map. Infrequent loading activities, such as those associated with fall and spring move-ins/outs at residential halls are also identified in Figure 3. As the Campus Plan development site concepts are further developed, access and loading will be considered and included as part of the CTR. It is known however, that no loading access will be proposed from public roadways with the exception of very limited and infrequent loading activities that occur along Massachusetts Avenue at the Katzen Center.

VEHICLE PARKING

The 2011 Campus Plan requires that the university “maintain an inventory of approximately 2,200 parking spaces on campus” (with “campus” including only Main Campus, East Campus and Tenley Campus). In light of the increased campus parking inventory associated with the

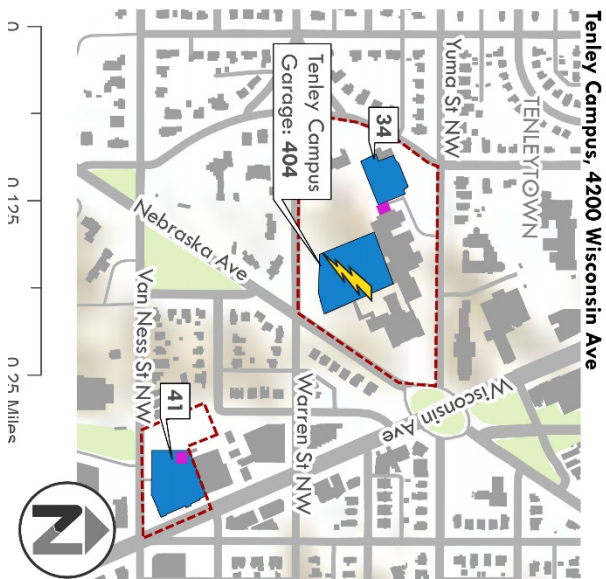
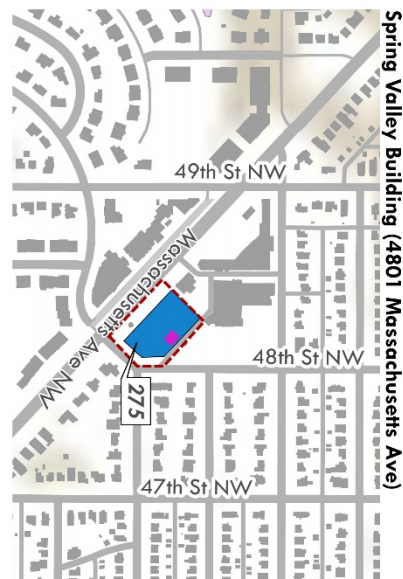
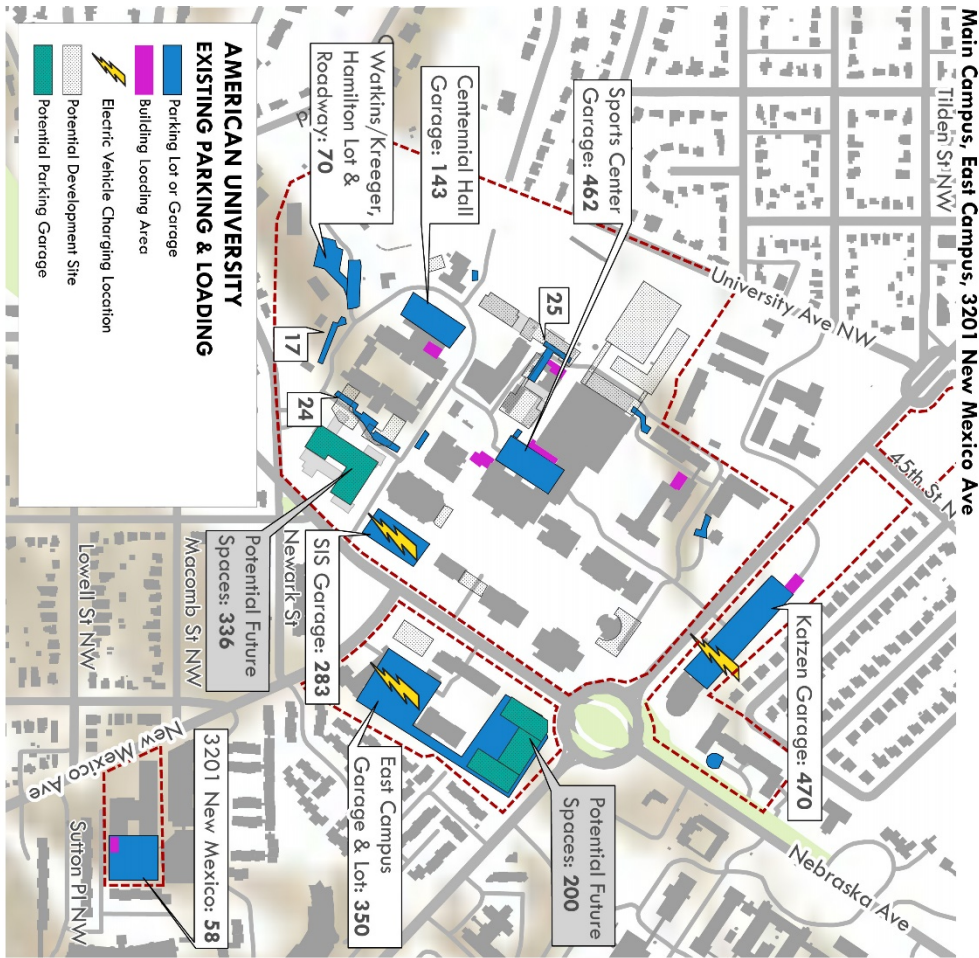
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additional properties included in the 2021 Campus Plan – which totals 3,045 spaces, 2,701 of which are currently utilized for university use – the university is proposing to adjust the Campus Plan requirement to maintain a parking inventory of no more than 3,000 spaces (inclusive of all Campus Plan properties, specifically Main Campus, East Campus, Tenley Campus, 4801 Massachusetts Avenue, 4200 Wisconsin Avenue, and 3201 New Mexico Avenue).

This approach will ensure that AU provides an adequate parking supply from its inventory across all properties included in the Campus Plan to meet the needs of its current population and any potential growth over the term of the Plan. This also reflects the University's continued commitment to effective TDM policies that reduce the number of single occupancy vehicles (SOVs) arriving to campus and in turn limit the need for additional parking resources. To ensure that the parking inventory appropriately meets the needs of the AU population, the university will continue to regularly monitor utilization of its parking facilities. The existing parking facility locations (greater than 10 spaces) as well as the two potential future parking facilities are shown in Figure 3.

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Figure 3 Existing and Potential Parking & Loading Map



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Table 1 Existing and Proposed Parking Inventory

LOCATION	PARKING SPACE COUNT	UNIVERSITY USE SPACES	ADDITIONAL CAPACITY	2011 PLAN SPACE COUNT	2021-2031 PLAN SPACE COUNT
Katzen Arts Center Garage	470	470	0	470	470
School of International Service Garage	283	283	0	283	283
Sports Center Garage	462	462	0	462	462
Nebraska Hall Driveway	3	3	0	3	3
McKinley Building Lot	7	7	0	7	7
Tunnel Parking Area	4	4	0	4	4
Centennial Hall Garage	143	143	0	143	143
Hamilton Building Lot	39	39	0	39	39
Hamilton Building Roadway	19	19	0	19	19
Watkins/Kreeger Buildings	12	12	0	12	12
Leonard Building/Sports Center Annex	7	7	0	7	7
Rockwood/Jack Childs Buildings Lot	17	17	0	17	17
Letts Hall Roadway	24	24	0	24	24
Tenley Campus Garage	404	404	0	404	404
Tenley Campus Lot	34	34	0	34	34
Media Production Center Lot	5	5	0	5	5
President's Office Building Lot	3	3	0	3	3
Osborn Building Lot	25	25	0	25	25
Sports Center Roadway	5	5	0	5	5
East Campus Lot and Garage	350	350	0	350	350
Spring Valley Building Garage ¹	275	275	0	0	275
4200 Wisconsin Avenue ^{1 2}	255	52	203	0	52
3201 New Mexico Avenue ^{11 2}	199	58	141	0	58
TOTAL	3045	2701	344	2316	2701
POTENTIAL ADDITIONAL PARKING CAPACITY ASSOCIATED WITH PROPOSED DEVELOPMENT SITES					
Proposed Development Site 6/7				Up to 336*	
Proposed Development Site 12**				Up to 200**	

*Potential parking associated with development of Site 6/7 could yield a net gain of up to 336 spaces (taking into account the loss of the Letts Hall Roadway spaces)

**Potential parking associated with development of Site 12 could yield a net gain of up to 200 spaces (taking into account the loss of the East Campus surface lot)

¹ AU-owned properties included in the 2021 Campus Plan (pursuant to the 2016 update to the Zoning Regulations) that were not included in the 2011 Campus Plan

² The "Additional Capacity" column refers to existing parking infrastructure/capacity that is NOT currently being used by AU (e.g., tenant/retail parking at 3201 New Mexico and tenant parking at 4200 Wisconsin)

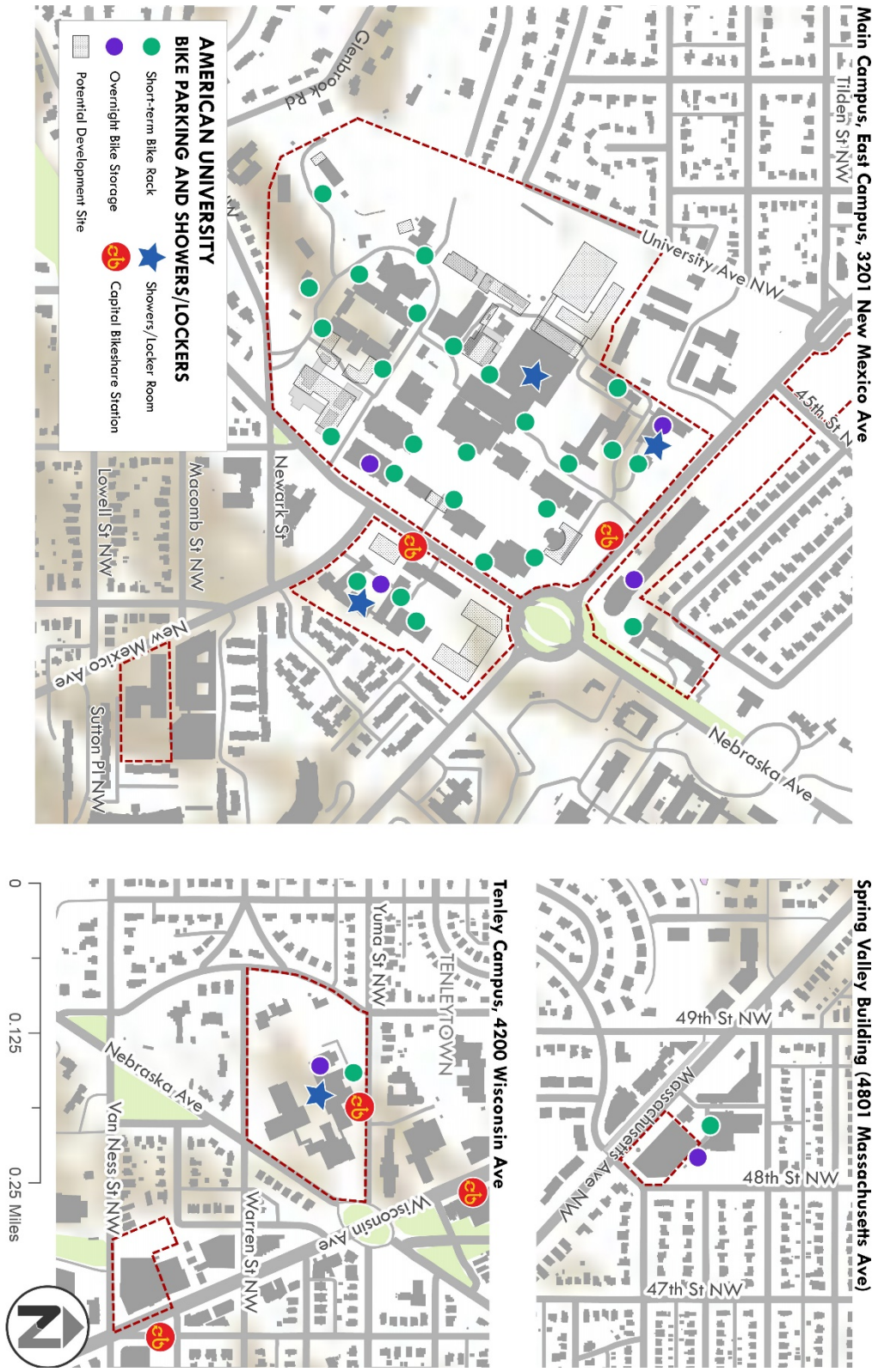
BICYCLE PARKING

Bicycle parking is located across the AU Campus Plan sites in front of most major buildings. Outdoor bike racks are referred to as short-term bike parking, while indoor, secure bike parking is referred to as overnight bike parking. Overnight bike parking is located in the major parking garages of campus, and showers and locker room facilities are available in major fitness centers. Overnight bike parking is an important option for bicycle commuters to provide the flexibility to leave their bike on campus in cases of inclement weather or a change of plans.

Two Capital Bikeshare stations are located on the main roads bordering AU's Main Campus: the first station is on Massachusetts Avenue NW, northwest of Ward Circle and the intersection with Nebraska Avenue NW. The second station is located on Nebraska Avenue NW, between New Mexico Avenue NW and Massachusetts Avenue NW. Additionally, a bikeshare station is located on the northern boundary of the Tenley Campus, on Yuma Street NW east of 42nd Street NW, and another is adjacent to the 4200 Wisconsin Avenue site. The Spring Valley Building is not proximate to any bikeshare station. Bikeshare stations are well-used by students, staff, and faculty in the area of the Main Campus, evidenced by the depletion of bikes from stations most weekday afternoons. American University would welcome an additional bikeshare station to support demand both from the Main Campus and the surrounding community and are analyzing the location for an additional bikeshare station at the southern end of the Main Campus in the area of Nebraska Avenue and Rockwood Parkway.

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Figure 4 Existing Bicycle Parking and Amenities



STREETSCAPE AND PUBLIC REALM

The development proposed within the Campus Plan update for the American University will not affect any aspect of the public right of way with all development internal to the Main Campus. The campus plan update purposely avoids the addition of curb cuts for roads and will utilize the existing road entry/exits onto the campus.

Several public roadways such as Rockwood Parkway west of Fletcher Gate, Glenbrook Road and University Avenue border the Main Campus and do not have sidewalks and/or street trees on both sides of the street. Instead, the right-of-way consists of two vehicular travel lanes with sidewalk fronting residences, while the other side of the street that fronts the campus grounds does not have a sidewalk and instead has a dense tree buffer. Construction of a sidewalk on the campus side of the street would require removing the existing forested buffer between the neighborhood street and/or private residential property and campus grounds. Due to the low vehicle traffic on these roads and community interests in maintaining sound and visual barriers from future development in this area of the campus, road improvements on these segments should not be focused towards the construction of a sidewalk.

In addition, current DDOT projects show a planned multi-use trail on the west side of Nebraska Avenue between Massachusetts Avenue and 42nd Street. This project, which is in the design phase, will add up to 4 ft. of additional sidewalk width to the existing sidewalk to facilitate safer interaction between bicycles and pedestrians. If a layby for pick-up/drop-off was to be approved along Nebraska Avenue, changes to the streetscape and public realm would be needed to accommodate the layby and the DDOT proposed multi-use trail expansion.

SUSTAINABLE TRANSPORTATION ELEMENTS

American University has nine ChargePoint Level-2 EV charging stations. These stations provide a total of 18 ports and are distributed throughout the campus at the following parking garages: East Campus, SIS, Katzen Arts Center, and Tenley Campus Garage. The EV stations sited in garages provide a ratio of about 1 EV port per 100 vehicle spaces. Any new parking lot or garage constructed on the AU campus sites will include an EV station at a ratio of the DDOT recommended 1 station per 50 vehicle spaces.

The university currently does not have a carsharing partnership. At the end of 2018, Maven replaced Zipcar as the campus carshare partner, but by the start of 2020, the company pulled operations from the DC/Baltimore region. As an alternative, AU recently partnered with Lyft to create the AU-Lyft RideSmart Program. This program replaces carshare with rideshare options for community members needing to travel for official AU business.

See Figure 3 for locations of Electric Vehicle Charging stations.

HERITAGE, SPECIAL AND STREET TREES

The 2021 Campus Plan will prioritize enhancing campus landscape and greenscape elements that are distinctive to AU's urban campus – an accredited and award-winning arboretum that supports over 3,000 trees and 385 varieties of plants. The University will be able to provide more detailed information regarding the potential impact of specific development projects on existing Heritage Trees and Special Trees during the Further Processing review process that is required for the development of each specific opportunity site included in the approved Campus Plan.

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There is a consistent street tree edge along roadways of the American University Campus Plan sites and the surrounding neighborhood. Several streets bordering the Main Campus grounds do not have a traditional streetscape with sidewalks and planting strips. Instead, at these locations, a forested wall runs along the right-of-way – such as along Rockwood Parkway NW (without a sidewalk) or Warren Street NW (with a sidewalk). At the Spring Valley Campus, overhead wires and driveways prevent the addition of street trees along a small section of Yuma Street NW. Figure 5 documents the existing street tree inventory in the vicinity of the AU Campus sites.

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Figure 5: Street Tree Inventory and Public Realm



2 TRAVEL ASSUMPTIONS

MODE SPLIT

American University undertakes an annual transportation survey of students and faculty to aid in the transportation monitoring and reporting of the University. The most recent survey was performed in the Fall of 2019. Mode split numbers display that AU student, staff, and faculty ride metro, bike, or walk as a commute mode at much higher rates than the rest of the city. Of the AU students who commute to campus, 14% of the population drives alone, while 78% use public transportation, walk, or ride their bike. Rideshare or carpooling make up 6% of the population. Staff and faculty use public transportation, walk, or ride their bike at lower rates (47% total), while 46% of the staff/faculty drive alone.

Table 2 Existing Campus Mode Share vs. D.C. Region

Mode	Drive Alone	Public Transportation	Rideshare	Bike/Walk	Carpool	Other
Student	14%	50%	4%	28%	2%	2%
Staff/Faculty	46%	30%	2%	17%	4%	1%
D.C. Region*	57.2%	24.1%	1.1%	3.3%	4.6%	9.7%

MWCOG "State of the Commute", 2019.

TRIP GENERATION

Traffic counts were undertaken to record existing conditions in February, 2020 with the study area approved by the AU Neighborhood Partnership Transportation and Parking Working Group and Steering Committee and reviewed by DDOT. These traffic counts included all access drives to the Main Campus in order to ascertain the existing morning and afternoon vehicular trip rate. The table below highlights the calculated trip rates and proposed trip generation. Trip generation and trip rates for transit and walk/bikes modes were calculated utilizing the existing traffic data and mode split survey data.

Table 3 Existing Trip Rate and Proposed Trip Generation

Main Campus	AM	PM	AM	PM	AM	PM
	Vehicle Trips		Person Trips			
Existing Trips	Automobile	Automobile	Transit	Transit	Walk/Bike	Walk/Bike
In	443	439	491	486	275	273
Out	132	526	146	583	82	327
Total	575	965	637	1,069	357	600
Trip Rate/Person*						
In	0.03	0.03	0.03	0.03	0.02	0.02
Out	0.01	0.03	0.01	0.04	0.01	0.02
Total	0.04	0.06	0.04	0.07	0.03	0.04

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Future Trip Generation**						
In	535	535	535	535	357	357
Out	179	535	178	714	178	357
Total	714	1,070	714	1,249	535	714
Growth	+139	+106	+255	+180	+178	+114

*With fall 2019 Campus Plan population of 15,424 (students and staff)

**With proposed 2021 Campus Plan population cap of 17,849 (students and staff)

Based upon the current mode share and trip generation, American University anticipates that the enhancements in the proposed bicycle network as a result of recent community studies would further decrease the single-occupancy vehicle mode split in the future, particularly for the student population. Combined with the COVID-19 era increase in telework options for University staff and faculty, it is anticipated their mode share will also shift away from single-occupancy vehicles. However, to be conservative, it is proposed to use the existing trip rates to generate the future trips as highlighted in Table 3.

3 MULTI-MODAL NETWORK EVALUATION

STRATEGIC PLANNING ELEMENTS

City-wide Transportation Plan

Move DC, the 25-year vision for the transportation system in DC was completed in October 2014. The plan recognized the need to provide a multi-modal transportation system across the district. It proposes increased investments in transit and bicycle networks in order to increase system capacity while not overloading the roadways with vehicular traffic. The plan does not propose any major changes to the vehicular network within the immediate area surrounding AU, but it is important to note is that the plan categorizes both Nebraska and Massachusetts Avenues NW near the Main Campus as primary freight routes. Since these roadways will continue to function as primary arterials, AU's Campus Plan should be sure to provide safe as well as alternate accommodations for pedestrians and bicycles in the areas that border these major roads. A major recommendation of this plan is an off-street multi-use trail along both roads, which would be constructed in the location of existing sidewalks.

Area Livability Studies

AU's Campus Plan sites are located within two of DDOT's livability study areas: the Main Campus and 3201 New Mexico Avenue site are located within the Rock Creek Far West area and the Tenley and Spring Valley Campuses are located within the Rock Creek West II area. The Rock Creek Far West Livability Study was recently completed in October 2019 and identified AU's Main Campus as a key pedestrian destination within the study area. The livability study recommended key improvements for the safety of pedestrians and bicyclists in the immediate area surrounding AU. The improvements proposed are:

- Add curb extensions on Rockwood Parkway and Newark Street at the 45th Street NW intersection to reduce the intersection footprint, shorten pedestrian crossing distance, and control the speed of turning vehicles.
- Install sidewalk on Sedgwick Street, University Avenue, and Tilden Street in areas northwest of the Main Campus.
- Initiate a Corridor study for Massachusetts Avenue and provide a shared-use path along Massachusetts Avenue between Westmoreland Circle and Whitehaven Street by widening the existing sidewalk on one side of the street to a width of at least 10 feet.
- Provide a bicycle boulevard on 49th Street. This would allow bicycle connections between the Main Campus and the Spring Valley Building.
- Provide a bicycle boulevard on Rockwood Parkway between Dalecarlia Parkway and Nebraska Avenue, recommended due to the amount of traffic on the street, available roadway width, and attempt to minimize loss of street parking.
- Provide an off-street trail on Nebraska Avenue between Ward Circle and Rockwood Parkway
- Initiate a Corridor study for New Mexico Avenue and improve the existing bicycle facility.

Figure 6 Rock Far West Livability Study Recommendations for American University Main Campus Area



The Rock Creek II Livability Study area was completed in 2009. Although many recommendations or other improvements in the area have been made between the time the study was completed and study, several key recommendations are:

- Provide a bicycle boulevard along Yuma Street between Connecticut and Massachusetts Avenues. This will help connect the two campuses by bike facility.
- Add sharrows on Albemarle Street between 43rd Street and Reno Road
- Add bike sharrows on 43rd Street between River Road and Van Ness Street and green curb extensions at River Road, Albemarle Street, and Van Ness Street.

AU’s focus on maintaining a low number of parking spaces per student/staff/faculty supports moveDC’s vision. In addition, AU’s provision of three shuttle routes between the Main Campus, Tenley Campus and Tenleytown metro station, and the Spring Valley Building are consistent with moveDC’s calls to bolster the transit system in areas where there are fewer options.

PEDESTRIAN NETWORK

On streets bordering the American University Campus Plan sites, sidewalk widths range from 4’ to 6.5’. Within the ¼ mile radius from the campus sites, neighborhood roadways with low vehicle volumes have narrower sidewalks, ranging between 3’-4’ in width. Several roads within the

neighborhood surrounding the Main Campus and other Campus Plan sites do not have sidewalks on either one or both sides of the street. The locations of these missing sidewalks are identified in Figure 7 of the Bicycle and Pedestrian Network map. DC requires a sidewalk on a least one side of non-highway streets in order to have a complete pedestrian network across the city. The Rock Creek Far West Livability Study identifies several roads where sidewalk construction should be prioritized because there is not a sidewalk on either side of the street.

BICYCLE NETWORK

Bicycling is an increasingly popular mode of transportation in the District of Columbia. However, the major roadways edging the Main Campus on two sides (Nebraska and Massachusetts Ave) are wide roadways with high traffic volumes, high speeds, and narrow vehicular lanes. This combination of factors encourage many bicyclists to ride on the sidewalk which ranges in width from 4' to 6.5'. The potential circulation concept illustrated in Figure 2 would significantly reduce vehicular through-traffic and help to provide a friendlier biking environment within the campus. Additionally, moveDC's proposed widening the sidewalk on both Nebraska and Massachusetts Avenue NW will provide an off-street multi-use trail that can more comfortably accommodate pedestrians and bicyclists.

Two Capital Bikeshare stations are located on the main roads bordering the campus: the first station is on Massachusetts Avenue NW, northwest of Ward Circle and the intersection with Nebraska Avenue NW. The second station is located on Nebraska Avenue NW, between New Mexico Avenue NW and Massachusetts Avenue NW. Another bikeshare station is located on the northern boundary of the Tenley Campus, on Yuma Street NW east of 42nd Street NW. No bikeshare stations are located near the Spring Valley Building. Bikeshare stations are well-used by students, staff, and faculty in the area of the Main Campus.

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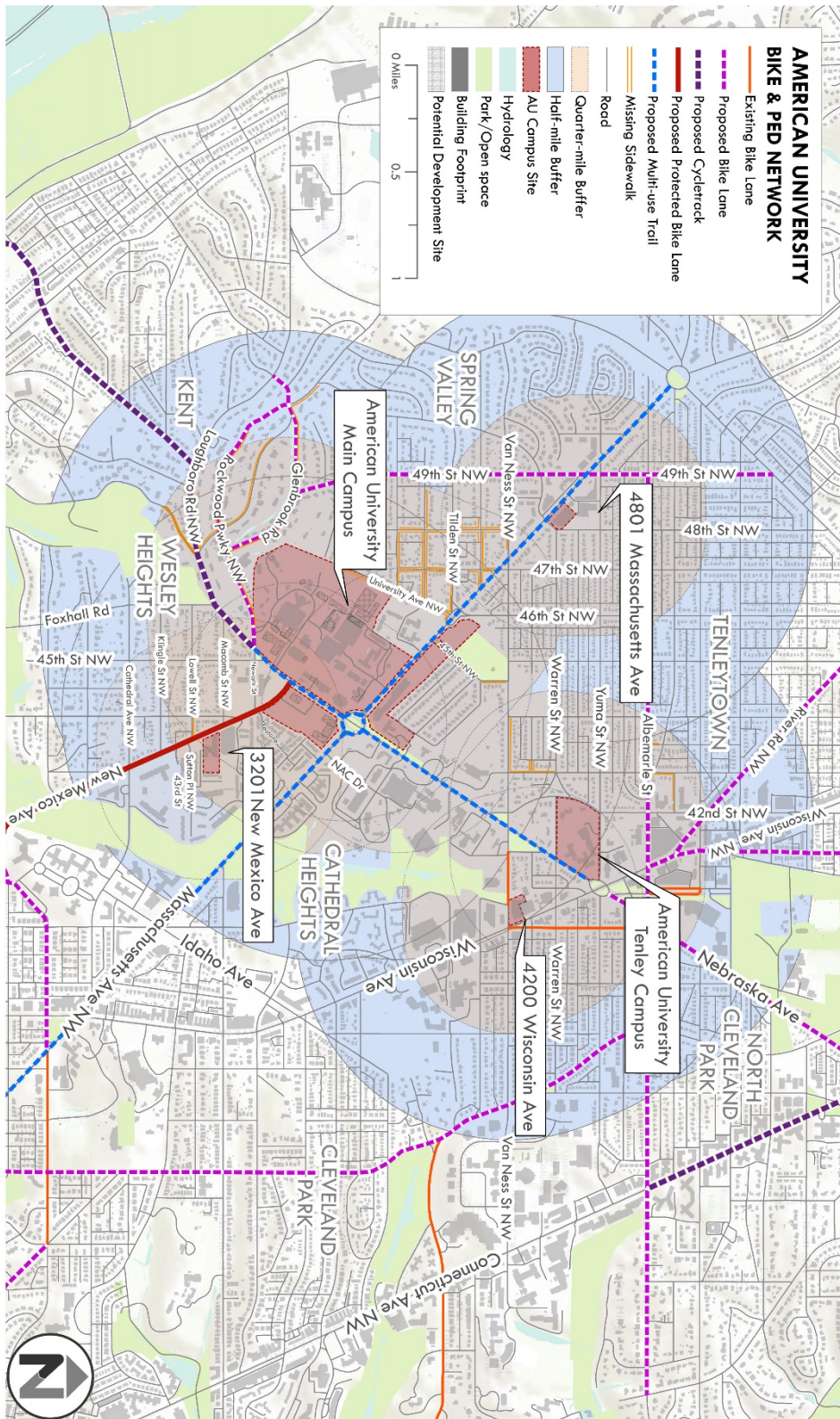


Figure 7: Bicycle Network (Existing and Proposed)

TRANSIT NETWORK

American University’s Main Campus and 3201 New Mexico Avenue are located a little less than one mile from WMATA’s Tenleytown Metro Station, which provides access to the red line trains. The Tenley Campus is only 0.2 mile from the Tenleytown Metro Station and the 4200 Wisconsin Avenue site is 0.3 miles from the station. Eleven bus routes provide access to the Metro Station area, which connect the area to downtown DC as well as Northeast and Southeast DC: 30N, 30S, 31, 33, 37, 96, H2, H3, H4, M4, and N2. Four WMATA bus lines operate seven days a week along the two major roads that border the Main Campus from the south and east (Nebraska and Massachusetts Avenues): M4, N2, N4, and N6. These buses provide direct access from the Main Campus to parts of downtown DC and northwest DC. The Spring Valley Building is located along bus routes N4 and N6.

Additionally, American University operates three shuttle routes between the Main Campus and the Tenleytown Metro Station, AU’s Tenley Campus, and the Spring Valley Building. The Campus Plan does not include any proposed changes to the University shuttle routes.

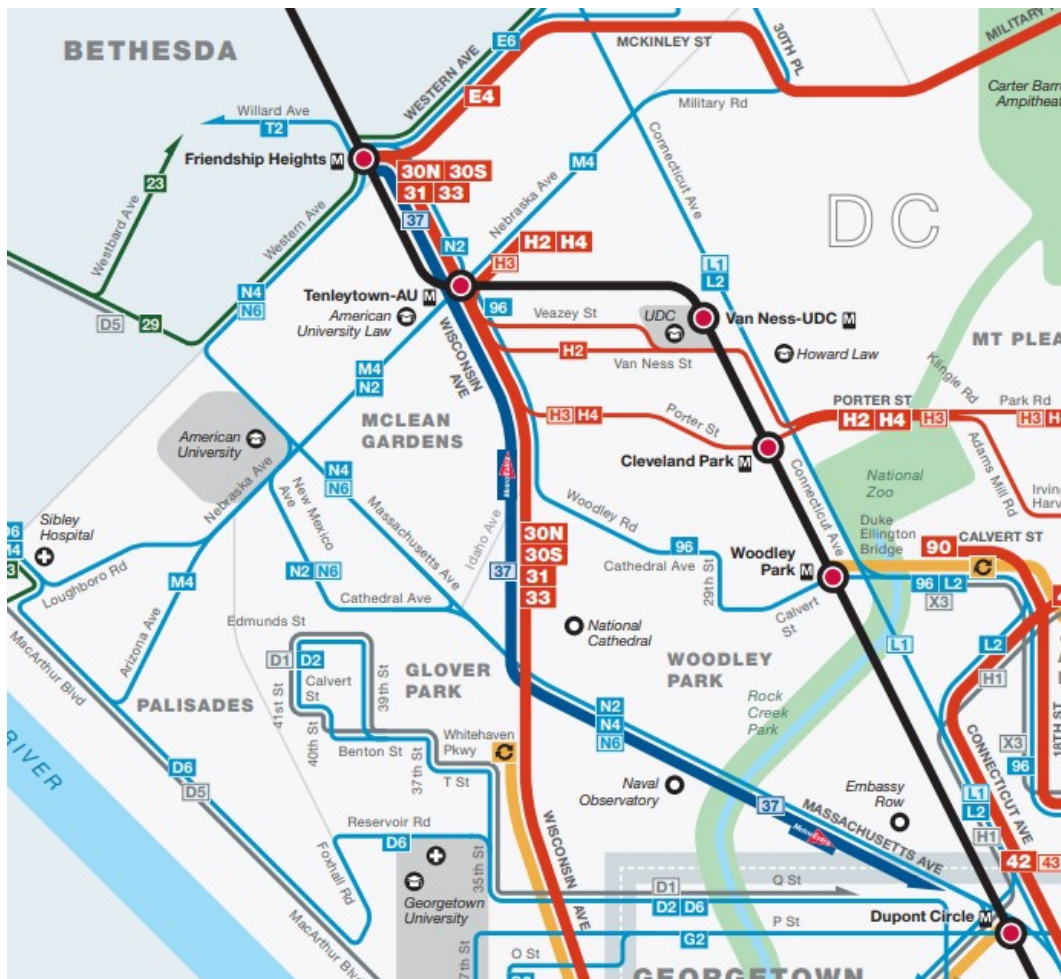


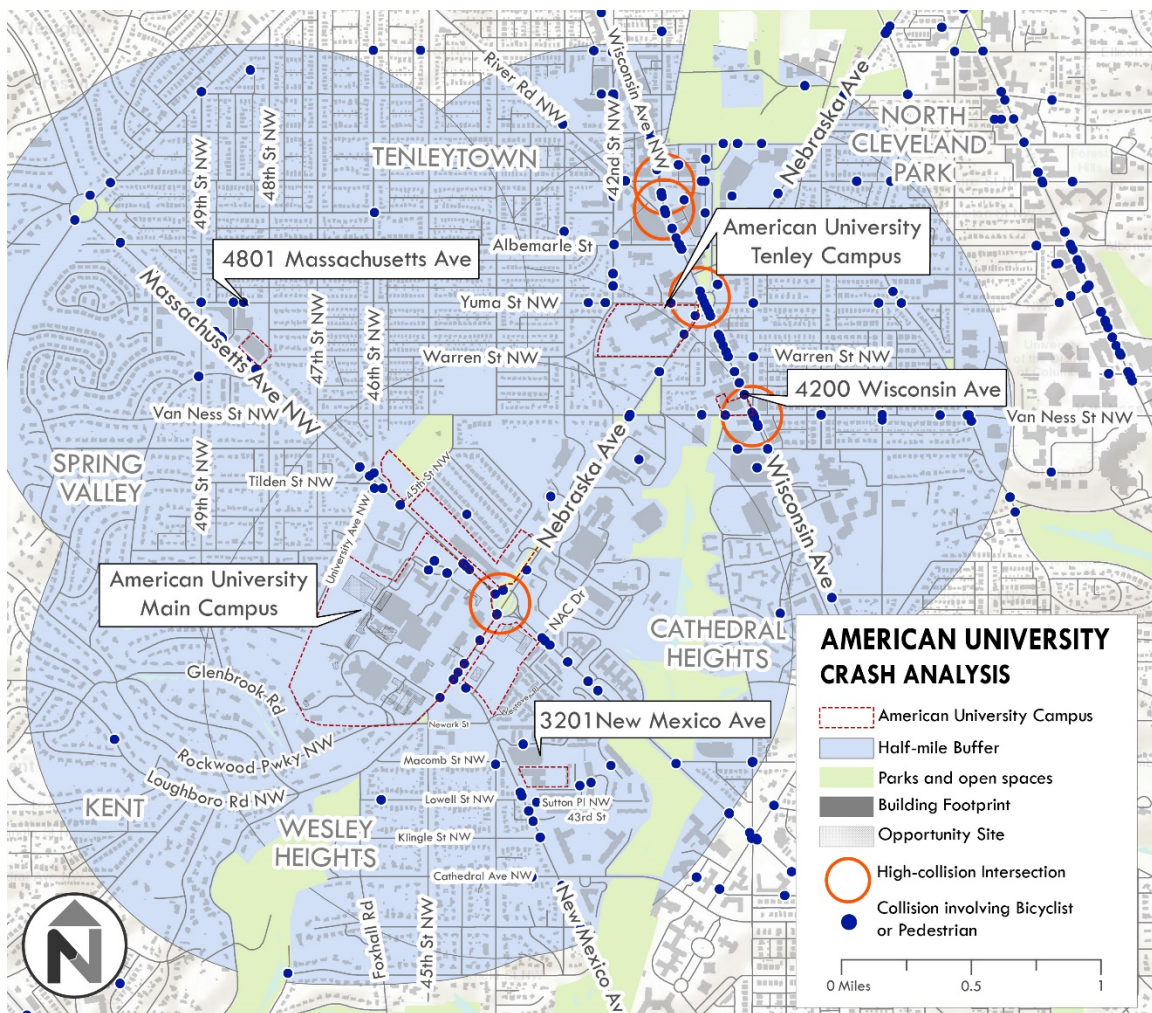
Figure 8: WMATA Bus Network Surrounding American University

SAFETY ANALYSIS

An initial analysis was undertaken to identify reported bicycle and pedestrian crashes within a 1/2 mile radius of the AU Campus Plan sites. From 2008 to 2020, 275 crashes involving bicycles and pedestrians were identified with several intersections standing out with over 40 collisions in that time. Intersections with over 40 collisions between June 2008 and March 2020 are 1) Ward Circle; 2) Tenley Circle; 3) Wisconsin Avenue, 39th Street, and Van Ness Street NW; 4) River Road and Wisconsin Avenue NW; 5) 41st Street and Brandywine Street NW. It is noted that none of these intersections has been noted by DDOT as a citywide high crash location.

Further analysis will be undertaken to identify any trends in the reported crashes that could lead to recommendations for infrastructure and/or operational improvements.

Figure 10: Area Safety Analysis



CURBSIDE MANAGEMENT

The Campus Plan update does not propose any changes to the existing curbside management in place on DC’s public streets, except for the potential TNC pick up/drop off solutions along Nebraska Avenue and Massachusetts Avenue as discussed above and below. Currently, streets surrounding the Main Campus have residential parking permit policies to deter students, faculty, and staff from using these streets to park their cars. Furthermore, the University actively enforces its *Good Neighbor Parking Policy*, which was adopted to achieve and maintain compliance with conditions in the 2000 and 2011 Campus Plans that required the university to adopt a policy to “prohibit, to the extent permitted by law, students, faculty, staff and vendors from parking on streets adjacent to and surrounding the campus.”

The *Good Neighbor Parking Policy* applies to on-street parking around the main campus at 4400 Massachusetts Avenue, NW; the Tenley Campus at 4300 Nebraska Avenue, NW; the Spring Valley Building at 4801 Massachusetts Avenue, NW; and the soccer field in the 4500 block of Massachusetts Avenue, NW. The policy states that all members of the university community – including students, faculty, staff, vendors, and guests – are required to either park on campus or use publicly available transportation while attending class, working, or visiting AU-owned property. They are not permitted to park in the neighborhood.

AU takes the obligation to comply with this condition of the 2011 Campus Plan seriously and has over the past several years demonstrated a commitment to the vigilant enforcement of the *Good Neighbor Parking Policy* in order to prevent university-related vehicles from parking on neighborhood streets and preserve on-street parking capacity for members of the community.

PICK-UP/DROP-OFF

The proposed Campus Circulation Plan (Figure 2) highlights the current concept for changes to the Main Campus vehicular circulation. Designated pick-up/drop-off areas for Taxi and TNC vehicles within the campus include locations close to both the Glover and Fletcher Gates as well as within East Campus. As previously stated, the University is currently collaborating with members of the community to explore options for potential TNC pick-up/drop-off solutions, such as a layby, along Nebraska Avenue and Massachusetts Avenue.

ON-STREET PARKING OCCUPANCY STUDY

The 2021 Campus Plan will not be requiring any relief from the parking regulations and hence an on-street parking occupancy study is not applicable.

PARKING GARAGE QUEUING ANALYSIS

There are two Main Campus garages that directly access public roadways – The SIS garage at Nebraska Avenue and the Katzen Arts Center garage at Massachusetts Avenue (see Figure 3). The Katzen Arts Center garage is not undergoing any facility or operational changes as part of the 2021 Campus Plan. As such, a garage queuing analysis is not applicable.

In the event below grade parking is included in the future development of Sites 6/7, that garage could potentially be accessed via the same driveway as the SIS garage. Queuing analysis for this garage and its impact on the access to Nebraska Avenue will be included in the CTR.

Additionally, should a garage be developed on Site 12 on East Campus, further analysis would be performed to understand any potential impacts on the existing New Mexico Avenue access location.

MOTORCOACHES

There is not a significant demand for motorcoaches on the Main Campus, therefore this analysis is not applicable. It is noted however that the University maintains a motorcoach management policy that provides for off-site parking for motorcoaches at a facility in Montgomery County, Maryland.

4 TRAFFIC IMPACT ANALYSIS

TIA STUDY AREA AND DATA COLLECTION

In the Fall of 2019, American University developed with the AU Neighborhood Partnership Transportation and Parking Working Group and Steering Committee and discussed with DDOT the proposed Traffic Impact Analysis study area and intersection count locations. 42 intersection locations were identified with counts undertaken the week of February 24th, 2020. The count locations are included in Figure 11.

Turning Movement Counts (TMC) were collected in 15-minute increments during the weekday morning (6:30 AM to 9:30 AM) and evening (4:00 PM to 7:00 PM) peak periods on Tuesdays through Thursdays during non-holiday weeks, while schools and Congress were in session, the Federal government is not in a shutdown, and weather is not an issue. TMCs include vehicles, pedestrians, bicyclists, and percentage truck traffic. TMCs were collected at all existing site driveways and reported as existing conditions in trip generation summary.

TIA STUDY SCENARIOS

With the TIA supporting the proposed 10-year 2021 Campus Plan, the proposed study scenarios include the following:

- Existing Conditions (Current Year)
- Background 2031 Conditions (No-Build)
- Total Future 2031 Conditions (With Development)
- Total Future 2031 Conditions (With Development and Mitigation)

TIA METHODOLOGY

TIA methodology will be in accordance with DDOT guidelines. Per DEM 38.3.5.1, HCM methodology will be used to determine Level of Service (LOS), v/c, and vehicle queue lengths. LOS will be reported by intersection approach and v/c by lane group. Synchro 9 will be utilized for capacity and queueing analyses. SimTraffic (10 simulations averaged) will be used to further evaluate an observed queueing issue in order to determine a solution, as necessary.

TRANSPORTATION NETWORK IMPROVEMENTS

Currently DDOT's project plans show the following for completion through the life of the 2021 Campus Plan:

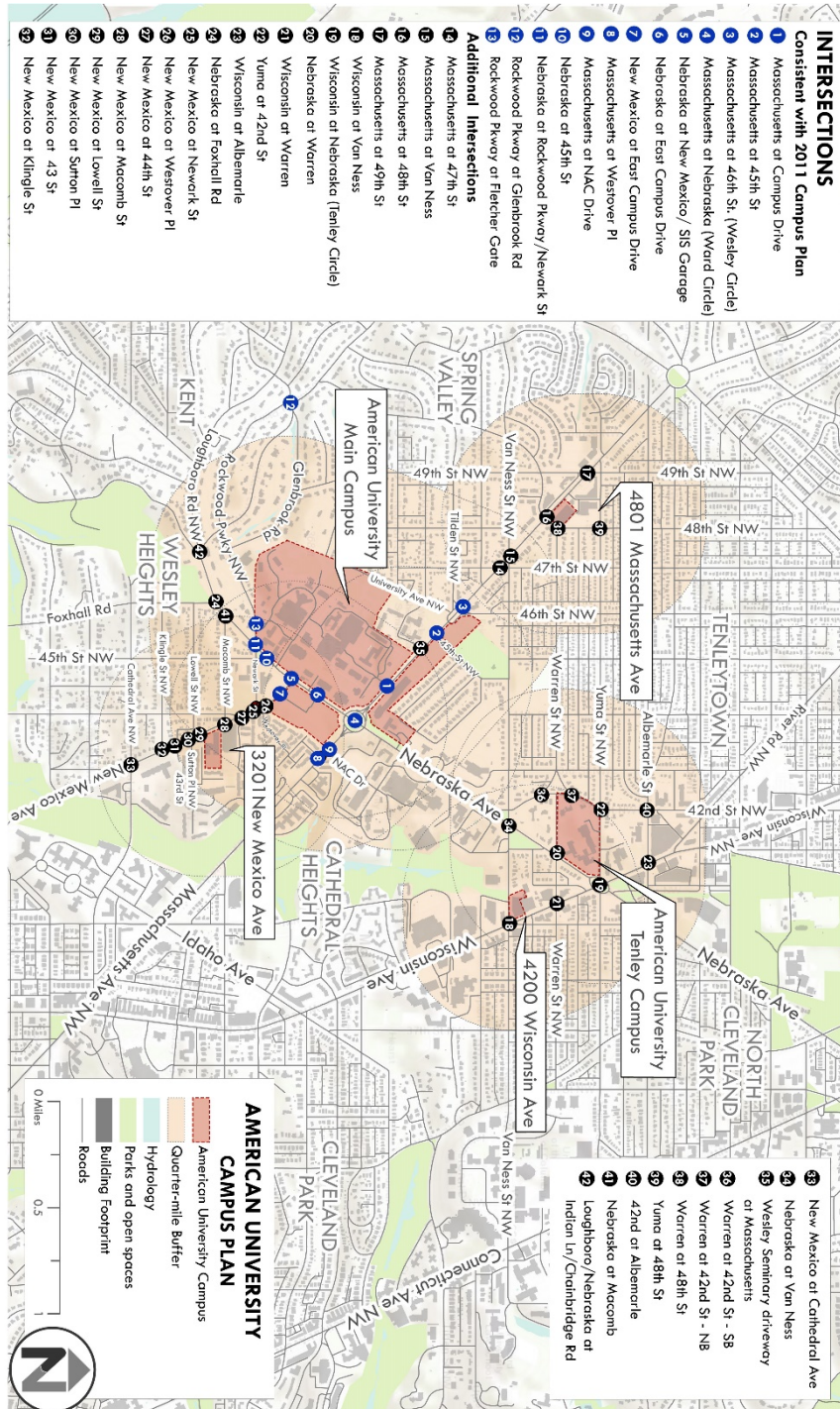
The following bike improvements are to be completed by 2022 :

- Protected bike lane on New Mexico Ave NW from Nebraska Ave NW to Tunlaw Road NW; Tunlaw Rd NW from New Mexico Ave NW to 37th Street NW; and 37th Street NW from Tunlaw Road NW to Reservoir Road NW.
- Protected bike lane/cycletrack on Arizona Avenue NW from Nebraska Avenue NW to Canal Rd NW

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- Shared-use path along Nebraska Avenue between Massachusetts Avenue and 42nd Street with widening of the existing sidewalk by 4-ft to accommodate pedestrians and bicyclists.

Figure 11 Study Area and Intersection Locations



LOCAL TRAFFIC GROWTH

At this time the only local development that is proposed within the study area is the Valor Development LLC, which is adjacent to the Spring Valley Shopping Center and the American University Spring Valley Building at 4801 Massachusetts Avenue. The proposed project is a mixed-use development containing 219 apartments and replacement of a previously existing grocery store.

REGIONAL TRAFFIC GROWTH

Review of historic AADT traffic counts from DDOT show generally a decrease in daily vehicle counts over the past 10-years of available data. The table below shows data for the roadways adjacent to Main Campus and will be utilized for the background and future analysis scenarios.

Table 4 Historic AADT Counts

Year	Massachusetts Ave (North of Ward Circle)	Massachusetts Ave (South of Ward Circle)	Massachusetts Ave (at 4801)	New Mexico Ave	Nebraska Ave (West of Ward Circle)	Nebraska Ave (East of Ward Circle)	Nebraska Ave (West of Tenley Circle)
2008	22,800	25,700	24,600	9,600	30,200	20,700	16,700
2018	21,010	19,369	20,437	6,343	24,843	22,978	16,119
% Total Growth	-7.85%	-24.63%	-16.9%	-33.9%	-17.7%	11.0%	-3.5%
% Annual Growth	-0.81%	-2.79%	-1.84%	-4.06%	-1.93%	1.05%	-0.35%

TRIP DISTRIBUTION

The distribution of additionally generated Campus trips are proposed to follow the existing distribution patterns accessing the Main Campus. These patterns are expected to remain consistent even if the circulation paths are changed per the concept plans. Based upon the existing traffic counts undertaken in February, 2020, the distribution patterns are as follows:

Table 5 Existing Distribution Patterns (AM Peak)

Intersection	Trips		East (to/from)		West (to/from)		North (to/from)		South (to/from)	
	In	Out	In	Out	In	Out	In	Out	In	Out
Glover Gate	107	60	16.8	10	-	-	72.9	35	10.3	55
Fletcher Gate	155	49	74.2	83.7	24.5	12.3	1.3	4.0	-	-
SIS Garage	51	3	56.9	-	-	66.7	-	-	43.1	33.
East Campus Dr (Nebraska Ave)	23	4	4.3	100	95.7	-	-	-	-	-
East Campus Dr (New Mexico Ave)	25	8	-	-	-	-	76	100	24	-

Note: Distribution shown as percentages

Table 6 Existing Distribution Patterns (PM Peak)

Intersection	Trips		East (to/from)		West (to/from)		North (to/from)		South (to/from)	
	In	Out	In	Out	In	Out	In	Out	In	Out
Glover Gate	128	152	13.9	5.3	-	-	74.5	40.1	11.6	54.6
Fletcher Gate	111	137	95.5	85.4	4.5	14.6	-	-	-	-
SIS Garage	89	93	66.3	3.2	-	54.8	-	-	33.7	42.0
East Campus Dr (Nebraska Ave)	37	41	8.1	92.7	91.9	7.3	-	-	-	-
East Campus Dr (New Mexico Ave)	11	34	-	-	-	-	72.7	91.2	27.3	8.8

Note: Distribution shown as percentages

5 MITIGATION

DDOT SIGNIFICANT IMPACT POLICY

- ☒ *The Applicant acknowledges DDOT's Significant Impact Policy.*
- ☒ *The study will comply with all other policies in the Guidance for Comprehensive Transportation Review and the Category & Guidelines column of this Scoping Form not explicitly documented in the Consultant Proposal or DDOT Comments columns.*
- ☒ *The study will include all of the required graphics, tables, and deliverables for the relevant sections determined during scoping, as shown in Table 1 of Guidance for Comprehensive Transportation Review.*

DDOT APPROACH TO MITIGATION

- ☒ *The Applicant acknowledges DDOT's approach to mitigation that prioritizes (in order of DDOT preference) optimal site design, reducing vehicle parking, implementing more TDM strategies, making non-automotive network improvements, and making a monetary contribution to DDOT for non-auto improvements before considering options that increase roadway capacity or alter roadway operations.*

TRANSPORTATION DEMAND MANAGEMENT PLAN

- ☒ *The Applicant will include at least a Baseline TDM Plan. The TDM plan will increase to Enhanced Plan or beyond depending on the parking ratio and other impacts identified in the study.*

See Attachment C for American University's existing Transportation Management Plan.

PERFORMANCE MONITORING PLAN

American University currently undertakes an annual performance monitoring plan that is submitted to DDOT for report. This plan includes:

- Student and Faculty/Staff Mode Split Survey
- Parking Utilization Data
- Transportation Demand Management Plan Updates

It is proposed that the PMP be further discussed with the AU Neighborhood Partnership Transportation and Parking Working Group and DDOT to ensure the plan meets the needs and goals of both the University, members of the communities surrounding the AU Campus Plan sites, and DDOT.

ROADWAY OPERATIONAL AND GEOMETRIC CHANGES

Any and all proposed roadway operational and geometric changes will be documented in the CTR with supporting analysis and warrants in the study appendix. Details will provide any ROW implications of proposed mitigations and will follow the procedures outlined in the *Manual of Uniform Traffic Control Devices* (MUTCD).

6 ADDITIONAL TOPICS FOR DISCUSSION

ANC DISCUSSIONS AND FEEDBACK

American University utilizes several forums to broadly engage neighborhood residents and community stakeholder groups in its 2021 Campus Plan process. These forums include the American University Neighborhood Partnership (Partnership), the Community Liaison Committee (CLC), Campus Planning 101 Sessions, and an online Community Input Portal. In addition to these ongoing forums, AU will present the proposed Campus Plan to ANC 3D and ANC 3E prior to filing the Plan with the Zoning Commission.

The Partnership is a joint organization between AU and leaders in many of the communities immediately adjacent to the University. The Partnership is focused on improving university/neighborhood relations through discussion, information sharing and problem-solving. A primary objective is to create a consensus-based framework to adopt a co-signed 2021 Campus Plan. The Partnership Steering Committee is comprised of AU representatives and representatives of community organizations and ANCs who were signatories to the March 18, 2018 letter submitted to and recognized by the Zoning Commission expressing the intent and vision of the Partnership. These founding members are the Fort Gaines Citizens Association, Spring Valley Neighborhood Association, Ward 3 Vision, and Westover Place Homeowner's Corporation, and ANC 3D and 3E. The Partnership and its working groups have been meeting regularly since early 2019 and will continue to do so throughout and following the Campus Plan development, review, and approval process. Specifically, the Transportation and Parking Working Group has worked closely with the University in preparation for the CTR scoping and review process, including providing direct guidance and input with respect to the identification of intersections included in the Traffic Impact Analysis study area.

The American University CLC was established to foster positive relations and to maintain regular communication between the university and its neighbors. As specified in the Zoning Commission Order for AU's 2011 Campus Plan, the CLC comprises individuals from neighboring community organizations and representatives from the university. The CLC meets at least quarterly. In addition to providing 2021 Campus Plan updates at regular CLC meetings, AU hosted two special CLC sessions on April 28 and April 30, 2020 to solicit community input with respect to the key components of the 2021 Campus Plan. Transportation and Parking was a featured topic at the April 30, 2020 session.

AU Campus Planning 101 Sessions are public meetings that engage the entire campus community and neighbors on various facets of planning. Through both educational presentations and collaborative group discussions, the Planning 101 Sessions consider various elements of AU planning efforts - including campus planning - and exchange ideas about what could benefit AU and the campus community. AU hosted two Campus Planning 101 Sessions in 2019 and will convene a special session focused on the 2021 Campus Plan on May 19, 2020.

On its dedicated Campus Plan website, AU provides a Community Input Portal for community residents and stakeholders to direct questions or feedback about the Campus Plan to the AU Community Relations team. This portal opened to the public in March 2020 and will remain active through the planning process.

MISCELLANEOUS ITEMS FOR DISCUSSION

None at this time.

COMMENTS DISPOSITION MATRIX (CDM)

Project Name: American University Campus Plan

Document Name: (1) CTR Scoping Memo_AU Campus Plan_05.06.2020.pdf

Reviewer Name:

Mike Shindledecker – TESD

Date Comments Due: 6/5/2020

Date Comments Submitted: 6/5/2020

Consultant Name: Nelson Nygaard

No.	Reviewer Name	Document Reference	Reviewer Comments	Priority* (H/L)	Resolution
1.	MS – TESD	1 (page 1-2)	Regarding the 67% housing figure: it is unclear if AU seeking zoning changes to increase the amount of residential zoning [permitted on campus. Please revise or include text to explicitly state the changes considered in this analysis.	H	Responded in Scoping Memo: The 67% housing requirement is the minimum supply of housing that AU must maintain for full-time undergraduate students under the 2011 Campus Plan; AU is not seeking to change this requirement in the 2021 Campus Plan.
2.	MS – TESD	1 (page 1-7)	Does the bifurcation of the Main Campus access create potential operations, circulation, or safety concerns?	H	Responded in Scoping Memo: Bifurcation will enhance campus access, operations and safety.
3.	MS – TESD	1 (page 1-9)	Please indicate the location of the two potential facilities in Figure 3. How would these, as well as the indicated other potential garage capacity locations, impact the trip distributions shown in section 4?	H	Figure 3 updated to show potential garage locations.
4.	MS – TESD	1 (page 1-10)	What do the superscript 1's mean in Table 1? What does "Additional Capacity" mean? Is it unused, unbuilt, unallocated, or otherwise?	H	Responded in Scoping Memo: The superscript "1" refers to AU-owned properties included in the 2021 Campus Plan (pursuant to the 2016 update to the Zoning Regulations) that were not included in the 2011 Campus Plan. The "Additional Capacity" column refers to existing parking infrastructure/capacity that is NOT currently being used by AU (e.g., tenant/retail parking at 3201 New Mexico and tenant parking at 4200 Wisconsin)
5.	MS – TESD	1 (page 1-11)	Based on the use of Bikeshare facilities, would the transportation network benefit from additional CaBi stations?	L	Agreed and AU will look for appropriate space at the southern end of the main Campus

***H: High – Must be addressed and/or corrected prior to acceptance of the document; L: Low – Should be addressed, investigated, and/or resolved but is not a requirement for acceptance of the document.**

No.	Reviewer Name	Document Reference	Reviewer Comments	Priority* (H/L)	Resolution
6.	MS – TESD	1 (page 1-13)	Streetscape and Public Realm: Page 1-7 states that AU is exploring “alternatives for pick-up/drop-off solutions, such as a layby, along Nebraska Avenue and Massachusetts Avenue which currently sees high TNC activity.” Will these solutions impact the streetscape or public realm?	L	Responded in Scoping Memo – this would impact the public realm and streetscape
7.	MS – TESD	1 (page 2-16)	Please provide the mode split information in tabular format, describing the total aggregate mode split and mode split by population, if desired. Additionally, the student population mode split does not add up to 100%.	L	Updated in Scoping Memo
8.	MS – TESD	1 (page 2-16)	Are there any changes to the transportation network that may shift the mode split of the campus in the future? For example, would bicycle facilitates indicated in Figure 7 reduce the dependency on the vehicular mode split? If so, what assumptions govern the shift in mode split, and how does this impact trip generation?	H	Updated in Scoping Memo: A conservative approach would be to assume that mode split remains the same as present with acknowledgement that additional network changes may decrease vehicle mode split
9.	MS – TESD	1 (page 3-24)	Locations of each garage site would be helpful in determining the potential need for a queuing analysis.	L	Graphic amended to show locations
10.	MS – TESD	1 (page 4-28)	Please expand the growth forecast section to assess rate of change over the past 10 years from 2008 to 2018 (the most recently available DDOT ADT data). Additionally, use of the MWCOG regional model would be helpful in validating the assumptions derived from historic AADT. Please also provide information in the analysis for multiple segments of the study roadways which are adjacent to the multiple campus locations/study intersections.	H	Expanded in updated Scoping Memo
11.	MS – TESD	1 (page 4-28)	The Fletcher Gate (on the western side of the campus) appears to handle most of the traffic to and from the east. Is this consistent with observations?	L	Trip distribution table reformatted in Scoping Memo to state volumes.
12.	MS – TESD	1 (page 4-28)	The format of this trip distribution description is a little confusing. It is difficult to tell how much of the traffic is incoming from or destined for network roadways, since the gates do not describe their approximate volume.	L	

*H: High – Must be addressed and/or corrected prior to acceptance of the document; L: Low – Should be addressed, investigated, and/or resolved but is not a requirement for acceptance of the document.

Appendix B Previous AU Zoning Approvals

**GOVERNMENT OF THE DISTRICT OF COLUMBIA
Zoning Commission**



**ZONING COMMISSION FOR THE DISTRICT OF COLUMBIA
ZONING COMMISSION ORDER NO. 11-07
Z.C. Case No. 11-07
American University
(2011 Campus Plan and Further Processing of an Approved Campus Plan –
East Campus, Nebraska Hall Addition, and Mary Graydon Center Addition)
March 8, 2012**

This Order arises out of an application by American University (“University,” “AU,” or “Applicant”) for special exception approval pursuant to 11 DCMR §§ 3104.1 and 3035, and in accordance with § 210 of the Zoning Regulations, of an updated campus plan for a period of 10 years and for further processing approval, under the approved campus plan, of certain construction on the University’s campus in Northwest Washington, D.C.

Procedural History

The Applicant filed an application with the Zoning Commission for the District of Columbia (“Commission”) on March 18, 2011 for review and approval of the American University 2011 Campus Plan (“Campus Plan” or “2011 Plan”) and further processing applications for the development of the East Campus, an addition to Nebraska Hall, and an addition to the Mary Graydon Center. The 2011 Plan follows on the University’s 2001 Campus Plan, which was approved, subject to conditions, for a term ending August 15, 2011. See Z.C. Order No. 949, Z.C. Case No. 00-36CP/16638 (January 8, 2002).

Notice of the self-certified application was mailed to owners of all property within 200 feet in all directions from all boundaries of the property involved in the application; that is, the University’s Main and Tenley campuses. Notice was also published in the *D.C. Register* on April 1, 2011 (58 DCR 2828).

Pursuant to notice, the Commission held public hearings on June 9, June 23, July 14, September 22, October 6, October 13, November 3, and November 7, 2011 to consider the University’s application. Decision meetings were conducted January 23, February 16, and March 8, 2012.

In addition to the Applicant, Advisory Neighborhood Commissions (“ANCs”) 3D, 3E, and 3F were automatically parties to this case. The Commission granted party status in opposition to the application to the Spring Valley-Wesley Heights Citizens Association (“SVWHCA”); the Neighbors for a Livable Community (“NLC”); the Westover Place Homes Corporation (“WPHC”), representing a development of 149 townhouses on eight acres abutting the site of the

proposed East Campus development; the Tenley Campus Neighborhood Association (“TCNA”); the Tenley Neighbors Association (“TNA”); and Robert Herzstein, a resident living near the University’s athletic fields. The Commission denied requests for party status by Catherine Brant, Alfred Brenner, Gail Donovan, Johanna Farley, David Fehrmann, Nancy Hanna, Maria Kress, Kathleen Mullen, Rosemary Niehuss, Elaine Patterson, Jill Stern, Benjamin Tessler, David Vaughan, and Carol Wells, finding that their interests would be adequately represented by the neighborhood associations.

Applicant’s Case. The University’s proposed campus plan for the period from 2011 to 2020 calls for the construction of new on-campus housing for undergraduate students as well as new academic, athletic, recreation, dining, and activity facilities, and the relocation of the Washington College of Law (“WCL”) to the Tenley Campus. The application also requests approval of three proposals for further processing of the new plan: (i) an addition to the Nebraska Hall student residence to add 150 new beds; (ii) an addition to the Mary Graydon Center to expand dining and activity space; and (iii) development of the East Campus, on the site of the current Nebraska Avenue parking lot, with six new buildings containing student housing and retail, academic, and administrative space as well as parking. The Applicant provided evidence and testimony in support of the application from David Taylor, chief of staff in the office of the University’s president; Jorge Abud, the University’s assistant vice president of facilities development and real estate; Beth Buffington, a principal with Little Diversified Architectural Consulting and an expert in architecture; Daniel Van Pelt and Robert Schiesel of Gorove/Slade Associates, experts in transportation planning; Michelle Espinosa, the University’s associate dean of students; and Kevin Miller, an expert in acoustics with Miller, Beam & Paganelli, consultants in acoustics, vibration, and audio/visual design.

Persons in Support. The Commission heard testimony and received letters from numerous persons in support of the application. Their statements generally cited the economic, cultural, educational, and aesthetic benefits provided by the University, as well as the benefits to surrounding communities that would result from approval of the 2011 Campus Plan. Persons in support commented favorably on the University’s proposal to increase the number of student beds on campus, its “reasonable plans for expansion,” the benefits of moving the Washington College of Law to the Tenleytown location closer to public transit, and its plans for development of the East Campus from a parking lot into a university use that would provide benefits to residents of the nearby neighborhoods.

Office of Planning. By report dated June 2, 2011, the Office of Planning (“OP”) recommended approval of the University’s proposed 2011 Campus Plan subject to conditions addressing noise, student enrollment, student housing, and the development and use of the East Campus. OP concluded that, with implementation of the recommended conditions, the 2011 Campus Plan could facilitate the fulfillment of the University’s academic mission without creating objectionable conditions for neighboring property. OP also reported that the Metropolitan Police

Department had no objections to the University's proposed 2011 Campus Plan. (Exhibit ["Ex.,"] 238.)

By a supplemental report dated June 22, 2011, OP modified some of its proposed conditions after receiving additional information from the Applicant and discussing measures to mitigate noise impacts with the owners of some properties adjoining the campus. By a second supplemental report, dated November 28, 2011, OP clarified its recommendations with respect to student housing.

DDOT. The District Department of Transportation ("DDOT") testified in support of the 2011 Campus Plan, describing its review of the pedestrian, transit, and vehicular impacts of the University's proposal. By memorandum dated June 6, 2011, DDOT indicated its recommendation "conditionally supportive" of the Applicant's proposal, subject to the provision of additional transportation details and analysis in further processing procedures, especially with respect to the Tenley Campus.

ANC 3D. By letter dated May 9, 2011, ANC 3D indicated that, at a special public meeting on April 25, 2011, the ANC approved a series of resolutions that opposed certain elements of the proposed campus plan, recommended "significant changes in the form of conditions to other elements" of the plan, and supported some elements of the University's proposal. The ANC objected that the University had "not engaged in a meaningful dialogue with residents about many of the projects proposed in the plan." (Ex. 45.) By letter dated June 2, 2011, ANC 3D submitted a resolution approved at a regular monthly meeting held June 1, 2011. The resolution indicated the ANC's opposition to installation of a mid-block pedestrian signal on Nebraska Avenue as well as its positions on student and employee caps, and student housing. ANC 3D provided testimony from David Fields, an expert in transportation planning, who stated that the University had not addressed "several technical transportation issues" and suggested "additional TDM measures worth considering," including a peak hour auto trip cap. (Ex. 471.)

ANC 3E. At a properly noticed meeting held May 12, 2011 with a quorum present, ANC 3E voted 4-0-1 to approve a resolution asking the Commission to delay the public hearing on the 2011 Campus Plan because the Applicant had not provided sufficient detail about its plans for the Tenley Campus. Alternatively, ANC 3E expressed its opposition to the proposed campus plan. (Ex. 119.) In subsequent filings and in testimony at the public hearing, ANC 3E made recommendations concerning especially the University's enrollment caps, on-campus housing requirements, and the regulation of student behavior.

ANC 3F. By letter dated May 23, 2011, ANC 3F reported its adoption of a resolution, by a vote of 5-0-0 at a duly noticed public meeting held on May 16, 2011 with a quorum present. The resolution requested postponement of this proceeding pending receipt of specified information from the University about its plans for the Tenley Campus, and alternatively stated the opposition of ANC 3F to "the Campus Plan as currently drafted." (Ex. 63.)

Parties in Opposition. The parties in opposition provided a joint presentation objecting to the Applicant's proposed campus plan, which included testimony provided by Deana Rhodeside, an expert in campus planning, and Jawahar (Joe) Mehra, an expert in transportation planning, as well as Susan Farrell, president of WPHC; Michael Mazzuchi and Glenn Westley, representing the SVWHCA; Robert Herzstein, both as president of NLC and on his own behalf; and Greg Ferenbach, president of the TCNA. The parties in opposition contended that the Applicant had failed to establish that its plan would not create objectionable conditions, and argued that modifications to the proposed plan were required with respect to caps on students – with subcaps for undergraduates and law students – and staff, and to developments proposed by the University, including reductions in the density and number of dormitories on the East Campus, reductions in the size of North Hall and the Beeghly addition, re-siting of South Hall, implementation of effective landscape screening from neighbors, adoption of conditions on development at the Tenley Campus to reduce its size, mass, and traffic, relocation of some new housing to the interior of the Main Campus, and a halt to the repurposing of neighborhood retail space.

In addition to their testimony, the parties in opposition made numerous submissions into the record in this proceeding. NLC and WPHC presented an “alternative framework” for the AU campus prepared by their expert in land-use planning, Deana Rhodeside. According to NLC/WPHC, the alternative illustrated “the potential to further concentrate both residential facilities and overall campus density on the interior of the AU main campus west of Nebraska Avenue, thereby addressing AU’s housing needs while ensuring that new development at the edges of the campus is not likely to become objectionable to neighboring properties and surrounding residential neighborhoods.” (Ex. 158.) The parties in opposition submitted a report by their traffic expert, Jawahar (Joe) Mehra, who contended that the Applicant’s transportation report did not accurately project traffic and increased delays that would result from approval of the proposed campus plan, because the University’s experts “systematically underestimated existing and future traffic conditions and the impacts of AU’s proposed plan and did not follow accepted industry practice in important respects.” (Ex. 465, 524.) SVWHCA submitted copies of two petitions, one “focused on objectionable aspects of the Campus Plan in Wesley Heights, which is adjacent to the proposed ‘East Campus’ housing,” and the other seeking retention of the University’s existing overall enrollment cap. SVWHCA also objected that the proposed campus plan omitted essential material regarding the University’s proposed use of the Tenley Campus. Robert Herzstein contended that activities on the campus have caused “severe adverse noise impacts” on neighboring houses, particularly arising from the University’s athletic fields due to the frequency of sports events and the use of amplified sound and air horns. Mr. Herzstein proposed a series of conditions related to the University’s use of its athletic fields. (Ex. 155, 513, 551.)

In addition to their joint presentation with other parties in opposition, NLC and WPHC contended that the University’s proposed 2011 Campus Plan would “create objectionable

conditions for the neighboring homes,” arguing that the Applicant had provided “an incomplete picture of its development plans in its 2011 Plan and related applications for further processing,” and that the “quality and character of nearby residential neighborhoods will be adversely affected and degraded by AU’s plans for enrollment growth, the construction of massive dormitories that adversely impact neighboring homes, and decreased parking.” According to NLC and WPHC, “[I]ikely adverse effects include increased noise and light from new student housing and other proposed structures, increased traffic and parking problems, additional pedestrian safety issues, aesthetically unacceptable and over-sized buildings, and a number of other objectionable conditions relating to student behavior and an absence of meaningful buffers.” (Ex. 157.)

Persons in Opposition. The Commission heard testimony and received letters from numerous persons in opposition to the application. The persons in opposition generally cited the University’s unwillingness to compromise on issues in discussion with neighborhood residents; allegations of “unrestricted growth” in established low-density neighborhoods, thereby altering the character of the surrounding neighborhoods; increased traffic congestion, especially around Ward Circle and Tenley Circle; allegations of noise impacts, particularly in connection with student residences, both on- and off-campus; complaints about parking on neighborhood streets by AU students and staff, and about the University’s off-campus parking program; objections to the planned relocation of the Washington College of Law to the Tenley Campus; concerns about off-campus misbehavior, especially involving students living in group houses off campus; the University’s expansion into commercial areas off campus and resulting displacement of neighborhood retail; plans to construct student housing in proximity to existing residences when viable options were available on the core campus; the height and bulk of proposed new construction; and increased pedestrian traffic along Nebraska Avenue.

FINDINGS OF FACT

1. The proposed 2011 Campus Plan applies to both the University’s Main Campus (4400 Massachusetts Avenue, N.W.) and the Tenley Campus (4300 Nebraska Avenue, N.W. and 4344 Wisconsin Avenue, N.W.). The East Campus, considered part of the Main Campus, is located across Nebraska Avenue from the largest portion of the Main Campus (3501 Nebraska Avenue, N.W.). The Tenley Campus is located approximately one mile from the Main Campus. The campus as a whole comprises Square 1560, Lot 807; Square 1599, Lots 24 and 812; Square 1600, Lots 1, 801, 810, and 816; Square 1601, Lot 3; and Square 1728, Lot 1. The Applicant did not propose any changes to the boundaries adopted in the University’s 2001 Campus Plan.
2. The Main Campus, located at Ward Circle at the intersection of Massachusetts and Nebraska Avenues, N.W., has been the principal site of the University since 1893. The Main Campus covers approximately 76 acres and contains 43 buildings with a total of 1.8 million square feet of gross floor area. Areas surrounding the Main Campus are devoted primarily to residential uses ranging from one-family detached dwellings to large

apartment buildings as well as institutional uses along Nebraska Avenue, including the U.S. Department of Homeland Security, the NBC studio, and several foreign missions.

3. The Main Campus comprises three subareas located on both sides of Massachusetts and Nebraska Avenues: (a) a 59-acre parcel bounded by Massachusetts Avenue on the north, Nebraska Avenue on the east, Rockwood Parkway and residential development on the south, and University Avenue and residential development on the west; (b) the eight-acre East Campus, bounded by Nebraska Avenue on the west, New Mexico Avenue on the south, Ward Circle and Massachusetts Avenue to the north, and the Westover Place residential community to the east; and (c) an L-shaped parcel fronting on Massachusetts and Nebraska Avenues that is the location of the Katzen Arts Center and Nebraska Hall, a student residence, and abuts the Temple Baptist Church and the Fort Gaines neighborhood of one-family detached dwellings to the north.
4. The Tenley Campus is an eight-acre site bounded by Nebraska Avenue on the east, Warren Street on the south, 42nd Street on the west, and Yuma Street on the north; the intersection of Nebraska Avenue and Yuma Street abuts Tenley Circle and Wisconsin Avenue. The Tenley Campus was acquired by the University in 1985 and currently contains five primary buildings that provide undergraduate residential space (497 beds), classrooms, and office space. The Tenleytown Metrorail station is located approximately one block north on Wisconsin Avenue. Uses in the areas surrounding the Tenley Campus include one-family residences, commercial space along Wisconsin Avenue, and institutional uses including churches, schools, and convent. (Ex. 8.)
5. The Main Campus is zoned R-5-A and R-1-B (west of Massachusetts Avenue); the East Campus is zoned R-5-A and R-5-B (Massachusetts Avenue frontage); and the Tenley Campus is zoned R-1-B.
6. The 2011 Campus Plan proposes more than 900,000 square feet of new campus development projects, including several that were also included in the 2001 Campus Plan but not constructed. Almost half of the new development will be devoted to student housing. (Ex. 238.)
7. The floor area ratio (“FAR”) of the combined campuses is currently 0.51, where a maximum of 1.8 is permitted. After construction of all new development proposed by the 2011 Campus Plan, the combined FAR would be 0.8. (Ex. 8.)
8. The general land-use categories presented in the 2011 Campus Plan to describe campus activities are academic/administrative, campus life/residential, parking, and athletic. The land use patterns proposed by the Applicant in the 2011 Plan are similar to the existing uses, with the exception of the East Campus and Tenley Campus. (Ex. 8.)

Student Enrollment Caps

9. The University's 2001 Campus Plan established student population caps of 10,600 (headcount) and 9,250 (full-time equivalent). The campus population caps excluded law students in light of the law school's off-campus location in a commercial zone at 4801 Massachusetts Avenue, N.W.
10. As of the date of its application, the University's student enrollment was 10,298, comprising 6,318 undergraduates (61% of total enrollment), 3,230 graduate students (32%), and 750 other students (seven percent). The University's law school currently enrolls 1,770 students. (Ex. 8.)
11. The University's proposed 2011 Campus Plan projects growth in student populations to 13,600, comprising 6,400 undergraduates, 4,400 graduate students, 2,000 law students, and 800 other students. The projected growth represents an increase of 13% in the total student population, which the University indicated would occur mainly as increases in graduate and law school enrollment (1,170 and 230, respectively) and not as increases in the number of undergraduate students (100). (Ex. 8; Transcript ["Tr."] of June 9 at 37.)
12. The Applicant opposed imposition of separate caps on undergraduate and graduate enrollment, citing fluctuations in the demand for specific education programs and the job market, and the need for flexibility in serving the educational needs of local, regional, and national populations and in meeting the job market demand for relevant academic programs. (Tr. of Nov. 3 at 178.)
13. The Office of Planning indicated its support for "a clear and consistent counting method to effectively measure the university's growth and assess its relative impacts," and commented favorably on the University's proposed headcount method, which "would capture all undergraduate, graduate, law school, continuing education, or any other students enrolled in an AU program who utilize facilities on any of its campuses." (Ex. 238.)
14. OP recommended implementation of measures designed to mitigate any objectionable impacts related to the number of students: (a) accept the overall total student cap and clarify that it includes all undergraduate, graduate, and law school students, and any student taking at least one class or course at any of the campuses covered by the Campus Plan; and (b) cap the law student enrollment at the University-stated expectation of 2,000. (Ex. 238, 375.)
15. ANC 3D asserted that the University should be "subject to its current cap of 10,600 students to be increased by the current law school enrollment of 1,770 once the law school is relocated," for a total of 12,370 students. According to ANC 3D, with the

exception of “[o]nline students and employees who have no physical presence at the university in the community,” “any student who registers for a class at AU – no matter where the class is located – should be counted in the cap on the basis that the students are registered at AU’s main address and will be using campus facilities” and will contribute to traffic, whether as a driver or a pedestrian. (Ex. 45, 204, 590.)

16. ANC 3D also advocated implementation of “a reasonable cap that limits AU growth as a way to ensure the number of students is not likely to lead to objectionable conditions,” where a “‘reasonable cap’ would be one in which the university could house at least two-thirds or more of its student population in university-provided housing located on campus.” (Ex. 590.)
17. ANC 3E “strongly supports imposition of an enrollment cap.” According to the ANC, any campus plan approval should include an enrollment cap “with individual caps for each of the covered categories of students.” (Ex. 378.)
18. SVWHCA advocated “a cap on student headcount equal to the lesser of: (i) 10,600 (fulltime equivalent of 9,200) plus the number of law students currently present at the Washington College of Law building who have been relocated from that site; and (ii) 11,233 students (fulltime equivalent of 9,800).” The cap proposed by SVWHCA was designed so that, as the law school was relocated to the Tenley Campus, “other aspects of AU’s operations would need to be somewhat reduced in order to accommodate the increased on-campus presence associated with the law school.” As an alternative, SVWHCA advocated adoption of a cap on undergraduate enrollment, in light of a 27% increase since 2000, which was not projected in the 2001 Campus Plan, and to “give the community a chance to absorb the effects of increase Main Campus undergraduate housing, without *also* having to live with dramatic future growth that would be possible under AU’s proposed cap of 13,600.” (Ex. 152; emphasis in original)
19. SVWHCA also asserted that “any students physically present in nearby off-campus properties (defined as properties within a mile of either the campus or any other properties already included for this purpose) should be counted for purposes” of the student cap. (Ex. 152.)
20. NLC and WPHC contended that an enrollment cap lower than that proposed by the Applicant was “necessary to protect the character of the surrounding neighborhoods, to minimize objectionable conditions associated with growth, and to reflect the physical limitations of the campus site.” NLC/WPHC contended that the University’s “proposed increases in enrollment and staff will increase the burdens upon the surrounding communities,” as the “addition of more people on campus will cause more buildings, noise, traffic, parking problems and other objectionable conditions.” (Ex. 157.)

21. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to number of students.

Staff Cap

22. The proposed 2011 Campus Plan projects an increase in University employment from the 2,200 cap adopted in the 2001 Campus Plan to a total of 2,900 employees. The University's current levels of employment are 2,318 for Campus Plan properties and 411 for the law school. (Ex. 8.)
23. ANC 3D recommended that the University's staff should be "capped at the current level of 2,200," subject to an increase of 400 employees to account for the law school after its relocation, for a total of 2,600. As with the student enrollment cap, ANC 3D argued that the staff cap should "apply to all campus educational program activities whether they are located in commercial property owned or rented by AU and that the university's expanding commercial property holdings should not be used as a way to circumvent the limits on growth imposed by a student and staff population cap." (Ex. 204.)
24. SVWHCA asserted that the University should be subject to a cap on employees of 2,400, including all faculty and staff currently present at the Washington College of Law building who have been relocated from its off-campus site on Massachusetts Avenue. (Ex. 152.)
25. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to number of employees.

Student Housing

26. The University currently provides housing for undergraduate students in residence halls on campus and by means of a master lease for apartments in the Berkshire, a large apartment building located off campus. The residence halls are designed to accommodate approximately 3,533 to 3,549 students, although the University currently houses 4,083 students by assigning approximately 300 to triple rooms (i.e., three students living in a room designed for two) and 200 to apartments leased by the University in the Berkshire. (Ex. 8.)
27. A condition of approval of the 2001 Campus Plan required the University to maintain a supply of on-campus housing sufficient to make housing available for 85% of its full-time freshman and sophomore students as well as for two-thirds of all full-time undergraduates (with both percentages based on student headcount). (See Z.C. Order No.

- 949, Condition No. 4.) In that proceeding the Commission found that the University was then providing housing on campus for two-thirds of its undergraduate students and that 85% of freshman and sophomore students were living in campus dormitories, which then provided a total of 3,264 beds.
28. As of the fall semester of 2012, the University had 3,749 on-campus beds and 6,400 full-time undergraduate students, so that the University was providing on campus housing for 59% of its full-time undergraduate population. As part of the 2011 Campus Plan, the Applicant proposed to discontinue use of 497 beds on the Tenley Campus and to build new residences at four sites on the Main Campus sufficient to accommodate 1,300 students, resulting in a net increase of 803 beds on campus. (Ex. 602.)
29. The increase in beds will come in three phases. The first will occur by the fall of 2013 with the addition of 510 new beds resulting from the addition to Nebraska Hall and the construction of the new North Hall. Because of the loss of the 497 beds on the Tenley Campus, the net result will be 13 additional beds. The University will therefore continue to be providing on campus housing for 59% of its full-time undergraduate students. The number of beds will next increase by 590 when the East Campus residential buildings open at the start of the fall 2016 semester. This will raise the percentage of on campus housing to 67% of full-time undergraduate students. The University proposed to maintain this percentage of on campus housing beginning with the fall 2016 semester and continuing through the remaining term of the plan. The Applicant noted that the 67-percent housing requirement would effectively serve as a cap on undergraduate enrollment, since the University's ability to admit undergraduate students would depend in part on the availability of student housing. (Ex. 578, 602; Tr. of Nov. 3 at 179.) The University also committed to increase to 100% the number of on-campus beds available for full-time freshman and sophomore students by the start of the Fall 2016 semester.
30. The University was unable to predict when the final 200 on-campus beds would be added through the construction of South Hall.
31. Students living in University-provided housing are subject to residence hall regulations. The residence hall regulations prohibit certain types of disruptive conduct, and direct the students not to engage in behavior such as the following:
- (a) To engage in any disorderly conduct or to interfere with the rights of other students in their academic pursuits. This specifically and especially pertains to other residents' rights to an environment conducive to study and to sleep;
 - (b) To engage in sports activity within the residence halls;

- (c) To engage in sports activity or to create excessive noise within 50 feet of any residence hall;
- (d) To shout or to otherwise create disturbances from any residence hall window;
- (e) To create excessive noise by any means, including playing loudspeakers through room windows at any time and creating noise audible outside a student room or in public areas, especially after 11:00 p.m. Sunday through Thursday, or past 1:00 a.m. on weekends. These times are considered quiet hours;
- (f) To drop or throw any object or any liquid from windows;
- (g) To enter or exit the residence hall through a window when no emergency is present;
- (h) To enter restricted areas including, but not limited to, building roofs;
- (i) To keep dangerous materials, including but not limited to, firearms, air or CO²-powered weapons, fireworks, and dangerous weapons;
- (j) To use, or possess any illegal drug (including medical marijuana) or drug paraphernalia in the residence halls.
- (k) To sell, manufacture, or distribute any illegal drug (including medical marijuana) or drug paraphernalia in the residence halls;
- (l) To knowingly and voluntarily be in the presence of any illegal drug (including medical marijuana) or drug paraphernalia in the residence halls;
- (m) To violate University policies pertaining to the use or possession of alcohol in the residence halls;
- (n) To violate University policies pertaining to the sale, manufacture, or distribution of alcohol in the residence halls;
- (o) To knowingly and voluntarily be in the presence of alcohol in the residence halls;
or
- (p) To refuse to follow a directive from a housing staff member when acting in the performance of his or her duties.

32. AU students who do not live on campus live in the District of Columbia (62%), Virginia (24%), and Maryland (14%). Of the approximately 1,180 undergraduate students currently living off-campus within the 20016 zip code, 20% (238 students) live in student group houses while 80% (938 students) live in apartments. (Ex. 8.)
33. Of those undergraduates living in apartments, more than half live in either the Berkshire or the Avalon at Foxhall (42% and 24%, respectively), two buildings on Massachusetts Avenue within walking distance of the Main Campus, while the remaining 324 apartment-dwelling undergraduate students (34%) live in one of 45 buildings. (Ex. 8.)
34. The University has a master lease with the Berkshire, leasing 100 apartments to house two students in each unit. In addition to the master lease, many AU students rent apartments individually in the Berkshire, which has a total of 750 apartments. The University provides apartments for two full-time employees to help manage the student population in the building. The University plans to phase out the master lease when additional housing becomes available on campus. (Tr. of June 9 at 44, 119-122.)
35. Of the 124 houses containing undergraduate students, most (57 houses, or 46%) have one student occupant, while 47 houses (38%) contain only undergraduates and 20 (16%) are “mixed.” The 47 “undergraduate only” houses are located in various neighborhoods, including Tenleytown (15 houses), AU Park (12), Wesley Heights (six), Cathedral Heights (four), Cleveland Park and Palisades (three each), and Spring Valley and Friendship Heights (two each). The University reported 13 group houses with four or more students within the 20016 zip code. (Ex. 8.)
36. Of the graduate students living off-campus, the University reported that more than half (53%) lived in the District of Columbia, while approximately one quarter lived in Maryland or Virginia (26% and 21%, respectively). Of graduate students living within the 20016 zip code, the University reported that most lived in apartments (363 graduate students, or 63%) and approximately one-third lived in houses (214 graduate students, or 37%). (Ex. 391.)
37. Of the law students living off-campus, the University reported that most (62%) lived in the District of Columbia, with the remainder living in Maryland or Virginia (22% and 16%, respectively). Of law students living within the 20016 Zip Code, the University reported that slightly more than half lived in apartments (163 law students, or 53%), with the remainder living in houses (147 law students, or 47%). (Ex. 391.)
38. OP recommended retention of the condition requiring the University to provide on-campus student housing for at least 67% of its total undergraduate enrollment, consistent with the following conditions: (a) the housing for at least 67% of the total undergraduate enrollment should be provided within the campus plan boundaries; (b) student housing

provided to meet this condition should be used only for undergraduate student housing; (c) the University should carry out its proposal to transition the current off-campus undergraduate housing into on-campus housing and to construct new on-campus housing, so as to make housing available for at least 67% of the total undergraduate enrollment by the beginning of the academic fall semester 2016; and (d) any additional off-campus undergraduate housing used to achieve the 67% requirement after the spring semester of 2017 should be reviewed by the Commission as an amendment to the approved 2011 Campus Plan. (Ex. 238, 588.)

39. Although ANC 3D supported retention of the “existing mandate that AU be required to have enough housing available for 85% of freshmen and sophomores and two-thirds of all undergraduates if they choose to live on campus,” the ANC also objected that the University had not justified the need for 1,290 new student beds, which ANC 3D described as “excessive” and likely to lead to objectionable conditions for neighboring residents. While acknowledging “a need for new student housing,” ANC 3D indicated its preference for housing “located on sites at the core of the campus that do not create objectionable conditions for neighbors living adjacent to the university.” The ANC specified that “[a]ll student housing must have a minimum 120-foot landscaped buffer – that includes mature trees – with any neighboring residential property,” and that “[s]tudent residences should be built with tinted windows that shield from residents’ views the type of window hangings that are characteristically found in the windows of AU’s student dorms and the effect of lighted windows throughout the evening.” (Ex. 45, 204.)
40. ANC 3E asserted that the University should “house as many students as possible on campus” so as to “reduce car trips” and possibly “the number of shuttle trips necessary to serve off-campus students.” ANC 3E opposed any reduction in the percentage of students housed on campus, and instead favored a requirement larger than the University’s current two-thirds requirement, along with an effective enforcement mechanism “to ensure that any minimum requirement is adhered to.” According to ANC 3E, “the result of the campus plan must be to have significantly fewer undergraduates living off campus.” (Ex. 378.)
41. ANC 3E recommended that the University should be required to house no less than 70% of undergraduates on campus based on an undergraduate enrollment of 6,000, resulting in a base of 4,200 on-campus beds. As proposed by ANC 3E, the University would be permitted to increase undergraduate enrollment to a maximum of 6,400, provided that, for each additional undergraduate above 6,000, the University would add at least one on-campus bed. Under this scenario, if AU enrolled 6,400 undergraduate students the University would be required to provide 4,600 on-campus beds, serving approximately

72% of all undergraduates and ensuring a decline in the number of undergraduates living off-campus in the future. (Ex. 496.)

42. SVWHCA questioned the University's need for additional student housing, "given its actual housing practices in relation to its undergraduate population." SVWHCA also asserted that the University should help prevent use of off-campus residential properties as student group houses, which "can and do create serious problems," particularly relating to excessive noise. (Ex. 152.)
43. NLC and WPHC asserted that the Applicant had not "provided a coherent or persuasive explanation of its actual housing needs" and "failed to locate dormitories on the core of the campus." Instead, according to NLC/WPHC, the Applicant "continues to pursue housing at locations that will create visual, noise and other problems for quiet residential neighborhoods and, as a direct result, AU's proposals will create objectionable conditions." NLC/WPHC contended that "[i]n principle, the neighbors do not oppose on-campus housing for undergraduates," but "they do oppose massive dorms in locations where they will adversely impact neighboring homes" as well as "the construction of intrusive and over-sized buildings that have not been justified with accurate information about the University's actual housing needs or plans." (Ex. 157.)
44. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to the University's provision of student housing.

Student Behavior

45. The University communicates its expectations for student conduct in person, in print, and online, including by way of its student code of conduct, residence hall regulations, housing license agreement, "Good Neighbor" guidelines, and documents needed to recognize a student organization. The expectations are also publicized in student orientation programs, residence hall meetings, training programs with student organizations and athletic teams, and informational sessions conducted by the University's office on student conduct. (Tr. of June 9 at 830.)
46. Students are subject to the University's code of conduct, which specifies that the University may take disciplinary action for infractions committed on- or off-campus. The University may take disciplinary action for off-campus infractions when a student's behavior threatens or endangers the safety and well-being of the campus community, or when a student is the subject of a violation of local, state, or federal law. The University recently amended the code to state that the University may also take action "when, in the judgment of university officials, a student's alleged misconduct has a negative effect on

the university's pursuit of its mission or on the wellbeing of the greater community." (Ex. 388, 578.)

47. The office of the dean of students tracks complaints received about student misbehavior, including those occurring at the residences of students living off-campus, and the University acknowledged that "from 6 to 10 'problem addresses' emerge each year" that "require intervention." According to the Applicant, after receiving a complaint, the staff of the dean of students' office will work with the University's public safety staff to "curb objectionable behaviors," the associate dean will meet with students living in a "problem address," and, "if trouble persists, the associate dean will engage the landlord or property manager." An offending student may face discipline by the University, police intervention, or termination of the lease by the landlord. (Ex. 8.)
48. Complaints may be submitted by telephone, email, or using an online complaint form, and may be made to the University's public safety officers as well as to the police. When an incident is reported about a particular address, the associate dean of students will gather information about the incident, identify and meet with the students living at that address, provide them with a written statement delineating the University's expectations with respect to their behavior, and communicate with coaches, organization advisors, and national headquarters of fraternities or sororities as needed. If a neighbor who reported the incident is known, the associate dean will provide the neighbor with information about the outcome of the investigation, as appropriate. A student or organization will be referred to the University's student conduct process when evidence supports a charge under the student code of conduct. The University has implemented an escalating series of sanctions for first and repeated violations, including issuance of a censure, mandatory attendance at a community standards course and other educational sanctions; disciplinary probation, which restricts student privileges; and suspension or dismissal from the university. (Ex. 578; Tr. of June 9 at 88-90.)
49. Since approval of the 2001 Campus Plan, the University has implemented several additional strategies to manage off-campus student misconduct. These include that the University: (a) amended the student code of conduct to extend its jurisdiction, allowing the University to bring charges under the code for off-campus misbehavior; (b) formed a standing committee of University administrators who meet every other week during the academic year to track cases and coordinate interventions; (c) improved the complaint process by creating a 24-hour telephone line and online complaint form and by designating the associate dean of students as the principal case manager for problem resolution; (d) assigned a public safety officer to briefings of the Metropolitan Police Department's Second District to enhance collaboration between the University and the police; (e) opened communication between the University's office of community and local government relations and landlords and realtors to build relationships and assist in resolving problems; and (f) created and distributed informational brochures and other

- materials to provide neighbors with useful information and key contacts for University programs and complaint resolution. The University also added two employees in its Off-Campus Services and established a community relations coordinating committee. (Ex. 8.)
50. Before the start of each Fall semester, the University communicates its expectations for student conduct to students with off-campus addresses. The University identifies and communicates with the landlords of off-campus addresses where AU students live, and screens those addresses where AU students rent and alerts the relevant District government agencies to addresses that are not properly licensed for rental. The University also identifies houses where multiple members from the same organization or team live, and meets with those organizations and teams to clarify expectations regarding their conduct. The University offers a mediation service for students and neighbors, and works with student government leaders to promote good neighbor relations. (Tr. of June 9 at 90-91.)
 51. ANC 3D initially adopted a resolution stating in part that “the Neighborhood Action Plan is ineffective and inadequate in protecting the neighborhood from disruptive student behavior off campus.” The ANC recommended modification of the action plan after “meaningful dialogue with residents with a goal of making the program more responsive to the needs of residents living near the campus.” ANC 3D also contended that “AU officials have not been vigilant in responding to residents’ concerns,” so that often “problems continue for the academic year and are only solved when the tenants move to another location or graduate.” ANC 3D later commented favorably on the University’s recent “significant change” that “should make it easier to apply the student code of conduct to off-campus student behavior,” but emphasized that concerns raised by residents about student off-campus behavior persisted. (Ex. 45, 204, 590.)
 52. ANC 3D also recommended inclusion of a condition requiring the University “to engage the community in a dialogue concerning locations for alcohol service on campus with a goal of limiting alcohol service to 6-8 buildings.” (Ex. 45, 204.)
 53. In light of its view that “a subset of students has caused significant problems in the community,” ANC 3E recommended that the Commission “approve no campus plan ... unless AU revokes its dry campus policy,” which “effectively exports a disciplinary problem caused by the University’s students from AU’s campus to the neighboring community.” (Ex. 378.)
 54. NLC and WPHC contended that the University “has an ongoing problem with underage drinking, late-night social activities, noisy student lifestyles, illegal parking, and jaywalking.” According to NLC/WPHC, the Applicant “has failed to recognize or solve these issues in a meaningful or adequate manner” and “has not mitigated the

objectionable conditions associated with hundreds of new student beds on the periphery of the campus.” NLC/WPHC also contended that the University’s proposal to comply with the student code of conduct adopted in Fall 2010 will be “inadequate if dormitories are located on the periphery of the campus.” According to NLC/WPHC, the University should be required “[a]t a minimum ... to use its private security force to patrol the halls of dormitories with appropriate access to student rooms when required.” (Ex. 157.)

55. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to student behavior.

Vehicular Traffic

56. The Applicant’s traffic study indicated that vehicular travel and parking demand at the Main Campus have been decreasing over the past decade, including during commuter peak hours. According to the Applicant, this trend indicated that “impacts to the surrounding transportation network will be minimal with the development of the 2011 Plan,” given that the University will maintain programs and policies directed to the reduction of vehicular-based traffic. (Ex. 8.)
57. As part of the 2011 Campus Plan, the University proposed to continue and improve its existing transportation demand management (“TDM”) program, which is designed to reduce vehicular demand to the campus. The TDM strategies currently implemented by the University include the AU Shuttle system, a free service that currently runs between the Main and Tenley Campuses, the Washington College of Law site on Massachusetts Avenue, and the Tenleytown-AU Metrorail station; a carpooling program, which offers discounted parking for participating employees; a ride-sharing program for students and employees; car- and bicycle-sharing programs; participation in the SmartBenefits program to encourage use of public transit; and measures to encourage use of bicycles. As part of the 2011 Campus Plan, the University will enhance the marketing of TDM programs by, among other things, creating an enhanced website consolidating all transportation information in one location, incorporating bicycle parking in new residence halls, and reserving space for future expansion of car- and bicycle-sharing stations. The Applicant also proposed measures to promote its TDM programs and to monitor their effectiveness. (Ex. 8, 50.)
58. DDOT made a recommendation “conditionally supportive” of the Applicant’s proposal, and indicated its agreement with the methodology, including the underlying assumptions such as projections of modal splits, used in the traffic study submitted by the Applicant’s experts. (Ex. 229; Tr. of Sep. 22 at 220.)

59. According to DDOT, the addition of new facilities on the AU campus would significantly change pedestrian patterns in the area, citing especially the development of the East Campus and the resulting increase in number of pedestrians crossing Nebraska Avenue. Nevertheless, DDOT concluded that approval of the proposed campus plan would create “minimal vehicular impacts,” citing trip generation characteristics and the planned reduction in the number of parking spaces on campus, and that the level of service for vehicular traffic would not significantly change. (Ex. 229.)
60. DDOT expressed support for all the TDM strategies proposed by the University, and requested that the University appoint a TDM liaison to work with DDOT, the Washington Metropolitan Area Transit Authority (“WMATA”), the Department of Homeland Security (whose offices are located near Ward Circle), and the community on transportation issues. DDOT also commented favorably on the Applicant’s proposed changes to the shuttle routes and to consolidate Metrobus and shuttle stops. According to DDOT, the planned changes would minimize travel delay for buses and vehicles, make the system more user-friendly, and allow the shuttle to serve the entire Main Campus. (Ex. 229.)
61. OP noted the location of the campus adjacent to major arterial and connector streets that carry significant vehicular commuter traffic, and that the campus is well served by public transit, including the University shuttle buses as well as Metrobus and Metrorail. OP indicated its support for the University’s efforts to develop a TDM plan and increase access to alternative forms of transit for students, faculty, and visitors to the campus. (Ex. 238.)
62. ANC 3D testified that the University’s proposed campus plan, and in particular the East Campus proposal, were likely to cause objectionable conditions relating to traffic. ANC 3D also asserted that the Applicant’s proposed TDM strategies, including its incentives for carpooling, would not be effective, and recommended “other strong and enforceable mitigation measures that might go so far as limiting and staggering the arrival and departure times of staff driving to campus.” ANC 3D provided testimony from David Fields, an expert in transportation planning, who stated that the University had not addressed “several technical transportation issues” and suggested “additional TDM measures worth considering.” These measures included a peak hour auto trip cap, so that “any year where AU’s population generates more than the approved maximum number of auto trips, AU should be required to further increase their TDM program and identify to the Zoning Commission and to the community how they intend to reduce this number in the future.” (Ex. 45, 470, 471.)
63. SVWHCA challenged AU’s assertion that the number of vehicle trips generated by the Main Campus during the weekday morning and evening peak hours has declined by almost four percent per year since 1999, and described the Applicant’s traffic study as

“deeply flawed,” with “severe shortcomings as measured against the common sense perception of residents regarding the effect AU has on traffic.” (Ex. 152.)

64. NLC and WPHC objected that “AU’s purported efforts to minimize [pedestrian/vehicle] conflicts” were “focused upon public roadways, rather than the location and uses of AU’s proposed buildings.” According to NLC/WPHC, “AU’s current plan will encourage all students, employees and visitors to cross Nebraska Avenue for retail shopping, food consumption, a welcome center and dormitories” while “the University has dramatically reduced parking in the area.” (Ex. 157.)
65. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to traffic.

Campus Parking

66. The University currently provides approximately 2,724 parking spaces on campus. According to the Applicant, demand for on-campus parking has declined since 2000. Surveys performed by the Applicant’s traffic experts in Fall 2010 showed that the parking inventory peaked at 53% occupied on a typical weekday during the semester.
67. In the 2011 Plan, the University proposed to reduce the number of on-campus parking spaces by 429, to approximately 2,200 spaces, in light of its projection of on-campus parking demand of 1,500 spaces over the term of the new plan. Some parking spaces will be added or removed at various locations to accommodate new or enlarged buildings. (Ex. 8; Tr. of June 9 at 198-199.)
68. The cost of campus parking is \$120 per month for full-time employees and \$964 per academic year for students. Freshman students are not permitted to keep cars on campus.
69. SVWHCA described the Applicant’s plans for parking as “completely inadequate,” considering the projected numbers of additional staff and students the University intended to bring on campus. SVWHCA acknowledged that the University “has some unused parking spaces,” but attributed them not to a “lack of parking need” but to the cost of parking – \$80 per month charged by the University or the risk of a \$75 ticket payable to the University if caught parking on neighborhood streets. According to SVWHCA, the Applicant’s program to prevent parking by University-affiliated vehicles on neighborhood streets is ineffective, and “[r]esidents attest to the results, which is that AU students routinely park on neighborhood streets.” SVWHCA concluded that “[w]hen the spaces on AU’s campus are both inadequate in number and too expensive, the parking problems associated with AU are sure to increase dramatically.” (Ex. 152.)

70. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to the provision of on-campus parking spaces.

Off-campus Parking

71. As part of its “Good Neighbor Policy,” the University issues tickets, and assesses fines, to university-related vehicles parking on neighborhood streets. A significant number of streets in the vicinity of the campus are subject to the residential parking permit regulations of 18 DCMR § 2411, which limit parking for vehicles that lack the permits. Recent enhancements to the Good Neighbor program by the University include the elimination of waivers for first offenses and implementation of greater sanctions for repeat violations, including higher fines and potential administrative penalties such as student code of conduct violations and disciplinary action. (Ex. 10, 438, 578, 589; Tr. of June 9 at 79; Tr. of November 3 at 181-182.)
72. DDOT estimated that student parking in the neighborhood is under 10% of total parking, or about 150 spaces. (Ex. 229.)
73. ANC 3D challenged the University’s assertion that “there is no off-campus parking problem based on a survey it conducted of on-street neighborhood parking availability.” According to ANC 3D, the University’s “parking enforcement program is not working given that the number of citations issued by AU has increased steadily each year since 2006.” (Ex. 5903)
74. NLC and WPHC contended that “AU’s off-campus parking enforcement process has not solved the parking problem in the neighborhoods.” NLC/WPHC claimed that drivers have a “continuing incentive to park off campus” because the University’s “fees for parking on campus are prohibitively high for many students and staff,” and that “the problem will be exacerbated” if the supply of campus parking is reduced, as the Applicant requested. Instead, NLC/WPHC argued that the University “should be required to provide sufficient parking at affordable prices,” “provide consistent and more effective enforcement of illegal parking” so that neighbors are no longer required “to be the ‘policing’ mechanism for AU’s students and staff.” NLC/WPHC advocated conditions requiring the University to face fines “to place a substantial monetary cost ... when it generates significant spill-over parking,” or to reduce enrollment if parking plans are inadequate to prevent spill-over parking on neighborhood streets. (Ex. 157.)
75. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not

likely to create objectionable conditions due to the parking of University-affiliated vehicles on streets in the neighborhoods surrounding the campus.

Noise

76. The University testified that uses within the Campus Plan boundaries are designed to minimize objectionable impacts on the neighboring community. The University also provides open space and landscaping buffers between university facilities and the surrounding community. (Ex. 8.)
77. The University's athletic facilities – Jacobs and Reeves Fields – are located on the western side of the Main Campus. Use of the fields is limited to daylight hours; no lights have been installed. Jacobs Field is the practice and playing field for the women's field hockey and lacrosse teams, and is also used for intercollegiate, intramural, and club sports as well as recreational activity. Jacobs Field also has a baseball/softball infield and backstop and some volleyball courts. Reeves Field is the primary playing field for the men's and women's soccer teams, and also has an oval track used for track and cross country competitions and for recreational running. Tennis courts are located adjacent to Reeves Field. (Ex. 440.)
78. Amplified sound has been used intermittently on the athletic fields, primarily during intercollegiate competitions and during a limited number of "special events." Amplified sound is not permitted during sports practices. According to the Applicant, amplified sound has been used, on average, 35 to 40 times annually for a limited duration; for example, during a regular-season lacrosse or field hockey match, the use of amplified sound would last 60 minutes for music and 10 minutes for announcements. University staff monitor the amplified sound levels at games, taking readings (at the fence line, which is 25 to 50 feet inside AU's western property line) during pre-game activities, during the first half, and during the second half. The staff are directed to "make all reasonable efforts to reduce the sound" when the volumes exceed 60 decibels. (Ex. 440, 575.)
79. The University previously implemented measures to mitigate impacts on neighboring properties from use of the athletic fields, including the installation of one-way/key access gates that allow neighbors to enter university grounds but do not allow access by students or University staff, removal of both a roadway encircling the fields along the property line and campus parking in the area along the property line, installation of landscaping and a decorative fence ranging from 25 to 50 feet from the western property line on AU property, and imposition of restrictions on non-athletic "special events." (Ex. 440.)
80. The Applicant proposed a number of conditions restricting the use of Jacobs Field to ensure that noise will not be objectionable to neighboring residents. The conditions will

initially ban the use of amplified sound and the scoreboard air horn until a new sound system is installed, and will subsequently limit the use of amplified sound on Jacobs Field only for intercollegiate athletic events, sporting events sponsored by the University, and for limited special events. Amplified sound will not be used for athletic team practices, intramural sporting events, university club sports, and university Greek life sports, and spectators will not be permitted to use cowbells and similar devices. The University will install an alternative sound system, selected in collaboration with a nearby neighbor, which will distribute sound more evenly at the ground level. (Ex. 575, 608.)

81. The University also proposed to provide neighboring property owners with telephone numbers to reach appropriate representatives of its Public Safety Department or the Dean of Students Office to address concerns regarding noise on the fields. At the beginning of each academic year, the University will use its best efforts to publicize, via written materials, fax, email, and its community relations website, all athletic events scheduled for Jacobs Field. In the case of athletic events scheduled less than 30 days in advance, the University will make all reasonable efforts to publicize the events as soon as possible. (Ex. 575.)
82. OP noted that the 2011 Campus Plan proposed several projects that would expand existing academic, athletic, and student life facilities on the Main Campus. OP concluded that the new facilities would not likely become objectionable to adjacent property on account of noise in light of their location at the core of the campus, shielded from neighbors by existing buildings and landscape features. (Ex. 238.)
83. However, OP noted that “certain elements of the campus plan could be improved to lessen their potential noise impacts,” stating that the location and size of the proposed additional bleacher seats, when combined with the use of the existing playing fields to the south, was likely to create an objectionable condition for the neighbors to the immediate west. (Ex. 238.)
84. OP recommended implementation of several measures designed to reduce noise impacts of the university use, including: (a) installation of an alternative speaker/sound system at the Williams/Jacobs Recreational Complex fields that would distribute sound more evenly at ground level as opposed to the use of a traditional loudspeaker system; (b) implementation of such other measures along the western boundary of the Williams/Jacobs Recreational Complex fields, including sound curtains or other devices as are effective in reducing the sound from the field to a non-objectionable level and are agreeable to neighboring homeowners; and (c) collaboration with the adjacent neighbors to create an enforcement policy that would clearly articulate the types of activities subject to its conditions and identify an AU contact person directly accountable for their enforcement. (Ex. 238, 375.)

85. NLC and WPHC objected to action by the University that had “completely changed the nature and use” of one of the playing fields by converting it from an “intramural field” used for “casual events with no noise-emitting devices” to a larger field with an electronic scoreboard used for “a complete schedule of intercollegiate games, which AU accompanies with loud speaker announcements, amplified rock music, and air horn blasts.” NLC/WPHC asserted that the 2011 Campus Plan should “include regulation of athletic events along with all other noise-creating events” so that their noise impacts will not become objectionable to neighboring property. (Ex. 157.)
86. Robert Herzstein, a party in opposition who resides in a detached dwelling on Woodway Lane, N.W., adjacent to the athletic fields, contended that activities on the campus have caused “severe adverse noise impacts” on neighboring houses, particularly arising from the University’s athletic fields due to the frequency of sports events and the use of amplified sound and air horns. According to Mr. Herzstein, in light of on-going problems with noise, the new campus plan should bring athletic events under the same rules adopted in the prior campus plan for “special events” and ensure that the University would avoid noise that would be objectionable to neighboring property. Mr. Herzstein proposed a series of conditions related to the University’s use of its athletic fields, including provisions restricting the use of amplified sound, creating a binding dispute resolution process, and requiring the Applicant to “work in good faith with the immediate neighbors of the playing field and an independent sound engineering firm, selected by mutual consent, to devise a way to reduce the impact of sound from its speakers on neighbors,” with the use of sound amplification forbidden until a resolution was found. (Ex. 155, 513, 551.)
87. For the reasons discussed below, the Commission finds that the 2011 Campus Plan, as proposed by the University and subject to the conditions adopted in this Order, is not likely to create objectionable conditions due to noise.

New Development

88. The 2011 Campus Plan proposes 10 projects totaling approximately 850,000 square feet of new development on the Main and Tenley Campuses that the University plans to undertake over the term of the plan. All but one of the projects would be located on an existing building site or on a parking lot, road, or other paved area. The projects are: the relocation of the Washington College of Law to the Tenley Campus;¹ construction of two

¹¹ This project was approved by the Commission in a further processing application, Z.C. Case No. 11-07B, decided on April 9, 2012. *See* Z.C. Order No. 11-07B.

new student residences, North Hall² and South Hall; expansion of the chemistry building, a project known as the Beeghly Addition; additions to the Multipurpose Gymnasium and replacement of the Sports Center Annex; installation of new bleachers to create additional seating at the Reeves Field; an addition to the Kay Spiritual Life Center; and enclosure of the Butler Tunnel under the Sports Center Garage. (Ex. 8.)

89. Relocation of Washington College of Law to the Tenley Campus: The University testified that the existing law school facilities at 4801 Massachusetts Avenue, N.W. are not sufficient to meet the future needs of the students, faculty, and staff of the Washington College of Law (“WCL”). The Applicant proposed to provide space for 2,000 law students and 500 employees of WCL in existing and new buildings at the Tenley Campus, along with 400 to 500 parking spaces accessed from Nebraska Avenue. Pedestrian entrances to the site will be provided on both Nebraska Avenue and Yuma Street. (Ex. 8.)
90. WCL currently has a total enrollment of 1,860 (1,430 day students and 430 night students) and a total staff of 411 (223 full-time and 188 part-time, including 130 adjuncts). The law building opens at 8:00 a.m. and classes are held between 8:30 a.m. and 10:00 p.m. Monday through Thursday, and 8:00 a.m. until 2:00 p.m. on Fridays. The peak class enrollments occur between 10:00 a.m. and 7:00 p.m. The library is officially open from 8:00 a.m. until midnight during the academic semesters, although students have access 24 hours per day, seven days per week. (Ex. 376, 385.)
91. Parking for WCL is currently provided both on- and off-site. The total inventory of 480 parking spaces includes 300 spaces in the WCL garage, 55 spaces in the garage of the Katzen Arts Center, 25 spaces in the parking lot of a nearby grocery store, and 100 spaces in a nearby garage and in leased buildings. (Ex. 385.)
92. The University testified that the existing class enrollment pattern at WCL reflected that “much of the travel to the law school today is outside rush hour periods,” and that the same pattern “is expected to continue in the future.” (Ex. 376.)
93. WCL currently hosts approximately 100 events per year, most (such as orientations and roundtables) attended by students already at the law school. The University testified that events drawing people outside the regular law school population are scheduled during times when regular classes are not in session (weekends and summer), and that similar events are anticipated in the future. The University also expects to continue its current practice of accommodating “requests from civic groups, such as high schools and

² This project was approved by the Commission in a further processing application, Z.C. Case No. 11-07A, decided on March 8, 2012. See Z.C. Order No. 11-07A.

- neighbors, who want to use the library or other facilities on a space-available basis.” (Ex. 376.)
94. OP had “no objection to the proposed land use” for the Tenley Campus but encouraged the University to work with the Historic Preservation Office on the proposed design of the planned buildings. OP concluded that the proposed relocation of WCL to the Tenley Campus would not likely create any objectionable noise impacts, given the proposed use for professional academic and administrative purposes and that most of the new development would occur in the interior of the campus. (Ex. 238.)
 95. ANC 3D expressed support for the relocation of WCL as proposed by the University. (Ex. 45, 204.)
 96. ANC 3E contended that the Applicant had not provided sufficient detail on its plan to move the law school to the Tenley Campus, which created issues pertaining to “design, traffic, parking, promotion of public transit usage, and enforceable neighborhood conservation protections, among others.” (Ex. 119.)
 97. ANC 3F also objected that the Applicant had not provided adequate information about its plans for the Tenley Campus. (Ex. 63.)
 98. TCNA asserted that “[p]utting the Law School on the Tenley Campus is fundamentally incompatible with the neighborhood’s residential character,” and that the Applicant’s proposal was in fact a proposal to significantly expand its law school. According to TCNA, the Applicant had not provided complete information about all activities proposed for the law school site, and had undercounted the number of “special events” likely to be held at the Tenley Campus. (Ex. 116, 427.)
 99. TNA contended that the Applicant’s proposal should be rejected because the “expanded population..., increased intensity of uses on the site, amplified traffic volumes and enlarged facilities will create conditions that are objectionable to neighboring properties.” (Ex. 599.)
 100. North Hall: The University proposed to construct a new six-story residence hall on a surface parking lot behind the President’s Office Building to provide housing for 360 students. (Ex. 8, 50.)
 101. OP testified that location of the North Hall was “suitable for additional student housing” but encouraged the University to “study further how existing site topography can be utilized to either lower the building height or mitigate its appearance from Massachusetts Avenue.” (Ex. 238.)

102. ANC 3D indicated that “construction at the North Hall site is acceptable in principle” but contended that the University “failed to mitigate neighbors’ objections.” According to ANC 3D, “the building’s size should be reduced significantly – at least in half – and designed in a way to minimize visual impacts on Massachusetts Avenue, respect existing topography, and be in scale with the President’s House.” (Ex. 45, 204.)
103. ANC 3E testified that the site behind the President’s Office was an appropriate site for student housing, and recommended approval “in principal [of] the idea of the inclusion of North Hall” in the approved Campus Plan while reserving judgment “on the specifics of the further processing application.” (Ex. 378, 496.)
104. NLC and WPHC testified that “North Hall is a potentially acceptable site for a residence hall, but the neighbors are concerned about the configuration, placement, height and visibility of AU’s specific proposal for that site.” According to NLC/WPHC, the Applicant’s proposal did not satisfy requirements with respect to configuration, location, height, and design, especially considering “Massachusetts Avenue’s visual corridor and views of the President’s building.” (Ex. 157.)
105. South Hall: The University proposed to construct a new six-story building adjacent to the existing south residence hall complex to provide housing for 200 students. (Ex. 8.)
106. ANC 3D testified that the South Hall project “should not be approved because of its location on the highest point of the campus,” where “[i]t seems geographically impossible to mitigate the impact of residents’ objections.” (Ex. 45, 204.)
107. ANC 3E testified that the proposed South Hall would “strengthen the University with no significant adverse impact on the neighborhoods.” (Ex. 496.)
108. NLC and WPHC testified that “neighbors unequivocally oppose the proposed South Hall, which will cause objectionable conditions for nearby residents of Spring Valley because of its placement on the highest point of the campus, directly overlooking nearby homes with no possibility of an effective buffer.” (Ex. 157.)
109. Robert Herzstein asserted that the South Hall project should be deleted from the 2011 Campus Plan because it would “create extremely objectionable visual and noise impacts on nearby residences,” given that the six-story building would be “on the very highest point of land on the campus” without an effective buffer for its impact on neighbors. (Ex. 155.)
110. Beeghly Addition: The University proposed a five-story addition to its chemistry building to allow consolidation of all science instruction and research in one facility. The addition would enlarge the existing building by 60,000 square feet. (Ex. 8.)

111. ANC 3D expressed support for the Beeghly addition provided that the size would be reduced to 50,000 square feet, the addition would be no higher than the existing building, and that, as part of the further processing application, the University would be required to show how the addition would be shielded from residents' views. (Ex. 45, 204.)
112. ANC 3E testified that the proposed Beeghly Addition would "strengthen the University with no significant adverse impact on the neighborhoods," while recognizing that any remaining issues could be resolved. (Ex. 496.)
113. The parties in opposition advocated a reduction in size of the proposed Beeghly addition so as to avoid a solid, massive wall on top of a ridge. (Ex. 524.)
114. Multipurpose Gymnasium and Sports Center Annex Replacement: The University proposed additions to its athletic facilities that would connect to the existing Sports Center. (Ex. 8.)
115. ANC 3D expressed support for the Multisport Gymnasium project provided that the size would be reduced to 15,000 square feet, the building façades would not be objectionable to residents, and the building would be no higher than 24 feet. The ANC also expressed support for the Sports Center annex provided that the size would be reduced to 24,000 square feet and the height to 24 feet. (Ex. 45, 204.)
116. ANC 3E testified that the proposed Multipurpose Gymnasium and Sports Center Annex Replacement would "strengthen the University with no significant adverse impact on the neighborhoods." (Ex. 496.)
117. The parties in opposition opposed the University's gymnasium project as proposed, citing a need to reduce its height and size so as to avoid objectionable conditions due to height, light, appearance and noise. (Ex. 597.)
118. Reeves Field Bleachers: The Applicant initially proposed to create additional seating for its natural-grass competition field by adding 2,000 bleacher seats to the existing 800 seats at Reeves Field in a project requiring demolition of the Osborn Building and reconfiguration of the main campus roadway. Storage and service space for the field would be located under the bleachers. The Applicant ultimately proposed to build 250 bleacher seats, as previously approved in the 2001 Campus Plan but not constructed, to accommodate spectators who now stand on the track surrounding the field to watch events. The Applicant asserted that reorientation of the bleachers, so as not to face adjoining residences, was not necessary to mitigate any potential noise impacts in light of the reduced number, the distance of the bleachers – approximately 450 feet – from the

- nearest property line, and the University's plans to install an alternative sound system that would distribute sound more evenly at ground level. (Ex. 8, 241, 575.)
119. OP did not oppose installation of bleachers at Reeves Field but, to reduce noise impacts, recommended a reduction in the proposed number of bleachers and their reorientation so as not to face the adjacent houses. (Ex. 238.)
 120. ANC 3D opposed construction of the Reeves Field bleachers on the ground that the project was likely to create objectionable conditions. ANC 3D challenged the acoustical engineering assessment submitted by the University, alleging that the assessment did not measure sound levels during field use but was "based on a series of questionable assumptions." (Ex. 45, 204, 590.)
 121. ANC 3E recommended approval of the Reeves Field proposal while recognizing that any remaining issues could be resolved in the further processing application submitted by the University for approval of the project. (Ex. 496.)
 122. NLC and WPHC opposed construction of the new bleachers, which NLC/WPHC asserted would create objectionable noise and other conditions, such as parking and traffic, particularly if the University planned to expand usage of the field after installation of the new bleachers. (Ex. 157.)
 123. Kay Spiritual Life Center Addition: The University proposed to construct an addition of 10,000 square feet to the north end of its interfaith religious center. (Ex. 8.)
 124. ANC 3D expressed support for the addition to the Kay Spiritual Life Center as proposed by the University. (Ex. 45, 204.)
 125. ANC 3E testified that the proposed addition to the Kay Spiritual Life Center would "strengthen the University with no significant adverse impact on the neighborhoods." (Ex. 496.)
 126. Butler Tunnel Enclosure: Reconfiguration of the main campus roadway would allow enclosure of approximately 20,000 square feet of space under the Sports Center Garage for use as student activity space. (Ex. 8.)
 127. ANC 3D expressed support for the enclosure of the Butler Tunnel as proposed by the University. (Ex. 45, 204.)
 128. ANC 3E testified that the proposed enclosure of the Butler Tunnel would "strengthen the University with no significant adverse impact on the neighborhoods." (Ex. 496.)

Further Processing Applications

129. In addition to approval of a new campus plan, the Applicant requested approval of three further processing projects: the East Campus, redevelopment of a surface parking lot with six buildings containing student housing, administrative and academic space, and retail space; the Nebraska Hall Addition, enlargement of a residence hall to add 150 beds; and the Mary Graydon Center Addition, enlargement of the student center to add dining and activity space.
- A) East Campus
130. As finally proposed, the East Campus will comprise six new buildings – three residence halls and three buildings devoted primarily to academic and administrative purposes – built on the site of a parking lot located across Nebraska Avenue from the largest portion of the Main Campus. The East Campus development will provide a total of approximately 329,000 square feet of new space for the University. (Ex. 8.)
131. The eight-acre East Campus is currently used as a parking lot with approximately 900 parking spaces used by University staff and students as well as visitors to the campus. The lot is currently underutilized, with approximately 55 to 60% of the spaces in use. (Ex. 8; Tr. of June 9 at 127.)
132. The three residential buildings (known as Buildings 1, 2 and 3) will contain a total of 590 beds for undergraduate students (except for freshmen students, who will not be permitted to live on the East Campus). Each residential building will have a rear setback of at least 100 feet, and no dormitory windows will face the Westover Place community. (Ex. 8, 50, 575.)
133. The “buffer buildings” (Buildings 4 and 6) will be located between the student residences and the adjoining townhouses in Westover Place, and sited to block noise from activities occurring on two courtyards located at the center of the East Campus. To minimize noise impacts, the buildings will not have direct entrances on the ground floor, or balconies or terraces, on their eastern elevations. The buildings will be 34 feet in height, equivalent to the height of the abutting Westover townhouses. To minimize the appearance of height, the buffer buildings will have flat roofs, without rooftop penthouse structure. The construction of Buildings 4 and 6 will be sequenced so that those buildings will be completed no later than the opening of the student housing buildings on the East Campus. (Ex. 8, 50, 602.)
134. The buffer buildings will be used for a mix of classrooms and offices. The University’s classroom buildings are open between 8:00 a.m. and 11:00 p.m., with classes in session between 8:30 a.m. and 10:40 p.m. The University occasionally uses its classroom

buildings for purposes of continuing education programs, typically held during evenings and weekends, and to host conferences, particularly during summer months when fewer classes are in session. Offices, with motion sensor lighting that turns off lights when no one is present, will be located along the wall of the academic/administrative buildings that will face the Westover Place property line. Office hours vary depending on the function of a particular office. (Ex. 575; Tr. of June 23 at 23, 28.)

135. The residence halls will be located at least 100 feet from the eastern property line shared by the University with Westover Place, and will be sited to provide the narrowest profile view to the Westover Place properties. The buffer buildings will be separated by a distance of 40 to 80 feet from the property line. The University will create a buffer area between Buildings 4 and 6 and the Westover property line by supplementing the existing trees with a landscaped berm and additional plantings. The majority of the buffer will be 55 to 60 feet deep, with one small area of 40 feet. (Ex. 50, 575.)
136. Building 1 will be a student residence building located along Nebraska Avenue, with a setback of approximately 70 feet. Building 1 will be six stories in height (62 feet) and will house 274 beds. The first floor will contain approximately 3,000 square feet of retail space, expected to be devoted to campus-serving food and non-food retail establishments such as an education service provider or an insignia clothing store, as well as meeting space for residential life activities, and apartments for faculty and staff. A vegetative buffer will restrict pedestrian movement from the sidewalk to a 24-foot-wide promenade area adjacent to Building 1. An opening in the building's frontage on Nebraska Avenue will accommodate a vehicular driveway into the East Campus from Nebraska Avenue. (Ex. 8, 50, 602.)
137. Building 2, another student residence building, will provide 140 beds in a five-story building (54 feet) with frontage along New Mexico Avenue. The building will be oriented so that the windows from dormitory rooms will face a courtyard and not overlook the Westover Place community. (Ex. 8, 50.)
138. Building 3, located in the center of the East Campus, will provide approximately 176 beds in a five-story student residence building (54 feet). Adjoining courtyards, 165 feet wide, will provide active and passive recreation space for East Campus residents. The first floor will contain meeting space and apartments for faculty and staff. The building will be oriented so that window from dormitory rooms will face a courtyard and not overlook the Westover Place community. (Ex. 8, 50.)
139. Building 4 will be used for administrative and academic purposes. The two-story building (24,000 square feet) will be sited to provide a physical buffer between the residential uses on the East Campus and the Westover Place townhouses to the east. (Ex. 8, 50.)

140. Building 5, a new administrative building located at the intersection of Nebraska and New Mexico Avenues, will house a new Admissions Welcome center, and other administrative offices. Building 5 will be four stories in height (54 feet). (Ex. 8, 50.)
141. Building 6, an administrative/academic building of 17,700 square feet, will be located to provide a physical buffer between the East Campus residential buildings and the neighboring Westover Place community. At two stories (34 feet), Building 6 will have approximately the same height as the abutting townhouses, and will provide meeting space, residential life activities space, offices, and academic space. (Ex. 8.)
142. The East Campus residential buildings, like the University's other residential buildings, will be served by a resident assistant on each floor as well as a resident director and desk receptionists. The East Campus residential buildings will also be subject to the same residence hall regulations in place at the University's other residential buildings; these regulations (see Finding of Fact No. 31) prohibit disorderly conduct and specified activities. (Ex. 440.)
143. The Applicant proposed to install a mid-block pedestrian-actuated signalized cross walk to allow pedestrians to cross Nebraska Avenue between the intersections of New Mexico and Nebraska Avenues and Massachusetts Avenue and Ward Circle. A signal warrant analysis performed by the Applicant's traffic expert for the intersection of Nebraska Avenue and the East Campus driveway concluded that the signal was warranted, would facilitate pedestrian movements at the intersection and diminish the impact of the proposed East Campus development on other intersections by distributing pedestrian crossings along Nebraska Avenue to three locations, and could operate under actuated or pre-timed operations with an acceptable level of delay and impact to nearby intersections. (Ex. 50, 350.)
144. Vehicular access to the East Campus will be provided via a primary entrance on New Mexico Avenue, east of its intersection with Nebraska Avenue, and via the existing vehicular ingress/egress on Nebraska Avenue, which will retain its existing limit of right-in, right-out from Nebraska Avenue. (Ex. 50.)
145. The existing surface parking lot will be removed, except for a portion at the eastern end with space for approximately 200 vehicles. (The University described the remaining surface parking lot as an area "reserved for a future signature academic building, similar to the Katzen Arts Center" sometime after 2020). An underground garage, providing approximately 150 parking spaces as well as loading facilities, will be constructed with access from New Mexico Avenue. The development will result in a net loss of approximately 500 parking spaces. (Ex. 8, 50.)

146. Facilities for bicycle parking will be provided throughout the East Campus, including some in the residence halls and the below-grade garage. The facilities will provide for bicycle sharing and long-term storage as well as short-term parking. (Ex. 8.)
147. The Applicant asserted that development of the proposed East Campus will not cause objectionable conditions related to noise, citing the orientation of the residential buildings so that windows would not face the adjoining residential community, the location of Building 6 to help block any noise from activities occurring on the courtyards, and design features such as the lack of a direct entrance to the ground floor of Building 6 from the east as well as the absence of balconies or terraces on the eastern elevation. (Ex. 8.)
148. Any event held on the East Campus that proposed to use sound amplification equipment will be required to comply with the University's "sound amplification policy." The policy prohibits certain types of sound amplification and restricts its use under other circumstances. Violations are enforced by the University's department of public safety and may be referred to its office on student conduct and conflict resolution services. (Ex. 440.)
149. The University submitted an environmental noise study prepared for the proposed East Campus by an expert in acoustics. The study investigated potential noise sources from the planned development and their potential impacts on the adjoining Westover Place neighborhood. Its conclusions included that:
 - (a) The East Campus development is planned so that the expected sources of noise from activity in the outdoor courtyard areas and from open windows of student residences will not be located adjacent to the existing residential properties at the southeast property boundary. The orientations of the residential buildings, and their distance from the neighboring residences, will reduce the noise levels and potential noise disturbances to those residences;
 - (b) The planned academic/administrative buildings at the eastern end of the site will block the line of sight, and thus the direct noise path, between the location of most sources of noise (courtyards and building faces) and most receiver locations in the residential neighborhood;
 - (c) The most commonly expected sources of noise (groups of people talking and music played at a reasonable level) will be half to one quarter as loud as the background noise level at most locations along the southern property line. At all locations, predicted noise levels of typical voice and music loudness are quieter than the levels allowed by District of Columbia noise regulations; and

(d) Loud “party” music might exceed levels permitted by noise regulations, depending on the receiver location and if the noise source was located in a room with open windows, but would likely be controlled by the University staff to avoid disruption to other building occupants. With closed windows, all resulting noise levels would be noticeably quieter and less than permitted by the noise regulations.

(Ex. 536.)

150. The Applicant asserted that development of the proposed East Campus will not cause objectionable conditions related to traffic. The University acknowledged that changes in pedestrian and vehicular trips will occur as a result of the East Campus development, but contended that no unacceptable conditions would arise, based on an analysis of future capacity that compared traffic models both with and without the development of the 2011 Campus Plan. (Ex. 8.)
151. The University will implement transportation demand management measures to mitigate traffic impacts of the East Campus development. In addition to provision of facilities to encourage use of bicycles, the University will accommodate a car-sharing service and will provide information on transportation options to students. (Ex. 8.)
152. The Applicant asserted that development of the proposed East Campus will not cause objectionable conditions related to number of students, citing the design and locations of the planned buildings, the creation and maintenance of a physical and landscaped buffer between the East Campus buildings and the adjoining townhouse residences, and the University’s residential life policies. Pursuant to those policies, students are required to sign a “housing and residence life” license agreement that sets expectations and guidelines for appropriate student behavior, and supplements the student code of conduct. Each residential building will include approximately 24 residential life staff who will enforce the guidelines. (Ex. 8.)
153. The University asserted that the development of the East Campus will not create objectionable impacts due to lighting, since no light from buildings, walkways, or the parking lot will project onto neighboring properties. The buildings will not have exterior lights except as required by the applicable building codes, and no lights will be installed in the landscaped buffer area adjacent to the Westover Place residences. (Ex. 440.)
154. The Applicant proposed a construction management plan, which specified actions the University will undertake to mitigate any adverse impact on adjacent properties resulting from construction activity related to the development of the East Campus. The plan addressed pre- and post-construction surveys of the adjacent Westover Place properties, a pre-construction community meeting to coordinate planned construction activities, an on-

site construction representative, the University's responsibility for damage to adjacent properties, hours of construction, and site management. (Ex. 440.)

155. DDOT testified that the additional pedestrian activity expected at the East Campus will be accommodated by existing signal timing on Nebraska Avenue, where currently "a significant number of pedestrians" cross at both Ward Circle and New Mexico Avenue. According to DDOT, the additional pedestrian crossings at those intersections and at a new crosswalk at the proposed driveway on Nebraska Avenue would not negatively impact the system in part because the pedestrian crossings would be spread over three intersections. The proposed mid-block signal would further disperse pedestrian traffic, improve safety, and, if correctly timed, would have a "minimal to no effect on traffic." (Ex. 229, 475.)
156. OP testified that "[s]tudent housing, in and of itself, is not an objectionable land use" for the East Campus site, noting that the R-5-A and R-5-B Zone Districts permit a variety of residential and institutional uses so long as they are compatible with adjoining residential uses. However, OP concluded that "the number of students on this site has the potential to create objectionable conditions for neighboring properties, given their low-density character," noting that the University proposed student residential buildings five or six stories in height "as compared to the adjacent 3-story single-family residences" and citing a designation of the adjacent residential community in the Comprehensive Plan as a "neighborhood conservation area," which calls for "modest changes in scale and density as a result of infill development and maintenance of the existing scale and architectural character." (Ex. 238.)
157. OP recommended a reduction in the student housing provided at the East Campus to 400 beds, with additional housing located on the Main Campus as needed. OP's recommended limit of 400 student beds on the East Campus would make "its percentage of the existing student housing inventory ... 9.9," bringing "the ratio of student housing beds to land area on the East Campus to a level commensurate with its relationship to the larger campus." OP acknowledged that the ratio of "beds to land area" would be higher at the core of the Main Campus and at the Nebraska Hall site, but asserted that those concentrations of student housing would be appropriate at those locations and contexts. (Ex. 238.)
158. With regard to the East Campus, OP also recommended that the Applicant provide a buffer, at least 65 feet wide and landscaped with evergreen and deciduous trees, along the eastern property line adjacent to Westover Place, with the nonresidential buildings at two and three stories permitted within the next 40 feet, so that the residential uses would be at least 125 feet from the eastern property line adjacent to Westover Place. OP recommended installation of a fence to preclude recreational use of the buffer area by students. (Ex. 238.)

159. With regard to the provision of retail space on the East Campus, OP recommended allowing only the 3,020 square feet proposed by the Applicant within the visitor center (Building 5), with a requirement that the University must submit a comprehensive retail plan as an amendment to the Campus Plan to identify the types of retail proposed and how the retail use would be integral to the campus use and not in conflict with the Comprehensive Plan. OP acknowledged that “[r]etail uses have been accepted as part of campus plans as customarily accessory uses to a university operation,” but asserted that the Applicant had provided “insufficient detail to understand the retail program proposed for the East Campus.” (The Applicant initially proposed to provide more than 17,000 square feet of retail space on the East Campus.) OP asserted that the “amount of retail development proposed for the East Campus would introduce land uses that are not anticipated on the site, called for on the Comprehensive Plan, or allowed as a matter-of-right under zoning.” OP encouraged the University “to consider concentrating retail uses in the existing commercial center” on New Mexico Avenue and recommended that retail space on East Campus should be limited to the 3,020 square feet proposed for the visitor center until “a comprehensive retail strategy” is approved as part of the Campus Plan. (Ex. 238.)
160. OP noted that the Applicant’s proposal would significantly increase the intensity of use on the East Campus, which could potentially create objectionable conditions for neighboring uses with regard to noise. OP recognized that some aspects of the proposal would help manage noise, such as the location of academic and administrative uses closest to the neighboring residential community, the absence of mechanical equipment on the roofs of the administrative buildings, the location of student residences closer to Nebraska Avenue, and the prohibition against freshman students living in East Campus residences. Nonetheless, OP noted that communities surrounding the campus, especially in Westover Place, “are concerned about the potential noise impacts of having 590 residential units adjacent to their west property line.” OP recommended that the University consider use of inoperable windows and “shifting the residential buildings further from the neighboring residences to help mitigate potential noise impacts.” (Ex. 238.)
161. ANC 3D opposed further processing of the University’s proposal for the East Campus, alleging that the project would be inconsistent with the standard of approval set forth in the Zoning Regulations as it is a development likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions, and that the University has “failed to mitigate conditions that would make housing at the site objectionable.” ANC 3D also recommended a number of conditions for development of the East Campus pertaining to setbacks, building heights, and fencing, among other things. (Ex. 45, 204.)

162. ANC 3D objected that, by developing the parking lot site, the University would be “eliminating an already-existing significant buffer with the community,” and argued that the utility of the “buffer buildings” proposed by the University would be limited because of their height and to the lack of any agreement ensuring that the buffer buildings would be built before construction of the new housing. ANC 3D advocated a buffer larger than the 65 feet proposed by the University. (Ex. 590.)
163. ANC 3D opposed the Applicant’s proposal to install a pedestrian signal mid-block on Nebraska Avenue between New Mexico Avenue and Ward Circle. According to the ANC, the mid-block signal would “further exacerbate existing traffic congestion on Nebraska Avenue” and in fact demonstrated “the inherent problem with AU’s housing plan: the new student housing will generate such an increase in pedestrian traffic in an already congested and unsafe corridor as to create more opportunities for pedestrian-vehicle conflicts, exacerbate existing congestion, and pose added dangers to public safety.” (Ex. 204.)
164. ANC 3D testified that student-serving retail would be inconsistent with the current land uses for the Nebraska Avenue corridor, and would add to “an already congested and hazardous traffic corridor.” According to ANC 3D, the elimination of retail at the East Campus development would help mitigate traffic impacts associated with additional pedestrian crossings that will result from the housing and academic uses on the East Campus. (Ex. 45, 204, 590.)
165. ANC 3D recommended a condition specifying that the East Campus may not be used for “conferences and meetings, including space designated for residential facilities and meeting or other undesignated ‘activity’ space.” According to ANC 3D, “[m]eeting space on the East Campus should either be eliminated or located underground to minimize the visual and noise impacts on neighbors for this use of the site.” (Ex. 45, 204.)
166. ANC 3D recommended that the East Campus should “include outdoor recreational space for student-residents living on the site” and that the University should “take other steps – in consultation with neighboring residents – to prevent use of the Horace Mann recreational space by AU students in order to preserve a quality neighborhood amenity for neighborhood residents and their young children.” (Ex. 204.)
167. According to ANC 3D, no amplified sound should be allowed at the East Campus location “under any circumstances,” given its proximity to residential property. (Ex. 590.)
168. According to ANC 3D, the student residences on the East Campus “should be used solely for university student housing and not for use by outside organizations.” (Ex. 45.) ANC

- 3D also advocated that “[a]ny housing on the East Campus site should be used only by juniors and seniors because of its proximity to residential property at Westover Place and in Wesley Heights – with the assumption and expectation that older students will be more mature.” In addition, “[a]ny dorms built on the East Campus should be routinely patrolled by AU Campus Security – both the grounds of the site as well as the interior of the dorms – and AU should be required to provide reports to neighbors on a quarterly basis on its patrolling activities.” (Ex. 204.)
169. ANC 3D expressed support for the Building 5 on the East Campus, provided that the building would be no higher than 54 feet and would not contain any retail. (Ex. 45.)
170. ANC 3E described the East Campus as “an appropriate site for development, including student housing on the order AU is proposing,” noting that the provision of “adequate and attractive undergraduate housing is an important goal for the University, but also serves the interest of the wider community.” ANC 3E did not concur with OP’s recommendation to limit the number of beds on the East Campus to 400 or the analysis underlying OP’s recommended limit, and asserted instead that the likely impact on neighbors could be measured using “the adequacy of the relevant buffers and the impact on traffic and pedestrian movement flowing from the proposed use compared to other potential uses.” According to ANC 3E, “the University has taken substantial steps to provide an adequate buffer with the adjacent Westover Place condominiums,” and the traffic and pedestrian issues “can be managed with the amount of density proposed by the University,” including the planned 590 beds. (Ex. 378, 496.)
171. ANC 3E also supported the provision of retail space on New Mexico and Nebraska Avenues “as potential vehicles to serve the community and enliven the street,” and opposed a reduction in the amount of retail proposed by the Applicant, because “the dearth of good retail options around Ward Circle drives additional traffic and congestion out of the neighborhood as students and long term residents alike leave in search of restaurants and better retail.” ANC 3E asserted that the University should develop a retail plan for the East Campus with input from the community, and that the plan should be based on the expectation of providing 17,020 square feet of retail space on the site. ANC 3E did not agree with the 3,020 square foot limit on retail space recommended by OP. (Ex. 378, 496.)
172. SVWHCA objected that the University “does not need to construct” the East Campus, and should instead “focus largely on expanding sites where housing already exists or site in the campus interior.” SVWHCA contended that the East Campus development would create objectionable conditions for surrounding neighbors, particularly due to noise associated with student residences; the location of student housing in proximity to an existing wine and liquor store; the lack of outdoor recreation space, which would lead to conflicts with students over the use of the field and grounds at the nearby Horace Mann

elementary school; the “objectionable heights and densities” of the proposed student residential buildings adjacent to low-density residential neighborhoods; and “the location of such a large number of residents at the periphery of AU’s campus and at the border of Wesley Heights,” especially “in the context of an unchecked expansion on the overall size of AU’s operation,” leading “AU to acquire and use for university purposes the scarce commercial properties and even residential properties in Wesley Heights.” (Ex. 152.)

173. SVWHCA also asserted that development of the East Campus would create substantial objectionable conditions from increased risk to pedestrians, especially in light of the frequency of “risky pedestrian behavior” currently by people crossing Nebraska Avenue from the parking lot and the expected increases in pedestrian traffic volumes after completion of student residences at the East Campus. According to SVWHCA, “substantial traffic congestion will be the inevitable result” of the increased frequency of vehicular conflicts with pedestrians. (Ex. 152.)
174. NLC and WPHC contended that the “East Campus dormitories would create particular hardship for the adjacent community of Westover Place,” where 33 of the abutting 149 townhouses are adjacent to the AU boundary and the “residents of these townhouses would see the proposed development from their patios, living room windows and bedrooms.” According to NLC/WPHC, the University’s proposed “setbacks and buffers are entirely unacceptable to neighbors who would look at the ‘buffer’ buildings proposed by AU and the five and six story dormitory buildings,” in part because “AU’s reconfiguration of the East Campus has not mitigated the many adverse effects of housing almost 600 undergraduates in close proximity to Westover Place.” (Ex. 157.)
175. According to NLC/WPHC, the Applicant’s plan for the East Campus “is totally inconsistent with the characteristics of the existing neighborhoods of Westover and Wesley Heights,” because the University site “would have much greater density, taller buildings, and larger structures.” NLC/WPHC contend that these “inconsistencies create many of the objectionable conditions associated with AU’s application” because “AU’s buildings are too tall for the community in which they would sit,” would not “fit into the architectural landscape of buildings in the immediate vicinity of East Campus,” and would “exceed the heights permitted as of right in an R-5-A zone.” (Ex. 157.)
176. NLC/WPHC also objected to the proposed uses of the East Campus, contending that the “character of the neighboring properties will be adversely affected by usage of the site for the housing of 590 undergraduate students and for retail activities,” given the “dramatically different” lifestyles of AU students and the “nearby permanent residents.” According to NLC/WPHC, the objectionable conditions arising from student behavior cannot be prevented by “AU’s code of conduct, security force, [or] student policies,” and therefore AU’s decision to “put these uses on the edge of campus where their effects

cannot be adequately mitigated,” instead of in the center of its campus, will give rise to objectionable conditions for neighboring communities. (Ex. 157.)

177. NLC/WPHC asserted that the Applicant had not adequately disclosed its plans for the proposed retail space at the East Campus. NLC/WPHC opposed the inclusion of restaurants and shops, which according to NLC/WPHC “would not be consistent with the R-5-A district and would be unprecedented along the entire length of Nebraska Avenue” in addition to creating a likelihood of “objectionable conditions relating to odors, rodents, increased pedestrian traffic, parking constraints, and increased vehicular traffic.” (Ex. 157.)
178. NLC/WPHC asserted that the Applicant’s proposed “buffer buildings” would not be “adequate ‘buffers’ for the dense development of East Campus or the objectionable conditions relating to AU’s proposed uses of East Campus,” noting that the “existing wall between East Campus and Westover is 4½ feet from the residents’ patios and as close as 15 feet to the Westover townhomes themselves.” According to NLC/WPHC, the buffer buildings would not “eliminate noise from open dormitory windows, prevent students from using the buffer strip of land immediately adjacent to Westover, or adequately obscure the high-rise buildings and their evening lights from view by Westover residents.” Rather, the buffer buildings would be located within 40 feet of the Westover property line, would “create a long, institutional barricade for hundreds of feet,” would not “fit the residential character of Westover” or be “softened visually by an adequate landscaped buffer” but would “generate their own noise from mechanical equipment and usage” and “emit light from their own windows that will face the Westover community.” (Ex. 157.)
179. WPHC proposed a series of “proposed mitigations for objectionable conditions” arising from the development of the East Campus. While continuing to advocate rejection of the Applicant’s proposal, WPHC urged the Commission to direct the Applicant to reach an agreement with the neighborhoods to comport with all of the guidelines provided by WPHC, then resubmit a new plan for development of the East Campus for further processing. The mitigation measures proposed by WPHC addressed the “massive size” of the University’s proposal, which WPHC asserted would create “density out of character with the surrounding residential neighborhood”; the Applicant’s proposed 40-foot buffer between the property line and the administrative buildings, which would, according to WPHC, “create privacy, noise, light and other objectionable conditions as the University pushes up against the surrounding single family neighborhoods” and therefore should be at least 100 feet wide along the full length of the property line, fenced on all sides, and landscaped so as to “provide an effective sight line barrier between the campus and the residences”; noise resulting from “[u]ndefined usage and occupancy levels of the buffer buildings”; provision of an insufficient number of parking spaces “for the massive amount of development, commuter traffic, and overflow from the Tenley

Law School”; creation of “pedestrian safety issues”; and inclusion of “excessive retail” space in a zone where retail use is not permitted as a matter of right. According to WPHC, any dormitories on the East Campus should not exceed three stories in height, “consistent with the as-of-right height restrictions for an R-5-A zone and compatible with the existing heights of the adjacent townhomes in Westover.” (Ex. 572, 594.)

B) Nebraska Hall Addition.

180. The University proposed to construct an addition to Nebraska Hall, a student residence with 115 beds, to provide 150 additional beds. The addition will be similar to the existing three-story residence hall with respect to bulk, height, and appearance. (Ex. 8, 50.)
181. The existing Nebraska Hall building is set back approximately 104 feet from Nebraska Avenue in front and 45 feet from 44th Street at the rear. A driveway and circular drop-off area are located in front, and a 25-space parking lot is located at the rear of the building. The addition will be constructed on the northern end of Nebraska Hall, on the site of the parking lot. The addition will be set back approximately 97 feet from Nebraska Avenue, and will maintain the 45-foot setback from 44th Street of the existing building. (Ex. 8.)
182. The addition will contain, in addition to residences for students and residential advisors, offices for the residential life staff, a faculty apartment, and a multifunction space able to accommodate 40 people. The University will make the multifunction space available for meetings of the Ft. Gaines Citizens Association. (Ex. 8.)
183. Mechanical equipment for the addition will be located in the “grade level” of the building, which is below grade as viewed from Nebraska Avenue. No rooftop mechanical equipment or antennas will be located on the roof of the addition. (Ex. 8.)
184. An existing fence will be expanded and increased in height, and landscaping will be developed in consultation with nearby residents to buffer the building from the residential areas to the west. (Ex. 8.)
185. The Applicant asserted that development of the Nebraska Hall addition will not cause adverse impacts related to noise, because all student access to the addition will be made from the Nebraska Avenue frontage, no access to the multipurpose space will be possible from the rear of the building adjacent to 44th Street, and the landscaping and fence will be extended for the length of the enlarged building. (Ex. 8.)
186. The Applicant asserted that development of the Nebraska Hall addition will not cause adverse impacts related to traffic or parking, because vehicular access to the property will not change, and deliveries will continue to be made through the main entry or the central

entry on the east side. The Katzen Arts Center garage, adjacent to Nebraska Hall, has sufficient capacity to accept vehicles that formerly parked on the 25-space lot. (Ex. 8.)

187. The Applicant asserted that development of the Nebraska Hall addition will not cause adverse impacts related to number of students or employees, citing the operation of a student residence at the site since 2006 with few, if any, complaints, and the landscaped buffer area between the expanded Nebraska Hall and adjacent residential properties. (Ex. 8.)
188. OP concluded that the proposed Nebraska Hall addition would not likely create adverse impacts or objectionable conditions within the neighboring community with regard to noise, traffic, parking, or the number of students or faculty. OP noted that potential noise impacts will be mitigated by the distance of the addition from neighboring uses as well as by its the scale and size; the removal of 26 parking spaces, and the addition of bicycle facilities, would likely reduce vehicle trips to the site; and the number of students likely would not cause adverse impacts because the site is currently used for student housing and the measures proposed by the Applicant, such as enforcement of the student code of conduct, site fencing and landscaping, and construction management, would mitigate any potential objectionable conditions. (Ex. 238.)
189. ANC 3D expressed “no objections to the expansion of Nebraska Hall to add 120 housing beds,”³ and “applaud[ed] AU for its willingness to fully engage the Ft. Gaines neighbors and address their concerns.” (Ex. 45, 204.)
190. ANC 3E recommended approval of the Nebraska Hall addition, stating that the project “will strengthen the University with no significant impact on nearby neighborhoods.” (Ex. 378, 496.)
191. By letter dated July 11, 2011, the Fort Gaines Citizens Association reported its vote, at a meeting in November 2010, “to take no exceptions with the Nebraska Hall extension Campus Plan proposal as agreed upon with the University.” The association was also indicated its support for the University’s subsequent proposal to increase the number of student rooms within the planned design. (Ex. 446.)

C) Mary Graydon Center Addition

192. The University proposed to construct an addition to the south end of the student center that will add 20,000 square feet of dining and activity space. The Mary Graydon Center,

³ The Applicant originally projected that the Nebraska Hall addition would provide 120 new beds but later revised its proposal after discerning that 150 beds could be accommodated in the planned space. ANC 3D did not revise its recommendation to express any opposition to the greater number of beds anticipated in the project.

which contains activity space, dining facilities, and retail services, is located in the center of the Main Campus adjacent to the central quad, and is surrounded by university uses, primarily academic, administrative, and athletic facilities. The planned addition will provide additional office and support space, dining facilities, and meeting and event space in a terrace level and three upper levels. (Ex. 8, 238.)

193. The Applicant asserted that development of the addition to the Mary Graydon Center will not cause adverse impacts related to number of noise, traffic, parking, or number of students or employees, citing the proposed use of the addition, its location internal to the campus, its lack of impact on traffic or parking, and that the addition will not add any students, faculty, or staff. (Ex. 8.)
194. OP concluded that the proposed Mary Graydon addition would not likely have any adverse impacts with regard to noise, traffic, the number of students, or other objectionable conditions, noting that the addition will be “located at the center of the Main Campus, well buffered from nearby residential uses” and “would not result in additional staff, faculty, or students or change existing traffic patterns or parking facilities.” (Ex. 238.)
195. ANC 3D expressed support for the addition to the Mary Graydon Center as proposed by the University. (Ex. 45, 204.)
196. ANC 3E recommended approval of the proposed addition to the Mary Graydon Center, stating that the project “will strengthen the University with no significant impact on nearby neighborhoods.” (Ex. 378, 496.)

Comprehensive Plan

197. The University is located in the Institutional Land Use category on the Future Land Use Map of the Comprehensive Plan, and is designated as an Institutional site on the Generalized Policy Map of the Comprehensive Plan.
198. The Applicant asserted that the proposed Campus Plan, including the planned new developments, is consistent with the map designations and satisfies many of the goals enumerated in the District Elements of the Comprehensive Plan. The University cited several policies set forth in the Land Use Element as consistent with the proposed Campus Plan, including policies that recognize the importance of universities, the need for institutions and neighborhoods to work proactively to address issues such as traffic and facility expansion, and the benefits of development near Metrorail stations, with site planning to encourage the use of public transit and infill development that will improve the character of the neighborhood. The University also asserted that the 2011 Plan was not inconsistent with the Comprehensive Plan, and would in fact advance numerous

policies, including those related to transportation, economic development, education, and urban design as well as with elements related to the Rock Creek West Area. The Applicant noted that, while areas surrounding the campus are designated neighborhood conservation areas on the Generalized Policy Map, the campus itself is designated institutional. According to the Applicant, “[n]othing in the Comprehensive Plan restricts development in an institutional area just because it is adjacent to a neighborhood conservation area.” (Ex. 8, 577.)

199. OP identified a number of policies of the Comprehensive Plan as relevant to the University’s proposed 2011 Campus Plan. They include policies in the Land Use element pertaining to institutional uses and attendant issues for nearby residential neighborhoods, policies in the Education element relating to student housing and the transportation impacts of universities, and policies in the Rock Creek West element addressing the conservation of neighborhoods and neighborhood commercial centers, the management of institutional land uses and transportation demand, congestion management measures, bicycle facilities, and historic resources. (Ex. 238.)
200. In its report dated June 2, 2011, OP indicated that “[o]verall, most features of the proposed campus plan are not inconsistent with many policies and objectives of the Comprehensive Plan.” However, OP concluded that “the campus plan contains some elements, including the proposed location and amount of retail, siting of outdoor athletic facilities, and amount of student housing in proximity to existing low density residential areas, that are inconsistent with the policies of the Comprehensive Plan,” including “minimizing its impact on surrounding residential communities, expanding outdoor university facilities in a manner without creating adverse impacts, and supporting neighborhood conservation.” (Ex. 238.)
201. ANC 3D asserted that the Applicant’s proposed campus plan was inconsistent with numerous provisions of the Comprehensive Plan, including policies in the Land Use element pertaining to conservation of single-family neighborhoods, neighborhood beautification, mitigation of impacts of commercial development, and institutional uses, as well as policies in the Transportation, Environmental Protection, Urban Design, Educational Facilities, and Rock Creek West elements. (Ex. 470.)
202. NLC and WPHC asserted that “the Comprehensive Plan provides consistent guidance regarding the importance of preserving and protecting the character of residential communities in the Rock Creek West District.” Noting that “[a]lthough colleges are an important asset in the District of Columbia,” NLC/WPHC contended that “the city’s residential communities are another valuable asset” and the “interests of universities should not supersede the often competing and long-established interests of stable residential neighborhoods.” (Ex. 157.)

Lighting Plan

203. As part of the 2011 Campus Plan, the University proposed to continue to implement the lighting plan adopted as part of the 2001 Campus Plan. Elements of the lighting plan include: (a) all new outdoor lighting fixtures are located and installed so as to avoid the extension of spotlights beyond the boundaries of the campus; (b) all lighting fixtures installed inside new campus buildings are equipped with motion sensors that turn lights off when not in use, except for fixtures installed in common areas or in other locations where constant lighting is needed for security or other reasons; (c) spotlights and outdoor lighting, both new and existing, are directed inward, downward, and away from the campus perimeter, and shielded when necessary to avoid lighting on the outside of the perimeter, to avoid objectionable impacts on neighboring property; and (d) energy-efficient lighting is used to illuminate roadways, parking lots, pedestrian walkways, and building exits to achieve security requirements. (Ex. 8, 440.)
204. ANC 3D recommended inclusion of a condition, identical to that adopted in the prior campus plan, relating to the types and characteristics of lighting fixtures used on campus. (Ex. 45, 204.)

Landscaping and Stormwater Management Plan

205. ANC 3D recommended inclusion of a condition requiring the Applicant to “consult closely with neighbors in the development of a Landscape Plan to address screening needs and the upgrading of plantings, especially along the campus periphery, including the East Campus, and a stormwater management plan.” (Ex. 45, 204.)
206. Robert Herzstein testified that the Applicant was “delinquent in maintaining landscape screening,” causing objectionable visual impacts on neighbors, and was attempting to avoid a landscaping responsibility in the future. According to Mr. Herzstein, the University “must be required to consult closely with neighbors on specific screening needs and to upgrade its plantings where needed to avoid adverse visual impacts.” (Ex. 155, 513.)

Liaison Committee

207. As part of the approved 2001 Campus Plan, the University was required to work with community representatives to form a Liaison Committee for the purpose of fostering consistent communication between the University and the surrounding neighborhoods, discussing issues of mutual interest, and proposing solutions to problems that exist or arise in implementing the approved campus plan. (See Order No. 949, Condition No. 6.)

208. In the 2011 Campus Plan, the Applicant proposed certain modifications intended to enhance the composition, structure, purpose, and leadership of the liaison committee. As proposed by the Applicant, the newly enhanced “community liaison committee” (“CLC”) will be led by the University’s vice president of campus life, the chief student affairs officer at the university and one of seven members of the president’s cabinet, who provides senior executive leadership for 15 departments in the Office of Campus Life, including student conduct, and has broad decision-making authority within the University. In addition to its representatives, the University will invite community groups to become members of the committee, including representatives of ANCs 3D, 3E, and 3F and 10 community groups.⁴ Meetings will be scheduled by the University, although any member of the committee may call a meeting at any time. The University will contact community representatives in advance of each meeting for input in formulating the meeting agendas. At each meeting, the University will provide reports and updates pertaining to matters such as transportation demand management programs, off-campus parking enforcement, off-campus student behavior, sound management on the athletic fields, construction management and mitigation of adverse impacts on adjacent properties, and campus events that neighbors may attend. (Ex. 602, 608.)
209. In the event of a dispute in which the University and a majority of the community representatives cannot reach agreement within one month, the University will participate in alternative dispute resolution and engage a third-party mediator at the University’s expense. Community members of the liaison committee will participate in the choice of a mediator, whose selection will require agreement by a majority of the committee members. (Ex. 608.)
210. The University will also conduct an annual town hall meeting, chaired by the University president and open to all neighbors, to discuss issues of interest to neighboring communities. The University will invite representatives from ANCs 3D, 3E, and 3F to co-chair the annual meeting. (Ex. 608.)
211. NLC and WPHC claimed that “[i]n practice, the liaison committee has not been terribly effective.” Nonetheless, NLC/WPHC advocated continuation of the committee, which “makes University officials pay some attention to neighbors and ... provides some information to neighbors from time to time.” (Ex. 157.)

⁴ The Applicant specified the community groups as: Neighbors for a Livable Community, Spring Valley-Wesley Heights Citizens Association, Tenley Campus Neighbors Association, Tenley Neighbors Association, the Westover Place Townhouse Association, Embassy Park Neighbors Association, Ft. Gaines Citizens Association, Greenbriar Condominium, McLean Gardens, and Sutton Place Condominiums.

Conference Use of University Facilities

212. The 2001 Campus Plan included a condition specifying that campus facilities built for instructional purposes (such as classrooms, laboratories, and conference rooms) could, from time to time, be used for conferences, but any purpose-built conference facility that the University proposed to build on campus would require amendment of the Campus Plan and specific approval of the conference-facility use through the special exception process. (*See* Order No. 949, Condition No. 5) The University has proposed to modify this condition to clarify that residential facilities may also be used for conferences. (*See* Condition No. 6 of this Order.)
213. The Applicant described the types of conferences and other public programs typically provided on the campus, and indicated their importance to the University. (Ex. 8.)
214. NLC and WPHC asserted that “[a]ny use of campus facilities for conferences should be subject to reasonable limits as to character, frequency, attendance, and location.” NLC/WPHC opposed use of the East Campus for large conferences, citing its close proximity to residential neighborhoods. (Ex. 157.)

Notice of Permit Applications

215. In 1917-1918 and again in 1942-1945, the University made the Main Campus available to the federal government. (Ex. 8.) In Finding of Fact No. 7 of Zoning Commission Order No. 949, which approved the 2001 Campus Plan, the Commission noted that in the mid-1990s, the University began working with the Army Corps of Engineers to test, remove, and remediate any adverse environmental conditions that exist in the Spring Valley neighborhood, including those associated with arsenic. According to Finding of Fact No. 8, the Department of Health (“DOH”) was consulted on the proposed Campus Plan in light of the ongoing project. DOH requested that, as a condition of approval of the 2001 Campus Plan, the Applicant should be required to notify DOH, the Corps of Engineers, and the U.S. Environmental Protection Agency when filing a permit application for any building, roadwork, or site work. The Commission agreed to that request. Since that time, the District of Columbia Council created a Department of the Environment and transferred the Department of Health’s environmental responsibilities to the new agency.
216. ANC 3D recommended inclusion of an updated condition, adopted in the prior campus plan, that would require the Applicant to provide notice to the District Department of the Environment when the University files a permit application for ground clearance, excavation, or other major construction that would implicate remedial work performed at or around the campus by the U.S. Army Corps of Engineers. (Ex. 45.)

217. NLC and WPHC also supported “a condition relating to the University’s coordination with the Corps of Engineers and U.S. Environmental Protection Agency.” (Ex. 157.)
218. In this Order, the Commission adopts Condition No. 11, regarding the provision of notice by the University before submitting a permit application.

Update in Further Processing Applications

219. The 2001 Campus Plan included a condition requiring the University to submit certain information, including an updated traffic analysis and reports on the supply of on-campus housing and numbers of students, in each application for further processing submitted pursuant to the approved plan. (See Order No. 949, Condition No. 9.)
220. NLC and WPHC supported continuation of the 2001 condition relating to further processing applications with the addition of a provision requiring the University to disclose the number of full-time undergraduate students actually housed by the University at the time of the application along with a review of the University’s compliance with the plan and its conditions, and “any other objectionable conditions present at that time.” (Ex. 157.)
221. In this Order, the Commission adopts Condition No. 10 regarding the submission of information in each application for further processing submitted pursuant to the approved plan.

Off-Campus Properties

222. ANC 3D made several recommendations related to the University’s use of off-campus properties. ANC 3D urged the Commission to adopt a condition requiring that “any further acquisitions of property by AU for university purposes in zip codes 20007 and 20016 should be treated as functionally equivalent to an amendment to the campus plan requiring approval by the Zoning Commission.” The ANC recommended another condition requiring the University “to maintain all single family residential property it owns as single family residences and agree not to rent these single family homes as group homes to students, for use by a fraternity or sorority, or as university faculty meeting centers.” ANC 3D recommended retention of the University’s existing caps of 10,600 students and 2,200 employees because of its acquisitions of commercial property in the neighborhood for university purposes; according to ANC 3D, “this ‘commercial’ loophole ... allows unlimited growth. Without some measures that require AU to count all students and staff in the cap, even those enrolled in a program or attending classes in AU-owned or rented commercially-zoned space in the neighborhood, AU will have no limits on its growth potential – even with a cap.” (Ex. 45, 204, 470.)

223. SVWHCA asserted that the University's ownership and use of commercial properties impaired their use for neighborhood-serving businesses, citing especially AU's acquisition of space formerly occupied by a grocery store that was then partly leased to "a pizza restaurant that is aimed at the AU student population, not neighborhood residents" and partly converted into a mail-sorting facility serving the University. SVWHCA urged adoption of a condition prohibiting AU from purchasing new off-campus properties during the term of the campus plan unless each prospective purchase and use is specifically identified and evaluated in connection with the rest of AU's campus plan with respect to the effects that AU's ownership would have on the surrounding neighborhoods, or a condition precluding use of off-campus property owned or purchased by AU for university purposes as opposed to retail businesses. (Ex. 152.)
224. NLC and WPHC argued that the University's proposed campus plan should provide additional information about the Applicant's intentions with respect to its off-campus properties, especially the current site of the law school on Massachusetts Avenue and commercial buildings on New Mexico Avenue. According to NLC/WPHC, the Applicant should be required to identify its planned uses for the off-campus properties so that "the effect on the campus and neighborhoods can be properly evaluated during the campus planning process." (Ex. 157.)

Dispute Resolution

225. Mr. Herzstein also advocated implementation of "[s]ome mechanism ... to resolve disputes in the event neighbors assert that the University is not complying with the Order [approving the 2011 Campus Plan], such as "a joint dispute resolution committee, with AU and neighbor representatives, and an independent party if needed, to resolve compliance controversies with binding determinations." (Ex. 513.)

Outdoor Advertising

226. ANC 3D urged the Commission "to impose limits on AU that would prevent it from displaying electronic, digital, or other forms of outdoor advertising on buildings that front on major avenues, such as Massachusetts or Nebraska Avenues. (Ex. 45.)

CONCLUSIONS OF LAW

The Applicant seeks special exception approval, pursuant to Sections 210 and 3104 of the Zoning Regulations, of an updated campus plan for a period of 10 years as well as further processing approval of three projects in accordance with the approved plan.

A university use is permitted as a special exception in a Residence zone. 11 DCMR § 210.1. Where, as here, a use was lawfully established prior to the use becoming subject to special

exception review, “any extension or enlargement of that use shall require special exception approval.” (11 DCMR § 3104.)

Subsection 3104.1 of Title 11 provides the general standard for granting a special exception, which is that the special exception “will be in harmony with the general purpose and intent of the Zoning Regulations and Zoning Maps and will not tend to affect adversely, the use of neighboring property in accordance with the Zoning Regulations and Zoning Maps, subject in each case to the special conditions specified.” Subsection 210.2 further requires that a university use must be located so that it is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions.

In addition, § 210.4 requires that:

As a prerequisite to requesting a special exception for each college or university use, the applicant shall have submitted to the Commission for its approval a plan for developing the campus as a whole, showing the location, height, and bulk, where appropriate, of all present and proposed improvements

Effective December 8, 2000, the Zoning Commission took on the responsibility to hear and decide all applications for special exception approval of a campus development plan; the amendment of a campus development plan; the further processing of an approved campus development plan to permit the construction and use of a specific building or structure within a campus. (11 DCMR § 3104.4.)

The Commission’s discretion in granting a special exception “is limited to a determination whether the exception sought meets the requirements of the regulation.” *Glenbrook Road Ass’n v. District of Columbia Bd. of Zoning Adjustment*, 605 A.2d 22, 30 (D.C. 1992). The Applicant has the burden of showing, in this case, that its proposal meets the prerequisite enumerated in § 210 as well as satisfying the general standard for special exception approval set forth in § 3104.1. Once the Applicant makes the requisite showing, the Commission “ordinarily must grant [its] application.” *Id.* quoting *Stewart v. District of Columbia Bd. of Zoning Adjustment*, 305 A.2d 516, 518 (D.C. 1973).

Based on the findings of fact, the Commission concludes that the Applicant has satisfied the burden of proving that the extended and enlarged university use, as described in the 2011 Campus Plan (including the three further processing requests) and subject to the conditions adopted in this Order, will satisfy the § 210 requirement of a university use that is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions.

Number of students. With regard to the number of students, the Commission concludes that the Applicant’s proposal is not likely to create objectionable conditions because the new enrollment

caps represent relatively small potential increases in the student population over the next 10 years, a significant percentage of the undergraduate students will be housed on campus, and the University enforces a student code of conduct and other measures designed to prevent and address any student misconduct that might occur on- or off-campus. The Commission notes that OP recommended approval of the Applicant's proposed enrollment caps, including its use of a headcount method to determine the number of students who utilize campus facilities.

A separate cap on law students is appropriate in light of the planned relocation of the WCL to the Tenley Campus, but the Commission declines to adopt separate subcaps on undergraduate and graduate students. The Commission was not persuaded that the difference in potential adverse impacts associated with the undergraduate and graduate populations, such as those pertaining to housing and parking, warrant separate caps, especially given the University's strong interest in maintaining flexibility to respond to changes in educational programs and in the job market.

The Commission declines to require the University to adopt a method of counting students for purpose of the enrollment cap that would include "any student who registers for a class at AU – no matter where the class is located" (except for on-line courses), as advocated by ANC 3D, or that would count "any students physically present in nearby off-campus properties" as advocated by the Spring Valley-Wesley Height Citizens Association. The "main purpose of including an enrollment cap on the number of students a college or university can enroll as part of a campus plan is to limit the adverse impact the student population will have on the surrounding community." *Citizens Ass'n of Georgetown v. District of Columbia Bd. of Zoning Adjustment*, 925 A.2d 585, 591 (D.C. 2007). The enrollment cap adopted in a campus plan relates only to the property within the campus plan boundaries, and is not intended as a means of controlling a university's operations elsewhere. The enrollment caps and related definitions of students subject to the caps adopted in this Order properly account for all students using the University's campus facilities that are subject to the campus plan regulations set forth in § 210; *i.e.* university property located in a Residence zone.

Number of Staff. Similarly, the Commission concludes that the Applicant's proposed employee cap of 2,900 (including a maximum of 500 employees at the Tenley Campus) is not likely to create objectionable conditions or adversely affect the use of neighboring property. The proposal represents a relatively small potential increase over the next 10 years, a period when the University will continue to implement its transportation demand measures to mitigate any potential adverse impacts related to traffic and parking.

Student Housing. The University's program of student housing is an important means of limiting the potential for objectionable conditions related to the number of students. Under the new campus plan, the University will maintain a supply of housing sufficient to make on campus housing available for all full-time freshman and sophomore students and for 67% of all full-time undergraduates beginning with the fall 2016 semester. During the interim period, the University must continue to make on campus housing available to 85% of full-time freshmen and

sophomore students and 59% of its full-time undergraduate students. Because the 67% housing requirement effectively serves as a cap on undergraduate enrollment, the student housing requirement adopted as part of the new plan addresses the recommendation of ANC 3D to implement a cap that limits University growth as a way to ensure that the number of students is not likely to lead to objectionable conditions

In light of the benefits of a significant supply of student housing on campus, the Commission was not persuaded by the concern of ANC 3D that the University's student housing proposal was "excessive," not justified, or likely to lead to objectionable conditions for neighboring residents. ANC 3D did not describe any potential objectionable conditions or adverse impacts, as those terms are used in Zoning Regulations, that would warrant the imposition of conditions limiting the provision of student housing to the interior of the campus, or requiring the provision of 120-foot landscaped buffers with mature trees or tinted windows in student residences to shield neighbors from views of the students' window hangings. The Commission notes, by contrast, that ANC 3E recommended that the University should "house as many students as possible on campus" so as to "reduce car trips" and possibly "the number of shuttle trips necessary to serve off-campus students." Similarly, the Commission was not persuaded by the "alternative framework" submitted by NLC and WPHC. That plan did not take into account important factors such as financial feasibility, the need for changes to roads and infrastructure, the current use of some of the sites identified as potential locations for new student residences, or the University's program requirements, and did not consider the East Campus as an appropriate site for student housing.

Student Conduct. The Commission does not find that the 2011 Campus Plan is likely to create objectionable conditions related to student misbehavior. Students living in University-provided housing – i.e. the majority of undergraduates and all full-time freshman and sophomore students – are subject to residence hall regulations that prohibit specified types of disruptive conduct. All students are subject to the code of conduct, which the University has amended to enhance its effectiveness against misbehavior occurring off campus. The Commission is sympathetic to persons who testified or wrote letters describing serious issues that have arisen in the past due to student misconduct, but does not find a systemic problem of objectionable conditions related to student conduct, and instead concludes that the University's measures are appropriate to address student behavior consistent with the scope of the Zoning Regulations. The Commission encourages the University to continue to monitor the effectiveness of its programs implemented to ensure compliance with its expectations for student conduct and to achieve quick, effective resolution of any problems that occur, and to work with the Community Liaison Committee to address any issues that may arise in the future.

The Commission recognizes the concerns expressed by ANCs 3D and 3E with regard to the availability of alcohol on the University's campus. However, the Commission was not persuaded to adopt the proposed conditions recommended by the ANCs, as they are outside the scope of this proceeding. *See President and Directors of Georgetown College v. District of*

Columbia Bd. of Zoning Adjustment, 837 A.2d 58 (D.C. 2003) (power to grant special exceptions implicitly encompasses authority to place reasonable conditions on the approval, but order approving campus plan may not usurp university prerogatives by intruding into minutiae of university administration).

Traffic. The Commission concludes that approval of the 2011 Campus Plan is not likely to create objectionable conditions related to traffic. The application was supported by a traffic report prepared by the Applicant's traffic experts, which used a methodology acceptable to DDOT and which the Commission found credible notwithstanding the objections raised by the parties in opposition. The University will continue to implement its transportation demand management program approved as part of its last campus plan, with improvements as needed depending on the results of the activities undertaken to monitor the effectiveness of the various TDM measures. The Commission was not persuaded by ANC 3D's unsubstantiated claims that the TDM strategies would not be effective.

The Commission appreciates the suggestion, made by a traffic expert retained by ANC 3D, of a peak-hour trip cap as a means to restrict vehicle trips to the University's campus, but declines to require its adoption in this proceeding. The Applicant proposed an array of measures also designed to limit vehicular trips to the campus, as well as methods to monitor their effectiveness.

Parking. The Commission concludes that approval of the 2011 Campus Plan is not likely to create objectionable conditions related to the parking of University-affiliated vehicles on or off campus. The Applicant's proposal to decrease the number of on-campus parking spaces over the term of the Plan is appropriate in light of evidence showing the underutilization of the existing parking supply. The Commission does not agree with SVWHCA that the Applicant's plans for parking are "completely inadequate" for the projected numbers of additional staff and students possible under the new student and staff caps included in the 2011 Plan, in part because SVWHCA attributed the underutilization of campus parking to the fees charged by the University rather than to the demonstrated effectiveness of some of the University's past TDM measures, such as increased ridership of the AU shuttle bus.

The University will continue to implement its program to discourage the parking of university-affiliated vehicles on neighborhood streets. Based on the evidence in the record, and the absence of evidence of significant problems in finding parking on neighborhood streets, the Commission concludes that the Good Neighbor policy has been reasonably effective and the University has been appropriately aggressive in its efforts to mitigate any potential adverse impacts related to parking. The Commission was not persuaded by claims to the contrary by ANC 3D, NLC, or WPHC.

Noise. Based on the Findings of Fact and the conditions of approval adopted in this Order, the Commission concludes that the 2011 Campus Plan is not likely to create objectionable conditions due to noise. Uses within the Campus Plan boundaries have been located to minimize

possible noise impacts, and the University has installed landscaped buffers around the edges of the campus and taken other steps to prevent objectionable noise. The conditions adopted in this Order impose significant restrictions on the use of the University's athletic fields and prohibit the use of amplified sound until a new sound system is installed that is effective in preventing adverse impacts on neighboring properties due to noise. These conditions are consistent with the recommendation of the Office of Planning to improve certain elements of the Applicant's proposal to lessen their potential noise impacts.

New Developments. With regard to the Applicant's proposal for new developments anticipated over the term of the new plan, the Commission concludes that all the projects are appropriate for inclusion in the 2011 Campus Plan, but notes that some of the projects, such as the planned bleachers at Reeves Field, present issues that will be addressed as part of an application for further processing. The Commission does not agree with Mr. Herzstein that the South Hall project should be rejected because the planned building would "tower" over nearby residences; as Mr. Herzstein acknowledges, the building would be located "several hundred feet from the boundary of the campus" and therefore at a distance from even the nearest residences. Any noise or other adverse impacts that any party alleges with respect to the South Tower will be addressed when the Applicant submits a more specific proposal for that project. In any future further processing application for any of the projects, the Applicant will be required to demonstrate, in adequate detail, that the proposed development will comply with the relevant special exception criteria and that no adverse impacts will result from a project as designed within the parameters approved by the Commission in this Order.

Further Processings. With regard to the Applicant's three proposals for further processing of the 2011 Plan, the Commission concludes that the projects – the Mary Graydon Center addition, the Nebraska Hall addition, and development of the East Campus – satisfy the requirements of the Zoning Regulations and can be approved, subject to the conditions in this Order, without creating objectionable conditions or adversely affecting the use of neighboring property. The Mary Graydon Center addition will add 20,000 square feet of dining and activity space in a location at the center of the campus, surrounded by other university uses. The project was not opposed by the ANCs or the parties in opposition, and is not likely to create any objectionable conditions, including those related to traffic, noise, or number of students. The Nebraska Hall addition will enlarge an existing student residence to increase the supply of on-campus housing by 150 beds. Noting that this project also was not opposed by the ANCs or the parties in opposition, the Commission concurs with the Applicant that the Nebraska Hall addition is not likely to create any objectionable conditions, including those related to traffic, parking, noise, or number of students.

East Campus. As finally proposed, the East Campus will contain six buildings: three student residences containing a total of 590 beds, and three academic/administrative buildings. The Commission concludes that the East Campus site is an appropriate location for the proposed development and that the Applicant's proposal, as finally amended, is consistent with the Zoning

Regulations and with the Comprehensive Plan. As part of a university campus, the site is subject to the FAR aggregation provisions of § 210.3, and is not limited to the maximum density that would otherwise be permitted as a matter of right. In addition, the Commission and the Board of Zoning Adjustment have recognized a range of uses as accessory to a principal university use of a site, including retail uses.⁵

The East Campus development will not be out of character with its surroundings. The site is across Nebraska Avenue from the largest part of the Main Campus, and is near several other institutional uses, including churches and office complexes, also fronting on Nebraska Avenue. The abutting lower-density residential community, Westover Place, already borders some high-density developments, as large apartment buildings are located along Massachusetts Avenue to the south and east. The redevelopment of the underutilized parking lot will improve the site and enhance its surroundings; the Commission does not agree with ANC 3D that the existing parking lot provides a “significant” buffer between the University and abutting uses that should be retained, especially in light of the landscaped buffer and arrangement of buildings proposed by the University.

Based on the Findings of Fact and the conditions of approval adopted in this Order, the Commission finds that the East Campus project is not likely to create objectionable conditions or adversely affect the use of neighboring property, considering especially the site design, including the location and design of the “buffer buildings”; elements of building design, such as the location of entrances and the absence of balconies; the number of student beds in the residential buildings, where students will be subject to the University’s residence hall regulations, code of conduct, and other rules governing student behavior; and the provision of a large landscaped buffer between the East Campus and the abutting residences. OP and ANC 3E both concurred that the East Campus site was appropriate for university use. The Commission was not persuaded by ANC 3D or the parties in opposition that the proposed university use of the East Campus site, subject to the conditions of approval, was unnecessary or likely to result in objectionable conditions relating to noise, density of development, student conduct, risks to pedestrians, visual impacts, or other potential adverse impacts. Similarly, the Commission was not persuaded that measures recommended by ANC 3D (such as limits on conferences, requirements to provide outdoor recreational space for students, and patrols of the student residences, with quarterly reports provided to neighbors) were necessary or warranted. The Commission agrees with the Applicant and DDOT that the mid-block pedestrian signal will provide a safe means for pedestrians to cross Nebraska Avenue without creating adverse impacts for vehicular traffic.

The Commission was not persuaded that the Applicant’s prior requests concerning the amount of retail space to be provided on the East Campus were consistent with requirements of the Zoning

⁵ See, e.g., BZA Appeal No. 17249 (order issued February 8, 2006), upholding certificate of occupancy issued to a restaurant, open to the public, located in a student residence building on a university campus in an R-5-D zone.

Regulations or with provisions of the Comprehensive Plan. The final plan to provide 3,000 square feet of retail space, an amount consistent with the recommendation of the Office of Planning, is not likely to alter the character of the neighborhood, create parking or vehicular impacts, or attract customers beyond the scope of the university use.

Comprehensive Plan. Based on the Findings of Fact and evidence in the record, the Commission concurs with the Applicant and OP that approval of the 2011 Campus Plan, as finally modified and subject to the conditions of approval adopted in this Order, is not inconsistent with the Comprehensive Plan. The University's campus is designated an Institutional Land Use and will further many policies of the Comprehensive Plan without threatening the character of the adjoining residential neighborhoods. The Commission does not agree with OP that the density of student housing proposed for the East Campus site would be inconsistent with Comprehensive Plan policies intended to promote neighborhood conservation, in part because the density of student housing varies across the University's campus, and has not created adverse impacts even at a density higher than that approved for the East Campus. Similarly, the Commission was not persuaded by the ANCs or the parties in opposition that the 2011 Campus Plan should be rejected as inconsistent with the Comprehensive Plan. However, the Commission concurs with OP's comments regarding the provision of retail space at the East Campus, and therefore adopts the reduced amount last proposed by the Applicant.

Community Liaison Committee. The Commission commends the efforts of the University to improve the effectiveness of the liaison committee in addressing any complaints that may arise concerning the university use approved in the 2011 Campus Plan. The recent modifications, especially those calling for the involvement of key University personnel and a broad representation of neighborhood residents as well as the implementation of a dispute resolution process, will provide an appropriate forum to discuss and resolve any issues that arise.

Conferences. The Commission recognizes the importance of conferences and similar public gatherings to the University, provided that the events are conducted in a way that does not create adverse impacts related to traffic or parking, or other objectionable conditions. The Commission declines to adopt the recommendation of NLC and WPHC to impose "limits as to character, frequency, attendance, and location," including a ban on large conferences at the East Campus. Rather, the Commission will continue a condition adopted in the 2001 Campus Plan that permits periodic use of campus facilities for conferences while precluding the development of any new conference facility without specific approval as an amendment of the campus plan.

Off-Campus Properties. ANC 3D and the parties in opposition made several recommendations related to the University's use of off-campus properties, including restrictions on any future acquisitions of property outside the campus plan boundaries for university use and lower caps on enrollment to discourage university expansion. The Commission appreciates the concerns expressed about university expansion off campus, especially in connection with the loss of neighborhood retail. However, in this proceeding, the Commission is limited to a review and

evaluation of the Applicant's proposed campus plan relative to the requirements of the Zoning Regulations, especially § 210; that is, the location of a university use in a Residence zone. The Applicant's use of off-campus property is beyond the scope of this proceeding, and is not inconsistent with the Zoning Regulations currently in effect.⁶

Other Conditions. ANC 3D recommended adoption of a condition requiring the Applicant to develop a landscaping plan in consultation with neighbors, as well as a stormwater management plan. Similarly, Robert Herzstein claimed that the University's inadequately maintained its landscape screening and therefore must be required to consult with neighbors on specific screening needs and plant upgrades. ANC 3D also advocated restrictions that would prevent the University from displaying outdoor advertising on buildings that front on major avenues. The Commission declines to adopt these recommendations because the parties did not identify specific adverse impacts within the meaning of the Zoning Regulations or explain how their proposals were warranted to address any objectionable conditions that would result from approval of the Applicant's proposal.

Mr. Herzstein also advocated implementation of a mechanism to resolve disputes in the event that neighbors assert that the University is not complying with the requirements of this Order. While this recommendation is outside the purview of the Zoning Regulations in a campus plan proceeding, in that a zoning enforcement procedure is already in place to address allegations of noncompliance, the Commission notes that the Applicant has agreed to implement an alternative dispute resolution process in connection with the Community Liaison Committee and the use of amplified sound on the University's athletic facilities.

Great Weight. The Commission is required under § 13(d) of the Advisory Neighborhood Commissions Act of 1975, effective March 26, 1976 (D.C. Law 1-21; D.C. Official Code § 1-309.10(d)) to give great weight to the recommendations of the Office of Planning. The Commission concurs with the recommendation of the Office of Planning to approve the application subject to conditions designed to mitigate potential adverse impacts. OP's recommended conditions have guided and informed the Commission's deliberations in this proceeding, although the Commission was not persuaded by OP's recommendation to limit the number of student beds on the East Campus and found the Applicant's proposal appropriate instead.

⁶ See, e.g. BZA Appeal No. 16507 (order issued February 11, 2000) (university's dormitory use of certain property outside its campus plan boundaries did not require special exception approval because the property was zoned R-5-E, which allows dormitory use as a matter of right), *aff'd*, *Watergate West, Inc. v. District of Columbia Bd. of Zoning Adjustment*, 815 A.2d 762 (D.C. 2003). The example of restrictions on the use of off-campus property imposed on George Washington University is inapposite, because those limits were the result of a proffer made by the university in support of a planned-unit development for its campus approved pursuant to chapter 24 of the Zoning Regulations. See Z.C. Order No. 06-11/06-12 (issued October 26, 2007); *aff'd*, *Foggy Bottom Ass'n v. District of Columbia Zoning Com'n*, 979 A.2d 1160 (D.C. 2009).

The Commission is also required to give “great weight” to the issues and concerns raised by the affected ANCs. Section 13(d) of the Advisory Neighborhood Commissions Act of 1975, effective March 26, 1976 (D.C. Law 1-21; D.C. Official Code § 1-309.10(d) (2001)). This proceeding involved the participation of three affected ANCs, which raised numerous – and sometimes conflicting – issues and concerns. Each of the issues and concerns of the affected ANC’s were acknowledged and fully discussed in this Order. The participation of the affected ANCs also guided and informed the Commission’s deliberations in this proceeding, and, while the Commission was not persuaded that the Applicant’s proposal should be denied or remanded for further discussions with the community, the issues and concerns of the affected ANCs were considered in the Commission’s formulation of conditions of approval of the 2011 Campus Plan.

Accordingly, it is **ORDERED** that the application for approval of a new campus plan for an extended and enlarged university use, as well as further processing of the approved plan for the development of the East Campus, an addition to Nebraska Hall, and an addition to the Mary Graydon Center, is **GRANTED SUBJECT** to the following **CONDITIONS**:

1. The Campus Plan shall be approved for a term of 10 years beginning with the effective date of this Order as indicated below.⁷
2. The approved Campus Plan boundary shall be the Main Campus (including the East Campus) and the Tenley Campus as shown in the American University 2011 Campus Plan and marked as Exhibits 8 and 9 in the record.
3. Student enrollment (headcount) shall not exceed 13,600, including any matriculated student enrolled in at least one class in any property included in the 2011 Plan. Enrollment of students at the Tenley Campus (*i.e.*, all matriculated students at the Washington College of Law registered for a regular academic program, whether full-time or part-time) shall not exceed 2,000. The maximum 2,000 students at the Tenley Campus shall be included in the Applicant’s overall cap of 13,600 students. Enrollment shall be determined annually on a headcount basis.
4. The number of employees shall not exceed 2,900.
5. Until the start of the fall 2016 semester, the University shall maintain a supply of housing sufficient to make housing available for 85% of its full-time freshman and sophomore students and for 62% of all full-time undergraduates. All of the freshman and sophomore housing and 59% of the housing for full-time undergraduates shall be located entirely on

⁷ In a campus plan proceeding, the Commission follows the rules of the Board of Zoning Adjustment except for § 3218. (*See* 11 DCMR § 3035.5.) Subsection 3125.6 of the Board’s rules provides that “a decision or order shall be and become final upon its filing in the record and service upon the parties.”

campus. By the start of the fall 2016 Semester, the University shall maintain a supply of on campus housing sufficient to make housing available for 100% of its full-time freshman and sophomore students and for 67% of all full-time undergraduates. Nothing in this condition is intended to preclude the University from continuing to house undergraduate students who are not freshmen or sophomores off-campus after the fall 2016 semester begins; provided that the University maintains the minimum percentage of on-campus housing required.

6. The University shall enforce its residence hall regulations in all University-provided housing, including the student residences on the East Campus.
7. Campus facilities built for residential and instructional purposes may, from time to time, be used for conferences; however, any purpose-built conference facility proposed to be constructed by the University on campus shall require amendment of the Campus Plan and specific approval of the conference-facility use through the special exception process.
8. The University shall abide by the terms of the student code of conduct, which shall apply to student behavior both on and off campus, and shall continue to implement its “Neighborhood Action Program” to address off-campus conduct by students living in neighborhoods adjacent to the campus. The University shall promote its “Good Neighbor Guidelines” through student workshops sponsored by the Off-Campus Housing Office.
9. The University shall abide by the terms of the lighting plan submitted as Exhibit 440 of the record and described in Finding of Fact No. 203.
10. The University shall submit to the Commission, as a special exception, each individual request to construct a building or structure described in the Campus Plan. Along with each request, the University shall submit information as to how the particular building or structure complies with the Plan as well as an updated traffic analysis and a report indicating the supply of on-campus housing and the number of full-time undergraduate students.
11. At the time the University files a permit application with the Department of Consumer and Regulatory Affairs for ground clearance, excavation, or other major construction that would implicate remedial work performed at or around the campus by the Army Corps of Engineers, the University shall provide notification to the D.C. Department of the Environment or other appropriate agency, the Army Corps of Engineers (Baltimore Office), and the U.S. Environmental Protection Agency, Region 3, that the University intends to undertake such activities.
12. No special exception application filed by the University for further processing under this plan may be granted unless the University proves that it has consistently remained in

substantial compliance with the conditions set forth in this Order. Any violation of a condition of this Order shall be grounds for the denial or revocation of any building permit or certificate of occupancy applied for by, or issued to, the University for any University building or use approved under this plan, and may result in the imposition of fines and penalties pursuant to the Department of Consumer and Regulatory Affairs Civil Infractions Act of 1985, D.C. Official Code §§ 2-1801.01 to 2-1803.03 (2001).

13. The University shall continue to implement traffic demand management (“TDM”) measures to minimize any adverse impacts of university-affiliated traffic:
 - (a) Transit. The University shall, at a minimum, maintain its existing shuttle bus and SmartBenefits programs. The University shall also investigate ways to improve transit service on campus through measures such as (i) improving information on websites, including maps of specific routes (AU shuttle and Metrobus) that serve the campus, (ii) coordinating with the Washington Metropolitan Area Transit Authority (“WMATA”) to make SmarTrip cards available on campus, and (iii) assessing the feasibility of implementing real-time tracking of AU shuttles on a website, mobile devices, and displays at transit stops. The University shall measure the success of its transit programs, considering factors such as the levels of ridership on various routes served by the shuttle buses and proportion of employees registered for the SmartBenefits program, and shall publish the results in monitoring reports;
 - (b) Carpooling. The University shall, at a minimum, maintain its existing carpool program, and shall investigate ways to encourage participation in the carpool program through measures such as providing preferred parking and larger discounts for participants, and by implementing a “guaranteed ride home” (“GRH”) program for eligible carpoolers. The University shall measure the success of its carpool programs, considering factors such as the number of carpools and total participants relative to the number of employee parking passes on campus, and shall publish the results in monitoring reports;
 - (c) Car-sharing. The University shall maintain the availability of car-sharing on campus (including during construction of the East Campus) with an appropriate number of spaces, and shall investigate means to encourage use of car-sharing through measures such as marketing the service as an alternative to private automobile ownership and providing spaces sufficient to accommodate usage. The University shall measure the success of its car-sharing program, and shall publish the results in monitoring reports;
 - (d) Bicycle Programs. The University shall, at a minimum, maintain its existing bicycle programs. The University shall also investigate ways to encourage the

use of bicycles to help reduce demand for other transportation services through measures such as: (i) providing incentives to encourage bicycling; (ii) improving both short- and long-term bicycle parking, consistent with DDOT's standards, in appropriate locations; (iii) providing information about bicycle riding in the District, bicycle routes between campus and major destinations, and locations on campus for bicycle parking and storage; and (iv) encouraging the use of Capital BikeShare, such as by marketing and providing additional space for the service. The University shall measure the success of its bicycle programs, considering factors such as the number and location of bicycle parking spaces and the number of new bicycle registrations, and shall publish the results in monitoring reports;

- (e) Marketing. The University shall create a TDM marketing program to provide detailed, comprehensive information to the Campus community on matters related to transportation policies and travel options, using a variety of means such as an access guide, a dedicated web site, brochures for students and employees, and information kiosks. The University shall measure the success of its TDM marketing program and shall publish the results in monitoring reports; and
 - (f) Monitoring. The University shall adopt a monitoring program to evaluate campus travel habits and the effectiveness of the various TDM strategies, considering factors such as measurements of traffic, parking, transit use, and mode splits, for the purpose of implementing improvements to its TDM program. The University shall provide a monitoring report annually to ANCs 3D, 3E, and 3F, and shall make the reports available to the public.
14. The University shall maintain an inventory of approximately 2,500 parking spaces on campus. The University shall continually evaluate its pricing policies for parking with the intention of discouraging vehicle trips to the campus without generating demand for off-campus parking by university-affiliated vehicles. The University shall provide DDOT with annual reports on parking utilization that reflect the number of non-carpool passes sold each year relative to the number of full-time equivalent employees and the number of occupied spaces on a typical semester weekday.
15. The University shall continue to implement the following program regarding enforcement of student, faculty, staff, and vendor off-campus parking:
- (a) The University shall use its best efforts to require all students, faculty, staff, and vendors servicing the campus to park on the campus and shall prohibit, to the extent permitted by law, students, faculty, staff, and vendors from parking on the streets adjacent to and surrounding the campus. The University shall use its best efforts to cause other University-related vehicles to park on the campus. To accomplish these purposes, the University shall have in place a system of

administrative actions, contract penalties, fines, which may be adjusted from time to time as needed, and/or termination of contracts for violations;

- (b) Construction employees, contractors, and subcontractors shall by contract be prohibited from parking on residential streets, subject to contractual penalties or termination. Visitors to the campus, including attendees of all conferences, shall be encouraged to use on-campus parking and, where feasible, notified in advance to do so;
 - (c) For conferences and large special events, the Applicant shall work with area institutions in order to provide additional parking as needed; and
 - (d) The University shall direct its students to register their vehicles in the District of Columbia, or to obtain a reciprocity sticker if eligible to do so. The University shall withhold parking privileges from students who do not comply with D.C. registration requirements. Failure to abide by District law concerning registration of student vehicles shall constitute a violation of the Student Conduct Code.
16. The University shall continue to work with community representatives to maintain the Community Liaison Committee created in the 2001 Campus Plan, with the enhancements to the composition, structure, purpose and leadership proposed by the Applicant for the 2011 Plan (see Findings of Fact 207-208.) for the purpose of fostering consistent communication between the University and the surrounding neighborhoods, discussing issues of mutual interest, and proposing solutions to problems that exist or arise in implementing the approved campus plan. It is recommended that the Community Liaison Committee be composed of an equal number of representatives of the University and the community and meet as necessary, but at least quarterly; separate meetings may be held to discuss matters of particular interest to the Main or Tenley Campus, if desired. Upon request, the University shall provide timely data relevant to campus plan issues to the Community Liaison Committee, provided that the data is not confidential or overly burdensome to produce. The University shall convene the first meeting of the Community Liaison Committee within three months of the effective date of this Order.

Jacobs Field

17. The University shall be permitted to use Jacobs Field for university events, defined as intercollegiate athletic events, university club sports, university Greek life sports, university intramural sporting events, university-related athletic activities (such as ROTC training and informal athletics events), and sporting camps sponsored by the University. All other uses of Jacobs Field shall be considered “special events” (as defined below).

18. The University shall maintain key-access gates between Jacobs Field and University Avenue. These gates shall be available only to neighbors to enter and exit University grounds, and shall not be used by University personnel or students to exit or enter University property.
19. The University shall not install roads or parking lots in the area between Jacobs Field and the property line abutting neighboring properties to the west of Jacobs Field.
20. The University shall maintain the existing landscape buffering between Jacobs Field and the property line adjacent to the neighboring properties to the west of Jacobs Field.
21. The University shall maintain the existing fence, which is six to seven feet tall, adjacent to neighboring properties to the west of Jacobs Field.
22. The University shall permit use of Jacobs Field only between dawn and dusk, and shall not illuminate Jacobs Field for evening or night uses.
23. The University shall make its athletic schedules publicly available via the University's website, and shall use its best efforts at the beginning of each academic year to publicize the schedule of athletic events at Jacobs Field. For athletic events scheduled less than 30 days ahead, the University shall make all reasonable efforts to publicize the athletic events as soon as possible.
24. The University shall implement measures to limit the noise impacts of activity on Jacobs Field on neighboring residential properties:
 - (a) Amplified sound shall not be used until a new sound system is installed and objectionable impacts of amplified sound are eliminated. With the assistance of expert sound engineers and in close collaboration with and personal involvement of Robert Herzstein of 4710 Woodway Lane, NW, the University shall install an alternative speaker/sound system that will distribute sound more evenly at the ground level (as opposed to the use of a traditional loudspeaker system) and other measures that the acoustics engineers recommend to remedy the problem and that comply with applicable sound regulations. In the event of an intractable dispute between Mr. Herzstein and the University regarding the new sound system that renders the parties unable to reach agreement, the University shall commit to alternative dispute resolution and engage, within one month and at the University's expense, a third-party mediator. The University shall seek the participation of Mr. Herzstein in the selection of the mediator or mediation services;

- (b) Amplified music shall not be permitted until the new sound system is installed and objectionable impacts of amplified sound are eliminated;
 - (c) The scoreboard air horn shall not be used on Jacobs Field until a satisfactory method for using it is devised;
 - (d) The University shall not permit the use of bullhorns, cowbells, or any other similar device by spectators;
 - (e) Pursuant to playing rules and requirements of specific sports, a game management sound device (such as a sound that makes players and referees aware of substitutions, the end of period, etc.) may be used, but shall operate within applicable sound regulations;
 - (f) If the above measures do not reduce the sound from Jacobs Field ("Field") to a level satisfactory to the adjacent neighbor, the University shall take such other remedial measures along the western boundary of the Jacobs Field, including sound curtains or other devices as suggested by the Office of Planning, as are effective in reducing the sound from the Field to a non-objectionable level and are agreeable to the adjacent neighbor;
 - (g) After a new sound system is installed, amplified sound may be used only for intercollegiate games and special events not to exceed a total of 40 each year; and
 - (h) The University shall provide owners of neighboring properties the telephone numbers for appropriate representatives (e.g., staff of its Public Safety Department or Community Relations or Dean of Students offices) to address concerns regarding noise on Jacobs Field.
25. To the extent that Jacobs Field is used for a special event (i.e. not a University-related athletic event as defined in Condition 23), such as graduation, homecoming, picnics, receptions, or charitable events (such as the Juvenile Diabetes Research Foundation's annual Real Estate Games), or exhibitions, the University shall comply with the following requirements:
- (a) The use of amplified sound shall not be permitted until the University installs a new sound system (described above) and thereafter the number of special events using sound amplification shall be limited to 12 per calendar year;
 - (b) The University shall provide owners of neighboring properties with telephone numbers to reach appropriate representatives of the University (such as staff of

the Public Safety Department, Community Relations office, or office of the Dean of Students) to address concerns regarding noise and activity on Jacobs Field;

- (c) The University shall provide notice of special events to residents in the vicinity of Jacobs Field, on Woodway Lane, and on University Avenue, as well as to any other persons who request notice or whose names are supplied to the University. Notice shall be provided in writing or by fax or email as far in advance as possible, but generally at least 30 days before an event;
- (d) The University shall use its best efforts to avoid scheduling a special event for a date on which a neighbor has informed the University in advance that the neighbor is planning a party or other important occasion; and
- (e) The University shall use its best efforts to observe the following guidelines relating to special events on the athletic fields:
 - (i) Special events shall be conducted only between the hours of 8:00 a.m. and dusk;
 - (ii) Amplified sound for special events on Jacobs Field shall be permitted only with permission from the Office of Student Activities. Sound amplification produced by public address systems, loudspeakers, bullhorns, musical amplifiers, or other similar devices for the intensification of sound shall not be permitted to unreasonably interfere with or disturb neighbors' enjoyment of their property or with the University's academic or administrative activities, consistent with the University's Sound Amplification Policy;
 - (iii) Vehicles essential for servicing the special events may park in the western parking area closest to Jacobs Field, but only if other parking locations are not feasible. In no event shall service vehicles park next to adjacent residences;
 - (iv) If an unauthorized special event (an event not scheduled by the University) occurs, neighbors may contact the designated university staff contact person; and
 - (v) Noise guidelines shall be provided to, and made part of, any arrangement between the University and the organization sponsoring the special event or the department or student group sponsoring the special event.

Nebraska Hall Addition

26. The addition shall be sited as shown in Exhibit 50 of the record and shall be set back approximately 97 feet from Nebraska Avenue and 45 feet from the rear (west) property line. Building height shall not exceed three stories, as aligned with the height of the existing third floor of Nebraska Hall. The gross floor area of the addition shall not exceed 50,000 square feet, and the addition shall provide at least 150 new beds and shall contain a multipurpose room with capacity for a 35-person meeting. The existing driveway shall remain and be used for drop-off and service access. No resident parking shall be provided on-site. Student access to the new addition shall be provided only from the Nebraska Avenue side of the property. Except for solar panels, no mechanical equipment or antennas/dishes shall be installed on the roof of the addition.
27. The University shall extend the existing fence along the north property line until it reaches the east property line along Nebraska Avenue, with the new fencing matching the seven feet in height of the existing fencing. The University shall install and maintain a landscape buffer of evergreen and deciduous plantings along the western perimeter to screen views of the building from neighboring residences. The University shall consult with the Fort Gaines Citizens' Association in deciding the landscaping design.
28. The University shall have the flexibility to vary the location and design of all interior components, including partitions, structural slabs, doors, hallways, columns, stairways, mechanical rooms, elevators, and toilet rooms, provided that the variations do not change the exterior configurations of the structures.
29. The University is granted the flexibility to vary the final selection of the exterior materials within the color ranges and material types proposed, based on the availability at the time of construction, and to make minor refinements to exterior details and dimensions, including belt courses, sills, bases, cornices, railings, trim, and façade patterns and articulations.
30. The University shall minimize the impact of construction activity on neighboring properties by:
 - (a) Appointing a University staff liaison to address concerns and answer questions regarding construction activity;
 - (b) Establishing a 24-hour construction contractor telephone contact for reporting problems and establishing a process for timely response;
 - (c) Conducting preconstruction inspections (including a photographic record) of nearby properties to establish a baseline for assessing potential construction-re-

lated damage and establishing a process for expeditiously and fairly handling damage claims;

- (d) Holding a preconstruction community meeting to coordinate planned construction activities at least 90 days before construction to include construction managers;
 - (e) Limiting construction work to Monday through Friday, 7:30 a.m. to 4:00 p.m.; however, interior work not creating an impact on neighboring residences may take place outside these hours; and
 - (f) Prohibiting construction traffic and construction worker parking on the nearby residential streets.
31. Pursuant to 11 DCMR § 3130 the portion of this Order approving the addition shall not be valid for more than two years after it becomes effective unless, within such two-year period, the University files plans for the proposed addition with the Department of Consumer and Regulatory Affairs for the purpose of securing a building permit(s), or the applicant files a request for a time extension pursuant to § 3130.6 prior to the expiration of the two-year period and that such request is granted. No other action, including the filing or granting of an application for a modification pursuant to § 3129.2 or 3129.7, shall extend the time period.
32. Pursuant to 11 DCMR § 3125, the Commission's approval of the addition includes approval of the plans submitted with the application for the construction of the addition. The University shall carry out the construction only in accordance with the plans approved by the Commission as the same may be amended and/or modified from time to time by the Commission.

Mary Graydon Center

33. The addition shall be sited as shown in Exhibit 9 of the record, where the building height shall not exceed four stories and the gross floor area of the addition shall not exceed 20,000 square feet.
34. The University shall have the flexibility to vary the location and design of all interior components, including partitions, structural slabs, doors, hallways, columns, stairways, mechanical rooms, elevators, and toilet rooms, provided that the variations do not change the exterior configurations of the structures.
35. The University is granted the flexibility to vary the final selection of the exterior materials within the color ranges and material types proposed, based on the availability at the time of construction, and to make minor refinements to exterior details and

dimensions, including belt courses, sills, bases, cornices, railings, trim, and façade patterns and articulations.

36. Pursuant to 11 DCMR § 3130 the portion of this Order approving the addition shall not be valid for more than two years after it becomes effective unless, within such two-year period, the University files plans for the proposed addition with the Department of Consumer and Regulatory Affairs for the purpose of securing a building permit(s), or the applicant files a request for a time extension pursuant to § 3130.6 prior to the expiration of the two-year period and that such request is granted. No other action, including the filing or granting of an application for a modification pursuant to § 3129.2 or 3129.7, shall extend the time period.
37. Pursuant to 11 DCMR § 3125, the Commission's approval of the addition includes approval of the plans submitted with the application for the construction of the addition. The University shall carry out the construction only in accordance with the plans approved by the Commission as the same may be amended and/or modified from time to time by the Commission.

East Campus

38. Buildings 1 through 6 shall be sited as shown in Exhibits 589 and 602 of the record. The East Campus shall contain a maximum of 590 beds for undergraduate students, and a maximum of 3,000 square feet (located in Building 1) devoted to retail use.
39. The University shall have the flexibility to vary the location and design of all interior components, including partitions, structural slabs, doors, hallways, columns, stairways, mechanical rooms, elevators, and toilet rooms, provided that the variations do not change the exterior configurations of the structures.
40. The University is granted the flexibility to vary the final selection of the exterior materials within the color ranges and material types proposed, based on the availability at the time of construction, and to make minor refinements to exterior details and dimensions, including belt courses, sills, bases, cornices, railings, trim, and façade patterns and articulations.
41. The University shall undertake the following actions to mitigate any adverse impact on adjacent properties resulting from construction activity related to the development of the East Campus:
 - (a) Pre- and Post-Construction Surveys of Adjacent Westover Place Properties – The University shall request access to the adjacent Westover Place properties to conduct surveys before the commencement and after completion of the

construction work on the East Campus. The surveys are intended to provide the University and owners of adjacent property a reference point from which to determine the effect, if any, that construction work on the East Campus has on the adjacent Westover Place properties. The surveys will be performed at the University's sole cost and expense. Each survey report shall be provided to the University and to the appropriate property owner. If the University is not permitted access to the property of an adjacent property owner, the University shall not be required to perform a survey for that property;

- (b) Responsibility for Damage to Adjacent Properties – The University shall repair, at its own expense and as promptly as reasonably possible, any damage to the properties of an adjacent property owner, and any improvements thereon, caused by and resulting from the construction work conducted on the East Campus;
- (c) Hours of Construction and Pre-Construction Community Meeting – The University shall limit construction hours to Monday – Friday 7:30 a.m. to 4:00 p.m. Interior work not creating an impact on adjacent properties may take place outside of these hours. The University shall hold a pre-construction community meeting to coordinate planned construction activities on the East Campus at least 90 days before construction activity starts. The University shall schedule the meeting at a time that helps foster maximum community participation. Attendees of that meeting shall include representatives of the University's general contractor and its on-site construction representative;
- (d) Site Management – The University shall erect and maintain construction fencing and barricades to screen and secure the site during the construction process. All excavated materials shall be removed from the East Campus via existing driveways on New Mexico Avenue and Nebraska Avenue. All construction-related deliveries to the East Campus shall occur from existing driveways on New Mexico Avenue or Nebraska Avenue. Although the University does not anticipate the need for any street closures as the result of the construction activity on the East Campus, sidewalk closures may be needed to maintain a safe environment. Notice of such closures shall be communicated in advance to the community. Parking spaces for all construction workers and deliveries shall be provided on the East Campus. No construction-related parking shall be permitted on nearby residential streets. The University shall remove rubbish and construction debris continuously during the construction period during the normal construction workday. The University shall monitor and police the construction site daily or more often as required to ensure cleanliness. The University shall also undertake a program of pest control to ensure that no increase in pest activity occurs during the construction period. All excavation or backfill trucks shall be

covered before proceeding from the East Campus onto public streets. Dust and debris shall be removed from the East Campus on an as-needed basis; and

- (e) Applicant's On-Site Construction Representative – The University shall designate a representative to be the key contact during the period of construction on the East Campus. At any time construction activity is occurring on the East Campus, the representative or his/her designee shall be available on-site or by telephone to receive communications. The University shall make available, at minimum to the owners of adjacent property, the name and telephone number of a person designated by the University to be contacted in case of emergency when no construction activity is occurring. The representative and his/her designee shall be able to answer questions, receive comments about site activities, and address concerns raised throughout the construction process.

VOTE: 4-0-0 (Anthony J. Hood, Konrad W. Schlater (by absentee vote), Peter G. May, and Michael G. Turnbull voting to approve; Marcie I. Cohen not participating.)

BY ORDER OF THE D.C. ZONING COMMISSION

Each concurring member approved the issuance of this Order.

ATTESTED BY:



SARA A. BARDIN
OFFICE OF ZONING DIRECTOR

FINAL DATE OF ORDER: MAY 17 2012

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of Zoning



Z.C. CASE NO.: 11-07

MAY 17 2012

As Secretary to the Commission, I hereby certify that on _____ copies of this Z.C. Order No. 11-07 were mailed first class, postage prepaid or sent by inter-office government mail to the following:

- | | | |
|---|--|--|
| 1. D.C. Register | 8. Commissioner Beverly Sklover
ANC/SMD 3E01
4504 Albemarle Street, N.W.
Washington, D.C. 20016 | 16. Neighbors for a Livable
Community
c/o Laurie Horvitz, Esq.
4520 East-West Highway, Suite
700
Bethesda, Maryland 20016 |
| 2. Paul Tummonds, Esq.
Goulston & Storrs
1999 K Street, N.W.
Washington, D.C. 20006 | 9. Commissioner Jonathan Bender
ANC/SMD 3E03
4411 Fessenden Street, N.W.
Washington, D.C. 20016 | 17. Westover Place Homes
Corporation
c/o Laurie Horvitz, Esq.
4520 East-West Highway, Suite
700
Bethesda, Maryland 20016 |
| 3. ANC 3D
P.O. Box 40846
Washington, D.C. 20016 | 10. Commissioner Sam Serebin
ANC/SMD 3E05
4300 Van Ness Street, N.W.
Washington, D.C. 20016 | 18. Tenley Campus Neighborhood
Association
c/o Allison Fultz, Esq.
Kaplan Kirsch & Rockwell, LLP
1001 Connecticut Ave., N.W.,
Suite 800
Washington, D.C. 20036 |
| 4. ANC 3E
c/o Lisner-Louise-Dickson-
Hurt Home
5425 Western Avenue, N.W.
Washington, D.C. 20015 | 11. Councilmember Mary Cheh | 19. Tenley Neighbors Association
c/o Judy Chesser
3901 Alton Place, N.W.
Washington, D.C. 20016 |
| 5. ANC 3F
Box 244
4401-A Connecticut Avenue,
N.W.
Washington, D.C. 20008-2322 | 12. DDOT (Martin Parker) | 20. Robert Herzstein
4710 Woodway Lane, N.W.
Washington, D.C. 20016 |
| 6. Commissioner Tom Smith
ANC/SMD 3D02
4601 Tilden Street, N.W.
Washington, D.C. 20016 | 13. Melinda Bolling,
Acting General Counsel
DCRA
1100 4th Street, S.W.
Washington, D.C. 20024 | |
| 7. Commissioner Deon Jones
ANC/3D07
Letts Hall
4400 Massachusetts Avenue,
N.W. #513
Washington, D.C. 20016 | 14. Office of the Attorney General
(Alan Bergstein) | |
| | 15. Spring-Valley-Wesley Heights
Neighborhood Association
c/o Michael Mazzuchi
4430 Macomb Street, N.W.
Washington, D.C. 20016 | |

ATTESTED BY:

Sharon S. Schellin
Secretary to the Zoning Commission
Office of Zoning

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Zoning Commission



ZONING COMMISSION FOR THE DISTRICT OF COLUMBIA
ZONING COMMISSION ORDER NO. 11-07B

Z.C. Case No. 11-07B
American University

(Special Exception Approval of a Further Processing of an Approved Campus Plan and
Variance Relief – Relocation of the Washington College of Law to the Tenley Campus)
April 9, 2012

This proceeding concerns an application of the American University (the “University” or “AU” or “Applicant”) requesting special exception approval under the campus plan provisions of the Zoning Regulations at 11 DCMR §§ 3104 and 210 for further processing under the approved 2011-2020 campus plan¹, and variance relief from § 400.9 of the Zoning Regulations, pursuant to 11 DCMR § 3103.2 of the Zoning Regulations, in order to allow the relocation of and construction of facilities for the Washington College of Law (“WCL”) at the Tenley Campus. In accordance with § 3035.4 of the Zoning Regulations, this case was heard and decided by the Zoning Commission for the District of Columbia (the “Commission”) using the rules of the D.C. Board of Zoning Adjustment at 11 DCMR §§ 3100 *et seq.* For the reasons stated below, the Commission hereby approves the application, subject to conditions.

HEARING DATES: November 21 and December 1, 2011

DECISION DATES: March 26 and April 9, 2012

The zoning relief requested in this case was self-certified, pursuant to 11 DCMR § 3113.2.

FINDINGS OF FACT

Applications, Parties, and Hearing

1. On August 29, 2011, the University submitted an application seeking special exception review and approval of a further processing of AU’s approved 2011-2020 campus plan (“2011 Plan”) for the relocation of the WCL and the construction of some new facilities for the WCL at the Tenley Campus (the “Property”). As part of the further processing application, the University also requested variance relief from § 400.9 of the Zoning Regulations. (Exhibits (“Ex.”) 1-5.) The Commission voted to approve the 2011 Plan on March 8, 2012. (Z.C. Order No. 11-07.)

¹ The campus plan was approved through Z.C. Order No. 11-07.

2. The Tenley Campus is located at 4340 Nebraska Avenue, N.W., which includes Square 1728, Lot 1. (Ex. 4.)
3. Notice of the public hearing was published in the *D.C. Register* on September 9, 2011 (58 DCR 7976) and was mailed to Advisory Neighborhood Commissions (“ANC”) 3E and 3F, and to owners of all property within 200 feet of the Property.
4. The public hearings on the application were conducted on November 21 and December 1, 2011. The hearings were conducted in accordance with the provisions of 11 DCMR §§ 3022 and 3117.
5. In addition to the Applicant, ANCs 3E and 3F were automatically parties in this proceeding. ANC 3E submitted a report and resolution in support of the application with conditions, after initially opposing the application. (Ex. 31, 57). The Commission also recognized ANC 3F as an “affected ANC” due to its proximity to the Tenley Campus, and granted a request by ANC 3F for additional time to evaluate the updated plans for the Tenley Campus and to submit a report. (Ex. 26, 32; 11/21/11 Transcript (“Tr.”) pp. 12-15.)
6. On November 4, 2011, the Commission received a request for party status from ANC 3D. The Commission denied party status to ANC 3D because the Tenley Campus is located approximately one-half mile outside the boundaries of ANC 3D. Accordingly, the Commission found that ANC 3D was not an “affected ANC,” and that its interests would not be more uniquely or distinctly affected by the new use of the Tenley Campus than would members of the general public equally far from the Tenley Campus. (Ex. 16; 11/21/11 Tr. pp. 13-19, 23-34.) ANC 3D submitted a letter in opposition to the application on December 1, 2011. (Ex. 55.)
7. The Commission received timely party status requests in opposition to the application from the Tenley Campus Neighbors Association (“TCNA”) (Ex. 7), the Tenley Neighbors Association (“TNA”) (Ex. 13), and the Spring Valley-Wesley Heights Citizens Association (“SVWHCA”). (Ex. 22.) The Commission granted party status to TCNA and TNA. The Commission denied party status to SVWHCA because the boundaries of the SVWHCA do not include the Tenley Campus and are at least one-half mile from the Tenley Campus; thus, members of SVWHCA will not be more uniquely or distinctly affected by the new use of the Tenley Campus than members of the general public. (11/21/11 Tr. pp., 24-28.)
8. The Commission received a timely party status request in support from Ward 3 Vision (“W3V”). (Ex. 20.) The Commission granted party status to W3V. (11/21/11 Tr. p. 11.)

9. Following the execution of a private agreement between TCNA and AU concerning the future development of the western portion of the Tenley Campus, TCNA withdrew its party status and did not have any further participation in this case. (Ex. 54.)
10. At the November 21st hearing, the University presented evidence and testimony from David King, qualified as an expert in architecture; David Taylor, the chief of staff in the University's Office of the President; Jorge Abud, the University's assistant vice president of facilities development and real estate; and Dan Van Pelt, qualified as an expert in traffic engineering. (11/21/11 Tr. pp. 39-78.)
11. At the public hearing, the Commission heard testimony and received a report from the Office of Planning ("OP") in support of the application. (Ex. 25; 11/21/11 Tr. pp. 184-189.)
12. The District Department of Transportation ("DDOT") filed a report in this case that was supportive of the application with recommendations. At the Commission's request, DDOT also filed a supplemental report responding to issues raised by ANC 3D. (Ex. 43, 71; 11/21/11 Tr. pp. 189-204.)
13. On October 21, 2011, AU filed a transportation impact study ("Traffic Study"). (Ex. 11.)
14. On November 7, 2011, AU filed a pre-hearing submission, which included updated architectural plans, a refinement of the requested variance relief from § 400.9, and a copy of the staff report of the Historic Preservation Office recommending that the Historic Preservation Review Board approve the plans for the Tenley Campus. (Ex. 21.)
15. On November 21, 2011, AU filed responses to the conditions of support stated in DDOT's report. (Ex. 46.)
16. On December 1, 2011, AU filed responses to issues and questions from the November 21 public hearing. AU's submission included development data for both the existing and proposed Tenley Campus uses; additional measurements and information for the new Tenley Campus use; a copy of the 1986 agreement between ANC 3E and AU; a copy of the November 21, 2011 agreement between TCNA and AU regarding future development of the Tenley Campus; slides from a presentation by the Washington Metropolitan Area Transit Authority regarding capacity at the Tenleytown Metrorail station; a description of AU's parking policy for WCL; and AU's responses to ANC 3F's 16 conditions of support. (Ex. 58.)
17. After the close of the hearing, the University filed a post-hearing submission in response to the requests of the Commission, including responses to the report and testimony

submitted by TNA, responses to traffic issues raised by ANC 3D, and clarifications of information previously submitted to the record. (Ex. 72.)

18. At a public meeting on April 9, 2012, the Commission approved the application in Case No. 11-07B, subject to conditions.

The Tenley Campus and Surrounding Area

19. The Tenley Campus is located in the Tenleytown neighborhood of Northwest Washington approximately one mile northeast of the University's Main Campus. The Tenley Campus contains eight acres of land and the following five primary buildings: freestanding Dunblane and Congressional Halls; and the connected Capital, Federal, and Constitution Halls. Except for Dunblane, the buildings are concentrated at the eastern edge of the site, and the western edge primarily contains trees, open green space, and recreation fields. The Tenley Campus is bounded by Tenley Circle, Nebraska Avenue, Warren Street, 42nd Street, and Yuma Street. (Ex. 4.)
20. The area surrounding the Tenley Campus includes single-family detached homes located to the west of 42nd Street and south of Warren Street. Institutional uses, such as St. Ann's Church and School and the Convent of Bon Secours, are located directly across Yuma Street to the north, with single-family residential buildings further west along Yuma Street. Residential uses are also located across Nebraska Avenue from the Tenley Campus. The Wisconsin Avenue commercial corridor is directly to the east of the Tenley Campus. This commercial corridor contains moderate density commercial uses, most of which are retail. The two entrances to the Tenleytown Metrorail Station are located approximately one block north along Wisconsin Avenue. (Ex. 4.)
21. The topography of the Tenley Campus varies significantly across the site with a high point of elevation 412 feet adjacent to Yuma Street and a low point of elevation 381 feet at Tenley Circle. The center of the proposed building façade along Yuma has a grade elevation of 406 feet at the curb line, which is approximately 20 feet higher than the 386-foot curb line elevation at the center of the new façade along Nebraska Avenue. Along Yuma Street and Nebraska Avenue, the grade elevation of the Tenley Campus and the adjacent right of way is approximately the same. However, along 42nd Street and the western portion of the property along Warren Street, the grade elevation of the Tenley Campus property is approximately 13 feet above these adjacent rights of way. (Ex. 4.)
22. The Tenley Campus currently contains the housing, classrooms and offices for the Washington Semester Program, as well as offices for several administrative units. (Ex. 4.)
23. The Tenleytown Historical Society ("THS") submitted three landmark applications for individual buildings located on the Tenley Campus, and ultimately the entire property.

The first application (HPA #08-11) was for Dunblane, a building located on the far western portion of the Tenley Campus that dates back to the mid-19th century. That landmark application focused primarily on the building's nineteenth century significance. The second historic landmark application filed by THS (HPA #09-04) was focused on the use of the Tenley Campus property by the Sisters of Providence of St. Mary of the Woods, which established a school for girls on the site, the Immaculata Seminary. The third historic landmark application (HPA #11-08), revised application HPA #09-04 and focused on the history and development of the Immaculata Seminary and specifically includes Dunblane, the buildings on the Tenley Campus that were constructed on or about 1955 (now known as Federal Hall, Congressional Hall, and the Constitution Building), and the entire Tenley Campus as elements of the significance of the landmark. (Ex. 4.)

24. On August 22, 2011, the University filed a conceptual design review application (HPA #11-467) for the proposed WCL facilities with the Historic Preservation Review Board ("HPRB"). On October 27, 2011, HPRB voted to approve THS's HPA #09-04 which created a historic district for the Tenley Campus and also granted conceptual design approval to the University's proposed WCL facilities in HPA #11-467. (Ex. 21.) The design for the Tenley Campus was approved on a conceptual basis by the HPRB at its October 27, 2011 meeting. (Ex. 21.)
25. The Tenley Campus is zoned R-1-B and is located in the Institutional land use category on the Future Land Use Map and the Generalized Policy Map of the District Elements of the Comprehensive Plan for the National Capital.

Tenley Campus Design

26. The University has determined that the current WCL facilities at 4801 Massachusetts Avenue, with an additional 16,000 square feet of rented office space located nearby, are not capable of supporting WCL's evolving operational and pedagogical needs. The new facility at the Tenley Campus will allow WCL to satisfy its needs as well as advance the University's goals described in the 2011 Plan. (Ex. 4.)
27. Development of the new WCL at the Tenley Campus will incorporate historic Capital Hall, its chapel, and Dunblane House. The new building masses will be located to preserve the existing academic courtyard and much of the existing topography, mature trees, and landscape character. The proposed new construction will require the demolition of three existing structures: Congressional Hall, Federal Hall, and Constitution Building. Those three structures are not considered architecturally significant, and were found not viable for law school use based on a building assessment commissioned by AU. (Ex. 4; 11/21/11 Tr. pp. 49-60.)

28. The new Tenley Campus development will provide a law school facility of approximately 310,000 square feet, with parking for approximately 450 vehicles. Approximately 400 parking spaces will be provided in two below-grade parking levels and approximately 40-50 parking spaces will be retained in an existing surface parking lot accessed from an existing curb cut on Yuma Street. The new facility will support a maximum student population of 2,000 and a maximum faculty/staff population of 500. (Ex. 4, 21; 11/21/11 Tr. pp. 45-60.) The new Tenley Campus will incorporate the following projects:
- (a) Capital Hall will be renovated, with the primary focus on interior spaces. The chapel will be renovated to accommodate the WCL Trial Advocacy program, adapting the main sanctuary into a ceremonial moot courtroom and the lower level into multiple flexible teaching courtrooms. The remainder of the building will be renovated to accommodate administrative and student offices. Capital Hall's existing exterior service court will be enclosed and converted into an enclosed atrium to facilitate connections to a new Yuma Street building. No changes are proposed for the primary exterior façades of Capital Hall. Any work to the exterior at these locations will be focused on the restoration and maintenance of the historic structure; (Ex. 4, 21.)
 - (b) The new Nebraska Avenue building will serve as a formal entrance to the new WCL facility. The entry floor will accommodate WCL's ceremonial courtroom, a large lobby intended for small gatherings and receptions, and several large format tiered classrooms. The second, third, and fourth floors will accommodate the Pence Law Library and feature both formal and informal study areas, group study rooms, library collections, public legal resources, and administrative support areas. The building will be 63 feet tall. The closest corner of the building to Nebraska Avenue will be set back 12.74 feet from the property line. The Nebraska Avenue building will include approximately 87,000 square feet of above-grade space, roughly distributed equally among the four levels. Driveways for a vehicular drop-off lane and entrance ramp to the two level below-grade parking structure will extend from the east façade of the building to Nebraska Avenue; (Ex. 4, 21.)
 - (c) The new Yuma Street building will be four stories above grade. The Yuma Street façade will minimize the apparent mass of the structure relative to the nearby lower scale residential context. The exterior façades of the Yuma Street addition will be composed primarily of brick masonry with large expanses of glass and aluminum curtainwall and limestone veneer. The building will include approximately 158,000 square feet of space and will be 59 feet tall. The lowest building will include large instructional spaces, tiered classrooms, student organization offices, student lockers, meeting space, a dining facility, and faculty

offices. The Yuma Street building and the Nebraska Avenue building will be linked by a below-grade connector; and (Ex. 4, 21.)

- (d) The design will preserve most of the campus interior and Dunblane House. The building design will be configured to maintain existing pedestrian circulation patterns from Yuma Street and Nebraska Avenue, and the structured terrace that links the Nebraska Avenue and Yuma Street buildings will be furnished with flexible seating and tables. In response to concerns raised by various members of the surrounding community, AU will retain the historic components of the Dunblane House. AU anticipates that WCL uses of Dunblane will include administrative offices, Alumni Affairs offices, and offices for visiting faculty and scholars. The exterior appearance will remain unaltered from its current condition; and (Ex. 4, 21.)
29. Redevelopment of the Tenley Campus will redefine the lawn in front of Capital Hall to better engage pedestrian activity and public access from Tenley Circle. The Applicant noted that this aspect of the proposed design is a direct result of a constructive dialogue process with the community and addresses many of the concerns expressed by both neighbors and OP. The new lawn area will direct circulation around Capital Hall and focus access to two new primary entry courts that frame the foreground for the two new buildings on the Tenley Campus. (Ex. 4, 21; 11/21/11 Tr. pp. 45-60.)
30. A new Yuma Street court will facilitate convenient access from the Tenleytown Metrorail Station and provide entry directly into the academic courtyard, Capital Hall, and the new academic and office wing. A new Nebraska Avenue court will provide entry into the new academic and library wing while also providing access to the academic courtyard through an existing building “hyphen.” (Ex. 4, 21; 11/21/11 Tr. pp. 45-60.)
31. The balance of the Tenley Campus will be enhanced by a densely planted perimeter landscape zone which will include walking paths that encircle Dunblane House and extend along Warren Street, 42nd Street, and Yuma Street. (Ex. 4, 21.)
32. The design for the Tenley Campus will promote environmentally sustainable development principles. Carbon emissions and fossil fuel consumption will be diminished by the site’s close proximity to multiple modes of public transportation, including city and campus buses and Metrorail. Site amenities will include bicycle racks and shower facilities to encourage bicycle commuting. Management of solar heat gain, stormwater quantity and quality, potable water use, and HVAC refrigerants will be implemented to minimize negative environmental effects. Building systems and site infrastructure will be designed for optimum performance to minimize energy consumption. Construction materials will be specified that require decreased embodied energy and maximize recycled content or are rapidly renewable. Interior spaces will

promote healthy environments by minimizing airborne contaminants and maximizing personal comfort by providing effective and adaptable HVAC systems and by emphasizing access to natural light and views. The University designed the project to meet or exceed LEED Gold standards, and the University will seek LEED Gold certification for the project. (Ex. 4, 21.)

33. At its closest point to the Nebraska Avenue property line, the Nebraska Avenue building will be set back 12.74 feet from the property line. Since the Nebraska Avenue building will have a measured building height of 63 feet, it is required to be set back from the Nebraska Avenue property line a distance of 23 feet, pursuant to § 400.9. Therefore, the Applicant is requesting variance relief from § 400.9 of the Zoning Regulations for the Nebraska Avenue building. (Ex. 4.)

Community Outreach and Dialogue

34. AU engaged in a dialogue with representatives of ANC 3E, TCNA, W3V, and nearby residents from late 2010 through spring 2011. The goal of this process was to allow each of the parties to articulate their goals and concerns for the development of the Tenley Campus and the relocation of the Washington College of Law to the Tenley Campus. This process included representatives from WCL and AU's architectural team, as well as an architect selected by TCNA. This group met six times. (Ex. 4; 11/21/11 Tr. pp. 75-76.)
35. In addition to these meetings, AU and its architects engaged in two design meetings with representatives of OP, the Historic Preservation Office ("HPO"), ANC 3E, ANC 3F, TCNA, the Tenleytown Historical Society, W3V, and other community representatives. These meetings were facilitated by OP Director Harriet Tregoning, who focused the group on the establishment of basic design principles which would then serve to guide potential modifications and refinements to specific elements of the campus design. Participants reviewed and discussed many issues, including the following: site development priorities; building massing; height and density; vehicular and pedestrian access; landscape character; parking facilities; historic preservation; building program; and neighborhood amenities. (Ex. 4.)
36. The group achieved consensus on eight design principles ranging from concentrating development on the eastern side of the site to creating accessible open areas and green space. (Ex. 4.)
37. The University and TCNA entered into a private agreement concerning the future development of the western portion of the Tenley Campus. The University agreed to restrict development on the western portion of the Tenley Campus until 2031. This restriction and associated conditions are included in the conditions of approval contained

herein. (Ex. 58.) As a result of this agreement, TCNA withdrew its party status in opposition. (Ex. 54.)

Office of Planning

38. By report dated November 10, 2011, and by testimony at the public hearing, OP recommended approval of the further processing and variance application for the Tenley Campus. OP reviewed the application under the standards for special exception approval for a campus plan and further processing under § 210, the general standards for special exception approval under § 3104, and the variance approval standards under § 3103.2, and found that the University satisfied the burden of proof for the special exception and variance relief requested. OP concluded that the project is not likely to “adversely impact neighboring properties, given its site design, efforts made to encourage the use of public transit and bicycling, and the anticipated use of the site.” (Ex. 25; 11/21/11 Tr. pp. 184-189.)
39. In its review of the § 210.2 standards, the OP report concluded that the relocation of the WCL to the Tenley Campus is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions. With respect to noise, the OP report stated that the project is unlikely to cause objectionable noise impacts due to the design and siting of the buildings. In regards to the number of students, OP noted its support for AU’s efforts to mitigate its impact on traffic, parking, and circulation and that the relocation of the WCL to the Tenley Campus will provide greater opportunities for students and faculty to use non-automobile forms of transportation. Also, the OP report stated that the proposed numbers of students and faculty are not likely to create objectionable conditions for neighboring properties because of the projects’ design and building siting. Finally, the OP report noted that the planned special events at the Tenley Campus are not likely to create objectionable conditions for the neighbors because of AU’s plans for managing the events and because of the nature of the events. (Ex. 25.)
40. In regard to the variance standards of § 3103.2, the OP report concluded that the site is unique due to its irregular trapezoidal shape; proximity to both a major commercial corridor and institutional and single-family residences; a 26-foot grade change on the site; and its designation as a historic district with three contributing buildings. The OP report also concluded that the Applicant would be faced with a practical difficulty in satisfying the setback requirement for the Nebraska Avenue building by preserving the historic character of the campus and maintaining the relationships between existing and proposed buildings; a conforming setback would not allow for the goals to be met because of the resulting design. In regard to the final prong of the variance test, the OP report stated that the proposed setback of 12.74 feet would not adversely impact the provision of light and air on adjacent properties, would not create adverse visual impacts, and would not create

disruptive noise; thus, the proposed setback would not impair the intent, purpose, or integrity of the Zone Plan. (Ex. 25.)

District Department of Transportation

41. By report dated November 17, 2011, DDOT supported the relocation of the WCL to the Tenley Campus with conditions. DDOT provided the following conditions of support: (1) implement traffic calming measures along 42nd Street in accordance with the Rock Creek West II Livability Study and the Janney Safe Routes to School Action Plan; (2) construct sidewalk and traffic calming on Warren Street; (3) widen the sidewalk along the northwest side of Nebraska Avenue between the Tenley and Main Campuses; (4) remove parking in critical locations to facilitate vehicular capacity; (5) modify site access design to meet DDOT standards; (6) commit to funding a significant suite of traffic demand management (“TDM”) measures recommended in the body of the DDOT report; (7) increase bicycle parking proposed for main building entrances and in the parking garage; (8) submit to annual reporting for performance of TDM measures; (9) meet trip thresholds for turning movements into the main garage; (10) meet threshold for AU-related use of public curbside parking; and (11) meet threshold for AU-related neighborhood cut-through trips. (Ex. 43.)
42. In its report, DDOT stated that it agrees with the methods, assumptions and conclusions in AU’s Traffic Study. In particular, DDOT noted that it agrees with AU’s Traffic Study in the following respects: evaluation of trip generation; assessment of trip distribution and assignment; mode split change to increased usage of public transit as a result of relocation of the WCL to the Tenley Campus; scope of study area; and projected background growth of traffic; and loading access from Yuma Street. (Ex. 43.)
43. In its report, DDOT stated that AU’s TDM measures will help mitigate potentially adverse impacts on traffic as a result of the redevelopment of the Tenley Campus. (Ex. 43.)
44. By supplemental report dated December 8, 2011, at the request of the Commission, DDOT responded to issues raised in a letter submitted by ANC 3D. In its report, DDOT stated that 450 parking spaces is considerably larger than the likely demand for parking, and reiterated its position that the Tenley Campus should provide only 250 spaces. Also, DDOT stated that “it is confident that [AU’s] work done to evaluate future conditions is accurate and reflects best industry practices.” Finally, DDOT stated that AU’s “suite of TDM programs will significantly reduce vehicular traffic demand to the site.” DDOT also made some refinements to its recommended TDM measures. (Ex. 71.)

ANC 3E

45. By resolution and testimony, ANC 3E supported the relocation of the WCL to the Tenley Campus. ANC 3E stated that the University's private agreement with TCNA demonstrated a successful collaboration between the University and the community. ANC 3E requested that the Commission adopt the conditions in the private agreement with a modification to the "lawsuit exception" in the private agreement, such that it applied only to lawsuits filed by non-TCNA members. ANC 3E also stated that the number of parking spaces should not be reduced from what the University proposed, that the University should not be prohibited from renting out excess parking spaces, and that widening of the Nebraska Avenue sidewalk between the Main and Tenley Campuses should be reviewed further. (Ex. 57; 12/1/11 Tr. pp. 30-39.)

ANC 3F

46. By report and testimony, ANC 3F stated that it does not object to the relocation of the WCL to the Tenley Campus, with conditions. Based on the actions that AU will take in the redevelopment of the Tenley Campus, including reporting, TDM measures, and other design features, ANC 3F did not object to the redevelopment of the Tenley Campus. ANC 3F placed 16 conditions on its support. (Ex. 53; 12/1/11 Tr. pp. 52-71.)

Testimony in Support

47. W3V presented oral testimony in support of the relocation of the WCL to the Tenley Campus and stated that the redevelopment of the Tenley Campus will be a great benefit to the community. W3V testified that the relocation of the WCL to the Tenley Campus will improve the vitality of the Wisconsin Avenue corridor and that AU was receptive to community concerns and made adjustments to the design and layout in response. W3V testified that the green space at the front of the redeveloped Tenley Campus will provide an opportunity to provide a great public space and entrance to the campus. In addition, W3V testified that it generally supports the reduction of parking in new developments near Metro stations and that DDOT did a thorough analysis of the Traffic Study. Further, Ellen McCarthy, qualified as an expert in land use and zoning, testified on behalf of W3V that there will not be an adverse impact from the project and that the project will be a positive development for the neighborhood. In particular, Ms. McCarthy testified that noise will be less than the existing use, that the project will have a large separation from single-family residential areas, that the proximity to public transit will encourage transit use and mitigate traffic impacts, that the number of students will not cause adverse impacts, and that the project complies with the general requirements for a special exception under § 210 of the Zoning Regulations. (12/1/11 Tr. pp. 78-94.)

48. The Commission heard testimony from several persons in support of the relocation of the WCL to the Tenley Campus. Supporters living near the Tenley Campus testified that the prior relocation of the WCL from the Main Campus to the Spring Valley location did not have adverse impacts on neighboring areas, and that the new relocation similarly will not have adverse impacts. The supporters commented favorably on AU's efforts to work with community groups, and testified that the redevelopment of the Tenley Campus will benefit the neighborhood and will invigorate businesses along Wisconsin Avenue. The Coalition for Smarter Growth testified that the project will encourage the use of transit and that it supports AU's TDM measures. (12/1/11 Tr. pp. 102-120.)

Testimony in Opposition

49. TNA submitted written and oral testimony in opposition to the application. TNA stated that AU's agreement with TCNA "pushed" the problems with the Tenley Campus closer to Nebraska Avenue. TNA testified that 2,000 students are too many for the campus and that the increase in students at the Tenley Campus will have noticeable impacts on surrounding properties. TNA stated that the 1986 agreement between neighbors and AU concerning development of the Tenley Campus is still in effect. TNA stated that the Tenley Campus will have far more students at one time than AU states, so traffic and other impacts will be worse than stated by the University, particularly neighborhood "cut-through" traffic. TNA testified that AU's Traffic Study does not adequately capture the adverse traffic impacts that will result from the redevelopment of the Tenley Campus and that the project will make the traffic congestion worse. TNA further testified that the number of parking spaces to be provided is far less than what the demand will be and that the University's Good Neighbor Policy is ineffective in reducing off-campus on-street parking violations. TNA stated that AU should not be granted variance relief from § 400.9 because the building will have adverse visual and light impacts on neighboring properties. Finally, TNA testified that the Tenley Campus should include more grass and trees at its eastern edge. (Ex. 67; 12/1/11 Tr. pp. 120-141.)
50. ANC 3D submitted two written submissions in opposition. ANC 3D stated that the Traffic Study is unreliable because of its limited scope. ANC 3D stated that the redevelopment of the Tenley Campus will exacerbate already congested streets in the vicinity of the Tenley Campus and that the TDM measures will be ineffective in reducing adverse traffic impacts. ANC 3D also stated that the redeveloped Tenley Campus will not provide adequate parking for the demand. ANC 3D stated that the University relied on suspect data from a transportation study prepared for the General Services Administration regarding future development of the Department of Homeland Security's Nebraska Avenue Complex ("NAC"). ANC 3D recommended that the University be required to adopt a trip cap as part of its TDM measures. (Ex. 35, 55.)

51. The Commission received written testimony from individuals opposing the application, who generally cited the likelihood of increased traffic congestion in the vicinity of the Tenley Campus; less on-street parking availability in the vicinity of the Tenley Campus; efficacy in preventing on-street parking; insufficient amount of on-campus parking; need for a more extensive traffic mitigation plan; future limits on growth of the Tenley Campus/preservation of green space; pedestrian safety concerns; cooperation by the University in planning for the redevelopment of the Tenley Campus; and incompatibility of the buildings with the surrounding neighborhood.

Section 210 Evaluation

52. Pursuant to 11 DCMR § 210.1, American University is an academic institution of higher learning, chartered by Congress on February 24, 1893 and founded under the auspices of the United Methodist Church. (Ex. 4.)
53. As required by 11 DCMR § 210.2, the Commission finds that the University demonstrated that the proposed use of the Tenley Campus is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable impacts. Specifically, the University proposed conditions of approval to avoid the creation of adverse impacts as a result of the development of the Tenley Campus. These conditions of approval evolved in response to community, agency, and Commission comments. The plan for the Tenley Campus also incorporated changes in response to community input.

Noise

54. The Commission finds that design of and activities on the Tenley Campus will not create objectionable noise impacts. The massing, siting, and functions of the new buildings on the Tenley Campus will minimize potentially adverse noise impacts on any neighboring properties. Development will be concentrated at the eastern end of the site, away from the nearby residential areas, and closer to commercial Wisconsin Avenue. The height and bulk of the new buildings will be located away from residential properties so that they will not create adverse noise or visual impacts on neighboring properties. The closest residential properties will be at least 112 feet from the buildings, so the distance will buffer any noise. Noticeable activity at the law school will be concentrated on its two principal entrances on Nebraska Avenue and on Yuma Street near Tenley Circle, which will mitigate any noise impacts on nearby residential properties because of their large distance from such residential properties. Open courtyards and outdoor gathering spaces will be primarily in the interior of the campus, so they will be buffered from surrounding areas by buildings. (Ex. 4, 21, 72.)

Traffic

55. The University's Traffic Study prepared by the University's traffic expert demonstrated that the relocation of the WCL to the Tenley Campus will not have adverse impacts on the surrounding transportation network, in part because the University will implement measures to mitigate potentially adverse traffic impacts. (Ex. 5, 11.) These measures will include adoption of the TDM measures stated in the report, the enhancement of the University's off-campus street parking enforcement program (the "Good Neighbor Policy"), and working with DDOT to install a new left-turn queuing lane on Nebraska Avenue to provide access to the new underground parking garage. (Ex. 11.)
56. The University will continue to encourage the use of public transportation by all members of the AU community, particularly by the WCL students and staff at the Tenley Campus. In addition to Metrorail and buses, the Tenley Campus is served by AU shuttle buses that connect the Main Campus with the Tenleytown Metrorail Station, the Tenley Campus, and the existing WCL campus. With the relocation of the WCL to the Tenley Campus, the University's projections indicate that shuttle bus ridership will increase, that use of public transit will increase (Metro and bus), and that use of automobiles will decrease. (Ex. 4, 5, 11.)
57. The University testified that objectionable peak-hour traffic congestion exists currently and that relocation of the WCL to the Tenley Campus will not have a noticeable effect on the overall traffic conditions in the surrounding transportation system. Additional traffic, an overall increase by approximately 2.3%, generated by the redevelopment of the Tenley Campus will not significantly contribute to traffic congestion in the proximity of the Tenley Campus. (Ex. 11, 72; 11/21/11 Tr. pp. 60-74.)
58. The University testified that the projected future demand for parking spaces, based on the proposed increase in the student and staff/faculty populations and the percentage of these populations that will drive to the Tenley Campus, will be approximately 450 spaces. This projection is based on an assumption of no changes to mode splits of WCL students, faculty, and staff. However, as the University demonstrated, a likely modest decrease in driving due to relocating the school close to the Metrorail station would decrease demand for parking spaces, to approximately 400 spaces at peak times. The University demonstrated that the approximately 450 provided spaces will be sufficient to accommodate the projected demand, while not encouraging the use of automobiles. Non-typical demand, such as demand generated by larger special events will be accommodated with surplus parking supplies at the Tenley Campus or the Main Campus. (Ex. 4, 5, 11.)

59. The University testified that vehicular access to the Tenley Campus will not adversely impact traffic on Nebraska Avenue, which will be used to provide access to the 400 below-grade parking spaces and a vehicular drop-off lane. This vehicular access point will be a one-way stop-controlled intersection with the north- and southbound approaches of Nebraska Avenue free-flowing through the intersection. The University testified that the proposed vehicular entrance for the Tenley Campus from Nebraska Avenue is projected to operate under acceptable conditions during the morning and afternoon peak hours. (Ex. 4, 5, 11.)
60. The University testified and presented evidence that the Good Neighbor Policy has been effective in preventing WCL-related on-street parking on nearby neighborhood streets. The continuation of the Good Neighbor Policy at the Tenley Campus will continue to prevent such unauthorized on-street parking. In response to community requests that the University increase the Good Neighbor Policy's enforcement mechanisms, AU adopted changes to strengthen enforcement. The new policy will escalate fines to \$100 for violations after the first offense, and WCL members will be subject to "administrative penalties, up to and including Honor Code violations and/or disciplinary action" for violations. (Ex. 4, 5, 11.)
61. The Commission finds that the Traffic Study included an appropriate scope for determining the potential impacts of the relocation of the WCL to the Tenley Campus. The scope of the Transportation Study accounted for traffic generated by changes to the network including planned and unbuilt developments using industry standard methodologies. The scope of the Traffic Study was discussed with and approved by DDOT. AU's traffic engineering experts and DDOT set the study area boundaries at the limits of where they believed relocation to the WCL could have a noticeable impact. The basis for this boundary was the predicted amount of vehicular traffic generated by the new WCL and the amount of traffic expected in the future (from existing and non-WCL sources in the future). AU's traffic engineering expert and DDOT selected the edge intersections based on accepted industry standards. (Ex. 11, 72.)
62. The Commission finds that the Traffic Study's inclusion of certain data from a transportation study prepared for the General Services Administration regarding future development of the Department of Homeland Security's NAC was appropriate. The Traffic Study used the following information from the NAC transportation study: (1) counts of existing traffic; (2) background growth assumptions; and (3) projections of traffic for the future NAC campus. AU's traffic engineering expert discussed the use of these study inputs with DDOT during the scoping of the Traffic Study, and DDOT agreed that these inputs were appropriate for use in the Traffic Study. (Ex. 72.)
63. The Commission finds that the University has satisfied eight recommendations made by DDOT (nos. 1, 2, and 6-11), that four of DDOT's recommendations are not necessary to

mitigate any adverse impacts associated with this application, such as the sidewalk and traffic calming measures proposed for Warren Street and Nebraska Avenue. The University's monitoring program will satisfy most of DDOT's conditions and allow problems to be addressed as they arise. The Commission was not persuaded by DDOT's recommendation for a reduced number of parking spaces, because AU demonstrated that the proposal of approximately 450 spaces will balance the need for parking with concerns of the neighboring community while not encouraging driving to the site.

64. The Commission finds that a trip cap was not presently justified for the proposed redevelopment of the Tenley Campus. The University demonstrated that its TDM program has already had a positive impact on the reduction of vehicular trips attributable to AU, and its TDM program for the redevelopment of the Tenley Campus will continue to be effective. (Ex. 72.)
65. The Commission finds that the redevelopment of the Tenley Campus will not create adverse traffic or parking impacts on neighboring properties. The relocation of the WCL to the Tenley Campus is likely to result in a greater portion of students and faculty/staff using public transit. The provision of 450 parking spaces will be sufficient to accommodate the expected parking demand for WCL students, faculty/staff, and visitors to WCL-sponsored events, and strike an appropriate balance between accommodating the expected parking demand for WCL uses and events while not adversely impacting the surrounding transportation network by adding too many new vehicles. The Commission was not persuaded by DDOT that 250 parking spaces would be adequate to avoid adverse impacts or by the parties in opposition that a greater number of spaces was needed, especially in light of the Applicant's TDM measures.
66. The relocation of the WCL to the Tenley Campus is not likely to generate an increase in traffic that would cause noticeable adverse impacts on the surrounding transportation network. The Good Neighbor Policy will address any adverse impacts regarding the availability of parking on the surrounding neighborhood streets, while the implementation of the TDM measures will likely limit the adverse traffic and parking impacts of the redevelopment of the Tenley Campus.

Number of Students

67. The University testified that, for the existing WCL facility, the maximum number of people on the WCL campus at any one time is approximately 840 people, which occurs at 11:00 a.m. on Wednesdays. With the relocation of the WCL to the Tenley Campus, the University does not intend to make any major changes to classes, operations, or events. Thus, based on the ratio of current to future maximum populations, the University expects that no more than 950 people associated with WCL will be at the Tenley Campus

at any one time when the WCL achieves the maximum populations of 2,000 students and 500 faculty/staff. (Ex. 4, 11, 72.)

68. The University testified that the WCL's hosting of conferences and events, including CLE classes, will not have an adverse impact on the neighboring community. While many events will be open to the public, the vast majority of attendees will continue to be AU faculty, staff, and students. Typically, 27% of attendees at such events are non-University guests, and the University expects the percentage of this limited outside audience to continue at the Tenley Campus. The University will continue to schedule events so they do not conflict with the normal academic schedule or each other; thus, their impact on the day-to-day functioning of the law school will be minor. Given the rather small number of outside participants in these events and the careful scheduling of these events, WCL's hosting of CLE Programs and other events will not have an adverse impact on the neighboring community. (Ex. 4.)
69. The Commission finds that the relocation of the WCL to the Tenley Campus will not cause objectionable impacts due to the number of students. The Tenley Campus will not contain more than approximately 950 people at any one time, and the number of attendees at events and conferences will not be objectionably large or intrusive to neighboring properties. The Tenley Campus will be able to accommodate the proposed number of students, faculty/staff and event attendees without adversely affecting neighboring properties. The Commission finds no basis to adopt a proposal by TNA to restrict to 1,000 the number of persons permitted on the Tenley Campus at any one time. That proposal would be extremely difficult to enforce, particularly in light of the aspects of the campus accessible to the public, and was not shown to be necessary or effective in avoiding any potential adverse impacts created by the Applicant's proposed use of the campus, especially in light of the limits on numbers of students, employees, and persons attending special events adopted in this Order.

Other Objectionable Conditions

70. The Commission finds that the redevelopment of the Tenley Campus will not create any other adverse impacts or other objectionable conditions on nearby properties. The buildings will be concentrated away from the residential areas nearby, and the trees and landscaping along the campus perimeter will provide significant buffers from both sound and visual impacts. The Nebraska Avenue building will be located a significant distance from nearby residential properties, so that it will not cause adverse visual impacts on those residential properties. The historic buildings (Capital Hall and Dunblane) will be preserved and incorporated into the new campus, and new buildings will be constructed on existing footprints to the greatest extent possible; thus, the site will maintain its existing configuration and aesthetic. The design of the campus will include significant green space, and development on the western edge will be restricted. The Campus will

have limited nighttime activity, and rooms will be equipped with light sensors to shut off all lights when rooms are not in use.

Variance Relief Evaluation

71. Under § 8 of the Zoning Act, D.C. Official Code § 6-641.07(g)(3), the Board of Zoning Adjustment, or Commission in this case, is authorized to grant a variance when an applicant demonstrates that (1) where, by reason of exceptional narrowness, shallowness or shape of a specific piece of property at the time of the original adoption of the regulations, or by reason of exceptional topographical conditions or other extraordinary or exceptional situation or condition of a specific piece of property; (2) the strict application of any regulation adopted under the Zoning Act would result in peculiar and exceptional practical difficulties to or exceptional and undue hardship upon the owner of the property, to authorize, upon an appeal relating to the property, a variance from the strict application so as to relieve the difficulties or hardship; and (3) that the relief can be granted without substantial detriment to the public good and without substantially impairing the intent, purpose, and integrity of the zone plan as embodied in the Zoning Regulations and Map. *Capitol Hill Restoration Society, Inc. v. D.C. Board of Zoning Adjustment*, 534 A.2d 939, 941 (D.C. 1987). *See also French v. D.C. Board of Zoning Adjustment*, 658 A.2d 1023 (D.C. 1995).
72. The Commission finds that the variance relief standards have been satisfied for the Nebraska Avenue building with regard to the setback requirements of 11 DCMR § 400.9:
- (a) Exceptional Situation of Condition: The Commission finds that the Tenley Campus site is exceptional because of the shape of the site, the configuration of the historic buildings that will be retained in the redevelopment of the site, and the varied topography. The historic district is not related to general building types or patterns of development that occur throughout Tenleytown, but refers to specific buildings (Capital Hall and Dunblane) on the Tenley Campus and the overall history of development on this specific site as an educational institution. The trapezoidal-shaped property and the significant grade changes of approximately 20 feet from Yuma Street to Nebraska Avenue are also factors that contribute to the uniqueness of this property. The confluence of these factors results in a site that is subject to an exceptional situation or condition;
 - (b) Practical Difficulty: The Commission finds that requiring the Applicant to push a portion of the Nebraska Avenue building further away from Nebraska Avenue would be unnecessarily burdensome and that the Applicant would be faced with a practical difficulty in satisfying the strict requirements of § 400.9. The design, siting, and massing of the Nebraska Avenue building were guided by AU's goals of creating a dignified scale and presence to the Nebraska Avenue frontage of the

Tenley Campus, with HPO's goals of retaining the 1955 "hyphen" structure between Capital Hall and the new structure, and the nearby residential property owners' goals of pushing development towards the eastern part of the Tenley Campus. The trapezoidal shape of the Tenley Campus creates a pinch point where this structure approaches Nebraska Avenue, and it is at this pinch point that the structure will be set back from the Nebraska Avenue property line by 12.74 feet. This pinch point occurs near the intersection of Nebraska Avenue and Warren Street. The degree of variance relief requested is relatively small, while the burden associated with strict compliance would be great for the Applicant. The amount of the Nebraska Avenue building which will not be set back 23 feet from Nebraska Avenue will not be a large proportion of the overall size of the structure, but it will be important to convey the building's presence along Nebraska Avenue. Siting the building further away from Nebraska Avenue would cause detrimental impacts related to HPO's concerns regarding the relationship of the new structure to the 1955 building "hyphen" and WCL's goals of creating an appropriate presence for WCL along the Nebraska Avenue corridor; and

- (c) No Detriment to the Public Good or Impairment of the Intent, Purpose or Integrity of the Zone Plan: The Commission finds that granting the requested variance relief will not impair the intent, purpose or integrity of the Zone Plan. The Applicant designed the Nebraska Avenue building to limit the adverse visual and noise impacts on surrounding residential properties. The amount of setback relief necessary to locate this building as depicted on the plans is not significant compared to the benefits that the location of this building will bring to the overall development of the Tenley Campus. Granting this relief will allow WCL to relocate its facilities to the Tenley Campus in a manner that effectively and appropriately addresses the needs and concerns of WCL, OP/HPO, and the surrounding residential community. Moreover, given the location of this pinch point in the property, where the nearest residential uses are located across the 100 foot wide right of way of Nebraska Avenue, there will be no adverse impact on the overall zone plan if this variance is granted.

CONCLUSIONS OF LAW

1. The Applicant requested special exception approval, pursuant to 11 DCMR §§ 210 and 3104, and variance approval, pursuant to 11 DCMR §3103.2 from the setback requirements of § 400.9, for the relocation of the WCL to the Tenley Campus. The Commission is authorized under the aforementioned provisions to grant a special exception when, in the judgment of the Commission based on a showing through substantial evidence, the special exception will be in harmony with the general purpose and intent of the Zoning Regulations and Maps and will not tend to affect adversely the use of neighboring property in accordance with the Zoning Regulations and Zoning

Maps. A special exception to allow use as a college or university in a residential zone district may be granted subject to the provisions contained in § 210, including that the university use must be “located so that it is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions,” and that maximum bulk requirements may be increased for specific buildings, subject to restrictions based on the total bulk of all buildings and structures on the campus. (D.C. Official Code § 6-641.07(g)(2); 11 DCMR §§ 210.2 – 210.9.)

2. Based on the above Findings of Fact, the Commission concludes that the University has satisfied the burden of proof for special exception approval of the relocation of the WCL to the Tenley Campus in accordance with § 210. The building siting, building design, landscaping, TDM measures, and conditions of approval proffered by the University will ensure that the redeveloped Tenley Campus is not likely to become objectionable because of noise, traffic, number of students, or other objectionable impacts. The new use of the Tenley Campus is not inconsistent with relevant policies of the Comprehensive Plan. The University has modified its proposed design for the Tenley Campus to address the concerns of parties and persons in opposition. In response to community and agency comments, approval of the Tenley Campus will include conditions to mitigate any possible adverse impacts and to avoid creation of additional adverse impacts or objectionable conditions.
3. The Commission is authorized under § 8 of the Zoning Act to grant variance relief where, “by reason of exceptional narrowness, shallowness, or shape of a specific piece of property at the time of the original adoption of the regulations or by reason of exceptional topographical conditions or other extraordinary or exceptional situation or condition of a specific piece of property,” the strict application of the Zoning Regulations would result in peculiar and exceptional practical difficulties to or exceptional and undue hardship upon the owner of the property, provided that relief can be granted without substantial detriment to the public good and without substantially impairing the intent, purpose, and integrity of the zone plan as embodied in the Zoning Regulations and Map. (D.C. Official Code § 6-641.07(g)(3); 11 DCMR § 3103.2.) As the Applicant notes, the District of Columbia Court of Appeals has held that “an exceptional or extraordinary situation or condition” may encompass the buildings on a property, not merely the land itself, and may arise due to a “confluence of factors.” See *Clerics of St. Viator v. District of Columbia Bd. of Zoning Adjustment*, 320 A.2d 291 (D.C. 1974); *Gilmartin v. District of Columbia Bd. of Zoning Adjustment*, 579 A.2d 1164, 1168 (D.C. 1990).
4. Based on the above Findings of Fact, the Commission concludes that the University has satisfied the burden of proof for variance relief from the setback requirements of § 400.9. The Commission concludes that the Tenley Campus is affected by an exceptional situation or condition due to a confluence of factors, and that those factors create a practical difficulty that impacts the Applicant’s ability to develop the Nebraska Avenue

building in a manner that is consistent with the setback requirements along Nebraska Avenue. The Commission finds that due to the landscaping, siting, and design features, granting the proposed variance relief will not result in substantial detriment to the public good or impair the intent, purpose or integrity of the Zone Plan.

5. The Commission accords the recommendation of OP the “great weight” to which it is entitled pursuant to D.C. Official Code § 6-623.04 (2001). As discussed in this Order, the Commission concurs with the recommendation of OP to grant the University’s further processing application for the Tenley Campus. OP assessed the application relative to standards under § 210, and concluded that the relocation of the WCL to the Tenley Campus is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions. OP also recommended approval of the requested variance relief from § 400.9.
6. The Commission accords the issues and concerns raised by ANCs 3E and 3F the “great weight” to which they are entitled pursuant to D.C. Official Code § 1-309.10(d) (2001). In doing so, the Commission fully credits the unique vantage point that ANCs 3E and 3F hold with respect to the impact of the redeveloped Tenley Campus on their constituents. As discussed herein, ANC 3E supported this application with conditions, most of which the University adopted (the exception related to a restriction on lawsuits in the agreement between AU and TCNA). The Commission agrees with ANC 3E that the number of parking spaces should not be reduced below 400-450, that the University should be permitted to rent out excess parking spaces, and that the Nebraska Avenue sidewalk widening is not warranted at this time. The University also adopted most of the conditions proposed by ANC 3F. The Commission does not find that two recommendations by ANC 3F that were not adopted by the University, relating to the planned LEED Gold rating and to a left-turn lane from Nebraska Avenue, would require adoption in this Order as conditions of approval needed to mitigate adverse impacts.
7. In a proposed condition on restricted development, derived from AU’s agreement with TCNA, the University agreed not to pursue any further development on the western portion of the Tenley Campus (i.e., in the “Restricted Area”) during a specified term, subject to “automatic termination” of the restriction if “TCNA or any property owner residing within 200 feet of the Tenley Campus, files any legal challenge to the Zoning Commission’s action in authorizing Washington College of Law’s relocation to the Tenley Campus as proposed in Z.C. Case No. 11-07B, except that, in the case of an individual property owner, this condition shall not expire if such legal challenge is withdrawn within 60 days.” While the Commission applauds the University’s efforts in obtaining agreement with nearby residents concerning the future use of the Tenley Campus, the Commission declines to adopt the proposed restriction on lawsuits, which is outside the purview of the Zoning Regulations. As the University acknowledges, the development restriction arises from a private agreement between the Applicant and

certain neighbors. The Commission does not find the proposed restriction on lawsuits necessary to mitigate any adverse impact or objectionable condition identified in this proceeding.

8. The Commission finds that the 1986 agreement between ANC 3E and AU is not germane to the approval of the relocation of the WCL to the Tenley Campus. As noted in the Commission's approval of the 2001 Campus Plan, the 1986 agreement has no binding effect on the Commission with respect to future campus plans or further processing applications.

DECISION

In consideration of the Findings of Fact and Conclusions of Law contained in this Order, the Zoning Commission for the District of Columbia concludes that the Applicant has met the burden of proof pursuant to 11 DCMR §§ 210, 3104, and 3103.2 and it is, therefore, **ORDERED** that American University's relocation of the Washington College of Law to the Tenley Campus, and the related construction of new facilities, is **GRANTED**, subject to the following conditions:

1. The Tenley Campus shall be developed in accordance with the plans included as Exhibit 21, Tab A.
2. **Student Enrollment, Faculty/Staff Cap and Special Events** – The WCL shall limit its student enrollment to 2,000 students. All matriculated students at the WCL shall be counted toward the cap. The 2,000 law student cap will be included in the University-wide student enrollment cap. The permitted increase in WCL enrollment shall be phased in, starting with 1,850 when the law school moves to the Tenley Campus and increasing by a maximum of 50 students each year, up to a maximum of 2,000 students. The WCL shall also have a faculty and staff cap of 500.

AU shall limit the attendance of people not currently enrolled or employed at AU at all other events at the Washington College of Law – Tenley Campus, during hours of peak class enrollment. Hours of peak enrollment are defined as hours in which total matriculated enrollment is 800 or more students. During the hours of peak enrollment, non-AU attendance at special events shall be limited to 150 people. AU shall provide annually a report to ANC 3E listing such events, dates, times, and AU and non-AU attendance. The Applicant shall provide at least 10 days advance notice of all continuing legal education and special events, with external attendees of more than 50, in the following manner:

- (a) Posting messages on the Tenleytown list serve;
- (b) Providing notice to representatives of the Tenley Campus Neighborhood Association and the Tenley Neighbors Association;

- (c) Providing notice to ANC 3E and ANC 3F;
- (d) Posting newsletters and flyers at the Tenley Public Library; and
- (e) Posting messages on the Washington College of Law and American University web sites.

The Applicant shall provide annually a report to ANC 3E, ANC 3F, the Tenley Campus Neighborhood Association, and the Tenley Neighbors Association listing such events, dates, times, and AU and non-AU attendance. AU shall vigorously advertise to non-law school attendees at all CLE classes and special events the availability of public transit and the prohibition of parking in the neighborhoods.

3. **Transportation Demand Management and Annual Monitoring Reports** – AU shall implement the Transportation Demand Management Program outlined in the statement in support of the application (which includes, but is not limited to, the inclusion of car-sharing spaces on the Tenley Campus, enhanced bicycle facilities, and financial incentives to utilize public transportation as described in Exhibits 4 and 11 of the record). Starting the year after WCL commences activities on the Tenley Campus, AU shall compile annual transportation demand management monitoring reports and disseminate them to ANC 3E, ANC 3F, the Tenley Campus Neighborhood Association, the Tenley Neighbors Association, the Office of Planning, and the District Department of Transportation. These reports shall include the following information related to the Tenley Campus:

- (a) Mode split surveys of the campus population, broken down by students and employees;
- (b) Current parking inventory and occupancy on a typical weekday;
- (c) Number of parking permits sold per year;
- (d) Parking availability on surrounding neighborhood streets;
- (e) Statistics on the Good Neighborhood Program, including number of tickets issued and a catalog of punishments issued in connection with same, including without limitation any instances of academic or administrative discipline (specific counts of such instances of academic or administrative discipline shall be provided);
- (f) Number of registered carpools;
- (g) Car-sharing service and Capital Bikeshare usage data;

- (h) Number of people signed up for SmartBenefits;
- (i) AU Shuttle ridership; and
- (j) Inventory and occupancy of bike racks.

Notwithstanding anything else herein, if the results of the annual monitoring reports show that some aspect of AU's Transportation Demand Management Program is not working as effectively as initially anticipated by AU, or that some other remedial measures are necessary, AU will implement the necessary measures as promptly as possible.

Prior to the opening of the Washington College of Law-Tenley Campus, AU will consider additional incentives to encourage use of non-automobile travel modes and report to ANC 3E and 3F on the findings of its study and its plans for the implementation of such incentives.

4. **Construction Management** – AU shall undertake the following actions to mitigate any adverse impact on adjacent properties resulting from construction activity related to the development of the Tenley Campus (the "Property"):
 - (a) **Hours of Construction and Pre-Construction Community Meeting** – AU shall limit construction hours to Monday – Friday 7:30 a.m. to 4:00 p.m., including deliveries and truck access. However, interior work not creating an impact on adjacent properties may take place outside of these hours. In addition, AU will hold a pre-construction community meeting to coordinate planned construction activities on the Property at least 90 days before construction activity starts. This meeting shall be open to residents on all streets surrounding the Tenley Campus, including residents east of Nebraska and Wisconsin Avenues. AU will schedule the meeting at a time that helps foster maximum community participation. Attendees of that meeting will include representatives of AU's general contractor and AU's on-site construction representative (discussed in detail below);
 - (b) **Site Management** – AU will erect and maintain construction fencing and barricades in order to screen and secure the site during the construction process. Before construction starts, AU shall install strong tree protection measures for trees being retained. In order to comply with the Tree Preservation Plan on page 4.0 of Exhibit A in the November 7, 2011 Pre-Hearing Submission (Exhibit 21, Tab A), all excavated materials will be removed from the Property via Nebraska Avenue, Yuma Street, and Warren Street. Similarly, all construction-related deliveries to the Property will occur Monday – Friday, 7:30 a.m. to 4:00 p.m. AU shall prohibit construction and delivery trucks from using local neighborhood

streets beyond those adjacent to the campus (the 4100 block of Yuma Street, the 4100 block of Warren Street, and a small portion of the 4300 block of 42nd Street). Construction and delivery trucks will be instructed to use the nearby arterial streets of Nebraska Avenue, Wisconsin Avenue, and River Road to access the site. AU does not anticipate the need for any street closures as the result of the construction activity on the Property. Sidewalk closures may be needed to maintain a safe environment and such closures will be communicated in advance to the community. Parking spaces for all construction workers and deliveries will be provided on the Property. No construction-related parking will be permitted on nearby residential streets. AU will remove rubbish and construction debris continuously during the construction period during the normal construction workday. In addition, AU will monitor and police the construction site daily or more often as required to ensure cleanliness. AU will also undertake a program of pest control to ensure that no increase in pest activity occurs during the construction period. All excavation or back fill trucks will be covered before proceeding from the Property onto District streets. Dust and debris will be removed from the Property on an as-needed basis; and

- (c) Applicant's On-Site Construction Representative – AU shall designate a representative to be the key contact during the period of construction on the Property. At any time construction activity is occurring on the Property, the AU representative or his/her designee shall be available on-site or by telephone to receive communications from the adjacent property owners. In addition, a name and telephone number of a person designated by AU to contact in case of emergency during hours in which no construction activity is occurring shall be readily available to the adjacent property owners. The AU representative and his/her designee will be able to answer questions and receive comments about the site activities and address any concerns the adjacent property owners might have throughout the construction process.
5. LEED Standards – American University will pursue the objective of achieving LEED Gold certification.
6. Loading and Trash Removal Plan – All deliveries and trash pickups shall occur between 7:30 a.m. and 7:30 p.m., Monday through Friday, and 9:00 a.m. and 6:00 p.m., Saturday and Sunday. Subject to District of Columbia approval, AU will configure the Yuma Street driveway and associated signage such that the entrance to the site for commercial traffic is permitted only from the east, and exit from the site for commercial traffic is permitted exclusively eastward toward Tenley Circle. AU will notify its vendors that all truck traffic is to be directed to travel on major roads and Yuma Street only.

7. **Lighting Plan** – AU will abide by the lighting plan submitted on November 21, 2011 (Ex. 45, Tab B.) No light from the buildings, walkways or parking lot on the Tenley Campus will project onto neighboring properties at night. The walkways throughout the Tenley Campus will be lit with lamps that reflect light downwards. Where allowed by the building code, interior lighting will have occupancy sensors that will turn off lights in unoccupied spaces.
8. **Off-Campus Parking Enforcement** – AU shall continue its Good Neighbor Policy of enforcing the requirement that students, faculty, staff, and vendors of AU and WCL will not park off campus on neighborhood streets. AU will adopt higher fines for repeat offenders, and WCL members are now subject to “administrative penalties, up to and including Honor Code violations and/or disciplinary action” for failure to abide by AU’s “good neighbor” program. Additionally, AU will prohibit registration, receipt of grades, and graduation for any student with any outstanding unpaid or uncontested violations. Effective with the opening of the Washington College of Law-Tenley Campus, upon a third parking violation and any subsequent violations within a 12-month period of time, AU shall issue an "Admonition," as defined in the Honor Code, subject to the students' rights to due process. AU will amend its parking policy to specify that Admonitions will be issued upon proven third or further parking violations, and that students with multiple parking violations may be subject to any further sanctions permitted by the Honor Code that the Honor Code Committee may decide to impose. AU will also amend its parking policy to make clear that students are expected to obey District of Columbia parking regulations as well as AU regulations.
9. **Landscape Plan** – The densely planted perimeter landscape zone of the Tenley Campus shall be maintained and improved along 42nd Street in accordance with the amended landscape and tree preservation plan shown on pages 3.0 and 4.0 of Exhibit A of the November 7, 2011 Pre-Hearing Submission (Ex. 21, Tab A). Additional large shade trees will be added to the western portion of the site, and a walkable path/arboretum will be designed and incorporated on the western half. Further details regarding the use of, enhancement and maintenance of the landscape zone and potential location of new landscaping will be discussed in advance with representatives of the adjacent properties.
10. **Community Access to Tenley Campus and Use of WCL Facilities** – AU shall allow casual open access to the grounds of the Tenley Campus, subject to AU’s reasonable control of its private property. WCL and AU agree to make space available to community organizations for meetings and events, subject to availability and upon proper request with reasonable notice.
11. **Seating Areas on the Newly Designed and Proposed Capitol Hall Front Lawn** – AU shall seek approval from appropriate District of Columbia agencies to incorporate benches and any other appropriate place-making features on the Capitol Hall front lawn.

12. **Potential Future Changes to Adjacent Roadway Network** – AU will support any ANC 3E proposal, provided it is accompanied by any petition or other documentation required by DDOT, relating to converting Warren Street to be “One Way” or closed to through traffic, at the time the WCL opens at the Tenley Campus or at any time during the period of approval of the 2011 Plan. AU will also support any ANC 3E proposal, provided it is accompanied by any petition or other documentation required by DDOT, by nearby neighbors to designate their block for Residential Permit Parking (RPP) or Resident-Only parking.
13. **Traffic Calming Measures Identified in the Rock Creek West II Livability Study** – AU shall pay all costs, up to a maximum of \$400,000, necessary to implement each of the traffic calming measures identified in the Rock Creek West II Livability Study for the intersections of: (1) 42nd Street and Van Ness Street; (2) 42nd Street and Warren Street; and (3) 42nd Street and Yuma Street. If improvements to the above-listed intersections cost less than \$400,000, then the balance of the unspent funds will be allocated to improvements at 42nd and Albemarle Streets. Such contribution shall be made only when DDOT has committed to implementing the measures for the above-listed intersections.
14. **Restrictions on Future Development** – American University shall not propose any further development of any kind during the term of the 2011 Plan or in the next campus plan (currently expected to be for the period 2022-2031, but for whatever the term of the campus plan that follows the campus plan in Case No. 11-07) on the western portion of the property (the “Restricted Area”). (Ex. 45, Tab A.) If the next campus plan has a life longer than 20 years, this development proposal restriction will extend to the end of calendar year 2031. There will be no new facility proposed prior to 2031 in the Restricted Area, and this restriction is not intended to expire with the Zoning Order in Case No. 11-07B, notwithstanding that the District’s campus plan process currently contemplates a 10-year campus plan. In addition, construction on any such proposed future project, if approved, will not be initiated before 2032.
15. **Limited Exceptions to Foregoing Restrictions on Future Development** – If AU demolishes the 1970’s era additions to the Dunblane house, which lies within the Restricted Area, the University may seek approval to build replacement square footage not to exceed what was demolished, and only on the area of the Tenley Campus outside the Restricted Area and subject to all necessary prior consents and approvals as may be required under law, including any historic preservation requirements. If American University chooses to eliminate the surface parking in the Restricted Area, such removal will not be deemed to violate the foregoing restriction, but no facility may be constructed on such surface parking area prior to 2032.
16. In accordance with the D.C. Human Rights Act of 1977, as amended, D.C. Official Code §§ 2-1401.01 et seq. (Act), the District of Columbia does 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, matriculation, political affiliation, genetic information, disability, source of income, or place of residence or business. Sexual harassment is a form of sex discrimination which is prohibited by the Act. In addition, harassment based on any of the above protected categories is prohibited by the Act. Discrimination in violation of the Act will not be tolerated. Violators will be subject to disciplinary action.

VOTE: 4-0-1 (Anthony J. Hood, Peter G. May, Marcie I. Cohen, and Michael G. Turnbull to approve; Konrad W. Schlater, not having participated, not voting).

BY ORDER OF THE D.C. ZONING COMMISSION
Each concurring member approved the issuance of this Order.

ATTESTED BY:



SARA A. BARDIN
OFFICE OF ZONING DIRECTOR

FINAL DATE OF ORDER: MAY 17 2012

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of Zoning



Z.C. CASE NO.: 11-07B

MAY 17 2012

As Secretary to the Commission, I hereby certify that on _____ copies of this Z.C. Order No. 11-07B were mailed first class, postage prepaid or sent by inter-office government mail to the following:

- | | |
|--|--|
| 1. D.C. Register | 8. Councilmember Mary Cheh |
| 2. Paul Tummonds, Esq.
Goulston & Storrs
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Washington, D.C. 20006 | 9. DDOT (Martin Parker) |
| 3. ANC 3E
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5425 Western Avenue, N.W.
Washington, D.C. 20015 | 10. Melinda Bolling,
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Bergstein) |
| 5. Commissioner Beverly Sklover
ANC/SMD 3E01
4504 Albemarle Street, N.W.
Washington, D.C. 20016 | 12. Tenley Campus Neighborhood Association
c/o Allison Fultz, Esq.
Kaplan Kirsch & Rockwell, LLP
1001 Connecticut Ave., N.W., Suite 800
Washington, D.C. 20036 |
| 6. Commissioner Jonathan Bender
ANC/SMD 3E03
4411 Fessenden Street, N.W.
Washington, D.C. 20016 | 13. Tenley Neighbors Association
c/o Judy Chesser
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Washington, D.C. 20016 |
| 7. Commissioner Sam Serebin
ANC/SMD 3E05
4300 Van Ness Street, N.W.
Washington, D.C. 20016 | 14. Ward 3 Vision
c/o John Wheeler
4304 Yuma St., N.W.
Washington, D.C. 20016 |

ATTESTED BY:

A handwritten signature in black ink, appearing to read "S. S. Schellin", is written over a horizontal line.

Sharon S. Schellin
Secretary to the Zoning Commission
Office of Zoning

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Zoning Commission



ZONING COMMISSION FOR THE DISTRICT OF COLUMBIA
ZONING COMMISSION ORDER NO. 11-07H

Z.C. Case No. 11-07H
American University

(Campus Plan Modification of Consequence @ Squares 1560, 1599, 1600, 1601, & 1728)
February 26, 2018

Pursuant to notice, a public meeting of the Zoning Commission for the District of Columbia (“Commission”) was held on February 26, 2018. At that meeting, the Commission reviewed the request of American University (“Applicant” or “University”) for a technical correction of Z.C. Order No. 11-07, the 2011-2022 American University Campus Plan Order, to correct Condition No. 14 so that AU is required to maintain an inventory of approximately 2,200 parking spaces on campus.

At the public meeting, the Commission determined that this request was more properly a modification of consequence and because all relevant parties had submitted information into the record the Commission was able to deliberate on this request at the public meeting. The technical correction application and modification of consequence were reviewed pursuant to § 703 of the Commission’s Rules of Practice and Procedures, which are codified in Subtitle Z of Title 11 of the District of Columbia Municipal Regulations (“DCMR”).

FINDINGS OF FACT

BACKGROUND INFORMATION

1. The Commission approved the AU Campus Plan for the period from 2011-2022 (“Campus Plan”) pursuant to Z.C. Order No. 11-07. The Campus Plan became effective on May 17, 2012.
2. The first line of Condition No. 14 of that Order provided:

The University shall maintain an inventory of approximately 2,500 parking spaces on campus.
3. Finding of Fact No. 67 of the Order stated in part:

In the 2011 Plan, the University proposed to reduce the number of on-campus parking spaces by 429, to approximately 2,200 spaces . . .
4. The University is providing 2,393 parking spaces.

5. The Applicant apparently did not notice the discrepancy until approximately five years later, when on August 25, 2017, it submitted to the Commission an application which sought approval for a Campus Plan Amendment and Further Processing application for the proposed construction of the Hall of Science Building (which is the subject of Z.C. Case No. 11-07G).
6. As part of any further processing application, the Applicant must prove that it has remained in substantial compliance with the conditions of the Campus Plan Order, including Condition No. 14.
7. Since it clearly was not in compliance with that Condition, the Applicant indicated within its statement of support that because the Finding of Fact noted it had proposed a reduction of its parking space requirement from 2,649 to 2,200, the latter figure as stated in Condition No. 14, must have been a typographical error. The other explanation of course is that the Commission did not fully accept the University's proposal and instead reduced the number of parking spaces from the 2,649 required in the prior campus plan to 2,500.
8. Based upon its typographical error theory, the Applicant's statement in support indicated that it was requesting a technical correction to Z.C. Order No. 11-07 to change the figure to what it had proposed.
9. At its January 29, 2018 public meeting, during the Commission's deliberations regarding Z.C. Case No. 11-07G, the Commission noted that the Applicant did not follow the rules in 11-Z DCMR § 703 for making such a request, and it would not consider the question until those rules were complied with and a separate application filed. Since it could not determine whether the University had remained in substantial compliance with the conditions in Z.C. Order No. 11-07 until it determined what the parking figure should be, it deferred final action until that occurred. The Applicant filed that request on February 7, 2018, which became known as this case, Z.C. Case No. 11-07H.
10. In satisfaction of § 703.13 of Subtitle Z, the Applicant provided a Certificate of Service, which noted that all parties to Z.C. Case No. 11-07 were served with this application. The Applicant noted that at the time of Z.C. Case No. 11-07, some properties that were located within 200 feet of the AU Tenley Campus on the east side of Wisconsin Avenue were located in Advisory Neighborhood Commission ("ANC") 3F. Those properties are no longer located in ANC 3F, but they are now located in ANC 3E. ANC 3E was served with a copy of the technical correction request. (Exhibit ["Ex."] 2.)
11. ANC 3D did not submit a report in this case. However, on September 21, 2017, ANC 3D submitted a letter to the Commission which supported the proposed Campus Plan Amendment and Further Processing application for the Hall of Science Building, as well as the technical correction to Condition No. 14 of Z.C. Order No. 11-07. (Ex. 12 of Z.C. Case No. 11-07G.) This letter noted:

Members of the ANC and the community have reviewed parking reports provided by American University in support of this application. We do not raise an

objection to American University's request for a technical correction to Condition No. 14 and the ANC further believes the expected loss of approximately 75 parking spaces will not pose an objectionable impact on the community. (Ex. 2D.)

12. The Office of Planning ("OP") did not submit a report in this case. However, on November 9, 2017, OP submitted a report in Z.C. Case No. 11-07G, which recommended that the Commission approve the requested amendment to the approved Campus Plan and the further processing of the campus plan, with conditions related to the submission of some additional information. (Ex. 32 of Z.C. Case No. 11-07G.) In regard to the proposed technical correction of the number of parking spaces, the OP report stated:

The applicant has also requested that the Zoning Commission correct the number of required on-campus parking spaces from 2,500 to 2,200 citing differences between ZC Order No. 11-07 Condition No. 14 and ZC Order 11-07 Finding of Fact 67 (Exhibit 4, page 13). OP agrees with this correction as the Case 11-07 record and testimony supports the 2,200 space requirement; the applicant will submit additional information from the original record to the record for this case to further substantiate this request. (Ex. 2E.)

13. The Department of Transportation did not submit a report in this case, and its report for Z.C. Case No. 11-07G does not make any specific reference to the proposed technical correction. (Ex. 40 of Z.C. Case No. 11-07G.)

14. On November 13, 2017, the Spring Valley Wesley Heights Citizens Association ("SVWHCA") and the Neighbors for a Livable Community ("NLC"), a Party in Opposition in Z.C. Case No. 11-07G, submitted a pre-hearing submission to the Commission. (Ex. 33 of Z.C. Case No. 11-07G). In that submission, SVWHCA/NLC noted their opposition to the Applicant's request for a technical correction to the number of parking spaces that AU is required to maintain on campus. (Ex. 2F, 2G.) SVWHCA/NLC provided oral testimony on this issue at the November 20, 2017 public hearing in Z.C. Case No. 11-07G. SVWHCA/NLC continued to address the issue of the proposed technical correction in their post-hearing submission in Z.C. Case No. 11-07G, which indicated: (Ex. 61 of Z.C. Case No. 11-07G.)

We stand on the testimony we provided in this case that there is no evidence in the record to indicate the Commission approved "2,200" as opposed to "approximately 2,500" as the parking space requirement. Many numbers for parking spaces were discussed in the course of Z.C. 11-07, including testimony from AU that it only needed 1,500 parking spaces to meet its needs. So, AU's suggestion that the Commission adopted the "2,200" figure is arbitrary and convenient, especially since AU now is not in compliance with Condition No. 14.

15. On February 20, 2018, SVWHCA/NLC filed a statement in opposition to the Applicant's application for a technical correction to Condition No. 14 of Z.C. Order No. 11-07. SVWHCA/NLC argued that the University's request does not meet the standards for a technical correction. Instead, pursuant to Subtitle Z §703.6, the University should apply

for a modification of significance because the University seeks additional zoning relief to allow for a 300 parking space reduction in the on campus parking requirement and such relief may result in objectionable conditions for neighbors. (Ex. 4.)

16. SVWHCA/NLC's statement in opposition to the technical correction of Condition No. 14 of Z.C. Order No. 11-07, states that a technical correction would only be appropriate if the University was able to prove that an error—in the form of a typo—was made in drafting the Order. SVWHCA/NLC asserts that the Z.C. Case No. 11-07 record does not support the University's argument, noting: when the Commission began its deliberations in Z.C. Case No. 11-07, the University's proposal for its on-campus parking inventory was to provide approximately 2,500 parking spaces, according to the University's draft order filed one month earlier in the case record; though the Commission supported reducing the number of parking spaces on campus over the term of the Campus Plan, its decision in Z.C. Case No. 11-07 did not clearly identify the number of parking spaces that were to be reduced. (Ex. 4.)
17. The SVWHCA/NLC statement in opposition also questioned the potential objectionable impacts that the reduction of parking spaces to 2,200, the University's increased parking utilization rate (now at least 80%), and the increase in undergraduate enrollment have on the surrounding community. The SVWHCA/NLC statement in opposition requested that the Commission hold a public hearing to review the factors resulting in the increased rate of parking utilization on campus and what steps might be needed to further reduce on-campus parking demand, including, but not limited to, additional traffic demand strategies or more effective monitoring of existing traffic demand programs. (Ex. 4.)
18. Based upon the Commission's review of the record in this case, there is no clear indication as to whether the 2,500 figure represented a typographical error or a compromise reached by the Commission.
19. The Commission, nonetheless, believes that it likely intended a figure between 2,200 and 2,500.
20. The record in Z.C. Case No. 11-07G indicates that no objectionable conditions result from the current parking space inventory and given the parking utilization on campus, a reduction to 2,200 would be appropriate.

CONCLUSIONS OF LAW

The Applicant filed this application as a technical correction of Condition No. 14 of Z.C. Order No. 11-07. The Commission agrees with SVWHCA/NLC that this case should not be reviewed as a technical correction of Z.C. Order No. 11-07. However, the Commission does not agree with SVWHCA/NLC's argument that a modification of significance application, and a public hearing, is necessary for the Commission to thoroughly review the relevant issues related to this application. The Commission concludes that ample evidence was presented in this case, and in Z.C. Case No. 11-07G, regarding the number of required on-campus parking spaces. The record of this case and of Z.C. Case Nos. 11-07 and 11-07G support the conclusion that the Commission agreed with decreasing the number of on-campus parking spaces. However, the

Commission could not consider this application a technical correction because the Commission's intent as to the number of required on-campus parking spaces at the time of its decision in Z.C. Case No. 11-07 is unclear. A technical correction would only be appropriate if the Commission could definitively conclude that it intended for the required number of parking spaces to be approximately 2,200 at the time of its deliberations in Z.C. Case No. 11-07, and that the 2,500 figure appeared in the final Z.C. Order No. 11-07 by mistake. The Commission can, however, conclude that its intent was a number of required parking spaces between approximately 2,200 and 2,500. Therefore, the Commission finds that the modification to Condition No. 14 of Z.C. Order No. 11-07, described in the above findings of fact, is a modification of consequence, and therefore can be granted without a public hearing.

Pursuant to 11-Z DCMR § 703.1, the Commission, in the interest of efficiency, is authorized to make "modifications of consequence" to final orders and plans without a public hearing. A modification of consequence means "A modification to a contested case order or the approved plans that is neither a minor modification nor a modification of significance." (11-Z DCMR § 703.3.) Examples of modifications of consequence "include, but are not limited to, a proposed change to a condition in the final order, a change in position on an issue discussed by the Commission that affected its decision, or a redesign or relocation of architectural elements and open spaces from the final design approved by the Commission." (11-Z DCMR § 703.4.)

The Commission finds that in the original Campus Plan case, Z.C. Case No. 11-07, it was the intent of OP, AU, DDOT, and the Commission to reduce the number of required parking spaces on campus. The Commission recognizes the overall benefit to the District that occurs with having a reduced number of parking spaces on campus, and it also acknowledges the need to make sure that the number of on-campus parking spaces provided by the University does not lead to adverse impacts on the surrounding community. Based on the evidence provided in this case and in Z.C. Case No. 11-07G, the Commission finds that ample parking spaces currently exist on American University's campus at the current inventory of approximately 2,400 parking spaces. The Commission also concludes that it was not presented with evidence, in this case or in Z.C. Case No. 11-07G, that negative impacts on the surrounding community were occurring based on AU related parking in the surrounding community. Therefore, the Commission concludes that the reduction of required on campus parking spaces to 2,200 going forward may be granted as a modification of consequence, and can be accomplished without the need for any further mitigation by the Applicant.

The Commission is required under D.C. Official Code § 1-309.10(d)(3)(A)(2012 Repl.) to give "great weight" to the issues and concerns of the affected ANCs. As is reflected in the Findings of Fact, ANC 3D voted to support the modification to Condition No. 14 of Z.C. Order No. 11-07 as a Technical Correction.

The Commission is required give great weight to the recommendations of OP (See D.C. Official Code § 6-623.04 (2012 Repl.)). The Commission concurs with OP's recommendation to approve the reduction in the number of required parking spaces on campus. The Applicant is subject to compliance with D.C. Law 2-38, the Human Rights Act of 1977.

DECISION

In consideration of the above Findings of Fact and Conclusions of Law contained in this Order, the Zoning Commission for the District of Columbia **ORDERS APPROVAL** of the modification of Condition No. 14 of Z.C. Order No. 11-07, as a modification of consequence. The conditions in Z.C. Order No. 11-07 remain unchanged except the following condition replaces Condition No. 14:


14. The University shall maintain an inventory of approximately 2,200 parking spaces on campus. The University shall continually evaluate its pricing policies for parking with the intention of discouraging vehicle trips to campus without generating demand for off-campus parking by university-affiliated vehicles. The University shall provide DDOT with annual reports on parking utilization that reflect the number of non-carpool passes sold each year relative to the number of full-time equivalent employees and the number of occupied spaces on a typical semester weekday.

On February 26, 2018, upon the motion of Commissioner May, as seconded by Commissioner Shapiro, the Zoning Commission took **FINAL ACTION** to **APPROVE** the application at its public meeting by a vote of **5-0-0** (Anthony J. Hood, Robert E. Miller, Peter A. Shapiro, Peter G. May, and Michael G. Turnbull to approve).

In accordance with the provisions of 11-Z DCMR § 604.9, this Order shall become final and effective upon publication in the *D.C. Register*; that is on August 3, 2018.

BY THE ORDER OF THE D.C. ZONING COMMISSION

A majority of the Commission members approved the issuance of this Order.



ANTHONY J. HOOD
CHAIRMAN
ZONING COMMISSION



SARA A. BARDIN
DIRECTOR
OFFICE OF ZONING

Appendix C American University 2021 Campus Plan Draft (Sept 8, 2020)

The full text of the American University 2021 Campus Plan Draft released on September 8, 2020 and a selection of relevant exhibits follow. The full 2021 Campus Plan Draft, including all exhibits, can be accessed from the AU Campus Plan website at:

https://www.american.edu/communityrelations/campus-plan/upload/au-2021-campus-plan-draft-wexhibits-a-through-bb-sept8_final.pdf

AMERICAN UNIVERSITY
2021 CAMPUS PLAN DRAFT
SEPTEMBER 8, 2020

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AU 2021 CAMPUS PLAN DRAFT: 09-08-2020

SECTION 1: OVERVIEW AND EXECUTIVE SUMMARY

The *2021 Campus Plan* is an integral component in the successful implementation of American University's strategic plan, *Changemakers for a Changing World*, setting forth a thoughtful approach to managing campus growth and development over the next 10 years in a manner that reflects the university's commitment to the communities of which it is a part. At the same time, the *2021 Campus Plan* will play a critical role in informing and incorporating the key priorities of an ambitious fundraising campaign that will capitalize on AU's momentum as an emerging global university to support the study and scholarship of American University students and faculty for generations to come. The fundamental components of the plan have been envisioned and developed—and will be collaboratively implemented over the next decade—in partnership with university and community stakeholders to ensure that the campus will adapt to and meet the changing needs of AU students, faculty, and staff while at the same time respecting and enhancing the quality of life of those who live within the neighborhoods surrounding campus. **It is AU's fundamental goal that the *2021 Campus Plan* successfully accomplish both of these objectives.**

A Predictable Yet Flexible Plan

Given the rapidly shifting landscape and increasingly competitive marketplace of higher education, AU must remain flexible to respond to the changing needs and demands associated with educating students in a dynamic global society. At the same time, AU is cognizant of the impact that new campus development, student enrollment, and transportation capacity can potentially have—if not thoughtfully planned and managed—on the residential neighborhoods surrounding campus. Accordingly, over the past two years, the university has worked closely with the AU Neighborhood Partnership and a wide range of campus and community stakeholders to gather input and feedback on the various planning concepts and priorities considered by AU throughout the planning process. **As a result of this dedicated and collaborative effort, the university and the AU Neighborhood Partnership have reached consensus on the objectives, proposals, and commitments set forth in the *2021 Campus Plan*, including:**

- strategic and measured enrollment management at a level **lower** than the student cap established in 2011, when adjusted to reflect the revised student count methodology set forth in the city's updated zoning regulations
- a balanced development program of academic/administrative, residential/campus life, and athletic uses, on a scale significantly reduced from the program proposed in the *2011 Campus Plan*, aimed at providing leading-edge research and teaching facilities and strengthening and invigorating a student-centered living and learning campus experience, including enhancing the landscape and open space elements that are distinctive to AU's urban campus—an accredited and award-winning arboretum—and actively advancing the university's culture of sustainability
- a focus on providing student housing opportunities that encourage more students to remain on-campus during their time at AU, while also implementing robust engagement initiatives with students who choose to live off campus to equip them to be responsible members of the community and promote positive relationships between students and their neighbors

- continued commitment to effective Transportation Demand Management (TDM) strategies aimed at promoting sustainable transportation options that reduce the use of single-occupancy vehicles and the demand for on-campus parking, along with vigilant enforcement of AU’s existing off-campus parking policies to preserve on-street parking capacity for members of the community

In its thoughtful approach to these key issues, the *2021 Campus Plan* provides a predictable yet flexible framework that embodies the priorities set forth in the strategic plan, allows AU to meet the changing needs and demands of the educational marketplace of the twenty-first century, reinforces the university’s positive role as a leading educational institution in the nation’s capital, and underscores AU’s commitment to meaningful collaboration with the community to ensure the university remains an important contributor to enhancing the quality of life in the neighborhoods surrounding campus.

Impact of COVID-19

The global COVID-19 pandemic has presented unprecedented challenges across the nation and around the world. Many institutions of higher education, including AU, have responded with focused efforts to temporarily transition instruction and operations to predominantly online platforms. AU’s efforts are yielding positive results, providing students with continuity of high-quality academic opportunities while striving to address the social, emotional, financial, and related impacts associated with the disruptions caused by the pandemic. Certainly, the outcomes of this experience will shape decision making, inform policy decisions, and influence operational models across all levels of education well into the future. Yet even before COVID-19 unexpectedly precipitated the rapid transition to university-wide distance learning, AU identified the development of leading-edge online programming as an area of strategic focus and a core component of the university’s future vision. This institutional focus—coupled with the flexibility and resiliency grounded in the principles embodied in AU’s strategic plan—has uniquely positioned the university to effectively navigate the uncertainties caused by the pandemic and adapt to the changing conditions impacting AU’s operations and instructional programming.

Nonetheless, AU fully anticipates strong and ongoing demand for its on-campus, face-to-face academic programs, research opportunities, and vibrant residential student experience, all of which will support and depend upon the types of high-quality facilities proposed in this 10-year Campus Plan.

AU’s work on the *2021 Campus Plan* and collaboration with members of the community actively continued through the transitions in university operations brought about by COVID-19. As discussed more fully below, regular and consistent engagement continued on a variety of digital platforms, and the AU Campus Plan website provided access to a wide range of useful resources, including meeting summaries and presentations, preliminary planning frameworks and drafts, and a comprehensive community input portal which facilitated feedback and provided responses to more than 100 questions posed by community members. As a result of this focused effort, the university, together with its dedicated neighborhood partners, thoughtfully and effectively advanced the strategic planning collaboration that resulted in this *2021 Campus Plan*.

SECTION 2: AMERICAN UNIVERSITY IN THE DISTRICT OF COLUMBIA

2.1 History

Since being chartered by Congress in 1893, American University has been a leader in higher education throughout the nation and around the world. A global outlook, practical idealism, and passion for public service define the changemaking institution, and its groundbreaking spirit inspires the university's legacy for making impact. Before women won the right to vote, they attended AU. Two pioneering women founded the Washington College of Law to provide opportunities for those historically excluded from the legal profession. For more than 50 years, AU has held its doors open to exceptional students from DC Public Schools through the Frederick Douglass Scholarship program. In 2018, AU became the first US university to reach carbon neutrality and stands committed to fostering a culture of sustainability to benefit the local and global community. As the university continues to grow in reputation and stature, AU remains grounded in the ideals of its founders while boldly embracing the opportunities to make an impact in this ever-changing world.

Today American University is a leading student-centered research university where passionate learners, bold leaders, engaged scholars, creative innovators, and active citizens unleash the power of collaborative discovery. AU partners with key organizations in the DC region and around the globe to better the human condition, learn from a vast array of experience and internships, create meaningful change, and address society's current and emerging challenges.

A Legacy of Leadership

The footsteps of changemakers echo throughout our history and reverberate through campus today. The land that university founder John Fletcher Hurst chose for AU was on what was then the rural fringe of the nation's capital, but it was already rich with Washington history—and the campus has hosted notable leaders ever since. Abraham Lincoln visited troops at Fort Gaines, which perched on the ground now held by Ward Circle and the Katzen Arts Center. In 1902, President Theodore Roosevelt laid the cornerstone of McKinley Hall, named for President William McKinley. At the groundbreaking for the School of International Service in 1957, President Dwight Eisenhower urged the new school to remember that “the waging of peace demands the best we have.” A few years later, President John Kennedy spoke at the 1963 AU commencement to deliver the pivotal foreign policy speech widely known as “A Strategy of Peace,” calling on the Soviet Union to work with United States on a nuclear test ban treaty. And 52 years later, President Barack Obama recalled Kennedy's historic speech at AU during his own 2015 campus address urging diplomatic resolution to prevent international conflict, noting that, “It is surely the pursuit of peace that is most needed in this world so full of strife.” Presidents came to AU with messages that challenged our thinking and affected the course of history. They charged us to make the world a better place and helped us to lay the foundation of who we are as a community and educational institution.

Growing with Washington

AU's ties to its home city were evident from its inception and only became stronger with the growth of the university. Undergraduates were first admitted in 1925, by which time graduate students had relocated to a downtown campus on F Street near the White House. It was there in the heart of downtown that in 1934, at the start of the New Deal, AU launched a program to help train federal employees in new methods of public administration. President Franklin Roosevelt, who spoke at the event launching the program, promised it would have the "hearty cooperation" of all branches of his administration. The program would evolve into today's School of Public Affairs.

During World War II, students shared the campus with the Navy, which used it for research and training and a barracks for Women Accepted for Volunteer Emergency Service (WAVES) including those responsible for encoding and decoding messages in the Office of Naval Operations. It was not the first time that war impacted AU directly; during World War I, the still largely undeveloped campus had been turned over briefly to the War Department for use as a military camp, testing, and training site.

The period after World War II was a time of growth and innovation. The Washington Semester Program, founded in 1947, began drawing students from around the nation—and, ultimately, the world—to participate in what was then a new concept: a semester internship in the nation's capital. In 1949, the Washington College of Law merged with AU, adding to the pioneering spirit of the university its rich history and founders' belief that lawyers had a crucial role to play in the development of society, business, government, and individual freedoms.

By 1955, the business program, first launched in 1924, experienced substantial success and growth and became a separate school, now known as the Kogod School of Business, and ground was broken for the School of International Service in 1957. Over the next decades, issues of the day continued to engage faculty and students as new centers, institutes, and programs were launched, and schools and departments expanded. In 1984, the School of Communication was established, reflecting the growth of the journalism program from its first courses in the 1920s.

A New Century

AU entered the twenty-first century with a reputation for shaping a rapidly changing world. Academic programs continuously gained high national rankings, and the exceptional quality of AU's students was reflected in an increasing number of merit awards and prestigious national scholarships and fellowships, such as Fulbright Awards and Presidential Management Fellowships. The university's growing role in fostering the creative arts was underscored with the opening of the 296-seat Harold and Sylvia Greenberg Theater in 2003 and the Katzen Arts Center in 2005.

The *2011 Campus Plan* resulted in several notable development projects that transformed key campus assets. The construction of Cassell Hall and an addition to Nebraska Hall created new on-campus residential space in competitive and marketable unit configurations. In 2016, the Washington College of Law relocated from the Spring Valley Building to a 300,000 square foot LEED Gold-certified facility at the Tenley Campus, providing a prominent identity for the law school while honoring the legacy of the historic structures that continue to contribute to the character of the campus. New and renovated buildings form a connected complex of instructional spaces, conference facilities, legal clinic resources,

teaching courtrooms, law library, alumni center, faculty and staff offices, and multiple student study and meeting spaces.

In 2017, AU replaced a 900-space surface parking lot at Nebraska and New Mexico avenues with a new and vibrant collection of LEED Gold-certified buildings, including three residence halls (Duber, Constitution, and Federal), an academic building (Don Myers Technology and Innovation Building) and abundant, accessible green space. Finally, the Hall of Science, completed in 2020, is a state-of-the-art facility that consolidates the university's biology, environmental science, chemistry, and neuroscience departments into a modernized, centralized location. The groundbreaking space will converge award-winning scientists and students across disciplines to empower life-changing discovery.

In 2017, Sylvia Mathews Burwell became the 15th president of American University and the first woman to hold the highest leadership position at AU. A visionary leader with extensive experience in both public and private sectors, President Burwell brought to American University a commitment to education and research, the ability to manage large and complex organizations, and experience helping to advance solutions to some of the world's most pressing challenges. President Burwell's focus on leading AU forward is outlined in her administration's strategic plan [Changemakers for a Changing World](#), which underscores the key goals and objectives of the *2021 Campus Plan*. A fundamental priority of her changemaking agenda is actively engaging in purposeful and impactful ways with the District of Columbia. For example, President Burwell served as co-chair for the committee that advised the mayor on the selection of the chancellor of DC Public Schools, and under her leadership, AU also launched the *District Scholars Program*, which provides full scholarships for high-achieving students attending the city's public and public charter schools.

EXHIBIT A: EXISTING CAMPUS CONDITIONS

EXHIBIT C: AU STRATEGIC PLAN | CHANGEMAKERS FOR A CHANGING WORLD

2.2 Academic and Research Programs

As noted in the strategic plan, AU's wide range of academic and research programs take full advantage of the university's location in the nation's capital, which offers one of the most robust environments for scholarship and experiential learning available anywhere. AU's excellence in teaching is the foundation for its growing academic reputation, and the university's connections to leaders and organizations across the nation and around the world have elevated AU's profile and serve as a platform for scholarly impact. At AU, *how* students learn is as important as *what* they study. The university's scholar-teachers lead by example, and AU students learn through dynamic experiences. When students come to AU, they grow not just as global-minded citizens but as changemakers in a changing world.

Academic Programs

With eight schools and more than 170 programs including bachelor's, master's, and doctoral degrees as well as executive and certificate programs, American University students choose a personalized curriculum of theoretical study and experiential learning taught by internationally recognized faculty in courses that take them from the classroom to the nation's capital and all around the globe:

- *College of Arts and Sciences.* The largest school at American University, the College of Arts and Sciences features more than 100 degree programs that span the arts, humanities, science, and social sciences. Its diverse scholarly community offers outstanding opportunities for hands-on interdisciplinary research, internships, and creative expression.
- *Kogod School of Business.* A top-ranked institution accredited by the *Association to Advance Collegiate Schools of Business*, the Kogod School of Business offers undergraduate degrees and graduate programs, including an MBA. Students gain real-world experience through programs grounded in experiential learning and expert faculty that prepare them to lead in all sectors of business, including public, private, and nonprofit enterprises.
- *School of Communication.* From journalism to strategic communication to independent filmmaking and games, the School of Communication inspires tomorrow's digital storytellers. Students learn to produce media that matter with the support of faculty who have received the highest honors in their professional fields, including Academy and Emmy awards and the Pulitzer Prize.
- *School of Education.* With a vibrant community and passion for change, AU's School of Education is dedicated to creating and ensuring excellent learning experiences for every child, utilizing cutting-edge research, innovative outreach programs, and the development of inspiring coursework to address the most challenging issues in the field. The School of Education has deep ties with DC Public Schools, including the *Teacher Pipeline Project*, an education-focused dual-enrollment program for high school seniors aimed at creating a pipeline of highly skilled and diverse teachers.
- *School of International Service.* A top-10 institution of international affairs, the School of International Service prepares graduate and undergraduate students for global service in government, nonprofits, and business while connecting them to an active international network of more than 20,000 alumni. AU students graduate prepared to combine knowledge with practice and wage peace in the world.
- *School of Professional and Extended Studies.* Dedicated to professional and experiential learning, the School of Professional and Extended Studies offers an array of options for lifelong learners spanning the applied social sciences. Programs range from undergraduate internship-based semester programs to market-driven online master's degrees for professionals at critical junctures in their careers.
- *School of Public Affairs.* Taking advantage of its location in the heart of our nation's capital, the School of Public Affairs is a top-ranked school of public administration and policy, government, and justice. From AU's politically engaged campus, students gain access to world-class faculty members, influencers, and internship opportunities where they can have a meaningful impact on the world.
- *Washington College of Law.* Today's economic, political, and social changes require innovative legal solutions. As one of the most diverse law schools in the country, the Washington College of Law equips students to navigate this new reality. Programs include international law, law and government, trial advocacy, and business, with experiential opportunities through nationally recognized clinics and externships.

Courses run on a 15-week semester basis in fall and spring, with shorter summer-term classes. In addition, AU offers study abroad programs and alternative breaks. Ninety-one percent of AU undergraduates participate in at least one internship during their time at AU, and 70 percent of students participate in study abroad. AU students are globally diverse, with all 50 states, the District of Columbia, and more than 140 countries represented.

Faculty at AU are both world-class academics and serious practitioners who teach, mentor, and invest in the success of every student. Among full-time faculty, 94 percent hold the highest degree in their fields, and the university's adjunct faculty is made up of policy makers, diplomats, journalists, artists, writers, scientists, and business leaders.

Research

American University is home to more than 30 centers and institutes that support collaborative and innovative research in scholarly fields that bring together thought leaders, policy makers, and industry leaders to investigate complex problems and create actionable solutions. As part of the strategic plan, AU is committed to establishing additional centers in areas of strategic focus where there is significant potential for impact that is aligned with the university's mission and goals. These areas of focus include health, data analytics, security, and social equity—all of which will build upon a strong foundation across AU's schools, and which each present opportunities for attracting external resources and support. In addition to building out each area of strategic focus, AU will explore the intersections of these four areas, particularly where the overlap presents opportunities for cutting-edge research.

2.3 Campus Life

Experiences outside the classroom play an integral part in the growth and development of all AU students. To that end, the university places great emphasis on intentionally guiding, challenging, and supporting its students as they grow and thrive as members of the AU community on campus and beyond. Coordinated by the vice president of campus life and inclusive excellence, AU offers a range of intersecting student-focused programs that together strive to integrate students into a diverse university community; promote their intellectual, social, and spiritual development; and, in collaboration with faculty, prepare students for lifelong learning and global citizenship. The wide spectrum of departments within the Office of Campus Life and other departments within AU divisions that support the campus life experience include:

- Dean of Students
- Center for Community Engagement and Service
- Center for Diversity and Inclusion
- Center for Student Involvement
- Counseling Center
- Health Promotion and Advocacy Center
- Housing and Residential Life
- International Student and Scholar Services
- Kay Spiritual Life Center
- Orientation, Transition and Retention
- Student Conduct and Conflict Resolution Services

- Student Health Center
- University Center (Mary Graydon Center)
- University Conference and Guest Services
- Equity and Title IX
- Dining Services

The Mary Graydon Center is centrally located on the Friedheim Quadrangle and connected to the Butler Pavilion, where the Office of Campus Life, the Career Center, Athletics and Recreation Department administrative office, and Bender Arena are located. The center currently houses university dining operations and serves as the main hub of student life activity.

Athletics and Recreation

Athletics and recreation are important components in the overall education and development of AU students. At the intercollegiate level, AU fields 16 NCAA Division I teams (men’s basketball, cross country, soccer, swimming and diving, indoor and outdoor track and field, and wrestling; women’s basketball, cross country, field hockey, lacrosse, soccer, swimming and diving, indoor and outdoor track and field, and volleyball), many of which have enjoyed multiple Patriot League titles and post-season appearances. As has become a tradition at American University, the academic accomplishments of AU scholar-athletes are equally as impressive, with many teams and individual athletes garnering Division I academic honors.

Recreational Sports and Fitness, a unit within the Department of Athletics and Recreation, provides a wide range of health, fitness, and recreational programs—including club sports, intramurals, group exercise classes, aquatics programs, and personal training sessions—to meet the variety of needs and interests of AU’s diverse campus population. These dynamic programs foster broad participation and encourage active lifestyles, provide a healthy release from academic rigor, and help develop lifelong habits of physical activity.

Campus athletic facilities include:

- *Bender Arena*. Located in the Sports Center, Bender Arena is the major sports venue on campus and is host to a variety of events including commencement and NCAA athletic games.
- *Greenberg Track and Reeves Athletics Complex*. Located on the west side of campus, Reeves Field is a premier soccer facility used for intercollegiate women’s and men’s soccer games; the complex also features a six-lane track.
- *William I. Jacobs Recreational Complex*. The Jacobs Recreational Complex includes a multi-use turf surface used for intercollegiate women’s lacrosse and field hockey games, along with a softball diamond and two outdoor sand volleyball courts.
- *Massachusetts Avenue Field*. An athletic field at the corner of Massachusetts Avenue and 45th Street is primarily used for intramurals and athletic practices.
- *Tennis Courts*. Six unlit tennis courts and two outdoor basketball courts are located on the northwest side of campus.
- *Jacobs Fitness Center*. Located within the Sports Center, Jacobs Fitness Center is the primary fitness facility on the Main Campus, housing the Athletics Strength and Conditioning and Wrestling rooms, a variety of cardio and weight training equipment, and group exercise studios.

- *Reeves Aquatic Center.* Located within the Sports Center, the aquatic center includes an eight-lane, 25-yard lap pool and a three-lane, 20-yard teaching pool.
- *Cassell Fitness Center.* Located in Cassell Hall on the north side of the Main Campus, the facility houses both cardio and weight training equipment and two fitness studios.
- *Duber Fitness Center.* Located within Duber Hall, the multi-use facility includes personal training and program space during the academic year and a small fitness center during the summer semester.
- *Campus Fitness Trail.* Launched in fall 2016, the two-mile campus fitness trail highlights achievements of the campus, faculty, students, and alumni, providing a unique opportunity to discover and explore the university.

Members of the residential neighborhoods surrounding campus have access to the track and tennis courts when they are not scheduled for use by AU and may purchase a membership to the Jacobs Fitness Center and participate in programs at the Reeves Aquatics Center.¹

Student Housing

The residential experience at American University is based on the understanding that much of what students learn happens outside of the classroom setting. Accordingly, AU's Office of Housing and Residence Life is committed to providing and supplementing quality programs and services that enhance the academic pursuit of all resident students, including facilitating the holistic development of AU students in living-learning communities and incorporating faculty and staff in out-of-classroom collaborative learning opportunities.

The residence life team within the Office of Housing and Residence Life is comprised of the director of residence life, the assistant director for residence life, a case manager, an associate director for each campus neighborhood, community directors, and assistant community directors. The staff collaborate with student staff to create a myriad of opportunities for residents to gain a better sense of self, community, and the world.

American University's residence halls are dynamic communities that promote student learning and positive and affirming atmospheres. Each building has unique features and special communities aimed at fostering student success.

Traditional-style halls include:

- Anderson Hall
- Clark Hall
- Hughes Hall
- Leonard Hall
- Letts Hall
- McDowell Hall
- Roper Hall

¹ In March 2020, access to campus athletic facilities was temporarily restricted due to the COVID-19 pandemic.

Suite-style halls include:

- Cassell Hall
- Centennial Hall
- Constitution Hall
- Duber Hall
- Federal Hall

Apartment-style halls include:

- Nebraska Hall

Together, these residence halls provide an on-campus housing capacity of 4,152 beds². In addition, approximately 200 beds of undergraduate student housing are available at the Frequency Apartments in nearby Tenleytown through an off-campus master lease. The housing at the Frequency is subject to AU residence hall regulations and is intended to meet the needs of upper-class students who desire to live in a vibrant commercial location close to public transportation and retail amenities without adversely impacting the residential neighborhoods surrounding campus.

2.4 Arts and Culture

American University honors the arts and culture as an essential part of higher education and strives to share that vision with the AU and broader DC communities in numerous ways.

Specifically designed to foster interdisciplinary collaboration in the arts, the Katzen Arts Center on Massachusetts Avenue NW provides more than 130,000 square feet of state-of-the-art instructional, exhibition, and performance space. The Katzen features the 30,000 square-foot American University Museum, with a variety of gallery and exhibition spaces including AU's permanent Watkins Collection, the Rothfield Collection of Contemporary Israeli Art, and other national and international contemporary art. The university's commitment to the arts expanded dramatically with the acquisition of the Corcoran Legacy Collection, which encompasses several works by both modern and contemporary artists of Washington, DC, including members of the Washington Color School.

The American University Museum maintains a long-standing commitment to supporting artists in the Washington, DC, community and takes an active role in the formation of the region's contemporary arts culture. The museum's Alper Initiative for Washington Art promotes the understanding and appreciation of the art and artists of the DC metropolitan area through its dedication to preserving, presenting, and creating the art history of Washington, DC.

The Greenberg Theater at 4200 Wisconsin Avenue NW and the Studio Theater in the Katzen Arts Center serve as leading venues for the DC community to experience live performances in music, theater, and dance. AU's Department of Performing Arts produces five mainstage theater shows each school year where students participate in performances ranging from classics to contemporary works and traditional book musicals to innovative new productions.

² Pursuant to DC Zoning Commission Order No. 11-07F, the university may also use up to 330 on-campus triples in addition to the 4,152-bed capacity.

The DC Humanities Truck is a unique, fully customized delivery truck that serves as an experimental mobile platform for AU faculty and students to travel throughout the District and interview residents in their own neighborhoods to document the stories of diverse, underserved communities throughout the DC region. The web-based projects are then exhibited and circulated within and beyond the communities where they were created. One of the truck's first projects focused on stories of communities and individuals experiencing homelessness, recent immigration, and the difficulties of living in neighborhoods undergoing significant transitions and dislocations.

WAMU (88.5 FM) is American University's public news and talk radio station and serves the greater Washington, DC metropolitan area as the region's primary National Public Radio station. WAMU is member-supported and committed to producing regular and special programming that reflects, supports, and celebrates the diverse and dynamic communities of Washington, DC.

2.5 Community Service and Outreach

American University is deeply rooted in community and service and continues to make strategic efforts to expand and strengthen its connections to the DC community and beyond. Many of these programs are featured in the university's 2020 community impact report *AU in the District*. Notable examples include:

- The *Washington Tax Initiative* connects AU's Kogod School of Business undergraduate and graduate students with Community Tax Aid, a nonprofit that provides free income tax preparation to low-income individuals.
- The *Eagle Endowment for Public and Community Service* supports community service projects in the DC area by helping students turn ideas into action and action into service, awarding students grants of up to \$1,000 and providing them with mentors who assist in implementing their projects. The program garnered recognition as the *Top College Philanthropic Organization in the USA*, along with the Brandeis University Silverman Center's *A Generous U* title and accompanying grant funding for its work in student philanthropy.
- The *Center for Community Engagement and Service (CCES)* is one of the leading platforms promoting AU's commitment to advancing social justice and civic responsibility and improving the lives of people both in the DC community and globally. *CCES* programs and projects include the following:
 - *CCES One-Day Service Events*: This program provides AU faculty, staff, students, and alumni with myriad opportunities to connect with diverse DC communities, focusing on facilitation of short-term and longer-term community services projects.
 - *Community-Based Learning (CBL)*: An academic, course-based initiative, *CBL* allows students to collaborate with community agencies, nonprofit organizations, and schools to address community-identified goals and needs.
 - *Explore DC*: Held during Welcome Week, the *Explore DC* program allows incoming students to participate in one day of community service and one day of immersion in the District to learn about neighborhoods and wards, city government, history, the city's culture, and how to use public transportation. During summer 2019, 405 students participated in the program, partnering with 50 different community service opportunities.

- *Martin Luther King Jr. Day of Service*: During 2019, 163 students and staff volunteered at six sites throughout the city, including Ron Brown High School, IDEA Public Charter School, Kelly Miller Middle School, Deanwood Recreation Center, A Wider Circle, and Campus Kitchen.

District of Columbia Schools

AU's School of Education has deep ties with DC Public Schools (DCPS), including the *Teacher Pipeline Project* that launched in fall 2018. Under this initiative, AU offers an education-focused dual-enrollment program for high-school seniors—the only such offering on AU's campus. The program allows high school students exposure to the education field while earning early college credits alongside undergraduate education students preparing to be teachers. The eventual goal of the dual-enrollment program is to create a pipeline of highly skilled and diverse teachers between AU and DCPS. In addition to this successful initiative, the broader university community engages directly with District public and public charter schools through many collaborative and impactful projects, including:

- *DC Reads*, a joint effort of AU, its students, DCPS, and community-based organizations that provide off-campus literacy programs and quality tutoring to children in need.
- *Marshall-Brennan Constitutional Literacy Project*, which celebrated its 20th anniversary in 2019, sends WCL students to area schools to teach constitutional law and youth justice; as part of the program, volunteers reframe issues present in the daily lives of youths as constitutional issues and engage students in hands-on civics activities that encourage them to be creative and develop problem-solving, collaborative, and critical thinking skills.
- The *Sports Analytics Club* at Woodrow Wilson High School promotes interest in math by bringing students together to learn analytics through sports analytics research projects that are approved and supervised by a STEM teacher advisor and an AU professor advisor.
- *DCPS Adopt-a-School Program* is a pipeline program that provides a structured pathway for partnerships between DCPS and local corporate and community organizations interested in building relationships that support student success.
- *The Ethics Bowl*, a College of Arts and Sciences-sponsored debate competition, helps DC-area high school students cultivate the virtues central to democratic citizenship. The competition allows students to explore the challenging ethical and political issues of our time in a systematic and open-minded way through respectful, supportive, and rigorous discussion.
- *In My Backyard Day of Service* is offered through the Washington College of Law Office of Admissions and Diversity and Inclusion to focus on fostering pipeline efforts that expose students to the impact and opportunities that exist within legal careers. As part of its partnership with Truesdell Education Campus, law students and staff participants work with Truesdell Elementary School to perform beautification projects and building maintenance to prepare the school for the start of the academic year.
- The *AU District Scholars Program* was launched by the university in December 2019 to enhance high-quality education and support the Washington, DC, community through the dedication of \$3 million in full scholarships for high-achieving students attending District public and public charter high schools and who have significant financial need. Eleven student recipients for the 2020-2021 academic year are the first cohort of AU District Scholars.

Law Clinics and Externship Programs

Each year more than 200 students take part in one of the Washington College of Law's 10 in-house clinics. As part of their work in this nationally ranked program, student attorneys advocate on behalf of underserved individuals and organizations in the DC region in venues ranging from local and federal courts and agencies to negotiating tables in corporate boardrooms. Each year, student attorneys provide tens of thousands of hours of pro bono legal services. Notable clinic programs include:

- *Janet R. Spragens Federal Tax Clinic* represents low-income individuals being audited by the IRS.
- *Immigrant Justice Clinic* provides representation to DC-area immigrants seeking asylum and humanitarian protection, naturalization, permanent residence, and other forms of relief.
- *Civil Advocacy Clinic* helps low-income clients solve legal problems and provides representation in civil matters in the courts and administrative agencies of DC and Maryland.
- *Community and Economic Development Law Clinic* provides legal assistance to small businesses, worker cooperatives, and nonprofit organizations in DC and Maryland.
- *Pro Bono Honors Pledge Program* promotes voluntary, uncompensated work undertaken by law students on behalf of low-income and underrepresented populations or for the public good. The program is designed to encourage students to continue engaging in pro bono service throughout their careers.
- *Washington College of Law Externship Program* provides thousands of hours of high-quality, unpaid legal assistance for government agencies, courts, public interest organizations, and law firms engaged in pro bono work, including organizations such as the World Bank, US Agency for International Development, US Department of Justice, Federal Communications Commission, US Senate and House of Representatives, Securities and Exchange Commission, and nonprofit organizations including Kids in Need of Defense, Washington Lawyers' Committee for Civil Rights, Public Defenders' Services, and Campaign for Youth Justice.

Local Outreach

Maintaining positive relationships with members of the communities surrounding campus is a priority for AU, and the university welcomes the opportunity to be a valuable and valued community partner. The Office of Community Relations actively facilitates efforts to work with neighbors, local community organizations, and the Advisory Neighborhood Commission (ANCs) in the neighborhoods surrounding campus to address issues of mutual concern. As an active member of the community, AU participates in many local neighborhood-based efforts, including:

- working with *Tenleytown Main Street*, a community-based nonprofit organization, in its efforts to strengthen the economic vitality of Tenleytown
- supporting beautification efforts at local parks such as *Friendship Park* (also known as Turtle Park)
- sponsoring and participating in community events including *Jazz at Turtle Park*, *Palisades Village Home and Garden Tour*, and the *Northwest Little League*
- working with teachers and children at neighborhood schools *Horace Mann* and *Janney Elementary* on special events and initiatives

AU also provides many community-centric programs and welcomes the public to use many of on-campus facilities and resources³, including:

- *Bender Library* to study and access print materials, library catalog, and databases
- various outdoor campus recreational facilities and membership opportunities at *William I. Jacobs Fitness Center*
- a variety of *summer athletic programs* on campus for neighborhood youth
- *Kennedy Political Union* lectures and seminars
- *Community Audit Program*, designed for community members ages 55 and older who live in the neighborhoods near campus, which allows individuals to audit university courses for a nominal fee
- creative activities and summer camps through *Kids at the Katzen*
- educational events and programming associated with AU's accredited and award-winning *campus arboretum*, which supports one of the most diverse collections of plant material of any urban campus in the country

2.6 Economic Contributions

As the fifth largest non-government employer in Washington, DC, American University has a significant impact on the region's economy. The university offers highly competitive wages and benefits to its employees—many of whom are DC residents—and is a major purchaser of goods and services from area businesses. The university's capital improvements in new buildings, large-scale renovations, and infrastructure projects also stimulate job creation and spending in the local construction sector.

AU's estimated economic impact on the metropolitan DC region totals approximately \$1.7 billion⁴, based on total annual spending of \$941 million, including:

- \$672 million in annual institutional spending (salaries; consultants and contractors; supplies and payments to local vendors; income, sales, and property taxes)
- \$212 million annual spending by students (room and board)
- \$5.7 million annual visitor spending (sports events, museum visitors, admissions prospects and their families)
- \$51 million annual research impact spending (federal and private grants and contracts)

In addition, AU's spending on capital projects from 2013—2018 totaled more than \$441 million.

EXHIBIT D: AU IN THE DISTRICT

³ In March 2020, access to campus facilities was temporarily restricted due to the COVID-19 pandemic.

⁴ AU's total economic impact on Washington, DC, was derived by multiplying its estimated annual spending of \$941 million with a multiplier of 1.88. The multiplier, a measure of how money put into the community is respent and leads to additional economic activity was calculated by the Consortium of Universities of the Washington Metropolitan Area, in a report titled, *The Economic Impact of the Consortium of Universities*. All figures based on financial year ending April 30, 2018.

SECTION 3: PLANNING THE PATH FORWARD

3.1 The Shifting Landscape and Competitive Marketplace of Higher Education in the Twenty-First Century

As a community of changemakers, AU is actively and purposefully identifying and responding to the myriad challenges throughout higher education—at a time when the demand for change and opportunities for institutions of higher education are both expanding exponentially. AU is actively meeting this challenge by combining its core strengths—because the university is not content with being an either-or institution. AU faculty are scholars *and* teachers. AU students are learners *and* researchers. AU pursues imperative research *that also* leads to real-world solutions. And as AU adapts to this shifting landscape, we teach our students to do the same. This approach has created a culture of institutional agility that allows AU to remain flexible to boldly engage the changing needs and demands in a dynamic global society. As AU prepares for tomorrow's opportunities, the university's mission to advance knowledge and foster intellectual curiosity remains its constant guide.

3.2 American University's Planning Framework

Building on the Strategic Plan

AU's strategic plan, [*Changemakers for a Changing World*](#), focuses on addressing the formidable issues facing higher education. It draws on AU's legacy of scholarship, learning, and community while taking advantage of the university's strengths—a campus located in the nation's capital, a robust environment for scholarship and experiential learning, a growing academic reputation with a foundation in teaching excellence, and worldwide connections with leaders and organizations that are a platform for scholarly impact. Through the strategic plan, the university is not only rethinking the rising costs of higher education but also how to prepare students to lead change, provide a lifetime of dynamic learning opportunities, elevate the discovery of knowledge with global impact, and develop multifaceted approaches to inclusive excellence. AU is an institution deeply rooted in community—on a global, national, and local level—and the strategic plan outlines the university's commitments to connecting with the communities surrounding campus and throughout the District of Columbia to effectively advance educational opportunities, enrich arts and culture, and promote economic development in a manner that benefits a wide range of stakeholders and enhances AU's position as an anchor institution in the District. Built around the values and purpose of creating meaningful change to respond to and address the most pressing issues facing the community, nation, and world, AU's strategic plan has effectively positioned the university to thoughtfully navigate challenges and uncertainties—including those brought about by the impacts of the COVID-19 pandemic—while at the same time maintaining focus on AU's forward thinking and long-term objectives and priorities.

Shaping the Future

The *2021 Campus Plan* is an integral component in the successful implementation of the strategic plan, setting forth a thoughtful approach to managing campus growth and development over the next 10 years in a manner that reflects the university's commitment to the communities of which it is a part. At

the same time, the Campus Plan will play a critical role in informing and incorporating the key priorities of an ambitious fundraising campaign that will capitalize on AU's momentum as an emerging global university to support the study and scholarship of American University students and faculty for generations to come. As detailed below, the fundamental components of the plan have been envisioned and developed—and will be collaboratively implemented over the next decade—in partnership with university and community stakeholders to ensure that the campus will adapt to and meet the changing needs of AU students, faculty, and staff while at the same time respecting and enhancing the quality of life of those who live within the neighborhoods surrounding campus. **It is AU's fundamental goal that the 2021 Campus Plan successfully accomplishes both of these objectives.**

3.3 Development of the Campus Plan: A Transparent and Consensus-Based Approach

AU embarked on this Campus Plan effort with an intentional focus on engaging effectively with members of the community who reside in the neighborhoods surrounding the campus. Over the past two years, the university worked closely with the AU Neighborhood Partnership and a wide range of campus and community stakeholders to gather input and feedback on various planning concepts and priorities as they were developed. **As a result of this dedicated and collaborative effort, the university and the AU Neighborhood Partnership have reached consensus on the objectives, proposals, and commitments set forth in the 2021 Campus Plan.** The following sections outline the comprehensive planning process which led to this successful result.

3.3.1 American University in the Context of Its Community

American University is located within several established residential neighborhoods, including AU Park, Fort Gaines, Spring Valley, Tenleytown, Wesley Heights, and Westover Place. Residents in these neighborhoods have a strong interest and involvement in activities on and around campus, and, for many years, have demonstrated a commitment to working collaboratively with the university on a wide range of initiatives and partnerships. These neighbors share a common interest in the long-term vitality of the university and in ensuring that its impacts are appropriately addressed and effectively managed, and, as detailed more fully below, have been integral partners in the development of the *2021 Campus Plan*.

EXHIBIT E: CAMPUS NEIGHBORHOOD CONTEXT

3.3.2 American University Neighborhood Partnership

The American University Neighborhood Partnership is a collaborative forum connecting AU and leaders in the communities surrounding the university, focused on improving university and neighborhood relations through discussion, information sharing, and problem-solving. Since its inception in 2018, representatives of all engaged stakeholder groups have actively participated in effective discussions to evaluate existing planning and programming efforts, identifying creative solutions to address neighborhood quality-of-life issues and sharing information and insight regarding matters of mutual concern.

Members of the Neighborhood Partnership take its charge seriously and are committed to its purposes and objectives as an effective and established forum for transparent engagement and the

development of mutually beneficial solutions. Senior leadership and key staff of the university (including five members of the president’s cabinet) are actively involved in the partnership, along with numerous neighborhood leaders who make substantial commitments of their own time to ensure that effective dialogue is maintained through continuity of meeting attendance, constructive discourse, and active communication with their constituents. In recent months, the parties’ level of effort and engagement has increased significantly to ensure thoughtful and collaborative review and discussion of AU’s priorities and objectives in the development of this consensus-based *2021 Campus Plan*.

Partnership Steering Committee. The Partnership Steering Committee is comprised of AU staff and administrators and representatives of community organizations and ANCs who were signatories to the March 18, 2018, letter expressing the intent and vision of the partnership that was submitted to and recognized by the Zoning Commission. These founding members include the Fort Gaines Citizens Association, Spring Valley Neighborhood Association, Ward 3 Vision, Westover Place Homeowner’s Corporation, ANC 3D and ANC 3E. Since the inception of the partnership, neighborhood leaders of the steering committee have conducted direct outreach to actively recruit community members to serve on working groups to provide a collection of perspectives and viewpoints that help shape balanced and well-informed alternatives and solutions. AU hosted an open house for the partnership in February 2019 and regularly shares information about the partnership on AU’s community relations website and at community events (e.g., Community Liaison Committee meetings and Planning 101 sessions).

The steering committee generally meets quarterly—but has met monthly during the campus planning process—and receives reports from and provides guidance to various partnership working groups.

Partnership Working Groups. The partnership includes five working groups that meet regularly, typically monthly, to support university planning efforts and address shared goals for promoting positive relationships and neighborhood quality-of-life issues. Each working group has a community and university co-chair, and members include neighborhood residents, AU administrators, staff, faculty, students, and consultants. The five working groups include:

- *Facilities Planning.* The Facilities Planning Working Group collaborates on issues related to physical campus facilities including existing and proposed development and renovation projects.
- *Student Life and Safety.* The Student Life and Safety Working Group addresses neighborhood quality-of-life issues including off-campus student conduct, noise and trash management matters, student safety in the community, and on-campus student life.
- *Transportation and Parking.* The Transportation and Parking Working Group addresses issues concerning travel to, from, and around the campus and provides input on efforts to mitigate the impacts of university-related traffic on the community.
- *Engagement and Communications.* The Engagement and Communications Working Group ensures that neighbors are aware of and are encouraged to participate in campus events and activities and promotes opportunities for engagement and the benefits associated with having the university as a neighbor.

- *Data and Metrics.* The Data and Metrics Working Group provides guidance on the development and review of metrics for compliance and assessment associated with various components of the Campus Plan.

3.3.3 The Community Liaison Committee (CLC)

The CLC, comprised of individuals from neighboring community organizations and representatives from the university, was affirmed in the *2011 Campus Plan* for the purpose of fostering consistent communication between the university and the surrounding neighborhoods, discussing issues of mutual interest, and proposing solutions to problems that exist or arise in implementing the Campus Plan. CLC meetings are held at least quarterly, and AU provides reports on various topics of interest to members of the community including enrollment, off-campus student conduct, construction projects, and community relations.

AU representatives provided updates on the *2021 Campus Plan* at regular CLC meetings and also hosted special Campus Plan-focused CLC sessions on April 28 and 30, 2020, and on August 6, 2020, to solicit community input and feedback with respect to the key components of the *2021 Campus Plan*.

3.3.4 Development of the *2021 Campus Plan*

American University has utilized several venues and forums to broadly engage neighborhood residents and community stakeholder groups in the development of the *2021 Campus Plan*. These opportunities included meetings with the Neighborhood Partnership and CLC, Planning 101 sessions that engaged the entire campus community and neighbors on various facets of planning, and numerous discussions with internal stakeholders and community organizations. This collaborative planning effort addressed major Campus Plan components including student enrollment, campus development, on-campus life, off-campus neighborhood quality-of-life issues, and parking and transportation—all through the lens of the unique challenges of long-term planning in the shifting global climate of higher education—and more recently, in the context of the COVID-19 pandemic. As noted above, this planning effort continued in earnest notwithstanding the impacts of COVID-19, as meetings and review sessions were successfully moved to online collaboration platforms.

EXHIBIT F: COMMUNITY ENGAGEMENT PROCESS

Campus Plan Website and Community Input Portal

The AU [2021 Campus Plan website](#) was launched in March 2020 to provide a wide range of information and materials, including meeting agendas, notes, and presentations; reports and data; and comprehensive FAQ resources. The website also includes an online [community input portal](#) for neighbors and interested stakeholders to submit questions or feedback about the Campus Plan. Responses to well over 100 questions submitted through the portal (or posed at public meetings, such as CLC sessions) were posted on the website for public review to allow all community members the benefit of seeing responses to issues raised by their neighbors. The website will continue to be updated regularly and the portal will remain active throughout the remainder of the review and approval process for the *2021 Campus Plan*.

Campus Plan Framework

In early 2020, AU developed a [Preliminary 2021 Campus Plan Framework](#) that outlined the university's institutional objectives with respect to key campus plan components. While the proposals included in the preliminary framework were developed by AU, they reflected significant input received from members of the community throughout the collaborative planning process. The *Preliminary 2021 Campus Plan Framework* was circulated at the March 3, 2020, CLC meeting and posted on AU's Campus Plan website for public review. Interested stakeholders provided extensive feedback on the preliminary framework through a variety of channels including several partnership meetings throughout spring 2020, internal stakeholder discussions (including a special session focused on AU student interests), two special Campus Plan CLC sessions on April 28 and April 30, 2020, a Planning 101 session open to all members of the community on May 19, 2020, and the online community input portal.

On June 1, 2020, the university released an updated version of the [2021 Campus Plan Framework](#) that reflected the substantial input and feedback received throughout spring 2020 and included many significant updates and changes in response to issues raised by members of the community. In particular, all key components outlined in the *2021 Campus Plan Framework* were the subject of focused and detailed review by the relevant partnership working groups to collaboratively address issues and concerns that were identified by neighborhood representatives. The working groups communicated their comments and perspectives directly to members of the steering committee, who remained actively engaged and involved in the planning process, providing input and direction as issues were explored and solutions developed. **As a result of this dedicated and focused collaborative planning effort, the AU Neighborhood Partnership Steering Committee affirmed its consensus support of the June 1, 2020, 2021 Campus Plan Framework.** AU presented the *2021 Campus Plan Framework* to the CLC at its quarterly meeting on June 9, 2020, and it was the subject of a special CLC meeting on August 6, 2020. The framework also was presented and discussed at ANC 3D and ANC 3E meetings in July and September 2020, as part of a comprehensive review timeline established and adopted by the ANC commissioners.

Proposed Campus Plan Draft

Over summer 2020, the terms set forth in the *2021 Campus Plan Framework* affirmed by the Neighborhood Partnership were incorporated into a full draft of the *2021 Campus Plan* document, including a set of proposed conditions of approval which were also reviewed and affirmed by the partnership. AU posted the draft *2021 Campus Plan* on AU's Campus Plan website for public review on September 8, 2020. Members of the AU community, including students, faculty and staff, as well as residents of the neighborhoods surrounding campus, including the CLC and all other interested stakeholders, were encouraged to review the draft *2021 Campus Plan* and submit questions or comments through the online community input portal.

[NOTE: The following text describes what is anticipated to occur over the next several months and will be updated as appropriate in the final 2021 Campus Plan document.]

Following review and consideration of the feedback and input received on the proposed draft document, the *2021 Campus Plan* was finalized and submitted for review to ANC 3D and ANC 3E for their consideration prior to filing with the DC Zoning Commission for public hearing and subsequent review and action by the commission.

3.3.5 Implementation of the *2021 Campus Plan*

Following approval of the *2021 Campus Plan*, the Neighborhood Partnership and its working groups will provide a collaborative forum for the day-to-day implementation of the objectives and priorities outlined in the *2021 Campus Plan*. For example, the *Facilities Planning Working Group* will evaluate development projects as they move from conceptual campus plan proposals to detailed submissions for further processing review. The *Student Life and Safety Working Group* will play a key role in developing enhanced off-campus student orientation programs and neighborhood outreach efforts as described in Section 4.4 below, as well as evaluating the efficacy of those programs over the term of the plan. The *Transportation and Parking Working Group* will continue to evaluate the key performance metrics which they helped develop with AU and DDOT as part of the Campus Plan Comprehensive Transportation Review (CTR) process. The *Engagement and Communications Working Group* will actively work with members of the community to identify programs and opportunities of mutual interest and benefit and promote positive engagement between AU and its neighbors. The *Data and Metrics Working Group* will help support the work of the steering committee and other working groups by providing and reviewing relevant data and developing appropriate metrics associated with various components of the plan. And finally, the *Partnership Steering Committee* will remain an important forum for active collaboration, information sharing and problem-solving, promoting positive and mutually-beneficial programmatic opportunities between AU and the community and ensuring that the commitments and obligations set forth in the *2021 Campus Plan* are appropriately managed throughout the plan's 10-year term.

In addition, it is anticipated that the CLC will continue to serve as a venue for regular communication between the university and its neighbors. AU administrators will provide reports on various topics relevant to Campus Plan issues and of interest to members of the community including enrollment, off-campus student conduct, construction projects, and community relations at regularly scheduled meetings of the CLC over the term of the Campus Plan.

SECTION 4: THE 2021 CAMPUS PLAN

The *2021 Campus Plan* sets forth a thoughtful and measured approach to managing campus growth and development over the next 10 years in a manner that reflects the university's commitment to the communities of which it is a part. Pursuant to the 2016 Zoning Regulations, the scope of the *2021 Campus Plan* has expanded from prior campus plans and now includes university-owned properties at 4801 Massachusetts Avenue NW, 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW, along with the Main Campus and Tenley Campus. This expanded scope provides a more comprehensive perspective of university activities within the surrounding neighborhood context, and the impact of these regulatory changes is directly reflected in several aspects of the *2021 Campus Plan*, including student and staff populations, parking inventory, and transportation considerations.

Envisioned and developed in close partnership with neighborhood stakeholders, the *2021 Campus Plan* sets forth a flexible yet predictable framework for future growth and development of the university in the context of its surrounding communities based on the following objectives:

- strategic and measured enrollment management at a level **lower** than the student cap established in 2011 when adjusted to reflect the revised student count methodology set forth in the city's updated zoning regulations
- a balanced development program of academic/administrative, residential/campus life, and athletic uses, on a scale significantly reduced from the program proposed in the *2011 Campus Plan*, aimed at providing leading-edge research and teaching facilities and strengthening and invigorating a student-centered living and learning campus experience, including enhancing the landscape and open space elements that are distinctive to AU's urban campus—an accredited and award-winning arboretum—and actively advancing the university's culture of sustainability
- a focus on providing student housing opportunities that encourage more students to remain on-campus during their time at AU, while at the same time implementing robust engagement with students who choose to live off campus to equip them to be responsible members of the community and promote positive relationships between students and their neighbors
- continued commitment to effective TDM strategies aimed at promoting alternative transportation options that reduce the use of single-occupancy vehicles and the demand for on-campus parking, along with vigilant enforcement of AU's existing off-campus parking policies to preserve on-street parking capacity for members of the community

Underscoring all of these objectives and key to the long-term success of the plan, AU will continue its dedicated efforts to work collaboratively with members of the community through the AU Neighborhood Partnership to effectively address impacts associated with AU students on the neighborhoods surrounding campus. In so doing, the *2021 Campus Plan* will ensure that AU effectively adapts to and meets the changing needs of its students, faculty, and staff while at the same time enhancing the quality of life for those who live within the neighborhoods surrounding the university.

4.1 Campus Populations: Measured Growth, a Reduced Enrollment Cap, and a Focus on Managing Impacts

4.1.1 Student Enrollment

A wide range of complex factors drive the continually changing dynamics of enrollment management in higher education. The profile of students entering degree-seeking, certificate, and continuing education programs and the demand for these programs are in rapid flux, influenced by shifts in demographics and economic and market forces that impact the notion of a “traditional” student. Even before the COVID-19 pandemic, online education programs were experiencing dramatic growth and actively transforming the landscape of higher education. Consistent with the priorities set forth in AU’s strategic plan, the university is adapting to these changes and providing a range of dynamic lifetime learning opportunities utilizing traditional face-to-face and leading-edge online platforms. While these rapidly changing conditions can pose challenges for long-range institutional planning, they also present opportunities for universities that can remain flexible to respond to emerging trends and offer unique programs to attract and retain high-quality students. To remain competitive and thrive as a vibrant educational institution in the nation’s capital, AU is focused on the need to maintain this responsive flexibility and institutional agility; this is more important now, as AU effectively navigates the immediate and long-term impacts of the COVID-19 pandemic.

2016 Zoning Regulations

In the context of the *2021 Campus Plan*, the university’s approach to enrollment management is further influenced by changes brought about by the 2016 update to the DC Zoning Regulations which impact the way AU and other universities throughout the District must count students. For AU, this new approach expands the scope of students included in the enrollment count—as the new regulations require that more types of students and students in a greater number of locations be counted.

Student enrollment has been reported on an annual basis to the CLC based on the student count definition set forth in the *2011 Campus Plan*. However, Subtitle Z, Section 302.10(d) of the 2016 Zoning Regulations includes a specific directive regarding the types of students to be counted, and Subtitle X, Section 102 calls for the inclusion of three university facilities that were not previously subject to the campus plan regulations—specifically 4801 Massachusetts Avenue NW (Spring Valley Building), 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW. As a result of these regulatory changes, the same student population results in different student counts under the methodology established in the *2011 Campus Plan* and the new approach that meets the requirements of the 2016 Zoning Regulations.

Impact on Student Population

The additional students included under the 2016 Zoning Regulations methodology include those enrolled in the School of Professional and Extended Studies, non-credit, and pre-sessional students, most of whom currently take their classes at the Spring Valley Building. As shown in Figure 1 below, while the identical fall 2019 AU student population is represented in the headcount numbers under both methodologies, the new, expanded methodology under the 2016 Zoning Regulations yields an additional 780 reported students or an increase of 6.61 percent. The vast majority of students

accounting for this increase is attributable to the additional university facilities included in the 2021 Campus Plan.

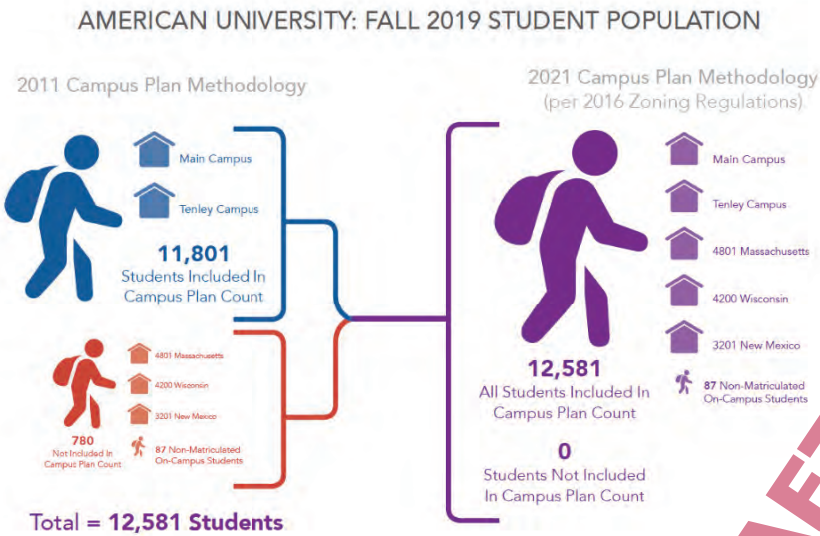


Figure 1. Impact of 2016 Zoning Regulations on Fall 2019 American University Student Population Count

Impact on Enrollment Cap

The student enrollment cap established in the 2011 Campus Plan is 13,600 students. Based on the impact of the new enrollment parameters set forth in the 2016 Zoning Regulations, it logically follows that the cap would also increase accordingly to correspond to the expanded scope of students being counted. As illustrated in Figure 2, when the enrollment cap is adjusted by 6.61 percent to reflect the impact of the new methodology, the result is an increase from 13,600 to 14,499 students.

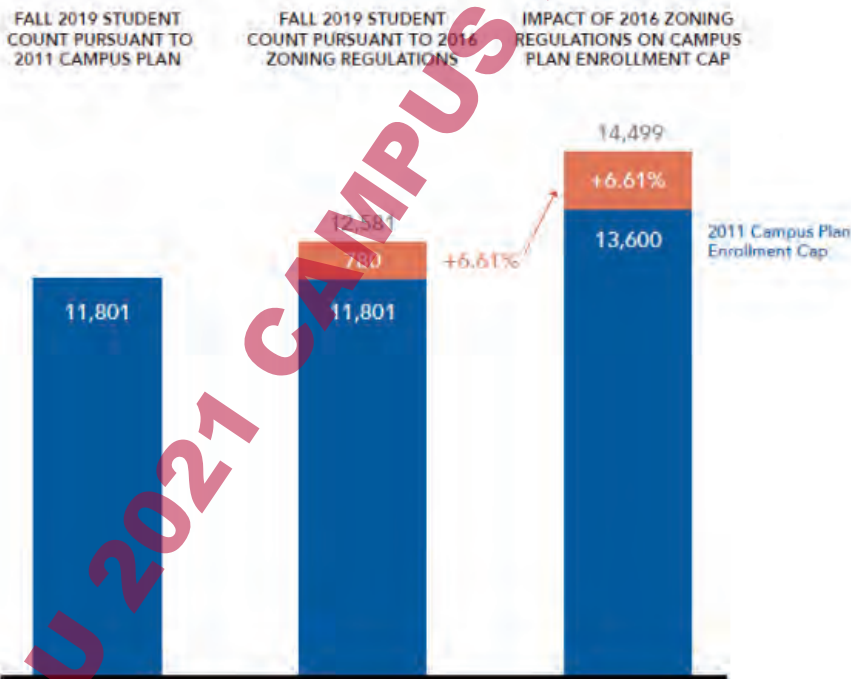


Figure 2. Impact of 2016 Zoning Regulations on Campus Plan Enrollment Cap

2021 Campus Plan Enrollment Projections: A Focus on Managing Impacts

As noted above, AU's outlook for the next 10 years is premised on the need to maintain flexibility with respect to the types of students AU attracts—and how and where they are educated—to remain competitive and thrive as a vibrant educational institution. Owing to the fluidity of market conditions throughout higher education, enrollment projections made 10 years ago as part of the *2011 Campus Plan* process did not materialize as AU had anticipated. Specifically, the university's stated goal of enrolling 1,000 additional graduate students over the term of the *2011 Campus Plan* was not met. While undergraduate enrollment increased at a measured pace over that period of time, the overall number of enrolled students remained relatively consistent and well below the approved enrollment cap.

Accordingly, AU has taken a different approach to addressing student enrollment over the term of the *2021 Campus Plan*; specifically, one focused around managing impacts rather than attempting to project specific enrollment figures for defined programs. That being said, AU has established directional guidance in terms of anticipated undergraduate, graduate, and online program growth. Specifically, it is AU's intent that traditional full-time undergraduate enrollment will likely remain close to current levels, owing to a range of factors including constraints associated with facilities, the services needed to support additional undergraduate students, as well as the size of current and anticipated future applicant pools. As was the case in the *2011 Campus Plan*, AU will endeavor to increase on-campus enrollment in face-to-face graduate programs, subject to the limitations of the proposed overall enrollment cap. In response to emerging trends, areas targeted for anticipated growth include leveraging AU's strengths in online instruction and lifelong learning initiatives, which include specially-designed, high-quality programs that utilize off-campus locations (e.g., downtown DC or other sites throughout the metro region) and do not bring students to the AU campus for their coursework.

Importantly, as part of the *2021 Campus Plan*, AU will continue its dedicated efforts to work collaboratively with members of the community through the AU Neighborhood Partnership to effectively address impacts on the neighborhoods surrounding campus associated with AU students. While the scope of the reported impacts is relatively small compared with other universities in DC, AU is firmly committed to a results-oriented approach to reduce these impacts further by:

- revising student policies to reference standards more explicitly for off-campus living
- providing additional on-campus housing in marketable unit configurations to encourage more students to remain on campus beyond their freshman year and reduce the number of undergraduates living in the neighborhoods surrounding campus
- enhancing on-campus opportunities for student activities and social engagement
- evaluating programs and efforts over the term of the *2021 Campus Plan* to ensure their efficacy

Undergraduate Housing Requirement

In support of AU's focus to manage the impacts of its student population and strengthen the living and learning experience on campus and also to provide an appropriate measure of predictability and control with respect to the number of undergraduate students enrolled, the university will continue to maintain a supply of housing for 67 percent of the full-time undergraduate student population. As discussed more fully in Section 4.3.3 below, and consistent with the *2011 Campus Plan*, AU plans to

meet this requirement over the 10-year term of the plan through a combination of housing resources, including existing and proposed on-campus residence halls as well as off-campus master-leased beds in strategic locations that do not adversely impact the residential neighborhoods surrounding campus.

Proposed Enrollment Cap

While committed to an approach to enrollment that is focused on managing impacts, the university is mindful of the desire for predictability among residents of the neighborhoods surrounding campus with respect to the number of students enrolled at the university. To that end, AU has carefully evaluated various enrollment considerations and believes it can manage enrollment over the term of the *2021 Campus Plan* without requiring a major shift from the student population projected in historical planning models.

The *2011 Campus Plan* established a student enrollment cap of 13,600, including a maximum of 2,000 students at the Tenley Campus. Given that the current and anticipated enrollment of the Washington College of Law is substantially less than the existing Tenley Campus enrollment cap, the university is seeking flexibility to allow students enrolled in other academic programs, including those that present opportunities for interdisciplinary collaboration, to attend classes at the Tenley Campus subject to the existing 2,000-student cap.

In terms of the overall student enrollment cap for the *2021 Campus Plan*, AU proposed in the March 3, 2020, *Preliminary 2021 Campus Plan Framework* to accommodate potential growth in the on-campus student population over the 10-year term of the *2021 Campus Plan* within the same cap established in 2011 when adjusted for the revised counting methodology set forth in the 2016 Zoning Regulations, as illustrated above in Figure 2.

Members of the community advocated for a more limited alternative to the *2021 Campus Plan* enrollment cap. This approach would increase the enrollment cap by the number of additional students that would be counted under the 2016 Zoning Regulations methodology in fall 2019 (i.e., 780), rather than the percentage of the total number of students represented by those additional students (i.e., the 6.61 percent or 899 students proposed by AU). In light of the need to remain flexible to respond to the aforementioned shifting dynamics of higher education—and particularly in the wake of the COVID-19 pandemic—AU firmly believes that its enrollment proposal is appropriate to provide the capacity to pursue a wide range of programmatic initiatives that will help ensure the vitality and financial viability of the university—many of which may bring students to campus for a limited period of time and will have minimal impact on the neighborhoods surrounding campus.

Nonetheless, after extensive discussion, review, and collaboration, the university has modified its approach to the enrollment cap for the 2021 Campus Plan to reflect the methodology favored by several community members of the Neighborhood Partnership and other neighborhood stakeholders engaged in the planning process.

The impact of the 2016 Zoning Regulations on the fall 2019 campus student population and *2011 Campus Plan* enrollment cap, and the relationship between the *2011 Campus Plan* cap, AU's initially proposed cap, and the revised cap proposed for the *2021 Campus Plan* are summarized in the table below:

	2011–2021 CAMPUS PLAN			2021–2031 CAMPUS PLAN			
	UNDER 11-07 ZONING ORDER METHODOLOGY	ADJUSTED FOR 2016 ZONING REGULATIONS	IMPACT OF 2016 ZONING REGULATIONS	AU PROPOSED ENROLLMENT CAP 3.03.2020	DIFFERENCE FROM 2011 ADJUSTED CAP	AU REVISED ENROLLMENT CAP 06.01.2020	DIFFERENCE FROM 2011 ADJUSTED CAP
FALL 2019 ENROLLMENT	11,801	12,581	+780 (6.61%)				
CAMPUS PLAN ENROLLMENT CAP	13,600	14,499	+899 (6.61%)	14,499	+ 0	14,380	- 119

As shown in the table, the proposed *2021 Campus Plan* enrollment cap, which would be in effect through 2031, **is lower than** the student enrollment cap established in the *2011 Campus Plan*, when adjusted for the new methodology for counting students mandated under the 2016 Zoning Regulations.

EXHIBIT G: STUDENT ENROLLMENT

This comprehensive consensus-based approach to enrollment management over the term of the *2021 Campus Plan*—encompassing AU’s focus on actively addressing and effectively minimizing adverse impacts on the neighborhoods surrounding campus, including the continued commitment to maintaining a supply of housing for 67 percent of the full-time undergraduate student population; retaining the 2,000 student enrollment cap at the Tenley Campus established in the *2011 Campus Plan*; and adopting an enrollment cap that is lower than the cap established in the *2011 Campus Plan* when revised to reflect the impact of the city’s updated Zoning Regulations—represents a balanced and thoughtful set of considerations aimed at meeting AU’s institutional needs and objectives while at the same time respecting and enhancing the quality of life for those who live within the neighborhoods surrounding campus.

4.1.2 Employee Population

The AU employee population is similarly impacted by the above-referenced changes to the 2016 Zoning Regulations. Given that 4801 Massachusetts Avenue NW (Spring Valley Building), 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW will now be included in the Campus Plan, the university employees that work at these locations will also be included in the employee count and any cap established in the *2021 Campus Plan* order of approval.

The impact of the 2016 Zoning Regulations on the current employee population and *2011 Campus Plan* employee cap, and the relationship between the current cap and the cap proposed for the *2021 Campus Plan*, are summarized in the table below:

	2011–2021 CAMPUS PLAN			2021–2031 CAMPUS PLAN
	ZC 11-07 ORDER METHODOLOGY	2016 ZONING REGULATIONS	IMPACT OF 2016 ZONING REGULATIONS	2016 ZONING REGULATIONS
FALL 2019 EMPLOYEE COUNT	2,461	2,843	+ 15.52%	
EMPLOYEE POPULATION CAP	2,900	3,350	+ 15.52%	3,350

As shown in the table, the proposed *2021 Campus Plan* employee cap, which would be in effect through 2031, reflects no change from the employee cap established in the *2011 Campus Plan*, when adjusted to count employees who work at the additional properties included in the *2021 Campus Plan* pursuant to the 2016 Zoning Regulations.

EXHIBIT H: EMPLOYEE POPULATION

4.2 Development Plan and Campus Character: Providing High Quality Facilities and Creating Special Campus Places That Reinforce AU’s Culture of Sustainability

Consistent with AU’s intent to maintain enrollment below the cap established in 2011 (when adjusted to reflect the 2016 Zoning Regulations methodology), proposed new development in the *2021 Campus Plan* is not aimed at accommodating increases in approved enrollment levels, but rather providing the types of high-quality and forward-thinking facilities that are required to further the university’s academic and research missions—including space for additional research labs and right-sized classrooms that promote the types of specialized instruction that is fundamental to the AU experience and differentiates the university from other peer institutions. These spaces include leading-edge teaching labs, interactive classrooms, media studios, facilities to support the visual and performing arts, and study spaces that foster cross-disciplinary collaboration and provide opportunities for independent and small group study. Additional proposed residential, campus life, and athletic space will support efforts to strengthen and invigorate a student-centered living and learning campus experience for every AU student and also provide a thriving campus environment that benefits the entire university community as well as the neighborhoods surrounding campus.

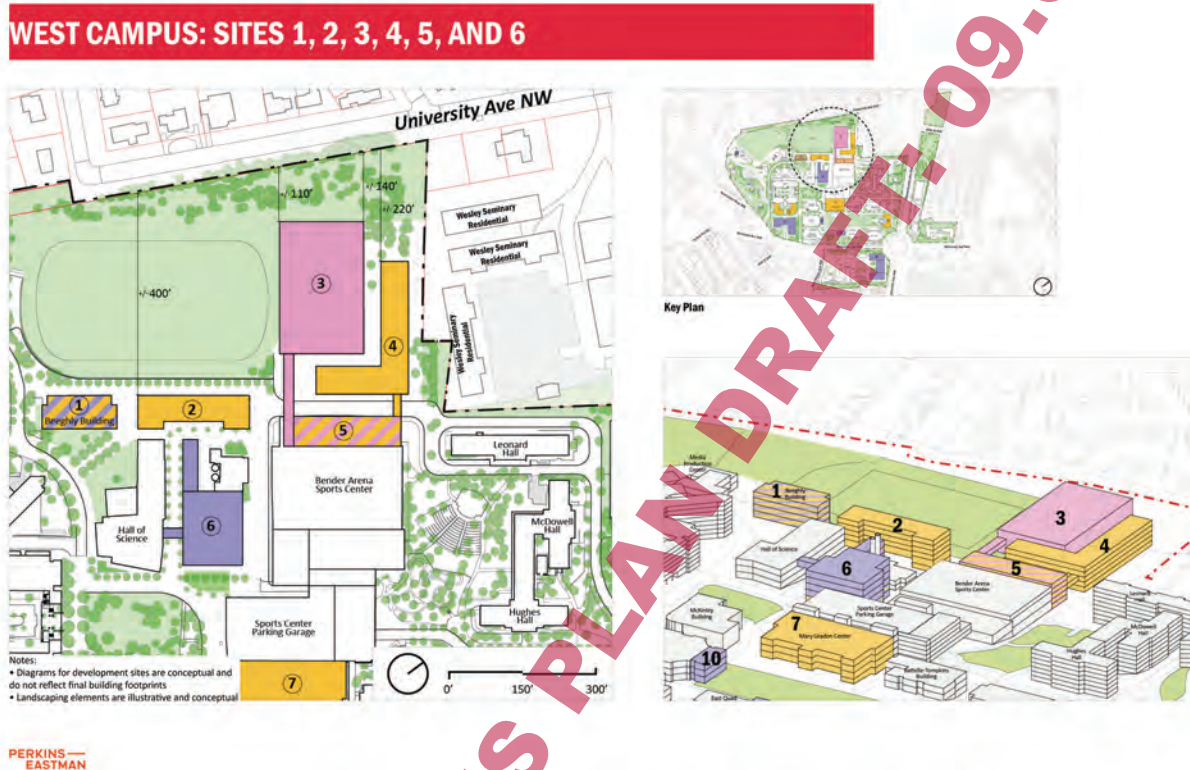
Reflecting this measured and strategic approach, potential new development opportunities included in the *2021 Campus Plan* total approximately 747,500 square feet of new gross floor area (GFA), significantly less than the 892,000 square feet of new GFA proposed in the *2011 Campus Plan*. Based on feedback gathered throughout the planning process, AU made several notable updates to the potential development sites included in the March 3, 2020, *Preliminary 2021 Campus Plan Framework*. In particular, community members provided helpful guidance that influenced the selection of the most suitable sites for residential use to meet AU’s target of 500–700 additional on-campus beds (see Section 4.3.3 for additional discussion regarding on-campus housing objectives); the appropriate siting and massing of proposed academic facilities; potential circulation and open space improvements; and identification of areas of the campus that are more suitable for long-range planning beyond the term of this Campus Plan—all of which are described more fully below.

The comprehensive and balanced development proposals outlined in the *2021 Campus Plan*—informed and shaped by extensive community input and feedback—effectively address AU’s residential/campus life, academic/administrative, and athletic space needs in a manner that reinforces the unique campus scale of AU, with heights and densities that correspond to the surrounding built environment, and setbacks, buffers, and design considerations that effectively mitigate potential adverse impacts and respect neighboring residential properties. In addition to these development proposals, AU will also continue to pursue strategic renovation and maintenance projects that reinvest in existing facilities but do not require the addition of any new gross floor area.

- EXHIBIT I: EXISTING BUILDING USES AND EXHIBIT J: PROPOSED BUILDING USES
- EXHIBIT K: PROPOSED DEVELOPMENT SITES
- EXHIBIT L: DEVELOPMENT PROGRAM SUMMARY
- EXHIBIT M: FLOOR AREA RATIO ANALYSIS

4.2.1 Proposed Main Campus Development

West Campus (Sites 1, 2, 3, 4, 5, and 6)

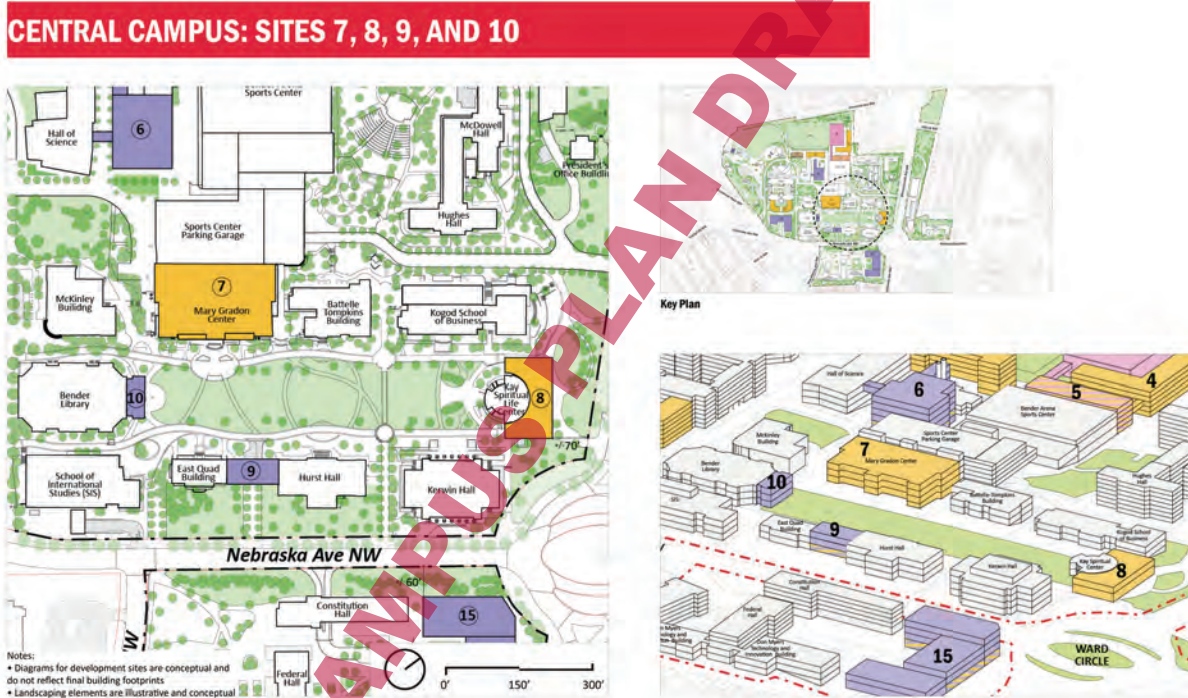


Proposed development on the northwest quadrant of campus (West Campus) will create an athletic, residential, and campus life village, including a new Center for Athletic Performance (detailed more fully in Section 4.3.2), consolidated and enhanced student health and wellness facilities, and additional student housing opportunities in competitive and marketable unit configurations to encourage more students to remain on campus during their time at AU. This collection of new development will effectively transform what is now “back of house” and service areas of campus into a vibrant campus destination, while maintaining a substantial distance (e.g., approximately 400 feet from Site 2, 220 feet from Site 4, and 110 to 140 feet from Site 3 to the western campus boundary) and appropriate buffers (e.g., landscaping and trees along both sides of the university’s fence line adjacent to University Avenue) from neighboring residential properties. *Given this transformational campus opportunity, and after extensive consultation and discussion with representatives of the community, AU has identified Site 2 and Site 4 (as well as any residential uses that may be incorporated in Site 5) as the primary priority residential sites for the 2021 Campus Plan.* These development opportunities would together yield approximately 500 new beds of on-campus housing to meet the housing target established by AU (and discussed more fully in Section 4.3).

In addition, the potential redevelopment of Asbury Hall (Site 6) would provide leading-edge academic and research space to support the sciences and other synergistic disciplines (e.g., psychology and health studies, and possibly programs from the School of Education and Kogod School of Business and other academic units) adjacent to the new Hall of Science and proximate to other key academic buildings along the Friedheim Quadrangle. The Beeghly Building could be used for either academic/administrative or residential/campus life use over the term of the *2021 Campus Plan* depending on campus needs; accordingly, the Beeghly Building has been designated as a secondary priority residential site.

As part of the further processing review and approval process for each of these proposed development sites, the university will work with members of the community, and particularly in consultation with the Facilities Planning Working Group, to ensure that vegetative buffers along the campus boundary at University Avenue are provided and maintained and that lighting impacts associated with the projects are addressed and appropriately mitigated.

Central Campus (Sites 7, 8, 9, and 10)



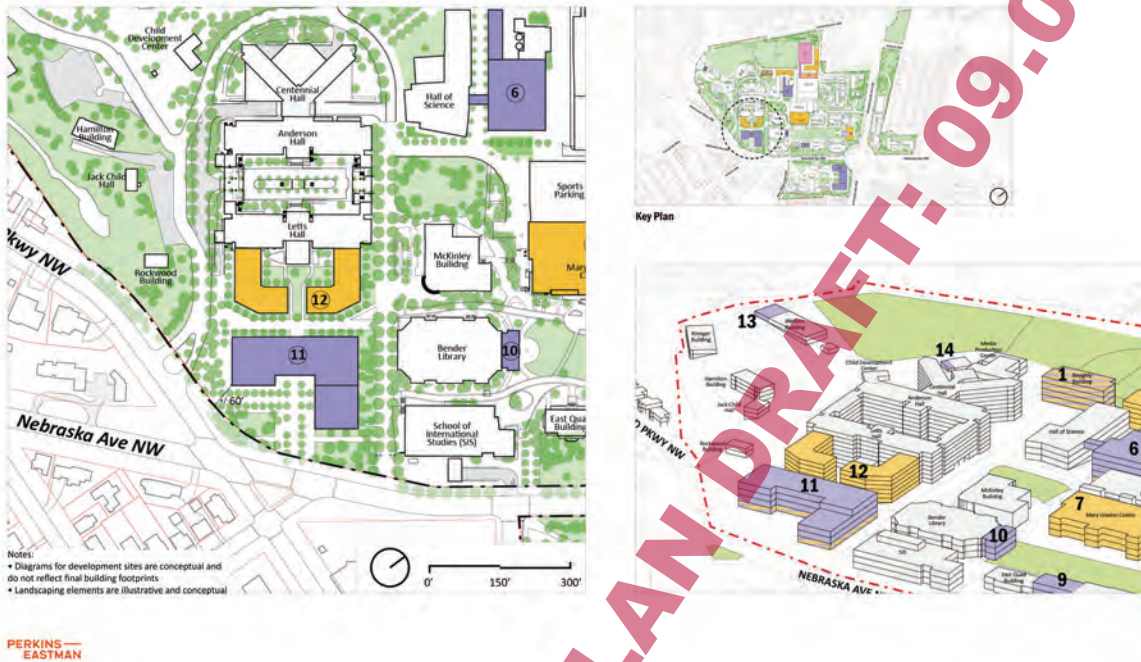
PERKINS
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The collection of properties around the Friedheim Quadrangle (Central Campus) represent the vibrant core of AU's campus. In support of the fundamental Campus Plan goal to strengthen and invigorate a student-centered living and learning campus experience, the university intends to renovate Mary Graydon Center over the term of the Campus Plan to serve as a re-envisioned hub of student life and activity (see also Section 4.3.1). While it is not intended that this effort would modify the exterior footprint of the Mary Graydon Center, some interior improvements (e.g., enclosing existing lightwell penetrations) could create up to approximately 5,000 square feet of additional gross floor area. Potential new development around Friedheim Quadrangle may include a modest addition to Bender Library, expansion of Kay Spiritual Life Center to provide additional space for interfaith services and

programming, and new administrative/academic space that could potentially connect the East Quad Building and Hurst Hall, addressing accessibility needs for the existing buildings as well as providing opportunities for programmatic connectivity.

Southeast Campus (Sites 11 and 12)

SOUTHEAST CAMPUS: SITES 11 AND 12



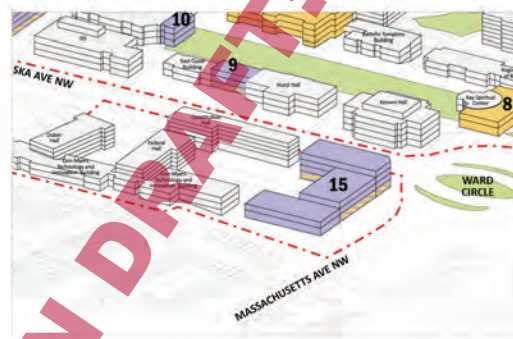
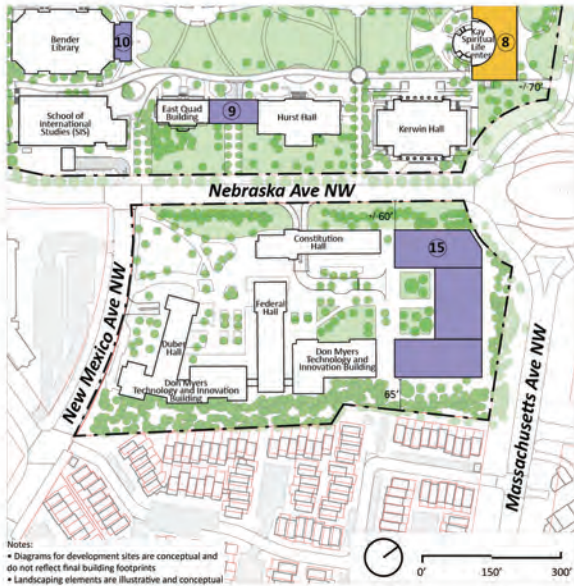
The southeast quadrant of campus bounded by Nebraska Avenue and Rockwood Parkway (Southeast Campus) is an important location that provides the initial visual impression of the AU campus to those arriving from the south and west. Redevelopment of this underutilized area of campus provides the opportunity to create a signature academic building that underscores the prominence of the location and also appropriately aligns with the height and scale of the adjacent School of International Studies Building, Bender Library, and other academic uses surrounding the Friedheim Quadrangle. Identified as Site 11, the conceptual massing and orientation of the potential project has been reconfigured after extensive community input to provide a substantial courtyard area along the campus perimeter (as discussed and illustrated more fully in Section 4.2.3) and a deeper set back from the surrounding residential community. Site 12, which has been significantly reduced in height and overall massing from AU’s initial concept proposal in direct response to feedback from members of the community, is proposed as a student housing site. Given the desirability of its central campus location and considering the positive impact the site could have in reinforcing important campus pedestrian and open space connections, *AU has identified Site 12 as a secondary priority residential site.*

Two levels of below-grade parking totaling up to 360 spaces could potentially be incorporated as part of the development of Sites 11 and 12 and approximately 24 surface parking spaces along the existing Letts Roadway would be displaced. The determination of whether or not to include below-grade parking would be evaluated at the time AU moves forward with further processing for either or both of the sites. If AU desires to include below-grade parking, additional study including environmental impact and geotechnical analysis would be conducted and reviewed with members of the community,

and particularly in consultation with the Facilities Planning Working Group and the Transportation and Parking Working Group, prior to the submission of a further processing application for the project.

East Campus (Site 15)

EAST CAMPUS: SITE 15



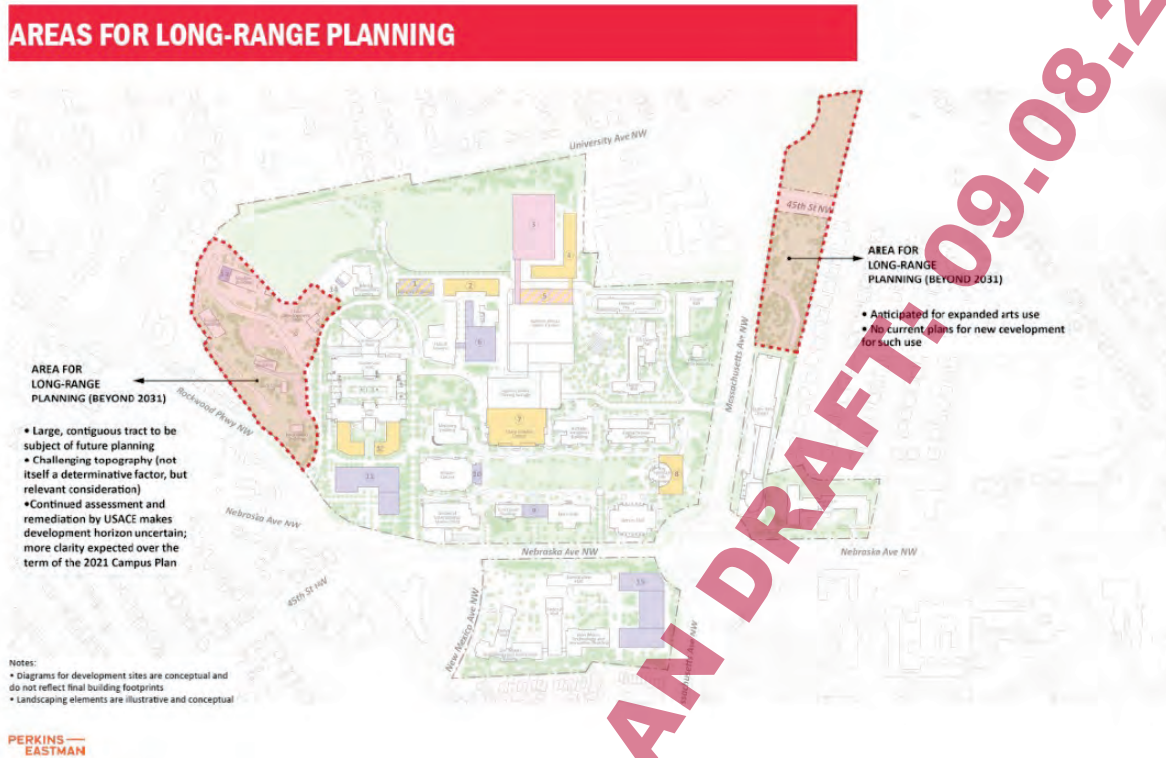
PERKINS
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Site 15 is a uniquely prominent campus location along Ward Circle. A signature academic building of approximately 135,000 square feet is proposed for the site, including ground floor campus life uses along Nebraska Avenue and Ward Circle. In response to input from members of the community (and particularly residents of the nearby Westover Place community), the height and massing of the building has been modified to step down from four stories along Nebraska Avenue, to three stories along Massachusetts Avenue, to two stories at the back of the site closest to Westover Place. As part of the further processing review and approval process for Site 15, the university will work with members of the community, and particularly in consultation with the Facilities Planning Working Group, to ensure that a landscaped buffer along the boundary with Westover Place will be provided and maintained and that lighting and noise impacts associated with the project are addressed and appropriately mitigated. In addition, given the close proximity of several Westover Place homes to the proposed development site, AU will work directly with Westover Place residents along the common property boundary line adjacent to Site 15 to document baseline conditions prior to commencing excavation or construction activity associated with the project.

Potential below-grade parking of up to two levels (400 spaces) could be incorporated as part of the development of Site 15, and approximately 200 existing surface parking spaces would be displaced. The determination of whether or not to include below-grade parking would be evaluated at the time AU moves forward with further processing for the site. If AU desires to include below-grade parking, additional study including environmental impact and geotechnical analysis would be conducted and reviewed with members of the community, and particularly in consultation with the Facilities Planning

Working Group and the Transportation and Parking Working Group, prior to the submission of a further processing application for the project.

Areas for Long-Range Planning



Given the 2021 Campus Plan's 10-year planning horizon, the university has not proposed a full campus build out plan but has instead focused on strategic infill and redevelopment opportunities, targeting areas that are underutilized (e.g., Sites 11 and 12); or that help resolve challenging physical conditions (e.g., Sites 2, 3, 4, 5, and 6); or that complete a clearly defined pattern of development (e.g., Site 15). Accordingly, in addition to identifying potential development sites, the university has also noted two areas of campus that do not include any major development sites and are instead considered as appropriate for long-term planning. The first is the area adjacent to the Katzen Arts Center, which would likely be suitable for expanded arts uses in the future. The second is the area of campus along Rockwood Parkway, extending from Fletcher Gate west to Jacobs Field. As the largest remaining contiguous area of undeveloped or underdeveloped campus space (other than athletic fields), this area will be the subject of thoughtful consideration and evaluation for future planning efforts beyond the 10-year scope of the 2021 Campus Plan. Two minor projects are contemplated over the term of the Campus Plan in this general area of campus, including an addition to Watkins Hall to accommodate a vehicle maintenance shop (associated with relocation of Osborn Hall that would be necessitated by the redevelopment of Site 2), and a storage area at the base of the existing communications tower.

4.2.2 Tenley Campus, 4801 Massachusetts Avenue NW, 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW

While significant new development is not anticipated at the Tenley Campus, improvements to the Dunblane House to address accessibility requirements and accommodate academic and administrative needs are contemplated. No significant modifications or redevelopment projects are currently planned

for 4801 Massachusetts Avenue NW (Spring Valley Building), 4200 Wisconsin Avenue NW, or 3201 New Mexico Avenue NW. AU will continue to evaluate the appropriate mix of university, commercial, and retail uses of these facilities over the term of the *2021 Campus Plan*, consistent with each property's existing underlying zoning.⁵

4.2.3 Landscape, Streetscape, and Open Spaces

For decades AU has prioritized enhancing the campus landscape and open space elements that are distinctive to the university's urban campus environment—an accredited and award-winning arboretum with a diverse collection of over 3,800 trees, more than 385 species and varieties of woody plants, and countless perennials, annuals, bulbs, and ornamental grasses. On the Main Campus, these special areas and features—including Woods Brown Amphitheatre, the President's Garden, Battelle Hillside, the Katzen Sculpture Garden, and the Labyrinth Garden to name only a few—range from peaceful and contemplative pockets of campus to areas that serve as lively hubs of social activity. The grounds of the eight-acre Tenley Campus are anchored by a collection of mature plantings that form an inviting interior courtyard encouraging outdoor engagement and activity. The entrance plaza at the Spring Valley Building at 4801 Massachusetts Avenue NW is always vibrant with activity, with a granite tiered fountain that serves as a comfortable gathering spot for students, visitors, and neighbors.

EXHIBIT N: EXISTING LANDSCAPE, STREETScape, AND OPEN SPACES

EXHIBIT O: EXISTING LANDSCAPE, STREETScape, AND OPEN SPACES: SPECIAL CAMPUS FEATURES

The *2021 Campus Plan* introduces new landscape and open space features, in addition to these thoughtfully designed and carefully maintained spaces, to ensure that members of the AU and surrounding community can enjoy the unique opportunities for outdoor recreation and social interaction as well as study and peaceful respite amidst an otherwise urban setting. To enhance access to these special places and throughout campus generally, AU will pursue efforts to strengthen pedestrian circulation, particularly opportunities that reinforce east-west connections through campus from Reeves Field to Nebraska Avenue, improve conditions in and around buildings on the west side of campus, and enhance the campus streetscape (e.g., in connection with the proposed development along Nebraska Avenue). In addition, the university will explore efforts to improve its visual and graphic communication on campus through coordinated wayfinding and signage elements.

EXHIBIT P: PROPOSED LANDSCAPE, STREETScape, AND OPEN SPACES

EXHIBIT Q: PROPOSED LANDSCAPE, STREETScape, AND OPEN SPACES: ILLUSTRATIVE CONCEPTS

EXHIBIT R: CAMPUS SIGNAGE AND WAYFINDING CONCEPTS

Maintaining and nurturing a vibrant and healthy tree canopy is an important priority for AU, as evidenced by the university's recognition by the Arbor Day Foundation for 10 consecutive years as a *Tree Campus USA*. Proposed development sites have been located and oriented to minimize the impact on existing campus trees, and new trees and landscape elements will be included as part of proposed development projects and at other key locations around campus, enhancing the campus tree canopy and serving as natural buffers at campus edges. Details regarding the impact of each proposed development site on existing Heritage Trees and Special Trees, including any necessary permitting and

⁵3200 New Mexico Avenue NW and 4200 Wisconsin Avenue NW currently include non-university related uses that are not subject to this Campus Plan application.

protection mechanisms to be employed, will be provided as building footprints are confirmed during the further processing review process that is required for each development project.

EXHIBIT S: CAMPUS SPECIAL AND HERITAGE TREES

EXHIBIT T: CAMPUS TOPOGRAPHY

4.2.4 Sustainability and Preservation

A Culture of Sustainability

American University is a proud leader in sustainability, both locally and nationally, and actively focuses on integrating a culture of environmental awareness, intention, and purpose throughout all facets of the university experience—from scholarship and teaching, to construction and infrastructure, to operations and transportation, to engagement both within and outside the university. Reflecting this institutional priority, AU signed the *American College and University President's Climate Commitment* in 2008 and launched its journey toward carbon neutrality. **Two years ahead of an ambitious target date of 2020, AU became the first university, first higher-education research institution, first urban higher-education campus, and the largest higher-education institution to achieve carbon neutrality.** Since reaching that noteworthy milestone, AU has worked to expand its commitment to a wide range of sustainability endeavors, developing a comprehensive sustainability plan that includes more than 50 individual goals across various sectors of university life centered around three key areas of focus: engagement, environment, and administration. As goals are achieved, the plan evolves as well—providing a dynamic set of objectives that will guide AU's efforts to expand the integration of sustainable practices into all aspects of the university experience and the everyday life of all members of the university community.

The ongoing impact of AU's commitment to sustainability is evident throughout campus. Green buildings incorporate energy-efficient technologies, utilize green roofs, and focus on human health. Environmentally conscious grounds management practices reduce stormwater runoff and prioritize planting local and adaptive species which decreases irrigation and fertilizer use. Solar energy powers university buildings as members of the AU community strive for zero waste and actively work with community partners to offer sustainable transportation options. And, in 2020, the university divested all public fossil fuel investments from its endowment, making AU one of the few universities in the country to fully divest both direct and indirect fossil fuel holdings.

With respect to campus development, American University uses the US Green Building Council's LEED (Leadership in Energy and Environmental Design) rating system for all new construction projects to evaluate the environmental impact and performance of campus buildings. In 2013, AU adopted a *Green Building Policy*, which outlines the university's commitment to achieve a minimum of LEED Gold certification for all new construction projects and manage all campus buildings to *LEED Existing Buildings: Operations and Maintenance* standards. Since 2011, 11 AU buildings have achieved (or are anticipated to achieve) LEED certified status, including:

- School of International Service (SIS) (LEED Gold BD+C, 2011)
- McKinley Hall (LEED Gold BD+C, 2015)
- Gray Hall (LEED Silver EB O+M, 2016)

- Tenley Campus/Washington College of Law (LEED Gold BD+C, 2016)
- Cassell Hall (LEED Silver BD+C, 2016)
- 4401 Connecticut NW/WAMU (LEED Gold CI, 2017)
- Constitution Hall, Federal Hall, Duber Hall, and Don Myers Technology and Innovation Building (LEED Gold BD+C, 2020)
- Hall of Science (Expected LEED Gold BD+C)

EXHIBIT U: CAMPUS SUSTAINABILITY FEATURES

Historic Preservation Considerations

As discussed in Section 2.1, AU's rich history in the District of Columbia extends back more than 125 years. Although the original plan for the Main Campus developed by Frederick Law Olmsted was significantly modified due to financial constraints, the northern part of the planned quadrangle (now the Friedheim Quadrangle) serves as the most prominent open space on the campus. Early university buildings, including Hurst Hall and McKinley Hall, remain as key academic buildings and important architectural resources. At the Tenley Campus, Washington College of Law students study in a state-of-the-art 300,000 square-foot LEED Gold-certified facility that was intentionally and thoughtfully designed to honor the history and the legacy of the site, as the 1904 Capital Hall, 1921 Chapel, and circa 1839 Dunblane House all continue to contribute to the character of the campus. Further information detailing the history of Main Campus and Tenley Campus buildings is included in EXHIBIT V: HISTORIC RESOURCES.

4.3 On-Campus Life: Supporting Student Success in a Vibrant and Inclusive Campus Community

The *2021 Campus Plan* includes a strong and purposeful emphasis on campus life and student housing, focusing on efforts to provide attractive and functional spaces that encourage students to spend more time on campus during their years at AU. This approach is not only aimed at enhancing the living and learning experience of AU students but also will benefit a wide range of stakeholders, including residents of the surrounding community.

4.3.1 Student Life

As noted above, the plan calls for reinvigorating Mary Graydon Center as a campus hub for a myriad of student-focused activities (e.g., Center for Student Involvement, Center for Diversity and Inclusion, Academic Support and Access Center, Center for Community Engagement and Services, and all student organizations), and repurposing existing and developing new space to accommodate integrated student health and wellness programs, particularly those focused on supporting students' mental health (including counseling services, health promotion and advocacy, and expanded fitness programs). A range of dining options and social gathering places also will be pursued to provide a wider variety of choices at convenient locations around campus.

4.3.2 Athletics and Recreation

Competitive intercollegiate athletics, robust recreational sports, and comprehensive fitness programs are all integral components of the AU student experience, yet AU's current facilities do not adequately

serve the needs of the university community. Facility limitations are a significant challenge to recruiting and retaining high-level student-athletes, and club, intramural sports, and recreational and fitness programs compete for field and studio space on campus. Accordingly, the *2021 Campus Plan* proposes additional space and facilities to support a range of athletics and recreational activities, including the new Center for Athletic Performance (CAP), which would provide training and support areas for AU athletics as well as varsity, club, and intramural competition venues. As a new, state-of-the-art facility, the CAP would serve as a catalyst to recruit and retain world class student-athletes and inspire increased competitive excellence, enhance the university's national profile, and heighten alumni and community engagement.

Additional projects include a proposed acoustical sound barrier wall and filming tower at Jacobs Field, a replacement video scoreboard at Reeves Field, and turf fields at Reeves Field and the park at 45th Street and Massachusetts Avenue NW.

EXHIBIT W: ATHLETIC AND RECREATION FACILITIES

4.3.3 Student Housing

Student housing continues to be an important focus in the *2021 Campus Plan*. To support this effort, the university will prioritize renovations to existing housing inventory and has also proposed new facilities that will provide unit configurations and amenities that respond to student preferences. In addition, AU will support the creation of learning communities, affinity housing, and other community-oriented housing experiences to encourage more upper-class students to live on campus beyond their freshman year. The prioritization of proposed new housing facilities as discussed below has been informed by input from and collaboration with neighborhood stakeholders to ensure that impacts associated with student housing are appropriately addressed and effectively mitigated.

Student Housing Requirement

AU will continue to maintain a supply of housing for 67 percent of the full-time undergraduate student population through a combination of housing resources, including those approved in the *2011 Campus Plan*—e.g., on-campus housing inventory (including 330 triples) and off-campus master-leased beds that are subject to AU residence hall regulations. In addition to the proposed development of the housing sites identified below, AU will also continue to explore off-campus student housing opportunities that provide students with housing alternatives that do not adversely impact the residential neighborhoods surrounding campus, including opportunities that meet many students' desire to live in vibrant commercial locations close to public transportation and retail amenities.

New Beds Proposed in 2021 Campus Plan

AU's target number of new on-campus beds over the term of the plan will depend upon the number of off-campus master-leased beds that are counted toward the 67 percent housing requirement. Assuming the current status is maintained and off-campus master-leased beds continue to be counted toward the requirement, the university proposes to add up to 500 additional beds on campus over the term of the plan. These new housing facilities would be designed in marketable and competitive unit configurations that meet student preferences, while also taking into consideration the implications of

cost on students' housing decisions. The additional housing capacity proposed would support the university's goal of encouraging more students to live on campus beyond their freshman year; allow AU the necessary flexibility in inventory to renovate existing residence halls over time to make less desirable—and more densely populated—facilities more competitive in unit type and configuration; and would also provide AU the opportunity to offer on-campus graduate student housing.

Prioritization of Residential Sites

Based on stakeholder feedback coupled with AU's institutional priorities regarding the residential sites identified in the March 3, 2020, *Preliminary 2021 Campus Plan Framework*, AU developed two levels of prioritization for various residential sites to meet its target of 500–700 additional on-campus beds over the term of the *2021 Campus Plan*.

Primary Priority Residential Sites. Sites 2 and 4 (and any residential uses that may be incorporated in Site 5) on West Campus would together meet AU's target of approximately 500 beds. As noted above, these residence halls, along with the proposed Center for Athletic Performance and consolidated student health and wellness facilities, would effectively transform an underutilized area of campus into a vibrant athletic, residential, and campus life village, while maintaining a substantial distance and appropriate buffers from neighboring residential properties.

Secondary Priority Sites. While it is AU's desired intent to maintain at least 200 master-leased beds off campus—to meet the needs of students who desire to live in vibrant commercial locations close to public transportation and retail amenities without adversely impacting residential neighborhoods surrounding campus—AU has noted throughout the planning process that, in the event the current 200 off-campus master-leased beds are no longer counted toward the 67 percent housing requirement, the university's target for additional on-campus beds would increase accordingly, up to approximately 700 total beds. Site 12 would provide for this additional capacity in the event the master-leased beds cannot be counted toward the housing requirement, are not available, or if additional housing capacity is otherwise necessary over the term of the plan. As noted above, the Beeghly Building could also potentially be considered for residential use over the term of the plan depending on campus needs (as an example, in the event Site 11 is developed and Site 12 is not, which would result in the loss of approximately 120 existing beds at Roper and Clark Halls).

4.4 Off-Campus Life and Neighborhood Quality of Life Efforts: Commitment to a Collaborative and Proactive Approach to Preventing and Managing Impacts

American University prides itself on its many contributions to the District of Columbia and the neighborhoods surrounding the AU campus. The university works closely with students to educate them about their rights and responsibilities as residents of the District, as members of the AU community, and as neighbors within the residential communities near campus. Understanding that many students live off campus at some point during their time at AU, the university has implemented a series of proactive measures to address off-campus student behavior. These measures include offering an enhanced off-campus orientation program that provides undergraduate students with an overview of the *Student Conduct Code* and guidance on how to be a good neighbor, covering issues such as excessive noise connected to social gatherings, home and yard maintenance, and other standard neighbor customs.

4.4.1 Student Conduct Code

AU's [Student Conduct Code](#) is designed to “support a safe, honest, and inclusive community with a shared commitment to acting with mutual respect and forming the highest standards of ethics and morals among its members.” All American University students are obligated, as a condition of enrollment, to abide by the *Student Conduct Code* and all relevant university policies and guidelines including the *Good Neighbor Guidelines*. This obligation is applicable to all conduct whether it occurs on or off campus.

The *Student Conduct Code* prohibits:

- Conduct which threatens or endangers the health or safety of any person
- disorderly conduct that interferes with the rights of others
- sexual assault, exploitation, or harassment
- use or possession of a weapon
- possession or use of alcohol by persons under 21 years of age
- possession or use of controlled substances (including marijuana)
- violation of local, state, or federal law

The conduct listed above is not exhaustive; the AU *Student Conduct Code* in its entirety can be reviewed [here](#), and relevant provisions and updates to the *Student Conduct Code* are also included as part of EXHIBIT X: UPDATES TO OFF-CAMPUS STUDENT CONDUCT POLICIES.

4.4.2 Good Neighbor Guidelines

In addition to the *Student Conduct Code*, all AU students are required to abide by all relevant university policies, including the [Good Neighbor Guidelines](#). As members of the AU community, the behavior of students living in the community or commuting to classes reflects directly on the university. The purpose of the *Good Neighbor Guidelines* is to summarize the university's expectations and educate AU community members on how to become active and responsible members of the surrounding community in which they live while maintaining their involvement and connection to the university.

The AU *Good Neighbor Guidelines* informs students of their responsibility to be aware of and abide by applicable DC laws and regulations regarding noise, disorderly conduct, alcohol and marijuana consumption, winter sidewalk safety, and weed control around their residences. The guidelines also inform students that violations of the policy may be subject to disciplinary action under the *Student Conduct Code*.

4.4.3 Orientation Programs

To better inform and educate students who choose to live off campus of their rights and responsibilities, the university, in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group, will implement an improved off-campus living orientation program. Managed by the Office of Campus Life, this program will include an online training module developed in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group that

students living in the 20016 or 20008 zip codes must complete. The *Pledge to Uphold Community Standards*, which details the responsibilities and obligations associated with living off campus, will be developed in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group and incorporated in the in-person and online training. Following the training, students must affirmatively acknowledge that they have fulfilled the training and understand the university's expectations. The Office of Campus Life will track participation and compliance with this program, and students not in compliance may be subject to adjudication under the *Student Conduct Code*.

In addition, AU will expand its in-person off-campus housing orientation program to include a larger collection of student organization members and athlete groups. The university will also continue to periodically distribute a letter to students from the Office of the Dean of Students that specifically reminds them of the university's expectation that they maintain the condition of their properties and manage the behavior of their guests. It will also state that AU expects students to know, understand, and abide by the [Disorderly Conduct Amendment Act of 2010](#) and the [District of Columbia Noise Control Act of 1977](#), both of which address noise disturbances. Students will also be informed of the details of both ordinances during the orientation programs.

4.4.4 Community Outreach

To remain engaged with the broader residential community, AU will continue its practice of making annual or more frequent visits to major apartment complexes and condominium communities where students live. The Office of Community Relations will also create, in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group, a neighbor education tool that informs residents of the university's strategies for student training and includes resources and directions on how to contact the university or file a complaint in the event of an undesirable incident. The university will also create and distribute, in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group, an *AU Eagle Living Guide* that will include good neighbor tips, resources, and a copy of the *Pledge to Uphold Community Standards*.

4.5 Transportation and Parking: Comprehensive Planning and Forward-Thinking Strategies

As part of the Campus Plan review and approval process, American University has worked in close coordination with members of the community, specifically the Neighborhood Partnership Transportation and Parking Working Group, and the DC Department of Transportation (DDOT) to prepare a Comprehensive Transportation Review (CTR). The CTR consists of the multi-modal evaluation and assessment of current and future transportation operations with a focus on high-quality site design, transit accessibility, and effective Transportation Demand Management (TDM) planning. The university's parking and transportation objectives and priorities, while detailed more fully in the CTR, are outlined below.

4.5.1 Parking

Consistent with the requirements of the *2011 Campus Plan*, the university currently maintains an inventory of 2,316 parking spaces on Main Campus and Tenley Campus. As a result of AU's commitment to a range of TDM strategies, on a typical semester weekday, AU's parking demand is only

approximately 73 percent of the available parking inventory, demonstrating that the university is effectively managing its parking supply to accommodate demand.

Impact of 2016 Zoning Regulations

As noted above, in response to changes included in the 2016 update to the DC Zoning Regulations, three university properties—4801 Massachusetts Avenue NW (Spring Valley Building), 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW—are included in the *2021 Campus Plan*. Adding these properties results in an increase to AU’s potential parking inventory of approximately 725 spaces, of which approximately 385 are currently dedicated to university use.

2021 Campus Plan Parking Requirement

The *2011 Campus Plan* requires that the university “maintain an inventory of approximately 2,200 parking spaces on campus” (with “campus” including only Main Campus and Tenley Campus). In light of the current parking inventory of 2,701 university-use spaces associated with all of the properties included in the *2021 Campus Plan* (specifically Main Campus, Tenley Campus, 4801 Massachusetts Avenue NW, 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW), the university is proposing to adjust the Campus Plan requirement to maintain a parking inventory of no more than 3,000 spaces for AU use, which would allow for up to 299 additional university-use parking spaces to be added to AU’s parking inventory over the term of the Campus Plan. Given that the aggregated university-use and non-university-use parking space capacity of all Campus Plan properties totals 3,045 parking spaces, AU would not necessarily be required to construct any additional parking infrastructure over the term of the Campus Plan to meet the proposed maximum 3,000 space university-use parking inventory.

Proposed Sites 11 and 12 and also Site 15 include the potential for below-grade parking, allowing up to approximately 336 and 200 net new additional parking spaces, respectively. While this inventory may not be necessary to support campus parking needs based on available parking inventory as noted above, potential below-grade parking has been included for those sites to be considered at the time of further processing review. Future planning considerations beyond the scope of this Campus Plan could impact the determination of whether below-grade parking would be included at either or both of these locations; for example, while there is no proposal in this Campus Plan for changing the use of the Sports Center Garage, if it is determined later in the term of this plan that demolition of the facility may be contemplated for the next Campus Plan, then construction of additional below-grade parking to replace the anticipated loss of the Sports Center Garage parking spaces may be pursued.

AU’s approach to restricting parking supply for university use to no more than 3,000 spaces will ensure that AU provides an adequate parking supply from its inventory across all properties included in the Campus Plan to meet the needs of its current population and any potential growth over the term of the plan. The proposal also reflects the university’s continued commitment to effective TDM policies that reduce the number of single occupancy vehicles (SOVs) arriving to campus and, in turn, limit the need for additional parking resources. To confirm that the parking is appropriately priced and the supply and adequately meets the needs of the AU population, the university will continue to regularly monitor and annually report utilization of its exclusively university-use parking facilities.

EXHIBIT Y: EXISTING PARKING AND LOADING FACILITIES
EXHIBIT Z: PROPOSED PARKING AND LOADING FACILITIES

4.5.2 Campus Circulation, Service, and Loading

As part of the campus planning process, the university has explored potential circulation changes that may occur as campus development projects are advanced to help improve the pedestrian campus experience and support alternative modes of transportation without adversely impacting university operations and services. These modifications could result in the bifurcation of campus vehicular traffic, creating north (Glover Gate) and south (Fletcher Gate) vehicular routes, limiting cross-campus vehicular traffic to transit, schedule-restricted service, emergency response vehicles, and special events. Existing campus circulation patterns as well as the proposed concepts for campus circulation are illustrated in EXHIBIT AA: EXISTING CAMPUS CIRCULATION and EXHIBIT BB: PROPOSED CAMPUS CIRCULATION.

4.5.3 Transportation Demand Management (TDM)

Comprehensive TDM planning will remain a priority for the university over the term of the *2021 Campus Plan*. Specifically, the university will maintain its robust shuttle service program that connects the Main Campus, Spring Valley Building, and Tenley Campus with the AU-Tenleytown Metrorail station and currently supports ridership of more than one million trips annually. In addition, the AU-WMATA U-PASS® Program, which allows for unlimited student rides on all Metrorail and Metrobus routes throughout the region, significantly reduces the number of vehicle trips to campus by students.⁶ Between July 2018 and June 2019, AU students logged more than 1.4 million system rides through the U-PASS® Program. The university will continue to maintain an active and comprehensive [transportation programs website](#) that outlines various transportation options and encourages the community to ride share, use transit, walk, or bike to campus. AU also offers a mobile app that provides members of the university community real-time information on various mobility options.

The university will continue to work closely with DDOT and the community, particularly the members of the Transportation and Parking Working Group, to ensure that AU's TDM policies and programs effectively support and incentivize sustainable travel modes—including walking, biking, and transit—for students, faculty, staff, and campus visitors over the 10-year term of the *2021 Campus Plan*.

4.5.4 Enforcement and Monitoring

As noted above, AU will continue to maintain and enhance the *Good Neighbor Parking Policy*, which effectively deters AU-related parking on neighborhood streets through vigilant enforcement efforts. The *Good Neighbor Parking Policy* was developed to achieve and maintain compliance with requirements established in both the *2001 Campus Plan* and *2011 Campus Plan* that the university “prohibit, to the extent permitted by law, students, faculty, staff, and vendors from parking on streets adjacent to and surrounding the campus.”

Specifically, the policy applies to on-street parking around the Main Campus at 4400 Massachusetts Avenue NW; Tenley Campus at 4300 Nebraska Avenue NW; Spring Valley Building at 4801

⁶ Due to the impact of COVID-19, WMATA temporarily suspended the U-PASS® Program for the fall 2020 semester.

Massachusetts Avenue NW; 3201 New Mexico Avenue NW; and the athletic field in the 4500 block of Massachusetts Avenue NW. The policy states that all members of the university community—including students, faculty, staff, vendors, and guests—are required to park their vehicles on campus or use publicly available transportation while attending classes, working, or visiting AU-owned properties. They are not permitted to park in the neighborhood.

Compliance with the *Good Neighbor Parking Policy* is a condition of both enrollment and employment at the university, and failure to abide by the provisions of the *Good Neighbor Parking Policy* results in administrative fines and actions. The university proactively patrols the adjacent neighborhood streets and cites vehicles believed to be parking in violation of the policy. The policy and citations do not apply to individuals not affiliated with American University.

AU takes the obligation to comply with this condition of the *2011 Campus Plan* seriously and has over the past several years demonstrated a commitment to the vigilant enforcement of the *Good Neighbor Policy* to prevent university-related vehicles from parking on neighborhood streets and preserve on-street parking capacity for members of the community. AU will continue to work with the community to enhance this program.

In addition to continued enforcement of the *Good Neighbor Parking Policy*, the university will work directly with members of the Transportation and Parking Working Group and DDOT to develop appropriate monitoring methods and performance metrics to ensure that the transportation-related impacts of any future growth over the term of the *2021 Campus Plan* are effectively managed and, to the extent necessary, appropriately mitigated.

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SECTION 5: COMPLIANCE WITH THE CAMPUS PLAN REGULATIONS

5.1 Subtitle X Section 101.1: Educational Use by a College or University

As discussed in Section 2, American University was established as a “university for the promotion of education [with the] power to grant and confer diplomas and the usual college and university degrees, and honorary degrees, and also such other powers as may be necessary fully to carry out and execute the general purposes of the [university]” by virtue of a Special Act of Congress of the United States, February 24, 1893 (27 Stat. 476), as amended by the following Acts of Congress: March 3, 1895 (28 Stat. 1814); June 30, 1951 (65 Stat. 107); August 1, 1953 (67 Stat. 359); October 31, 1990 (104 Stat. 1160); September 9, 1996 (110 Stat. 2378).

5.2 Subtitle X Section 101.2: The Uses Shall Be Located So They Are Not Likely to Become Objectionable to Neighboring Property Because of Noise, Traffic, Parking, Number of Students, or Other Objectionable Conditions

As noted in Section 4, the *2021 Campus Plan* sets forth a thoughtful and measured approach to managing growth and development over the next 10 years. Envisioned and developed in close partnership with neighborhood stakeholders, the *2021 Campus Plan* establishes a flexible yet predictable framework for future growth and development of the university in the context of its surrounding communities.

Noise. As detailed in Section 4.2, the comprehensive and balanced development proposals included in the *2021 Campus Plan* effectively address the university’s residential/campus life, academic/administrative, and athletic space needs in a manner that reinforces AU’s unique campus scale with locations, heights, and densities of buildings and structures that correspond to the surrounding built environment. University policies regarding on-campus and off-campus student life, described in Sections 4.3 and 4.4, also support an environment that is respectful of neighboring residential communities. Through the use of significant setbacks, buffers, design considerations, and student conduct policies, the university will effectively mitigate potential adverse noise-related impacts on neighboring residential properties.

Traffic and Parking. As discussed in Section 4.5, the university has proposed to maintain a parking inventory of no more than 3,000 spaces (inclusive of all Campus Plan properties, specifically Main Campus, Tenley Campus, 4801 Massachusetts Avenue NW, 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW) over the term of the *2021 Campus Plan*. This proposed inventory ceiling, which would allow AU to utilize approximately 300 additional parking spaces for university use over the term of the plan, is not expected to create adverse traffic and parking impacts on neighboring properties. The *2021 Campus Plan* also proposes significant improvements to the pedestrian campus experience without adversely impacting university operations and services. Importantly, the university will maintain its commitment to effective TDM strategies and vigilant enforcement of off-campus parking policies.

Number of Students. As discussed in detail in Section 4.1.1, the university is proposing an enrollment cap of 14,380 students. This enrollment cap is **lower** than the student enrollment cap established in the *2011 Campus Plan*, when adjusted for the new methodology of counting students mandated under the 2016 Zoning Regulations. In addition, AU will continue to maintain a supply of housing for 67 percent of the full-time undergraduate student population through a combination of housing resources, including on-campus housing inventory and off-campus master-leased beds.

Other Objectionable Conditions. The *2021 Campus Plan* does not create any other objectionable conditions on neighboring properties. However, in order to mitigate any potential impacts, Section 6 details proposed conditions of approval for the 10-year term of the plan. In addition, Section 3.3.5 sets forth the university's commitment to continued active collaboration with neighborhood stakeholders in the implementation of the goals and objectives of the *2021 Campus Plan*.

For the reasons noted above, the proposed uses and their locations are not likely to become objectionable to neighboring properties because of noise, traffic, parking, number of students, or other objectionable conditions.

5.3 Subtitle X Sections 101.3 and 101.4: Analysis of Incidental Uses

In order to support the operation of the university, a small number of commercial uses customarily incidental to university uses operate on campus, including a convenience market, UPS store, and campus bookstore located at the Butler Pavilion and several food service venues throughout campus.

Any future commercial uses are expected to be at locations discussed during the planning process (including campus life use spaces on the ground floor of buildings proposed at Sites 2, 5, 6, 7, 11, and 15) and will not have objectionable impacts on non-university residential neighbors. More specific information and scope of these uses and the mitigation of their related impacts (if any) will be addressed in further detail with the AU Neighborhood Partnership and other university and community stakeholders, including at the time of a further processing application if such use is associated with a project proposed in this Campus Plan.

The total floor area of all commercial uses, including basement or cellar space, shall occupy no more than 10 percent (10%) of the gross floor area of the total campus floor area. All proposed commercial activities or developments generally described herein and more specifically proposed as part of a further processing application will be related to the educational mission of the university and none will be inconsistent with the Comprehensive Plan.

5.4 Subtitle X Sections 101.5 through 101.7 and 101.12: Campus Development Standards

The properties included in the *2021 Campus Plan* are located within the RA-1, RA-2, R-1-B, MU-3A, and MU-4⁷ Zone Districts.

⁷ The properties located in the MU-3A and MU-4 Zones were not previously required to be included in the Campus Plan review and approval process. The uses of these properties are addressed in section 5.12 below. However, the land area and the GFA of the buildings on these MU-3A and MU-4 properties have not been included in the aggregated density calculations for the R and RA portions of the campus property.

Density. As set forth in the Zoning Regulations, the maximum total density allowed for all building and structures within the RA-1 and R-1-B zoned areas of campus cannot exceed a floor area ratio (FAR) of 1.8. Pursuant to the Zoning Regulations, in calculating FAR the land area shall not include public streets and alleys, but may include interior private streets and alleys within the campus boundaries. The university certifies that the additional gross floor area proposed in the *2021 Campus Plan*, together with the gross floor area of the campus as set forth in the *2011 Campus Plan* and the gross floor area constructed since the approval of the *2011 Campus Plan*, total a floor area ratio (FAR) of .91, just over 50 percent of the 1.8 FAR permitted under the Zoning Regulations (See EXHIBIT M: FLOOR AREA RATIO ANALYSIS). As discussed more fully in Section 4, this low level of density reflects the university's interest in maintaining the unique scale and character of the campus.

Height. Subtitle X, Section 101.5 permits a base height of 50 feet for campus buildings; under Subtitle D, Section 303.2, the height may be increased to a maximum of 90 feet provided that each building is set back from adjacent lot lines at least one foot for each foot of building height exceeding 50 feet. As described in EXHIBIT K: DEVELOPMENT PROGRAM SUMMARY and consistent with these regulations, all proposed campus buildings are within the 90 feet requirement.

5.5 Subtitle X Section 101.8: Plan for Campus as a Whole, Showing the Location, Height, and Bulk, Where Appropriate, of All Present and Proposed Improvements

As described in Section 4, and illustrated in EXHIBITS B, K and L, the *2021 Campus Plan* includes a plan for developing the campus as a whole, showing the location, height, and bulk, where appropriate, of all present and proposed improvements.

5.5.1 Section 101.8(a): Buildings, Parking, and Loading Facilities

Buildings. As set forth in Section 4.2 and EXHIBITS K and L, the *2021 Campus Plan* calls for new building development as set forth below:

Academic/Administrative:	289,064 square feet of GFA ⁸
Residential/Campus Life:	355,936 square feet of GFA ^{8,9}
Athletic:	102,500 square feet of GFA ⁹

Parking and Loading. The location of all existing and proposed parking and loading facilities are provided in EXHIBIT Y and Z.

5.5.2 Section 101.8(b): Screening, Signs, Streets, and Public Utility Facilities

As detailed in Section 4.2.3, the *2021 Campus Plan* recognizes the importance of the landscape and open space elements that are distinctive to AU's urban campus—an accredited and award-winning

⁸ Site 1 (Beeghly Building addition) has been designated for either academic/administrative or residential/campus life use; for the purpose of this development program summary totals, the proposed 5,000 square-foot addition has been allocated to residential/campus life use.

⁹ Site 5 (SCAN replacement) has been designated for either residential/campus life or athletics use, or a combination of both; for the purpose of this development program summary totals, the proposed GFA of the site has been allocated equally to each use.

arboretum—and introduces new features to further enhance the campus environment. Development sites have been located and oriented to minimize the impact on existing campus trees, and new trees will be planted in connection with proposed development projects and at other key locations around campus, expanding the tree canopy and serving as important buffers along campus edges. Vehicular circulation will be improved and pedestrian connections strengthened to enhance the use and enjoyment of the campus by members of the university community and residents of the neighborhoods surrounding campus. The university will also explore efforts to improve its visual and graphic communication on campus through coordinated wayfinding and signage elements.

AU's Department of Energy and Engineering is focused on operating and maintaining safe and reliable utility services for all campus facilities and driving the university toward intelligent and sustainable energy usage. As a result, the university continues to make strides to decrease carbon emissions by investing in its utilities infrastructure, increasing onsite power generation, and improving central plant efficiency. In 2019 the university completed a campus-wide conversion from steam to a low-temperature hot water heating system. The new cutting-edge system is expected to serve the campus for the next several decades in a cost-and-energy-efficient manner—creating long-term savings and reducing campus carbon emissions by 50 percent. In April 2020, five new natural gas micro-turbines began generating onsite electricity and providing heat and power to the university. By co-generating energy onsite, AU's central plant becomes more efficient, and the university's offsite electrical energy generation, purchasing, and delivery is reduced significantly. In support of AU's comprehensive commitment to sustainability, the university will continue to evaluate emerging energy technologies and resource conservation opportunities over the term of the *2021 Campus Plan*, maintaining AU's leadership in green technologies both regionally and nationally and aligning with the District's energy efficiency goals.

5.5.3 Section 101.8(c): Athletic and Other Recreational Facilities

As detailed in Section 4.3.2 and EXHIBIT W, the *2021 Campus Plan* proposes additional space and facilities to support a range of athletic and recreational activities, including the new Center for Athletic Performance, which would provide training and support areas for AU athletics as well as varsity, club, and intramural competition venues. Additional projects include a proposed acoustical sound barrier wall and filming tower at Jacobs Field, a replacement video scoreboard at Reeves Field, and turf fields at Reeves Field and the park at 45th Street and Massachusetts Avenue NW.

5.5.4 Section 101.8(d): Description of All Activities Conducted or To Be Conducted on the Campus, and the Capacity of All Present and Proposed Campus Development

The properties included in the *2021 Campus Plan* accommodate a range of university uses and activities that not only fulfill AU's core academic and research missions, but also provide a supportive and engaging on-campus residential experience for AU students and create substantial opportunities and benefits for residents of the neighborhoods surrounding campus and throughout the District of Columbia. The capacity of all present and proposed campus development is sufficient to meet the needs of these activities for the term of the *2021 Campus Plan*.

5.5.5 Satisfaction of Filing Requirements Enumerated in Subtitle Z Section 302.10

The information provided in this *2021 Campus Plan* meets all of the requirements set forth in Section 302.10.

5.6 Subtitle X Sections 101.9: Further Processing for Specific Buildings, Structures, and Uses

As required by Section 101.9, the university will submit applications for further processing for specific buildings and uses set forth in the *2021 Campus Plan*. In addition, the university requests flexibility to process, following review by the AU Neighborhood Partnership, minor building additions related to campus accessibility-related renovations as a modification of consequence (that is, without further processing approval). These minor renovation projects will not result in an appreciable increase in the impact of the buildings and uses with which they are related and which have been subject to prior further processing review and approval.

5.7 Subtitle X Section 101.10: No Interim Use of Land or Improved Property Proposed

No interim use of property is proposed under the *2021 Campus Plan*.

5.8 Subtitle X Section 101.11: Compliance with the Comprehensive Plan

The AU Main Campus and Tenley Campus are both located in the Institutional Land Use Category on the Future Land Use Map (FLUM) of the Comprehensive Plan and are designated as an Institutional site on the Comprehensive Plan's Generalized Policy Map¹⁰. The continued use of the AU campus and the proposed new development and facility modernizations are consistent with these map designations, which provide for "change and infill" on university campuses consistent with campus plans; see 10 DCMR § 223.22.

The *2021 Campus Plan* continues to encourage and foster many of the Land Use Elements of the Comprehensive Plan. Policy 2.3.5 of the Land Use Element, regarding Institutional Uses, recognizes the importance of universities to the "economy, character, history, and future of the District of Columbia." As detailed in Section 2, AU has a long history of providing economic, artistic, and community service support to the District of Columbia and the surrounding community. Land Use Policy 2.3.5 also calls for "institutions and neighborhoods to work proactively" to address issues such as traffic, parking, and facility expansion. As noted in Section 3, AU has worked closely with the AU Neighborhood Partnership, the CLC, and a wide range of university and community stakeholders to gather input and feedback on the *2021 Campus Plan*. That process has resulted in the university and the AU Neighborhood Partnership reaching consensus on the objectives, proposals, and commitments set forth in the *2021 Campus Plan*.

Land Use Policy 3.2.1 supports the ongoing efforts by "District institutions to mitigate their traffic and parking impacts by promoting ridesharing, carpooling, public transportation, shuttle service and bicycling, providing on-site parking, and undertaking other transportation demand management measures." (See also Education Element Policy EDU 3.3.5). In addition, Policy T-3.3.1 of the

¹⁰ The 3201 New Mexico Avenue NW property, the 4801 Massachusetts Avenue NW property, and the 4200 Wisconsin Avenue NW property are all located in the Low Density Commercial FLUM category.

Transportation Element provides support for the use of programs that reduce the number of car trips. AU's compliance with these Elements of the Comprehensive Plan are addressed in Section 4.5.

Land Use Policy 3.2.3 seeks to ensure that colleges and universities that are located within residential areas are planned, designed, and managed in a way that minimizes objectionable impacts on adjacent communities. As discussed extensively above, the *2021 Campus Plan* minimizes objectionable impacts on the surrounding communities.

The *2021 Campus Plan* will also help further important policies and goals of the Economic Development Element of the Comprehensive Plan. The Economic Development Element notes that educational services are a "core" District industry (See Policy ED 1.1.2) and Policy ED 2.4.1 "supports growth in the higher education" sector based on its potential to create jobs and income opportunities as well as enhance District cultural amenities. While this language is from the 2006 Comprehensive Plan, it is still very relevant today. As noted in Section 2.6, American University is the fifth largest non-government employer in Washington, DC, and has annual total economic impacts of \$1.7 billion.

The Educational Element of the Comprehensive Plan includes policies that encourage university growth and development through the campus plan process and attention to community issues and concerns (See Policies EDU 3.3.2 and 3.3.3). As noted above, the *2021 Campus Plan* sets forth a predictable, balanced, and flexible plan that accommodates AU's growth while respecting and enhancing the quality of life of those who live within the neighborhoods surrounding campus, and the comprehensive planning process has allowed for a wide range of university and community stakeholders to provide meaningful input and feedback.

The *2021 Campus Plan* also continues to be consistent with Policies of the Rock Creek West Area, in particular Policy RCW 1.1.8 *Managing Institutional Land Uses* and Policy RCW 1.1.12 *Congestion Management Measures*. Policy RCW 1.1.8 notes that redevelopment or expansion of institutional land uses needs to be compatible with the physical character of the community, states that the density of future institutional development should reflect surrounding land uses as well as input from the local community, and encourages the minimization of potential adverse effects. Policy 1.1.12 seeks to ensure that land use decisions do not exacerbate congestion and parking problems in already congested areas. As noted above, the *2021 Campus Plan* proposes development on sites that are compatible with the physical character of the community at appropriate densities. The plan has been the subject of significant community input, and the university has proposed conditions of approval which further minimize any potential adverse effects. Finally, the significant TDM measures proposed by the university address Policy RCW 1.1.12.

5.9 Subtitle X Section 101.13: Referral to the District of Columbia Office of Planning, Department of Transportation, and Department of Energy and Environment

The *2021 Campus Plan* will be referred by the Office of Zoning to the Office of Planning, Department of Transportation, and Department of Energy and the Environment for their review and written reports.

5.10 Subtitle X Section 101.14: Application Is in Harmony with the Zoning Regulations

The *2021 Campus Plan* is in harmony with general purpose and intent of the Zoning Regulations and Zoning Maps and will not tend to affect adversely the use of neighboring property.

5.11 Subtitle X Section 101.16: A Further Processing of a Campus Building Shall Not be Filed Simultaneously with a Full Campus Plan Application

No further processing application shall be filed simultaneously with the *2021 Campus Plan* application.

5.12 Subtitle X Section 102: Special Exception for Use of Commercial Property by a College or University

Section 102.1 requires that any property located in a low-density mixed-use zone (which includes the MU-3 and MU-4 Zones) used by a university or college for academic and administrative uses shall be permitted as a special exception, subject to review and approval by the Zoning Commission. However, Section 102.5 allows an applicant to request that the use of such property under Section 102 be reviewed as part of a campus plan application and that such use be subject to conditions of the campus plan approval. The university is requesting that its continued use of the properties located at 3201 New Mexico Avenue NW (located in the MU-3A Zone District), 4801 Massachusetts Avenue NW (located in the MU-4 Zone District), and 4200 Wisconsin Avenue NW (located in the MU-4 Zone District) be reviewed and approved as part of the *2021 Campus Plan*.

As noted in Section 4, by expanding the scope of the *2021 Campus Plan* to include these properties, the plan provides a more comprehensive understanding of the university's activities in the university buildings near the Main and Tenley campuses, and the student and employee populations that study and work at the locations are now included in the total student and employee population count. Similarly, the traffic and parking impacts of these properties also are included in the transportation and TDM measures that are proposed by the university. All of these properties currently include AU academic/administrative uses, and 4200 Wisconsin Avenue NW also houses the Greenberg Theater (campus life use), consistent with the requirements of the 1958 Zoning Regulations¹¹. The continued use of these properties for such university activities by AU will not create objectionable effects on the character of the surrounding neighborhoods or because of noise, traffic, lighting, or other conditions.

¹¹ 3200 New Mexico Avenue NW and 4200 Wisconsin Avenue NW include non-university related uses that are not subject to this Campus Plan application.

SECTION 6: PROPOSED CONDITIONS OF APPROVAL

As part of their collaborative work in connection with the development of this consensus *2021 Campus Plan*, the American University Neighborhood Partnership has reviewed and affirmed the following proposed conditions of approval to guide the implementation and enforcement of the objectives and commitments set forth in the plan.

TERM AND SCOPE

1. The Campus Plan will be approved for a term of 10 years beginning with the effective date of this Order as indicated below. [Consistent with *2011 Campus Plan* Condition 1]
2. The approved Campus Plan boundary shall include the Main Campus (including the area known as East Campus), the Tenley Campus, 4801 Massachusetts Avenue NW, 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW as shown in the American University *2021 Campus Plan* and marked as Exhibit [TBD] in the record. For the purposes of these conditions, all references to “on campus” include Main Campus, Tenley Campus, 4801 Massachusetts Avenue NW, 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW. [Revised *2011 Campus Plan* Condition 2 to include additional properties as required under the 2016 Zoning Regulations]

COMMUNITY ENGAGEMENT

3. The University shall continue to work with the American University Neighborhood Partnership (Partnership), a joint forum between AU and leaders in the communities surrounding the University that is focused on improving University and neighborhood relations through discussion, information sharing, and problem-solving. The Partnership shall be co-chaired by a member of the University’s senior leadership and a neighbor leader who shall both serve on the AU Neighborhood Partnership Steering Committee. The Steering Committee is comprised of University administrators and representatives of community organizations and ANCs who were signatories to the March 18, 2018, letter submitted to and recognized by the Zoning Commission expressing the intent and vision of the Partnership (specifically Fort Gaines Citizens Association, Spring Valley Neighborhood Association, Ward 3 Vision, Westover Place Homeowner’s Corporation, and ANC 3D, and ANC 3E.) The Partnership is supported by Working Groups that meet regularly to address key issues of shared concern (e.g., Facilities Planning, Student Life and Safety, Transportation and Parking, Engagement and Communications, and Data and Metrics). Each working group has a community and University co-chair, and members include neighborhood residents, AU administrators, staff, faculty, students, and consultants. As detailed in the *2021 Campus Plan* and throughout these conditions, the Partnership and its Working Groups will provide a collaborative forum for the implementation of the objectives and priorities outlined in the *2021 Campus Plan*. [New Condition]
4. The University shall continue to work with community representatives to maintain the Community Liaison Committee (CLC) created in the *2001 Campus Plan*, with the enhancements to the composition, structure, purpose and leadership proposed by the University for the *2011*

Campus Plan for the purpose of fostering consistent communication between the University and the surrounding neighborhoods, discussing issues of mutual interest, and proposing solutions to problems that exist or arise in implementing the approved Campus Plan. It is recommended that the CLC be composed of an equal number of representatives of the University and the community and meet as necessary but at least quarterly; separate meetings may be held to discuss matters of particular interest to the Main Campus or Tenley Campus or other campus locations, if desired. Upon request, the University shall provide timely data relevant to Campus Plan issues to the CLC, provided that the data is not confidential or overly burdensome to produce. [Consistent with *2011 Campus Plan* Condition 16]

STUDENT ENROLLMENT AND EMPLOYEE POPULATION

5. Student enrollment (headcount) shall not exceed 14,380, including every University student on campus including full-time, part-time, foreign, certificate/non-degree, single course, night programs, and executive program students. The number of students enrolled in courses at the Tenley Campus (including but not limited to Washington College of Law students) shall not exceed 2,000 students. Enrollment shall be determined annually on a headcount basis and shall be reported to the CLC and AU Neighborhood Partnership. [Revised *2011 Campus Plan* Condition 3 to reflect student count definition and adjustment to cap based on 2016 Zoning Regulations, students who may be enrolled at courses at Tenley Campus, and to confirm reporting requirement]
6. The number of University employees shall not exceed 3,350 employees. [Revised *2011 Campus Plan* Condition 4 to reflect adjustment to cap based on 2016 Zoning Regulations]

DEVELOPMENT PLAN AND CAMPUS CHARACTER

7. Campus facilities may, from time to time, be used for conferences; however, any purpose-built conference facility proposed to be constructed by the University on campus shall require amendment of the Campus Plan and specific approval of the conference-facility use through the special exception process. [Consistent with *2011 Campus Plan* Condition 7]
8. Following review with the AU Neighborhood Partnership Facilities Planning Working Group and discussion with members of the community, the University shall submit to the Zoning Commission for further processing review each individual request to construct a building or structure described in the Campus Plan. Along with each request, the University shall submit information as to how this building or structure complies with the Campus Plan. [Revised *2011 Campus Plan* Condition 10]
9. At the time the University files a permit application with the Department of Consumer and Regulatory Affairs for ground clearance, excavation, or other major construction that would implicate remedial work performed at or around the campus by the Army Corps of Engineers, the University shall provide notification to the DC Department of Energy and the Environment (DOEE) or other appropriate agency, the Army Corps of Engineers (Baltimore Office), and the US Environmental Protection Agency, Region 3, that the University intends to undertake such activities. [Consistent with *2011 Campus Plan* Condition 11]

10. No special exception application filed by the University for further processing under this Campus Plan may be granted unless the University proves that it has consistently remained in substantial compliance with the conditions set forth in this Order. Any violation of a condition of this Order shall be grounds for the denial or revocation of any building permit or certificate of occupancy applied by, or issued to, the University for any University building or use approved under this Campus Plan, and may result in the imposition of fines and penalties pursuant to the Department of Consumer and Regulatory Affairs Civil Infractions Act of 1985, DC Official Code §§ 2 -1801.01 to 2-1803.03 (2001) [Consistent with *2011 Campus Plan* Condition 12]

STUDENT HOUSING AND ON-CAMPUS LIFE

11. The University shall maintain a supply of housing sufficient to make housing available for 100 percent of its full-time freshman and sophomore students and for 67 percent of all full-time undergraduates. Housing provided by the University through a master lease that is subject to AU residence hall regulations may be considered “on campus” housing for the purpose of calculating the housing percentages noted above through the term of this Campus Plan. The University also will be able to continue to use 330 on-campus triples in the calculation of the number of beds that is required to make available to full-time undergraduate students through the term of this Campus Plan. Nothing in this condition is intended to preclude the University from continuing to house undergraduate students who are not freshman students or sophomores in off-campus housing, provided that the University maintains the minimum percentage of on-campus housing required. [Consistent with *2011 Campus Plan* Condition 5, as updated in ZC 11-07F]
12. In support of the University’s goal of providing new student housing opportunities in competitive and marketable unit configurations to encourage more students to remain on campus beyond their freshman year, all residence halls may be occupied by all levels of undergraduate and graduate students with the exception of Cassell Hall, Nebraska Hall, and all East Campus residence halls, which may only be occupied by sophomores, juniors, seniors or graduate students. The University shall continue to enforce its residence hall regulations in all University-provided housing. [New condition; also incorporates *2011 Campus Plan* Condition 6 language regarding enforcement of residence hall regulations]
13. The area of the Main Campus identified as East Campus (bounded by New Mexico Avenue NW; Nebraska Avenue NW; Massachusetts Avenue NW, and Westover Place) shall contain a maximum of 590 beds for undergraduate students. [Consistent with ZC 11-07 Condition 38, as updated in ZC 11-07F]

Jacobs Field

14. To resolve issues raised in ZC Order 11-07 and addressed throughout the implementation of the *2011 Campus Plan*, the University has proposed to construct an acoustical sound barrier wall adjacent to Jacobs Field as part of the Campus Plan. Until such time as the Zoning Commission takes specific action on the proposed acoustical sound barrier wall, the conditions set forth in ZC Order 11-07 with respect to Jacobs Field (specifically conditions 17 through 25) will remain in

effect and enforceable. Following such action by the Zoning Commission, the following conditions 14 through 19 shall supersede conditions 17 through 25 of ZC Order 11-07. [New Condition]

15. The University shall be permitted to use Jacobs Field for University and special events, including but not limited to intercollegiate athletic events, university club sports, university Greek life sports, university intramural sporting events, university-related athletic events (such as ROTC training and informal athletic events), events with local public schools, and sporting camps and other activities approved by the University. [Revised 2011 Campus Plan Condition 17]
16. The University shall maintain key-access gates between Jacobs Field and University Avenue. These gates shall be available only to neighbors to enter and exit University grounds and shall not be used by University personnel or students to exit or enter University property. [Consistent with 2011 Campus Plan Condition 18]
17. The University shall not install roads or parking lots in the area between Jacobs Field and the property line abutting neighboring properties to the west of Jacobs Field. [Consistent with 2011 Campus Plan Condition 19]
18. The University shall permit use of Jacobs Field only between dawn and dusk and shall not illuminate Jacobs Field for evening or night uses. [Consistent with 2011 Campus Plan Condition 22]
19. The University shall make its athletic schedules publicly available via the University's website and shall use its best efforts at the beginning of each academic year to publicize the schedule of athletic events at Jacobs Field. For athletic and other events scheduled fewer than 30 days ahead, the University shall make reasonable efforts to publicize the events as soon as possible. [Consistent with 2011 Campus Plan Condition 23]
20. The University will continue to make reasonable, good faith efforts to manage the noise impacts of activity on Jacobs Field on neighboring residential properties, including:
 - (a) utilizing an amplified sound system that maintains sound levels measured at the proposed acoustical sound barrier wall of, at, or below 60dB between 7:00 a.m. and 9:00 p.m. and 55dB at all other hours
 - (b) discouraging the use of bullhorns, cowbells, or other similar devices by spectators
 - (c) providing noise guidelines to any university department or group or non-university organization sponsoring an event on Jacobs Field
 - (d) having neighbors contact the director of community relations if an unauthorized event (an event not scheduled by the University) occurs

[Revised 2011 Campus Plan Condition 24]

[Proposed Conditions 14—20 revise and replace 2011 Campus Plan Conditions 17—25 upon such time as the Zoning Commission takes specific action on the proposed acoustical sound barrier wall]

OFF-CAMPUS LIFE AND NEIGHBORHOOD QUALITY OF LIFE EFFORTS

21. The University shall continue to provide a reporting mechanism to address issues and concerns raised by members of the community in order to effectively implement and enforce the terms of the *Student Code of Conduct*, which applies to student behavior both on and off campus, and shall also implement the enhanced *Good Neighbor Guidelines* that have been developed in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group to address off-campus conduct by students living in residential neighborhoods adjacent to campus. Over the term of the Campus Plan, the University will take a number of proactive steps to address off-campus student behavior, including the following:
- (a) To better inform and educate students who choose to live off-campus of their rights and responsibilities, the University, in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group, will implement an improved off-campus living orientation program that will include an online training module developed in consultation with AU Neighborhood Partnership Student Life and Safety Working Group that must be completed by students living in the 20016 or 20008 zip codes. Both online and in-person training sessions will include the *Pledge to Uphold Community Standards*, detailing the responsibilities and obligations associated with living off-campus, which will be developed in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group. Following the training, students must affirmatively acknowledge that they have fulfilled the training and understand the university's expectations. The Office of Campus Life will track participation and compliance with this program, and students not in compliance may be subject to adjudication under the *Student Conduct Code*.
 - (b) The University will continue to periodically distribute a letter to students from the Office of the Dean of Students that specifically reminds them of the University's expectation that they maintain the condition of their property and manage the behavior of their guests. It will also state that the University expects students to know, understand, and abide by the Disorderly Conduct Amendment Act of 2010 and the District of Columbia Noise Control Act of 1977, both of which address noise disturbances. Students will also be informed of the details of both ordinances during the orientation programs.
 - (c) To remain engaged with the broader residential community, the University will continue its practice of making annual or more frequent visits to major apartment complexes and condominium communities where students live.
 - (d) The University's Office of Community Relations will create, in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group, a neighbor education tool that informs residents of the University's strategies for student training and includes resources and directions on how to contact the University and/or file a complaint in the event of an undesirable incident.

- (e) The University will create and distribute, in consultation with the AU Neighborhood Partnership Student Life and Safety Working Group, an *AU Eagle Living Guide* that will include good neighbor tips, resources, and a copy of the *Pledge to Uphold Community Standards*.

[Revised and replaced 2011 Campus Plan Condition 8]

TRANSPORTATION AND PARKING

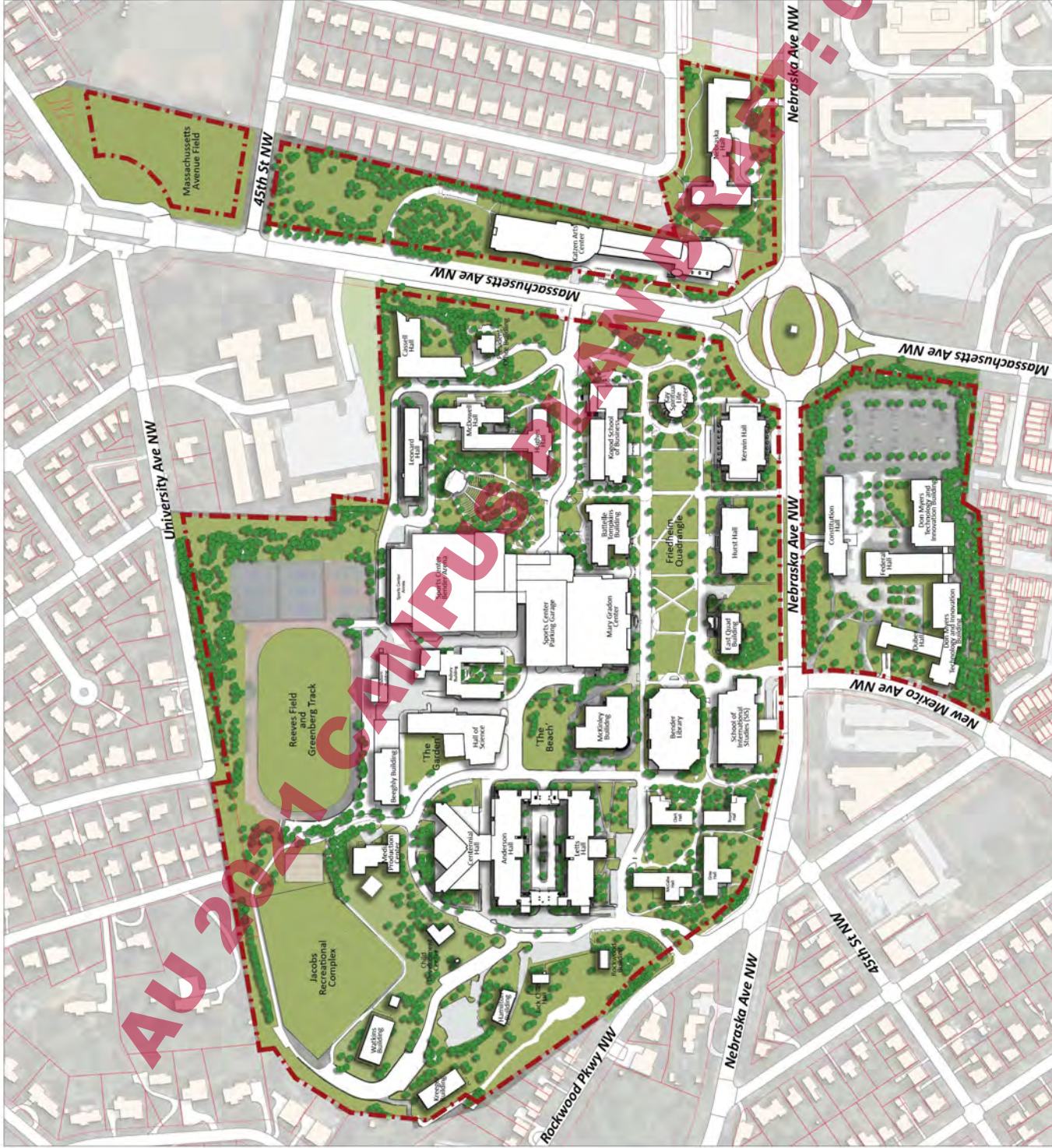
- 22. The University shall continue to implement Transportation Demand Management (TDM) measures to minimize any adverse impacts of University-affiliated traffic and will work with the Transportation and Parking Working Group of the AU Neighborhood Partnership to evaluate the efficacy of these measures over the term of the Campus Plan. On an annual basis, the University shall provide DDOT with a Transportation Performance Monitoring Plan Report detailing the transportation mode split of AU students and employees and the utilization of exclusive university-use parking facilities (Main Campus, Tenley Campus, and 4801 Massachusetts Avenue NW) on a typical semester weekday. [Revised and replaced 2011 Campus Plan Condition 13]
- 23. The University shall maintain a parking inventory of no more than 3,000 spaces for University use inclusive of all Campus Plan properties. The University shall continually evaluate its pricing policies for parking with the intention of discouraging single-occupancy vehicle trips to campus without generating demand for off-campus parking by University-affiliated vehicles. Parking utilization analysis will be included in the annual Transportation Performance Monitoring Plan Report as detailed in Condition 22. [Revised and replaced 2011 Campus Plan Condition 14]
- 24. The University shall continue to implement, and will work in consultation with the AU Neighborhood Partnership to enhance, its *Good Neighbor Parking Policy* regarding enforcement of student, faculty, staff, and vendor off-campus parking:
 - (a) The University shall use its best efforts to require all students, faculty, staff, and vendors servicing the campus to park on the campus and shall prohibit, to the extent permitted by law, students, faculty, staff, and vendors from parking on the streets adjacent to and surrounding the campus. The University shall use its best efforts to cause other University-related vehicles to park on the campus. To accomplish these purposes, the University shall have in place a system of administrative actions, contract penalties, fines—which may be adjusted from time to time as needed—and/or termination of contracts for violations.
 - (b) Construction employees, contractors, and subcontractors shall by contract be prohibited from parking on residential streets, subject to contractual penalties of termination. Visitors to the campus, including attendees of all conferences, shall be encouraged to utilize non-single occupant vehicle modes of transportation and/or use on-campus parking and, where feasible, notified in advance to do so.

AU 2021 CAMPUS PLAN DRAFT 09-08-2020

- (c) For conferences and large special events, the University shall encourage participants and attendees to utilize non-single occupant vehicular modes of transportation where possible and work with area institutions in order to provide additional parking as needed.
- (d) The University shall direct its students to register their vehicles in the District of Columbia or obtain a reciprocity sticker if eligible to do so. The University shall withhold parking privileges from students who do not comply with DC registration requirements. Failure to abide by District law concerning registration of student vehicles shall constitute a violation of the *Student Conduct Code*.

[Revised and replaced 2011 Campus Plan Condition 15]

AU 2021 CAMPUS PLAN DRAFT: 09.08.2020



MAIN CAMPUS

Note:
 • Campus tree locations based on ArcGIS – AU Tree Inventory



TENLEY CAMPUS



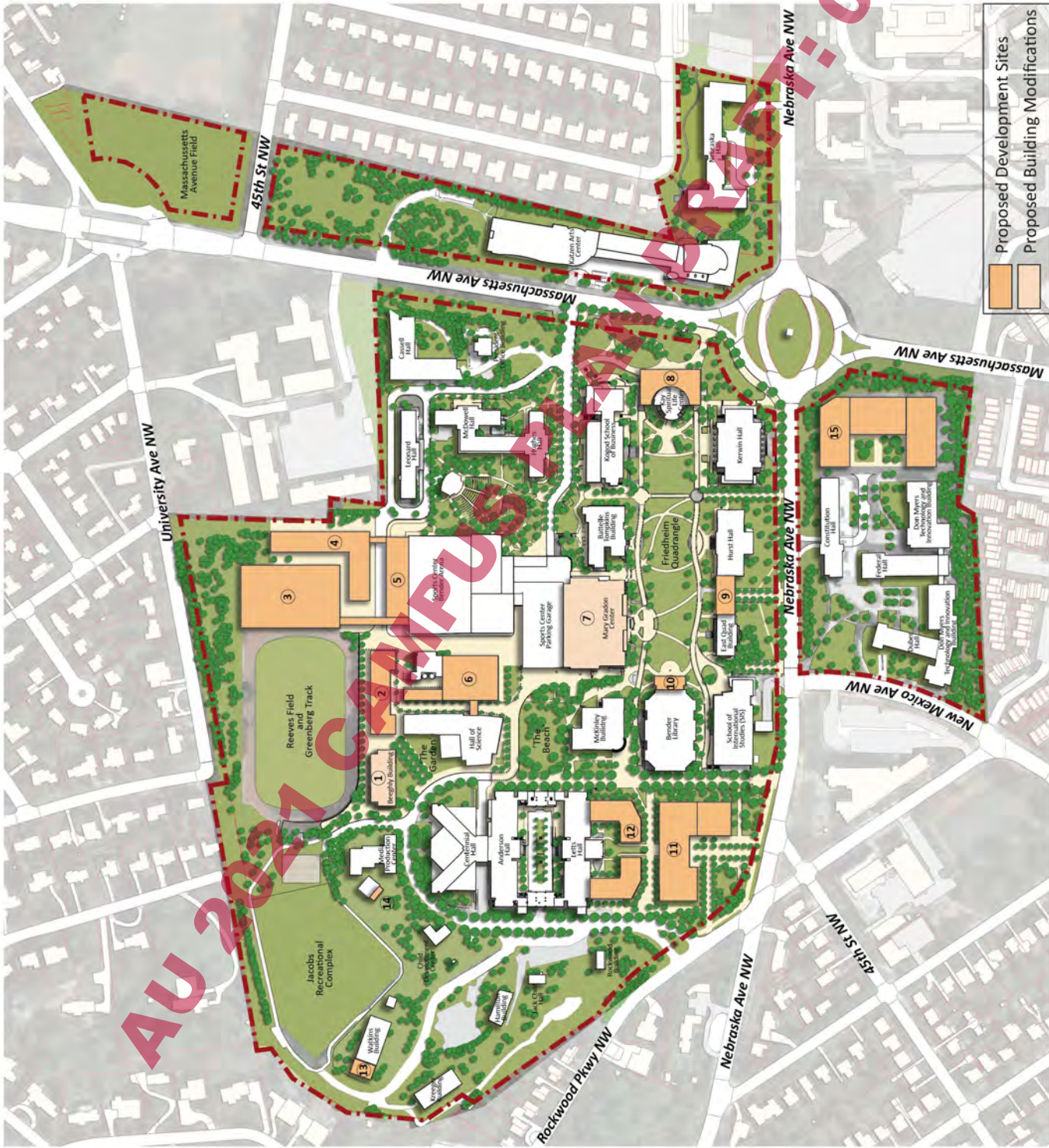
4801 MASSACHUSETTS AVE NW



4200 WISCONSIN AVE NW



3201 NEW MEXICO AVE NW



MAIN CAMPUS

- Notes:
- Diagrams for development sites are conceptual and do not reflect final building footprints
 - Landscaping elements are illustrative and conceptual



TENLEY CAMPUS



4801 MASSACHUSETTS AVE NW



4200 WISCONSIN AVE NW



3201 NEW MEXICO AVE NW

AU 2027 CAMPUS

09-30-2020

AU 2021 CAMPUS PLAN DRAFT: EXHIBITS C THROUGH X

The full September 8, 2020 American University 2021 Campus Plan Draft, including EXHIBITS C through EXHIBIT X is available here:

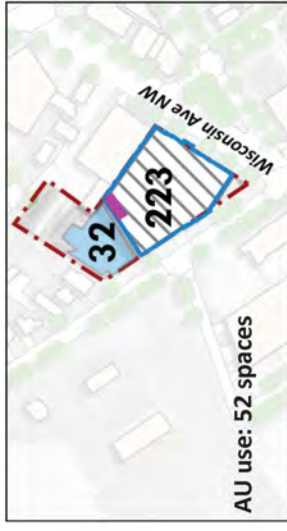
[American University Campus Plan Draft: September 8, 2020](#)



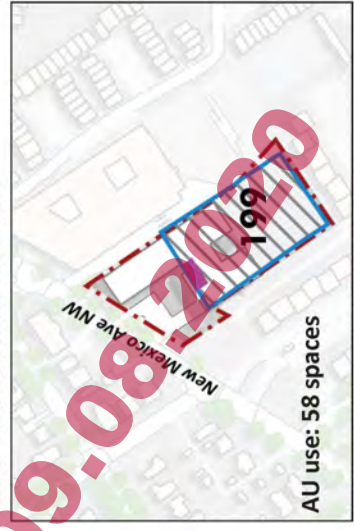
TENLEY CAMPUS



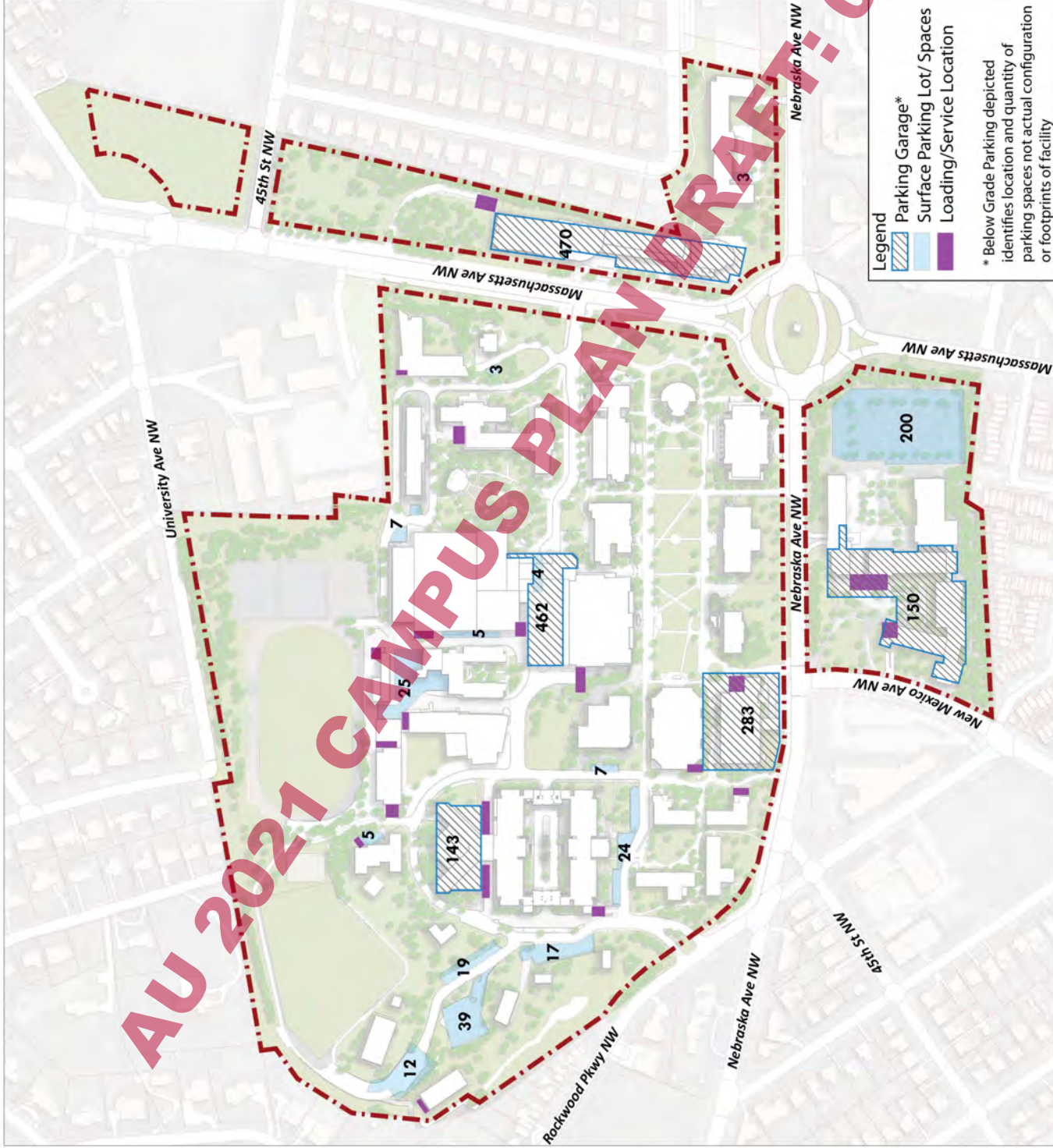
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4200 WISCONSIN AVE NW



3201 NEW MEXICO AVE NW

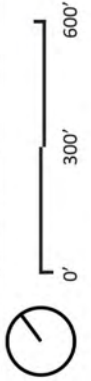


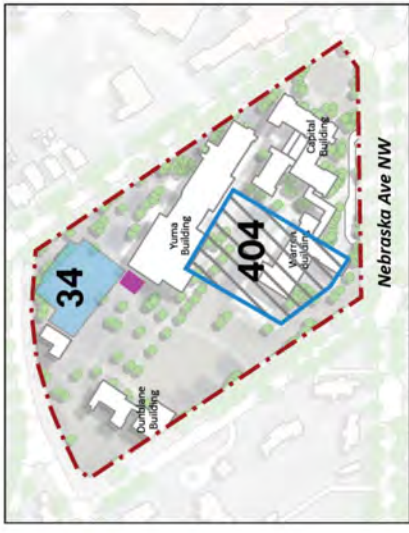
MAIN CAMPUS

Legend

- Parking Garage*
- Surface Parking Lot/ Spaces
- Loading/Service Location

* Below Grade Parking depicted identifies location and quantity of parking spaces not actual configuration or footprints of facility





TENLEY CAMPUS

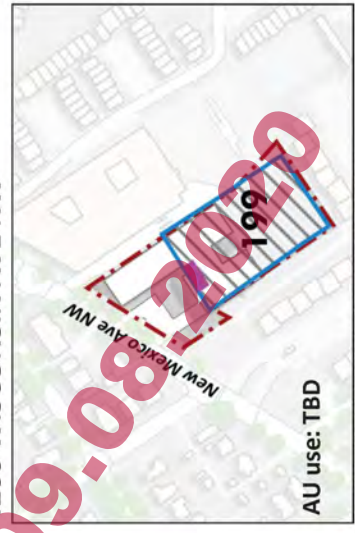


4801 MASSACHUSETTS AVE NW



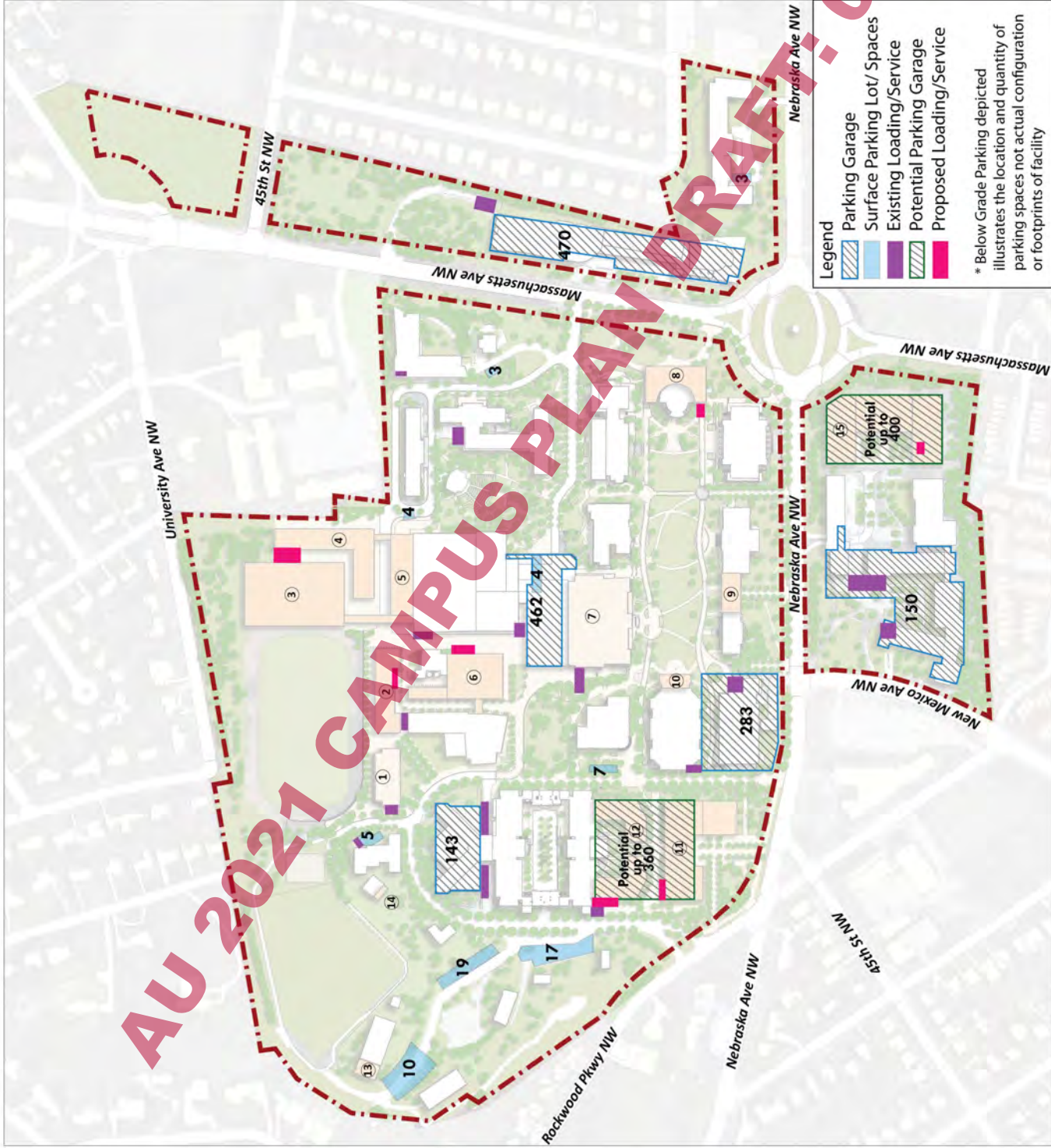
AU use: TBD

4200 WISCONSIN AVE NW



AU use: TBD

3201 NEW MEXICO AVE NW

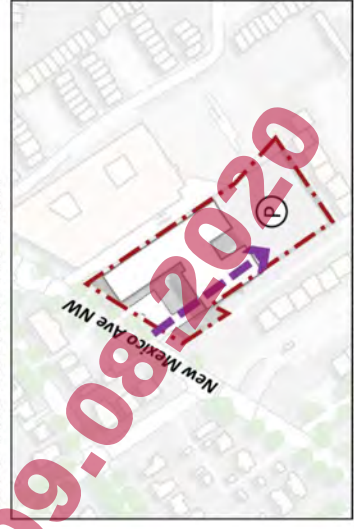
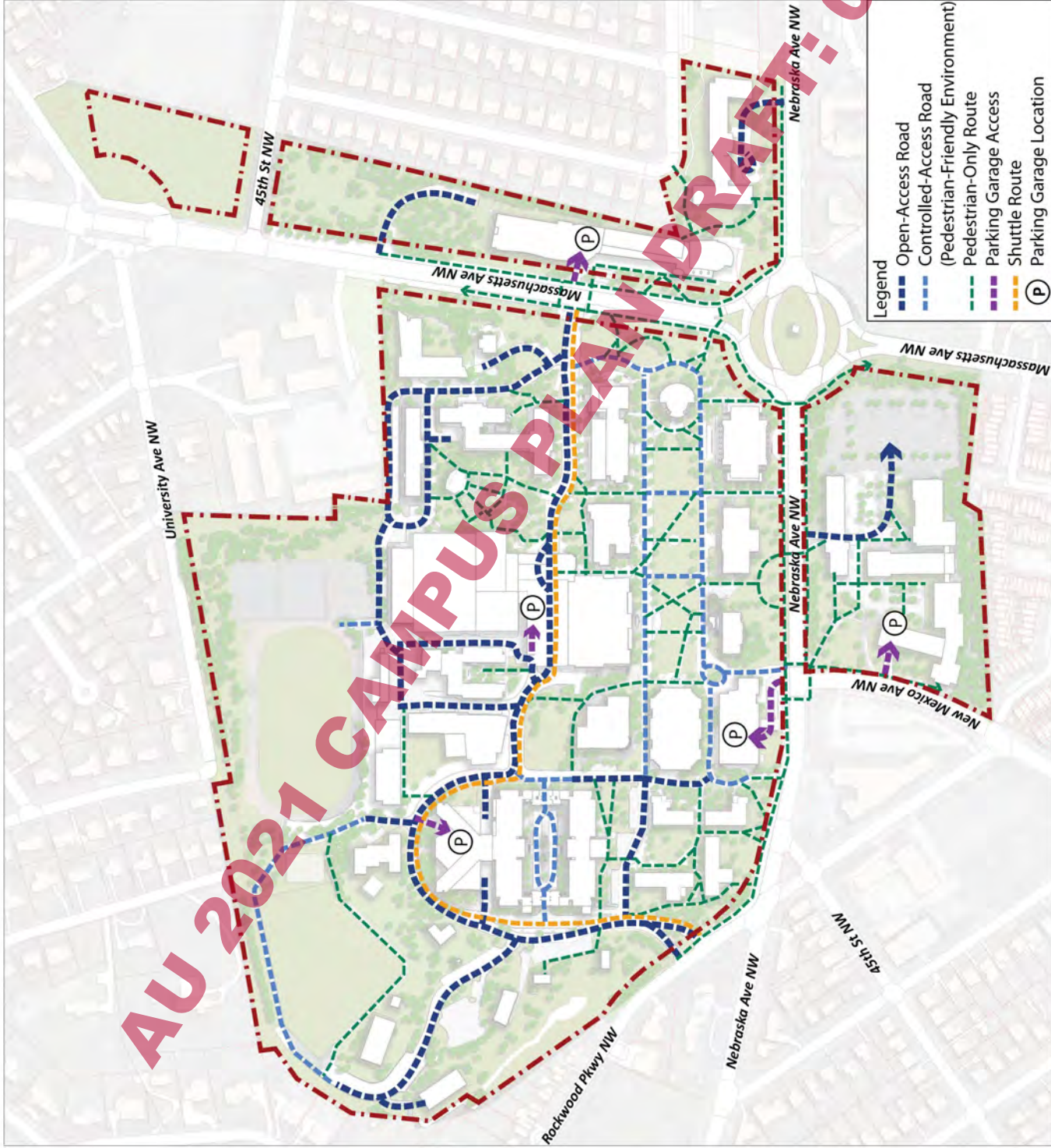


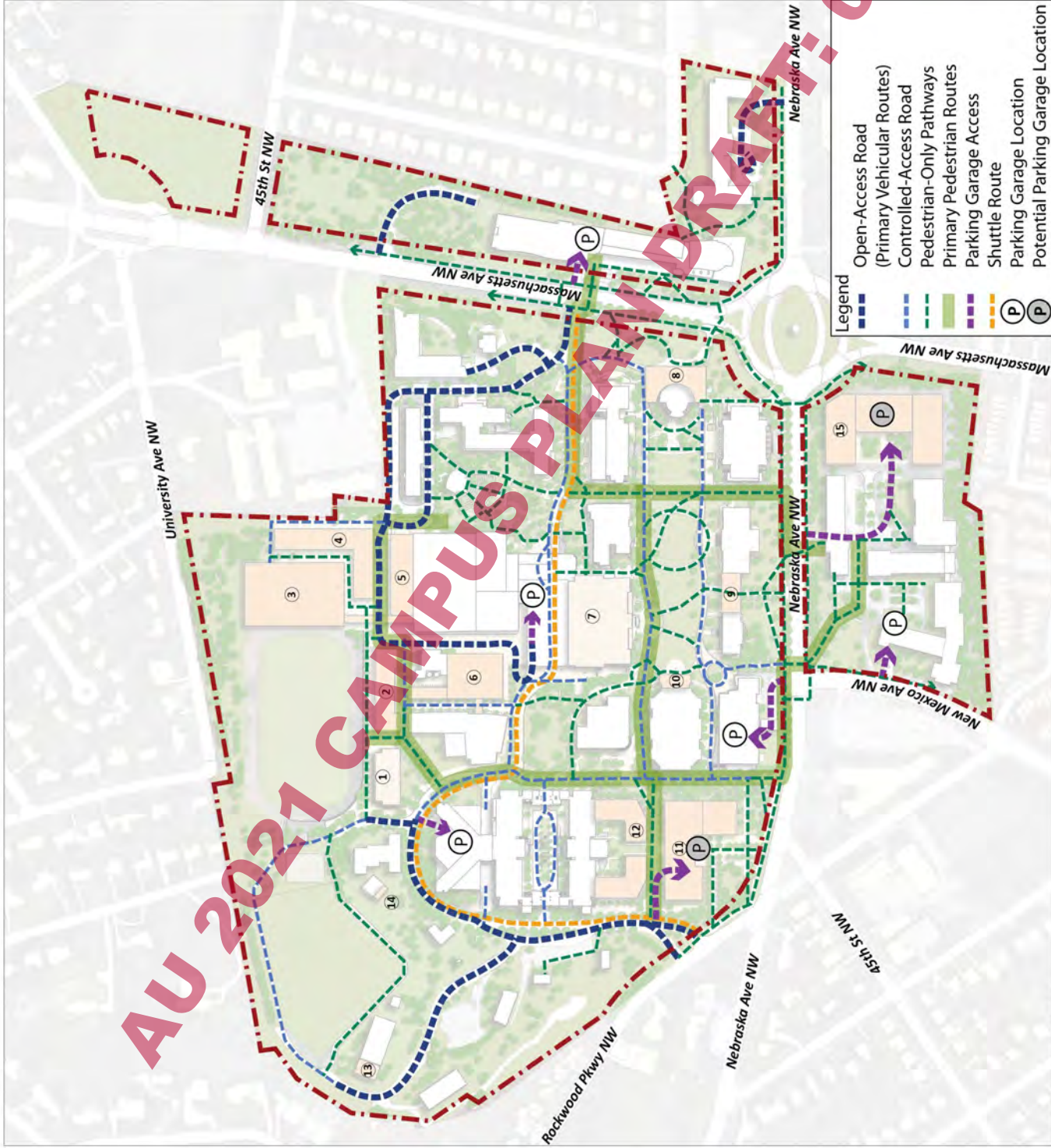
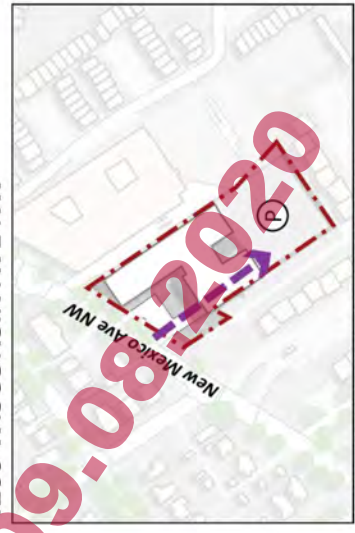
MAIN CAMPUS

Notes:

- Pursuant to Section 4.5.1, the university will maintain a total parking inventory of no more than 3,000 parking spaces for university use.
- The potential for below grade parking at Sites 11/12 and Site 15 will be subject to further consideration at the time of further processing review for each respective project.

AU 2021 CAMPUS PLAN DRAFT: 09-08-2020





MAIN CAMPUS

- Notes:
- Proposed circulation modifications would be implemented over time as campus development projects are advanced and will be addressed as part of the further processing review for each project.
 - The potential for below grade parking at Sites 11/12 and Site 15 will be subject to further consideration at the time of further processing review for each respective project.

AU 2021 CAMPUS PLAN DRAFT 09-08-2020

Appendix D 2021 Campus Plan Population Projections

2021 Campus Plan Enrollment Projections

As detailed in the American University 2021 Campus Plan Draft and in Chapter 3 of this Comprehensive Transportation Review, the current AU student population and proposed enrollment cap are both impacted by the changes to the 2016 Zoning Regulations. AU has proposed to accommodate potential growth in the on-campus student population over the ten year term of the 2021 Campus Plan **below** the cap established in 2011, when adjusted for the revised counting methodology set forth in the 2016 Zoning Regulations.

The impact of the 2016 Zoning Regulations on the current campus student population and 2011 Campus Plan enrollment cap, and the relationship between the current cap and the cap proposed for the 2021 Campus Plan are summarized in the table below:

	2011 – 2021 CAMPUS PLAN			2021 – 2031 CAMPUS PLAN	
	UNDER ZC 11-07 ORDER METHODOLOGY	ADJUSTED 2016 ZONING REGULATIONS	IMPACT OF 2016 ZONING REGULATIONS	AU REVISED ENROLLMENT CAP 06.01.2020	DIFFERENCE FROM 2011 ADJUSTED CAP
FALL 2019 ENROLLMENT	11,801	12,581	+780 (+ 6.61%)		
CAMPUS PLAN ENROLLMENT CAP	13,600	14,499	+899 (+ 6.61%)	14,380	-119

As shown in the table, the proposed 2021 Campus Plan enrollment cap, which would be in effect through 2031, is **lower** than the student enrollment cap established in the 2011 Campus Plan, when adjusted for the new methodology for counting students mandated under the 2016 Zoning Regulations.

2021 Campus Plan Employee Population

The AU employee population is similarly impacted by the changes to the 2016 Zoning Regulations. Given that 4801 Massachusetts Avenue NW (Spring Valley Building), 4200 Wisconsin Avenue NW, and 3201 New Mexico Avenue NW will now be included in the Campus Plan, the university employees that work at these locations will also be included in the employee count and any cap established in the 2021 Campus Plan order of approval.

The impact of the 2016 Zoning Regulations on the current employee population and 2011 Campus Plan employee cap, and the relationship between the current cap and the cap proposed for the 2021 Campus Plan, are summarized in the table below:

American University Comprehensive Transportation Review – Appendix D

American University

	2011 – 2021 CAMPUS PLAN			2021 -2031 CAMPUS PLAN
	ZC 11-07 ORDER METHODOLOGY	2016 ZONING REGULATIONS	IMPACT OF 2016 ZONING REGULATIONS	2016 ZONING REGULATIONS
FALL 2019 EMPLOYEE COUNT	2,461	2,843	+ 15.52%	
EMPLOYEE POPULATION CAP	2,900	3,350	+ 15.52%	3,350

As shown in the table, the proposed 2021 Campus Plan employee cap, which would be in effect through 2031, reflects no change from the employee cap established in the 2011 Campus Plan, when adjusted to count employees who work at the properties that will be included in the 2021 Campus Plan pursuant to the 2016 Zoning Regulations.

For the purpose of estimating the impact of potential university population growth on the proposed trip generation discussed in Chapter 4 of this Comprehensive Transportation Review, the following potential scenarios regarding the primary campus location of students, faculty and staff were developed:

Table C-1: Potential Student Enrollment by Primary Campus Plan Location

Campus Plan Location	Fall 2019 Enrollment: Primary Campus Location	Potential Growth Scenario (Through 2031)		
		Enrollment	Growth	% Growth
Main Campus	9,877	11,400	1,523	15.42%
Tenley Campus	1,341	1,500	159	11.86%
4801 Massachusetts	1,245	1,245	-	0.00%
4200 Wisconsin	118	235	117	99.15%
3201 New Mexico	-	-	-	-
Total Students	12,581	14,380	1,799	14.30%

Table C-2: Potential Faculty/Staff by Primary Campus Plan Location

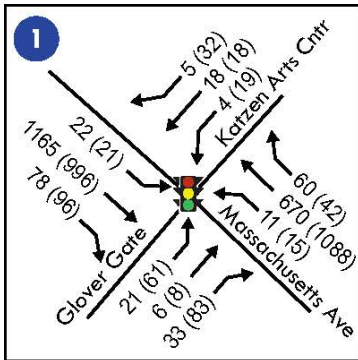
Campus Plan Location	Fall 2019 Faculty/Staff: Primary Campus Location	Potential Growth Scenario (Through 2031)		
		Faculty/Staff	Growth	% Growth
Main Campus	2,176	2,576	400	18.40%
Tenley Campus	285	335	50	17.40%
4801 Massachusetts	277	277	-	-
4200 Wisconsin	9	18	9	100.00%
3201 New Mexico	96	144	48	50.00%
Total Students	2,843	3,350	507	17.83%

**Appendix E Existing Traffic
Volumes and
Turning Movement
Counts**

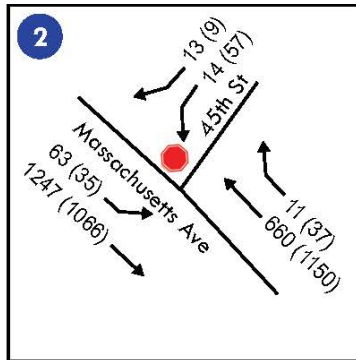
American University Comprehensive Transportation Review – Appendix E

American University

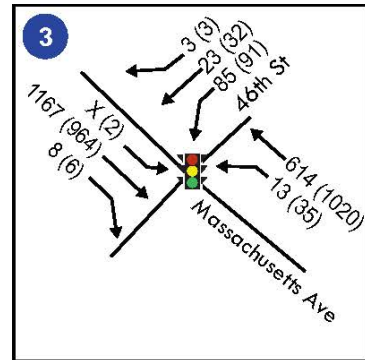
Figure 5-1 Existing Intersection Peak Hour Traffic Volumes



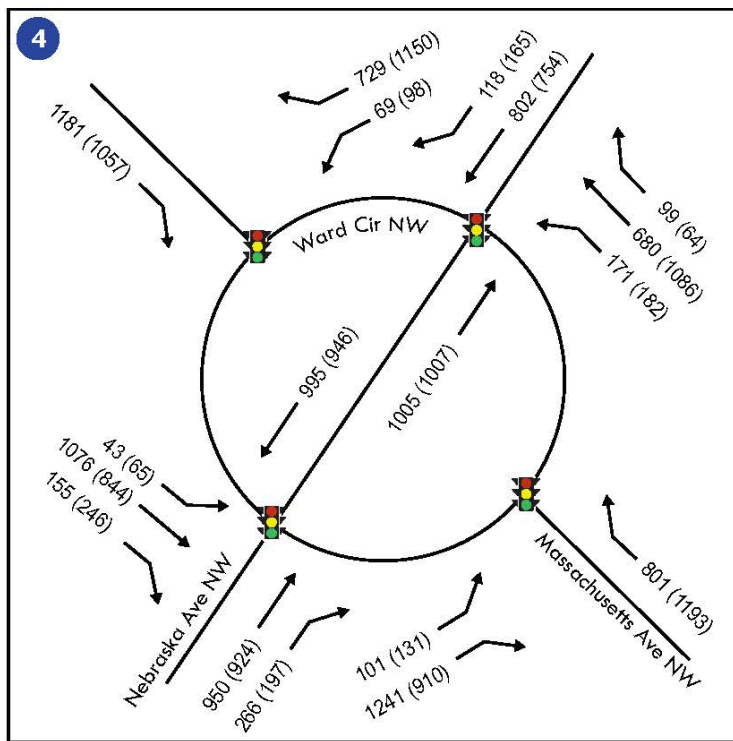
1. Massachusetts Ave. at Glover Gate



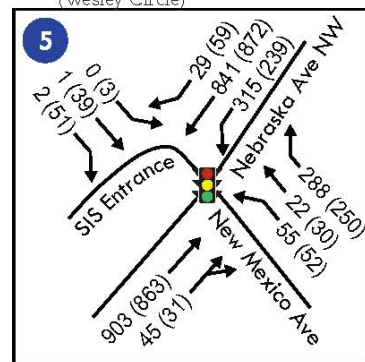
2. Massachusetts Ave. at 45th St.



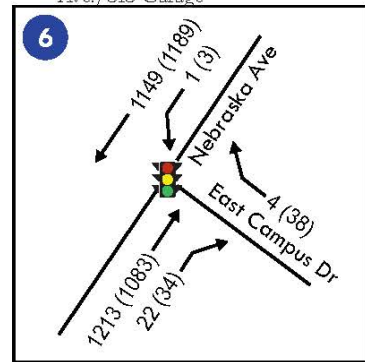
3. Massachusetts Ave. at 46th St. (Wesley Circle)



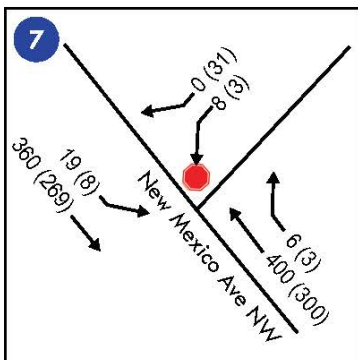
4. Massachusetts Ave. at Nebraska Ave. (Ward Circle)



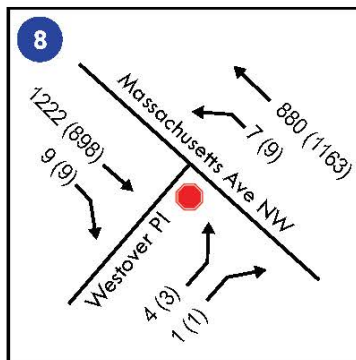
5. Nebraska Ave. at New Mexico Ave./SIS Garage



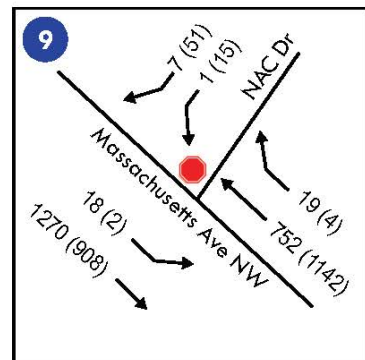
6. Nebraska Ave. at East Campus Dr.



7. New Mexico Ave. at East Campus Dr.

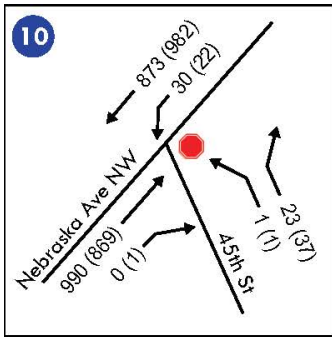


8. Massachusetts Ave. at Westover Pl.

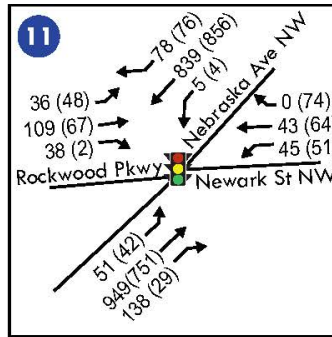


9. Massachusetts Ave. at NAC Dr.

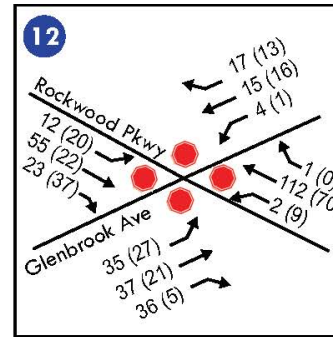
Figure 5-2 Existing Intersection Peak Hour Traffic Volumes



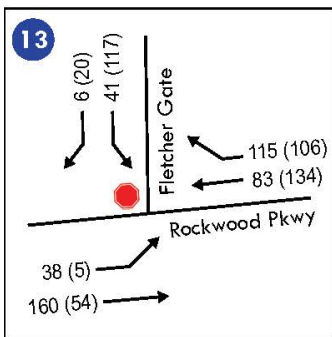
1. Nebraska Ave. at 45th St.



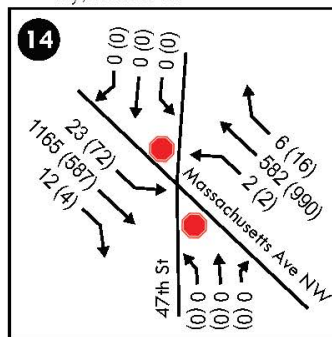
2. Nebraska Ave. at Rockwood Pkwy/Newark St.



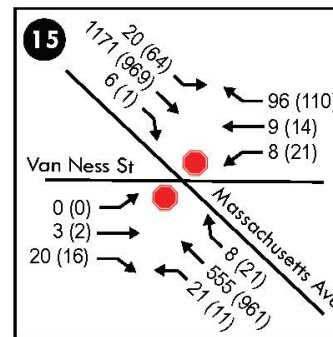
3. Rockwood Pkwy at Glenbrook Rd.



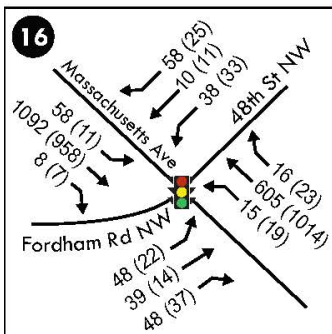
4. Rockwood Pkwy at Fletcher Gate



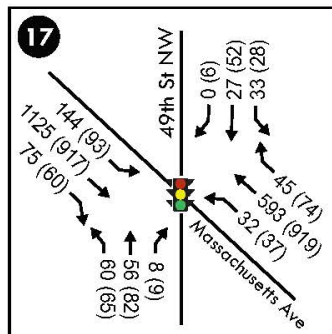
5. Massachusetts Ave. at 47th St.



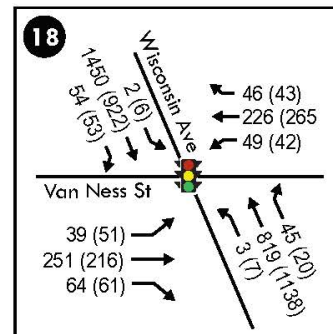
6. Massachusetts Ave. at Van Ness St.



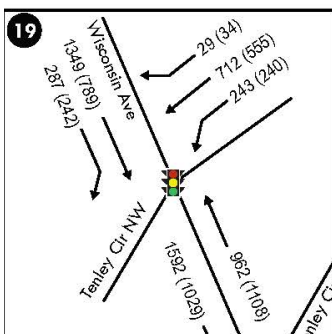
7. Massachusetts Ave. at 48th St.



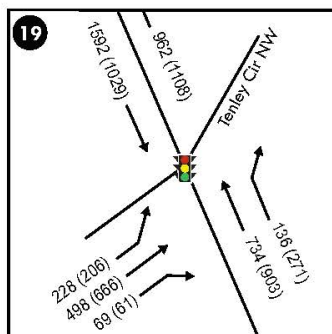
8. Massachusetts Ave. at 49th St.



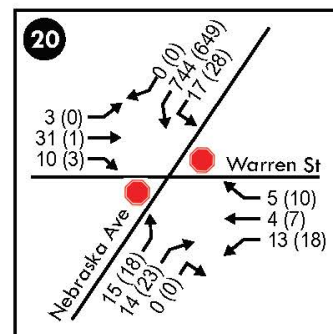
9. Wisconsin Ave. at Van Ness St.



10. (A) Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North

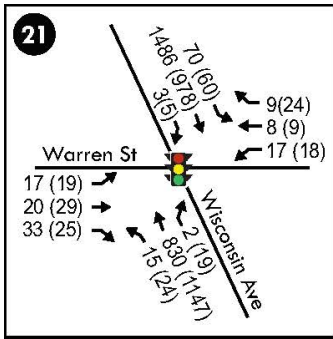


10. (B) Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South

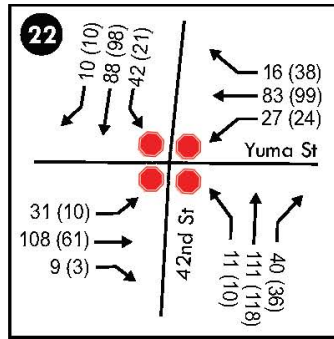


11. Nebraska Ave. at Warren St.

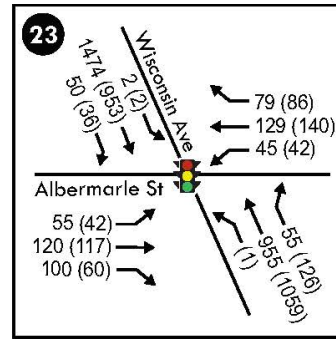
Figure 5-3 Existing Intersection Peak Hour Traffic Volumes



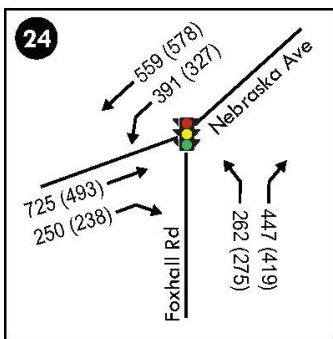
1. Wisconsin Ave. at Warren St.



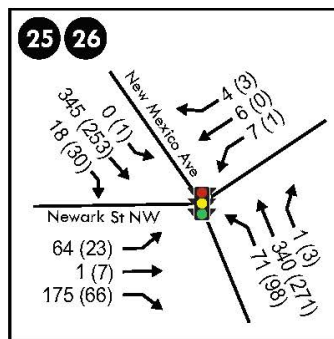
2. Yuma St. at 42nd St.



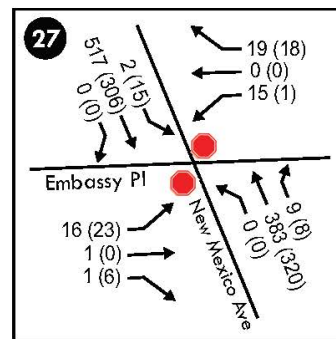
3. Wisconsin Ave. at Albermarle St.



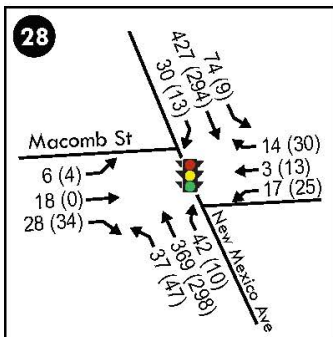
4. Nebraska Ave. at Foxhall Rd.



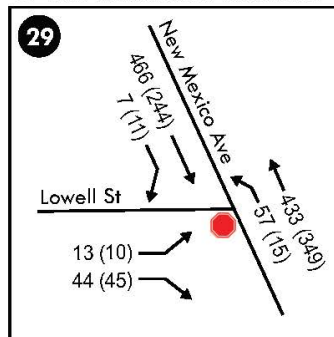
5. New Mexico Ave. at Newark St.
6. New Mexico Ave. at Westover Pl.



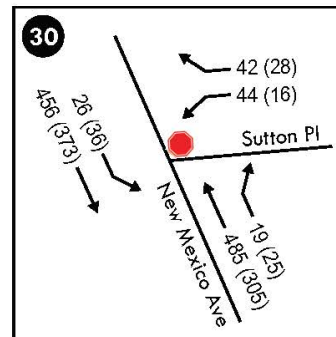
7. New Mexico Ave. at 44th St.



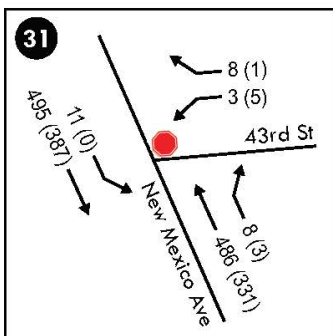
8. New Mexico Ave. at Macomb St.



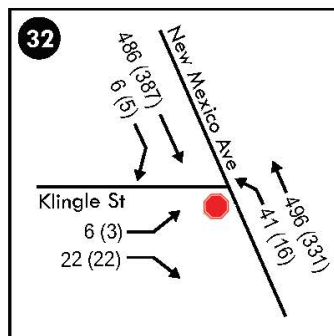
9. New Mexico Ave. at Lowell St.



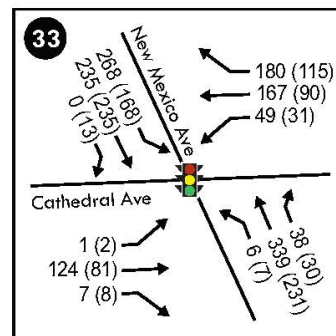
10. New Mexico Ave. at Sutton Pl.



11. New Mexico Ave. at 43th St.

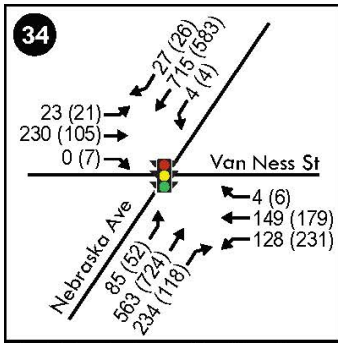


12. New Mexico Ave. at Klinge St.

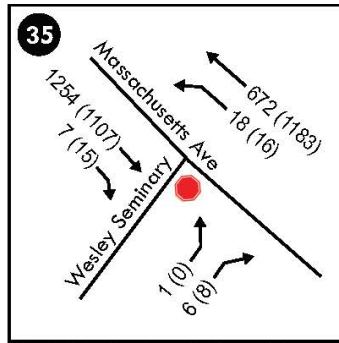


13. New Mexico Ave. at Cathedral Ave.

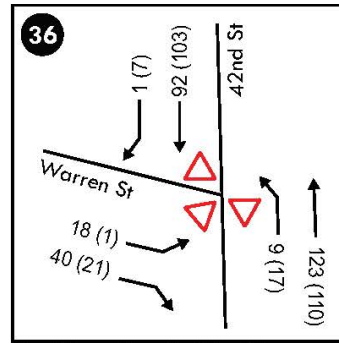
Figure 5-4 Existing Intersection Peak Hour Traffic Volumes



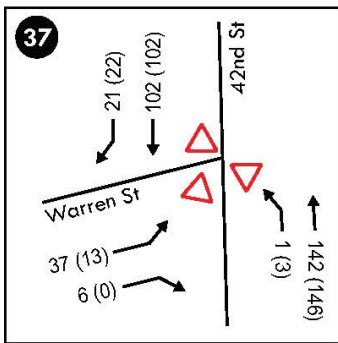
1. Nebraska Ave. at Van Ness St.



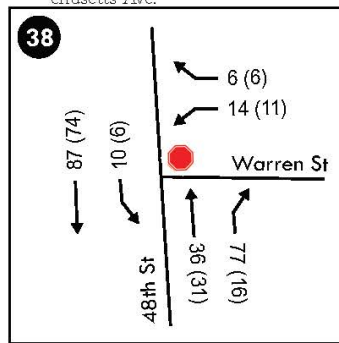
2. Wesley Seminary Drive at Massachusetts Ave.



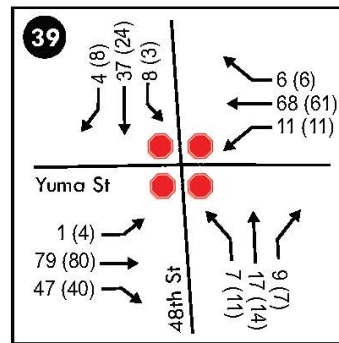
3. Warren St at 42nd St - SB



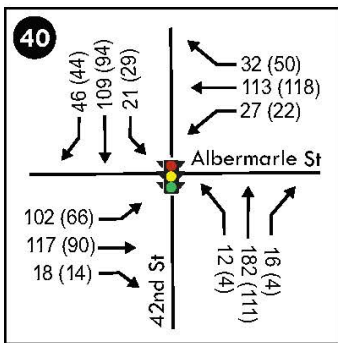
4. Warren St at 42nd St - NB



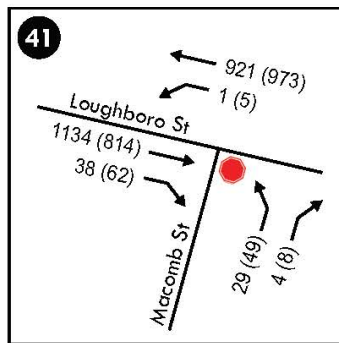
5. Warren St at 48th St.



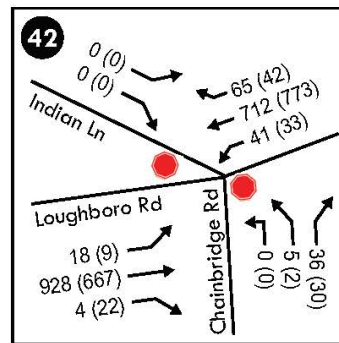
6. Yuma St. at 48th St.



7. 42nd St. at Albermarle St.



8. Nebraska Ave. at Macomb St.



9. Loughboro Rd./Nebraska Ave. at Indian Ln./Chainbridge Rd.

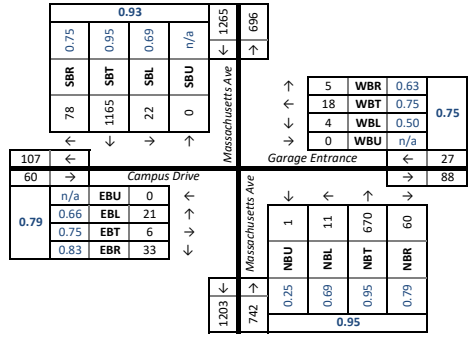
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

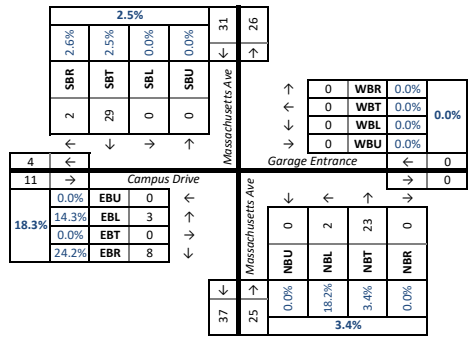
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & Garage Entrance/Campus Drive																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Garage Entrance				Massachusetts Ave				Campus Drive							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	1	99	5	5	0	0	0	0	5	0	12	46	3	3	0	7	2	5	1
06:45 AM to 07:00 AM		0	0	133	5	3	0	1	0	0	3	0	10	80	3	3	0	6	1	10	2
07:00 AM to 07:15 AM		0	3	190	10	4	0	0	4	0	2	0	5	81	5	9	0	4	1	7	1
07:15 AM to 07:30 AM		0	4	309	10	1	0	0	5	0	3	0	2	105	5	10	0	4	0	3	1
07:30 AM to 07:45 AM		0	1	310	6	6	0	1	2	1	3	0	3	125	8	24	0	1	8	7	6
07:45 AM to 08:00 AM		0	3	287	11	4	0	0	6	0	2	0	1	149	15	40	0	3	3	6	4
08:00 AM to 08:15 AM		0	7	271	24	0	0	0	2	4	1	0	2	152	13	77	0	10	0	10	1
08:15 AM to 08:30 AM		0	4	267	25	3	0	0	3	1	1	1	4	176	15	25	0	7	1	10	6
08:30 AM to 08:45 AM		0	3	287	11	2	0	2	3	2	5	0	1	169	11	18	0	2	2	7	2
08:45 AM to 09:00 AM		0	7	305	16	3	0	1	6	0	5	0	2	171	15	31	0	4	1	7	2
09:00 AM to 09:15 AM		0	8	306	26	4	0	1	6	2	3	0	4	154	19	37	0	8	2	9	1
09:15 AM to 09:30 AM		0	7	213	21	6	0	2	7	1	5	0	3	125	16	103	0	5	4	10	8
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		1265				27				742				111				60			
08:15 AM to 09:15 AM		0	22	1165	78	12	0	4	18	5	14	1	11	670	60	111	0	21	6	33	11
Peak Hour Factor (PHF)		Overall 0.96				n/a				0.69 0.95 0.75 0.93				n/a				0.50 0.75 0.63 0.75			
HEAVY VEHICLES (FHWA 4+)		Direction:				Southbound				Westbound				Northbound				Eastbound			
Roadway:		Massachusetts Ave				Garage Entrance				Massachusetts Ave				Campus Drive							
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	11	1	0	0	0	0	0	0	2	0	0	0	1	0	0	1	1	
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	0	0	1	3	0	0	0	0	0	0	1	1	
07:00 AM to 07:15 AM		0	0	3	0	0	0	0	0	0	1	8	0	0	0	0	0	0	2	2	
07:15 AM to 07:30 AM		0	0	8	1	0	0	0	0	0	4	0	0	0	1	0	0	1	0	1	
07:30 AM to 07:45 AM		0	0	7	0	0	0	0	0	0	0	12	0	0	0	0	0	0	2	2	
07:45 AM to 08:00 AM		0	0	5	0	0	0	0	0	0	0	6	0	0	1	0	0	1	0	2	
08:00 AM to 08:15 AM		0	0	4	2	0	0	0	0	0	0	6	0	0	0	0	0	0	2	2	
08:15 AM to 08:30 AM		0	0	13	2	0	0	0	0	0	1	11	0	0	0	0	0	0	1	1	
08:30 AM to 08:45 AM		0	0	3	0	0	0	0	0	0	5	0	0	0	0	0	0	0	2	2	
08:45 AM to 09:00 AM		0	0	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	2	
09:00 AM to 09:15 AM		0	0	9	0	0	0	0	0	0	1	4	0	0	3	0	3	0	3	3	
09:15 AM to 09:30 AM		0	0	10	0	0	0	0	0	0	0	4	0	0	0	0	0	0	2	2	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		31				0				25				11							
08:15 AM to 09:15 AM		0	0	29	2	2.5%	0	0	0	0	0.0%	0	2	23	0	3.4%	0	3	0	8	18.3%
Heavy Vehicle % (PHV)		0.0%				0.0%				18.2%				3.4%							
INT. PEAK HR (HV ONLY)		33				0				36				8							
07:30 AM to 08:30 AM		0	0	29	4	2.7%	0	0	0	0	0.0%	0	1	35	0	5.4%	0	1	0	7	12.1%
Heavy Vehicle % (PHV)		0.0%				0.0%				10.0%				5.8%							
BICYCLES		Direction:				Southbound				Westbound				Northbound				Eastbound			
Roadway:		Massachusetts Ave				Garage Entrance				Massachusetts Ave				Campus Drive							
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		3				3				2				0							
08:15 AM to 09:15 AM		0	0	3	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		3				3				2				0							
08:15 AM to 09:15 AM		0	0	3	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0

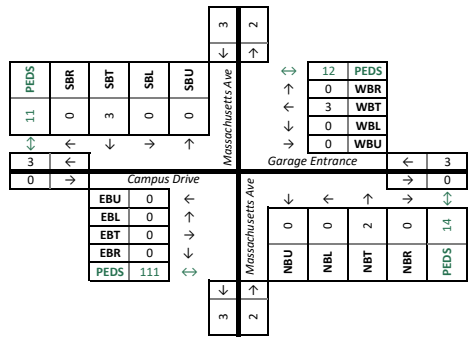
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

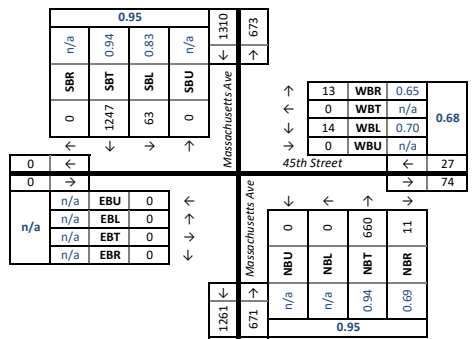
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

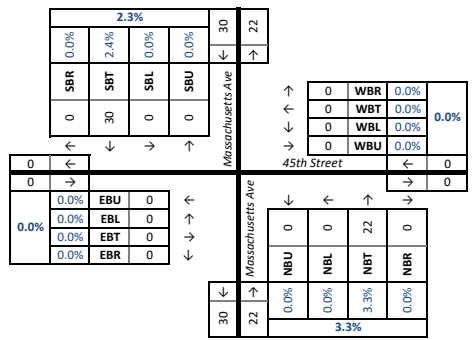
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & 45th Street/																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				45th Street				Massachusetts Ave				Massachusetts Ave							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	101	0	3	0	4	0	0	4	0	0	54	1	1	0	0	0	0	0
06:45 AM to 07:00 AM		0	1	138	0	0	0	1	0	0	0	0	0	85	1	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	6	202	0	0	0	4	0	0	2	0	0	84	1	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	10	318	0	0	0	4	0	2	2	0	0	109	2	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	21	314	0	2	0	4	0	2	3	0	0	123	4	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	20	298	0	0	0	5	0	2	2	0	0	146	5	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	10	295	0	2	0	7	0	1	2	0	0	160	4	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	16	289	0	0	0	4	0	3	1	0	0	175	1	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	16	302	0	0	0	1	0	3	6	0	0	166	3	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	19	326	0	0	0	4	0	2	3	0	0	170	3	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	12	330	0	2	0	5	0	5	3	0	0	149	4	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	11	241	0	2	0	5	0	5	4	0	0	122	4	1	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		1310				27				671				0							
08:15 AM to 09:15 AM		0	63	1247	0	2	0	14	0	13	13	0	0	660	11	0	0	0	0	0	0
Peak Hour Factor (PHF)		Overall 0.96				n/a				0.70				0.65							
		n/a				0.83				0.94				n/a							
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound							
Direction:		Massachusetts Ave				45th Street				Massachusetts Ave				Massachusetts Ave							
Roadway:		Massachusetts Ave				45th Street				Massachusetts Ave				Massachusetts Ave							
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	12	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	3	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	9	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	7	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	14	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	9	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	1	10	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		30				0				22				0							
08:15 AM to 09:15 AM		0	0	30	0	0	0	0	0	0	0	22	0	0	0	0	0				
Heavy Vehicle % (PHV)		0.0%				2.4%				3.3%				0.0%							
		0.0%				0.0%				0.0%				0.0%							
INT. PEAK HR (HV ONLY)		32				0				28				0							
07:30 AM to 08:30 AM		0	0	32	0	0	0	0	0	0	0	28	0	0	0	0	0				
Heavy Vehicle % (PHV)		0.0%				2.7%				4.5%				0.0%							
		0.0%				0.0%				0.0%				0.0%							
BICYCLES		Southbound				Westbound				Northbound				Eastbound							
Direction:		Massachusetts Ave				45th Street				Massachusetts Ave				Massachusetts Ave							
Roadway:		Massachusetts Ave				45th Street				Massachusetts Ave				Massachusetts Ave							
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
08:15 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
INT. PEAK HR (BIKES)		0				1				1				0							
07:15 AM to 08:15 AM		0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0				

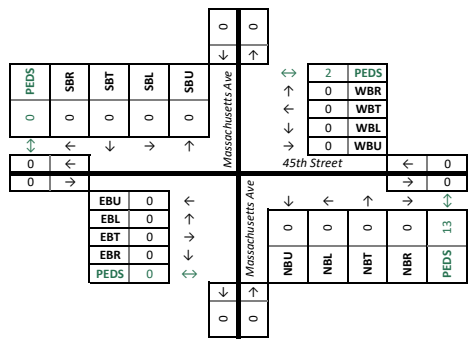
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

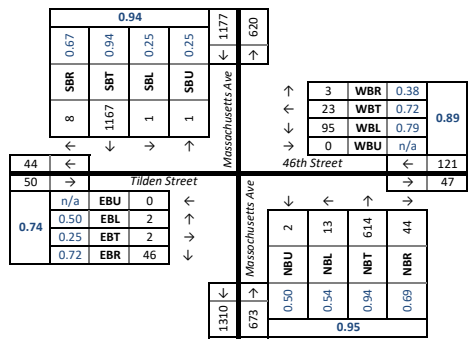
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

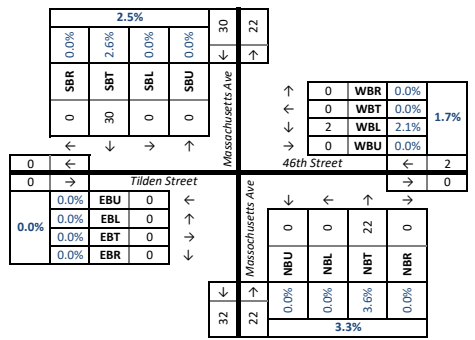
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave/Massachusetts Ave & 46th Street/Tilden Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				46th Street				Massachusetts Ave				Tilden Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	88	0	1	0	4	1	0	0	0	1	49	4	0	0	0	0	9	3	
06:45 AM to 07:00 AM		0	0	133	1	3	0	2	1	0	0	0	0	81	3	1	0	0	0	5	2	
07:00 AM to 07:15 AM		0	0	190	1	0	0	10	2	0	1	1	0	75	8	0	0	0	0	8	0	
07:15 AM to 07:30 AM		0	0	295	0	0	0	23	5	1	3	0	3	105	3	0	0	0	0	10	0	
07:30 AM to 07:45 AM		0	0	298	0	0	0	18	4	1	1	1	0	118	6	0	0	1	0	19	0	
07:45 AM to 08:00 AM		0	0	281	1	0	0	18	4	0	2	0	1	137	10	0	0	0	0	20	4	
08:00 AM to 08:15 AM		0	0	264	2	2	0	31	11	2	1	1	2	146	12	0	0	0	0	10	3	
08:15 AM to 08:30 AM		0	0	271	1	0	0	24	8	1	1	0	3	164	11	0	0	0	2	10	2	
08:30 AM to 08:45 AM		0	0	283	2	0	0	18	3	0	2	1	2	160	6	0	0	1	0	16	3	
08:45 AM to 09:00 AM		0	1	310	3	2	0	23	8	2	0	1	2	153	16	0	0	0	0	11	2	
09:00 AM to 09:15 AM		1	0	303	2	0	0	30	4	0	0	0	6	137	11	0	0	1	0	9	2	
09:15 AM to 09:30 AM		0	0	231	1	1	0	14	2	1	1	0	6	111	11	0	0	0	1	7	2	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1177				121				673				50								
08:15 AM to 09:15 AM		1	1	1167	8	2	0	95	23	3	3	2	13	614	44	0	0	2	2	46	9	
Peak Hour Factor (PHF)		Overall	0.25	0.25	0.94	0.67	0.94	n/a	0.79	0.72	0.38	0.89	0.50	0.54	0.94	0.69	0.95	n/a	0.50	0.25	0.72	0.74
HEAVY VEHICLES (FHWA 4+)		Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		Massachusetts Ave				46th Street				Massachusetts Ave				Tilden Street								
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	12	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	3	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	9	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	7	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	5	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	14	0	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	9	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	10	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		30				2				22				0								
08:15 AM to 09:15 AM		0	0	30	0	0	0	2	0	0	0	0	0	22	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	0.0%	2.5%	0.0%	2.1%	0.0%	0.0%	1.7%	0.0%	0.0%	3.6%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
INT. PEAK HR (HV ONLY)		32				1				28				0								
07:30 AM to 08:30 AM		0	0	31	1	0	0	1	0	0	0	0	0	28	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.8%	25.0%	2.9%	0.0%	1.1%	0.0%	0.0%	0.8%	0.0%	0.0%	5.0%	0.0%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
BICYCLES		Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		Massachusetts Ave				46th Street				Massachusetts Ave				Tilden Street								
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
08:30 AM to 08:45 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		2				2				0				1								
08:15 AM to 09:15 AM		0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	
INT. PEAK HR (BIKES)		3				1				2				1								
07:45 AM to 08:45 AM		0	0	3	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	0	1	

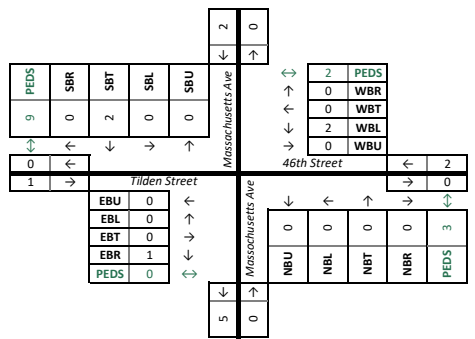
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

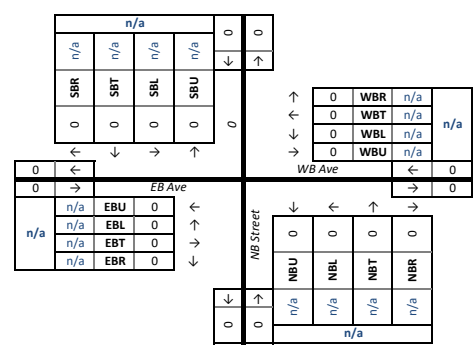
Project Name : American University Data Collection Analysis Period : STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts : Wednesday, February 26, 2020
 Location : Washington DC Weather : Partly Cloudy
 Data Source : Excel Consultants LLC

Ward Circle, Location 51, 52, 53, 54

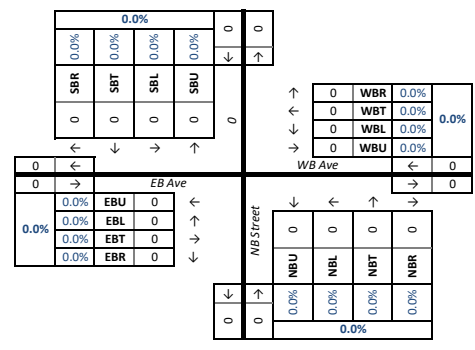
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. /NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	WB Ave				NB Street				EB Ave											
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
07:15 AM to 07:30 AM																					
07:30 AM to 07:45 AM																					
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09:45 AM to 10:00 AM																					
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10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a							
Overall		n/a				n/a				n/a				n/a							
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	WB Ave				NB Street				EB Ave											
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
07:15 AM to 07:30 AM																					
07:30 AM to 07:45 AM																					
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10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%							
INT. PEAK HR (HV ONLY)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%							
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	WB Ave				NB Street				EB Ave											
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
07:15 AM to 07:30 AM																					
07:30 AM to 07:45 AM																					
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10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
INT. PEAK HR (BIKES)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							

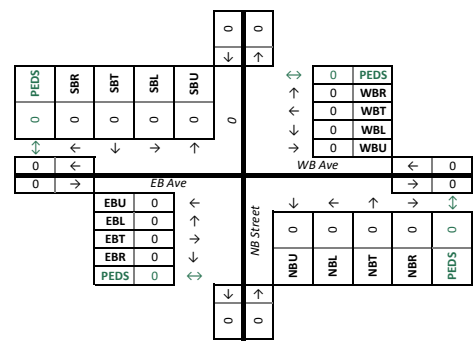
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

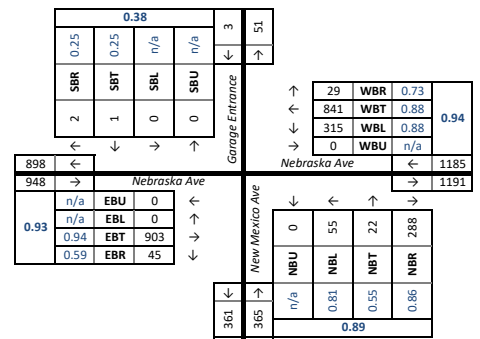
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

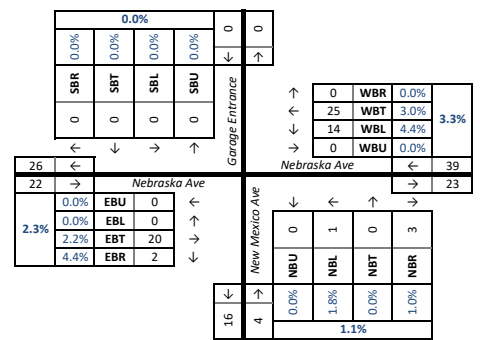
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Garage Entrance/New Mexico Ave & Nebraska Ave																
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound				
	Roadway:	Garage Entrance				Nebraska Ave				New Mexico Ave				Nebraska Ave				
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	
06:30 AM to 06:45 AM		0	0	0	3	0	21	144	4	3	0	1	4	22	2	0	0	98
06:45 AM to 07:00 AM		0	0	0	1	5	0	27	169	2	2	0	2	1	20	4	0	1
07:00 AM to 07:15 AM		0	0	1	0	4	0	33	183	3	14	0	5	4	34	2	0	1
07:15 AM to 07:30 AM		0	0	0	0	1	0	31	180	6	5	0	8	4	25	2	0	0
07:30 AM to 07:45 AM		0	0	0	1	5	0	47	216	5	15	0	11	3	52	3	0	0
07:45 AM to 08:00 AM		0	0	1	0	10	0	66	240	9	23	0	14	10	56	5	0	0
08:00 AM to 08:15 AM		0	0	0	0	5	0	75	184	4	69	0	12	1	71	7	0	0
08:15 AM to 08:30 AM		0	0	0	0	5	0	85	212	6	21	0	12	9	77	13	0	0
08:30 AM to 08:45 AM		0	0	0	2	2	0	89	205	10	25	0	17	2	84	6	0	0
08:45 AM to 09:00 AM		0	0	0	0	5	0	88	138	13	22	0	23	14	73	15	0	0
09:00 AM to 09:15 AM		0	0	1	2	6	0	88	178	10	32	0	19	18	67	5	0	0
09:15 AM to 09:30 AM		0	0	1	0	4	0	65	131	21	56	0	15	8	63	9	0	0
09:30 AM to 09:45 AM																		
09:45 AM to 10:00 AM																		
10:00 AM to 10:15 AM																		
10:15 AM to 10:30 AM																		
10:30 AM to 10:45 AM																		
10:45 AM to 11:00 AM																		
11:00 AM to 11:15 AM																		
11:15 AM to 11:30 AM																		
INT. PEAK HR (ALL VEH)	07:45 AM to 08:45 AM	0	0	1	2	22	0	315	841	29	138	0	55	22	288	31	0	0
Peak Hour Factor (PHF)	Overall	0.98	n/a	n/a	0.25	0.25	0.38	n/a	0.88	0.88	0.73	0.94	n/a	0.81	0.55	0.86	0.89	
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound				
	Roadway:	Garage Entrance				Nebraska Ave				New Mexico Ave				Nebraska Ave				
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	
06:30 AM to 06:45 AM		0	0	0	0	0	2	3	0	0	0	0	1	0	0	0	3	
06:45 AM to 07:00 AM		0	0	0	0	0	1	5	0	0	1	0	1	0	0	5	1	
07:00 AM to 07:15 AM		0	0	0	0	0	2	6	0	0	0	0	2	0	0	5	0	
07:15 AM to 07:30 AM		0	0	0	0	0	2	4	0	0	1	0	0	0	0	9	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	12	0	0	0	0	3	0	0	4	0	
07:45 AM to 08:00 AM		0	0	0	0	0	3	3	0	0	0	0	0	0	0	9	0	
08:00 AM to 08:15 AM		0	0	0	0	0	4	7	0	0	0	0	2	0	0	3	2	
08:15 AM to 08:30 AM		0	0	0	0	0	2	8	0	0	1	0	0	0	0	5	0	
08:30 AM to 08:45 AM		0	0	0	0	0	5	7	0	0	0	0	1	0	0	3	0	
08:45 AM to 09:00 AM		0	0	0	0	0	1	5	0	0	0	0	3	0	0	9	1	
09:00 AM to 09:15 AM		0	0	0	0	0	3	2	0	0	0	0	1	0	0	7	1	
09:15 AM to 09:30 AM		0	0	0	0	0	1	3	0	0	1	0	4	0	0	7	1	
09:30 AM to 09:45 AM																		
09:45 AM to 10:00 AM																		
10:00 AM to 10:15 AM																		
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10:30 AM to 10:45 AM																		
10:45 AM to 11:00 AM																		
11:00 AM to 11:15 AM																		
11:15 AM to 11:30 AM																		
INT. PEAK HR (ALL VEH)	07:45 AM to 08:45 AM	0	0	0	0	0	0	14	25	0	0	0	1	0	3	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	3.0%	0.0%	3.3%	0.0%	1.8%	0.0%	1.0%	1.1%	0.0%	2.2%
INT. PEAK HR (HV ONLY)	08:00 AM to 09:00 AM	0	0	0	0	0	0	12	27	0	0	0	1	0	6	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	3.7%	0.0%	3.5%	0.0%	1.6%	0.0%	2.0%	1.8%	0.0%	2.2%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound				
	Roadway:	Garage Entrance				Nebraska Ave				New Mexico Ave				Nebraska Ave				
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																		
09:45 AM to 10:00 AM																		
10:00 AM to 10:15 AM																		
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10:30 AM to 10:45 AM																		
10:45 AM to 11:00 AM																		
11:00 AM to 11:15 AM																		
11:15 AM to 11:30 AM																		
INT. PEAK HR (ALL VEH)	07:45 AM to 08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)	06:45 AM to 07:45 AM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

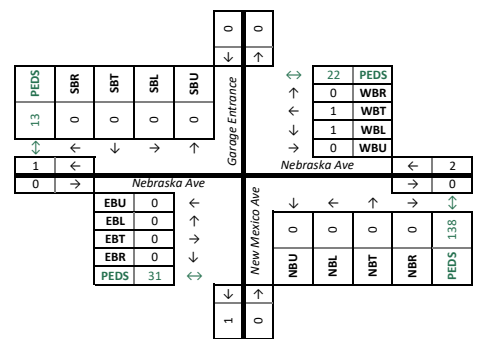
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

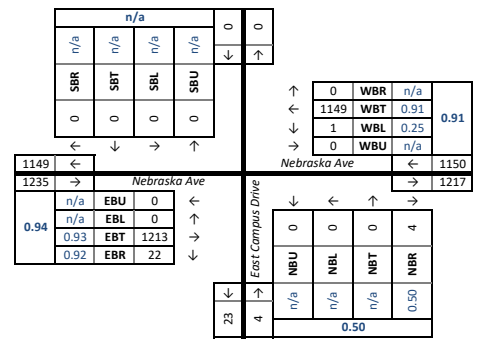
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. /East Campus Drive & Nebraska Ave																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:					Nebraska Ave				East Campus Drive				Nebraska Ave								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
06:30 AM to 06:45 AM		0	0	0	0	0	0	2	169	0	0	0	0	0	0	0	0	0	118	2	4	
06:45 AM to 07:00 AM		0	0	0	0	0	0	2	197	0	0	0	0	1	3	0	0	0	158	1	1	
07:00 AM to 07:15 AM		0	0	0	0	0	0	1	218	0	0	1	1	1	0	0	0	234	2	0		
07:15 AM to 07:30 AM		0	0	0	0	0	0	1	216	0	0	0	0	1	4	0	0	225	4	4		
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	268	0	0	0	0	8	0	0	0	325	5	8		
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	315	0	0	0	0	1	4	0	0	286	6	9		
08:00 AM to 08:15 AM		0	0	0	0	0	0	1	263	0	2	0	0	2	10	0	0	307	5	39		
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	303	0	0	0	0	1	3	0	0	295	6	11		
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	301	0	0	0	0	2	13	0	0	279	7	14		
08:45 AM to 09:00 AM		0	0	0	0	0	0	2	239	0	0	0	0	5	12	0	0	302	4	17		
09:00 AM to 09:15 AM		0	0	0	0	0	0	2	276	0	0	0	0	7	8	0	0	265	6	8		
09:15 AM to 09:30 AM		0	0	0	0	0	0	2	215	0	0	0	0	3	12	0	0	290	1	31		
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				1150				4				1235				67				
07:30 AM to 08:30 AM		0	0	0	0	0	1	1149	0	2	0	0	0	4	25	0	0	1213	22	67		
Peak Hour Factor (PHF)		Overall	U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		0.98	n/a	n/a	n/a	n/a	n/a	0.25	0.91	n/a	n/a	0.50	0.50	n/a	n/a	n/a	0.93	0.92	0.92	0.92	0.94	

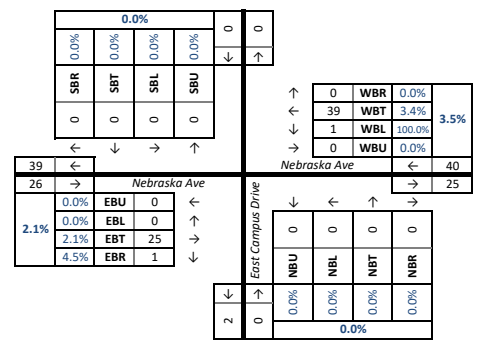
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:					Nebraska Ave				East Campus Drive				Nebraska Ave							
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
06:30 AM to 06:45 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	4	0			
06:45 AM to 07:00 AM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6	0			
07:00 AM to 07:15 AM		0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	7	0			
07:15 AM to 07:30 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	9	0			
07:30 AM to 07:45 AM		0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	7	0			
07:45 AM to 08:00 AM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	7	1			
08:00 AM to 08:15 AM		0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	6	0			
08:15 AM to 08:30 AM		0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	5	0			
08:30 AM to 08:45 AM		0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	4	0			
08:45 AM to 09:00 AM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	12	0			
09:00 AM to 09:15 AM		0	0	0	0	0	0	5	0	0	0	2	0	0	0	0	8	0			
09:15 AM to 09:30 AM		0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	11	0			
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				40				0				26							
07:30 AM to 08:30 AM		0	0	0	0	0	1	39	0	0	0	0	0	0	0	0	25	1	26		
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	3.4%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	4.5%	2.1%		
INT. PEAK HR (HV ONLY)		0				36				0				30							
07:15 AM to 08:15 AM		0	0	0	0	0	1	35	0	0	0	0	0	0	0	0	29	1	30		
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	3.3%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	5.0%	2.6%		

BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:					Nebraska Ave				East Campus Drive				Nebraska Ave								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:30 AM to 07:45 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0				
07:45 AM to 08:00 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0				
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
08:15 AM to 08:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0				
08:30 AM to 08:45 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0				
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0				
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				3				0				2								
07:30 AM to 08:30 AM		0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	2			
INT. PEAK HR (BIKES)		0				3				0				2								
07:30 AM to 08:30 AM		0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	2			

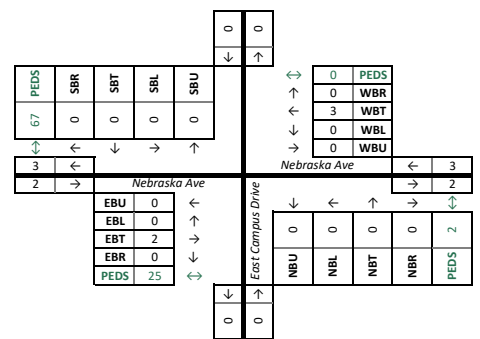
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

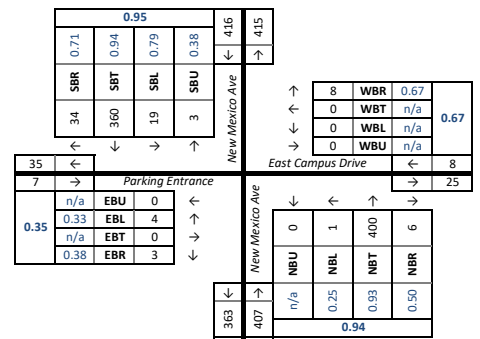
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

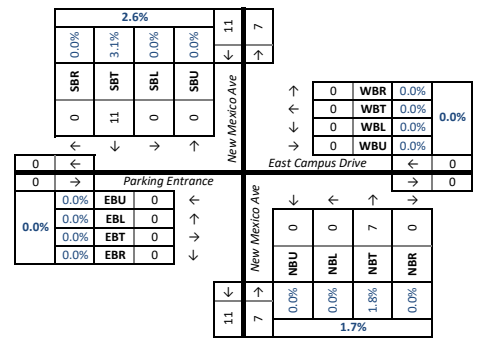
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. New Mexico Ave & East Campus Drive/Parking Entrance																
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound				
	Roadway:	New Mexico Ave				East Campus Drive				New Mexico Ave				Parking Entrance				
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	
06:30 AM to 06:45 AM		0	5	17	0	1	0	1	3	0	0	26	0	0	0	0	2	
06:45 AM to 07:00 AM		0	8	26	1	0	3	0	1	7	0	0	22	1	0	0	0	
07:00 AM to 07:15 AM		1	2	36	3	0	0	0	4	5	0	0	38	0	0	0	0	
07:15 AM to 07:30 AM		0	1	32	3	0	0	0	2	5	0	1	35	0	0	0	0	
07:30 AM to 07:45 AM		1	3	49	0	0	0	0	0	8	0	0	66	2	0	0	1	
07:45 AM to 08:00 AM		1	3	66	0	0	0	0	1	17	1	0	78	3	0	0	2	
08:00 AM to 08:15 AM		3	5	79	1	0	0	0	1	13	0	0	78	1	0	2	0	
08:15 AM to 08:30 AM		0	6	87	3	0	0	0	2	18	0	0	96	0	0	0	0	
08:30 AM to 08:45 AM		0	4	96	8	0	0	0	2	12	0	1	100	3	0	1	1	
08:45 AM to 09:00 AM		2	6	90	11	0	0	0	1	9	0	0	107	1	0	0	0	
09:00 AM to 09:15 AM		1	3	87	12	0	0	0	3	17	0	0	97	2	0	3	3	
09:15 AM to 09:30 AM		1	6	61	9	0	0	0	2	10	0	0	79	0	0	4	0	
09:30 AM to 09:45 AM																		
09:45 AM to 10:00 AM																		
10:00 AM to 10:15 AM																		
10:15 AM to 10:30 AM																		
10:30 AM to 10:45 AM																		
10:45 AM to 11:00 AM																		
11:00 AM to 11:15 AM																		
11:15 AM to 11:30 AM																		
INT. PEAK HR (ALL VEH)		416				8				407				7				
08:15 AM to 09:15 AM		3	19	360	34	0	0	0	0	8	56	0	1	400	6	0	4	3
Peak Hour Factor (PHF)		Overall	0.38	0.79	0.94	0.71	0.95	n/a	n/a	n/a	0.67	0.67	n/a	0.25	0.93	0.50	0.94	0.35
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound				
Direction:		New Mexico Ave				East Campus Drive				New Mexico Ave				Parking Entrance				
Roadway:		New Mexico Ave				East Campus Drive				New Mexico Ave				Parking Entrance				
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	
06:30 AM to 06:45 AM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0
09:30 AM to 09:45 AM																		
09:45 AM to 10:00 AM																		
10:00 AM to 10:15 AM																		
10:15 AM to 10:30 AM																		
10:30 AM to 10:45 AM																		
10:45 AM to 11:00 AM																		
11:00 AM to 11:15 AM																		
11:15 AM to 11:30 AM																		
INT. PEAK HR (ALL VEH)		11				0				7				0				
08:15 AM to 09:15 AM		0	0	11	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Heavy Vehicle % (PHV):		0.0%	0.0%	3.1%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		12				0				9				0				
08:00 AM to 09:00 AM		0	0	12	0	0	0	0	0	0	0	9	0	0	0	0	0	0
Heavy Vehicle % (PHV):		0.0%	0.0%	3.4%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%
BICYCLES		Southbound				Westbound				Northbound				Eastbound				
Direction:		New Mexico Ave				East Campus Drive				New Mexico Ave				Parking Entrance				
Roadway:		New Mexico Ave				East Campus Drive				New Mexico Ave				Parking Entrance				
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	1	0	0	2	0	0	0	0	1	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																		
09:45 AM to 10:00 AM																		
10:00 AM to 10:15 AM																		
10:15 AM to 10:30 AM																		
10:30 AM to 10:45 AM																		
10:45 AM to 11:00 AM																		
11:00 AM to 11:15 AM																		
11:15 AM to 11:30 AM																		
INT. PEAK HR (ALL VEH)		2				3				3				0				
08:15 AM to 09:15 AM		0	0	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0
INT. PEAK HR (BIKES)		2				3				3				0				
08:15 AM to 09:15 AM		0	0	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0

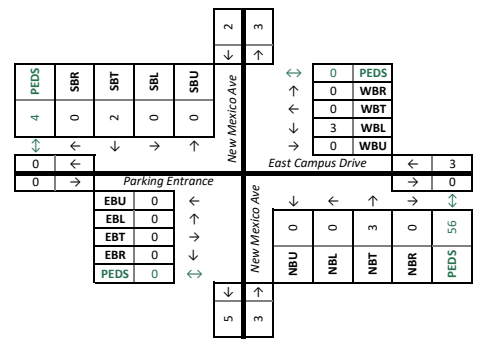
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

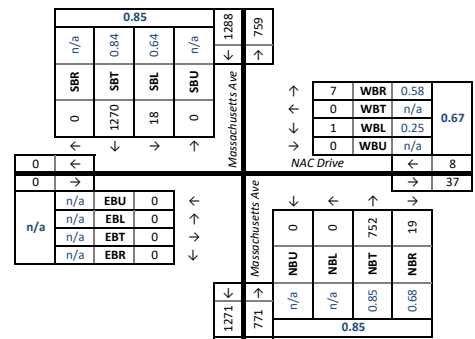
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

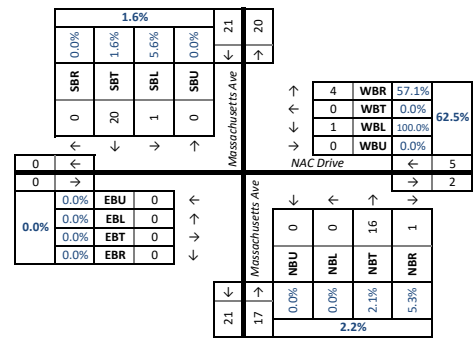
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:15 AM to 08:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & NAC Drive/																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				NAC Drive				Massachusetts Ave												
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	9	111	0	0	0	0	0	3	0	0	58	6	6	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	6	151	0	1	0	1	0	1	3	0	0	118	6	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	5	219	0	0	0	1	0	1	6	0	0	119	4	1	0	0	0	0	0	
07:15 AM to 07:30 AM		0	5	285	0	0	0	0	0	3	14	0	0	145	6	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	1	380	0	0	0	0	0	1	17	0	0	174	3	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	5	316	0	0	0	0	0	2	44	0	0	213	3	1	0	0	0	0	0	
08:00 AM to 08:15 AM		0	7	289	0	0	0	1	0	1	31	0	0	220	7	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	1	242	0	0	0	2	0	3	20	0	0	187	2	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	5	232	0	0	0	2	0	0	16	0	0	210	5	0	0	0	0	0	0	
08:45 AM to 09:00 AM		1	4	253	0	0	0	0	0	2	12	0	0	197	3	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	6	217	0	0	0	3	0	0	14	0	0	170	7	1	0	0	0	0	0	
09:15 AM to 09:30 AM		0	2	221	0	0	0	1	0	4	27	0	0	122	2	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1288				8				771				1				0				
07:15 AM to 08:15 AM		0	18	1270	0	0	1	0	7	106	0	0	752	19	1	0	0	0	0	0	0	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		0.92	n/a	0.64	0.84	n/a	0.85	n/a	0.25	n/a	0.58	0.67	n/a	n/a	0.85	0.68	0.85	n/a	n/a	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)		Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		Massachusetts Ave				NAC Drive				Massachusetts Ave												
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	1	7	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	3	0	0	1	0	0	0	0	7	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	5	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	10	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	3	0	0	0	0	2	0	0	4	1	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	1	2	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	12	0	0	0	0	2	0	0	2	1	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	13	0	0	0	0	2	0	0	5	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	1	4	0	0	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	4	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		21				5				17				0								
07:15 AM to 08:15 AM		0	1	20	0	0	1	0	4	62.5%	0.0%	0.0%	16	1	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Heavy Vehicle % (PHV)		0.0%	5.6%	1.6%	0.0%	1.6%	0.0%	100.0%	0.0%	57.1%	62.5%	0.0%	0.0%	2.1%	5.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
INT. PEAK HR (HV ONLY)		32				5				18				0								
08:00 AM to 09:00 AM		0	1	31	0	0	1	0	4	45.5%	0.0%	0.0%	17	1	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Heavy Vehicle % (PHV)		0.0%	5.9%	3.1%	0.0%	3.1%	0.0%	20.0%	0.0%	66.7%	45.5%	0.0%	0.0%	2.1%	5.9%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
BICYCLES		Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		Massachusetts Ave				NAC Drive				Massachusetts Ave												
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		2				0				2				0								
07:15 AM to 08:15 AM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
INT. PEAK HR (BIKES)		2				0				5				0								
08:30 AM to 09:30 AM		0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	

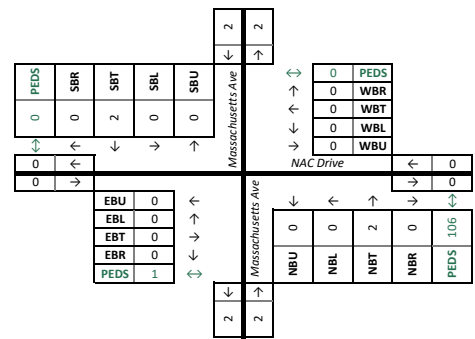
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

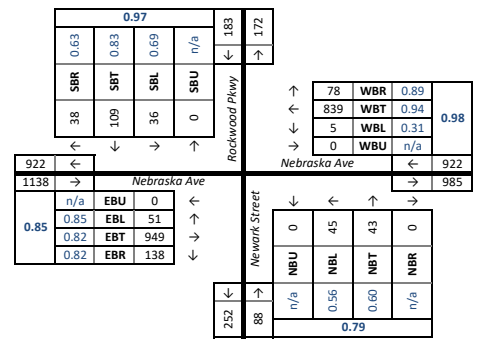
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

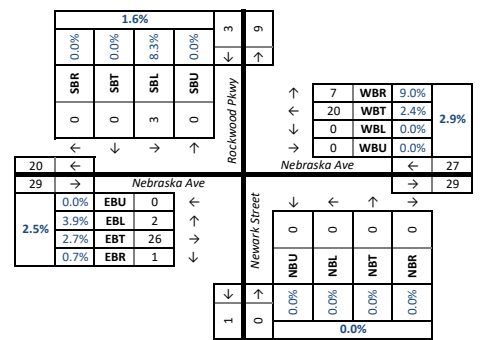
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Rockwood Pkwy/Newark Street & Nebraska Ave																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Rockwood Pkwy				Nebraska Ave				Newark Street				Nebraska Ave								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM	to 06:45 AM	0	4	1	2	2	0	1	107	19	0	0	2	0	0	0	0	11	105	1	0	
06:45 AM	to 07:00 AM	0	5	3	2	1	0	0	135	6	2	0	4	2	0	2	0	10	171	2	1	
07:00 AM	to 07:15 AM	0	2	5	6	1	0	0	146	5	1	0	7	2	0	1	0	10	193	9	2	
07:15 AM	to 07:30 AM	0	6	16	6	0	0	0	162	13	0	0	6	11	1	0	0	12	223	16	0	
07:30 AM	to 07:45 AM	0	13	27	5	0	0	0	223	13	0	0	20	8	0	0	0	9	291	33	0	
07:45 AM	to 08:00 AM	0	9	25	13	2	0	1	200	21	0	0	9	6	0	4	0	15	227	28	0	
08:00 AM	to 08:15 AM	0	8	24	15	2	0	4	205	22	1	0	9	18	0	0	0	14	203	35	2	
08:15 AM	to 08:30 AM	0	6	33	5	2	0	0	211	22	0	0	7	11	0	4	0	13	228	42	2	
08:30 AM	to 08:45 AM	0	3	47	7	0	0	2	170	16	1	0	8	11	1	0	0	12	217	55	3	
08:45 AM	to 09:00 AM	0	9	37	11	1	0	2	131	24	0	0	13	14	0	0	0	16	213	34	0	
09:00 AM	to 09:15 AM	0	6	30	7	1	0	0	151	29	0	0	14	21	0	0	0	9	197	29	0	
09:15 AM	to 09:30 AM	0	4	21	9	1	0	1	132	21	2	0	8	6	0	0	0	16	240	30	0	
09:30 AM	to 09:45 AM																					
09:45 AM	to 10:00 AM																					
10:00 AM	to 10:15 AM																					
10:15 AM	to 10:30 AM																					
10:30 AM	to 10:45 AM																					
10:45 AM	to 11:00 AM																					
11:00 AM	to 11:15 AM																					
11:15 AM	to 11:30 AM																					
INT. PEAK HR (ALL VEH)		183				922				88				1138								
07:30 AM	to 08:30 AM	0	36	109	38	6	0	5	839	78	1	0	45	43	0	8	0	51	949	138	4	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		n/a	0.69	0.83	0.63	0.97	n/a	0.31	0.94	0.89	0.98	n/a	0.56	0.60	n/a	0.79	n/a	0.85	0.82	0.82	0.85	
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Rockwood Pkwy				Nebraska Ave				Newark Street				Nebraska Ave								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM	to 06:45 AM	0	0	0	0	0	0	5	1	0	0	0	0	0	1	4	0					
06:45 AM	to 07:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	1	6	0					
07:00 AM	to 07:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0					
07:15 AM	to 07:30 AM	0	0	0	1	0	0	6	1	0	0	0	0	0	1	3	1					
07:30 AM	to 07:45 AM	0	3	0	0	0	0	6	1	0	0	0	0	0	0	9	0					
07:45 AM	to 08:00 AM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	8	0					
08:00 AM	to 08:15 AM	0	0	0	0	0	0	6	2	0	0	0	0	0	1	3	1					
08:15 AM	to 08:30 AM	0	0	0	0	0	0	6	3	0	0	0	0	0	1	6	0					
08:30 AM	to 08:45 AM	0	1	0	1	0	0	4	1	0	1	0	0	0	0	3	1					
08:45 AM	to 09:00 AM	0	1	1	3	0	0	4	2	0	1	0	0	0	0	5	0					
09:00 AM	to 09:15 AM	0	0	0	0	0	0	6	2	0	0	0	0	0	0	8	0					
09:15 AM	to 09:30 AM	0	0	0	0	0	0	3	2	0	1	0	0	0	0	10	2					
09:30 AM	to 09:45 AM																					
09:45 AM	to 10:00 AM																					
10:00 AM	to 10:15 AM																					
10:15 AM	to 10:30 AM																					
10:30 AM	to 10:45 AM																					
10:45 AM	to 11:00 AM																					
11:00 AM	to 11:15 AM																					
11:15 AM	to 11:30 AM																					
INT. PEAK HR (ALL VEH)		3				27				0				29								
07:30 AM	to 08:30 AM	0	3	0	0	0	0	20	7	0	0	0	0	0	2	26	1					
Heavy Vehicle % (PHV)		0.0%	8.3%	0.0%	0.0%	1.6%	0.0%	0.0%	2.4%	9.0%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	2.7%	0.7%	2.5%	
INT. PEAK HR (HV ONLY)		7				24				3				29								
08:30 AM	to 09:30 AM	0	2	1	4	0	0	17	7	0	3	0	0	0	0	26	3					
Heavy Vehicle % (PHV)		0.0%	9.1%	0.7%	11.8%	3.7%	0.0%	0.0%	2.9%	7.8%	3.5%	0.0%	7.0%	0.0%	0.0%	3.1%	0.0%	0.0%	3.0%	2.0%	2.7%	
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Rockwood Pkwy				Nebraska Ave				Newark Street				Nebraska Ave								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM	to 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
07:00 AM	to 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0					
07:15 AM	to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
07:30 AM	to 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
07:45 AM	to 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
08:00 AM	to 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
08:15 AM	to 08:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0					
08:30 AM	to 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
08:45 AM	to 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
09:00 AM	to 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
09:15 AM	to 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
09:30 AM	to 09:45 AM																					
09:45 AM	to 10:00 AM																					
10:00 AM	to 10:15 AM																					
10:15 AM	to 10:30 AM																					
10:30 AM	to 10:45 AM																					
10:45 AM	to 11:00 AM																					
11:00 AM	to 11:15 AM																					
11:15 AM	to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				1				0				0								
07:30 AM	to 08:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0					
INT. PEAK HR (BIKES)		0				0				0				1								
06:30 AM	to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0					

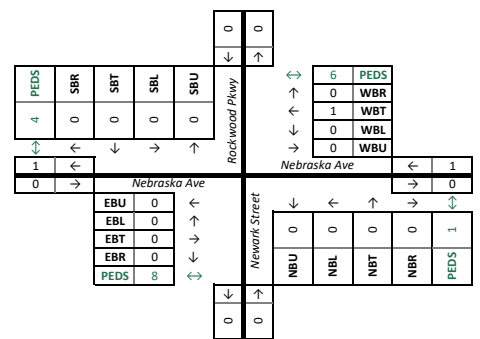
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

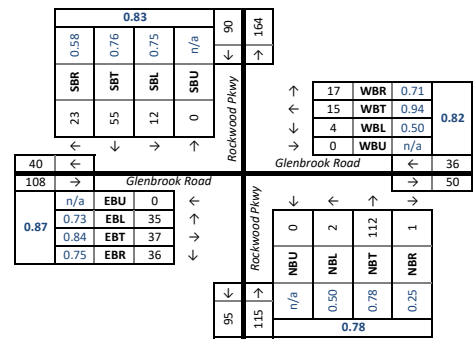
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Rockwood Pkwy & Glenbrook Road																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Rockwood Pkwy				Glenbrook Road				Rockwood Pkwy				Glenbrook Road								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	1	3	2	0	0	0	1	1	0	0	0	5	1	0	0	2	1	1	0	
06:45 AM to 07:00 AM		0	1	1	0	0	0	0	1	3	2	0	1	5	1	0	0	3	0	0	0	
07:00 AM to 07:15 AM		0	1	3	5	0	0	0	1	5	0	0	1	5	1	0	0	1	4	4	0	
07:15 AM to 07:30 AM		0	1	7	4	0	0	0	5	5	0	0	4	13	0	0	0	6	4	6	0	
07:30 AM to 07:45 AM		0	3	7	5	0	0	0	6	5	1	0	1	18	0	1	0	4	8	7	0	
07:45 AM to 08:00 AM		0	3	13	11	0	0	1	5	5	0	0	0	23	0	0	0	7	6	7	0	
08:00 AM to 08:15 AM		0	3	9	5	0	0	2	2	3	0	0	5	25	1	0	0	12	4	2	0	
08:15 AM to 08:30 AM		0	4	13	10	0	0	2	4	3	0	0	1	31	0	0	0	8	11	12	0	
08:30 AM to 08:45 AM		0	3	18	4	0	0	2	3	6	0	0	0	24	0	0	0	7	10	5	0	
08:45 AM to 09:00 AM		0	1	15	5	0	0	0	4	5	0	0	1	21	0	0	0	8	8	12	1	
09:00 AM to 09:15 AM		0	4	9	4	0	0	0	4	3	0	0	0	36	1	0	0	12	8	7	0	
09:15 AM to 09:30 AM		0	1	13	8	0	0	1	2	3	0	0	4	17	0	0	0	7	4	2	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		90				36				115				108				1				
08:15 AM to 09:15 AM		0	12	55	23	0	0	4	15	17	0	0	2	112	1	0	0	35	37	36	1	
Peak Hour Factor (PHF)		Overall	n/a	0.75	0.76	0.58	0.83	n/a	0.50	0.94	0.71	0.82	n/a	0.50	0.78	0.25	0.78	n/a	0.73	0.84	0.75	0.87

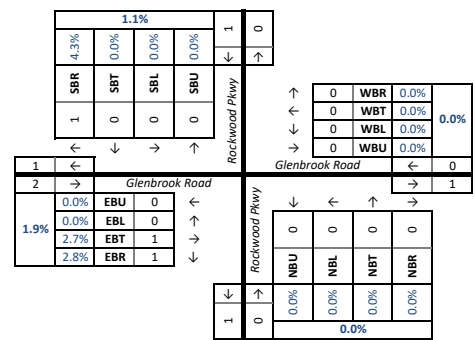
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Rockwood Pkwy				Glenbrook Road				Rockwood Pkwy				Glenbrook Road							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
08:45 AM to 09:00 AM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		1				0				0				2				0			
08:15 AM to 09:15 AM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	4.3%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	2.8%	1.9%
INT. PEAK HR (HV ONLY)		0				0				3				1				0			
07:15 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	1
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	4.5%	1.4%

BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Rockwood Pkwy				Glenbrook Road				Rockwood Pkwy				Glenbrook Road							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				1				1				1				0			
08:15 AM to 09:15 AM		0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0
INT. PEAK HR (BIKES)		1				2				0				1				0			
07:30 AM to 08:30 AM		0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0

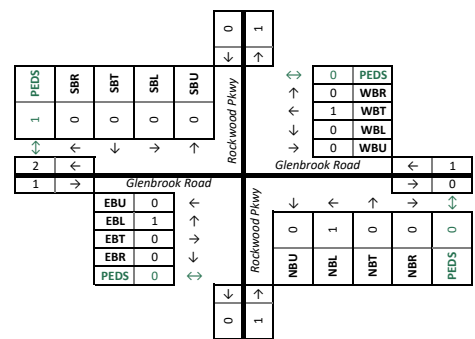
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

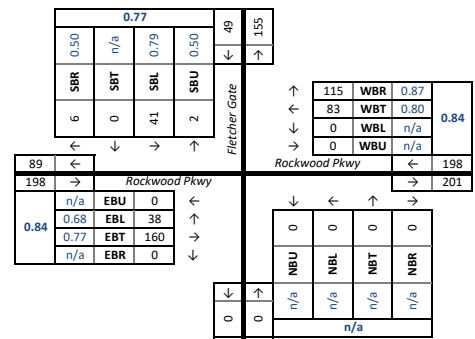
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

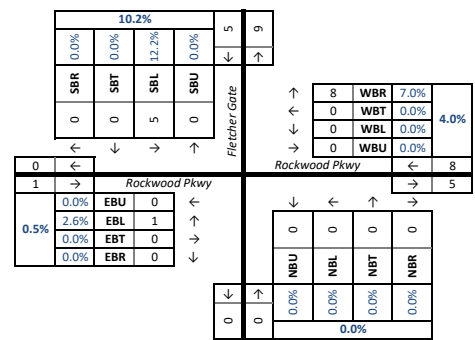
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Fletcher Gate/ & Rockwood Pkwy																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	3	0	4	0	0	0	5	24	0	0	0	0	0	0	2	2	0	0	0
06:45 AM to 07:00 AM		0	7	0	4	0	0	0	5	14	0	0	0	0	0	0	2	5	0	0	0
07:00 AM to 07:15 AM		4	2	0	0	0	0	0	7	10	0	0	0	0	0	0	2	11	0	0	0
07:15 AM to 07:30 AM		1	12	0	5	0	0	0	11	25	0	0	0	0	0	0	3	16	0	0	0
07:30 AM to 07:45 AM		1	9	0	1	0	0	0	14	16	1	0	0	0	0	0	2	36	0	0	0
07:45 AM to 08:00 AM		0	8	0	4	0	0	0	15	27	0	0	0	0	0	0	13	39	0	0	0
08:00 AM to 08:15 AM		0	12	0	5	2	0	0	29	25	0	0	0	0	2	0	2	35	0	0	0
08:15 AM to 08:30 AM		0	13	0	3	0	0	0	20	26	0	0	0	0	0	0	8	31	0	0	0
08:30 AM to 08:45 AM		1	5	0	0	0	0	0	15	24	0	0	0	0	0	0	7	52	0	0	0
08:45 AM to 09:00 AM		0	11	0	2	0	0	0	22	32	0	0	0	0	0	0	9	46	0	0	0
09:00 AM to 09:15 AM		1	12	0	1	0	0	0	26	33	0	0	0	0	0	0	14	31	0	0	0
09:15 AM to 09:30 AM		0	7	0	1	0	0	0	19	24	0	0	0	0	0	0	5	27	0	1	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		49				198				0				198							
08:15 AM to 09:15 AM		2	41	0	6	0	0	83	115	0	0	0	0	0	0	38	160	0	0	0	
Peak Hour Factor (PHF)		Overall 0.91				0.50 0.79 n/a 0.50 0.77				n/a n/a n/a 0.80 0.87 0.84				n/a n/a n/a n/a n/a							
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound							
Direction:		Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy							
Roadway:		Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy							
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0			
06:45 AM to 07:00 AM		0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
07:00 AM to 07:15 AM		2	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
07:30 AM to 07:45 AM		0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
08:00 AM to 08:15 AM		0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0			
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
08:30 AM to 08:45 AM		0	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0			
08:45 AM to 09:00 AM		0	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
09:15 AM to 09:30 AM		0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0			
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		5				8				0				1							
08:15 AM to 09:15 AM		0	5	0	0	0	0	0	8	0	0	0	0	0	1	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0% 12.2% 0.0% 0.0% 10.2%				0.0% 0.0% 0.0% 7.0% 4.0%				0.0% 0.0% 0.0% 0.0% 0.0%				0.0% 2.6% 0.0% 0.0% 0.5%							
INT. PEAK HR (HV ONLY)		7				8				0				1							
08:00 AM to 09:00 AM		0	6	0	1	0	0	0	8	0	0	0	0	0	1	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0% 14.6% 0.0% 10.0% 13.5%				0.0% 0.0% 0.0% 7.5% 4.1%				0.0% 0.0% 0.0% 0.0% 0.0%				0.0% 3.8% 0.0% 0.0% 0.5%							
BICYCLES		Southbound				Westbound				Northbound				Eastbound							
Direction:		Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy							
Roadway:		Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy							
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0			
06:45 AM to 07:00 AM		0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0			
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:15 AM to 07:30 AM		0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0			
07:30 AM to 07:45 AM		0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0			
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0			
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0			
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				1				0				0							
08:15 AM to 09:15 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		5				5				0				0							
06:45 AM to 07:45 AM		0	4	0	1	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0

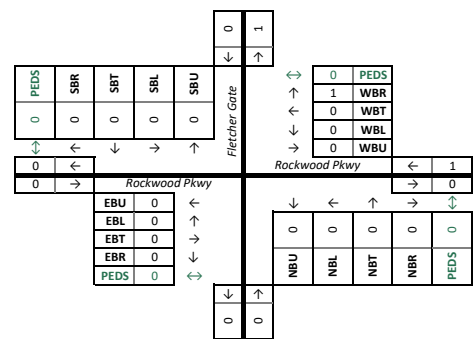
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

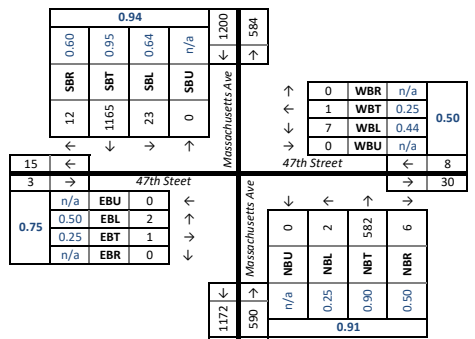
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

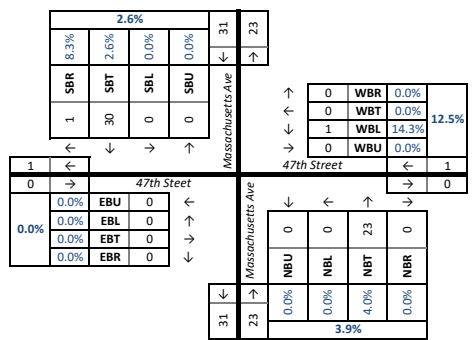
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & 47th Street/47th Steet																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				47th Street				Massachusetts Ave				47th Steet								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	1	83	0	0	0	2	1	0	0	0	0	50	0	0	0	0	0	0	0	1
06:45 AM to 07:00 AM		0	4	149	2	0	0	2	0	0	0	0	0	81	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	2	159	2	0	0	4	0	0	2	0	0	72	2	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	2	312	2	0	0	1	0	1	1	0	0	96	2	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	2	295	0	0	0	2	0	0	1	0	0	111	2	0	0	0	0	2	0	0
07:45 AM to 08:00 AM		0	18	270	2	0	0	4	0	1	2	0	0	135	0	0	0	0	1	3	0	4
08:00 AM to 08:15 AM		0	2	241	1	0	0	4	1	0	2	0	0	142	1	0	0	0	1	0	0	4
08:15 AM to 08:30 AM		0	6	291	2	0	0	4	0	0	1	0	0	162	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	5	308	5	0	0	0	0	0	3	0	0	154	1	0	0	0	1	0	0	2
08:45 AM to 09:00 AM		0	9	293	3	0	0	1	0	0	0	0	0	141	3	0	0	0	1	0	0	3
09:00 AM to 09:15 AM		0	3	273	2	0	0	2	1	0	0	0	2	125	2	0	0	0	0	1	0	1
09:15 AM to 09:30 AM		0	9	252	1	0	0	3	1	0	2	0	0	116	0	0	0	0	2	0	0	3
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1200				8				590				3								
08:15 AM to 09:15 AM		0	23	1165	12	0	0	7	1	0	4	0	2	582	6	0	0	2	1	0	6	
Peak Hour Factor (PHF)		Overall	n/a				n/a				n/a				n/a							
		0.95	0.64 0.95 0.60 0.94				0.44 0.25 n/a 0.50				0.25 0.90 0.50 0.91				0.50 0.25 n/a 0.75							
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				47th Street				Massachusetts Ave				47th Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	9	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	4	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	12	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	2	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	1	5	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	8	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	14	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	5	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	5	1	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	6	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	10	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		31				1				23				0								
08:15 AM to 09:15 AM		0	0	30	1	0	1	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	8.3%	2.6%	0.0%	14.3%	0.0%	0.0%	12.5%	0.0%	0.0%	4.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		31				1				23				0								
08:15 AM to 09:15 AM		0	0	30	1	0	1	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	8.3%	2.6%	0.0%	14.3%	0.0%	0.0%	12.5%	0.0%	0.0%	4.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				47th Street				Massachusetts Ave				47th Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1				0				0				0								
08:15 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		3				0				2				0								
07:15 AM to 08:15 AM		0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0

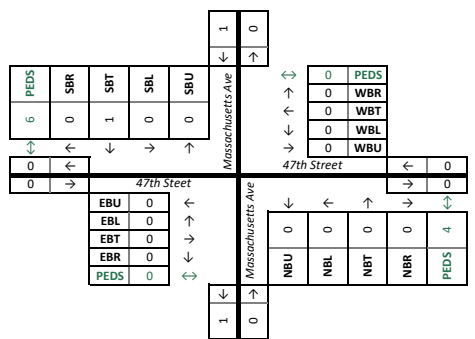
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

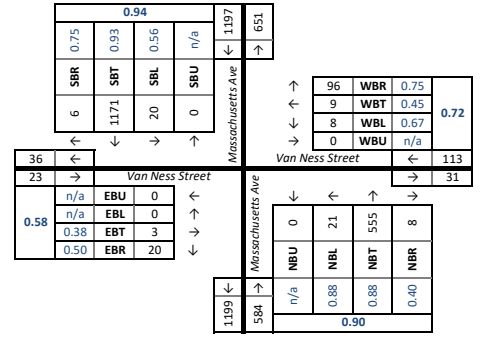
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & Van Ness Street																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Van Ness Street				Massachusetts Ave				Van Ness Street							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	79	0	1	0	3	2	4	1	0	2	47	1	0	0	0	0	2	2
06:45 AM to 07:00 AM		0	3	153	0	1	0	1	2	5	1	0	1	80	0	0	0	0	0	1	0
07:00 AM to 07:15 AM		0	2	157	1	0	0	5	0	6	3	0	2	68	2	2	0	0	0	1	2
07:15 AM to 07:30 AM		0	1	308	1	1	0	2	3	8	2	0	3	91	3	0	0	0	1	6	0
07:30 AM to 07:45 AM		0	1	291	1	0	0	2	2	10	1	0	0	109	2	0	0	0	3	4	1
07:45 AM to 08:00 AM		0	16	282	2	0	0	4	2	18	2	0	5	128	4	0	0	0	1	4	6
08:00 AM to 08:15 AM		0	2	232	2	0	0	5	3	29	2	0	2	139	1	0	0	0	0	7	6
08:15 AM to 08:30 AM		0	3	287	1	0	0	2	0	23	0	0	5	157	0	0	0	0	0	10	1
08:30 AM to 08:45 AM		0	4	315	1	0	0	0	0	23	2	0	4	150	1	0	0	0	1	3	3
08:45 AM to 09:00 AM		0	9	297	2	0	0	3	4	32	0	0	6	131	5	0	0	0	0	4	3
09:00 AM to 09:15 AM		0	4	272	2	0	0	3	5	18	0	0	6	117	2	0	0	0	2	3	0
09:15 AM to 09:30 AM		0	7	254	1	0	0	4	1	11	4	0	2	115	1	0	0	0	1	4	2
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)	08:15 AM to 09:15 AM	0	20	1171	6	0	0	8	9	96	2	0	21	555	8	0	0	0	3	20	7
Peak Hour Factor (PHF)	Overall	n/a	0.56	0.93	0.75	0.94	n/a	0.67	0.45	0.75	0.72	n/a	0.88	0.88	0.40	0.90	n/a	n/a	0.38	0.50	0.58

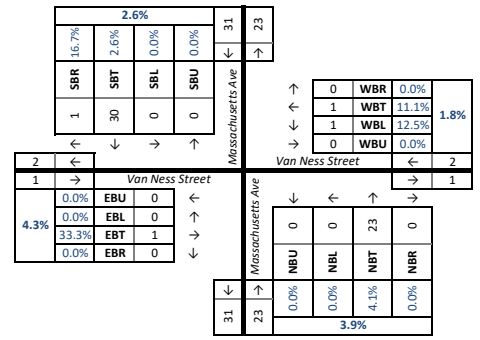
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Van Ness Street				Massachusetts Ave				Van Ness Street							
	Movement:	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
06:30 AM to 06:45 AM		0	0	9	0		0	0	0	0		0	0	3	0		0	0	0	0	
06:45 AM to 07:00 AM		0	0	6	0		0	0	0	0		0	0	3	0		0	0	0	0	
07:00 AM to 07:15 AM		0	0	4	0		0	0	0	0		0	1	4	1		0	0	0	0	
07:15 AM to 07:30 AM		0	0	12	0		0	0	0	0		0	0	6	0		0	0	0	0	
07:30 AM to 07:45 AM		0	0	2	0		0	0	0	0		0	0	7	0		0	0	0	0	
07:45 AM to 08:00 AM		0	1	6	0		0	0	0	0		0	1	3	0		0	0	0	0	
08:00 AM to 08:15 AM		0	0	8	0		0	0	0	0		0	0	3	0		0	0	0	0	
08:15 AM to 08:30 AM		0	0	14	0		0	0	0	0		0	0	9	0		0	0	0	0	
08:30 AM to 08:45 AM		0	0	5	0		0	0	0	0		0	0	4	0		0	0	0	0	
08:45 AM to 09:00 AM		0	0	6	0		0	0	0	0		0	0	5	0		0	0	0	0	
09:00 AM to 09:15 AM		0	0	5	1		0	1	1	0		0	0	5	0		0	0	1	0	
09:15 AM to 09:30 AM		0	0	10	0		0	0	0	0		0	0	5	0		0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)	08:15 AM to 09:15 AM	0	0	30	1		0	1	1	0		0	0	23	0		0	0	1	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	16.7%	2.6%	0.0%	12.5%	11.1%	0.0%	1.8%	0.0%	0.0%	4.1%	0.0%	3.9%	0.0%	0.0%	33.3%	0.0%	4.3%
INT. PEAK HR (HV ONLY)	08:15 AM to 09:15 AM	0	0	30	1		0	1	1	0		0	0	23	0		0	0	1	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	16.7%	2.6%	0.0%	12.5%	11.1%	0.0%	1.8%	0.0%	0.0%	4.1%	0.0%	3.9%	0.0%	0.0%	33.3%	0.0%	4.3%

BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Van Ness Street				Massachusetts Ave				Van Ness Street							
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)	08:15 AM to 09:15 AM	0	0	1	0		0	0	0	0		0	0	0	0		0	0	0	0	0
INT. PEAK HR (BIKES)	07:00 AM to 08:00 AM	0	0	1	0		0	0	0	1		0	0	0	0		0	0	0	0	0

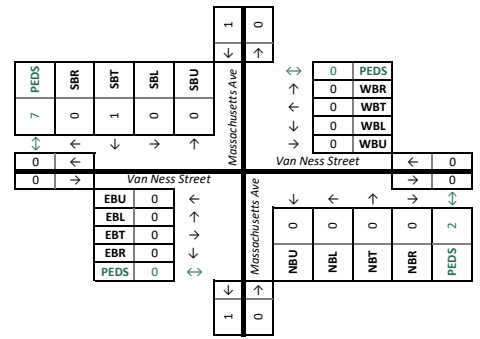
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

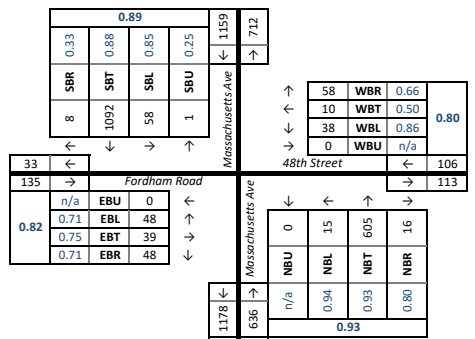
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

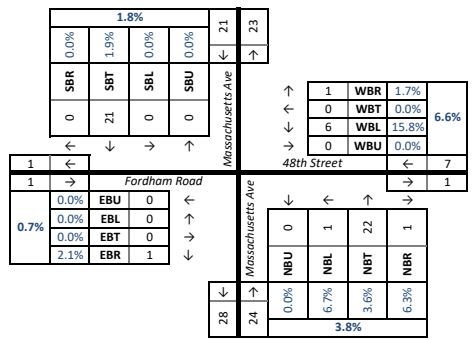
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & 48th Street/Fordham Road																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				48th Street				Massachusetts Ave				Fordham Road								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
06:30 AM to 06:45 AM		0	0	92	0	2	0	3	0	0	1	1	2	50	0	0	0	4	4	2	3	
06:45 AM to 07:00 AM		0	0	121	1	1	0	2	1	1	0	0	1	82	1	0	0	6	4	11	0	
07:00 AM to 07:15 AM		0	2	168	1	2	0	4	0	7	2	0	1	80	2	0	0	5	7	9	0	
07:15 AM to 07:30 AM		0	2	277	0	5	0	9	4	6	1	0	0	95	3	1	0	6	2	15	3	
07:30 AM to 07:45 AM		0	8	300	2	4	0	6	3	2	1	0	3	116	2	0	0	14	8	17	3	
07:45 AM to 08:00 AM		0	9	249	2	10	0	4	1	6	11	0	0	141	2	1	0	9	3	18	3	
08:00 AM to 08:15 AM		0	10	240	1	8	0	11	3	9	3	0	5	174	6	0	0	7	8	13	6	
08:15 AM to 08:30 AM		0	16	240	0	8	0	10	5	10	6	0	4	159	2	0	0	9	13	13	0	
08:30 AM to 08:45 AM		0	15	312	0	9	0	11	1	6	5	0	4	162	5	2	0	11	13	17	0	
08:45 AM to 09:00 AM		0	17	275	6	12	0	9	1	20	6	0	3	147	4	0	0	11	6	9	4	
09:00 AM to 09:15 AM		1	10	265	2	13	0	8	3	22	0	0	4	137	5	0	0	17	7	9	0	
09:15 AM to 09:30 AM		0	4	241	5	9	0	5	2	13	2	0	1	112	1	2	0	8	4	15	1	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1159				106				636				135								
08:15 AM to 09:15 AM		1	58	1092	8	42	0	38	10	58	17	0	15	605	16	2	0	48	39	48	4	
Peak Hour Factor (PHF)		Overall	0.25	0.85	0.88	0.33	0.89	n/a	0.86	0.50	0.66	0.80	n/a	0.94	0.93	0.80	0.93	n/a	0.71	0.75	0.71	0.82

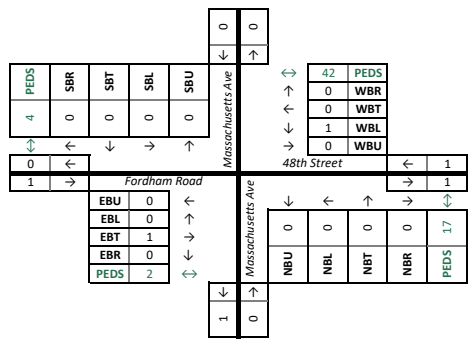
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

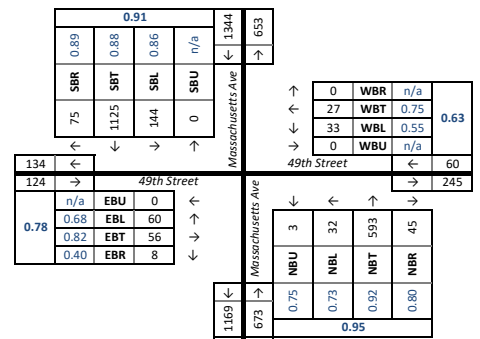
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

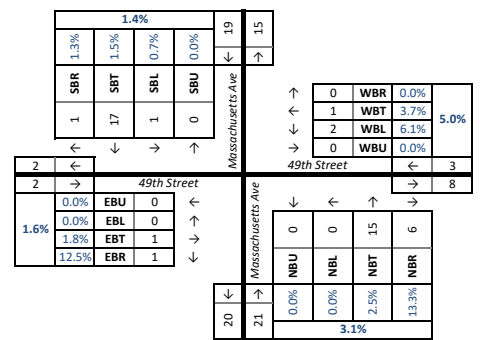
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave & 49th Street																			
ALL VEHICLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound 49th Street				Northbound Massachusetts Ave				Eastbound 49th Street							
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
		Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds	Peds				
06:30 AM to 06:45 AM		0	2	91	9	0	0	2	2	0	1	1	2	39	6	1	0	3	4	0	1
06:45 AM to 07:00 AM		0	8	130	7	4	0	2	2	2	1	3	3	68	4	1	0	4	5	0	1
07:00 AM to 07:15 AM		0	21	171	9	6	0	4	1	1	4	0	2	83	7	1	0	9	10	0	1
07:15 AM to 07:30 AM		0	18	269	12	2	0	7	4	1	0	0	6	98	11	1	0	11	9	2	1
07:30 AM to 07:45 AM		0	27	303	11	3	0	6	2	0	1	0	6	118	9	3	0	12	11	2	0
07:45 AM to 08:00 AM		0	29	262	14	1	0	3	1	0	0	0	1	131	5	0	0	9	11	2	0
08:00 AM to 08:15 AM		0	31	234	14	2	0	7	10	0	0	7	8	156	16	2	0	7	24	1	6
08:15 AM to 08:30 AM		0	34	256	18	3	0	9	7	0	4	1	7	161	8	1	0	13	17	1	0
08:30 AM to 08:45 AM		0	33	321	17	3	0	6	6	0	0	0	11	149	11	3	0	11	13	2	3
08:45 AM to 09:00 AM		0	35	275	19	13	0	15	9	0	3	1	9	141	14	2	0	22	13	5	5
09:00 AM to 09:15 AM		0	42	273	21	7	0	3	5	0	1	1	5	142	12	4	0	14	13	0	2
09:15 AM to 09:30 AM		0	25	241	16	5	0	2	4	1	13	1	4	131	10	5	0	9	14	3	1
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		1344				60				673				124							
08:15 AM to 09:15 AM		0	144	1125	75	26	0	33	27	0	8	3	32	593	45	10	0	60	56	8	10
Peak Hour Factor (PHF)		Overall 0.95				n/a 0.86 0.88 0.89 0.91				n/a 0.55 0.75 n/a 0.63				0.75 0.73 0.92 0.80 0.95							
HEAVY VEHICLES (FHWA 4+)		Direction: Roadway: Movement:				Southbound Massachusetts Ave				Westbound 49th Street				Northbound Massachusetts Ave				Eastbound 49th Street			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
06:30 AM to 06:45 AM		0	0	8	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	1	5	1	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	1	2	0	0	1	0	0	0	4	1	0	1	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	1	10	1	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	3	0	0	0	0	0	0	1	5	1	0	0	0	0	0	0	1	1
07:45 AM to 08:00 AM		0	0	3	0	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	5	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	1	8	1	0	1	1	0	0	5	1	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	1	0	0	0	0	0	0	3	1	0	0	0	1	0	0	1	0	0
08:45 AM to 09:00 AM		0	0	2	0	0	1	0	0	0	2	3	0	0	0	0	0	1	1	0	0
09:00 AM to 09:15 AM		0	0	6	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	8	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	1	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		19				3				21				2							
08:15 AM to 09:15 AM		0	1	17	1	0	2	1	0	0	0	15	6	0	0	1	1				
Heavy Vehicle % (PHV)		0.0% 0.7% 1.5% 1.3% 1.4%				0.0% 6.1% 3.7% 0.0% 5.0%				0.0% 0.0% 2.5% 13.3% 3.1%				0.0% 0.0% 1.8% 12.5% 1.6%							
INT. PEAK HR (HV ONLY)		30				2				15				1							
06:30 AM to 07:30 AM		0	3	25	2	0	1	0	1	0	0	12	3	0	1	0	0				
Heavy Vehicle % (PHV)		0.0% 6.1% 3.8% 5.4% 4.0%				0.0% 6.7% 0.0% 25.0% 7.1%				0.0% 0.0% 4.2% 10.7% 4.5%				0.0% 3.7% 0.0% 0.0% 1.8%							
BICYCLES		Direction: Roadway: Movement:				Southbound Massachusetts Ave				Westbound 49th Street				Northbound Massachusetts Ave				Eastbound 49th Street			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
08:15 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
INT. PEAK HR (BIKES)		2				1				2				0							
07:00 AM to 08:00 AM		0	0	2	0	0	0	1	0	0	1	1	0	0	0	0	0				

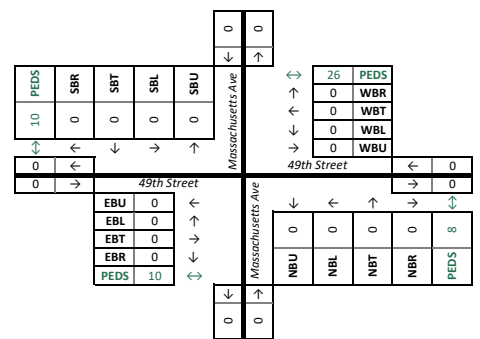
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

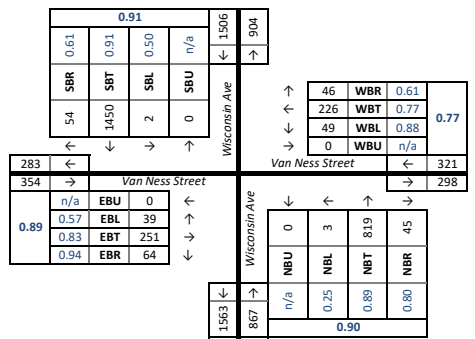
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

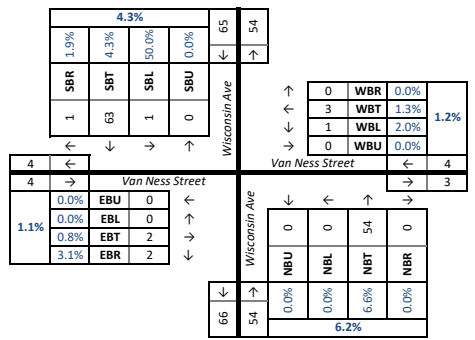
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Wisconsin Ave & Van Ness Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Van Ness Street				Wisconsin Ave				Van Ness Street								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	5	195	5	3	0	5	17	4	6	0	2	92	2	3	0	2	14	6	20	
06:45 AM to 07:00 AM		0	2	207	8	4	0	7	30	9	7	0	5	102	4	3	0	7	15	4	6	
07:00 AM to 07:15 AM		0	1	262	9	2	0	3	25	4	6	0	2	129	4	11	0	7	20	8	8	
07:15 AM to 07:30 AM		0	1	304	8	7	0	8	40	4	16	0	0	160	0	14	0	8	25	10	9	
07:30 AM to 07:45 AM		0	1	378	4	6	0	6	46	4	13	0	2	163	8	1	0	1	54	11	8	
07:45 AM to 08:00 AM		0	0	388	9	11	0	12	73	19	14	0	3	230	9	4	0	3	70	17	36	
08:00 AM to 08:15 AM		0	1	323	8	7	0	12	50	11	9	0	0	215	10	0	0	10	47	16	14	
08:15 AM to 08:30 AM		0	0	397	15	8	0	14	51	10	5	0	0	192	12	0	0	17	58	16	11	
08:30 AM to 08:45 AM		0	1	342	22	12	0	11	52	6	8	0	0	182	14	2	0	9	76	15	15	
08:45 AM to 09:00 AM		0	1	414	18	14	0	22	54	9	8	0	0	208	6	11	0	6	59	9	13	
09:00 AM to 09:15 AM		0	6	309	19	13	0	13	44	5	1	0	0	142	7	9	0	13	55	8	3	
09:15 AM to 09:30 AM		0	1	288	11	10	0	14	53	9	4	0	3	150	2	0	0	8	55	20	14	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1506				321				867				354				76				
07:45 AM to 08:45 AM		0	2	1450	54	38	0	49	226	46	36	0	3	819	45	6	0	39	251	64	76	
Peak Hour Factor (PHF)		Overall 0.91				n/a 0.50 0.91 0.61 0.91				n/a 0.88 0.77 0.61 0.77				n/a 0.25 0.89 0.80 0.90				n/a 0.57 0.83 0.94 0.89				
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Van Ness Street				Wisconsin Ave				Van Ness Street								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	1	14	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	19	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	1	11	0	0	0	0	1	0	0	0	0	9	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	1	13	1	0	0	0	1	1	0	0	0	8	0	0	0	0	1	0	0	
07:45 AM to 08:00 AM		0	0	15	0	0	0	0	1	0	0	0	0	11	0	0	0	0	0	1	0	
08:00 AM to 08:15 AM		0	1	16	0	0	0	1	0	0	0	0	0	15	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	20	0	0	0	0	1	0	0	0	0	10	0	0	0	0	1	0	0	
08:30 AM to 08:45 AM		0	0	12	1	0	0	0	1	0	0	0	0	18	0	0	0	0	1	1	0	
08:45 AM to 09:00 AM		0	1	20	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	2	16	0	0	0	1	0	0	0	0	0	14	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	11	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		65				4				54				4								
07:45 AM to 08:45 AM		0	1	63	1	4.3%	0.0%	50.0%	4.3%	1.9%	4.3%	0.0%	0	1	3	0	0.0%	0.0%	54	0	0	0
Heavy Vehicle % (PHV)		0.0% 50.0% 4.3% 1.9% 4.3%				0.0% 2.0% 1.3% 0.0% 1.2%				0.0% 0.0% 6.6% 0.0% 6.2%				0.0% 0.0% 0.8% 3.1% 1.1%								
INT. PEAK HR (HV ONLY)		65				4				54				4								
07:45 AM to 08:45 AM		0	1	63	1	4.3%	0.0%	50.0%	4.3%	1.9%	4.3%	0.0%	0	1	3	0	0.0%	0.0%	54	0	0	0
Heavy Vehicle % (PHV)		0.0% 50.0% 4.3% 1.9% 4.3%				0.0% 2.0% 1.3% 0.0% 1.2%				0.0% 0.0% 6.6% 0.0% 6.2%				0.0% 0.0% 0.8% 3.1% 1.1%								
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Van Ness Street				Wisconsin Ave				Van Ness Street								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	
07:15 AM to 07:30 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	
08:00 AM to 08:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	
08:15 AM to 08:30 AM		0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	
08:30 AM to 08:45 AM		0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		6				5				3				4								
07:45 AM to 08:45 AM		0	1	5	0	0	0	5	0	0	0	0	0	3	0	0	0	0	4	0	0	
INT. PEAK HR (BIKES)		6				5				3				4								
07:45 AM to 08:45 AM		0	1	5	0	0	0	5	0	0	0	0	0	3	0	0	0	0	4	0	0	

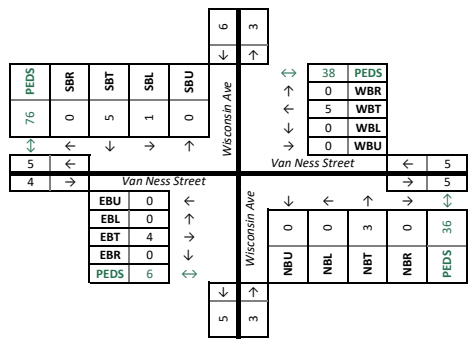
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

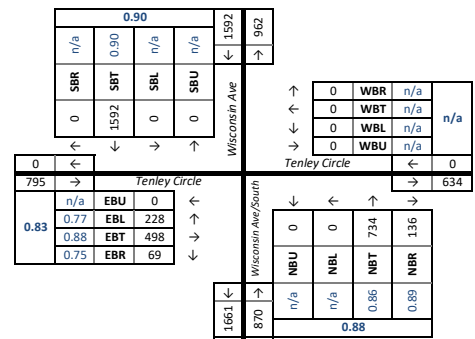
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Wisconsin Ave / Wisconsin Ave/South & Tenley Circle																					
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound									
	Roadway:	Wisconsin Ave				Tenley Circle				Wisconsin Ave/South				Tenley Circle									
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds		
06:30 AM to 06:45 AM		0	0	182	0	1	0	0	0	0	4	0	0	66	10	3	0	26	40	11	3		
06:45 AM to 07:00 AM		0	0	226	0	2	0	0	0	0	11	0	0	95	22	2	0	39	44	5	4		
07:00 AM to 07:15 AM		0	0	270	0	0	0	0	0	0	3	0	0	100	29	2	0	56	84	8	4		
07:15 AM to 07:30 AM		0	0	360	0	0	0	0	0	0	13	0	0	139	29	0	0	45	89	15	8		
07:30 AM to 07:45 AM		0	0	405	0	0	0	0	0	0	12	0	0	142	19	5	0	49	106	12	9		
07:45 AM to 08:00 AM		0	0	442	0	0	0	0	0	0	12	0	0	199	38	2	0	57	122	20	13		
08:00 AM to 08:15 AM		0	0	362	0	4	0	0	0	0	8	0	0	213	33	6	0	39	109	12	4		
08:15 AM to 08:30 AM		0	0	408	0	0	0	0	0	0	19	0	0	168	32	9	0	58	125	14	19		
08:30 AM to 08:45 AM		0	0	380	0	1	0	0	0	0	29	0	0	154	33	6	0	74	142	23	25		
08:45 AM to 09:00 AM		0	0	409	0	2	0	0	0	0	12	0	0	216	28	7	0	67	95	18	13		
09:00 AM to 09:15 AM		0	0	321	0	0	0	0	0	0	19	0	0	138	34	6	0	57	114	18	4		
09:15 AM to 09:30 AM		0	0	315	0	1	0	0	0	0	15	0	0	151	27	9	0	51	78	16	10		
09:30 AM to 09:45 AM																							
09:45 AM to 10:00 AM																							
10:00 AM to 10:15 AM																							
10:15 AM to 10:30 AM																							
10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		1592				0				870				795									
07:45 AM to 08:45 AM		0	0	1592	0	5	0	0	0	0	0	68	0	0	734	136	23	0	228	498	69	61	
Peak Hour Factor (PHF)		Overall 0.93				n/a				n/a				n/a									
		n/a	n/a	n/a	0.90	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.86	0.89	n/a	n/a	0.77	0.88	0.75	0.83

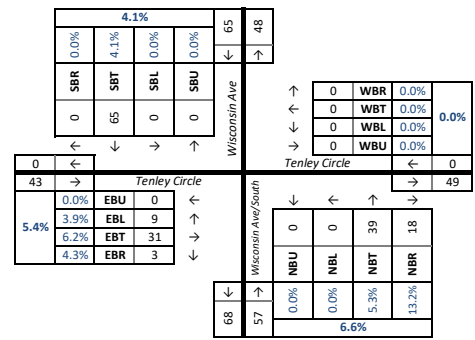
Direction:		Southbound				Westbound				Northbound				Eastbound							
HEAVY VEHICLES (FHWA 4+)	Roadway:	Wisconsin Ave				Tenley Circle				Wisconsin Ave/South				Tenley Circle							
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
	06:30 AM to 06:45 AM		0	0	9	0	0	0	0	0	0	0	2	6	0	0	4	0			
06:45 AM to 07:00 AM		0	0	17	0	0	0	0	0	0	0	6	3	0	0	2	3				
07:00 AM to 07:15 AM		0	0	19	0	0	0	0	0	0	0	5	7	0	0	2	4				
07:15 AM to 07:30 AM		0	0	14	0	0	0	0	0	0	0	10	4	0	1	5	2				
07:30 AM to 07:45 AM		0	0	12	0	0	0	0	0	0	0	7	2	0	5	5	0				
07:45 AM to 08:00 AM		0	0	19	0	0	0	0	0	0	0	11	5	0	3	9	0				
08:00 AM to 08:15 AM		0	0	16	0	0	0	0	0	0	0	10	4	0	2	6	2				
08:15 AM to 08:30 AM		0	0	17	0	0	0	0	0	0	0	7	4	0	2	8	0				
08:30 AM to 08:45 AM		0	0	13	0	0	0	0	0	0	0	11	5	0	2	8	1				
08:45 AM to 09:00 AM		0	0	21	0	0	0	0	0	0	0	7	5	0	0	7	0				
09:00 AM to 09:15 AM		0	0	16	0	0	0	0	0	0	0	10	4	0	2	9	0				
09:15 AM to 09:30 AM		0	0	10	0	0	0	0	0	0	0	10	4	0	5	7	0				
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		65				0				57				43							
07:45 AM to 08:45 AM		0	0	65	0	0	0	0	0	0	0	0	0	39	18	0	9	31	3		
Heavy Vehicle % (PHV)		0.0%				4.1%				0.0%				5.4%							
		0.0%	0.0%	4.1%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	13.2%	6.6%	0.0%	3.9%	6.2%	4.3%	5.4%
INT. PEAK HR (HV ONLY)		65				0				57				43							
07:45 AM to 08:45 AM		0	0	65	0	0	0	0	0	0	0	0	0	39	18	0	9	31	3		
Heavy Vehicle % (PHV)		0.0%				4.1%				0.0%				5.4%							
		0.0%	0.0%	4.1%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	13.2%	6.6%	0.0%	3.9%	6.2%	4.3%	5.4%

Direction:		Southbound				Westbound				Northbound				Eastbound					
BICYCLES	Roadway:	Wisconsin Ave				Tenley Circle				Wisconsin Ave/South				Tenley Circle					
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R		
	06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0		
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0		
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0		
08:00 AM to 08:15 AM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:15 AM to 08:30 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1		
08:45 AM to 09:00 AM		0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0		
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0		
09:15 AM to 09:30 AM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0		
09:30 AM to 09:45 AM																			
09:45 AM to 10:00 AM																			
10:00 AM to 10:15 AM																			
10:15 AM to 10:30 AM																			
10:30 AM to 10:45 AM																			
10:45 AM to 11:00 AM																			
11:00 AM to 11:15 AM																			
11:15 AM to 11:30 AM																			
INT. PEAK HR (ALL VEH)		3				0				6				1					
07:45 AM to 08:45 AM		0	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1
INT. PEAK HR (BIKES)		6				0				9				2					
08:30 AM to 09:30 AM		0	0	6	0	0	0	0	0	0	0	0	0	9	0	0	1	0	1

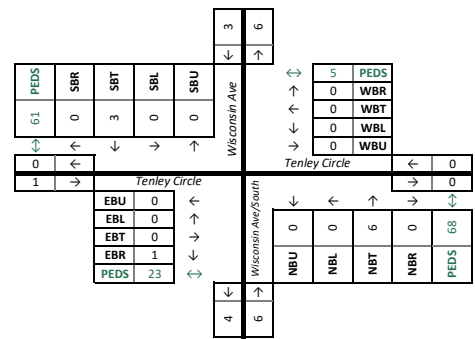
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

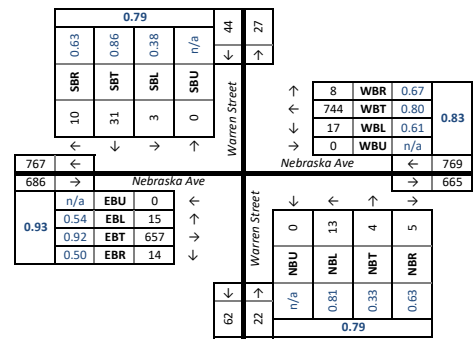
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

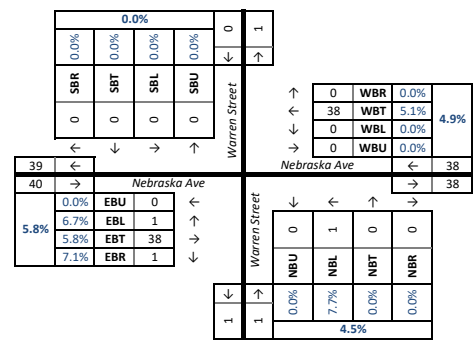
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Warren Street & Nebraska Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave					
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	1	0	0	110	0	0	0	1	0	3	0	0	63	3	0	0
06:45 AM to 07:00 AM		0	0	0	0	2	0	2	131	0	0	0	1	1	0	6	0	3	85	0	0
07:00 AM to 07:15 AM		0	0	0	1	2	0	2	139	0	1	0	2	0	0	0	1	1	139	3	0
07:15 AM to 07:30 AM		0	0	2	1	2	1	0	174	1	2	0	2	0	0	1	0	4	107	2	0
07:30 AM to 07:45 AM		0	0	4	0	3	0	3	217	6	2	0	3	1	0	2	0	6	137	0	1
07:45 AM to 08:00 AM		0	0	6	2	3	0	0	195	0	1	0	1	0	1	3	0	4	132	1	0
08:00 AM to 08:15 AM		0	1	9	4	9	0	0	232	1	1	0	4	1	2	3	0	2	146	2	2
08:15 AM to 08:30 AM		0	0	4	1	3	0	4	187	3	0	0	2	3	0	6	0	4	178	3	1
08:30 AM to 08:45 AM		0	2	9	2	2	0	6	172	1	0	0	3	0	1	5	0	2	173	7	0
08:45 AM to 09:00 AM		0	0	9	3	5	0	7	153	3	1	0	4	0	2	3	0	7	160	2	0
09:00 AM to 09:15 AM		0	1	2	1	3	0	4	218	3	0	0	7	0	1	1	0	0	139	6	2
09:15 AM to 09:30 AM		0	1	4	1	5	0	2	172	10	1	0	5	1	1	3	0	6	110	5	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		44				769				22				686							
08:00 AM to 09:00 AM		0	3	31	10	19	0	17	744	8	2	0	13	4	5	17	0	15	657	14	3
Peak Hour Factor (PHF)		Overall 0.94				n/a 0.38 0.86 0.63 0.79				n/a 0.61 0.80 0.67 0.83				n/a 0.81 0.33 0.63 0.79							
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound							
Direction:		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave					
Roadway:		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave					
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	5	0	0	0	1	0	0	0	0	3	0			
06:45 AM to 07:00 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	0			
07:00 AM to 07:15 AM		0	0	0	0	0	0	8	0	0	0	0	0	0	0	1	6	1			
07:15 AM to 07:30 AM		0	0	0	0	0	0	8	0	0	0	0	0	0	0	1	7	0			
07:30 AM to 07:45 AM		0	0	1	0	0	0	10	0	0	0	0	0	0	0	2	10	0			
07:45 AM to 08:00 AM		0	0	0	0	0	0	7	0	0	0	0	0	0	0	1	11	0			
08:00 AM to 08:15 AM		0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	10	0			
08:15 AM to 08:30 AM		0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	9	0			
08:30 AM to 08:45 AM		0	0	0	0	0	0	11	0	0	0	0	1	0	0	1	12	1			
08:45 AM to 09:00 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	7	0			
09:00 AM to 09:15 AM		0	0	0	0	0	0	1	13	0	0	0	0	0	0	0	8	0			
09:15 AM to 09:30 AM		0	0	0	0	0	0	1	10	0	0	0	0	0	0	0	13	0			
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				38				1				40							
08:00 AM to 09:00 AM		0	0	0	0	0	0	0	38	0	0	0	1	0	0	0	0	1	38	1	1
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				5.8%							
INT. PEAK HR (HV ONLY)		0				40				1				45							
07:45 AM to 08:45 AM		0	0	0	0	0	0	0	40	0	0	0	1	0	0	0	0	2	42	1	1
Heavy Vehicle % (PHV)		0.0%				0.0%				10.0%				6.7%							
BICYCLES		Southbound				Westbound				Northbound				Eastbound							
Direction:		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave					
Roadway:		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave		Warren Street		Nebraska Ave					
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:45 AM to 07:00 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
07:00 AM to 07:15 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0			
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			
09:00 AM to 09:15 AM		0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0			
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				2				1							
08:00 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0
INT. PEAK HR (BIKES)		0				2				0				1							
06:45 AM to 07:45 AM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0

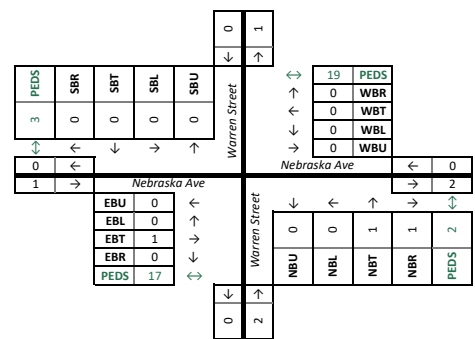
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

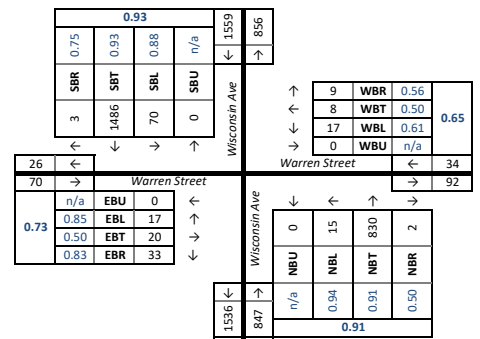
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Thursday, February 27, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

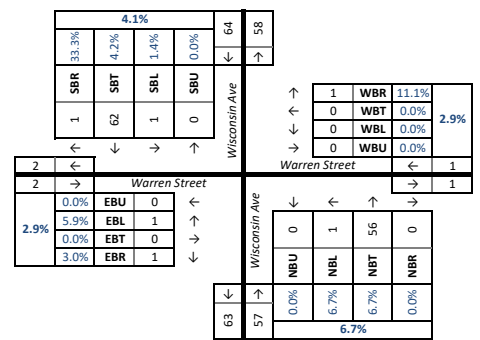
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Wisconsin Ave & Warren Street																					
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound									
	Roadway:	Wisconsin Ave				Warren Street				Wisconsin Ave				Warren Street									
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right						
06:30 AM to 06:45 AM		0	3	190	0	0	0	1	3	1	0	2	89	0	3	0	2	2	3	7			
06:45 AM to 07:00 AM		0	3	217	0	0	0	0	1	1	0	3	101	0	1	0	0	0	1	3			
07:00 AM to 07:15 AM		0	6	278	1	0	1	0	2	0	0	2	149	1	0	0	3	2	1	1			
07:15 AM to 07:30 AM		0	8	345	0	0	4	3	0	1	0	1	158	0	0	0	2	2	2	2			
07:30 AM to 07:45 AM		0	15	370	0	0	4	1	8	4	0	1	148	0	1	0	4	1	5	3			
07:45 AM to 08:00 AM		0	20	399	0	3	0	3	1	3	2	0	4	228	1	2	0	5	3	8	3		
08:00 AM to 08:15 AM		0	14	338	1	3	0	1	2	4	2	0	4	220	0	2	0	4	2	9	6		
08:15 AM to 08:30 AM		0	20	387	1	1	0	7	4	2	0	0	3	194	1	1	0	4	5	6	3		
08:30 AM to 08:45 AM		0	16	362	1	3	0	6	1	0	1	0	4	188	0	3	0	4	10	10	3		
08:45 AM to 09:00 AM		0	9	402	0	0	0	9	6	4	0	0	3	217	2	2	0	2	12	9	1		
09:00 AM to 09:15 AM		0	12	312	1	0	0	5	4	4	2	0	3	156	2	0	0	0	2	6	3		
09:15 AM to 09:30 AM		0	11	297	0	0	0	2	1	1	1	0	5	162	0	3	0	2	5	8	11		
09:30 AM to 09:45 AM																							
09:45 AM to 10:00 AM																							
10:00 AM to 10:15 AM																							
10:15 AM to 10:30 AM																							
10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		1559				34				847				70									
07:45 AM to 08:45 AM		0	70	1486	3	10	0	17	8	9	5	0	15	830	2	8	0	17	20	33	15		
Peak Hour Factor (PHF)		Overall	0.93	n/a	0.88	0.93	0.75	0.93	n/a	0.61	0.50	0.56	0.65	n/a	0.94	0.91	0.50	0.91	n/a	0.85	0.50	0.83	0.73
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound									
Direction:		Wisconsin Ave				Warren Street				Wisconsin Ave				Warren Street									
Roadway:		Wisconsin Ave				Warren Street				Wisconsin Ave				Warren Street									
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right						
06:30 AM to 06:45 AM		0	0	11	0	0	0	0	0	0	1	9	0	0	0	0	0	0	0	0	0		
06:45 AM to 07:00 AM		0	0	18	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0		
07:00 AM to 07:15 AM		0	1	18	0	0	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0		
07:15 AM to 07:30 AM		0	0	14	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0		
07:30 AM to 07:45 AM		0	0	11	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	1		
07:45 AM to 08:00 AM		0	1	15	0	0	0	0	0	0	0	1	12	0	0	0	1	0	0	0	0		
08:00 AM to 08:15 AM		0	0	18	0	0	0	0	0	1	0	0	16	0	0	0	0	0	0	0	0		
08:15 AM to 08:30 AM		0	0	16	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0		
08:30 AM to 08:45 AM		0	0	13	1	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	1		
08:45 AM to 09:00 AM		0	0	18	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0		
09:00 AM to 09:15 AM		0	0	16	0	0	1	0	0	0	0	14	0	0	0	0	0	0	0	0	0		
09:15 AM to 09:30 AM		0	0	9	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	1	0		
09:30 AM to 09:45 AM																							
09:45 AM to 10:00 AM																							
10:00 AM to 10:15 AM																							
10:15 AM to 10:30 AM																							
10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		64				1				57				2									
07:45 AM to 08:45 AM		0	1	62	1	0	0	0	1	0	0	1	56	0	0	0	1	0	1	1	0		
Heavy Vehicle % (PHV)		0.0%	1.4%	4.2%	33.3%	4.1%	0.0%	0.0%	0.0%	11.1%	2.9%	0.0%	6.7%	6.7%	0.0%	6.7%	0.0%	5.9%	0.0%	3.0%	2.9%		
INT. PEAK HR (HV ONLY)		64				1				57				2									
07:45 AM to 08:45 AM		0	1	62	1	0	0	0	1	0	0	1	56	0	0	0	1	0	1	1	0		
Heavy Vehicle % (PHV)		0.0%	1.4%	4.2%	33.3%	4.1%	0.0%	0.0%	0.0%	11.1%	2.9%	0.0%	6.7%	6.7%	0.0%	6.7%	0.0%	5.9%	0.0%	3.0%	2.9%		
BICYCLES		Southbound				Westbound				Northbound				Eastbound									
Direction:		Wisconsin Ave				Warren Street				Wisconsin Ave				Warren Street									
Roadway:		Wisconsin Ave				Warren Street				Wisconsin Ave				Warren Street									
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right						
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 AM to 07:00 AM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM to 07:45 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0		
08:00 AM to 08:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:15 AM to 08:30 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:30 AM to 08:45 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
08:45 AM to 09:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0		
09:15 AM to 09:30 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
09:30 AM to 09:45 AM																							
09:45 AM to 10:00 AM																							
10:00 AM to 10:15 AM																							
10:15 AM to 10:30 AM																							
10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		4				1				2				0									
07:45 AM to 08:45 AM		0	0	4	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0		
INT. PEAK HR (BIKES)		3				0				3				2									
08:30 AM to 09:30 AM		0	0	3	0	0	0	0	0	0	0	3	0	0	0	2	0	0	1	1	1		

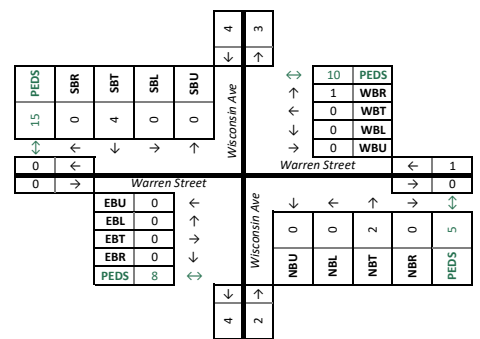
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

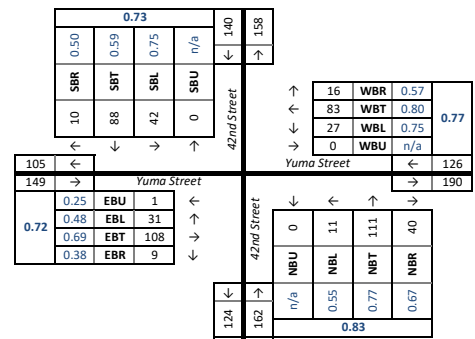
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

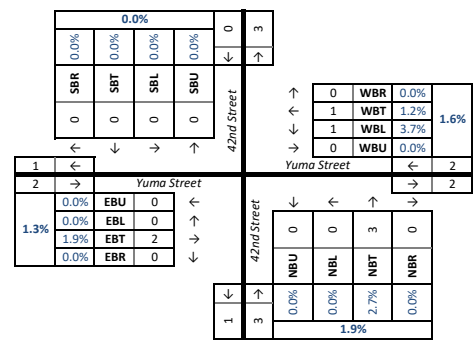
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. 42nd Street & Yuma Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	42nd Street				Yuma Street				42nd Street				Yuma Street								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	1	5	0	3	0	0	5	1	0	0	0	13	2	1	0	0	4	0	1	
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	8	2	0	0	0	14	3	0	0	0	3	1	1	
07:00 AM to 07:15 AM		0	1	10	0	0	0	0	10	2	1	1	1	13	3	4	0	0	4	2	2	
07:15 AM to 07:30 AM		0	6	24	1	1	0	1	10	0	2	0	1	15	5	6	0	0	11	2	3	
07:30 AM to 07:45 AM		0	7	16	0	5	0	4	12	6	0	0	2	22	6	3	0	3	21	0	1	
07:45 AM to 08:00 AM		0	8	26	3	4	1	2	18	1	2	0	2	33	12	8	0	1	31	3	2	
08:00 AM to 08:15 AM		0	6	16	0	18	0	3	15	1	2	0	1	22	7	2	1	2	11	1	11	
08:15 AM to 08:30 AM		0	14	21	5	16	0	9	22	2	6	0	3	23	15	2	0	16	30	1	9	
08:30 AM to 08:45 AM		0	14	14	2	24	0	9	26	6	4	0	2	36	11	0	0	12	39	1	14	
08:45 AM to 09:00 AM		0	8	37	3	7	0	6	20	7	2	0	5	30	7	2	0	1	28	6	1	
09:00 AM to 09:15 AM		0	3	10	2	4	0	4	13	4	0	0	2	14	3	1	0	2	23	0	3	
09:15 AM to 09:30 AM		0	3	17	2	4	0	7	8	4	0	0	5	27	11	1	0	1	16	2	1	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		140				126				162				149								
08:00 AM to 09:00 AM		0	42	88	10	65	0	27	83	16	14	0	11	111	40	6	1	31	108	9	35	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		0.84	n/a	0.75	0.59	0.50	0.73	n/a	0.75	0.80	0.57	0.77	n/a	0.55	0.77	0.67	0.83	0.25	0.48	0.69	0.38	0.72
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound								
Direction:		42nd Street				Yuma Street				42nd Street				Yuma Street								
Roadway:		42nd Street				Yuma Street				42nd Street				Yuma Street								
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0		
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		
07:15 AM to 07:30 AM		0	0	2	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0		
07:30 AM to 07:45 AM		0	0	0	1	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0		
07:45 AM to 08:00 AM		0	0	0	1	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0		
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0		
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
08:45 AM to 09:00 AM		0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	0	1	0		
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:15 AM to 09:30 AM		0	0	2	1	0	0	2	0	0	0	0	0	1	1	0	0	0	1	0		
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				2				3				2								
08:00 AM to 09:00 AM		0	0	0	0	0	0	1	1	0	0	0	3	0	0	0	2	0	2	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	1.2%	0.0%	1.6%	0.0%	0.0%	2.7%	0.0%	1.9%	0.0%	0.0%	1.9%	0.0%	1.3%	
INT. PEAK HR (HV ONLY)		5				5				6				2								
07:00 AM to 08:00 AM		0	0	3	2	0	0	4	1	0	0	0	6	0	0	1	1	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	3.9%	50.0%	4.9%	0.0%	0.0%	8.0%	11.1%	7.5%	0.0%	0.0%	7.2%	0.0%	5.2%	0.0%	25.0%	1.5%	0.0%	2.6%	
BICYCLES		Southbound				Westbound				Northbound				Eastbound								
Direction:		42nd Street				Yuma Street				42nd Street				Yuma Street								
Roadway:		42nd Street				Yuma Street				42nd Street				Yuma Street								
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
07:45 AM to 08:00 AM		0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0		
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0		
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:30 AM to 08:45 AM		0	0	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0		
08:45 AM to 09:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0		
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0		
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		3				1				3				0								
08:00 AM to 09:00 AM		0	0	3	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	0	0	
INT. PEAK HR (BIKES)		5				2				2				0								
07:45 AM to 08:45 AM		0	1	4	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0	

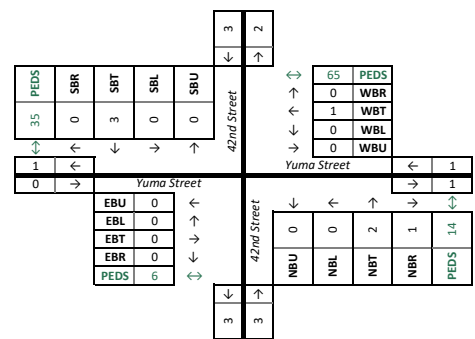
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

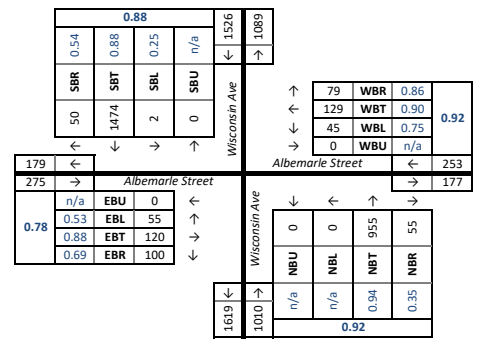
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

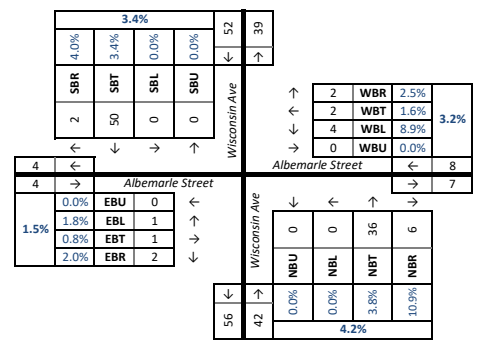
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Wisconsin Ave & Albemarle Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Albemarle Street				Wisconsin Ave				Albemarle Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	4	132	1	10	0	5	3	9	12	0	1	94	3	2	0	3	4	2	5	
06:45 AM to 07:00 AM		0	8	177	2	10	0	6	6	9	27	0	0	145	1	10	0	1	11	5	13	
07:00 AM to 07:15 AM		1	0	208	3	14	0	10	15	19	31	0	0	164	4	7	0	3	15	8	7	
07:15 AM to 07:30 AM		0	2	307	5	20	0	4	25	16	20	0	1	195	6	6	0	6	13	7	25	
07:30 AM to 07:45 AM		0	0	383	2	32	0	10	17	13	42	0	0	191	5	11	0	10	31	19	14	
07:45 AM to 08:00 AM		0	2	365	7	37	0	15	31	14	47	0	0	254	2	20	0	8	34	21	36	
08:00 AM to 08:15 AM		0	0	374	7	41	0	8	26	23	54	0	0	234	39	13	0	12	30	20	29	
08:15 AM to 08:30 AM		0	0	419	13	43	0	11	36	22	66	0	0	231	10	37	0	9	30	23	39	
08:30 AM to 08:45 AM		0	0	316	23	48	0	11	36	20	32	0	0	236	4	30	0	26	26	36	74	
08:45 AM to 09:00 AM		0	0	327	10	49	0	10	28	23	33	0	0	268	2	6	0	13	38	15	57	
09:00 AM to 09:15 AM		0	0	315	4	24	0	12	27	17	40	0	0	196	7	15	0	9	18	12	37	
09:15 AM to 09:30 AM		1	0	291	9	38	0	7	20	13	34	0	1	212	3	12	0	8	31	7	52	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1526				253				1010				275								
07:45 AM to 08:45 AM		0	2	1474	50	169	0	45	129	79	199	0	0	955	55	100	0	55	120	100	178	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		0.95	n/a	0.25	0.88	0.54	0.88	n/a	0.75	0.90	0.86	0.92	n/a	n/a	0.94	0.35	0.88	n/a	0.53	0.88	0.69	0.78
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound								
Direction:		Wisconsin Ave				Albemarle Street				Wisconsin Ave				Albemarle Street								
Roadway:		Wisconsin Ave				Albemarle Street				Wisconsin Ave				Albemarle Street								
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	1	11	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	11	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	9	0	0	1	2	0	0	0	9	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	7	0	0	1	1	2	0	0	8	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	16	0	0	1	0	0	0	0	12	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	14	0	0	2	2	0	0	0	10	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	12	1	0	1	0	1	0	0	9	3	0	0	0	0	0	0	2	0	
08:15 AM to 08:30 AM		0	0	15	0	0	1	0	1	0	0	7	2	0	0	1	1	0	0	0	0	
08:30 AM to 08:45 AM		0	0	9	1	0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	16	0	0	0	0	3	0	0	6	0	0	0	0	0	2	0	0	0	
09:00 AM to 09:15 AM		0	0	16	0	0	0	0	0	0	0	10	1	0	0	0	1	0	0	0	0	
09:15 AM to 09:30 AM		0	0	8	0	0	0	1	1	0	0	14	0	0	1	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		52				8				42				4								
07:45 AM to 08:45 AM		0	0	50	2		0	4	2	2		0	0	36	6		0	1	1	2		
Heavy Vehicle % (PHV)		0.0%	0.0%	3.4%	4.0%	3.4%	0.0%	8.9%	1.6%	2.5%	3.2%	0.0%	0.0%	3.8%	10.9%	4.2%	0.0%	1.8%	0.8%	2.0%	1.5%	
INT. PEAK HR (HV ONLY)		58				9				43				4								
07:30 AM to 08:30 AM		0	0	57	1		0	5	2	2		0	0	38	5		0	1	1	2		
Heavy Vehicle % (PHV)		0.0%	0.0%	3.7%	3.4%	3.7%	0.0%	11.4%	1.8%	2.8%	4.0%	0.0%	0.0%	4.2%	8.9%	4.5%	0.0%	2.6%	0.8%	2.4%	1.6%	
BICYCLES		Southbound				Westbound				Northbound				Eastbound								
Direction:		Wisconsin Ave				Albemarle Street				Wisconsin Ave				Albemarle Street								
Roadway:		Wisconsin Ave				Albemarle Street				Wisconsin Ave				Albemarle Street								
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
09:00 AM to 09:15 AM		0	0	1	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				1				0				1								
07:45 AM to 08:45 AM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	1	0		
INT. PEAK HR (BIKES)		3				2				3				3								
08:30 AM to 09:30 AM		0	0	2	1		0	0	2	0		0	0	3	0		0	0	1	2		

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



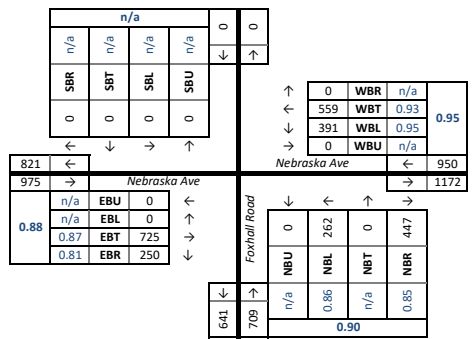
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

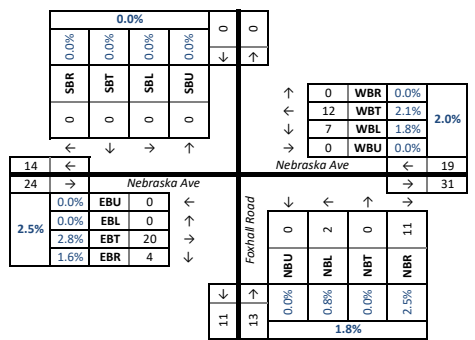
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. /Foxhall Road & Nebraska Ave																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Nebraska Ave				Foxhall Road				Nebraska Ave				Nebraska Ave								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	0	0	0	0	0	41	74	0	0	0	27	0	70	1	0	0	53	9	1	
06:45 AM to 07:00 AM		0	0	0	0	0	0	53	92	0	0	0	25	0	111	3	0	0	80	15	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	70	91	0	0	0	27	0	113	2	0	0	103	15	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	71	109	0	0	0	42	0	96	1	0	0	157	39	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	99	151	0	0	0	64	0	132	0	0	0	209	49	1	
07:45 AM to 08:00 AM		0	0	0	0	0	0	103	122	0	0	0	71	0	108	2	0	0	199	77	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	101	138	0	0	0	76	0	110	1	0	0	127	63	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	88	148	0	0	0	51	0	97	3	0	0	190	61	1	
08:30 AM to 08:45 AM		0	0	0	0	0	0	82	111	0	0	0	65	0	97	1	0	0	195	56	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	54	113	0	0	0	51	0	95	2	0	0	176	84	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	70	114	0	0	0	47	0	78	0	0	0	169	64	2	
09:15 AM to 09:30 AM		0	0	0	0	0	0	36	121	0	0	0	40	0	104	3	0	0	188	45	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				950				709				975								
07:30 AM to 08:30 AM		0	0	0	0	0	391	559	0	0	0	262	0	447	6	0	0	725	250	2		
Peak Hour Factor (PHF)		Overall 0.94				n/a				n/a				0.90								
		U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB	
		n/a	n/a	n/a	n/a	n/a	n/a	0.95	0.93	n/a	0.95	n/a	0.86	n/a	0.85	0.90	n/a	n/a	n/a	0.87	0.81	0.88
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Nebraska Ave				Foxhall Road				Nebraska Ave				Nebraska Ave								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	3	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	4	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	3	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	3	3	0	0	2	0	1	0	0	0	4	1	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	3	2	0	0	1	0	4	0	0	0	5	1	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	1	1	0	0	1	0	2	0	0	0	6	1	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	2	5	0	0	0	0	1	0	0	0	5	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	1	4	0	0	0	0	4	0	0	0	4	2	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	2	3	0	0	0	0	4	0	0	0	2	1	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	5	2	0	0	0	0	1	0	0	0	4	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	8	1	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	3	1	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				19				13				24								
07:30 AM to 08:30 AM		0	0	0	0	0	7	12	0	0	0	2	0	11	0	0	0	20	4	0	0	0
Heavy Vehicle % (PHV)		0.0%				0.0%				0.8%				2.8%								
		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	2.1%	0.0%	2.0%	0.0%	0.8%	0.0%	2.5%	1.8%	0.0%	0.0%	2.8%	1.6%	2.5%	2.5%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Nebraska Ave				Foxhall Road				Nebraska Ave				Nebraska Ave								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				1				0				0								
07:30 AM to 08:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		0				1				0				1								
08:00 AM to 09:00 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

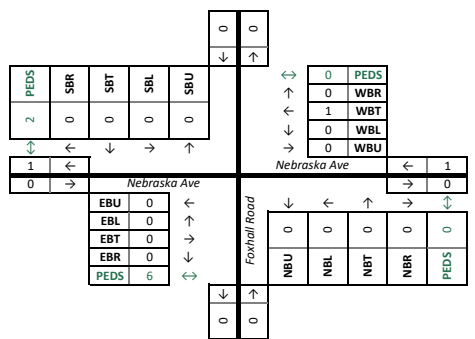
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

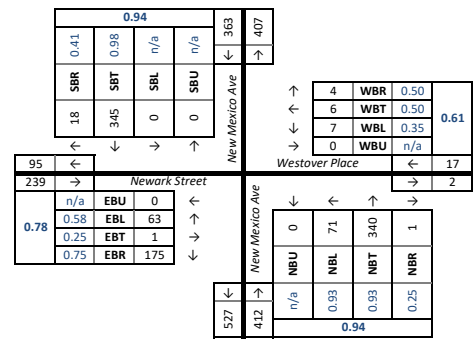
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

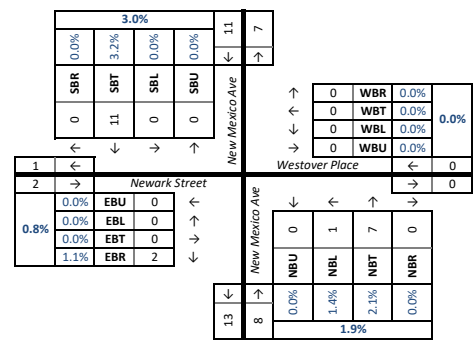
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. New Mexico Ave & Westover Place/Newark Street																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	New Mexico Ave				Westover Place				New Mexico Ave				Newark Street							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	16	2	0	0	0	0	0	1	0	4	25	0	1	0	1	0	2	0
06:45 AM to 07:00 AM		0	0	28	1	2	0	0	0	0	6	0	10	19	0	1	0	4	0	2	1
07:00 AM to 07:15 AM		0	0	35	1	0	0	1	1	0	5	0	10	36	0	0	0	2	0	14	1
07:15 AM to 07:30 AM		0	0	29	3	0	0	0	0	0	7	0	13	33	0	1	0	3	1	15	0
07:30 AM to 07:45 AM		0	0	44	5	1	0	0	3	0	15	0	13	65	0	3	0	3	0	43	3
07:45 AM to 08:00 AM		0	0	59	7	1	0	1	2	2	18	0	23	73	0	4	0	8	0	36	4
08:00 AM to 08:15 AM		0	0	71	8	2	0	6	1	2	17	0	22	70	0	4	0	7	1	46	2
08:15 AM to 08:30 AM		0	0	85	2	2	0	2	3	0	15	0	18	91	1	6	0	5	0	34	1
08:30 AM to 08:45 AM		0	0	86	11	1	0	5	1	1	11	0	15	90	0	49	0	13	0	33	1
08:45 AM to 09:00 AM		0	0	86	4	1	0	0	2	2	26	0	19	79	0	30	0	27	0	50	6
09:00 AM to 09:15 AM		0	0	88	1	1	0	0	0	1	31	0	19	80	0	3	0	18	1	58	6
09:15 AM to 09:30 AM		0	0	58	3	3	0	0	1	0	23	0	17	72	0	1	0	7	1	31	4
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0	0	363	18	5	0	7	6	4	83	0	71	340	1	88	0	63	1	175	14
08:15 AM to 09:15 AM																					
Peak Hour Factor (PHF)		n/a	n/a	0.98	0.41	0.94	n/a	0.35	0.50	0.50	0.61	n/a	0.93	0.93	0.25	0.94	n/a	0.58	0.25	0.75	0.78
Overall		n/a	n/a	0.98	0.41	0.94	n/a	0.35	0.50	0.50	0.61	n/a	0.93	0.93	0.25	0.94	n/a	0.58	0.25	0.75	0.78

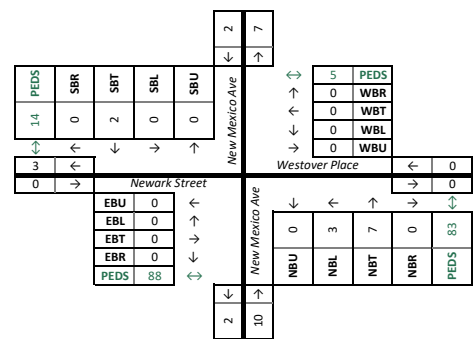
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



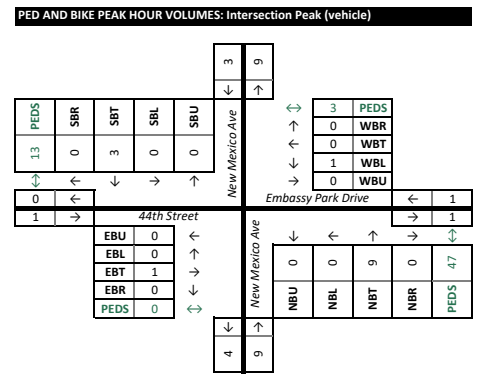
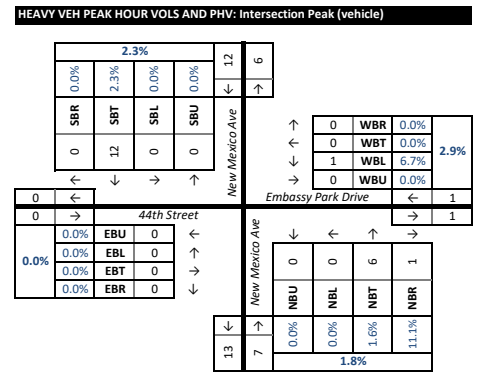
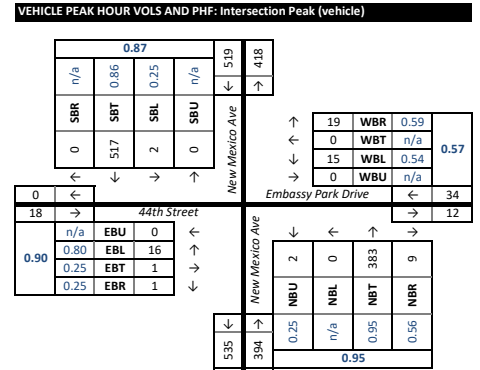
DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
Project # : 3 Date of Counts : Wednesday, February 26, 2020
Location : Washington DC Weather : Partly Cloudy
Data Source : Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 08:00 AM to 09:00 AM
System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

ALL VEHICLES	1. New Mexico Ave & Embassy Park Drive/44th Street																			
	Direction: Southbound					Direction: Westbound					Direction: Northbound					Direction: Eastbound				
	New Mexico Ave					Embassy Park Drive					New Mexico Ave					44th Street				
	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
INT. PEAK HR (ALL VEH)																				
08:00 AM to 09:00 AM					08:00 AM to 09:00 AM					08:00 AM to 09:00 AM					08:00 AM to 09:00 AM					
Overall Peak Factor (PHF)	0.88				0.87				0.57				0.90				0.95			
HEAVY VEHICLES (FHWA 4+)																				
INT. PEAK HR (HV ONLY)																				
08:30 AM to 09:30 AM					08:30 AM to 09:30 AM					08:30 AM to 09:30 AM					08:30 AM to 09:30 AM					
Overall Peak Factor (PHF)	3.0%				9.1%				3.2%				5.3%							
BICYCLES																				
INT. PEAK HR (BIKES)																				
08:15 AM to 09:15 AM					08:15 AM to 09:15 AM					08:15 AM to 09:15 AM					08:15 AM to 09:15 AM					
Overall Peak Factor (PHF)	4				1				9				1							



DATA COLLECTION NOTES :

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
Project #: 3 Date of Counts: Wednesday, February 26, 2020
Location: Washington DC Weather: Partly Cloudy
Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 08:00 AM to 09:00 AM
System Peak Hour (all vehicles): 08:00 AM to 09:00 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

ALL VEHICLES	Intersection: 1. New Mexico Ave & /Klingle Street	Direction: Southbound		Westbound		Northbound		Eastbound								
		New Mexico Ave		Klingle Street		New Mexico Ave		Klingle Street								
		U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	20	0	1	0	0	0	0	0	0	1	0	1	0
06:45 AM to 07:00 AM		0	0	31	0	0	0	0	0	0	0	2	36	0	0	0
07:00 AM to 07:15 AM		0	0	46	3	0	0	0	0	0	0	0	51	0	0	0
07:15 AM to 07:30 AM		0	0	46	3	1	0	0	0	0	0	0	58	0	0	0
07:30 AM to 07:45 AM		0	0	87	0	0	0	0	0	0	0	8	83	0	0	0
07:45 AM to 08:00 AM		1	0	101	0	1	0	0	0	0	0	10	101	0	0	0
08:00 AM to 08:15 AM		0	0	115	2	1	0	0	0	0	0	15	107	0	0	0
08:15 AM to 08:30 AM		0	0	125	1	0	0	0	0	0	0	9	133	0	0	0
08:30 AM to 08:45 AM		0	0	111	2	1	0	0	0	0	0	8	135	0	0	0
08:45 AM to 09:00 AM		0	0	135	1	0	0	0	0	0	0	9	121	0	0	0
09:00 AM to 09:15 AM		0	0	122	4	3	0	0	0	0	0	5	100	0	0	0
09:15 AM to 09:30 AM		0	0	96	1	0	0	0	0	0	0	3	83	0	0	0
09:30 AM to 09:45 AM																
09:45 AM to 10:00 AM																
10:00 AM to 10:15 AM																
10:15 AM to 10:30 AM																
10:30 AM to 10:45 AM																
10:45 AM to 11:00 AM																
11:00 AM to 11:15 AM																
11:15 AM to 11:30 AM																

INT. PEAK HR (ALL VEH)	08:00 AM to 09:00 AM
Overall	0.95
Factor (PHF)	0.95

HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound	Westbound	Northbound	Eastbound
06:30 AM to 06:45 AM		0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0
09:30 AM to 09:45 AM		0	0	0	0
09:45 AM to 10:00 AM		0	0	0	0
10:00 AM to 10:15 AM		0	0	0	0
10:15 AM to 10:30 AM		0	0	0	0
10:30 AM to 10:45 AM		0	0	0	0
10:45 AM to 11:00 AM		0	0	0	0
11:00 AM to 11:15 AM		0	0	0	0
11:15 AM to 11:30 AM		0	0	0	0

INT. PEAK HR (ALL VEH)	08:00 AM to 09:00 AM
Heavy Vehicle % (PHV)	2.4%

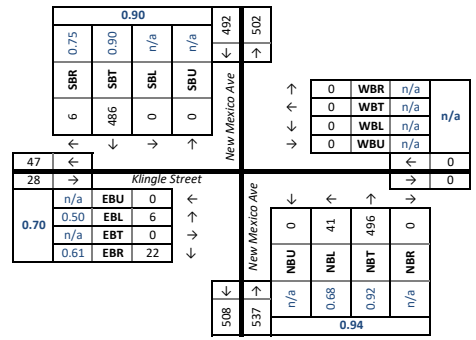
INT. PEAK HR (HV ONLY)	08:30 AM to 09:30 AM
Heavy Vehicle % (PHV)	2.5%

BICYCLES	Direction:	Southbound		Westbound		Northbound		Eastbound	
		New Mexico Ave		Klingle Street		New Mexico Ave		Klingle Street	
		U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM		0	0	1	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	1	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	1	0	0	0	3	0
08:30 AM to 08:45 AM		0	0	4	0	0	0	4	0
08:45 AM to 09:00 AM		0	0	1	0	0	0	3	0
09:00 AM to 09:15 AM		0	0	1	0	0	0	1	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM									
09:45 AM to 10:00 AM									
10:00 AM to 10:15 AM									
10:15 AM to 10:30 AM									
10:30 AM to 10:45 AM									
10:45 AM to 11:00 AM									
11:00 AM to 11:15 AM									
11:15 AM to 11:30 AM									

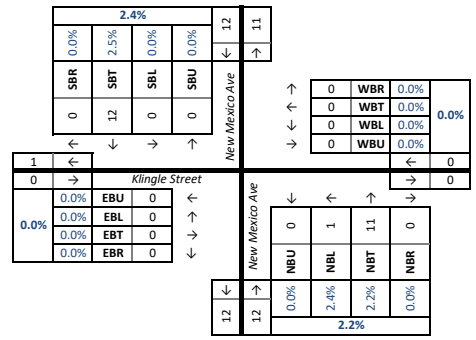
INT. PEAK HR (ALL VEH)	08:00 AM to 09:00 AM														
6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0

INT. PEAK HR (BIKES)	08:15 AM to 09:15 AM														
7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0

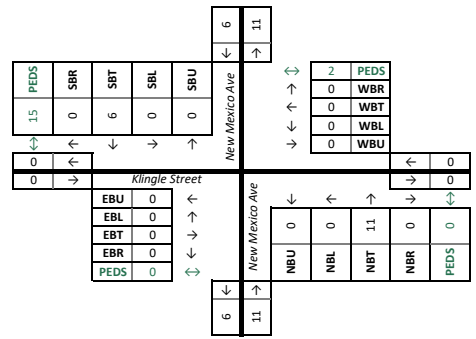
VEHICLE PEAK HOUR VOLTS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLTS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

HOURLY COMPARISON -- AM PEAK

		Total	
6:30 AM to	7:30 AM	32111	
6:45 AM to	7:45 AM	40307	
7:00 AM to	8:00 AM	47485	
7:15 AM to	8:15 AM	52794	
7:30 AM to	8:30 AM	56374	
7:45 AM to	8:45 AM	57567	
8:00 AM to	9:00 AM	57920	
8:15 AM to	9:15 AM	57138	
8:30 AM to	9:30 AM	54296	
8:45 AM to	9:45 AM	39643	
9:00 AM to	10:00 AM	25057	
9:15 AM to	10:15 AM	11696	
9:30 AM to	10:30 AM	0	
9:45 AM to	10:45 AM	0	
10:00 AM to	11:00 AM	0	
10:15 AM to	11:15 AM	0	MAX
10:30 AM to	11:30 AM	0	57920
SYSTEM PEAK			
8:00 AM to	9:00 AM		

PHF CALCULATION (ENTIRE SYSTEM)

	15-Min		
6:30 AM	5264	0	0
6:45 AM	7055	0	0
7:00 AM	8834	0	0
7:15 AM	10958	0	0
7:30 AM	13460	0	0
7:45 AM	14233	0	0
8:00 AM	14143	1	14653
8:15 AM	14538	0	0
8:30 AM	14653	0	0
8:45 AM	14586	0	0
9:00 AM	13361	0	0
9:15 AM	11696	0	0
9:30 AM	0	0	0
9:45 AM	0	0	0
10:00 AM	0	0	0
10:15 AM	0	0	0
10:30 AM	0	0	0
10:45 AM	0		
11:00 AM	0		
11:15 AM	0		



Multimodal Turning Movement Count Report

PROJECT_SHORT_NAME | STUDY_PERIOD

Project Information

Project Name: American University Data Collection

Location: Washington DC

Project Number: 3

Analysis Period: STUDY_PERIOD

4:00 PM to 7:00 PM

System Peak Hour:

5:00 PM to 6:00 PM

Notes:

Study Intersections

Intersection ID	Southbound	Westbound	Northbound	Eastbound	Count Date	Intersection Peak Hour
1	Massachusetts Ave	Garage Entrance	Massachusetts Ave	Campus Drive	2/25/2020	5:15 PM to 6:15 PM
2	Massachusetts Ave	45th Street	Massachusetts Ave		2/25/2020	5:15 PM to 6:15 PM
3	Massachusetts Ave	46th Street	Massachusetts Ave	Tilden Street	2/25/2020	5:15 PM to 6:15 PM
4	0	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
5	Garage Entrance	Nebraska Ave	New Mexico Ave	Nebraska Ave	2/26/2020	5:00 PM to 6:00 PM
6		Nebraska Ave	East Campus Drive	Nebraska Ave	2/26/2020	5:15 PM to 6:15 PM
7	New Mexico Ave	East Campus Drive	New Mexico Ave	Parking Entrance	2/26/2020	4:45 PM to 5:45 PM
8	Massachusetts Ave	Garage Entrance	Massachusetts Ave	Westover Place	2/26/2020	5:00 PM to 6:00 PM
9	Massachusetts Ave	NAC Drive	Massachusetts Ave		2/26/2020	5:15 PM to 6:15 PM
10		Nebraska Ave	45th Street	Nebraska Ave	2/26/2020	5:15 PM to 6:15 PM
11	Rockwood Pkwy	Nebraska Ave	Newark Street	Nebraska Ave	2/25/2020	4:00 PM to 5:00 PM
12	Rockwood Pkwy	Glenbrook Road	Rockwood Pkwy	Glenbrook Road	2/25/2020	6:00 PM to 7:00 PM
13	Fletcher Gate	Rockwood Pkwy		Rockwood Pkwy	2/25/2020	4:45 PM to 5:45 PM
14	Massachusetts Ave	47th Street	Massachusetts Ave	47th Street	2/25/2020	5:00 PM to 6:00 PM
15	Massachusetts Ave	Van Ness Street	Massachusetts Ave	Van Ness Street	2/25/2020	5:00 PM to 6:00 PM
16	Massachusetts Ave	48th Street	Massachusetts Ave	Fordham Road	2/25/2020	5:15 PM to 6:15 PM
17	Massachusetts Ave	49th Street	Massachusetts Ave	49th Street	2/25/2020	5:15 PM to 6:15 PM
18	Wisconsin Ave	Van Ness Street	Wisconsin Ave	Van Ness Street	2/27/2020	5:00 PM to 6:00 PM
19	Wisconsin Ave	Tenley Circle	Wisconsin Ave/South	Tenley Circle	2/27/2020	5:15 PM to 6:15 PM
20	Warren Street	Nebraska Ave	Warren Street	Nebraska Ave	2/27/2020	4:45 PM to 5:45 PM
21	Wisconsin Ave	Warren Street	Wisconsin Ave	Warren Street	2/27/2020	5:00 PM to 6:00 PM
22	42nd Street	Yuma Street	42nd Street	Yuma Street	2/27/2020	5:00 PM to 6:00 PM
23	Wisconsin Ave	Albemarle Street	Wisconsin Ave	Albemarle Street	2/27/2020	5:15 PM to 6:15 PM
24		Nebraska Ave	Foxhall Road	Nebraska Ave	2/25/2020	5:15 PM to 6:15 PM
25	New Mexico Ave	Westover Place	New Mexico Ave	Newark Street	2/26/2020	5:00 PM to 6:00 PM
26	New Mexico Ave	Westover Place	New Mexico Ave	Newark Street	2/26/2020	5:00 PM to 6:00 PM
27	New Mexico Ave	Embassy Park Drive	New Mexico Ave	44th Street	2/26/2020	5:00 PM to 6:00 PM
28	New Mexico Ave	Shopping Center Entrance	New Mexico Ave	Macomb Street	2/26/2020	5:00 PM to 6:00 PM
29	New Mexico Ave		New Mexico Ave	Lowell Street	2/26/2020	5:00 PM to 6:00 PM
30	New Mexico Ave	Sutton Place	New Mexico Ave		2/26/2020	5:00 PM to 6:00 PM
31	New Mexico Ave	43rd Street	New Mexico Ave	Alley Entrance	2/26/2020	5:00 PM to 6:00 PM
32	New Mexico Ave		New Mexico Ave	Klinge Street	2/26/2020	5:00 PM to 6:00 PM
33	New Mexico Ave	Cathedral Ave	New Mexico Ave	Cathedral Ave	2/26/2020	5:00 PM to 6:00 PM
34	Van Ness Street	Nebraska Ave	Van Ness Street	Nebraska Ave	2/27/2020	4:45 PM to 5:45 PM

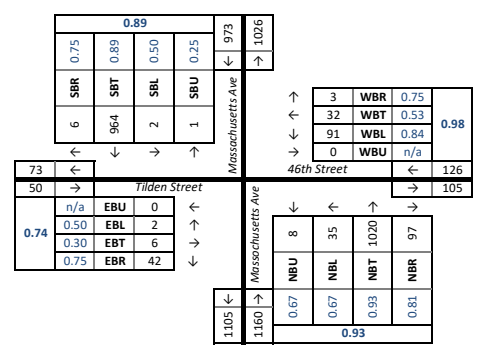
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

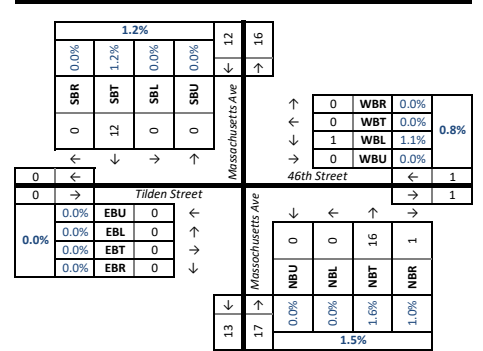
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Massachusetts Ave/Massachusetts Ave & 46th Street/Tilden Street																			
ALL VEHICLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave					Westbound 46th Street					Northbound Massachusetts Ave					Eastbound Tilden Street				
		U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P
		04:00 PM to 04:15 PM	0	0	169	0	2	0	11	2	0	4	0	6	225	24	0	0	1	2	6
INT. PEAK HR (ALL VEH)		973					126					1160					50				
05:15 PM to 06:15 PM		1	2	964	6	6	0	91	32	3	17	8	35	1020	97	0	0	2	6	42	19
Peak Hour Factor (PHF)		0.25 0.50 0.89 0.75 0.89					n/a 0.84 0.53 0.75 0.98					0.67 0.67 0.93 0.81 0.93					n/a 0.50 0.30 0.75 0.74				

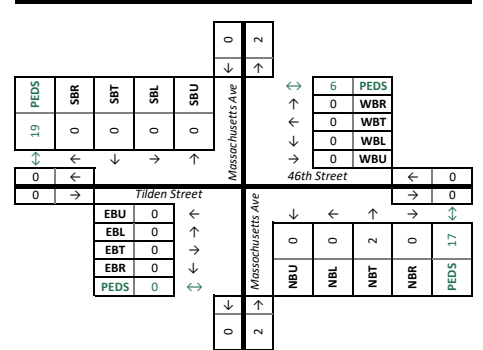
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

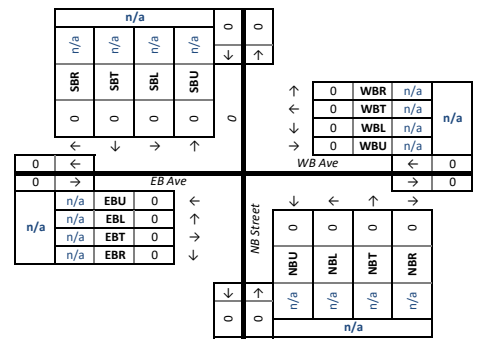
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

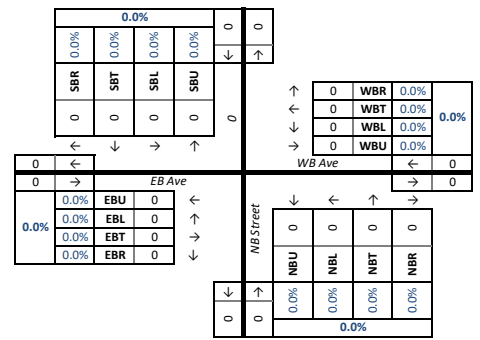
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. /NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	WB Ave				WB Ave				NB Street				EB Ave							
Movement:		U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
04:00 PM to 04:15 PM																					
04:15 PM to 04:30 PM																					
04:30 PM to 04:45 PM																					
04:45 PM to 05:00 PM																					
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08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a							
Overall		U	L	T	R	SB	U	L	T	R	WB	U	L	T	R	NB	U	L	T	R	EB
n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound							
Roadway:		0				0				0				0							
Movement:		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM to 04:15 PM																					
04:15 PM to 04:30 PM																					
04:30 PM to 04:45 PM																					
04:45 PM to 05:00 PM																					
05:00 PM to 05:15 PM																					
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08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 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%	0.0%	0.0%
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
04:00 PM to 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%	0.0%	0.0%
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
BICYCLES		Southbound				Westbound				Northbound				Eastbound							
Roadway:		0				0				0				0							
Movement:		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM to 04:15 PM																					
04:15 PM to 04:30 PM																					
04:30 PM to 04:45 PM																					
04:45 PM to 05:00 PM																					
05:00 PM to 05:15 PM																					
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08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		0				0				0				0							
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

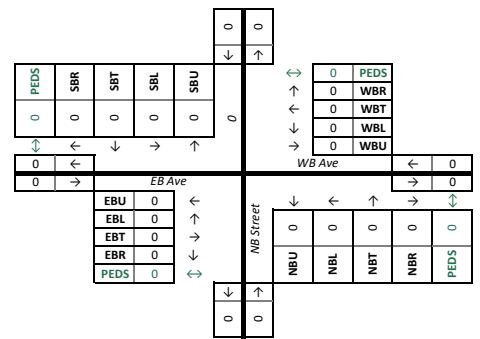
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

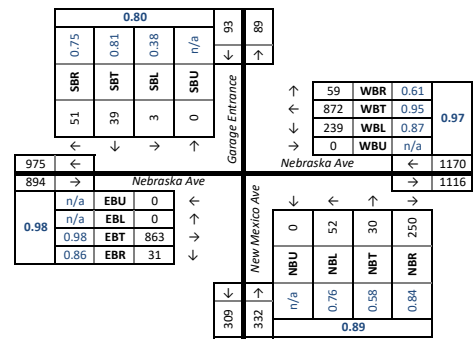
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

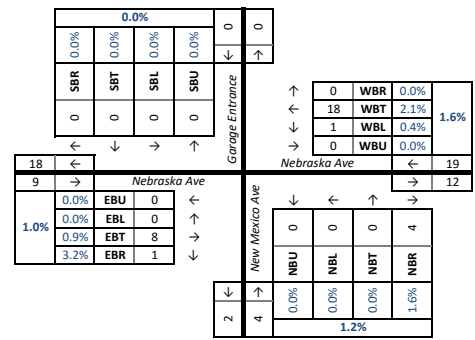
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Garage Entrance/New Mexico Ave & Nebraska Ave																																		
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound																						
	Roadway:	Garage Entrance				Nebraska Ave				New Mexico Ave				Nebraska Ave																						
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds															
04:00 PM	to 04:15 PM	0	0	5	10	13	0	48	236	8	66	0	13	3	76	6	0	0	212	6	5															
04:15 PM	to 04:30 PM	0	0	5	5	8	0	60	219	4	53	0	11	3	56	8	0	0	233	2	5															
04:30 PM	to 04:45 PM	0	1	2	4	7	0	49	255	8	74	0	14	2	57	6	0	0	187	3	7															
04:45 PM	to 05:00 PM	0	0	4	5	7	0	59	198	14	66	0	19	9	64	4	0	0	189	9	9															
05:00 PM	to 05:15 PM	0	0	12	17	17	0	63	207	20	113	0	9	8	60	4	0	0	214	5	9															
05:15 PM	to 05:30 PM	0	1	12	16	9	0	46	227	24	212	0	17	13	52	11	0	0	217	9	18															
05:30 PM	to 05:45 PM	0	2	8	16	10	0	61	230	11	81	0	12	7	74	10	0	0	212	9	6															
05:45 PM	to 06:00 PM	0	0	7	2	7	0	69	208	4	62	0	14	2	64	4	0	0	220	8	7															
06:00 PM	to 06:15 PM	0	0	9	6	14	0	62	248	3	64	0	8	0	48	5	0	0	227	4	10															
06:15 PM	to 06:30 PM	0	0	6	11	1	0	79	194	2	47	0	14	2	55	5	0	0	163	6	6															
06:30 PM	to 06:45 PM	0	0	3	2	9	0	62	216	4	59	0	10	4	51	2	0	0	172	7	4															
06:45 PM	to 07:00 PM	0	0	5	4	6	0	75	137	5	69	0	6	7	53	5	0	0	149	4	5															
07:00 PM	to 07:15 PM																																			
07:15 PM	to 07:30 PM																																			
07:30 PM	to 07:45 PM																																			
07:45 PM	to 08:00 PM																																			
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08:15 PM	to 08:30 PM																																			
08:30 PM	to 08:45 PM																																			
08:45 PM	to 09:00 PM																																			
INT. PEAK HR (ALL VEH)		93				43				1170				468				332				29				894				40						
05:00 PM to 06:00 PM		0	3	39	51		0	239	872	59		0	52	30	250		0	0	863	31		0	0	863	31		0	0	863	31		0	0	863	31	
Peak Hour Factor (PHF)		0.97				0.80				n/a				0.87				0.61				0.89				0.87				0.97						
		n/a	U	L	Thru	Right	SB	n/a	U	L	Thru	Right	WB	n/a	U	L	Thru	Right	NB	n/a	U	L	Thru	Right	EB	n/a	U	L	Thru	Right	EB					

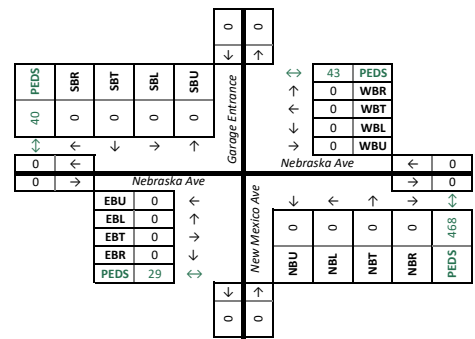
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

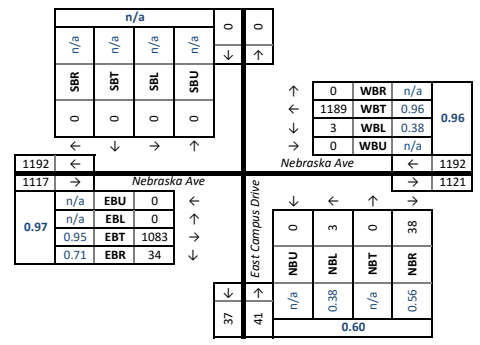
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. /East Campus Drive & Nebraska Ave																		
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:					Nebraska Ave				East Campus Drive				Nebraska Ave						
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	294	0	0	0	0	9	11	0	0	284	3	29
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	283	0	0	0	0	8	7	0	0	282	7	22
04:30 PM to 04:45 PM		0	0	0	0	0	0	2	311	0	2	0	1	9	14	0	0	242	3	39
04:45 PM to 05:00 PM		0	0	0	0	0	0	4	271	0	0	0	0	14	4	0	0	241	12	39
05:00 PM to 05:15 PM		0	0	0	0	0	0	2	290	0	0	0	0	14	17	0	0	264	11	71
05:15 PM to 05:30 PM		0	0	0	0	0	0	2	297	0	0	0	0	17	20	0	0	258	12	66
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	302	0	0	0	0	6	10	0	0	284	4	46
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	279	0	0	1	0	9	9	0	0	273	11	24
06:00 PM to 06:15 PM		0	0	0	0	0	0	1	311	0	0	2	0	6	7	0	0	268	7	22
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	274	0	0	1	0	8	8	0	0	215	3	40
06:30 PM to 06:45 PM		0	0	0	0	0	1	2	282	0	0	0	0	7	9	0	0	218	5	42
06:45 PM to 07:00 PM		0	0	0	0	0	0	2	211	0	0	0	0	8	16	0	0	191	7	43
07:00 PM to 07:15 PM																				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				1192				41				1117						
05:15 PM to 06:15 PM		0	0	0	0	0	3	1189	0	0	0	3	0	38	46	0	0	1083	34	158
Peak Hour Factor (PHF)	Overall	n/a				0.38				0.96				0.60						
		n/a				0.38				0.96				0.60						

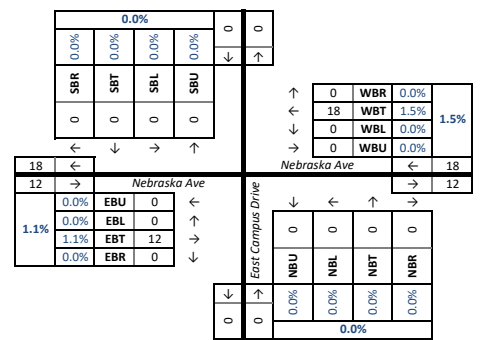
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:					Nebraska Ave				East Campus Drive				Nebraska Ave			
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right
04:00 PM to 04:15 PM		0	0	0	0	0	0	9	0	0	0	0	0	4	0		
04:15 PM to 04:30 PM		0	0	0	0	0	0	5	0	0	0	1	0	3	0		
04:30 PM to 04:45 PM		0	0	0	0	0	0	3	0	0	0	0	0	7	0		
04:45 PM to 05:00 PM		0	0	0	0	0	0	8	0	0	0	0	0	1	0		
05:00 PM to 05:15 PM		0	0	0	0	0	0	4	0	0	0	0	0	5	0		
05:15 PM to 05:30 PM		0	0	0	0	0	0	7	0	0	0	0	0	2	0		
05:30 PM to 05:45 PM		0	0	0	0	0	0	2	0	0	0	0	0	4	0		
05:45 PM to 06:00 PM		0	0	0	0	0	0	6	0	0	0	0	0	1	0		
06:00 PM to 06:15 PM		0	0	0	0	0	0	3	0	0	0	0	0	5	0		
06:15 PM to 06:30 PM		0	0	0	0	0	0	6	0	0	0	0	0	6	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	4	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	0	0	0	0	3	0	0	0	0	0	0	0		
07:00 PM to 07:15 PM																	
07:15 PM to 07:30 PM																	
07:30 PM to 07:45 PM																	
07:45 PM to 08:00 PM																	
08:00 PM to 08:15 PM																	
08:15 PM to 08:30 PM																	
08:30 PM to 08:45 PM																	
08:45 PM to 09:00 PM																	
INT. PEAK HR (ALL VEH)		0				18				0				12			
05:15 PM to 06:15 PM		0	0	0	0	0	0	18	0	0	0	0	0	12	0		
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				1.1%			
		0.0%				0.0%				0.0%				1.1%			
INT. PEAK HR (HV ONLY)		0				25				1				15			
04:00 PM to 05:00 PM		0	0	0	0	0	0	25	0	0	0	1	0	0	15	0	
Heavy Vehicle % (PHV)		0.0%				0.2%				2.5%				2.4%			
		0.0%				0.2%				2.5%				2.4%			

BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:					Nebraska Ave				East Campus Drive				Nebraska Ave						
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right			
04:00 PM to 04:15 PM		0	0	0	0	0	0	1	0	0	0	0	0	0	1	0				
04:15 PM to 04:30 PM		0	0	0	0	0	0	1	0	0	0	1	0	0	2	0				
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	1	0					
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	1	0					
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	1	0	2	0					
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	1	0					
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	1	0					
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0					
07:00 PM to 07:15 PM																				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				1				3						
05:15 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	0	0
INT. PEAK HR (BIKES)		0				2				1				4						
04:00 PM to 05:00 PM		0	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0	4	0	0

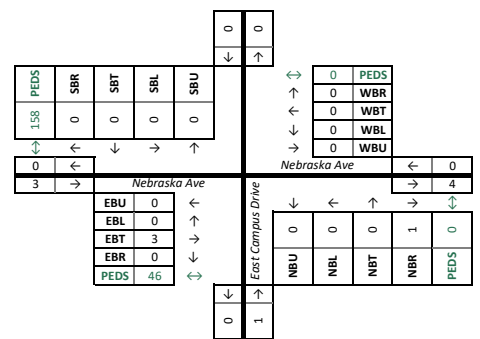
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

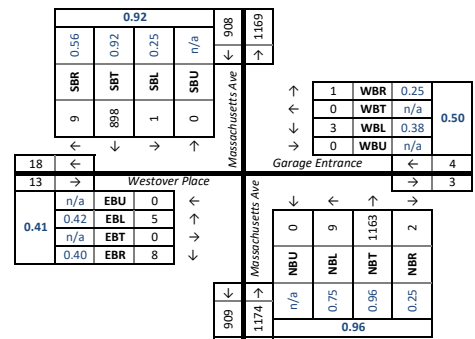
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

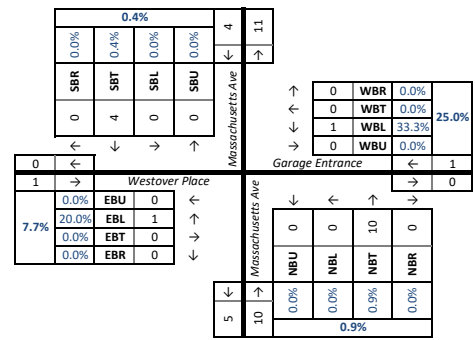
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Massachusetts Ave & Garage Entrance/Westover Place																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Garage Entrance				Massachusetts Ave				Westover Place							
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
04:00 PM to 04:15 PM		0	0	185	2	0	0	1	0	2	26	0	1	265	0	0	0	3	0	1	18
04:15 PM to 04:30 PM		0	0	198	1	0	0	2	0	1	15	0	3	259	0	0	0	1	0	0	13
04:30 PM to 04:45 PM		0	1	163	5	0	0	3	0	0	25	0	6	292	0	2	0	1	0	1	10
04:45 PM to 05:00 PM		0	1	192	1	0	0	0	0	1	59	0	1	259	0	0	0	4	0	2	15
05:00 PM to 05:15 PM		0	0	215	4	0	0	2	0	0	34	0	3	304	0	0	0	3	0	5	24
05:15 PM to 05:30 PM		0	1	245	1	0	0	0	0	0	48	0	2	286	2	0	0	0	0	1	39
05:30 PM to 05:45 PM		0	0	201	1	0	0	1	0	1	43	0	3	298	0	0	0	1	0	1	29
05:45 PM to 06:00 PM		0	0	237	3	0	0	0	0	0	27	0	1	275	0	0	0	1	0	1	9
06:00 PM to 06:15 PM		0	0	234	1	0	0	0	0	0	8	0	1	285	1	0	0	0	0	3	4
06:15 PM to 06:30 PM		0	0	208	5	0	0	1	0	0	6	0	4	259	1	2	0	4	0	2	1
06:30 PM to 06:45 PM		0	0	163	1	1	0	0	0	1	21	0	5	288	0	0	0	2	0	3	11
06:45 PM to 07:00 PM		0	0	157	4	0	0	0	0	1	8	0	3	245	0	0	0	2	0	1	7
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		908				4				1174				13				101			
05:00 PM to 06:00 PM		0	1	898	9	0	0	3	0	1	152	0	9	1163	2	0	0	5	0	8	
Peak Hour Factor (PHF)		0.98				n/a				0.50				0.96				0.41			
		U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		n/a	0.25	0.92	0.56	0.92	n/a	0.38	n/a	0.25	0.50	n/a	0.75	0.96	0.25	0.96	n/a	0.42	n/a	0.40	0.41

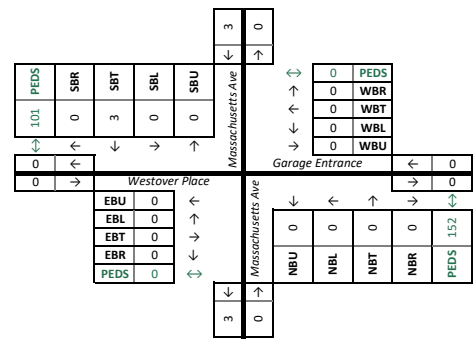
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

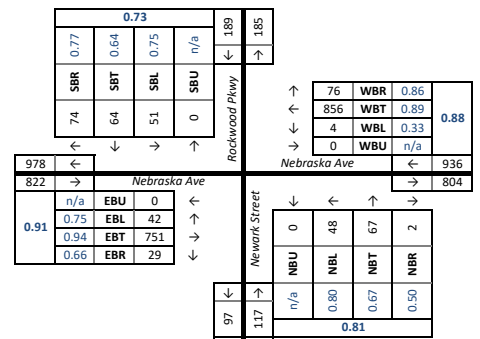
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

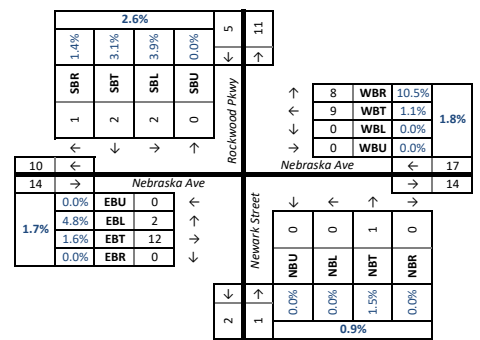
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection: 1. Rockwood Pkwy/Newark Street & Nebraska Ave																				
ALL VEHICLES	Direction:		Southbound			Westbound			Northbound			Eastbound								
	Roadway:		Rockwood Pkwy			Nebraska Ave			Newark Street			Nebraska Ave								
	Movement:		U	L	R	U	L	R	U	L	R	U	L	R						
04:00 PM to 04:15 PM	U	L	R	Peds	U	L	R	Peds	U	L	R	U	L	R	Peds					
04:15 PM to 04:30 PM	0	16	25	24	2	0	3	241	22	8	0	15	16	1	5	0	7	200	7	3
04:30 PM to 04:45 PM	0	10	14	22	3	0	0	207	18	5	0	9	16	0	3	0	10	189	8	6
04:45 PM to 05:00 PM	0	7	11	13	2	0	1	221	17	3	0	14	10	0	5	0	14	200	11	3
05:00 PM to 05:15 PM	0	8	14	15	3	0	0	187	19	3	0	10	25	1	2	0	11	162	3	3
05:15 PM to 05:30 PM	0	12	12	20	1	0	1	216	20	3	0	12	23	1	2	0	9	222	7	6
05:30 PM to 05:45 PM	0	10	20	18	3	0	3	197	26	6	0	6	15	1	5	0	19	200	5	1
05:45 PM to 06:00 PM	0	12	5	25	6	0	1	164	31	1	0	13	31	0	1	0	11	165	6	14
06:00 PM to 06:15 PM	0	7	9	10	1	0	2	193	15	1	0	5	11	1	1	0	15	183	3	1
06:15 PM to 06:30 PM	0	11	5	14	2	0	2	181	17	6	0	11	8	2	2	0	13	218	14	0
06:30 PM to 06:45 PM	0	8	10	7	2	0	0	200	13	2	0	8	13	0	3	0	10	183	8	0
06:45 PM to 07:00 PM	0	9	5	12	3	0	1	188	19	1	0	10	21	0	3	0	14	202	3	2
07:00 PM to 07:15 PM	0	8	22	9	1	0	1	184	18	2	0	11	9	0	1	0	14	138	1	1
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		189				936				117				822						
04:00 PM to 05:00 PM	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds				
Peak Hour	0	51	64	74	10	0	4	856	76	19	0	48	67	2	15	0	42	751	29	15
Factor (PHF)	n/a	0.75	0.64	0.77	0.73	n/a	0.33	0.89	0.86	0.88	n/a	0.80	0.67	0.50	0.81	n/a	0.75	0.94	0.66	0.91
HEAVY VEHICLES (FHWA 4+)																				
Direction:		Southbound			Westbound			Northbound			Eastbound									
Roadway:		Rockwood Pkwy			Nebraska Ave			Newark Street			Nebraska Ave									
Movement:		U	L	R	U	L	R	U	L	R	U	L	R							
04:00 PM to 04:15 PM	U	L	R	U	L	R	U	L	R	U	L	R	U	L	R					
04:15 PM to 04:30 PM	0	0	0	0	0	0	3	2	0	0	1	0	0	0	5	0				
04:30 PM to 04:45 PM	0	1	0	0	0	0	3	2	0	0	0	0	0	1	2	0				
04:45 PM to 05:00 PM	0	0	2	0	0	0	2	2	0	0	0	0	0	1	2	0				
05:00 PM to 05:15 PM	0	1	0	1	0	0	1	2	0	0	0	0	0	0	3	0				
05:15 PM to 05:30 PM	0	1	1	0	0	0	2	2	0	0	0	0	0	0	1	0				
05:30 PM to 05:45 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0				
05:45 PM to 06:00 PM	0	1	0	0	0	0	1	4	0	0	0	0	0	0	3	0				
06:00 PM to 06:15 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0				
06:15 PM to 06:30 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3	0				
06:30 PM to 06:45 PM	0	0	0	0	0	0	3	2	0	0	0	0	0	0	3	0				
06:45 PM to 07:00 PM	0	0	0	0	0	0	3	2	0	0	0	0	0	0	2	0				
07:00 PM to 07:15 PM	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		5				17				1				14						
04:00 PM to 05:00 PM	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds				
Heavy Vehicle % (PHV)	0.0%	3.9%	3.1%	1.4%	2.6%	0.0%	0.0%	1.1%	10.5%	1.8%	0.0%	0.0%	1.5%	0.0%	0.9%	0.0%	4.8%	1.6%	0.0%	1.7%
INT. PEAK HR (HV ONLY)		5				17				1				14						
04:00 PM to 05:00 PM	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds				
Heavy Vehicle % (PHV)	0.0%	3.9%	3.1%	1.4%	2.6%	0.0%	0.0%	1.1%	10.5%	1.8%	0.0%	0.0%	1.5%	0.0%	0.9%	0.0%	4.8%	1.6%	0.0%	1.7%
BICYCLES																				
Direction:		Southbound			Westbound			Northbound			Eastbound									
Roadway:		Rockwood Pkwy			Nebraska Ave			Newark Street			Nebraska Ave									
Movement:		U	L	R	U	L	R	U	L	R	U	L	R							
04:00 PM to 04:15 PM	U	L	R	U	L	R	U	L	R	U	L	R	U	L	R					
04:15 PM to 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:30 PM to 04:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0					
04:45 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:00 PM to 05:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0				
05:15 PM to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:30 PM to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:45 PM to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
06:00 PM to 06:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0				
06:15 PM to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:30 PM to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:45 PM to 07:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0				
07:00 PM to 07:15 PM																				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				2				0						
04:00 PM to 05:00 PM	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds	U	L	R	Peds				
INT. PEAK HR (BIKES)	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0				
06:00 PM to 07:00 PM	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0				

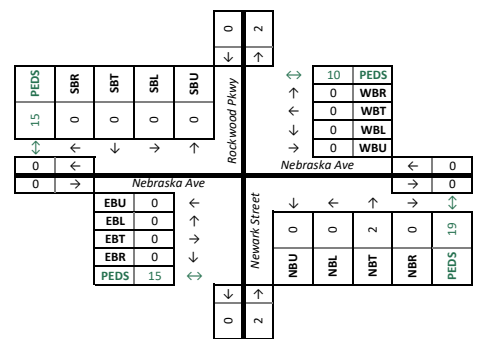
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

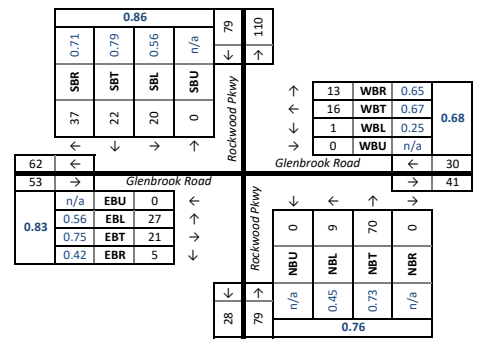
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

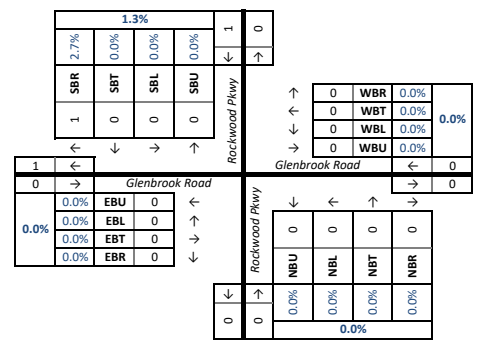
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:00 PM to 07:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Rockwood Pkwy & Glenbrook Road																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Rockwood Pkwy				Glenbrook Road				Rockwood Pkwy				Glenbrook Road							
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
04:00 PM to 04:15 PM		0	2	7	7	0	0	1	4	4	2	0	4	10	0	0	0	7	6	3	1
04:15 PM to 04:30 PM		0	2	5	6	0	0	0	6	1	0	0	3	15	0	0	0	5	5	3	0
04:30 PM to 04:45 PM		0	2	6	9	3	0	0	4	0	2	0	6	7	0	1	0	3	5	1	0
04:45 PM to 05:00 PM		0	5	6	9	0	0	0	4	2	0	0	2	7	0	0	0	4	4	0	0
05:00 PM to 05:15 PM		0	2	10	3	0	0	0	3	5	1	0	5	9	0	0	0	5	3	2	0
05:15 PM to 05:30 PM		0	7	7	6	1	0	0	8	1	0	0	2	18	0	0	0	5	2	3	0
05:30 PM to 05:45 PM		0	1	12	10	0	0	1	7	3	0	0	6	21	1	0	0	2	4	3	0
05:45 PM to 06:00 PM		0	3	10	8	3	0	0	6	8	0	0	2	8	0	3	0	1	5	1	0
06:00 PM to 06:15 PM		0	1	7	9	0	0	1	6	4	1	0	5	7	0	0	0	5	5	1	0
06:15 PM to 06:30 PM		0	4	6	13	1	0	0	4	2	2	0	1	15	0	0	0	4	5	3	0
06:30 PM to 06:45 PM		0	9	5	6	0	0	0	3	2	0	0	2	24	0	0	0	12	4	0	0
06:45 PM to 07:00 PM		0	6	4	9	0	0	0	3	5	0	0	1	24	0	0	0	6	7	1	0
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		79				30				79				53				0			
06:00 PM to 07:00 PM		0	20	22	37	1	0	1	16	13	3	0	9	70	0	0	0	27	21	5	0
Peak Hour Factor (PHF)		0.90				0.68				0.76				0.83							
HEAVY VEHICLES (FHWA 4+)		Direction: Southbound				Westbound				Northbound				Eastbound							
Roadway: Rockwood Pkwy		Glenbrook Road				Rockwood Pkwy				Glenbrook Road											
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:15 PM to 04:30 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:15 PM to 06:30 PM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0				
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		1				0				0				0							
06:00 PM to 07:00 PM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
INT. PEAK HR (HV ONLY)		2				0				0				0							
04:15 PM to 05:15 PM		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
BICYCLES		Direction: Southbound				Westbound				Northbound				Eastbound							
Roadway: Rockwood Pkwy		Glenbrook Road				Rockwood Pkwy				Glenbrook Road											
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0				
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		0				0				0				1							
06:00 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
INT. PEAK HR (BIKES)		0				0				1				1							
04:15 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1				

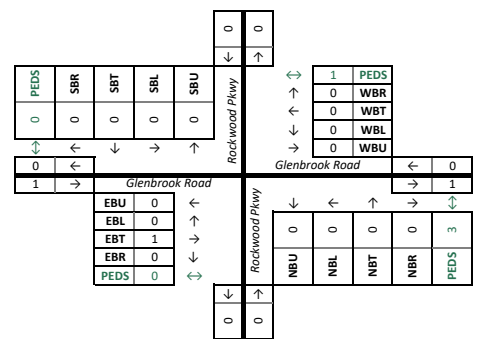
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

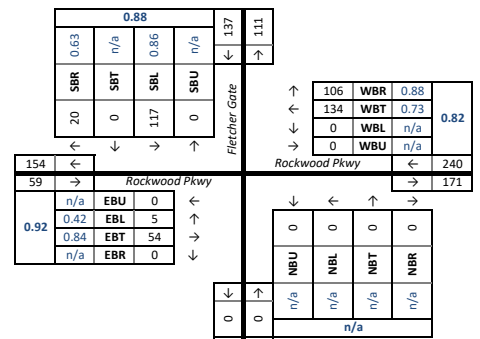
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

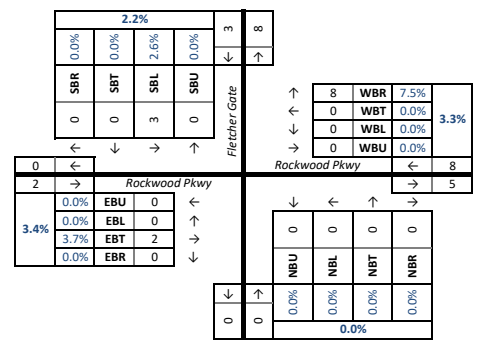
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:45 PM to 05:45 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Fletcher Gate/ & Rockwood Pkwy																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
04:00 PM to 04:15 PM		0	43	0	4	1	0	0	24	21	0	0	0	0	0	0	0	4	22	0	6	
04:15 PM to 04:30 PM		0	25	0	10	0	0	0	30	20	2	0	0	0	0	0	0	0	21	0	0	
04:30 PM to 04:45 PM		0	25	0	10	1	0	0	19	16	0	0	0	0	0	0	0	4	16	0	0	
04:45 PM to 05:00 PM		0	27	0	1	1	0	0	27	28	0	0	0	0	0	0	0	3	10	0	0	
05:00 PM to 05:15 PM		0	30	0	6	0	0	0	22	30	0	0	0	0	0	0	0	0	14	0	0	
05:15 PM to 05:30 PM		0	34	0	5	5	0	0	39	21	0	0	0	0	0	0	0	2	14	0	0	
05:30 PM to 05:45 PM		0	26	0	8	0	0	0	46	27	0	0	0	0	0	0	0	0	16	0	2	
05:45 PM to 06:00 PM		0	20	0	5	0	0	0	25	20	0	0	0	0	0	0	0	2	12	0	2	
06:00 PM to 06:15 PM		0	11	0	1	2	0	0	20	14	0	0	0	0	0	0	0	0	13	0	0	
06:15 PM to 06:30 PM		0	14	0	3	0	0	0	17	19	2	0	0	0	0	0	0	2	11	0	1	
06:30 PM to 06:45 PM		0	18	0	4	0	0	0	34	20	1	0	0	0	0	0	0	1	8	0	1	
06:45 PM to 07:00 PM		0	27	0	1	3	0	0	22	19	0	0	0	0	0	0	0	1	12	0	3	
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		137				240				0				59								
04:45 PM to 05:45 PM		0	117	0	20	6	0	0	134	106	0	0	0	0	0	0	0	5	54	0	2	
Peak Hour Factor (PHF)		Overall	U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		0.89	n/a	0.86	n/a	0.63	0.88	n/a	n/a	0.73	0.88	0.82	n/a	n/a	n/a	n/a	n/a	n/a	0.42	0.84	n/a	0.92
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	1	0	0	0	0	0	5	0	0	0	0	0	1	1	0	0	0	0	0	
04:15 PM to 04:30 PM		0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM to 04:45 PM		0	2	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM to 05:00 PM		0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	
05:00 PM to 05:15 PM		0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	
05:15 PM to 05:30 PM		0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 PM to 07:15 PM																						
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07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		3				8				0				2								
04:45 PM to 05:45 PM		0	3	0	0		0	0	0	8		0	0	0	0		0	0	2	0		
Heavy Vehicle % (PHV)		0.0%	2.6%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	7.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	3.4%	
INT. PEAK HR (HV ONLY)		5				13				0				3								
04:00 PM to 05:00 PM		0	5	0	0		0	0	1	12		0	0	0	0		0	1	2	0		
Heavy Vehicle % (PHV)		0.0%	4.2%	0.0%	0.0%	3.4%	0.0%	0.0%	1.0%	14.1%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	2.9%	0.0%	3.8%	
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Fletcher Gate				Rockwood Pkwy				Rockwood Pkwy				Rockwood Pkwy								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM to 05:45 PM		0	0	0	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM to 06:00 PM		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM to 06:15 PM		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM to 06:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM to 06:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM to 07:00 PM		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		1				0				0				1								
04:45 PM to 05:45 PM		0	0	0	1		0	0	0	0		0	0	0	0		0	1	0	0		
INT. PEAK HR (BIKES)		1				0				0				3								
05:15 PM to 06:15 PM		0	0	0	1		0	0	0	0		0	0	0	0		0	2	1	0		

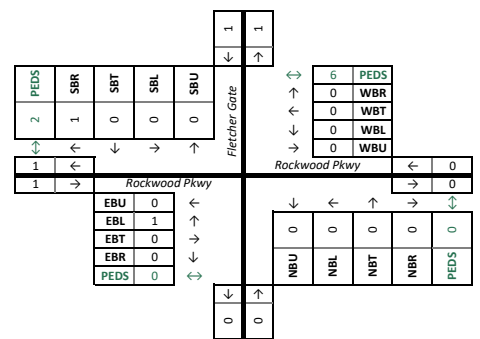
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

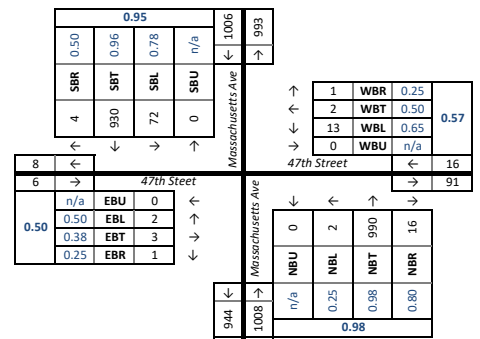
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

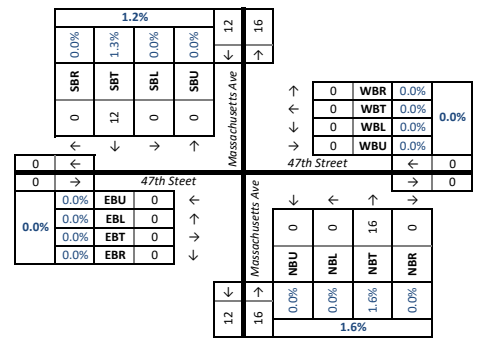
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Massachusetts Ave & 47th Street/47th Steet																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				47th Street				Massachusetts Ave				47th Steet							
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
04:00 PM to 04:15 PM		0	19	171	0	0	0	0	0	0	0	221	3	0	0	0	0	0	8		
04:15 PM to 04:30 PM		0	5	142	1	0	0	0	0	0	0	231	5	0	0	0	0	0	4		
04:30 PM to 04:45 PM		0	13	161	3	0	0	2	1	1	4	0	0	241	9	0	0	1	5		
04:45 PM to 05:00 PM		0	11	168	2	0	0	2	0	0	6	0	0	223	5	0	0	0	1		
05:00 PM to 05:15 PM		0	14	223	2	0	0	3	0	0	3	0	0	240	4	0	0	1	0		
05:15 PM to 05:30 PM		0	18	241	0	0	0	3	1	0	11	0	0	251	5	0	0	0	3		
05:30 PM to 05:45 PM		0	23	243	0	0	0	2	0	0	2	0	2	247	4	0	0	1	1		
05:45 PM to 06:00 PM		0	17	223	2	0	0	5	1	1	4	0	0	252	3	0	0	0	3		
06:00 PM to 06:15 PM		0	21	215	0	0	0	4	4	1	1	2	0	1	233	3	0	0	0		
06:15 PM to 06:30 PM		0	18	188	2	0	0	4	0	0	3	0	0	215	7	0	0	1	2		
06:30 PM to 06:45 PM		0	6	170	1	0	0	5	1	0	3	0	0	231	4	0	0	1	1		
06:45 PM to 07:00 PM		0	8	165	1	0	0	2	0	0	1	6	0	0	218	8	0	0	0		
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	0	72	930	4	0	13	2	1	20	0	2	990	16	0	0	2	3	1	12	
Peak Hour Factor (PHF)	Overall	n/a	0.78	0.96	0.50	0.95	n/a	0.65	0.50	0.25	0.57	n/a	0.25	0.98	0.80	0.98	n/a	0.50	0.38	0.25	0.50

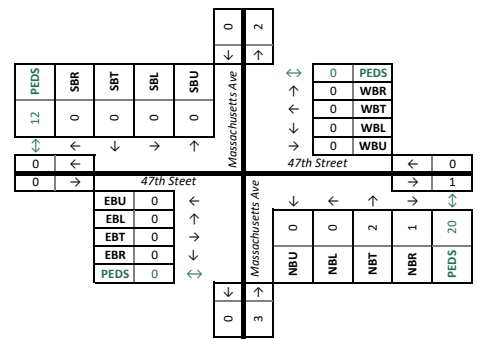
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection
 Project #: 3
 Location: Washington DC
 Data Source: Excel Consultants LLC

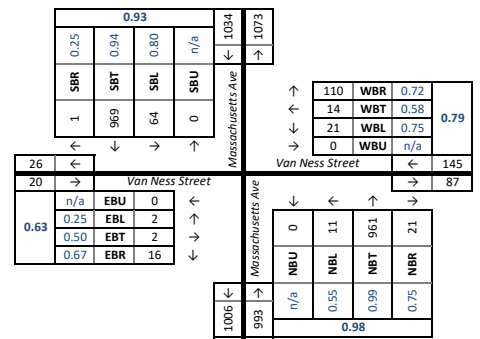
Analysis Period: STUDY PERIOD
 Date of Counts: Tuesday, February 25, 2020
 Weather: Cloudy

04:00 PM to 07:00 PM

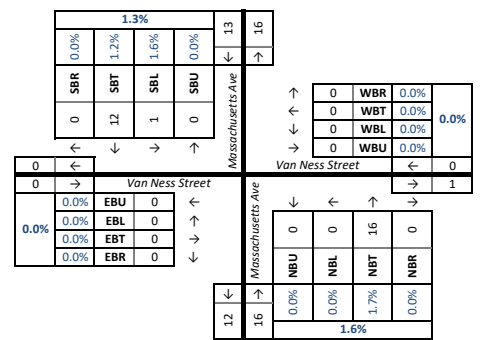
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Massachusetts Ave & Van Ness Street																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Van Ness Street				Massachusetts Ave				Van Ness Street							
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM	to 04:15 PM	0	12	185	0	0	0	1	30	7	0	6	204	10	0	0	0	5	9		
04:15 PM	to 04:30 PM	0	6	142	1	0	2	4	37	1	0	2	223	6	0	0	0	4	4		
04:30 PM	to 04:45 PM	0	10	171	0	0	2	3	22	1	0	5	228	10	0	0	1	0	4	4	
04:45 PM	to 05:00 PM	0	11	174	3	0	4	2	21	8	0	2	216	5	0	0	0	0	3	3	
05:00 PM	to 05:15 PM	0	13	232	0	0	4	2	25	3	0	3	235	3	0	0	0	0	3	2	
05:15 PM	to 05:30 PM	0	18	246	0	0	7	6	21	5	0	1	243	7	0	0	2	0	6	1	
05:30 PM	to 05:45 PM	0	20	259	0	0	5	3	26	2	0	2	240	6	0	0	0	1	2	0	
05:45 PM	to 06:00 PM	0	13	232	1	0	5	3	38	1	0	5	243	5	0	0	0	1	5	3	
06:00 PM	to 06:15 PM	0	19	225	0	0	8	2	25	1	0	3	224	7	0	0	0	0	3	1	
06:15 PM	to 06:30 PM	0	19	200	0	1	5	2	9	2	0	4	204	7	0	0	0	1	3	3	
06:30 PM	to 06:45 PM	0	4	170	0	0	6	2	15	2	0	1	225	6	0	0	0	0	1	1	
06:45 PM	to 07:00 PM	0	7	168	0	0	3	7	17	7	0	1	210	8	0	0	0	0	3	3	
07:00 PM	to 07:15 PM																				
07:15 PM	to 07:30 PM																				
07:30 PM	to 07:45 PM																				
07:45 PM	to 08:00 PM																				
08:00 PM	to 08:15 PM																				
08:15 PM	to 08:30 PM																				
08:30 PM	to 08:45 PM																				
08:45 PM	to 09:00 PM																				
INT. PEAK HR (ALL VEH)		1034				145				993				20							
05:00 PM	to 06:00 PM	0	64	969	1	0	0	21	14	110	11	0	11	961	21	0	0	2	2	16	6
Peak Hour Factor (PHF)		Overall	0.80	0.94	0.25	0.93	n/a	0.75	0.58	0.72	0.79	n/a	0.55	0.99	0.75	0.98	n/a	0.25	0.50	0.67	0.63
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Van Ness Street				Massachusetts Ave				Van Ness Street							
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM	to 04:15 PM	0	0	6	0	0	0	0	1	0	1	6	0	0	0	0	0	0	0	0	
04:15 PM	to 04:30 PM	0	0	6	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	
04:30 PM	to 04:45 PM	0	0	3	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	
04:45 PM	to 05:00 PM	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	
05:00 PM	to 05:15 PM	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
05:15 PM	to 05:30 PM	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	
05:30 PM	to 05:45 PM	0	1	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	
05:45 PM	to 06:00 PM	0	0	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	
06:00 PM	to 06:15 PM	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
06:15 PM	to 06:30 PM	0	0	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	
06:30 PM	to 06:45 PM	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
06:45 PM	to 07:00 PM	0	0	3	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	
07:00 PM	to 07:15 PM																				
07:15 PM	to 07:30 PM																				
07:30 PM	to 07:45 PM																				
07:45 PM	to 08:00 PM																				
08:00 PM	to 08:15 PM																				
08:15 PM	to 08:30 PM																				
08:30 PM	to 08:45 PM																				
08:45 PM	to 09:00 PM																				
INT. PEAK HR (ALL VEH)		13				0				16				0							
05:00 PM	to 06:00 PM	0	1	12	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	1.6%	1.2%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		18				1				26				0							
04:00 PM	to 05:00 PM	0	0	18	0	0	0	0	1	0	1	25	0	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.7%	0.0%	2.5%	0.0%	0.0%	0.0%	0.9%	0.8%	0.0%	6.7%	2.9%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Massachusetts Ave				Van Ness Street				Massachusetts Ave				Van Ness Street							
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM	to 04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
04:15 PM	to 04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	to 04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 PM	to 07:15 PM																				
07:15 PM	to 07:30 PM																				
07:30 PM	to 07:45 PM																				
07:45 PM	to 08:00 PM																				
08:00 PM	to 08:15 PM																				
08:15 PM	to 08:30 PM																				
08:30 PM	to 08:45 PM																				
08:45 PM	to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				1				0							
05:00 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
INT. PEAK HR (BIKES)		2				0				1				0							
04:00 PM	to 05:00 PM	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	

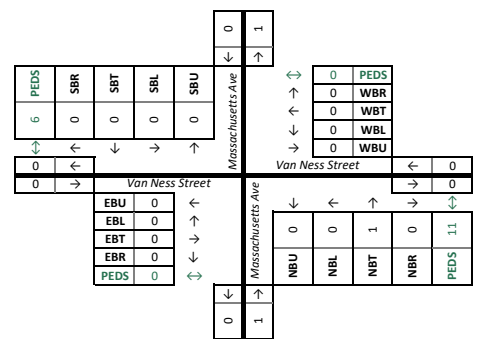
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

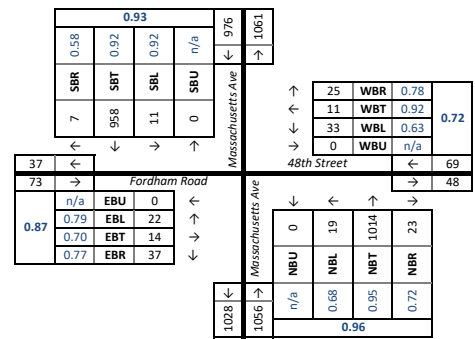
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

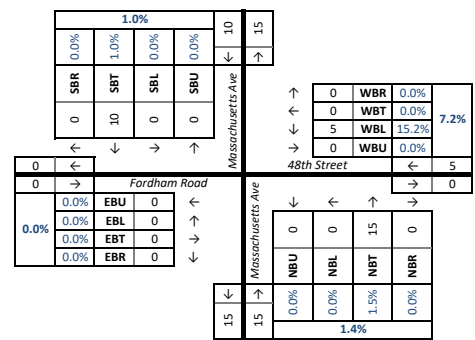
Intersection:		1. Massachusetts Ave & 48th Street/Fordham Road																			
ALL VEHICLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound 48th Street				Northbound Massachusetts Ave				Eastbound Fordham Road							
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
		04:00 PM to 04:15 PM	0	6	159	3	10	0	15	4	6	4	0	3	248	3	1	0	5	3	15
04:15 PM to 04:30 PM	1	2	132	1	8	0	9	7	6	1	0	6	241	3	3	0	12	3	10	3	
04:30 PM to 04:45 PM	0	0	169	1	8	0	11	6	3	6	0	1	254	6	2	0	3	5	5	4	
04:45 PM to 05:00 PM	0	5	156	1	5	0	14	3	3	5	0	3	235	1	3	0	7	6	6	5	
05:00 PM to 05:15 PM	0	2	223	1	8	0	13	3	6	7	0	5	249	2	0	0	2	3	7	2	
05:15 PM to 05:30 PM	0	2	233	1	12	0	13	3	8	12	0	5	246	5	1	0	7	3	10	3	
05:30 PM to 05:45 PM	0	3	259	0	8	0	12	2	5	3	0	4	243	7	0	0	3	3	8	1	
05:45 PM to 06:00 PM	0	3	235	3	5	0	5	3	8	4	0	3	259	8	3	0	6	5	7	5	
06:00 PM to 06:15 PM	0	3	231	3	2	0	3	3	4	2	0	7	266	3	1	0	6	3	12	1	
06:15 PM to 06:30 PM	0	1	202	3	8	0	11	2	3	0	0	2	223	5	0	0	9	6	6	4	
06:30 PM to 06:45 PM	1	2	167	0	4	0	6	2	2	1	0	1	235	2	0	0	5	3	3	0	
06:45 PM to 07:00 PM	0	1	153	2	21	0	8	3	7	4	0	2	210	4	0	0	9	3	3	1	
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		976				69				1056				73							
05:15 PM to 06:15 PM	0	11	958	7	27	0	33	11	25	21	0	19	1014	23	5	0	22	14	37	10	
Peak Hour Factor (PHF)	Overall	U	L	T	R	SB	U	L	T	R	WB	U	L	T	R	NB	U	L	T	R	EB
	0.99	n/a	0.92	0.92	0.58	0.93	n/a	0.63	0.92	0.78	0.72	n/a	0.68	0.95	0.72	0.96	n/a	0.79	0.70	0.77	0.87

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



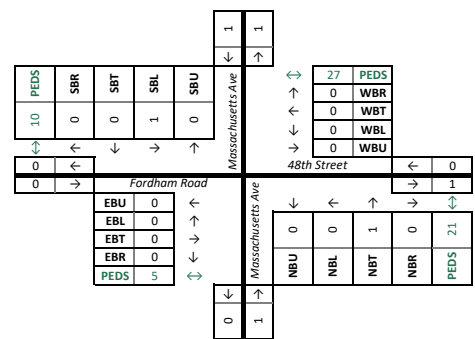
HEAVY VEHICLES (FHWA 4+)		Direction: Southbound, Westbound, Northbound, Eastbound																		
	Roadway: Movement:	Southbound Massachusetts Ave				Westbound 48th Street				Northbound Massachusetts Ave				Eastbound Fordham Road						
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
04:00 PM to 04:15 PM	0	1	5	0	0	2	0	0	0	0	8	0	0	0	0	1				
04:15 PM to 04:30 PM	0	0	4	0	0	1	0	1	0	0	5	1	0	0	0	1				
04:30 PM to 04:45 PM	0	0	2	0	0	1	0	0	0	0	7	0	0	0	0	0				
04:45 PM to 05:00 PM	0	0	1	0	0	1	1	0	0	1	5	0	0	0	0	0				
05:00 PM to 05:15 PM	0	0	2	0	0	1	0	0	0	0	2	0	0	0	0	0				
05:15 PM to 05:30 PM	0	0	3	0	0	2	0	0	0	0	4	0	0	0	0	0				
05:30 PM to 05:45 PM	0	0	2	0	0	1	0	0	0	0	5	0	0	0	0	0				
05:45 PM to 06:00 PM	0	0	2	0	0	1	0	0	0	0	4	0	0	0	0	0				
06:00 PM to 06:15 PM	0	0	3	0	0	1	0	0	0	0	2	0	0	0	0	0				
06:15 PM to 06:30 PM	0	0	3	0	0	1	0	0	0	0	4	0	0	0	0	0				
06:30 PM to 06:45 PM	0	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0				
06:45 PM to 07:00 PM	0	0	2	0	0	1	0	0	0	0	3	0	0	2	0	0				
07:00 PM to 07:15 PM																				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		10				5				15				0						
05:15 PM to 06:15 PM	0.0%	0.0%	1.0%	0.0%	1.0%	0.0%	15.2%	0.0%	0.0%	7.2%	0.0%	0.0%	1.5%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Heavy Vehicle % (PHV)																				
INT. PEAK HR (HV ONLY)		13				7				27				2						
04:00 PM to 05:00 PM	0	1	12	0	0	5	1	1	0	1	25	1	0	0	0	2				
Heavy Vehicle % (PHV)	0.0%	7.7%	1.9%	0.0%	2.0%	0.0%	10.2%	5.0%	5.6%	8.0%	0.0%	7.7%	2.6%	7.7%	2.7%	0.0%	0.0%	0.0%	5.6%	2.5%

HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



BICYCLES		Direction: Southbound, Westbound, Northbound, Eastbound															
	Roadway: Movement:	Southbound Massachusetts Ave				Westbound 48th Street				Northbound Massachusetts Ave				Eastbound Fordham Road			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
04:00 PM to 04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
04:15 PM to 04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM to 04:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
05:00 PM to 05:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
05:15 PM to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM to 06:15 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
06:15 PM to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 PM to 07:15 PM																	
07:15 PM to 07:30 PM																	
07:30 PM to 07:45 PM																	
07:45 PM to 08:00 PM																	
08:00 PM to 08:15 PM																	
08:15 PM to 08:30 PM																	
08:30 PM to 08:45 PM																	
08:45 PM to 09:00 PM																	
INT. PEAK HR (ALL VEH)		1				0				1				0			
05:15 PM to 06:15 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
INT. PEAK HR (BIKES)		2				0				2				0			
04:00 PM to 05:00 PM	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	

PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

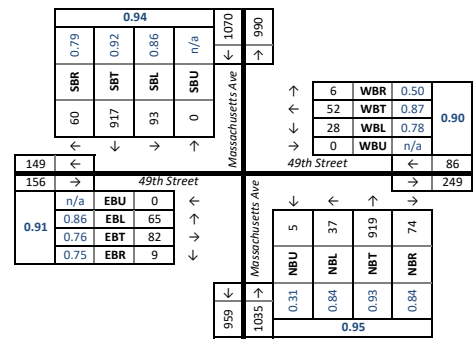
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

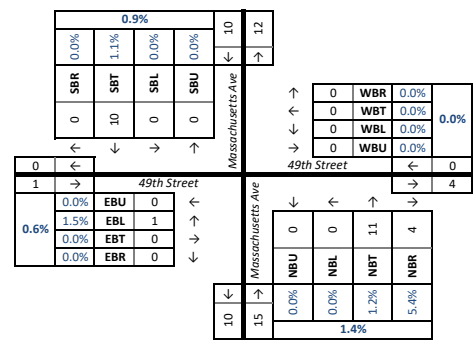
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Massachusetts Ave & 49th Street																				
ALL VEHICLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound 49th Street				Northbound Massachusetts Ave				Eastbound 49th Street								
		U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	
		04:00 PM to 04:15 PM	0	20	155	11	18	0	7	15	1	3	8	18	242	17	7	0	21	21	3	7
04:15 PM to 04:30 PM	0	24	135	11	6	0	6	10	1	2	8	7	199	16	20	0	11	26	3	1		
04:30 PM to 04:45 PM	0	31	157	14	12	0	9	7	0	1	8	11	227	21	15	0	14	19	1	2		
04:45 PM to 05:00 PM	0	23	148	10	6	0	7	14	3	4	2	8	225	18	14	0	19	17	2	1		
05:00 PM to 05:15 PM	0	23	215	20	10	0	6	3	1	1	3	6	232	29	4	0	16	19	3	0		
05:15 PM to 05:30 PM	0	26	225	13	5	0	7	10	1	6	4	11	221	16	10	0	18	20	2	1		
05:30 PM to 05:45 PM	0	27	248	11	8	0	5	15	0	3	1	7	218	19	5	0	13	27	3	4		
05:45 PM to 06:00 PM	0	17	221	17	5	0	9	12	3	2	0	11	232	22	4	0	15	17	2	3		
06:00 PM to 06:15 PM	0	23	223	19	4	0	7	15	2	1	0	8	248	17	6	0	19	18	2	0		
06:15 PM to 06:30 PM	0	27	192	12	6	0	4	13	1	2	0	1	221	12	8	0	16	11	0	7		
06:30 PM to 06:45 PM	0	20	175	12	3	0	7	4	3	6	3	7	219	15	11	0	9	17	1	2		
06:45 PM to 07:00 PM	0	13	145	12	11	0	7	11	1	8	3	5	198	15	9	0	7	15	0	6		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		1070				86				1035				156								
05:15 PM to 06:15 PM		0	93	917	60	22	0	28	52	6	12	5	37	919	74	25	0	65	82	9	8	
Peak Hour Factor (PHF)		Overall	0.98	0.86	0.92	0.79	0.94	n/a	0.78	0.87	0.50	0.90	0.31	0.84	0.93	0.84	0.95	n/a	0.86	0.76	0.75	0.91
HEAVY VEHICLES (FHWA 4+)	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound 49th Street				Northbound Massachusetts Ave				Eastbound 49th Street								
		U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	
		04:00 PM to 04:15 PM	0	0	4	1		0	1	0	0		0	0	5	3		0	0	0	0	
04:15 PM to 04:30 PM	0	1	2	0		0	1	1	0		0	0	5	1		0	0	0	1	1		
04:30 PM to 04:45 PM	0	0	2	0		0	0	0	0		0	0	5	2		0	0	0	0	0		
04:45 PM to 05:00 PM	0	0	1	0		0	0	0	0		0	0	3	2		0	1	0	0	0		
05:00 PM to 05:15 PM	0	1	2	0		0	0	0	0		0	0	1	1		0	0	0	0	0		
05:15 PM to 05:30 PM	0	0	3	0		0	0	0	0		0	0	3	1		0	0	0	0	0		
05:30 PM to 05:45 PM	0	0	2	0		0	0	0	0		0	0	4	1		0	1	0	0	0		
05:45 PM to 06:00 PM	0	0	2	0		0	0	0	0		0	0	3	1		0	0	0	0	0		
06:00 PM to 06:15 PM	0	0	3	0		0	0	0	0		0	0	1	1		0	0	0	0	0		
06:15 PM to 06:30 PM	0	1	3	0		0	0	0	0		0	0	2	2		0	0	0	0	0		
06:30 PM to 06:45 PM	0	0	1	1		0	0	0	0		0	0	2	0		0	1	0	0	0		
06:45 PM to 07:00 PM	0	0	1	0		0	1	0	0		0	0	4	1		0	0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		10				0				15				1								
05:15 PM to 06:15 PM		0	0	10	0	0.9%	0	0	0	0	0.0%	0	0	11	4	1.4%	0	1	0	0	0.6%	
Heavy Vehicle % (PHV)		0.0%	0.0%	1.1%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	5.4%	1.4%	0.0%	1.5%	0.0%	0.0%	0.6%	
INT. PEAK HR (HV ONLY)		11				3				26				3								
04:00 PM to 05:00 PM		0	1	9	1	1.5%	0	2	1	0	3.8%	0	0	18	8	2.5%	0	1	1	1	1.9%	
Heavy Vehicle % (PHV)		0.0%	1.0%	1.5%	2.2%	1.5%	0.0%	6.9%	2.2%	0.0%	3.8%	0.0%	0.0%	2.0%	11.1%	2.5%	0.0%	1.5%	1.2%	11.1%	1.9%	
BICYCLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound 49th Street				Northbound Massachusetts Ave				Eastbound 49th Street								
		U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	
		04:00 PM to 04:15 PM	0	0	0	0		0	0	0	0		0	0	1	0		0	0	0	0	0
04:15 PM to 04:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
04:30 PM to 04:45 PM	0	0	1	0		0	0	0	0		0	0	0	0		0	0	1	0	0		
04:45 PM to 05:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
05:00 PM to 05:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
05:15 PM to 05:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
05:30 PM to 05:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0	0		
05:45 PM to 06:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
06:00 PM to 06:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
06:15 PM to 06:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
06:30 PM to 06:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
06:45 PM to 07:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		0				0				0				1								
05:15 PM to 06:15 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		
INT. PEAK HR (BIKES)		1				0				1				1								
04:00 PM to 05:00 PM		0	0	1	0		0	0	0	0		0	0	1	0		0	0	1	0		

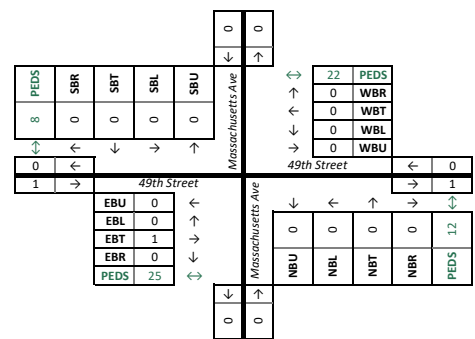
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

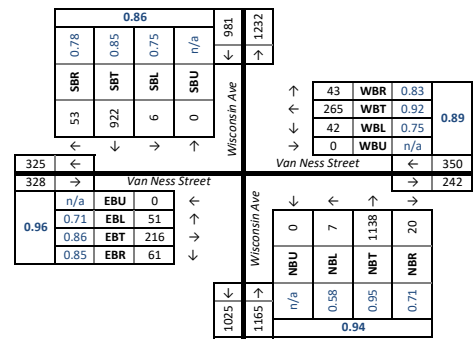
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Thursday, February 27, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

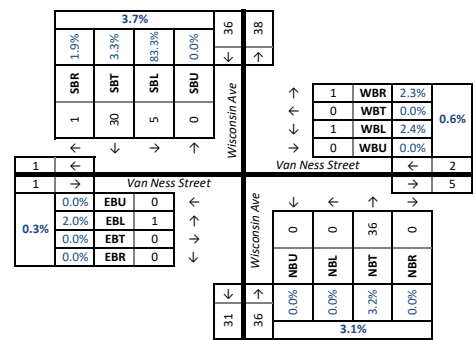
Intersection:		1. Wisconsin Ave & Van Ness Street																			
ALL VEHICLES	Direction: Roadway: Movement:	Southbound					Westbound					Northbound					Eastbound				
		Wisconsin Ave					Van Ness Street					Wisconsin Ave					Van Ness Street				
		U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
04:00 PM	to 04:15 PM	0	3	232	16	12	0	9	70	9	17	0	2	221	9	24	0	16	38	23	29
04:15 PM	to 04:30 PM	0	2	186	10	6	0	13	56	15	7	0	1	225	7	11	0	11	45	14	23
04:30 PM	to 04:45 PM	0	0	211	12	3	0	14	55	8	18	0	1	243	4	9	0	14	44	13	24
04:45 PM	to 05:00 PM	0	1	196	12	3	0	11	62	8	11	0	0	254	12	6	0	7	39	13	17
05:00 PM	to 05:15 PM	0	2	187	13	15	0	11	70	13	16	0	2	278	5	15	0	12	55	18	17
05:15 PM	to 05:30 PM	0	2	253	10	6	0	6	72	10	31	0	2	301	7	28	0	8	63	13	21
05:30 PM	to 05:45 PM	0	1	211	17	10	0	14	72	12	15	0	0	281	6	5	0	13	55	17	25
05:45 PM	to 06:00 PM	0	1	271	13	8	0	11	51	8	7	0	3	278	2	8	0	18	43	13	13
06:00 PM	to 06:15 PM	0	1	208	11	12	0	13	44	12	17	0	4	261	4	3	0	12	60	13	13
06:15 PM	to 06:30 PM	0	2	260	9	3	0	7	49	13	19	0	2	241	6	8	0	10	35	11	17
06:30 PM	to 06:45 PM	0	6	184	9	6	0	11	49	11	10	0	3	223	1	8	0	8	35	11	8
06:45 PM	to 07:00 PM	0	8	194	8	5	0	10	25	8	12	0	6	218	4	8	0	15	38	7	20
07:00 PM	to 07:15 PM																				
07:15 PM	to 07:30 PM																				
07:30 PM	to 07:45 PM																				
07:45 PM	to 08:00 PM																				
08:00 PM	to 08:15 PM																				
08:15 PM	to 08:30 PM																				
08:30 PM	to 08:45 PM																				
08:45 PM	to 09:00 PM																				
INT. PEAK HR (ALL VEH)		981					350					1165					328				
05:00 PM to 06:00 PM		0	6	922	53	39	0	42	265	43	69	0	7	1138	20	56	0	51	216	61	76
Peak Hour Factor (PHF)		n/a					n/a					n/a					n/a				
		0.75 0.85 0.78 0.86					0.75 0.92 0.83 0.89					0.58 0.95 0.71 0.94					0.71 0.86 0.85 0.96				

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



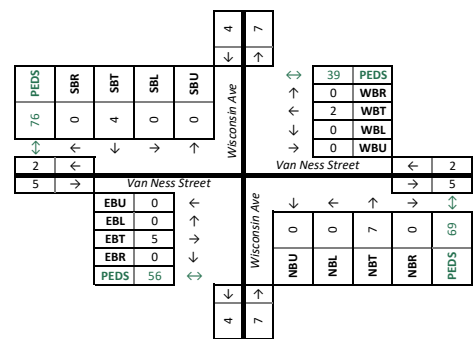
HEAVY VEHICLES (FHWA 4+)	Direction: Roadway: Movement:	Southbound					Westbound					Northbound					Eastbound				
		Wisconsin Ave					Van Ness Street					Wisconsin Ave					Van Ness Street				
		U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
04:00 PM	to 04:15 PM	0	0	13	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	1	
04:15 PM	to 04:30 PM	0	1	9	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	
04:30 PM	to 04:45 PM	0	0	8	0	0	1	0	0	0	0	0	12	0	0	0	0	0	1		
04:45 PM	to 05:00 PM	0	1	10	1	0	0	0	0	0	0	0	12	0	0	0	0	0	0		
05:00 PM	to 05:15 PM	0	1	6	1	0	1	0	1	0	0	0	8	0	0	1	0	0	0		
05:15 PM	to 05:30 PM	0	2	11	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0		
05:30 PM	to 05:45 PM	0	1	5	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0		
05:45 PM	to 06:00 PM	0	1	8	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0		
06:00 PM	to 06:15 PM	0	1	9	0	0	1	0	0	0	0	0	5	0	0	0	0	0	0		
06:15 PM	to 06:30 PM	0	2	4	0	0	2	0	0	0	0	0	6	0	0	0	0	0	0		
06:30 PM	to 06:45 PM	0	0	4	1	0	0	0	0	0	0	0	8	0	0	0	0	0	0		
06:45 PM	to 07:00 PM	0	0	5	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0		
07:00 PM	to 07:15 PM																				
07:15 PM	to 07:30 PM																				
07:30 PM	to 07:45 PM																				
07:45 PM	to 08:00 PM																				
08:00 PM	to 08:15 PM																				
08:15 PM	to 08:30 PM																				
08:30 PM	to 08:45 PM																				
08:45 PM	to 09:00 PM																				
INT. PEAK HR (ALL VEH)		36					2					36					1				
05:00 PM to 06:00 PM		0	5	30	1		0	1	0	1		0	0	36	0		0	1	0	0	
Heavy Vehicle % (PHV)		0.0% 83.3% 3.3% 1.9% 3.7%					0.0% 2.4% 0.0% 2.3% 0.6%					0.0% 0.0% 3.2% 0.0% 3.1%					0.0% 2.0% 0.0% 0.0% 0.3%				
INT. PEAK HR (HV ONLY)		41					3					39					2				
04:30 PM to 05:30 PM		0	4	35	2		0	2	0	1		0	0	39	0		0	1	0	1	
Heavy Vehicle % (PHV)		0.0% 80.0% 4.1% 4.3% 4.6%					0.0% 4.8% 0.0% 2.6% 0.9%					0.0% 0.0% 3.6% 0.0% 3.5%					0.0% 2.4% 0.0% 1.8% 0.7%				

HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



BICYCLES	Direction: Roadway: Movement:	Southbound					Westbound					Northbound					Eastbound				
		Wisconsin Ave					Van Ness Street					Wisconsin Ave					Van Ness Street				
		U	L	Thru	Right		U	L	Thru	Right		U	L	Thru	Right		U	L	Thru	Right	
04:00 PM	to 04:15 PM	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0		
04:15 PM	to 04:30 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0		
04:30 PM	to 04:45 PM	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0		
04:45 PM	to 05:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0		
05:15 PM	to 05:30 PM	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	4	0	0		
05:30 PM	to 05:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0		
05:45 PM	to 06:00 PM	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0		
06:00 PM	to 06:15 PM	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0		
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0		
06:30 PM	to 06:45 PM	0	0	1	0	0	0	0	1	0	0	0	3	0	0	0	2	0	0		
06:45 PM	to 07:00 PM	0	0	1	0	0	0	0	0	0	0	0	4	0	0	2	2	0	0		
07:00 PM	to 07:15 PM																				
07:15 PM	to 07:30 PM																				
07:30 PM	to 07:45 PM																				
07:45 PM	to 08:00 PM																				
08:00 PM	to 08:15 PM																				
08:15 PM	to 08:30 PM																				
08:30 PM	to 08:45 PM																				
08:45 PM	to 09:00 PM																				
INT. PEAK HR (ALL VEH)		4					2					7					5				
05:00 PM to 06:00 PM		0	0	4	0		0	0	2	0		0	0	7	0		0	0	5	0	
INT. PEAK HR (BIKES)		4					2					10					7				
06:00 PM to 07:00 PM		0	0	4	0		0	0	2	0		0	0	10	0		0	2	5	0	

PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

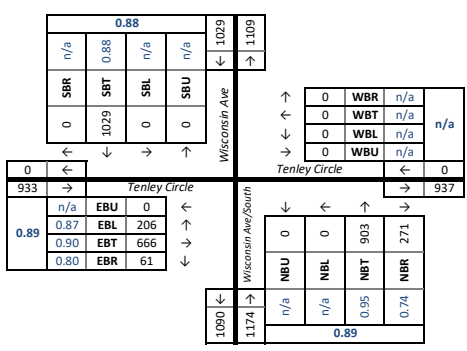
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Thursday, February 27, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

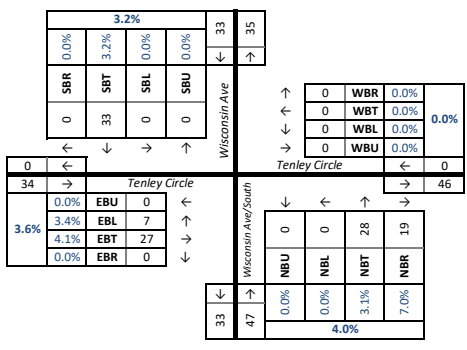
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Wisconsin Ave / Wisconsin Ave/South & Tenley Circle																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Tenley Circle				Wisconsin Ave/South				Tenley Circle								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
04:00 PM to 04:15 PM		0	0	215	0	0	0	0	0	28	0	0	183	37	12	0	60	185	12	18		
04:15 PM to 04:30 PM		0	1	216	0	0	0	0	0	34	0	0	209	61	6	0	61	164	8	16		
04:30 PM to 04:45 PM		0	1	230	0	0	0	0	0	23	0	0	190	41	13	0	42	177	11	14		
04:45 PM to 05:00 PM		0	0	225	0	1	0	0	0	24	0	0	208	77	13	0	37	149	4	30		
05:00 PM to 05:15 PM		0	1	198	0	1	0	0	0	23	0	0	202	57	16	0	48	169	6	12		
05:15 PM to 05:30 PM		0	0	291	0	5	0	0	0	19	0	0	237	91	13	0	49	165	12	21		
05:30 PM to 05:45 PM		0	0	237	0	4	0	0	0	33	0	0	217	68	29	0	59	184	19	19		
05:45 PM to 06:00 PM		0	0	278	0	1	0	0	0	35	0	0	231	61	10	0	51	150	16	23		
06:00 PM to 06:15 PM		0	0	223	0	6	0	0	0	30	0	0	218	51	6	0	47	167	14	17		
06:15 PM to 06:30 PM		0	0	268	0	2	0	0	0	38	0	0	208	57	7	0	57	166	18	27		
06:30 PM to 06:45 PM		0	0	211	0	6	0	0	0	16	0	0	178	45	25	0	47	124	11	10		
06:45 PM to 07:00 PM		0	0	212	0	0	0	0	0	14	0	0	195	59	1	0	47	135	10	16		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		1029				0				1174				933								
05:15 PM to 06:15 PM		0	0	1029	0	16	0	0	0	0	117	0	0	903	271	58	0	206	666	61	80	
Peak Hour Factor (PHF)		Overall 0.93				n/a				n/a				n/a								
		n/a	n/a	0.88	n/a	0.88	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.95	0.74	0.89	n/a	n/a	0.87	0.90	0.80	0.89
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Tenley Circle				Wisconsin Ave/South				Tenley Circle								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	10	0	0	0	0	0	0	0	4	1	0	2	7	0	0	0			
04:15 PM to 04:30 PM		0	0	10	0	0	0	0	0	0	0	3	5	0	0	3	7	0	0			
04:30 PM to 04:45 PM		0	0	10	0	0	0	0	0	0	0	9	3	0	0	2	8	1	1			
04:45 PM to 05:00 PM		0	0	11	0	0	0	0	0	0	0	3	7	0	0	0	7	0	0			
05:00 PM to 05:15 PM		0	0	8	0	0	0	0	0	0	0	6	3	0	1	4	0	0	0			
05:15 PM to 05:30 PM		0	0	14	0	0	0	0	0	0	0	8	5	0	0	3	6	0	0			
05:30 PM to 05:45 PM		0	0	3	0	0	0	0	0	0	0	7	8	0	0	1	8	0	0			
05:45 PM to 06:00 PM		0	0	6	0	0	0	0	0	0	0	9	2	0	1	1	7	0	0			
06:00 PM to 06:15 PM		0	0	10	0	0	0	0	0	0	0	4	4	0	0	2	6	0	0			
06:15 PM to 06:30 PM		0	0	5	0	0	0	0	0	0	0	2	3	0	0	1	8	0	0			
06:30 PM to 06:45 PM		0	0	3	0	0	0	0	0	0	0	8	2	0	0	5	0	0	0			
06:45 PM to 07:00 PM		0	0	3	0	0	0	0	0	0	0	10	4	0	0	1	3	0	0			
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		33				0				47				34								
05:15 PM to 06:15 PM		0	0	33	0		0	0	0	0	0	0	0	28	19		0	7	27	0		
Heavy Vehicle % (PHV)		0.0%				3.2%				0.0%				3.6%								
		0.0%	0.0%	3.2%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	7.0%	4.0%	0.0%	3.4%	4.1%	0.0%	3.6%	
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave				Tenley Circle				Wisconsin Ave/South				Tenley Circle								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0			
04:15 PM to 04:30 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:30 PM to 04:45 PM		0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0			
04:45 PM to 05:00 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0			
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0			
05:45 PM to 06:00 PM		0	0	4	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0			
06:00 PM to 06:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0			
06:15 PM to 06:30 PM		0	0	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0			
06:30 PM to 06:45 PM		0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0			
06:45 PM to 07:00 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0			
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		5				0				7				1								
05:15 PM to 06:15 PM		0	0	5	0		0	0	0	0	0	0	0	6	1		0	0	0	1		
INT. PEAK HR (BIKES)		7				0				11				1								
05:45 PM to 06:45 PM		0	0	7	0		0	0	0	0	0	0	0	9	2		0	0	1	1	0	

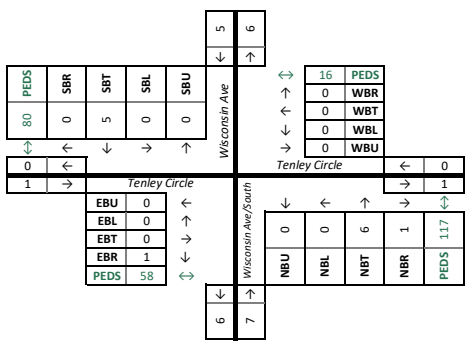
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

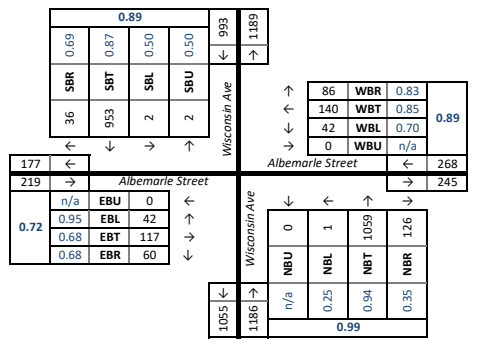
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

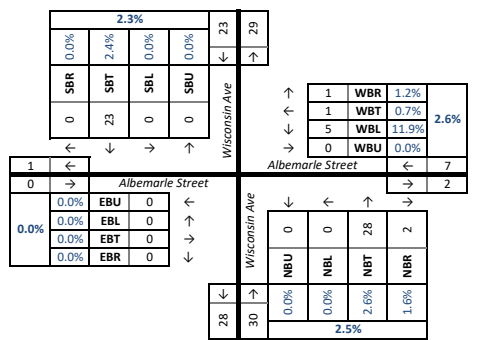
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Wisconsin Ave & Albemarle Street																										
ALL VEHICLES	Direction: Roadway: Movement:	Southbound						Westbound						Northbound						Eastbound								
		Wisconsin Ave						Albemarle Street						Wisconsin Ave						Albemarle Street								
		U	Left	Thru	Right	Peds		U	Left	Thru	Right	Peds		U	Left	Thru	Right	Peds		U	Left	Thru	Right	Peds				
04:00 PM to 04:15 PM		0	0	221	14	91		0	8	22	26	138		0	0	254	12	24		0	13	26	6	91				
04:15 PM to 04:30 PM		0	0	215	8	41		0	14	29	20	102		0	0	267	8	65		0	6	19	8	64				
04:30 PM to 04:45 PM		0	0	211	11	50		0	10	23	15	70		0	0	201	51	28		0	16	16	13	43				
04:45 PM to 05:00 PM		1	0	224	11	47		0	4	15	9	75		0	0	243	9	24		0	8	30	12	87				
05:00 PM to 05:15 PM		0	0	203	7	81		0	10	26	21	123		0	1	260	9	62		0	13	36	14	103				
05:15 PM to 05:30 PM		1	0	273	6	51		0	10	32	23	91		0	0	211	89	37		0	10	21	16	92				
05:30 PM to 05:45 PM		0	1	238	13	77		0	15	34	19	100		0	0	283	11	41		0	11	43	22	102				
05:45 PM to 06:00 PM		1	0	253	9	69		0	9	33	18	93		0	0	283	17	34		0	10	20	16	101				
06:00 PM to 06:15 PM		0	1	189	8	62		0	8	41	26	72		0	1	282	9	50		0	11	33	6	79				
06:15 PM to 06:30 PM		0	0	258	16	61		0	6	34	21	57		0	0	229	12	20		0	16	31	14	80				
06:30 PM to 06:45 PM		0	6	194	10	50		0	12	25	20	58		0	3	242	8	27		0	11	9	12	44				
06:45 PM to 07:00 PM		0	5	202	7	49		0	6	17	18	50		0	2	248	9	20		0	3	18	15	48				
07:00 PM to 07:15 PM																												
07:15 PM to 07:30 PM																												
07:30 PM to 07:45 PM																												
07:45 PM to 08:00 PM																												
08:00 PM to 08:15 PM																												
08:15 PM to 08:30 PM																												
08:30 PM to 08:45 PM																												
08:45 PM to 09:00 PM																												
INT. PEAK HR (ALL VEH)		993						268						1186						162			219			374		
05:15 PM to 06:15 PM		2	2	953	36	259	0	42	140	86	356	0	1	1059	126	162	0	42	117	60	374							
Peak Hour Factor (PHF)		0.50						0.70						0.85						0.83			0.89			0.72		
HEAVY VEHICLES (FHWA 4+)		0.00						0.00						0.00						0.00			0.00			0.00		
04:00 PM to 04:15 PM		0	0	11	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0				
INT. PEAK HR (HV ONLY)		23						7						30						0			0					
05:15 PM to 06:15 PM		0	0	23	0	0	0	5	1	1	1	0	0	28	2	0	0	0	0	0	0	0	0	0				
Heavy Vehicle % (PHV)		0.0%						11.9%						2.6%						2.5%			0.0%					
04:00 PM to 05:00 PM		0	0	37	0	0	0	2	1	1	1	0	0	19	1	0	0	0	0	0	0	0	0	0				
Heavy Vehicle % (PHV)		0.0%						5.6%						1.1%						1.4%			1.9%					
BICYCLES		0.00						0.00						0.00						0.00			0.00			0.00		
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0				
INT. PEAK HR (ALL BIKES)		2						2						3						1			0					
05:15 PM to 06:15 PM		0	0	2	0	0	0	1	1	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0				
INT. PEAK HR (BIKES)		4						2						4						0			0					
05:45 PM to 06:45 PM		0	0	3	1	0	0	1	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0				

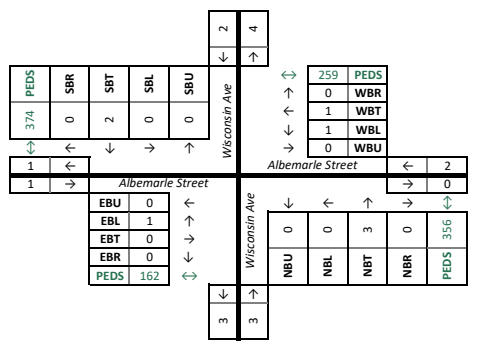
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



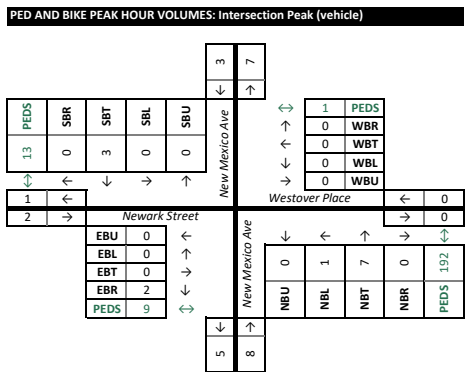
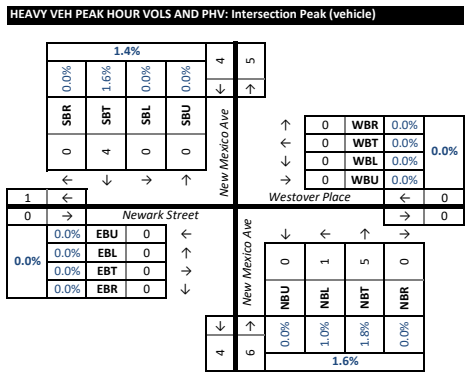
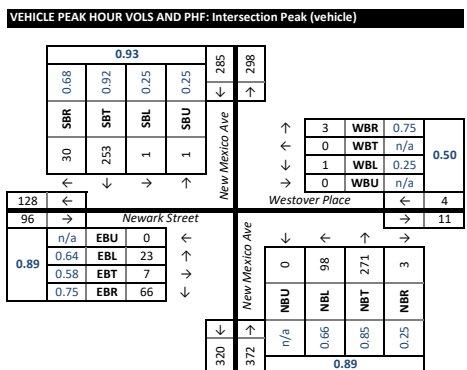
DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts : Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & Westover Place/Newark Street																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	New Mexico Ave				Westover Place				New Mexico Ave				Newark Street							
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
04:00 PM to 04:15 PM		0	0	52	3	2	0	0	0	0	32	0	21	75	0	5	0	7	0	14	4
04:15 PM to 04:30 PM		0	1	59	3	2	0	0	0	0	34	0	17	60	2	4	0	5	0	20	3
04:30 PM to 04:45 PM		0	0	46	3	1	0	0	1	0	42	0	14	60	0	10	0	5	1	16	3
04:45 PM to 05:00 PM		0	1	60	5	4	0	0	1	0	35	0	10	73	0	1	0	7	0	10	0
05:00 PM to 05:15 PM		0	0	68	9	0	0	0	0	1	61	0	19	58	3	2	0	8	0	10	7
05:15 PM to 05:30 PM		0	0	52	11	1	0	1	0	1	70	0	37	65	0	3	0	9	3	13	1
05:30 PM to 05:45 PM		1	1	64	5	0	0	0	0	0	27	0	25	80	0	2	0	3	2	21	3
05:45 PM to 06:00 PM		0	0	69	5	0	0	0	0	1	34	0	17	68	0	2	0	3	2	22	2
06:00 PM to 06:15 PM		0	0	67	2	0	0	0	0	0	8	0	24	46	6	2	0	3	2	11	1
06:15 PM to 06:30 PM		0	1	80	2	2	0	0	2	0	1	0	16	59	0	4	0	3	0	14	1
06:30 PM to 06:45 PM		0	0	72	4	1	0	1	1	1	10	0	9	52	1	5	0	6	3	19	0
06:45 PM to 07:00 PM		0	1	64	5	0	0	1	0	2	16	0	18	57	2	3	0	5	3	9	0
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	285				1	4				3	372				9	96				13
Peak Hour Factor (PHF)	Overall	0.25	0.25	0.92	0.68	0.93	n/a	0.25	n/a	0.75	0.50	n/a	0.66	0.85	0.25	0.89	n/a	0.64	0.58	0.75	0.89



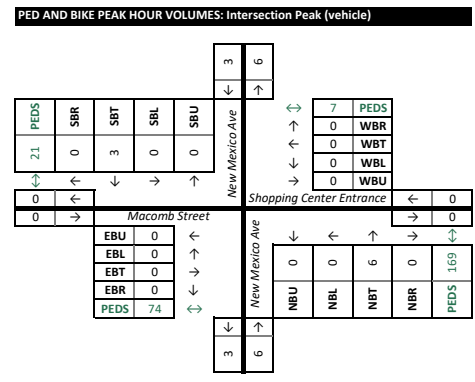
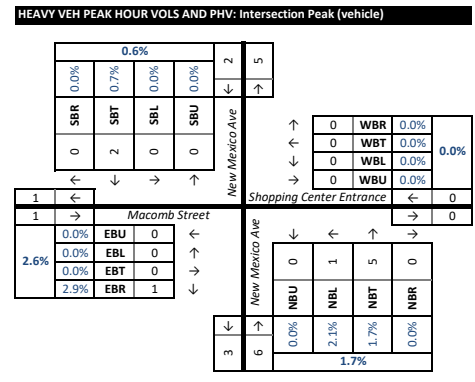
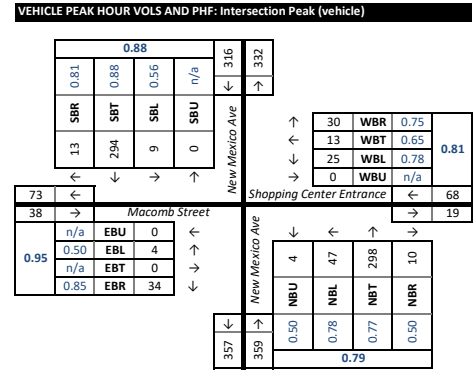
DATA COLLECTION NOTES :

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & Shopping Center Entrance/Macomb Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	New Mexico Ave				Shopping Center Entrance				New Mexico Ave				Macomb Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	6	64	3	0	0	7	5	16	31	0	12	65	5	24	0	3	2	12	0	
04:15 PM to 04:30 PM		0	2	71	4	2	0	6	2	18	31	1	6	45	1	23	0	3	1	5	4	
04:30 PM to 04:45 PM		0	1	57	7	2	0	12	6	17	30	0	12	60	3	21	0	4	0	10	3	
04:45 PM to 05:00 PM		0	7	60	4	2	0	6	6	10	45	0	9	55	1	19	0	5	1	14	4	
05:00 PM to 05:15 PM		0	1	71	3	1	0	8	0	10	60	1	11	72	1	27	0	0	0	10	10	
05:15 PM to 05:30 PM		0	2	58	4	0	0	3	3	4	67	2	13	97	2	25	0	2	0	8	2	
05:30 PM to 05:45 PM		0	4	84	2	3	0	7	5	7	21	0	15	64	2	12	0	0	0	10	4	
05:45 PM to 06:00 PM		0	2	81	4	3	0	7	5	9	21	1	8	65	5	10	0	2	0	6	5	
06:00 PM to 06:15 PM		0	4	69	1	0	0	7	3	10	21	0	8	67	1	3	0	0	1	11	2	
06:15 PM to 06:30 PM		0	1	83	3	0	0	5	4	6	10	0	9	66	1	5	0	1	0	14	9	
06:30 PM to 06:45 PM		0	0	75	1	0	0	4	0	7	19	0	10	56	4	6	0	1	0	9	3	
06:45 PM to 07:00 PM		0	1	80	2	2	0	2	1	2	13	0	9	65	2	7	0	1	0	8	3	
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		316				68				359				74								
05:00 PM to 06:00 PM		0	9	294	13	7	0	25	13	30	169	4	47	298	10	74	0	4	0	34	21	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right
		0.98	n/a	0.56	0.88	0.81	0.88	n/a	0.78	0.65	0.75	0.81	0.50	0.78	0.77	0.50	0.79	n/a	0.50	n/a	0.85	0.95



DATA COLLECTION NOTES:

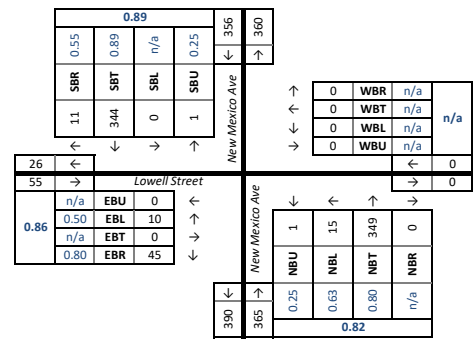
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

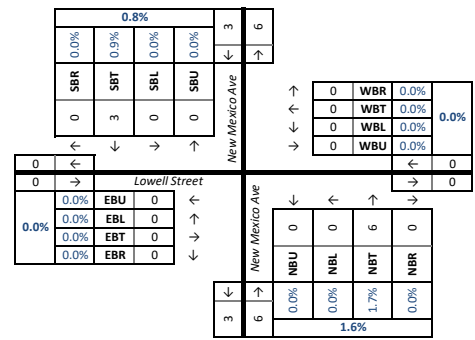
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & /Lowell Street																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	New Mexico Ave				New Mexico Ave				New Mexico Ave				Lowell Street							
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right				
04:00 PM to 04:15 PM		0	0	76	7	0	0	0	0	0	0	78	0	4	0	4	0	9	0		
04:15 PM to 04:30 PM		1	0	80	2	3	0	0	0	0	0	5	52	0	3	0	1	0	10	2	
04:30 PM to 04:45 PM		0	0	75	4	1	0	0	0	0	0	4	72	0	7	0	3	0	11	4	
04:45 PM to 05:00 PM		0	0	76	5	1	0	0	0	0	0	4	61	0	9	0	4	0	14	4	
05:00 PM to 05:15 PM		0	0	87	3	1	0	0	0	0	0	6	83	0	10	0	2	0	10	5	
05:15 PM to 05:30 PM		0	0	71	0	0	0	0	0	0	0	2	109	0	7	0	5	0	11	2	
05:30 PM to 05:45 PM		0	0	97	3	1	0	0	0	0	1	4	81	0	5	0	1	0	14	3	
05:45 PM to 06:00 PM		1	0	89	5	0	0	0	0	0	0	3	76	0	3	0	2	0	10	3	
06:00 PM to 06:15 PM		0	0	85	2	2	0	0	0	0	0	7	73	0	9	0	3	0	10	2	
06:15 PM to 06:30 PM		0	0	99	2	1	0	0	0	0	0	9	75	0	1	0	2	0	10	7	
06:30 PM to 06:45 PM		0	0	87	1	0	0	0	0	0	0	5	67	0	5	0	3	0	16	4	
06:45 PM to 07:00 PM		0	0	89	1	1	0	0	0	0	0	2	70	0	2	0	6	0	12	3	
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	356				0				365				55							
Peak Hour Factor (PHF)	Overall	0.25	n/a	0.89	0.55	0.89	n/a	n/a	n/a	n/a	n/a	0.25	0.63	0.80	n/a	0.82	n/a	0.50	n/a	0.80	0.86
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
Roadway:	New Mexico Ave	New Mexico Ave				New Mexico Ave				Lowell Street											
Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0		
04:15 PM to 04:30 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0		
04:45 PM to 05:00 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0		
05:15 PM to 05:30 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:30 PM to 05:45 PM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
06:00 PM to 06:15 PM		0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0		
06:15 PM to 06:30 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	3				0				6				0							
Heavy Vehicle % (PHV)		0.0%	0.0%	0.9%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)	04:00 PM to 05:00 PM	4				0				7				2							
Heavy Vehicle % (PHV)		0.0%	0.0%	1.3%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	2.5%	0.0%	16.7%	0.0%	0.0%	3.6%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
Roadway:	New Mexico Ave	New Mexico Ave				New Mexico Ave				Lowell Street											
Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
04:15 PM to 04:30 PM		0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
04:30 PM to 04:45 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
04:45 PM to 05:00 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
05:15 PM to 05:30 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:30 PM to 05:45 PM		0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	4				0				2				2							
INT. PEAK HR (BIKES)	04:00 PM to 05:00 PM	5				0				5				1							

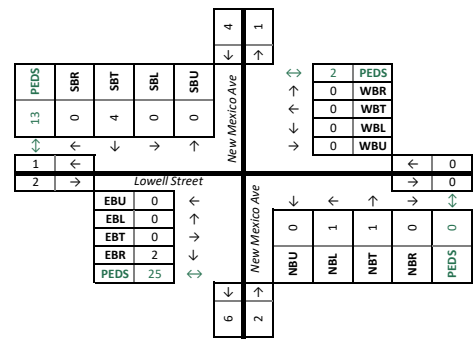
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

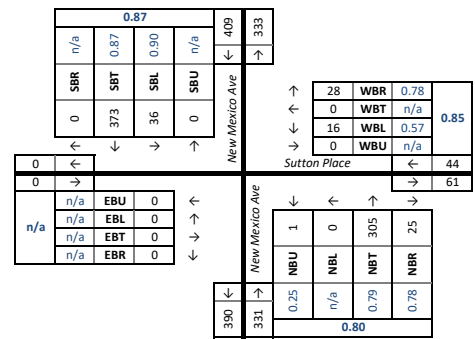
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

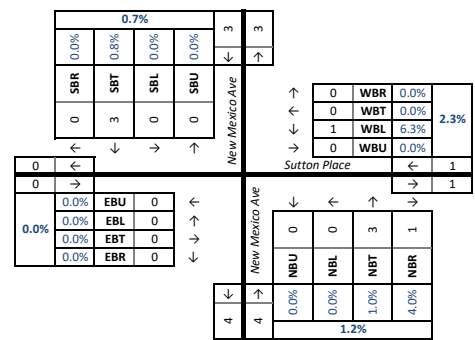
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & Sutton Place/																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	New Mexico Ave				Sutton Place				New Mexico Ave												
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
04:00 PM to 04:15 PM		0	8	78	0	0	0	2	0	9	30	0	0	68	4	1	0	0	0	0	0	
04:15 PM to 04:30 PM		0	8	89	0	0	0	3	0	5	10	0	0	57	5	0	0	0	0	0	0	
04:30 PM to 04:45 PM		0	9	70	0	2	1	4	0	7	16	0	0	54	4	0	0	0	0	0	0	
04:45 PM to 05:00 PM		0	7	81	0	3	0	5	0	8	17	0	0	54	5	0	0	0	0	0	0	
05:00 PM to 05:15 PM		0	9	98	0	2	0	2	0	6	26	1	0	74	6	0	0	0	0	0	0	
05:15 PM to 05:30 PM		0	9	76	0	0	0	7	0	5	29	0	0	77	6	0	0	0	0	0	0	
05:30 PM to 05:45 PM		0	10	107	0	1	0	3	0	8	25	0	0	73	5	0	0	0	0	0	0	
05:45 PM to 06:00 PM		0	8	92	0	0	0	4	0	9	22	0	0	61	8	0	0	0	0	0	0	
06:00 PM to 06:15 PM		0	11	84	0	4	0	2	0	7	19	0	0	76	8	0	0	0	0	0	0	
06:15 PM to 06:30 PM		0	6	106	0	0	0	5	0	11	11	0	0	69	5	0	0	0	0	0	0	
06:30 PM to 06:45 PM		0	7	95	0	0	0	7	0	4	10	0	0	69	9	0	0	0	0	0	0	
06:45 PM to 07:00 PM		0	9	91	0	2	0	2	0	7	27	0	0	66	7	0	0	0	0	0	0	
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		409				44				331				0								
05:00 PM to 06:00 PM		0	36	373	0	3	0	16	0	28	102	1	0	305	25	0	0	0	0	0	0	0
Peak Hour Factor (PHF)		Overall 0.95				SB 0.87				WB 0.85				NB 0.80								
		n/a	U	L	Thru	Right	n/a	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		n/a	0.90	0.87	n/a	0.87	n/a	0.57	n/a	0.78	0.85	0.25	n/a	0.79	0.78	0.80	n/a	n/a	n/a	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound								
Direction:		New Mexico Ave				Sutton Place				New Mexico Ave												
Roadway:		New Mexico Ave				Sutton Place				New Mexico Ave												
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
04:15 PM to 04:30 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
04:30 PM to 04:45 PM		0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0		
04:45 PM to 05:00 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0		
05:15 PM to 05:30 PM		0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0		
05:30 PM to 05:45 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
06:00 PM to 06:15 PM		0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0		
06:15 PM to 06:30 PM		0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		3				1				4				0								
05:00 PM to 06:00 PM		0	0	3	0	0	0	1	0	0	0	0	0	3	1	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%				0.7%				2.3%				0.0%								
		0.0%	0.0%	0.8%	0.0%	0.7%	0.0%	6.3%	0.0%	0.0%	2.3%	0.0%	0.0%	1.0%	4.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		5				1				5				0								
04:15 PM to 05:15 PM		0	0	5	0	0	0	0	0	1	0	0	0	4	1	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%				1.3%				2.4%				1.9%								
		0.0%	0.0%	1.5%	0.0%	1.3%	0.0%	0.0%	0.0%	3.8%	2.4%	0.0%	0.0%	1.7%	5.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BICYCLES		Southbound				Westbound				Northbound				Eastbound								
Direction:		New Mexico Ave				Sutton Place				New Mexico Ave												
Roadway:		New Mexico Ave				Sutton Place				New Mexico Ave												
Movement:		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
04:15 PM to 04:30 PM		0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0		
04:30 PM to 04:45 PM		0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0		
04:45 PM to 05:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		
05:15 PM to 05:30 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
05:30 PM to 05:45 PM		0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0		
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0		
06:00 PM to 06:15 PM		0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		4				0				8				0								
05:00 PM to 06:00 PM		0	0	4	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		8				0				6				0								
05:15 PM to 06:15 PM		0	2	6	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



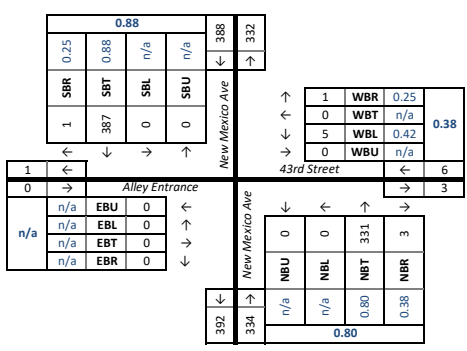
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

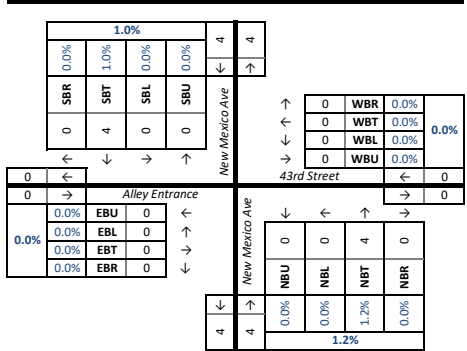
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & 43rd Street/Alley Entrance																											
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound															
	Roadway:	New Mexico Ave				43rd Street				New Mexico Ave				Alley Entrance															
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds								
04:00 PM to 04:15 PM		1	2	77	0	0	0	0	2	16	0	0	68	0	0	1	0	0	0	1									
04:15 PM to 04:30 PM		0	1	91	0	0	0	2	0	1	9	0	0	60	0	1	0	0	0	2									
04:30 PM to 04:45 PM		0	1	73	0	0	0	3	0	2	14	0	0	56	0	1	0	0	0	0									
04:45 PM to 05:00 PM		0	1	84	1	0	0	2	0	0	10	0	0	59	1	2	0	0	0	1									
05:00 PM to 05:15 PM		0	0	99	0	0	0	3	0	1	25	0	0	80	0	2	0	0	0	6									
05:15 PM to 05:30 PM		0	0	83	0	0	0	1	0	0	29	0	0	103	1	1	0	0	0	0									
05:30 PM to 05:45 PM		0	0	110	0	0	0	0	0	0	16	0	0	78	0	2	0	0	0	4									
05:45 PM to 06:00 PM		0	0	95	1	0	0	1	0	0	20	0	0	70	2	3	0	0	0	2									
06:00 PM to 06:15 PM		0	1	86	0	0	0	0	0	1	11	0	0	83	0	0	0	0	0	0									
06:15 PM to 06:30 PM		0	0	111	0	0	0	0	0	0	9	0	0	74	0	0	0	0	0	5									
06:30 PM to 06:45 PM		0	0	102	0	0	0	0	0	0	7	0	1	79	0	0	0	0	0	2									
06:45 PM to 07:00 PM		0	0	93	0	0	0	0	0	0	17	0	0	73	0	1	0	0	0	3									
07:00 PM to 07:15 PM																													
07:15 PM to 07:30 PM																													
07:30 PM to 07:45 PM																													
07:45 PM to 08:00 PM																													
08:00 PM to 08:15 PM																													
08:15 PM to 08:30 PM																													
08:30 PM to 08:45 PM																													
08:45 PM to 09:00 PM																													
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	388				6				90				334				8				0				12			
Peak Hour Factor (PHF)	Overall	0.97				n/a				0.38				n/a				0.80				n/a				n/a			
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound															
	Roadway:	New Mexico Ave				43rd Street				New Mexico Ave				Alley Entrance															
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right												
04:00 PM to 04:15 PM		0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
04:15 PM to 04:30 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
04:30 PM to 04:45 PM		0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0									
04:45 PM to 05:00 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
05:15 PM to 05:30 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
05:30 PM to 05:45 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
06:00 PM to 06:15 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
06:15 PM to 06:30 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
06:45 PM to 07:00 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
07:00 PM to 07:15 PM																													
07:15 PM to 07:30 PM																													
07:30 PM to 07:45 PM																													
07:45 PM to 08:00 PM																													
08:00 PM to 08:15 PM																													
08:15 PM to 08:30 PM																													
08:30 PM to 08:45 PM																													
08:45 PM to 09:00 PM																													
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	4				0				4				0															
Heavy Vehicle % (PHV)		0.0%	0.0%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%							
INT. PEAK HR (HV ONLY)	04:15 PM to 05:15 PM	4				1				5				0															
Heavy Vehicle % (PHV)		0.0%	0.0%	1.2%	0.0%	1.1%	0.0%	10.0%	0.0%	0.0%	7.1%	0.0%	0.0%	2.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%								
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound															
	Roadway:	New Mexico Ave				43rd Street				New Mexico Ave				Alley Entrance															
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right												
04:00 PM to 04:15 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
04:15 PM to 04:30 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
04:30 PM to 04:45 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
04:45 PM to 05:00 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
05:00 PM to 05:15 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
05:15 PM to 05:30 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0									
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
06:45 PM to 07:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
07:00 PM to 07:15 PM																													
07:15 PM to 07:30 PM																													
07:30 PM to 07:45 PM																													
07:45 PM to 08:00 PM																													
08:00 PM to 08:15 PM																													
08:15 PM to 08:30 PM																													
08:30 PM to 08:45 PM																													
08:45 PM to 09:00 PM																													
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	3				0				5				0															
INT. PEAK HR (BIKES)	04:30 PM to 05:30 PM	5				0				6				0															

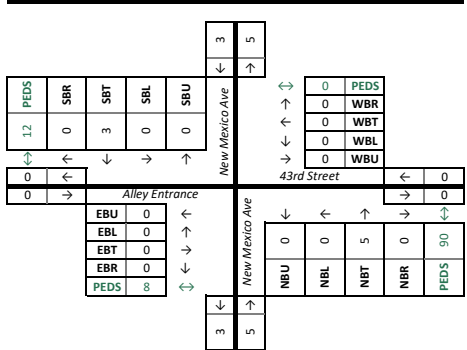
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

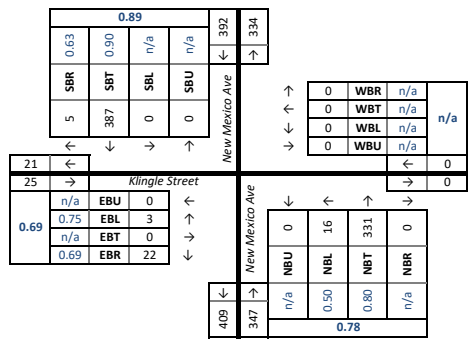
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

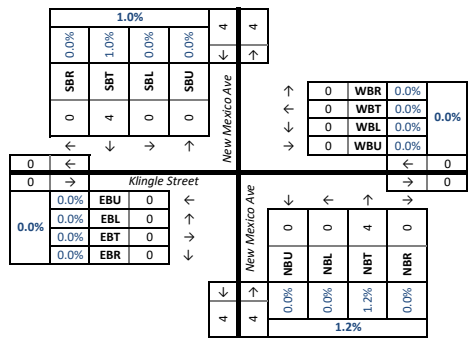
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & /Klinge Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	New Mexico Ave				Klinge Street				New Mexico Ave				Klinge Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM	to 04:15 PM	1	0	74	2	1	0	0	0	0	0	0	4	65	0	0	0	2	0	7	0	
04:15 PM	to 04:30 PM	0	0	90	3	0	0	0	0	0	0	0	1	58	0	0	0	2	0	5	0	
04:30 PM	to 04:45 PM	0	0	75	1	0	0	0	0	0	0	0	1	54	0	0	0	2	0	6	0	
04:45 PM	to 05:00 PM	0	0	84	2	3	0	0	0	0	0	0	5	59	0	0	0	1	0	4	1	
05:00 PM	to 05:15 PM	0	0	101	1	0	0	0	0	0	0	0	1	80	0	0	0	0	0	7	2	
05:15 PM	to 05:30 PM	0	0	83	1	2	0	0	0	0	0	0	8	103	0	0	0	1	0	8	3	
05:30 PM	to 05:45 PM	0	0	108	2	3	0	0	0	0	0	0	4	77	0	0	0	1	0	5	0	
05:45 PM	to 06:00 PM	0	0	95	1	2	0	0	0	0	0	0	3	71	0	0	0	1	0	2	3	
06:00 PM	to 06:15 PM	0	0	85	1	1	0	0	0	0	0	0	4	82	0	0	0	1	0	4	0	
06:15 PM	to 06:30 PM	0	0	111	0	0	0	0	0	0	0	0	4	74	0	0	0	0	0	1	8	
06:30 PM	to 06:45 PM	0	0	101	1	1	0	0	0	0	0	0	2	80	0	0	0	0	0	3	0	
06:45 PM	to 07:00 PM	0	0	90	3	1	0	0	0	0	0	0	2	73	0	0	0	0	0	2	8	
07:00 PM	to 07:15 PM																					
07:15 PM	to 07:30 PM																					
07:30 PM	to 07:45 PM																					
07:45 PM	to 08:00 PM																					
08:00 PM	to 08:15 PM																					
08:15 PM	to 08:30 PM																					
08:30 PM	to 08:45 PM																					
08:45 PM	to 09:00 PM																					
INT. PEAK HR (ALL VEH)		392				0				347				25								
05:00 PM	to 06:00 PM	0	0	387	5	7	0	0	0	0	0	0	16	331	0	0	0	3	0	22	8	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		0.94	n/a	n/a	0.90	0.63	0.89	n/a	n/a	n/a	n/a	n/a	n/a	0.50	0.80	n/a	0.78	n/a	0.75	n/a	0.69	0.69
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	New Mexico Ave				Klinge Street				New Mexico Ave				Klinge Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM	to 04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1					
04:15 PM	to 04:30 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0					
04:30 PM	to 04:45 PM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0					
04:45 PM	to 05:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0					
05:00 PM	to 05:15 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0					
05:15 PM	to 05:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:30 PM	to 05:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0					
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0					
06:00 PM	to 06:15 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0					
06:15 PM	to 06:30 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0					
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:45 PM	to 07:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0					
07:00 PM	to 07:15 PM																					
07:15 PM	to 07:30 PM																					
07:30 PM	to 07:45 PM																					
07:45 PM	to 08:00 PM																					
08:00 PM	to 08:15 PM																					
08:15 PM	to 08:30 PM																					
08:30 PM	to 08:45 PM																					
08:45 PM	to 09:00 PM																					
INT. PEAK HR (ALL VEH)		4				0				4				0								
05:00 PM	to 06:00 PM	0	0	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0			
Heavy Vehicle % (PHV)		0.0%	0.0%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
INT. PEAK HR (HV ONLY)		5				0				5				0								
04:15 PM	to 05:15 PM	0	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0					
Heavy Vehicle % (PHV)		0.0%	0.0%	1.4%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	New Mexico Ave				Klinge Street				New Mexico Ave				Klinge Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM	to 04:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0					
04:15 PM	to 04:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:30 PM	to 04:45 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0					
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0					
05:00 PM	to 05:15 PM	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0					
05:15 PM	to 05:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0					
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0					
05:45 PM	to 06:00 PM	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0					
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0					
06:30 PM	to 06:45 PM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0					
06:45 PM	to 07:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0					
07:00 PM	to 07:15 PM																					
07:15 PM	to 07:30 PM																					
07:30 PM	to 07:45 PM																					
07:45 PM	to 08:00 PM																					
08:00 PM	to 08:15 PM																					
08:15 PM	to 08:30 PM																					
08:30 PM	to 08:45 PM																					
08:45 PM	to 09:00 PM																					
INT. PEAK HR (ALL VEH)		6				0				6				1								
05:00 PM	to 06:00 PM	0	0	6	0	0	0	0	0	0	0	6	0	0	1	0	0					
INT. PEAK HR (BIKES)		6				0				6				1								
05:00 PM	to 06:00 PM	0	0	6	0	0	0	0	0	0	0	6	0	0	1	0	0					

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



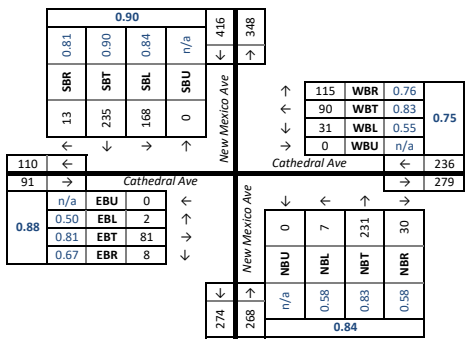
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

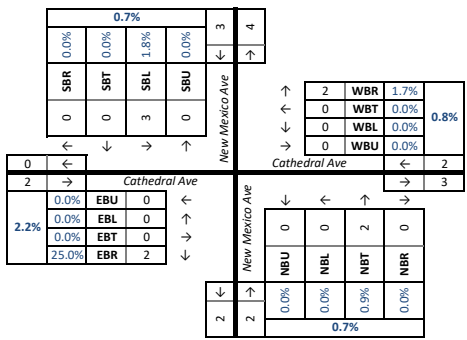
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. New Mexico Ave & Cathedral Ave																							
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound											
	Roadway:	New Mexico Ave				Cathedral Ave				New Mexico Ave				Cathedral Ave											
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds				
04:00 PM to 04:15 PM		0	40	37	0	0	0	5	21	19	5	0	3	47	2	3	0	3	19	1	0				
04:15 PM to 04:30 PM		0	49	46	1	2	0	8	33	12	3	0	1	47	6	1	0	0	25	3	0				
04:30 PM to 04:45 PM		0	40	43	4	6	0	10	20	25	5	0	1	30	13	0	0	0	26	1	2				
04:45 PM to 05:00 PM		0	39	42	2	0	0	3	11	13	7	0	0	49	8	0	0	2	27	2	1				
05:00 PM to 05:15 PM		0	40	65	4	1	0	9	24	28	13	0	0	55	4	1	0	1	19	2	2				
05:15 PM to 05:30 PM		0	40	51	4	5	0	14	27	38	14	0	3	70	7	3	0	1	15	3	0				
05:30 PM to 05:45 PM		0	50	63	3	6	0	3	19	29	13	0	2	52	6	0	0	0	25	1	3				
05:45 PM to 06:00 PM		0	38	56	2	2	0	5	20	20	8	0	2	54	13	0	0	0	22	2	1				
06:00 PM to 06:15 PM		0	38	52	2	2	0	3	20	37	7	0	3	49	10	1	0	0	14	1	2				
06:15 PM to 06:30 PM		0	33	72	0	2	0	8	31	19	4	0	3	60	8	2	0	0	25	3	3				
06:30 PM to 06:45 PM		0	49	53	4	0	0	7	16	22	1	0	1	57	6	0	0	3	15	0	2				
06:45 PM to 07:00 PM		0	33	59	0	3	0	7	21	20	1	0	5	54	9	0	0	1	20	2	3				
07:00 PM to 07:15 PM																									
07:15 PM to 07:30 PM																									
07:30 PM to 07:45 PM																									
07:45 PM to 08:00 PM																									
08:00 PM to 08:15 PM																									
08:15 PM to 08:30 PM																									
08:30 PM to 08:45 PM																									
08:45 PM to 09:00 PM																									
INT. PEAK HR (ALL VEH)		416				236				268				91											
05:00 PM to 06:00 PM		0	168	235	13	14	0	31	90	115	48	0	7	231	30	4	0	2	81	8	6				
Peak Hour Factor (PHF)		0.93				0.75				0.84				0.88											
		n/a	U	L	Thru	Right	SB	n/a	U	L	Thru	Right	WB	n/a	U	L	Thru	Right	NB	n/a	U	L	Thru	Right	EB
HEAVY VEHICLES (FHWA 4+)		Southbound				Westbound				Northbound				Eastbound											
ALL VEHICLES	Direction:	New Mexico Ave				Cathedral Ave				New Mexico Ave				Cathedral Ave											
	Roadway:	New Mexico Ave				Cathedral Ave				New Mexico Ave				Cathedral Ave											
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right								
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	1	0								
04:15 PM to 04:30 PM		0	1	0	0	0	1	2	0	0	0	1	0	0	0	0	0								
04:30 PM to 04:45 PM		0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0								
04:45 PM to 05:00 PM		0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0								
05:00 PM to 05:15 PM		0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1								
05:15 PM to 05:30 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1								
05:30 PM to 05:45 PM		0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0								
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0								
06:00 PM to 06:15 PM		0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0								
06:15 PM to 06:30 PM		0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	0								
06:30 PM to 06:45 PM		0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0								
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
07:00 PM to 07:15 PM																									
07:15 PM to 07:30 PM																									
07:30 PM to 07:45 PM																									
07:45 PM to 08:00 PM																									
08:00 PM to 08:15 PM																									
08:15 PM to 08:30 PM																									
08:30 PM to 08:45 PM																									
08:45 PM to 09:00 PM																									
INT. PEAK HR (ALL VEH)		3				2				2				2											
05:00 PM to 06:00 PM		0	3	0	0	0	0	0	2	0	0	2	0	0	0	0	2	0	0	0	2	2.2%			
Heavy Vehicle % (PHV)		0.0%				0.0%				0.9%				25.0%											
		0.0%	1.8%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	1.7%	0.8%	0.0%	0.0%	0.9%	0.0%	0.7%	0.0%	0.0%	0.0%	25.0%	2.2%				
INT. PEAK HR (HV ONLY)		5				4				5				1											
04:00 PM to 05:00 PM		0	3	2	0	0	1	2	1	0	0	4	1	0	0	1	0	0	0	1	0	0			
Heavy Vehicle % (PHV)		0.0%				3.8%				2.3%				1.0%											
		0.0%	1.8%	1.2%	0.0%	1.5%	0.0%	3.8%	2.4%	1.4%	2.2%	0.0%	0.0%	2.3%	3.4%	2.4%	0.0%	0.0%	1.0%	0.0%	0.9%				
BICYCLES		Southbound				Westbound				Northbound				Eastbound											
ALL VEHICLES	Direction:	New Mexico Ave				Cathedral Ave				New Mexico Ave				Cathedral Ave											
	Roadway:	New Mexico Ave				Cathedral Ave				New Mexico Ave				Cathedral Ave											
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right								
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0								
04:15 PM to 04:30 PM		0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0								
04:30 PM to 04:45 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0								
04:45 PM to 05:00 PM		0	2	2	0	0	0	0	1	0	0	1	0	0	0	0	0								
05:00 PM to 05:15 PM		0	0	2	0	0	1	0	0	0	0	2	2	0	0	0	0								
05:15 PM to 05:30 PM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0								
05:30 PM to 05:45 PM		0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0								
05:45 PM to 06:00 PM		0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0								
06:00 PM to 06:15 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0								
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0								
06:45 PM to 07:00 PM		0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0								
07:00 PM to 07:15 PM																									
07:15 PM to 07:30 PM																									
07:30 PM to 07:45 PM																									
07:45 PM to 08:00 PM																									
08:00 PM to 08:15 PM																									
08:15 PM to 08:30 PM																									
08:30 PM to 08:45 PM																									
08:45 PM to 09:00 PM																									
INT. PEAK HR (ALL VEH)		6				1				14				0											
05:00 PM to 06:00 PM		0	0	6	0	0	1	0	0	0	0	11	3	0	0	0	0	0	0	0	0	0			
INT. PEAK HR (BIKES)		9				2				12				0											
04:45 PM to 05:45 PM		0	2	7	0	0	1	0	1	0	0	10	2	0	0	0	0	0	0	0	0	0			

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



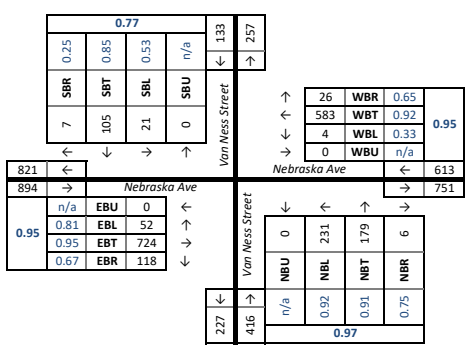
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

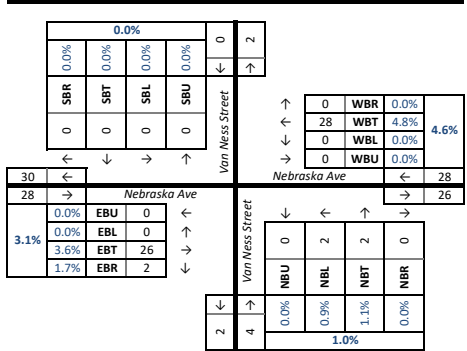
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:45 PM to 05:45 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Van Ness Street & Nebraska Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Van Ness Street				Nebraska Ave				Van Ness Street				Nebraska Ave							
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
04:00 PM to 04:15 PM		0	5	22	0	0	0	147	8	0	0	58	44	2	1	0	11	202	37	4	
04:15 PM to 04:30 PM		0	7	32	1	3	0	0	116	8	6	0	61	43	1	9	0	9	174	40	2
04:30 PM to 04:45 PM		0	5	16	2	5	0	0	123	4	0	0	40	34	1	6	0	5	175	32	5
04:45 PM to 05:00 PM		0	4	27	0	3	0	0	146	5	0	0	63	43	1	4	0	16	171	22	1
05:00 PM to 05:15 PM		0	2	18	0	5	0	3	150	9	1	0	59	41	1	7	0	14	181	22	9
05:15 PM to 05:30 PM		0	5	31	7	7	0	0	159	2	7	0	59	46	2	4	0	8	181	44	6
05:30 PM to 05:45 PM		0	10	29	0	11	0	1	128	10	3	0	50	49	2	10	0	14	191	30	7
05:45 PM to 06:00 PM		0	6	27	0	5	0	2	135	10	5	0	52	55	3	6	0	11	159	23	2
06:00 PM to 06:15 PM		0	1	30	1	8	0	1	142	9	2	0	42	44	0	3	0	14	195	30	0
06:15 PM to 06:30 PM		0	5	28	1	0	0	1	125	9	5	0	52	40	1	14	0	9	167	29	12
06:30 PM to 06:45 PM		0	2	20	0	4	0	1	149	6	0	0	47	31	1	2	0	2	187	25	1
06:45 PM to 07:00 PM		0	9	19	0	0	0	0	114	7	0	0	27	16	0	4	0	2	160	32	1
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		133				613				416				894							
04:45 PM to 05:45 PM		0	21	105	7	26	0	4	583	26	11	0	231	179	6	25	0	52	724	118	23
Peak Hour Factor (PHF)		Overall 0.94				n/a 0.53 0.85 0.25 0.77				n/a 0.33 0.92 0.65 0.95				n/a 0.92 0.91 0.75 0.97							
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Van Ness Street				Nebraska Ave				Van Ness Street				Nebraska Ave							
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
04:00 PM to 04:15 PM		0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	7	0		
04:15 PM to 04:30 PM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	9	0		
04:30 PM to 04:45 PM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	10	1		
04:45 PM to 05:00 PM		0	0	0	0	0	0	10	0	0	1	1	0	0	0	0	0	5	0		
05:00 PM to 05:15 PM		0	0	0	0	0	0	6	0	0	1	1	0	0	0	0	0	5	0		
05:15 PM to 05:30 PM		0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	9	1		
05:30 PM to 05:45 PM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7	1		
05:45 PM to 06:00 PM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7	0		
06:00 PM to 06:15 PM		0	0	1	0	0	0	7	0	0	0	0	0	0	0	0	0	9	0		
06:15 PM to 06:30 PM		0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	8	1		
06:30 PM to 06:45 PM		0	0	1	0	0	0	4	0	0	1	0	0	0	0	0	0	6	0		
06:45 PM to 07:00 PM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	3	0		
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		0				28				2				28							
04:45 PM to 05:45 PM		0	0	0	0	0	0	28	0	0	2	2	0	0	0	26	2				
Heavy Vehicle % (PHV)		0.0%				0.0%				0.9%				3.6%							
04:00 PM to 05:00 PM		0	0	0	0	0	0	30	0	0	1	1	0	0	0	31	1				
Heavy Vehicle % (PHV)		0.0%				5.6%				0.6%				4.3%							
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Van Ness Street				Nebraska Ave				Van Ness Street				Nebraska Ave							
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
04:00 PM to 04:15 PM		0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	3	2			
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1			
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
04:45 PM to 05:00 PM		0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0			
05:15 PM to 05:30 PM		0	0	3	0	0	0	1	0	0	0	4	1	0	1	0	1	1			
05:30 PM to 05:45 PM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
05:45 PM to 06:00 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:00 PM to 06:15 PM		0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0			
06:15 PM to 06:30 PM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1			
06:30 PM to 06:45 PM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0			
06:45 PM to 07:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		4				3				5				4							
04:45 PM to 05:45 PM		0	0	4	0	0	0	3	0	0	0	4	1	0	1	2	1				
INT. PEAK HR (BIKES)		4				2				5				6							
04:30 PM to 05:30 PM		0	0	4	0	0	0	2	0	0	0	4	1	0	1	3	2				

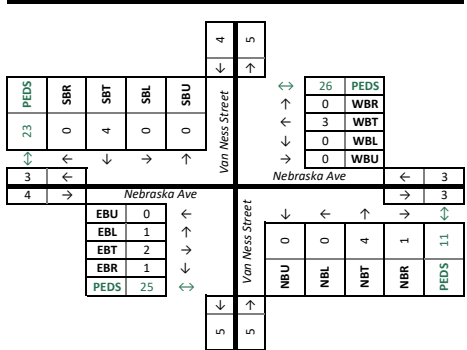
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

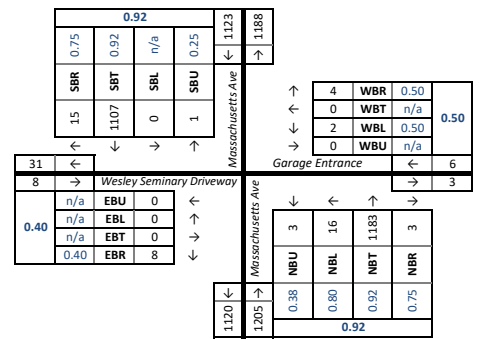
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Massachusetts Ave & Garage Entrance/Wesley Seminary Driveway																		
ALL VEHICLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound Garage Entrance				Northbound Massachusetts Ave				Eastbound Wesley Seminary Driveway						
		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right			
		04:00 PM to 04:15 PM	0	0	176	3	0	0	0	0	7	1	5	259	0	1	0	0	0	1
04:15 PM to 04:30 PM	0	0	176	1	0	0	0	0	1	5	5	256	0	0	0	2	0	11	11	
04:30 PM to 04:45 PM	0	0	184	5	0	0	0	0	1	9	2	2	283	0	0	1	0	7	12	
04:45 PM to 05:00 PM	0	0	202	2	0	0	0	0	1	7	2	5	259	0	0	0	0	4	4	
05:00 PM to 05:15 PM	0	0	231	8	0	0	1	0	5	6	1	3	285	0	0	0	0	4	8	
05:15 PM to 05:30 PM	0	0	302	3	0	0	0	0	1	3	1	5	282	1	0	0	0	5	15	
05:30 PM to 05:45 PM	0	0	268	5	0	0	0	0	1	9	2	2	322	0	0	0	0	1	10	
05:45 PM to 06:00 PM	1	0	278	3	0	0	1	0	0	5	0	5	285	1	0	0	0	0	7	
06:00 PM to 06:15 PM	0	0	259	4	0	0	1	0	2	3	0	4	294	1	0	0	0	2	9	
06:15 PM to 06:30 PM	0	0	220	5	0	0	1	0	0	2	0	8	257	0	0	1	0	3	12	
06:30 PM to 06:45 PM	1	0	198	1	0	0	0	0	0	3	1	0	264	0	0	0	0	0	10	
06:45 PM to 07:00 PM	0	0	205	2	0	0	0	0	0	3	0	0	268	0	0	0	0	2	5	
07:00 PM to 07:15 PM																				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)																				
05:15 PM to 06:15 PM			1123						6				1205					8	41	
Peak Hour Factor (PHF)	Overall	0.25	n/a	0.92	0.75	0.92	n/a	0.50	n/a	0.50	0.38	0.80	0.92	0.75	0.92	n/a	n/a	n/a	0.40	0.40

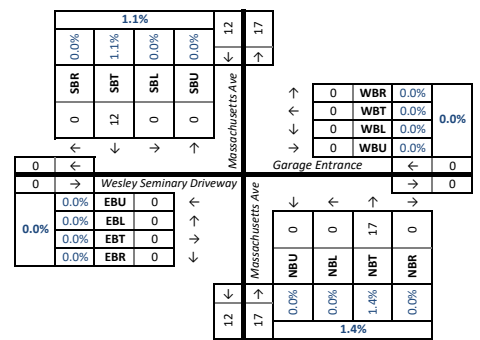
HEAVY VEHICLES (FHWA 4+)	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound Garage Entrance				Northbound Massachusetts Ave				Eastbound Wesley Seminary Driveway					
		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right		
		04:00 PM to 04:15 PM	0	0	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0
04:15 PM to 04:30 PM	0	0	7	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
04:30 PM to 04:45 PM	0	0	2	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
04:45 PM to 05:00 PM	0	0	4	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
05:00 PM to 05:15 PM	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
05:15 PM to 05:30 PM	0	0	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
05:30 PM to 05:45 PM	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
05:45 PM to 06:00 PM	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
06:00 PM to 06:15 PM	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
06:15 PM to 06:30 PM	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
06:30 PM to 06:45 PM	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
06:45 PM to 07:00 PM	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																			
07:15 PM to 07:30 PM																			
07:30 PM to 07:45 PM																			
07:45 PM to 08:00 PM																			
08:00 PM to 08:15 PM																			
08:15 PM to 08:30 PM																			
08:30 PM to 08:45 PM																			
08:45 PM to 09:00 PM																			
INT. PEAK HR (ALL VEH)																			
05:15 PM to 06:15 PM			12						0				17					0	
Heavy Vehicle % (PHV)		0.0%	0.0%	1.1%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)																			
04:00 PM to 05:00 PM			20						0				24					0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	9.1%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

BICYCLES	Direction: Roadway: Movement:	Southbound Massachusetts Ave				Westbound Garage Entrance				Northbound Massachusetts Ave				Eastbound Wesley Seminary Driveway					
		U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right		
		04:00 PM to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM to 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
05:00 PM to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
05:15 PM to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
05:30 PM to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
05:45 PM to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:00 PM to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:45 PM to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																			
07:15 PM to 07:30 PM																			
07:30 PM to 07:45 PM																			
07:45 PM to 08:00 PM																			
08:00 PM to 08:15 PM																			
08:15 PM to 08:30 PM																			
08:30 PM to 08:45 PM																			
08:45 PM to 09:00 PM																			
INT. PEAK HR (ALL VEH)																			
05:15 PM to 06:15 PM			0						0				3					0	
INT. PEAK HR (BIKES)																			
04:45 PM to 05:45 PM			0						0				5					0	

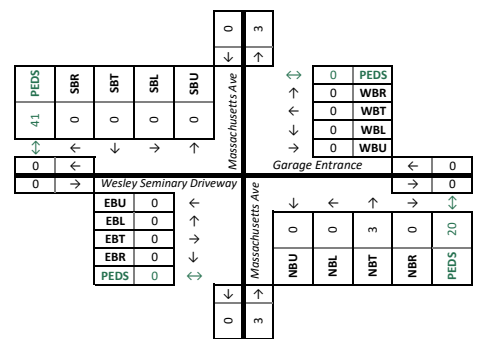
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

HOURLY COMPARISON -- AM PEAK

PHF CALCULATION (ENTIRE SYSTEM)

		Total	15-Min			
4:00 PM to	5:00 PM	49997	4:00 PM	12921	0	0
4:15 PM to	5:15 PM	50747	4:15 PM	12313	0	0
4:30 PM to	5:30 PM	53137	4:30 PM	12461	0	0
4:45 PM to	5:45 PM	55059	4:45 PM	12302	0	0
5:00 PM to	6:00 PM	56704	5:00 PM	13671	1	14703
5:15 PM to	6:15 PM	56672	5:15 PM	14703	0	0
5:30 PM to	6:30 PM	54748	5:30 PM	14383	0	0
5:45 PM to	6:45 PM	52491	5:45 PM	13947	0	0
6:00 PM to	7:00 PM	49934	6:00 PM	13639	0	0
6:15 PM to	7:15 PM	36295	6:15 PM	12779	0	0
6:30 PM to	7:30 PM	23516	6:30 PM	12126	0	0
6:45 PM to	7:45 PM	11390	6:45 PM	11390	0	0
7:00 PM to	8:00 PM	0	7:00 PM	0	0	0
7:15 PM to	8:15 PM	0	7:15 PM	0	0	0
7:30 PM to	8:30 PM	0	7:30 PM	0	0	0
7:45 PM to	8:45 PM	0	7:45 PM	0	0	0
8:00 PM to	9:00 PM	0	8:00 PM	0	0	0
SYSTEM PEAK			8:15 PM	0		
5:00 PM to	6:00 PM		8:30 PM	0		
			8:45 PM	0		

MAX
56704



Multimodal Turning Movement Count Report

PROJECT_SHORT_NAME | STUDY_PERIOD

Project Information

Project Name:	American University Data Collection		
Location:	Washington DC	Project Number:	3
Analysis Period:	STUDY_PERIOD	6:30 AM to 9:30 AM	System Peak Hour: 7:30 AM to 8:30 AM
Notes:			

Study Intersections

Intersection ID	Southbound	Westbound	Northbound	Eastbound	Count Date	Intersection Peak Hour
36	42nd Street		42nd Street	Warren St (South)	2/27/2020	8:00 AM to 9:00 AM
37	42nd Street		42nd Street	Warren St (North)	2/27/2020	8:00 AM to 9:00 AM
38	48th Street	Warren Street	48th Street		2/25/2020	8:15 AM to 9:15 AM
39	48th Street	Yuma Street	48th Street	Yuma Street	2/25/2020	8:15 AM to 9:15 AM
40	42nd Street	Albemarle Street	42nd Street	Albemarle Street	2/27/2020	7:45 AM to 8:45 AM
41		Nebraska Ave	Macomb Street	Nebraska Ave	2/25/2020	7:30 AM to 8:30 AM
42	Indian Lane	Nebraska Ave	Chain Bridge Road	Loughboro Road	2/25/2020	7:30 AM to 8:30 AM
43	First Driveway	Campus Drive	Concrete walk	Campus Drive	2/25/2020	8:30 AM to 9:30 AM
44	Ped Crossing	Campus Drive	Ped Crossing	Campus Drive	2/25/2020	6:30 AM to 7:30 AM
45	Campus Drive	Campus Drive	Dumpster Area		2/25/2020	8:30 AM to 9:30 AM
46	Loop	Campus Drive	Loop		2/25/2020	8:30 AM to 9:30 AM
47	Loop		Loop	Parking Lot	2/25/2020	8:15 AM to 9:15 AM
48	Loop	Access Road	South Exit		2/25/2020	8:15 AM to 9:15 AM
49	Loop	Emergency Access	Loop	Access to South Entrance	2/25/2020	7:15 AM to 8:15 AM
50	Drop off/Pick up Zone	Campus Drive		Campus Drive	2/25/2020	8:30 AM to 9:30 AM
51	Ward Circle	Nebraska Ave	Ward Circle	Ward Circle	2/26/2020	7:45 AM to 8:45 AM
52	Massachusetts Ave	Ward Circle	0	Ward Circle	2/26/2020	7:45 AM to 8:45 AM
53	Ward Circle	Ward Circle	Ward Circle	Nebraska Ave	2/26/2020	7:30 AM to 8:30 AM
54		Ward Circle	Massachusetts Ave	Ward Circle	2/26/2020	7:30 AM to 8:30 AM
191	Wisconsin Ave/North	Tenley Circle	Wisconsin Ave	Tenley Circle	2/27/2020	7:45 AM to 8:45 AM
192	Yuma Street	Tenley Circle		Tenley Circle	2/27/2020	7:45 AM to 8:45 AM
193	Tenley Circle		Tenley Circle	Nebraska Ave	2/27/2020	7:45 AM to 8:45 AM
55	SB Street	WB Ave	NB Street	EB Ave	1/1/1999	6:30 AM to 7:30 AM
56	SB Street	WB Ave	NB Street	EB Ave	1/1/1999	6:30 AM to 7:30 AM
57	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
58	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
59	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
60	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
61	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
62	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
63	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
64	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
65	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	6:30 AM to 7:30 AM
66	SB Street	WB Ave	NB Street	EB Ave	1/1/1999	6:30 AM to 7:30 AM

67

SB Street

WB Ave

NB Street

EB Ave

1/1/1999

6:30 AM to 7:30 AM

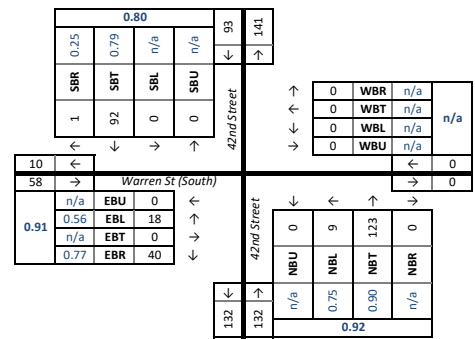
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Thursday, February 27, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

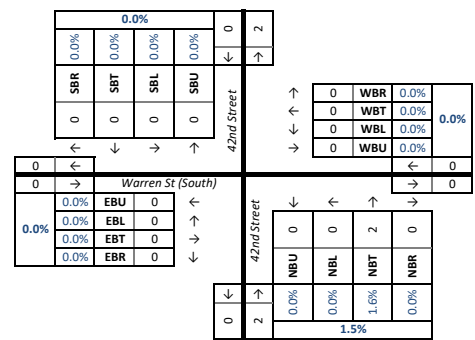
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. 42nd Street & /Warren St (South)																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	42nd Street				42nd Street				Warren St (South)				Warren St (South)								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	0	4	0	0	0	0	0	0	0	2	8	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	1	0	
07:00 AM to 07:15 AM		0	0	5	0	0	0	0	0	0	0	1	22	0	0	0	0	0	0	3	0	
07:15 AM to 07:30 AM		0	0	17	0	0	0	0	0	0	0	2	13	0	4	0	1	0	2	0	0	
07:30 AM to 07:45 AM		0	0	24	2	0	0	0	0	0	0	1	24	0	0	0	1	0	7	0	0	
07:45 AM to 08:00 AM		0	0	18	1	0	0	0	0	0	0	2	23	0	0	0	4	0	10	0	0	
08:00 AM to 08:15 AM		0	0	14	0	0	0	0	0	0	0	1	29	0	2	0	8	0	8	0	0	
08:15 AM to 08:30 AM		0	0	28	0	0	0	0	0	0	0	2	34	0	0	0	1	0	10	0	0	
08:30 AM to 08:45 AM		0	0	21	1	0	0	0	0	0	0	3	30	0	3	0	7	0	9	0	0	
08:45 AM to 09:00 AM		0	0	29	0	0	0	0	0	0	0	3	30	0	1	0	2	0	13	0	0	
09:00 AM to 09:15 AM		0	0	19	1	0	0	0	0	0	0	4	17	0	0	0	2	0	5	0	0	
09:15 AM to 09:30 AM		0	0	19	1	0	0	0	0	0	0	1	29	0	0	0	0	0	1	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		93				0				132				58								
08:00 AM to 09:00 AM		0	0	92	1	0	0	0	0	0	0	0	9	123	0	6	0	18	0	40	0	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		n/a	n/a	n/a	0.79	0.25	0.80	n/a	n/a	n/a	n/a	n/a	n/a	0.75	0.90	n/a	0.92	n/a	0.56	n/a	0.77	0.91
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	42nd Street				42nd Street				Warren St (South)				Warren St (South)								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				0				2				0								
08:00 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		3				0				4				1								
06:45 AM to 07:45 AM		0	0	3	0	0	0	0	0	0	0	0	1	3	0	0	0	0	1	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	5.8%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	4.1%	0.0%	5.1%	0.0%	0.0%	0.0%	7.7%	6.7%	0.0%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	42nd Street				42nd Street				42nd Street				Warren St (South)								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		3				0				2				0								
08:00 AM to 09:00 AM		0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		3				0				2				0								
07:45 AM to 08:45 AM		0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0

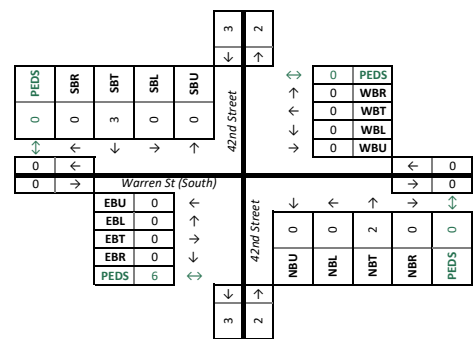
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:00 AM to 09:00 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. 42nd Street & /Warren St (North)																	
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound					
	Roadway:	42nd Street				42nd Street				Warren St (North)				Warren St (North)					
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
06:30 AM to 06:45 AM		0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	6	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	6	3	1	0	0	0	0	0	19	0	1	0	2	0	0	0
07:15 AM to 07:30 AM		0	0	23	1	0	0	0	0	0	0	19	0	0	0	3	0	0	0
07:30 AM to 07:45 AM		0	0	19	4	0	0	0	0	0	0	24	0	0	0	3	0	2	0
07:45 AM to 08:00 AM		0	0	23	2	2	0	0	0	0	0	45	0	1	0	6	0	1	1
08:00 AM to 08:15 AM		1	0	19	5	3	0	0	0	0	0	33	0	0	0	3	0	3	0
08:15 AM to 08:30 AM		0	0	28	7	0	0	0	0	0	0	36	0	0	0	11	0	1	0
08:30 AM to 08:45 AM		0	0	20	4	0	0	0	0	0	0	32	0	0	0	17	0	0	0
08:45 AM to 09:00 AM		1	0	35	5	0	0	0	0	0	1	41	0	0	0	6	0	2	0
09:00 AM to 09:15 AM		0	0	21	4	2	0	0	0	0	0	12	0	1	0	3	0	2	0
09:15 AM to 09:30 AM		0	0	24	2	2	0	0	0	0	1	39	1	0	0	6	0	0	0

INT. PEAK HR (ALL VEH)		125				0				143				43			
08:00 AM to 09:00 AM		2	0	102	21	0	0	0	0	0	1	142	0	0	37	0	6
Peak Hour Factor (PHF)	Overall	0.50	n/a	0.73	0.75	n/a	n/a	n/a	n/a	n/a	0.25	0.87	n/a	n/a	0.54	n/a	0.50
		0.85			0.76					0.85				0.63			

HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	42nd Street				42nd Street				Warren St (North)				Warren St (North)			
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	1	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

INT. PEAK HR (ALL VEH)		0				0				0				0			
08:00 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		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%

INT. PEAK HR (HV ONLY)		4				0				4				1			
06:45 AM to 07:45 AM		0	0	3	1	0	0	0	0	0	0	4	0	0	0	0	1
Heavy Vehicle % (PHV)		0.0%	0.0%	5.6%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	5.0%	0.0%	0.0%	50.0%

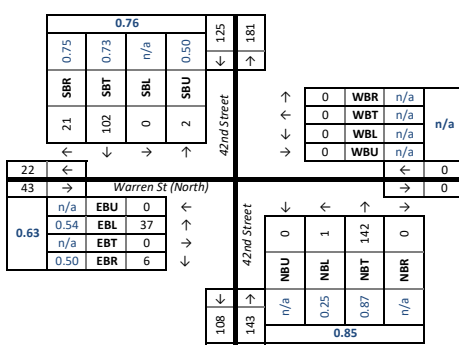
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	42nd Street				42nd Street				Warren St (North)				Warren St (North)			
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																			
09:45 AM to 10:00 AM																			
10:00 AM to 10:15 AM																			
10:15 AM to 10:30 AM																			
10:30 AM to 10:45 AM																			
10:45 AM to 11:00 AM																			
11:00 AM to 11:15 AM																			
11:15 AM to 11:30 AM																			

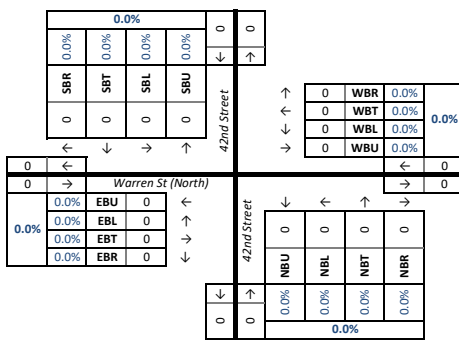
INT. PEAK HR (ALL VEH)		2				0				1				0			
08:00 AM to 09:00 AM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0
INT. PEAK HR (BIKES)		2				0				2				0			
08:15 AM to 09:15 AM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0

DATA COLLECTION NOTES:

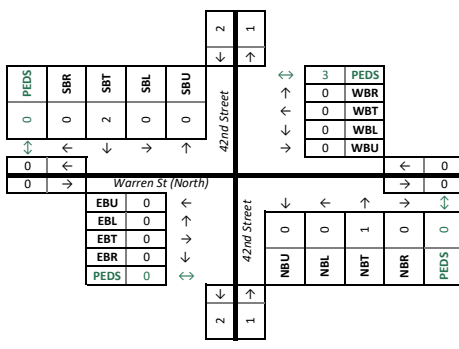
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



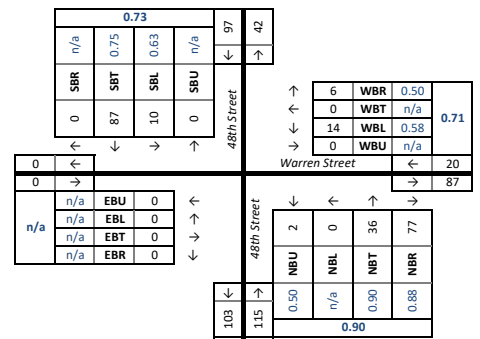
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

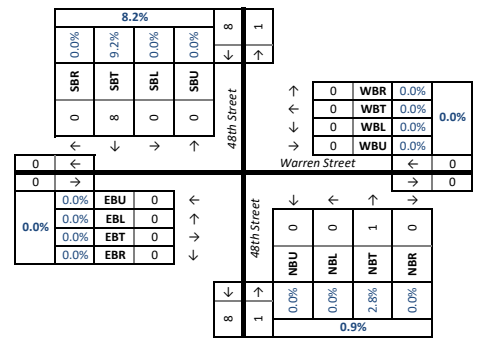
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. 48th Street & Warren Street/																	
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound					
	Roadway:	48th Street				Warren Street				48th Street				Warren Street					
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R		
06:30 AM to 06:45 AM		0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	5	0	1	0	0	0	1	0	0	5	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	2	7	0	2	0	2	0	1	1	0	8	2	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	15	0	0	0	3	0	0	1	0	0	8	1	0	0	0	0
07:30 AM to 07:45 AM		0	2	8	0	1	0	1	0	1	0	0	9	7	0	0	0	0	0
07:45 AM to 08:00 AM		0	4	13	0	0	0	3	0	2	0	1	0	2	14	0	0	0	0
08:00 AM to 08:15 AM		0	0	12	0	3	0	2	0	2	0	1	0	9	11	0	0	0	0
08:15 AM to 08:30 AM		0	4	19	0	2	0	3	0	1	0	0	0	10	22	0	0	0	0
08:30 AM to 08:45 AM		0	1	18	0	2	0	1	0	1	0	1	0	10	21	1	0	0	0
08:45 AM to 09:00 AM		0	1	21	0	2	0	4	0	3	0	1	0	7	16	0	0	0	0
09:00 AM to 09:15 AM		0	4	29	0	4	0	6	0	1	1	0	0	9	18	1	0	0	0
09:15 AM to 09:30 AM		0	0	16	0	2	0	1	0	0	0	2	0	5	4	0	0	0	0
09:30 AM to 09:45 AM																			
09:45 AM to 10:00 AM																			
10:00 AM to 10:15 AM																			
10:15 AM to 10:30 AM																			
10:30 AM to 10:45 AM																			
10:45 AM to 11:00 AM																			
11:00 AM to 11:15 AM																			
11:15 AM to 11:30 AM																			
INT. PEAK HR (ALL VEH)	08:15 AM to 09:15 AM	97				20				115				0					
		0	10	87	0	0	14	0	6	2	0	36	77	2	0	0	0		
Peak Hour Factor (PHF)	Overall	0.87				0.71				0.90				n/a					
		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.50	n/a	0.90	0.88	n/a	n/a	n/a	n/a		

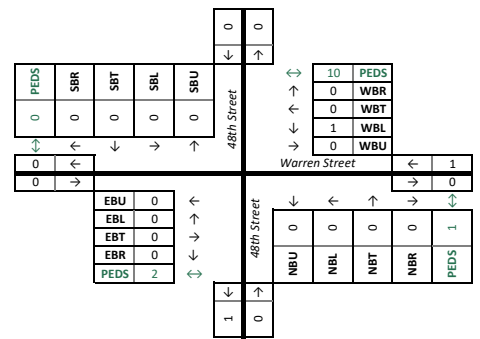
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

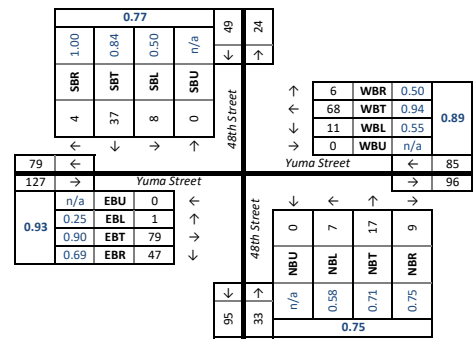
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

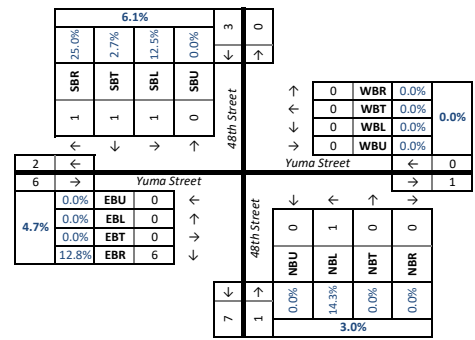
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. 48th Street & Yuma Street																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	48th Street				Yuma Street				48th Street				Yuma Street								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
06:30 AM to 06:45 AM		0	0	0	0	1	0	2	5	0	2	0	0	2	1	3	0	0	1	2	0	
06:45 AM to 07:00 AM		0	0	2	1	1	0	1	4	0	0	0	0	1	2	0	0	0	1	2	0	
07:00 AM to 07:15 AM		0	0	1	0	0	0	3	13	0	0	0	2	4	1	0	0	0	5	3	0	
07:15 AM to 07:30 AM		0	0	2	1	2	0	2	10	0	1	0	1	3	1	0	0	1	8	13	0	
07:30 AM to 07:45 AM		0	1	7	0	2	0	4	8	1	0	0	1	6	4	2	0	1	20	5	1	
07:45 AM to 08:00 AM		0	1	4	2	1	0	5	16	0	0	0	0	1	1	0	0	0	21	5	0	
08:00 AM to 08:15 AM		0	3	7	0	0	0	2	13	0	1	0	2	5	4	1	0	2	16	9	1	
08:15 AM to 08:30 AM		0	4	11	1	0	0	4	15	2	0	0	1	5	3	0	0	0	22	12	0	
08:30 AM to 08:45 AM		0	2	6	1	0	0	1	17	3	2	0	3	5	3	1	0	1	22	10	0	
08:45 AM to 09:00 AM		0	1	10	1	1	0	5	18	1	4	0	2	6	0	5	0	0	20	8	1	
09:00 AM to 09:15 AM		0	1	10	1	0	0	1	18	0	0	0	1	1	3	0	0	0	15	17	2	
09:15 AM to 09:30 AM		0	0	5	1	0	0	6	15	0	0	0	3	2	1	0	0	2	11	8	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		49				85				33				127								
08:15 AM to 09:15 AM		0	8	37	4	1	0	11	68	6	6	0	7	17	9	6	0	1	79	47	3	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		0.92	n/a	0.50	0.84	1.00	0.77	n/a	0.55	0.94	0.50	0.89	n/a	0.58	0.71	0.75	0.75	n/a	0.25	0.90	0.69	0.93

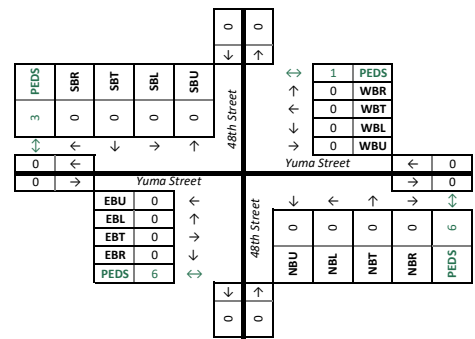
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

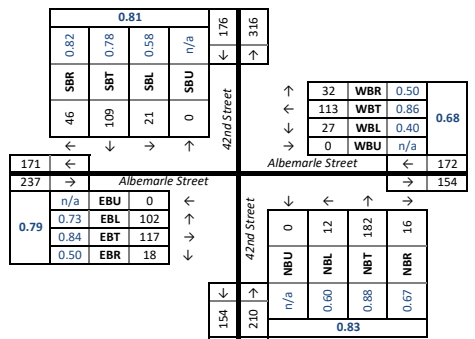
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

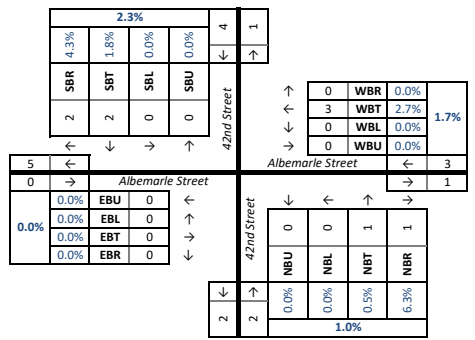
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. 42nd Street & Albemarle Street																																																											
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound																																															
	Roadway:	42nd Street				Albemarle Street				42nd Street				Albemarle Street																																															
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds																																								
06:30 AM to 06:45 AM		0	0	2	3	1	0	0	10	2	1	0	0	3	0	0	0	3	5	0	1																																								
06:45 AM to 07:00 AM		0	1	7	6	2	0	1	14	1	2	0	0	9	1	3	0	5	7	1	15																																								
07:00 AM to 07:15 AM		1	2	10	3	1	0	0	9	5	5	0	2	9	0	1	0	11	9	2	3																																								
07:15 AM to 07:30 AM		0	5	17	7	3	0	0	14	3	3	0	1	17	3	4	0	9	25	2	15																																								
07:30 AM to 07:45 AM		0	3	13	9	4	0	2	21	5	10	0	2	41	3	5	0	24	23	0	11																																								
07:45 AM to 08:00 AM		0	2	31	14	7	0	3	33	1	18	0	2	36	4	10	0	27	33	2	21																																								
08:00 AM to 08:15 AM		0	4	15	12	10	0	2	21	7	28	0	2	50	5	16	0	17	22	2	30																																								
08:15 AM to 08:30 AM		0	9	28	7	37	0	5	29	8	87	0	3	44	1	34	0	35	35	5	37																																								
08:30 AM to 08:45 AM		0	6	35	13	75	0	17	30	16	140	0	5	52	6	58	0	23	27	9	71																																								
08:45 AM to 09:00 AM		0	2	28	10	14	0	5	34	2	21	0	5	33	4	7	0	21	35	5	31																																								
09:00 AM to 09:15 AM		0	3	19	13	10	0	3	14	6	13	0	2	18	2	5	0	17	13	4	21																																								
09:15 AM to 09:30 AM		0	6	16	9	8	0	2	23	12	9	0	0	24	1	5	0	12	15	2	18																																								
09:30 AM to 09:45 AM																																																													
09:45 AM to 10:00 AM																																																													
10:00 AM to 10:15 AM																																																													
10:15 AM to 10:30 AM																																																													
10:30 AM to 10:45 AM																																																													
10:45 AM to 11:00 AM																																																													
11:00 AM to 11:15 AM																																																													
11:15 AM to 11:30 AM																																																													
INT. PEAK HR (ALL VEH)		176				129				172				273				210				118				237				159																															
Peak Hour Factor (PHF)		0.83				n/a				0.58				0.78				0.82				0.81				n/a				0.60				0.67				0.83				n/a				0.73				0.84				0.50				0.79			

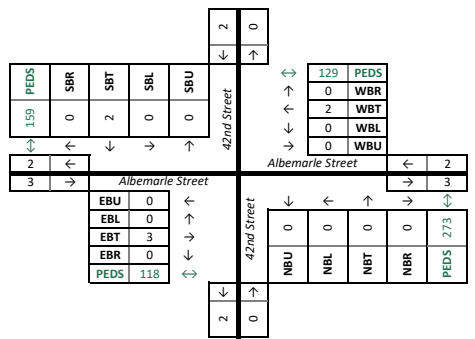
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

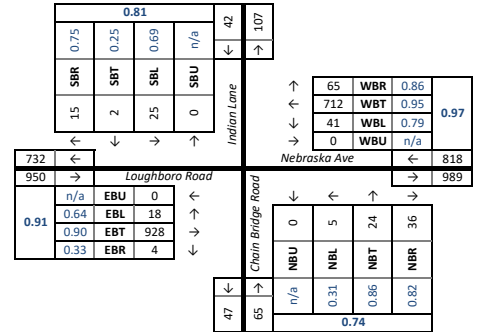
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. Indian Lane/Chain Bridge Road & Nebraska Ave/Loughboro Road		Southbound				Westbound				Northbound				Eastbound							
ALL VEHICLES	Direction: Roadway:	Indian Lane		Nebraska Ave		Chain Bridge Road		Loughboro Road		Indian Lane		Nebraska Ave		Chain Bridge Road		Loughboro Road					
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds
06:30 AM to 06:45 AM		0	1	0	0	0	0	3	85	9	0	0	0	0	1	0	0	2	75	2	1
06:45 AM to 07:00 AM		0	0	0	0	0	0	3	104	0	0	0	1	0	6	3	0	3	89	1	0
07:00 AM to 07:15 AM		0	2	0	0	0	0	4	116	9	0	0	0	0	2	0	0	2	122	3	0
07:15 AM to 07:30 AM		0	4	1	3	0	0	6	140	11	0	0	1	4	3	0	0	3	177	1	0
07:30 AM to 07:45 AM		0	1	0	3	0	0	13	187	10	0	0	4	7	11	0	0	2	258	0	0
07:45 AM to 08:00 AM		0	9	0	4	0	0	13	175	19	0	0	1	4	10	1	0	7	245	0	0
08:00 AM to 08:15 AM		0	9	0	3	0	0	10	174	18	0	0	0	6	6	1	0	3	190	3	1
08:15 AM to 08:30 AM		0	6	2	5	1	0	5	176	18	1	0	0	7	9	0	0	6	235	1	1
08:30 AM to 08:45 AM		0	4	1	5	0	0	6	168	6	0	0	3	12	8	1	0	6	249	4	0
08:45 AM to 09:00 AM		0	5	1	2	0	0	4	153	8	0	0	0	12	11	1	0	6	234	2	1
09:00 AM to 09:15 AM		0	5	0	2	0	0	4	145	8	0	0	3	17	18	0	0	13	222	2	0
09:15 AM to 09:30 AM		0	1	1	3	0	0	4	142	12	0	0	0	6	8	3	0	7	211	2	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)	07:30 AM to 08:30 AM	42				818				65				950							
Peak Hour Factor (PHF)	Overall	0.69	0.25	0.75	0.81	n/a	0.79	0.95	0.86	0.97	n/a	0.31	0.86	0.82	0.74	n/a	0.64	0.90	0.33	0.91	

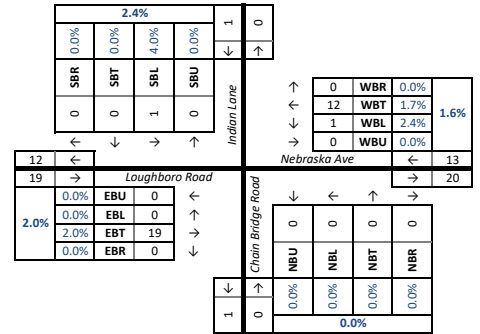
HEAVY VEHICLES (FHWA 4+)	Direction: Roadway:	Indian Lane		Nebraska Ave		Chain Bridge Road		Loughboro Road													
	Movement:	U	L	Thru	Right	U	L	Thru	Right												
06:30 AM to 06:45 AM		0	0	0	0	0	0	3	0												
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0												
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0												
07:15 AM to 07:30 AM		0	0	0	0	0	1	3	1												
07:30 AM to 07:45 AM		0	0	0	0	0	0	4	0												
07:45 AM to 08:00 AM		0	1	0	0	0	0	1	0												
08:00 AM to 08:15 AM		0	0	0	0	0	1	4	0												
08:15 AM to 08:30 AM		0	0	0	0	0	0	3	0												
08:30 AM to 08:45 AM		0	0	0	0	0	0	4	0												
08:45 AM to 09:00 AM		0	0	0	0	0	1	3	0												
09:00 AM to 09:15 AM		0	0	0	0	0	0	3	0												
09:15 AM to 09:30 AM		0	0	0	0	0	0	5	0												
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)	07:30 AM to 08:30 AM	1		13		0		19													
Heavy Vehicle % (PHV):		0.0%	4.0%	0.0%	0.0%	2.4%	0.0%	2.4%	1.7%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19	0	2.0%
INT. PEAK HR (HV ONLY)	08:30 AM to 09:30 AM	0		16		1		21													
Heavy Vehicle % (PHV):		0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	2.5%	0.0%	2.4%	0.0%	0.0%	0.0%	2.2%	1.0%	0.0%	0.0%	2.3%	0.0%	2.2%	

BICYCLES	Direction: Roadway:	Indian Lane		Nebraska Ave		Chain Bridge Road		Loughboro Road	
	Movement:	U	L	Thru	Right	U	L	Thru	Right
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	1
07:15 AM to 07:30 AM		0	1	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM									
09:45 AM to 10:00 AM									
10:00 AM to 10:15 AM									
10:15 AM to 10:30 AM									
10:30 AM to 10:45 AM									
10:45 AM to 11:00 AM									
11:00 AM to 11:15 AM									
11:15 AM to 11:30 AM									
INT. PEAK HR (ALL VEH)	07:30 AM to 08:30 AM	0		1		0		0	
INT. PEAK HR (BIKES)	06:30 AM to 07:30 AM	1		0		1		0	

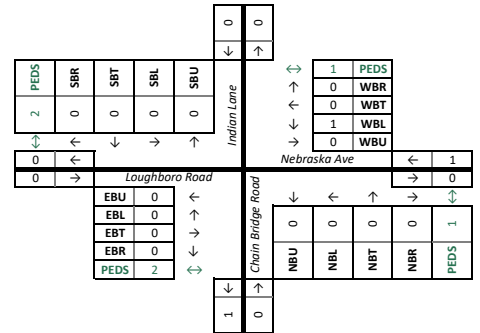
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

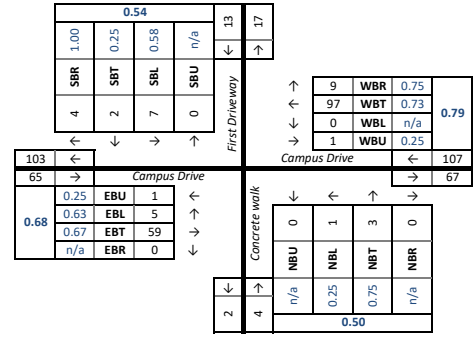
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

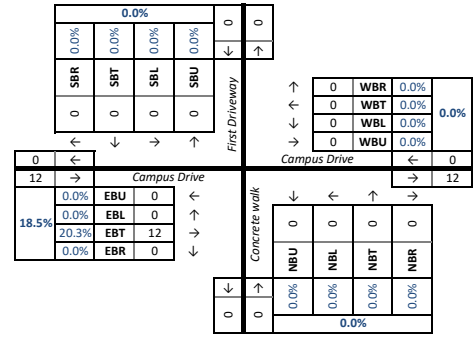
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:30 AM to 09:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. First Driveway/Concrete walk & Campus Drive		Southbound					Westbound					Northbound					Eastbound										
ALL VEHICLES	Direction:	First Driveway		Campus Drive			Concrete walk		Campus Drive			Concrete walk		Campus Drive			Concrete walk		Campus Drive								
	Roadway:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	2	0	1	6	0	0	16	1	0	0	0	1	0	2	0	1	11	0	1	0	0	0	0	1	
06:45 AM to 07:00 AM		0	2	1	0	2	0	0	14	2	0	0	0	1	2	4	0	0	12	1	2	0	0	0	10	5	
07:00 AM to 07:15 AM		0	2	0	0	1	0	0	13	6	1	0	0	1	0	9	0	0	10	0	5	0	0	0	10	5	
07:15 AM to 07:30 AM		0	1	0	0	2	0	0	10	3	0	0	0	1	0	5	0	0	10	2	5	0	0	0	10	5	
07:30 AM to 07:45 AM		0	4	0	1	8	0	0	14	1	1	0	0	0	1	9	0	1	13	2	6	0	0	0	13	6	
07:45 AM to 08:00 AM		0	2	0	2	8	1	1	9	4	4	0	0	0	1	20	0	0	4	0	4	0	0	0	4	4	
08:00 AM to 08:15 AM		0	5	0	3	2	2	1	30	2	7	0	1	0	0	44	0	1	15	0	23	0	0	0	15	0	
08:15 AM to 08:30 AM		0	3	1	1	4	0	0	26	2	0	0	1	0	0	14	0	2	15	0	14	0	0	0	15	0	
08:30 AM to 08:45 AM		0	0	0	1	6	0	0	13	3	2	0	0	1	0	6	1	1	8	0	2	0	0	0	8	2	
08:45 AM to 09:00 AM		0	2	0	1	2	0	0	27	3	0	0	0	1	0	24	0	0	13	0	2	0	0	0	13	2	
09:00 AM to 09:15 AM		0	3	2	1	7	0	0	33	1	1	0	0	0	0	20	0	2	16	0	10	0	0	0	16	10	
09:15 AM to 09:30 AM		0	2	0	1	8	1	0	24	2	5	0	1	1	0	56	0	2	22	0	23	0	0	0	22	23	
09:30 AM to 09:45 AM																											
09:45 AM to 10:00 AM																											
10:00 AM to 10:15 AM																											
10:15 AM to 10:30 AM																											
10:30 AM to 10:45 AM																											
10:45 AM to 11:00 AM																											
11:00 AM to 11:15 AM																											
11:15 AM to 11:30 AM																											
INT. PEAK HR (ALL VEH)	08:30 AM to 09:30 AM	13					107					4					65										
Peak Hour Overall	0.81	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB						
Factor (PHF)	n/a	0.58	0.25	1.00	0.54	0.25	n/a	0.73	0.75	0.79	n/a	0.25	0.75	n/a	0.50	0.25	0.63	0.67	n/a	0.68							

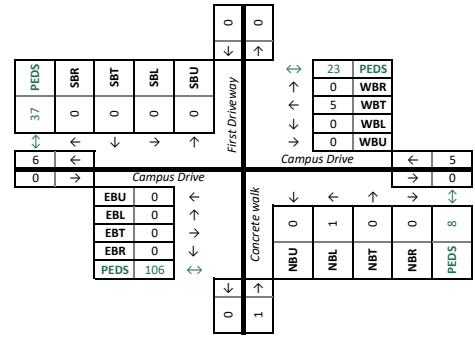
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

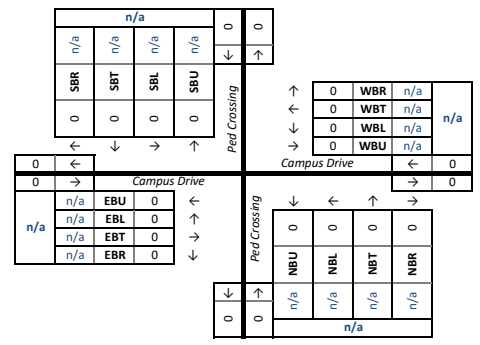
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

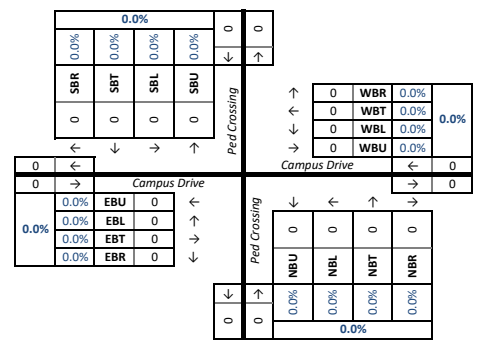
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

ALL VEHICLES	1. Ped Crossing & Campus Drive																					
	Direction: Roadway: Movement:	Southbound					Westbound					Northbound					Eastbound					
		U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	
06:30 AM to 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:45 AM to 07:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	9
07:00 AM to 07:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM to 07:30 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	9
07:45 AM to 08:00 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	3
08:00 AM to 08:15 AM	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	21
08:15 AM to 08:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	15
08:30 AM to 08:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	10
08:45 AM to 09:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	3
09:00 AM to 09:15 AM	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	4
09:15 AM to 09:30 AM	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	14
09:30 AM to 09:45 AM	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 to 10:00 AM	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 to 10:15 AM	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 to 10:30 AM	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 to 10:45 AM	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 to 11:00 AM	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 to 11:15 AM	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 to 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (ALL VEH)	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	12
06:30 AM to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor (PHF)	Overall n/a	U n/a	L n/a	T n/a	R n/a	SB n/a	U n/a	L n/a	T n/a	R n/a	WB n/a	U n/a	L n/a	T n/a	R n/a	NB n/a	U n/a	L n/a	T n/a	R n/a	EB n/a	0

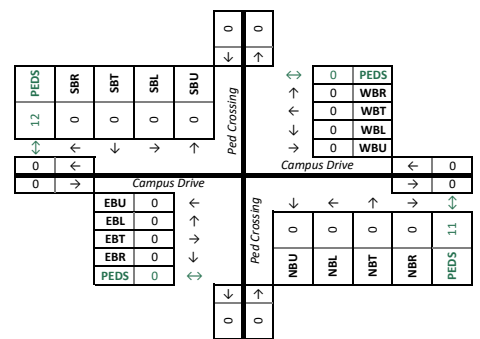
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection
Analysis Period: STUDY PERIOD
Date of Counts: Tuesday, February 25, 2020
Weather: Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)

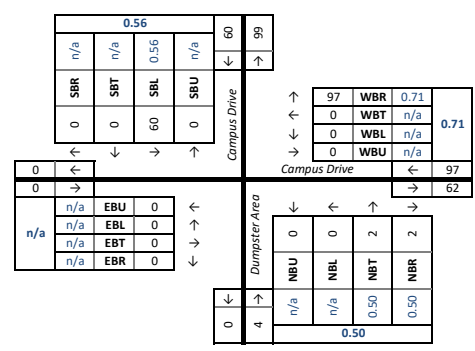
Intersection Peak Hour (all vehicles): 08:30 AM to 09:30 AM

System Peak Hour (all vehicles): 07:30 AM to 08:30 AM

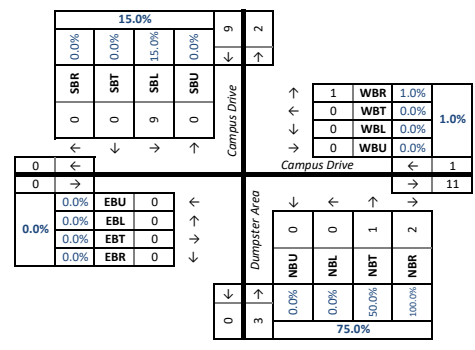
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Main data table showing intersection counts for all vehicles, heavy vehicles, and bicycles across various directions and time intervals.

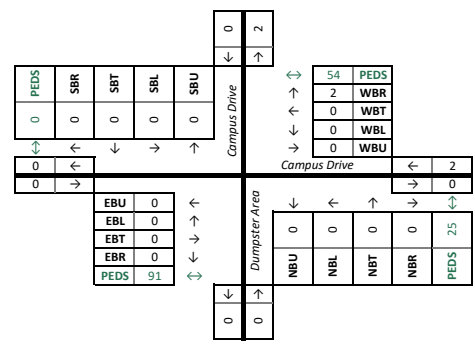
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

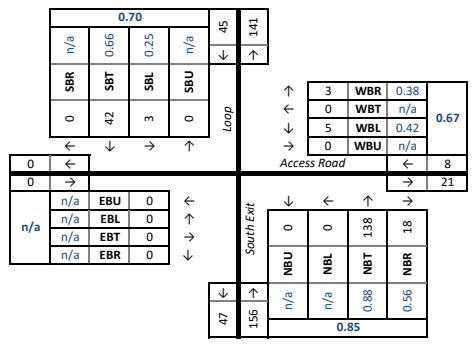
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

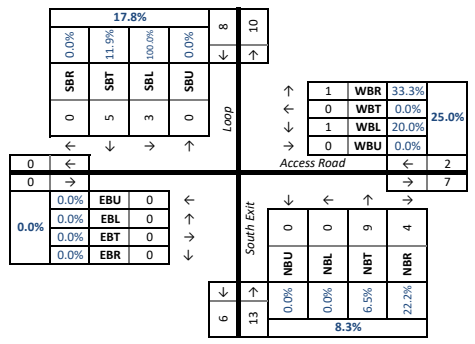
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Loop/South Exit & Access Road/																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Loop				Access Road				South Exit				Eastbound							
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
06:30 AM to 06:45 AM		0	1	9	0	0	0	0	0	2	0	0	18	6	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	1	8	0	1	0	1	0	0	7	0	0	19	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	1	2	0	0	0	1	0	2	0	0	14	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	2	16	0	0	0	1	0	1	0	0	24	6	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	1	10	0	0	0	2	0	2	3	0	0	11	6	2	0	0	0	0	0
07:45 AM to 08:00 AM		0	1	7	0	1	0	2	0	2	2	0	0	32	6	5	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	16	0	2	0	2	0	1	0	0	0	24	5	3	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	16	0	0	0	1	0	0	0	0	0	33	3	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	3	5	0	0	0	0	1	6	0	0	0	28	2	1	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	9	0	0	0	1	0	2	4	0	0	38	8	2	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	12	0	0	0	3	0	0	6	0	0	39	5	1	0	0	0	0	0
09:15 AM to 09:30 AM		0	3	6	0	1	0	3	0	1	1	0	0	30	5	6	0	0	0	0	0
INT. PEAK HR (ALL VEH)		45				8				156				4							
08:15 AM to 09:15 AM		0	3	42	0	0	0	5	0	3	16	0	0	138	18	4	0	0	0	0	0
Peak Hour Factor (PHF)		0.89				0.70				0.67				0.85							
Overall		n/a	n/a	n/a	n/a	0.70	n/a	n/a	n/a	n/a	0.67	n/a	n/a	n/a	n/a	0.85	n/a	n/a	n/a	n/a	n/a
n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

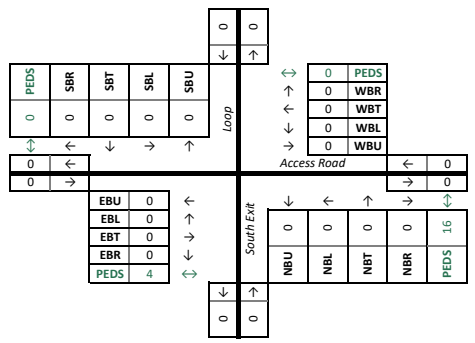
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

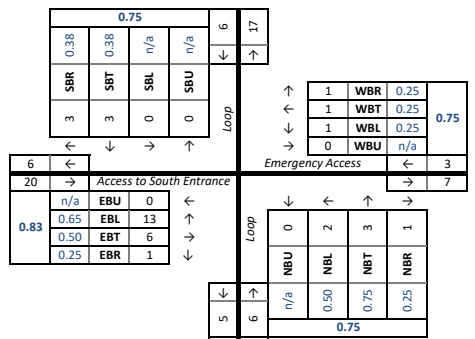
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:15 AM to 08:15 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Loop & Emergency Access/Access to South Entrance																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Loop				Emergency Access				Loop				Access to South Entrance								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
06:30 AM to 06:45 AM		0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	5
07:00 AM to 07:15 AM		0	1	0	0	0	0	0	0	0	3	0	1	0	0	1	0	1	0	1	1	1
07:15 AM to 07:30 AM		0	0	0	1	0	0	1	0	0	4	0	0	0	1	0	0	1	3	1	4	0
07:30 AM to 07:45 AM		0	0	0	2	0	0	0	0	0	0	0	1	1	0	0	0	4	0	0	0	0
07:45 AM to 08:00 AM		0	0	1	0	1	0	0	1	0	0	0	1	1	0	3	0	3	3	0	10	0
08:00 AM to 08:15 AM		0	0	2	0	1	0	0	0	1	1	0	1	1	0	1	0	5	0	0	27	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	2	0
08:30 AM to 08:45 AM		0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	0	4	1	0	4	0
08:45 AM to 09:00 AM		0	0	0	1	1	0	0	0	0	0	0	1	1	0	2	0	2	1	0	3	0
09:00 AM to 09:15 AM		0	0	0	0	1	0	0	1	1	1	0	0	1	0	0	1	4	0	1	12	0
09:15 AM to 09:30 AM		0	0	0	3	9	0	2	0	0	1	0	0	1	0	7	1	5	0	0	10	0
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		6				3				6				20				41				
07:15 AM to 08:15 AM		0	0	3	3	2	0	1	1	1	5	0	2	3	1	4	0	13	6	1		
Peak Hour Factor (PHF)		Overall	U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		0.88	n/a	n/a	0.38	0.38	0.75	n/a	0.25	0.25	0.25	0.75	n/a	0.50	0.75	0.25	0.75	n/a	0.65	0.50	0.25	0.83

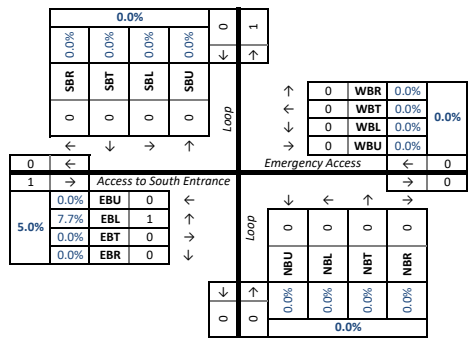
HEAVY VEHICLES (FHWA 4+)		Direction: Southbound, Westbound, Northbound, Eastbound																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Loop				Emergency Access				Loop				Access to South Entrance								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				0				0				1								
07:15 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Heavy Vehicle % (PHV)		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%	7.7%	25.0%	0.0%	0.0%	0.0%	5.0%	0.0%
INT. PEAK HR (HV ONLY)		0				0				0				2								
06:30 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Heavy Vehicle % (PHV)		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%	11.1%	25.0%	0.0%	0.0%	0.0%	13.3%	0.0%	0.0%

BICYCLES		Direction: Southbound, Westbound, Northbound, Eastbound																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Loop				Emergency Access				Loop				Access to South Entrance								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0				0				0				0								
07:15 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		1				1				0				0								
08:15 AM to 09:15 AM		0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

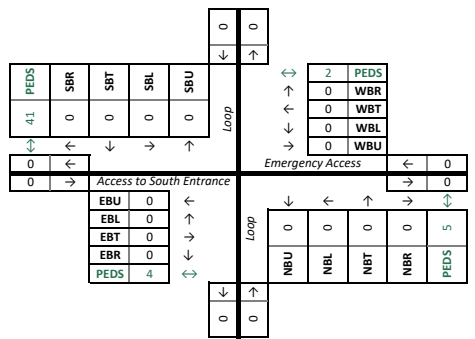
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

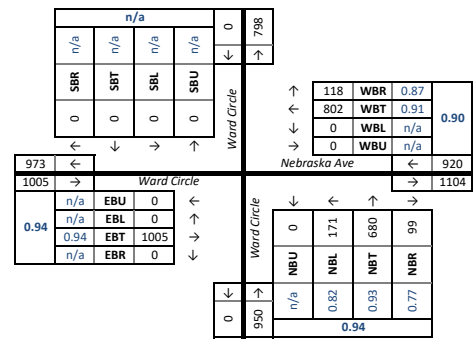
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

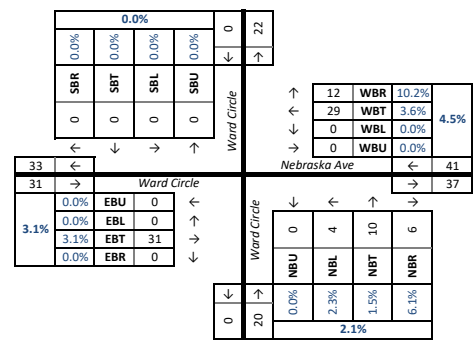
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Ward Circle & Nebraska Ave/Ward Circle																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Ward Circle				Nebraska Ave				Ward Circle				Ward Circle							
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
06:30 AM	to 06:45 AM	0	0	0	0	0	0	0	137	19	3	0	25	40	9	0	0	0	83	0	0
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	155	11	0	0	34	90	9	0	0	0	122	0	0
07:00 AM	to 07:15 AM	0	0	0	0	0	0	0	163	22	5	0	36	88	18	0	0	0	185	0	0
07:15 AM	to 07:30 AM	0	0	0	0	0	0	0	166	23	6	0	35	104	23	0	0	0	179	0	0
07:30 AM	to 07:45 AM	0	0	0	0	0	0	0	204	29	3	0	44	128	21	0	0	0	236	0	0
07:45 AM	to 08:00 AM	0	0	0	0	0	0	0	221	34	10	0	50	171	18	0	0	0	231	0	0
08:00 AM	to 08:15 AM	0	0	0	0	0	0	0	180	33	13	0	52	182	18	0	0	0	267	0	0
08:15 AM	to 08:30 AM	0	0	0	0	0	0	0	218	25	5	0	26	161	31	0	0	0	259	0	0
08:30 AM	to 08:45 AM	0	0	0	0	0	0	0	183	26	6	0	43	166	32	0	0	0	248	0	0
08:45 AM	to 09:00 AM	0	0	0	0	0	0	0	160	37	5	0	32	173	27	0	0	0	264	0	0
09:00 AM	to 09:15 AM	0	0	0	0	0	0	0	191	36	6	0	34	151	21	0	0	0	243	0	0
09:15 AM	to 09:30 AM	0	0	0	0	0	0	0	153	32	12	0	19	123	15	0	0	0	261	0	0
09:30 AM	to 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	to 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	to 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	to 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	to 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	to 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	to 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	to 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (ALL VEH)		0				920				950				1005							
07:45 AM	to 08:45 AM	0	0	0	0	0	0	0	802	118	34	0	171	680	99	0	0	0	1005	0	0
Peak Hour Factor (PHF)		Overall 0.98				n/a n/a n/a n/a n/a				0.91 0.87 0.90				n/a 0.82 0.93 0.77 0.94							
HEAVY VEHICLES (FHWA 4+)		Direction:				Southbound				Westbound				Northbound				Eastbound			
Roadway:		Ward Circle				Nebraska Ave				Ward Circle				Ward Circle							
Movement:		U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
06:30 AM	to 06:45 AM	0	0	0	0	0	0	2	1	0	1	3	1	0	0	4	0				
06:45 AM	to 07:00 AM	0	0	0	0	0	0	6	0	0	0	2	2	0	0	4	0				
07:00 AM	to 07:15 AM	0	0	0	0	0	0	6	2	0	0	10	0	0	0	7	0				
07:15 AM	to 07:30 AM	0	0	0	0	0	0	4	0	0	0	3	2	0	0	9	0				
07:30 AM	to 07:45 AM	0	0	0	0	0	0	9	3	0	0	3	1	0	0	3	0				
07:45 AM	to 08:00 AM	0	0	0	0	0	0	2	3	0	2	3	1	0	0	10	0				
08:00 AM	to 08:15 AM	0	0	0	0	0	0	10	2	0	1	3	1	0	0	7	0				
08:15 AM	to 08:30 AM	0	0	0	0	0	0	8	4	0	0	1	1	0	0	6	0				
08:30 AM	to 08:45 AM	0	0	0	0	0	0	9	3	0	1	3	3	0	0	8	0				
08:45 AM	to 09:00 AM	0	0	0	0	0	0	3	5	0	2	4	2	0	0	9	0				
09:00 AM	to 09:15 AM	0	0	0	0	0	0	4	3	0	1	1	2	0	0	13	0				
09:15 AM	to 09:30 AM	0	0	0	0	0	0	4	1	0	0	2	1	0	0	11	0				
09:30 AM	to 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:45 AM	to 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:00 AM	to 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:15 AM	to 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:30 AM	to 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:45 AM	to 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11:00 AM	to 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11:15 AM	to 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
INT. PEAK HR (ALL VEH)		0				41				20				31							
07:45 AM	to 08:45 AM	0	0	0	0	0	0	0	29	12	0	4	10	6	0	0	31	0			
Heavy Vehicle % (PHV)		0.0%				0.0%				2.3%				3.1%							
INT. PEAK HR (HV ONLY)		0				44				22				30							
08:00 AM	to 09:00 AM	0	0	0	0	0	0	0	30	14	0	4	11	7	0	0	30	0			
Heavy Vehicle % (PHV)		0.0%				0.0%				2.6%				2.9%							
BICYCLES		Direction:				Southbound				Westbound				Northbound				Eastbound			
Roadway:		Ward Circle				Nebraska Ave				Ward Circle				Ward Circle							
Movement:		U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R				
06:30 AM	to 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:00 AM	to 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:15 AM	to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:30 AM	to 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:45 AM	to 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
08:00 AM	to 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
08:15 AM	to 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
08:30 AM	to 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
08:45 AM	to 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:00 AM	to 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:15 AM	to 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:30 AM	to 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
09:45 AM	to 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:00 AM	to 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:15 AM	to 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:30 AM	to 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:45 AM	to 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11:00 AM	to 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11:15 AM	to 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
INT. PEAK HR (ALL VEH)		0				0				0				0							
07:45 AM	to 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
INT. PEAK HR (BIKES)		0				0				0				0							
06:30 AM	to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

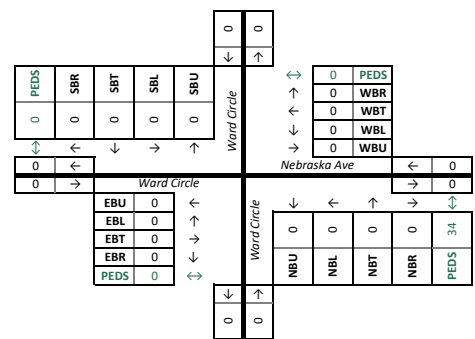
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

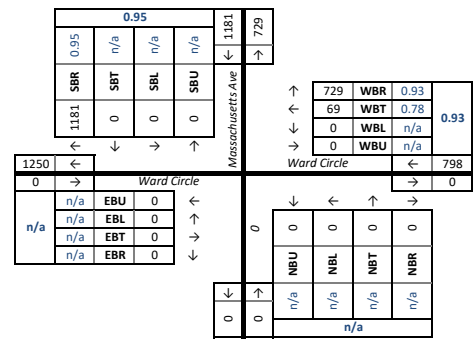
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

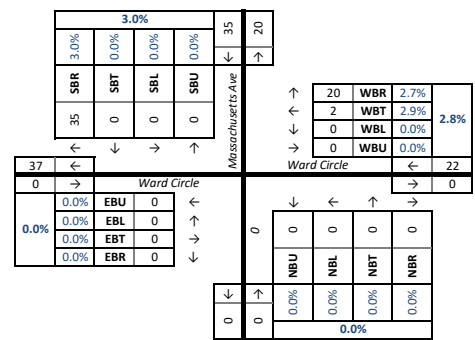
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Massachusetts Ave/ Ward Circle																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				Ward Circle				Ward Circle				Ward Circle								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
06:30 AM to 06:45 AM		0	0	0	103	0	0	0	7	52	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	138	0	0	0	6	95	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	202	0	0	0	13	97	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	259	3	0	0	12	115	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	310	1	0	0	20	137	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	311	2	0	0	22	183	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	289	22	0	0	19	196	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	288	11	0	0	15	171	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	293	10	0	0	13	179	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	284	23	0	0	13	197	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	270	19	0	0	13	174	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	257	19	0	0	12	143	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1181				45	798				0	0				0						
07:45 AM to 08:45 AM		0	0	0	1181		0	0	0	69	729	0	0	0	0	0	0	0	0	0	0	
Peak Hour Factor (PHF)		Overall	U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		0.96	n/a	n/a	n/a	0.95	0.95	n/a	n/a	0.78	0.93	0.93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				Ward Circle				Ward Circle				Ward Circle								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	0	8	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	8	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	9	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	8	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	4	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	13	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	10	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	11	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	7	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		35					22				0	0				0						
07:45 AM to 08:45 AM		0	0	0	35		0	0	0	2	20	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	3.0%	3.0%	0.0%	0.0%	2.9%	2.7%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
INT. PEAK HR (HV ONLY)		41					24				0	0				0						
08:15 AM to 09:15 AM		0	0	0	41		0	0	0	3	21	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	3.6%	3.6%	0.0%	0.0%	5.6%	2.9%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Massachusetts Ave				Ward Circle				Ward Circle				Ward Circle								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		0					1				0	0				0						
07:45 AM to 08:45 AM		0	0	0	0		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		0					1				0	0				0						
07:30 AM to 08:30 AM		0	0	0	0		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

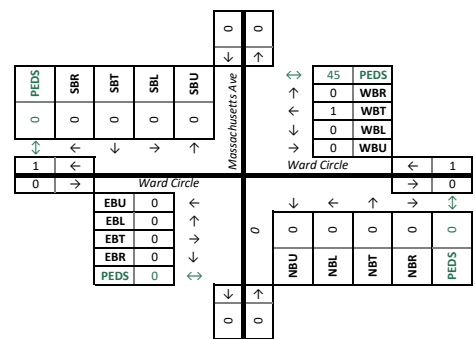
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

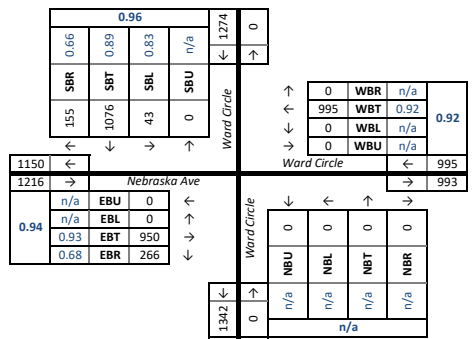
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

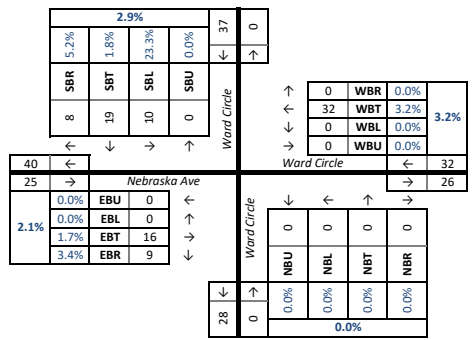
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Ward Circle & Ward Circle/Nebraska Ave																					
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound									
	Roadway:	Ward Circle				Ward Circle				Ward Circle				Nebraska Ave									
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds		
06:30 AM	to 06:45 AM	0	4	97	9	0	0	0	162	0	0	0	0	0	0	0	0	0	79	39	12		
06:45 AM	to 07:00 AM	0	3	131	10	0	0	0	189	0	0	0	0	0	0	0	0	0	119	40	3		
07:00 AM	to 07:15 AM	0	6	189	20	0	0	0	199	0	0	0	0	0	0	0	0	0	179	56	6		
07:15 AM	to 07:30 AM	0	7	249	15	0	0	0	201	0	0	0	0	0	0	0	0	0	172	55	6		
07:30 AM	to 07:45 AM	0	9	301	20	0	0	0	248	0	0	0	0	0	0	0	0	0	227	98	14		
07:45 AM	to 08:00 AM	0	10	279	44	0	0	0	271	0	0	0	0	0	0	0	0	0	221	66	41		
08:00 AM	to 08:15 AM	0	11	265	32	0	0	0	232	0	0	0	0	0	0	0	0	0	256	52	26		
08:15 AM	to 08:30 AM	0	13	231	59	0	0	0	244	0	0	0	0	0	0	0	0	0	246	50	11		
08:30 AM	to 08:45 AM	0	15	220	71	0	0	0	226	0	0	0	0	0	0	0	0	0	233	48	7		
08:45 AM	to 09:00 AM	0	15	233	49	0	0	0	192	0	0	0	0	0	0	0	0	0	249	58	19		
09:00 AM	to 09:15 AM	0	14	216	53	0	0	0	225	0	0	0	0	0	0	0	0	0	229	43	31		
09:15 AM	to 09:30 AM	0	16	208	45	0	0	0	172	0	0	0	0	0	0	0	0	0	245	48	27		
09:30 AM	to 09:45 AM																						
09:45 AM	to 10:00 AM																						
10:00 AM	to 10:15 AM																						
10:15 AM	to 10:30 AM																						
10:30 AM	to 10:45 AM																						
10:45 AM	to 11:00 AM																						
11:00 AM	to 11:15 AM																						
11:15 AM	to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1274				995				0				1216									
07:30 AM	to 08:30 AM	0	43	1076	155	0	0	0	995	0	0	0	0	0	0	0	0	0	950	266	92		
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB	
		0.96	n/a	0.83	0.89	0.66	0.96	n/a	n/a	n/a	0.92	n/a	0.92	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.93	0.68	0.94
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound									
	Roadway:	Ward Circle				Ward Circle				Ward Circle				Nebraska Ave									
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right						
06:30 AM	to 06:45 AM	0	1	5	2	0	0	3	0	0	0	0	0	0	0	3	1						
06:45 AM	to 07:00 AM	0	0	6	0	0	0	6	0	0	0	0	0	0	0	4	2						
07:00 AM	to 07:15 AM	0	2	4	2	0	0	6	0	0	0	0	0	0	0	5	2						
07:15 AM	to 07:30 AM	0	3	2	1	0	0	4	0	0	0	0	0	0	0	6	3						
07:30 AM	to 07:45 AM	0	0	6	4	0	0	9	0	0	0	0	0	0	0	3	4						
07:45 AM	to 08:00 AM	0	4	2	2	0	0	4	0	0	0	0	0	0	0	6	1						
08:00 AM	to 08:15 AM	0	2	2	1	0	0	11	0	0	0	0	0	0	0	5	1						
08:15 AM	to 08:30 AM	0	4	9	1	0	0	8	0	0	0	0	0	0	0	2	3						
08:30 AM	to 08:45 AM	0	5	3	2	0	0	10	0	0	0	0	0	0	0	3	1						
08:45 AM	to 09:00 AM	0	4	7	1	0	0	5	0	0	0	0	0	0	0	5	7						
09:00 AM	to 09:15 AM	0	4	4	0	0	0	5	0	0	0	0	0	0	0	9	1						
09:15 AM	to 09:30 AM	0	4	1	0	0	0	4	0	0	0	0	0	0	0	7	4						
09:30 AM	to 09:45 AM																						
09:45 AM	to 10:00 AM																						
10:00 AM	to 10:15 AM																						
10:15 AM	to 10:30 AM																						
10:30 AM	to 10:45 AM																						
10:45 AM	to 11:00 AM																						
11:00 AM	to 11:15 AM																						
11:15 AM	to 11:30 AM																						
INT. PEAK HR (ALL VEH)		37				32				0				25									
07:30 AM	to 08:30 AM	0	10	19	8	0	0	32	0	0	0	0	0	0	0	16	9						
Heavy Vehicle % (PHV)		0.0%	23.3%	1.8%	5.2%	2.9%	0.0%	0.0%	3.2%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	3.4%	2.1%		
INT. PEAK HR (HV ONLY)		44				28				0				31									
08:15 AM	to 09:15 AM	0	17	23	4	0	0	28	0	0	0	0	0	0	0	19	12						
Heavy Vehicle % (PHV)		0.0%	29.8%	2.6%	1.7%	3.7%	0.0%	0.0%	3.2%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	6.0%	2.7%		
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound									
	Roadway:	Ward Circle				Ward Circle				Ward Circle				Nebraska Ave									
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right						
06:30 AM	to 06:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0						
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:00 AM	to 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:15 AM	to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:30 AM	to 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:45 AM	to 08:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0						
08:00 AM	to 08:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0						
08:15 AM	to 08:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:30 AM	to 08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0						
08:45 AM	to 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:00 AM	to 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:15 AM	to 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:30 AM	to 09:45 AM																						
09:45 AM	to 10:00 AM																						
10:00 AM	to 10:15 AM																						
10:15 AM	to 10:30 AM																						
10:30 AM	to 10:45 AM																						
10:45 AM	to 11:00 AM																						
11:00 AM	to 11:15 AM																						
11:15 AM	to 11:30 AM																						
INT. PEAK HR (ALL VEH)		3				0				0				0									
07:30 AM	to 08:30 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0						
INT. PEAK HR (BIKES)		5				0				0				0									
07:45 AM	to 08:45 AM	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0						

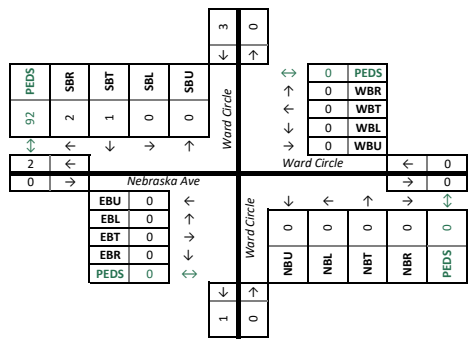
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

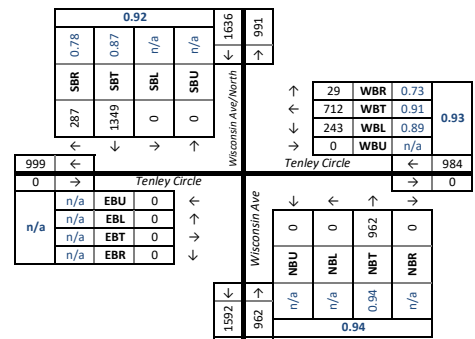
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Thursday, February 27, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

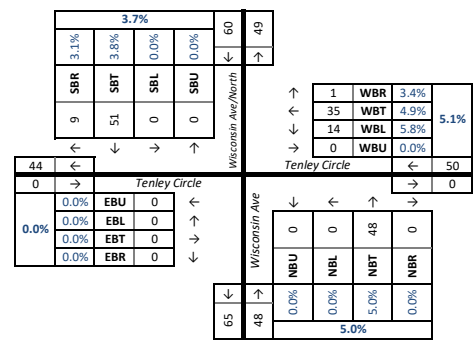
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Wisconsin Ave/North/Wisconsin Ave & Tenley Circle																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Wisconsin Ave/North				Tenley Circle				Wisconsin Ave				Tenley Circle								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	0	109	12	1	0	73	117	10	7	0	0	92	0	1	0	0	0	0	2	
06:45 AM to 07:00 AM		0	0	158	28	0	0	68	131	7	11	0	0	134	0	1	0	0	0	0	8	
07:00 AM to 07:15 AM		0	0	191	30	5	0	79	132	10	13	0	0	156	0	0	0	0	0	0	2	
07:15 AM to 07:30 AM		0	0	281	34	7	0	79	173	7	9	0	0	184	0	0	0	0	0	0	6	
07:30 AM to 07:45 AM		0	0	329	34	6	0	76	205	5	22	0	0	191	0	2	0	0	0	0	10	
07:45 AM to 08:00 AM		0	0	389	56	10	0	53	182	7	19	0	0	256	0	0	0	0	0	0	13	
08:00 AM to 08:15 AM		0	0	300	66	11	0	62	195	8	23	0	0	252	0	2	0	0	0	0	6	
08:15 AM to 08:30 AM		0	0	348	92	15	0	60	157	10	26	0	0	226	0	1	0	0	0	0	19	
08:30 AM to 08:45 AM		0	0	312	73	10	0	68	178	4	35	0	0	228	0	1	0	0	0	0	19	
08:45 AM to 09:00 AM		0	0	348	56	15	0	61	124	1	27	0	0	283	0	4	0	0	0	0	11	
09:00 AM to 09:15 AM		0	0	262	52	20	0	59	190	8	19	0	0	195	0	1	0	0	0	0	11	
09:15 AM to 09:30 AM		0	0	257	49	13	0	58	178	8	24	0	1	201	0	0	0	0	0	0	15	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
INT. PEAK HR (ALL VEH)		1636				46	984				103	962				4	0				57	
07:45 AM to 08:45 AM		0	0	1349	287	0.92	0	243	712	29	0.73	0	0	962	0	0.94	0	0	0	0	0	
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
		0.95	n/a	n/a	0.87	0.78	0.92	n/a	0.89	0.91	0.73	0.93	n/a	n/a	0.94	n/a	0.94	n/a	n/a	n/a	n/a	n/a

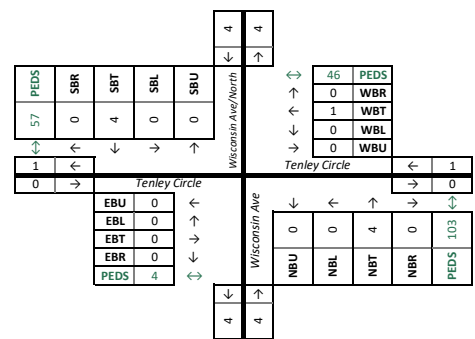
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

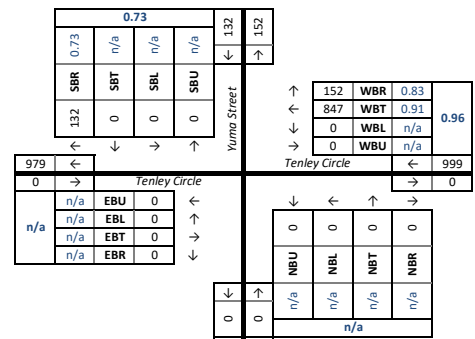
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Thursday, February 27, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

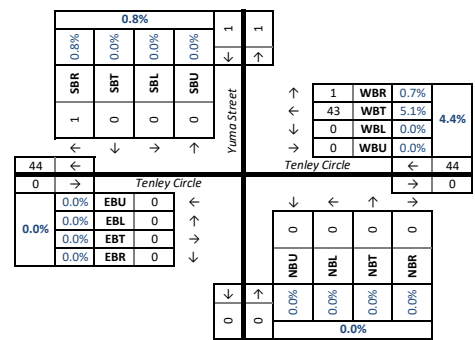
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. Yuma Street/ & Tenley Circle																									
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound													
	Roadway:	Yuma Street				Tenley Circle				Tenley Circle				Tenley Circle													
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds						
06:30 AM to 06:45 AM		0	0	0	1	5	0	0	122	7	0	0	0	0	0	0	0	0	0	0	0						
06:45 AM to 07:00 AM		0	0	0	4	9	0	0	141	18	0	0	0	0	0	0	0	0	0	0	0						
07:00 AM to 07:15 AM		0	0	0	5	8	0	0	142	20	0	0	0	0	0	0	0	0	0	0	0						
07:15 AM to 07:30 AM		0	0	0	23	11	0	0	191	16	0	0	0	0	0	0	0	0	0	0	0						
07:30 AM to 07:45 AM		0	0	0	25	11	0	0	214	25	0	0	0	0	0	0	0	0	0	0	0						
07:45 AM to 08:00 AM		0	0	0	34	27	0	0	204	34	0	0	0	0	0	0	0	0	0	0	0						
08:00 AM to 08:15 AM		0	0	0	20	26	0	0	233	28	0	0	0	0	0	0	0	0	0	0	0						
08:15 AM to 08:30 AM		0	0	0	33	24	0	0	203	46	0	0	0	0	0	0	0	0	0	0	0						
08:30 AM to 08:45 AM		0	0	0	45	27	0	0	207	44	0	0	0	0	0	0	0	0	0	0	0						
08:45 AM to 09:00 AM		0	0	0	45	18	0	0	179	21	0	0	0	0	0	0	0	0	0	0	0						
09:00 AM to 09:15 AM		0	0	0	31	49	0	0	202	20	0	0	0	0	0	0	0	0	0	0	0						
09:15 AM to 09:30 AM		0	0	0	12	36	0	0	213	15	0	0	0	0	0	0	0	0	0	0	0						
09:30 AM to 09:45 AM																											
09:45 AM to 10:00 AM																											
10:00 AM to 10:15 AM																											
10:15 AM to 10:30 AM																											
10:30 AM to 10:45 AM																											
10:45 AM to 11:00 AM																											
11:00 AM to 11:15 AM																											
11:15 AM to 11:30 AM																											
INT. PEAK HR (ALL VEH)		132				104	999				0				0												
07:45 AM to 08:45 AM		0	0	0	132	0	0	0	132	0	0	0	847	152	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor (PHF)		Overall 0.96				0.73	n/a				0.91 0.83				0.96												
		n/a				n/a	n/a				n/a				n/a												
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound													
	Roadway:	Yuma Street				Tenley Circle				Tenley Circle				Tenley Circle													
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right										
06:30 AM to 06:45 AM		0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0						
06:45 AM to 07:00 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:00 AM to 07:15 AM		0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:15 AM to 07:30 AM		0	0	0	1	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0						
07:30 AM to 07:45 AM		0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:45 AM to 08:00 AM		0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:00 AM to 08:15 AM		0	0	0	1	0	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0						
08:15 AM to 08:30 AM		0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:30 AM to 08:45 AM		0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:45 AM to 09:00 AM		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:00 AM to 09:15 AM		0	0	0	0	0	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0						
09:15 AM to 09:30 AM		0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0						
09:30 AM to 09:45 AM																											
09:45 AM to 10:00 AM																											
10:00 AM to 10:15 AM																											
10:15 AM to 10:30 AM																											
10:30 AM to 10:45 AM																											
10:45 AM to 11:00 AM																											
11:00 AM to 11:15 AM																											
11:15 AM to 11:30 AM																											
INT. PEAK HR (ALL VEH)		1					44				0				0												
07:45 AM to 08:45 AM		0	0	0	1		0	0	0	43	1		0	0	0	0		0	0	0	0	0	0	0	0		
Heavy Vehicle % (PHV)		0.0%				0.0%	0.0%				5.1%				0.7%												
		0.8%				0.8%	0.0%				4.4%				0.0%												
INT. PEAK HR (HV ONLY)		2					43				0				0												
07:15 AM to 08:15 AM		0	0	0	2		0	0	0	41	2		0	0	0	0		0	0	0	0	0	0	0	0		
Heavy Vehicle % (PHV)		0.0%				0.0%	0.0%				4.9%				1.9%												
		2.0%				2.0%	0.0%				4.6%				0.0%												
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound													
	Roadway:	Yuma Street				Tenley Circle				Tenley Circle				Tenley Circle													
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right										
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:45 AM to 08:00 AM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
09:30 AM to 09:45 AM																											
09:45 AM to 10:00 AM																											
10:00 AM to 10:15 AM																											
10:15 AM to 10:30 AM																											
10:30 AM to 10:45 AM																											
10:45 AM to 11:00 AM																											
11:00 AM to 11:15 AM																											
11:15 AM to 11:30 AM																											
INT. PEAK HR (ALL VEH)		1					0				0				0												
07:45 AM to 08:45 AM		0	0	0	1		0	0	0	0	0		0	0	0	0		0	0	0	0	0	0	0	0		
INT. PEAK HR (BIKES)		1					0				0				0												
07:00 AM to 08:00 AM		0	0	0	1		0	0	0	0	0		0	0	0	0		0	0	0	0	0	0	0	0		

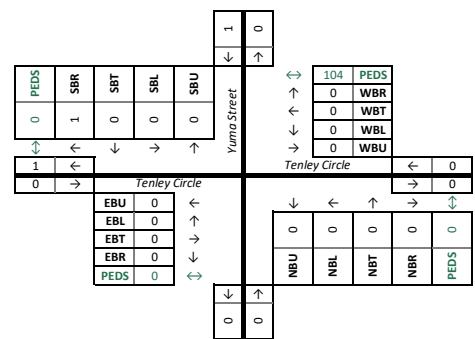
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

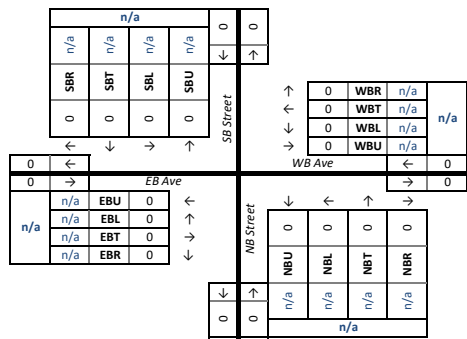
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Friday, January 1, 1999
 Location : Washington DC Weather: WEATHER
 Data Source: Excel Consultants LLC

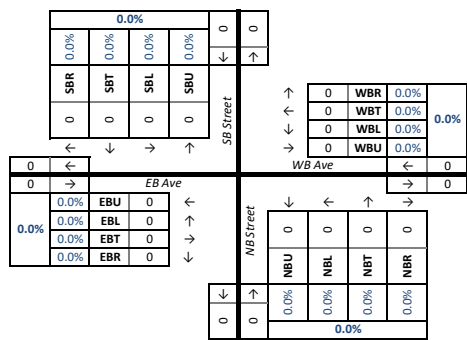
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
06:30 AM	to 06:45 AM																				
06:45 AM	to 07:00 AM																				
07:00 AM	to 07:15 AM																				
07:15 AM	to 07:30 AM																				
07:30 AM	to 07:45 AM																				
07:45 AM	to 08:00 AM																				
08:00 AM	to 08:15 AM																				
08:15 AM	to 08:30 AM																				
08:30 AM	to 08:45 AM																				
08:45 AM	to 09:00 AM																				
09:00 AM	to 09:15 AM																				
09:15 AM	to 09:30 AM																				
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a							
Overall		n/a				n/a				n/a				n/a							
Direction:		Southbound				Westbound				Northbound				Eastbound							
Roadway:		SB Street				WB Ave				NB Street				EB Ave							
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right							
HEAVY VEHICLES (FHWA 4+)		0				0				0				0							
06:30 AM to 06:45 AM		0				0				0				0							
06:45 AM to 07:00 AM		0				0				0				0							
07:00 AM to 07:15 AM		0				0				0				0							
07:15 AM to 07:30 AM		0				0				0				0							
07:30 AM to 07:45 AM		0				0				0				0							
07:45 AM to 08:00 AM		0				0				0				0							
08:00 AM to 08:15 AM		0				0				0				0							
08:15 AM to 08:30 AM		0				0				0				0							
08:30 AM to 08:45 AM		0				0				0				0							
08:45 AM to 09:00 AM		0				0				0				0							
09:00 AM to 09:15 AM		0				0				0				0							
09:15 AM to 09:30 AM		0				0				0				0							
09:30 AM to 09:45 AM		0				0				0				0							
09:45 AM to 10:00 AM		0				0				0				0							
10:00 AM to 10:15 AM		0				0				0				0							
10:15 AM to 10:30 AM		0				0				0				0							
10:30 AM to 10:45 AM		0				0				0				0							
10:45 AM to 11:00 AM		0				0				0				0							
11:00 AM to 11:15 AM		0				0				0				0							
11:15 AM to 11:30 AM		0				0				0				0							
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%							
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%							
INT. PEAK HR (HV ONLY)		0				0				0				0							
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%							
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%							
Direction:		Southbound				Westbound				Northbound				Eastbound							
Roadway:		SB Street				WB Ave				NB Street				EB Ave							
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right							
BICYCLES		0				0				0				0							
06:30 AM to 06:45 AM		0				0				0				0							
06:45 AM to 07:00 AM		0				0				0				0							
07:00 AM to 07:15 AM		0				0				0				0							
07:15 AM to 07:30 AM		0				0				0				0							
07:30 AM to 07:45 AM		0				0				0				0							
07:45 AM to 08:00 AM		0				0				0				0							
08:00 AM to 08:15 AM		0				0				0				0							
08:15 AM to 08:30 AM		0				0				0				0							
08:30 AM to 08:45 AM		0				0				0				0							
08:45 AM to 09:00 AM		0				0				0				0							
09:00 AM to 09:15 AM		0				0				0				0							
09:15 AM to 09:30 AM		0				0				0				0							
09:30 AM to 09:45 AM		0				0				0				0							
09:45 AM to 10:00 AM		0				0				0				0							
10:00 AM to 10:15 AM		0				0				0				0							
10:15 AM to 10:30 AM		0				0				0				0							
10:30 AM to 10:45 AM		0				0				0				0							
10:45 AM to 11:00 AM		0				0				0				0							
11:00 AM to 11:15 AM		0				0				0				0							
11:15 AM to 11:30 AM		0				0				0				0							
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
INT. PEAK HR (BIKES)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							

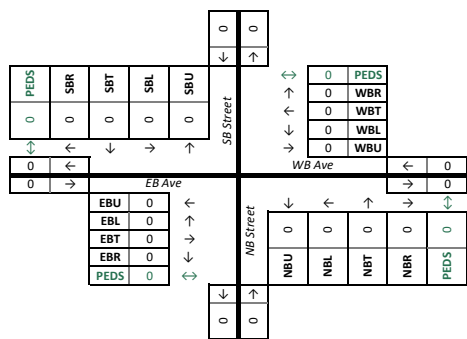
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

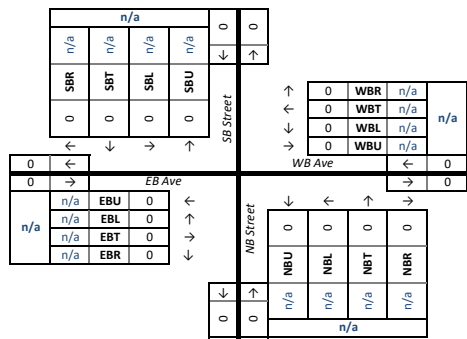
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Friday, January 1, 1999
 Location: Washington DC Weather: WEATHER
 Data Source: Excel Consultants LLC

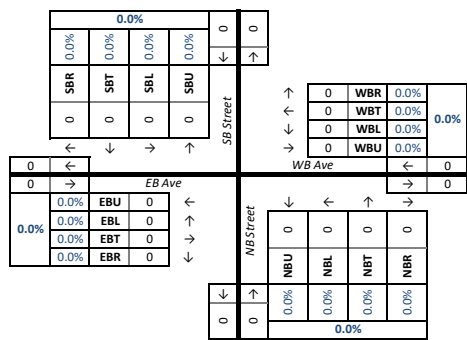
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	SB Street					WB Ave					NB Street					EB Ave				
	Movement:	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
07:15 AM to 07:30 AM																					
07:30 AM to 07:45 AM																					
07:45 AM to 08:00 AM																					
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08:45 AM to 09:00 AM																					
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10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				
Peak Hour Factor (PHF)		n/a					n/a					n/a					n/a				
Overall		n/a					n/a					n/a					n/a				
Direction:		Southbound					Westbound					Northbound					Eastbound				
Roadway:		SB Street					WB Ave					NB Street					EB Ave				
Movement:		U Left Thru Right					U Left Thru Right					U Left Thru Right					U Left Thru Right				
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
07:15 AM to 07:30 AM																					
07:30 AM to 07:45 AM																					
07:45 AM to 08:00 AM																					
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10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				
Heavy Vehicle % (PHV)		0.0%					0.0%					0.0%					0.0%				
06:30 AM to 07:30 AM		0.0%					0.0%					0.0%					0.0%				
INT. PEAK HR (HV ONLY)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				
Heavy Vehicle % (PHV)		0.0%					0.0%					0.0%					0.0%				
06:30 AM to 07:30 AM		0.0%					0.0%					0.0%					0.0%				
Direction:		Southbound					Westbound					Northbound					Eastbound				
Roadway:		SB Street					WB Ave					NB Street					EB Ave				
Movement:		U Left Thru Right					U Left Thru Right					U Left Thru Right					U Left Thru Right				
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
07:15 AM to 07:30 AM																					
07:30 AM to 07:45 AM																					
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10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				
INT. PEAK HR (BIKES)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				

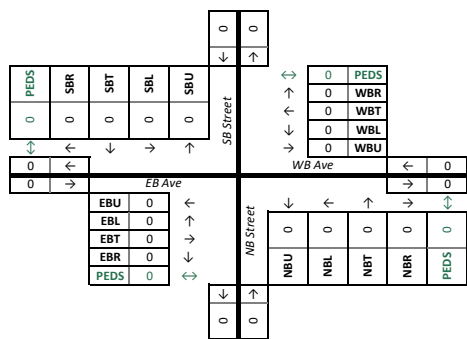
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

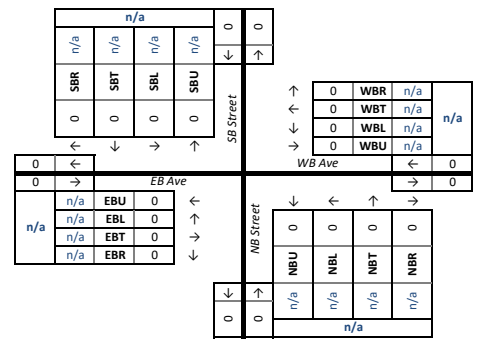
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

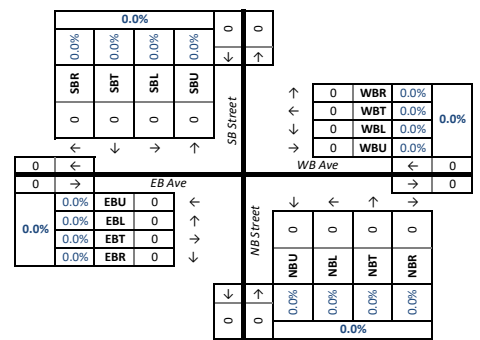
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
06:30 AM to 06:45 AM																					
06:45 AM to 07:00 AM																					
07:00 AM to 07:15 AM																					
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10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a							
Overall		n/a				n/a				n/a				n/a							
Direction:		Southbound				Westbound				Northbound				Eastbound							
Roadway:		SB Street				WB Ave				NB Street				EB Ave							
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right							
HEAVY VEHICLES (FHWA 4+)		0				0				0				0							
06:30 AM to 06:45 AM		0				0				0				0							
06:45 AM to 07:00 AM		0				0				0				0							
07:00 AM to 07:15 AM		0				0				0				0							
07:15 AM to 07:30 AM		0				0				0				0							
07:30 AM to 07:45 AM		0				0				0				0							
07:45 AM to 08:00 AM		0				0				0				0							
08:00 AM to 08:15 AM		0				0				0				0							
08:15 AM to 08:30 AM		0				0				0				0							
08:30 AM to 08:45 AM		0				0				0				0							
08:45 AM to 09:00 AM		0				0				0				0							
09:00 AM to 09:15 AM		0				0				0				0							
09:15 AM to 09:30 AM		0				0				0				0							
09:30 AM to 09:45 AM		0				0				0				0							
09:45 AM to 10:00 AM		0				0				0				0							
10:00 AM to 10:15 AM		0				0				0				0							
10:15 AM to 10:30 AM		0				0				0				0							
10:30 AM to 10:45 AM		0				0				0				0							
10:45 AM to 11:00 AM		0				0				0				0							
11:00 AM to 11:15 AM		0				0				0				0							
11:15 AM to 11:30 AM		0				0				0				0							
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%							
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%							
INT. PEAK HR (HV ONLY)		0				0				0				0							
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%							
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%							
Direction:		Southbound				Westbound				Northbound				Eastbound							
Roadway:		SB Street				WB Ave				NB Street				EB Ave							
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right							
BICYCLES		0				0				0				0							
06:30 AM to 06:45 AM		0				0				0				0							
06:45 AM to 07:00 AM		0				0				0				0							
07:00 AM to 07:15 AM		0				0				0				0							
07:15 AM to 07:30 AM		0				0				0				0							
07:30 AM to 07:45 AM		0				0				0				0							
07:45 AM to 08:00 AM		0				0				0				0							
08:00 AM to 08:15 AM		0				0				0				0							
08:15 AM to 08:30 AM		0				0				0				0							
08:30 AM to 08:45 AM		0				0				0				0							
08:45 AM to 09:00 AM		0				0				0				0							
09:00 AM to 09:15 AM		0				0				0				0							
09:15 AM to 09:30 AM		0				0				0				0							
09:30 AM to 09:45 AM		0				0				0				0							
09:45 AM to 10:00 AM		0				0				0				0							
10:00 AM to 10:15 AM		0				0				0				0							
10:15 AM to 10:30 AM		0				0				0				0							
10:30 AM to 10:45 AM		0				0				0				0							
10:45 AM to 11:00 AM		0				0				0				0							
11:00 AM to 11:15 AM		0				0				0				0							
11:15 AM to 11:30 AM		0				0				0				0							
INT. PEAK HR (ALL VEH)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							
INT. PEAK HR (BIKES)		0				0				0				0							
06:30 AM to 07:30 AM		0				0				0				0							

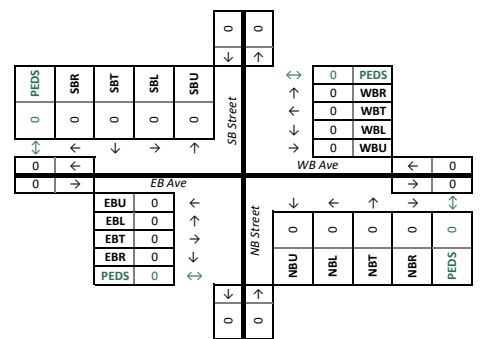
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period : STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts : Wednesday, February 26, 2020
 Location : Washington DC Weather : Partly Cloudy
 Data Source : Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																					
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound						
	Roadway:	SB Street					WB Ave					NB Street					EB Ave						
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds		
06:30 AM to 06:45 AM																							
06:45 AM to 07:00 AM																							
07:00 AM to 07:15 AM																							
07:15 AM to 07:30 AM																							
07:30 AM to 07:45 AM																							
07:45 AM to 08:00 AM																							
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10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		0					0					0					0						
06:30 AM to 07:30 AM		0					0					0					0						
Peak Hour Factor (PHF)		n/a					n/a					n/a					n/a						
Overall		n/a					n/a					n/a					n/a						
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound						
	Roadway:	SB Street					WB Ave					NB Street					EB Ave						
	Movement:	U	L	T	R		U	L	T	R		U	L	T	R		U	L	T	R			
06:30 AM to 06:45 AM																							
06:45 AM to 07:00 AM																							
07:00 AM to 07:15 AM																							
07:15 AM to 07:30 AM																							
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10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		0					0					0					0						
06:30 AM to 07:30 AM		0					0					0					0						
Heavy Vehicle % (PHV)		0.0%					0.0%					0.0%					0.0%						
06:30 AM to 07:30 AM		0.0%					0.0%					0.0%					0.0%						
INT. PEAK HR (HV ONLY)		0					0					0					0						
06:30 AM to 07:30 AM		0					0					0					0						
Heavy Vehicle % (PHV)		0.0%					0.0%					0.0%					0.0%						
06:30 AM to 07:30 AM		0.0%					0.0%					0.0%					0.0%						
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound						
	Roadway:	SB Street					WB Ave					NB Street					EB Ave						
	Movement:	U	L	T	R		U	L	T	R		U	L	T	R		U	L	T	R			
06:30 AM to 06:45 AM																							
06:45 AM to 07:00 AM																							
07:00 AM to 07:15 AM																							
07:15 AM to 07:30 AM																							
07:30 AM to 07:45 AM																							
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10:30 AM to 10:45 AM																							
10:45 AM to 11:00 AM																							
11:00 AM to 11:15 AM																							
11:15 AM to 11:30 AM																							
INT. PEAK HR (ALL VEH)		0					0					0					0						
06:30 AM to 07:30 AM		0					0					0					0						
INT. PEAK HR (BIKES)		0					0					0					0						
06:30 AM to 07:30 AM		0					0					0					0						

VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)

The diagram shows a grid of movement counts for all vehicles. The top-left quadrant shows counts for SB Street movements (SBR, SBT, SBL, SBU) with values n/a. The bottom-left quadrant shows counts for EB Ave movements (EBU, EBL, EBT, EBR) with values n/a. The right side shows counts for NB Street and WB Ave movements (NBU, NBL, NBT, NBR and WBR, WBL, WBU) with values n/a. A central diagram shows the intersection layout with arrows indicating directions and movements.

HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)

The diagram shows a grid of movement counts for heavy vehicles, with all values being 0.0%. The layout is identical to the all-vehicle diagram, showing counts for SB Street, EB Ave, NB Street, and WB Ave movements.

PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)

The diagram shows a grid of movement counts for pedestrians and bicycles, with all values being 0. The layout is identical to the previous diagrams, showing counts for SB Street, EB Ave, NB Street, and WB Ave movements.

DATA COLLECTION NOTES :

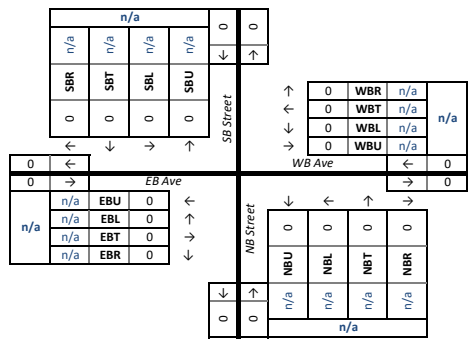
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

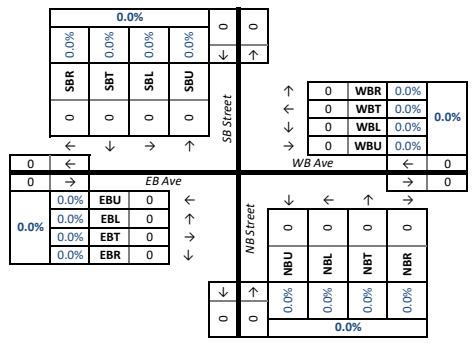
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																		
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	U	L	T	R
06:30 AM to 06:45 AM		0																		
06:45 AM to 07:00 AM		0																		
07:00 AM to 07:15 AM		0																		
07:15 AM to 07:30 AM		0																		
07:30 AM to 07:45 AM		0																		
07:45 AM to 08:00 AM		0																		
08:00 AM to 08:15 AM		0																		
08:15 AM to 08:30 AM		0																		
08:30 AM to 08:45 AM		0																		
08:45 AM to 09:00 AM		0																		
09:00 AM to 09:15 AM		0																		
09:15 AM to 09:30 AM		0																		
09:30 AM to 09:45 AM		0																		
09:45 AM to 10:00 AM		0																		
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10:15 AM to 10:30 AM		0																		
10:30 AM to 10:45 AM		0																		
10:45 AM to 11:00 AM		0																		
11:00 AM to 11:15 AM		0																		
11:15 AM to 11:30 AM		0																		
INT. PEAK HR (ALL VEH)		0																		
06:30 AM to 07:30 AM		0																		
Peak Hour Factor (PHF)		n/a																		
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
06:30 AM to 06:45 AM		0																		
06:45 AM to 07:00 AM		0																		
07:00 AM to 07:15 AM		0																		
07:15 AM to 07:30 AM		0																		
07:30 AM to 07:45 AM		0																		
07:45 AM to 08:00 AM		0																		
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10:30 AM to 10:45 AM		0																		
10:45 AM to 11:00 AM		0																		
11:00 AM to 11:15 AM		0																		
11:15 AM to 11:30 AM		0																		
INT. PEAK HR (ALL VEH)		0																		
06:30 AM to 07:30 AM		0.0%																		
Heavy Vehicle % (PHV)		0.0%																		
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
06:30 AM to 06:45 AM		0																		
06:45 AM to 07:00 AM		0																		
07:00 AM to 07:15 AM		0																		
07:15 AM to 07:30 AM		0																		
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10:45 AM to 11:00 AM		0																		
11:00 AM to 11:15 AM		0																		
11:15 AM to 11:30 AM		0																		
INT. PEAK HR (ALL VEH)		0																		
06:30 AM to 07:30 AM		0																		
INT. PEAK HR (BIKES)		0																		
06:30 AM to 07:30 AM		0																		

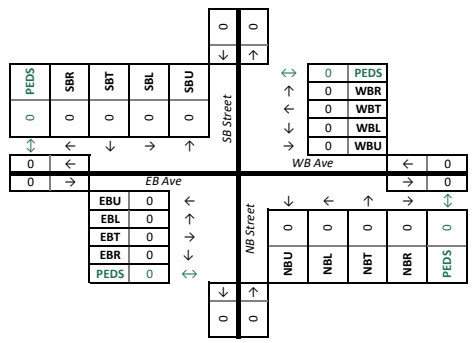
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

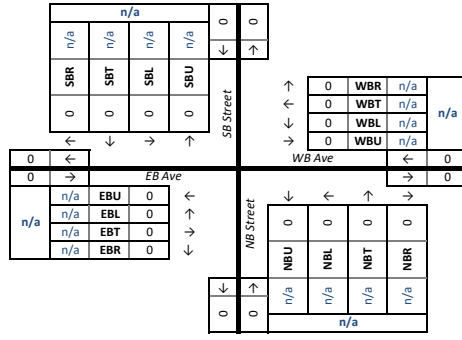
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

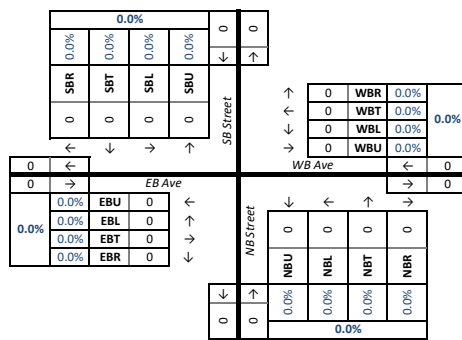
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. SB Street/NB Street & WB Ave/EB Ave		Southbound					Westbound					Northbound					Eastbound									
ALL VEHICLES	Direction: SB Street	SB Street					WB Ave					NB Street					EB Ave									
	Roadway: SB Street	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds					
	Movement:	U Left Thru Right Peds					U Left Thru Right Peds					U Left Thru Right Peds					U Left Thru Right Peds									
06:30 AM	to 06:45 AM																									
06:45 AM	to 07:00 AM																									
07:00 AM	to 07:15 AM																									
07:15 AM	to 07:30 AM																									
07:30 AM	to 07:45 AM																									
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10:45 AM	to 11:00 AM																									
11:00 AM	to 11:15 AM																									
11:15 AM	to 11:30 AM																									
	INT. PEAK HR (ALL VEH)	0					0					0					0									
06:30 AM	to 07:30 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
	Peak Hour Factor (PHF)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	HEAVY VEHICLES (FHWA 4+)	SB Street					WB Ave					NB Street					EB Ave									
	Direction: SB Street	U Left Thru Right					U Left Thru Right					U Left Thru Right					U Left Thru Right									
	Movement:	U Left Thru Right					U Left Thru Right					U Left Thru Right					U Left Thru Right									
06:30 AM	to 06:45 AM																									
06:45 AM	to 07:00 AM																									
07:00 AM	to 07:15 AM																									
07:15 AM	to 07:30 AM																									
07:30 AM	to 07:45 AM																									
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10:45 AM	to 11:00 AM																									
11:00 AM	to 11:15 AM																									
11:15 AM	to 11:30 AM																									
	INT. PEAK HR (ALL VEH)	0					0					0					0									
06:30 AM	to 07:30 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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Heavy Vehicle % (PHV)	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	INT. PEAK HR (HV ONLY)	0					0					0					0									
06:30 AM	to 07:30 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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Heavy Vehicle % (PHV)	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	BICYCLES	SB Street					WB Ave					NB Street					EB Ave									
	Direction: SB Street	U Left Thru Right					U Left Thru Right					U Left Thru Right					U Left Thru Right									
	Movement:	U Left Thru Right					U Left Thru Right					U Left Thru Right					U Left Thru Right									
06:30 AM	to 06:45 AM																									
06:45 AM	to 07:00 AM																									
07:00 AM	to 07:15 AM																									
07:15 AM	to 07:30 AM																									
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10:45 AM	to 11:00 AM																									
11:00 AM	to 11:15 AM																									
11:15 AM	to 11:30 AM																									
	INT. PEAK HR (ALL VEH)	0					0					0					0									
06:30 AM	to 07:30 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
	INT. PEAK HR (BIKES)	0					0					0					0									
06:30 AM	to 07:30 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

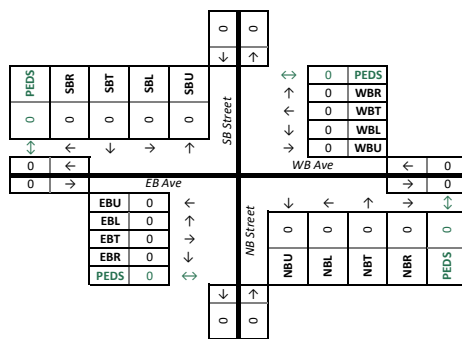
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

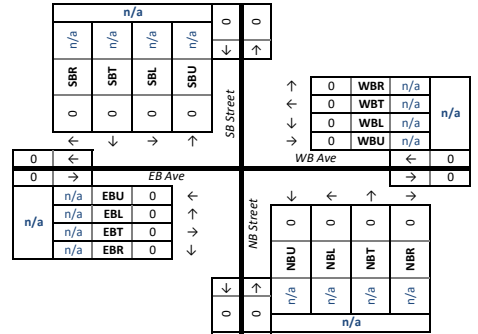
Project Name: American University Data Collection
 Project #: 3
 Location: Washington DC
 Data Source: Excel Consultants LLC

Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Date of Counts: Wednesday, February 26, 2020
 Weather: Partly Cloudy

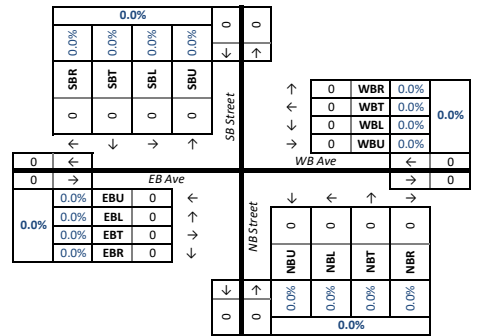
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	SB Street					WB Ave					NB Street					EB Ave				
	Movement:	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P
06:30 AM to 06:45 AM		0					0					0					0				
06:45 AM to 07:00 AM		0					0					0					0				
07:00 AM to 07:15 AM		0					0					0					0				
07:15 AM to 07:30 AM		0					0					0					0				
07:30 AM to 07:45 AM		0					0					0					0				
07:45 AM to 08:00 AM		0					0					0					0				
08:00 AM to 08:15 AM		0					0					0					0				
08:15 AM to 08:30 AM		0					0					0					0				
08:30 AM to 08:45 AM		0					0					0					0				
08:45 AM to 09:00 AM		0					0					0					0				
09:00 AM to 09:15 AM		0					0					0					0				
09:15 AM to 09:30 AM		0					0					0					0				
09:30 AM to 09:45 AM		0					0					0					0				
09:45 AM to 10:00 AM		0					0					0					0				
10:00 AM to 10:15 AM		0					0					0					0				
10:15 AM to 10:30 AM		0					0					0					0				
10:30 AM to 10:45 AM		0					0					0					0				
10:45 AM to 11:00 AM		0					0					0					0				
11:00 AM to 11:15 AM		0					0					0					0				
11:15 AM to 11:30 AM		0					0					0					0				
INT. PEAK HR (ALL VEH)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				
Peak Hour Factor (PHF)		n/a					n/a					n/a					n/a				
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	SB Street					WB Ave					NB Street					EB Ave				
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
06:30 AM to 06:45 AM		0					0					0					0				
06:45 AM to 07:00 AM		0					0					0					0				
07:00 AM to 07:15 AM		0					0					0					0				
07:15 AM to 07:30 AM		0					0					0					0				
07:30 AM to 07:45 AM		0					0					0					0				
07:45 AM to 08:00 AM		0					0					0					0				
08:00 AM to 08:15 AM		0					0					0					0				
08:15 AM to 08:30 AM		0					0					0					0				
08:30 AM to 08:45 AM		0					0					0					0				
08:45 AM to 09:00 AM		0					0					0					0				
09:00 AM to 09:15 AM		0					0					0					0				
09:15 AM to 09:30 AM		0					0					0					0				
09:30 AM to 09:45 AM		0					0					0					0				
09:45 AM to 10:00 AM		0					0					0					0				
10:00 AM to 10:15 AM		0					0					0					0				
10:15 AM to 10:30 AM		0					0					0					0				
10:30 AM to 10:45 AM		0					0					0					0				
10:45 AM to 11:00 AM		0					0					0					0				
11:00 AM to 11:15 AM		0					0					0					0				
11:15 AM to 11:30 AM		0					0					0					0				
INT. PEAK HR (ALL VEH)		0					0					0					0				
06:30 AM to 07:30 AM		0.0%					0.0%					0.0%					0.0%				
Heavy Vehicle % (PHV)		0.0%					0.0%					0.0%					0.0%				
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	SB Street					WB Ave					NB Street					EB Ave				
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
06:30 AM to 06:45 AM		0					0					0					0				
06:45 AM to 07:00 AM		0					0					0					0				
07:00 AM to 07:15 AM		0					0					0					0				
07:15 AM to 07:30 AM		0					0					0					0				
07:30 AM to 07:45 AM		0					0					0					0				
07:45 AM to 08:00 AM		0					0					0					0				
08:00 AM to 08:15 AM		0					0					0					0				
08:15 AM to 08:30 AM		0					0					0					0				
08:30 AM to 08:45 AM		0					0					0					0				
08:45 AM to 09:00 AM		0					0					0					0				
09:00 AM to 09:15 AM		0					0					0					0				
09:15 AM to 09:30 AM		0					0					0					0				
09:30 AM to 09:45 AM		0					0					0					0				
09:45 AM to 10:00 AM		0					0					0					0				
10:00 AM to 10:15 AM		0					0					0					0				
10:15 AM to 10:30 AM		0					0					0					0				
10:30 AM to 10:45 AM		0					0					0					0				
10:45 AM to 11:00 AM		0					0					0					0				
11:00 AM to 11:15 AM		0					0					0					0				
11:15 AM to 11:30 AM		0					0					0					0				
INT. PEAK HR (ALL VEH)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				
INT. PEAK HR (BIKES)		0					0					0					0				
06:30 AM to 07:30 AM		0					0					0					0				

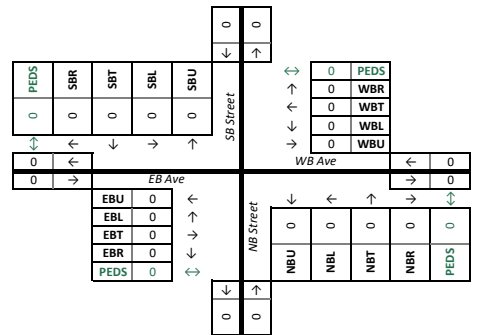
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

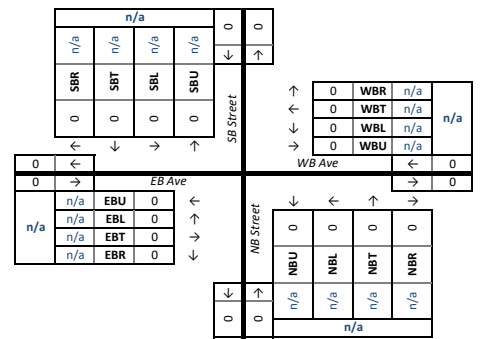
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

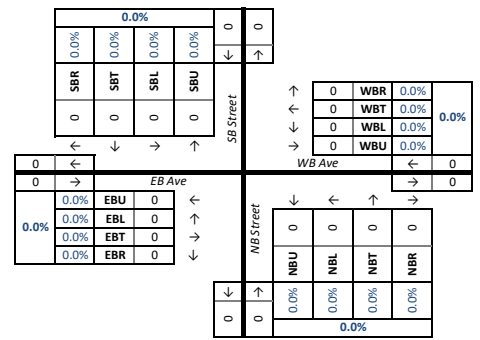
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. SB Street/NB Street & WB Ave/EB Ave																
ALL VEHICLES	Southbound				Westbound				Northbound				Eastbound			
	SB Street				WB Ave				NB Street				EB Ave			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
06:30 AM to 06:45 AM																
06:45 AM to 07:00 AM																
07:00 AM to 07:15 AM																
07:15 AM to 07:30 AM																
07:30 AM to 07:45 AM																
07:45 AM to 08:00 AM																
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10:00 AM to 10:15 AM																
10:15 AM to 10:30 AM																
10:30 AM to 10:45 AM																
10:45 AM to 11:00 AM																
11:00 AM to 11:15 AM																
11:15 AM to 11:30 AM																
INT. PEAK HR (ALL VEH)																
06:30 AM to 07:30 AM																
Peak Hour Factor (PHF)																
Overall n/a	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)	Southbound				Westbound				Northbound				Eastbound			
Roadway: SB Street	SB Street				WB Ave				NB Street				EB Ave			
Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
06:30 AM to 06:45 AM																
06:45 AM to 07:00 AM																
07:00 AM to 07:15 AM																
07:15 AM to 07:30 AM																
07:30 AM to 07:45 AM																
07:45 AM to 08:00 AM																
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10:30 AM to 10:45 AM																
10:45 AM to 11:00 AM																
11:00 AM to 11:15 AM																
11:15 AM to 11:30 AM																
INT. PEAK HR (ALL VEH)																
06:30 AM to 07:30 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%
Heavy Vehicle % (PHV):	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%
INT. PEAK HR (HV ONLY)																
06:30 AM to 07:30 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%
Heavy Vehicle % (PHV):	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	Southbound				Westbound				Northbound				Eastbound			
Roadway: SB Street	SB Street				WB Ave				NB Street				EB Ave			
Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
06:30 AM to 06:45 AM																
06:45 AM to 07:00 AM																
07:00 AM to 07:15 AM																
07:15 AM to 07:30 AM																
07:30 AM to 07:45 AM																
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10:45 AM to 11:00 AM																
11:00 AM to 11:15 AM																
11:15 AM to 11:30 AM																
INT. PEAK HR (ALL VEH)																
06:30 AM to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)																
06:30 AM to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

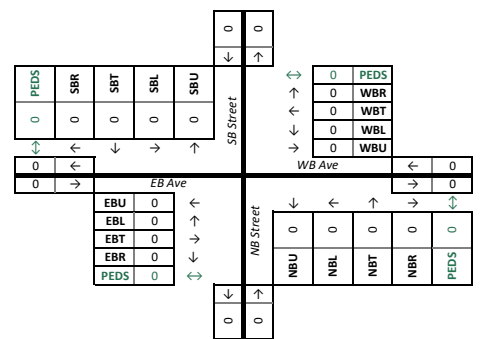
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project #: 3 Date of Counts: Friday, January 1, 1999
 Location: Washington DC Weather: WEATHER
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)

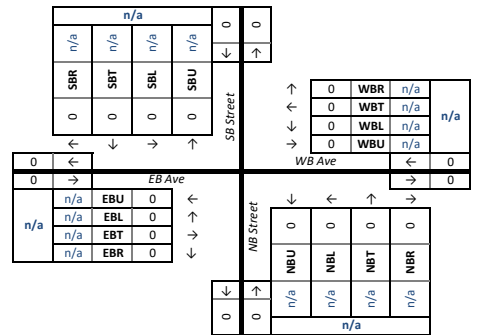
Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM

System Peak Hour (all vehicles): 07:30 AM to 08:30 AM

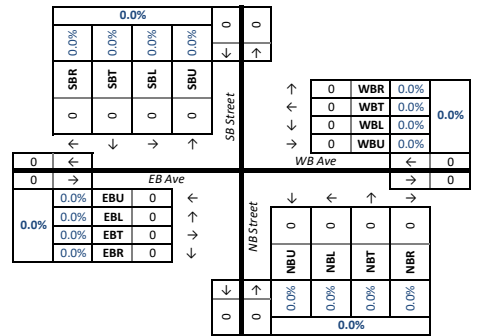
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																		
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R
	06:30 AM to 06:45 AM																			
	06:45 AM to 07:00 AM																			
	07:00 AM to 07:15 AM																			
	07:15 AM to 07:30 AM																			
	07:30 AM to 07:45 AM																			
	07:45 AM to 08:00 AM																			
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	08:45 AM to 09:00 AM																			
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	09:45 AM to 10:00 AM																			
	10:00 AM to 10:15 AM																			
	10:15 AM to 10:30 AM																			
	10:30 AM to 10:45 AM																			
	10:45 AM to 11:00 AM																			
	11:00 AM to 11:15 AM																			
	11:15 AM to 11:30 AM																			
INT. PEAK HR (ALL VEH)		0				0				0				0						
06:30 AM to 07:30 AM		0				0				0				0						
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a						
Overall		n/a				n/a				n/a				n/a						
HEAVY VEHICLES (FHWA 4+)																				
Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		SB Street				WB Ave				NB Street				EB Ave						
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right						
	06:30 AM to 06:45 AM																			
	06:45 AM to 07:00 AM																			
	07:00 AM to 07:15 AM																			
	07:15 AM to 07:30 AM																			
	07:30 AM to 07:45 AM																			
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	10:30 AM to 10:45 AM																			
	10:45 AM to 11:00 AM																			
	11:00 AM to 11:15 AM																			
	11:15 AM to 11:30 AM																			
INT. PEAK HR (ALL VEH)		0				0				0				0						
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%						
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%						
INT. PEAK HR (HV ONLY)		0				0				0				0						
06:30 AM to 07:30 AM		0.0%				0.0%				0.0%				0.0%						
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%						
BICYCLES																				
Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		SB Street				WB Ave				NB Street				EB Ave						
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right						
	06:30 AM to 06:45 AM																			
	06:45 AM to 07:00 AM																			
	07:00 AM to 07:15 AM																			
	07:15 AM to 07:30 AM																			
	07:30 AM to 07:45 AM																			
	07:45 AM to 08:00 AM																			
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	10:30 AM to 10:45 AM																			
	10:45 AM to 11:00 AM																			
	11:00 AM to 11:15 AM																			
	11:15 AM to 11:30 AM																			
INT. PEAK HR (ALL VEH)		0				0				0				0						
06:30 AM to 07:30 AM		0				0				0				0						
INT. PEAK HR (BIKES)		0				0				0				0						
06:30 AM to 07:30 AM		0				0				0				0						

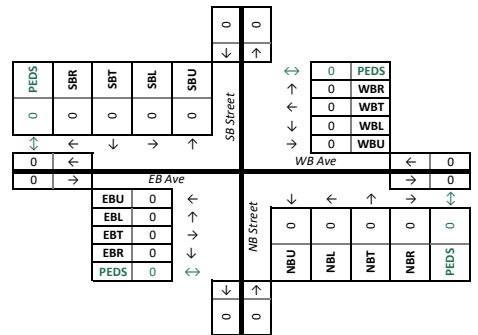
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

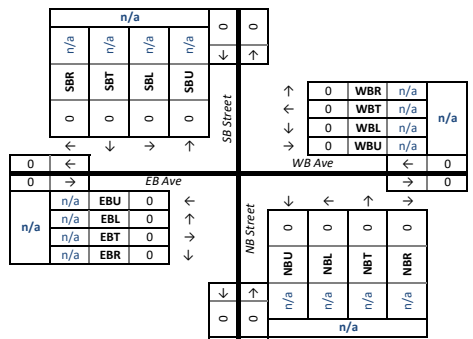
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 06:30 AM to 09:30 AM
 Project # : 3 Date of Counts: Friday, January 1, 1999
 Location : Washington DC Weather: WEATHER
 Data Source: Excel Consultants LLC

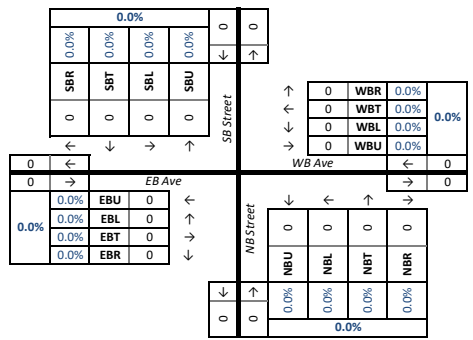
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 06:30 AM to 07:30 AM
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																				
ALL VEHICLES	Direction:		Southbound				Westbound				Northbound				Eastbound							
	Roadway:		SB Street				WB Ave				NB Street				EB Ave							
	Movement:		U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
06:30 AM	to	06:45 AM																				
06:45 AM	to	07:00 AM																				
07:00 AM	to	07:15 AM																				
07:15 AM	to	07:30 AM																				
07:30 AM	to	07:45 AM																				
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10:45 AM	to	11:00 AM																				
11:00 AM	to	11:15 AM																				
11:15 AM	to	11:30 AM																				
INT. PEAK HR (ALL VEH)		0				0				0				0								
06:30 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour Factor (PHF)		Overall	U	L	T	R	SB	U	L	T	R	WB	U	L	T	R	NB	U	L	T	R	EB
n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)		Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		SB Street				WB Ave				NB Street				EB Ave								
Movement:		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R					
06:30 AM	to	06:45 AM																				
06:45 AM	to	07:00 AM																				
07:00 AM	to	07:15 AM																				
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10:45 AM	to	11:00 AM																				
11:00 AM	to	11:15 AM																				
11:15 AM	to	11:30 AM																				
INT. PEAK HR (ALL VEH)		0				0				0				0								
06:30 AM to 07:30 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%	0.0%	0.0%	0.0%	0.0%	
Heavy Vehicle % (PHV)		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%	0.0%	
INT. PEAK HR (HV ONLY)		0				0				0				0								
06:30 AM to 07:30 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%	0.0%	0.0%	0.0%	0.0%	
Heavy Vehicle % (PHV)		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%	0.0%	
BICYCLES		Direction:		Southbound				Westbound				Northbound				Eastbound						
Roadway:		SB Street				WB Ave				NB Street				EB Ave								
Movement:		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R					
06:30 AM	to	06:45 AM																				
06:45 AM	to	07:00 AM																				
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10:45 AM	to	11:00 AM																				
11:00 AM	to	11:15 AM																				
11:15 AM	to	11:30 AM																				
INT. PEAK HR (ALL VEH)		0				0				0				0								
06:30 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INT. PEAK HR (BIKES)		0				0				0				0								
06:30 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

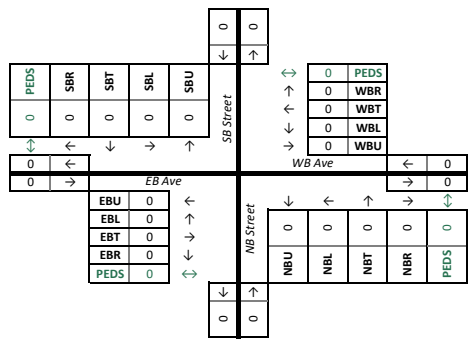
VEHICLE PEAK HOUR VOL AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOL AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

HOURLY COMPARISON -- AM PEAK

PHF CALCULATION (ENTIRE SYSTEM)

		Total	15-Min			
6:30 AM to	7:30 AM	13677	6:30 AM	2397	0	0
6:45 AM to	7:45 AM	16844	6:45 AM	3090	0	0
7:00 AM to	8:00 AM	19555	7:00 AM	3691	0	0
7:15 AM to	8:15 AM	21468	7:15 AM	4499	0	0
7:30 AM to	8:30 AM	22649	7:30 AM	5564	1	5801
7:45 AM to	8:45 AM	22637	7:45 AM	5801	0	0
8:00 AM to	9:00 AM	22291	8:00 AM	5604	0	0
8:15 AM to	9:15 AM	21805	8:15 AM	5680	0	0
8:30 AM to	9:30 AM	20956	8:30 AM	5552	0	0
8:45 AM to	9:45 AM	15404	8:45 AM	5455	0	0
9:00 AM to	10:00 AM	9949	9:00 AM	5118	0	0
9:15 AM to	10:15 AM	4831	9:15 AM	4831	0	0
9:30 AM to	10:30 AM	0	9:30 AM	0	0	0
9:45 AM to	10:45 AM	0	9:45 AM	0	0	0
10:00 AM to	11:00 AM	0	10:00 AM	0	0	0
10:15 AM to	11:15 AM	0	10:15 AM	0	0	0
10:30 AM to	11:30 AM	0	10:30 AM	0	0	0
SYSTEM PEAK						
7:30 AM to	8:30 AM		10:45 AM	0		
			11:00 AM	0		
			11:15 AM	0		

MAX
22649



Multimodal Turning Movement Count Report

PROJECT_SHORT_NAME | STUDY_PERIOD

Project Information

Project Name:	American University Data Collection		
Location:	Washington DC	Project Number:	3
Analysis Period:	STUDY_PERIOD	4:00 PM to 7:00 PM	System Peak Hour: 5:00 PM to 6:00 PM
Notes:			

Study Intersections

Intersection ID	Southbound	Westbound	Northbound	Eastbound	Count Date	Intersection Peak Hour
36	42nd Street		42nd Street	Warren St (South)	2/27/2020	5:15 PM to 6:15 PM
37	42nd Street		42nd Street	Warren St (North)	2/27/2020	5:15 PM to 6:15 PM
38	48th Street	Warren Street	48th Street		2/25/2020	4:45 PM to 5:45 PM
39	48th Street	Yuma Street	48th Street	Yuma Street	2/25/2020	4:30 PM to 5:30 PM
40	42nd Street	Albemarle Street	42nd Street	Albemarle Street	2/27/2020	5:00 PM to 6:00 PM
41		Nebraska Ave	Macomb Street	Nebraska Ave	2/25/2020	4:00 PM to 5:00 PM
42	Indian Lane	Nebraska Ave	Chain Bridge Road	Loughboro Road	2/25/2020	5:00 PM to 6:00 PM
43	First Driveway	Campus Drive	Concrete walk	Campus Drive	2/25/2020	5:00 PM to 6:00 PM
44	Ped Crossing	Campus Drive	Ped Crossing	Campus Drive	2/25/2020	4:00 PM to 5:00 PM
45	Campus Drive	Campus Drive	Dumpster Area		2/25/2020	5:00 PM to 6:00 PM
46	Loop	Campus Drive	Loop		2/25/2020	5:00 PM to 6:00 PM
47	Loop		Loop	Parking Lot	2/25/2020	4:30 PM to 5:30 PM
48	Loop	Access Road	South Exit		2/25/2020	4:45 PM to 5:45 PM
49	Loop	Emergency Access	Loop	Access to South Entrance	2/25/2020	5:00 PM to 6:00 PM
50	Drop off/Pick up Zone	Campus Drive		Campus Drive	2/25/2020	5:00 PM to 6:00 PM
51	Ward Circle	Nebraska Ave	Ward Circle	Ward Circle	2/26/2020	5:00 PM to 6:00 PM
52	Massachusetts Ave	Ward Circle	0	Ward Circle	2/26/2020	5:15 PM to 6:15 PM
53	Ward Circle	Ward Circle	Ward Circle	Nebraska Ave	2/26/2020	5:15 PM to 6:15 PM
54		Ward Circle	Massachusetts Ave	Ward Circle	2/26/2020	5:15 PM to 6:15 PM
191	Wisconsin Ave/North	Tenley Circle	Wisconsin Ave	Tenley Circle	2/27/2020	5:15 PM to 6:15 PM
192	Yuma Street	Tenley Circle		Tenley Circle	2/27/2020	5:00 PM to 6:00 PM
193	Tenley Circle		Tenley Circle	Nebraska Ave	2/27/2020	5:00 PM to 6:00 PM
55	SB Street	WB Ave	NB Street	EB Ave	1/1/1999	4:00 PM to 5:00 PM
56	SB Street	WB Ave	NB Street	EB Ave	1/1/1999	4:00 PM to 5:00 PM
57	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
58	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
59	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
60	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
61	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
62	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
63	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
64	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
65	SB Street	WB Ave	NB Street	EB Ave	2/26/2020	4:00 PM to 5:00 PM
66	SB Street	WB Ave	NB Street	EB Ave	1/1/1999	4:00 PM to 5:00 PM

67

SB Street

WB Ave

NB Street

EB Ave

1/1/1999

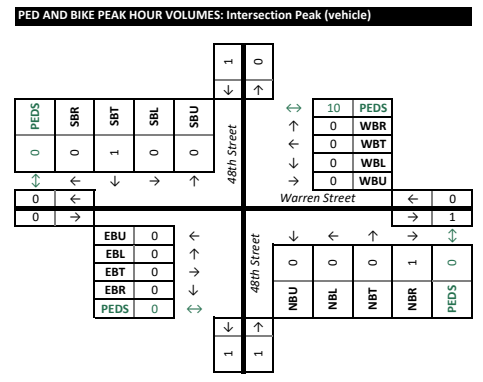
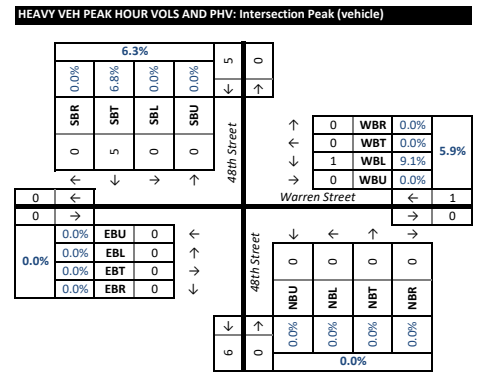
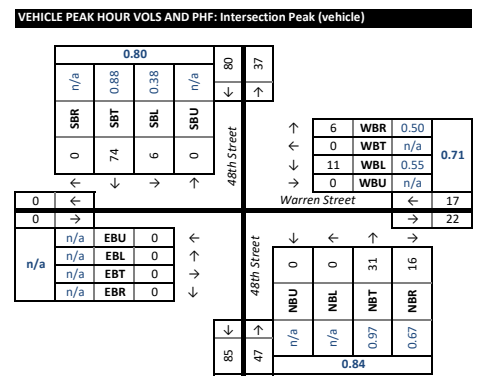
4:00 PM to 5:00 PM

Multimodal Turning Movement Count Report

Project Name : American University Data Collection
Analysis Period : STUDY PERIOD
Date of Counts : Tuesday, February 25, 2020
Location : Washington DC
Weather : Cloudy
Data Source : Excel Consultants LLC

Volumes Displayed as : 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 04:45 PM to 05:45 PM
System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
User-Defined Peak Hour: 05:00 PM to 06:00 PM

Table with columns for Direction (Southbound, Westbound, Northbound, Eastbound) and Roadway (48th Street, Warren Street). Rows show movement counts (U, Left, Thru, Right, Peds) for various time intervals (e.g., 04:00 PM to 04:15 PM). Includes summary rows for INT. PEAK HR (ALL VEH) and HEAVY VEHICLES (PHF).



DATA COLLECTION NOTES :

Multimodal Turning Movement Count Report

Project Name: American University Data Collection
 Project #: 3
 Location: Washington DC
 Date of Counts: Thursday, February 27, 2020
 Weather: Partly Cloudy
 Analysis Period: STUDY PERIOD
 Date of Counts: Thursday, February 27, 2020
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM
 Data Source: Excel Consultants LLC

ALL VEHICLES	Direction: Southbound				Direction: Westbound				Direction: Northbound				Direction: Eastbound							
	42nd Street				Albemarle Street				42nd Street				Albemarle Street							
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM to 04:15 PM	0	6	19	12	7	0	1	21	11	11	0	2	19	1	6	0	16	6	6	14
INT. PEAK HR (ALL VEH)				168				190				119				170				
05:00 PM to 06:00 PM	1	29	94	44	83	0	22	118	50	128	0	4	111	4	47	0	66	90	14	93
Peak Hour Factor (PHF)	Overall 0.92				0.25 0.81 0.87 0.69 0.88				n/a 0.61 0.76 0.74 0.81				n/a 0.50 0.65 0.50 0.65				n/a 0.66 0.80 0.58 0.92			

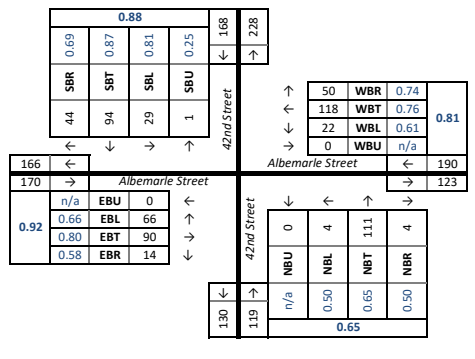
HEAVY VEHICLES (FHWA 4+)	Direction: Southbound				Direction: Westbound				Direction: Northbound				Direction: Eastbound							
	42nd Street				Albemarle Street				42nd Street				Albemarle Street							
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INT. PEAK HR (ALL VEH)				1				2				0				0				
05:00 PM to 06:00 PM	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)	0.0%				0.0%				0.0%				2.0%				0.0%			

BICYCLES	Direction: Southbound				Direction: Westbound				Direction: Northbound				Direction: Eastbound						
	42nd Street				Albemarle Street				42nd Street				Albemarle Street						
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
04:00 PM to 04:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (ALL VEH)				4				3				2				0			
05:00 PM to 06:00 PM	0	1	3	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)	4				3				2				0						

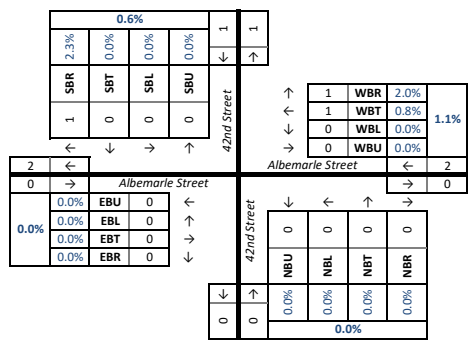
HEAVY VEHICLES (FHWA 4+)	Direction: Southbound				Direction: Westbound				Direction: Northbound				Direction: Eastbound							
	42nd Street				Albemarle Street				42nd Street				Albemarle Street							
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INT. PEAK HR (ALL VEH)				0				0				0				0				
05:00 PM to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)	0.0%				0.0%				16.7%				0.0%				0.9%			

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

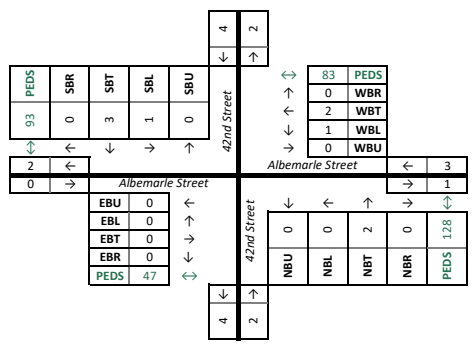
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEHICLES PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

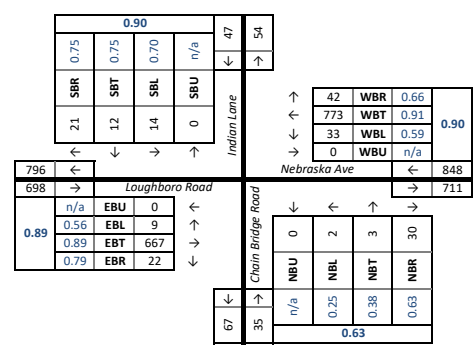
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

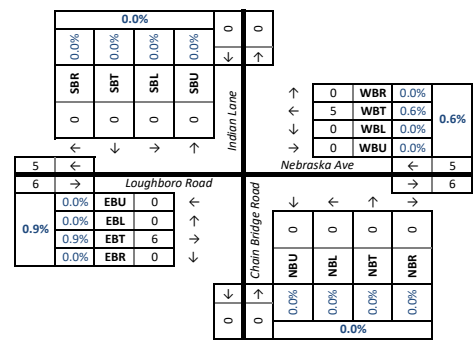
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Indian Lane/Chain Bridge Road & Nebraska Ave/Loughboro Road																				
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound					
	Roadway:	Indian Lane					Nebraska Ave					Chain Bridge Road					Loughboro Road					
	Movement:	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	U	L	T	R	P	
04:00 PM	to 04:15 PM	0	5	0	6	1	0	8	198	11	0	0	1	2	7	6	0	2	161	2	0	
04:15 PM	to 04:30 PM	0	3	3	5	1	0	20	192	11	0	0	0	0	5	2	0	0	148	4	2	
04:30 PM	to 04:45 PM	0	2	1	9	0	0	17	188	7	1	0	1	0	5	3	0	1	165	7	2	
04:45 PM	to 05:00 PM	0	3	4	1	0	0	12	157	4	0	0	3	0	4	1	0	1	156	8	0	
05:00 PM	to 05:15 PM	0	5	4	2	0	0	14	187	9	0	0	0	2	12	2	0	3	165	4	1	
05:15 PM	to 05:30 PM	0	4	3	6	0	0	7	195	8	0	0	0	0	7	1	0	1	145	7	0	
05:30 PM	to 05:45 PM	0	5	2	6	0	0	7	212	16	0	0	0	0	5	1	0	1	169	7	0	
05:45 PM	to 06:00 PM	0	0	3	7	1	0	5	179	9	0	0	2	1	6	1	0	4	188	4	4	
06:00 PM	to 06:15 PM	0	4	4	4	0	0	6	182	11	0	0	0	1	6	2	0	3	175	3	0	
06:15 PM	to 06:30 PM	0	2	0	1	0	0	6	176	11	0	0	0	1	3	0	0	3	160	1	0	
06:30 PM	to 06:45 PM	0	2	3	2	3	0	6	180	15	0	0	0	0	5	1	0	0	145	1	3	
06:45 PM	to 07:00 PM	0	1	2	1	1	0	5	183	10	0	0	0	1	3	0	0	1	120	1	1	
07:00 PM	to 07:15 PM																					
07:15 PM	to 07:30 PM																					
07:30 PM	to 07:45 PM																					
07:45 PM	to 08:00 PM																					
08:00 PM	to 08:15 PM																					
08:15 PM	to 08:30 PM																					
08:30 PM	to 08:45 PM																					
08:45 PM	to 09:00 PM																					
INT. PEAK HR (ALL VEH)		47					848					35					698					
05:00 PM to 06:00 PM		0	14	12	21	1	0	33	773	42	0	0	2	3	30	5	0	9	667	22	5	
Peak Hour Factor (PHF)		Overall	U	L	T	R	SB	U	L	T	R	WB	U	L	T	R	NB	U	L	T	R	EB
		0.95	n/a	0.70	0.75	0.75	0.90	n/a	0.59	0.91	0.66	0.90	n/a	0.25	0.38	0.63	0.63	n/a	0.56	0.89	0.79	0.89

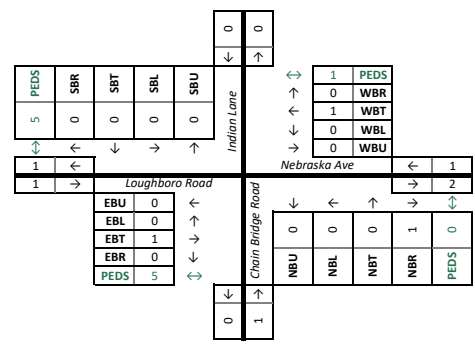
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

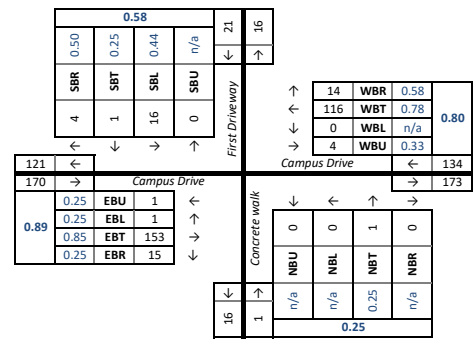
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

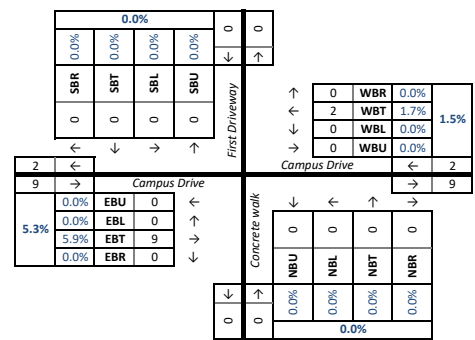
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. First Driveway/Concrete walk & Campus Drive																				
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound					
	Roadway:	First Driveway					Campus Drive					Concrete walk					Campus Drive					
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
04:00 PM to 04:15 PM		0	10	0	1	10	4	3	18	7	20	0	0	1	0	35	1	1	39	2	15	
04:15 PM to 04:30 PM		0	2	0	2	4	0	0	24	2	5	0	1	0	2	24	0	2	34	0	10	
04:30 PM to 04:45 PM		0	3	0	1	11	1	0	16	5	2	0	1	0	0	21	0	1	40	0	6	
04:45 PM to 05:00 PM		0	3	0	1	2	2	0	25	6	1	0	0	0	0	19	0	0	21	0	10	
05:00 PM to 05:15 PM		0	9	0	0	5	1	0	23	4	7	0	0	1	0	39	0	1	39	0	16	
05:15 PM to 05:30 PM		0	2	0	1	5	3	0	37	2	2	0	0	0	0	107	0	0	36	0	23	
05:30 PM to 05:45 PM		0	1	0	2	3	0	0	34	2	2	0	0	0	0	28	0	0	33	15	7	
05:45 PM to 06:00 PM		0	4	1	1	14	0	0	22	6	0	0	0	0	0	15	1	0	45	0	6	
06:00 PM to 06:15 PM		0	3	0	0	8	0	0	15	1	2	0	1	0	0	11	0	1	22	0	9	
06:15 PM to 06:30 PM		0	6	0	2	6	1	0	26	6	8	0	0	0	0	11	1	1	43	2	10	
06:30 PM to 06:45 PM		0	3	0	1	10	0	0	19	3	0	0	0	1	0	9	0	1	31	0	6	
06:45 PM to 07:00 PM		0	8	0	0	2	2	0	25	6	3	0	0	0	0	6	0	1	30	0	3	
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		21					134					1					170					
05:00 PM to 06:00 PM		0	16	1	4	27	4	0	116	14	11	0	0	1	0	189	1	1	153	15	52	
Peak Hour Factor (PHF)		Overall	U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		0.94	n/a	0.44	0.25	0.50	0.58	0.33	n/a	0.78	0.58	0.80	n/a	n/a	0.25	n/a	0.25	0.25	0.25	0.85	0.25	0.89
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound					
	Roadway:	First Driveway					Campus Drive					Concrete walk					Campus Drive					
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
04:00 PM to 04:15 PM		0	0	0	1		0	0	0	0		0	0	0	0		0	0	2	0		
04:15 PM to 04:30 PM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	2	0		
04:30 PM to 04:45 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	3	0		
04:45 PM to 05:00 PM		0	0	0	0		0	0	2	0		0	0	0	0		0	0	3	0		
05:00 PM to 05:15 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		
05:15 PM to 05:30 PM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	2	0		
05:30 PM to 05:45 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	3	0		
05:45 PM to 06:00 PM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	2	0		
06:00 PM to 06:15 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		
06:15 PM to 06:30 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		
06:30 PM to 06:45 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		
06:45 PM to 07:00 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		0					2					0					9					
05:00 PM to 06:00 PM		0	0	0	0		0	0	2	0		0	0	0	0		0	0	9	0		
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	5.3%	
INT. PEAK HR (HV ONLY)		1					3					0					10					
04:00 PM to 05:00 PM		0	0	0	1		0	0	3	0		0	0	0	0		0	0	10	0		
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	20.0%	4.3%	0.0%	0.0%	3.6%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	7.1%	
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound					
	Roadway:	First Driveway					Campus Drive					Concrete walk					Campus Drive					
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
04:00 PM to 04:15 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
04:15 PM to 04:30 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
04:30 PM to 04:45 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
04:45 PM to 05:00 PM		0	1	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
05:00 PM to 05:15 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
05:15 PM to 05:30 PM		0	0	1	0		0	0	1	0		0	0	0	0		0	0	0	0		
05:30 PM to 05:45 PM		0	1	0	0		0	0	0	0		0	0	1	0		0	0	0	0		
05:45 PM to 06:00 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
06:00 PM to 06:15 PM		0	0	0	1		0	0	0	0		0	0	0	0		0	1	1	0		
06:15 PM to 06:30 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		
06:30 PM to 06:45 PM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
06:45 PM to 07:00 PM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		2					1					1					0					
05:00 PM to 06:00 PM		0	1	1	0		0	0	1	0		0	0	1	0		0	0	0	0		
INT. PEAK HR (BIKES)		3					1					1					2					
05:15 PM to 06:15 PM		0	1	1	1		0	0	1	0		0	0	1	0		0	1	1	0		

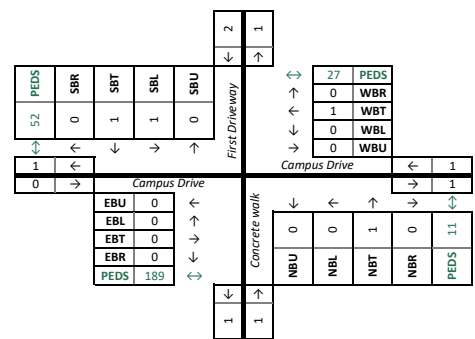
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

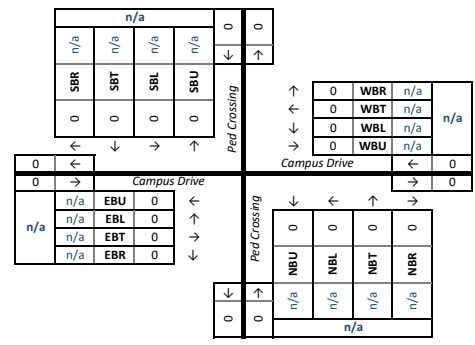
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

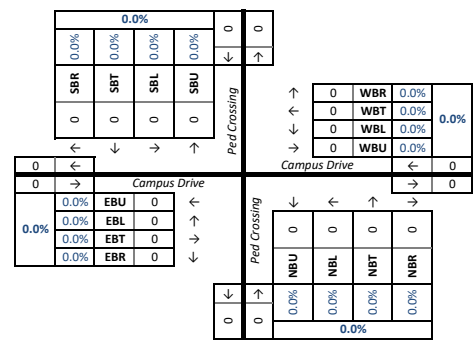
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Ped Crossing & Campus Drive																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Ped Crossing				Campus Drive				Ped Crossing				Campus Drive								
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	39	0	0	0	0	0	0	0	0	0	0	42
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	25
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	20
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	19
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	25
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0	0	47
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	0	63
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	24
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	26
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	25
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	24
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	26
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		0				0				0				0				106				
04:00 PM to 05:00 PM		0				0				0				0				84				
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB
n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Ped Crossing				Campus Drive				Ped Crossing				Campus Drive								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		0				0				0				0				0.0%				
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%				0.0%				
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%				0.0%				
INT. PEAK HR (HV ONLY)		0				0				0				0				0				
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%				0.0%				
Heavy Vehicle % (PHV):		0.0%				0.0%				0.0%				0.0%				0.0%				
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Ped Crossing				Campus Drive				Ped Crossing				Campus Drive								
	Movement:	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right	U	L	Thru	Right					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		0				0				0				0				0				
04:00 PM to 05:00 PM		0				0				0				0				0				
INT. PEAK HR (BIKES)		0				0				0				0				0				
04:00 PM to 05:00 PM		0				0				0				0				0				

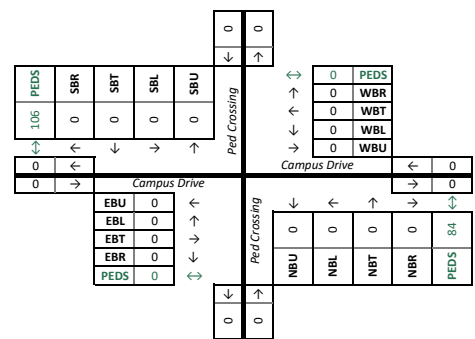
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

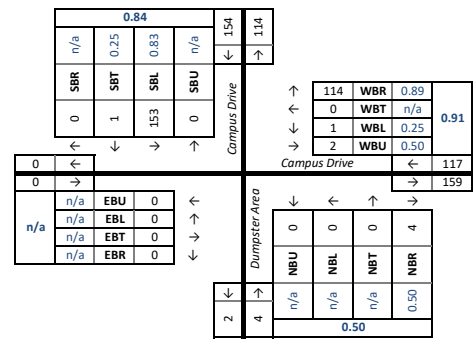
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

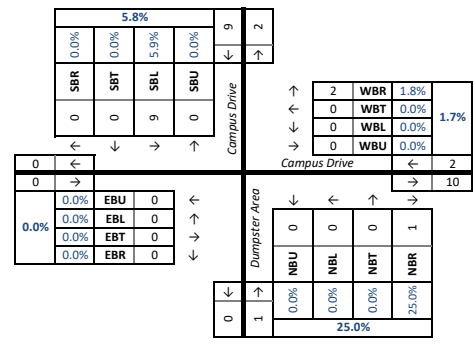
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Campus Drive/Dumpster Area & Campus Drive/																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Campus Drive				Campus Drive				Dumpster Area												
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	35	2	0	0	1	0	16	14	0	0	0	0	83	0	0	0	0			
04:15 PM to 04:30 PM		0	31	0	0	0	0	0	19	14	0	0	0	0	48	0	0	0	0			
04:30 PM to 04:45 PM		0	33	0	0	0	1	0	14	10	0	0	2	0	61	0	0	0	0			
04:45 PM to 05:00 PM		0	18	0	0	0	1	0	21	5	0	0	0	1	62	0	0	0	0			
05:00 PM to 05:15 PM		0	46	0	0	0	1	0	30	20	0	0	0	2	88	0	0	0	0			
05:15 PM to 05:30 PM		0	28	1	0	0	0	0	32	12	0	0	0	0	122	0	0	0	0			
05:30 PM to 05:45 PM		0	42	0	0	0	1	0	27	8	0	0	0	1	65	0	0	0	0			
05:45 PM to 06:00 PM		0	37	0	0	1	0	0	25	10	0	0	0	1	39	0	0	0	0			
06:00 PM to 06:15 PM		0	21	0	0	0	0	0	14	4	0	0	0	0	24	0	0	0	0			
06:15 PM to 06:30 PM		0	36	0	0	2	1	0	16	10	0	0	0	0	28	0	0	0	0			
06:30 PM to 06:45 PM		0	26	0	0	2	0	0	19	3	0	0	0	0	34	0	0	0	0			
06:45 PM to 07:00 PM		0	31	0	0	0	0	0	17	34	0	0	0	0	69	0	0	0	0			
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	154				117				4				314				0				
Peak Hour Factor (PHF)	Overall	0	153	1	0	0	2	1	0	0	1	0	114	50	0	0	0	0	0	0	0	0
	n/a	0.83	0.25	n/a	0.84	0.50	0.25	n/a	0.89	0.91	n/a	n/a	n/a	0.50	0.50	n/a	n/a	n/a	n/a	n/a	n/a	
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
Roadway:	Campus Drive	Campus Drive				Campus Drive				Dumpster Area												
Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R						
04:00 PM to 04:15 PM		0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
04:15 PM to 04:30 PM		0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
04:30 PM to 04:45 PM		0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0			
04:45 PM to 05:00 PM		0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0			
05:00 PM to 05:15 PM		0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
05:15 PM to 05:30 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:30 PM to 05:45 PM		0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0			
05:45 PM to 06:00 PM		0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
06:00 PM to 06:15 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:15 PM to 06:30 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:30 PM to 06:45 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:45 PM to 07:00 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	9				2				1				0								
Heavy Vehicle % (PHV)		0.0%	5.9%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	1.8%	1.7%	0.0%	0.0%	0.0%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%		
INT. PEAK HR (HV ONLY)	04:00 PM to 05:00 PM	9				2				2				0								
Heavy Vehicle % (PHV)		0.0%	6.8%	50.0%	0.0%	7.6%	0.0%	0.0%	0.0%	2.9%	2.7%	0.0%	0.0%	50.0%	100.0%	66.7%	0.0%	0.0%	0.0%	0.0%		
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
Roadway:	Campus Drive	Campus Drive				Campus Drive				Dumpster Area												
Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R						
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:00 PM to 05:15 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:00 PM to 06:15 PM		0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0			
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	1				1				0				0								
INT. PEAK HR (BIKES)	05:15 PM to 06:15 PM	2				2				0				0								

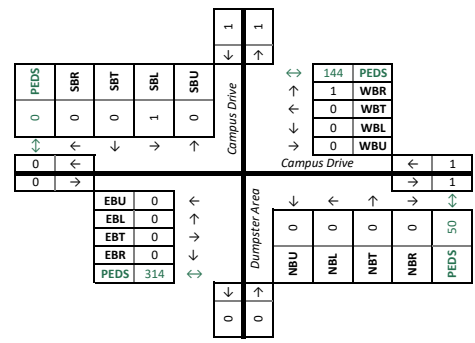
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection
 Project #: 3
 Location: Washington DC
 Data Source: Excel Consultants LLC

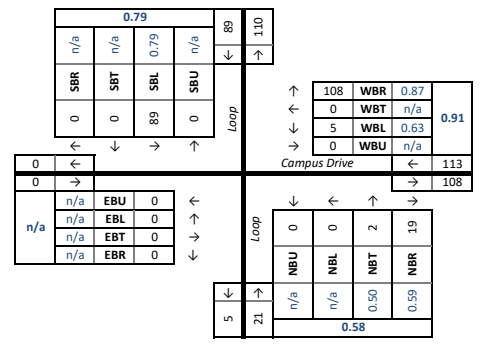
Analysis Period: STUDY PERIOD
 Date of Counts: Tuesday, February 25, 2020
 Weather: Cloudy

04:00 PM to 07:00 PM

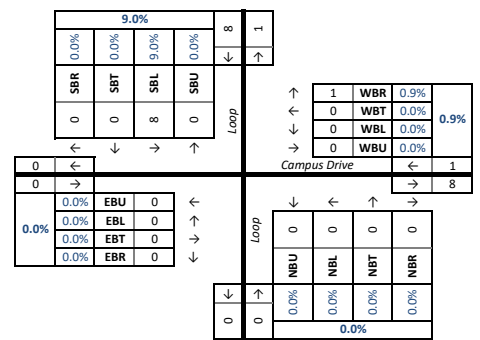
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Loop & Campus Drive/															
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Loop				Campus Drive				Loop				Campus Drive			
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R
04:00 PM to 04:15 PM		0	19	0	0	5	1	1	0	24	0	0	0	45	0	0	0
04:15 PM to 04:30 PM		0	12	0	0	2	0	0	0	22	0	0	0	29	0	0	0
04:30 PM to 04:45 PM		1	21	1	0	0	0	0	0	26	0	0	0	31	0	0	0
04:45 PM to 05:00 PM		0	16	0	0	1	0	0	0	19	0	0	0	24	0	0	0
05:00 PM to 05:15 PM		0	22	0	0	0	0	0	0	31	0	0	0	27	0	0	0
05:15 PM to 05:30 PM		0	16	0	0	2	0	2	0	26	0	0	0	72	0	0	0
05:30 PM to 05:45 PM		0	28	0	0	0	2	0	0	29	0	0	0	52	0	0	0
05:45 PM to 06:00 PM		0	23	0	0	4	1	1	0	22	0	0	0	17	0	0	0
06:00 PM to 06:15 PM		0	18	0	0	0	2	0	0	14	2	0	0	32	0	0	0
06:15 PM to 06:30 PM		0	22	0	0	1	0	2	0	13	2	0	0	40	0	0	0
06:30 PM to 06:45 PM		1	13	0	0	4	1	0	0	12	0	0	0	20	0	0	0
06:45 PM to 07:00 PM		0	10	0	0	5	0	1	0	21	0	0	0	20	0	0	0
07:00 PM to 07:15 PM																	
07:15 PM to 07:30 PM																	
07:30 PM to 07:45 PM																	
07:45 PM to 08:00 PM																	
08:00 PM to 08:15 PM																	
08:15 PM to 08:30 PM																	
08:30 PM to 08:45 PM																	
08:45 PM to 09:00 PM																	
INT. PEAK HR (ALL VEH)		89				113				21				0			
05:00 PM to 06:00 PM		0	89	0	0	6	0	5	0	108	0	0	0	168	0	0	0
Peak Hour Factor (PHF)		Overall 0.87				0.79				0.63				0.87			
		n/a	n/a	n/a	n/a	0.79	n/a	n/a	n/a	0.63	n/a	n/a	n/a	0.87	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Loop				Campus Drive				Loop				Campus Drive			
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R
04:00 PM to 04:15 PM		0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM to 04:45 PM		0	3	0	0	0	0	0	2	0	0	0	1	0	0	0	0
04:45 PM to 05:00 PM		0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0
05:00 PM to 05:15 PM		0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0
05:15 PM to 05:30 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM to 05:45 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM to 06:00 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM to 06:15 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM to 07:00 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																	
07:15 PM to 07:30 PM																	
07:30 PM to 07:45 PM																	
07:45 PM to 08:00 PM																	
08:00 PM to 08:15 PM																	
08:15 PM to 08:30 PM																	
08:30 PM to 08:45 PM																	
08:45 PM to 09:00 PM																	
INT. PEAK HR (ALL VEH)		8				1				0				0			
05:00 PM to 06:00 PM		0	8	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV)		0.0%				9.0%				0.0%				0.0%			
		0.0%	9.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		10				4				1				0			
04:00 PM to 05:00 PM		0	10	0	0	0	1	0	3	0	0	0	1	0	0	0	0
Heavy Vehicle % (PHV)		0.0%				14.7%				0.0%				0.0%			
		0.0%	14.7%	0.0%	0.0%	0.0%	100.0%	0.0%	3.3%	0.0%	0.0%	0.0%	11.1%	8.3%	0.0%	0.0%	0.0%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Loop				Campus Drive				Loop				Campus Drive			
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
05:15 PM to 05:30 PM		0	0	1	0	0	0	0	1	0	0	0	3	0	0	0	0
05:30 PM to 05:45 PM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																	
07:15 PM to 07:30 PM																	
07:30 PM to 07:45 PM																	
07:45 PM to 08:00 PM																	
08:00 PM to 08:15 PM																	
08:15 PM to 08:30 PM																	
08:30 PM to 08:45 PM																	
08:45 PM to 09:00 PM																	
INT. PEAK HR (ALL VEH)		1				2				5				0			
05:00 PM to 06:00 PM		0	0	1	0	0	1	0	1	0	0	0	5	0	0	0	0
INT. PEAK HR (BIKES)		1				2				5				0			
05:00 PM to 06:00 PM		0	0	1	0	0	1	0	1	0	0	0	5	0	0	0	0

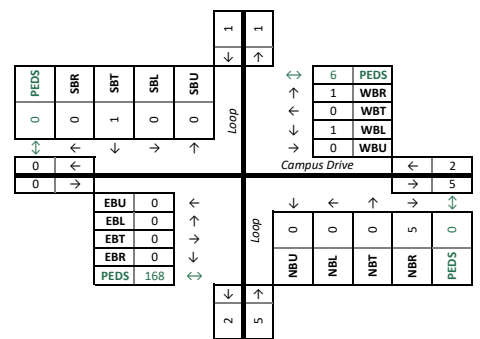
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

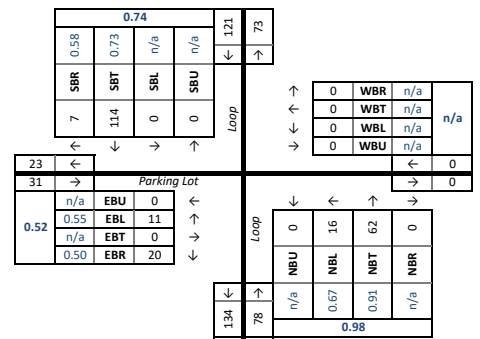
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

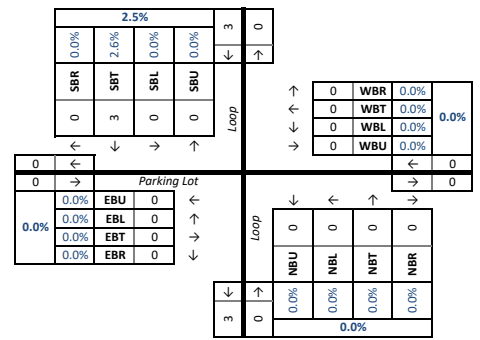
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:30 PM to 05:30 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Loop & /Parking Lot																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Loop				Loop				Loop				Parking Lot								
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	
04:00 PM to 04:15 PM		0	0	33	1	13	0	0	0	0	0	0	1	10	0	6	0	0	0	7	6	
04:15 PM to 04:30 PM		0	0	19	0	0	0	0	0	0	0	0	4	7	0	8	0	2	0	8	21	
04:30 PM to 04:45 PM		0	0	35	0	2	0	0	0	0	0	0	2	16	0	2	0	2	0	5	3	
04:45 PM to 05:00 PM		0	0	17	2	20	0	0	0	0	0	0	6	14	0	19	0	2	0	4	3	
05:00 PM to 05:15 PM		0	0	39	2	21	0	0	0	0	0	0	3	17	0	32	0	2	0	1	3	
05:15 PM to 05:30 PM		0	0	23	3	65	0	0	0	0	0	0	5	15	0	21	0	5	0	10	5	
05:30 PM to 05:45 PM		0	0	27	0	10	0	0	0	0	0	0	5	21	0	3	0	2	0	5	0	
05:45 PM to 06:00 PM		0	0	20	1	6	0	0	0	0	0	0	0	17	0	1	0	1	0	1	0	
06:00 PM to 06:15 PM		0	0	19	1	0	0	0	0	0	0	0	1	10	0	3	0	0	0	3	1	
06:15 PM to 06:30 PM		0	0	16	0	1	0	0	0	0	0	0	1	14	0	1	0	0	0	1	0	
06:30 PM to 06:45 PM		0	0	13	0	1	0	0	0	0	0	0	2	10	0	2	0	0	0	2	0	
06:45 PM to 07:00 PM		0	0	26	1	1	0	0	0	0	0	0	0	12	0	2	0	0	0	3	0	
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		121				0				78				31								
04:30 PM to 05:30 PM		0	0	114	7	108	0	0	0	0	0	0	16	62	0	74	0	11	0	20	14	
Peak Hour Factor (PHF)		Overall	U	L	Thru	R	SB	U	L	Thru	R	WB	U	L	Thru	R	NB	U	L	Thru	R	EB
		n/a	n/a	n/a	0.73	0.58	0.74	n/a	n/a	n/a	n/a	n/a	n/a	0.67	0.91	n/a	0.98	n/a	0.55	n/a	0.50	0.52
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Loop				Loop				Loop				Parking Lot								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0		
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:30 PM to 04:45 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		3				0				0				0								
04:30 PM to 05:30 PM		0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	2.6%	0.0%	2.5%	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%	
INT. PEAK HR (HV ONLY)		2				0				2				0								
04:00 PM to 05:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
Heavy Vehicle % (PHV)		0.0%	0.0%	1.9%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	Loop				Loop				Loop				Parking Lot								
	Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0		
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:00 PM to 07:15 PM																						
07:15 PM to 07:30 PM																						
07:30 PM to 07:45 PM																						
07:45 PM to 08:00 PM																						
08:00 PM to 08:15 PM																						
08:15 PM to 08:30 PM																						
08:30 PM to 08:45 PM																						
08:45 PM to 09:00 PM																						
INT. PEAK HR (ALL VEH)		0				0				0				1								
04:30 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
INT. PEAK HR (BIKES)		0				0				0				1								
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	

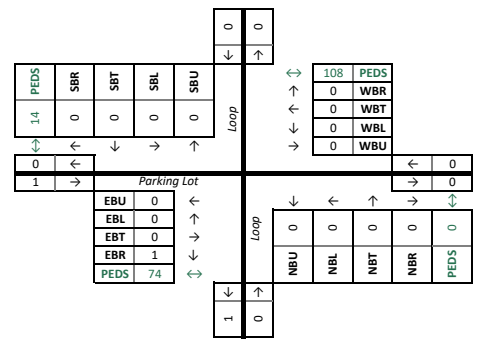
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name: American University Data Collection
Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
Project #: 3
Date of Counts: Tuesday, February 25, 2020
Location: Washington DC
Weather: Cloudy
Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 04:45 PM to 05:45 PM
System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
User-Defined Peak Hour: 05:00 PM to 06:00 PM

Table with columns for Direction (Southbound, Westbound, Northbound, Eastbound), Roadway (Loop, Access Road, South Exit), and Movement (U, Left, Thru, Right, Peds). Rows represent time intervals from 04:00 PM to 09:00 PM.

Summary table for INT. PEAK HR (ALL VEH) showing overall peak hour factor (0.96) and peak hour percentages for various movements.

Table for HEAVY VEHICLES (FHWA 4+) showing movement counts for heavy vehicles during the peak period.

Main table for HEAVY VEHICLES (FHWA 4+) showing counts and percentages for movements like WB, WBT, WBL, WBU, NBU, NBL, NBT, NBR.

Summary table for HEAVY VEHICLE % (PHV) showing the percentage of heavy vehicles in each movement.

Summary table for HEAVY VEHICLE % (HV ONLY) showing the percentage of heavy vehicles in each movement.

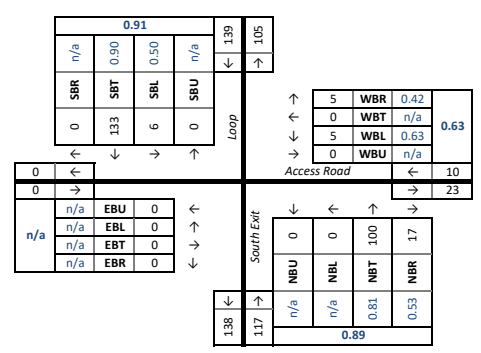
Table for BICYCLES showing movement counts for bicycles during the peak period.

Main table for BICYCLES showing counts for movements like EBU, EBL, EBT, EBR, and PEDS.

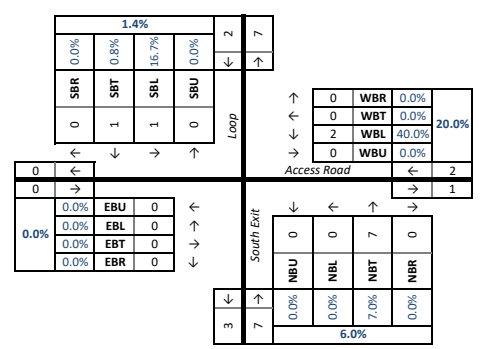
Summary table for INT. PEAK HR (ALL VEH) and INT. PEAK HR (BIKES) for bicycle movements.

DATA COLLECTION NOTES:

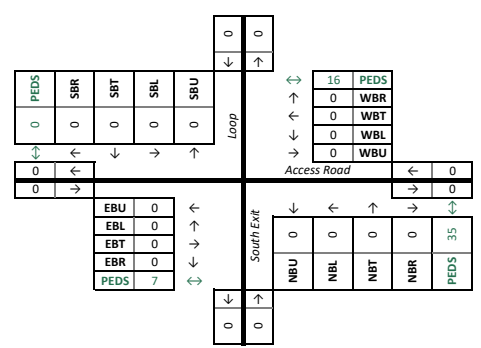
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



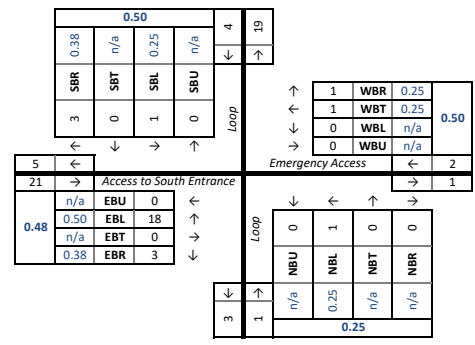
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Tuesday, February 25, 2020
 Location: Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

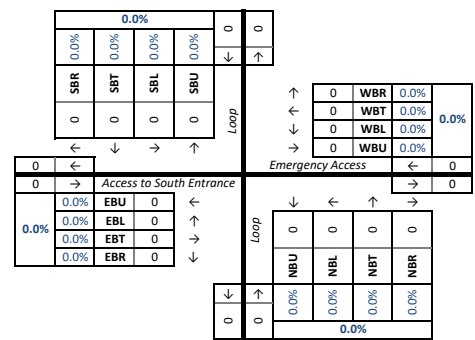
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Loop & Emergency Access/Access to South Entrance																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	Loop				Emergency Access				Loop				Access to South Entrance							
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds
04:00 PM to 04:15 PM		0	0	0	1	5	0	0	0	0	1	0	1	0	0	14	0	5	1	1	23
04:15 PM to 04:30 PM		0	0	0	0	3	0	0	0	0	1	0	1	0	0	6	0	2	0	1	17
04:30 PM to 04:45 PM		0	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	1	0	1	9
04:45 PM to 05:00 PM		0	0	0	1	1	0	0	1	0	1	0	0	1	0	3	0	0	0	0	11
05:00 PM to 05:15 PM		0	0	0	0	5	0	0	0	0	2	0	0	0	0	8	0	9	0	2	17
05:15 PM to 05:30 PM		0	0	0	1	4	0	0	0	0	2	0	0	0	0	21	0	2	0	0	37
05:30 PM to 05:45 PM		0	1	0	0	1	0	0	0	1	4	0	1	0	0	1	0	4	0	1	19
05:45 PM to 06:00 PM		0	0	0	2	0	0	0	1	0	0	0	0	0	3	0	3	0	0	0	6
06:00 PM to 06:15 PM		0	0	0	2	3	0	0	0	0	2	0	0	0	0	0	0	4	1	0	15
06:15 PM to 06:30 PM		0	0	1	1	4	0	0	1	0	0	0	0	0	0	0	0	2	1	0	8
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	13
06:45 PM to 07:00 PM		0	0	0	2	1	0	0	0	0	3	0	0	0	0	7	0	6	0	0	23
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	4				10	2				8	1				33	21				79
Peak Hour Factor (PHF)	Overall	n/a	0.25	n/a	0.38	0.50	n/a	n/a	0.25	0.25	0.50	n/a	0.25	n/a	n/a	0.25	n/a	0.50	n/a	0.38	0.48
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
Roadway:	Loop	Emergency Access				Loop				Access to South Entrance											
Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
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08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	0				0	0				0	0				0					
Heavy Vehicle % (PHV)		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%	0.0%
INT. PEAK HR (HV ONLY)	04:00 PM to 05:00 PM	1					0					1									
Heavy Vehicle % (PHV)		0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	7.7%
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
Roadway:	Loop	Emergency Access				Loop				Access to South Entrance											
Movement:	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R					
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM to 05:00 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM to 05:45 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM to 07:15 PM																					
07:15 PM to 07:30 PM																					
07:30 PM to 07:45 PM																					
07:45 PM to 08:00 PM																					
08:00 PM to 08:15 PM																					
08:15 PM to 08:30 PM																					
08:30 PM to 08:45 PM																					
08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)	05:00 PM to 06:00 PM	2				0	0				0	0				0					
INT. PEAK HR (BIKES)	04:45 PM to 05:45 PM	3				0	0				0	0				0					

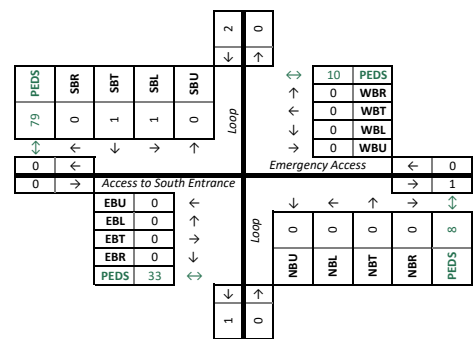
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

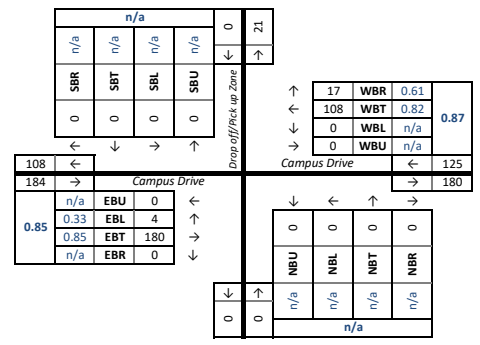
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Tuesday, February 25, 2020
 Location : Washington DC Weather: Cloudy
 Data Source: Excel Consultants LLC

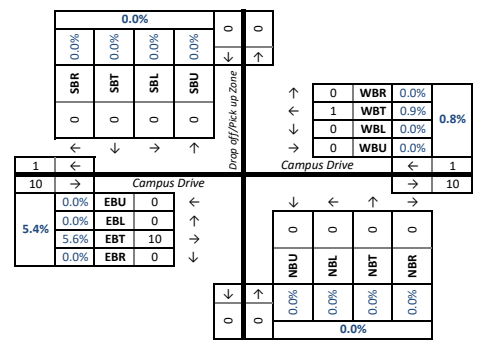
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Drop off/Pick up Zone/ & Campus Drive																						
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound										
	Roadway:	Drop off/Pick up Zone				Campus Drive				Campus Drive				Campus Drive										
	Movement:	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds	U	L	Thru	R	Peds			
04:00 PM to 04:15 PM		0	0	0	0	27	0	0	16	11	2	0	0	0	0	0	0	2	48	0	14			
04:15 PM to 04:30 PM		0	0	0	0	11	0	0	15	4	0	0	0	0	0	0	0	1	31	0	16			
04:30 PM to 04:45 PM		0	1	0	0	13	0	0	16	2	3	0	0	0	0	0	0	4	30	0	10			
04:45 PM to 05:00 PM		0	0	0	0	8	0	0	16	5	1	0	0	0	0	0	0	4	19	0	7			
05:00 PM to 05:15 PM		0	0	0	0	22	0	0	28	5	7	0	0	0	0	0	0	1	53	0	26			
05:15 PM to 05:30 PM		0	0	0	0	40	0	0	28	2	3	0	0	0	0	0	0	0	38	0	25			
05:30 PM to 05:45 PM		0	0	0	0	17	0	0	33	3	0	0	0	0	0	0	0	3	47	0	15			
05:45 PM to 06:00 PM		0	0	0	0	7	0	0	19	7	2	0	0	0	0	0	0	0	42	0	17			
06:00 PM to 06:15 PM		0	0	0	0	14	0	0	13	9	0	0	0	0	0	0	0	2	29	0	19			
06:15 PM to 06:30 PM		0	0	0	0	14	0	0	8	17	1	0	0	0	0	0	1	7	39	0	10			
06:30 PM to 06:45 PM		0	2	0	0	13	0	0	19	5	7	0	0	0	0	0	0	4	30	0	10			
06:45 PM to 07:00 PM		0	0	0	0	17	0	0	16	2	5	0	0	0	0	0	0	1	35	0	17			
07:00 PM to 07:15 PM																								
07:15 PM to 07:30 PM																								
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07:45 PM to 08:00 PM																								
08:00 PM to 08:15 PM																								
08:15 PM to 08:30 PM																								
08:30 PM to 08:45 PM																								
08:45 PM to 09:00 PM																								
INT. PEAK HR (ALL VEH)		0				86	125				12	0				0	184				83			
05:00 PM to 06:00 PM		0	0	0	0		0	0	108	17	12	0	0	0	0	0	0	4	180	0	83			
Peak Hour Factor (PHF)		Overall				n/a	n/a				0.82	0.61	n/a				n/a	0.33				0.85	n/a	0.85
HEAVY VEHICLES (FHWA 4+)		Direction:				Southbound				Westbound				Northbound				Eastbound						
Roadway:		Drop off/Pick up Zone				Campus Drive				Campus Drive				Campus Drive										
Movement:		U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R							
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0				
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0				
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3	0	0				
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0				
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0				
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0				
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0				
07:00 PM to 07:15 PM																								
07:15 PM to 07:30 PM																								
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07:45 PM to 08:00 PM																								
08:00 PM to 08:15 PM																								
08:15 PM to 08:30 PM																								
08:30 PM to 08:45 PM																								
08:45 PM to 09:00 PM																								
INT. PEAK HR (ALL VEH)		0				1	0				0	10				0								
05:00 PM to 06:00 PM		0	0	0	0		0	0	0	1	0	0	0	0	0	0	0	0	10	0	0			
Heavy Vehicle % (PHV)		0.0%				0.0%	0.0%				0.0%	0.0%				5.6%	0.0%	5.4%						
INT. PEAK HR (HV ONLY)		0				3	0				0	11				0								
04:45 PM to 05:45 PM		0	0	0	0		0	0	2	1	0	0	0	0	0	0	0	11	0	0				
Heavy Vehicle % (PHV)		0.0%				0.0%	1.9%				6.7%	2.5%	0.0%				7.0%	0.0%	6.7%					
BICYCLES		Direction:				Southbound				Westbound				Northbound				Eastbound						
Roadway:		Drop off/Pick up Zone				Campus Drive				Campus Drive				Campus Drive										
Movement:		U	L	Thru	R	U	L	Thru	R	U	L	Thru	R	U	L	Thru	R							
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0				
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0				
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0				
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:00 PM to 07:15 PM																								
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07:45 PM to 08:00 PM																								
08:00 PM to 08:15 PM																								
08:15 PM to 08:30 PM																								
08:30 PM to 08:45 PM																								
08:45 PM to 09:00 PM																								
INT. PEAK HR (ALL VEH)		0				1	0				0	2				0								
05:00 PM to 06:00 PM		0	0	0	0		0	0	1	0	0	0	0	0	0	0	0	2	0	0				
INT. PEAK HR (BIKES)		0				2	0				0	2				0								
05:45 PM to 06:45 PM		0	0	0	0		0	0	2	0	0	0	0	0	0	0	0	2	0	0				

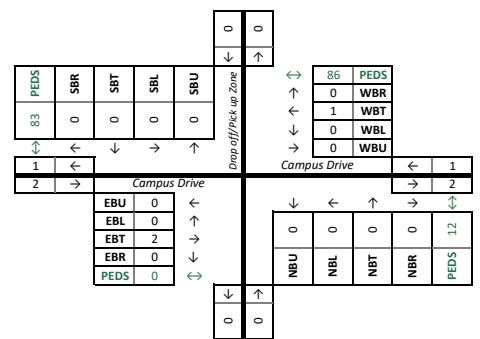
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection
Project # : 3
Location : Washington DC
Data Source: Excel Consultants LLC

Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
Date of Counts: Wednesday, February 26, 2020
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
User-Defined Peak Hour: 05:00 PM to 06:00 PM

Table for ALL VEHICLES showing direction (Southbound, Westbound, Northbound, Eastbound) and movement counts (U, Left, Thru, Right, Peds) for various time intervals from 04:00 PM to 09:00 PM. Includes summary rows for INT. PEAK HR (ALL VEH) and Factor (PHF).

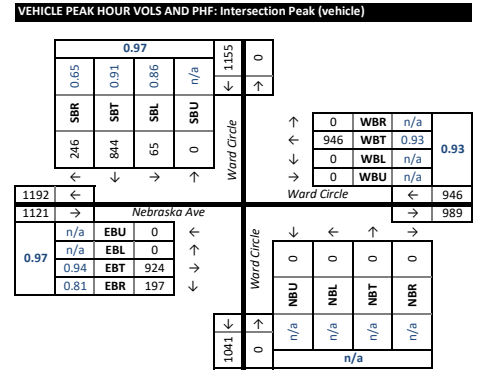


Table for HEAVY VEHICLES (FHWA 4+) showing direction and movement counts (U, Left, Thru, Right) for various time intervals from 04:00 PM to 09:00 PM. Includes summary rows for INT. PEAK HR (ALL VEH) and INT. PEAK HR (HV ONLY).

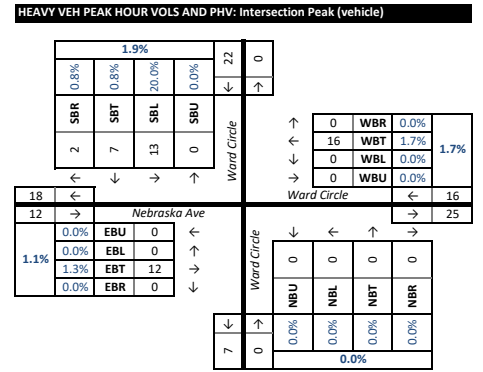
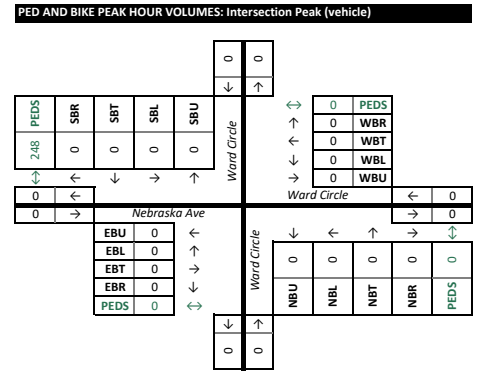


Table for BICYCLES showing direction and movement counts (U, Left, Thru, Right) for various time intervals from 04:00 PM to 09:00 PM. Includes summary rows for INT. PEAK HR (ALL VEH) and INT. PEAK HR (BIKES).



DATA COLLECTION NOTES:

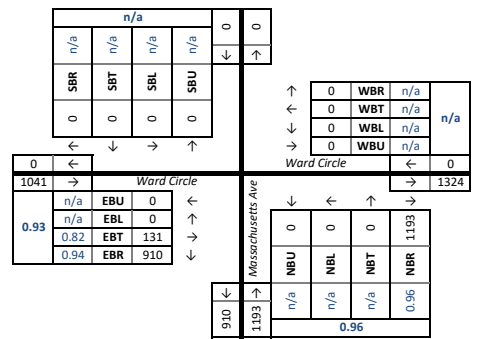
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

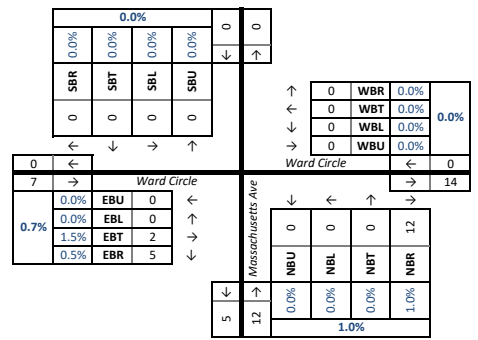
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. /Massachusetts Ave & Ward Circle																									
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound										
	Roadway:						Ward Circle					Massachusetts Ave					Ward Circle										
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds						
04:00 PM to 04:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	282	34	0	0	20	178	0	0	0	0	0	0	
04:15 PM to 04:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	274	33	0	0	29	195	0	0	0	0	0	0	
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	301	45	0	0	28	164	0	0	0	0	0	0	
04:45 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	280	19	0	0	26	192	0	0	0	0	0	0	
05:00 PM to 05:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	312	65	0	0	25	214	0	0	0	0	0	0	
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	300	92	0	0	34	243	0	0	0	0	0	0	
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	310	59	0	0	30	201	0	0	0	0	0	0	
05:45 PM to 06:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	285	32	0	0	40	239	0	0	0	0	0	0	
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	298	37	0	0	27	227	0	0	0	0	0	0	
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	273	21	0	0	27	209	0	0	0	0	0	0	
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	297	33	0	0	31	162	0	0	0	0	0	0	
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	247	37	0	0	24	160	0	0	0	0	0	0	
07:00 PM to 07:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
07:15 PM to 07:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
07:30 PM to 07:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
07:45 PM to 08:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
08:00 PM to 08:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
08:15 PM to 08:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
08:30 PM to 08:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
08:45 PM to 09:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0	0	0	0	0	
INT. PEAK HR (ALL VEH)		0	0	0	0	0	0	0	0	0	0	1193		220			1041				0	0	0	0	0	0	
05:15 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	1193		220		0	0	131	910	0	0	0	0	0
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB					
		0.97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.96	n/a	n/a	n/a	0.82	0.94	0.93				

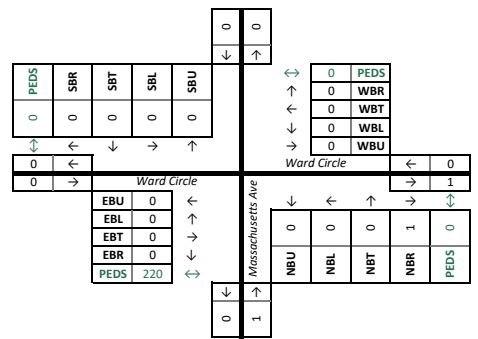
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



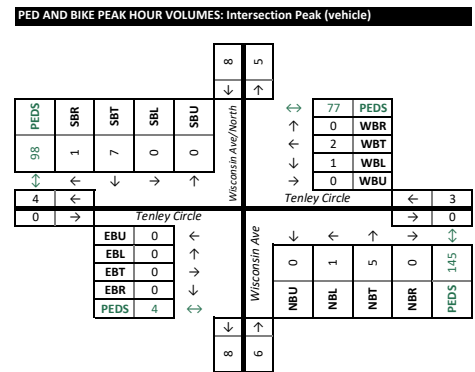
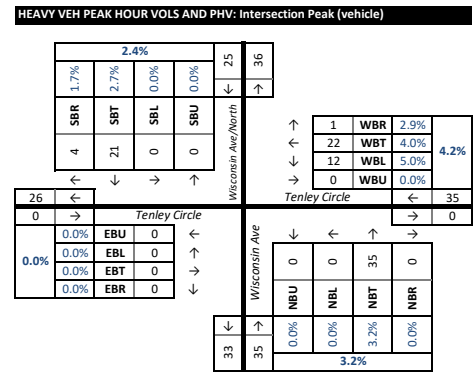
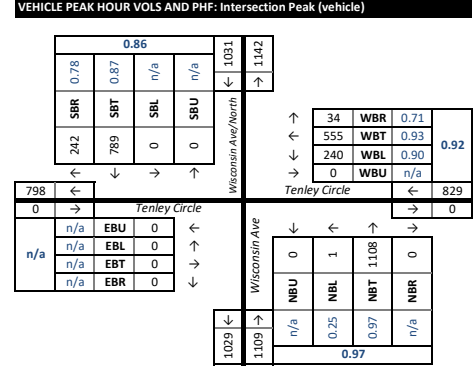
DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Thursday, February 27, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 05:15 PM to 06:15 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. Wisconsin Ave/North/Wisconsin Ave & Tenley Circle																							
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound											
	Roadway:	Wisconsin Ave/North				Tenley Circle				Wisconsin Ave				Tenley Circle											
	Movement:	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds	U	L	Thru	Right	Peds				
04:00 PM	to 04:15 PM	0	0	167	51	16	0	48	125	10	47	0	0	243	0	4	0	0	0	0	15				
04:15 PM	to 04:30 PM	0	0	159	48	10	0	58	114	8	35	0	0	270	0	5	0	0	0	0	18				
04:30 PM	to 04:45 PM	0	0	165	65	14	0	66	109	7	34	0	1	231	0	2	0	0	0	0	9				
04:45 PM	to 05:00 PM	0	0	185	74	20	0	40	115	6	23	0	0	245	0	3	0	0	0	0	25				
05:00 PM	to 05:15 PM	0	0	145	65	24	0	54	164	4	47	0	1	249	0	0	0	0	0	0	26				
05:15 PM	to 05:30 PM	0	0	227	49	10	0	64	150	12	24	0	0	286	0	1	0	0	0	0	14				
05:30 PM	to 05:45 PM	0	0	184	58	40	0	53	142	11	41	0	0	276	0	0	0	0	0	0	31				
05:45 PM	to 06:00 PM	0	0	222	78	14	0	56	131	5	43	0	0	282	0	1	0	0	0	0	29				
06:00 PM	to 06:15 PM	0	0	156	57	13	0	67	132	6	37	0	1	264	0	2	0	0	0	0	24				
06:15 PM	to 06:30 PM	0	0	201	60	2	0	67	104	6	45	0	0	265	0	5	0	0	0	0	21				
06:30 PM	to 06:45 PM	0	0	148	60	8	0	63	123	7	30	0	0	225	0	2	0	0	0	0	11				
06:45 PM	to 07:00 PM	0	0	177	61	9	0	35	93	13	27	0	0	242	0	16	0	0	0	0	22				
07:00 PM	to 07:15 PM																								
07:15 PM	to 07:30 PM																								
07:30 PM	to 07:45 PM																								
07:45 PM	to 08:00 PM																								
08:00 PM	to 08:15 PM																								
08:15 PM	to 08:30 PM																								
08:30 PM	to 08:45 PM																								
08:45 PM	to 09:00 PM																								
INT. PEAK HR (ALL VEH)		1031				77	829				145	1109				4	0				98				
05:15 PM to 06:15 PM		0	0	789	242		0	240	555	34		0	1	1108	0		0	0	0	0		0	0	0	0
Peak Hour Factor (PHF)		Overall	U	L	Thru	Right	SB	U	L	Thru	Right	WB	U	L	Thru	Right	NB	U	L	Thru	Right	EB			
		0.94	n/a	n/a	0.87	0.78	0.86	n/a	0.90	0.93	0.71	0.92	n/a	0.25	0.97	n/a	0.97	n/a	n/a	n/a	n/a	n/a			



DATA COLLECTION NOTES:

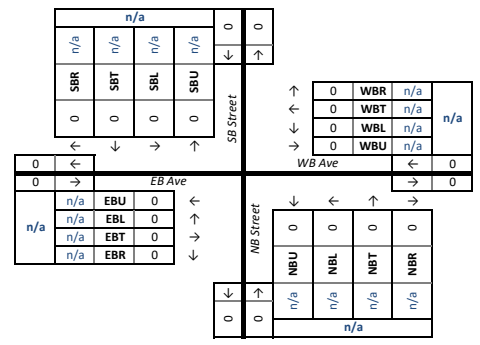
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Friday, January 1, 1999
 Location : Washington DC Weather: WEATHER
 Data Source: Excel Consultants LLC

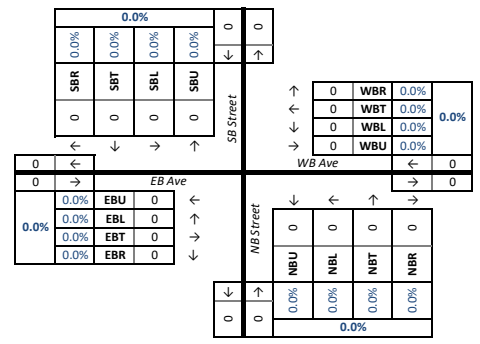
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
	04:00 PM to 04:15 PM																				
	04:15 PM to 04:30 PM																				
	04:30 PM to 04:45 PM																				
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	08:15 PM to 08:30 PM																				
	08:30 PM to 08:45 PM																				
	08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a							
04:00 PM to 05:00 PM		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
	04:00 PM to 04:15 PM																				
	04:15 PM to 04:30 PM																				
	04:30 PM to 04:45 PM																				
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	08:30 PM to 08:45 PM																				
	08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 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%	0.0%	0.0%
INT. PEAK HR (HV ONLY)		0				0				0				0							
04:00 PM to 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%	0.0%	0.0%
BICYCLES		Southbound				Westbound				Northbound				Eastbound							
BICYCLES	Direction:	SB Street				WB Ave				NB Street				EB Ave							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
	04:00 PM to 04:15 PM																				
	04:15 PM to 04:30 PM																				
	04:30 PM to 04:45 PM																				
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	08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)		0				0				0				0							
04:00 PM to 05:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

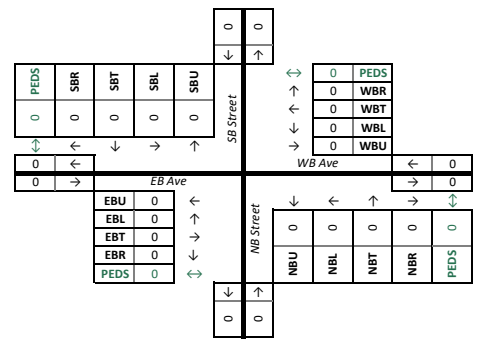
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :

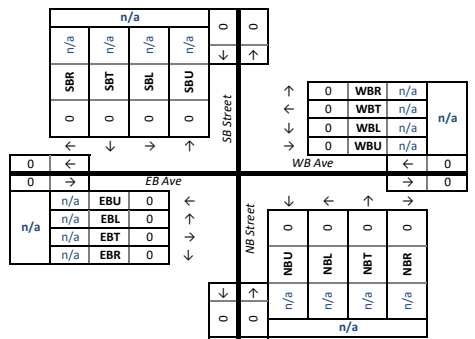
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

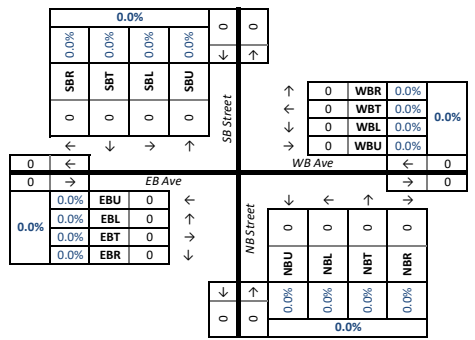
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	
	04:00 PM to 04:15 PM																					
	04:15 PM to 04:30 PM																					
	04:30 PM to 04:45 PM																					
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	08:30 PM to 08:45 PM																					
	08:45 PM to 09:00 PM																					
	INT. PEAK HR (ALL VEH)	0				0				0				0								
	04:00 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Peak Hour Factor (PHF)	Overall	U	L	T	R	SB	U	L	T	R	WB	U	L	T	R	NB	U	L	T	R	EB
		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R					
	04:00 PM to 04:15 PM																					
	04:15 PM to 04:30 PM																					
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	08:45 PM to 09:00 PM																					
	INT. PEAK HR (ALL VEH)	0				0				0				0								
	04:00 PM to 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%	0.0%		
	Heavy Vehicle % (PHV)	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%		
	INT. PEAK HR (HV ONLY)	0				0				0				0								
	04:00 PM to 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%	0.0%		
	Heavy Vehicle % (PHV)	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	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R					
	04:00 PM to 04:15 PM																					
	04:15 PM to 04:30 PM																					
	04:30 PM to 04:45 PM																					
	04:45 PM to 05:00 PM																					
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	08:30 PM to 08:45 PM																					
	08:45 PM to 09:00 PM																					
	INT. PEAK HR (ALL VEH)	0				0				0				0								
	04:00 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	INT. PEAK HR (BIKES)	0				0				0				0								
	04:00 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

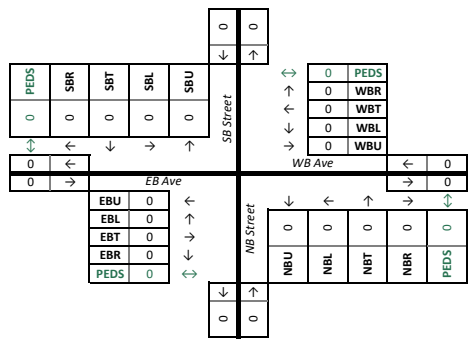
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

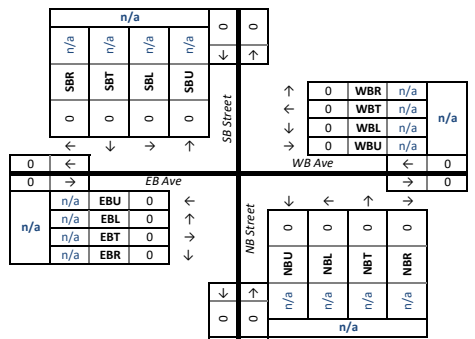
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

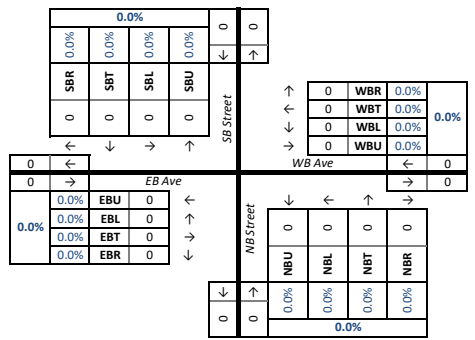
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 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
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 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	
	04:00 PM to 04:15 PM																					
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	08:45 PM to 09:00 PM																					
	INT. PEAK HR (ALL VEH)	0				0				0				0								
	04:00 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Peak Hour Factor (PHF)	Overall	U	L	T	R	SB	U	L	T	R	WB	U	L	T	R	NB	U	L	T	R	EB
		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
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	04:00 PM to 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%	0.0%		
	Heavy Vehicle % (PHV)	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%		
	INT. PEAK HR (HV ONLY)	0				0				0				0								
	04:00 PM to 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%	0.0%		
	Heavy Vehicle % (PHV)	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	Direction:	Southbound				Westbound				Northbound				Eastbound								
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	04:00 PM to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
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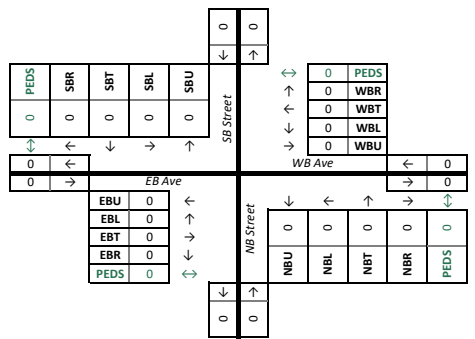
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



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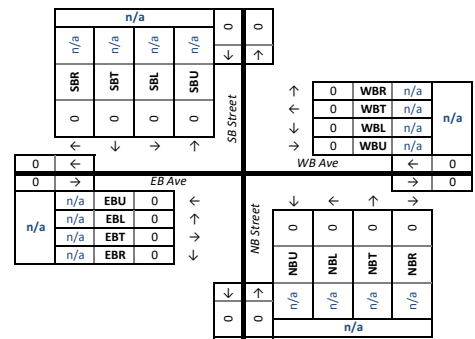
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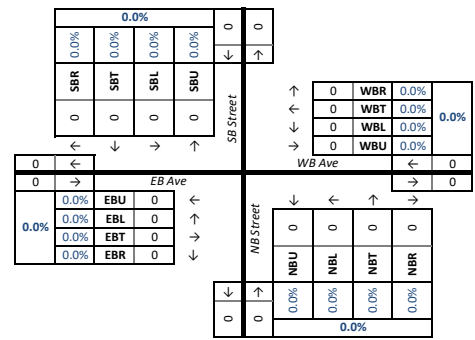
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Overall		n/a				n/a				n/a				n/a								
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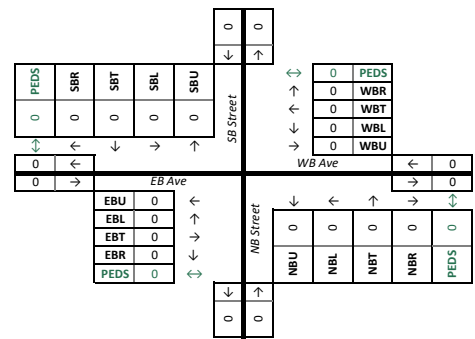
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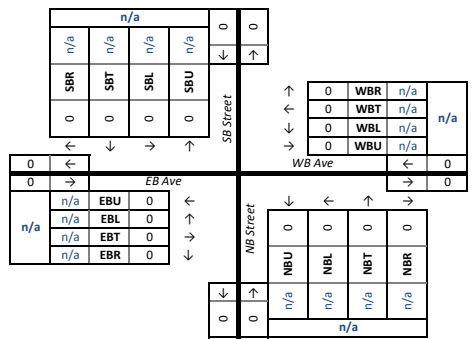
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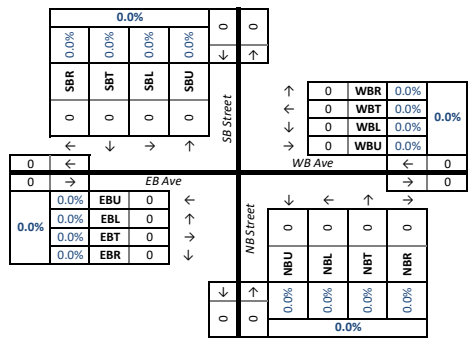
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		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
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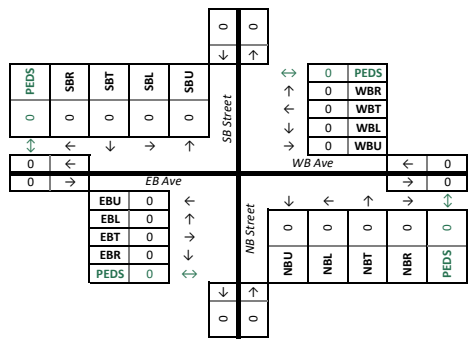
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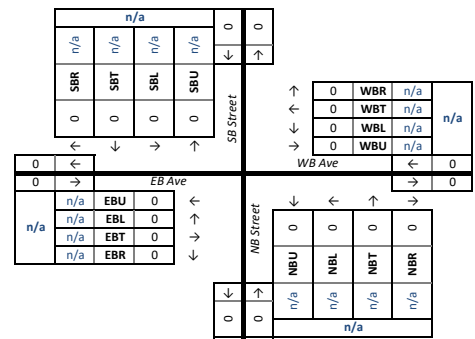
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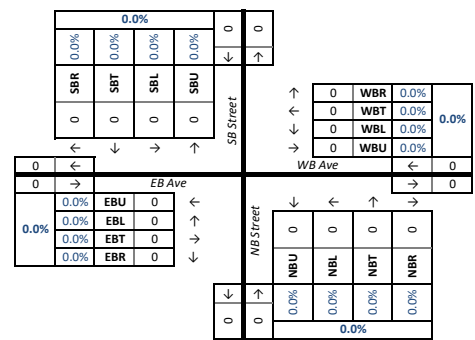
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04:00 PM to 05:00 PM		0				0				0				0							
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
Overall		0.0%				0.0%				0.0%				0.0%							
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
04:00 PM to 04:15 PM																					
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08:45 PM to 09:00 PM																					
INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0				0				0				0							
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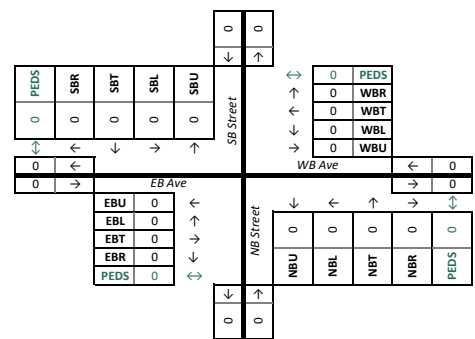
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

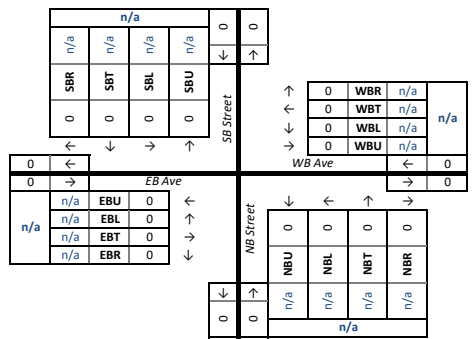
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Wednesday, February 26, 2020
 Location : Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

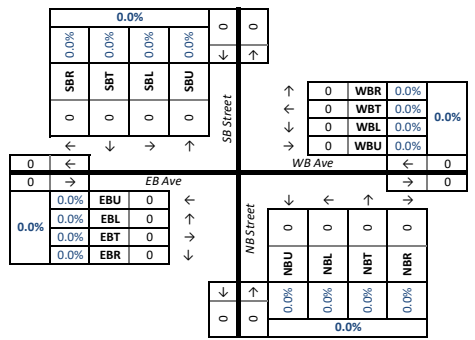
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																				
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	
04:00 PM	to 04:15 PM																					
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INT. PEAK HR (ALL VEH)		0				0				0				0								
04:00 PM to 05:00 PM		0				0				0				0								
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a								
Overall		n/a				n/a				n/a				n/a								
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R					
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INT. PEAK HR (ALL VEH)		0				0				0				0								
04:00 PM to 05:00 PM		0				0				0				0								
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%								
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%								
INT. PEAK HR (HV ONLY)		0				0				0				0								
04:00 PM to 05:00 PM		0				0				0				0								
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%								
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%								
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound								
	Roadway:	SB Street				WB Ave				NB Street				EB Ave								
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R					
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INT. PEAK HR (ALL VEH)		0				0				0				0								
04:00 PM to 05:00 PM		0				0				0				0								
INT. PEAK HR (BIKES)		0				0				0				0								
04:00 PM to 05:00 PM		0				0				0				0								

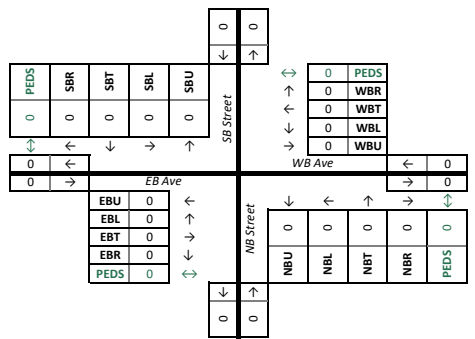
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

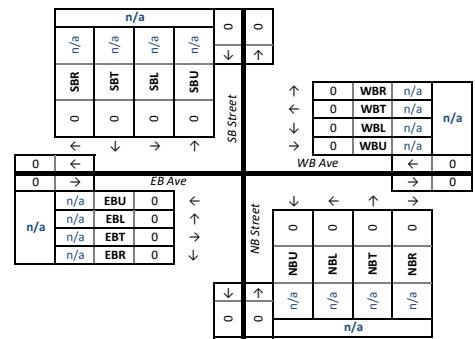
Multimodal Turning Movement Count Report

Project Name: American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project #: 3 Date of Counts: Wednesday, February 26, 2020
 Location: Washington DC Weather: Partly Cloudy
 Data Source: Excel Consultants LLC

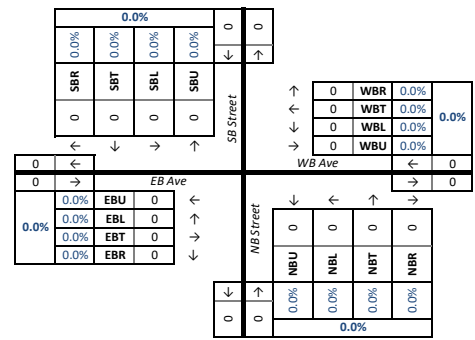
Volumes Displayed as: 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																			
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	SB Street				WB Ave				NB Street				EB Ave							
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
04:00 PM to 04:15 PM																					
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INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0				0				0				0							
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a							
Overall		n/a				n/a				n/a				n/a							
HEAVY VEHICLES (FHWA 4+)		Direction:				Direction:				Direction:				Direction:							
Roadway:		SB Street				WB Ave				NB Street				EB Ave							
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right							
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INT. PEAK HR (ALL VEH)		0				0				0				0							
04:00 PM to 05:00 PM		0				0				0				0							
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%							
INT. PEAK HR (HV ONLY)		0				0				0				0							
04:00 PM to 05:00 PM		0				0				0				0							
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%							
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%							
BICYCLES		Direction:				Direction:				Direction:				Direction:							
Roadway:		SB Street				WB Ave				NB Street				EB Ave							
Movement:		U Left Thru Right				U Left Thru Right				U Left Thru Right				U Left Thru Right							
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04:00 PM to 05:00 PM		0				0				0				0							
INT. PEAK HR (BIKES)		0				0				0				0							
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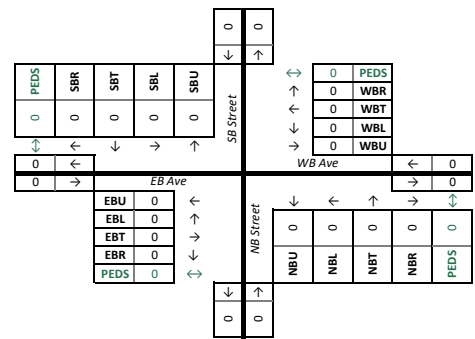
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

Multimodal Turning Movement Count Report

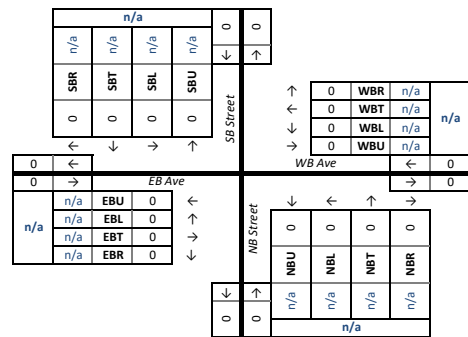
Project Name : American University Data Collection Analysis Period : STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts : Friday, January 1, 1999
 Location : Washington DC Weather : WEATHER
 Data Source : Excel Consultants LLC

Volumes Displayed as : 1. Intersection Peak (vehicle)
 Intersection Peak Hour (all vehicles): 04:00 PM to 05:00 PM
 System Peak Hour (all vehicles): 05:00 PM to 06:00 PM
 User-Defined Peak Hour: 05:00 PM to 06:00 PM

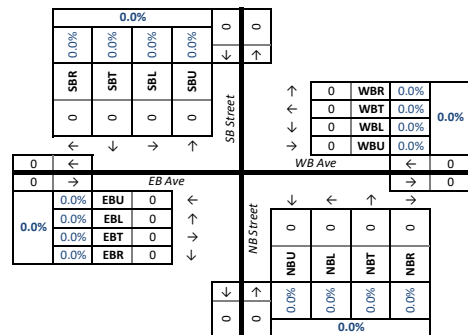
Intersection: 1. SB Street/NB Street & WB Ave/EB Ave		Southbound					Westbound					Northbound					Eastbound				
ALL VEHICLES	Direction:	SB Street					WB Ave					NB Street					EB Ave				
	Roadway:	SB Street					WB Ave					NB Street					EB Ave				
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
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INT. PEAK HR (ALL VEH)		0					0					0					0				
04:00 PM to 05:00 PM		0					0					0					0				
Peak Hour Factor (PHF)		n/a					n/a					n/a					n/a				
HEAVY VEHICLES (FHWA 4+)		Southbound					Westbound					Northbound					Eastbound				
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
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INT. PEAK HR (ALL VEH)		0					0					0					0				
04:00 PM to 05:00 PM		0					0					0					0				
Heavy Vehicle % (PHV):		0.0%					0.0%					0.0%					0.0%				
INT. PEAK HR (HV ONLY)		0					0					0					0				
04:00 PM to 05:00 PM		0					0					0					0				
Heavy Vehicle % (PHV):		0.0%					0.0%					0.0%					0.0%				
BICYCLES		Southbound					Westbound					Northbound					Eastbound				
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds
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04:00 PM to 05:00 PM		0					0					0					0				
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DATA COLLECTION NOTES :

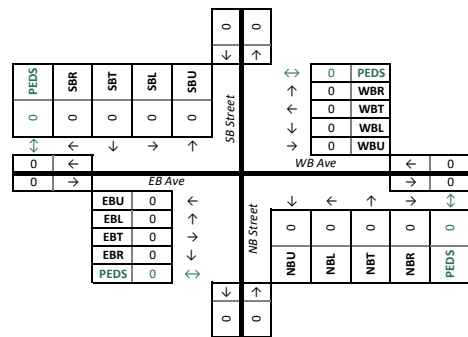
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



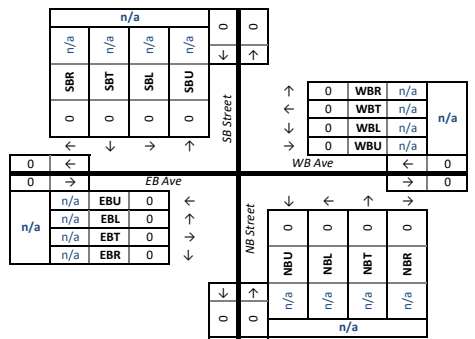
Multimodal Turning Movement Count Report

Project Name : American University Data Collection Analysis Period: STUDY PERIOD 04:00 PM to 07:00 PM
 Project # : 3 Date of Counts: Friday, January 1, 1999
 Location : Washington DC Weather: WEATHER
 Data Source: Excel Consultants LLC

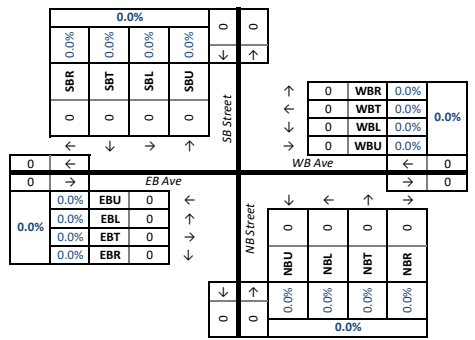
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Intersection:		1. SB Street/NB Street & WB Ave/EB Ave																		
ALL VEHICLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R	Peds	U	L	T	R
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04:00 PM to 05:00 PM		0				0				0				0						
Peak Hour Factor (PHF)		n/a				n/a				n/a				n/a						
Overall		n/a				n/a				n/a				n/a						
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
04:00 PM to 04:15 PM																				
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04:00 PM to 05:00 PM		0				0				0				0						
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%						
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%						
INT. PEAK HR (HV ONLY)		0				0				0				0						
04:00 PM to 05:00 PM		0				0				0				0						
Heavy Vehicle % (PHV)		0.0%				0.0%				0.0%				0.0%						
04:00 PM to 05:00 PM		0.0%				0.0%				0.0%				0.0%						
BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	SB Street				WB Ave				NB Street				EB Ave						
	Movement:	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
04:00 PM to 04:15 PM																				
04:15 PM to 04:30 PM																				
04:30 PM to 04:45 PM																				
04:45 PM to 05:00 PM																				
05:00 PM to 05:15 PM																				
05:15 PM to 05:30 PM																				
05:30 PM to 05:45 PM																				
05:45 PM to 06:00 PM																				
06:00 PM to 06:15 PM																				
06:15 PM to 06:30 PM																				
06:30 PM to 06:45 PM																				
06:45 PM to 07:00 PM																				
07:00 PM to 07:15 PM																				
07:15 PM to 07:30 PM																				
07:30 PM to 07:45 PM																				
07:45 PM to 08:00 PM																				
08:00 PM to 08:15 PM																				
08:15 PM to 08:30 PM																				
08:30 PM to 08:45 PM																				
08:45 PM to 09:00 PM																				
INT. PEAK HR (ALL VEH)		0				0				0				0						
04:00 PM to 05:00 PM		0				0				0				0						
INT. PEAK HR (BIKES)		0				0				0				0						
04:00 PM to 05:00 PM		0				0				0				0						

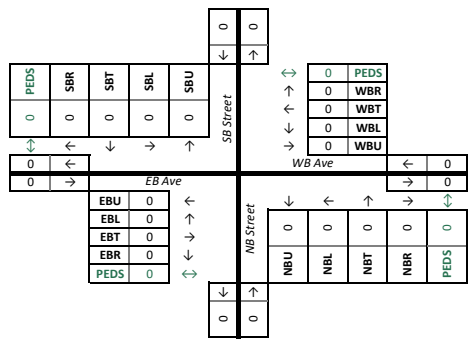
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



HEAVY VEH PEAK HOUR VOLS AND PHV: Intersection Peak (vehicle)



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES:

HOURLY COMPARISON -- AM PEAK

PHF CALCULATION (ENTIRE SYSTEM)

		Total	15-Min			
4:00 PM to	5:00 PM	20102	4:00 PM	5210	0	0
4:15 PM to	5:15 PM	20497	4:15 PM	4948	0	0
4:30 PM to	5:30 PM	21201	4:30 PM	5040	0	0
4:45 PM to	5:45 PM	21719	4:45 PM	4904	0	0
5:00 PM to	6:00 PM	22349	5:00 PM	5605	1	5652
5:15 PM to	6:15 PM	22027	5:15 PM	5652	0	0
5:30 PM to	6:30 PM	21347	5:30 PM	5558	0	0
5:45 PM to	6:45 PM	20593	5:45 PM	5534	0	0
6:00 PM to	7:00 PM	19422	6:00 PM	5283	0	0
6:15 PM to	7:15 PM	14139	6:15 PM	4972	0	0
6:30 PM to	7:30 PM	9167	6:30 PM	4804	0	0
6:45 PM to	7:45 PM	4363	6:45 PM	4363	0	0
7:00 PM to	8:00 PM	0	7:00 PM	0	0	0
7:15 PM to	8:15 PM	0	7:15 PM	0	0	0
7:30 PM to	8:30 PM	0	7:30 PM	0	0	0
7:45 PM to	8:45 PM	0	7:45 PM	0	0	0
8:00 PM to	9:00 PM	0	8:00 PM	0	0	0
SYSTEM PEAK			8:15 PM	0		
5:00 PM to	6:00 PM		8:30 PM	0		
			8:45 PM	0		

MAX
22349

Appendix F Existing Traffic Analysis

Table 5-1 Existing Intersection Capacity Analysis

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Massachusetts Ave. at Campus Drive	B	11.5	0.59	B	19.2	0.95
Massachusetts Ave. at 45 th St.	A	1.9	0.26	B	13.1	1.5
Massachusetts Ave. at 46 th St. (Wesley Circle)	A	6	0.6	A	9.3	0.59
Massachusetts Ave. at Nebraska Ave. (Ward Circle) West	C	26.1	1.25	D	38.2	1.19
Massachusetts Ave. at Nebraska Ave. (Ward Circle) East	B	17	1.25	C	22.4	1.19
Massachusetts Ave. at Nebraska Ave. (Ward Circle) North	F	86.3	1.25	D	38.2	1.19
Massachusetts Ave. at Nebraska Ave. (Ward Circle) South	C	21.2	1.25	E	69.7	1.19
Nebraska Ave. at New Mexico Ave./SIS Garage	C	32.3	0.89	C	24.1	0.9
Nebraska Ave. at East Campus Dr.	A	0.9	0.41	A	2	0.41
New Mexico Ave. at East Campus Dr.	A	0.4	0.27	A	0.7	0.2
Massachusetts Ave. at Westover Pl.	A	0.2	0.53	A	0.1	0.51
Massachusetts Ave. at NAC Dr.	A	0.2	0.55	A	0.9	0.5
Nebraska Ave. at 45 th St.	A	0.6	0.07	A	0.6	0.09
Nebraska Ave. at Rockwood Parkway/Newark St.	A	9.1	0.68	B	11.8	0.58
Rockwood Parkway at Glenbrook Rd.	A	8	0.16	A	7.6	0.1
Rockwood Parkway at Fletcher Gate	A	2	0.13	A	3.6	0.21
Massachusetts Ave. at 47 th St.	A	0.3	0.39	A	0.8	0.33
Massachusetts Ave. at Van Ness St.	A	1.6	0.39	A	3.2	0.58
Massachusetts Ave. at 48 th St.	A	9.1	0.67	B	10.4	0.56
Massachusetts Ave. at 49 th St.	B	16.7	0.81	B	10.9	0.71
Wisconsin Ave. at Van Ness St.	C	22.3	0.83	C	27.4	0.84

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Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North	C	31.5	1.13	B	17.7	0.98
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South	C	21.4	1.13	D	39.8	0.98
Nebraska Ave. at Warren St.	A	1.5	0.24	A	1.2	0.21
Wisconsin Ave. at Warren St.	B	12.4	0.85	A	8.5	0.73
Yuma St. at 42 nd St.	A	9.3	0.24	A	9	0.24
Wisconsin Ave. at Albemarle St.	B	17.3	0.83	C	23.9	0.98
Nebraska Ave. at Foxhall Rd.	D	39	0.98	D	36.8	1.02
New Mexico Ave. at Newark St.	C	24.1	0.93	B	11.7	0.51
New Mexico Ave. at Westover Pl.	C	24.1	0.93	B	11.7	0.51
New Mexico Ave. at 44 th St.	A	0.8	0.08	A	1.1	0.08
New Mexico Ave. at Macomb St.	B	12.8	0.62	B	13.6	0.48
New Mexico Ave. at Lowell St.	A	1.7	0.31	A	1.1	0.17
New Mexico Ave. at Sutton Pl.	A	2.2	0.33	A	1.3	0.22
New Mexico Ave. at 43 th St.	A	0.3	0.32	A	0.1	0.22
New Mexico Ave. at Klinge St.	A	1	0.32	A	0.6	0.26
New Mexico Ave. at Cathedral Ave.	D	37.5	1.01	C	21.1	0.68
Nebraska Ave. at Van Ness St.	B	18.2	0.96	C	29.5	1.04
Wesley Seminary Drive at Massachusetts Ave.	A	0	0	A	0.5	0.03
Warren St at 42 nd St – SB	A	4.3	0.14	A	4.3	0.13
Warren St at 42 nd St – NB	A	4.5	0.15	A	4.5	0.15
Warren St at 48 th St.	A	1.2	0.07	A	1.4	0.03
Yuma St. at 48 th St.	A	7.8	0.16	A	7.7	0.15
42 nd St. at Albemarle St.	C	22.4	0.83	B	14.6	0.51
Nebraska Ave. at Macomb St.	A	3.2	0.78	A	5.4	0.89
Loughboro Rd./Nebraska Ave. at Indian Ln./Chain Bridge Rd.	A	2.5	0.37	A	1.2	0.12

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Table 5-2 Existing Intersection Queuing Analysis

Intersection	AM Peak Hour - 95%-Queue Length (Storage Length)				PM Peak Hour – 95% Queue Length (Storage Length)			
	NB	SB	EB	WB	NB	SB	EB	WB
Massachusetts Ave. at Campus Drive	105 (471)	500 (628)	48 (221)	44 (361)	1199 (471)	169 (628)	60 (221)	72 (361)
Massachusetts Ave. at 45 th St.	0 (222)	0.3 (246)	-	1 (156)	0 (222)	0 (246)	-	7 (156)
Massachusetts Ave. at 46 th St. (Wesley Circle)	55 (229)	72 (586)	0 (148)	98 (119)	105 (229)	248 (586)	0(148)	167 (119)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) West	-	29 (250)	655 (372)	134 (300)	-	36 (250)	661 (372)	216 (300)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) East	51 (260)	-	97 (300)	467 (737)	102 (260)	-	102(300)	422 (737)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) North	94 (193)	884 (471)	-	-	119 (193)	717 (471)	-	-
Massachusetts Ave. at Nebraska Ave. (Ward Circle) South	445 (345)		116 (219)	-	861 (345)		149 (219)	-
Nebraska Ave. at New Mexico Ave./SIS Garage	189 (330)	9 (349)	296 (349)	724 (396)	167 (330)	92 (349)	297 (349)	494 (396)
Nebraska Ave. at East Campus Dr.	79 (396)	60 (372)	-	0 (208)	208 (396)	76 (372)	-	0 (208)
New Mexico Ave. at East Campus Dr.	-	2 (221)	1 (330)	0 (250)	-	4 (221)	1 (330)	0 (250)
Massachusetts Ave. at Westover Pl.	0 (565)	1 (156)	5 (277)	-	1 (565)	0 (156)	3 (277)	-
Massachusetts Ave. at NAC Dr.	0 (156)	2 (345)	-	2 (342)	0 (156)	0 (345)	-	34 (342)
Nebraska Ave. at 45 th St.	0 (220)	-	0 (349)	0 (291)	0 (220)	-	0 (349)	0 (291)
Nebraska Ave. at Rockwood Parkway/Newark St.	152 (717)	41 (291)	204 (270)	109 (279)	92 (717)	94 (291)	149 (270)	226 (279)
Rockwood Parkway at Glenbrook Rd.	1 (1445)	1 (322)	1 (425)	1 (322)	0 (1445)	0 (322)	0 (425)	0 (322)
Rockwood Parkway at Fletcher Gate	-	7 (285)	2 (155)	0 (270)	-	20 (285)	0 (155)	0 (270)

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Massachusetts Ave. at 47 th St.	0 (313)	0 (181)	2 (269)	0 (586)	0 (313)	0 (181)	10 (269)	0 (586)
Massachusetts Ave. at Van Ness St.	3 (269)	2 (663)	5 (452)	33 (210)	1 (269)	8 (663)	4 (452)	84 (210)
Massachusetts Ave. at 48 th St.	211 (663)	32 (758)	72 (433)	56 (204)	384 (663)	84 (758)	46 (433)	55 (204)
Massachusetts Ave. at 49 th St.	88 (565)	54 (328)	104 (245)	357 (758)	117 (565)	77 (328)	203 (245)	34 (759)
Wisconsin Ave. at Van Ness St.	341 (367)	92 (319)	395 (1242)	305 (419)	508 (367)	62 (319)	288 (1242)	352 (419)
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North	137 (190)	48 (554)	0 (110)	613 (97)	104 (190)	72 (554)	0 (110)	444 (97)
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South	157 (377)	80 (190)	416 (109)	0 (111)	414 (377)	90 (190)	528 (109)	0 (111)
Nebraska Ave. at Warren St.	1 (726)	1 (392)	12 (316)	4 (282)	2 (726)	1 (392)	1 (316)	6 (282)
Wisconsin Ave. at Warren St.	279 (330)	15 (116)	72 (299)	46 (129)	199 (330)	20 (116)	80 (299)	55 (129)
Yuma St. at 42 nd St.	1 (435)	1 (295)	1 (457)	1 (864)	1 (435)	1 (295)	1 (457)	1 (864)
Wisconsin Ave. at Albemarle St.	193 (554)	50 (196)	171 (670)	224 (654)	112 (554)	116 (196)	160 (670)	226 (654)
Nebraska Ave. at Foxhall Rd.	361 (2089)	-	474 (701)	518 (717)	423 (2089)	-	425 (701)	287 (717)
New Mexico Ave. at Newark St.	65 (252)	161 (250)	310 (284)	23 (247)	77 (252)	112 (250)	100 (284)	0 (247)
New Mexico Ave. at Westover Pl.	65 (252)	161 (250)	310 (284)	23 (247)	77 (252)	112 (250)	100 (284)	0 (247)
New Mexico Ave. at 44 th St.	0 (186)	0 (252)	5 (312)	7 (150)	0 (186)	1 (252)	6 (312)	2 (150)
New Mexico Ave. at Macomb St.	150 (277)	223 (186)	64 (613)	46 (596)	236 (277)	112 (186)	53 (613)	82 (596)
New Mexico Ave. at Lowell St.	5 (94)	0 (277)	13 (597)	-	1 (94)	0 (277)	8 (597)	-
New Mexico Ave. at Sutton Pl.	0 (274)	2 (94)	-	34 (405)	0 (274)	3 (94)	-	8 (405)
New Mexico Ave. at 43 th St.	0 (358)	1 (274)	-	2 (337)	0 (358)	0 (274)	-	1 (337)

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New Mexico Ave. at Klinge St.	4 (283)	0 (358)	7 (568)	-	1 (283)	0 (358)	4 (568)	-
New Mexico Ave. at Cathedral Ave.	196 (212)	553 (283)	124 (642)	212 (805)	120 (212)	316 (283)	97 (642)	128 (805)
Nebraska Ave. at Van Ness St.	769 (1410)	100 (726)	245 (110)	153 (1242)	969 (1410)	110 (726)	129 (110)	282 (1242)
Wesley Seminary Drive at Massachusetts Ave.	0 (628)	0 (222)	0 (141)	-	0 (628)	0 (222)	0 (141)	-
Warren St at 42 nd St – SB	0 (119)	0 (97)	0 (426)	-	0 (119)	0 (97)	0 (426)	-
Warren St at 42 nd St – NB	1 (92)	0 (435)	0 (419)		1 (92)	0 (435)	0 (419)	
Warren St at 48 th St.	0 (526)	1 (383)	-	2 (1057)	0 (526)	0 (383)	-	2 (1057)
Yuma St. at 48 th St.	0 (383)	0 (277)	0 (259)	0 (1099)	0 (383)	0 (277)	0 (259)	0 (1099)
42 nd St. at Albemarle St.	104 (299)	94 (437)	206 (202)	32 (670)	58 (299)	84 (437)	106 (202)	56 (670)
Nebraska Ave. at Macomb St.	77 (291)	-	0 (299)	0 (1077)	110 (291)	-	0 (299)	1 (1077)
Loughboro Rd./Nebraska Ave. at Indian Ln./Chain Bridge Rd.	38 (287)	0 (1445)	2 (1158)	5 (701)	11 (287)	0 (144 5)	1 (1158)	3 (701)

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↑	↗		↖	↗		↔	
Traffic Volume (vph)	22	1165	78	11	670	60	21	6	33	4	18	5
Future Volume (vph)	22	1165	78	11	670	60	21	6	33	4	18	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-4%			-1%			5%	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.85		0.96	0.91		0.98	
Frt		0.991				0.850			0.850		0.976	
Flt Protected		0.999			0.999			0.962			0.993	
Satd. Flow (prot)	0	2868	0	0	1626	1318	0	1286	1136	0	1450	0
Flt Permitted		0.934			0.973			0.804			0.970	
Satd. Flow (perm)	0	2682	0	0	1584	1116	0	1036	1036	0	1399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				62			34		5	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		628			471			361			221	
Travel Time (s)		14.3			10.7			9.8			6.0	
Confl. Peds. (#/hr)	27		16	16		27	23		41	41		23
Confl. Bikes (#/hr)			8			3						2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	0%	0%	5%	20%	20%	20%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	7	7	7
Adj. Flow (vph)	23	1201	80	11	691	62	22	6	34	4	19	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1304	0	0	702	62	0	28	34	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.28	1.28	1.22	1.22	1.22	1.24	1.24	1.24	1.29	1.33	1.29
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left			Left		Right	Left		Right	Left		
Leading Detector (ft)	20	20		20	20	20	20	20	20	20	20	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20		20	20	20	20	20	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	6	6		2	2	2	8	8	8	4	4	

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020

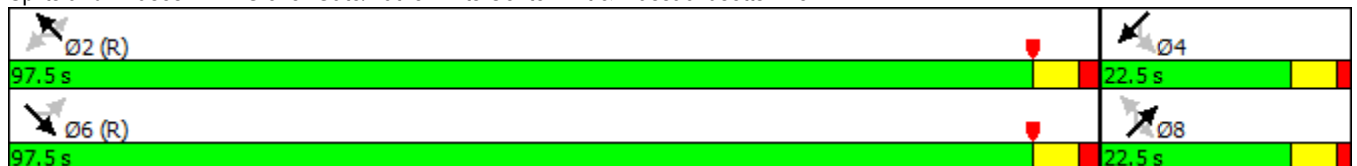


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	20.0	20.0		18.0	18.0	18.0	12.5	12.5	12.5	22.5	22.5	
Total Split (s)	97.5	97.5		97.5	97.5	97.5	22.5	22.5	22.5	22.5	22.5	
Total Split (%)	81.3%	81.3%		81.3%	81.3%	81.3%	18.8%	18.8%	18.8%	18.8%	18.8%	
Maximum Green (s)	91.5	91.5		91.5	91.5	91.5	17.0	17.0	17.0	17.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)		4.0			4.0	4.0		3.5	3.5		3.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	
Flash Dont Walk (s)	7.0	7.0		5.0	5.0	5.0				10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0	0				64	64	
Act Effct Green (s)		98.8			98.8	98.8		17.0	17.0			17.0
Actuated g/C Ratio		0.82			0.82	0.82		0.14	0.14			0.14
v/c Ratio		0.59			0.54	0.07		0.19	0.19			0.14
Control Delay		13.7			3.7	0.5		47.4	16.9			39.4
Queue Delay		1.0			0.0	0.0		0.0	0.1			0.0
Total Delay		14.7			3.7	0.5		47.4	16.9			39.4
LOS		B			A	A		D	B			D
Approach Delay		14.7			3.5			30.7				39.4
Approach LOS		B			A			C				D

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	115 (96%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	11.5
Intersection LOS:	B
Intersection Capacity Utilization:	73.1%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW



Lanes, Volumes, Timings
 2: Massachusetts Ave NW & 45th St

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↕	
Traffic Volume (vph)	63	1247	660	11	14	13
Future Volume (vph)	63	1247	660	11	14	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		4%	-7%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.937	
Flt Protected		0.998			0.974	
Satd. Flow (prot)	0	3231	3412	0	1587	0
Flt Permitted		0.998			0.974	
Satd. Flow (perm)	0	3231	3412	0	1587	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		246	222		156	
Travel Time (s)		5.6	5.0		3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	1386	733	12	16	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1456	745	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.2%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑						↑↓	
Traffic Volume (vph)	0	1167	8	13	614	0	0	0	0	85	23	3
Future Volume (vph)	0	1167	8	13	614	0	0	0	0	85	23	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	9	9	9
Grade (%)		7%			-7%			0%			7%	
Storage Length (ft)	0		90	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96		1.00							1.00
Frt			0.850									0.996
Flt Protected					0.999							0.963
Satd. Flow (prot)	0	2841	1235	0	2892	0	0	0	0	0	1256	0
Flt Permitted					0.921							0.963
Satd. Flow (perm)	0	2841	1191	0	2666	0	0	0	0	0	1256	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23									1
Link Speed (mph)		30			30			25				25
Link Distance (ft)		586			229			148				119
Travel Time (s)		13.3			5.2			4.0				3.2
Confl. Peds. (#/hr)	16		22	22		16						5
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	7	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0					0	0	0
Adj. Flow (vph)	0	1191	8	13	627	0	0	0	0	87	23	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1191	8	0	640	0	0	0	0	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.30	1.30	1.35	1.20	1.27	1.20	1.14	1.14	1.14	1.36	1.55	1.36
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA	Perm	Perm	NA					Split	NA	
Protected Phases		6			2					4	4	
Permitted Phases			6	2								
Minimum Split (s)		15.5	15.5	15.5	15.5					23.5	23.5	
Total Split (s)		88.0	88.0	88.0	88.0					32.0	32.0	
Total Split (%)		73.3%	73.3%	73.3%	73.3%					26.7%	26.7%	
Maximum Green (s)		82.5	82.5	82.5	82.5					26.5	26.5	
Yellow Time (s)		4.5	4.5	4.5	4.5					4.0	4.0	
All-Red Time (s)		1.0	1.0	1.0	1.0					1.5	1.5	
Lost Time Adjust (s)		-2.0	-2.0		-2.0							-2.0
Total Lost Time (s)		3.5	3.5		3.5							3.5

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effect Green (s)		84.5	84.5		84.5						28.5	
Actuated g/C Ratio		0.70	0.70		0.70						0.24	
v/c Ratio		0.60	0.01		0.34						0.38	
Control Delay		3.5	0.0		5.2						36.6	
Queue Delay		0.0	0.0		0.0						0.0	
Total Delay		3.5	0.0		5.2						36.6	
LOS		A	A		A						D	
Approach Delay		3.5			5.2						36.6	
Approach LOS		A			A						D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	46 (38%), Referenced to phase 2:NWTL and 6:SET, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	6.0
Intersection LOS:	A
Intersection Capacity Utilization:	57.5%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 3: Tilden St NW/46th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings

5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	1	2	55	22	288	0	903	45	315	841	29
Future Volume (vph)	0	1	2	55	22	288	0	903	45	315	841	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	10	10	10	10	10	10
Grade (%)		15%			-1%			2%				-1%
Storage Length (ft)	0		0	220		5	0		0	0		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97		0.97		0.87		1.00			1.00	
Frt		0.910				0.850		0.993			0.995	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1398	0	1465	1524	1295	0	2888	0	1438	1451	0
Flt Permitted				0.756						0.148		
Satd. Flow (perm)	0	1398	0	1129	1524	1128	0	2888	0	224	1451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				74		5			3	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			330			349			396	
Travel Time (s)		9.5			9.0			7.9			9.0	
Confl. Peds. (#/hr)	63		16	16		63	29		19	19		29
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	3%	3%	3%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	3	3	0	0	0	0	8	0
Adj. Flow (vph)	0	1	2	57	23	300	0	941	47	328	876	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	57	23	300	0	988	0	328	906	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.24	1.26	1.26	1.26	1.26	1.26	1.24	1.29	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA		Perm	NA	pm+ov		NA		pm+pt	NA	
Protected Phases		8			4	5		6		5	2	
Permitted Phases	8			4		4				2		
Minimum Split (s)	23.5	23.5		24.5	24.5	10.5		25.5		10.5	21.5	
Total Split (s)	29.0	29.0		29.0	29.0	32.0		56.0		32.0	88.0	
Total Split (%)	24.2%	24.2%		24.2%	24.2%	26.7%		46.7%		26.7%	73.3%	
Maximum Green (s)	23.5	23.5		23.5	23.5	26.5		50.5		26.5	82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5		1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		3.5		3.5	3.5	3.5		3.5		3.5	3.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lead		Lag		Lead		

Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

Lane Group	Ø14	Ø18
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	14	18
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	3%	3%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead

Lanes, Volumes, Timings

5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

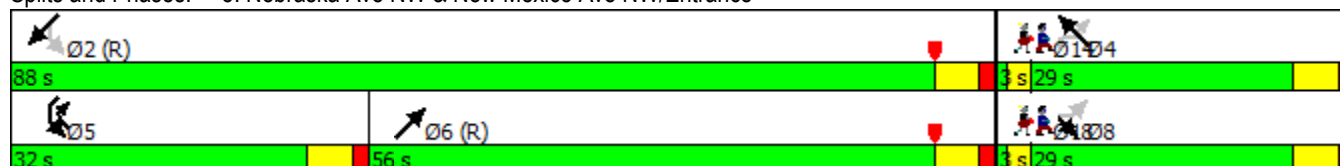


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		12.0	12.0			13.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effect Green (s)		25.5		25.5	25.5	54.0		52.5		84.5	84.5	
Actuated g/C Ratio		0.21		0.21	0.21	0.45		0.44		0.70	0.70	
v/c Ratio		0.01		0.24	0.07	0.51		0.78		0.74	0.89	
Control Delay		29.0		42.4	38.6	19.7		22.4		40.2	40.3	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.3	3.2	
Total Delay		29.0		42.4	38.6	19.7		22.4		40.5	43.5	
LOS		C		D	D	B		C		D	D	
Approach Delay		29.0			24.2			22.4			42.7	
Approach LOS		C			C			C			D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	25 (21%), Referenced to phase 2:SWTL and 6:NET, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	32.3
Intersection LOS:	C
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 5: Nebraska Ave NW & New Mexico Ave NW/Entrance



Lane Group	Ø14	Ø18
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

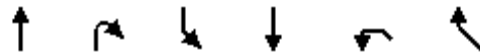
Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

	↑	↖	↙	↓	↘	↗	
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Lane Configurations	↑↑			↑↑		↗	
Traffic Volume (vph)	1213	22	1	1149	0	4	
Future Volume (vph)	1213	22	1	1149	0	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	-1%			-1%	0%		
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	
Frt	0.997					0.865	
Flt Protected							
Satd. Flow (prot)	3546	0	0	3557	0	1611	
Flt Permitted				0.954			
Satd. Flow (perm)	3546	0	0	3393	0	1611	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	3					1091	
Link Speed (mph)	30			30	25		
Link Distance (ft)	396			372	208		
Travel Time (s)	9.0			8.5	5.7		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	1348	24	1	1277	0	4	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1372	0	0	1278	0	4	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	0			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00	
Turning Speed (mph)		9	15		15	9	
Number of Detectors	1		1	1		1	
Detector Template			Left			Right	
Leading Detector (ft)	20		20	20		20	
Trailing Detector (ft)	0		0	0		0	
Detector 1 Position(ft)	0		0	0		0	
Detector 1 Size(ft)	20		20	20		20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0		0.0	
Turn Type	NA		Perm	NA		Perm	
Protected Phases	2			2		4	
Permitted Phases			2			6	
Detector Phase	2		2	2		6	
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0		4.0	10.0
Minimum Split (s)	20.0		20.0	20.0		20.5	26.0
Total Split (s)	92.0		92.0	92.0		20.5	28.0
Total Split (%)	76.7%		76.7%	76.7%		17.1%	23%

Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

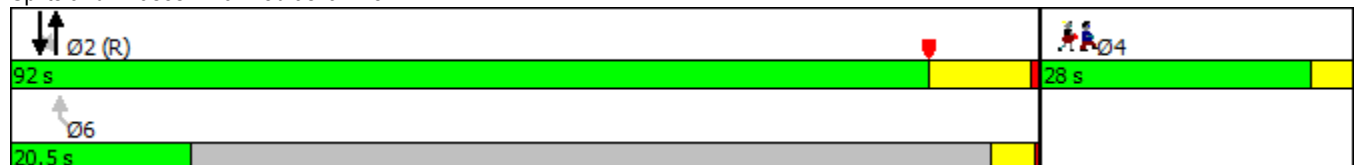


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Maximum Green (s)	82.0		82.0	82.0		16.0	24.0
Yellow Time (s)	9.0		9.0	9.0		4.0	4.0
All-Red Time (s)	1.0		1.0	1.0		0.5	0.0
Lost Time Adjust (s)	-2.0			-2.0		-2.0	
Total Lost Time (s)	8.0			8.0		2.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0	1.0		3.0	1.0
Recall Mode	C-Max		C-Max	C-Max		None	None
Walk Time (s)						5.0	10.0
Flash Dont Walk (s)						11.0	12.0
Pedestrian Calls (#/hr)						0	5
Act Effect Green (s)	113.2			113.2		114.3	
Actuated g/C Ratio	0.94			0.94		0.95	
v/c Ratio	0.41			0.40		0.00	
Control Delay	0.9			0.8		0.0	
Queue Delay	0.0			0.0		0.0	
Total Delay	1.0			0.8		0.0	
LOS	A			A		A	
Approach Delay	1.0			0.8			
Approach LOS	A			A			

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	62 (52%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	0.9
Intersection LOS:	A
Intersection Capacity Utilization:	47.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: Nebraska Ave NW



Lanes, Volumes, Timings
7: New Mexico Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	19	360	400	6	8	0
Future Volume (vph)	19	360	400	6	8	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	7%		0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.998			
Flt Protected		0.998			0.950	
Satd. Flow (prot)	0	3280	1674	0	1652	0
Flt Permitted		0.998			0.950	
Satd. Flow (perm)	0	3280	1674	0	1652	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		330	250		221	
Travel Time (s)		9.0	6.8		5.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	400	444	7	9	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	421	451	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.14	1.14	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1222	9	7	880	4	1
Future Volume (vph)	1222	9	7	880	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-4%			0%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999				0.973	
Flt Protected					0.962	
Satd. Flow (prot)	3366	0	0	3303	1627	0
Flt Permitted					0.962	
Satd. Flow (perm)	3366	0	0	3303	1627	0
Link Speed (mph)	30			25	30	
Link Distance (ft)	156			565	277	
Travel Time (s)	3.5			15.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1358	10	8	978	4	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1368	0	0	986	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.1% ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
9: Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↕	
Traffic Volume (vph)	18	1270	752	19	1	7
Future Volume (vph)	18	1270	752	19	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	0%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.996		0.880	
Flt Protected		0.999			0.994	
Satd. Flow (prot)	0	3366	3290	0	1521	0
Flt Permitted		0.999			0.994	
Satd. Flow (perm)	0	3366	3290	0	1521	0
Link Speed (mph)		30	25		30	
Link Distance (ft)		345	156		342	
Travel Time (s)		7.8	4.3		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1411	836	21	1	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1431	857	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.8%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Nebraska Ave NW

08/31/2020



Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	1	23	990	0	30	873
Future Volume (vph)	1	23	990	0	30	873
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.870					
Flt Protected	0.998					0.998
Satd. Flow (prot)	1510	0	3270	0	0	3313
Flt Permitted	0.998					0.998
Satd. Flow (perm)	1510	0	3270	0	0	3313
Link Speed (mph)	30		30			30
Link Distance (ft)	220		291			349
Travel Time (s)	5.0		6.6			7.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	26	1100	0	33	970
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	1100	0	0	1003
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.11	1.11	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

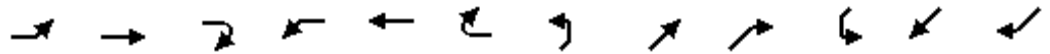
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.9%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020

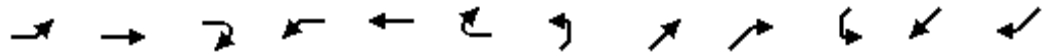


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	36	109	38	45	43	0	51	949	138	5	839	78
Future Volume (vph)	36	109	38	45	43	0	51	949	138	5	839	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15	10	10	10	10	10	10
Grade (%)		6%			-1%			-2%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.99			0.99			1.00	
Frt		0.972						0.982			0.987	
Flt Protected		0.990			0.975			0.998				
Satd. Flow (prot)	0	1555	0	0	1772	0	0	2913	0	0	2831	0
Flt Permitted		0.926			0.728			0.845			0.949	
Satd. Flow (perm)	0	1448	0	0	1317	0	0	2467	0	0	2686	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		10						30			19	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		270			279			717			291	
Travel Time (s)		7.4			7.6			16.3			6.6	
Confl. Peds. (#/hr)	16		10	10		16	3		20	20		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	38	114	40	47	45	0	53	989	144	5	874	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	192	0	0	92	0	0	1186	0	0	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.19	1.19	1.19	1.01	1.01	1.01	1.23	1.23	1.23	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	26.0	26.0		26.0	26.0		25.0	25.0		25.0	25.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		82.0	82.0		82.0	82.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		28.0			28.0			84.0			84.0	

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.23			0.23			0.70			0.70	
v/c Ratio		0.56			0.30			0.68			0.51	
Control Delay		45.4			41.2			5.6			3.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		45.4			41.2			5.6			3.1	
LOS		D			D			A			A	
Approach Delay		45.4			41.2			5.6			3.1	
Approach LOS		D			D			A			A	

Intersection Summary

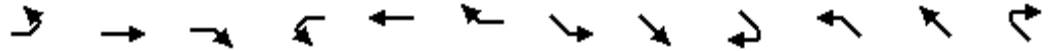
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	42 (35%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	9.1
Intersection LOS:	A
Intersection Capacity Utilization:	91.3%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW



Lanes, Volumes, Timings
 12: Indian Ln/Rockwood Pkwy & Glenbrook Ave

08/31/2020



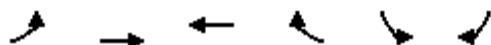
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕↔			↕↔	
Traffic Volume (vph)	35	37	36	4	15	17	12	55	23	2	112	1
Future Volume (vph)	35	37	36	4	15	17	12	55	23	2	112	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.955			0.936			0.965			0.999	
Flt Protected		0.984			0.995			0.994			0.999	
Satd. Flow (prot)	0	1634	0	0	1619	0	0	1668	0	0	1735	0
Flt Permitted		0.984			0.995			0.994			0.999	
Satd. Flow (perm)	0	1634	0	0	1619	0	0	1668	0	0	1735	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		425			322			322			1445	
Travel Time (s)		9.7			7.3			7.3			32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	41	40	4	17	19	13	61	26	2	124	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	40	0	0	100	0	0	127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 13: Rockwood Pkwy NW & Fletcher Gate

08/31/2020



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↘	↙
Traffic Volume (vph)	38	160	83	115	41	6
Future Volume (vph)	38	160	83	115	41	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		6%	0%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.921		0.982	
Flt Protected		0.991			0.958	
Satd. Flow (prot)	0	1671	1601	0	1636	0
Flt Permitted		0.991			0.958	
Satd. Flow (perm)	0	1671	1601	0	1636	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		155	270		285	
Travel Time (s)		4.2	7.4		6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	178	92	128	46	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	220	220	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 14: 47th St & Massachusetts Ave NW

08/31/2020

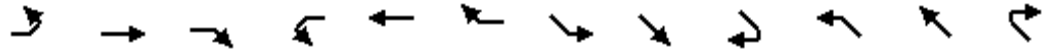
												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	23	1165	12	2	582	6
Future Volume (vph)	0	0	0	0	0	0	23	1165	12	2	582	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt								0.999				0.998
Flt Protected								0.999				
Satd. Flow (prot)	0	1739	0	0	1739	0	0	3181	0	0	3346	0
Flt Permitted								0.999				
Satd. Flow (perm)	0	1739	0	0	1739	0	0	3181	0	0	3346	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			181			269			586	
Travel Time (s)		7.1			4.1			6.1			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0	26	1294	13	2	647	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	1333	0	0	656	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 15: Massachusetts Ave NW & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	3	20	8	9	96	20	1171	6	21	555	8
Future Volume (vph)	0	3	20	8	9	96	20	1171	6	21	555	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.881			0.885			0.999			0.998	
Flt Protected					0.996			0.999			0.998	
Satd. Flow (prot)	0	1532	0	0	1532	0	0	3181	0	0	3339	0
Flt Permitted					0.996			0.999			0.998	
Satd. Flow (perm)	0	1532	0	0	1532	0	0	3181	0	0	3339	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		452			210			663			269	
Travel Time (s)		10.3			4.8			15.1			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	3	22	9	10	107	22	1301	7	23	617	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	126	0	0	1330	0	0	649	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

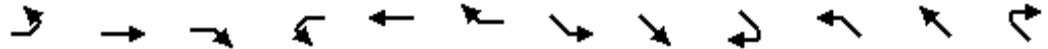
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.9%
ICU Level of Service	C
Analysis Period (min)	15

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020

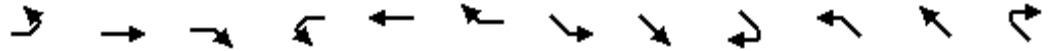


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	48	39	48	38	10	58	58	1092	8	15	605	16
Future Volume (vph)	48	39	48	38	10	58	58	1092	8	15	605	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-6%			3%				-3%
Storage Length (ft)	50		0	150		0	0		0	0		140
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.97		0.96	0.95			1.00				1.00
Frt		0.917			0.871			0.999				0.996
Flt Protected	0.950			0.950				0.997				0.999
Satd. Flow (prot)	1311	1228	0	1460	1277	0	0	2875	0	0	2783	0
Flt Permitted	0.711			0.680				0.873				0.914
Satd. Flow (perm)	943	1228	0	1006	1277	0	0	2517	0	0	2546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			60			1				5
Link Speed (mph)		25			25			30				30
Link Distance (ft)		433			204			758				663
Travel Time (s)		11.8			5.6			17.2				15.1
Confl. Peds. (#/hr)	26		26	26		26	4		39	39		4
Confl. Bikes (#/hr)									3			5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	7%	7%	7%	2%	2%	2%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	7	0	7	7
Parking (#/hr)	0	0	0							0	0	0
Adj. Flow (vph)	49	40	49	39	10	60	60	1126	8	15	624	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	89	0	39	70	0	0	1194	0	0	655	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.45	1.45	1.28	1.20	1.20	1.20	1.27	1.29	1.27	1.22	1.33	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6				2
Permitted Phases	4			8			6			2		
Minimum Split (s)	28.0	28.0		28.0	28.0		15.0	15.0		15.0	15.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		83.0	83.0		83.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.0			3.0	

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	15.0	15.0		15.0	15.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effect Green (s)	28.0	28.0		28.0	28.0			85.0			85.0	
Actuated g/C Ratio	0.23	0.23		0.23	0.23			0.71			0.71	
v/c Ratio	0.22	0.28		0.17	0.20			0.67			0.36	
Control Delay	40.5	21.6		39.1	13.2			2.8			14.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	40.5	21.6		39.1	13.2			2.8			14.3	
LOS	D	C		D	B			A			B	
Approach Delay		28.3			22.5			2.8			14.3	
Approach LOS		C			C			A			B	

Intersection Summary





















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	9.1
Intersection LOS:	A
Intersection Capacity Utilization:	83.7%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 16: Massachusetts Ave NW & Fordham Rd NW/48th St NW



Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	60	56	8	33	27	0	144	1125	75	32	593	45
Future Volume (vph)	60	56	8	33	27	0	144	1125	75	32	593	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	11	11	11	11	11	11
Grade (%)		-1%			-3%			-2%				3%
Storage Length (ft)	85		0	70		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	0.99		0.97				1.00				1.00
Frt		0.982						0.992				0.990
Flt Protected	0.950			0.950				0.995				0.998
Satd. Flow (prot)	1296	1333	0	1484	1562	0	0	3012	0	0	2913	0
Flt Permitted	0.739			0.713				0.672				0.810
Satd. Flow (perm)	977	1333	0	1079	1562	0	0	2034	0	0	2363	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5						14				8
Link Speed (mph)		25			25			30				30
Link Distance (ft)		565			328			245				758
Travel Time (s)		15.4			8.9			5.6				17.2
Confl. Peds. (#/hr)	19		20	20		19	11		16	16		11
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	2%	2%	2%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	7	0	7	0
Parking (#/hr)	0	0										
Adj. Flow (vph)	63	59	8	35	28	0	152	1184	79	34	624	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	67	0	35	28	0	0	1415	0	0	705	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		9			9			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.47	1.47	1.30	1.28	1.28	1.28	1.18	1.20	1.18	1.22	1.24	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			4		5	2				6
Permitted Phases	4			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		10.0	19.5		19.5	19.5	
Total Split (s)	27.5	27.5		27.5	27.5		33.0	92.5		59.5	59.5	
Total Split (%)	22.9%	22.9%		22.9%	22.9%		27.5%	77.1%		49.6%	49.6%	
Maximum Green (s)	21.5	21.5		21.5	21.5		28.0	87.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.5	1.5	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.5			3.5	

Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag							Lead			Lag		
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)	23.5	23.5		23.5	23.5			89.0			56.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.47	
v/c Ratio	0.33	0.25		0.17	0.09			0.81			0.64	
Control Delay	47.1	40.7		42.6	40.6			6.0			30.7	
Queue Delay	0.0	0.0		0.0	0.0			0.1			0.0	
Total Delay	47.1	40.7		42.6	40.6			6.1			30.7	
LOS	D	D		D	D			A			C	
Approach Delay		43.8			41.7			6.1			30.7	
Approach LOS		D			D			A			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	116 (97%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	16.7
Intersection LOS:	B
Intersection Capacity Utilization:	90.4%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 17: 49th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	251	64	49	226	46	3	819	45	2	1450	54
Future Volume (vph)	39	251	64	49	226	46	3	819	45	2	1450	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		5%			2%			-1%			1%	
Storage Length (ft)	70		0	110		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor	0.98	0.99		0.98	0.99			0.98			0.98	
Frt		0.970			0.975			0.992			0.995	
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1449	1463	0	1472	1497	0	0	2655	0	0	3905	0
Flt Permitted	0.354			0.283				0.950			0.940	
Satd. Flow (perm)	530	1463	0	430	1497	0	0	2522	0	0	3670	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		10						7			9	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		1242			419			367			319	
Travel Time (s)		33.9			11.4			8.3			7.3	
Confl. Peds. (#/hr)	23		27	27		23	127		88	88		127
Confl. Bikes (#/hr)						5			4			7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	6%	6%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	30	30
Parking (#/hr)								0	0			
Adj. Flow (vph)	41	264	67	52	238	48	3	862	47	2	1526	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	331	0	52	286	0	0	912	0	0	1585	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.29	1.29	1.29	1.26	1.26	1.26	1.24	1.32	1.24	1.26	1.32	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		11.0	18.0	
Total Split (s)	36.0	36.0		36.0	36.0		67.0	67.0		11.0	78.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		55.8%	55.8%		9.2%	65.0%	
Maximum Green (s)	30.0	30.0		30.0	30.0		61.0	61.0		5.0	72.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lag	Lag					Lag	Lag	

Lane Group	Ø3	Ø5	Ø7	Ø11
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	3	5	7	11
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead

Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		1.0	4.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		7.0	7.0		1.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	32.0	32.0		32.0	32.0			63.0			74.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27			0.52			0.62	
v/c Ratio	0.29	0.83		0.46	0.72			0.69			0.70	
Control Delay	46.8	63.4		51.9	51.4			24.4			5.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.3	
Total Delay	46.8	63.4		51.9	51.4			24.4			5.6	
LOS	D	E		D	D			C			A	
Approach Delay		61.6			51.4			24.4			5.6	
Approach LOS		E			D			C			A	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 54 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 22.3
 Intersection LOS: C
 Intersection Capacity Utilization 69.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: WISCONSIN AVE & Van Ness St



Lane Group	Ø3	Ø5	Ø7	Ø11
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

20: Nebraska Ave & Warren St & Nebraska Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SWL2	SWL	SWR
Lane Configurations		↕			↕		↕	↕		↕	
Traffic Volume (vph)	3	31	10	13	4	5	15	14	17	744	0
Future Volume (vph)	3	31	10	13	4	5	15	14	17	744	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%		-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95
Frt		0.969			0.966		0.984	0.850			
Flt Protected		0.997			0.972		0.957			0.950	
Satd. Flow (prot)	0	1680	0	0	1632	0	1654	1418	0	3188	0
Flt Permitted		0.997			0.972		0.957			0.950	
Satd. Flow (perm)	0	1680	0	0	1632	0	1654	1418	0	3188	0
Link Speed (mph)		30			30		30			30	
Link Distance (ft)		316			282		726			392	
Travel Time (s)		7.2			6.4		16.5			8.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	34	11	14	4	6	17	16	19	827	0
Shared Lane Traffic (%)								10%			
Lane Group Flow (vph)	0	48	0	0	24	0	19	14	0	846	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Left	Right
Median Width(ft)		0			0		10			20	
Link Offset(ft)		0			0		0			0	
Crosswalk Width(ft)		16			16		16			16	
Two way Left Turn Lane											
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.08	1.08	1.10	1.10	1.10
Turning Speed (mph)	15		9	15		9	15	9	15	15	9
Sign Control		Stop			Stop		Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 21: WISCONSIN AVE & Warren St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	20	33	17	8	9	15	830	2	70	1486	3
Future Volume (vph)	17	20	33	17	8	9	15	830	2	70	1486	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	8	8	8	10	10	10	10	10	10
Grade (%)		1%			1%			-1%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor		0.99			0.99			1.00			1.00	
Frt		0.936			0.965							
Flt Protected		0.988			0.975			0.999			0.998	
Satd. Flow (prot)	0	1229	0	0	1205	0	0	2727	0	0	4239	0
Flt Permitted		0.927			0.873			0.894			0.806	
Satd. Flow (perm)	0	1149	0	0	1077	0	0	2440	0	0	3415	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			9							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		299			129			330			116	
Travel Time (s)		8.2			3.5			7.5			2.6	
Confl. Peds. (#/hr)	8		2	2		8	115		87	87		212
Confl. Bikes (#/hr)									5			6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	6%	6%	6%	3%	3%	3%
Parking (#/hr)	0	0	0	0	0	0		0	0			
Adj. Flow (vph)	18	21	35	18	8	9	16	874	2	74	1564	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	35	0	0	892	0	0	1641	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.49	1.31	1.38	1.56	1.38	1.24	1.32	1.24	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			6			2	
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		6	6		2	2	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	

Lanes, Volumes, Timings
 21: WISCONSIN AVE & Warren St

08/31/2020

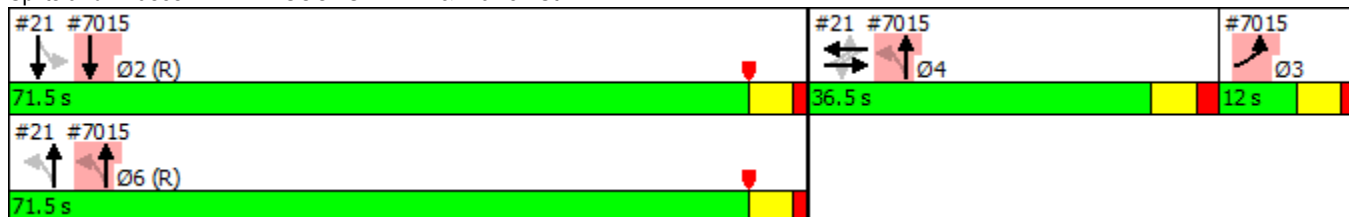


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.0	29.0		29.0	29.0		22.5	22.5		23.5	23.5	
Total Split (s)	36.5	36.5		36.5	36.5		71.5	71.5		71.5	71.5	
Total Split (%)	30.4%	30.4%		30.4%	30.4%		59.6%	59.6%		59.6%	59.6%	
Maximum Green (s)	30.5	30.5		30.5	30.5		66.0	66.0		66.0	66.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			3.5			3.5	
Lead/Lag	Lead	Lead		Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		10.0	10.0		11.0	11.0	
Pedestrian Calls (#/hr)	10	10		10	10		0	0		0	0	
Act Effct Green (s)		16.4			16.4			68.0			68.0	
Actuated g/C Ratio		0.14			0.14			0.57			0.57	
v/c Ratio		0.40			0.23			0.65			0.85	
Control Delay		34.9			37.9			22.6			4.8	
Queue Delay		0.0			0.0			0.7			0.0	
Total Delay		34.9			37.9			23.4			4.8	
LOS		C			D			C			A	
Approach Delay		34.9			37.9			23.4			4.8	
Approach LOS		C			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	29 (24%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	12.4
Intersection LOS:	B
Intersection Capacity Utilization:	78.6%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 21: WISCONSIN AVE & Warren St



Lane Group	Ø3
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	12.0
Total Split (s)	12.0
Total Split (%)	10%
Maximum Green (s)	7.0
Yellow Time (s)	4.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings

22: Yuma St.

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	31	108	9	27	83	16	11	111	40	42	88	10
Future Volume (vph)	31	108	9	27	83	16	11	111	40	42	88	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.983			0.967			0.990	
Flt Protected		0.990			0.989			0.997			0.985	
Satd. Flow (prot)	0	1742	0	0	1690	0	0	1676	0	0	1695	0
Flt Permitted		0.990			0.989			0.997			0.985	
Satd. Flow (perm)	0	1742	0	0	1690	0	0	1676	0	0	1695	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		457			864			435			295	
Travel Time (s)		10.4			19.6			9.9			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	120	10	30	92	18	12	123	44	47	98	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	0	0	140	0	0	179	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
23: WISCONSIN AVE & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	120	100	45	129	79	0	955	55	2	1474	50
Future Volume (vph)	55	120	100	45	129	79	0	955	55	2	1474	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	9	9	9	11	11	11	11	11	11
Grade (%)		-4%			4%			3%			-3%	
Storage Length (ft)	120		0	0		150	0		110	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	0.91
Ped Bike Factor	0.75	0.94			0.98	0.68			0.32		0.97	
Frt		0.932				0.850			0.850		0.995	
Flt Protected	0.950				0.987							
Satd. Flow (prot)	1531	1410	0	0	1459	1257	0	2773	1081	0	4124	0
Flt Permitted	0.950				0.865						0.939	
Satd. Flow (perm)	1154	1410	0	0	1249	850	0	2773	348	0	3872	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				127			127			6
Link Speed (mph)		25			25			30				30
Link Distance (ft)		670			654			554				196
Travel Time (s)		18.3			17.8			12.6				4.5
Confl. Peds. (#/hr)	227		84	84		227	295		317	317		295
Confl. Bikes (#/hr)									1			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	6%	6%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	20	0	24	24
Parking (#/hr)								0	0			
Adj. Flow (vph)	58	126	105	47	136	83	0	1005	58	2	1552	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	231	0	0	183	83	0	1005	58	0	1607	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.34	1.34	1.34	1.22	1.30	1.53	1.17	1.22	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Perm	NA	Perm		NA	Perm	Perm		NA
Protected Phases	3	8			4			2				6
Permitted Phases				4		4			2		6	
Minimum Split (s)	10.0	33.0		30.0	30.0	30.0		23.0	23.0	17.0	17.0	
Total Split (s)	15.0	50.0		35.0	35.0	35.0		64.0	64.0	64.0	64.0	
Total Split (%)	12.5%	41.7%		29.2%	29.2%	29.2%		53.3%	53.3%	53.3%	53.3%	
Maximum Green (s)	10.0	44.0		29.0	29.0	29.0		58.0	58.0	58.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)	3.0	4.0			4.0	4.0		4.0	4.0		4.0	

Lane Group	Ø1	Ø5	Ø7	Ø9
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	1	5	7	9
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				

Lanes, Volumes, Timings
 23: WISCONSIN AVE & Albermarle St

08/31/2020

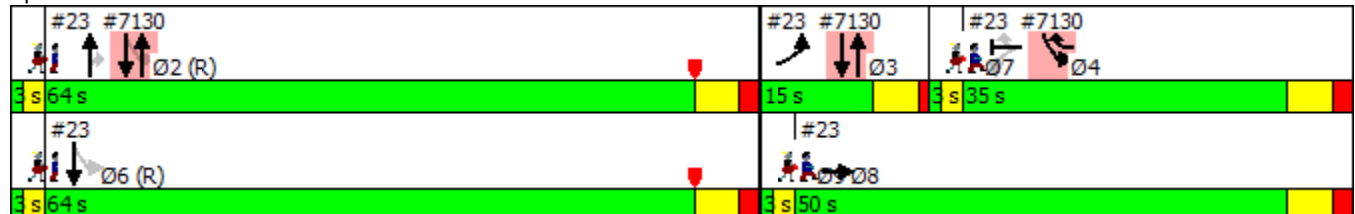


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag						Lag	Lag	Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)		4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Flash Dont Walk (s)		20.0		17.0	17.0	17.0		10.0	10.0	4.0	4.0	
Pedestrian Calls (#/hr)		0		0	0	0		0	0	0	0	
Act Effect Green (s)	12.0	46.0		31.0	31.0	31.0		60.0	60.0		60.0	
Actuated g/C Ratio	0.10	0.38		0.26	0.26	0.26		0.50	0.50		0.50	
v/c Ratio	0.38	0.41		0.57	0.27	0.27		0.73	0.24		0.83	
Control Delay	56.7	26.2		49.6	16.1	16.1		19.9	2.5		10.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	56.7	26.2		49.6	16.1	16.1		19.9	2.5		10.0	
LOS	E	C		D	B	B		B	A		A	
Approach Delay		32.3		39.2				18.9			10.0	
Approach LOS		C		D				B			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	6 (5%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	17.3
Intersection LOS:	B
Intersection Capacity Utilization	82.2%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 23: WISCONSIN AVE & Albermarle St



Lane Group	Ø1	Ø5	Ø7	Ø9
Lead/Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

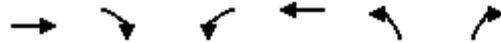
08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑	↘	↗
Traffic Volume (vph)	725	250	391	559	262	447
Future Volume (vph)	725	250	391	559	262	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		200	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98		0.98		0.99	
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2706	0	1451	1528	1486	1330
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2706	0	1424	1528	1469	1330
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	49					86
Link Speed (mph)	30			30	25	
Link Distance (ft)	701			717	2089	
Travel Time (s)	15.9			16.3	57.0	
Confl. Peds. (#/hr)		19	19		3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	5%	5%	1%	1%
Bus Blockages (#/hr)	8	8	0	0	0	0
Adj. Flow (vph)	755	260	407	582	273	466
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1015	0	407	582	273	466
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	46	
Two way Left Turn Lane						
Headway Factor	1.28	1.26	1.24	1.24	1.26	1.26
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	Perm	pt+ov
Protected Phases	2		1	6		14
Permitted Phases					4	
Minimum Split (s)	20.5		10.5	15.5	21.0	
Total Split (s)	53.5		38.0	91.5	28.5	
Total Split (%)	44.6%		31.7%	76.3%	23.8%	
Maximum Green (s)	48.0		32.5	86.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.5	1.5	1.0	
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	
Total Lost Time (s)	3.5		3.5	3.5	3.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020

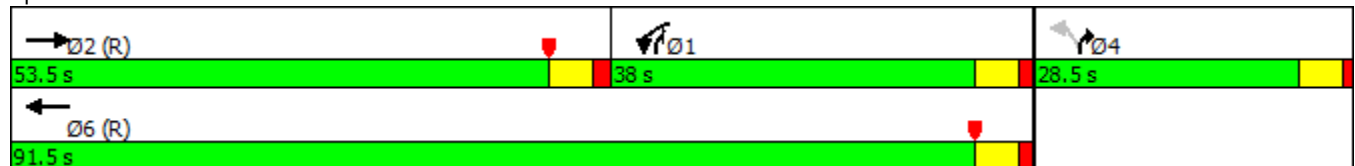


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	8.0				9.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	50.0		34.5	88.0	25.5	63.0
Actuated g/C Ratio	0.42		0.29	0.73	0.21	0.52
v/c Ratio	0.88		0.98	0.52	0.88	0.63
Control Delay	40.7		76.3	8.1	73.7	20.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	40.7		76.3	8.1	73.7	20.7
LOS	D		E	A	E	C
Approach Delay	40.7			36.2	40.3	
Approach LOS	D			D	D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 39.0
 Intersection LOS: D
 Intersection Capacity Utilization 81.8%
 ICU Level of Service D
 Analysis Period (min) 15













Splits and Phases: 24: Foxhall Rd NW & Nebraska Ave NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	64	1	175	7	6	4	71	340	1	0	345	18
Future Volume (vph)	64	1	175	7	6	4	71	340	1	0	345	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	11	11	11	11	11	11	10	10	10
Grade (%)		-7%			-6%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.85			0.96			0.99			1.00	
Frt		0.901			0.968						0.993	
Flt Protected		0.987			0.980			0.991				
Satd. Flow (prot)	0	1063	0	0	1605	0	0	1374	0	0	1399	0
Flt Permitted		0.917			0.891			0.877				
Satd. Flow (perm)	0	986	0	0	1408	0	0	1207	0	0	1399	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					4							5
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		284			247			252			250	
Travel Time (s)		7.7			6.7			6.9			6.8	
Confl. Peds. (#/hr)	2		64	64		2	32		57	57		32
Confl. Bikes (#/hr)									3			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	3%	3%	3%	5%	5%	5%
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Adj. Flow (vph)	67	1	184	7	6	4	75	358	1	0	363	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	252	0	0	17	0	0	434	0	0	382	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.42	1.25	1.15	1.15	1.15	1.26	1.43	1.26	1.20	1.36	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			4			2				2
Permitted Phases	4			4			2			2		
Minimum Split (s)	22.5	22.5		22.5	22.5		25.5	25.5		25.5	25.5	
Total Split (s)	31.0	31.0		31.0	31.0		69.0	69.0		69.0	69.0	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		69.0%	69.0%		69.0%	69.0%	
Maximum Green (s)	25.5	25.5		25.5	25.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover Pl NW

08/31/2020

Lane Group	Ø6	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	6	8
Permitted Phases		
Minimum Split (s)	26.5	26.5
Total Split (s)	69.0	31.0
Total Split (%)	69%	31%
Maximum Green (s)	63.5	25.5
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	4.0	14.0

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		27.5			27.5			65.5			65.5	
Actuated g/C Ratio		0.28			0.28			0.66			0.66	
v/c Ratio		0.93			0.04			0.55			0.42	
Control Delay		76.7			22.8			6.0			9.7	
Queue Delay		0.0			0.0			0.2			0.0	
Total Delay		76.7			22.8			6.2			9.8	
LOS		E			C			A			A	
Approach Delay		76.7			22.8			6.2			9.8	
Approach LOS		E			C			A			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	10 (10%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	24.1
Intersection LOS:	C
Intersection Capacity Utilization	77.5%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 26: New Mexico Ave NW & Newark St NW/Westover PI NW



Lane Group	Ø6	Ø8
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings

27: New Mexico Ave NW & 44th St/Embassy Park Dr

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	16	1	1	15	0	19	0	383	9	2	517	0
Future Volume (vph)	16	1	1	15	0	19	0	383	9	2	517	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.925			0.997				
Flt Protected		0.957			0.978							
Satd. Flow (prot)	0	1652	0	0	1573	0	0	1664	0	0	1799	0
Flt Permitted		0.957			0.978							
Satd. Flow (perm)	0	1652	0	0	1573	0	0	1664	0	0	1799	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		312			150			186			252	
Travel Time (s)		7.1			3.4			5.1			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	1	1	17	0	21	0	426	10	2	574	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	38	0	0	436	0	0	576	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.15	1.15	1.15	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Macomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	18	28	17	3	14	37	369	42	74	427	30
Future Volume (vph)	6	18	28	17	3	14	37	369	42	74	427	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	11	11	11	11	11	11
Grade (%)		-2%			-3%			7%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.82			0.84			0.99			0.99	
Frt		0.926			0.944			0.987			0.992	
Flt Protected		0.995			0.976			0.996			0.993	
Satd. Flow (prot)	0	1117	0	0	1392	0	0	1358	0	0	1574	0
Flt Permitted		0.978			0.878			0.927			0.875	
Satd. Flow (perm)	0	1092	0	0	1083	0	0	1259	0	0	1387	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		613			596			277			186	
Travel Time (s)		16.7			16.3			7.6			5.1	
Confl. Peds. (#/hr)	19		97	97		19	42					42
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	2%	2%	2%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	3
Parking (#/hr)	0	0	0				0	3	0			
Adj. Flow (vph)	6	19	30	18	3	15	39	393	45	79	454	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	36	0	0	477	0	0	565	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		-35			-35			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.13	1.29	1.13	1.28	1.28	1.28	1.25	1.45	1.25	1.14	1.16	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			8			2			2	
Permitted Phases	8			8			2			2		
Minimum Split (s)	22.0	22.0		22.0	22.0		26.0	26.0		26.0	26.0	
Total Split (s)	26.5	26.5		26.5	26.5		70.5	70.5		70.5	70.5	
Total Split (%)	26.5%	26.5%		26.5%	26.5%		70.5%	70.5%		70.5%	70.5%	
Maximum Green (s)	20.5	20.5		20.5	20.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lag	Lag							
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		7.0	7.0	

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Minimum Split (s)	3.0
Total Split (s)	3.0
Total Split (%)	3%
Maximum Green (s)	1.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Walk Time (s)	

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Maccomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.5			22.5			65.5			65.5	
Actuated g/C Ratio		0.22			0.22			0.66			0.66	
v/c Ratio		0.22			0.15			0.58			0.62	
Control Delay		34.6			33.1			9.4			11.8	
Queue Delay		0.0			0.0			0.0			0.5	
Total Delay		34.6			33.1			9.4			12.3	
LOS		C			C			A			B	
Approach Delay		34.6			33.1			9.4			12.3	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 4 (4%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 12.8
 Intersection LOS: B
 Intersection Capacity Utilization 70.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 28: New Mexico Ave NW & Maccomb St NW



Lane Group	Ø7
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings
 29: New Mexico Ave NW & Lowell St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	44	57	433	466	7
Future Volume (vph)	13	44	57	433	466	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.998	
Flt Protected	0.989			0.994		
Satd. Flow (prot)	1539	0	0	1668	1778	0
Flt Permitted	0.989			0.994		
Satd. Flow (perm)	1539	0	0	1668	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	597			94	277	
Travel Time (s)	13.6			2.6	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	49	63	481	518	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	544	526	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.3%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings
 30: New Mexico Ave NW & Sutton PI

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	42	485	19	26	456
Future Volume (vph)	44	42	485	19	26	456
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.934		0.995			
Flt Protected	0.975					0.997
Satd. Flow (prot)	1583	0	1669	0	0	1777
Flt Permitted	0.975					0.997
Satd. Flow (perm)	1583	0	1669	0	0	1777
Link Speed (mph)	30		25			25
Link Distance (ft)	405		274			94
Travel Time (s)	9.2		7.5			2.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	47	539	21	29	507
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	0	560	0	0	536
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.9%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
31: New Mexico Ave NW

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	8	486	8	11	495
Future Volume (vph)	3	8	486	8	11	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.998			
Flt Protected	0.988					0.999
Satd. Flow (prot)	1544	0	1674	0	0	1780
Flt Permitted	0.988					0.999
Satd. Flow (perm)	1544	0	1674	0	0	1780
Link Speed (mph)	30		25			25
Link Distance (ft)	337		358			274
Travel Time (s)	7.7		9.8			7.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	9	540	9	12	550
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	549	0	0	562
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 32: New Mexico Ave NW & Klinge St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	22	41	496	486	6
Future Volume (vph)	6	22	41	496	486	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.998	
Flt Protected	0.989			0.996		
Satd. Flow (prot)	1539	0	0	1671	1778	0
Flt Permitted	0.989			0.996		
Satd. Flow (perm)	1539	0	0	1671	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	568			283	358	
Travel Time (s)	12.9			7.7	9.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	24	46	551	540	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	597	547	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.6%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings
 33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	1	124	7	49	167	180	6	339	38	268	235	0
Future Volume (vph)	1	124	7	49	167	180	6	339	38	268	235	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		-2%			6%			5%				-5%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00	0.96		0.99				0.97
Frt		0.993				0.850		0.987				
Flt Protected					0.989			0.999				0.974
Satd. Flow (prot)	0	1406	0	0	1338	1136	0	1348	0	0	1366	0
Flt Permitted		0.998			0.907			0.993				0.612
Satd. Flow (perm)	0	1403	0	0	1223	1086	0	1340	0	0	833	0
Right Turn on Red			No			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25				25
Link Distance (ft)		642			805			212				283
Travel Time (s)		17.5			22.0			5.8				7.7
Confl. Peds. (#/hr)	14		7	7		14	18		41	41		18
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	3	0	0	0	3	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	1	131	7	52	176	189	6	357	40	282	247	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	228	189	0	403	0	0	529	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.23	1.42	1.23	1.30	1.47	1.49	1.29	1.46	1.29	1.21	1.38	1.21
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	23.0	23.0		13.0	13.0	13.0	23.0	23.0		19.0	19.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0	67.0	67.0		67.0	67.0	
Total Split (%)	33.0%	33.0%		33.0%	33.0%	33.0%	67.0%	67.0%		67.0%	67.0%	
Maximum Green (s)	27.0	27.0		27.0	27.0	27.0	61.0	61.0		61.0	61.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0				-2.0
Total Lost Time (s)		4.0			4.0	4.0		4.0				4.0

Lanes, Volumes, Timings

33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0					10.0	10.0		6.0	6.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		29.0			29.0	29.0		63.0			63.0	
Actuated g/C Ratio		0.29			0.29	0.29		0.63			0.63	
v/c Ratio		0.34			0.64	0.60		0.48			1.01	
Control Delay		30.9			40.8	39.9		12.1			56.3	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		30.9			40.8	39.9		12.1			56.3	
LOS		C			D	D		B			E	
Approach Delay		30.9			40.4			12.1			56.3	
Approach LOS		C			D			B			E	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	9 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	37.5
Intersection LOS:	D
Intersection Capacity Utilization	93.6%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 33: New Mexico Ave NW & Cathedral Ave NW



Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	23	230	0	128	149	4	85	563	234	4	715	27
Future Volume (vph)	23	230	0	128	149	4	85	563	234	4	715	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	10	10	10	10	10	10	10	10	10
Grade (%)		2%			4%			0%				1%
Storage Length (ft)	0		0	125		0	0		380	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.97	1.00			1.00	0.79		1.00	
Frt					0.996				0.850			0.995
Flt Protected		0.995		0.950				0.993				
Satd. Flow (prot)	0	1853	0	1471	1542	0	0	1371	1174	0	2734	0
Flt Permitted		0.965		0.448				0.811			0.953	
Satd. Flow (perm)	0	1797	0	671	1542	0	0	1118	928	0	2605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1				244			6
Link Speed (mph)		25			25			30				30
Link Distance (ft)		110			1242			1410				726
Travel Time (s)		3.0			33.9			32.0				16.5
Confl. Peds. (#/hr)	2		38	38		2	14		51	51		14
Confl. Bikes (#/hr)			6			2			4			5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	4%	4%	4%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	7	0
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	24	240	0	133	155	4	89	586	244	4	745	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	0	133	159	0	0	675	244	0	777	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.28	1.28	1.28	1.25	1.42	1.42	1.26	1.28	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Minimum Split (s)	22.5	22.5		22.5	22.5		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	41.5	41.5		41.5	41.5		78.5	78.5	78.5	78.5	78.5	78.5
Total Split (%)	34.6%	34.6%		34.6%	34.6%		65.4%	65.4%	65.4%	65.4%	65.4%	65.4%
Maximum Green (s)	36.0	36.0		36.0	36.0		73.5	73.5	73.5	73.5	73.5	73.5
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5		1.5	1.5		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0			-2.0	-2.0			-2.0
Total Lost Time (s)		3.5		3.5	3.5			3.0	3.0			3.0

Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)		38.0		38.0	38.0		75.5	75.5			75.5	
Actuated g/C Ratio		0.32		0.32	0.32		0.63	0.63			0.63	
v/c Ratio		0.46		0.63	0.33		0.96	0.36			0.47	
Control Delay		36.1		28.0	13.8		32.4	1.0			4.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		36.1		28.0	13.8		32.4	1.0			4.5	
LOS		D		C	B		C	A			A	
Approach Delay		36.1			20.3		24.0				4.5	
Approach LOS		D			C		C				A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	18.2
Intersection LOS:	B
Intersection Capacity Utilization:	103.6%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 34: Nebraska Ave NW & Van Ness St NW



Lanes, Volumes, Timings
35: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1254	7	18	672	1	6
Future Volume (vph)	1254	7	18	672	1	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	4%			-7%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999				0.882	
Flt Protected				0.999	0.994	
Satd. Flow (prot)	3234	0	0	3415	1524	0
Flt Permitted				0.999	0.994	
Satd. Flow (perm)	3234	0	0	3415	1524	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	222			628	141	
Travel Time (s)	5.0			14.3	3.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1393	8	20	747	1	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1401	0	0	767	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.9%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

36:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	40	9	123	92	1
Future Volume (vph)	18	40	9	123	92	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.999		
Flt Protected	0.985			0.997		
Satd. Flow (prot)	1553	0	0	1733	1737	0
Flt Permitted	0.985			0.997		
Satd. Flow (perm)	1553	0	0	1733	1737	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	426			119	97	
Travel Time (s)	9.7			2.7	2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	44	10	137	102	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	147	103	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	23.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

37:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	6	1	142	102	21
Future Volume (vph)	37	6	1	142	102	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980				0.977	
Flt Protected	0.959					
Satd. Flow (prot)	1634	0	0	1739	1699	0
Flt Permitted	0.959					
Satd. Flow (perm)	1634	0	0	1739	1699	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	419			92	435	
Travel Time (s)	9.5			2.1	9.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	7	1	158	113	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	159	136	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	18.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
38: Warren St & 48th St

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	6	36	77	10	87
Future Volume (vph)	14	6	36	77	10	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959		0.908			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1611	0	1579	0	0	1730
Flt Permitted	0.966					0.995
Satd. Flow (perm)	1611	0	1579	0	0	1730
Link Speed (mph)	30		30			30
Link Distance (ft)	1057		526			383
Travel Time (s)	24.0		12.0			8.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	7	40	86	11	97
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	126	0	0	108
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
39: 48th St & Yuma St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	79	47	11	68	6	7	17	9	8	37	4
Future Volume (vph)	1	79	47	11	68	6	7	17	9	8	37	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.990			0.964			0.990	
Flt Protected					0.994			0.989			0.992	
Satd. Flow (prot)	0	1652	0	0	1711	0	0	1658	0	0	1707	0
Flt Permitted					0.994			0.989			0.992	
Satd. Flow (perm)	0	1652	0	0	1711	0	0	1658	0	0	1707	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			1099			383			277	
Travel Time (s)		5.9			25.0			8.7			6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	88	52	12	76	7	8	19	10	9	41	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	0	0	95	0	0	37	0	0	54	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.7%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	102	117	18	27	113	32	12	182	16	21	109	46
Future Volume (vph)	102	117	18	27	113	32	12	182	16	21	109	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	9	9	9	9	9	9
Grade (%)		9%			-9%			-5%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.83			0.86			0.97			0.91	
Frt		0.990			0.975			0.990			0.965	
Flt Protected		0.979			0.992			0.997			0.994	
Satd. Flow (prot)	0	1228	0	0	1250	0	0	1351	0	0	1233	0
Flt Permitted		0.814			0.928			0.982			0.954	
Satd. Flow (perm)	0	883	0	0	1121	0	0	1319	0	0	1157	0
Right Turn on Red			No			No			Yes			No
Satd. Flow (RTOR)								9				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		202			670			299			437	
Travel Time (s)		5.5			18.3			8.2			11.9	
Confl. Peds. (#/hr)	186		240	240		186	96		129	129		96
Confl. Bikes (#/hr)			3			2			1			2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	113	130	20	30	126	36	13	202	18	23	121	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	263	0	0	192	0	0	233	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.38	1.57	1.38	1.24	1.41	1.24	1.27	1.44	1.27	1.30	1.47	1.30
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	15.5	15.5		15.5	15.5		17.5	17.5		17.5	17.5	
Total Split (s)	25.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		48.3%	48.3%		48.3%	48.3%	
Maximum Green (s)	19.5	19.5		19.5	19.5		23.5	23.5		23.5	23.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0		8.0	8.0	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	5%	5%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.5			21.5			25.5			25.5	
Actuated g/C Ratio		0.36			0.36			0.42			0.42	
v/c Ratio		0.83			0.48			0.41			0.40	
Control Delay		43.6			10.8			14.3			15.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		43.6			10.8			14.3			15.0	
LOS		D			B			B			B	
Approach Delay		43.6			10.8			14.3			15.0	
Approach LOS		D			B			B			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	45 (75%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	22.4
Intersection LOS:	C
Intersection Capacity Utilization:	55.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 40: 42nd St & Albermarle St



Lane Group	Ø1	Ø3
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings
41: Macomb St & Loughboro St

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1134	38	1	921	29	4
Future Volume (vph)	1134	38	1	921	29	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996			0.985		
Flt Protected				0.957		
Satd. Flow (prot)	1732	0	0	1739	1639	0
Flt Permitted				0.957		
Satd. Flow (perm)	1732	0	0	1739	1639	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	299			1077	291	
Travel Time (s)	6.8			24.5	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1260	42	1	1023	32	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1302	0	0	1024	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

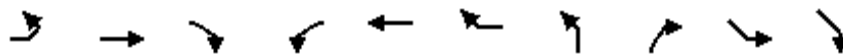
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.0% ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings

42: Chainbridge Rd & Loughboro Rd/Nebraska Ave NW & Indian Ln

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations		↕			↕		↕		↕	
Traffic Volume (vph)	18	928	4	41	712	65	5	36	0	0
Future Volume (vph)	18	928	4	41	712	65	5	36	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.989		0.883			
Flt Protected		0.999			0.997		0.994			
Satd. Flow (prot)	0	1735	0	0	1714	0	1526	0	1739	0
Flt Permitted		0.999			0.997		0.994			
Satd. Flow (perm)	0	1735	0	0	1714	0	1526	0	1739	0
Link Speed (mph)		30			25		30		30	
Link Distance (ft)		1158			701		287		1445	
Travel Time (s)		26.3			19.1		6.5		32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1031	4	46	791	72	6	40	0	0
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	1055	0	0	909	0	46	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		0			0		10		10	
Link Offset(ft)		0			0		0		0	
Crosswalk Width(ft)		16			16		16		16	
Two way Left Turn Lane										
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15	9	15	9
Sign Control		Free			Free		Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.4%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑						↑↑	
Traffic Volume (vph)	0	962	0	0	1349	287	0	0	0	243	712	29
Future Volume (vph)	0	962	0	0	1349	287	0	0	0	243	712	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	11
Grade (%)		2%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor					0.99						1.00	
Frt					0.974						0.996	
Flt Protected											0.988	
Satd. Flow (prot)	0	2915	0	0	4145	0	0	0	0	0	2964	0
Flt Permitted											0.988	
Satd. Flow (perm)	0	2915	0	0	4145	0	0	0	0	0	2957	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			554			110			97	
Travel Time (s)		4.3			12.6			2.5			2.2	
Confl. Peds. (#/hr)	103		171	171		103				12		93
Confl. Bikes (#/hr)			9			8						3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	982	0	0	1377	293	0	0	0	248	727	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	982	0	0	1670	0	0	0	0	0	1005	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		15 6 1 2			15 6 1						3 4	
Permitted Phases										3 4		
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		70.0			65.0						36.0	
Actuated g/C Ratio		0.58			0.54						0.30	
v/c Ratio		0.58			0.74						1.13	

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	34.0	5.0	43.0	5.0	9.0	19.0	82.0	10.0	14.0
Total Split (%)	28%	4%	36%	4%	8%	16%	68%	8%	12%
Maximum Green (s)	27.0	1.0	34.0	1.0	6.0	13.0	73.0	5.0	10.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									
v/c Ratio									

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Control Delay		9.5			4.2						97.4	
Queue Delay		0.7			0.2						0.0	
Total Delay		10.2			4.4						97.4	
LOS		B			A						F	
Approach Delay		10.2			4.4						97.4	
Approach LOS		B			A						F	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	109 (91%), Referenced to phase 1:NBSB and 11:., Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.13
Intersection Signal Delay:	31.5
Intersection LOS:	C
Intersection Capacity Utilization	133.1%
ICU Level of Service	H
Analysis Period (min)	15













Splits and Phases: 191: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑			↑↑				
Traffic Volume (vph)	0	734	136	0	1592	0	228	498	69	0	0	0
Future Volume (vph)	0	734	136	0	1592	0	228	498	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.99				
Frt		0.977						0.987				
Flt Protected								0.986				
Satd. Flow (prot)	0	2593	0	0	4040	0	0	2943	0	0	0	0
Flt Permitted								0.986				
Satd. Flow (perm)	0	2593	0	0	4040	0	0	2929	0	0	0	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			190			109			111	
Travel Time (s)		8.6			4.3			2.5			2.5	
Confl. Peds. (#/hr)	117		168	168		117	22		42			
Confl. Bikes (#/hr)			9			6			2			
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	34	0	0	0	0	0	0	0
Parking (#/hr)		0	0									
Adj. Flow (vph)	0	741	137	0	1608	0	230	503	70	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	878	0	0	1608	0	0	803	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.34	1.26	1.23	1.31	1.23	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		15 6 1			15 6 1 2			3 4				
Permitted Phases							3 4					
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		65.0			70.0			36.0				

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Bus Blockages (#/hr)									
Parking (#/hr)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	34.0	5.0	43.0	5.0	9.0	19.0	82.0	10.0	14.0
Total Split (%)	28%	4%	36%	4%	8%	16%	68%	8%	12%
Maximum Green (s)	27.0	1.0	34.0	1.0	6.0	13.0	73.0	5.0	10.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020



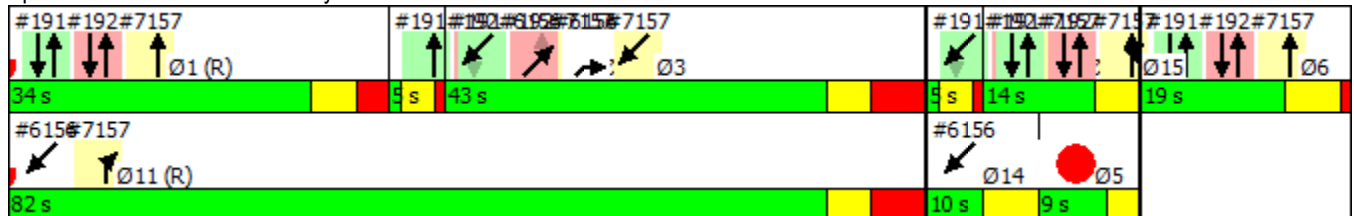
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.54			0.58			0.30				
v/c Ratio		0.63			0.68			0.91				
Control Delay		21.7			5.8			33.3				
Queue Delay		0.3			0.6			17.6				
Total Delay		21.9			6.4			50.9				
LOS		C			A			D				
Approach Delay		21.9			6.4			50.9				
Approach LOS		C			A			D				

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 109 (91%), Referenced to phase 1:NBSB and 11:, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 21.4
 Intersection Capacity Utilization 133.1%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service H

Splits and Phases: 192: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Actuated g/C Ratio									
v/c Ratio									
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Lane Configurations											
Traffic Volume (vph)	69	729	0	1181	0	0					
Future Volume (vph)	69	729	0	1181	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	11	11	10	10	12	12					
Lane Util. Factor	1.00	0.88	1.00	0.88	1.00	1.00					
Frt		0.850		0.850							
Flt Protected	0.950										
Satd. Flow (prot)	1540	2424	0	2341	0	0					
Flt Permitted	0.950										
Satd. Flow (perm)	1540	2424	0	2341	0	0					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		30		25						
Link Distance (ft)	193		471		250						
Travel Time (s)	5.3		10.7		6.8						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	77	810	0	1312	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	77	810	0	1312	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	11		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.19	1.19	1.25	1.25	1.14	1.14					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom		Prot							
Protected Phases	12	4 5		4			2	5	6	8	14
Permitted Phases											
Minimum Split (s)	16.0			29.0			17.0	10.0	11.0	20.0	13.0
Total Split (s)	58.0			62.0			58.0	47.0	11.0	62.0	62.0
Total Split (%)	48.3%			51.7%			48%	39%	9%	52%	52%
Maximum Green (s)	52.0			52.0			52.0	42.0	7.0	52.0	56.0
Yellow Time (s)	4.0			4.0			4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0			6.0			2.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)	-2.0			-2.0							
Total Lost Time (s)	4.0			8.0							
Lead/Lag								Lead	Lag		
Lead-Lag Optimize?											
Walk Time (s)				7.0			7.0			4.0	
Flash Dont Walk (s)				12.0			4.0			6.0	
Pedestrian Calls (#/hr)				0			0			0	
Act Effct Green (s)	54.0	101.0		54.0							
Actuated g/C Ratio	0.45	0.84		0.45							
v/c Ratio	0.11	0.40		1.25							
Control Delay	28.8	1.0		141.7							
Queue Delay	5.0	0.4		0.0							

Lanes, Volumes, Timings
 401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Total Delay	33.7	1.4		141.7							
LOS	C	A		F							
Approach Delay	4.2		141.7								
Approach LOS	A		F								

Intersection Summary

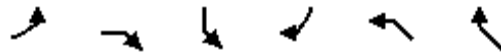
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	100
Control Type:	Pretimed
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	86.3
Intersection LOS:	F
Intersection Capacity Utilization	52.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 401: Ward Cir NW & Massachusetts Ave NW

#403#404 Ø2 (R) 58 s	#401 Ø4 62 s
#401#402 Ø5 47 s	#402 Ø8 62 s
#401#402 Ø12 58 s	#403#404 Ø14 62 s

Lanes, Volumes, Timings
402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Lane Configurations											
Traffic Volume (vph)	101	1241	0	0	0	801					
Future Volume (vph)	101	1241	0	0	0	801					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	10	10	9	9	10	10					
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	0.88					
Fr't		0.850				0.850					
Flt Protected	0.950										
Satd. Flow (prot)	1486	2341	0	0	0	2341					
Flt Permitted	0.950										
Satd. Flow (perm)	1486	2341	0	0	0	2341					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		25		25						
Link Distance (ft)	219		260		345						
Travel Time (s)	6.0		7.1		9.4						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	112	1379	0	0	0	890					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	112	1379	0	0	0	890					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	10		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.25	1.25	1.30	1.30	1.25	1.25					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom				Prot					
Protected Phases	12	8 5				8	2	4	5	6	14
Permitted Phases											
Minimum Split (s)	16.0					20.0	17.0	29.0	10.0	11.0	13.0
Total Split (s)	58.0					62.0	58.0	62.0	47.0	11.0	62.0
Total Split (%)	48.3%					51.7%	48%	52%	39%	9%	52%
Maximum Green (s)	52.0					52.0	52.0	52.0	42.0	7.0	56.0
Yellow Time (s)	4.0					4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0					6.0	2.0	6.0	1.0	0.0	2.0
Lost Time Adjust (s)	-2.0					-2.0					
Total Lost Time (s)	4.0					8.0					
Lead/Lag									Lead	Lag	
Lead-Lag Optimize?											
Walk Time (s)						4.0	7.0	7.0			
Flash Dont Walk (s)						6.0	4.0	12.0			
Pedestrian Calls (#/hr)						0	0	0			
Act Effct Green (s)	54.0	101.0				54.0					
Actuated g/C Ratio	0.45	0.84				0.45					
v/c Ratio	0.17	0.70				0.85					
Control Delay	26.3	3.8				38.3					
Queue Delay	5.5	5.6				0.0					

Lanes, Volumes, Timings
 402: Massachusetts Ave NW & Ward Cir NW

08/31/2020

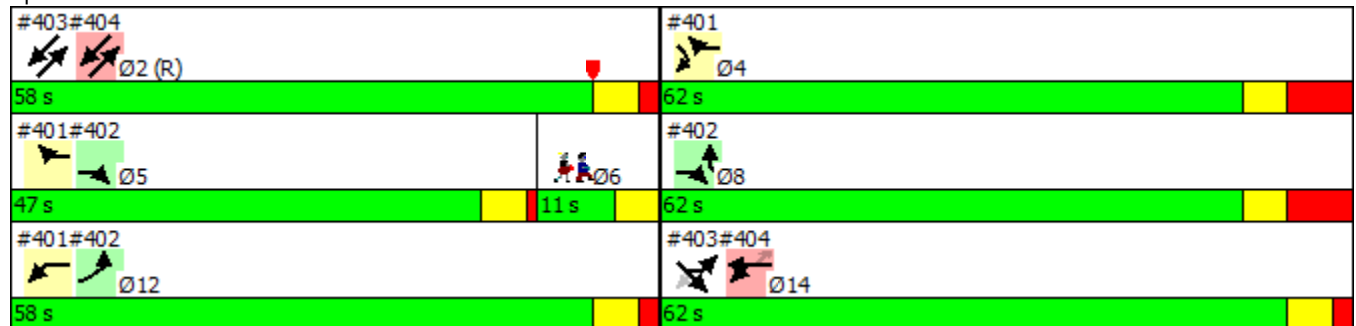


Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Total Delay	31.8	9.3				38.3					
LOS	C	A				D					
Approach Delay	11.0				38.3						
Approach LOS	B				D						

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	100
Control Type:	Pretimed
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	21.2
Intersection LOS:	C
Intersection Capacity Utilization	54.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 402: Massachusetts Ave NW & Ward Cir NW



Lanes, Volumes, Timings
403: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑↑	↑					↑↑			↑↑	
Traffic Volume (vph)	43	1076	155	0	0	0	0	950	266	0	995	0
Future Volume (vph)	43	1076	155	0	0	0	0	950	266	0	995	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	12	12	12	9	9	9	10	10	10
Grade (%)		1%			0%			-1%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.92					1.00				
Frt			0.850					0.967				
Flt Protected		0.998										
Satd. Flow (prot)	0	4051	1264	0	0	0	0	2751	0	0	2888	0
Flt Permitted		0.998										
Satd. Flow (perm)	0	4051	1167	0	0	0	0	2751	0	0	2888	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		250			219			372			300	
Travel Time (s)		6.8			6.0			8.5			8.2	
Confl. Peds. (#/hr)			99									
Confl. Bikes (#/hr)			10						1			3
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	43	1087	157	0	0	0	0	960	269	0	1005	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1130	157	0	0	0	0	1229	0	0	1005	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.31	1.31	1.14	1.14	1.14	1.30	1.30	1.30	1.25	1.25	1.25
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA	Perm					NA			NA	
Protected Phases	14	14						2			2	
Permitted Phases			14									
Minimum Split (s)	13.0	13.0	13.0					17.0			17.0	
Total Split (s)	62.0	62.0	62.0					58.0			58.0	
Total Split (%)	51.7%	51.7%	51.7%					48.3%			48.3%	
Maximum Green (s)	56.0	56.0	56.0					52.0			52.0	
Yellow Time (s)	4.0	4.0	4.0					4.0			4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0			2.0	
Lost Time Adjust (s)		-2.0	-2.0					-2.0			-2.0	
Total Lost Time (s)		4.0	4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	62.0	47.0	11.0	62.0	58.0
Total Split (%)	52%	39%	9%	52%	48%
Maximum Green (s)	52.0	42.0	7.0	52.0	52.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?					

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

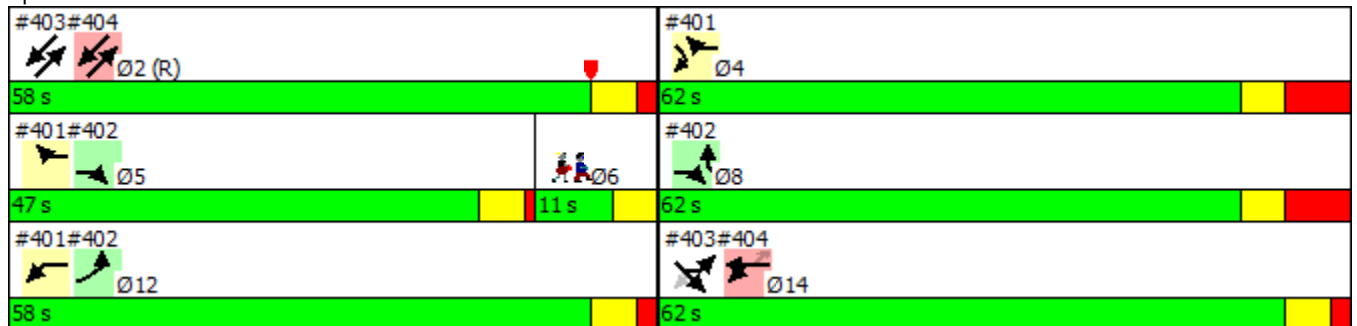


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		58.0	58.0					54.0			54.0	
Actuated g/C Ratio		0.48	0.48					0.45			0.45	
v/c Ratio		0.58	0.28					0.99			0.77	
Control Delay		5.8	5.6					42.7			12.8	
Queue Delay		5.0	2.2					9.3			1.6	
Total Delay		10.8	7.8					52.0			14.4	
LOS		B	A					D			B	
Approach Delay		10.4						52.0			14.4	
Approach LOS		B						D			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	100
Control Type:	Pretimed
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	26.1
Intersection LOS:	C
Intersection Capacity Utilization:	69.4%
ICU Level of Service:	C
Analysis Period (min):	15

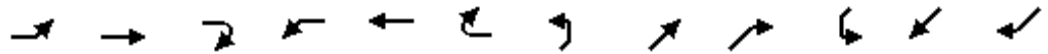
Splits and Phases: 403: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑	↑		↑↑			↑↑	
Traffic Volume (vph)	0	0	0	171	680	99	0	1005	0	0	802	118
Future Volume (vph)	0	0	0	171	680	99	0	1005	0	0	802	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	10	10	10	10	10	10
Grade (%)		0%			2%			0%				-1%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor					1.00	0.96					1.00	
Frt						0.850					0.981	
Flt Protected					0.990							
Satd. Flow (prot)	0	0	0	0	3998	1257	0	2916	0	0	2779	0
Flt Permitted					0.990							
Satd. Flow (perm)	0	0	0	0	3997	1205	0	2916	0	0	2779	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25				30
Link Distance (ft)		193			260			300				737
Travel Time (s)		5.3			7.1			8.2				16.8
Confl. Peds. (#/hr)				1		47	1		1	1		1
Confl. Bikes (#/hr)						2			1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	11	11
Adj. Flow (vph)	0	0	0	180	716	104	0	1058	0	0	844	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	896	104	0	1058	0	0	968	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.32	1.32	1.32	1.25	1.25	1.25	1.24	1.27	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Split	NA	Perm		NA			NA	
Protected Phases				14	14			2			2	
Permitted Phases						14						
Minimum Split (s)				13.0	13.0	13.0		17.0			17.0	
Total Split (s)				62.0	62.0	62.0		58.0			58.0	
Total Split (%)				51.7%	51.7%	51.7%		48.3%			48.3%	
Maximum Green (s)				56.0	56.0	56.0		52.0			52.0	
Yellow Time (s)				4.0	4.0	4.0		4.0			4.0	
All-Red Time (s)				2.0	2.0	2.0		2.0			2.0	
Lost Time Adjust (s)					-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)					4.0	4.0		4.0			4.0	
Lead/Lag												

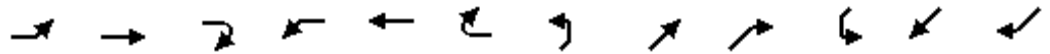
Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Bus Blockages (#/hr)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	62.0	47.0	11.0	62.0	58.0
Total Split (%)	52%	39%	9%	52%	48%
Maximum Green (s)	52.0	42.0	7.0	52.0	52.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		

Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

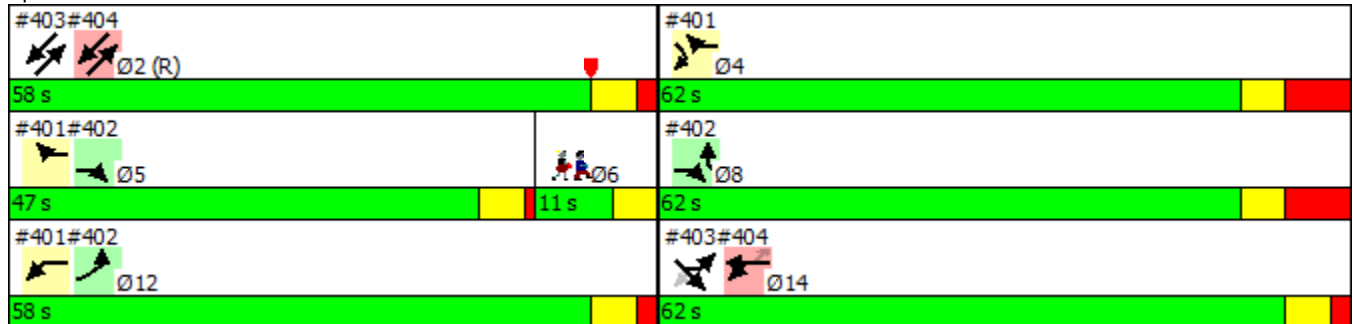


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)					58.0	58.0		54.0			54.0	
Actuated g/C Ratio					0.48	0.48		0.45			0.45	
v/c Ratio					0.46	0.18		0.81			0.77	
Control Delay					7.3	7.2		11.8			26.1	
Queue Delay					0.6	0.0		5.4			0.2	
Total Delay					7.9	7.2		17.2			26.3	
LOS					A	A		B			C	
Approach Delay					7.8			17.2			26.3	
Approach LOS					A			B			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	100
Control Type:	Pretimed
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	17.0
Intersection LOS:	B
Intersection Capacity Utilization:	69.4%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 404: Nebraska Ave NW & Ward Cir NW



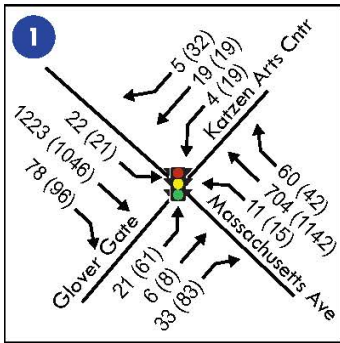
Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lead-Lag Optimize?					
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Appendix G Background Traffic Volumes and Analysis

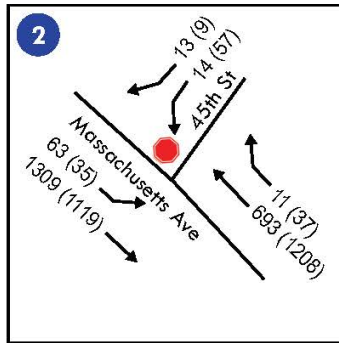
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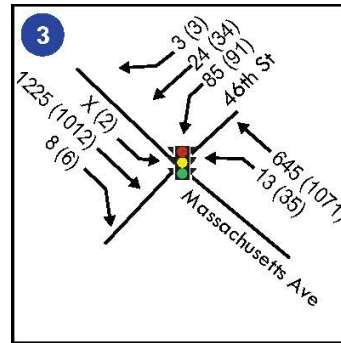
Figure 6-1 Background Intersection Peak Hour Traffic Volumes



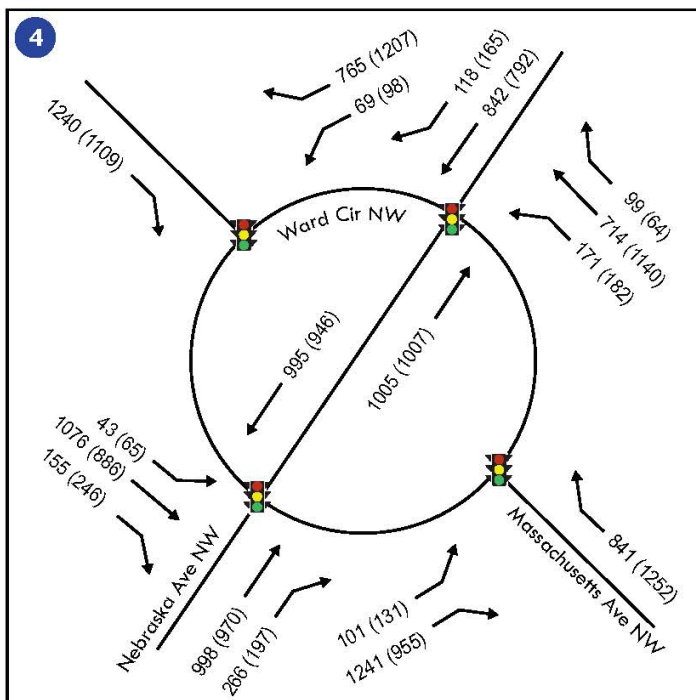
1. Massachusetts Ave. at Glover Gate



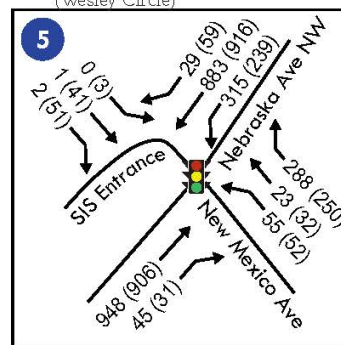
2. Massachusetts Ave. at 45th St.



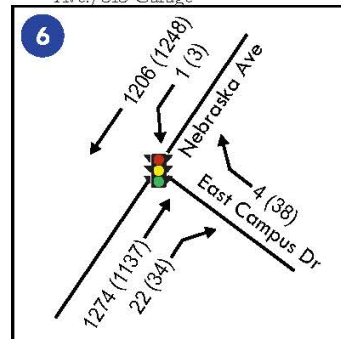
3. Massachusetts Ave. at 46th St. (Wesley Circle)



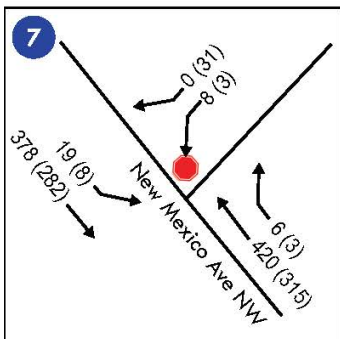
4. Massachusetts Ave. at Nebraska Ave. (Ward Circle)



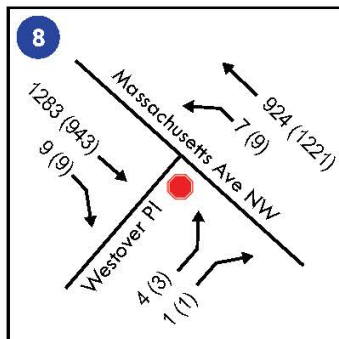
5. Nebraska Ave. at New Mexico Ave./SIS Garage



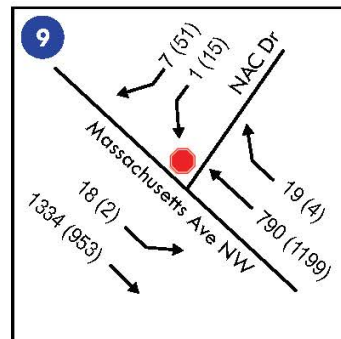
6. Nebraska Ave. at East Campus Dr.



7. New Mexico Ave. at East Campus Dr.

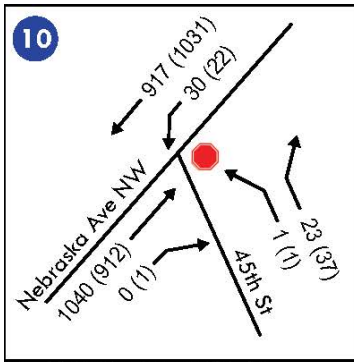


8. Massachusetts Ave. at Westover Pl.

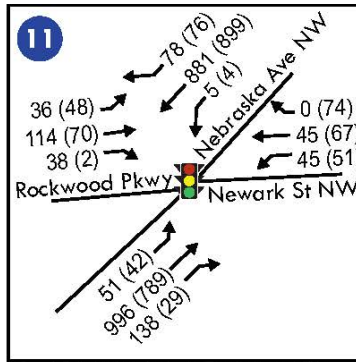


9. Massachusetts Ave. at NAC Dr.

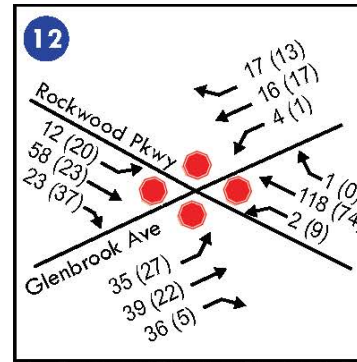
Figure 6-2 Background Intersection Peak Hour Traffic Volumes



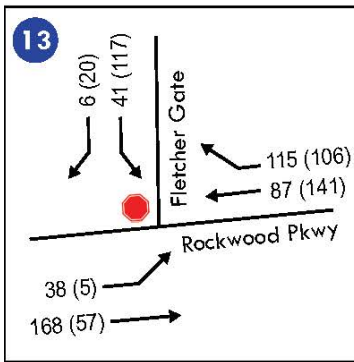
1. Nebraska Ave. at 45th St.



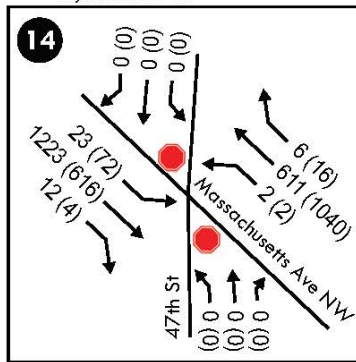
2. Nebraska Ave. at Rockwood Pkwy/Newark St.



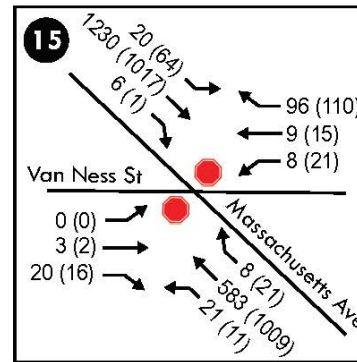
3. Rockwood Pkwy at Glenbrook Rd.



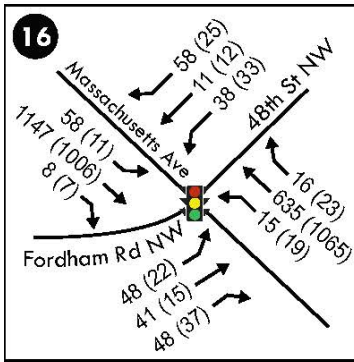
4. Rockwood Pkwy at Fletcher Gate



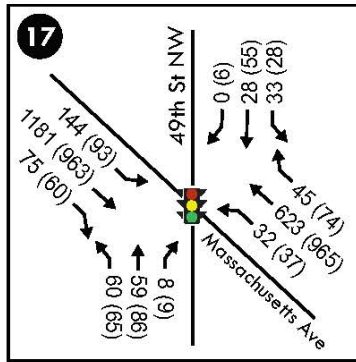
5. Massachusetts Ave. at 47th St.



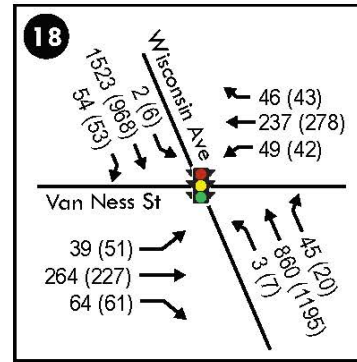
6. Massachusetts Ave. at Van Ness St.



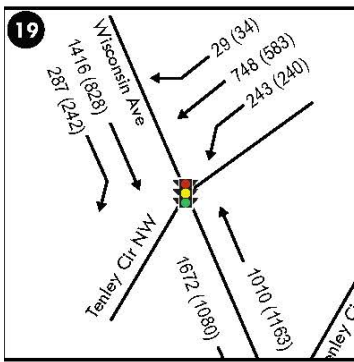
7. Massachusetts Ave. at 48th St.



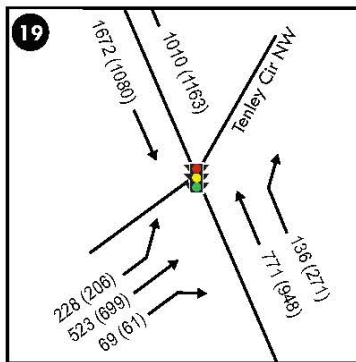
8. Massachusetts Ave. at 49th St.



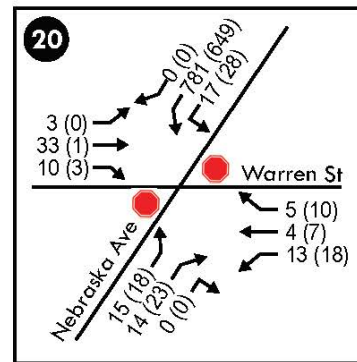
9. Wisconsin Ave. at Van Ness St.



10. (A) Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North

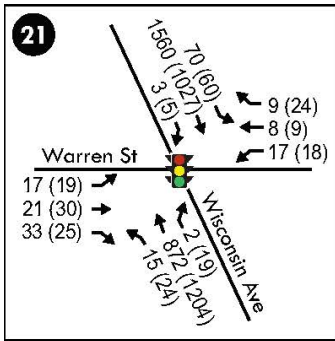


19. (B) Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South

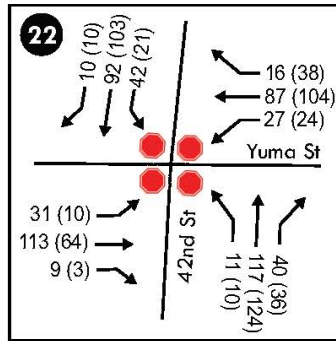


11. Nebraska Ave. at Warren St.

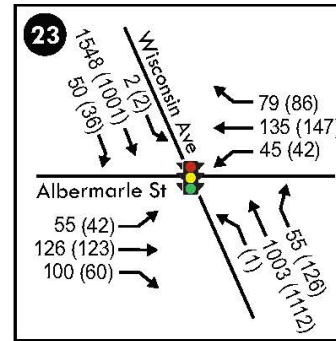
Figure 6-3 Background Intersection Peak Hour Traffic Volumes



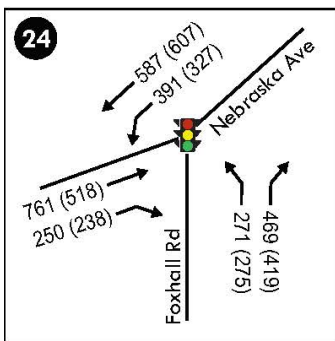
1. Wisconsin Ave. at Warren St.



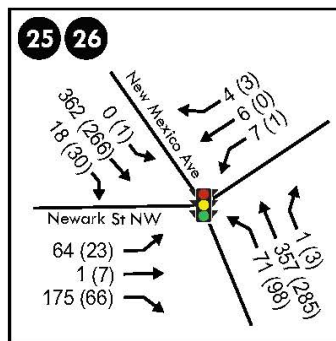
2. Yuma St. at 42nd St.



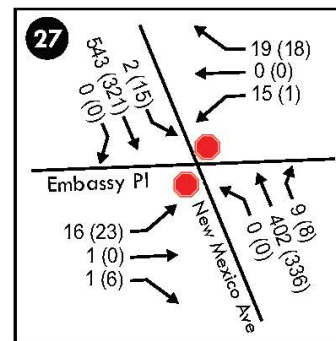
3. Wisconsin Ave. at Albermarle St.



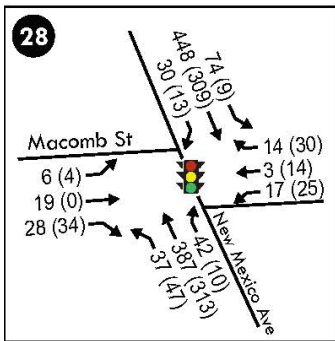
4. Nebraska Ave. at Foxhall Rd.



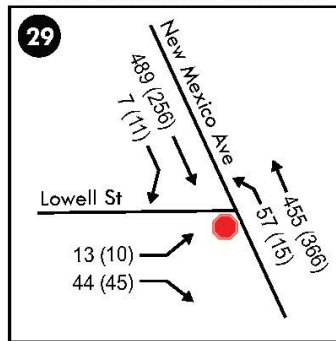
5. New Mexico Ave. at Newark St.
6. New Mexico Ave. at Westover Pl.



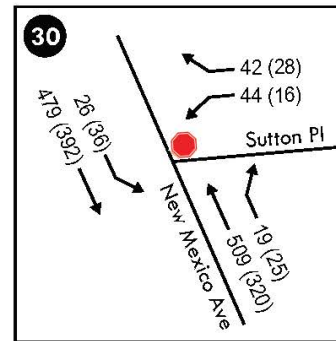
7. New Mexico Ave. at 44th St.



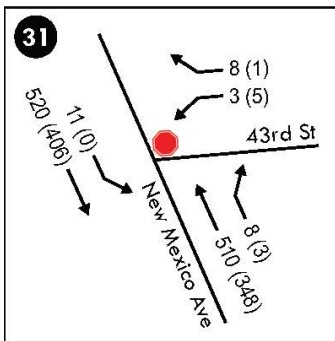
8. New Mexico Ave. at Macomb St.



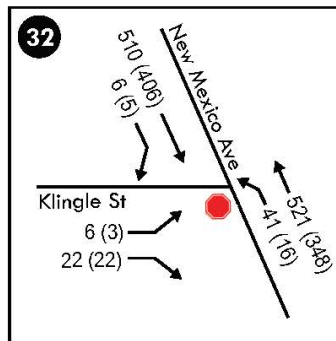
9. New Mexico Ave. at Lowell St.



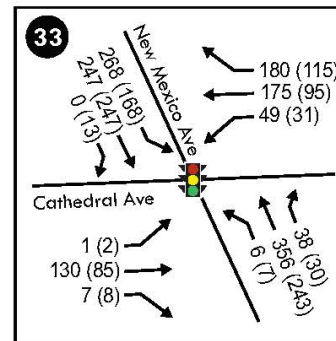
10. New Mexico Ave. at Sutton Pl.



11. New Mexico Ave. at 43rd St.

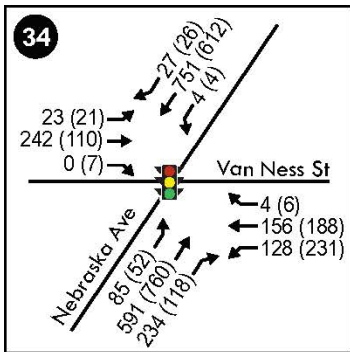


12. New Mexico Ave. at Klinge St.

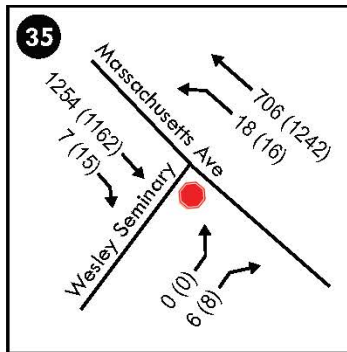


13. New Mexico Ave. at Cathedral Ave.

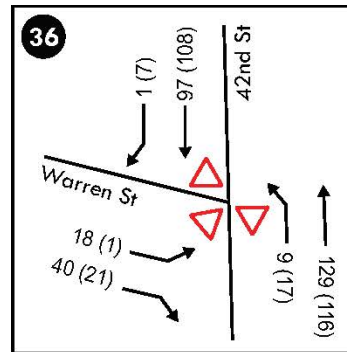
Figure 6-4 Background Intersection Peak Hour Traffic Volumes



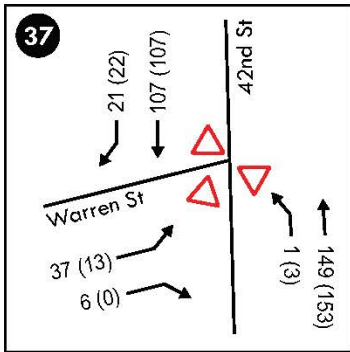
1. Nebraska Ave. at Van Ness St.



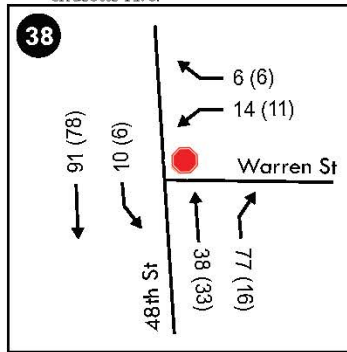
2. Wesley Seminary Drive at Massachusetts Ave.



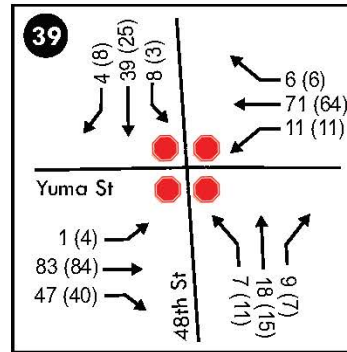
3. Warren St at 42nd St - SB



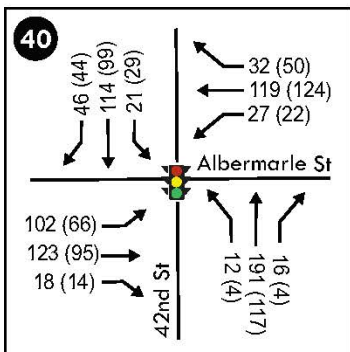
4. Warren St at 42nd St - NB



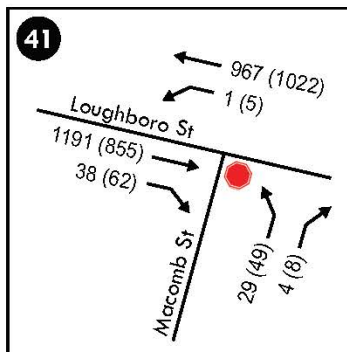
5. Warren St at 48th St.



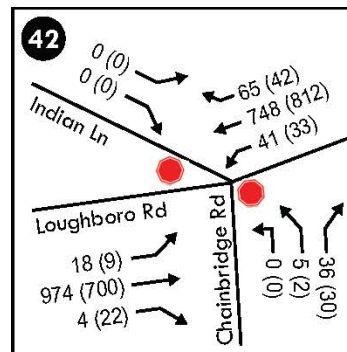
6. Yuma St at 48th St.



7. 42nd St. at Albermarle St.



8. Nebraska Ave. at Maccomb St.



9. Loughboro Rd./Nebraska Ave. at Indian Ln./Chainbridge Rd.

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Table 6-1 Background Conditions Operational Analysis

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Massachusetts Ave. at Campus Drive	B	12.6	0.62	B	24.4	1
Massachusetts Ave. at 45 th St.	A	2.3	0.33	B	17.3	1.8
Massachusetts Ave. at 46 th St. (Wesley Circle)	A	6.1	0.62	A	9.6	0.62
Massachusetts Ave. at Nebraska Ave. (Ward Circle) West	C	30.4	1.31	D	43.3	1.25
Massachusetts Ave. at Nebraska Ave. (Ward Circle) East	B	19.8	1.31	C	29.1	1.25
Massachusetts Ave. at Nebraska Ave. (Ward Circle) North	F	102.3	1.31	D	46.2	1.25
Massachusetts Ave. at Nebraska Ave. (Ward Circle) South	C	23.1	1.31	F	83.1	1.25
Nebraska Ave. at New Mexico Ave./SIS Garage	D	36.5	0.93	C	26.9	0.94
Nebraska Ave. at East Campus Dr.	A	0.9	0.43	A	2.2	0.43
New Mexico Ave. at East Campus Dr.	A	0.4	0.28	A	0.7	0.21
Massachusetts Ave. at Westover Pl.	A	0.2	0.56	A	0.2	0.53
Massachusetts Ave. at NAC Dr.	A	0.2	0.58	A	1	0.52
Nebraska Ave. at 45 th St.	A	0.7	0.07	A	0.6	0.09
Nebraska Ave. at Rockwood Parkway/Newark St.	A	9.6	0.71	B	12.1	0.59
Rockwood Parkway at Glenbrook Rd.	A	8.1	0.16	A	7.6	0.11
Rockwood Parkway at Fletcher Gate	A	2	0.13	A	3.6	0.21
Massachusetts Ave. at 47 th St.	A	0.3	0.41	A	0.8	0.35
Massachusetts Ave. at Van Ness St.	A	1.7	0.41	A	3.3	0.61
Massachusetts Ave. at 48 th St.	A	9.3	0.7	B	10.9	0.59
Massachusetts Ave. at 49 th St.	B	18	0.85	B	11.9	0.74
Wisconsin Ave. at Van Ness St.	C	23	0.87	C	29	0.88
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North	D	36	1.17	C	20.1	1.01
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South	C	24	1.17	D	42.9	1.01
Nebraska Ave. at Warren St.	A	1.6	0.26	A	1.2	0.21

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Wisconsin Ave. at Warren St.	B	14.5	0.89	A	9	0.77
Yuma St. at 42 nd St.	A	9.5	0.25	A	9.1	0.25
Wisconsin Ave. at Albemarle St.	B	19	0.87	C	25.2	0.98
Nebraska Ave. at Foxhall Rd.	D	40.9	0.98	D	39	1.02
New Mexico Ave. at Newark St.	C	23.8	0.93	B	11.6	0.53
New Mexico Ave. at Westover Pl.	C	23.8	0.93	B	11.6	0.53
New Mexico Ave. at 44 th St.	A	0.8	0.09	A	1.1	0.08
New Mexico Ave. at Macomb St.	B	13.2	0.65	B	13.7	0.5
New Mexico Ave. at Lowell St.	A	1.7	0.32	A	1.1	0.17
New Mexico Ave. at Sutton Pl.	A	2.3	0.35	A	1.3	0.23
New Mexico Ave. at 43 th St.	A	0.3	0.34	A	0.1	0.23
New Mexico Ave. at Klinge St.	A	1	0.34	A	0.6	0.27
New Mexico Ave. at Cathedral Ave.	D	40.5	1.04	C	21.6	0.7
Nebraska Ave. at Van Ness St.	c	22	1.01	D	35.8	1.09
Wesley Seminary Drive at Massachusetts Ave.	A	0.3	0	A	0.6	0.03
Warren St at 42 nd St – SB	A	4.3	0.14	A	4.3	0.13
Warren St at 42 nd St – NB	A	4.5	0.16	A	4.5	0.16
Warren St at 48 th St.	A	1.2	0.08	A	1.4	0.03
Yuma St. at 48 th St.	A	7.8	0.16	A	7.7	0.16
42 nd St. at Albemarle St.	C	23.1	0.85	B	14.8	0.52
Nebraska Ave. at Macomb St.	A	4	0.92	A	6.9	1.03
Loughboro Rd./Nebraska Ave. at Indian Ln./Chain Bridge Rd.	A	3	0.45	A	1.3	0.14

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Table 6-2 Background Conditions Queuing Analysis

Intersection	AM Peak Hour - 95%-Queue Length (Storage Length)				PM Peak Hour – 95% Queue Length (Storage Length)			
	NB	SB	EB	WB	NB	SB	EB	WB
Massachusetts Ave. at Campus Drive	107 (471)	558 (628)	48 (221)	45 (361)	1295 (471)	194 (628)	98 (221)	75 (361)
Massachusetts Ave. at 45 th St.	0 (222)	0.3 (246)	-	1.3 (156)	0 (222)	0 (246)	-	8 (156)
Massachusetts Ave. at 46 th St. (Wesley Circle)	60 (229)	80 (586)	0 (148)	98 (119)	108 (229)	262 (586)	0 (148)	168 (119)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) West	-	27 (250)	690 (372)	158 (300)	-	35 (250)	704 (372)	241 (300)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) East	50 (260)	-	99 (300)	495 (737)	50 (260)	-	102 (300)	469 (737)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) North	96 (193)	946 (471)	-	-	116 (193)	760 (471)	-	-
Massachusetts Ave. at Nebraska Ave. (Ward Circle) South	514 (345)		116 (219)	-	922 (345)		150 (219)	-
Nebraska Ave. at New Mexico Ave./SIS Garage	193 (330)	9 (349)	352 (349)	932 (396)	171 (330)	98 (349)	317 (349)	526 (396)
Nebraska Ave. at East Campus Dr.	84 (396)	61 (372)	-	0 (208)	237 (396)	90 (372)	-	0 (208)
New Mexico Ave. at East Campus Dr.	-	2 (221)	1 (330)	0 (250)	-	4 (221)	1 (330)	0 (250)
Massachusetts Ave. at Westover Pl.	0 (565)	1 (156)	6 (277)	-	1 (565)	0 (156)	3 (277)	-
Massachusetts Ave. at NAC Dr.	0 (156)	2 (345)	-	2 (342)	0 (156)	0 (345)	-	39 (342)
Nebraska Ave. at 45 th St.	0 (220)	-	0 (349)	0 (291)	0 (220)	-	0 (349)	0 (291)
Nebraska Ave. at Rockwood Parkway/Newark St.	207 (717)	38 (291)	209 (270)	111 (279)	93 (717)	95 (291)	153 (270)	230 (279)
Rockwood Parkway at Glenbrook Rd.	1 (1445)	1 (322)	1 (425)	1 (322)	0 (1445)	0 (322)	0 (425)	0 (322)
Rockwood Parkway at Fletcher Gate	-	7 (285)	2 (155)	0 (270)	-	20 (285)	0 (155)	0 (270)
Massachusetts Ave. at 47 th St.	0 (313)	0 (181)	2 (269)	0 (586)	0 (313)	0 (181)	10 (269)	0 (586)
Massachusetts Ave. at Van Ness St.	3 (269)	2 (663)	6 (452)	35 (210)	1 (269)	9 (663)	4 (452)	92 (210)

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Massachusetts Ave. at 48 th St.	212 (663)	31 (758)	75 (433)	56 (204)	426 (663)	87 (758)	47 (433)	55 (204)
Massachusetts Ave. at 49 th St.	88 (565)	54 (328)	133 (245)	374 (758)	122 (565)	82 (328)	217 (245)	34 (759)
Wisconsin Ave. at Van Ness St.	366 (367)	90 (319)	420 (1242)	326 (419)	554 (367)	60 (319)	303 (1242)	379 (419)
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North	142 (190)	48 (554)	0 (110)	645 (97)	102 (190)	73 (554)	0 (110)	470 (97)
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South	160 (377)	80 (190)	438 (109)	0 (111)	528 (377)	92 (190)	560 (109)	0 (111)
Nebraska Ave. at Warren St.	2 (726)	1 (392)	13 (316)	4 (282)	2 (726)	1 (392)	1 (316)	6 (282)
Wisconsin Ave. at Warren St.	299 (330)	19 (116)	73 (299)	46 (129)	211 (330)	28 (116)	81 (299)	55 (129)
Yuma St. at 42 nd St.	1 (435)	1 (295)	1 (457)	1 (864)	1 (435)	1 (295)	1 (457)	1 (864)
Wisconsin Ave. at Albemarle St.	212 (554)	54 (196)	177 (670)	230 (654)	118 (554)	146 (196)	168 (670)	234 (654)
Nebraska Ave. at Foxhall Rd.	384 (2089)	-	526 (701)	520 (717)	423 (2089)	-	452 (701)	284 (717)
New Mexico Ave. at Newark St.	66 (252)	171 (250)	310 (284)	23 (247)	77 (252)	118 (250)	100 (284)	0 (247)
New Mexico Ave. at Westover Pl.	66 (252)	171 (250)	310 (284)	23 (247)	77 (252)	118 (250)	100 (284)	0 (247)
New Mexico Ave. at 44 th St.	0 (186)	0 (252)	5 (312)	7 (150)	0 (186)	1 (252)	6 (312)	2 (150)
New Mexico Ave. at Macomb St.	177 (277)	228 (186)	65 (613)	46 (596)	248 (277)	114 (186)	53 (613)	85 (596)
New Mexico Ave. at Lowell St.	5 (94)	0 (277)	14 (597)	-	1 (94)	0 (277)	8 (597)	-
New Mexico Ave. at Sutton Pl.	0 (274)	2 (94)	-	37 (405)	0 (274)	3 (94)	-	9 (405)
New Mexico Ave. at 43 th St.	0 (358)	1 (274)	-	2 (337)	0 (358)	0 (274)	-	1 (337)
New Mexico Ave. at Klinge St.	4 (283)	0 (358)	7 (568)	-	1 (283)	0 (358)	4 (568)	-
New Mexico Ave. at Cathedral Ave.	208 (212)	575 (283)	130 (642)	220 (805)	126 (212)	337 (283)	101 (642)	134 (805)
Nebraska Ave. at Van Ness St.	801 (1410)	105 (726)	257 (110)	148 (1242)	967 (1410)	110 (726)	133 (110)	268 (1242)
Wesley Seminary Drive at Massachusetts Ave.	0 (628)	0 (222)	0 (141)	-	0 (628)	0 (222)	0 (141)	-

American University Comprehensive Transportation Review – Appendix G

American University

Warren St at 42 nd St – SB	0 (119)	0 (97)	0 (426)	-	0 (119)	0 (97)	0 (426)	-
Warren St at 42 nd St – NB	1 (92)	0 (435)	0 (419)		1 (92)	0 (435)	0 (419)	
Warren St at 48 th St.	0 (526)	1 (383)	-	2 (1057)	0 (526)	0 (383)	-	2 (1057)
Yuma St. at 48 th St.	0 (383)	0 (277)	1 (259)	0 (1099)	0 (383)	0 (277)	1 (259)	0 (1099)
42 nd St. at Albemarle St.	110 (299)	97 (437)	211 (202)	37 (670)	61 (299)	86 (437)	109 (202)	60 (670)
Nebraska Ave. at Macomb St.	87 (291)	-	0 (299)	0 (1077)	125 (291)	-	0 (299)	1 (1077)
Loughboro Rd./Nebraska Ave. at Indian Ln./Chain Bridge Rd.	48 (287)	0 (1445)	2 (1158)	6 (701)	12 (287)	0 (144 5)	1 (1158)	4 (701)

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↑	↗		↖	↗		↔	
Traffic Volume (vph)	22	1223	78	11	704	60	21	6	33	4	19	5
Future Volume (vph)	22	1223	78	11	704	60	21	6	33	4	19	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-4%			-1%			5%	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.85		0.96	0.91		0.98	
Frt		0.991				0.850			0.850		0.977	
Flt Protected		0.999			0.999			0.962			0.993	
Satd. Flow (prot)	0	2869	0	0	1626	1318	0	1286	1136	0	1452	0
Flt Permitted		0.934			0.973			0.803			0.971	
Satd. Flow (perm)	0	2682	0	0	1584	1116	0	1034	1036	0	1403	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				62			34		5	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		628			471			361			221	
Travel Time (s)		14.3			10.7			9.8			6.0	
Confl. Peds. (#/hr)	27		16	16		27	23		41	41		23
Confl. Bikes (#/hr)			8			3						2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	0%	0%	5%	20%	20%	20%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	7	7	7
Adj. Flow (vph)	23	1261	80	11	726	62	22	6	34	4	20	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1364	0	0	737	62	0	28	34	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.28	1.28	1.22	1.22	1.22	1.24	1.24	1.24	1.29	1.33	1.29
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left			Left		Right	Left		Right	Left		
Leading Detector (ft)	20	20		20	20	20	20	20	20	20	20	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20		20	20	20	20	20	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	6	6		2	2	2	8	8	8	4	4	

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020

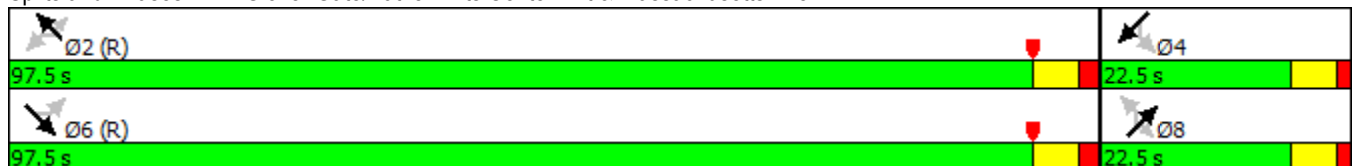


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	20.0	20.0		18.0	18.0	18.0	12.5	12.5	12.5	22.5	22.5	
Total Split (s)	97.5	97.5		97.5	97.5	97.5	22.5	22.5	22.5	22.5	22.5	
Total Split (%)	81.3%	81.3%		81.3%	81.3%	81.3%	18.8%	18.8%	18.8%	18.8%	18.8%	
Maximum Green (s)	91.5	91.5		91.5	91.5	91.5	17.0	17.0	17.0	17.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)		4.0			4.0	4.0		3.5	3.5		3.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	
Flash Dont Walk (s)	7.0	7.0		5.0	5.0	5.0				10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0	0				64	64	
Act Effct Green (s)		98.8			98.8	98.8		17.0	17.0			17.0
Actuated g/C Ratio		0.82			0.82	0.82		0.14	0.14			0.14
v/c Ratio		0.62			0.57	0.07		0.19	0.19			0.14
Control Delay		14.8			4.4	0.6		47.4	16.9			39.7
Queue Delay		1.4			0.0	0.0		0.0	0.1			0.0
Total Delay		16.2			4.4	0.6		47.4	16.9			39.7
LOS		B			A	A		D	B			D
Approach Delay		16.2			4.1			30.7				39.7
Approach LOS		B			A			C				D

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	115 (96%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	12.6
Intersection LOS:	B
Intersection Capacity Utilization:	74.9%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW



Lanes, Volumes, Timings
 2: Massachusetts Ave NW & 45th St

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↔	
Traffic Volume (vph)	63	1309	693	11	14	13
Future Volume (vph)	63	1309	693	11	14	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		4%	-7%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.937	
Flt Protected		0.998			0.974	
Satd. Flow (prot)	0	3231	3412	0	1587	0
Flt Permitted		0.998			0.974	
Satd. Flow (perm)	0	3231	3412	0	1587	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		246	222		156	
Travel Time (s)		5.6	5.0		3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	1454	770	12	16	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1524	782	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.9%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑						↑↓	
Traffic Volume (vph)	0	1225	8	13	645	0	0	0	0	85	24	3
Future Volume (vph)	0	1225	8	13	645	0	0	0	0	85	24	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	9	9	9
Grade (%)		7%			-7%			0%			7%	
Storage Length (ft)	0		90	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96		1.00							1.00
Frt			0.850									0.996
Flt Protected					0.999							0.963
Satd. Flow (prot)	0	2841	1235	0	2892	0	0	0	0	0	1256	0
Flt Permitted					0.920							0.963
Satd. Flow (perm)	0	2841	1191	0	2663	0	0	0	0	0	1256	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23									1
Link Speed (mph)		30			30			25				25
Link Distance (ft)		586			229			148				119
Travel Time (s)		13.3			5.2			4.0				3.2
Confl. Peds. (#/hr)	16		22	22		16						5
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	7	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0					0	0	0
Adj. Flow (vph)	0	1250	8	13	658	0	0	0	0	87	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1250	8	0	671	0	0	0	0	0	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.30	1.30	1.35	1.20	1.27	1.20	1.14	1.14	1.14	1.36	1.55	1.36
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA	Perm	Perm	NA					Split	NA	
Protected Phases		6			2					4	4	
Permitted Phases			6	2								
Minimum Split (s)		15.5	15.5	15.5	15.5					23.5	23.5	
Total Split (s)		88.0	88.0	88.0	88.0					32.0	32.0	
Total Split (%)		73.3%	73.3%	73.3%	73.3%					26.7%	26.7%	
Maximum Green (s)		82.5	82.5	82.5	82.5					26.5	26.5	
Yellow Time (s)		4.5	4.5	4.5	4.5					4.0	4.0	
All-Red Time (s)		1.0	1.0	1.0	1.0					1.5	1.5	
Lost Time Adjust (s)		-2.0	-2.0		-2.0							-2.0
Total Lost Time (s)		3.5	3.5		3.5							3.5

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effect Green (s)		84.5	84.5		84.5							28.5
Actuated g/C Ratio		0.70	0.70		0.70							0.24
v/c Ratio		0.62	0.01		0.36							0.38
Control Delay		3.8	0.0		5.4							36.6
Queue Delay		0.0	0.0		0.0							0.0
Total Delay		3.8	0.0		5.4							36.6
LOS		A	A		A							D
Approach Delay		3.7			5.4							36.6
Approach LOS		A			A							D

Intersection Summary




















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	46 (38%), Referenced to phase 2:NWTL and 6:SET, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	6.1
Intersection LOS:	A
Intersection Capacity Utilization	59.3%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 3: Tilden St NW/46th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	1	2	55	23	288	0	948	45	315	883	29
Future Volume (vph)	0	1	2	55	23	288	0	948	45	315	883	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	10	10	10	10	10	10
Grade (%)		15%			-1%			2%				-1%
Storage Length (ft)	0		0	220		5	0		0	0		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97		0.97		0.87		1.00			1.00	
Frt		0.910				0.850		0.993			0.995	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1398	0	1465	1524	1295	0	2888	0	1438	1452	0
Flt Permitted				0.756						0.132		
Satd. Flow (perm)	0	1398	0	1129	1524	1128	0	2888	0	200	1452	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				67		5			3	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			330			349			396	
Travel Time (s)		9.5			9.0			7.9			9.0	
Confl. Peds. (#/hr)	63		16	16		63	29		19	19		29
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	3%	3%	3%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	3	3	0	0	0	0	8	0
Adj. Flow (vph)	0	1	2	57	24	300	0	988	47	328	920	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	57	24	300	0	1035	0	328	950	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.24	1.26	1.26	1.26	1.26	1.26	1.24	1.29	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA		Perm	NA	pm+ov		NA		pm+pt	NA	
Protected Phases		8			4	5		6		5	2	
Permitted Phases	8			4		4				2		
Minimum Split (s)	23.5	23.5		24.5	24.5	10.5		25.5		10.5	21.5	
Total Split (s)	29.0	29.0		29.0	29.0	32.0		56.0		32.0	88.0	
Total Split (%)	24.2%	24.2%		24.2%	24.2%	26.7%		46.7%		26.7%	73.3%	
Maximum Green (s)	23.5	23.5		23.5	23.5	26.5		50.5		26.5	82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5		1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		3.5		3.5	3.5	3.5		3.5		3.5	3.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lead		Lag		Lead		

Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

Lane Group	Ø14	Ø18
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	14	18
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	3%	3%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead

Lanes, Volumes, Timings

5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		12.0	12.0			13.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effect Green (s)		25.5		25.5	25.5	54.0		52.5		84.5	84.5	
Actuated g/C Ratio		0.21		0.21	0.21	0.45		0.44		0.70	0.70	
v/c Ratio		0.01		0.24	0.07	0.51		0.82		0.76	0.93	
Control Delay		29.0		42.4	38.7	20.3		24.2		41.7	45.6	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.4	7.0	
Total Delay		29.0		42.4	38.7	20.3		24.2		42.1	52.6	
LOS		C		D	D	C		C		D	D	
Approach Delay		29.0			24.8			24.2			49.9	
Approach LOS		C			C			C			D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	25 (21%), Referenced to phase 2:SWTL and 6:NET, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	36.5
Intersection LOS:	D
Intersection Capacity Utilization:	80.2%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 5: Nebraska Ave NW & New Mexico Ave NW/Entrance



Lane Group	Ø14	Ø18
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

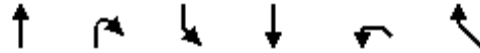
Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

	↑	↖	↙	↓	↘	↗	
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Lane Configurations	↑↑			↑↑		↗	
Traffic Volume (vph)	1274	22	1	1206	0	4	
Future Volume (vph)	1274	22	1	1206	0	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	-1%			-1%	0%		
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	
Fr _t	0.997					0.865	
Fl _t Protected							
Satd. Flow (prot)	3546	0	0	3557	0	1611	
Fl _t Permitted				0.954			
Satd. Flow (perm)	3546	0	0	3393	0	1611	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	3					1091	
Link Speed (mph)	30			30	25		
Link Distance (ft)	396			372	208		
Travel Time (s)	9.0			8.5	5.7		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	1416	24	1	1340	0	4	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1440	0	0	1341	0	4	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	0			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00	
Turning Speed (mph)		9	15		15	9	
Number of Detectors	1		1	1		1	
Detector Template			Left			Right	
Leading Detector (ft)	20		20	20		20	
Trailing Detector (ft)	0		0	0		0	
Detector 1 Position(ft)	0		0	0		0	
Detector 1 Size(ft)	20		20	20		20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0		0.0	
Turn Type	NA		Perm	NA		Perm	
Protected Phases	2			2		4	
Permitted Phases			2			6	
Detector Phase	2		2	2		6	
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0		4.0	10.0
Minimum Split (s)	20.0		20.0	20.0		20.5	26.0
Total Split (s)	92.0		92.0	92.0		20.5	28.0
Total Split (%)	76.7%		76.7%	76.7%		17.1%	23%

Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

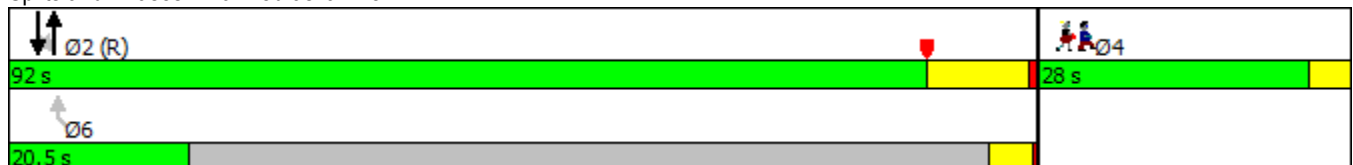


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Maximum Green (s)	82.0		82.0	82.0		16.0	24.0
Yellow Time (s)	9.0		9.0	9.0		4.0	4.0
All-Red Time (s)	1.0		1.0	1.0		0.5	0.0
Lost Time Adjust (s)	-2.0			-2.0		-2.0	
Total Lost Time (s)	8.0			8.0		2.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0	1.0		3.0	1.0
Recall Mode	C-Max		C-Max	C-Max		None	None
Walk Time (s)						5.0	10.0
Flash Dont Walk (s)						11.0	12.0
Pedestrian Calls (#/hr)						0	5
Act Effect Green (s)	113.2			113.2		114.3	
Actuated g/C Ratio	0.94			0.94		0.95	
v/c Ratio	0.43			0.42		0.00	
Control Delay	1.0			0.8		0.0	
Queue Delay	0.1			0.1		0.0	
Total Delay	1.0			0.9		0.0	
LOS	A			A		A	
Approach Delay	1.0			0.9			
Approach LOS	A			A			

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	62 (52%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	0.9
Intersection LOS:	A
Intersection Capacity Utilization:	49.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: Nebraska Ave NW



Lanes, Volumes, Timings
7: New Mexico Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	19	378	420	6	8	0
Future Volume (vph)	19	378	420	6	8	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	7%		0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.998			
Flt Protected		0.998			0.950	
Satd. Flow (prot)	0	3280	1674	0	1652	0
Flt Permitted		0.998			0.950	
Satd. Flow (perm)	0	3280	1674	0	1652	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		330	250		221	
Travel Time (s)		9.0	6.8		5.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	420	467	7	9	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	441	474	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.14	1.14	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1283	9	7	924	4	1
Future Volume (vph)	1283	9	7	924	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-4%			0%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999				0.973	
Flt Protected					0.962	
Satd. Flow (prot)	3366	0	0	3303	1627	0
Flt Permitted					0.962	
Satd. Flow (perm)	3366	0	0	3303	1627	0
Link Speed (mph)	30			25	30	
Link Distance (ft)	156			565	277	
Travel Time (s)	3.5			15.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1426	10	8	1027	4	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1436	0	0	1035	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	45.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
9: Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↔	
Traffic Volume (vph)	18	1334	790	19	1	7
Future Volume (vph)	18	1334	790	19	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	0%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.996		0.880	
Flt Protected		0.999			0.994	
Satd. Flow (prot)	0	3366	3290	0	1521	0
Flt Permitted		0.999			0.994	
Satd. Flow (perm)	0	3366	3290	0	1521	0
Link Speed (mph)		30	25		30	
Link Distance (ft)		345	156		342	
Travel Time (s)		7.8	4.3		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1482	878	21	1	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1502	899	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.6%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Nebraska Ave NW

08/31/2020



Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	1	23	1040	0	30	917
Future Volume (vph)	1	23	1040	0	30	917
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.870					
Flt Protected	0.998					0.998
Satd. Flow (prot)	1510	0	3270	0	0	3313
Flt Permitted	0.998					0.998
Satd. Flow (perm)	1510	0	3270	0	0	3313
Link Speed (mph)	30		30			30
Link Distance (ft)	220		291			349
Travel Time (s)	5.0		6.6			7.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	26	1156	0	33	1019
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	1156	0	0	1052
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.11	1.11	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.1%
Analysis Period (min)	15
	ICU Level of Service B

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020

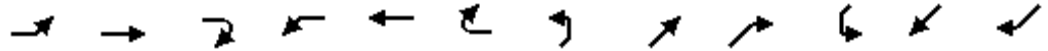


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	36	114	38	45	45	0	51	996	138	5	881	78
Future Volume (vph)	36	114	38	45	45	0	51	996	138	5	881	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15	10	10	10	10	10	10
Grade (%)		6%			-1%			-2%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.973						0.983			0.988	
Flt Protected		0.990			0.976			0.998				
Satd. Flow (prot)	0	1557	0	0	1774	0	0	2918	0	0	2834	0
Flt Permitted		0.927			0.725			0.843			0.949	
Satd. Flow (perm)	0	1452	0	0	1311	0	0	2464	0	0	2689	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		10						28			18	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		270			279			717			291	
Travel Time (s)		7.4			7.6			16.3			6.6	
Confl. Peds. (#/hr)	16		10	10		16	3		20	20		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	38	119	40	47	47	0	53	1038	144	5	918	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	0	0	94	0	0	1235	0	0	1004	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.19	1.19	1.19	1.01	1.01	1.01	1.23	1.23	1.23	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	26.0	26.0		26.0	26.0		25.0	25.0		25.0	25.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		82.0	82.0		82.0	82.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		28.0			28.0			84.0			84.0	

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.23			0.23			0.70			0.70	
v/c Ratio		0.57			0.31			0.71			0.53	
Control Delay		46.0			41.4			6.4			3.1	
Queue Delay		0.0			0.0			0.3			0.0	
Total Delay		46.0			41.4			6.7			3.1	
LOS		D			D			A			A	
Approach Delay		46.0			41.4			6.7			3.1	
Approach LOS		D			D			A			A	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 42 (35%), Referenced to phase 2:NESW, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 9.6
 Intersection Capacity Utilization 94.0%
 Analysis Period (min) 15

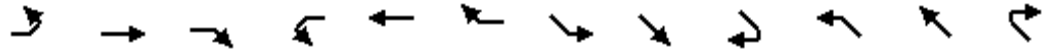
Intersection LOS: A
 ICU Level of Service F

Splits and Phases: 11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW



Lanes, Volumes, Timings
 12: Indian Ln/Rockwood Pkwy & Glenbrook Ave

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	35	39	36	4	16	17	12	58	23	2	118	1
Future Volume (vph)	35	39	36	4	16	17	12	58	23	2	118	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956			0.937			0.966			0.999	
Flt Protected		0.984			0.995			0.994			0.999	
Satd. Flow (prot)	0	1635	0	0	1621	0	0	1669	0	0	1735	0
Flt Permitted		0.984			0.995			0.994			0.999	
Satd. Flow (perm)	0	1635	0	0	1621	0	0	1669	0	0	1735	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		425			322			322			1445	
Travel Time (s)		9.7			7.3			7.3			32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	43	40	4	18	19	13	64	26	2	131	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	41	0	0	103	0	0	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 13: Rockwood Pkwy NW & Fletcher Gate

08/31/2020



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↘	↙
Traffic Volume (vph)	38	168	87	115	41	6
Future Volume (vph)	38	168	87	115	41	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		6%	0%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.923		0.982	
Flt Protected		0.991			0.958	
Satd. Flow (prot)	0	1671	1605	0	1636	0
Flt Permitted		0.991			0.958	
Satd. Flow (perm)	0	1671	1605	0	1636	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		155	270		285	
Travel Time (s)		4.2	7.4		6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	187	97	128	46	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	229	225	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 14: 47th St & Massachusetts Ave NW

08/31/2020

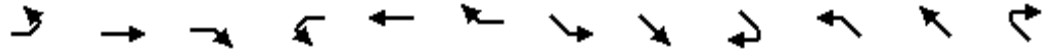
												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	23	1223	12	2	611	6
Future Volume (vph)	0	0	0	0	0	0	23	1223	12	2	611	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt								0.999			0.998	
Flt Protected								0.999				
Satd. Flow (prot)	0	1739	0	0	1739	0	0	3181	0	0	3346	0
Flt Permitted								0.999				
Satd. Flow (perm)	0	1739	0	0	1739	0	0	3181	0	0	3346	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			181			269			586	
Travel Time (s)		7.1			4.1			6.1			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0	26	1359	13	2	679	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	1398	0	0	688	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 15: Massachusetts Ave NW & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	3	20	8	9	96	20	1230	6	21	583	8
Future Volume (vph)	0	3	20	8	9	96	20	1230	6	21	583	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.881			0.885			0.999			0.998	
Flt Protected					0.996			0.999			0.998	
Satd. Flow (prot)	0	1532	0	0	1532	0	0	3181	0	0	3339	0
Flt Permitted					0.996			0.999			0.998	
Satd. Flow (perm)	0	1532	0	0	1532	0	0	3181	0	0	3339	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		452			210			663			269	
Travel Time (s)		10.3			4.8			15.1			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	3	22	9	10	107	22	1367	7	23	648	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	126	0	0	1396	0	0	680	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

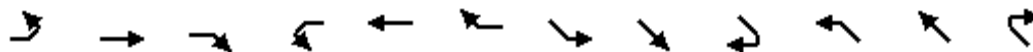
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.6%
ICU Level of Service	C
Analysis Period (min)	15

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020

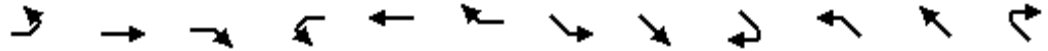


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	48	41	48	38	11	58	58	1147	8	15	635	16
Future Volume (vph)	48	41	48	38	11	58	58	1147	8	15	635	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-6%			3%				-3%
Storage Length (ft)	50		0	150		0	0		0	0		140
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.97		0.96	0.95			1.00				1.00
Fr _t		0.919			0.873			0.999				0.997
Fl _t Protected	0.950			0.950				0.998				0.999
Satd. Flow (prot)	1311	1232	0	1460	1280	0	0	2878	0	0	2786	0
Fl _t Permitted	0.711			0.676				0.872				0.913
Satd. Flow (perm)	943	1232	0	1000	1280	0	0	2514	0	0	2546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			60			1				5
Link Speed (mph)		25			25			30				30
Link Distance (ft)		433			204			758				663
Travel Time (s)		11.8			5.6			17.2				15.1
Confl. Peds. (#/hr)	26		26	26		26	4		39	39		4
Confl. Bikes (#/hr)									3			5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	7%	7%	7%	2%	2%	2%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	7	0	7	7
Parking (#/hr)	0	0	0							0	0	0
Adj. Flow (vph)	49	42	49	39	11	60	60	1182	8	15	655	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	91	0	39	71	0	0	1250	0	0	686	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.45	1.45	1.28	1.20	1.20	1.20	1.27	1.29	1.27	1.22	1.33	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6				2
Permitted Phases	4			8			6			2		
Minimum Split (s)	28.0	28.0		28.0	28.0		15.0	15.0		15.0	15.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		83.0	83.0		83.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.0			3.0	

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	15.0	15.0		15.0	15.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effect Green (s)	28.0	28.0		28.0	28.0			85.0			85.0	
Actuated g/C Ratio	0.23	0.23		0.23	0.23			0.71			0.71	
v/c Ratio	0.22	0.28		0.17	0.21			0.70			0.38	
Control Delay	40.5	22.7		39.1	13.4			3.2			14.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	40.5	22.7		39.1	13.4			3.2			14.1	
LOS	D	C		D	B			A			B	
Approach Delay		29.0			22.5			3.2			14.1	
Approach LOS		C			C			A			B	

Intersection Summary





















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization:	86.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 16: Massachusetts Ave NW & Fordham Rd NW/48th St NW



Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	60	59	8	33	28	0	144	1181	75	32	623	45
Future Volume (vph)	60	59	8	33	28	0	144	1181	75	32	623	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	11	11	11	11	11	11
Grade (%)		-1%			-3%			-2%				3%
Storage Length (ft)	85		0	70		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	0.99		0.97				1.00				1.00
Flt		0.983						0.992				0.990
Flt Protected	0.950			0.950				0.995				0.998
Satd. Flow (prot)	1296	1335	0	1484	1562	0	0	3012	0	0	2914	0
Flt Permitted	0.738			0.711				0.664				0.807
Satd. Flow (perm)	976	1335	0	1076	1562	0	0	2010	0	0	2355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5						13				8
Link Speed (mph)		25			25			30				30
Link Distance (ft)		565			328			245				758
Travel Time (s)		15.4			8.9			5.6				17.2
Confl. Peds. (#/hr)	19		20	20		19	11		16	16		11
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	2%	2%	2%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	7	0	7	0
Parking (#/hr)	0	0										
Adj. Flow (vph)	63	62	8	35	29	0	152	1243	79	34	656	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	70	0	35	29	0	0	1474	0	0	737	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		9			9			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.47	1.47	1.30	1.28	1.28	1.28	1.18	1.20	1.18	1.22	1.24	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			4		5	2				6
Permitted Phases	4			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		10.0	19.5		19.5	19.5	
Total Split (s)	27.5	27.5		27.5	27.5		33.0	92.5		59.5	59.5	
Total Split (%)	22.9%	22.9%		22.9%	22.9%		27.5%	77.1%		49.6%	49.6%	
Maximum Green (s)	21.5	21.5		21.5	21.5		28.0	87.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.5	1.5	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.5			3.5	

Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag							Lead			Lag		Lag
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)	23.5	23.5		23.5	23.5			89.0			56.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.47	
v/c Ratio	0.33	0.26		0.17	0.10			0.85			0.67	
Control Delay	47.1	41.1		42.6	40.6			7.9			31.2	
Queue Delay	0.0	0.0		0.0	0.0			0.1			0.0	
Total Delay	47.1	41.1		42.6	40.6			8.0			31.2	
LOS	D	D		D	D			A			C	
Approach Delay		44.0			41.7			8.0			31.2	
Approach LOS		D			D			A			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	116 (97%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	18.0
Intersection LOS:	B
Intersection Capacity Utilization:	93.0%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 17: 49th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	264	64	49	237	46	3	860	45	2	1523	54
Future Volume (vph)	39	264	64	49	237	46	3	860	45	2	1523	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		5%			2%			-1%			1%	
Storage Length (ft)	70		0	110		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor	0.98	0.99		0.98	0.99			0.98			0.98	
Frt		0.971			0.976			0.993			0.995	
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1449	1465	0	1472	1499	0	0	2660	0	0	3908	0
Flt Permitted	0.337			0.262				0.949			0.940	
Satd. Flow (perm)	505	1465	0	399	1499	0	0	2524	0	0	3674	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		10						7			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		1242			419			367			319	
Travel Time (s)		33.9			11.4			8.3			7.3	
Confl. Peds. (#/hr)	23		27	27		23	127		88	88		127
Confl. Bikes (#/hr)						5			4			7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	6%	6%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	30	30
Parking (#/hr)								0	0			
Adj. Flow (vph)	41	278	67	52	249	48	3	905	47	2	1603	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	345	0	52	297	0	0	955	0	0	1662	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.29	1.29	1.29	1.26	1.26	1.26	1.24	1.32	1.24	1.26	1.32	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		11.0	18.0	
Total Split (s)	36.0	36.0		36.0	36.0		67.0	67.0		11.0	78.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		55.8%	55.8%		9.2%	65.0%	
Maximum Green (s)	30.0	30.0		30.0	30.0		61.0	61.0		5.0	72.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lag	Lag					Lag	Lag	

Lane Group	Ø3	Ø5	Ø7	Ø11
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	3	5	7	11
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead

Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		1.0	4.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		7.0	7.0		1.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	32.0	32.0		32.0	32.0			63.0			74.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27			0.52			0.62	
v/c Ratio	0.31	0.87		0.49	0.74			0.72			0.73	
Control Delay	47.3	66.9		55.3	53.1			25.5			5.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.2	
Total Delay	47.3	66.9		55.3	53.1			25.5			5.4	
LOS	D	E		E	D			C			A	
Approach Delay		64.8			53.4			25.5			5.4	
Approach LOS		E			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	54 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	23.0
Intersection LOS:	C
Intersection Capacity Utilization:	71.9%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 18: WISCONSIN AVE & Van Ness St



Lane Group	Ø3	Ø5	Ø7	Ø11
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

20: Nebraska Ave & Warren St & Nebraska Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SWL2	SWL	SWR
Lane Configurations		↕			↕		↕	↕		↕	↕
Traffic Volume (vph)	3	33	10	13	4	5	15	14	17	781	0
Future Volume (vph)	3	33	10	13	4	5	15	14	17	781	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%		-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95
Frt		0.971			0.966		0.984	0.850			
Flt Protected		0.997			0.972		0.957			0.950	
Satd. Flow (prot)	0	1683	0	0	1632	0	1654	1418	0	3188	0
Flt Permitted		0.997			0.972		0.957			0.950	
Satd. Flow (perm)	0	1683	0	0	1632	0	1654	1418	0	3188	0
Link Speed (mph)		30			30		30			30	
Link Distance (ft)		316			282		726			392	
Travel Time (s)		7.2			6.4		16.5			8.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	37	11	14	4	6	17	16	19	868	0
Shared Lane Traffic (%)								10%			
Lane Group Flow (vph)	0	51	0	0	24	0	19	14	0	887	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Left	Right
Median Width(ft)		0			0		10			20	
Link Offset(ft)		0			0		0			0	
Crosswalk Width(ft)		16			16		16			16	
Two way Left Turn Lane											
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.08	1.08	1.10	1.10	1.10
Turning Speed (mph)	15		9	15		9	15	9	15	15	9
Sign Control		Stop			Stop		Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 21: WISCONSIN AVE & Warren St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	17	21	33	17	8	9	15	872	2	70	1560	3
Future Volume (vph)	17	21	33	17	8	9	15	872	2	70	1560	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	8	8	8	10	10	10	10	10	10
Grade (%)		1%			1%			-1%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor		0.99			0.99			1.00			1.00	
Frt		0.937			0.965							
Flt Protected		0.988			0.975			0.999			0.998	
Satd. Flow (prot)	0	1230	0	0	1205	0	0	2727	0	0	4239	0
Flt Permitted		0.928			0.873			0.892			0.800	
Satd. Flow (perm)	0	1152	0	0	1077	0	0	2435	0	0	3391	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			9							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		299			129			330			116	
Travel Time (s)		8.2			3.5			7.5			2.6	
Confl. Peds. (#/hr)	8		2	2		8	115		87	87		212
Confl. Bikes (#/hr)									5			6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	6%	6%	6%	3%	3%	3%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	18	22	35	18	8	9	16	918	2	74	1642	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	35	0	0	936	0	0	1719	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.49	1.31	1.38	1.56	1.38	1.24	1.32	1.24	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			6			2	
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		6	6		2	2	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	

Lanes, Volumes, Timings
21: WISCONSIN AVE & Warren St

08/31/2020

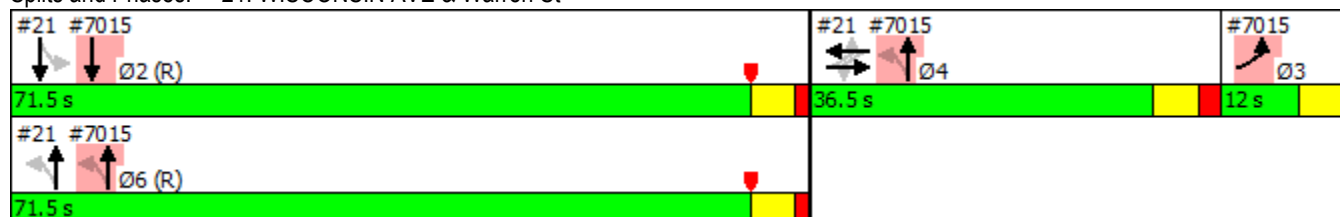


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.0	29.0		29.0	29.0		22.5	22.5		23.5	23.5	
Total Split (s)	36.5	36.5		36.5	36.5		71.5	71.5		71.5	71.5	
Total Split (%)	30.4%	30.4%		30.4%	30.4%		59.6%	59.6%		59.6%	59.6%	
Maximum Green (s)	30.5	30.5		30.5	30.5		66.0	66.0		66.0	66.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			3.5			3.5	
Lead/Lag	Lead	Lead		Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		10.0	10.0		11.0	11.0	
Pedestrian Calls (#/hr)	10	10		10	10		0	0		0	0	
Act Effct Green (s)		16.5			16.5			68.0			68.0	
Actuated g/C Ratio		0.14			0.14			0.57			0.57	
v/c Ratio		0.40			0.23			0.68			0.89	
Control Delay		35.2			37.9			24.4			7.4	
Queue Delay		0.0			0.0			0.7			0.0	
Total Delay		35.2			37.9			25.1			7.4	
LOS		D			D			C			A	
Approach Delay		35.2			37.9			25.1			7.4	
Approach LOS		D			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	29 (24%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	14.5
Intersection LOS:	B
Intersection Capacity Utilization:	81.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 21: WISCONSIN AVE & Warren St



Lane Group	Ø3
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	12.0
Total Split (s)	12.0
Total Split (%)	10%
Maximum Green (s)	7.0
Yellow Time (s)	4.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings

22: Yuma St.

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	31	113	9	27	87	16	11	117	40	42	92	10
Future Volume (vph)	31	113	9	27	87	16	11	117	40	42	92	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.983			0.968			0.991	
Flt Protected		0.990			0.990			0.997			0.986	
Satd. Flow (prot)	0	1742	0	0	1692	0	0	1678	0	0	1699	0
Flt Permitted		0.990			0.990			0.997			0.986	
Satd. Flow (perm)	0	1742	0	0	1692	0	0	1678	0	0	1699	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		457			864			435			295	
Travel Time (s)		10.4			19.6			9.9			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	126	10	30	97	18	12	130	44	47	102	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	145	0	0	186	0	0	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
23: WISCONSIN AVE & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	126	100	45	135	79	0	1003	55	2	1548	50
Future Volume (vph)	55	126	100	45	135	79	0	1003	55	2	1548	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	9	9	9	11	11	11	11	11	11
Grade (%)		-4%			4%			3%			-3%	
Storage Length (ft)	120		0	0		150	0		110	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	0.91
Ped Bike Factor	0.76	0.94			0.98	0.68			0.32		0.97	
Frt		0.934				0.850			0.850		0.995	
Flt Protected	0.950				0.988							
Satd. Flow (prot)	1531	1415	0	0	1461	1257	0	2773	1081	0	4129	0
Flt Permitted	0.950				0.867						0.939	
Satd. Flow (perm)	1157	1415	0	0	1253	850	0	2773	348	0	3877	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38				127			127			6
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		670			654			554			196	
Travel Time (s)		18.3			17.8			12.6			4.5	
Confl. Peds. (#/hr)	227		84	84		227	295		317	317		295
Confl. Bikes (#/hr)									1			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	6%	6%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	20	0	24	24
Parking (#/hr)								0	0			
Adj. Flow (vph)	58	133	105	47	142	83	0	1056	58	2	1629	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	238	0	0	189	83	0	1056	58	0	1684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.34	1.34	1.34	1.22	1.30	1.53	1.17	1.22	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases	3	8			4			2				6
Permitted Phases				4		4			2		6	
Minimum Split (s)	10.0	33.0		30.0	30.0	30.0		23.0	23.0	17.0	17.0	
Total Split (s)	15.0	50.0		35.0	35.0	35.0		64.0	64.0	64.0	64.0	
Total Split (%)	12.5%	41.7%		29.2%	29.2%	29.2%		53.3%	53.3%	53.3%	53.3%	
Maximum Green (s)	10.0	44.0		29.0	29.0	29.0		58.0	58.0	58.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)	3.0	4.0			4.0	4.0		4.0	4.0		4.0	

Lane Group	Ø1	Ø5	Ø7	Ø9
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	1	5	7	9
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				

Lanes, Volumes, Timings
 23: WISCONSIN AVE & Albermarle St

08/31/2020

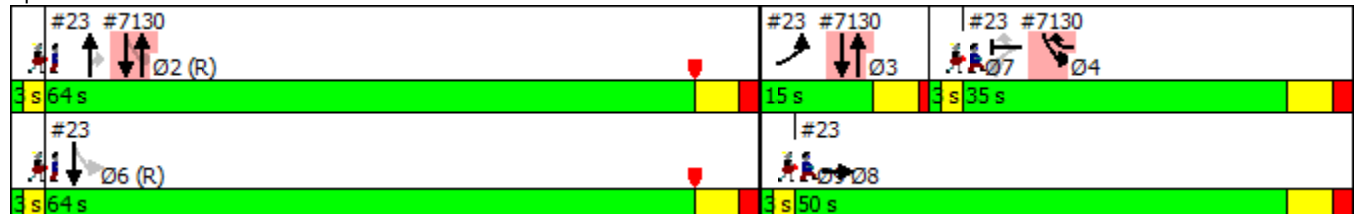


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag						Lag	Lag	Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)		4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Flash Dont Walk (s)		20.0		17.0	17.0	17.0		10.0	10.0	4.0	4.0	
Pedestrian Calls (#/hr)		0		0	0	0		0	0	0	0	
Act Effect Green (s)	12.0	46.0		31.0	31.0		60.0	60.0			60.0	
Actuated g/C Ratio	0.10	0.38		0.26	0.26		0.50	0.50			0.50	
v/c Ratio	0.38	0.42		0.59	0.27		0.76	0.24			0.87	
Control Delay	56.5	26.7		50.2	16.1		21.8	2.5			12.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	56.5	26.7		50.2	16.1		21.8	2.5			12.1	
LOS	E	C		D	B		C	A			B	
Approach Delay		32.6		39.8			20.8				12.1	
Approach LOS		C		D			C				B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	6 (5%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	19.0
Intersection LOS:	B
Intersection Capacity Utilization:	83.8%
ICU Level of Service:	E
Analysis Period (min):	15

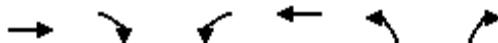
Splits and Phases: 23: WISCONSIN AVE & Albermarle St



Lane Group	Ø1	Ø5	Ø7	Ø9
Lead/Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings
24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑	↘	↗
Traffic Volume (vph)	761	250	391	587	275	469
Future Volume (vph)	761	250	391	587	275	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		200	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98		0.98		0.99	
Frt	0.963					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2711	0	1451	1528	1486	1330
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2711	0	1426	1528	1469	1330
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	45					76
Link Speed (mph)	30			30	25	
Link Distance (ft)	701			717	2089	
Travel Time (s)	15.9			16.3	57.0	
Confl. Peds. (#/hr)		19	19		3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	5%	5%	1%	1%
Bus Blockages (#/hr)	8	8	0	0	0	0
Adj. Flow (vph)	793	260	407	611	286	489
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1053	0	407	611	286	489
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	46	
Two way Left Turn Lane						
Headway Factor	1.28	1.26	1.24	1.24	1.26	1.26
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	Perm	pt+ov
Protected Phases	2		1	6		14
Permitted Phases					4	
Minimum Split (s)	20.5		10.5	15.5	21.0	
Total Split (s)	53.5		38.0	91.5	28.5	
Total Split (%)	44.6%		31.7%	76.3%	23.8%	
Maximum Green (s)	48.0		32.5	86.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.5	1.5	1.0	
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	
Total Lost Time (s)	3.5		3.5	3.5	3.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020

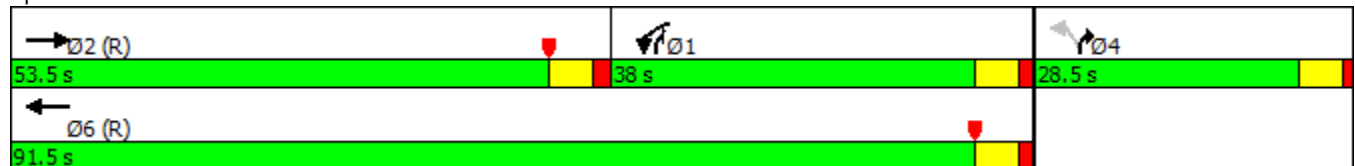


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	8.0				9.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	50.0		34.5	88.0	25.5	63.0
Actuated g/C Ratio	0.42		0.29	0.73	0.21	0.52
v/c Ratio	0.91		0.98	0.55	0.92	0.67
Control Delay	44.3		75.2	8.3	80.5	22.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	44.3		75.2	8.3	80.5	22.6
LOS	D		E	A	F	C
Approach Delay	44.3			35.0	44.0	
Approach LOS	D			D	D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 40.9
 Intersection Capacity Utilization 83.7%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 24: Foxhall Rd NW & Nebraska Ave NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	64	1	175	7	6	4	71	357	1	0	362	18
Future Volume (vph)	64	1	175	7	6	4	71	357	1	0	362	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	11	11	11	11	11	11	10	10	10
Grade (%)		-7%			-6%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.85			0.96			0.99			1.00	
Frt		0.901			0.968						0.994	
Flt Protected		0.987			0.980			0.992				
Satd. Flow (prot)	0	1063	0	0	1605	0	0	1375	0	0	1401	0
Flt Permitted		0.917			0.891			0.877				
Satd. Flow (perm)	0	986	0	0	1408	0	0	1208	0	0	1401	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					4						5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		284			247			252			250	
Travel Time (s)		7.7			6.7			6.9			6.8	
Confl. Peds. (#/hr)	2		64	64		2	32		57	57		32
Confl. Bikes (#/hr)									3			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	3%	3%	3%	5%	5%	5%
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Adj. Flow (vph)	67	1	184	7	6	4	75	376	1	0	381	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	252	0	0	17	0	0	452	0	0	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.42	1.25	1.15	1.15	1.15	1.26	1.43	1.26	1.20	1.36	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			4			2				2
Permitted Phases	4			4			2			2		
Minimum Split (s)	22.5	22.5		22.5	22.5		25.5	25.5		25.5	25.5	
Total Split (s)	31.0	31.0		31.0	31.0		69.0	69.0		69.0	69.0	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		69.0%	69.0%		69.0%	69.0%	
Maximum Green (s)	25.5	25.5		25.5	25.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover Pl NW

08/31/2020

Lane Group	Ø6	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	6	8
Permitted Phases		
Minimum Split (s)	26.5	26.5
Total Split (s)	69.0	31.0
Total Split (%)	69%	31%
Maximum Green (s)	63.5	25.5
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	4.0	14.0

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		27.5			27.5			65.5			65.5	
Actuated g/C Ratio		0.28			0.28			0.66			0.66	
v/c Ratio		0.93			0.04			0.57			0.44	
Control Delay		76.7			22.8			6.3			10.0	
Queue Delay		0.0			0.0			0.2			0.0	
Total Delay		76.7			22.8			6.5			10.1	
LOS		E			C			A			B	
Approach Delay		76.7			22.8			6.5			10.1	
Approach LOS		E			C			A			B	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 10 (10%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 23.8

Intersection LOS: C

Intersection Capacity Utilization 79.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 26: New Mexico Ave NW & Newark St NW/Westover PI NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

Lane Group	Ø6	Ø8
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings

27: New Mexico Ave NW & 44th St/Embassy Park Dr

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	16	1	1	15	0	19	0	402	9	2	543	0
Future Volume (vph)	16	1	1	15	0	19	0	402	9	2	543	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.925			0.997				
Flt Protected		0.957			0.978							
Satd. Flow (prot)	0	1652	0	0	1573	0	0	1664	0	0	1799	0
Flt Permitted		0.957			0.978							
Satd. Flow (perm)	0	1652	0	0	1573	0	0	1664	0	0	1799	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		312			150			186			252	
Travel Time (s)		7.1			3.4			5.1			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	1	1	17	0	21	0	447	10	2	603	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	38	0	0	457	0	0	605	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.15	1.15	1.15	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Macomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	19	28	17	3	14	37	387	42	74	448	30
Future Volume (vph)	6	19	28	17	3	14	37	387	42	74	448	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	11	11	11	11	11	11
Grade (%)		-2%			-3%			7%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.83			0.84			0.99			0.99	
Frt		0.928			0.944			0.988			0.993	
Flt Protected		0.995			0.976			0.996			0.993	
Satd. Flow (prot)	0	1124	0	0	1392	0	0	1359	0	0	1576	0
Flt Permitted		0.979			0.877			0.928			0.876	
Satd. Flow (perm)	0	1099	0	0	1083	0	0	1263	0	0	1390	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		613			596			277			186	
Travel Time (s)		16.7			16.3			7.6			5.1	
Confl. Peds. (#/hr)	19		97	97		19	42					42
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	2%	2%	2%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	3
Parking (#/hr)	0	0	0				0	3	0			
Adj. Flow (vph)	6	20	30	18	3	15	39	412	45	79	477	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	36	0	0	496	0	0	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		-35			-35			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.13	1.29	1.13	1.28	1.28	1.28	1.25	1.45	1.25	1.14	1.16	1.14
Turning Speed (mph)	15		9	15			9	15	9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			8			2			2	
Permitted Phases	8			8			2			2		
Minimum Split (s)	22.0	22.0		22.0	22.0		26.0	26.0		26.0	26.0	
Total Split (s)	26.5	26.5		26.5	26.5		70.5	70.5		70.5	70.5	
Total Split (%)	26.5%	26.5%		26.5%	26.5%		70.5%	70.5%		70.5%	70.5%	
Maximum Green (s)	20.5	20.5		20.5	20.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lag	Lag							
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		7.0	7.0	

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Minimum Split (s)	3.0
Total Split (s)	3.0
Total Split (%)	3%
Maximum Green (s)	1.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Walk Time (s)	

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Macomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.5			22.5			65.5			65.5	
Actuated g/C Ratio		0.22			0.22			0.66			0.66	
v/c Ratio		0.23			0.15			0.60			0.65	
Control Delay		34.6			33.1			10.0			12.3	
Queue Delay		0.0			0.0			0.0			0.4	
Total Delay		34.6			33.1			10.0			12.7	
LOS		C			C			B			B	
Approach Delay		34.6			33.1			10.0			12.7	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 4 (4%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 13.2
 Intersection LOS: B
 Intersection Capacity Utilization 72.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 28: New Mexico Ave NW & Macomb St NW



Lane Group	Ø7
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings
 29: New Mexico Ave NW & Lowell St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	44	57	455	489	7
Future Volume (vph)	13	44	57	455	489	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.998	
Flt Protected	0.989			0.994		
Satd. Flow (prot)	1539	0	0	1668	1778	0
Flt Permitted	0.989			0.994		
Satd. Flow (perm)	1539	0	0	1668	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	597			94	277	
Travel Time (s)	13.6			2.6	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	49	63	506	543	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	569	551	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.7%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings
 30: New Mexico Ave NW & Sutton PI

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	42	509	19	26	479
Future Volume (vph)	44	42	509	19	26	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.934		0.995			
Flt Protected	0.975					0.997
Satd. Flow (prot)	1583	0	1669	0	0	1777
Flt Permitted	0.975					0.997
Satd. Flow (perm)	1583	0	1669	0	0	1777
Link Speed (mph)	30		25			25
Link Distance (ft)	405		274			94
Travel Time (s)	9.2		7.5			2.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	47	566	21	29	532
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	0	587	0	0	561
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.1%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
31: New Mexico Ave NW

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	8	510	8	11	520
Future Volume (vph)	3	8	510	8	11	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.998			
Flt Protected	0.988					0.999
Satd. Flow (prot)	1544	0	1674	0	0	1780
Flt Permitted	0.988					0.999
Satd. Flow (perm)	1544	0	1674	0	0	1780
Link Speed (mph)	30		25			25
Link Distance (ft)	337		358			274
Travel Time (s)	7.7		9.8			7.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	9	567	9	12	578
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	576	0	0	590
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.2%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
32: New Mexico Ave NW & Klinge St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	22	41	521	510	6
Future Volume (vph)	6	22	41	521	510	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.998	
Flt Protected	0.989			0.996		
Satd. Flow (prot)	1539	0	0	1671	1778	0
Flt Permitted	0.989			0.996		
Satd. Flow (perm)	1539	0	0	1671	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	568			283	358	
Travel Time (s)	12.9			7.7	9.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	24	46	579	567	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	625	574	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.2%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings

33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↖	↗		↕			↕	
Traffic Volume (vph)	1	130	7	49	175	180	6	356	38	268	247	0
Future Volume (vph)	1	130	7	49	175	180	6	356	38	268	247	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		-2%			6%			5%				-5%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00	0.96		0.99				0.97
Frt		0.993				0.850		0.987				
Flt Protected					0.989			0.999				0.975
Satd. Flow (prot)	0	1406	0	0	1338	1136	0	1349	0	0	1367	0
Flt Permitted		0.998			0.911			0.994				0.608
Satd. Flow (perm)	0	1403	0	0	1229	1086	0	1342	0	0	829	0
Right Turn on Red			No			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25				25
Link Distance (ft)		642			805			212				283
Travel Time (s)		17.5			22.0			5.8				7.7
Confl. Peds. (#/hr)	14		7	7		14	18		41	41		18
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	3	0	0	0	3	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	1	137	7	52	184	189	6	375	40	282	260	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	236	189	0	421	0	0	542	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.23	1.42	1.23	1.30	1.47	1.49	1.29	1.46	1.29	1.21	1.38	1.21
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	23.0	23.0		13.0	13.0	13.0	23.0	23.0		19.0	19.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0	67.0	67.0		67.0	67.0	
Total Split (%)	33.0%	33.0%		33.0%	33.0%	33.0%	67.0%	67.0%		67.0%	67.0%	
Maximum Green (s)	27.0	27.0		27.0	27.0	27.0	61.0	61.0		61.0	61.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0				-2.0
Total Lost Time (s)		4.0			4.0	4.0		4.0				4.0

Lanes, Volumes, Timings
 33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0					10.0	10.0		6.0	6.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		29.0			29.0	29.0		63.0			63.0	
Actuated g/C Ratio		0.29			0.29	0.29		0.63			0.63	
v/c Ratio		0.36			0.66	0.60		0.50			1.04	
Control Delay		31.2			41.6	39.9		12.5			64.5	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		31.2			41.6	39.9		12.5			64.5	
LOS		C			D	D		B			E	
Approach Delay		31.2			40.9			12.5			64.5	
Approach LOS		C			D			B			E	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	9 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.04
Intersection Signal Delay:	40.5
Intersection LOS:	D
Intersection Capacity Utilization:	95.7%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 33: New Mexico Ave NW & Cathedral Ave NW



Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	242	0	128	156	4	85	591	234	4	751	27
Future Volume (vph)	23	242	0	128	156	4	85	591	234	4	751	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	10	10	10	10	10	10	10	10	10
Grade (%)		2%			4%			0%				1%
Storage Length (ft)	0		0	125		0	0		380	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.97	1.00			1.00	0.79		1.00	
Frt					0.996				0.850		0.995	
Flt Protected		0.996		0.950				0.994				
Satd. Flow (prot)	0	1855	0	1471	1542	0	0	1373	1174	0	2734	0
Flt Permitted		0.966		0.435				0.803			0.953	
Satd. Flow (perm)	0	1798	0	652	1542	0	0	1108	928	0	2605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1				244			6
Link Speed (mph)		25			25			30				30
Link Distance (ft)		110			1242			1410				726
Travel Time (s)		3.0			33.9			32.0				16.5
Confl. Peds. (#/hr)	2		38	38		2	14		51	51		14
Confl. Bikes (#/hr)			6			2			4			5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	4%	4%	4%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	7	0
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	24	252	0	133	163	4	89	616	244	4	782	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	276	0	133	167	0	0	705	244	0	814	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.28	1.28	1.28	1.25	1.42	1.42	1.26	1.28	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Minimum Split (s)	22.5	22.5		22.5	22.5		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	41.5	41.5		41.5	41.5		78.5	78.5	78.5	78.5	78.5	78.5
Total Split (%)	34.6%	34.6%		34.6%	34.6%		65.4%	65.4%	65.4%	65.4%	65.4%	65.4%
Maximum Green (s)	36.0	36.0		36.0	36.0		73.5	73.5	73.5	73.5	73.5	73.5
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5		1.5	1.5		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0			-2.0	-2.0		-2.0	
Total Lost Time (s)		3.5		3.5	3.5			3.0	3.0		3.0	

Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)		38.0		38.0	38.0			75.5	75.5			75.5
Actuated g/C Ratio		0.32		0.32	0.32			0.63	0.63			0.63
v/c Ratio		0.49		0.65	0.34			1.01	0.36			0.50
Control Delay		36.6		28.3	13.3			44.3	0.9			4.8
Queue Delay		0.0		0.0	0.0			0.0	0.0			0.0
Total Delay		36.6		28.3	13.3			44.3	0.9			4.8
LOS		D		C	B			D	A			A
Approach Delay		36.6			20.0			33.1				4.8
Approach LOS		D			B			C				A

Intersection Summary

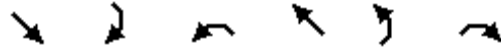
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	22.0
Intersection LOS:	C
Intersection Capacity Utilization:	107.0%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 34: Nebraska Ave NW & Van Ness St NW



Lanes, Volumes, Timings
35: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1254	7	18	706	0	6
Future Volume (vph)	1254	7	18	706	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	4%			-7%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999				0.865	
Flt Protected				0.999		
Satd. Flow (prot)	3234	0	0	3415	1504	0
Flt Permitted				0.999		
Satd. Flow (perm)	3234	0	0	3415	1504	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	222			628	141	
Travel Time (s)	5.0			14.3	3.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1393	8	20	784	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1401	0	0	804	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

36:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	40	9	129	97	1
Future Volume (vph)	18	40	9	129	97	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.999		
Flt Protected	0.985			0.997		
Satd. Flow (prot)	1553	0	0	1733	1737	0
Flt Permitted	0.985			0.997		
Satd. Flow (perm)	1553	0	0	1733	1737	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	426			119	97	
Travel Time (s)	9.7			2.7	2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	44	10	143	108	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	153	109	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	24.1% ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

37:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	6	1	149	107	21
Future Volume (vph)	37	6	1	149	107	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980			0.978		
Flt Protected	0.959					
Satd. Flow (prot)	1634	0	0	1739	1700	0
Flt Permitted	0.959					
Satd. Flow (perm)	1634	0	0	1739	1700	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	419			92	435	
Travel Time (s)	9.5			2.1	9.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	7	1	166	119	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	167	142	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	18.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
38: Warren St & 48th St

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	6	38	77	10	91
Future Volume (vph)	14	6	38	77	10	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959		0.909			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1611	0	1580	0	0	1730
Flt Permitted	0.966					0.995
Satd. Flow (perm)	1611	0	1580	0	0	1730
Link Speed (mph)	30		30			30
Link Distance (ft)	1057		526			383
Travel Time (s)	24.0		12.0			8.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	7	42	86	11	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	128	0	0	112
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

39: 48th St & Yuma St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	83	47	11	71	6	7	18	9	8	39	4
Future Volume (vph)	1	83	47	11	71	6	7	18	9	8	39	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.990			0.964			0.990	
Flt Protected					0.994			0.990			0.992	
Satd. Flow (prot)	0	1655	0	0	1711	0	0	1659	0	0	1707	0
Flt Permitted					0.994			0.990			0.992	
Satd. Flow (perm)	0	1655	0	0	1711	0	0	1659	0	0	1707	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			1099			383			277	
Travel Time (s)		5.9			25.0			8.7			6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	92	52	12	79	7	8	20	10	9	43	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	98	0	0	38	0	0	56	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	102	123	18	27	119	32	12	191	16	21	114	46
Future Volume (vph)	102	123	18	27	119	32	12	191	16	21	114	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	9	9	9	9	9	9
Grade (%)		9%			-9%			-5%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.84			0.87			0.97			0.91	
Frt		0.990			0.975			0.990			0.966	
Flt Protected		0.980			0.992			0.997			0.994	
Satd. Flow (prot)	0	1231	0	0	1254	0	0	1353	0	0	1237	0
Flt Permitted		0.814			0.929			0.983			0.954	
Satd. Flow (perm)	0	891	0	0	1129	0	0	1323	0	0	1162	0
Right Turn on Red			No			No			Yes			No
Satd. Flow (RTOR)								8				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		202			670			299			437	
Travel Time (s)		5.5			18.3			8.2			11.9	
Confl. Peds. (#/hr)	186		240	240		186	96		129	129		96
Confl. Bikes (#/hr)			3			2			1			2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	113	137	20	30	132	36	13	212	18	23	127	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	270	0	0	198	0	0	243	0	0	201	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.38	1.57	1.38	1.24	1.41	1.24	1.27	1.44	1.27	1.30	1.47	1.30
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	15.5	15.5		15.5	15.5		17.5	17.5		17.5	17.5	
Total Split (s)	25.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		48.3%	48.3%		48.3%	48.3%	
Maximum Green (s)	19.5	19.5		19.5	19.5		23.5	23.5		23.5	23.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0		8.0	8.0	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	5%	5%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020

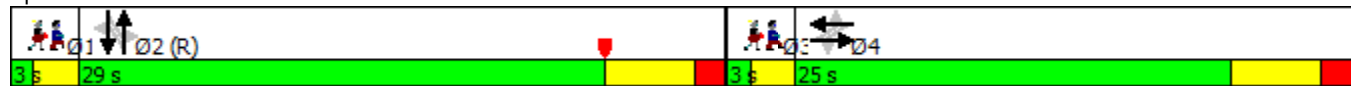


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.5			21.5			25.5			25.5	
Actuated g/C Ratio		0.36			0.36			0.42			0.42	
v/c Ratio		0.85			0.49			0.43			0.41	
Control Delay		45.3			11.3			14.7			15.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		45.3			11.3			14.7			15.2	
LOS		D			B			B			B	
Approach Delay		45.3			11.3			14.7			15.2	
Approach LOS		D			B			B			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	45 (75%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	55
Control Type:	Pretimed
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	23.1
Intersection LOS:	C
Intersection Capacity Utilization:	56.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 40: 42nd St & Albermarle St



Lane Group	Ø1	Ø3
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings
41: Macomb St & Loughboro St

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1191	38	1	967	29	4
Future Volume (vph)	1191	38	1	967	29	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996			0.985		
Flt Protected				0.957		
Satd. Flow (prot)	1732	0	0	1739	1639	0
Flt Permitted				0.957		
Satd. Flow (perm)	1732	0	0	1739	1639	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	299			1077	291	
Travel Time (s)	6.8			24.5	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1323	42	1	1074	32	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1365	0	0	1075	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

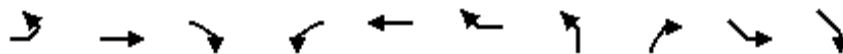
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.0%
Analysis Period (min)	15
	ICU Level of Service D

Lanes, Volumes, Timings

42: Chainbridge Rd & Loughboro Rd/Nebraska Ave NW & Indian Ln

08/31/2020















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations		↕			↕		↕		↕	
Traffic Volume (vph)	18	974	4	41	748	65	5	36	0	0
Future Volume (vph)	18	974	4	41	748	65	5	36	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.990		0.883			
Flt Protected		0.999			0.998		0.994			
Satd. Flow (prot)	0	1737	0	0	1718	0	1526	0	1739	0
Flt Permitted		0.999			0.998		0.994			
Satd. Flow (perm)	0	1737	0	0	1718	0	1526	0	1739	0
Link Speed (mph)		30			25		30		30	
Link Distance (ft)		1158			701		287		1445	
Travel Time (s)		26.3			19.1		6.5		32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1082	4	46	831	72	6	40	0	0
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	1106	0	0	949	0	46	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		0			0		10		10	
Link Offset(ft)		0			0		0		0	
Crosswalk Width(ft)		16			16		16		16	
Two way Left Turn Lane										
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15	9	15	9
Sign Control		Free			Free		Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.6%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑						↑↑	
Traffic Volume (vph)	0	1010	0	0	1416	287	0	0	0	243	748	29
Future Volume (vph)	0	1010	0	0	1416	287	0	0	0	243	748	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	11
Grade (%)		2%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor					0.99						1.00	
Frt					0.975						0.996	
Flt Protected											0.988	
Satd. Flow (prot)	0	2915	0	0	4151	0	0	0	0	0	2964	0
Flt Permitted											0.988	
Satd. Flow (perm)	0	2915	0	0	4151	0	0	0	0	0	2958	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			554			110			97	
Travel Time (s)		4.3			12.6			2.5			2.2	
Confl. Peds. (#/hr)	103		171	171		103				12		93
Confl. Bikes (#/hr)			9			8						3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	1031	0	0	1445	293	0	0	0	248	763	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1031	0	0	1738	0	0	0	0	0	1041	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm		NA
Protected Phases		15 6 1 2			15 6 1							3 4
Permitted Phases										3 4		
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		70.0			65.0						36.0	
Actuated g/C Ratio		0.58			0.54						0.30	
v/c Ratio		0.61			0.77						1.17	

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	34.0	5.0	43.0	5.0	9.0	19.0	82.0	10.0	14.0
Total Split (%)	28%	4%	36%	4%	8%	16%	68%	8%	12%
Maximum Green (s)	27.0	1.0	34.0	1.0	6.0	13.0	73.0	5.0	10.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									
v/c Ratio									

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Control Delay		9.3			4.2						114.2	
Queue Delay		0.8			0.2						0.0	
Total Delay		10.2			4.4						114.2	
LOS		B			A						F	
Approach Delay		10.2			4.4						114.2	
Approach LOS		B			A						F	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	109 (91%), Referenced to phase 1:NBSB and 11:., Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.17
Intersection Signal Delay:	36.0
Intersection LOS:	D
Intersection Capacity Utilization	137.5%
ICU Level of Service	H
Analysis Period (min)	15













Splits and Phases: 191: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑			↑↑				
Traffic Volume (vph)	0	771	136	0	1672	0	228	523	69	0	0	0
Future Volume (vph)	0	771	136	0	1672	0	228	523	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.99				
Frt		0.978						0.987				
Flt Protected								0.986				
Satd. Flow (prot)	0	2598	0	0	4040	0	0	2944	0	0	0	0
Flt Permitted								0.986				
Satd. Flow (perm)	0	2598	0	0	4040	0	0	2930	0	0	0	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			190			109			111	
Travel Time (s)		8.6			4.3			2.5			2.5	
Confl. Peds. (#/hr)	117		168	168		117	22		42			
Confl. Bikes (#/hr)			9			6			2			
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	34	0	0	0	0	0	0	0
Parking (#/hr)		0	0									
Adj. Flow (vph)	0	779	137	0	1689	0	230	528	70	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	916	0	0	1689	0	0	828	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.34	1.26	1.23	1.31	1.23	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		15 6 1			15 6 1 2			3 4				
Permitted Phases							3 4					
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		65.0			70.0			36.0				

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Bus Blockages (#/hr)									
Parking (#/hr)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	34.0	5.0	43.0	5.0	9.0	19.0	82.0	10.0	14.0
Total Split (%)	28%	4%	36%	4%	8%	16%	68%	8%	12%
Maximum Green (s)	27.0	1.0	34.0	1.0	6.0	13.0	73.0	5.0	10.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

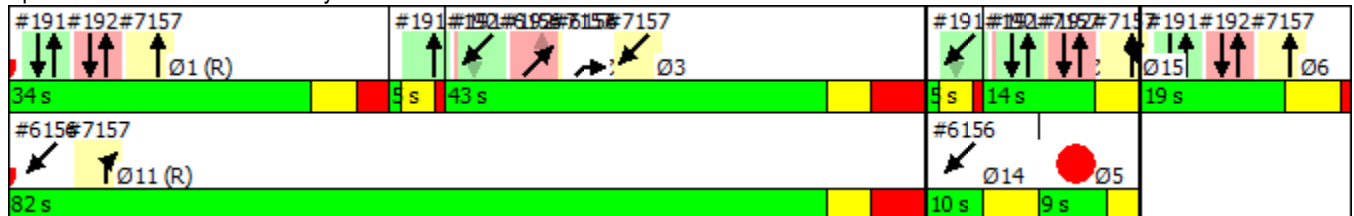


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.54			0.58			0.30				
v/c Ratio		0.65			0.72			0.94				
Control Delay		22.2			5.7			38.3				
Queue Delay		0.3			0.7			23.1				
Total Delay		22.5			6.4			61.4				
LOS		C			A			E				
Approach Delay		22.5			6.4			61.4				
Approach LOS		C			A			E				

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	109 (91%), Referenced to phase 1:NBSB and 11:., Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.17
Intersection Signal Delay:	24.0
Intersection LOS:	C
Intersection Capacity Utilization	137.5%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 192: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Actuated g/C Ratio									
v/c Ratio									
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Lane Configurations											
Traffic Volume (vph)	69	765	0	1240	0	0					
Future Volume (vph)	69	765	0	1240	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	11	11	10	10	12	12					
Lane Util. Factor	1.00	0.88	1.00	0.88	1.00	1.00					
Frt		0.850		0.850							
Flt Protected	0.950										
Satd. Flow (prot)	1540	2424	0	2341	0	0					
Flt Permitted	0.950										
Satd. Flow (perm)	1540	2424	0	2341	0	0					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		30		25						
Link Distance (ft)	193		471		250						
Travel Time (s)	5.3		10.7		6.8						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	77	850	0	1378	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	77	850	0	1378	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	11		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.19	1.19	1.25	1.25	1.14	1.14					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom		Prot							
Protected Phases	12	4 5		4			2	5	6	8	14
Permitted Phases											
Minimum Split (s)	16.0			29.0			17.0	10.0	11.0	20.0	13.0
Total Split (s)	58.0			62.0			58.0	47.0	11.0	62.0	62.0
Total Split (%)	48.3%			51.7%			48%	39%	9%	52%	52%
Maximum Green (s)	52.0			52.0			52.0	42.0	7.0	52.0	56.0
Yellow Time (s)	4.0			4.0			4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0			6.0			2.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)	-2.0			-2.0							
Total Lost Time (s)	4.0			8.0							
Lead/Lag								Lead	Lag		
Lead-Lag Optimize?											
Walk Time (s)				7.0			7.0			4.0	
Flash Dont Walk (s)				12.0			4.0			6.0	
Pedestrian Calls (#/hr)				0			0			0	
Act Effct Green (s)	54.0	101.0		54.0							
Actuated g/C Ratio	0.45	0.84		0.45							
v/c Ratio	0.11	0.42		1.31							
Control Delay	28.5	1.1		168.2							
Queue Delay	5.1	0.4		0.0							

Lanes, Volumes, Timings
 401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Total Delay	33.6	1.5		168.2							
LOS	C	A		F							
Approach Delay	4.2		168.2								
Approach LOS	A		F								

Intersection Summary

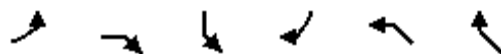
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	102.3
Intersection LOS:	F
Intersection Capacity Utilization	54.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 401: Ward Cir NW & Massachusetts Ave NW

#403#404 Ø2 (R) 58 s	#401 Ø4 62 s
#401#402 Ø5 47 s	#402 Ø8 62 s
#401#402 Ø12 58 s	#403#404 Ø14 62 s

Lanes, Volumes, Timings
402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Lane Configurations											
Traffic Volume (vph)	101	1241	0	0	0	841					
Future Volume (vph)	101	1241	0	0	0	841					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	10	10	9	9	10	10					
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	0.88					
Frt		0.850				0.850					
Flt Protected	0.950										
Satd. Flow (prot)	1486	2341	0	0	0	2341					
Flt Permitted	0.950										
Satd. Flow (perm)	1486	2341	0	0	0	2341					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		25		25						
Link Distance (ft)	219		260		345						
Travel Time (s)	6.0		7.1		9.4						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	112	1379	0	0	0	934					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	112	1379	0	0	0	934					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	10		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.25	1.25	1.30	1.30	1.25	1.25					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom				Prot					
Protected Phases	12	8 5				8	2	4	5	6	14
Permitted Phases											
Minimum Split (s)	16.0					20.0	17.0	29.0	10.0	11.0	13.0
Total Split (s)	58.0					62.0	58.0	62.0	47.0	11.0	62.0
Total Split (%)	48.3%					51.7%	48%	52%	39%	9%	52%
Maximum Green (s)	52.0					52.0	52.0	52.0	42.0	7.0	56.0
Yellow Time (s)	4.0					4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0					6.0	2.0	6.0	1.0	0.0	2.0
Lost Time Adjust (s)	-2.0					-2.0					
Total Lost Time (s)	4.0					8.0					
Lead/Lag									Lead	Lag	
Lead-Lag Optimize?											
Walk Time (s)						4.0	7.0	7.0			
Flash Dont Walk (s)						6.0	4.0	12.0			
Pedestrian Calls (#/hr)						0	0	0			
Act Effct Green (s)	54.0	101.0				54.0					
Actuated g/C Ratio	0.45	0.84				0.45					
v/c Ratio	0.17	0.70				0.89					
Control Delay	26.3	3.7				42.0					
Queue Delay	5.6	5.9				0.0					

Lanes, Volumes, Timings
 402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Total Delay	31.9	9.7									
LOS	C	A									
Approach Delay	11.3				42.0						
Approach LOS	B				D						

Intersection Summary

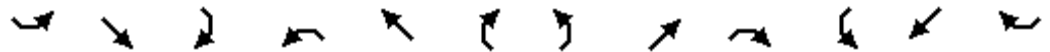
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	23.1
Intersection LOS:	C
Intersection Capacity Utilization	54.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 402: Massachusetts Ave NW & Ward Cir NW

#403#404 Ø2 (R) 58 s	#401 Ø4 62 s
#401#402 Ø5 47 s	#402 Ø6 11 s
#401#402 Ø12 58 s	#403#404 Ø8 62 s
	#403#404 Ø14 62 s

Lanes, Volumes, Timings
403: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑↑	↑					↑↑			↑↑	
Traffic Volume (vph)	43	1076	155	0	0	0	0	998	266	0	1045	0
Future Volume (vph)	43	1076	155	0	0	0	0	998	266	0	1045	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	12	12	12	9	9	9	10	10	10
Grade (%)		1%			0%			-1%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.92					1.00				
Frt			0.850					0.968				
Flt Protected		0.998										
Satd. Flow (prot)	0	4051	1264	0	0	0	0	2755	0	0	2888	0
Flt Permitted		0.998										
Satd. Flow (perm)	0	4051	1167	0	0	0	0	2755	0	0	2888	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		250			219			372			300	
Travel Time (s)		6.8			6.0			8.5			8.2	
Confl. Peds. (#/hr)			99									
Confl. Bikes (#/hr)			10						1			3
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	43	1087	157	0	0	0	0	1008	269	0	1056	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1130	157	0	0	0	0	1277	0	0	1056	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.31	1.31	1.14	1.14	1.14	1.30	1.30	1.30	1.25	1.25	1.25
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA	Perm					NA			NA	
Protected Phases	14	14						2			2	
Permitted Phases			14									
Minimum Split (s)	13.0	13.0	13.0					17.0			17.0	
Total Split (s)	62.0	62.0	62.0					58.0			58.0	
Total Split (%)	51.7%	51.7%	51.7%					48.3%			48.3%	
Maximum Green (s)	56.0	56.0	56.0					52.0			52.0	
Yellow Time (s)	4.0	4.0	4.0					4.0			4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0			2.0	
Lost Time Adjust (s)		-2.0	-2.0					-2.0			-2.0	
Total Lost Time (s)		4.0	4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	62.0	47.0	11.0	62.0	58.0
Total Split (%)	52%	39%	9%	52%	48%
Maximum Green (s)	52.0	42.0	7.0	52.0	52.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?					

Lanes, Volumes, Timings
403: Nebraska Ave NW & Ward Cir NW

08/31/2020

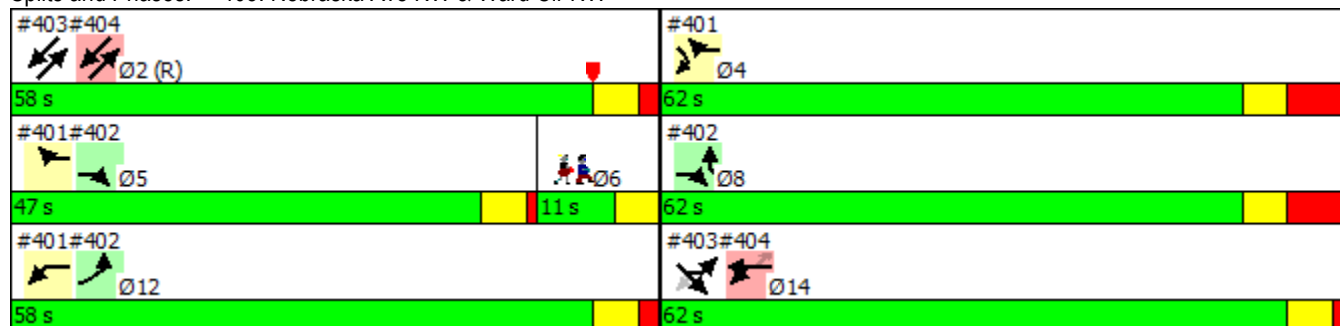


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		58.0	58.0					54.0			54.0	
Actuated g/C Ratio		0.48	0.48					0.45			0.45	
v/c Ratio		0.58	0.28					1.03			0.81	
Control Delay		5.7	5.5					52.2			13.7	
Queue Delay		7.1	2.3					8.6			2.3	
Total Delay		12.7	7.9					60.8			16.0	
LOS		B	A					E			B	
Approach Delay		12.1						60.8			16.0	
Approach LOS		B						E			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	30.4
Intersection LOS:	C
Intersection Capacity Utilization	70.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 403: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑	↑		↑↑			↑↑	
Traffic Volume (vph)	0	0	0	171	714	99	0	1055	0	0	842	118
Future Volume (vph)	0	0	0	171	714	99	0	1055	0	0	842	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	10	10	10	10	10	10
Grade (%)		0%			2%			0%				-1%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor					1.00	0.96					1.00	
Frt						0.850					0.982	
Flt Protected					0.990							
Satd. Flow (prot)	0	0	0	0	3998	1257	0	2916	0	0	2782	0
Flt Permitted					0.990							
Satd. Flow (perm)	0	0	0	0	3997	1205	0	2916	0	0	2782	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25				30
Link Distance (ft)		193			260			300				737
Travel Time (s)		5.3			7.1			8.2				16.8
Confl. Peds. (#/hr)				1		47	1		1	1		1
Confl. Bikes (#/hr)						2			1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	11	11
Adj. Flow (vph)	0	0	0	180	752	104	0	1111	0	0	886	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	932	104	0	1111	0	0	1010	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.32	1.32	1.32	1.25	1.25	1.25	1.24	1.27	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Split	NA	Perm		NA			NA	
Protected Phases				14	14			2			2	
Permitted Phases						14						
Minimum Split (s)				13.0	13.0	13.0		17.0			17.0	
Total Split (s)				62.0	62.0	62.0		58.0			58.0	
Total Split (%)				51.7%	51.7%	51.7%		48.3%			48.3%	
Maximum Green (s)				56.0	56.0	56.0		52.0			52.0	
Yellow Time (s)				4.0	4.0	4.0		4.0			4.0	
All-Red Time (s)				2.0	2.0	2.0		2.0			2.0	
Lost Time Adjust (s)					-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)					4.0	4.0		4.0			4.0	
Lead/Lag												

Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Bus Blockages (#/hr)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	62.0	47.0	11.0	62.0	58.0
Total Split (%)	52%	39%	9%	52%	48%
Maximum Green (s)	52.0	42.0	7.0	52.0	52.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		

Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

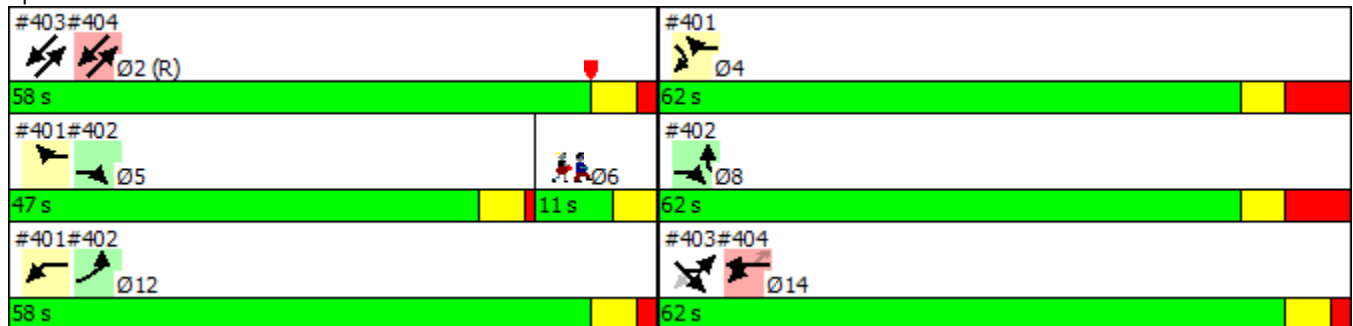


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)					58.0	58.0		54.0			54.0	
Actuated g/C Ratio					0.48	0.48		0.45			0.45	
v/c Ratio					0.48	0.18		0.85			0.81	
Control Delay					7.1	6.9		12.9			27.5	
Queue Delay					0.8	0.0		10.6			0.5	
Total Delay					7.8	6.9		23.5			28.0	
LOS					A	A		C			C	
Approach Delay					7.7			23.5			28.0	
Approach LOS					A			C			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	19.8
Intersection LOS:	B
Intersection Capacity Utilization	70.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 404: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lead-Lag Optimize?					
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↑	↗		↖	↗		↔	
Traffic Volume (vph)	24	1051	98	19	1142	53	65	8	88	25	27	58
Future Volume (vph)	24	1051	98	19	1142	53	65	8	88	25	27	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-4%			-1%			5%	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.87		0.97	0.81		0.92	
Frt		0.987				0.850			0.850		0.928	
Flt Protected		0.999			0.999			0.957			0.989	
Satd. Flow (prot)	0	2714	0	0	1610	1370	0	1435	1274	0	1354	0
Flt Permitted		0.828			0.967			0.592			0.924	
Satd. Flow (perm)	0	2249	0	0	1559	1194	0	861	1031	0	1197	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21				27			93		43	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		628			471			361			221	
Travel Time (s)		14.3			10.7			9.8			6.0	
Confl. Peds. (#/hr)	30		38	38		30	23		127	127		23
Confl. Bikes (#/hr)			8			3						2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	7%	7%	7%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	5	5	5
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	25	1106	103	20	1202	56	68	8	93	26	28	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1234	0	0	1222	56	0	76	93	0	115	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.36	1.28	1.22	1.22	1.22	1.24	1.24	1.24	1.29	1.32	1.29
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left			Left		Right	Left		Right	Left		
Leading Detector (ft)	20	20		20	20	20	20	20	20	20	20	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20		20	20	20	20	20	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA	custom	Perm	NA	Perm	Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2		4	8		8	4		

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	6	6		2	2	4	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	20.0	20.0		18.0	18.0	22.5	12.5	12.5	12.5	22.5	22.5	
Total Split (s)	91.5	91.5		91.5	91.5	28.5	28.5	28.5	28.5	28.5	28.5	
Total Split (%)	76.3%	76.3%		76.3%	76.3%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	
Maximum Green (s)	85.5	85.5		85.5	85.5	23.0	23.0	23.0	23.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)		4.0			4.0	3.5		3.5	3.5		3.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max	None	None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	
Flash Dont Walk (s)	7.0	7.0		5.0	5.0	10.0				10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0	150				150	150	
Act Effct Green (s)		92.3			92.3	20.2		20.2	20.2		20.2	
Actuated g/C Ratio		0.77			0.77	0.17		0.17	0.17		0.17	
v/c Ratio		0.71			1.02	0.25		0.52	0.37		0.49	
Control Delay		8.4			44.5	45.8		59.0	12.8		35.1	
Queue Delay		1.1			1.1	0.0		0.0	1.3		2.6	
Total Delay		9.5			45.5	45.8		59.0	14.1		37.7	
LOS		A			D	D		E	B		D	
Approach Delay		9.5			45.6			34.2			37.7	
Approach LOS		A			D			C			D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7 (6%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 28.6
 Intersection LOS: C
 Intersection Capacity Utilization 105.2%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW



Lanes, Volumes, Timings
 2: Massachusetts Ave NW & 45th St

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	35	1159	1208	37	57	9
Future Volume (vph)	35	1159	1208	37	57	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		4%	-7%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.996		0.982	
Flt Protected		0.999			0.959	
Satd. Flow (prot)	0	3234	3405	0	1637	0
Flt Permitted		0.999			0.959	
Satd. Flow (perm)	0	3234	3405	0	1637	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		246	222		156	
Travel Time (s)		5.6	5.0		3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	1288	1342	41	63	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1327	1383	0	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.7%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020

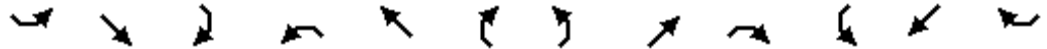


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑						↑↓	
Traffic Volume (vph)	2	1052	6	35	1071	97	0	0	0	91	34	3
Future Volume (vph)	2	1052	6	35	1071	97	0	0	0	91	34	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	9	9	9
Grade (%)		7%			-7%			0%			7%	
Storage Length (ft)	0		90	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.98		1.00						1.00	
Frt			0.850		0.988						0.997	
Flt Protected					0.999						0.966	
Satd. Flow (prot)	0	2725	1132	0	3001	0	0	0	0	0	1287	0
Flt Permitted		0.954			0.881						0.966	
Satd. Flow (perm)	0	2600	1108	0	2646	0	0	0	0	0	1287	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23		22						1	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		586			229			148			119	
Travel Time (s)		13.3			5.2			4.0			3.2	
Confl. Peds. (#/hr)	8					8						2
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	5	0	5	0	0	0	0	0	0	0
Parking (#/hr)		0	0							0	0	0
Adj. Flow (vph)	2	1085	6	36	1104	100	0	0	0	94	35	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1087	6	0	1240	0	0	0	0	0	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.30	1.39	1.52	1.20	1.21	1.20	1.14	1.14	1.14	1.36	1.55	1.36
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA					Split	NA	
Protected Phases		6			2					4	4	
Permitted Phases	6		6	2								
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5					23.5	23.5	
Total Split (s)	94.0	94.0	94.0	94.0	94.0					26.0	26.0	
Total Split (%)	78.3%	78.3%	78.3%	78.3%	78.3%					21.7%	21.7%	
Maximum Green (s)	88.5	88.5	88.5	88.5	88.5					20.5	20.5	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5					4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0					1.5	1.5	
Lost Time Adjust (s)		-2.0	-2.0		-2.0						-2.0	
Total Lost Time (s)		3.5	3.5		3.5						3.5	

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effect Green (s)		90.5	90.5		90.5							22.5
Actuated g/C Ratio		0.75	0.75		0.75							0.19
v/c Ratio		0.55	0.01		0.62							0.55
Control Delay		9.6	0.3		4.9							57.4
Queue Delay		0.0	0.0		0.0							0.0
Total Delay		9.6	0.3		4.9							57.4
LOS		A	A		A							E
Approach Delay		9.6			4.9							57.4
Approach LOS		A			A							E

Intersection Summary




















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	28 (23%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	9.8
Intersection LOS:	A
Intersection Capacity Utilization	86.5%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: Tilden St NW/46th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	6	43	51	62	40	259	0	910	34	239	926	75
Future Volume (vph)	6	43	51	62	40	259	0	910	34	239	926	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	10	10	10	10	10	10
Grade (%)		15%			-1%			2%			-1%	
Storage Length (ft)	0		0	220		5	0		0	0		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.96		0.97		0.72		1.00			0.99	
Frt		0.932				0.850		0.995			0.989	
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1428	0	1494	1554	1321	0	2894	0	1494	1501	0
Flt Permitted		0.985		0.548						0.140		
Satd. Flow (perm)	0	1388	0	836	1554	955	0	2894	0	220	1501	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				66		4			10	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			330			349			396	
Travel Time (s)		9.5			9.0			7.9			9.0	
Confl. Peds. (#/hr)	120		19	19		120	35		28	28		35
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	3	3	0	0	0	0	6	0
Adj. Flow (vph)	7	47	55	67	43	282	0	989	37	260	1007	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	0	67	43	282	0	1026	0	260	1089	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.24	1.26	1.26	1.26	1.26	1.26	1.24	1.28	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	pm+ov		NA		pm+pt	NA	
Protected Phases		8			4	5		6		5	2	
Permitted Phases	8			4		4				2		
Minimum Split (s)	23.5	23.5		21.5	21.5	10.5		25.5		10.5	21.5	
Total Split (s)	24.0	24.0		24.0	24.0	36.0		57.0		36.0	93.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	30.0%		47.5%		30.0%	77.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5	30.5		51.5		30.5	87.5	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5		1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		3.5		3.5	3.5	3.5		3.5		3.5	3.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lead		Lag		Lead		

Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

Lane Group	Ø14	Ø18
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	14	18
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	3%	3%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead

Lanes, Volumes, Timings

5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		12.0	12.0			13.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effect Green (s)		20.5		20.5	20.5	53.0		53.5		89.5	89.5	
Actuated g/C Ratio		0.17		0.17	0.17	0.44		0.45		0.75	0.75	
v/c Ratio		0.41		0.47	0.16	0.51		0.79		0.51	0.97	
Control Delay		34.2		57.1	44.4	21.5		25.0		15.6	36.0	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.3	41.2	
Total Delay		34.2		57.1	44.4	21.5		25.0		15.9	77.2	
LOS		C		E	D	C		C		B	E	
Approach Delay		34.2			30.1			25.0			65.4	
Approach LOS		C			C			C			E	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 66 (55%), Referenced to phase 2:SWTL and 6:NET, Start of Yellow
 Natural Cycle: 110
 Control Type: Pretimed
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 45.0
 Intersection LOS: D
 Intersection Capacity Utilization 79.4%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: Nebraska Ave NW & New Mexico Ave NW/Entrance



Lane Group	Ø14	Ø18
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

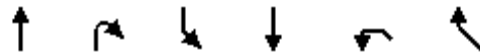
Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

	↑	↖	↙	↓	↘	↗	
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Lane Configurations	↑↑			↑↑		↗	
Traffic Volume (vph)	1144	43	3	1274	3	40	
Future Volume (vph)	1144	43	3	1274	3	40	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	-1%			-1%	0%		
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	
Flt	0.995					0.865	
Flt Protected					0.950		
Satd. Flow (prot)	3539	0	0	3557	0	1611	
Flt Permitted				0.952	0.950		
Satd. Flow (perm)	3539	0	0	3386	0	1611	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	5					296	
Link Speed (mph)	30			30	25		
Link Distance (ft)	396			372	208		
Travel Time (s)	9.0			8.5	5.7		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	1271	48	3	1416	3	44	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1319	0	0	1419	3	44	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	0			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00	
Turning Speed (mph)		9	15		15	9	
Number of Detectors	1		1	1	1	1	
Detector Template			Left		Left	Right	
Leading Detector (ft)	20		20	20	20	20	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		20	20	20	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	Perm	
Protected Phases	2			2	6		4
Permitted Phases			2			6	
Detector Phase	2		2	2	6	6	
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0	4.0	4.0	10.0
Minimum Split (s)	20.0		20.0	20.0	20.5	20.5	26.0
Total Split (s)	92.0		92.0	92.0	20.5	20.5	28.0
Total Split (%)	65.5%		65.5%	65.5%	14.6%	14.6%	20%

Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020



Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Maximum Green (s)	82.0		82.0	82.0	16.0	16.0	24.0
Yellow Time (s)	9.0		9.0	9.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	0.5	0.5	0.0
Lost Time Adjust (s)	-2.0			-2.0		-2.0	
Total Lost Time (s)	8.0			8.0		2.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0	1.0	3.0	3.0	1.0
Recall Mode	C-Max		C-Max	C-Max	None	None	None
Walk Time (s)					5.0	5.0	10.0
Flash Dont Walk (s)					11.0	11.0	12.0
Pedestrian Calls (#/hr)					0	0	5
Act Effect Green (s)	114.6			114.6	0.0	13.8	
Actuated g/C Ratio	0.82			0.82	0.00	0.10	
v/c Ratio	0.46			0.51	no cap	0.10	
Control Delay	7.2			8.0		0.5	
Queue Delay	1.0			1.5		0.0	
Total Delay	8.2			9.5	Error	0.5	
LOS	A			A	F	A	
Approach Delay	8.2			9.5	Err		
Approach LOS	A			A	F		

Intersection Summary

Area Type:	Other
Cycle Length:	140.5
Actuated Cycle Length:	140.5
Offset:	55 (39%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	Err
Intersection Signal Delay:	Err
Intersection LOS:	F
Intersection Capacity Utilization Err%:	ICU Level of Service H
Analysis Period (min):	15

Splits and Phases: 6: Nebraska Ave NW



Lanes, Volumes, Timings
7: New Mexico Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	282	333	4	3	33
Future Volume (vph)	10	282	333	4	3	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	7%		0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.999		0.875	
Flt Protected		0.998			0.996	
Satd. Flow (prot)	0	3280	1676	0	1515	0
Flt Permitted		0.998			0.996	
Satd. Flow (perm)	0	3280	1676	0	1515	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		330	250		221	
Travel Time (s)		9.0	6.8		5.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	313	370	4	3	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	324	374	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.14	1.14	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	27.8%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
8: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	943	18	9	1235	3	1
Future Volume (vph)	943	18	9	1235	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-4%			0%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.997				0.966	
Flt Protected					0.964	
Satd. Flow (prot)	3359	0	0	3303	1619	0
Flt Permitted					0.964	
Satd. Flow (perm)	3359	0	0	3303	1619	0
Link Speed (mph)	30			25	30	
Link Distance (ft)	156			565	277	
Travel Time (s)	3.5			15.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1048	20	10	1372	3	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1068	0	0	1382	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.4%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
9: Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↔	
Traffic Volume (vph)	2	953	1213	4	15	51
Future Volume (vph)	2	953	1213	4	15	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	0%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt					0.896	
Flt Protected					0.989	
Satd. Flow (prot)	0	3369	3303	0	1541	0
Flt Permitted					0.989	
Satd. Flow (perm)	0	3369	3303	0	1541	0
Link Speed (mph)		30	25		30	
Link Distance (ft)		345	156		342	
Travel Time (s)		7.8	4.3		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	1059	1348	4	17	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1061	1352	0	74	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
10: Nebraska Ave NW

08/31/2020



Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	1	37	919	1	22	1051
Future Volume (vph)	1	37	919	1	22	1051
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.868					
Flt Protected	0.999					0.999
Satd. Flow (prot)	1508	0	3270	0	0	3316
Flt Permitted	0.999					0.999
Satd. Flow (perm)	1508	0	3270	0	0	3316
Link Speed (mph)	30		30			30
Link Distance (ft)	220		291			349
Travel Time (s)	5.0		6.6			7.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	41	1021	1	24	1168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	1022	0	0	1192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.11	1.11	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

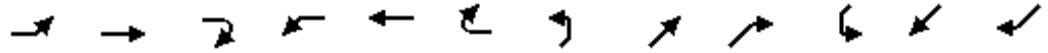
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.7%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	55	70	2	51	67	74	52	789	29	4	899	96
Future Volume (vph)	55	70	2	51	67	74	52	789	29	4	899	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15	10	10	10	10	10	10
Grade (%)		6%			-1%			-2%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.98			1.00			1.00	
Frt		0.998			0.948			0.995			0.986	
Flt Protected		0.979			0.987			0.997				
Satd. Flow (prot)	0	1620	0	0	1722	0	0	2942	0	0	2932	0
Flt Permitted		0.714			0.876			0.795			0.952	
Satd. Flow (perm)	0	1173	0	0	1525	0	0	2345	0	0	2792	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		1						7			22	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		270			279			717			291	
Travel Time (s)		7.4			7.6			16.3			6.6	
Confl. Peds. (#/hr)	18		6	6		18	9		19	19		9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	60	77	2	56	74	81	57	867	32	4	988	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	211	0	0	956	0	0	1097	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.19	1.19	1.19	1.01	1.01	1.01	1.23	1.23	1.23	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	26.0	26.0		26.0	26.0		25.0	25.0		25.0	25.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		82.0	82.0		82.0	82.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		28.0			28.0			84.0			84.0	

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.23			0.23			0.70			0.70	
v/c Ratio		0.51			0.59			0.58			0.56	
Control Delay		47.3			48.9			4.9			4.9	
Queue Delay		0.0			14.4			0.0			0.3	
Total Delay		47.3			63.3			4.9			5.2	
LOS		D			E			A			A	
Approach Delay		47.3			63.3			4.9			5.2	
Approach LOS		D			E			A			A	

Intersection Summary

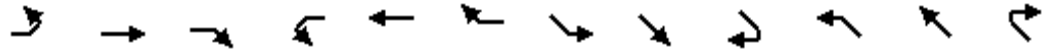
Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 76 (63%), Referenced to phase 2:NESW, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 12.6 Intersection LOS: B
 Intersection Capacity Utilization 84.9% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW



Lanes, Volumes, Timings
 12: Indian Ln/Rockwood Pkwy & Glenbrook Ave

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕↔			↕↔	
Traffic Volume (vph)	27	22	5	1	17	13	20	23	37	9	74	0
Future Volume (vph)	27	22	5	1	17	13	20	23	37	9	74	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.986			0.944			0.938				
Fl _t Protected		0.976			0.999			0.988			0.995	
Satd. Flow (prot)	0	1673	0	0	1640	0	0	1611	0	0	1730	0
Fl _t Permitted		0.976			0.999			0.988			0.995	
Satd. Flow (perm)	0	1673	0	0	1640	0	0	1611	0	0	1730	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		425			322			322			1445	
Travel Time (s)		9.7			7.3			7.3			32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	24	6	1	19	14	22	26	41	10	82	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	0	0	34	0	0	89	0	0	92	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 13: Rockwood Pkwy NW & Fletcher Gate

08/31/2020



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	57	141	106	124	20
Future Volume (vph)	5	57	141	106	124	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		6%	0%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.942		0.981	
Flt Protected		0.996			0.959	
Satd. Flow (prot)	0	1680	1638	0	1636	0
Flt Permitted		0.996			0.959	
Satd. Flow (perm)	0	1680	1638	0	1636	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		155	270		285	
Travel Time (s)		4.2	7.4		6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	63	157	118	138	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	69	275	0	160	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 14: 47th St & Massachusetts Ave NW

08/31/2020

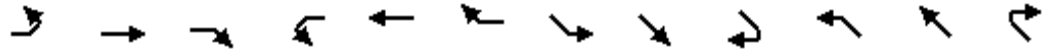
												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	72	656	4	2	1040	16
Future Volume (vph)	0	0	0	0	0	0	72	656	4	2	1040	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%				-3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt								0.999				0.998
Flt Protected								0.995				
Satd. Flow (prot)	0	1739	0	0	1739	0	0	3169	0	0	3346	0
Flt Permitted								0.995				
Satd. Flow (perm)	0	1739	0	0	1739	0	0	3169	0	0	3346	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			181			228			586	
Travel Time (s)		7.1			4.1			5.2			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0	80	729	4	2	1156	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	813	0	0	1176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.3%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
 15: Massachusetts Ave NW & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	2	16	21	15	110	64	1057	1	11	1009	21
Future Volume (vph)	0	2	16	21	15	110	64	1057	1	11	1009	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.878			0.898						0.997	
Flt Protected					0.993			0.997			0.999	
Satd. Flow (prot)	0	1526	0	0	1550	0	0	3178	0	0	3339	0
Flt Permitted					0.993			0.997			0.999	
Satd. Flow (perm)	0	1526	0	0	1550	0	0	3178	0	0	3339	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		452			169			704			228	
Travel Time (s)		10.3			3.8			16.0			5.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	2	18	23	17	122	71	1174	1	12	1121	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	162	0	0	1246	0	0	1156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

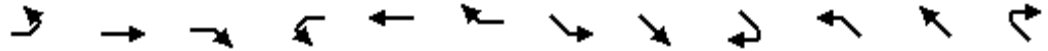
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	85.4%
ICU Level of Service	E
Analysis Period (min)	15

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020

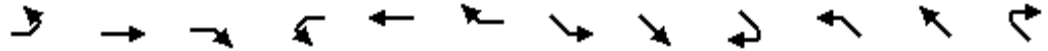


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	22	15	37	33	12	25	11	1046	7	19	1065	23
Future Volume (vph)	22	15	37	33	12	25	11	1046	7	19	1065	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-6%			3%			-3%	
Storage Length (ft)	50		0	150		0	0		0	0		140
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.98	0.99		0.99	0.97			1.00				1.00
Frt		0.893			0.899			0.999				0.997
Flt Protected	0.950			0.950				0.999				0.999
Satd. Flow (prot)	1298	1204	0	1446	1334	0	0	2951	0	0	3003	0
Flt Permitted	0.731			0.720				0.937				0.917
Satd. Flow (perm)	974	1204	0	1089	1334	0	0	2768	0	0	2757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			27			2				5
Link Speed (mph)		25			25			30				30
Link Distance (ft)		433			204			758				704
Travel Time (s)		11.8			5.6			17.2				16.0
Confl. Peds. (#/hr)	16		4	4		16	2		17	17		2
Confl. Bikes (#/hr)									3			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	8%	8%	8%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	5	0	5	5
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	24	16	40	36	13	27	12	1137	8	21	1158	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	56	0	36	40	0	0	1157	0	0	1204	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.45	1.45	1.28	1.20	1.20	1.20	1.27	1.27	1.27	1.22	1.24	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6				2
Permitted Phases	4			8			6			2		
Minimum Split (s)	28.0	28.0		28.0	28.0		15.0	15.0		15.0	15.0	
Total Split (s)	28.0	28.0		28.0	28.0		92.0	92.0		92.0	92.0	
Total Split (%)	23.3%	23.3%		23.3%	23.3%		76.7%	76.7%		76.7%	76.7%	
Maximum Green (s)	22.0	22.0		22.0	22.0		87.0	87.0		87.0	87.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.0			3.0	

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	15.0	15.0		15.0	15.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effect Green (s)	24.0	24.0		24.0	24.0			89.0			89.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.74	
v/c Ratio	0.12	0.21		0.17	0.14			0.56			0.59	
Control Delay	41.4	19.4		42.2	20.7			4.6			14.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	41.4	19.4		42.2	20.7			4.6			14.6	
LOS	D	B		D	C			A			B	
Approach Delay		26.0			30.8			4.6			14.6	
Approach LOS		C			C			A			B	

Intersection Summary




















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	89 (74%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization	73.6%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 16: Massachusetts Ave NW & Fordham Rd NW/48th St NW



Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	65	86	9	28	55	6	93	1003	60	37	965	74
Future Volume (vph)	65	86	9	28	55	6	93	1003	60	37	965	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	11	11	11	11	11	11
Grade (%)		-1%			-3%			-2%				3%
Storage Length (ft)	85		0	70		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		1.00	1.00			1.00			1.00	
Flt		0.985			0.986			0.992			0.990	
Flt Protected	0.950			0.950				0.996			0.998	
Satd. Flow (prot)	1309	1355	0	1484	1535	0	0	3066	0	0	2981	0
Flt Permitted	0.715			0.641				0.659			0.852	
Satd. Flow (perm)	961	1355	0	997	1535	0	0	2029	0	0	2545	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			4			13			11	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		565			328			700			758	
Travel Time (s)		15.4			8.9			15.9			17.2	
Confl. Peds. (#/hr)	16		3	3		16	12		4	4		12
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	5	0	5	0
Parking (#/hr)	0	0										
Adj. Flow (vph)	69	91	10	30	59	6	99	1067	64	39	1027	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	101	0	30	65	0	0	1230	0	0	1145	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		9			9			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.47	1.47	1.30	1.28	1.28	1.28	1.18	1.19	1.18	1.22	1.23	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			4		5	2			6	
Permitted Phases	4			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		10.0	19.5		19.5	19.5	
Total Split (s)	27.5	27.5		27.5	27.5		17.0	92.5		75.5	75.5	
Total Split (%)	22.9%	22.9%		22.9%	22.9%		14.2%	77.1%		62.9%	62.9%	
Maximum Green (s)	21.5	21.5		21.5	21.5		12.0	87.0		70.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.5	1.5	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.5			3.5	

Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag							Lead			Lag		
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)	23.5	23.5		23.5	23.5			89.0			72.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.60	
v/c Ratio	0.37	0.38		0.15	0.21			0.76			0.75	
Control Delay	48.4	45.0		42.5	40.2			10.8			5.2	
Queue Delay	0.0	0.0		0.0	0.0			1.2			0.0	
Total Delay	48.4	45.0		42.5	40.2			12.0			5.2	
LOS	D	D		D	D			B			A	
Approach Delay		46.4			40.9			12.0			5.2	
Approach LOS		D			D			B			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	87 (73%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	12.3
Intersection LOS:	B
Intersection Capacity Utilization:	97.0%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 17: 49th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	227	61	42	278	43	10	1195	20	6	968	55
Future Volume (vph)	51	227	61	42	278	43	10	1195	20	6	968	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		5%			2%			-1%			1%	
Storage Length (ft)	70		0	110		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor	0.98	0.98		0.97	0.99			0.99			0.97	
Frt		0.968			0.980			0.998			0.992	
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1464	1466	0	1501	1533	0	0	2928	0	0	3942	0
Flt Permitted	0.296			0.347				0.943			0.934	
Satd. Flow (perm)	445	1466	0	531	1533	0	0	2758	0	0	3682	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		11						2			13	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		1242			419			367			319	
Travel Time (s)		33.9			11.4			8.3			7.3	
Confl. Peds. (#/hr)	35		40	40		35	202		114	114		202
Confl. Bikes (#/hr)						5			4			7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	25
Parking (#/hr)											0	0
Adj. Flow (vph)	53	234	63	43	287	44	10	1232	21	6	998	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	297	0	43	331	0	0	1263	0	0	1061	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.29	1.29	1.29	1.26	1.26	1.26	1.24	1.24	1.24	1.26	1.31	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			2			1	6
Permitted Phases	8			4			2				6	
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		11.0	18.0	
Total Split (s)	37.0	37.0		37.0	37.0		66.0	66.0		11.0	77.0	
Total Split (%)	30.8%	30.8%		30.8%	30.8%		55.0%	55.0%		9.2%	64.2%	
Maximum Green (s)	31.0	31.0		31.0	31.0		60.0	60.0		5.0	71.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lag	Lag					Lag	Lag	

Lane Group	Ø3	Ø5	Ø7	Ø11
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	3	5	7	11
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead

Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		4.0	4.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		7.0	7.0		1.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	33.0	33.0		33.0	33.0			62.0			73.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28			0.52			0.61	
v/c Ratio	0.43	0.72		0.29	0.79			0.89			0.47	
Control Delay	50.8	50.9		41.1	54.9			34.9			6.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.4	
Total Delay	50.8	50.9		41.1	54.9			34.9			6.9	
LOS	D	D		D	D			C			A	
Approach Delay		50.8			53.3			34.9			6.9	
Approach LOS		D			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	17 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	29.3
Intersection LOS:	C
Intersection Capacity Utilization:	80.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 18: WISCONSIN AVE & Van Ness St



Lane Group	Ø3	Ø5	Ø7	Ø11
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

20: Nebraska Ave & Warren St & Nebraska Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SWL2	SWL	SWR
Lane Configurations		↕			↕		↕	↕		↕	
Traffic Volume (vph)	0	1	3	18	7	10	18	23	28	669	0
Future Volume (vph)	0	1	3	18	7	10	18	23	28	669	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%		-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95
Frt		0.899			0.962		0.975	0.850			
Flt Protected					0.975		0.960			0.950	
Satd. Flow (prot)	0	1563	0	0	1631	0	1644	1418	0	3188	0
Flt Permitted					0.975		0.960			0.950	
Satd. Flow (perm)	0	1563	0	0	1631	0	1644	1418	0	3188	0
Link Speed (mph)		30			30		30			30	
Link Distance (ft)		316			282		726			392	
Travel Time (s)		7.2			6.4		16.5			8.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1	3	20	8	11	20	26	31	743	0
Shared Lane Traffic (%)								16%			
Lane Group Flow (vph)	0	4	0	0	39	0	24	22	0	774	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Left	Right
Median Width(ft)		0			0		10			20	
Link Offset(ft)		0			0		0			0	
Crosswalk Width(ft)		16			16		16			16	
Two way Left Turn Lane											
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.08	1.08	1.10	1.10	1.10
Turning Speed (mph)	15		9	15		9	15	9	15	15	9
Sign Control		Stop			Stop		Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
21: WISCONSIN AVE & Warren St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	19	30	25	18	9	24	24	1204	19	60	1030	5
Future Volume (vph)	19	30	25	18	9	24	24	1204	19	60	1030	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	8	8	8	10	10	10	10	10	10
Grade (%)		1%			1%			-1%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor		0.98			0.97			0.99			1.00	
Frt		0.954			0.936			0.998			0.999	
Flt Protected		0.987			0.982			0.999			0.997	
Satd. Flow (prot)	0	1246	0	0	1121	0	0	2955	0	0	4083	0
Flt Permitted		0.926			0.896			0.906			0.756	
Satd. Flow (perm)	0	1157	0	0	1017	0	0	2675	0	0	3096	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			25			2			1	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		299			129			330			116	
Travel Time (s)		8.2			3.5			7.5			2.6	
Confl. Peds. (#/hr)	28		13	13		28	227		158	158		227
Confl. Bikes (#/hr)									5			6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Parking (#/hr)	0	0	0	0	0	0					0	0
Adj. Flow (vph)	20	31	26	19	9	25	25	1241	20	62	1062	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	53	0	0	1286	0	0	1129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.49	1.31	1.38	1.56	1.38	1.24	1.24	1.24	1.24	1.29	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			6			2	
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		6	6		2	2	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	

Lanes, Volumes, Timings
21: WISCONSIN AVE & Warren St

08/31/2020

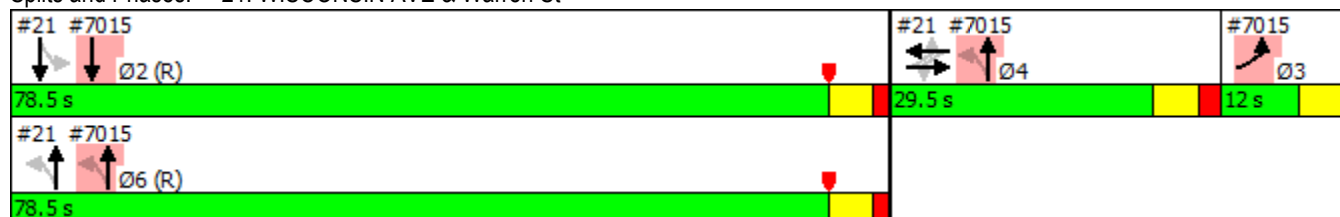


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.0	29.0		29.0	29.0		22.5	22.5		23.5	23.5	
Total Split (s)	29.5	29.5		29.5	29.5		78.5	78.5		78.5	78.5	
Total Split (%)	24.6%	24.6%		24.6%	24.6%		65.4%	65.4%		65.4%	65.4%	
Maximum Green (s)	23.5	23.5		23.5	23.5		73.0	73.0		73.0	73.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			3.5			3.5	
Lead/Lag	Lead	Lead		Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		10.0	10.0		11.0	11.0	
Pedestrian Calls (#/hr)	41	41		41	41		0	0		0	0	
Act Effct Green (s)		23.2			23.2			75.0			75.0	
Actuated g/C Ratio		0.19			0.19			0.62			0.62	
v/c Ratio		0.32			0.25			0.77			0.58	
Control Delay		35.9			27.1			11.0			2.3	
Queue Delay		0.0			0.0			1.4			0.0	
Total Delay		35.9			27.1			12.5			2.3	
LOS		D			C			B			A	
Approach Delay		35.9			27.1			12.5			2.3	
Approach LOS		D			C			B			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	25 (21%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	9.0
Intersection LOS:	A
Intersection Capacity Utilization:	86.2%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 21: WISCONSIN AVE & Warren St



Lane Group	Ø3
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	12.0
Total Split (s)	12.0
Total Split (%)	10%
Maximum Green (s)	7.0
Yellow Time (s)	4.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings

22: Yuma St.

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	10	64	3	28	104	43	10	124	40	26	103	10
Future Volume (vph)	10	64	3	28	104	43	10	124	40	26	103	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.967			0.969			0.990	
Flt Protected		0.994			0.992			0.997			0.991	
Satd. Flow (prot)	0	1754	0	0	1668	0	0	1680	0	0	1706	0
Flt Permitted		0.994			0.992			0.997			0.991	
Satd. Flow (perm)	0	1754	0	0	1668	0	0	1680	0	0	1706	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		457			864			435			295	
Travel Time (s)		10.4			19.6			9.9			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	71	3	31	116	48	11	138	44	29	114	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	195	0	0	193	0	0	154	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.7%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
23: WISCONSIN AVE & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	42	123	60	42	147	86	1	1112	126	2	1041	36	
Future Volume (vph)	42	123	60	42	147	86	1	1112	126	2	1041	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	9	9	9	11	11	11	11	11	11	
Grade (%)		-4%			4%			3%				-3%	
Storage Length (ft)	120		0	0		150	0		110	0		0	
Storage Lanes	1		0	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	0.91	
Ped Bike Factor	0.76	0.93			0.97	0.68			0.13		0.97		
Frt		0.951				0.850			0.850		0.995		
Flt Protected	0.950				0.989								
Satd. Flow (prot)	1547	1446	0	0	1462	1257	0	2783	1138	0	4208	0	
Flt Permitted	0.950				0.893			0.954			0.939		
Satd. Flow (perm)	1180	1446	0	0	1277	857	0	2655	145	0	3951	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		24				127			127			6	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		670			654			554				196	
Travel Time (s)		18.3			17.8			12.6				4.5	
Confl. Peds. (#/hr)	211		129	129		211	324		548	548		324	
Confl. Bikes (#/hr)									1			3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	17	17	0	22	22	
Parking (#/hr)								0	0				
Adj. Flow (vph)	44	129	63	44	155	91	1	1171	133	2	1096	38	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	44	192	0	0	199	91	0	1172	133	0	1136	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		10			10			0			0		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.22	1.22	1.22	1.34	1.34	1.34	1.22	1.35	1.51	1.17	1.22	1.17	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA		
Protected Phases	3	8			4			2				6	
Permitted Phases				4		4	2		2	6			
Minimum Split (s)	10.0	30.0		27.0	27.0	27.0	20.0	20.0	20.0	16.0	16.0		
Total Split (s)	15.0	50.0		35.0	35.0	35.0	64.0	64.0	64.0	64.0	64.0		
Total Split (%)	12.5%	41.7%		29.2%	29.2%	29.2%	53.3%	53.3%	53.3%	53.3%	53.3%		
Maximum Green (s)	10.0	44.0		29.0	29.0	29.0	58.0	58.0	58.0	58.0	58.0		
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
All-Red Time (s)	1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	4.0			4.0	4.0		4.0	4.0		4.0		

Lane Group	Ø1	Ø5	Ø7	Ø9
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	1	5	7	9
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				

Lanes, Volumes, Timings
 23: WISCONSIN AVE & Albermarle St

08/31/2020

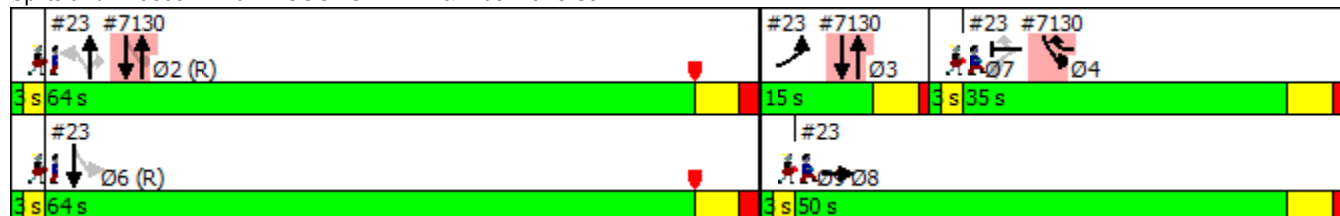


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag					Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)		20.0		17.0	17.0	17.0	10.0	10.0	10.0	4.0	4.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0	0
Act Effect Green (s)	12.0	46.0		31.0	31.0		60.0	60.0			60.0	
Actuated g/C Ratio	0.10	0.38		0.26	0.26		0.50	0.50			0.50	
v/c Ratio	0.29	0.34		0.60	0.29		0.88	0.98			0.57	
Control Delay	51.4	27.1		57.4	24.0		17.4	83.1			16.0	
Queue Delay	0.0	0.0		0.0	0.0		1.7	0.0			2.8	
Total Delay	51.4	27.1		57.4	24.0		19.1	83.1			18.8	
LOS	D	C		E	C		B	F			B	
Approach Delay		31.6		46.9			25.6				18.8	
Approach LOS		C		D			C				B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	7 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	25.6
Intersection LOS:	C
Intersection Capacity Utilization:	82.4%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 23: WISCONSIN AVE & Albermarle St



Lane Group	Ø1	Ø5	Ø7	Ø9
Lead/Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings
24: Foxhall Rd NW & Nebraska Ave NW

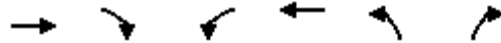
08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑	↙	↗
Traffic Volume (vph)	523	238	327	607	275	424
Future Volume (vph)	523	238	327	607	275	424
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		200	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97		0.98		0.98	
Frt	0.953					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2713	0	1509	1588	1472	1317
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2713	0	1478	1588	1444	1317
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	62					69
Link Speed (mph)	30			30	25	
Link Distance (ft)	701			717	2089	
Travel Time (s)	15.9			16.3	57.0	
Confl. Peds. (#/hr)		16	16		5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Bus Blockages (#/hr)	6	6	0	0	0	0
Adj. Flow (vph)	568	259	355	660	299	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	827	0	355	660	299	461
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	46	
Two way Left Turn Lane						
Headway Factor	1.27	1.26	1.24	1.24	1.26	1.26
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	Perm	pt+ov
Protected Phases	2		1	6		14
Permitted Phases					4	
Minimum Split (s)	20.5		10.5	15.5	21.0	
Total Split (s)	38.5		54.0	92.5	27.5	
Total Split (%)	32.1%		45.0%	77.1%	22.9%	
Maximum Green (s)	33.0		48.5	87.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.5	1.5	1.0	
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	
Total Lost Time (s)	3.5		3.5	3.5	3.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020



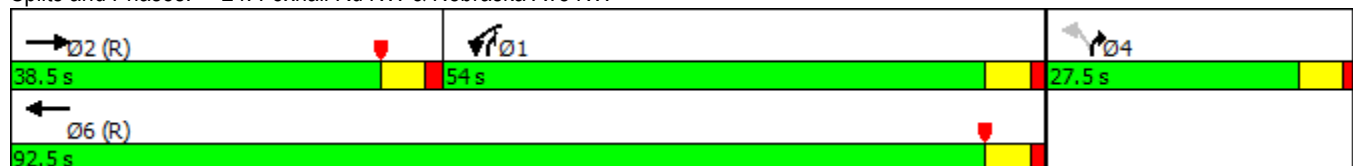
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	8.0				9.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	35.0		50.5	89.0	24.5	78.0
Actuated g/C Ratio	0.29		0.42	0.74	0.20	0.65
v/c Ratio	0.99		0.56	0.56	1.02	0.52
Control Delay	68.4		21.8	3.5	104.5	11.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	68.4		21.8	3.5	104.5	11.8
LOS	E		C	A	F	B
Approach Delay	68.4			9.9	48.3	
Approach LOS	E			A	D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 35 (29%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 39.7
 Intersection Capacity Utilization 72.1%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 24: Foxhall Rd NW & Nebraska Ave NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	23	7	66	1	0	3	98	312	3	1	269	30
Future Volume (vph)	23	7	66	1	0	3	98	312	3	1	269	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	11	11	11	11	11	11	10	10	10
Grade (%)		-7%			-6%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.96			0.99			0.99	
Frt		0.906			0.899			0.999			0.986	
Flt Protected		0.988			0.988			0.988				
Satd. Flow (prot)	0	1237	0	0	1463	0	0	1393	0	0	1430	0
Flt Permitted		0.945			0.966			0.844			0.999	
Satd. Flow (perm)	0	1177	0	0	1422	0	0	1185	0	0	1428	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					27			1			12	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		284			247			252			250	
Travel Time (s)		7.7			6.7			6.9			6.8	
Confl. Peds. (#/hr)	8		11	11		8	12		109	109		12
Confl. Bikes (#/hr)									3			3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Adj. Flow (vph)	24	7	70	1	0	3	104	332	3	1	286	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	4	0	0	439	0	0	319	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.42	1.25	1.15	1.15	1.15	1.26	1.43	1.26	1.20	1.36	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	22.5	22.5		22.5	22.5		25.5	25.5		25.5	25.5	
Total Split (s)	30.0	30.0		30.0	30.0		70.0	70.0		70.0	70.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	24.5	24.5		24.5	24.5		64.5	64.5		64.5	64.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover Pl NW

08/31/2020

Lane Group	Ø6	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	6	8
Permitted Phases		
Minimum Split (s)	26.5	26.5
Total Split (s)	70.0	30.0
Total Split (%)	70%	30%
Maximum Green (s)	64.5	24.5
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	4.0	14.0

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		26.5			26.5			66.5			66.5	
Actuated g/C Ratio		0.26			0.26			0.66			0.66	
v/c Ratio		0.32			0.01			0.56			0.33	
Control Delay		33.1			0.0			9.2			8.1	
Queue Delay		0.0			0.0			0.1			0.0	
Total Delay		33.1			0.0			9.3			8.1	
LOS		C			A			A			A	
Approach Delay		33.1						9.3			8.1	
Approach LOS		C						A			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	63 (63%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization	66.6%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 26: New Mexico Ave NW & Newark St NW/Westover PI NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

Lane Group	Ø6	Ø8
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings

27: New Mexico Ave NW & 44th St/Embassy Park Dr

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	23	0	6	1	0	18	0	363	17	15	324	0
Future Volume (vph)	23	0	6	1	0	18	0	363	17	15	324	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.871			0.994				
Flt Protected		0.962			0.998						0.998	
Satd. Flow (prot)	0	1624	0	0	1511	0	0	1659	0	0	1796	0
Flt Permitted		0.962			0.998						0.998	
Satd. Flow (perm)	0	1624	0	0	1511	0	0	1659	0	0	1796	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		312			150			186			252	
Travel Time (s)		7.1			3.4			5.1			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	0	7	1	0	20	0	403	19	17	360	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	21	0	0	422	0	0	377	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.15	1.15	1.15	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Macomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	0	34	25	14	30	47	340	10	9	312	13
Future Volume (vph)	4	0	34	25	14	30	47	340	10	9	312	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	11	11	11	11	11	11
Grade (%)		-2%			-3%			7%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.70			0.85			0.99			0.99	
Frt		0.878			0.942			0.997			0.995	
Flt Protected		0.995			0.982			0.994			0.999	
Satd. Flow (prot)	0	908	0	0	1374	0	0	1384	0	0	1655	0
Flt Permitted		0.980			0.898			0.920			0.987	
Satd. Flow (perm)	0	887	0	0	1121	0	0	1272	0	0	1635	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		613			596			277			186	
Travel Time (s)		16.7			16.3			7.6			5.1	
Confl. Peds. (#/hr)	31		101	101		31	45					45
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	3
Parking (#/hr)	0	0	0				0	3	0			
Adj. Flow (vph)	4	0	38	28	16	33	52	378	11	10	347	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	77	0	0	441	0	0	371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		-35			-35			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.13	1.29	1.13	1.28	1.28	1.28	1.25	1.45	1.25	1.14	1.16	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			8			2			2	
Permitted Phases	8			8			2			2		
Minimum Split (s)	22.0	22.0		22.0	22.0		26.0	26.0		26.0	26.0	
Total Split (s)	26.5	26.5		26.5	26.5		70.5	70.5		70.5	70.5	
Total Split (%)	26.5%	26.5%		26.5%	26.5%		70.5%	70.5%		70.5%	70.5%	
Maximum Green (s)	20.5	20.5		20.5	20.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lag	Lag							
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		7.0	7.0	

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Minimum Split (s)	3.0
Total Split (s)	3.0
Total Split (%)	3%
Maximum Green (s)	1.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Walk Time (s)	

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Maccomb St NW

08/31/2020

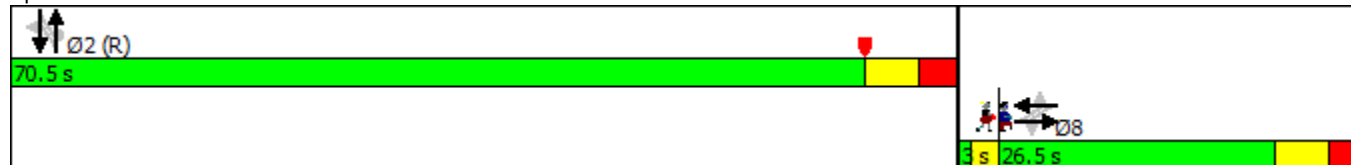


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		22.5			22.5			65.5			65.5	
Actuated g/C Ratio		0.22			0.22			0.66			0.66	
v/c Ratio		0.21			0.31			0.53			0.35	
Control Delay		34.9			36.3			13.0			7.5	
Queue Delay		0.0			0.0			0.0			0.3	
Total Delay		34.9			36.3			13.0			7.8	
LOS		C			D			B			A	
Approach Delay		34.9			36.3			13.0			7.8	
Approach LOS		C			D			B			A	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 58 (58%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 13.9
 Intersection LOS: B
 Intersection Capacity Utilization 67.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 28: New Mexico Ave NW & Maccomb St NW



Lane Group	Ø7
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings
 29: New Mexico Ave NW & Lowell St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	45	15	393	259	11
Future Volume (vph)	10	45	15	393	259	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889				0.995	
Flt Protected	0.991			0.998		
Satd. Flow (prot)	1532	0	0	1674	1773	0
Flt Permitted	0.991			0.998		
Satd. Flow (perm)	1532	0	0	1674	1773	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	597			94	277	
Travel Time (s)	13.6			2.6	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	50	17	437	288	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	0	454	300	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 30: New Mexico Ave NW & Sutton PI

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	28	347	25	36	395
Future Volume (vph)	16	28	347	25	36	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.915		0.991			
Flt Protected	0.982					0.996
Satd. Flow (prot)	1562	0	1663	0	0	1775
Flt Permitted	0.982					0.996
Satd. Flow (perm)	1562	0	1663	0	0	1775
Link Speed (mph)	30		25			25
Link Distance (ft)	405		274			94
Travel Time (s)	9.2		7.5			2.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	31	386	28	40	439
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	0	414	0	0	479
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.9%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
31: New Mexico Ave NW

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	1	375	3	0	409
Future Volume (vph)	5	1	375	3	0	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981		0.999			
Flt Protected	0.959					
Satd. Flow (prot)	1636	0	1676	0	0	1782
Flt Permitted	0.959					
Satd. Flow (perm)	1636	0	1676	0	0	1782
Link Speed (mph)	30		25			25
Link Distance (ft)	337		358			274
Travel Time (s)	7.7		9.8			7.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	1	417	3	0	454
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	420	0	0	454
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 32: New Mexico Ave NW & Klinge St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	22	16	375	409	5
Future Volume (vph)	3	22	16	375	409	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880				0.998	
Flt Protected	0.994			0.998		
Satd. Flow (prot)	1521	0	0	1674	1778	0
Flt Permitted	0.994			0.998		
Satd. Flow (perm)	1521	0	0	1674	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	568			283	358	
Travel Time (s)	12.9			7.7	9.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	24	18	417	454	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	435	460	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	2	85	21	31	95	115	7	257	30	168	250	13
Future Volume (vph)	2	85	21	31	95	115	7	257	30	168	250	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		-2%			6%			5%				-5%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.95		0.99			0.97	
Frt		0.973				0.850		0.986			0.996	
Flt Protected		0.999			0.988			0.999			0.981	
Satd. Flow (prot)	0	1382	0	0	1363	1159	0	1347	0	0	1408	0
Flt Permitted		0.997			0.907			0.989			0.743	
Satd. Flow (perm)	0	1379	0	0	1247	1100	0	1332	0	0	1040	0
Right Turn on Red			No			No			No			Yes
Satd. Flow (RTOR)												3
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		642			805			212			283	
Travel Time (s)		17.5			22.0			5.8			7.7	
Confl. Peds. (#/hr)	16		7	7		16	14		40	40		7
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Bus Blockages (#/hr)	0	3	0	0	0	3	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	2	96	24	35	107	129	8	289	34	189	281	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	142	129	0	331	0	0	485	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.23	1.42	1.23	1.30	1.47	1.49	1.29	1.46	1.29	1.21	1.38	1.21
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	23.0	23.0		13.0	13.0	13.0	23.0	23.0		19.0	19.0	
Total Split (s)	30.0	30.0		30.0	30.0	30.0	70.0	70.0		70.0	70.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	64.0	64.0		64.0	64.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)		4.0			4.0	4.0		4.0			4.0	

Lanes, Volumes, Timings

33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020

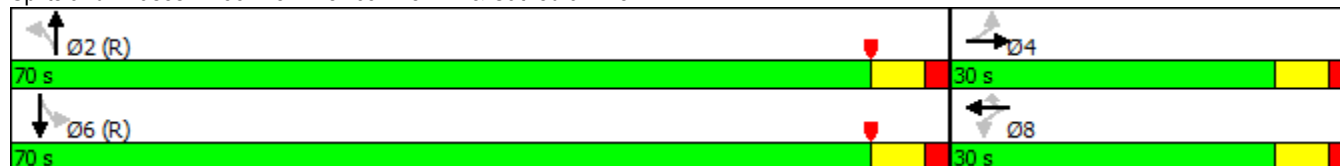


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0					10.0	10.0		6.0	6.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effect Green (s)		26.0			26.0	26.0		66.0			66.0	
Actuated g/C Ratio		0.26			0.26	0.26		0.66			0.66	
v/c Ratio		0.34			0.44	0.45		0.38			0.71	
Control Delay		33.3			36.0	37.1		9.2			19.5	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		33.3			36.0	37.1		9.2			19.5	
LOS		C			D	D		A			B	
Approach Delay		33.3			36.5			9.2			19.5	
Approach LOS		C			D			A			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	12 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	21.9
Intersection LOS:	C
Intersection Capacity Utilization	67.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 33: New Mexico Ave NW & Cathedral Ave NW



Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	21	110	7	231	188	6	52	760	120	6	632	26
Future Volume (vph)	21	110	7	231	188	6	52	760	120	6	632	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	10	10	10	10	10	10	10	10	10
Grade (%)		2%			4%			0%				1%
Storage Length (ft)	0		0	125		0	0		380	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98	1.00			1.00	0.79		0.99	
Frt		0.993			0.996				0.850		0.994	
Flt Protected		0.992		0.950				0.997				
Satd. Flow (prot)	0	1811	0	1486	1555	0	0	1473	1292	0	2688	0
Flt Permitted		0.938		0.608				0.915			0.949	
Satd. Flow (perm)	0	1706	0	928	1555	0	0	1347	1017	0	2551	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1				129			6
Link Speed (mph)		25			25			30				30
Link Distance (ft)		110			1242			1410				726
Travel Time (s)		3.0			33.9			32.0				16.5
Confl. Peds. (#/hr)	19		18	18		19	60		52	52		60
Confl. Bikes (#/hr)			6			2			4			5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	5%	5%	5%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	0	0	0	0
Parking (#/hr)										0	0	0
Adj. Flow (vph)	23	118	8	248	202	6	56	817	129	6	680	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	0	248	208	0	0	873	129	0	714	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.28	1.28	1.28	1.25	1.29	1.25	1.26	1.34	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Minimum Split (s)	22.5	22.5		22.5	22.5		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	45.5	45.5		45.5	45.5		74.5	74.5	74.5	74.5	74.5	74.5
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%	62.1%	62.1%	62.1%	62.1%
Maximum Green (s)	40.0	40.0		40.0	40.0		69.5	69.5	69.5	69.5	69.5	69.5
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5		1.5	1.5		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0			-2.0	-2.0		-2.0	
Total Lost Time (s)		3.5		3.5	3.5			3.0	3.0		3.0	

Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)		42.0		42.0	42.0			71.5	71.5			71.5
Actuated g/C Ratio		0.35		0.35	0.35			0.60	0.60			0.60
v/c Ratio		0.25		0.77	0.38			1.09	0.20			0.47
Control Delay		28.6		47.0	27.4			66.1	0.3			6.2
Queue Delay		0.0		0.0	0.0			0.0	0.0			0.0
Total Delay		28.6		47.0	27.4			66.1	0.3			6.2
LOS		C		D	C			E	A			A
Approach Delay		28.6			38.1			57.6				6.2
Approach LOS		C			D			E				A

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	80 (67%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	70
Control Type:	Pretimed
Maximum v/c Ratio:	1.09
Intersection Signal Delay:	36.1
Intersection LOS:	D
Intersection Capacity Utilization:	105.3%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 34: Nebraska Ave NW & Van Ness St NW



Lanes, Volumes, Timings
35: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1162	15	16	1242	0	8
Future Volume (vph)	1162	15	16	1242	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	4%			-7%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.865	
Flt Protected				0.999		
Satd. Flow (prot)	3231	0	0	3415	1504	0
Flt Permitted				0.999		
Satd. Flow (perm)	3231	0	0	3415	1504	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	222			628	141	
Travel Time (s)	5.0			14.3	3.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1291	17	18	1380	0	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1308	0	0	1398	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.6%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings

36:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	21	17	116	108	7
Future Volume (vph)	1	21	17	116	108	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871				0.992	
Flt Protected	0.998			0.994		
Satd. Flow (prot)	1511	0	0	1728	1725	0
Flt Permitted	0.998			0.994		
Satd. Flow (perm)	1511	0	0	1728	1725	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	426			119	97	
Travel Time (s)	9.7			2.7	2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	23	19	129	120	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	0	148	128	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	23.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

37:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	0	3	153	107	22
Future Volume (vph)	13	0	3	153	107	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.977	
Fl _t Protected	0.950			0.999		
Satd. Flow (prot)	1652	0	0	1737	1699	0
Fl _t Permitted	0.950			0.999		
Satd. Flow (perm)	1652	0	0	1737	1699	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	419			92	435	
Travel Time (s)	9.5			2.1	9.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	0	3	170	119	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	173	143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	20.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
38: Warren St & 48th St

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	6	33	16	6	78
Future Volume (vph)	11	6	33	16	6	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950		0.956			
Flt Protected	0.969					0.996
Satd. Flow (prot)	1600	0	1662	0	0	1732
Flt Permitted	0.969					0.996
Satd. Flow (perm)	1600	0	1662	0	0	1732
Link Speed (mph)	30		30			30
Link Distance (ft)	1057		526			383
Travel Time (s)	24.0		12.0			8.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	7	37	18	7	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	55	0	0	94
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.1% ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
39: 48th St & Yuma St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	84	40	11	64	6	11	15	7	3	25	8
Future Volume (vph)	4	84	40	11	64	6	11	15	7	3	25	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.989			0.971			0.970	
Flt Protected		0.999			0.993			0.984			0.996	
Satd. Flow (prot)	0	1664	0	0	1707	0	0	1661	0	0	1680	0
Flt Permitted		0.999			0.993			0.984			0.996	
Satd. Flow (perm)	0	1664	0	0	1707	0	0	1661	0	0	1680	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			1099			383			277	
Travel Time (s)		5.9			25.0			8.7			6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	93	44	12	71	7	12	17	8	3	28	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	0	0	90	0	0	37	0	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	66	95	14	22	124	50	4	117	4	29	99	44
Future Volume (vph)	66	95	14	22	124	50	4	117	4	29	99	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	9	9	9	9	9	9
Grade (%)		9%			-9%			-5%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93			0.92			0.99			0.96	
Frt		0.989			0.965			0.996			0.966	
Flt Protected		0.981			0.994			0.999			0.992	
Satd. Flow (prot)	0	1243	0	0	1283	0	0	1408	0	0	1294	0
Flt Permitted		0.841			0.957			0.993			0.945	
Satd. Flow (perm)	0	1010	0	0	1214	0	0	1397	0	0	1219	0
Right Turn on Red			No			No			Yes			No
Satd. Flow (RTOR)								3				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		202			670			299			437	
Travel Time (s)		5.5			18.3			8.2			11.9	
Confl. Peds. (#/hr)	81		84	84		81	39		34	34		39
Confl. Bikes (#/hr)			3			2			1			2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	71	102	15	24	133	54	4	126	4	31	106	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	188	0	0	211	0	0	134	0	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.38	1.57	1.38	1.24	1.41	1.24	1.27	1.44	1.27	1.30	1.47	1.30
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	15.5	15.5		15.5	15.5		17.5	17.5		17.5	17.5	
Total Split (s)	25.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		48.3%	48.3%		48.3%	48.3%	
Maximum Green (s)	19.5	19.5		19.5	19.5		23.5	23.5		23.5	23.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0		8.0	8.0	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	5%	5%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020

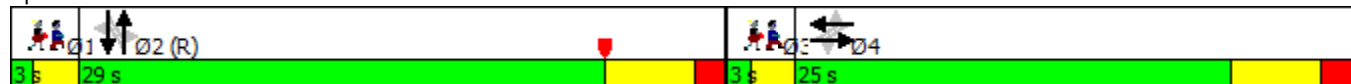


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.5			21.5			25.5			25.5	
Actuated g/C Ratio		0.36			0.36			0.42			0.42	
v/c Ratio		0.52			0.49			0.23			0.36	
Control Delay		21.5			10.9			12.0			14.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.5			10.9			12.0			14.2	
LOS		C			B			B			B	
Approach Delay		21.5			10.9			12.0			14.2	
Approach LOS		C			B			B			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	45 (75%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	14.7
Intersection LOS:	B
Intersection Capacity Utilization	57.5%
ICU Level of Service	B
Analysis Period (min)	15

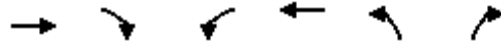
Splits and Phases: 40: 42nd St & Albermarle St



Lane Group	Ø1	Ø3
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings
41: Macomb St & Loughboro St

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	860	62	5	1022	49	8
Future Volume (vph)	860	62	5	1022	49	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991			0.981		
Flt Protected				0.959		
Satd. Flow (prot)	1723	0	0	1739	1636	0
Flt Permitted				0.959		
Satd. Flow (perm)	1723	0	0	1739	1636	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	299			1077	291	
Travel Time (s)	6.8			24.5	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	956	69	6	1136	54	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1025	0	0	1142	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

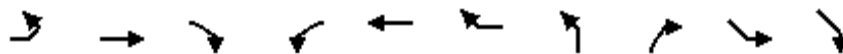
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.8% ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings

42: Chainbridge Rd & Loughboro Rd/Nebraska Ave NW & Indian Ln

08/31/2020















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations		↕			↕		↕		↕	
Traffic Volume (vph)	9	705	22	33	812	42	2	30	0	0
Future Volume (vph)	9	705	22	33	812	42	2	30	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.994		0.873			
Flt Protected		0.999			0.998		0.997			
Satd. Flow (prot)	0	1730	0	0	1725	0	1513	0	1739	0
Flt Permitted		0.999			0.998		0.997			
Satd. Flow (perm)	0	1730	0	0	1725	0	1513	0	1739	0
Link Speed (mph)		30			25		30		30	
Link Distance (ft)		1158			701		287		1445	
Travel Time (s)		26.3			19.1		6.5		32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	783	24	37	902	47	2	33	0	0
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	817	0	0	986	0	35	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		0			0		10		10	
Link Offset(ft)		0			0		0		0	
Crosswalk Width(ft)		16			16		16		16	
Two way Left Turn Lane										
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15	9	15	9
Sign Control		Free			Free		Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.2%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑						↑↑	
Traffic Volume (vph)	0	1163	0	0	828	254	0	0	0	240	591	34
Future Volume (vph)	0	1163	0	0	828	254	0	0	0	240	591	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	11
Grade (%)		2%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor					0.97						0.99	
Frt					0.965						0.994	
Flt Protected											0.986	
Satd. Flow (prot)	0	2818	0	0	4016	0	0	0	0	0	2974	0
Flt Permitted											0.986	
Satd. Flow (perm)	0	2818	0	0	4016	0	0	0	0	0	2957	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			554			110			97	
Travel Time (s)		4.3			12.6			2.5			2.2	
Confl. Peds. (#/hr)	146		199	199		146	152		30	30		152
Confl. Bikes (#/hr)			9			8						3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	0%	0%	0%	3%	3%	3%
Bus Blockages (#/hr)	0	26	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	0	1211	0	0	863	265	0	0	0	250	616	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1211	0	0	1128	0	0	0	0	0	901	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.35	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		15 6 1 2			15 6 1						3 4	
Permitted Phases										3 4		
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		66.0			61.0						40.0	
Actuated g/C Ratio		0.55			0.51						0.33	

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Bus Blockages (#/hr)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	27.0	5.0	47.0	5.0	12.0	19.0	79.0	10.0	17.0
Total Split (%)	23%	4%	39%	4%	10%	16%	66%	8%	14%
Maximum Green (s)	20.0	1.0	38.0	1.0	9.0	13.0	70.0	5.0	13.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

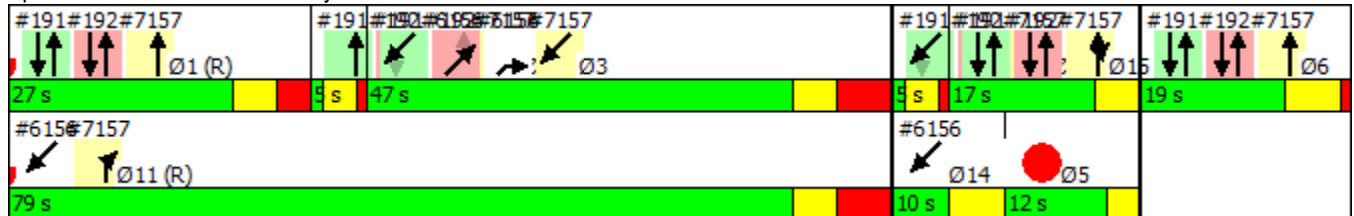


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio		0.78			0.55						0.91	
Control Delay		8.4			8.9						37.4	
Queue Delay		10.3			0.1						0.0	
Total Delay		18.6			9.0						37.4	
LOS		B			A						D	
Approach Delay		18.6			9.0						37.4	
Approach LOS		B			A						D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 1:NBSB and 11:; Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	20.5
Intersection LOS:	C
Intersection Capacity Utilization	135.3%
ICU Level of Service	H
Analysis Period (min)	15













Splits and Phases: 191: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
v/c Ratio									
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑			↑↑				
Traffic Volume (vph)	0	948	271	0	1080	0	206	699	61	0	0	0
Future Volume (vph)	0	948	271	0	1080	0	206	699	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97						0.99				
Frt		0.967						0.991				
Flt Protected								0.989				
Satd. Flow (prot)	0	2798	0	0	4272	0	0	3051	0	0	0	0
Flt Permitted								0.989				
Satd. Flow (perm)	0	2798	0	0	4272	0	0	3041	0	0	0	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			190			109			111	
Travel Time (s)		8.6			4.3			2.5			2.5	
Confl. Peds. (#/hr)	180		193	193		180	20		64			
Confl. Bikes (#/hr)			9			6			2			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Adj. Flow (vph)	0	1009	288	0	1149	0	219	744	65	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1297	0	0	1149	0	0	1028	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		15 6 1			15 6 1 2			3 4				
Permitted Phases							3 4					
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		61.0			66.0			40.0				
Actuated g/C Ratio		0.51			0.55			0.33				
v/c Ratio		0.91			0.49			1.01				

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	27.0	5.0	47.0	5.0	12.0	19.0	79.0	10.0	17.0
Total Split (%)	23%	4%	39%	4%	10%	16%	66%	8%	14%
Maximum Green (s)	20.0	1.0	38.0	1.0	9.0	13.0	70.0	5.0	13.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									
v/c Ratio									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

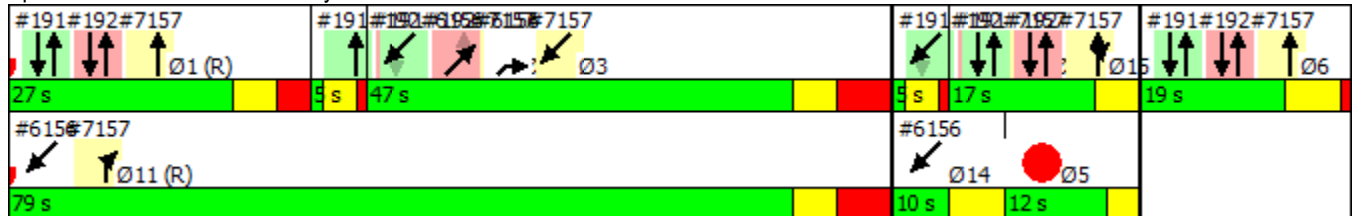


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Control Delay		34.8			8.6			48.4				
Queue Delay		8.7			0.3			31.6				
Total Delay		43.5			9.0			80.0				
LOS		D			A			F				
Approach Delay		43.5			9.0			80.0				
Approach LOS		D			A			F				

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 1:NBSB and 11:, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	42.9
Intersection LOS:	D
Intersection Capacity Utilization	135.3%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 192: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Lane Configurations											
Traffic Volume (vph)	98	1207	0	1109	0	0					
Future Volume (vph)	98	1207	0	1109	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	11	11	10	10	12	12					
Lane Util. Factor	1.00	0.88	1.00	0.88	1.00	1.00					
Frt		0.850		0.850							
Flt Protected	0.950										
Satd. Flow (prot)	1540	2424	0	2341	0	0					
Flt Permitted	0.950										
Satd. Flow (perm)	1540	2424	0	2341	0	0					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		30		25						
Link Distance (ft)	193		471		250						
Travel Time (s)	5.3		10.7		6.8						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	109	1341	0	1232	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	109	1341	0	1232	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	11		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.19	1.19	1.25	1.25	1.14	1.14					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom		Prot							
Protected Phases	12	4 5		4			2	5	6	8	14
Permitted Phases											
Minimum Split (s)	16.0			29.0			17.0	10.0	11.0	20.0	13.0
Total Split (s)	55.0			65.0			55.0	44.0	11.0	65.0	65.0
Total Split (%)	45.8%			54.2%			46%	37%	9%	54%	54%
Maximum Green (s)	49.0			55.0			49.0	39.0	7.0	55.0	59.0
Yellow Time (s)	4.0			4.0			4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0			6.0			2.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)	-2.0			-2.0							
Total Lost Time (s)	4.0			8.0							
Lead/Lag								Lead	Lag		
Lead-Lag Optimize?											
Walk Time (s)				7.0			7.0			4.0	
Flash Dont Walk (s)				12.0			4.0			6.0	
Pedestrian Calls (#/hr)				0			0			0	
Act Effct Green (s)	51.0	101.0		57.0							
Actuated g/C Ratio	0.42	0.84		0.48							
v/c Ratio	0.17	0.66		1.11							
Control Delay	30.9	2.8		90.0							
Queue Delay	13.7	3.1		0.1							

Lanes, Volumes, Timings
 401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Total Delay	44.6	5.9		90.1							
LOS	D	A		F							
Approach Delay	8.8		90.1								
Approach LOS	A		F								

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	46.1
Intersection LOS:	D
Intersection Capacity Utilization	53.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 401: Ward Cir NW & Massachusetts Ave NW

#403#404 55 s	#401 65 s
#401#402 44 s	#402 65 s
#401#402 55 s	#403#404 65 s

Lanes, Volumes, Timings
402: Massachusetts Ave NW & Ward Cir NW

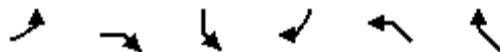
08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Lane Configurations											
Traffic Volume (vph)	131	955	0	0	0	1266					
Future Volume (vph)	131	955	0	0	0	1266					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	10	10	9	9	10	10					
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	0.88					
Frt		0.850				0.850					
Flt Protected	0.950										
Satd. Flow (prot)	1486	2341	0	0	0	2341					
Flt Permitted	0.950										
Satd. Flow (perm)	1486	2341	0	0	0	2341					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		25		25						
Link Distance (ft)	219		260		345						
Travel Time (s)	6.0		7.1		9.4						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	146	1061	0	0	0	1407					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	146	1061	0	0	0	1407					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	10		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.25	1.25	1.30	1.30	1.25	1.25					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom				Prot					
Protected Phases	12	8 5				8	2	4	5	6	14
Permitted Phases											
Minimum Split (s)	16.0					20.0	17.0	29.0	10.0	11.0	13.0
Total Split (s)	55.0					65.0	55.0	65.0	44.0	11.0	65.0
Total Split (%)	45.8%					54.2%	46%	54%	37%	9%	54%
Maximum Green (s)	49.0					55.0	49.0	55.0	39.0	7.0	59.0
Yellow Time (s)	4.0					4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0					6.0	2.0	6.0	1.0	0.0	2.0
Lost Time Adjust (s)	-2.0					-2.0					
Total Lost Time (s)	4.0					8.0					
Lead/Lag									Lead	Lag	
Lead-Lag Optimize?											
Walk Time (s)						4.0	7.0	7.0			
Flash Dont Walk (s)						6.0	4.0	12.0			
Pedestrian Calls (#/hr)						0	0	0			
Act Effct Green (s)	51.0	101.0				57.0					
Actuated g/C Ratio	0.42	0.84				0.48					
v/c Ratio	0.23	0.54				1.27					
Control Delay	30.5	1.8				154.8					
Queue Delay	13.8	0.8				0.0					

Lanes, Volumes, Timings
 402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Total Delay	44.3	2.6									
LOS	D	A									
Approach Delay	7.6				154.8						
Approach LOS	A				F						

Intersection Summary

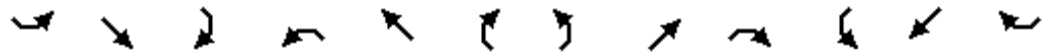
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	86.8
Intersection LOS:	F
Intersection Capacity Utilization	55.9%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 402: Massachusetts Ave NW & Ward Cir NW

#403#404 Ø2 (R) 55 s	#401 Ø4 65 s
#401#402 Ø5 44 s	#402 Ø8 65 s
#401#402 Ø12 55 s	#403#404 Ø14 65 s

Lanes, Volumes, Timings
403: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑↑	↑					↑↑			↑↑	
Traffic Volume (vph)	65	889	254	0	0	0	0	970	197	0	1011	0
Future Volume (vph)	65	889	254	0	0	0	0	970	197	0	1011	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	12	12	12	9	9	9	10	10	10
Grade (%)		1%			0%			-1%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.92					1.00				
Frt			0.850					0.975				
Flt Protected		0.997										
Satd. Flow (prot)	0	4086	1276	0	0	0	0	2803	0	0	2944	0
Flt Permitted		0.997										
Satd. Flow (perm)	0	4086	1172	0	0	0	0	2803	0	0	2944	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		250			219			372			300	
Travel Time (s)		6.8			6.0			8.5			8.2	
Confl. Peds. (#/hr)			114									
Confl. Bikes (#/hr)			10						1			3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	69	946	270	0	0	0	0	1032	210	0	1076	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1015	270	0	0	0	0	1242	0	0	1076	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.31	1.31	1.14	1.14	1.14	1.30	1.30	1.30	1.25	1.25	1.25
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA	Perm					NA			NA	
Protected Phases	14	14						2			2	
Permitted Phases			14									
Minimum Split (s)	13.0	13.0	13.0					17.0			17.0	
Total Split (s)	65.0	65.0	65.0					55.0			55.0	
Total Split (%)	54.2%	54.2%	54.2%					45.8%			45.8%	
Maximum Green (s)	59.0	59.0	59.0					49.0			49.0	
Yellow Time (s)	4.0	4.0	4.0					4.0			4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0			2.0	
Lost Time Adjust (s)		-2.0	-2.0					-2.0			-2.0	
Total Lost Time (s)		4.0	4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	65.0	44.0	11.0	65.0	55.0
Total Split (%)	54%	37%	9%	54%	46%
Maximum Green (s)	55.0	39.0	7.0	55.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?					

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

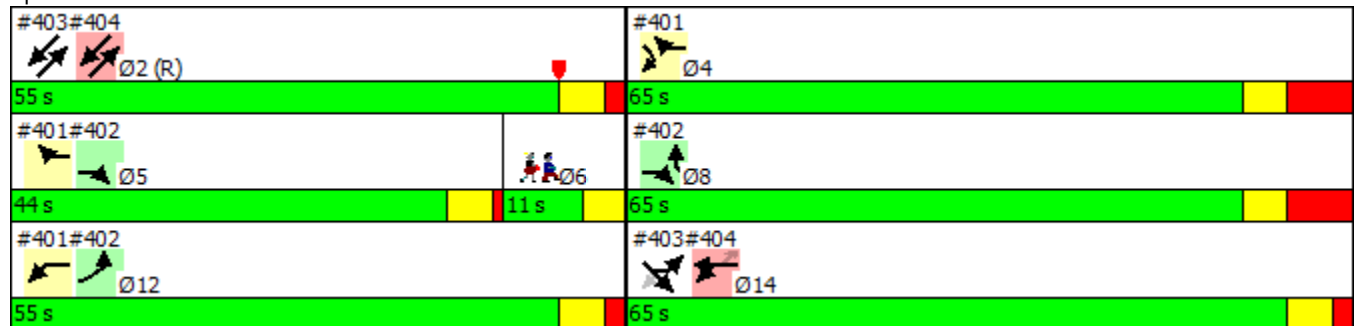


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		61.0	61.0					51.0			51.0	
Actuated g/C Ratio		0.51	0.51					0.42			0.42	
v/c Ratio		0.49	0.45					1.04			0.86	
Control Delay		5.9	6.2					72.2			19.1	
Queue Delay		2.0	3.8					23.7			14.4	
Total Delay		7.9	9.9					95.9			33.5	
LOS		A	A					F			C	
Approach Delay		8.4						95.9			33.5	
Approach LOS		A						F			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	46.0
Intersection LOS:	D
Intersection Capacity Utilization:	68.0%
ICU Level of Service:	C
Analysis Period (min):	15

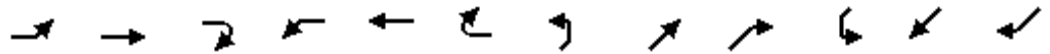
Splits and Phases: 403: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑	↑		↑↑			↑↑	
Traffic Volume (vph)	0	0	0	188	1149	64	0	1057	0	0	804	173
Future Volume (vph)	0	0	0	188	1149	64	0	1057	0	0	804	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	10	10	10	10	10	10
Grade (%)		0%			2%			0%				-1%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor						0.99					0.94	
Frt						0.850					0.973	
Flt Protected					0.993							
Satd. Flow (prot)	0	0	0	0	4089	1282	0	2944	0	0	2690	0
Flt Permitted					0.993							
Satd. Flow (perm)	0	0	0	0	4089	1266	0	2944	0	0	2690	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			30	
Link Distance (ft)		193			260			300			737	
Travel Time (s)		5.3			7.1			8.2			16.8	
Confl. Peds. (#/hr)							123					123
Confl. Bikes (#/hr)							2		1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	9	9
Adj. Flow (vph)	0	0	0	198	1209	67	0	1113	0	0	846	182
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1407	67	0	1113	0	0	1028	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.32	1.32	1.32	1.25	1.25	1.25	1.24	1.27	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Split	NA	Perm		NA			NA	
Protected Phases				14	14			2			2	
Permitted Phases						14						
Minimum Split (s)				13.0	13.0	13.0		17.0			17.0	
Total Split (s)				65.0	65.0	65.0		55.0			55.0	
Total Split (%)				54.2%	54.2%	54.2%		45.8%			45.8%	
Maximum Green (s)				59.0	59.0	59.0		49.0			49.0	
Yellow Time (s)				4.0	4.0	4.0		4.0			4.0	
All-Red Time (s)				2.0	2.0	2.0		2.0			2.0	
Lost Time Adjust (s)					-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)					4.0	4.0		4.0			4.0	
Lead/Lag												

Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Bus Blockages (#/hr)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	65.0	44.0	11.0	65.0	55.0
Total Split (%)	54%	37%	9%	54%	46%
Maximum Green (s)	55.0	39.0	7.0	55.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020

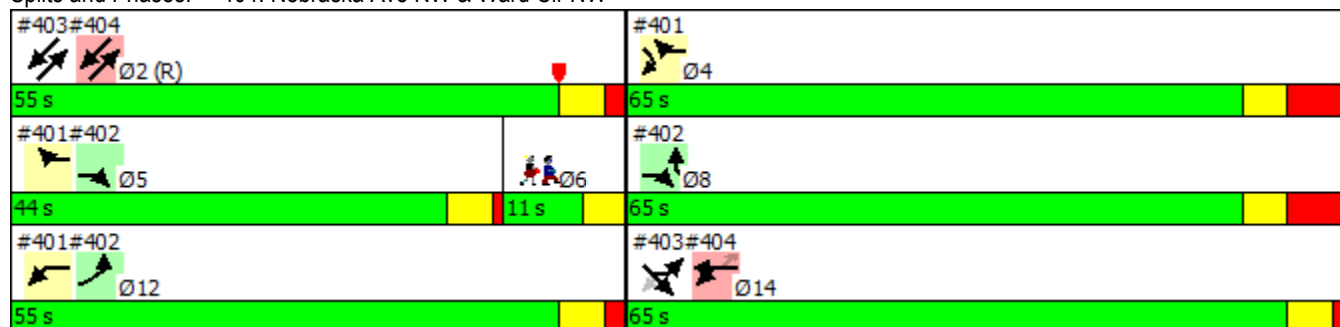


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)					61.0	61.0		51.0			51.0	
Actuated g/C Ratio					0.51	0.51		0.42			0.42	
v/c Ratio					0.68	0.10		0.89			0.90	
Control Delay					7.0	6.5		15.0			38.5	
Queue Delay					17.7	0.0		15.6			4.6	
Total Delay					24.8	6.5		30.6			43.1	
LOS					C	A		C			D	
Approach Delay					23.9			30.6			43.1	
Approach LOS					C			C			D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	31.4
Intersection LOS:	C
Intersection Capacity Utilization:	68.0%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 404: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lead-Lag Optimize?					
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

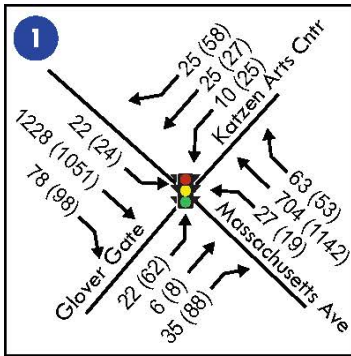
Appendix H

Future Traffic Volumes and Analysis

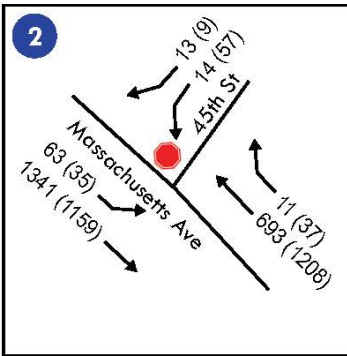
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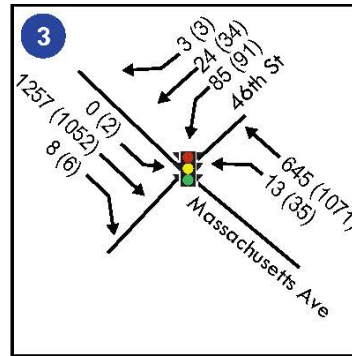
Figure 7-1 Future Intersection Peak Hour Traffic Volumes



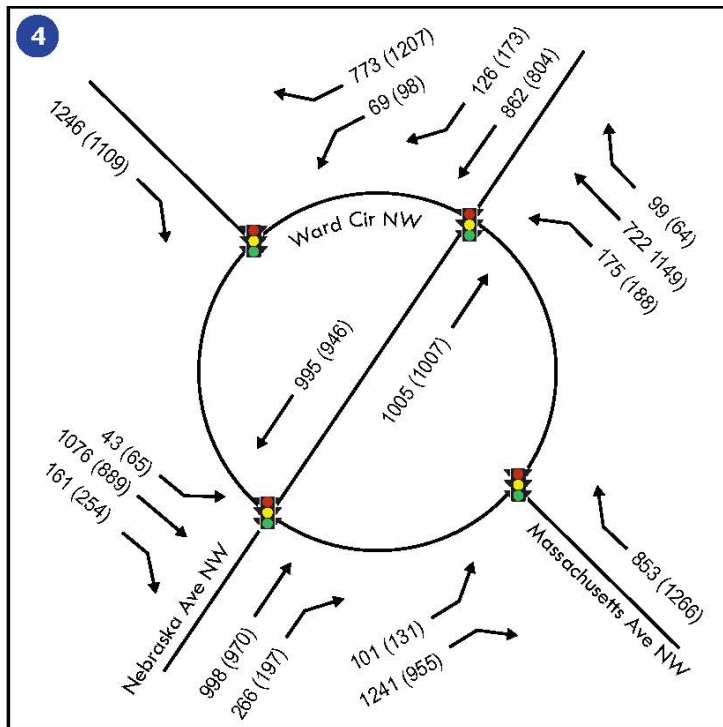
1. Massachusetts Ave. at Glover Gate



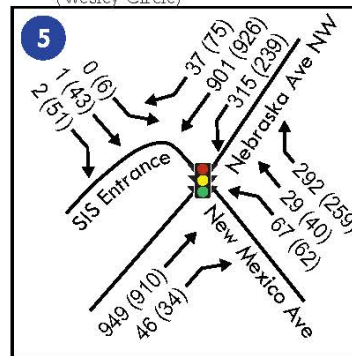
2. Massachusetts Ave. at 45th St.



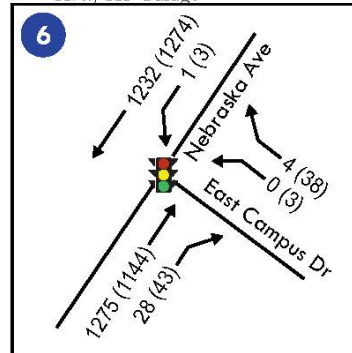
3. Massachusetts Ave. at 46th St. (Wesley Circle)



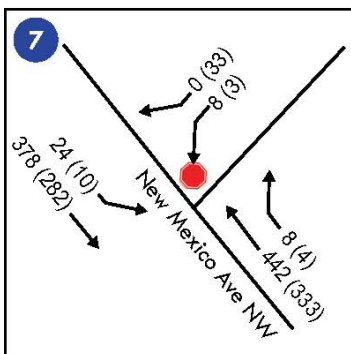
4. Massachusetts Ave. at Nebraska Ave. (Ward Circle)



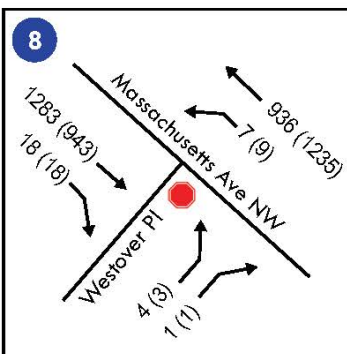
5. Nebraska Ave. at New Mexico Ave./SIS Garage



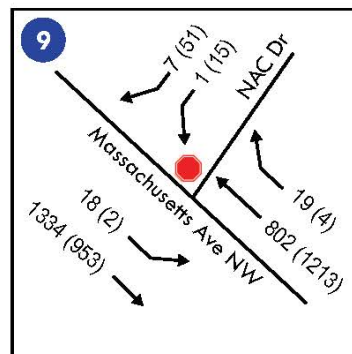
6. Nebraska Ave. at East Campus Dr.



7. New Mexico Ave. at East Campus Dr.



8. Massachusetts Ave. at Westover Pl.

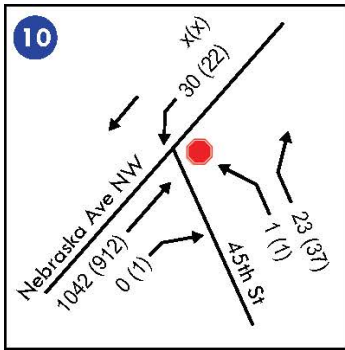


9. Massachusetts Ave. at NAC Dr.

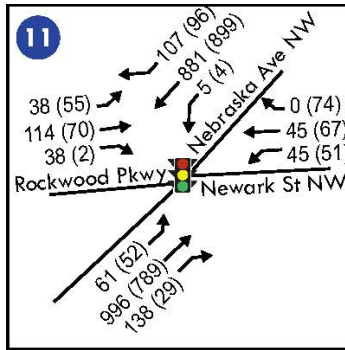
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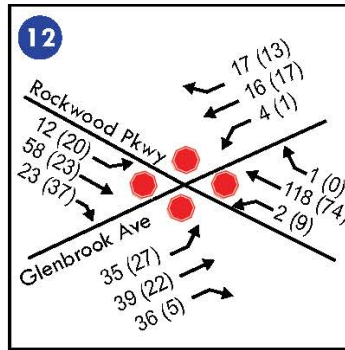
Figure 7-2 Future Intersection Peak Hour Traffic Volumes



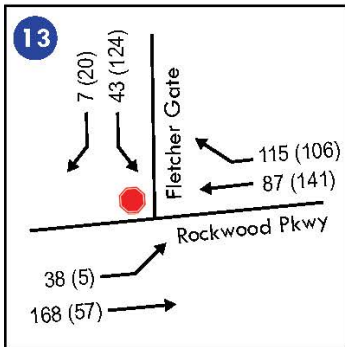
1. Nebraska Ave. at 45th St.



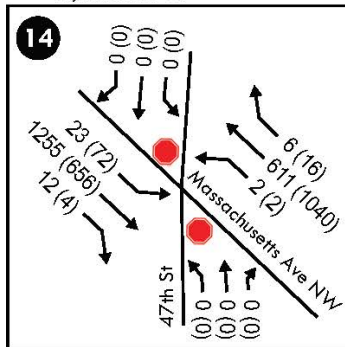
2. Nebraska Ave. at Rockwood Pkwy/Newark St.



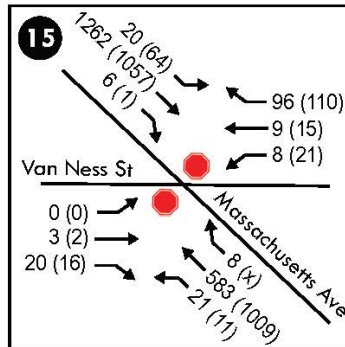
3. Rockwood Pkwy at Glenbrook Rd.



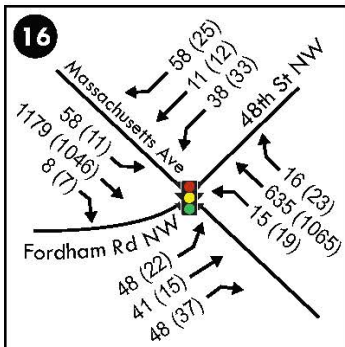
4. Rockwood Pkwy at Fletcher Gate



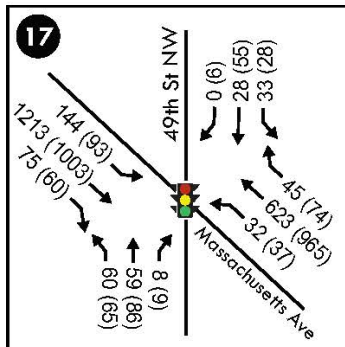
5. Massachusetts Ave. at 47th St.



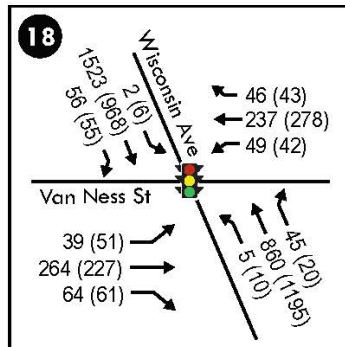
6. Massachusetts Ave. at Van Ness St.



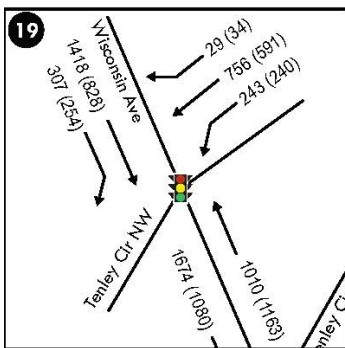
7. Massachusetts Ave. at 48th St.



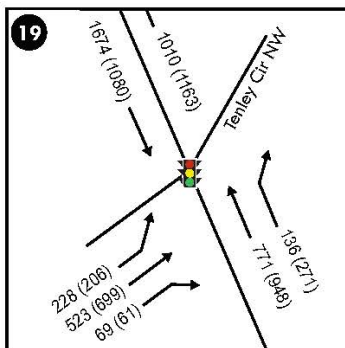
8. Massachusetts Ave. at 49th St.



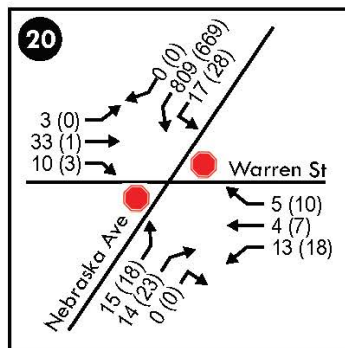
9. Wisconsin Ave. at Van Ness St.



10. (A) Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North

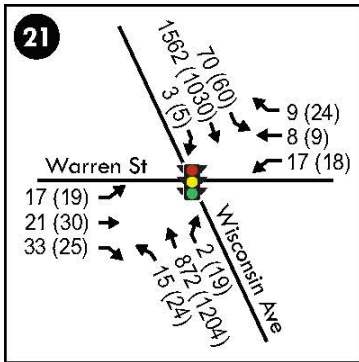


19. (B) Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South

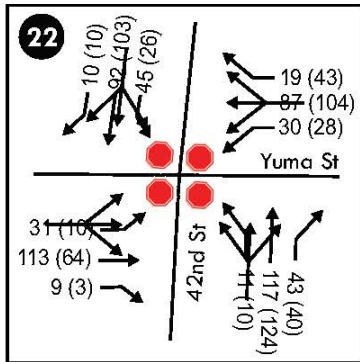


11. Nebraska Ave. at Warren St.

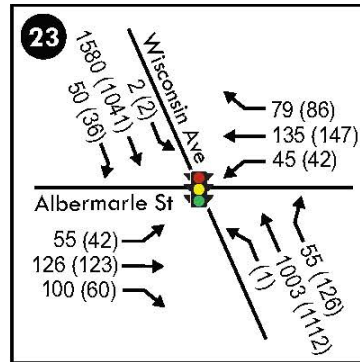
Figure 7-3 Future Intersection Peak Hour Traffic Volumes



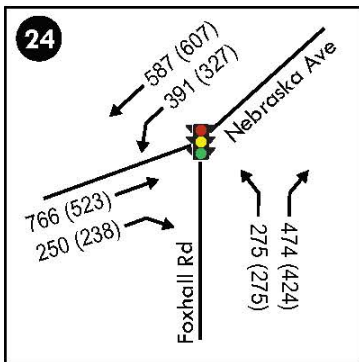
1. Wisconsin Ave. at Warren St.



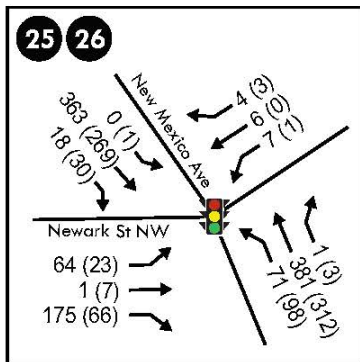
2. Yuma St. at 42nd St.



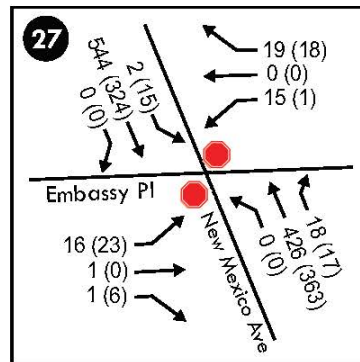
3. Wisconsin Ave. at Albermarle St.



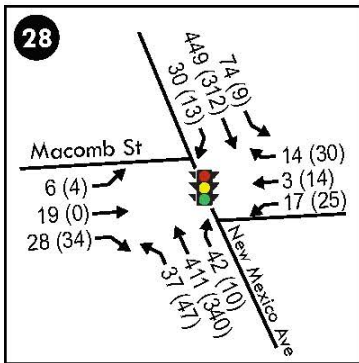
4. Nebraska Ave. at Foxhall Rd.



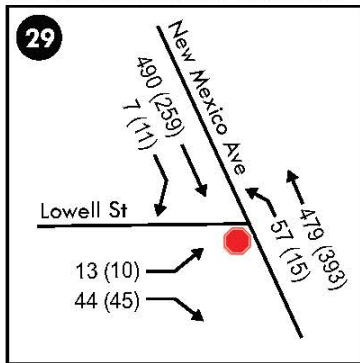
5. New Mexico Ave. at Newark St.
6. New Mexico Ave. at Westover Pl.



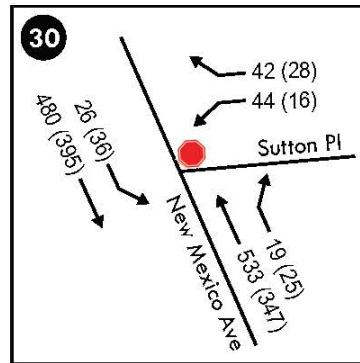
7. New Mexico Ave. at 44th St.



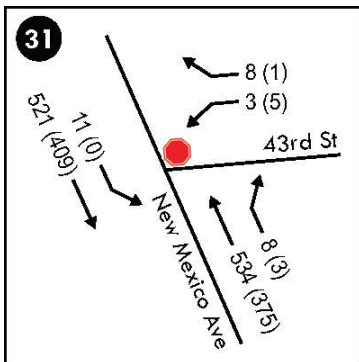
8. New Mexico Ave. at Macomb St.



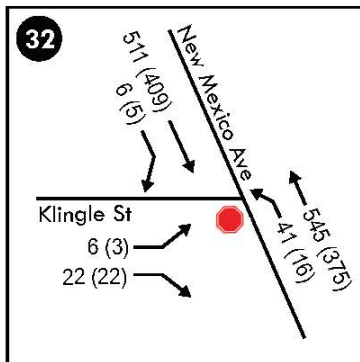
9. New Mexico Ave. at Lowell St.



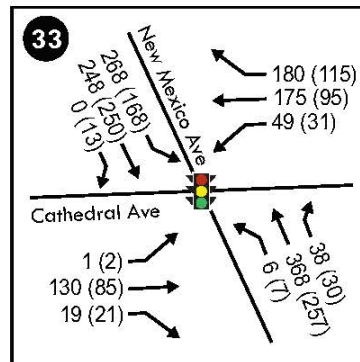
10. New Mexico Ave. at Sutton Pl.



11. New Mexico Ave. at 43rd St.

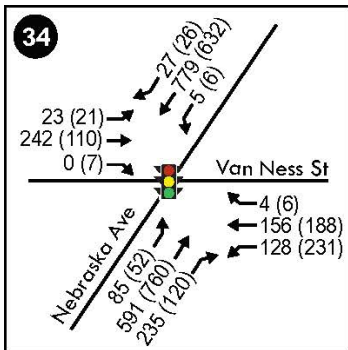


12. New Mexico Ave. at Klinge St.

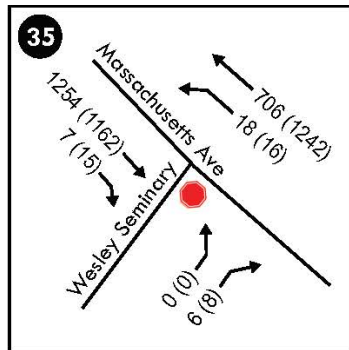


13. New Mexico Ave. at Cathedral Ave.

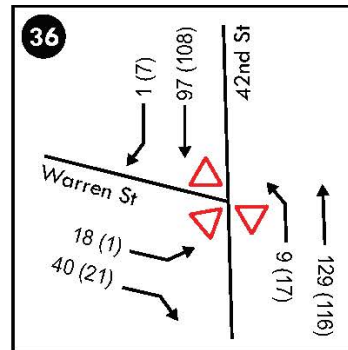
Figure 7-4 Future Intersection Peak Hour Traffic Volumes



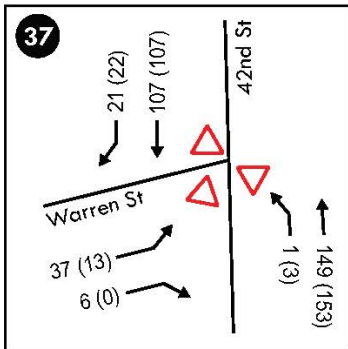
1. Nebraska Ave. at Van Ness St.



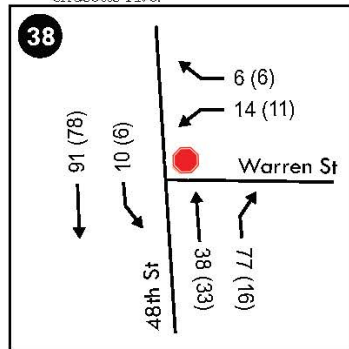
2. Wesley Seminary Drive at Massachusetts Ave.



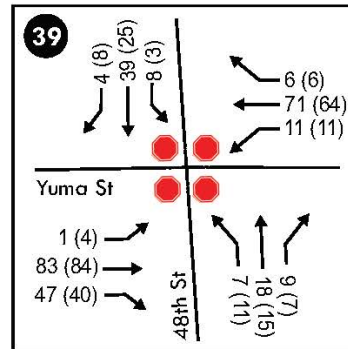
3. Warren St at 42nd St - SB



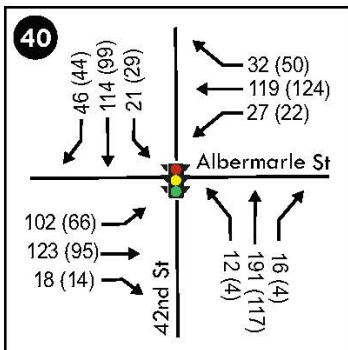
4. Warren St at 42nd St - NB



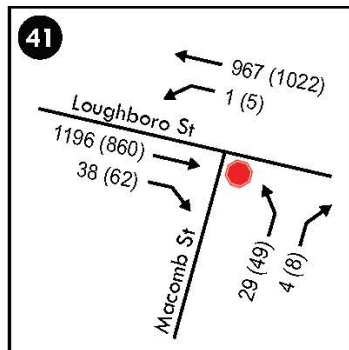
5. Warren St at 48th St.



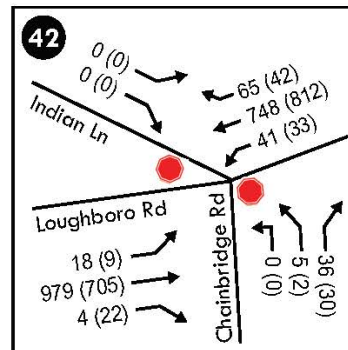
6. Yuma St. at 48th St.



7. 42nd St. at Albermarle St.



8. Nebraska Ave. at Macomb St.



9. Loughboro Rd./Nebraska Ave. at Indian Ln./Chainbridge Rd.

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Table 7-1 Future Conditions Operational Analysis

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	Max V/C	LOS	Delay (s)	Max V/C
Massachusetts Ave. at Campus Drive	B	13.4	0.62	C	28.6	1.02
Massachusetts Ave. at 45 th St.	A	2.6	0.37	B	18.4	1.93
Massachusetts Ave. at 46 th St. (Wesley Circle)	A	6.2	0.64	A	9.8	0.62
Massachusetts Ave. at Nebraska Ave. (Ward Circle) West	C	31	1.31	D	46	1.27
Massachusetts Ave. at Nebraska Ave. (Ward Circle) East	C	20.5	1.31	C	31.4	1.27
Massachusetts Ave. at Nebraska Ave. (Ward Circle) North	F	103.5	1.31	D	46.1	1.27
Massachusetts Ave. at Nebraska Ave. (Ward Circle) South	C	23.8	1.31	F	86.8	1.27
Nebraska Ave. at New Mexico Ave./SIS Garage	D	40.3	0.96	D	45	0.97
Nebraska Ave. at East Campus Dr.	A	1	0.43	A	2.3	0.44
New Mexico Ave. at East Campus Dr.	A	0.4	0.29	A	0.7	0.22
Massachusetts Ave. at Westover Pl.	A	0.2	0.56	A	0.2	0.54
Massachusetts Ave. at NAC Dr.	A	0.2	0.6	A	1	0.53
Nebraska Ave. at 45 th St.	A	0.7	0.07	A	0.6	0.1
Nebraska Ave. at Rockwood Parkway/Newark St.	B	10.2	0.75	B	12.4	0.59
Rockwood Parkway at Glenbrook Rd.	A	8.1	0.16	A	7.6	0.11
Rockwood Parkway at Fletcher Gate	A	2	0.13	A	3.8	0.22
Massachusetts Ave. at 47 th St.	A	0.3	0.42	A	0.8	0.35
Massachusetts Ave. at Van Ness St.	A	1.7	0.42	A	3.4	0.63
Massachusetts Ave. at 48 th St.	A	8.9	0.72	B	10.8	0.59
Massachusetts Ave. at 49 th St.	B	18.4	0.86	B	12.3	0.76
Wisconsin Ave. at Van Ness St.	C	23.1	0.87	C	29.3	0.89
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North	D	37	1.18	C	20.5	1.01
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South	C	23.9	1.18	D	42.9	1.01
Nebraska Ave. at Warren St.	A	1.6	0.26	A	1.2	0.22
Wisconsin Ave. at Warren St.	B	14.6	0.9	A	9	0.77

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Yuma St. at 42 nd St.	A	9.5	0.26	A	9.3	0.26
Wisconsin Ave. at Albemarle St.	B	19.5	0.88	C	25.6	0.98
Nebraska Ave. at Foxhall Rd.	D	41	0.98	D	39.6	1.02
New Mexico Ave. at Newark St.	C	23.6	0.93	B	11.6	0.56
New Mexico Ave. at Westover Pl.	C	23.6	0.93	B	11.6	0.56
New Mexico Ave. at 44 th St.	A	0.8	0.09	A	1.1	0.08
New Mexico Ave. at Macomb St.	B	13.6	0.65	B	13.9	0.53
New Mexico Ave. at Lowell St.	A	1.7	0.32	A	1.1	0.18
New Mexico Ave. at Sutton Pl.	A	2.3	0.36	A	1.3	0.24
New Mexico Ave. at 43 th St.	A	0.3	0.35	A	0.1	0.25
New Mexico Ave. at Kingle St.	A	1	0.34	A	0.6	0.27
New Mexico Ave. at Cathedral Ave.	D	42	1.05	C	21.9	0.71
Nebraska Ave. at Van Ness St.	C	23.7	1.03	D	36	1.09
Wesley Seminary Drive at Massachusetts Ave.	A	0.3	0	A	0.6	0.03
Warren St at 42 nd St – SB	A	4.3	0.14	A	4.3	0.13
Warren St at 42 nd St – NB	A	4.5	0.16	A	4.5	0.16
Warren St at 48 th St.	A	1.2	0.08	A	1.4	0.03
Yuma St. at 48 th St.	A	7.8	0.16	A	7.7	0.16
42 nd St. at Albemarle St.	C	23.1	0.85	B	14.7	0.52
Nebraska Ave. at Macomb St.	A	4.1	0.93	A	7	1.04
Loughboro Rd./Nebraska Ave. at Indian Ln./Chain Bridge Rd.	A	3	0.46	A	1.3	0.14

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Table 7-2 Future Conditions Queuing Analysis

Intersection	AM Peak Hour - 95%-Queue Length (Storage Length)				PM Peak Hour – 95% Queue Length (Storage Length)			
	NB	SB	EB	WB	NB	SB	EB	WB
Massachusetts Ave. at Campus Drive	150 (471)	565 (628)	49 (221)	67 (361)	1339 (471)	227 (628)	104 (221)	108 (361)
Massachusetts Ave. at 45 th St.	0 (222)	0.3 (246)	-	1.4 (156)	0 (222)	0 (246)	-	8 (156)
Massachusetts Ave. at 46 th St. (Wesley Circle)	62 (229)	94 (586)	0 (148)	98 (119)	114 (229)	277 (586)	0 (148)	168 (119)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) West	-	27 (250)	688 (372)	199 (300)	-	35 (250)	704 (372)	248 (300)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) East	49 (260)	-	98 (300)	511 (737)	49 (260)	-	103 (300)	517 (737)
Massachusetts Ave. at Nebraska Ave. (Ward Circle) North	94 (193)	949 (471)	-	-	113 (193)	762 (471)	-	-
Massachusetts Ave. at Nebraska Ave. (Ward Circle) South	527 (345)		116 (219)	-	937 (345)		150 (219)	-
Nebraska Ave. at New Mexico Ave./SIS Garage	197 (330)	9 (349)	373 (349)	981 (396)	180 (330)	108 (349)	328 (349)	569 (396)
Nebraska Ave. at East Campus Dr.	85 (396)	63 (372)	-	0 (208)	241 (396)	106 (372)	-	0 (208)
New Mexico Ave. at East Campus Dr.	-	2 (221)	2 (330)	0 (250)	-	5 (221)	1 (330)	0 (250)
Massachusetts Ave. at Westover Pl.	0 (565)	1 (156)	6 (277)	-	1 (565)	0 (156)	3 (277)	-
Massachusetts Ave. at NAC Dr.	0 (156)	2 (345)	-	2 (342)	0 (156)	0 (345)	-	40 (342)
Nebraska Ave. at 45 th St.	0 (220)	-	0 (349)	0 (291)	0 (220)	-	0 (349)	0 (291)
Nebraska Ave. at Rockwood Parkway/Newark St.	273 (717)	42 (291)	212 (270)	111 (279)	96 (717)	100 (291)	162 (270)	230 (279)
Rockwood Parkway at Glenbrook Rd.	1 (1445)	1 (322)	1 (425)	1 (322)	0 (1445)	0 (322)	0 (425)	0 (322)
Rockwood Parkway at Fletcher Gate	-	8 (285)	2 (155)	0 (270)	-	21 (285)	0 (155)	0 (270)
Massachusetts Ave. at 47 th St.	0 (313)	0 (181)	2 (269)	0 (586)	0 (313)	0 (181)	10 (269)	0 (586)
Massachusetts Ave. at Van Ness St.	3 (269)	2 (663)	6 (452)	36 (210)	1 (269)	9 (663)	4 (452)	96 (210)

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Massachusetts Ave. at 48 th St.	193 (663)	32 (758)	75 (433)	56 (204)	425 (663)	90 (758)	47 (433)	55 (204)
Massachusetts Ave. at 49 th St.	88 (565)	54 (328)	141 (245)	374 (758)	122 (565)	82 (328)	230 (245)	34 (759)
Wisconsin Ave. at Van Ness St.	370 (367)	89 (319)	420 (1242)	326 (419)	560 (367)	60 (319)	304 (1242)	379 (419)
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) North	142 (190)	48 (554)	0 (110)	652 (97)	102 (190)	73 (554)	0 (110)	477 (97)
Wisconsin Ave. at Nebraska Ave. (Tenley Circle) South	160 (377)	80 (190)	438 (109)	0 (111)	532 (377)	92 (190)	560 (109)	0 (111)
Nebraska Ave. at Warren St.	2 (726)	1 (392)	14 (316)	4 (282)	2 (726)	1 (392)	1 (316)	6 (282)
Wisconsin Ave. at Warren St.	301 (330)	19 (116)	73 (299)	46 (129)	211 (330)	28 (116)	81 (299)	55 (129)
Yuma St. at 42 nd St.	1 (435)	1 (295)	1 (457)	1 (864)	1 (435)	1 (295)	1 (457)	1 (864)
Wisconsin Ave. at Albemarle St.	212 (554)	54 (196)	177 (670)	230 (654)	117 (554)	176 (196)	168 (670)	234 (654)
Nebraska Ave. at Foxhall Rd.	384 (2089)	-	530 (701)	520 (717)	423 (2089)	-	457 (701)	286 (717)
New Mexico Ave. at Newark St.	69 (252)	173 (250)	310 (284)	23 (247)	79 (252)	120 (250)	100 (284)	0 (247)
New Mexico Ave. at Westover Pl.	69 (252)	173 (250)	310 (284)	23 (247)	79 (252)	120 (250)	100 (284)	0 (247)
New Mexico Ave. at 44 th St.	0 (186)	0 (252)	6 (312)	8 (150)	0 (186)	1 (252)	7 (312)	2 (150)
New Mexico Ave. at Macomb St.	206 (277)	228 (186)	65 (613)	46 (596)	269 (277)	115 (186)	53 (613)	85 (596)
New Mexico Ave. at Lowell St.	5 (94)	0 (277)	15 (597)	-	1 (94)	0 (277)	8 (597)	-
New Mexico Ave. at Sutton Pl.	0 (274)	2 (94)	-	40 (405)	0 (274)	3 (94)	-	9 (405)
New Mexico Ave. at 43 th St.	0 (358)	1 (274)	-	2 (337)	0 (358)	0 (274)	-	2 (337)
New Mexico Ave. at Klinge St.	4 (283)	0 (358)	7 (568)	-	1 (283)	0 (358)	4 (568)	-
New Mexico Ave. at Cathedral Ave.	216 (212)	580 (283)	140 (642)	220 (805)	134 (212)	342 (283)	114 (642)	134 (805)
Nebraska Ave. at Van Ness St.	810 (1410)	116 (726)	257 (110)	147 (1242)	967 (1410)	117 (726)	133 (110)	269 (1242)

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Wesley Seminary Drive at Massachusetts Ave.	0 (628)	0 (222)	0 (141)	-	0 (628)	0 (222)	0 (141)	-
Warren St at 42 nd St – SB	0 (119)	0 (97)	0 (426)	-	0 (119)	0 (97)	0 (426)	-
Warren St at 42 nd St – NB	1 (92)	0 (435)	0 (419)	-	1 (92)	0 (435)	0 (419)	-
Warren St at 48 th St.	0 (526)	1 (383)	-	2 (1057)	0 (526)	0 (383)	-	2 (1057)
Yuma St. at 48 th St.	0 (383)	0 (277)	1 (259)	0 (1099)	0 (383)	0 (277)	1 (259)	0 (1099)
42 nd St. at Albemarle St.	110 (299)	97 (437)	211 (202)	37 (670)	61 (299)	86 (437)	109 (202)	50 (670)
Nebraska Ave. at Macomb St.	88 (291)	-	0 (299)	0 (1077)	126 (291)	-	0 (299)	1 (1077)
Loughboro Rd./Nebraska Ave. at Indian Ln./Chain Bridge Rd.	49 (287)	0 (1445)	2 (1158)	6 (701)	12 (287)	0 (1445)	1 (1158)	4 (701)

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↑	↗		↖	↗		↔	
Traffic Volume (vph)	22	1228	78	27	704	63	22	6	35	10	25	25
Future Volume (vph)	22	1228	78	27	704	63	22	6	35	10	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-4%			-1%			5%	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.85		0.97	0.91		0.96	
Frt		0.991				0.850			0.850		0.943	
Flt Protected		0.999			0.998			0.962			0.992	
Satd. Flow (prot)	0	2869	0	0	1625	1318	0	1286	1136	0	1378	0
Flt Permitted		0.934			0.910			0.839			0.958	
Satd. Flow (perm)	0	2682	0	0	1481	1116	0	1086	1036	0	1313	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				65			36		26	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		628			471			361			221	
Travel Time (s)		14.3			10.7			9.8			6.0	
Confl. Peds. (#/hr)	27		16	16		27	23		41	41		23
Confl. Bikes (#/hr)			8			3						2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	0%	0%	5%	20%	20%	20%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	7	7	7
Adj. Flow (vph)	23	1266	80	28	726	65	23	6	36	10	26	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1369	0	0	754	65	0	29	36	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.28	1.28	1.22	1.22	1.22	1.24	1.24	1.24	1.29	1.33	1.29
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left			Left		Right	Left		Right	Left		
Leading Detector (ft)	20	20		20	20	20	20	20	20	20	20	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20		20	20	20	20	20	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	6	6		2	2	2	8	8	8	4	4	

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020

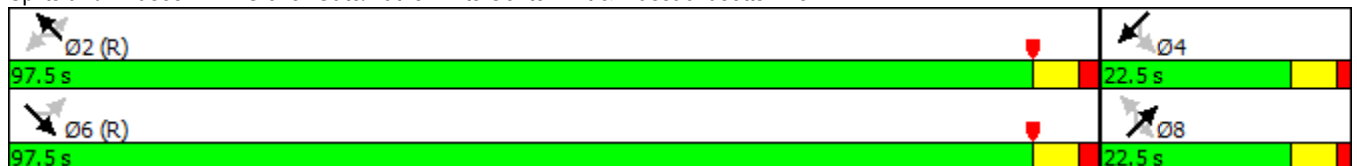


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	20.0	20.0		18.0	18.0	18.0	12.5	12.5	12.5	22.5	22.5	
Total Split (s)	97.5	97.5		97.5	97.5	97.5	22.5	22.5	22.5	22.5	22.5	
Total Split (%)	81.3%	81.3%		81.3%	81.3%	81.3%	18.8%	18.8%	18.8%	18.8%	18.8%	
Maximum Green (s)	91.5	91.5		91.5	91.5	91.5	17.0	17.0	17.0	17.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)		4.0			4.0	4.0		3.5	3.5		3.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	
Flash Dont Walk (s)	7.0	7.0		5.0	5.0	5.0				10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0	0				64	64	
Act Effct Green (s)		98.8			98.8	98.8		17.0	17.0			17.0
Actuated g/C Ratio		0.82			0.82	0.82		0.14	0.14			0.14
v/c Ratio		0.62			0.62	0.07		0.19	0.20			0.30
Control Delay		14.9			6.0	0.6		47.2	16.5			32.4
Queue Delay		1.5			0.0	0.0		0.0	0.1			0.0
Total Delay		16.4			6.0	0.6		47.2	16.6			32.4
LOS		B			A	A		D	B			C
Approach Delay		16.4			5.6			30.3				32.4
Approach LOS		B			A			C				C

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 115 (96%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 13.4
 Intersection LOS: B
 Intersection Capacity Utilization 85.0%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW



Lanes, Volumes, Timings
 2: Massachusetts Ave NW & 45th St

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↕	
Traffic Volume (vph)	63	1341	693	11	14	13
Future Volume (vph)	63	1341	693	11	14	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		4%	-7%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.937	
Flt Protected		0.998			0.974	
Satd. Flow (prot)	0	3231	3412	0	1587	0
Flt Permitted		0.998			0.974	
Satd. Flow (perm)	0	3231	3412	0	1587	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		246	222		156	
Travel Time (s)		5.6	5.0		3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	1490	770	12	16	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1560	782	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.7%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020

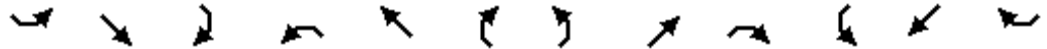


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑						↕	
Traffic Volume (vph)	0	1257	8	13	645	0	0	0	0	85	24	3
Future Volume (vph)	0	1257	8	13	645	0	0	0	0	85	24	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	9	9	9
Grade (%)		7%			-7%			0%			7%	
Storage Length (ft)	0		90	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96		1.00							1.00
Frt			0.850									0.996
Flt Protected					0.999							0.963
Satd. Flow (prot)	0	2841	1235	0	2892	0	0	0	0	0	1256	0
Flt Permitted					0.919							0.963
Satd. Flow (perm)	0	2841	1191	0	2660	0	0	0	0	0	1256	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23									1
Link Speed (mph)		30			30			25				25
Link Distance (ft)		586			229			148				119
Travel Time (s)		13.3			5.2			4.0				3.2
Confl. Peds. (#/hr)	16		22	22		16						5
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	7	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0					0	0	0
Adj. Flow (vph)	0	1283	8	13	658	0	0	0	0	87	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1283	8	0	671	0	0	0	0	0	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.30	1.30	1.35	1.20	1.27	1.20	1.14	1.14	1.14	1.36	1.55	1.36
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA	Perm	Perm	NA					Split	NA	
Protected Phases		6			2					4	4	
Permitted Phases			6	2								
Minimum Split (s)		15.5	15.5	15.5	15.5					23.5	23.5	
Total Split (s)		88.0	88.0	88.0	88.0					32.0	32.0	
Total Split (%)		73.3%	73.3%	73.3%	73.3%					26.7%	26.7%	
Maximum Green (s)		82.5	82.5	82.5	82.5					26.5	26.5	
Yellow Time (s)		4.5	4.5	4.5	4.5					4.0	4.0	
All-Red Time (s)		1.0	1.0	1.0	1.0					1.5	1.5	
Lost Time Adjust (s)		-2.0	-2.0		-2.0							-2.0
Total Lost Time (s)		3.5	3.5		3.5							3.5

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effect Green (s)		84.5	84.5		84.5							28.5
Actuated g/C Ratio		0.70	0.70		0.70							0.24
v/c Ratio		0.64	0.01		0.36							0.38
Control Delay		3.9	0.0		5.5							36.6
Queue Delay		0.0	0.0		0.0							0.0
Total Delay		3.9	0.0		5.5							36.6
LOS		A	A		A							D
Approach Delay		3.9			5.5							36.6
Approach LOS		A			A							D

Intersection Summary





















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	46 (38%), Referenced to phase 2:NWTL and 6:SET, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	6.2
Intersection LOS:	A
Intersection Capacity Utilization:	60.3%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 3: Tilden St NW/46th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

													
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Volume (vph)	0	1	2	67	29	292	0	949	46	315	901	37	
Future Volume (vph)	0	1	2	67	29	292	0	949	46	315	901	37	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	10	10	10	
Grade (%)		15%			-1%			2%				-1%	
Storage Length (ft)	0		0	220		5	0		0	0		0	
Storage Lanes	0		0	1		1	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor		0.97		0.97		0.87		1.00				0.99	
Frt		0.910				0.850		0.993				0.994	
Flt Protected				0.950						0.950			
Satd. Flow (prot)	0	1398	0	1465	1524	1295	0	2888	0	1438	1449	0	
Flt Permitted				0.756						0.131			
Satd. Flow (perm)	0	1398	0	1129	1524	1128	0	2888	0	198	1449	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		2				67		5				4	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		349			330			349				396	
Travel Time (s)		9.5			9.0			7.9				9.0	
Confl. Peds. (#/hr)	63		16	16		63	29		19	19		29	
Confl. Bikes (#/hr)						1							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	3%	3%	3%	6%	6%	6%	
Bus Blockages (#/hr)	0	0	0	0	3	3	0	0	0	0	8	0	
Adj. Flow (vph)	0	1	2	70	30	304	0	989	48	328	939	39	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	3	0	70	30	304	0	1037	0	328	978	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		10			10			10				10	
Link Offset(ft)		0			0			0				0	
Crosswalk Width(ft)		16			16			16				16	
Two way Left Turn Lane													
Headway Factor	1.26	1.26	1.26	1.24	1.26	1.26	1.26	1.26	1.26	1.24	1.29	1.24	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Turn Type		NA		Perm	NA	pm+ov		NA		pm+pt		NA	
Protected Phases		8			4	5		6		5		2	
Permitted Phases	8			4		4				2			
Minimum Split (s)	23.5	23.5		24.5	24.5	10.5		25.5		10.5		21.5	
Total Split (s)	29.0	29.0		29.0	29.0	32.0		56.0		32.0		88.0	
Total Split (%)	24.2%	24.2%		24.2%	24.2%	26.7%		46.7%		26.7%		73.3%	
Maximum Green (s)	23.5	23.5		23.5	23.5	26.5		50.5		26.5		82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0		4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5		1.5		1.5		1.5	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0		-2.0		-2.0		-2.0	
Total Lost Time (s)		3.5		3.5	3.5	3.5		3.5		3.5		3.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lead		Lag		Lead			

Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

Lane Group	Ø14	Ø18
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	14	18
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	3%	3%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead

Lanes, Volumes, Timings

5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

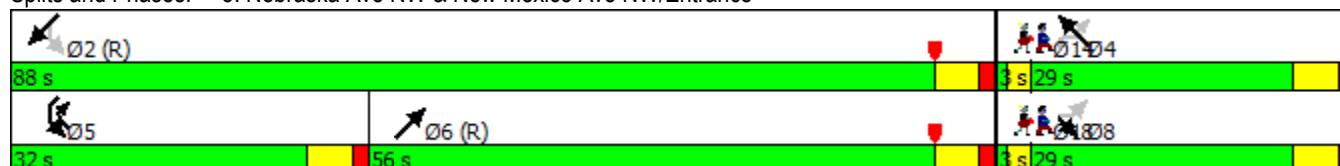


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0				7.0
Flash Dont Walk (s)	11.0	11.0		12.0	12.0			13.0				9.0
Pedestrian Calls (#/hr)	0	0		0	0			0				0
Act Effect Green (s)		25.5		25.5	25.5	54.0		52.5		84.5	84.5	
Actuated g/C Ratio		0.21		0.21	0.21	0.45		0.44		0.70	0.70	
v/c Ratio		0.01		0.29	0.09	0.52		0.82		0.76	0.96	
Control Delay		29.0		43.7	39.0	20.5		24.6		41.6	50.5	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.3	11.8	
Total Delay		29.0		43.7	39.0	20.5		24.6		41.9	62.3	
LOS		C		D	D	C		C		D	E	
Approach Delay		29.0			25.9			24.6			57.2	
Approach LOS		C			C			C			E	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	25 (21%), Referenced to phase 2:SWTL and 6:NET, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	40.3
Intersection LOS:	D
Intersection Capacity Utilization:	80.6%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 5: Nebraska Ave NW & New Mexico Ave NW/Entrance



Lane Group	Ø14	Ø18
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

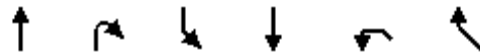
Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

	↑	↖	↙	↓	↘	↗	
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Lane Configurations	↑↑			↑↑		↗	
Traffic Volume (vph)	1275	28	1	1232	0	4	
Future Volume (vph)	1275	28	1	1232	0	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	-1%			-1%	0%		
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	
Fr _t	0.997					0.865	
Fl _t Protected							
Satd. Flow (prot)	3546	0	0	3557	0	1611	
Fl _t Permitted				0.954			
Satd. Flow (perm)	3546	0	0	3393	0	1611	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	4					1091	
Link Speed (mph)	30			30	25		
Link Distance (ft)	396			372	208		
Travel Time (s)	9.0			8.5	5.7		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	1417	31	1	1369	0	4	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1448	0	0	1370	0	4	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	0			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00	
Turning Speed (mph)		9	15		15	9	
Number of Detectors	1		1	1		1	
Detector Template			Left			Right	
Leading Detector (ft)	20		20	20		20	
Trailing Detector (ft)	0		0	0		0	
Detector 1 Position(ft)	0		0	0		0	
Detector 1 Size(ft)	20		20	20		20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0		0.0	
Turn Type	NA		Perm	NA		Perm	
Protected Phases	2			2		4	
Permitted Phases			2			6	
Detector Phase	2		2	2		6	
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0		4.0	10.0
Minimum Split (s)	20.0		20.0	20.0		20.5	26.0
Total Split (s)	92.0		92.0	92.0		20.5	28.0
Total Split (%)	76.7%		76.7%	76.7%		17.1%	23%

Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

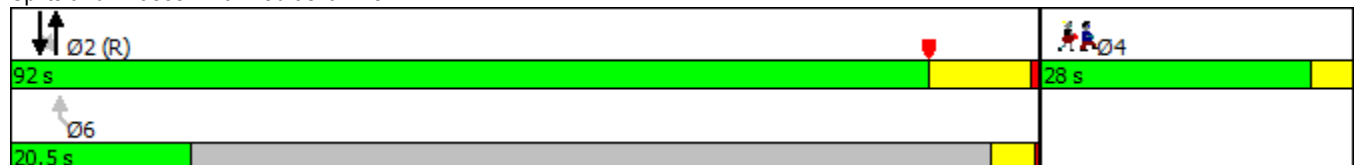


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Maximum Green (s)	82.0		82.0	82.0		16.0	24.0
Yellow Time (s)	9.0		9.0	9.0		4.0	4.0
All-Red Time (s)	1.0		1.0	1.0		0.5	0.0
Lost Time Adjust (s)	-2.0			-2.0		-2.0	
Total Lost Time (s)	8.0			8.0		2.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0	1.0		3.0	1.0
Recall Mode	C-Max		C-Max	C-Max		None	None
Walk Time (s)						5.0	10.0
Flash Dont Walk (s)						11.0	12.0
Pedestrian Calls (#/hr)						0	5
Act Effect Green (s)	113.2			113.2		114.3	
Actuated g/C Ratio	0.94			0.94		0.95	
v/c Ratio	0.43			0.43		0.00	
Control Delay	1.0			0.8		0.0	
Queue Delay	0.1			0.1		0.0	
Total Delay	1.0			0.9		0.0	
LOS	A			A		A	
Approach Delay	1.0			0.9			
Approach LOS	A			A			

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	62 (52%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	1.0
Intersection LOS:	A
Intersection Capacity Utilization	49.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: Nebraska Ave NW



Lanes, Volumes, Timings
7: New Mexico Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	24	378	442	8	8	0
Future Volume (vph)	24	378	442	8	8	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	7%		0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.998			
Flt Protected		0.997			0.950	
Satd. Flow (prot)	0	3277	1674	0	1652	0
Flt Permitted		0.997			0.950	
Satd. Flow (perm)	0	3277	1674	0	1652	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		330	250		221	
Travel Time (s)		9.0	6.8		5.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	420	491	9	9	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	447	500	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.14	1.14	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1283	18	7	936	4	1
Future Volume (vph)	1283	18	7	936	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-4%			0%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.973	
Flt Protected					0.962	
Satd. Flow (prot)	3363	0	0	3303	1627	0
Flt Permitted					0.962	
Satd. Flow (perm)	3363	0	0	3303	1627	0
Link Speed (mph)	30			25	30	
Link Distance (ft)	156			565	277	
Travel Time (s)	3.5			15.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1426	20	8	1040	4	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1446	0	0	1048	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
9: Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↔↕	↕↔		↕↔	
Traffic Volume (vph)	18	1334	802	19	1	7
Future Volume (vph)	18	1334	802	19	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	0%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.997		0.880	
Flt Protected		0.999			0.994	
Satd. Flow (prot)	0	3366	3293	0	1521	0
Flt Permitted		0.999			0.994	
Satd. Flow (perm)	0	3366	3293	0	1521	0
Link Speed (mph)		30	25		30	
Link Distance (ft)		345	156		342	
Travel Time (s)		7.8	4.3		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1482	891	21	1	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1502	912	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.6%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Nebraska Ave NW

08/31/2020



Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	1	23	1042	0	30	946
Future Volume (vph)	1	23	1042	0	30	946
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.870					
Flt Protected	0.998					0.998
Satd. Flow (prot)	1510	0	3270	0	0	3313
Flt Permitted	0.998					0.998
Satd. Flow (perm)	1510	0	3270	0	0	3313
Link Speed (mph)	30		30			30
Link Distance (ft)	220		291			349
Travel Time (s)	5.0		6.6			7.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	26	1158	0	33	1051
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	1158	0	0	1084
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.11	1.11	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.9%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020

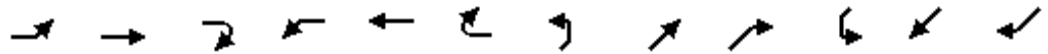


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	38	114	38	45	45	0	61	996	138	5	881	107
Future Volume (vph)	38	114	38	45	45	0	61	996	138	5	881	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15	10	10	10	10	10	10
Grade (%)		6%			-1%			-2%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.973						0.983			0.984	
Flt Protected		0.990			0.976			0.997				
Satd. Flow (prot)	0	1557	0	0	1774	0	0	2915	0	0	2820	0
Flt Permitted		0.923			0.723			0.811			0.949	
Satd. Flow (perm)	0	1445	0	0	1308	0	0	2371	0	0	2676	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		10						28			26	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		270			279			717			291	
Travel Time (s)		7.4			7.6			16.3			6.6	
Confl. Peds. (#/hr)	16		10	10		16	3		20	20		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	40	119	40	47	47	0	64	1038	144	5	918	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	199	0	0	94	0	0	1246	0	0	1034	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.19	1.19	1.19	1.01	1.01	1.01	1.23	1.23	1.23	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	26.0	26.0		26.0	26.0		25.0	25.0		25.0	25.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		82.0	82.0		82.0	82.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		28.0			28.0			84.0			84.0	

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.23			0.23			0.70			0.70	
v/c Ratio		0.58			0.31			0.75			0.55	
Control Delay		46.4			41.4			7.4			3.3	
Queue Delay		0.0			0.0			0.2			0.3	
Total Delay		46.4			41.4			7.6			3.6	
LOS		D			D			A			A	
Approach Delay		46.4			41.4			7.6			3.6	
Approach LOS		D			D			A			A	

Intersection Summary

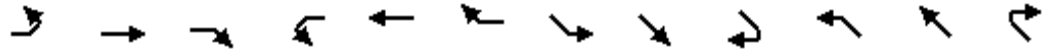
Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 42 (35%), Referenced to phase 2:NESW, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 10.2
 Intersection Capacity Utilization 95.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service F

Splits and Phases: 11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW



Lanes, Volumes, Timings
 12: Indian Ln/Rockwood Pkwy & Glenbrook Ave

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕↔			↕↔	
Traffic Volume (vph)	35	39	36	4	16	17	12	58	23	2	118	1
Future Volume (vph)	35	39	36	4	16	17	12	58	23	2	118	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956			0.937			0.966			0.999	
Flt Protected		0.984			0.995			0.994			0.999	
Satd. Flow (prot)	0	1635	0	0	1621	0	0	1669	0	0	1735	0
Flt Permitted		0.984			0.995			0.994			0.999	
Satd. Flow (perm)	0	1635	0	0	1621	0	0	1669	0	0	1735	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		425			322			322			1445	
Travel Time (s)		9.7			7.3			7.3			32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	43	40	4	18	19	13	64	26	2	131	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	41	0	0	103	0	0	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 13: Rockwood Pkwy NW & Fletcher Gate

08/31/2020



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	168	87	115	43	7
Future Volume (vph)	38	168	87	115	43	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		6%	0%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.923		0.981	
Flt Protected		0.991			0.959	
Satd. Flow (prot)	0	1671	1605	0	1636	0
Flt Permitted		0.991			0.959	
Satd. Flow (perm)	0	1671	1605	0	1636	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		155	270		285	
Travel Time (s)		4.2	7.4		6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	187	97	128	48	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	229	225	0	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 14: 47th St & Massachusetts Ave NW

08/31/2020

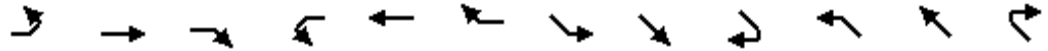
												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	23	1255	12	2	611	6
Future Volume (vph)	0	0	0	0	0	0	23	1255	12	2	611	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt								0.999			0.998	
Flt Protected								0.999				
Satd. Flow (prot)	0	1739	0	0	1739	0	0	3181	0	0	3346	0
Flt Permitted								0.999				
Satd. Flow (perm)	0	1739	0	0	1739	0	0	3181	0	0	3346	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			181			269			586	
Travel Time (s)		7.1			4.1			6.1			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0	26	1394	13	2	679	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	1433	0	0	688	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 15: Massachusetts Ave NW & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	3	20	8	9	96	20	1262	6	21	583	8
Future Volume (vph)	0	3	20	8	9	96	20	1262	6	21	583	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.881			0.885			0.999			0.998	
Flt Protected					0.996			0.999			0.998	
Satd. Flow (prot)	0	1532	0	0	1532	0	0	3181	0	0	3339	0
Flt Permitted					0.996			0.999			0.998	
Satd. Flow (perm)	0	1532	0	0	1532	0	0	3181	0	0	3339	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		452			210			663			269	
Travel Time (s)		10.3			4.8			15.1			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	3	22	9	10	107	22	1402	7	23	648	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	126	0	0	1431	0	0	680	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

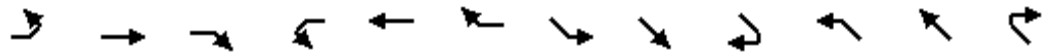
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.4%
ICU Level of Service	C
Analysis Period (min)	15

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020

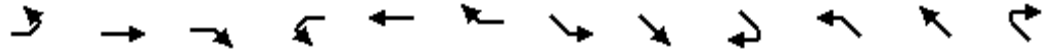


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	48	41	48	38	11	58	58	1179	8	15	635	16
Future Volume (vph)	48	41	48	38	11	58	58	1179	8	15	635	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-6%			3%			-3%	
Storage Length (ft)	50		0	150		0	0		0	0		140
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.97		0.96	0.95			1.00				1.00
Frt		0.919			0.873			0.999				0.997
Flt Protected	0.950			0.950				0.998				0.999
Satd. Flow (prot)	1311	1232	0	1460	1280	0	0	2878	0	0	2786	0
Flt Permitted	0.711			0.676				0.874				0.912
Satd. Flow (perm)	943	1232	0	1000	1280	0	0	2520	0	0	2543	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			60			1				5
Link Speed (mph)		25			25			30				30
Link Distance (ft)		433			204			758				663
Travel Time (s)		11.8			5.6			17.2				15.1
Confl. Peds. (#/hr)	26		26	26		26	4		39	39		4
Confl. Bikes (#/hr)									3			5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	7%	7%	7%	2%	2%	2%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	7	0	7	7
Parking (#/hr)	0	0	0							0	0	0
Adj. Flow (vph)	49	42	49	39	11	60	60	1215	8	15	655	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	91	0	39	71	0	0	1283	0	0	686	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.45	1.45	1.28	1.20	1.20	1.20	1.27	1.29	1.27	1.22	1.33	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6				2
Permitted Phases	4			8			6			2		
Minimum Split (s)	28.0	28.0		28.0	28.0		15.0	15.0		15.0	15.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		83.0	83.0		83.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.0			3.0	

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	15.0	15.0		15.0	15.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effect Green (s)	28.0	28.0		28.0	28.0			85.0			85.0	
Actuated g/C Ratio	0.23	0.23		0.23	0.23			0.71			0.71	
v/c Ratio	0.22	0.28		0.17	0.21			0.72			0.38	
Control Delay	40.5	22.7		39.1	13.4			3.3			13.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	40.5	22.7		39.1	13.4			3.3			13.2	
LOS	D	C		D	B			A			B	
Approach Delay		29.0			22.5			3.3			13.2	
Approach LOS		C			C			A			B	

Intersection Summary





















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	8.9
Intersection LOS:	A
Intersection Capacity Utilization	87.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 16: Massachusetts Ave NW & Fordham Rd NW/48th St NW



Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	60	59	8	33	28	0	144	1213	75	32	623	45
Future Volume (vph)	60	59	8	33	28	0	144	1213	75	32	623	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	11	11	11	11	11	11
Grade (%)		-1%			-3%			-2%				3%
Storage Length (ft)	85		0	70		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	0.99		0.97				1.00				1.00
Flt		0.983						0.992				0.990
Flt Protected	0.950			0.950				0.995				0.998
Satd. Flow (prot)	1296	1335	0	1484	1562	0	0	3013	0	0	2914	0
Flt Permitted	0.738			0.711				0.666				0.803
Satd. Flow (perm)	976	1335	0	1076	1562	0	0	2017	0	0	2343	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5						13				8
Link Speed (mph)		25			25			30				30
Link Distance (ft)		565			328			245				758
Travel Time (s)		15.4			8.9			5.6				17.2
Confl. Peds. (#/hr)	19		20	20		19	11		16	16		11
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	2%	2%	2%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	7	0	7	0
Parking (#/hr)	0	0										
Adj. Flow (vph)	63	62	8	35	29	0	152	1277	79	34	656	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	70	0	35	29	0	0	1508	0	0	737	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		9			9			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.47	1.47	1.30	1.28	1.28	1.28	1.18	1.20	1.18	1.22	1.24	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			4		5	2				6
Permitted Phases	4			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		10.0	19.5		19.5	19.5	
Total Split (s)	27.5	27.5		27.5	27.5		33.0	92.5		59.5	59.5	
Total Split (%)	22.9%	22.9%		22.9%	22.9%		27.5%	77.1%		49.6%	49.6%	
Maximum Green (s)	21.5	21.5		21.5	21.5		28.0	87.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.5	1.5	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.5			3.5	

Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag							Lead			Lag		
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)	23.5	23.5		23.5	23.5			89.0			56.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.47	
v/c Ratio	0.33	0.26		0.17	0.10			0.86			0.67	
Control Delay	47.1	41.1		42.6	40.6			8.9			31.0	
Queue Delay	0.0	0.0		0.0	0.0			0.1			0.0	
Total Delay	47.1	41.1		42.6	40.6			9.0			31.0	
LOS	D	D		D	D			A			C	
Approach Delay		44.0			41.7			9.0			31.0	
Approach LOS		D			D			A			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	116 (97%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	18.4
Intersection LOS:	B
Intersection Capacity Utilization	94.0%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 17: 49th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	264	64	49	237	46	5	860	45	2	1523	56
Future Volume (vph)	39	264	64	49	237	46	5	860	45	2	1523	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		5%			2%			-1%			1%	
Storage Length (ft)	70		0	110		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor	0.98	0.99		0.98	0.99			0.98			0.98	
Frt		0.971			0.976			0.993			0.995	
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1449	1465	0	1472	1499	0	0	2660	0	0	3906	0
Flt Permitted	0.337			0.262				0.943			0.940	
Satd. Flow (perm)	505	1465	0	399	1499	0	0	2508	0	0	3671	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		10						6			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		1242			419			367			319	
Travel Time (s)		33.9			11.4			8.3			7.3	
Confl. Peds. (#/hr)	23		27	27		23	127		88	88		127
Confl. Bikes (#/hr)						5			4			7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	6%	6%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	30	30
Parking (#/hr)								0	0			
Adj. Flow (vph)	41	278	67	52	249	48	5	905	47	2	1603	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	345	0	52	297	0	0	957	0	0	1664	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.29	1.29	1.29	1.26	1.26	1.26	1.24	1.32	1.24	1.26	1.32	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		11.0	18.0	
Total Split (s)	36.0	36.0		36.0	36.0		67.0	67.0		11.0	78.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		55.8%	55.8%		9.2%	65.0%	
Maximum Green (s)	30.0	30.0		30.0	30.0		61.0	61.0		5.0	72.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lag	Lag					Lag	Lag	

Lane Group	Ø3	Ø5	Ø7	Ø11
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	3	5	7	11
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead

Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		1.0	4.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		7.0	7.0		1.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	32.0	32.0		32.0	32.0			63.0			74.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27			0.52			0.62	
v/c Ratio	0.31	0.87		0.49	0.74			0.73			0.73	
Control Delay	47.5	66.8		55.3	53.1			25.7			5.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.2	
Total Delay	47.5	66.8		55.3	53.1			25.7			5.5	
LOS	D	E		E	D			C			A	
Approach Delay		64.8			53.4			25.7			5.5	
Approach LOS		E			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	54 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	23.1
Intersection LOS:	C
Intersection Capacity Utilization:	71.9%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 18: WISCONSIN AVE & Van Ness St



Lane Group	Ø3	Ø5	Ø7	Ø11
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

20: Nebraska Ave & Warren St & Nebraska Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SWL2	SWL	SWR
Lane Configurations		↕			↕		↕	↕		↕	
Traffic Volume (vph)	3	33	10	13	4	5	15	14	17	809	0
Future Volume (vph)	3	33	10	13	4	5	15	14	17	809	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%		-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95
Frt		0.971			0.966		0.984	0.850			
Flt Protected		0.997			0.972		0.957			0.950	
Satd. Flow (prot)	0	1683	0	0	1632	0	1654	1418	0	3188	0
Flt Permitted		0.997			0.972		0.957			0.950	
Satd. Flow (perm)	0	1683	0	0	1632	0	1654	1418	0	3188	0
Link Speed (mph)		30			30		30			30	
Link Distance (ft)		316			282		726			392	
Travel Time (s)		7.2			6.4		16.5			8.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	37	11	14	4	6	17	16	19	899	0
Shared Lane Traffic (%)								10%			
Lane Group Flow (vph)	0	51	0	0	24	0	19	14	0	918	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Left	Right
Median Width(ft)		0			0		10			20	
Link Offset(ft)		0			0		0			0	
Crosswalk Width(ft)		16			16		16			16	
Two way Left Turn Lane											
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.08	1.08	1.10	1.10	1.10
Turning Speed (mph)	15		9	15		9	15	9	15	15	9
Sign Control		Stop			Stop		Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 21: WISCONSIN AVE & Warren St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	17	21	33	17	8	9	15	872	2	70	1562	3
Future Volume (vph)	17	21	33	17	8	9	15	872	2	70	1562	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	8	8	8	10	10	10	10	10	10
Grade (%)		1%			1%			-1%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor		0.99			0.99			1.00			1.00	
Frt		0.937			0.965							
Flt Protected		0.988			0.975			0.999			0.998	
Satd. Flow (prot)	0	1230	0	0	1205	0	0	2727	0	0	4239	0
Flt Permitted		0.928			0.873			0.891			0.800	
Satd. Flow (perm)	0	1152	0	0	1077	0	0	2432	0	0	3391	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			9							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		299			129			330			116	
Travel Time (s)		8.2			3.5			7.5			2.6	
Confl. Peds. (#/hr)	8		2	2		8	115		87	87		212
Confl. Bikes (#/hr)									5			6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	6%	6%	6%	3%	3%	3%
Parking (#/hr)	0	0	0	0	0	0		0	0			
Adj. Flow (vph)	18	22	35	18	8	9	16	918	2	74	1644	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	35	0	0	936	0	0	1721	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.49	1.31	1.38	1.56	1.38	1.24	1.32	1.24	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			6			2	
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		6	6		2	2	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	

Lanes, Volumes, Timings
21: WISCONSIN AVE & Warren St

08/31/2020

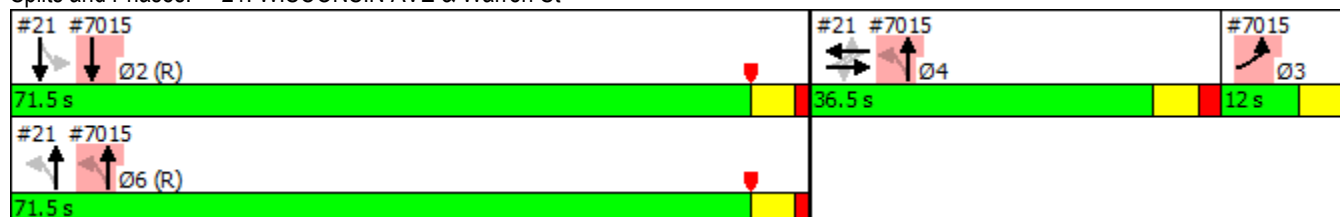


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.0	29.0		29.0	29.0		22.5	22.5		23.5	23.5	
Total Split (s)	36.5	36.5		36.5	36.5		71.5	71.5		71.5	71.5	
Total Split (%)	30.4%	30.4%		30.4%	30.4%		59.6%	59.6%		59.6%	59.6%	
Maximum Green (s)	30.5	30.5		30.5	30.5		66.0	66.0		66.0	66.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			3.5			3.5	
Lead/Lag	Lead	Lead		Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		10.0	10.0		11.0	11.0	
Pedestrian Calls (#/hr)	10	10		10	10		0	0		0	0	
Act Effct Green (s)		16.5			16.5			68.0			68.0	
Actuated g/C Ratio		0.14			0.14			0.57			0.57	
v/c Ratio		0.40			0.23			0.68			0.90	
Control Delay		35.0			37.9			24.6			7.3	
Queue Delay		0.0			0.0			0.7			0.0	
Total Delay		35.0			37.9			25.3			7.3	
LOS		D			D			C			A	
Approach Delay		35.0			37.9			25.3			7.3	
Approach LOS		D			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	29 (24%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	14.6
Intersection LOS:	B
Intersection Capacity Utilization:	81.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 21: WISCONSIN AVE & Warren St



Lane Group	Ø3
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	12.0
Total Split (s)	12.0
Total Split (%)	10%
Maximum Green (s)	7.0
Yellow Time (s)	4.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings

22: Yuma St.

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	31	113	9	30	87	19	11	117	43	45	92	10
Future Volume (vph)	31	113	9	30	87	19	11	117	43	45	92	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.981			0.966			0.991	
Flt Protected		0.990			0.989			0.997			0.985	
Satd. Flow (prot)	0	1742	0	0	1687	0	0	1674	0	0	1697	0
Flt Permitted		0.990			0.989			0.997			0.985	
Satd. Flow (perm)	0	1742	0	0	1687	0	0	1674	0	0	1697	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		457			864			435			295	
Travel Time (s)		10.4			19.6			9.9			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	126	10	33	97	21	12	130	48	50	102	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	151	0	0	190	0	0	163	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
23: WISCONSIN AVE & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	126	100	45	135	79	0	1003	55	2	1580	50
Future Volume (vph)	55	126	100	45	135	79	0	1003	55	2	1580	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	9	9	9	11	11	11	11	11	11
Grade (%)		-4%			4%			3%			-3%	
Storage Length (ft)	120		0	0		150	0		110	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	0.91
Ped Bike Factor	0.76	0.94			0.98	0.68			0.32		0.97	
Frt		0.934				0.850			0.850		0.995	
Flt Protected	0.950				0.988							
Satd. Flow (prot)	1531	1415	0	0	1461	1257	0	2773	1081	0	4131	0
Flt Permitted	0.950				0.867						0.939	
Satd. Flow (perm)	1157	1415	0	0	1253	850	0	2773	348	0	3879	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38				127			127			6
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		670			654			554			196	
Travel Time (s)		18.3			17.8			12.6			4.5	
Confl. Peds. (#/hr)	227		84	84		227	295		317	317		295
Confl. Bikes (#/hr)									1			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	6%	6%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	20	0	24	24
Parking (#/hr)								0	0			
Adj. Flow (vph)	58	133	105	47	142	83	0	1056	58	2	1663	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	238	0	0	189	83	0	1056	58	0	1718	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.34	1.34	1.34	1.22	1.30	1.53	1.17	1.22	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases	3	8			4			2				6
Permitted Phases				4		4			2		6	
Minimum Split (s)	10.0	33.0		30.0	30.0	30.0		23.0	23.0	17.0	17.0	
Total Split (s)	15.0	50.0		35.0	35.0	35.0		64.0	64.0	64.0	64.0	
Total Split (%)	12.5%	41.7%		29.2%	29.2%	29.2%		53.3%	53.3%	53.3%	53.3%	
Maximum Green (s)	10.0	44.0		29.0	29.0	29.0		58.0	58.0	58.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)	3.0	4.0			4.0	4.0		4.0	4.0		4.0	

Lane Group	Ø1	Ø5	Ø7	Ø9
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	1	5	7	9
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				

Lanes, Volumes, Timings
 23: WISCONSIN AVE & Albermarle St

08/31/2020

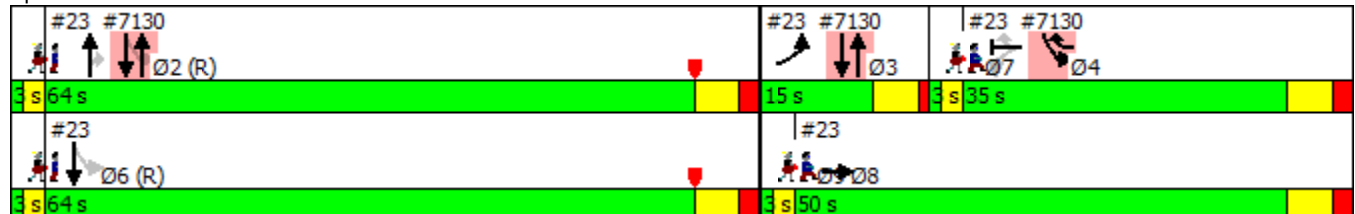


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag						Lag	Lag	Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)		4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Flash Dont Walk (s)		20.0		17.0	17.0	17.0		10.0	10.0	4.0	4.0	
Pedestrian Calls (#/hr)		0		0	0	0		0	0	0	0	
Act Effect Green (s)	12.0	46.0		31.0	31.0	31.0		60.0	60.0		60.0	
Actuated g/C Ratio	0.10	0.38		0.26	0.26	0.26		0.50	0.50		0.50	
v/c Ratio	0.38	0.42		0.59	0.27	0.27		0.76	0.24		0.88	
Control Delay	56.5	26.7		50.2	16.1	16.1		21.9	2.5		13.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	56.5	26.7		50.2	16.1	16.1		21.9	2.5		13.2	
LOS	E	C		D	B	B		C	A		B	
Approach Delay		32.6		39.8				20.8			13.2	
Approach LOS		C		D				C			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	6 (5%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	19.5
Intersection LOS:	B
Intersection Capacity Utilization	84.4%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 23: WISCONSIN AVE & Albermarle St



Lane Group	Ø1	Ø5	Ø7	Ø9
Lead/Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑	↙	↗
Traffic Volume (vph)	766	250	391	587	275	474
Future Volume (vph)	766	250	391	587	275	474
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		200	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98		0.98		0.99	
Frt	0.963					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2711	0	1451	1528	1486	1330
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2711	0	1426	1528	1469	1330
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	45					75
Link Speed (mph)	30			30	25	
Link Distance (ft)	701			717	2089	
Travel Time (s)	15.9			16.3	57.0	
Confl. Peds. (#/hr)		19	19		3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	5%	5%	1%	1%
Bus Blockages (#/hr)	8	8	0	0	0	0
Adj. Flow (vph)	798	260	407	611	286	494
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1058	0	407	611	286	494
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	46	
Two way Left Turn Lane						
Headway Factor	1.28	1.26	1.24	1.24	1.26	1.26
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	Perm	pt+ov
Protected Phases	2		1	6		14
Permitted Phases					4	
Minimum Split (s)	20.5		10.5	15.5	21.0	
Total Split (s)	53.5		38.0	91.5	28.5	
Total Split (%)	44.6%		31.7%	76.3%	23.8%	
Maximum Green (s)	48.0		32.5	86.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.5	1.5	1.0	
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	
Total Lost Time (s)	3.5		3.5	3.5	3.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020



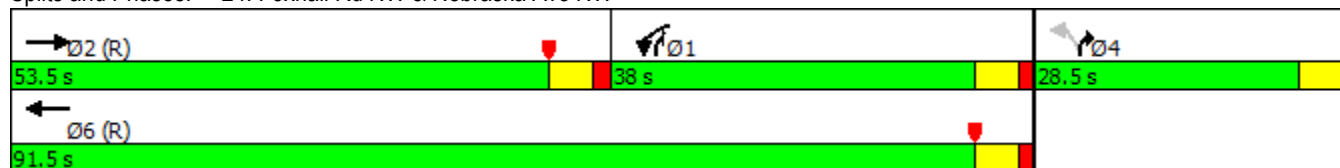
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	8.0				9.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	50.0		34.5	88.0	25.5	63.0
Actuated g/C Ratio	0.42		0.29	0.73	0.21	0.52
v/c Ratio	0.92		0.98	0.55	0.92	0.67
Control Delay	44.9		74.3	8.1	80.5	23.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	44.9		74.3	8.1	80.5	23.0
LOS	D		E	A	F	C
Approach Delay	44.9			34.6	44.1	
Approach LOS	D			C	D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 41.0
 Intersection Capacity Utilization 83.9%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 24: Foxhall Rd NW & Nebraska Ave NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	64	1	175	7	6	4	71	381	1	0	363	18
Future Volume (vph)	64	1	175	7	6	4	71	381	1	0	363	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	11	11	11	11	11	11	10	10	10
Grade (%)		-7%			-6%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.85			0.96			0.99			1.00	
Frt		0.901			0.968						0.994	
Flt Protected		0.987			0.980			0.992				
Satd. Flow (prot)	0	1063	0	0	1605	0	0	1375	0	0	1401	0
Flt Permitted		0.917			0.891			0.883				
Satd. Flow (perm)	0	986	0	0	1408	0	0	1217	0	0	1401	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					4						5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		284			247			252			250	
Travel Time (s)		7.7			6.7			6.9			6.8	
Confl. Peds. (#/hr)	2		64	64		2	32		57	57		32
Confl. Bikes (#/hr)									3			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	3%	3%	3%	5%	5%	5%
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Adj. Flow (vph)	67	1	184	7	6	4	75	401	1	0	382	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	252	0	0	17	0	0	477	0	0	401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.42	1.25	1.15	1.15	1.15	1.26	1.43	1.26	1.20	1.36	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			4			2				2
Permitted Phases	4			4			2			2		
Minimum Split (s)	22.5	22.5		22.5	22.5		25.5	25.5		25.5	25.5	
Total Split (s)	31.0	31.0		31.0	31.0		69.0	69.0		69.0	69.0	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		69.0%	69.0%		69.0%	69.0%	
Maximum Green (s)	25.5	25.5		25.5	25.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover Pl NW

08/31/2020

Lane Group	Ø6	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	6	8
Permitted Phases		
Minimum Split (s)	26.5	26.5
Total Split (s)	69.0	31.0
Total Split (%)	69%	31%
Maximum Green (s)	63.5	25.5
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	4.0	14.0

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

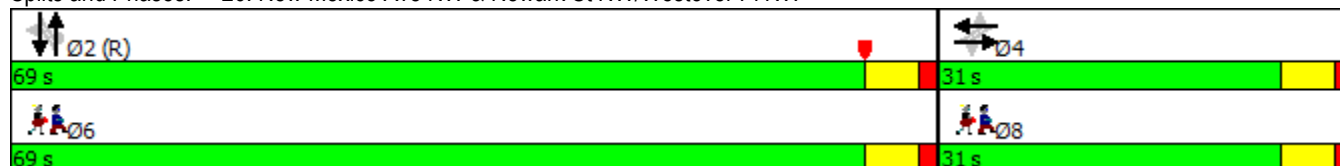


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		27.5			27.5			65.5			65.5	
Actuated g/C Ratio		0.28			0.28			0.66			0.66	
v/c Ratio		0.93			0.04			0.60			0.44	
Control Delay		76.7			22.8			6.7			10.0	
Queue Delay		0.0			0.0			0.2			0.0	
Total Delay		76.7			22.8			6.9			10.1	
LOS		E			C			A			B	
Approach Delay		76.7			22.8			6.9			10.1	
Approach LOS		E			C			A			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	10 (10%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	23.6
Intersection LOS:	C
Intersection Capacity Utilization:	80.9%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 26: New Mexico Ave NW & Newark St NW/Westover PI NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

Lane Group	Ø6	Ø8
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings

27: New Mexico Ave NW & 44th St/Embassy Park Dr

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	16	1	1	15	0	19	0	426	18	2	544	0
Future Volume (vph)	16	1	1	15	0	19	0	426	18	2	544	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.925			0.995				
Flt Protected		0.957			0.978							
Satd. Flow (prot)	0	1652	0	0	1573	0	0	1661	0	0	1799	0
Flt Permitted		0.957			0.978							
Satd. Flow (perm)	0	1652	0	0	1573	0	0	1661	0	0	1799	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		312			150			186			252	
Travel Time (s)		7.1			3.4			5.1			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	1	1	17	0	21	0	473	20	2	604	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	38	0	0	493	0	0	606	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.15	1.15	1.15	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
28: New Mexico Ave NW & Macomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	19	28	17	3	14	37	411	42	74	449	30
Future Volume (vph)	6	19	28	17	3	14	37	411	42	74	449	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	11	11	11	11	11	11
Grade (%)		-2%			-3%			7%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.83			0.84			1.00			0.99	
Frt		0.928			0.944			0.988			0.993	
Flt Protected		0.995			0.976			0.996			0.993	
Satd. Flow (prot)	0	1124	0	0	1392	0	0	1359	0	0	1576	0
Flt Permitted		0.979			0.877			0.931			0.871	
Satd. Flow (perm)	0	1099	0	0	1083	0	0	1267	0	0	1382	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		613			596			277			186	
Travel Time (s)		16.7			16.3			7.6			5.1	
Confl. Peds. (#/hr)	19		97	97		19	42					42
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	2%	2%	2%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	3
Parking (#/hr)	0	0	0				0	3	0			
Adj. Flow (vph)	6	20	30	18	3	15	39	437	45	79	478	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	36	0	0	521	0	0	589	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		-35			-35			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.13	1.29	1.13	1.28	1.28	1.28	1.25	1.45	1.25	1.14	1.16	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			8			2			2	
Permitted Phases	8			8			2			2		
Minimum Split (s)	22.0	22.0		22.0	22.0		26.0	26.0		26.0	26.0	
Total Split (s)	26.5	26.5		26.5	26.5		70.5	70.5		70.5	70.5	
Total Split (%)	26.5%	26.5%		26.5%	26.5%		70.5%	70.5%		70.5%	70.5%	
Maximum Green (s)	20.5	20.5		20.5	20.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lag	Lag							
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		7.0	7.0	

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Minimum Split (s)	3.0
Total Split (s)	3.0
Total Split (%)	3%
Maximum Green (s)	1.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Walk Time (s)	

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Maccomb St NW

08/31/2020

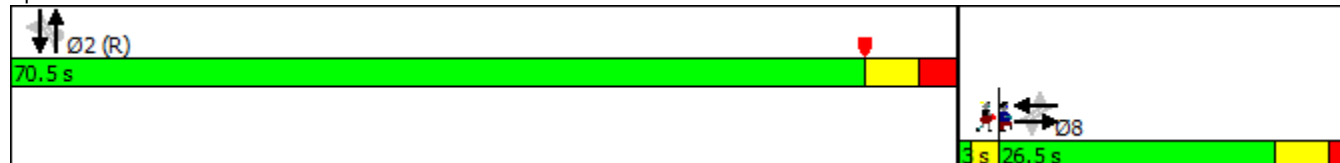


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.5			22.5			65.5			65.5	
Actuated g/C Ratio		0.22			0.22			0.66			0.66	
v/c Ratio		0.23			0.15			0.63			0.65	
Control Delay		34.6			33.1			10.8			12.4	
Queue Delay		0.0			0.0			0.0			0.4	
Total Delay		34.6			33.1			10.8			12.8	
LOS		C			C			B			B	
Approach Delay		34.6			33.1			10.8			12.8	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 4 (4%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 13.6
 Intersection LOS: B
 Intersection Capacity Utilization 72.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 28: New Mexico Ave NW & Maccomb St NW



Lane Group	Ø7
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings
 29: New Mexico Ave NW & Lowell St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	44	57	479	490	7
Future Volume (vph)	13	44	57	479	490	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.998	
Flt Protected	0.989			0.995		
Satd. Flow (prot)	1539	0	0	1669	1778	0
Flt Permitted	0.989			0.995		
Satd. Flow (perm)	1539	0	0	1669	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	597			94	277	
Travel Time (s)	13.6			2.6	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	49	63	532	544	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	595	552	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.0%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings
 30: New Mexico Ave NW & Sutton PI

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	42	533	19	26	480
Future Volume (vph)	44	42	533	19	26	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.934		0.995			
Flt Protected	0.975					0.997
Satd. Flow (prot)	1583	0	1669	0	0	1777
Flt Permitted	0.975					0.997
Satd. Flow (perm)	1583	0	1669	0	0	1777
Link Speed (mph)	30		25			25
Link Distance (ft)	405		274			94
Travel Time (s)	9.2		7.5			2.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	47	592	21	29	533
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	0	613	0	0	562
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.2%
Analysis Period (min)	15
	ICU Level of Service B

Lanes, Volumes, Timings
31: New Mexico Ave NW

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	8	534	8	11	521
Future Volume (vph)	3	8	534	8	11	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.998			
Flt Protected	0.988					0.999
Satd. Flow (prot)	1544	0	1674	0	0	1780
Flt Permitted	0.988					0.999
Satd. Flow (perm)	1544	0	1674	0	0	1780
Link Speed (mph)	30		25			25
Link Distance (ft)	337		358			274
Travel Time (s)	7.7		9.8			7.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	9	593	9	12	579
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	602	0	0	591
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.2%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 32: New Mexico Ave NW & Klinge St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	22	41	545	511	6
Future Volume (vph)	6	22	41	545	511	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.998	
Flt Protected	0.989			0.996		
Satd. Flow (prot)	1539	0	0	1671	1778	0
Flt Permitted	0.989			0.996		
Satd. Flow (perm)	1539	0	0	1671	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	568			283	358	
Travel Time (s)	12.9			7.7	9.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	24	46	606	568	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	652	575	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.5%
	ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings
33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	1	130	19	49	175	180	6	368	38	268	248	0
Future Volume (vph)	1	130	19	49	175	180	6	368	38	268	248	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		-2%			6%			5%				-5%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.96		0.99				0.97
Frt		0.983				0.850		0.988				
Flt Protected					0.989			0.999				0.975
Satd. Flow (prot)	0	1388	0	0	1338	1136	0	1351	0	0	1367	0
Flt Permitted		0.999			0.910			0.994			0.601	
Satd. Flow (perm)	0	1386	0	0	1227	1086	0	1344	0	0	820	0
Right Turn on Red			No			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		642			805			212			283	
Travel Time (s)		17.5			22.0			5.8			7.7	
Confl. Peds. (#/hr)	14		7	7		14	18		41	41		18
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	3	0	0	0	3	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	1	137	20	52	184	189	6	387	40	282	261	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	236	189	0	433	0	0	543	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.23	1.42	1.23	1.30	1.47	1.49	1.29	1.46	1.29	1.21	1.38	1.21
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	23.0	23.0		13.0	13.0	13.0	23.0	23.0		19.0	19.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0	67.0	67.0		67.0	67.0	
Total Split (%)	33.0%	33.0%		33.0%	33.0%	33.0%	67.0%	67.0%		67.0%	67.0%	
Maximum Green (s)	27.0	27.0		27.0	27.0	27.0	61.0	61.0		61.0	61.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)		4.0			4.0	4.0		4.0			4.0	

Lanes, Volumes, Timings

33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0					10.0	10.0		6.0	6.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		29.0			29.0	29.0		63.0			63.0	
Actuated g/C Ratio		0.29			0.29	0.29		0.63			0.63	
v/c Ratio		0.39			0.66	0.60		0.51			1.05	
Control Delay		32.1			41.7	39.9		12.8			69.1	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		32.1			41.7	39.9		12.8			69.1	
LOS		C			D	D		B			E	
Approach Delay		32.1			40.9			12.8			69.1	
Approach LOS		C			D			B			E	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	9 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.05
Intersection Signal Delay:	42.0
Intersection LOS:	D
Intersection Capacity Utilization	96.5%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 33: New Mexico Ave NW & Cathedral Ave NW



Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘			↖	↗		↕	
Traffic Volume (vph)	23	242	0	128	156	4	85	591	235	5	779	27
Future Volume (vph)	23	242	0	128	156	4	85	591	235	5	779	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	10	10	10	10	10	10	10	10	10
Grade (%)		2%			4%			0%			1%	
Storage Length (ft)	0		0	125		0	0		380	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.97	1.00			1.00	0.79		1.00	
Fr _t					0.996				0.850		0.995	
Fl _t Protected		0.996		0.950				0.994				
Satd. Flow (prot)	0	1855	0	1471	1542	0	0	1373	1174	0	2734	0
Fl _t Permitted		0.966		0.435				0.790			0.952	
Satd. Flow (perm)	0	1798	0	652	1542	0	0	1090	928	0	2603	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1				245		5	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		110			1242			1410			726	
Travel Time (s)		3.0			33.9			32.0			16.5	
Confl. Peds. (#/hr)	2		38	38		2	14		51	51		14
Confl. Bikes (#/hr)			6			2			4			5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	4%	4%	4%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	7	0
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	24	252	0	133	163	4	89	616	245	5	811	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	276	0	133	167	0	0	705	245	0	844	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.28	1.28	1.28	1.25	1.42	1.42	1.26	1.28	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Minimum Split (s)	22.5	22.5		22.5	22.5		21.0	21.0	21.0	21.0	21.0	
Total Split (s)	41.5	41.5		41.5	41.5		78.5	78.5	78.5	78.5	78.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%		65.4%	65.4%	65.4%	65.4%	65.4%	
Maximum Green (s)	36.0	36.0		36.0	36.0		73.5	73.5	73.5	73.5	73.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		-2.0		-2.0	-2.0			-2.0	-2.0		-2.0	
Total Lost Time (s)		3.5		3.5	3.5			3.0	3.0		3.0	

Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)		38.0		38.0	38.0			75.5	75.5			75.5
Actuated g/C Ratio		0.32		0.32	0.32			0.63	0.63			0.63
v/c Ratio		0.49		0.65	0.34			1.03	0.36			0.51
Control Delay		36.6		29.0	14.0			49.8	0.9			5.3
Queue Delay		0.0		0.0	0.0			0.0	0.0			0.0
Total Delay		36.6		29.0	14.0			49.8	0.9			5.3
LOS		D		C	B			D	A			A
Approach Delay		36.6			20.6			37.2				5.3
Approach LOS		D			C			D				A

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	23.7
Intersection LOS:	C
Intersection Capacity Utilization:	107.9%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 34: Nebraska Ave NW & Van Ness St NW



Lanes, Volumes, Timings
35: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1254	7	18	706	0	6
Future Volume (vph)	1254	7	18	706	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	4%			-7%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999				0.865	
Flt Protected				0.999		
Satd. Flow (prot)	3234	0	0	3415	1504	0
Flt Permitted				0.999		
Satd. Flow (perm)	3234	0	0	3415	1504	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	222			628	141	
Travel Time (s)	5.0			14.3	3.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1393	8	20	784	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1401	0	0	804	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

36:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	40	9	129	97	1
Future Volume (vph)	18	40	9	129	97	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.999		
Flt Protected	0.985			0.997		
Satd. Flow (prot)	1553	0	0	1733	1737	0
Flt Permitted	0.985			0.997		
Satd. Flow (perm)	1553	0	0	1733	1737	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	426			119	97	
Travel Time (s)	9.7			2.7	2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	44	10	143	108	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	153	109	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	24.1% ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

37:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	6	1	149	107	21
Future Volume (vph)	37	6	1	149	107	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980				0.978	
Flt Protected	0.959					
Satd. Flow (prot)	1634	0	0	1739	1700	0
Flt Permitted	0.959					
Satd. Flow (perm)	1634	0	0	1739	1700	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	419			92	435	
Travel Time (s)	9.5			2.1	9.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	7	1	166	119	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	167	142	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	18.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
38: Warren St & 48th St

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	6	38	77	10	91
Future Volume (vph)	14	6	38	77	10	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959		0.909			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1611	0	1580	0	0	1730
Flt Permitted	0.966					0.995
Satd. Flow (perm)	1611	0	1580	0	0	1730
Link Speed (mph)	30		30			30
Link Distance (ft)	1057		526			383
Travel Time (s)	24.0		12.0			8.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	7	42	86	11	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	128	0	0	112
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

39: 48th St & Yuma St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	83	47	11	71	6	7	18	9	8	39	4
Future Volume (vph)	1	83	47	11	71	6	7	18	9	8	39	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.990			0.964			0.990	
Flt Protected					0.994			0.990			0.992	
Satd. Flow (prot)	0	1655	0	0	1711	0	0	1659	0	0	1707	0
Flt Permitted					0.994			0.990			0.992	
Satd. Flow (perm)	0	1655	0	0	1711	0	0	1659	0	0	1707	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			1099			383			277	
Travel Time (s)		5.9			25.0			8.7			6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	92	52	12	79	7	8	20	10	9	43	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	98	0	0	38	0	0	56	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	102	123	18	27	119	32	12	191	16	21	114	46
Future Volume (vph)	102	123	18	27	119	32	12	191	16	21	114	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	9	9	9	9	9	9
Grade (%)		9%			-9%			-5%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.84			0.87			0.97			0.91	
Frt		0.990			0.975			0.990			0.966	
Flt Protected		0.980			0.992			0.997			0.994	
Satd. Flow (prot)	0	1231	0	0	1254	0	0	1353	0	0	1237	0
Flt Permitted		0.814			0.929			0.983			0.954	
Satd. Flow (perm)	0	891	0	0	1129	0	0	1323	0	0	1162	0
Right Turn on Red			No			No			Yes			No
Satd. Flow (RTOR)								8				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		202			670			299			437	
Travel Time (s)		5.5			18.3			8.2			11.9	
Confl. Peds. (#/hr)	186		240	240		186	96		129	129		96
Confl. Bikes (#/hr)			3			2			1			2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	113	137	20	30	132	36	13	212	18	23	127	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	270	0	0	198	0	0	243	0	0	201	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.38	1.57	1.38	1.24	1.41	1.24	1.27	1.44	1.27	1.30	1.47	1.30
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	15.5	15.5		15.5	15.5		17.5	17.5		17.5	17.5	
Total Split (s)	25.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		48.3%	48.3%		48.3%	48.3%	
Maximum Green (s)	19.5	19.5		19.5	19.5		23.5	23.5		23.5	23.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0		8.0	8.0	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	5%	5%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.5			21.5			25.5			25.5	
Actuated g/C Ratio		0.36			0.36			0.42			0.42	
v/c Ratio		0.85			0.49			0.43			0.41	
Control Delay		45.3			11.3			14.7			15.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		45.3			11.3			14.7			15.2	
LOS		D			B			B			B	
Approach Delay		45.3			11.3			14.7			15.2	
Approach LOS		D			B			B			B	

Intersection Summary

Area Type: CBD

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 45 (75%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 23.1

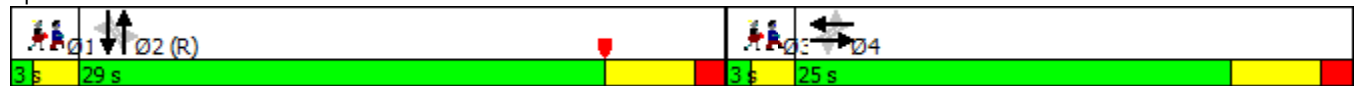
Intersection LOS: C

Intersection Capacity Utilization 56.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 40: 42nd St & Albermarle St



Lane Group	Ø1	Ø3
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings
41: Macomb St & Loughboro St

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1196	38	1	967	29	4
Future Volume (vph)	1196	38	1	967	29	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996			0.985		
Flt Protected				0.957		
Satd. Flow (prot)	1732	0	0	1739	1639	0
Flt Permitted				0.957		
Satd. Flow (perm)	1732	0	0	1739	1639	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	299			1077	291	
Travel Time (s)	6.8			24.5	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1329	42	1	1074	32	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1371	0	0	1075	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

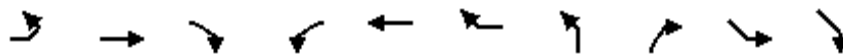
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.2% ICU Level of Service D
Analysis Period (min)	15

Lanes, Volumes, Timings

42: Chainbridge Rd & Loughboro Rd/Nebraska Ave NW & Indian Ln

08/31/2020















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations		↕			↕		↕		↕	
Traffic Volume (vph)	18	979	4	41	748	65	5	36	0	0
Future Volume (vph)	18	979	4	41	748	65	5	36	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.990		0.883			
Flt Protected		0.999			0.998		0.994			
Satd. Flow (prot)	0	1737	0	0	1718	0	1526	0	1739	0
Flt Permitted		0.999			0.998		0.994			
Satd. Flow (perm)	0	1737	0	0	1718	0	1526	0	1739	0
Link Speed (mph)		30			25		30		30	
Link Distance (ft)		1158			701		287		1445	
Travel Time (s)		26.3			19.1		6.5		32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1088	4	46	831	72	6	40	0	0
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	1112	0	0	949	0	46	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		0			0		10		10	
Link Offset(ft)		0			0		0		0	
Crosswalk Width(ft)		16			16		16		16	
Two way Left Turn Lane										
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15	9	15	9
Sign Control		Free			Free		Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.6%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑						↑↑	
Traffic Volume (vph)	0	1010	0	0	1418	307	0	0	0	243	756	29
Future Volume (vph)	0	1010	0	0	1418	307	0	0	0	243	756	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	11
Grade (%)		2%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor					0.99						1.00	
Frt					0.973						0.996	
Flt Protected											0.988	
Satd. Flow (prot)	0	2915	0	0	4140	0	0	0	0	0	2965	0
Flt Permitted											0.988	
Satd. Flow (perm)	0	2915	0	0	4140	0	0	0	0	0	2958	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			554			110			97	
Travel Time (s)		4.3			12.6			2.5			2.2	
Confl. Peds. (#/hr)	103		171	171		103				12		93
Confl. Bikes (#/hr)			9			8						3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	1031	0	0	1447	313	0	0	0	248	771	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1031	0	0	1760	0	0	0	0	0	1049	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		15 6 1 2			15 6 1						3 4	
Permitted Phases										3 4		
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		70.0			65.0						36.0	
Actuated g/C Ratio		0.58			0.54						0.30	
v/c Ratio		0.61			0.79						1.18	

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	34.0	5.0	43.0	5.0	9.0	19.0	82.0	10.0	14.0
Total Split (%)	28%	4%	36%	4%	8%	16%	68%	8%	12%
Maximum Green (s)	27.0	1.0	34.0	1.0	6.0	13.0	73.0	5.0	10.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									
v/c Ratio									

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Control Delay		9.3			4.2						118.0	
Queue Delay		0.8			0.3						0.0	
Total Delay		10.2			4.4						118.0	
LOS		B			A						F	
Approach Delay		10.2			4.4						118.0	
Approach LOS		B			A						F	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	109 (91%), Referenced to phase 1:NBSB and 11:., Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.18
Intersection Signal Delay:	37.0
Intersection LOS:	D
Intersection Capacity Utilization	138.3%
ICU Level of Service	H
Analysis Period (min)	15

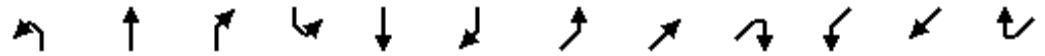
Splits and Phases: 191: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑			↑↑				
Traffic Volume (vph)	0	771	136	0	1674	0	228	523	69	0	0	0
Future Volume (vph)	0	771	136	0	1674	0	228	523	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.99				
Frt		0.978						0.987				
Flt Protected								0.986				
Satd. Flow (prot)	0	2598	0	0	4040	0	0	2944	0	0	0	0
Flt Permitted								0.986				
Satd. Flow (perm)	0	2598	0	0	4040	0	0	2930	0	0	0	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		377			190			109				111
Travel Time (s)		8.6			4.3			2.5				2.5
Confl. Peds. (#/hr)	117		168	168		117	22		42			
Confl. Bikes (#/hr)			9			6			2			
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	34	0	0	0	0	0	0	0
Parking (#/hr)		0	0									
Adj. Flow (vph)	0	779	137	0	1691	0	230	528	70	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	916	0	0	1691	0	0	828	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.26	1.34	1.26	1.23	1.31	1.23	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		15 6 1			15 6 1 2			3 4				
Permitted Phases							3 4					
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		65.0			70.0			36.0				

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Bus Blockages (#/hr)									
Parking (#/hr)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	34.0	5.0	43.0	5.0	9.0	19.0	82.0	10.0	14.0
Total Split (%)	28%	4%	36%	4%	8%	16%	68%	8%	12%
Maximum Green (s)	27.0	1.0	34.0	1.0	6.0	13.0	73.0	5.0	10.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.54			0.58			0.30				
v/c Ratio		0.65			0.72			0.94				
Control Delay		22.0			5.7			38.3				
Queue Delay		0.3			0.8			23.1				
Total Delay		22.3			6.4			61.4				
LOS		C			A			E				
Approach Delay		22.3			6.4			61.4				
Approach LOS		C			A			E				

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	109 (91%), Referenced to phase 1:NBSB and 11:., Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.18
Intersection Signal Delay:	23.9
Intersection LOS:	C
Intersection Capacity Utilization	138.3%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 192: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Actuated g/C Ratio									
v/c Ratio									
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Lane Configurations											
Traffic Volume (vph)	69	773	0	1246	0	0					
Future Volume (vph)	69	773	0	1246	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	11	11	10	10	12	12					
Lane Util. Factor	1.00	0.88	1.00	0.88	1.00	1.00					
Frt		0.850		0.850							
Flt Protected	0.950										
Satd. Flow (prot)	1540	2424	0	2341	0	0					
Flt Permitted	0.950										
Satd. Flow (perm)	1540	2424	0	2341	0	0					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		30		25						
Link Distance (ft)	193		471		250						
Travel Time (s)	5.3		10.7		6.8						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	77	859	0	1384	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	77	859	0	1384	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	11		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.19	1.19	1.25	1.25	1.14	1.14					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom		Prot							
Protected Phases	12	4 5		4			2	5	6	8	14
Permitted Phases											
Minimum Split (s)	16.0			29.0			17.0	10.0	11.0	20.0	13.0
Total Split (s)	58.0			62.0			58.0	47.0	11.0	62.0	62.0
Total Split (%)	48.3%			51.7%			48%	39%	9%	52%	52%
Maximum Green (s)	52.0			52.0			52.0	42.0	7.0	52.0	56.0
Yellow Time (s)	4.0			4.0			4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0			6.0			2.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)	-2.0			-2.0							
Total Lost Time (s)	4.0			8.0							
Lead/Lag								Lead	Lag		
Lead-Lag Optimize?											
Walk Time (s)				7.0			7.0			4.0	
Flash Dont Walk (s)				12.0			4.0			6.0	
Pedestrian Calls (#/hr)				0			0			0	
Act Effct Green (s)	54.0	101.0		54.0							
Actuated g/C Ratio	0.45	0.84		0.45							
v/c Ratio	0.11	0.42		1.31							
Control Delay	28.5	1.1		170.6							
Queue Delay	5.1	0.4		0.0							

Lanes, Volumes, Timings
 401: Ward Cir NW & Massachusetts Ave NW

08/31/2020

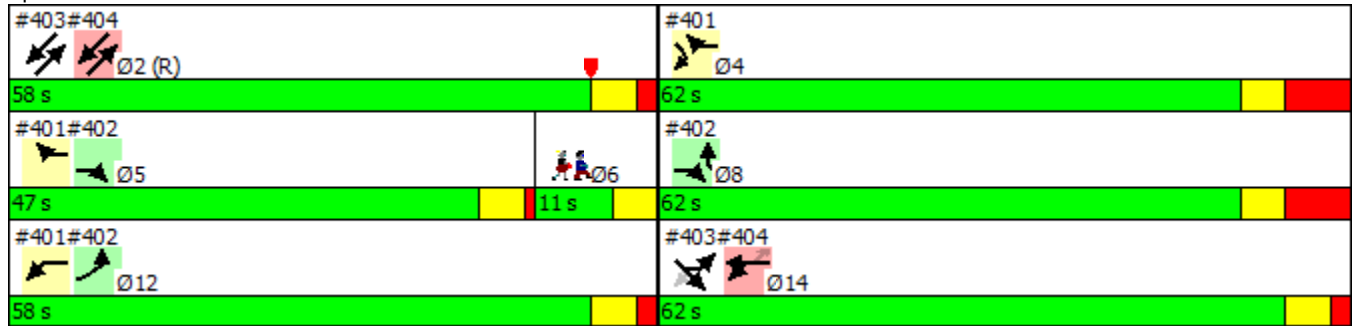


Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Total Delay	33.5	1.6		170.6							
LOS	C	A		F							
Approach Delay	4.2		170.6								
Approach LOS	A		F								

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	103.5
Intersection LOS:	F
Intersection Capacity Utilization	55.1%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 401: Ward Cir NW & Massachusetts Ave NW



Lanes, Volumes, Timings
 402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Lane Configurations											
Traffic Volume (vph)	101	1241	0	0	0	853					
Future Volume (vph)	101	1241	0	0	0	853					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	10	10	9	9	10	10					
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	0.88					
Frt		0.850				0.850					
Flt Protected	0.950										
Satd. Flow (prot)	1486	2341	0	0	0	2341					
Flt Permitted	0.950										
Satd. Flow (perm)	1486	2341	0	0	0	2341					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		25		25						
Link Distance (ft)	219		260		345						
Travel Time (s)	6.0		7.1		9.4						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	112	1379	0	0	0	948					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	112	1379	0	0	0	948					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	10		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.25	1.25	1.30	1.30	1.25	1.25					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom				Prot					
Protected Phases	12	8 5				8	2	4	5	6	14
Permitted Phases											
Minimum Split (s)	16.0					20.0	17.0	29.0	10.0	11.0	13.0
Total Split (s)	58.0					62.0	58.0	62.0	47.0	11.0	62.0
Total Split (%)	48.3%					51.7%	48%	52%	39%	9%	52%
Maximum Green (s)	52.0					52.0	52.0	52.0	42.0	7.0	56.0
Yellow Time (s)	4.0					4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0					6.0	2.0	6.0	1.0	0.0	2.0
Lost Time Adjust (s)	-2.0					-2.0					
Total Lost Time (s)	4.0					8.0					
Lead/Lag									Lead	Lag	
Lead-Lag Optimize?											
Walk Time (s)						4.0	7.0	7.0			
Flash Dont Walk (s)						6.0	4.0	12.0			
Pedestrian Calls (#/hr)						0	0	0			
Act Effct Green (s)	54.0	101.0				54.0					
Actuated g/C Ratio	0.45	0.84				0.45					
v/c Ratio	0.17	0.70				0.90					
Control Delay	26.3	3.7				43.4					
Queue Delay	5.6	5.9				0.0					

Lanes, Volumes, Timings
 402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Total Delay	31.9	9.7				43.4					
LOS	C	A				D					
Approach Delay	11.3				43.4						
Approach LOS	B				D						

Intersection Summary

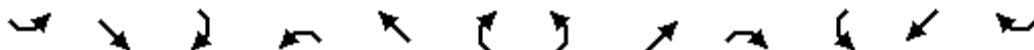
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	23.8
Intersection LOS:	C
Intersection Capacity Utilization	54.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 402: Massachusetts Ave NW & Ward Cir NW

#403#404 Ø2 (R) 58 s	#401 Ø4 62 s
#401#402 Ø5 47 s	#402 Ø8 62 s
#401#402 Ø12 58 s	#403#404 Ø14 62 s

Lanes, Volumes, Timings
403: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑↑	↑					↑↑			↑↑	
Traffic Volume (vph)	43	1076	161	0	0	0	0	998	266	0	1069	0
Future Volume (vph)	43	1076	161	0	0	0	0	998	266	0	1069	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	12	12	12	9	9	9	10	10	10
Grade (%)		1%			0%			-1%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.92					1.00				
Frt			0.850					0.968				
Flt Protected		0.998										
Satd. Flow (prot)	0	4051	1264	0	0	0	0	2755	0	0	2888	0
Flt Permitted		0.998										
Satd. Flow (perm)	0	4051	1167	0	0	0	0	2755	0	0	2888	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		250			219			372			300	
Travel Time (s)		6.8			6.0			8.5			8.2	
Confl. Peds. (#/hr)			99									
Confl. Bikes (#/hr)			10						1			3
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	43	1087	163	0	0	0	0	1008	269	0	1080	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1130	163	0	0	0	0	1277	0	0	1080	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.31	1.31	1.14	1.14	1.14	1.30	1.30	1.30	1.25	1.25	1.25
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA	Perm					NA			NA	
Protected Phases	14	14						2			2	
Permitted Phases			14									
Minimum Split (s)	13.0	13.0	13.0					17.0			17.0	
Total Split (s)	62.0	62.0	62.0					58.0			58.0	
Total Split (%)	51.7%	51.7%	51.7%					48.3%			48.3%	
Maximum Green (s)	56.0	56.0	56.0					52.0			52.0	
Yellow Time (s)	4.0	4.0	4.0					4.0			4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0			2.0	
Lost Time Adjust (s)		-2.0	-2.0					-2.0			-2.0	
Total Lost Time (s)		4.0	4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	62.0	47.0	11.0	62.0	58.0
Total Split (%)	52%	39%	9%	52%	48%
Maximum Green (s)	52.0	42.0	7.0	52.0	52.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?					

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

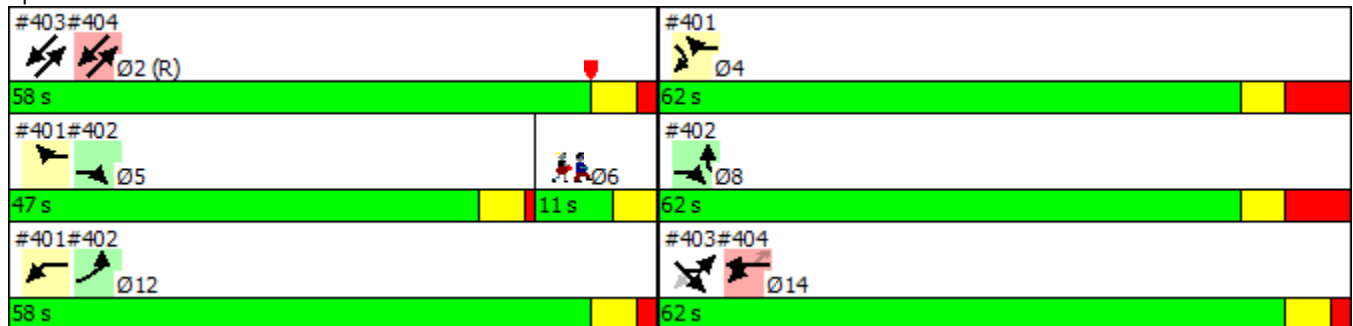


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		58.0	58.0					54.0			54.0	
Actuated g/C Ratio		0.48	0.48					0.45			0.45	
v/c Ratio		0.58	0.29					1.03			0.83	
Control Delay		5.6	5.5					52.3			14.8	
Queue Delay		7.3	2.5					8.6			3.4	
Total Delay		12.9	8.0					60.9			18.1	
LOS		B	A					E			B	
Approach Delay		12.3						60.9			18.1	
Approach LOS		B						E			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	31.0
Intersection LOS:	C
Intersection Capacity Utilization	70.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 403: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑	↑		↑↑			↑↑	
Traffic Volume (vph)	0	0	0	175	722	99	0	1055	0	0	862	126
Future Volume (vph)	0	0	0	175	722	99	0	1055	0	0	862	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	10	10	10	10	10	10
Grade (%)		0%			2%			0%				-1%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor					1.00	0.96					1.00	
Frt						0.850					0.981	
Flt Protected					0.990							
Satd. Flow (prot)	0	0	0	0	3998	1257	0	2916	0	0	2779	0
Flt Permitted					0.990							
Satd. Flow (perm)	0	0	0	0	3997	1205	0	2916	0	0	2779	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25				30
Link Distance (ft)		193			260			300				737
Travel Time (s)		5.3			7.1			8.2				16.8
Confl. Peds. (#/hr)				1		47	1		1	1		1
Confl. Bikes (#/hr)						2			1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	11	11
Adj. Flow (vph)	0	0	0	184	760	104	0	1111	0	0	907	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	944	104	0	1111	0	0	1040	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.32	1.32	1.32	1.25	1.25	1.25	1.24	1.27	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Split	NA	Perm		NA			NA	
Protected Phases				14	14			2			2	
Permitted Phases						14						
Minimum Split (s)				13.0	13.0	13.0		17.0			17.0	
Total Split (s)				62.0	62.0	62.0		58.0			58.0	
Total Split (%)				51.7%	51.7%	51.7%		48.3%			48.3%	
Maximum Green (s)				56.0	56.0	56.0		52.0			52.0	
Yellow Time (s)				4.0	4.0	4.0		4.0			4.0	
All-Red Time (s)				2.0	2.0	2.0		2.0			2.0	
Lost Time Adjust (s)					-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)					4.0	4.0		4.0			4.0	
Lead/Lag												

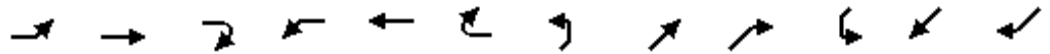
Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Bus Blockages (#/hr)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	62.0	47.0	11.0	62.0	58.0
Total Split (%)	52%	39%	9%	52%	48%
Maximum Green (s)	52.0	42.0	7.0	52.0	52.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		

Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

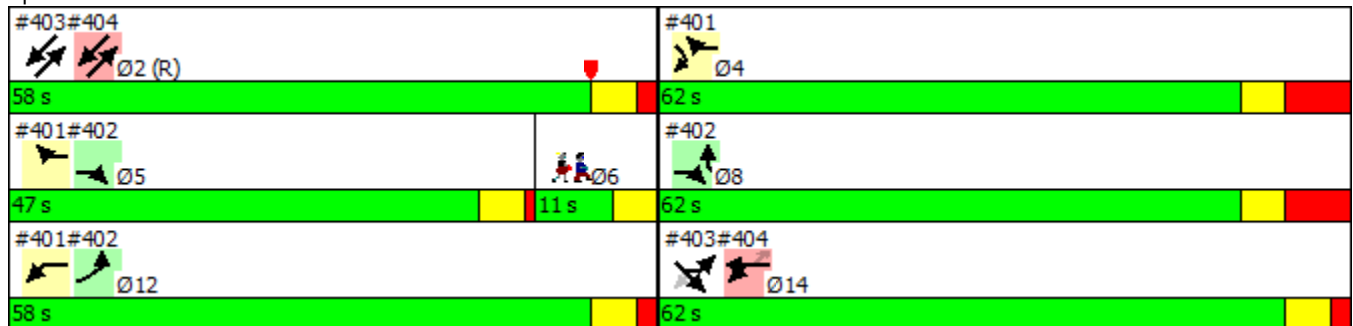


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)					58.0	58.0		54.0			54.0	
Actuated g/C Ratio					0.48	0.48		0.45			0.45	
v/c Ratio					0.49	0.18		0.85			0.83	
Control Delay					7.2	7.1		12.9			29.1	
Queue Delay					0.8	0.0		10.6			0.8	
Total Delay					8.0	7.1		23.5			29.9	
LOS					A	A		C			C	
Approach Delay					7.9			23.5			29.9	
Approach LOS					A			C			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	43 (36%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	20.5
Intersection LOS:	C
Intersection Capacity Utilization:	70.8%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 404: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lead-Lag Optimize?					
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↑	↗		↖	↗		↔	
Traffic Volume (vph)	24	1051	98	19	1142	53	65	8	88	25	27	58
Future Volume (vph)	24	1051	98	19	1142	53	65	8	88	25	27	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-4%			-1%			5%	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.87		0.97	0.81		0.92	
Frt		0.987				0.850			0.850		0.928	
Flt Protected		0.999			0.999			0.957			0.989	
Satd. Flow (prot)	0	2714	0	0	1610	1370	0	1435	1274	0	1354	0
Flt Permitted		0.828			0.967			0.592			0.924	
Satd. Flow (perm)	0	2249	0	0	1559	1194	0	861	1031	0	1197	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21				27			93		43	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		628			471			361			221	
Travel Time (s)		14.3			10.7			9.8			6.0	
Confl. Peds. (#/hr)	30		38	38		30	23		127	127		23
Confl. Bikes (#/hr)			8			3						2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	7%	7%	7%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	5	5	5
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	25	1106	103	20	1202	56	68	8	93	26	28	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1234	0	0	1222	56	0	76	93	0	115	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.36	1.28	1.22	1.22	1.22	1.24	1.24	1.24	1.29	1.32	1.29
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left			Left		Right	Left		Right	Left		
Leading Detector (ft)	20	20		20	20	20	20	20	20	20	20	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20		20	20	20	20	20	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA	custom	Perm	NA	Perm	Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2		4	8		8	4		

Lanes, Volumes, Timings

1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	6	6		2	2	4	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	20.0	20.0		18.0	18.0	22.5	12.5	12.5	12.5	22.5	22.5	
Total Split (s)	91.5	91.5		91.5	91.5	28.5	28.5	28.5	28.5	28.5	28.5	
Total Split (%)	76.3%	76.3%		76.3%	76.3%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	
Maximum Green (s)	85.5	85.5		85.5	85.5	23.0	23.0	23.0	23.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0	-2.0		-2.0	
Total Lost Time (s)		4.0			4.0	3.5		3.5	3.5		3.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max	None	None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	
Flash Dont Walk (s)	7.0	7.0		5.0	5.0	10.0				10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0	150				150	150	
Act Effct Green (s)		92.3			92.3	20.2		20.2	20.2		20.2	
Actuated g/C Ratio		0.77			0.77	0.17		0.17	0.17		0.17	
v/c Ratio		0.71			1.02	0.25		0.52	0.37		0.49	
Control Delay		8.4			44.5	45.8		59.0	12.8		35.1	
Queue Delay		1.1			1.1	0.0		0.0	1.3		2.6	
Total Delay		9.5			45.5	45.8		59.0	14.1		37.7	
LOS		A			D	D		E	B		D	
Approach Delay		9.5			45.6			34.2			37.7	
Approach LOS		A			D			C			D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7 (6%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 28.6
 Intersection LOS: C
 Intersection Capacity Utilization 105.2%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 1: Glover Gate/Katzen Arts Center Ent & Massachusetts Ave NW



Lanes, Volumes, Timings
 2: Massachusetts Ave NW & 45th St

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	35	1159	1208	37	57	9
Future Volume (vph)	35	1159	1208	37	57	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		4%	-7%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.996		0.982	
Flt Protected		0.999			0.959	
Satd. Flow (prot)	0	3234	3405	0	1637	0
Flt Permitted		0.999			0.959	
Satd. Flow (perm)	0	3234	3405	0	1637	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		246	222		156	
Travel Time (s)		5.6	5.0		3.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	1288	1342	41	63	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1327	1383	0	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.7%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑						↑↓	
Traffic Volume (vph)	2	1052	6	35	1071	97	0	0	0	91	34	3
Future Volume (vph)	2	1052	6	35	1071	97	0	0	0	91	34	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	9	9	9
Grade (%)		7%			-7%			0%			7%	
Storage Length (ft)	0		90	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.98		1.00						1.00	
Frt			0.850		0.988						0.997	
Flt Protected					0.999						0.966	
Satd. Flow (prot)	0	2725	1132	0	3001	0	0	0	0	0	1287	0
Flt Permitted		0.954			0.881						0.966	
Satd. Flow (perm)	0	2600	1108	0	2646	0	0	0	0	0	1287	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23		22						1	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		586			229			148			119	
Travel Time (s)		13.3			5.2			4.0			3.2	
Confl. Peds. (#/hr)	8					8						2
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	5	0	5	0	0	0	0	0	0	0
Parking (#/hr)		0	0							0	0	0
Adj. Flow (vph)	2	1085	6	36	1104	100	0	0	0	94	35	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1087	6	0	1240	0	0	0	0	0	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.30	1.39	1.52	1.20	1.21	1.20	1.14	1.14	1.14	1.36	1.55	1.36
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA					Split	NA	
Protected Phases		6			2					4	4	
Permitted Phases	6		6	2								
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5					23.5	23.5	
Total Split (s)	94.0	94.0	94.0	94.0	94.0					26.0	26.0	
Total Split (%)	78.3%	78.3%	78.3%	78.3%	78.3%					21.7%	21.7%	
Maximum Green (s)	88.5	88.5	88.5	88.5	88.5					20.5	20.5	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5					4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0					1.5	1.5	
Lost Time Adjust (s)		-2.0	-2.0		-2.0						-2.0	
Total Lost Time (s)		3.5	3.5		3.5						3.5	

Lanes, Volumes, Timings

3: Tilden St NW/46th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effect Green (s)		90.5	90.5		90.5							22.5
Actuated g/C Ratio		0.75	0.75		0.75							0.19
v/c Ratio		0.55	0.01		0.62							0.55
Control Delay		9.6	0.3		4.9							57.4
Queue Delay		0.0	0.0		0.0							0.0
Total Delay		9.6	0.3		4.9							57.4
LOS		A	A		A							E
Approach Delay		9.6			4.9							57.4
Approach LOS		A			A							E

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	28 (23%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	9.8
Intersection LOS:	A
Intersection Capacity Utilization	86.5%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: Tilden St NW/46th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings

5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔		↖	↗	↗		↕		↖	↗	
Traffic Volume (vph)	6	43	51	62	40	259	0	910	34	239	926	75
Future Volume (vph)	6	43	51	62	40	259	0	910	34	239	926	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	10	10	10	10	10	10
Grade (%)		15%			-1%			2%				-1%
Storage Length (ft)	0		0	220		5	0		0	0		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.96		0.97		0.72		1.00			0.99	
Frt		0.932				0.850		0.995			0.989	
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1428	0	1494	1554	1321	0	2894	0	1494	1501	0
Flt Permitted		0.985		0.548						0.140		
Satd. Flow (perm)	0	1388	0	836	1554	955	0	2894	0	220	1501	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				66		4			10	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			330			349			396	
Travel Time (s)		9.5			9.0			7.9			9.0	
Confl. Peds. (#/hr)	120		19	19		120	35		28	28		35
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	3	3	0	0	0	0	6	0
Adj. Flow (vph)	7	47	55	67	43	282	0	989	37	260	1007	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	0	67	43	282	0	1026	0	260	1089	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.24	1.26	1.26	1.26	1.26	1.26	1.24	1.28	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	pm+ov		NA		pm+pt		NA
Protected Phases		8			4	5		6		5	2	
Permitted Phases	8			4		4				2		
Minimum Split (s)	23.5	23.5		21.5	21.5	10.5		25.5		10.5	21.5	
Total Split (s)	24.0	24.0		24.0	24.0	36.0		57.0		36.0	93.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	30.0%		47.5%		30.0%	77.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5	30.5		51.5		30.5	87.5	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5		1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		3.5		3.5	3.5	3.5		3.5		3.5	3.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lead		Lag		Lead		

Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020

Lane Group	Ø14	Ø18
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	14	18
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	3%	3%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead

Lanes, Volumes, Timings
 5: Nebraska Ave NW & New Mexico Ave NW/Entrance

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		12.0	12.0			13.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		20.5		20.5	20.5	53.0		53.5		89.5	89.5	
Actuated g/C Ratio		0.17		0.17	0.17	0.44		0.45		0.75	0.75	
v/c Ratio		0.41		0.47	0.16	0.51		0.79		0.51	0.97	
Control Delay		34.2		57.1	44.4	21.5		25.0		12.3	36.6	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.2	1.2	
Total Delay		34.2		57.1	44.4	21.5		25.0		12.5	37.8	
LOS		C		E	D	C		C		B	D	
Approach Delay		34.2			30.1			25.0			32.9	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 66 (55%), Referenced to phase 2:SWTL and 6:NET, Start of Yellow
 Natural Cycle: 110
 Control Type: Pretimed
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 29.8
 Intersection LOS: C
 Intersection Capacity Utilization 79.4%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: Nebraska Ave NW & New Mexico Ave NW/Entrance



Lane Group	Ø14	Ø18
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

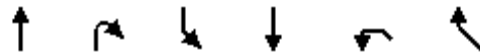
Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

	↑	↖	↙	↓	↘	↗	
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Lane Configurations	↑↑			↑↑		↗	
Traffic Volume (vph)	1144	43	3	1274	0	40	
Future Volume (vph)	1144	43	3	1274	0	40	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	-1%			-1%	0%		
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	
Fr _t	0.995					0.865	
Fl _t Protected							
Satd. Flow (prot)	3539	0	0	3557	0	1611	
Fl _t Permitted				0.953			
Satd. Flow (perm)	3539	0	0	3390	0	1611	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	7					1091	
Link Speed (mph)	30			30	25		
Link Distance (ft)	396			372	208		
Travel Time (s)	9.0			8.5	5.7		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	1271	48	3	1416	0	44	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1319	0	0	1419	0	44	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	0			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00	
Turning Speed (mph)		9	15		15	9	
Number of Detectors	1		1	1		1	
Detector Template			Left			Right	
Leading Detector (ft)	20		20	20		20	
Trailing Detector (ft)	0		0	0		0	
Detector 1 Position(ft)	0		0	0		0	
Detector 1 Size(ft)	20		20	20		20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0		0.0	
Turn Type	NA		Perm	NA		Perm	
Protected Phases	2			2			4
Permitted Phases			2			6	
Detector Phase	2		2	2		6	
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0		4.0	10.0
Minimum Split (s)	20.0		20.0	20.0		20.5	26.0
Total Split (s)	92.0		92.0	92.0		20.5	28.0
Total Split (%)	76.7%		76.7%	76.7%		17.1%	23%

Lanes, Volumes, Timings
6: Nebraska Ave NW

08/31/2020

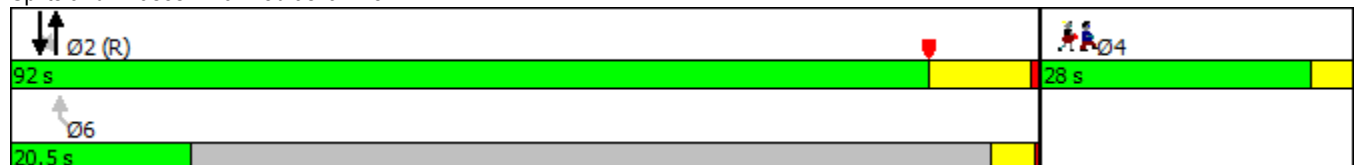


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR	Ø4
Maximum Green (s)	82.0		82.0	82.0		16.0	24.0
Yellow Time (s)	9.0		9.0	9.0		4.0	4.0
All-Red Time (s)	1.0		1.0	1.0		0.5	0.0
Lost Time Adjust (s)	-2.0			-2.0		-2.0	
Total Lost Time (s)	8.0			8.0		2.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0	1.0		3.0	1.0
Recall Mode	C-Max		C-Max	C-Max		None	None
Walk Time (s)						5.0	10.0
Flash Dont Walk (s)						11.0	12.0
Pedestrian Calls (#/hr)						0	5
Act Effect Green (s)	113.2			113.2		114.3	
Actuated g/C Ratio	0.94			0.94		0.95	
v/c Ratio	0.40			0.44		0.03	
Control Delay	2.7			1.7		0.0	
Queue Delay	0.3			0.0		0.0	
Total Delay	3.0			1.7		0.1	
LOS	A			A		A	
Approach Delay	3.0			1.7	0.1		
Approach LOS	A			A	A		

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	55 (46%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.44
Intersection Signal Delay:	2.3
Intersection LOS:	A
Intersection Capacity Utilization:	46.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: Nebraska Ave NW



Lanes, Volumes, Timings
7: New Mexico Ave NW

08/31/2020



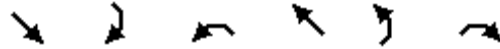
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	10	282	333	4	3	33
Future Volume (vph)	10	282	333	4	3	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	7%		0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.999		0.875	
Flt Protected		0.998			0.996	
Satd. Flow (prot)	0	3280	1676	0	1515	0
Flt Permitted		0.998			0.996	
Satd. Flow (perm)	0	3280	1676	0	1515	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		330	250		221	
Travel Time (s)		9.0	6.8		5.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	313	370	4	3	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	324	374	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.14	1.14	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	27.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	943	18	9	1235	3	1
Future Volume (vph)	943	18	9	1235	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-4%			0%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.997				0.966	
Flt Protected					0.964	
Satd. Flow (prot)	3359	0	0	3303	1619	0
Flt Permitted					0.964	
Satd. Flow (perm)	3359	0	0	3303	1619	0
Link Speed (mph)	30			25	30	
Link Distance (ft)	156			565	277	
Travel Time (s)	3.5			15.4	6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1048	20	10	1372	3	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1068	0	0	1382	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
9: Massachusetts Ave NW

08/31/2020



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕↕	↕↔		↔↔	
Traffic Volume (vph)	2	953	1213	4	15	51
Future Volume (vph)	2	953	1213	4	15	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	0%		0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt					0.896	
Flt Protected					0.989	
Satd. Flow (prot)	0	3369	3303	0	1541	0
Flt Permitted					0.989	
Satd. Flow (perm)	0	3369	3303	0	1541	0
Link Speed (mph)		30	25		30	
Link Distance (ft)		345	156		342	
Travel Time (s)		7.8	4.3		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	1059	1348	4	17	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1061	1352	0	74	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
10: Nebraska Ave NW

08/31/2020



Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	1	37	919	1	22	1051
Future Volume (vph)	1	37	919	1	22	1051
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.868					
Flt Protected	0.999					0.999
Satd. Flow (prot)	1508	0	3270	0	0	3316
Flt Permitted	0.999					0.999
Satd. Flow (perm)	1508	0	3270	0	0	3316
Link Speed (mph)	30		30			30
Link Distance (ft)	220		291			349
Travel Time (s)	5.0		6.6			7.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	41	1021	1	24	1168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	1022	0	0	1192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.11	1.11	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	55	70	2	51	67	74	52	789	29	4	899	96
Future Volume (vph)	55	70	2	51	67	74	52	789	29	4	899	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15	10	10	10	10	10	10
Grade (%)		6%			-1%			-2%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.98			1.00			1.00	
Frt		0.998			0.948			0.995			0.986	
Flt Protected		0.979			0.987			0.997				
Satd. Flow (prot)	0	1620	0	0	1722	0	0	2942	0	0	2932	0
Flt Permitted		0.714			0.876			0.795			0.952	
Satd. Flow (perm)	0	1173	0	0	1525	0	0	2345	0	0	2792	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		1						7			22	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		270			279			717			291	
Travel Time (s)		7.4			7.6			16.3			6.6	
Confl. Peds. (#/hr)	18		6	6		18	9		19	19		9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	60	77	2	56	74	81	57	867	32	4	988	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	211	0	0	956	0	0	1097	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.19	1.19	1.19	1.01	1.01	1.01	1.23	1.23	1.23	1.24	1.24	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	26.0	26.0		26.0	26.0		25.0	25.0		25.0	25.0	
Total Split (s)	32.0	32.0		32.0	32.0		88.0	88.0		88.0	88.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		82.0	82.0		82.0	82.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		28.0			28.0			84.0			84.0	

Lanes, Volumes, Timings

11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Actuated g/C Ratio		0.23			0.23			0.70			0.70	
v/c Ratio		0.51			0.59			0.58			0.56	
Control Delay		47.3			48.9			4.9			4.5	
Queue Delay		0.0			14.4			0.0			0.3	
Total Delay		47.3			63.3			4.9			4.8	
LOS		D			E			A			A	
Approach Delay		47.3			63.3			4.9			4.8	
Approach LOS		D			E			A			A	

Intersection Summary

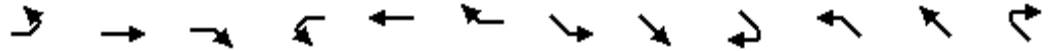
Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 76 (63%), Referenced to phase 2:NESW, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 12.4 Intersection LOS: B
 Intersection Capacity Utilization 84.9% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 11: Nebraska Ave NW & Rockwood Pkwy NW/Newark St NW



Lanes, Volumes, Timings
 12: Indian Ln/Rockwood Pkwy & Glenbrook Ave

08/31/2020



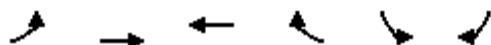
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕↔			↕↔	
Traffic Volume (vph)	27	22	5	1	17	13	20	23	37	9	74	0
Future Volume (vph)	27	22	5	1	17	13	20	23	37	9	74	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.944			0.938				
Flt Protected		0.976			0.999			0.988			0.995	
Satd. Flow (prot)	0	1673	0	0	1640	0	0	1611	0	0	1730	0
Flt Permitted		0.976			0.999			0.988			0.995	
Satd. Flow (perm)	0	1673	0	0	1640	0	0	1611	0	0	1730	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		425			322			322			1445	
Travel Time (s)		9.7			7.3			7.3			32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	24	6	1	19	14	22	26	41	10	82	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	0	0	34	0	0	89	0	0	92	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 13: Rockwood Pkwy NW & Fletcher Gate

08/31/2020



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	57	141	106	124	20
Future Volume (vph)	5	57	141	106	124	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		6%	0%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.942		0.981	
Flt Protected		0.996			0.959	
Satd. Flow (prot)	0	1680	1638	0	1636	0
Flt Permitted		0.996			0.959	
Satd. Flow (perm)	0	1680	1638	0	1636	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		155	270		285	
Travel Time (s)		4.2	7.4		6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	63	157	118	138	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	69	275	0	160	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.09	1.09	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 14: 47th St & Massachusetts Ave NW

08/31/2020

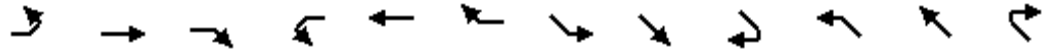
												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	72	656	4	2	1040	16
Future Volume (vph)	0	0	0	0	0	0	72	656	4	2	1040	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%				-3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt								0.999				0.998
Flt Protected								0.995				
Satd. Flow (prot)	0	1739	0	0	1739	0	0	3169	0	0	3346	0
Flt Permitted								0.995				
Satd. Flow (perm)	0	1739	0	0	1739	0	0	3169	0	0	3346	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			181			228			586	
Travel Time (s)		7.1			4.1			5.2			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0	80	729	4	2	1156	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	813	0	0	1176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.3%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings
 15: Massachusetts Ave NW & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	2	16	21	15	110	64	1057	1	11	1009	21
Future Volume (vph)	0	2	16	21	15	110	64	1057	1	11	1009	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			7%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.878			0.898						0.997	
Flt Protected					0.993			0.997			0.999	
Satd. Flow (prot)	0	1526	0	0	1550	0	0	3178	0	0	3339	0
Flt Permitted					0.993			0.997			0.999	
Satd. Flow (perm)	0	1526	0	0	1550	0	0	3178	0	0	3339	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		452			169			704			228	
Travel Time (s)		10.3			3.8			16.0			5.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	2	18	23	17	122	71	1174	1	12	1121	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	162	0	0	1246	0	0	1156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

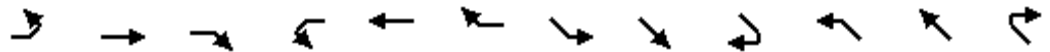
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	85.4%
ICU Level of Service	E
Analysis Period (min)	15

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020

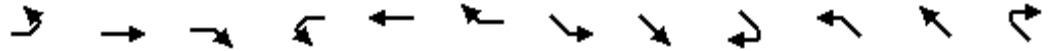


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	22	15	37	33	12	25	11	1046	7	19	1065	23
Future Volume (vph)	22	15	37	33	12	25	11	1046	7	19	1065	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		4%			-6%			3%				-3%
Storage Length (ft)	50		0	150		0	0		0	0		140
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.98	0.99		0.99	0.97			1.00				1.00
Flt		0.893			0.899			0.999				0.997
Flt Protected	0.950			0.950				0.999				0.999
Satd. Flow (prot)	1298	1204	0	1446	1334	0	0	2951	0	0	3003	0
Flt Permitted	0.731			0.720				0.937				0.917
Satd. Flow (perm)	974	1204	0	1089	1334	0	0	2768	0	0	2757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			27			2				5
Link Speed (mph)		25			25			30				30
Link Distance (ft)		433			204			758				704
Travel Time (s)		11.8			5.6			17.2				16.0
Confl. Peds. (#/hr)	16		4	4		16	2		17	17		2
Confl. Bikes (#/hr)									3			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	8%	8%	8%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	5	0	5	5
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	24	16	40	36	13	27	12	1137	8	21	1158	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	56	0	36	40	0	0	1157	0	0	1204	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.45	1.45	1.28	1.20	1.20	1.20	1.27	1.27	1.27	1.22	1.24	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6				2
Permitted Phases	4			8			6			2		
Minimum Split (s)	28.0	28.0		28.0	28.0		15.0	15.0		15.0	15.0	
Total Split (s)	28.0	28.0		28.0	28.0		92.0	92.0		92.0	92.0	
Total Split (%)	23.3%	23.3%		23.3%	23.3%		76.7%	76.7%		76.7%	76.7%	
Maximum Green (s)	22.0	22.0		22.0	22.0		87.0	87.0		87.0	87.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.0			3.0	

Lanes, Volumes, Timings

16: Massachusetts Ave NW & Fordham Rd NW/48th St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	15.0	15.0		15.0	15.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effect Green (s)	24.0	24.0		24.0	24.0			89.0			89.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.74	
v/c Ratio	0.12	0.21		0.17	0.14			0.56			0.59	
Control Delay	41.4	19.4		42.2	20.7			4.6			14.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	41.4	19.4		42.2	20.7			4.6			14.6	
LOS	D	B		D	C			A			B	
Approach Delay		26.0			30.8			4.6			14.6	
Approach LOS		C			C			A			B	

Intersection Summary





















Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	89 (74%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization	73.6%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 16: Massachusetts Ave NW & Fordham Rd NW/48th St NW



Lanes, Volumes, Timings
17: 49th St NW & Massachusetts Ave NW

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	65	86	9	28	55	6	93	1003	60	37	965	74
Future Volume (vph)	65	86	9	28	55	6	93	1003	60	37	965	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	11	11	11	11	11	11
Grade (%)		-1%			-3%			-2%				3%
Storage Length (ft)	85		0	70		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		1.00	1.00			1.00			1.00	
Frt		0.985			0.986			0.992			0.990	
Flt Protected	0.950			0.950				0.996			0.998	
Satd. Flow (prot)	1309	1355	0	1484	1535	0	0	3066	0	0	2981	0
Flt Permitted	0.715			0.641				0.659			0.852	
Satd. Flow (perm)	961	1355	0	997	1535	0	0	2029	0	0	2545	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			4			13			11	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		565			328			700			758	
Travel Time (s)		15.4			8.9			15.9			17.2	
Confl. Peds. (#/hr)	16		3	3		16	12		4	4		12
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	5	0	5	0
Parking (#/hr)	0	0										
Adj. Flow (vph)	69	91	10	30	59	6	99	1067	64	39	1027	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	101	0	30	65	0	0	1230	0	0	1145	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		9			9			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.47	1.47	1.30	1.28	1.28	1.28	1.18	1.19	1.18	1.22	1.23	1.22
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			4		5	2			6	
Permitted Phases	4			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		10.0	19.5		19.5	19.5	
Total Split (s)	27.5	27.5		27.5	27.5		17.0	92.5		75.5	75.5	
Total Split (%)	22.9%	22.9%		22.9%	22.9%		14.2%	77.1%		62.9%	62.9%	
Maximum Green (s)	21.5	21.5		21.5	21.5		12.0	87.0		70.0	70.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.5	1.5	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			3.5			3.5	

Lanes, Volumes, Timings
 17: 49th St NW & Massachusetts Ave NW

08/31/2020



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lead/Lag							Lead			Lag		
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)	23.5	23.5		23.5	23.5			89.0			72.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.74			0.60	
v/c Ratio	0.37	0.38		0.15	0.21			0.76			0.75	
Control Delay	48.4	45.0		42.5	40.2			10.8			5.2	
Queue Delay	0.0	0.0		0.0	0.0			1.2			0.0	
Total Delay	48.4	45.0		42.5	40.2			12.0			5.2	
LOS	D	D		D	D			B			A	
Approach Delay		46.4			40.9			12.0			5.2	
Approach LOS		D			D			B			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	87 (73%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	12.3
Intersection LOS:	B
Intersection Capacity Utilization:	97.0%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 17: 49th St NW & Massachusetts Ave NW



Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	227	61	42	278	43	10	1195	20	6	968	55
Future Volume (vph)	51	227	61	42	278	43	10	1195	20	6	968	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		5%			2%			-1%			1%	
Storage Length (ft)	70		0	110		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor	0.98	0.98		0.97	0.99			0.99			0.97	
Frt		0.968			0.980			0.998			0.992	
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1464	1466	0	1501	1533	0	0	2928	0	0	3942	0
Flt Permitted	0.296			0.347				0.943			0.934	
Satd. Flow (perm)	445	1466	0	531	1533	0	0	2758	0	0	3682	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		11						2			13	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		1242			419			367			319	
Travel Time (s)		33.9			11.4			8.3			7.3	
Confl. Peds. (#/hr)	35		40	40		35	202		114	114		202
Confl. Bikes (#/hr)						5			4			7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	25
Parking (#/hr)											0	0
Adj. Flow (vph)	53	234	63	43	287	44	10	1232	21	6	998	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	297	0	43	331	0	0	1263	0	0	1061	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.29	1.29	1.29	1.26	1.26	1.26	1.24	1.24	1.24	1.26	1.31	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			2			1	6
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		11.0	18.0	
Total Split (s)	37.0	37.0		37.0	37.0		66.0	66.0		11.0	77.0	
Total Split (%)	30.8%	30.8%		30.8%	30.8%		55.0%	55.0%		9.2%	64.2%	
Maximum Green (s)	31.0	31.0		31.0	31.0		60.0	60.0		5.0	71.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lag	Lag					Lag	Lag	

Lane Group	Ø3	Ø5	Ø7	Ø11
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	3	5	7	11
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead

Lanes, Volumes, Timings
 18: WISCONSIN AVE & Van Ness St

08/31/2020

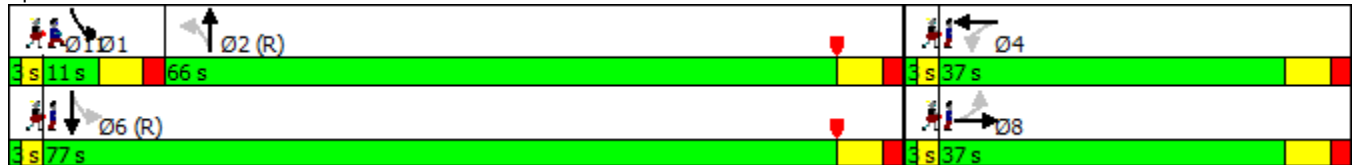


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		4.0	4.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		7.0	7.0		1.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0		33.0	33.0			62.0			73.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28			0.52			0.61	
v/c Ratio	0.43	0.72		0.29	0.79			0.89			0.47	
Control Delay	50.8	50.9		41.1	54.9			34.9			6.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.4	
Total Delay	50.8	50.9		41.1	54.9			34.9			6.9	
LOS	D	D		D	D			C			A	
Approach Delay		50.8			53.3			34.9			6.9	
Approach LOS		D			D			C			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	17 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	29.3
Intersection LOS:	C
Intersection Capacity Utilization:	80.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 18: WISCONSIN AVE & Van Ness St



Lane Group	Ø3	Ø5	Ø7	Ø11
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

20: Nebraska Ave & Warren St & Nebraska Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SWL2	SWL	SWR
Lane Configurations		↕			↕		↕	↕		↕	
Traffic Volume (vph)	0	1	3	18	7	10	18	23	28	669	0
Future Volume (vph)	0	1	3	18	7	10	18	23	28	669	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%		-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95
Frt		0.899			0.962		0.975	0.850			
Flt Protected					0.975		0.960			0.950	
Satd. Flow (prot)	0	1563	0	0	1631	0	1644	1418	0	3188	0
Flt Permitted					0.975		0.960			0.950	
Satd. Flow (perm)	0	1563	0	0	1631	0	1644	1418	0	3188	0
Link Speed (mph)		30			30		30			30	
Link Distance (ft)		316			282		726			392	
Travel Time (s)		7.2			6.4		16.5			8.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1	3	20	8	11	20	26	31	743	0
Shared Lane Traffic (%)								16%			
Lane Group Flow (vph)	0	4	0	0	39	0	24	22	0	774	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Left	Right
Median Width(ft)		0			0		10			20	
Link Offset(ft)		0			0		0			0	
Crosswalk Width(ft)		16			16		16			16	
Two way Left Turn Lane											
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.08	1.08	1.10	1.10	1.10
Turning Speed (mph)	15		9	15		9	15	9	15	15	9
Sign Control		Stop			Stop		Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
21: WISCONSIN AVE & Warren St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	19	30	25	18	9	24	24	1204	19	60	1030	5
Future Volume (vph)	19	30	25	18	9	24	24	1204	19	60	1030	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	8	8	8	10	10	10	10	10	10
Grade (%)		1%			1%			-1%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Ped Bike Factor		0.98			0.97			0.99			1.00	
Frt		0.954			0.936			0.998			0.999	
Flt Protected		0.987			0.982			0.999			0.997	
Satd. Flow (prot)	0	1246	0	0	1121	0	0	2955	0	0	4083	0
Flt Permitted		0.926			0.896			0.906			0.756	
Satd. Flow (perm)	0	1157	0	0	1017	0	0	2675	0	0	3096	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			25			2			1	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		299			129			330			116	
Travel Time (s)		8.2			3.5			7.5			2.6	
Confl. Peds. (#/hr)	28		13	13		28	227		158	158		227
Confl. Bikes (#/hr)									5			6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Parking (#/hr)	0	0	0	0	0	0					0	0
Adj. Flow (vph)	20	31	26	19	9	25	25	1241	20	62	1062	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	53	0	0	1286	0	0	1129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.49	1.31	1.38	1.56	1.38	1.24	1.24	1.24	1.24	1.29	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			6			2	
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		6	6		2	2	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	

Lanes, Volumes, Timings
21: WISCONSIN AVE & Warren St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.0	29.0		29.0	29.0		22.5	22.5		23.5	23.5	
Total Split (s)	29.5	29.5		29.5	29.5		78.5	78.5		78.5	78.5	
Total Split (%)	24.6%	24.6%		24.6%	24.6%		65.4%	65.4%		65.4%	65.4%	
Maximum Green (s)	23.5	23.5		23.5	23.5		73.0	73.0		73.0	73.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			3.5			3.5	
Lead/Lag	Lead	Lead		Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		10.0	10.0		11.0	11.0	
Pedestrian Calls (#/hr)	41	41		41	41		0	0		0	0	
Act Effct Green (s)		23.2			23.2			75.0			75.0	
Actuated g/C Ratio		0.19			0.19			0.62			0.62	
v/c Ratio		0.32			0.25			0.77			0.58	
Control Delay		35.9			27.1			11.0			2.3	
Queue Delay		0.0			0.0			1.4			0.0	
Total Delay		35.9			27.1			12.5			2.3	
LOS		D			C			B			A	
Approach Delay		35.9			27.1			12.5			2.3	
Approach LOS		D			C			B			A	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 25 (21%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 9.0
 Intersection LOS: A
 Intersection Capacity Utilization 86.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 21: WISCONSIN AVE & Warren St



Lane Group	Ø3
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	12.0
Total Split (s)	12.0
Total Split (%)	10%
Maximum Green (s)	7.0
Yellow Time (s)	4.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings

22: Yuma St.

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	10	64	3	28	104	43	10	124	40	26	103	10
Future Volume (vph)	10	64	3	28	104	43	10	124	40	26	103	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.967			0.969			0.990	
Flt Protected		0.994			0.992			0.997			0.991	
Satd. Flow (prot)	0	1754	0	0	1668	0	0	1680	0	0	1706	0
Flt Permitted		0.994			0.992			0.997			0.991	
Satd. Flow (perm)	0	1754	0	0	1668	0	0	1680	0	0	1706	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		457			864			435			295	
Travel Time (s)		10.4			19.6			9.9			6.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	71	3	31	116	48	11	138	44	29	114	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	195	0	0	193	0	0	154	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.7%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
23: WISCONSIN AVE & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	42	123	60	42	147	86	1	1112	126	2	1041	36	
Future Volume (vph)	42	123	60	42	147	86	1	1112	126	2	1041	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	9	9	9	11	11	11	11	11	11	
Grade (%)		-4%			4%			3%				-3%	
Storage Length (ft)	120		0	0		150	0		110	0		0	
Storage Lanes	1		0	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	0.91	
Ped Bike Factor	0.76	0.93			0.97	0.68			0.13		0.97		
Frt		0.951				0.850			0.850		0.995		
Flt Protected	0.950				0.989								
Satd. Flow (prot)	1547	1446	0	0	1462	1257	0	2783	1138	0	4208	0	
Flt Permitted	0.950				0.893			0.954			0.939		
Satd. Flow (perm)	1180	1446	0	0	1277	857	0	2655	145	0	3951	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		24				127			127			6	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		670			654			554				196	
Travel Time (s)		18.3			17.8			12.6				4.5	
Confl. Peds. (#/hr)	211		129	129		211	324		548	548		324	
Confl. Bikes (#/hr)									1			3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	17	17	0	22	22	
Parking (#/hr)								0	0				
Adj. Flow (vph)	44	129	63	44	155	91	1	1171	133	2	1096	38	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	44	192	0	0	199	91	0	1172	133	0	1136	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		10			10			0			0		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.22	1.22	1.22	1.34	1.34	1.34	1.22	1.35	1.51	1.17	1.22	1.17	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA		
Protected Phases	3	8			4			2				6	
Permitted Phases				4		4	2		2		6		
Minimum Split (s)	10.0	30.0		27.0	27.0	27.0	20.0	20.0	20.0	16.0	16.0		
Total Split (s)	15.0	50.0		35.0	35.0	35.0	64.0	64.0	64.0	64.0	64.0		
Total Split (%)	12.5%	41.7%		29.2%	29.2%	29.2%	53.3%	53.3%	53.3%	53.3%	53.3%		
Maximum Green (s)	10.0	44.0		29.0	29.0	29.0	58.0	58.0	58.0	58.0	58.0		
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
All-Red Time (s)	1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	4.0			4.0	4.0		4.0	4.0		4.0		

Lane Group	Ø1	Ø5	Ø7	Ø9
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Turn Type				
Protected Phases	1	5	7	9
Permitted Phases				
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0	3.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	1.0	1.0	1.0	1.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				

Lanes, Volumes, Timings
 23: WISCONSIN AVE & Albermarle St

08/31/2020

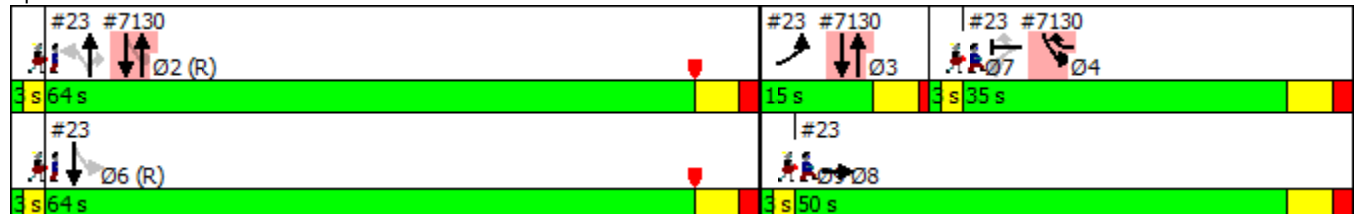


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag					Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)		20.0		17.0	17.0	17.0	10.0	10.0	10.0	4.0	4.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0	0
Act Effect Green (s)	12.0	46.0		31.0	31.0		60.0	60.0			60.0	
Actuated g/C Ratio	0.10	0.38		0.26	0.26		0.50	0.50			0.50	
v/c Ratio	0.29	0.34		0.60	0.29		0.88	0.98			0.57	
Control Delay	51.4	27.1		57.4	24.0		17.4	83.1			16.0	
Queue Delay	0.0	0.0		0.0	0.0		1.7	0.0			2.8	
Total Delay	51.4	27.1		57.4	24.0		19.1	83.1			18.8	
LOS	D	C		E	C		B	F			B	
Approach Delay		31.6		46.9			25.6				18.8	
Approach LOS		C		D			C				B	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	7 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	25.6
Intersection LOS:	C
Intersection Capacity Utilization:	82.4%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 23: WISCONSIN AVE & Albermarle St



Lane Group	Ø1	Ø5	Ø7	Ø9
Lead/Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?				
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings
24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑	↘	↗
Traffic Volume (vph)	523	238	327	607	275	424
Future Volume (vph)	523	238	327	607	275	424
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		200	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97		0.98		0.98	
Frt	0.953					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2713	0	1509	1588	1472	1317
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2713	0	1478	1588	1444	1317
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	62					69
Link Speed (mph)	30			30	25	
Link Distance (ft)	701			717	2089	
Travel Time (s)	15.9			16.3	57.0	
Confl. Peds. (#/hr)		16	16		5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Bus Blockages (#/hr)	6	6	0	0	0	0
Adj. Flow (vph)	568	259	355	660	299	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	827	0	355	660	299	461
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	46	
Two way Left Turn Lane						
Headway Factor	1.27	1.26	1.24	1.24	1.26	1.26
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	Perm	pt+ov
Protected Phases	2		1	6		14
Permitted Phases					4	
Minimum Split (s)	20.5		10.5	15.5	21.0	
Total Split (s)	38.5		54.0	92.5	27.5	
Total Split (%)	32.1%		45.0%	77.1%	22.9%	
Maximum Green (s)	33.0		48.5	87.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.5	1.5	1.0	
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	
Total Lost Time (s)	3.5		3.5	3.5	3.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						

Lanes, Volumes, Timings
 24: Foxhall Rd NW & Nebraska Ave NW

08/31/2020



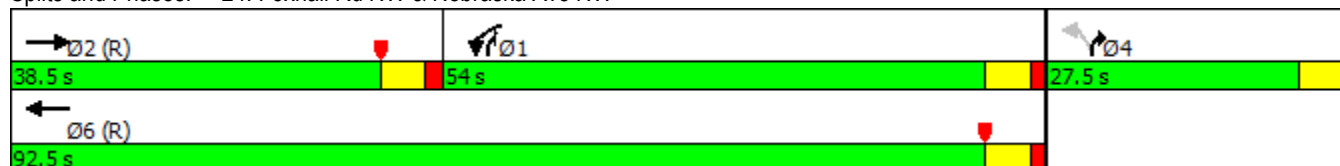
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	8.0				9.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	35.0		50.5	89.0	24.5	78.0
Actuated g/C Ratio	0.29		0.42	0.74	0.20	0.65
v/c Ratio	0.99		0.56	0.56	1.02	0.52
Control Delay	68.4		21.2	3.4	104.5	11.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	68.4		21.2	3.4	104.5	11.8
LOS	E		C	A	F	B
Approach Delay	68.4			9.6	48.3	
Approach LOS	E			A	D	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 35 (29%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 39.6
 Intersection Capacity Utilization 72.1%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 24: Foxhall Rd NW & Nebraska Ave NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	23	7	66	1	0	3	98	312	3	1	269	30
Future Volume (vph)	23	7	66	1	0	3	98	312	3	1	269	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	11	11	11	11	11	11	10	10	10
Grade (%)		-7%			-6%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.96			0.99			0.99	
Frt		0.906			0.899			0.999			0.986	
Flt Protected		0.988			0.988			0.988				
Satd. Flow (prot)	0	1237	0	0	1463	0	0	1393	0	0	1430	0
Flt Permitted		0.945			0.966			0.844			0.999	
Satd. Flow (perm)	0	1177	0	0	1422	0	0	1185	0	0	1428	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					27			1			12	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		284			247			252			250	
Travel Time (s)		7.7			6.7			6.9			6.8	
Confl. Peds. (#/hr)	8		11	11		8	12		109	109		12
Confl. Bikes (#/hr)									3			3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Adj. Flow (vph)	24	7	70	1	0	3	104	332	3	1	286	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	4	0	0	439	0	0	319	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.42	1.25	1.15	1.15	1.15	1.26	1.43	1.26	1.20	1.36	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	22.5	22.5		22.5	22.5		25.5	25.5		25.5	25.5	
Total Split (s)	30.0	30.0		30.0	30.0		70.0	70.0		70.0	70.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	24.5	24.5		24.5	24.5		64.5	64.5		64.5	64.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

Lane Group	Ø6	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	6	8
Permitted Phases		
Minimum Split (s)	26.5	26.5
Total Split (s)	70.0	30.0
Total Split (%)	70%	30%
Maximum Green (s)	64.5	24.5
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	4.0	14.0

Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		26.5			26.5			66.5			66.5	
Actuated g/C Ratio		0.26			0.26			0.66			0.66	
v/c Ratio		0.32			0.01			0.56			0.33	
Control Delay		33.1			0.0			9.2			8.1	
Queue Delay		0.0			0.0			0.1			0.0	
Total Delay		33.1			0.0			9.3			8.1	
LOS		C			A			A			A	
Approach Delay		33.1						9.3			8.1	
Approach LOS		C						A			A	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	63 (63%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization	66.6%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 26: New Mexico Ave NW & Newark St NW/Westover PI NW



Lanes, Volumes, Timings

26: New Mexico Ave NW & Newark St NW/Westover PI NW

08/31/2020

Lane Group	Ø6	Ø8
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings

27: New Mexico Ave NW & 44th St/Embassy Park Dr

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	23	0	6	1	0	18	0	363	17	15	324	0
Future Volume (vph)	23	0	6	1	0	18	0	363	17	15	324	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			8%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.871			0.994				
Flt Protected		0.962			0.998						0.998	
Satd. Flow (prot)	0	1624	0	0	1511	0	0	1659	0	0	1796	0
Flt Permitted		0.962			0.998						0.998	
Satd. Flow (perm)	0	1624	0	0	1511	0	0	1659	0	0	1796	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		312			150			186			252	
Travel Time (s)		7.1			3.4			5.1			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	0	7	1	0	20	0	403	19	17	360	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	21	0	0	422	0	0	377	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.15	1.15	1.15	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Macomb St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	0	34	25	14	30	47	340	10	9	312	13
Future Volume (vph)	4	0	34	25	14	30	47	340	10	9	312	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	11	11	11	11	11	11
Grade (%)		-2%			-3%			7%			-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.70			0.85			0.99			0.99	
Frt		0.878			0.942			0.997			0.995	
Flt Protected		0.995			0.982			0.994			0.999	
Satd. Flow (prot)	0	908	0	0	1374	0	0	1384	0	0	1655	0
Flt Permitted		0.980			0.898			0.920			0.987	
Satd. Flow (perm)	0	887	0	0	1121	0	0	1272	0	0	1635	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		613			596			277			186	
Travel Time (s)		16.7			16.3			7.6			5.1	
Confl. Peds. (#/hr)	31		101	101		31	45					45
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	3
Parking (#/hr)	0	0	0				0	3	0			
Adj. Flow (vph)	4	0	38	28	16	33	52	378	11	10	347	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	77	0	0	441	0	0	371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		-35			-35			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.13	1.29	1.13	1.28	1.28	1.28	1.25	1.45	1.25	1.14	1.16	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			8			2			2	
Permitted Phases	8			8			2			2		
Minimum Split (s)	22.0	22.0		22.0	22.0		26.0	26.0		26.0	26.0	
Total Split (s)	26.5	26.5		26.5	26.5		70.5	70.5		70.5	70.5	
Total Split (%)	26.5%	26.5%		26.5%	26.5%		70.5%	70.5%		70.5%	70.5%	
Maximum Green (s)	20.5	20.5		20.5	20.5		63.5	63.5		63.5	63.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lag	Lag							
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		7.0	7.0		7.0	7.0	

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Minimum Split (s)	3.0
Total Split (s)	3.0
Total Split (%)	3%
Maximum Green (s)	1.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Walk Time (s)	

Lanes, Volumes, Timings
 28: New Mexico Ave NW & Maccomb St NW

08/31/2020

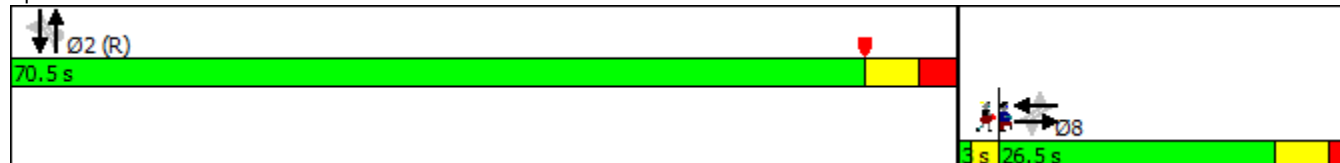


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.5			22.5			65.5			65.5	
Actuated g/C Ratio		0.22			0.22			0.66			0.66	
v/c Ratio		0.21			0.31			0.53			0.35	
Control Delay		34.9			36.3			13.0			7.5	
Queue Delay		0.0			0.0			0.0			0.3	
Total Delay		34.9			36.3			13.0			7.8	
LOS		C			D			B			A	
Approach Delay		34.9			36.3			13.0			7.8	
Approach LOS		C			D			B			A	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 58 (58%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 13.9
 Intersection LOS: B
 Intersection Capacity Utilization 67.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 28: New Mexico Ave NW & Maccomb St NW



Lane Group	Ø7
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings
 29: New Mexico Ave NW & Lowell St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	45	15	393	259	11
Future Volume (vph)	10	45	15	393	259	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889				0.995	
Flt Protected	0.991			0.998		
Satd. Flow (prot)	1532	0	0	1674	1773	0
Flt Permitted	0.991			0.998		
Satd. Flow (perm)	1532	0	0	1674	1773	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	597			94	277	
Travel Time (s)	13.6			2.6	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	50	17	437	288	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	0	454	300	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.8%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
 30: New Mexico Ave NW & Sutton PI

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	28	347	25	36	395
Future Volume (vph)	16	28	347	25	36	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.915		0.991			
Flt Protected	0.982					0.996
Satd. Flow (prot)	1562	0	1663	0	0	1775
Flt Permitted	0.982					0.996
Satd. Flow (perm)	1562	0	1663	0	0	1775
Link Speed (mph)	30		25			25
Link Distance (ft)	405		274			94
Travel Time (s)	9.2		7.5			2.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	31	386	28	40	439
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	0	414	0	0	479
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.9%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
31: New Mexico Ave NW

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	1	375	3	0	409
Future Volume (vph)	5	1	375	3	0	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		7%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981		0.999			
Flt Protected	0.959					
Satd. Flow (prot)	1636	0	1676	0	0	1782
Flt Permitted	0.959					
Satd. Flow (perm)	1636	0	1676	0	0	1782
Link Speed (mph)	30		25			25
Link Distance (ft)	337		358			274
Travel Time (s)	7.7		9.8			7.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	1	417	3	0	454
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	420	0	0	454
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 32: New Mexico Ave NW & Klinge St

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	22	16	375	409	5
Future Volume (vph)	3	22	16	375	409	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			7%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880				0.998	
Flt Protected	0.994			0.998		
Satd. Flow (prot)	1521	0	0	1674	1778	0
Flt Permitted	0.994			0.998		
Satd. Flow (perm)	1521	0	0	1674	1778	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	568			283	358	
Travel Time (s)	12.9			7.7	9.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	24	18	417	454	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	435	460	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.14	1.14	1.06	1.06
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	2	85	21	31	95	115	7	257	30	168	250	13
Future Volume (vph)	2	85	21	31	95	115	7	257	30	168	250	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		-2%			6%			5%				-5%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.95		0.99			0.97	
Frt		0.973				0.850		0.986			0.996	
Flt Protected		0.999			0.988			0.999			0.981	
Satd. Flow (prot)	0	1382	0	0	1363	1159	0	1347	0	0	1408	0
Flt Permitted		0.997			0.907			0.989			0.743	
Satd. Flow (perm)	0	1379	0	0	1247	1100	0	1332	0	0	1040	0
Right Turn on Red			No			No			No			Yes
Satd. Flow (RTOR)												3
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		642			805			212			283	
Travel Time (s)		17.5			22.0			5.8			7.7	
Confl. Peds. (#/hr)	16		7	7		16	14		40	40		7
Confl. Bikes (#/hr)									5			4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Bus Blockages (#/hr)	0	3	0	0	0	3	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	2	96	24	35	107	129	8	289	34	189	281	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	142	129	0	331	0	0	485	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.23	1.42	1.23	1.30	1.47	1.49	1.29	1.46	1.29	1.21	1.38	1.21
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	23.0	23.0		13.0	13.0	13.0	23.0	23.0		19.0	19.0	
Total Split (s)	30.0	30.0		30.0	30.0	30.0	70.0	70.0		70.0	70.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	64.0	64.0		64.0	64.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)		4.0			4.0	4.0		4.0			4.0	

Lanes, Volumes, Timings

33: New Mexico Ave NW & Cathedral Ave NW

08/31/2020

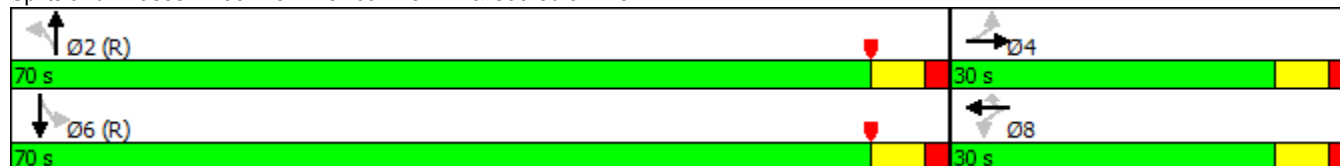


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0					10.0	10.0		6.0	6.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effect Green (s)		26.0			26.0	26.0		66.0			66.0	
Actuated g/C Ratio		0.26			0.26	0.26		0.66			0.66	
v/c Ratio		0.34			0.44	0.45		0.38			0.71	
Control Delay		33.3			36.0	37.1		9.2			19.5	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		33.3			36.0	37.1		9.2			19.5	
LOS		C			D	D		A			B	
Approach Delay		33.3			36.5			9.2			19.5	
Approach LOS		C			D			A			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	12 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	21.9
Intersection LOS:	C
Intersection Capacity Utilization	67.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 33: New Mexico Ave NW & Cathedral Ave NW



Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	21	110	7	231	188	6	52	760	120	6	632	26
Future Volume (vph)	21	110	7	231	188	6	52	760	120	6	632	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	10	10	10	10	10	10	10	10	10
Grade (%)		2%			4%			0%				1%
Storage Length (ft)	0		0	125		0	0		380	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98	1.00			1.00	0.79		0.99	
Frt		0.993			0.996				0.850		0.994	
Flt Protected		0.992		0.950				0.997				
Satd. Flow (prot)	0	1811	0	1486	1555	0	0	1473	1292	0	2688	0
Flt Permitted		0.938		0.608				0.915			0.949	
Satd. Flow (perm)	0	1706	0	928	1555	0	0	1347	1017	0	2551	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1				129			6
Link Speed (mph)		25			25			30				30
Link Distance (ft)		110			1242			1410				726
Travel Time (s)		3.0			33.9			32.0				16.5
Confl. Peds. (#/hr)	19		18	18		19	60		52	52		60
Confl. Bikes (#/hr)			6			2			4			5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	5%	5%	5%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	0	0	0	0
Parking (#/hr)										0	0	0
Adj. Flow (vph)	23	118	8	248	202	6	56	817	129	6	680	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	0	248	208	0	0	873	129	0	714	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.28	1.28	1.28	1.25	1.29	1.25	1.26	1.34	1.26
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Minimum Split (s)	22.5	22.5		22.5	22.5		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	45.5	45.5		45.5	45.5		74.5	74.5	74.5	74.5	74.5	74.5
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%	62.1%	62.1%	62.1%	62.1%
Maximum Green (s)	40.0	40.0		40.0	40.0		69.5	69.5	69.5	69.5	69.5	69.5
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5		1.5	1.5		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0			-2.0	-2.0		-2.0	
Total Lost Time (s)		3.5		3.5	3.5			3.0	3.0		3.0	

Lanes, Volumes, Timings
 34: Nebraska Ave NW & Van Ness St NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)		42.0		42.0	42.0			71.5	71.5			71.5
Actuated g/C Ratio		0.35		0.35	0.35			0.60	0.60			0.60
v/c Ratio		0.25		0.77	0.38			1.09	0.20			0.47
Control Delay		28.6		47.0	27.4			65.9	0.3			6.2
Queue Delay		0.0		0.0	0.0			0.0	0.0			0.0
Total Delay		28.6		47.0	27.4			65.9	0.3			6.2
LOS		C		D	C			E	A			A
Approach Delay		28.6			38.1			57.5				6.2
Approach LOS		C			D			E				A

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	80 (67%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	70
Control Type:	Pretimed
Maximum v/c Ratio:	1.09
Intersection Signal Delay:	36.0
Intersection LOS:	D
Intersection Capacity Utilization	105.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 34: Nebraska Ave NW & Van Ness St NW



Lanes, Volumes, Timings
35: Massachusetts Ave NW

08/31/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1162	15	16	1242	0	8
Future Volume (vph)	1162	15	16	1242	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	4%			-7%	0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.865	
Flt Protected				0.999		
Satd. Flow (prot)	3231	0	0	3415	1504	0
Flt Permitted				0.999		
Satd. Flow (perm)	3231	0	0	3415	1504	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	222			628	141	
Travel Time (s)	5.0			14.3	3.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1291	17	18	1380	0	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1308	0	0	1398	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.12	1.12	1.05	1.05	1.09	1.09
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.6%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings

36:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	21	17	116	108	7
Future Volume (vph)	1	21	17	116	108	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871				0.992	
Flt Protected	0.998			0.994		
Satd. Flow (prot)	1511	0	0	1728	1725	0
Flt Permitted	0.998			0.994		
Satd. Flow (perm)	1511	0	0	1728	1725	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	426			119	97	
Travel Time (s)	9.7			2.7	2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	23	19	129	120	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	0	148	128	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	23.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

37:

08/31/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	0	3	153	107	22
Future Volume (vph)	13	0	3	153	107	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.977	
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1652	0	0	1737	1699	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1652	0	0	1737	1699	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	419			92	435	
Travel Time (s)	9.5			2.1	9.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	0	3	170	119	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	173	143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	20.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
38: Warren St & 48th St

08/31/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	6	33	16	6	78
Future Volume (vph)	11	6	33	16	6	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950		0.956			
Flt Protected	0.969					0.996
Satd. Flow (prot)	1600	0	1662	0	0	1732
Flt Permitted	0.969					0.996
Satd. Flow (perm)	1600	0	1662	0	0	1732
Link Speed (mph)	30		30			30
Link Distance (ft)	1057		526			383
Travel Time (s)	24.0		12.0			8.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	7	37	18	7	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	55	0	0	94
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.1% ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

39: 48th St & Yuma St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	84	40	11	64	6	11	15	7	3	25	8
Future Volume (vph)	4	84	40	11	64	6	11	15	7	3	25	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.989			0.971			0.970	
Flt Protected		0.999			0.993			0.984			0.996	
Satd. Flow (prot)	0	1664	0	0	1707	0	0	1661	0	0	1680	0
Flt Permitted		0.999			0.993			0.984			0.996	
Satd. Flow (perm)	0	1664	0	0	1707	0	0	1661	0	0	1680	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			1099			383			277	
Travel Time (s)		5.9			25.0			8.7			6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	93	44	12	71	7	12	17	8	3	28	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	0	0	90	0	0	37	0	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	66	95	14	22	124	50	4	117	4	29	99	44
Future Volume (vph)	66	95	14	22	124	50	4	117	4	29	99	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9	9	9	9	9	9	9
Grade (%)		9%			-9%			-5%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93			0.92			0.99			0.96	
Frt		0.989			0.965			0.996			0.966	
Flt Protected		0.981			0.994			0.999			0.992	
Satd. Flow (prot)	0	1243	0	0	1283	0	0	1408	0	0	1294	0
Flt Permitted		0.841			0.957			0.993			0.945	
Satd. Flow (perm)	0	1010	0	0	1214	0	0	1397	0	0	1219	0
Right Turn on Red			No			No			Yes			No
Satd. Flow (RTOR)								3				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		202			670			299			437	
Travel Time (s)		5.5			18.3			8.2			11.9	
Confl. Peds. (#/hr)	81		84	84		81	39		34	34		39
Confl. Bikes (#/hr)			3			2			1			2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	71	102	15	24	133	54	4	126	4	31	106	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	188	0	0	211	0	0	134	0	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.38	1.57	1.38	1.24	1.41	1.24	1.27	1.44	1.27	1.30	1.47	1.30
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	15.5	15.5		15.5	15.5		17.5	17.5		17.5	17.5	
Total Split (s)	25.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		48.3%	48.3%		48.3%	48.3%	
Maximum Green (s)	19.5	19.5		19.5	19.5		23.5	23.5		23.5	23.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)		3.5			3.5			3.5			3.5	
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0		8.0	8.0	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Minimum Split (s)	3.0	3.0
Total Split (s)	3.0	3.0
Total Split (%)	5%	5%
Maximum Green (s)	1.0	1.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?		
Walk Time (s)		
Flash Dont Walk (s)		

Lanes, Volumes, Timings
40: 42nd St & Albermarle St

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.5			21.5			25.5			25.5	
Actuated g/C Ratio		0.36			0.36			0.42			0.42	
v/c Ratio		0.52			0.49			0.23			0.36	
Control Delay		21.5			10.9			12.0			14.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.5			10.9			12.0			14.2	
LOS		C			B			B			B	
Approach Delay		21.5			10.9			12.0			14.2	
Approach LOS		C			B			B			B	

Intersection Summary

Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	45 (75%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	14.7
Intersection LOS:	B
Intersection Capacity Utilization	57.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 40: 42nd St & Albermarle St



Lane Group	Ø1	Ø3
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Lanes, Volumes, Timings
41: Macomb St & Loughboro St

08/31/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	860	62	5	1022	49	8
Future Volume (vph)	860	62	5	1022	49	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991			0.981		
Flt Protected				0.959		
Satd. Flow (prot)	1723	0	0	1739	1636	0
Flt Permitted				0.959		
Satd. Flow (perm)	1723	0	0	1739	1636	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	299			1077	291	
Travel Time (s)	6.8			24.5	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	956	69	6	1136	54	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1025	0	0	1142	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

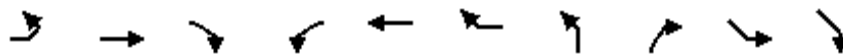
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.8% ICU Level of Service C
Analysis Period (min)	15

Lanes, Volumes, Timings

42: Chainbridge Rd & Loughboro Rd/Nebraska Ave NW & Indian Ln

08/31/2020















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations		↕			↕		↕		↕	
Traffic Volume (vph)	9	705	22	33	812	42	2	30	0	0
Future Volume (vph)	9	705	22	33	812	42	2	30	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.994		0.873			
Flt Protected		0.999			0.998		0.997			
Satd. Flow (prot)	0	1730	0	0	1725	0	1513	0	1739	0
Flt Permitted		0.999			0.998		0.997			
Satd. Flow (perm)	0	1730	0	0	1725	0	1513	0	1739	0
Link Speed (mph)		30			25		30		30	
Link Distance (ft)		1158			701		287		1445	
Travel Time (s)		26.3			19.1		6.5		32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	783	24	37	902	47	2	33	0	0
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	817	0	0	986	0	35	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		0			0		10		10	
Link Offset(ft)		0			0		0		0	
Crosswalk Width(ft)		16			16		16		16	
Two way Left Turn Lane										
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15	9	15	9
Sign Control		Free			Free		Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.2%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑						↑↑	
Traffic Volume (vph)	0	1163	0	0	828	254	0	0	0	240	591	34
Future Volume (vph)	0	1163	0	0	828	254	0	0	0	240	591	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	11
Grade (%)		2%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor					0.97						0.99	
Frt					0.965						0.994	
Flt Protected											0.986	
Satd. Flow (prot)	0	2818	0	0	4016	0	0	0	0	0	2974	0
Flt Permitted											0.986	
Satd. Flow (perm)	0	2818	0	0	4016	0	0	0	0	0	2957	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			554			110			97	
Travel Time (s)		4.3			12.6			2.5			2.2	
Confl. Peds. (#/hr)	146		199	199		146	152		30	30		152
Confl. Bikes (#/hr)			9			8						3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	0%	0%	0%	3%	3%	3%
Bus Blockages (#/hr)	0	26	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	0	1211	0	0	863	265	0	0	0	250	616	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1211	0	0	1128	0	0	0	0	0	901	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.35	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		15 6 1 2			15 6 1						3 4	
Permitted Phases										3 4		
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		66.0			61.0						40.0	
Actuated g/C Ratio		0.55			0.51						0.33	

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Bus Blockages (#/hr)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	27.0	5.0	47.0	5.0	12.0	19.0	79.0	10.0	17.0
Total Split (%)	23%	4%	39%	4%	10%	16%	66%	8%	14%
Maximum Green (s)	20.0	1.0	38.0	1.0	9.0	13.0	70.0	5.0	13.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									

Lanes, Volumes, Timings
 191: Tenley Cir & WISCONSIN AVE

08/31/2020

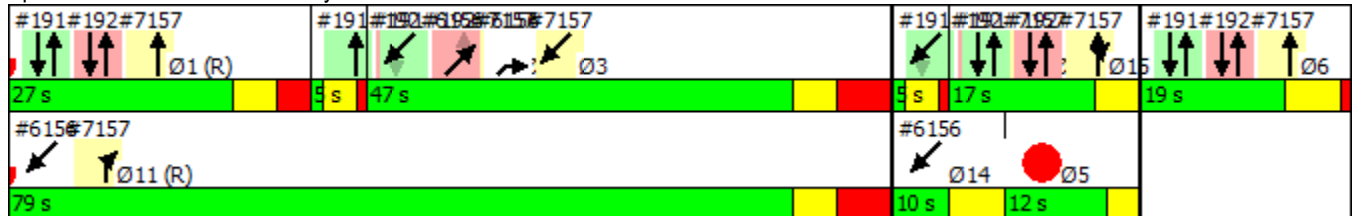


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio		0.78			0.55						0.91	
Control Delay		8.4			8.9						37.4	
Queue Delay		10.3			0.1						0.0	
Total Delay		18.6			9.0						37.4	
LOS		B			A						D	
Approach Delay		18.6			9.0						37.4	
Approach LOS		B			A						D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 1:NBSB and 11:; Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	20.5
Intersection LOS:	C
Intersection Capacity Utilization	135.3%
ICU Level of Service	H
Analysis Period (min)	15













Splits and Phases: 191: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
v/c Ratio									
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑↑			↑↑				
Traffic Volume (vph)	0	948	271	0	1080	0	206	699	61	0	0	0
Future Volume (vph)	0	948	271	0	1080	0	206	699	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97						0.99				
Frt		0.967						0.991				
Flt Protected								0.989				
Satd. Flow (prot)	0	2798	0	0	4272	0	0	3051	0	0	0	0
Flt Permitted								0.989				
Satd. Flow (perm)	0	2798	0	0	4272	0	0	3041	0	0	0	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			190			109			111	
Travel Time (s)		8.6			4.3			2.5			2.5	
Confl. Peds. (#/hr)	180		193	193		180	20		64			
Confl. Bikes (#/hr)			9			6			2			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Adj. Flow (vph)	0	1009	288	0	1149	0	219	744	65	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1297	0	0	1149	0	0	1028	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.26	1.26	1.26	1.23	1.23	1.23	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		15 6 1			15 6 1 2			3 4				
Permitted Phases							3 4					
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		61.0			66.0			40.0				
Actuated g/C Ratio		0.51			0.55			0.33				
v/c Ratio		0.91			0.49			1.01				

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Grade (%)									
Lane Util. Factor									
Ped Bike Factor									
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Confl. Bikes (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Turn Type									
Protected Phases	1	2	3	4	5	6	11	14	15
Permitted Phases									
Minimum Split (s)	12.0	5.0	23.0	5.0	4.0	18.0	40.0	10.0	9.0
Total Split (s)	27.0	5.0	47.0	5.0	12.0	19.0	79.0	10.0	17.0
Total Split (%)	23%	4%	39%	4%	10%	16%	66%	8%	14%
Maximum Green (s)	20.0	1.0	38.0	1.0	9.0	13.0	70.0	5.0	13.0
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0	5.0	4.0	5.0	4.0
All-Red Time (s)	3.0	1.0	5.0	1.0	0.0	1.0	5.0	0.0	0.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag	Lead	Lag		Lead	Lag			Lead	Lag
Lead-Lag Optimize?									
Act Effect Green (s)									
Actuated g/C Ratio									
v/c Ratio									

Lanes, Volumes, Timings
 192: Tenley Cir & WISCONSIN AVE

08/31/2020

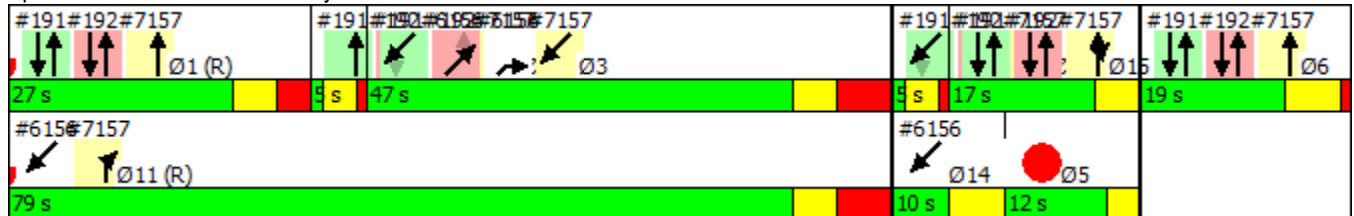


Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Control Delay		34.8			8.6			48.4				
Queue Delay		8.7			0.3			31.6				
Total Delay		43.5			9.0			80.0				
LOS		D			A			F				
Approach Delay		43.5			9.0			80.0				
Approach LOS		D			A			F				

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	99 (83%), Referenced to phase 1:NBSB and 11:; Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	42.9
Intersection LOS:	D
Intersection Capacity Utilization	135.3%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 192: Tenley Cir & WISCONSIN AVE



Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø11	Ø14	Ø15
Control Delay									
Queue Delay									
Total Delay									
LOS									
Approach Delay									
Approach LOS									
Intersection Summary									

Lanes, Volumes, Timings
401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Lane Configurations											
Traffic Volume (vph)	98	1207	0	1109	0	0					
Future Volume (vph)	98	1207	0	1109	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	11	11	10	10	12	12					
Lane Util. Factor	1.00	0.88	1.00	0.88	1.00	1.00					
Frt		0.850		0.850							
Flt Protected	0.950										
Satd. Flow (prot)	1540	2424	0	2341	0	0					
Flt Permitted	0.950										
Satd. Flow (perm)	1540	2424	0	2341	0	0					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		30		25						
Link Distance (ft)	193		471		250						
Travel Time (s)	5.3		10.7		6.8						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	109	1341	0	1232	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	109	1341	0	1232	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	11		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.19	1.19	1.25	1.25	1.14	1.14					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom		Prot							
Protected Phases	12	4 5		4			2	5	6	8	14
Permitted Phases											
Minimum Split (s)	16.0			29.0			17.0	10.0	11.0	20.0	13.0
Total Split (s)	55.0			65.0			55.0	44.0	11.0	65.0	65.0
Total Split (%)	45.8%			54.2%			46%	37%	9%	54%	54%
Maximum Green (s)	49.0			55.0			49.0	39.0	7.0	55.0	59.0
Yellow Time (s)	4.0			4.0			4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0			6.0			2.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)	-2.0			-2.0							
Total Lost Time (s)	4.0			8.0							
Lead/Lag								Lead	Lag		
Lead-Lag Optimize?											
Walk Time (s)				7.0			7.0			4.0	
Flash Dont Walk (s)				12.0			4.0			6.0	
Pedestrian Calls (#/hr)				0			0			0	
Act Effct Green (s)	51.0	101.0		57.0							
Actuated g/C Ratio	0.42	0.84		0.48							
v/c Ratio	0.17	0.66		1.11							
Control Delay	30.9	2.8		90.0							
Queue Delay	13.7	3.1		0.1							

Lanes, Volumes, Timings
 401: Ward Cir NW & Massachusetts Ave NW

08/31/2020



Lane Group	WBL	WBR	SEL	SER	NEL	NER	Ø2	Ø5	Ø6	Ø8	Ø14
Total Delay	44.6	5.9		90.1							
LOS	D	A		F							
Approach Delay	8.8		90.1								
Approach LOS	A		F								

Intersection Summary

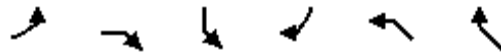
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	46.1
Intersection LOS:	D
Intersection Capacity Utilization	53.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 401: Ward Cir NW & Massachusetts Ave NW

#403#404 Ø2 (R) 55 s	#401 Ø4 65 s
#401#402 Ø5 44 s	#402 Ø8 65 s
#401#402 Ø12 55 s	#403#404 Ø14 65 s

Lanes, Volumes, Timings
402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Lane Configurations											
Traffic Volume (vph)	131	955	0	0	0	1266					
Future Volume (vph)	131	955	0	0	0	1266					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	10	10	9	9	10	10					
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	0.88					
Frt		0.850				0.850					
Flt Protected	0.950										
Satd. Flow (prot)	1486	2341	0	0	0	2341					
Flt Permitted	0.950										
Satd. Flow (perm)	1486	2341	0	0	0	2341					
Right Turn on Red	No	No		No		No					
Satd. Flow (RTOR)											
Link Speed (mph)	25		25		25						
Link Distance (ft)	219		260		345						
Travel Time (s)	6.0		7.1		9.4						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90					
Adj. Flow (vph)	146	1061	0	0	0	1407					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	146	1061	0	0	0	1407					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Right					
Median Width(ft)	10		0		0						
Link Offset(ft)	0		0		0						
Crosswalk Width(ft)	16		16		16						
Two way Left Turn Lane											
Headway Factor	1.25	1.25	1.30	1.30	1.25	1.25					
Turning Speed (mph)	15	9	15	9	15	9					
Turn Type	Prot	custom				Prot					
Protected Phases	12	8 5				8	2	4	5	6	14
Permitted Phases											
Minimum Split (s)	16.0					20.0	17.0	29.0	10.0	11.0	13.0
Total Split (s)	55.0					65.0	55.0	65.0	44.0	11.0	65.0
Total Split (%)	45.8%					54.2%	46%	54%	37%	9%	54%
Maximum Green (s)	49.0					55.0	49.0	55.0	39.0	7.0	59.0
Yellow Time (s)	4.0					4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0					6.0	2.0	6.0	1.0	0.0	2.0
Lost Time Adjust (s)	-2.0					-2.0					
Total Lost Time (s)	4.0					8.0					
Lead/Lag									Lead	Lag	
Lead-Lag Optimize?											
Walk Time (s)						4.0	7.0	7.0			
Flash Dont Walk (s)						6.0	4.0	12.0			
Pedestrian Calls (#/hr)						0	0	0			
Act Effct Green (s)	51.0	101.0				57.0					
Actuated g/C Ratio	0.42	0.84				0.48					
v/c Ratio	0.23	0.54				1.27					
Control Delay	30.5	1.8				154.8					
Queue Delay	13.8	0.8				0.0					

Lanes, Volumes, Timings
 402: Massachusetts Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR	Ø2	Ø4	Ø5	Ø6	Ø14
Total Delay	44.3	2.6									
LOS	D	A									
Approach Delay	7.6				154.8						
Approach LOS	A				F						

Intersection Summary

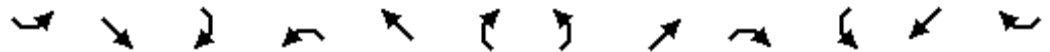
Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	86.8
Intersection LOS:	F
Intersection Capacity Utilization	55.9%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 402: Massachusetts Ave NW & Ward Cir NW

#403#404 55 s	#401 65 s
#401#402 44 s	#402 65 s
#401#402 55 s	#403#404 65 s

Lanes, Volumes, Timings
403: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑↑	↑					↑↑			↑↑	
Traffic Volume (vph)	65	889	254	0	0	0	0	970	197	0	1011	0
Future Volume (vph)	65	889	254	0	0	0	0	970	197	0	1011	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	12	12	12	9	9	9	10	10	10
Grade (%)		1%			0%			-1%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.92					1.00				
Frt			0.850					0.975				
Flt Protected		0.997										
Satd. Flow (prot)	0	4086	1276	0	0	0	0	2803	0	0	2944	0
Flt Permitted		0.997										
Satd. Flow (perm)	0	4086	1172	0	0	0	0	2803	0	0	2944	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		250			219			372			300	
Travel Time (s)		6.8			6.0			8.5			8.2	
Confl. Peds. (#/hr)			114									
Confl. Bikes (#/hr)			10						1			3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	69	946	270	0	0	0	0	1032	210	0	1076	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1015	270	0	0	0	0	1242	0	0	1076	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.31	1.31	1.31	1.14	1.14	1.14	1.30	1.30	1.30	1.25	1.25	1.25
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA	Perm					NA			NA	
Protected Phases	14	14						2			2	
Permitted Phases			14									
Minimum Split (s)	13.0	13.0	13.0					17.0			17.0	
Total Split (s)	65.0	65.0	65.0					55.0			55.0	
Total Split (%)	54.2%	54.2%	54.2%					45.8%			45.8%	
Maximum Green (s)	59.0	59.0	59.0					49.0			49.0	
Yellow Time (s)	4.0	4.0	4.0					4.0			4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0			2.0	
Lost Time Adjust (s)		-2.0	-2.0					-2.0			-2.0	
Total Lost Time (s)		4.0	4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	65.0	44.0	11.0	65.0	55.0
Total Split (%)	54%	37%	9%	54%	46%
Maximum Green (s)	55.0	39.0	7.0	55.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?					

Lanes, Volumes, Timings
 403: Nebraska Ave NW & Ward Cir NW

08/31/2020

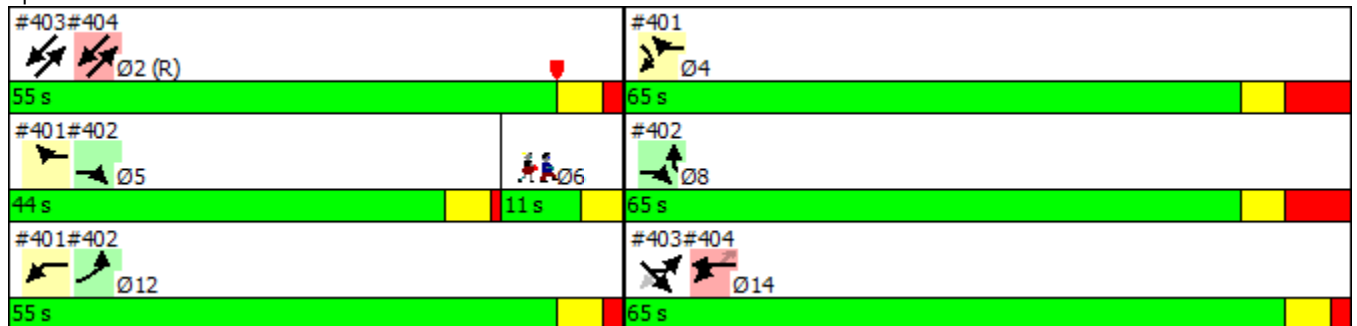


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effect Green (s)		61.0	61.0					51.0			51.0	
Actuated g/C Ratio		0.51	0.51					0.42			0.42	
v/c Ratio		0.49	0.45					1.04			0.86	
Control Delay		5.9	6.2					78.0			19.1	
Queue Delay		2.0	3.8					14.0			14.4	
Total Delay		7.9	9.9					92.0			33.5	
LOS		A	A					F			C	
Approach Delay		8.4						92.0			33.5	
Approach LOS		A						F			C	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	44.7
Intersection LOS:	D
Intersection Capacity Utilization:	68.0%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 403: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑	↑		↑↑			↑↑	
Traffic Volume (vph)	0	0	0	188	1149	64	0	1057	0	0	804	173
Future Volume (vph)	0	0	0	188	1149	64	0	1057	0	0	804	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	9	9	10	10	10	10	10	10
Grade (%)		0%			2%			0%				-1%
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor						0.99					0.94	
Frt						0.850					0.973	
Flt Protected					0.993							
Satd. Flow (prot)	0	0	0	0	4089	1282	0	2944	0	0	2690	0
Flt Permitted					0.993							
Satd. Flow (perm)	0	0	0	0	4089	1266	0	2944	0	0	2690	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25				30
Link Distance (ft)		193			260			300				737
Travel Time (s)		5.3			7.1			8.2				16.8
Confl. Peds. (#/hr)							123					123
Confl. Bikes (#/hr)							2		1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	9	9
Adj. Flow (vph)	0	0	0	198	1209	67	0	1113	0	0	846	182
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1407	67	0	1113	0	0	1028	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.32	1.32	1.32	1.25	1.25	1.25	1.24	1.27	1.24
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Split	NA	Perm		NA			NA	
Protected Phases				14	14			2			2	
Permitted Phases						14						
Minimum Split (s)				13.0	13.0	13.0		17.0			17.0	
Total Split (s)				65.0	65.0	65.0		55.0			55.0	
Total Split (%)				54.2%	54.2%	54.2%		45.8%			45.8%	
Maximum Green (s)				59.0	59.0	59.0		49.0			49.0	
Yellow Time (s)				4.0	4.0	4.0		4.0			4.0	
All-Red Time (s)				2.0	2.0	2.0		2.0			2.0	
Lost Time Adjust (s)					-2.0	-2.0		-2.0			-2.0	
Total Lost Time (s)					4.0	4.0		4.0			4.0	
Lead/Lag												

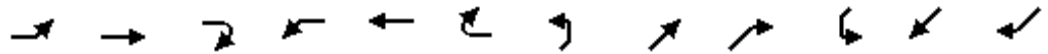
Lanes, Volumes, Timings
 404: Nebraska Ave NW & Ward Cir NW

08/31/2020

Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Grade (%)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Bus Blockages (#/hr)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	4	5	6	8	12
Permitted Phases					
Minimum Split (s)	29.0	10.0	11.0	20.0	16.0
Total Split (s)	65.0	44.0	11.0	65.0	55.0
Total Split (%)	54%	37%	9%	54%	46%
Maximum Green (s)	55.0	39.0	7.0	55.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	6.0	1.0	0.0	6.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		

Lanes, Volumes, Timings
404: Nebraska Ave NW & Ward Cir NW

08/31/2020

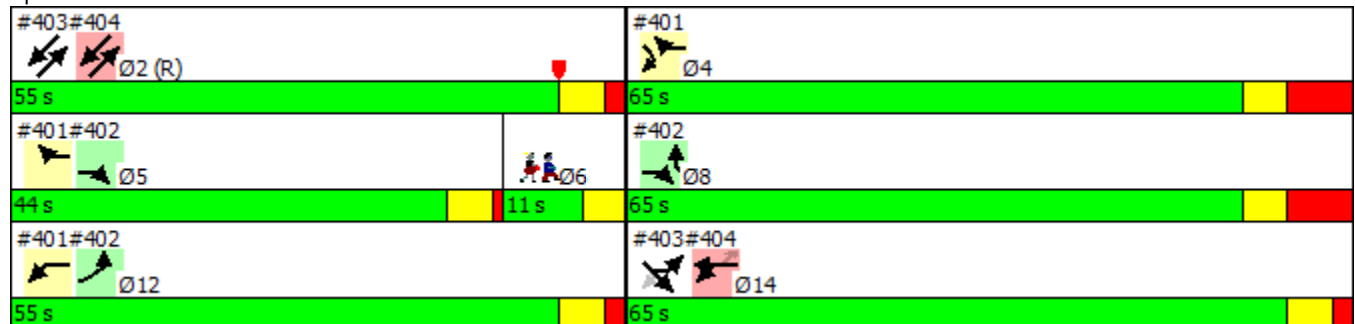


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Walk Time (s)								7.0			7.0	
Flash Dont Walk (s)								4.0			4.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)					61.0	61.0		51.0			51.0	
Actuated g/C Ratio					0.51	0.51		0.42			0.42	
v/c Ratio					0.68	0.10		0.89			0.90	
Control Delay					7.0	6.5		14.5			38.5	
Queue Delay					17.7	0.0		15.6			4.6	
Total Delay					24.8	6.5		30.1			43.1	
LOS					C	A		C			D	
Approach Delay					23.9			30.1			43.1	
Approach LOS					C			C			D	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	11 (9%), Referenced to phase 2:NESW, Start of Yellow
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	31.3
Intersection LOS:	C
Intersection Capacity Utilization:	68.0%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 404: Nebraska Ave NW & Ward Cir NW



Lane Group	Ø4	Ø5	Ø6	Ø8	Ø12
Lead-Lag Optimize?					
Walk Time (s)	7.0			4.0	
Flash Dont Walk (s)	12.0			6.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Intersection Summary					

Appendix I Crash Rate Tables

List of Intersections by Total Number of Crashes between 2016-2019

# *	Intersection	Crashes w/ Ped/Bike	Crashes w/ Serious Injuries	Total # of Crashes	Daily Intersection Traffic Volume	Crash Rate**
34	Nebraska Ave at Van Ness	3	1	11	21,620	0.35
21	Wisconsin Ave at Warren St	1	0	10	25,100	0.27
22	Yuma St at 42nd St	2	0	2	5,760	0.24
41	Nebraska Ave at Foxhall Rd	0	0	7	21,270	0.23
19	Wisconsin Ave at Nebraska Ave (Tenley Circle)	2	0	21	68,390	0.21
29	New Mexico Ave at Lowell St	0	0	3	10,200	0.20
16	Massachusetts Ave at 48th St	2	1	6	21,740	0.19
14	Massachusetts Ave at 47th St	0	0	4	18,010	0.15
4	Massachusetts Ave at Nebraska Ave (Ward Circle)	1	0	24	110,190	0.15
1	Massachusetts Ave at Katzen Arts Center/Campus Drive	1	1	5	24,790	0.14
42	Loughboro Rd at Chain Bridge Rd	0	0	3	18,750	0.11
5	Nebraska Avw at New Mexico Avw/ SIS Garage	0	0	4	25,010	0.11
9	Massachusetts Ave at NAC Drive	0	0	3	21,220	0.10
11	Nebraska Ave at Rockwood Pkway/Newark St	0	0	3	23,310	0.09
20	Nebraska Ave at Warren St	0	0	2	15,700	0.09
7	New Mexico at East Campus Drive	0	0	1	7,930	0.09
40	Albemarle St at 42nd	0	0	1	7,950	0.09
31	NM at Driveway	1	0	1	10,140	0.07
18	Wisconsin at Van Ness	0	0	3	30,480	0.07
8	Massachusetts at Westover Pl	0	0	2	21,250	0.06
28	New Mexico Ave at Macomb St	4***	1	1	10,650	0.06
2	Massachusetts at 45th St	0	0	2	23,540	0.06

American University Comprehensive Transportation Review – Appendix I

American University

6	Nebraska at East Campus Drive	0	0	2	23,890	0.06
33	NM at Cathedral	0	0	1	14,140	0.05
23	Wisconsin at Albemarle	0	0	2	30,640	0.04
10	Nebraska at 45th St	0	0	1	19,170	0.04
15	Massachusetts at Van Ness	1	0	1	21,900	0.03
3	Massachusetts at 46th St. (Wesley Circle)	0	0	1	22,500	0.03
24	Nebraska at Foxhall Rd	0	0	1	26,340	0.03

* Intersections without crashes within 100 feet include Intersection numbers 12, 13, 17, 26, 27, 30, 32, 35, 36, 37, and 39.

** Crash rate is the number of crashes per one million vehicles that enter the intersection.

*** One accident at New Mexico and Macomb involved four pedestrians and one serious injury.