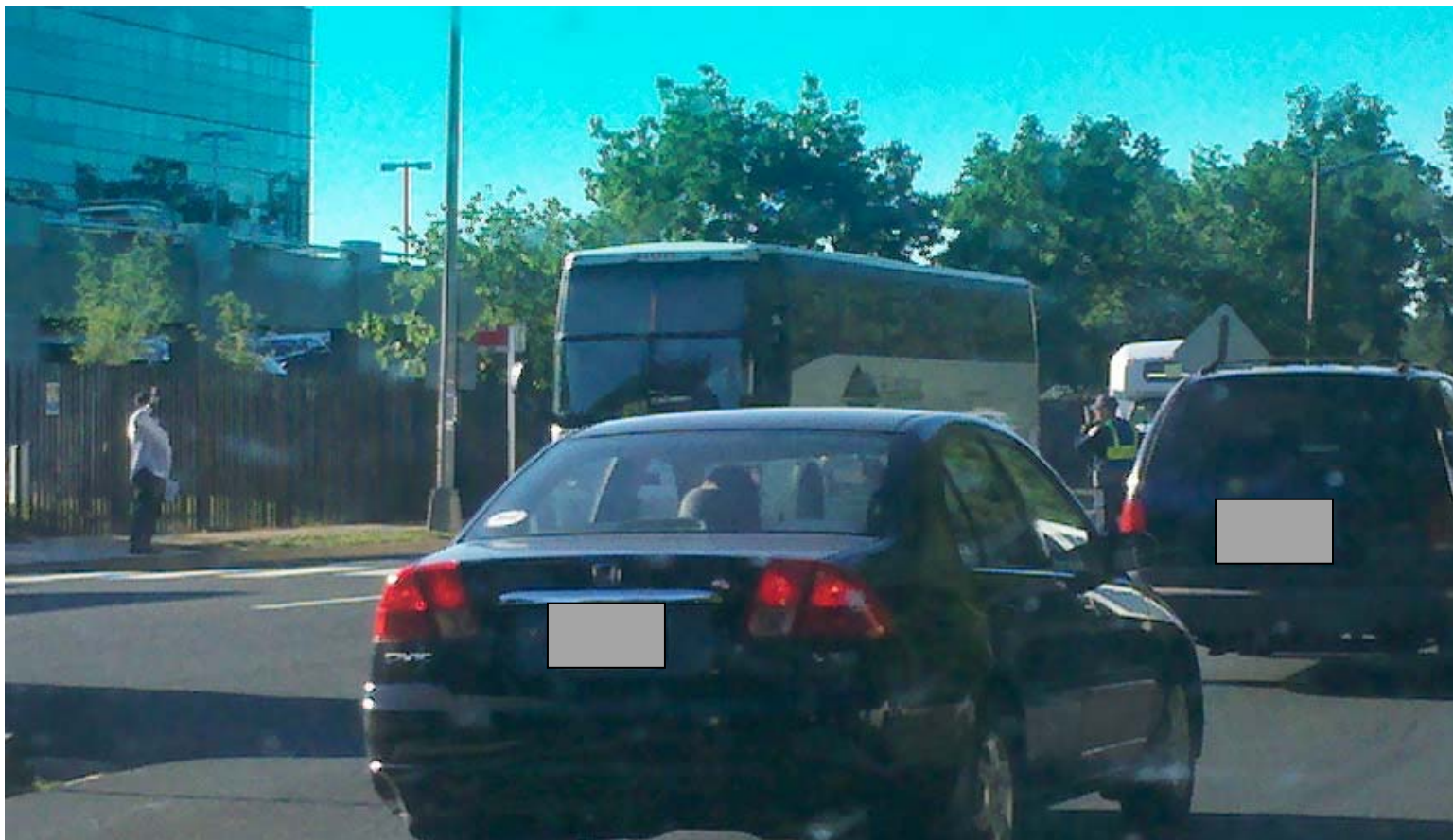


National Capital Region Transportation Planning Board



2012 Base Realignment and Closure / Federal Employment Consolidation Impact Analysis Travel Monitoring Report Existing Conditions

Final – October 2012

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EXECUTIVE SUMMARY

This study reports vehicle and person travel data for 15 employment sites around the Washington region that were impacted by the 2005 Base Realignment and Closure (BRAC) action or other recent consolidations of large Federal sites. Counts of vehicle and people entering the sites were collected between 5:00am and 10:00am for single day at each site during spring 2012. The deadline for completing the BRAC action was September 2011; however, some sites were granted extension. The relocations for the monitored sites were complete at the time of data collection except where otherwise noted. Nearly 95,000 vehicles carrying over 111,000 people entered the monitored sites during the morning analysis period. The average automobile occupancy for the sites during the morning analysis period was 1.18 persons per vehicle. During the different peak hours identified for each site, a total of over 37,000 people entered and the average automobile occupancy was 1.21. 76% of the people entering the sites during the morning analysis period drove alone, 16% used either a carpool or vanpool, and the remainder took transit, walked or biked, or arrived in a truck.

Data on vehicle and person volumes as well as mode split are presented for each of the 15 sites, as well as discussion of their personnel levels prior to and following the BRAC action, and both completed and planned transportation improvements for the site. All of the sites have a master plan that includes a Transportation Management Plan (TMP) which seeks to improve access to the complex through a series of short-term and long-term strategies. Many of the sites are currently updating their plans or beginning their implementation phase.

These data provide a useful snapshot of conditions just after the completion of the majority of the BRAC moves and serves as a benchmark for future monitoring of the same sites. It is anticipated that most of the sites will be recounted in approximately five years to determine the impacts of the TMP implementation and potential shifts in residential location in response to the BRAC employment shifts. The data will also be used to inform the regional travel demand forecasting process.

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INTRODUCTION

The process by which the United States' defense base infrastructure is periodically evaluated for operational efficiency is informally known as Base Realignment and Closure, or BRAC. Formally, the Defense Base Closure and Realignment Act of 1990, as amended¹ provided for the creation of an independent commission² appointed by the President of the United States that reviews the recommended list of base closures and realignments prepared by the Secretary of Defense and evaluates each recommendation against eight selection criteria contained under the law.³ The BRAC Commission can add military installations to the initial list through a prescribed process. Once the Commission's recommendations are finalized, they are forwarded to the President. If the President approves the Commission's recommendations, they are forwarded to Congress, and unless Congress disapproves, the Commission's recommendations are finalized and the Department of Defense (DoD) begins the closures and realignments, to be completed within a specified period of time.⁴ There have been five (5) commissions established and subsequent rounds of BRAC actions: 1988, 1991, 1993, 1995, and 2005. The closures and realignments recommended by the 2005 BRAC were to be completed by September 2011.

The 2005 BRAC actions created a significant shift of jobs and households in Maryland, Virginia, and the District of Columbia. Statewide, Maryland estimated an increase of 30,000 DoD jobs, both military and civilian, and another 30,000 indirect and induced jobs and a gain of approximately 28,000 households as a result of the 2005 BRAC actions.⁵ While two of the major installations gaining jobs, Fort Meade and the Aberdeen Proving Ground, are in the Baltimore region, several facilities within the TPB region in Maryland have also gained jobs under BRAC 2005. In addition, many locations in the TPB regions in Northern Virginia and the District have added jobs post-BRAC. Finally, there are major consolidations of Federal offices that, although not part of the BRAC action, are regionally significant enough to be included in any monitoring of such employment shifts.

At the metropolitan level, the TPB region has seen a net increase of jobs as a result of the BRAC 2005 actions; however, even where total jobs have increased regionally, individual TPB jurisdictions have seen varying levels of increases and decreases of DoD-related jobs under BRAC. For example, some of the added jobs at the Walter Reed National Military Medical Center (WRNMMC) in Bethesda have been realigned from the now-closed Walter Reed Army Medical Center in Northwest Washington. The consolidation of workers from the National Geospatial Agency (NGA) at a new headquarters building at Fort Belvoir North shifted many of those jobs from the former NGA campus on Sangamore Rd in Bethesda. Approximately 22,000 jobs were shifted out of leased office space in Alexandria, Arlington, and Bailey's Crossroads in Fairfax County to military installations both within and outside the region, including Fort Belvoir

¹ Public Law 101-510, which was amended by The Ronald Reagan National Defense Authorization Act for Fiscal Year 2005, Public Law 108-375. See <http://www.brac.gov/docs/BRAC05Legislation.pdf> and http://www.brac.gov/docs/criteria_final_jan4_05.pdf

² Both the commission itself as well as the process are colloquially referred to as BRAC.

³ *Ibid.*

⁴ The law contains provisions in the event of disapproval by the President or Congress. *Ibid.*

⁵ See <http://www.brac.maryland.gov/what.asp>

and Marine Corps Base Quantico (MCB Quantico).⁶ Finally, BRAC and other major Federal consolidation have moved or will move jobs into new construction or redeveloped space, such as the Mark Center in Alexandria, Defense Health Headquarters (DHHQ) near Merrifield, the FDA research campus in White Oak, and the St. Elizabeths⁷ campus in Anacostia.

To fully “trace” these workers, families and related travel across and in and out of the region is a nearly impossible task. However, monitoring the bases themselves in conjunction with the rest of the regular regional travel monitoring program and the cooperative forecasting process can provide information on the regional transportation impact of the BRAC action. This report provides initial data on travel to fifteen (15) regional BRAC and Federal employment consolidation sites, shown in Figure 1. While it is not true baseline or “before” data, it provides a useful snapshot of conditions just after the completion of the majority of the BRAC moves and serves as a benchmark for future monitoring of the same sites.

TRAVEL MONITORING PROCEDURES

At each location, field staff counted all vehicles and persons entering the site through the monitored entry point / gate between 5:00am and 10:00am, for a single Tuesday, Wednesday, or Thursday. Data collection took place during spring 2012 and included cyclists, pedestrians and transit patrons (directly observed from nearby stops or stations, obtained from area transit operators and converted to the morning analysis period, or derived from non-motorized travel when the closest transit stop was a significant distance from the base gate). The resulting information has been aggregated to the base / installation / site level; due to security concerns raised by base personnel at nearly all monitored locations, disaggregate data at the individual entry gate level is not contained within this report. Readers interested in more detailed data may request it from staff, pending approval from individual base personnel. In addition, certain access points at particular installations could not directly monitored due to specific security restrictions; in those cases base personnel provided staff with approved count information from which morning analysis period conditions could be derived.

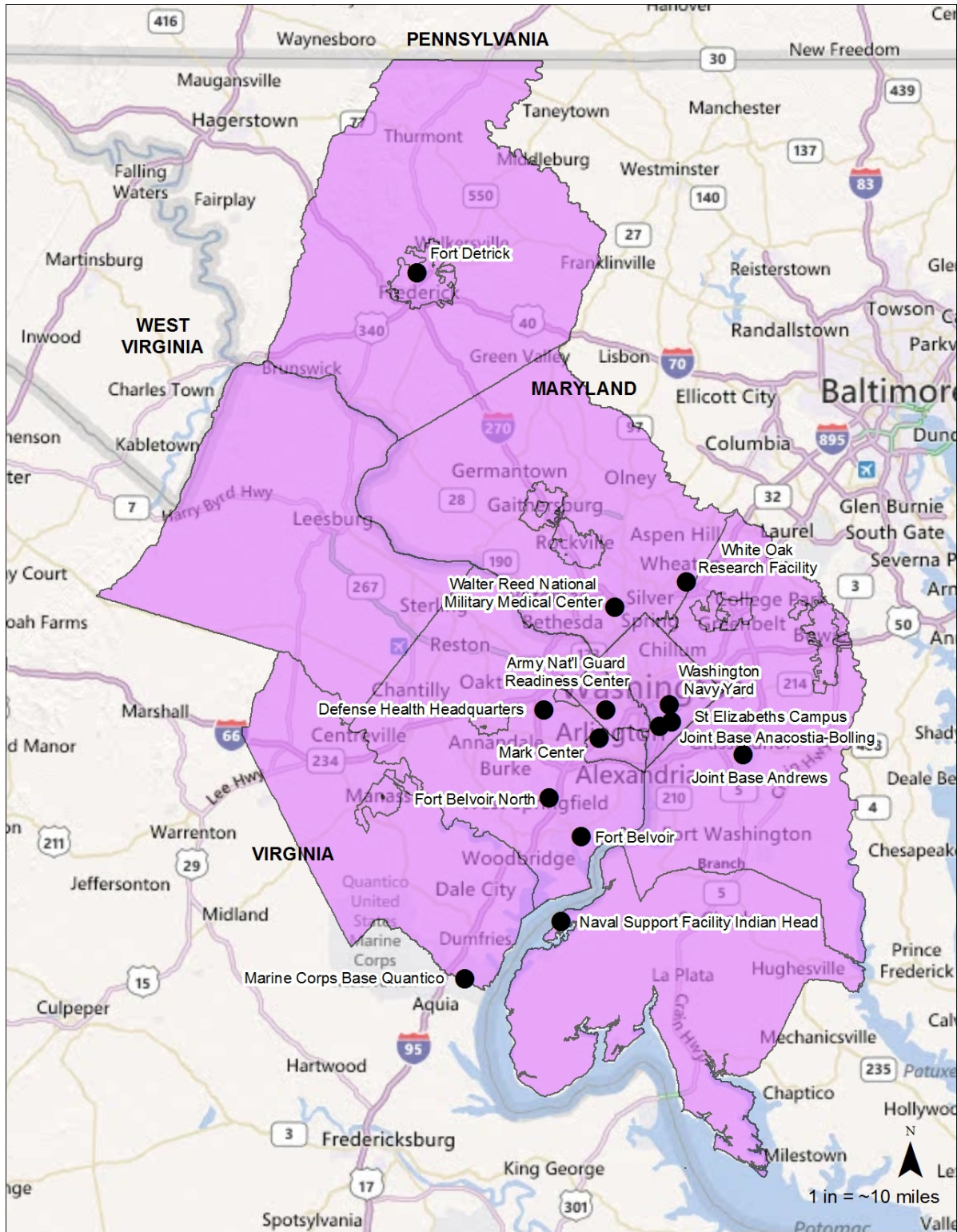
Security personnel at Fort Belvoir North granted monitoring access only with the condition that data for the installation be combined with that of main post Fort Belvoir; as such those data are merged in some parts of the report. Other information in the report specific to Fort Belvoir North was obtained from publicly-available sources. Finally, it must be noted that some base personnel may be missed during the five-hour morning count window. This includes shift workers as well as other people arriving after 10am due to outside meetings or personal business. Telecommuters and those with a regular day off / flex schedule are also not accounted for in these data.

Maps showing two-way average annual daily traffic (AADT) on the roadways surrounding each installation are also included to provide information on background traffic conditions. These data come from TPB’s Regional Transportation Data Clearinghouse and are from the most recent year of completed counts for each state department of transportation.

⁶ With the departure of nearly 17,000 jobs, mostly from Crystal City, Arlington received the greatest BRAC impact of any jurisdiction nationally. See <http://www.bracarlingtonva.us/default/index.cfm/impact/history/> and <http://www.novaregion.org/index.aspx?NID=1146>

⁷ The name ‘St. Elizabeths’ dates from the Colonial era and does not include an apostrophe.

Figure 1: BRAC / Federal Consolidation Monitoring Locations



TRAVEL MONITORING SITES AND RESULTS

Regional

Table 1 below shows the number of vehicles and persons entering each of the bases during the five-hour morning analysis period and the identified peak hour of the analysis period. Average auto occupancy for the five-hour analysis period and the peak hour is also noted for each site. The high auto occupancy for the St. Elizabeths Campus is likely due to most of the trips being for construction activities and same-shift workers carpooling to the site.

Table 1: Summary Results – All Monitoring Sites (Region)

Location	5 hour total			Peak Hour Persons		
	Vehicles	Persons	Avg. Auto Occupancy	Peak Hour Persons	Avg. Auto Occupancy	Peak Hour
Mark Center	4,284	5,582	1.14	1,504	1.13	8:00AM-9:00AM
MCB Quantico	15,525	16,927	1.1	7,076	1.08	6:45AM-7:45AM
Fort Belvoir (Main Post + Belvoir North)	26,084	28,403	1.1	8,929	1.15	6:45AM-7:45AM
ANG RC Arlington	1,107	2,082	1.16	398	1.22	6:45AM-7:45AM
TriCare / DHHQ	1,104	1,485	1.28	506	1.26	6:45AM-7:45AM
<i>Total Virginia</i>	<i>48,104</i>	<i>54,479</i>	<i>1.16</i>	<i>18,413</i>	<i>1.17</i>	
St Elizabeths Campus	715	1,064	1.6	589	1.88	5:15AM-6:15AM
Navy Yard	5,697	9,842	1.21	3,289	1.22	6:15AM-7:15AM
JBAB	9,007	9,644	1.09	2,943	1.07	6:45AM-7:45AM
<i>Total DC</i>	<i>15,419</i>	<i>20,550</i>	<i>1.3</i>	<i>6,821</i>	<i>1.39</i>	
JB Andrews	8,493	9,025	1.09	3,301	1.07	6:45AM-7:45AM
Walter Reed	8,566	11,825	1.2	4,257	1.38	6:15AM-7:15AM
White Oak	5,426	6,494	1.11	1,924	1.07	8:15AM-9:15AM
Fort Detrick	6,347	7,120	1.13	2,110	1.09	7:15AM-8:15AM
NSF Indian Head	2,003	2,137	1.08	662	1.07	6:15AM-7:15AM
<i>Total Maryland</i>	<i>30,835</i>	<i>36,601</i>	<i>1.12</i>	<i>12,254</i>	<i>1.14</i>	
Total All Sites	94,358	111,630	1.18	37,488	1.21	

Figure 2 shows the proportion of drive alone person-trips compared with non drive-alone person trips for each of the individual sites and totals for the sites in the District, Maryland, Virginia, and the region. Figure 3 shows the mode split (based on person-trips rather than vehicle trips) for all the regional monitoring sites. Compared with the *overall* regional mode split, the monitoring sites have a higher proportion of drive alone person-trips, a lower proportion of transit trips, a lower proportion of non-motorized trips, and a slightly lower proportion of carpool / vanpool trips. It should be noted that data on some of the DoD-operated shuttles are still pending from base representatives, so the transit numbers may increase slightly. In general, most of the BRAC and consolidation locations are difficult to serve with transit, a point compounded by the regional shift in work locations due to the BRAC actions without a corresponding shift in locations of residence of those workers. Base Transportation Management Plans attempt to

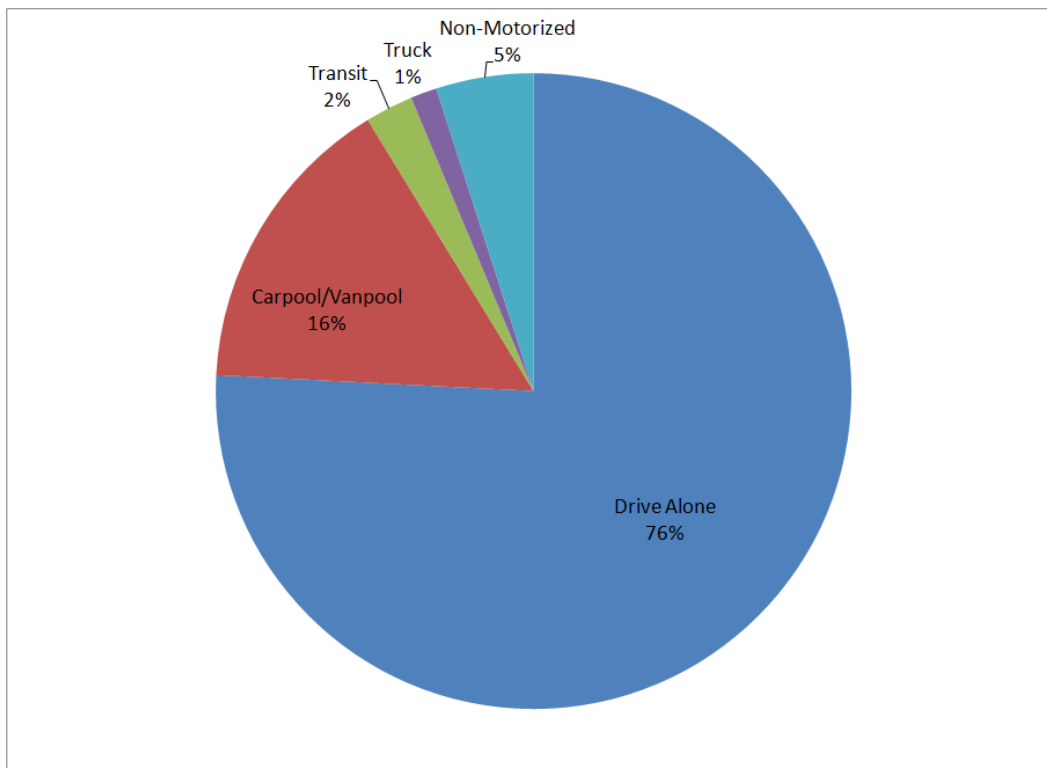
create modal shifts in the installation workforce by offering alternatives modes of transportation, restricting parking, etc. Since the BRAC moves are fairly recent (and some still ongoing), it may take years for the TMP strategies to have any effect; hence the desire to collect data at this early stage in the process.

The remainder of the report looks at each of the fifteen monitoring sites individually. For each location, basic information is presented regarding the location of the site, the agency tenants, and the approximate number of base personnel pre and post-BRAC. Information is also presented on highway and transit access to the site as well as available information on proposed transportation improvements and recent planning activities. Finally, the temporal distribution of vehicles and persons entering the site during the five-hour analysis period, as well as the mode split for the site, are shown.

Figure 2: Drive Alone and Non-Drive Alone Person Trips – All Individual Sites



Figure 3: Person Mode Split – All Monitoring Sites (Region)



District of Columbia

St. Elizabeths Campus

The St. Elizabeths campus in the Anacostia neighborhood of Southeast Washington is named for the former psychiatric hospital located on its grounds. The campus is bisected by Martin Luther King, Jr. Ave, SE and primary access points are currently from this roadway. The West Campus, bordered on the west by the Anacostia Freeway (I-295), is owned by the Federal government. Under the General Services Administration (GSA), planning and construction are proceeding for a consolidated headquarters for the U.S. Department of Homeland Security (DHS), including a separate headquarters facility for the U.S. Coast Guard.⁸ The Coast Guard facility is expected to be completed by the end of 2013. As part of the Coast Guard development a new west side access road intersecting with Firth Sterling Ave, SE just north of the site is being constructed along with a new access control point. Full build out and occupancy of the West Campus is currently forecast for the year 2019. The East Campus remains under District ownership and is currently the subject of an extensive master planning process and separate Environmental Assessment for transportation network improvements. The West Campus Coast Guard facility will move approximately 3,800 employees to the site; 14,000 additional employees are forecast for the full build out.

Bus service to the St. Elizabeths campus is provided by Metrobus routes operating along Martin Luther King, Jr. Ave, SE and connecting with the Anacostia Metrorail (Green Line) station northeast of the campus. District streetcar service is also planned in the vicinity of the Metrorail station. There are additional access points to the East Campus through the adjacent neighborhood from Alabama Ave, SE. Metrobus routes also operate along Alabama Ave, SE and connect with the Congress Heights Metrorail station on the Green Line.

Figure 5 shows the temporal distribution of vehicles and persons entering the St. Elizabeths Campus during the five-hour morning analysis period (5:00am to 10:00am), by 15-minute segment. The peak hour occurs from 5:15am to 6:15am and volumes are fairly low, which is expected since the only visitors to the site currently are construction and related workers. It is anticipated that volumes will increase consistently and the peak hour may shift to later in the morning as buildings are completed and occupied.

Figure 6 shows the mode split for persons entering the St. Elizabeths Campus. The largest proportion of person-trips used carpool or vanpool, followed by drive alone. This breakdown is also anticipated due to the construction work, which tends to operate in discrete time shifts, thus facilitating travel to the site in high-occupancy vehicles.

AADTs for roads near St. Elizabeths are shown in Figure 7. Volumes currently are heaviest along I-295 and Suitland Parkway, with only between 11,000 and 16,000 vehicles along Martin Luther King, Jr. Ave, SE. Those volumes are expected to significantly increase as facilities open for business in both campuses.

⁸ Although technically a branch of the armed forces, under the law that created DHS the Coast Guard now operates under DHS during peacetime; operation can be shifted back to DoD by congressional action (i.e., a declaration of war) or by direction from the President.

Figure 4: St. Elizabeths Campus Gate Location

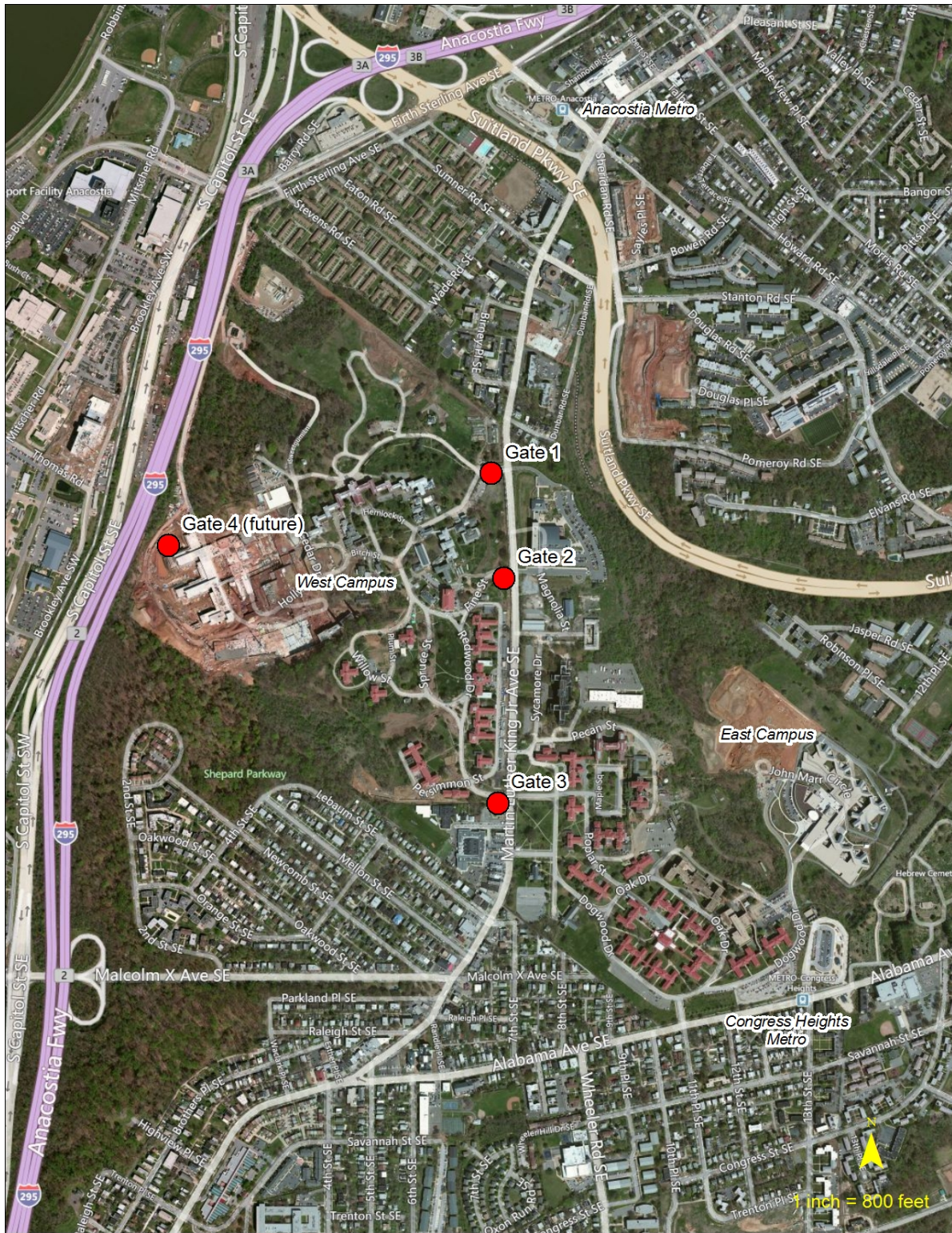


Figure 5: Distribution of Persons and Vehicles Entering St. Elizabeths Campus

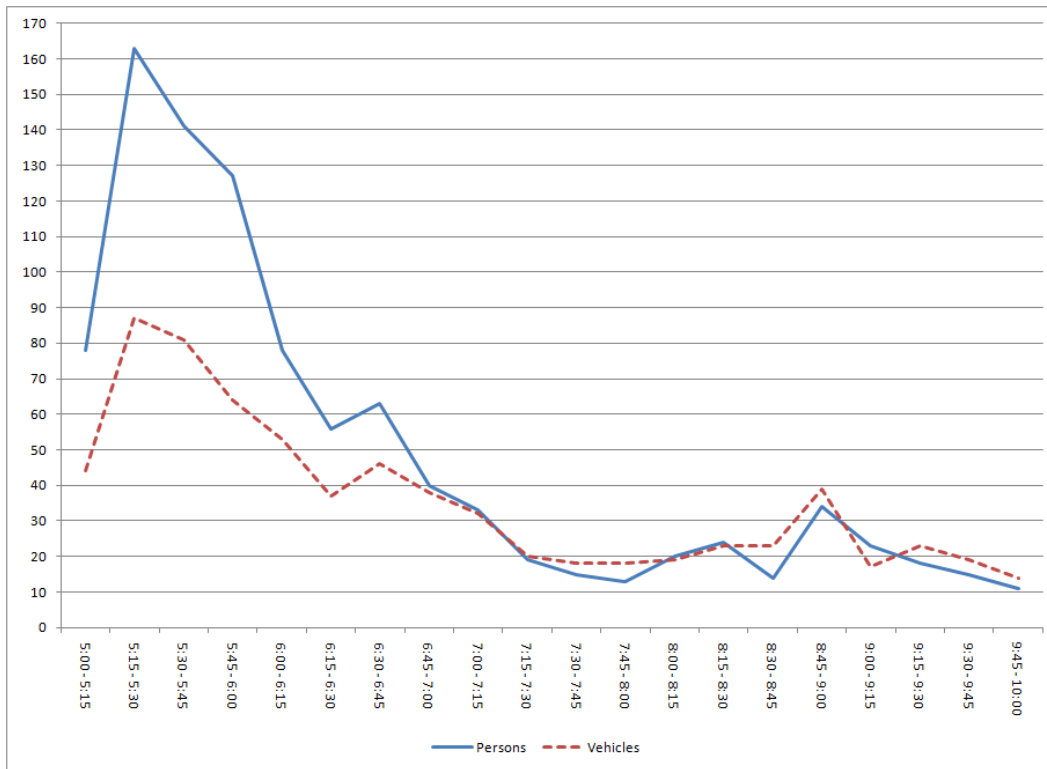


Figure 6: Person Mode Split – St. Elizabeths Campus

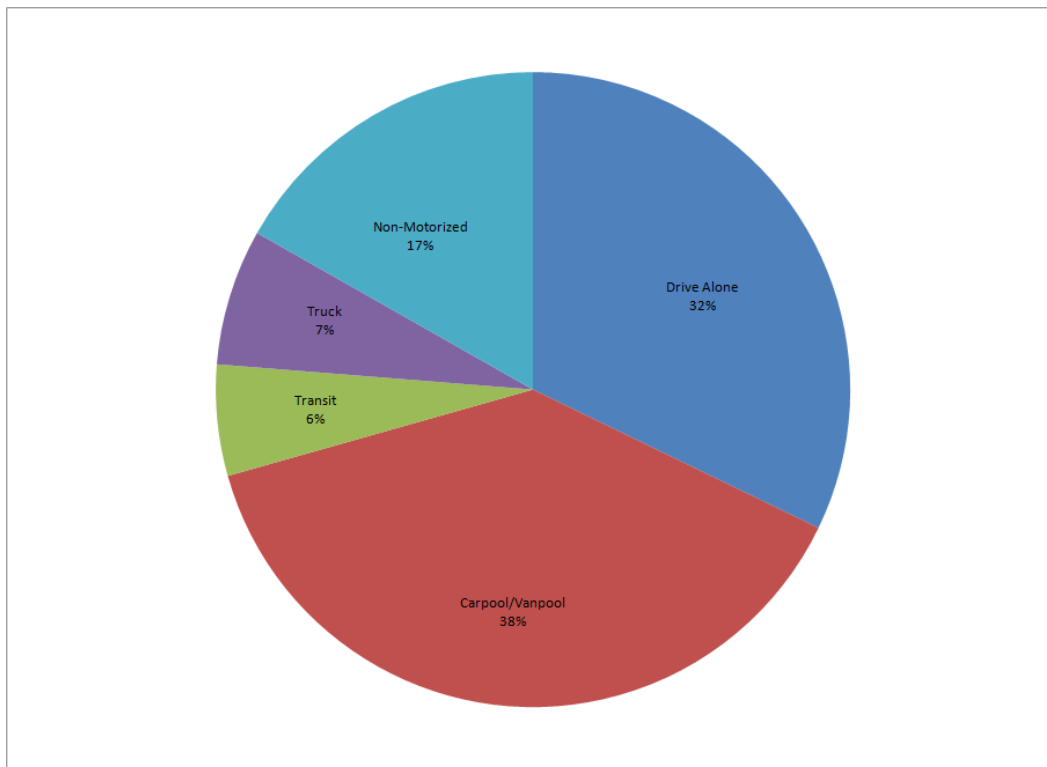
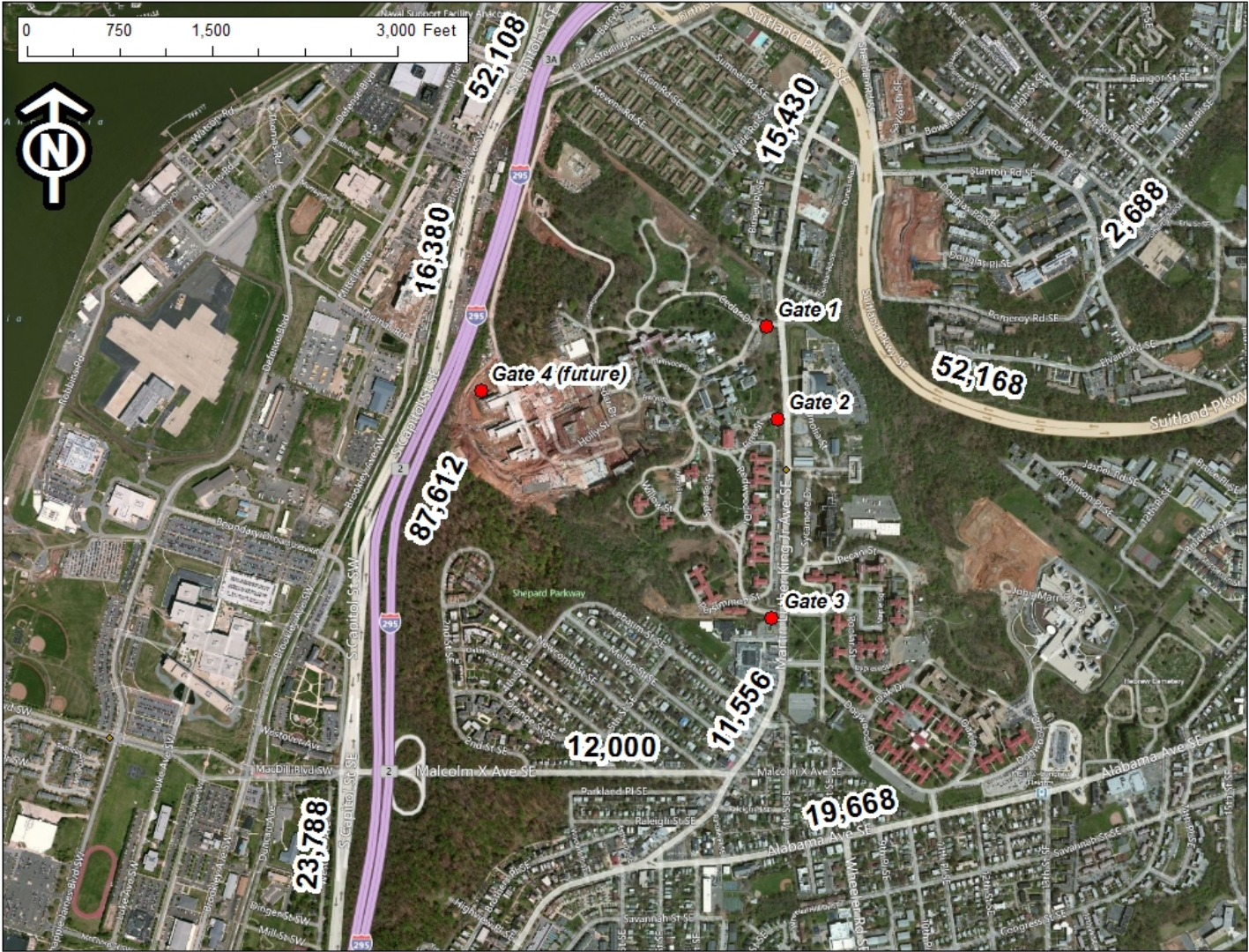


Figure 7: AADT for Roadways near St. Elizabeths Campus



Joint Base Anacostia-Bolling (JBAB)

Located on the other side of I-295 from the St. Elizabeths Campus, the creation of Joint Base Anacostia-Bolling was a BRAC 2005 realignment action that merged two previously separate but adjacent installations: Bolling Air Force Base and Naval Support Facility Anacostia. The base occupies most of the land between I-295 and the Potomac River south of the Frederick Douglass Memorial Bridge. Just to the south of the installation are the Naval Research Laboratory and the Blue Plains Wastewater Treatment Facility. Nearly 14,000 employees serving approximately 50 different Federal agencies currently work at JBAB. Roughly 1,000 of those workers are the result of BRAC relocations from Arlington County. A recently released draft ten-year master plan for the installation assumes an employment increase of 5,000 jobs.⁹ There are approximately 8,000 parking spaces at JBAB, and the draft master plan proposed removal of nearly 400 spaces. The resulting parking ratio and lack of transit access to the base were raised in the master plan (which includes a Transportation Management Plan [TMP]) review by the National Capital Planning Commission (NCPC).¹⁰ NCPC's *Comprehensive Plan for the National Capital Region* requires an employee parking ratio of 1:4. Under existing conditions the parking ratio at JBAB is 1:1.66, and under master plan build out it would shift to 1:2.42.¹¹

There are five gates at JBAB that are generally evenly distributed along the eastern perimeter of the base (see Figure 8). Arnold Gate is the most centrally located and has direct access from the I-295 interchange with Malcolm X Ave, SE. The Firth Sterling Gate is approximately ½ mile from the Anacostia Metrorail Station on the Green Line. Firth Sterling Gate and the Main (Arnold) Gate are served by transit via Metrobus routes A9; P17, 18 and 19, and W4, 13, and 14 and MTA Commuter Bus 907. Only routes A9, P17, P19, W13, and 907 provide peak period service to the base. JBAB is also served by two shuttles: one to the Pentagon and the other to Anacostia Metrorail station. The Pentagon shuttle offers seven trips per day while the Anacostia station shuttle provides 20-minute headway service during peak periods.¹² DDOT is planning a streetcar line in Anacostia with operations along South Capitol St to Firth Sterling Ave, Howard Rd, and Martin Luther King Jr. Avenue, passing by the Anacostia station and JBAB's Firth Sterling Gate. The North Gate was closed during our data collection. As noted in WMATA (2010):

The base's draft TMP recommends extending the Streetcar to a stop near the Defense Intelligence Analysis Center (DIAC) access road. A stop at this location would bring the streetcar beyond Firth Sterling Gate but not quite to the Main Gate. The stop would require a new pedestrian entrance control facility with secure biometrics at South Capitol Street. Even once the first phase of the streetcar is completed...the DoD shuttle to Anacostia station will still be necessary. The shuttle will be needed to provide direct service to on-base buildings, while the streetcar is only planned to serve the Naval Annex portion of the site. Even the proposed extension to serve the DIAC would not provide a

⁹ See

http://www.ncpc.gov/DocumentDepot/Actions_Recommendations/2011May/Joint_Base_Anacostia_Bolling_Draft_Master_Plan_Recommendation_MP55_May2011_.pdf

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Description of bus and shuttle service adapted from WMATA (2010)*

convenient trip for many personnel who work in buildings farther south. Additionally, current shuttle bus service frequency should be increased to every 10 minutes to provide an average wait of five minutes. If demand is sufficient, peak shuttle service could be split into two routes to provide a quicker trip to different portions of the installation. Off-peak shuttle service should be added, and could be provided on demand. It could service both the DIAC and JBAB. The shuttle vehicle would wait at Anacostia Station after the morning peak through early afternoon and then wait on base in the afternoon before and after the afternoon peak regular service.

The base TMP indicates that 75% of JBAB employees drive alone to their jobs and 78% of employees access the base using I-295 during peak periods.¹³ The TMP traffic analysis notes that the interchange near Arnold Gate operates at a Level of Service (LOS) E during the PM peak hour.¹⁴ The signalized intersection at South Capitol St and Firth Sterling Ave SE, immediately adjacent to the Firth Sterling Gate, operates at LOS D during the AM peak hour.¹⁵ NCPC's review recommended that JBAB improve its TMP to bring its parking ratio in line with the *Comprehensive Plan* and improve alternative transportation options and consider a joint TMP with the St. Elizabeths Campus. As part of the TMP improvements, JBAB is currently conducting an on-line employee transportation survey.

The temporal distribution of persons and vehicles entering JBAB during the five-hour morning analysis period is shown in Figure 9. Slightly fewer than 3,000 people enter JBAB during the peak hour of 6:45am to 7:45am. Average auto occupancy during the peak hour is 1.07 persons per vehicle. The mode split for the base during the morning analysis period is shown in Figure 10. Nearly 85% of the people arriving to the base drive alone. Considering the goals and objectives of the base TMP and the more stringent parking requirements mandated by NCPC, it is expected that the proportion of JBAB entries that drive alone will decrease in the future.

AADTs along roadways near JBAB are shown in Figure 11. The data confirm the heavy volumes along I-295 expected with the number of base employees using it for access.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*

Figure 8: Joint Base Anacostia-Bolling Gate Location

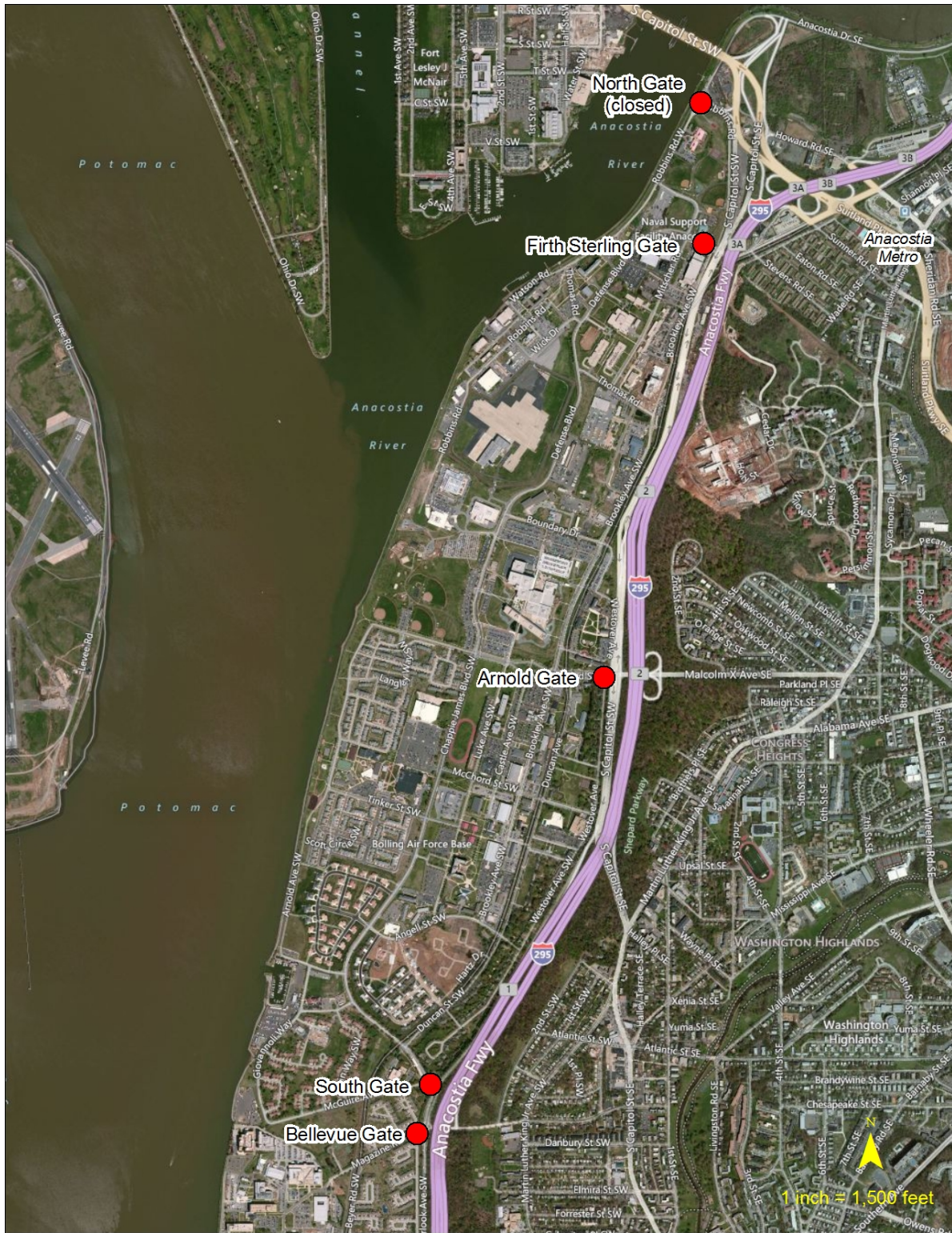


Figure 9: Time Distribution of Persons and Vehicles Entering JBAB

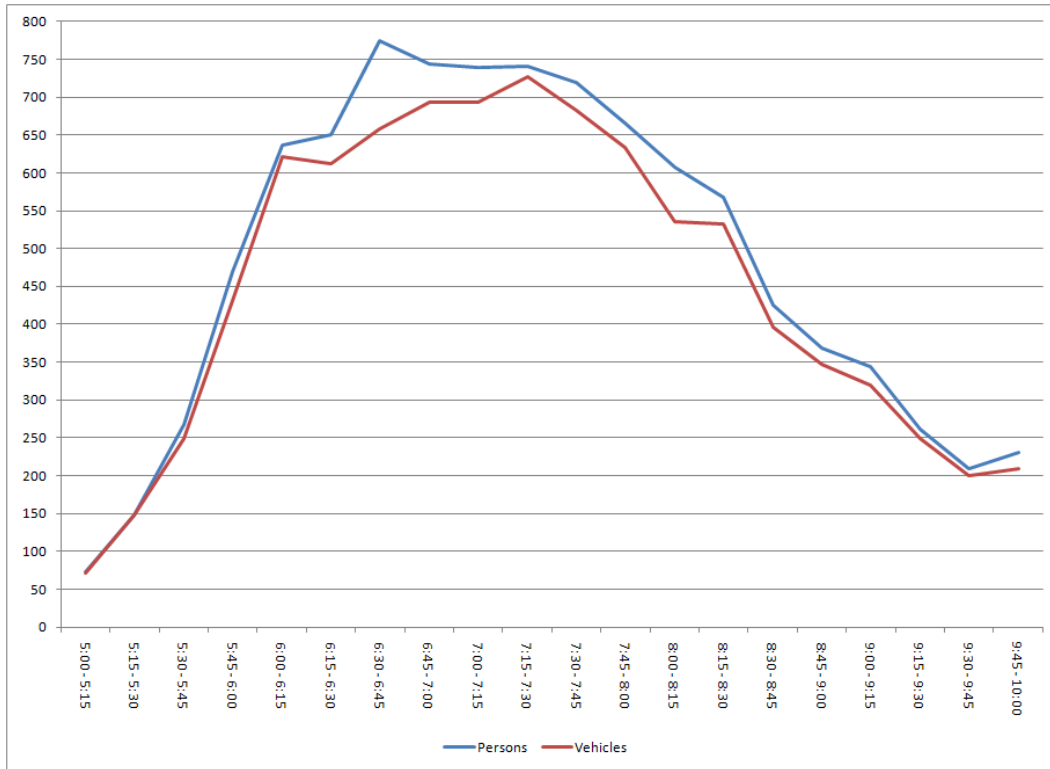


Figure 10: Person Mode Split - JBAB

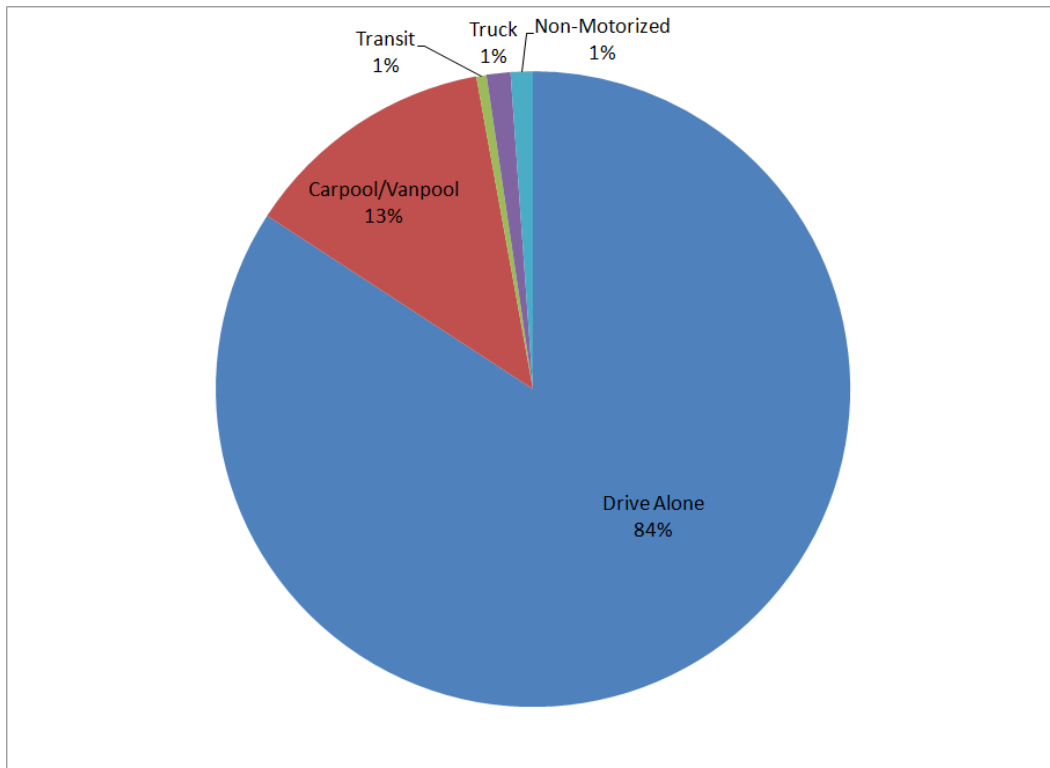
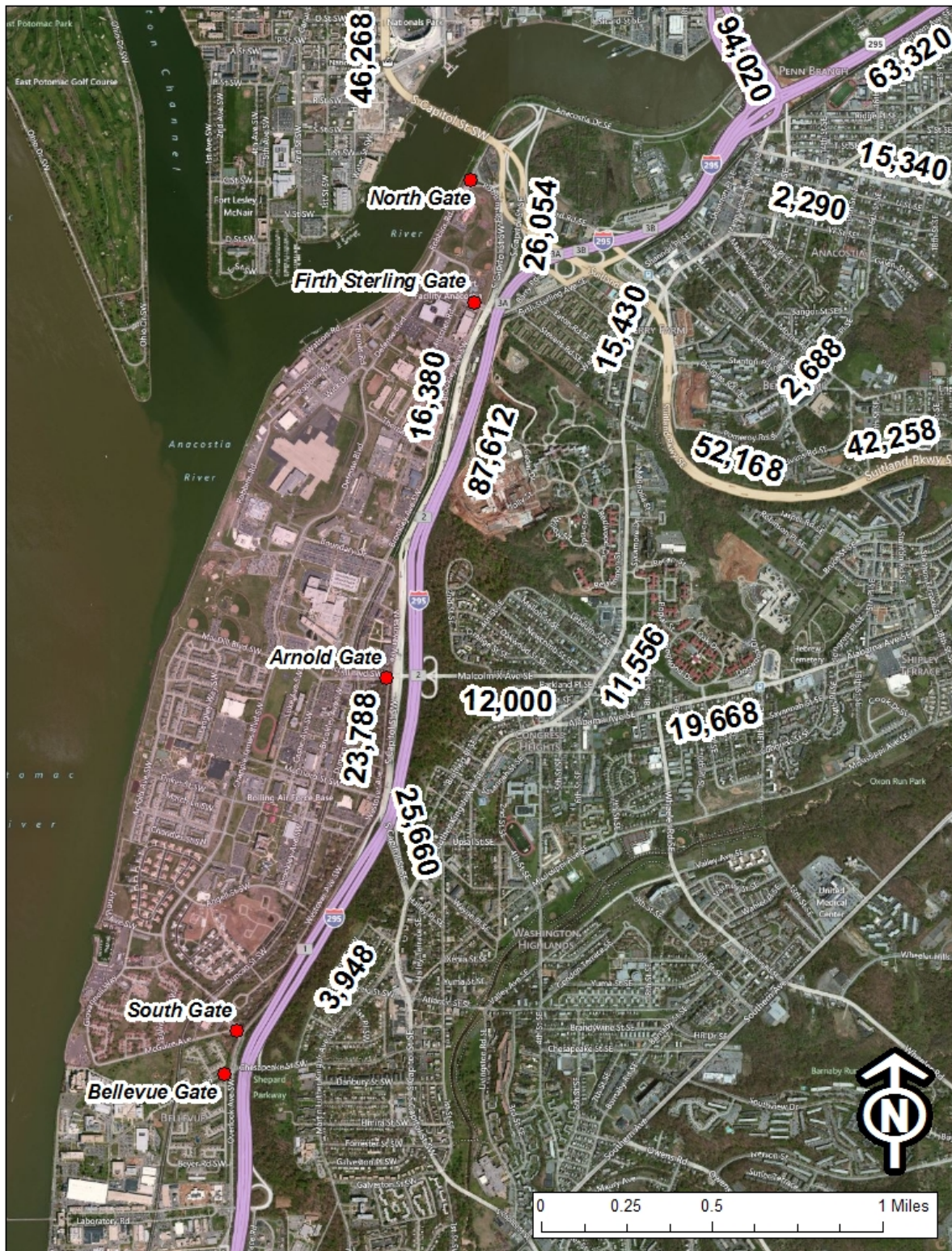


Figure 11: AADTs for Roadways near JBAB



Washington Navy Yard (WNY)

Washington Navy Yard is the oldest naval facility in the United States. The installation is home to Naval Support Activity Washington headquarters, Commander, Navy Installations Command (CNIC), Regional Headquarters Naval District Washington, Naval Facilities Engineering Command (NAVFAC) headquarters, and Naval Sea Systems Command (NAVSEA) headquarters, and several other tenant commands and offices. The installation is located in Southeast Washington just east of USDOT headquarters and is bounded by M St, SE on the north, the Anacostia River on the south and I-295 on the east. NAVFAC and NAVSEA were moved to the Washington Navy Yard under the BRAC 2005 actions from previous locations in Crystal City, Arlington, and the City of Alexandria. The Office of the Judge Advocate General, the Navy's military lawyers, was also relocated to the Navy Yard from Alexandria under BRAC 2005. These moves added approximately 4,500 jobs to the Navy Yard and added approximately 2,500 parking spaces.¹⁶ There are 15,000 total personnel for Naval Support Activity Washington, of which WNY is the largest of seven regional installations.

There are four (4) access points to the Washington Navy Yard (see Figure 12): from M St, SE at 6th St and 9th St, and from 11th St, SE at N St and O St. The Sixth and M St, SE gate is located approximately 0.3 miles from the Navy Yard Metrorail Station on the Green Line. Metrobus Route N22, the Navy Yard Shuttle Line, provides seven-days-a-week service connecting the the installation with the following Metrorail stations: Navy Yard (Green Line); Eastern Market (Blue / Orange Lines); Capitol South (Blue / Orange Lines); Union Station (Red Line, connections to MARC, VRE, and Amtrak). A DoD shuttle operating 15-passenger vans provides six daily trips between WNY and JBAB.¹⁷ Preparation of an updated master plan and TMP for the Navy Yard is ongoing. The last approved master plan for the base was in 1990.¹⁸

Figure 13 shows the temporal distribution of persons and vehicles entering WNY during the five-hour morning analysis period. The peak hour occurs between 6:15am and 7:15am.

Approximately 3,200 people enter the base during the peak hour and the average auto occupancy for the peak hour is 1.22 persons per vehicle. Figure 14 shows the mode split for WNY. Just over one-half of people arriving during the five-hour morning analysis period drive alone. Due to the distance from the Navy Yard Metrorail station to the WNY gates, it is probable that a high proportion of the non-motorized person-trips entering the base arrived to the area via transit.

During their initial review of the results at WNY, NAVFAC officials found the counts to be unexpectedly low. After further review and consideration of a recount at WNY, it was determined that missing shift workers and absences due to vacation, telecommuting, and other factors likely contributed to the low trip volumes.

Figure 15 shows AADTs for roadways near the Washington Navy Yard. The improved connections from the new 11th Street Bridge should impact access to the facility.

¹⁶ See <http://www.globalsecurity.org/military/facility/washington-ny.htm>

¹⁷ See http://www.cnicy.navy.mil/navycni/groups/public/documents/cdn/cnicp_a284297.pdf

¹⁸ See

http://www.ncpc.gov/DocumentDepot/Actions_Recommendations/2011September/Washington_Navy_Yard_Energy_Enhancement_Building_126_Recommendation_7231_September2011_.pdf

Figure 12: Washington Navy Yard Gate Location



Figure 13: Distribution of Persons and Vehicles Entering Washington Navy Yard

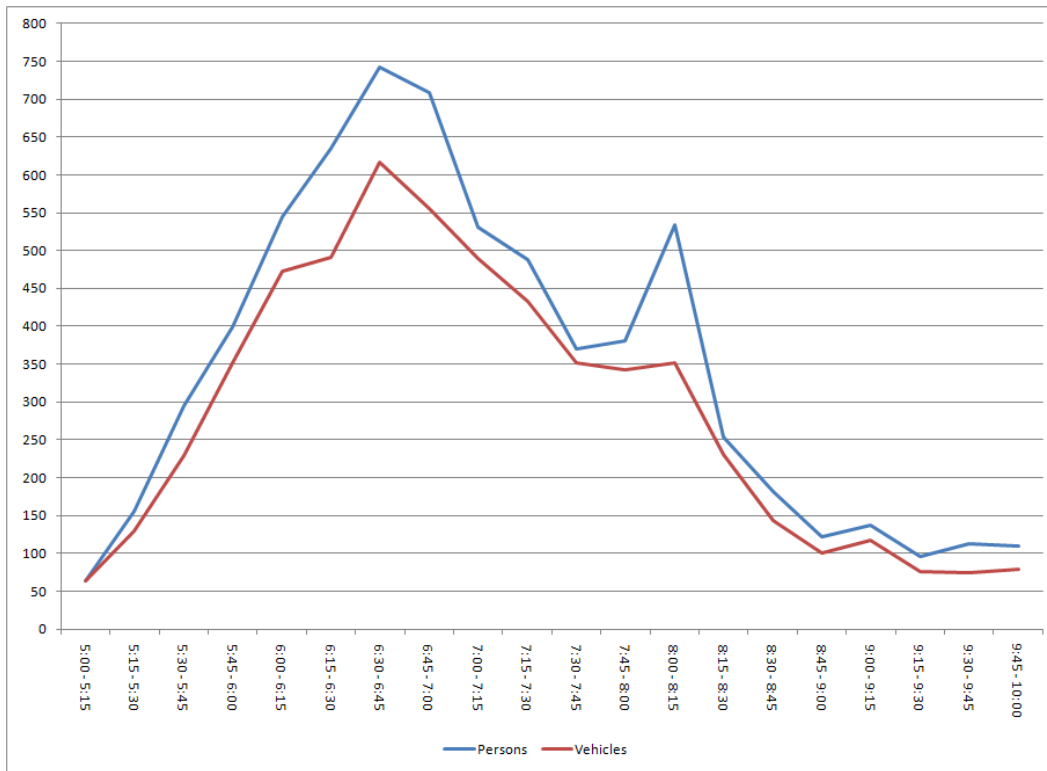
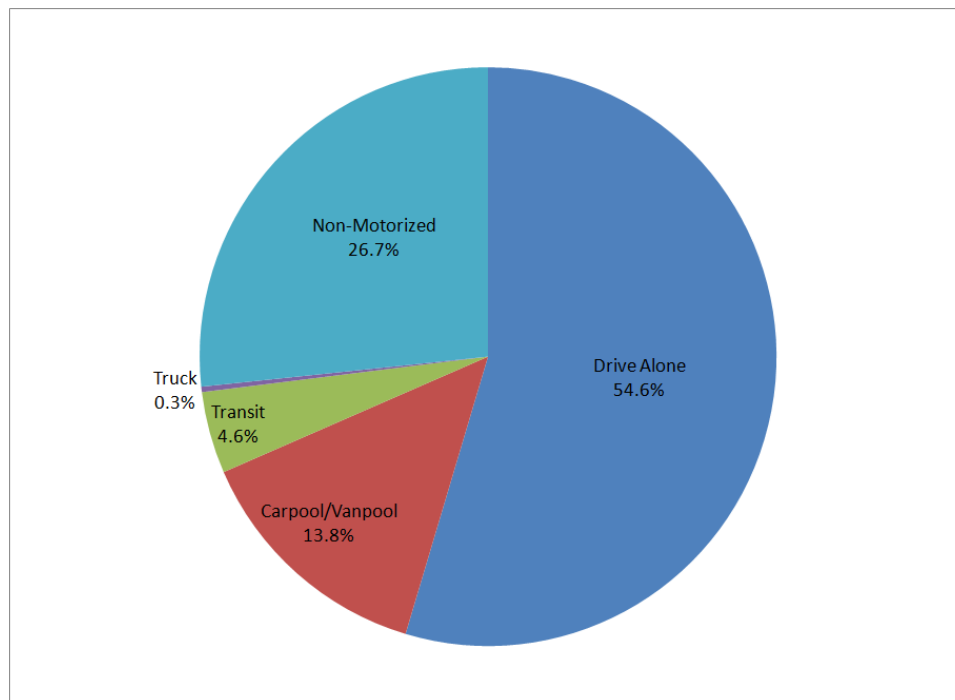
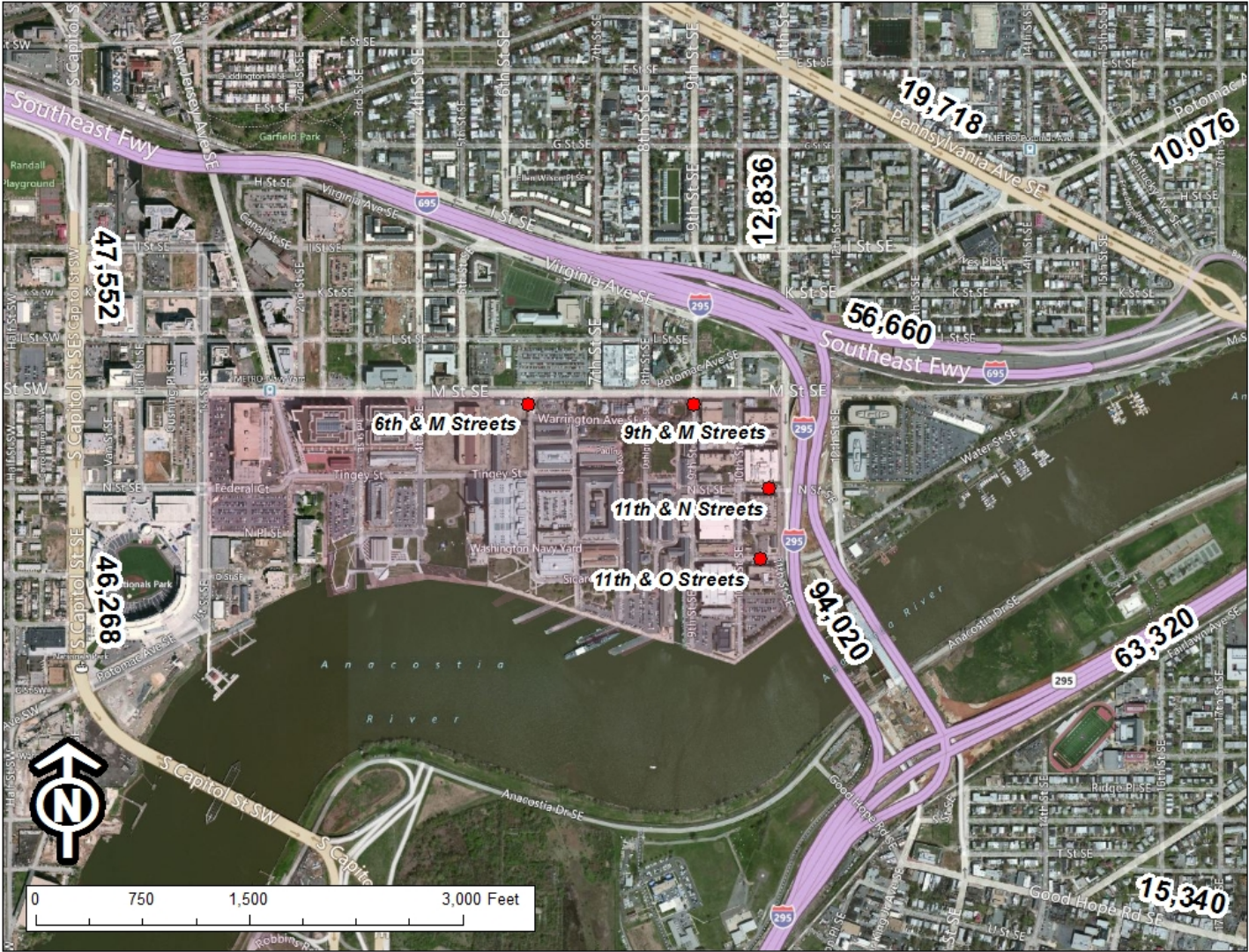


Figure 14: Person Mode Split – Washington Navy Yard¹⁹



¹⁹At-gate counters not positioned to best capture transit riders due to long walk from station and bus stops to base gates. A proportion of non-motorized should be considered a proxy for transit.

Figure 15: AADTs for Roadways near Washington Navy Yard



Maryland

Federal Research Center White Oak

The Federal Research Center White Oak (FRC White Oak) was the former location of the Naval Surface Warfare Center, a Navy research facility primarily dedicated to explosive ordnance testing. Previous BRAC actions relocated Navy tenants to other sites, and the primary tenant at FRC WO is the U.S. Food and Drug Administration (FDA), which is part of the Department of Health and Human Services. The FDA campus will consolidate workers from multiple other sites into a single destination that includes the agency headquarters and other research facilities. Currently about 5,500 employees work at the FDA campus, and approximately 9,000 are expected by full build out in the year 2016.

Befitting the earlier safety and security requirements of a former weapons testing facility, the overall site stretches over 662 acres in Montgomery and Prince George's counties and is bounded by New Hampshire Ave (MD 650) on the west and Powder Mill Rd (MD 212) on the east (see Figure 16) . The majority of the FDA existing and planned development is concentrated in the western portion of the site with access currently from the gates on Michelson Rd and Mahan Rd off of MD 650. The U.S. Army Research Lab Adelphi Laboratory Center (ALC) is located at the southern edge of the site with access from the Floral Drive gate off of Powder Mill Rd. A new access point from the east via a new road, FDA Boulevard, has been recently completed and provides a connection from Cherry Hill Rd through a private development known as LifeSci Village²⁰ There is also a Back Gate near the intersection of Powder Mill Rd and Cherry Hill Rd. Transit service is provided by Metrobus Route R2 operating on Powder Mill Rd and Cherry Hill Rd, Metrobus Routes C8 and K6 operating on MD 650, and Ride-On Routes 10, 20, and 22 operating on MD 650. MTA commuter bus route 204 provides peak period, peak direction service to FDA from Frederick and Gaithersburg via I-270 and the Intercounty Connector (MD 200) and continues to the College Park – UMD Metrorail station on the Green Line. MD 650 is one of the corridors identified in the recent bus rapid transit (BRT) study completed for the County Council.

The entire area of Montgomery County west of the Prince George's line and bounded by the Capital Beltway (I-495), Northwest Branch, Columbia Pike (US 29), and Cherry Hill Rd is the subject of the East County Science Center Master Plan being conducted by the Maryland-National Capital Park and Planning Commission (M-NCPPC). The master plan is scheduled to be completed by the end of 2013. As part of the master plan process a Transit Oriented Development (TOD) Scenario Planning Report was prepared by M/A/B for Commission staff under the TPB's Transportation-Land Use Connections (TLC) program.

Figure 17 shows the temporal distribution of persons and vehicles entering the FRC during the five-hour morning analysis period. Just over 1,900 persons enter the complex during the morning peak hour of 8:15am to 9:15am. Average auto occupancy during the morning peak hour is 1.07. The person mode split for the FRC is shown in Figure 18. Nearly 80% of the people entering during the morning analysis period drove alone. Figure 19 shows the AADTs near FRC White Oak. The heaviest volumes are along US 29 and MD 650, as well as Beltway and I-95, which provide connections to the site via MD 650 and Powder Mill Rd (MD 212).

²⁰ This location is sometimes called Percontee for the name of the actual developer.

Figure 16: Federal Research Center White Oak - Gate Location

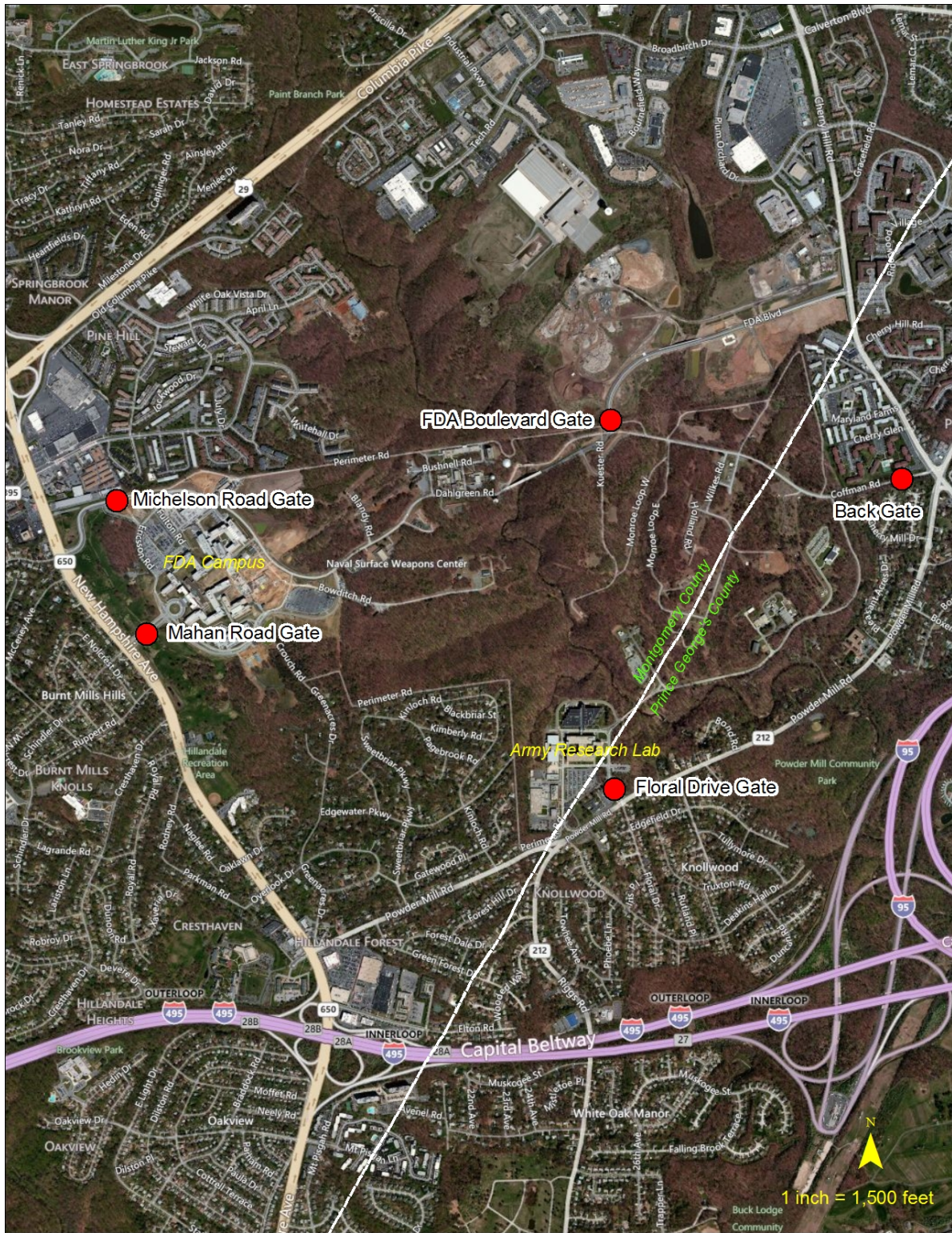


Figure 17: Distribution of Persons and Vehicles Entering FRC White Oak

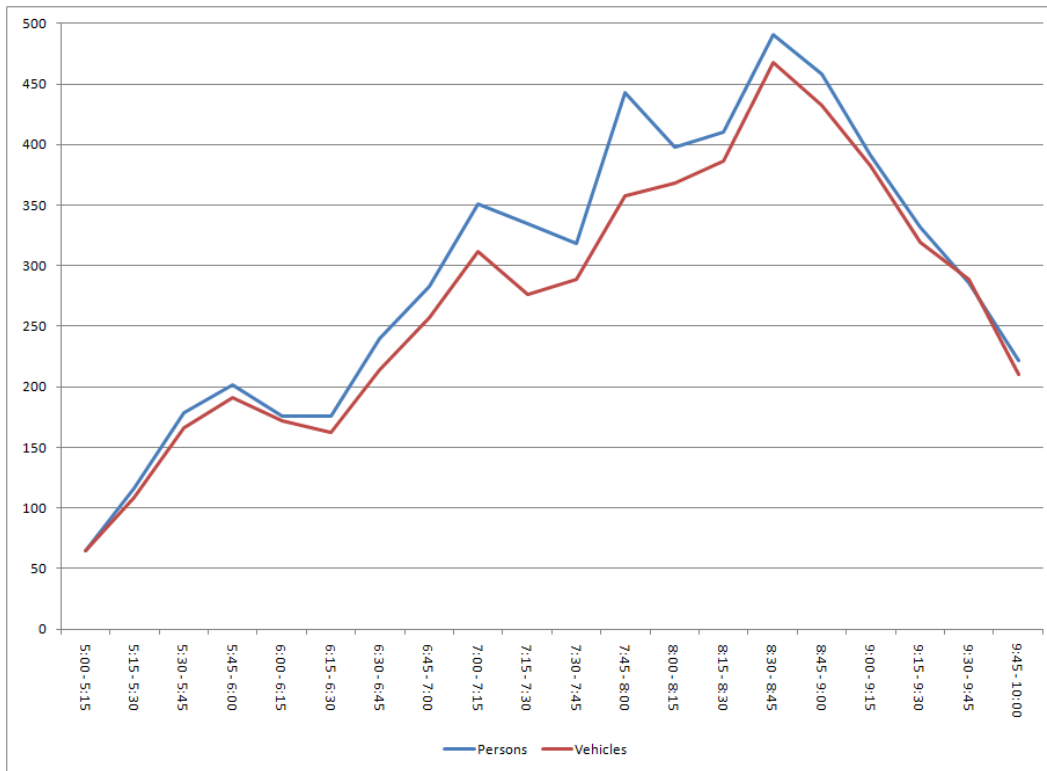


Figure 18: Person Mode Split – FRC White Oak

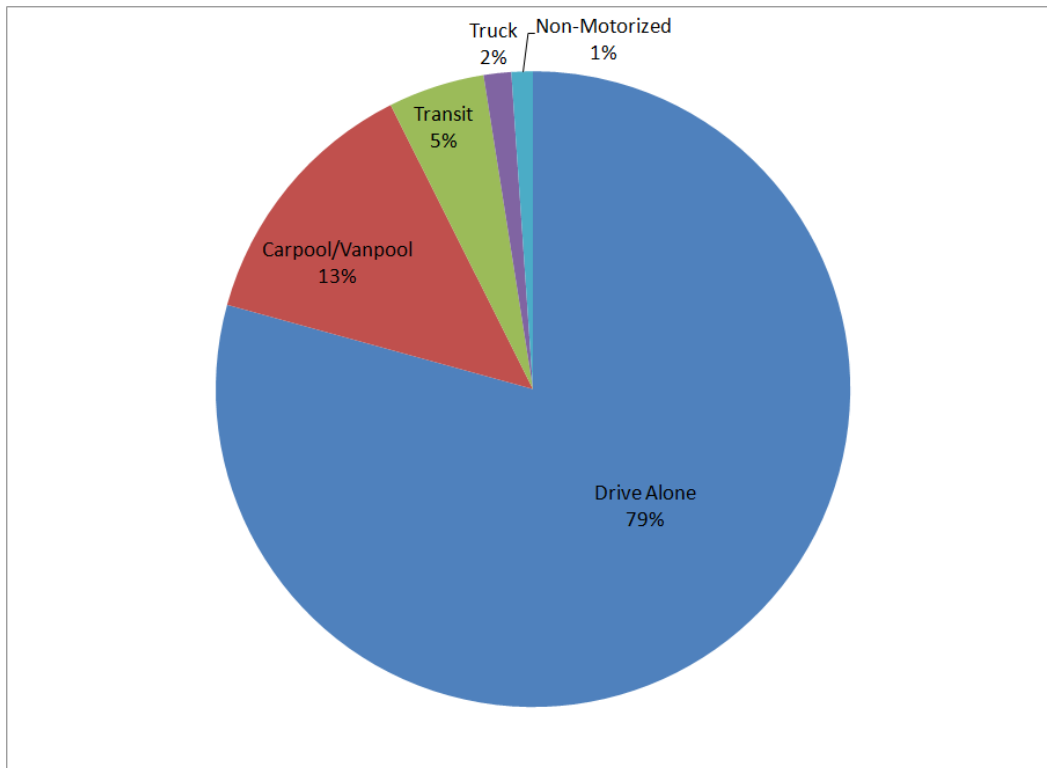
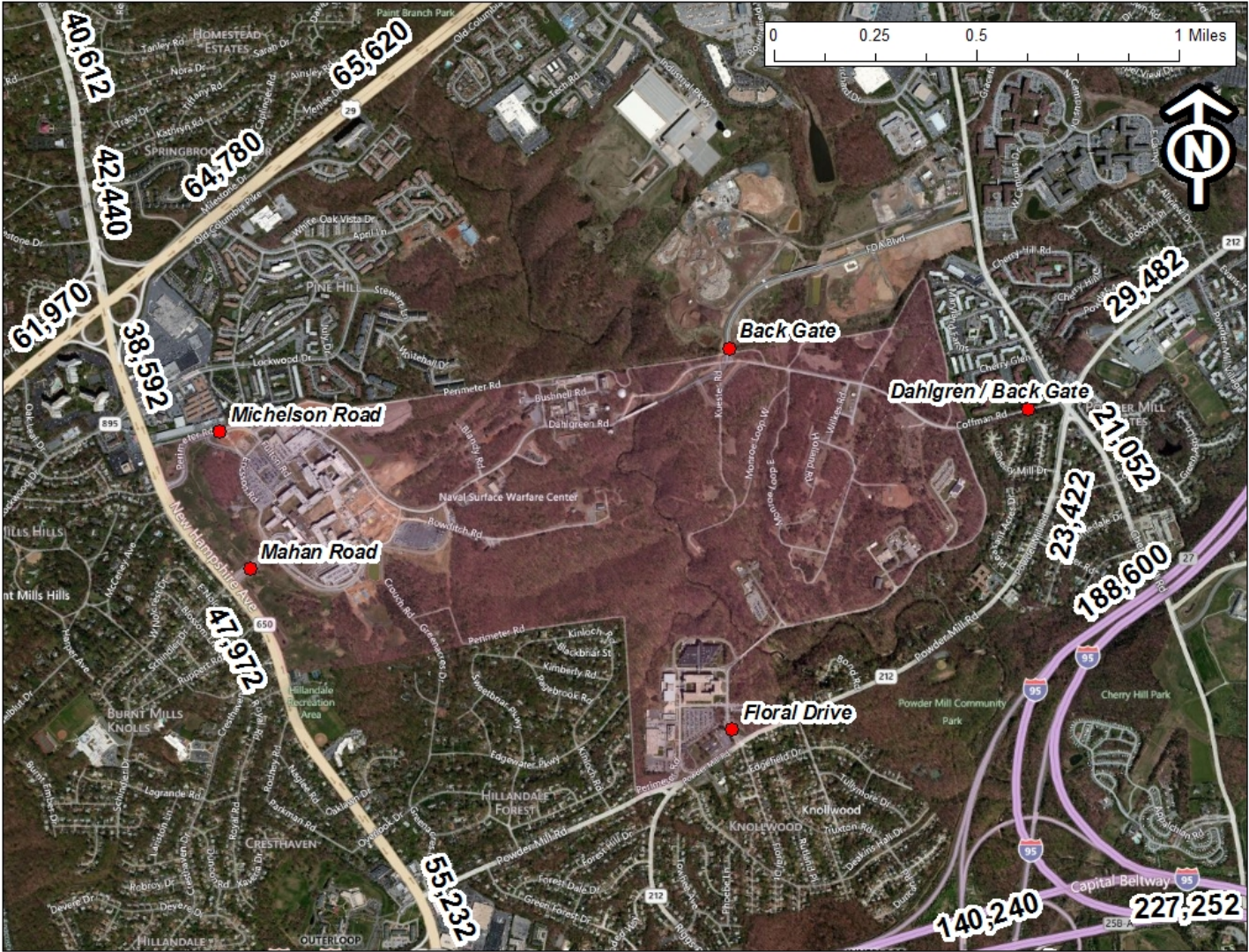


Figure 19: AADTs for Roadways near FRC White Oak



Fort Detrick

Fort Detrick is a U.S. Army garrison located within the City of Frederick. With 9,200 employees the base is the largest employer in Frederick County and has expanded under the recent BRAC action. The installation includes several facilities dedicated to medical and biomedical research, including the National Interagency Biodefense Campus and the Army Medical Research Institute of Infectious Diseases.

There are four access points to Fort Detrick: the main gate on 7th Street, a second gate for base personnel on Oppossumtown Pike, the Rosemont Gate for base personnel, and the Old Farm Gate for visitors and deliveries (see Figure 20). The base was the subject of a pedestrian, bicycle, and transit access study in June 2008 prepared by Kittleson and Associates under the TPB's Transportation-Land Use Connections (TLC) program. As a follow-up action, a fiscal year 2013 (FY 2013) TLC project was awarded to Frederick to complete 30% design for a three-mile rails-to-rails project known as the East Street Trail, which will provide improved bicycle and pedestrian connections between the base, the Frederick MARC commuter rail station, Frederick Memorial Hospital, and Hood College. This is the first TLC award in the new design pilot program, which seeks to move the program beyond planning into implementation. Transit service is provided to the base by Frederick County TransIT bus route 30, which connects to the Frederick MARC station. The Meet-the-MARC shuttle operated by TransIT also makes limited stops at Fort Detrick.

The distribution of vehicles and persons entering Fort Detrick during the five-hour morning analysis period is shown in Figure 21. Just over 6,300 vehicles carrying just over 7,100 people entered the base between 5:00am and 10:00am. Average auto occupancy during this period was 1.13 persons per vehicle. Just over 2,100 people entered the base during the peak hour of 7:15am to 8:15am, with an average auto occupancy of 1.09. While not the maximum person movement into the base, periods of higher vehicle occupancy occur earlier in the morning between 6:00am and 6:30am (see Figure 21).

Figure 22 shows the mode split of people entering the base during the morning analysis period. Just under 80% of people entering the base during the period drove alone, with most of the rest coming via carpool or vanpool.

AADTs for roadways near Fort Detrick are shown in Figure 23. The heaviest volumes, over 95,000 AADT, are along US 15, which is the main access route to the installation and the major north-south route in Frederick County.

Figure 20: Fort Detrick – Gate Location

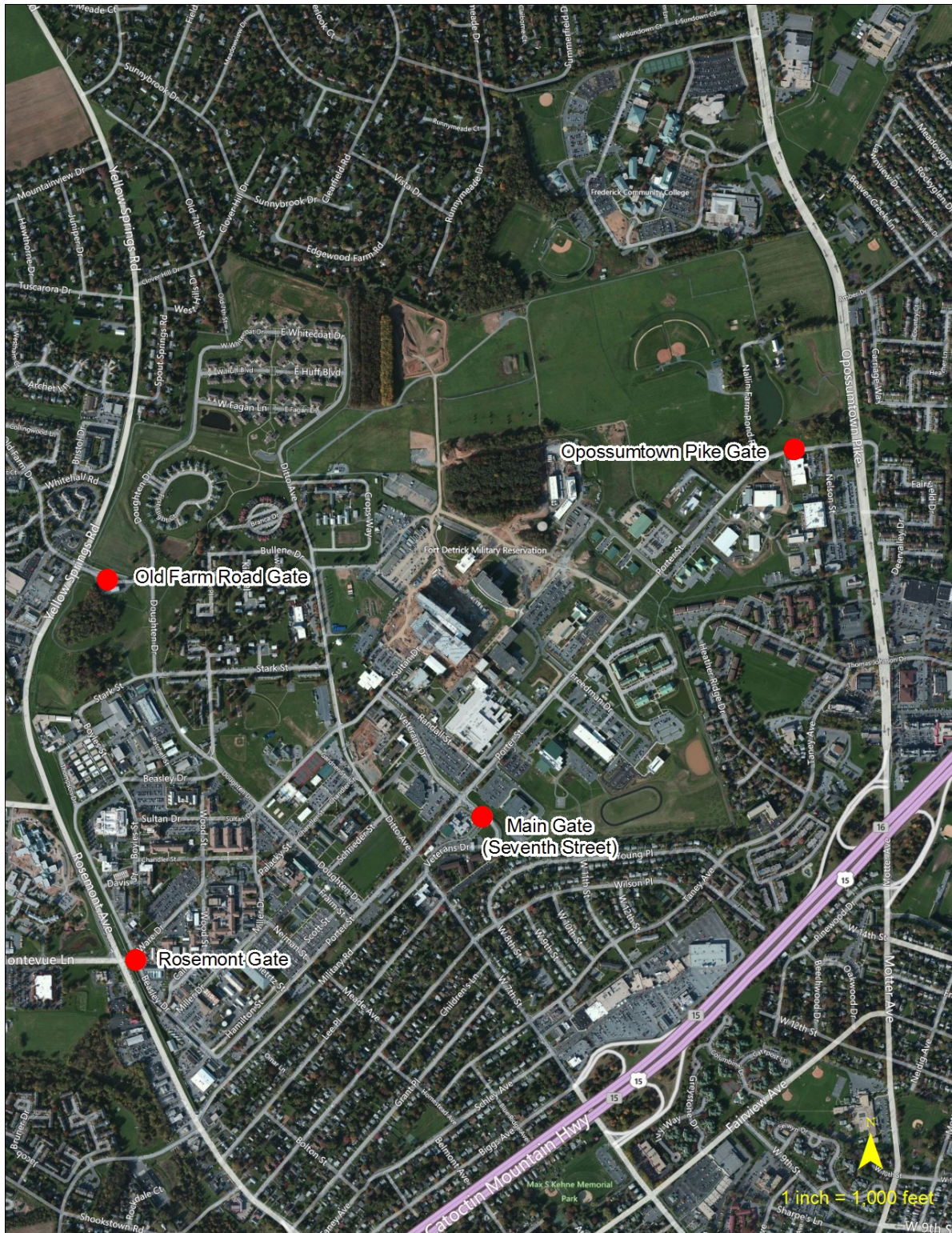


Figure 21: Distribution of Persons and Vehicles Entering Fort Detrick

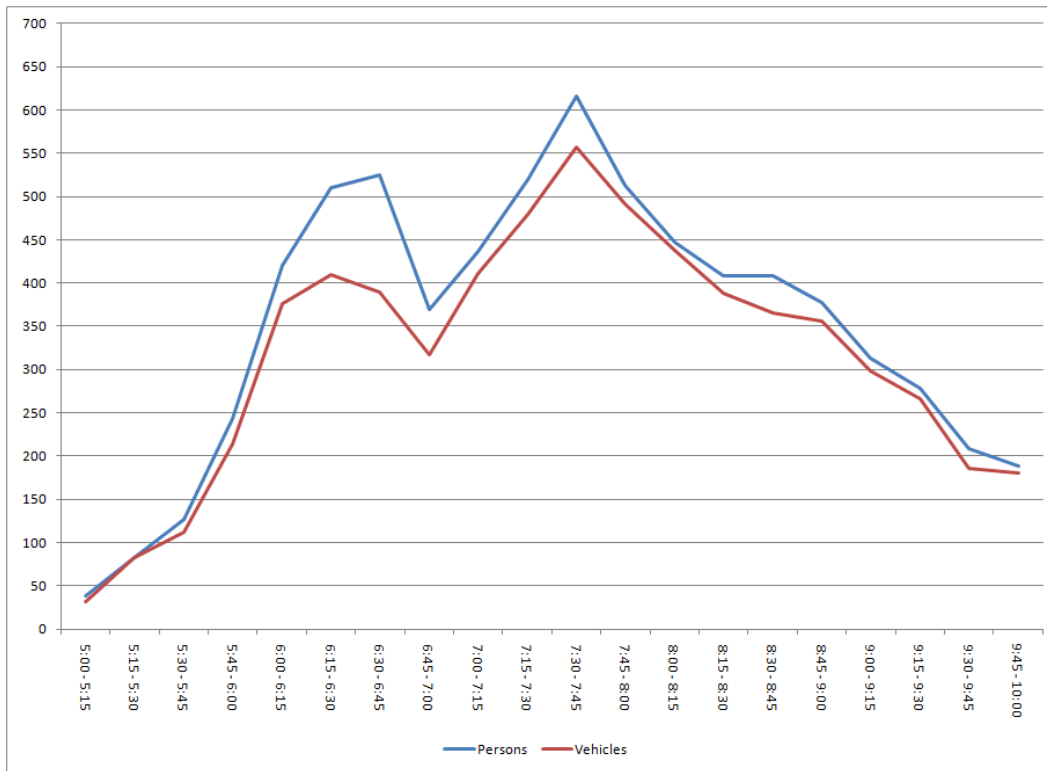


Figure 22: Person Mode Split – Fort Detrick

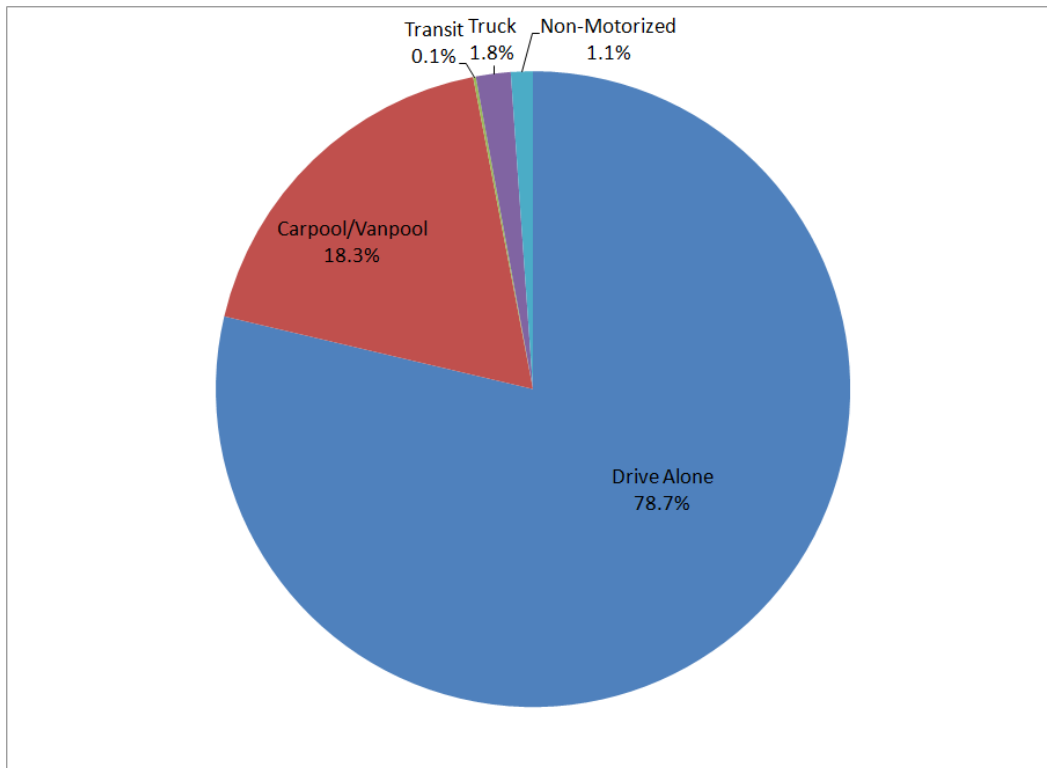
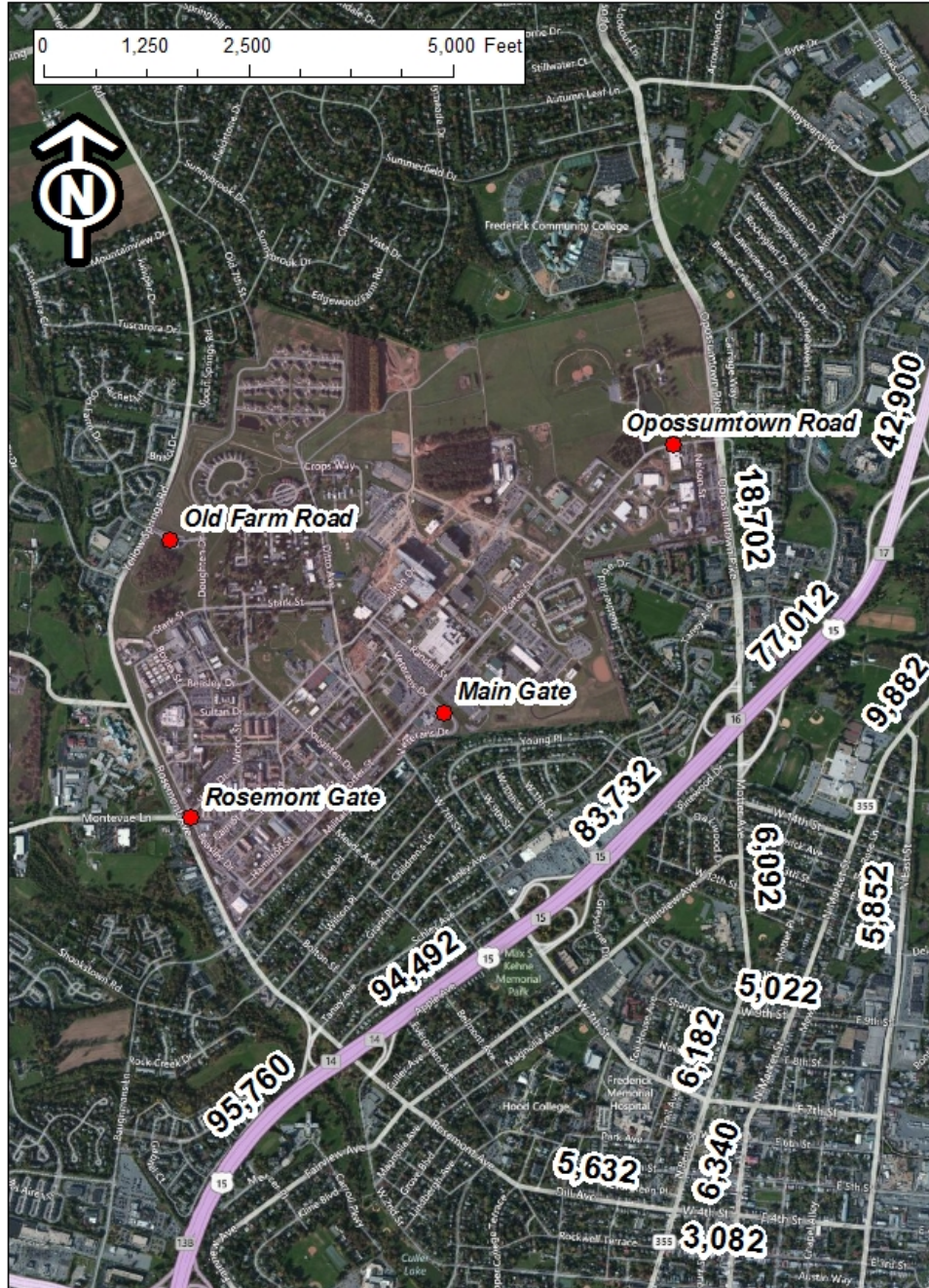


Figure 23: AADTs for Roadways near Fort Detrick



Joint Base Andrews

Joint Base Andrews is the facility resulting from the consolidation of Andrews Air Force Base and Naval Air Facility Washington under the BRAC 2005 action. The base is best known as the home of the two jumbo jet aircraft used to transport the President of the United States that are colloquially referred to as *Air Force One*.²¹ Many other commands and aircraft are present at the base, which is located in Prince George's County just southeast of I-495, south of Suitland Pkwy, and southwest of Pennsylvania Ave (MD 4). The installation covers approximately 6,800 acres, making it a little more than half the size of Washington Dulles International Airport.²² Approximately 3,000 jobs were added to the installation under the BRAC action, all of them relocated to newly constructed space. There are a total of just over 16,000 personnel at the base.

There are five access points to the installation (see Figure 24). The Main Gate is accessed via Allentown Rd (MD 337), which has northbound access from the Outer Loop of the Beltway only. The West Gate is located 0.2 miles southwest of the Main Gate and is for pedestrian and bicycle access only. The Virginia Gate is on the south side of the base near the golf course and is accessed via Branch Ave (MD 5). The Pearl Harbor Gate is on the south east side of the base and is accessed via Dower House Rd, which connects with MD 4 to the north and Woodyard Rd (MD 223) to the south. The North Gate is located at the northeast corner of the base and is accessed via Suitland Pkwy and MD 4.

Bus service to the base is provided by Metrobus Route K12 which stops at the West Gate and connects to the Branch Avenue terminal station on the Metrorail Green Line. In September 2011, the Central Regional Maryland Transit Corporation (which manages fixed-route bus operations in Howard, Anne Arundel, and a portion of Prince George's County as well as the City of Laurel) began managing subscription bus service to Joint Base Andrews on a Maryland route from Waldorf and La Plata and in Charles County as well as a Virginia route with stops in Stafford, Dumfries, Woodbridge, and Springfield.

Beginning in 2007, staff to the Prince George's County Planning Board (M-NCPPC) prepared a series of studies to ensure compatible development in the Clear Zone, Accident Potential Zones and noise sensitive areas around the base. These areas generally extend to the north and south of the base due to the orientation of the two parallel runways but can extend in other directions based on flight operation patterns. The resulting guidelines, which will be implemented through county zoning and subdivision regulations, limit both building height and intensity of use depending on the distance and direction from the base. County planning staff has recently held briefings and public outreach meetings as part of the implementation of the plan guidelines.²³

The Maryland State Highway Administration (SHA) has several active projects near the base, including access improvements from MD 5 to the Branch Ave Metrorail station, intersection improvements near the base, and corridor studies for both MD 223 and MD 5.

²¹ That call sign is used only when the President is on-board and can be used for any fixed wing aircraft transporting the President.

²² Further comparison shows that the base has two runways compared with the current four at Dulles. Daily flight operations are roughly one-sixth that of Dulles.

²³ See <http://www.pgplanning.org/Assets/Planning/Programs+and+Projects/Special+Projects/The+Joint+Land+Use+Study/presentation.pdf>

Figure 25 shows the distribution of vehicles and people entering Joint Base Andrews during the five-hour morning analysis period. Just over 9,000 people in just under 8,500 vehicles entered the base during this period, with an average auto occupancy of 1.09. During the peak hour of 6:45am to 7:45am, just over 3,300 people entered the base and the average auto occupancy was 1.07.

The mode split for the base during the morning analysis period is shown in Figure 26. 85% of the people entering the base drove alone, with most of the rest arriving by carpool or vanpool. Some of the non-motorized trips are likely transit due to the location of the transit stop near the bike/ped only gate on MD 337. Ridership data for the CMRT-operated subscription bus service could not be obtained at the time of publication.

AADTs for roadways near Joint Base Andrews are shown in Figure 27. Volumes along MD 337 near the installation are about 30,000. Volumes along the major arterial roadways adjacent to the base, MD 5 and MD 4, are much higher: nearly 75,000 on MD 4 and nearly 120,000 on MD 5.

Figure 24: Joint Base Andrews – Gate Location

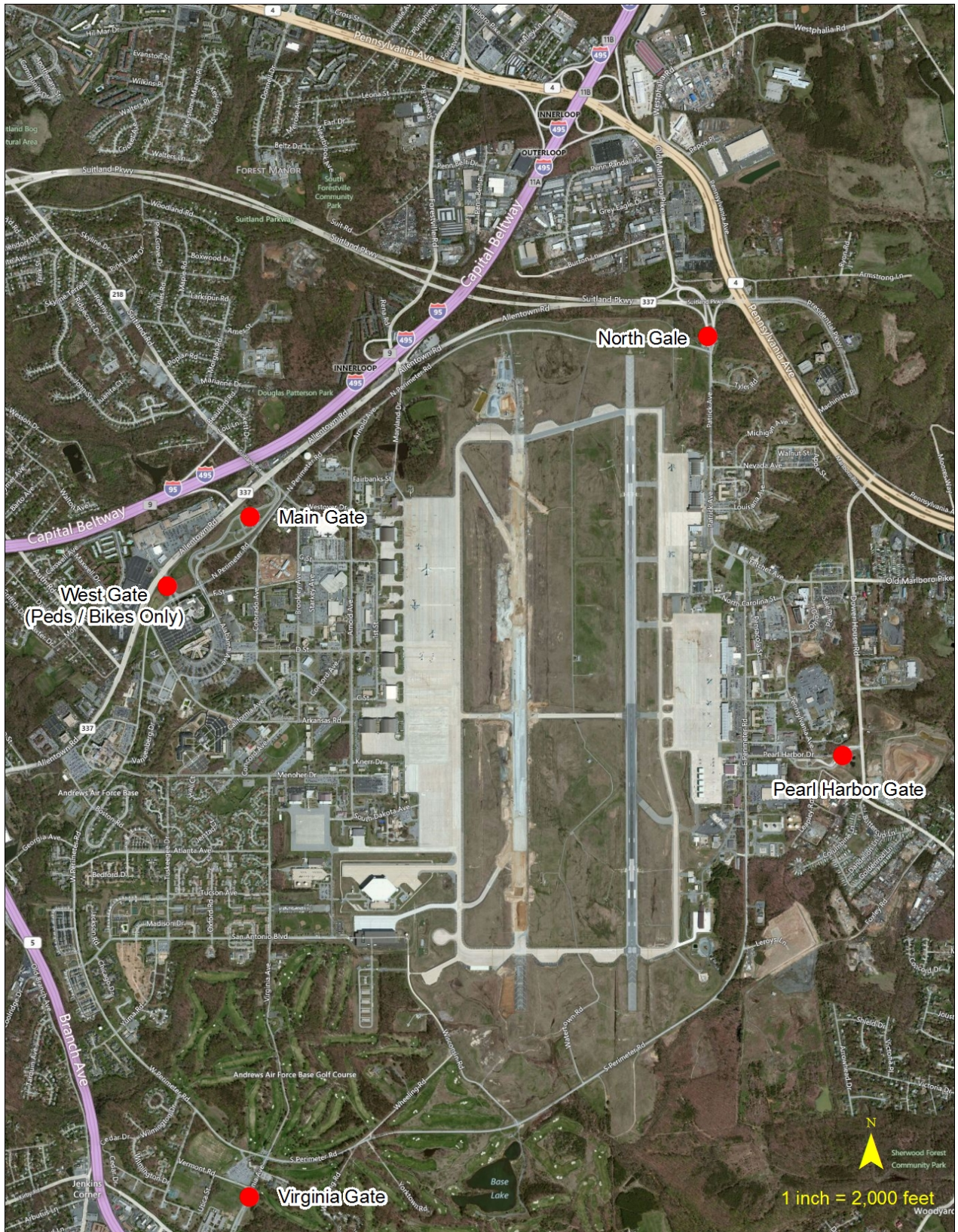


Figure 25: Distribution of Persons and Vehicles Entering Joint Base Andrews

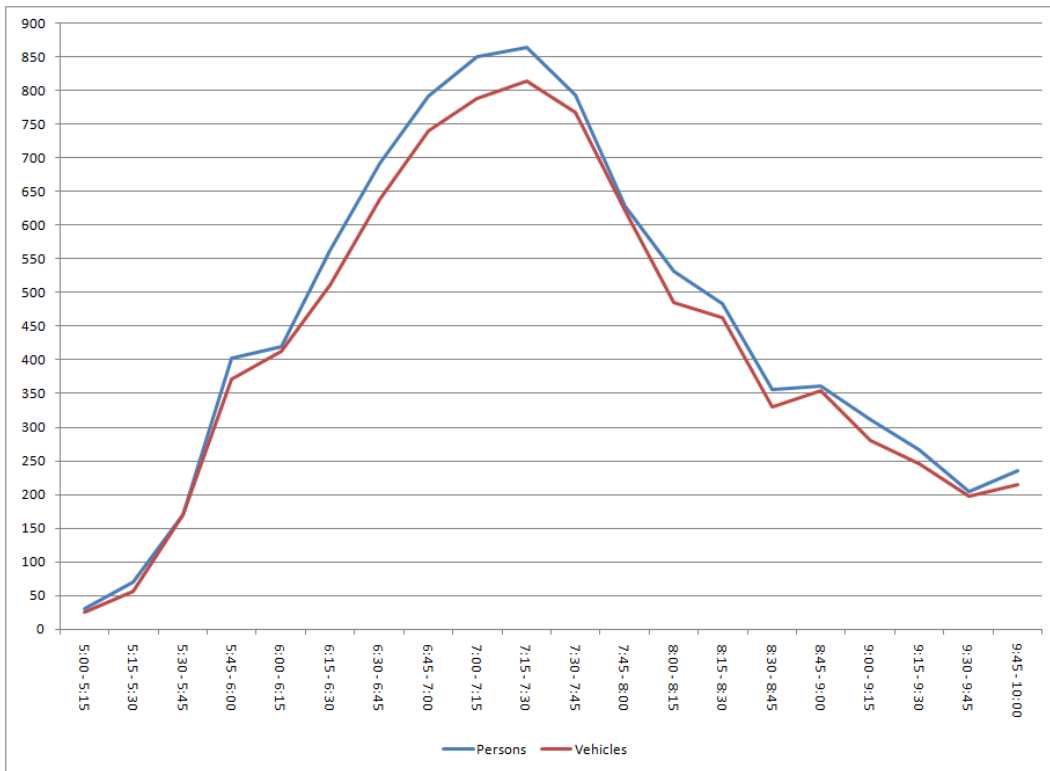


Figure 26: Person Mode Split – Joint Base Andrews

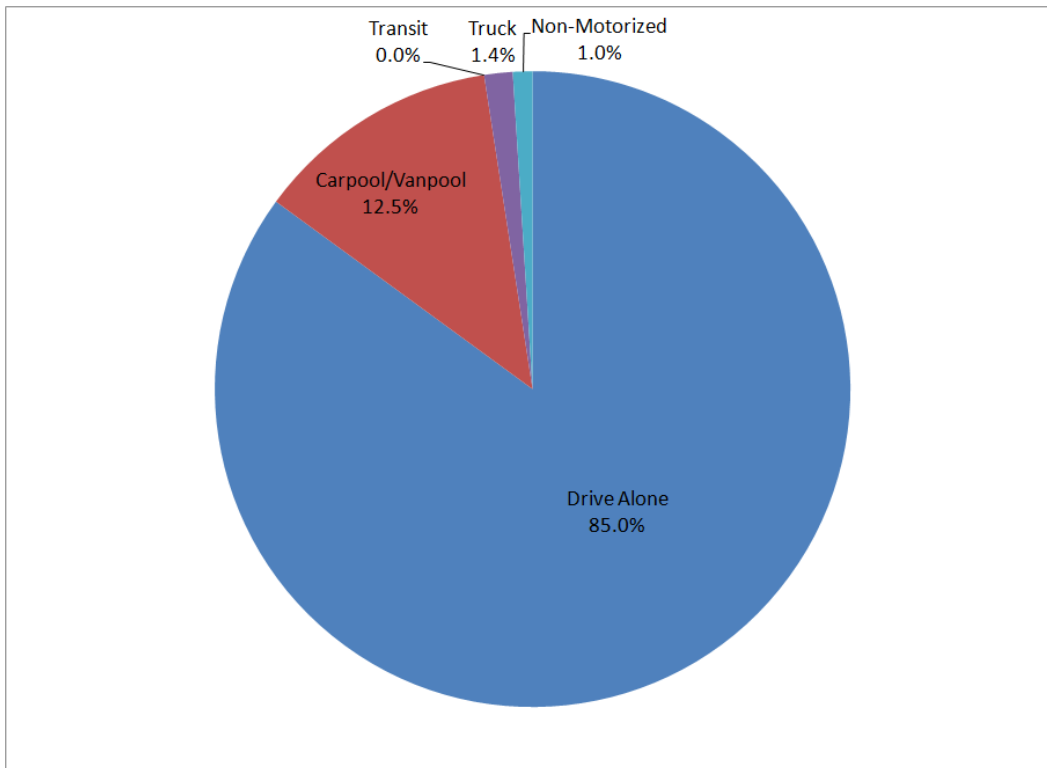
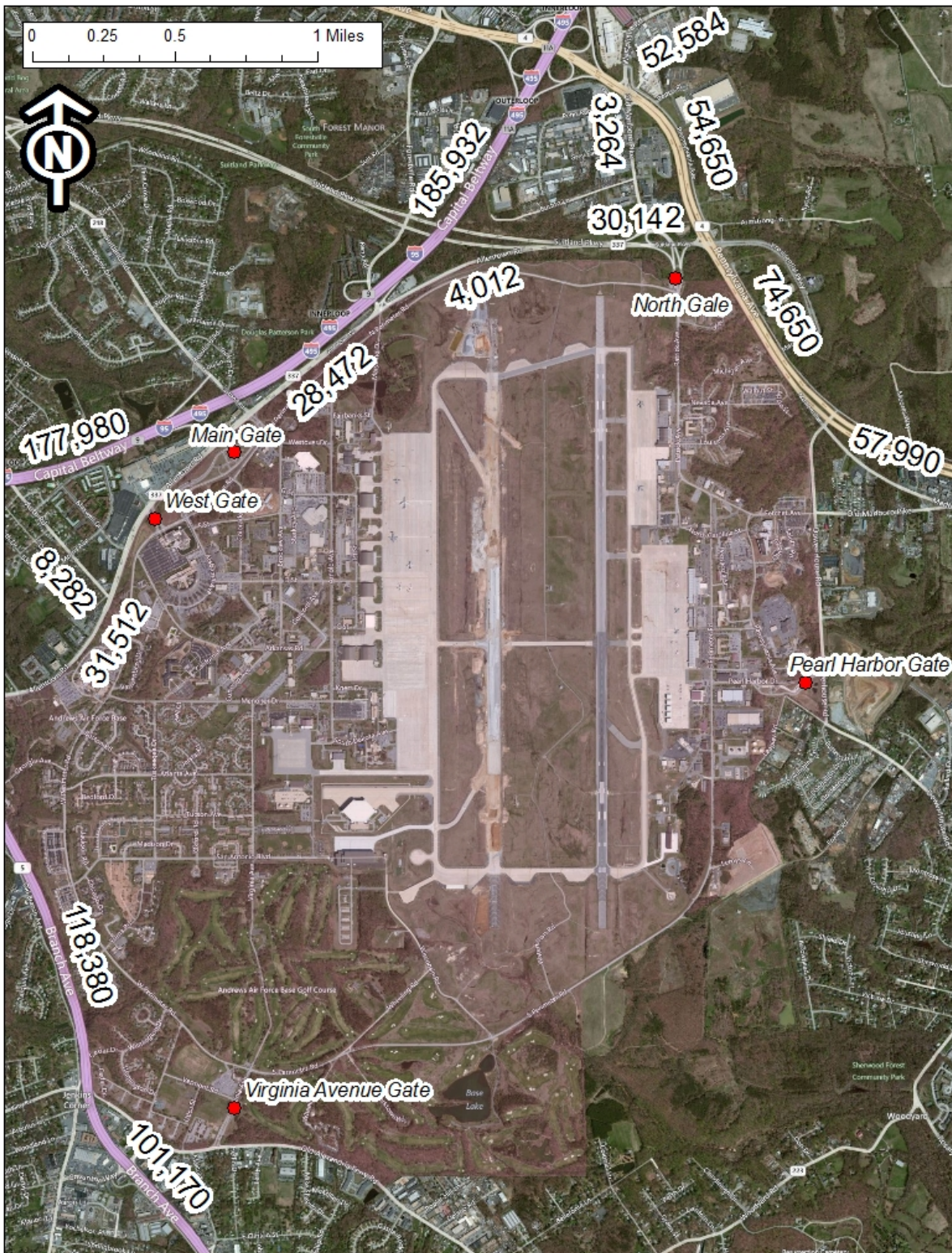


Figure 27: AADTs for Roadways near Joint Base Andrews



Naval Support Facility Indian Head

Naval Support Facility Indian Head (NSF IH) is a research facility located on the peninsula extending into the Potomac River immediately southwest of the town of Indian Head in Charles County. The facility received jobs under previous BRAC actions, including some moved from the White Oak site when it was still a Navy base. NSF IH was threatened with complete closure under the most recent BRAC action but ultimately survived. As of 2011 there were approximately 3,200 employees at the site. The base is one of the largest employers in Charles County.

There is a single access gate to the site at the end of Indian Head Highway ([MD 210] see Figure 28). Transit service AM and PM peak periods is provided by Metrobus Route W19, which connects to the Southern Avenue station of the Metrorail Green Line near the/ Prince George's County / District of Columbia border. Fixed route service is also provided by VanGo, the Charles County transit operator.

Figure 29 shows the distribution of vehicles and persons entering NSF IH during the five-hour morning analysis period. Just over 2,000 vehicles carrying just over 2,100 people entered the base during this time. Average auto occupancy was 1.08. During the peak hour of 6:15am to 7:15am, just over 650 people entered the base and the average auto occupancy was 1.07. Figure 30 shows the mode split for NSF IH. Over 85% of the people arriving drove alone, with most of the rest arriving by carpool or vanpool.

Figure 31 shows AADTs for roadways near NSF IH. AADT for MD 210 approaching the base is just over 12,000 vehicles, nearly all of which are traveling to and from the installation.

Figure 28: Naval Support Facility Indian Head – Gate Location



Figure 29: Time Distribution of Persons and Vehicles Entering NSF Indian Head

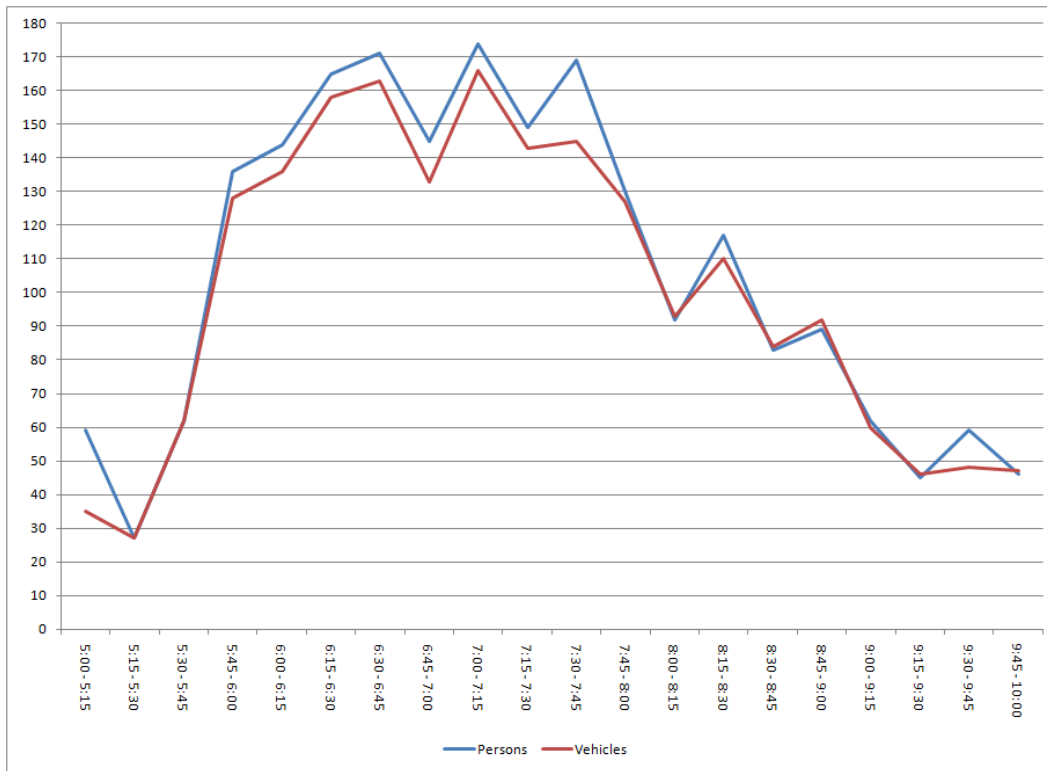


Figure 30: Person Mode Split – NSF Indian Head

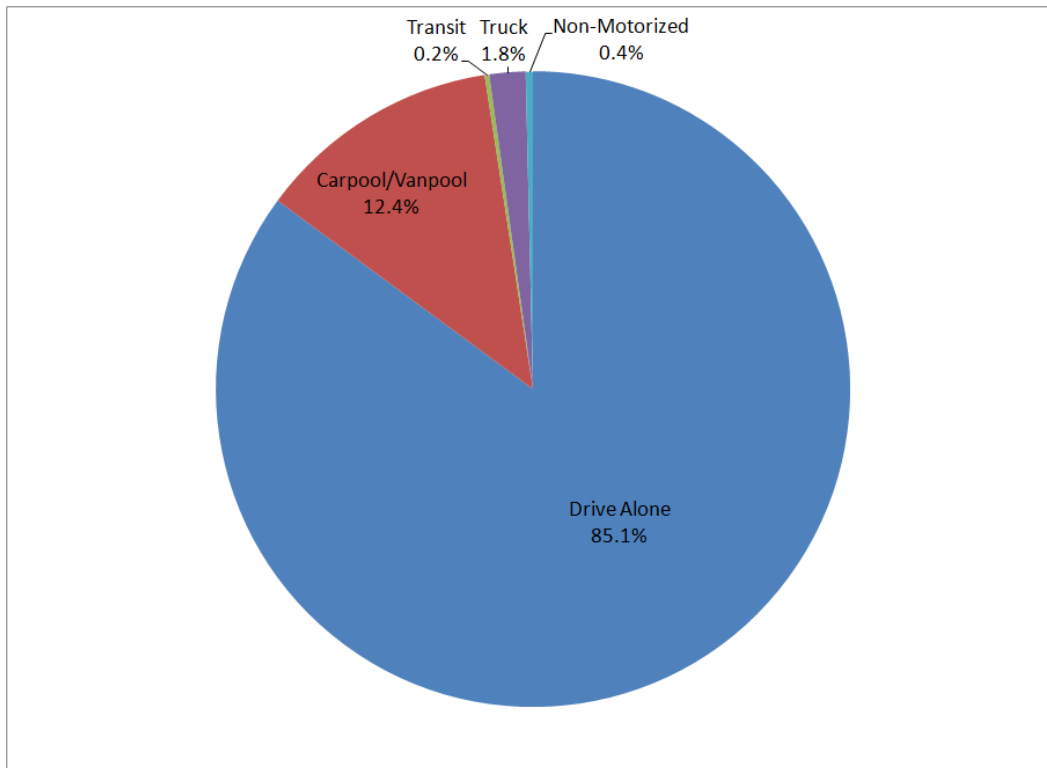


Figure 31: AADTs for Roadways near NSF Indian Head



Walter Reed National Military Medical Center

The Walter Reed National Military Medical Center (WRNMMC) is located at 8901 Rockville Pike in Bethesda, Montgomery County. The facility occupies most of the east side of Rockville Pike (MD 355) between Jones Bridge Road and Cedar Lane. Under the BRAC action, this facility represents the absorption of the former Walter Reed Army Medical Center, an Army facility located at 6900 Georgia Avenue, NW in the District of Columbia (now closed), into the Bethesda site previously called the National Naval Medical Center. The Uniformed Services University of Health Sciences (USUHS) is located on the WRNMMC site.

Employment at the site has increased from about 8,000 in 2008 to about 10,200 in 2012. A new pedestrian tunnel under MD 355 linking the site to the Medical Center stop on the Metrorail Red Line and new elevators from near the hospital entrance to the Metro platform are scheduled for completion in 2015. Additionally, the Maryland State Highway Administration and Montgomery County Department of Transportation are completing major intersection improvements at the intersections of Rockville Pike and Cedar Lane / West Cedar Lane, Rockville Pike and Jones Bridge Road, and Connecticut Avenue (MD 185) at Jones Bridge Road. For years, these three intersections have consistently been among the most congested in the County. Smaller scale improvements are also being / have been implemented at other intersections along the roads adjacent to the site.

There are five access points to WRNMMC (see Figure 32). The North Gate and South Gate (Main Gate) are located on Wood Rd, which is accessed from MD 355. The Navy Lodge, Navy Exchange, and USU Gates are accessed from Jones Bridge Rd on the south side of the facility. People arriving via Metrorail exit the Medical Center station on the National Institutes of Health (NIH) campus on the west side of MD 355 just south of South Dr, which is opposite South Wood Rd. They then must exit the escalators and cross MD 355 using the crosswalk at the signalized intersection of MD 355 / South Dr / South Wood Rd and enter WRNMMC via the South Gate.

The distribution of people and vehicles entering WRNMMC during the five-hour morning analysis period is shown in Figure 33. Just over 8,500 vehicles carrying nearly 12,000 people arrived at the facility during the analysis period. The person-trip volume is higher than the post-BRAC employment levels at the site, but this level is expected considering the addition of visitors to the site, including those visiting patients at the medical center as well as patients with medical visits (as opposed to people being treated inpatient at the hospital). Average auto occupancy during the analysis period is 1.2. During the peak hour between 6:15am and 7:15am, just over 4,200 people entered the site and the average auto occupancy was 1.38, the highest of the fully functional analysis sites. In addition, the increased person-trip volume relative to the vehicle-trip volume is fairly consistent throughout the analysis period, as shown in the space between the vehicle and person lines in Figure 33.

Figure 34 shows the mode split for people entering WRNMMC during the analysis period. 62% of people entering drove alone, which is the lowest proportion of the Maryland analysis sites. 12% arrived via transit, most of that on Metrorail. 23% of people arrived via carpool or vanpool.

Figure 35 shows AADTs for roadways near WRNMMC. MD 355 right next to the installation has a volume of nearly 45,000.

Figure 32: Walter Reed National Military Medical Center – Gate Location



Figure 33: Distribution of Persons and Vehicles Entering WRNMMC

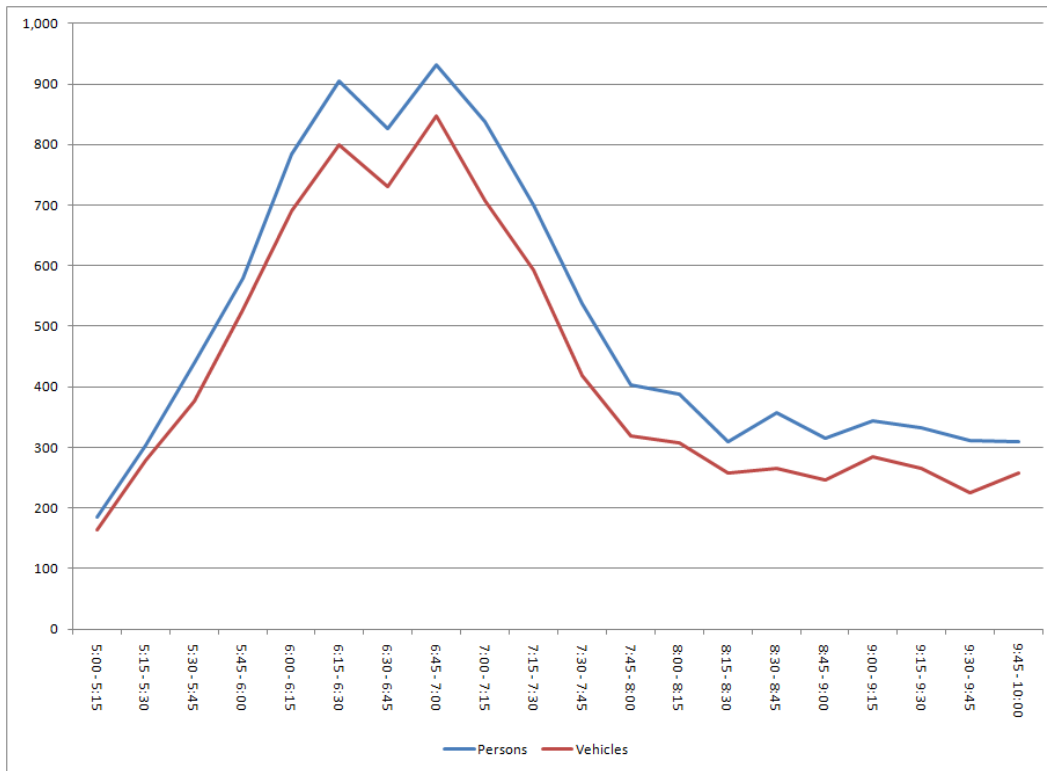
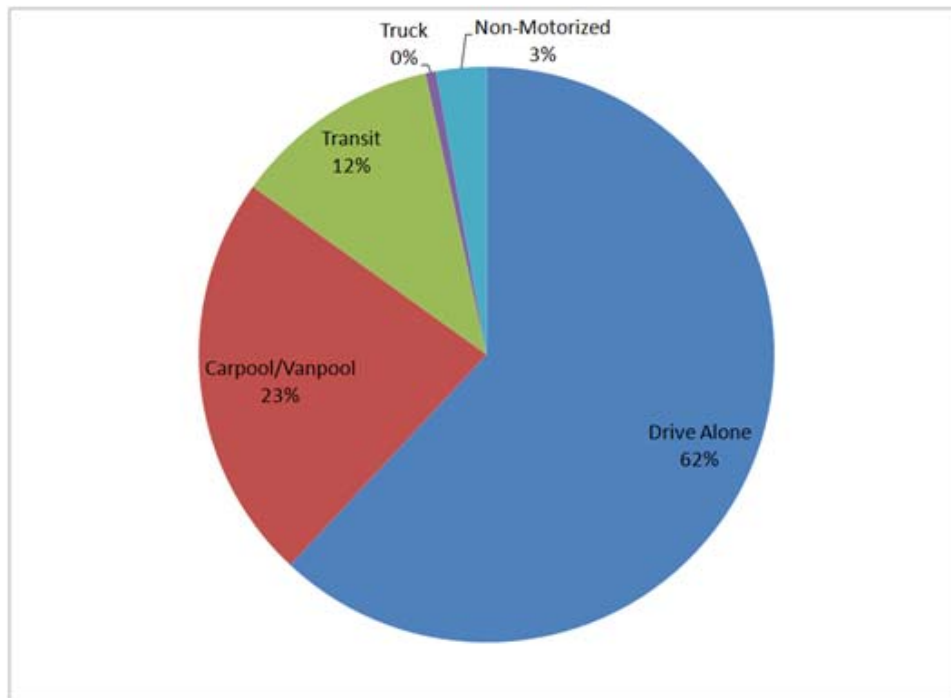
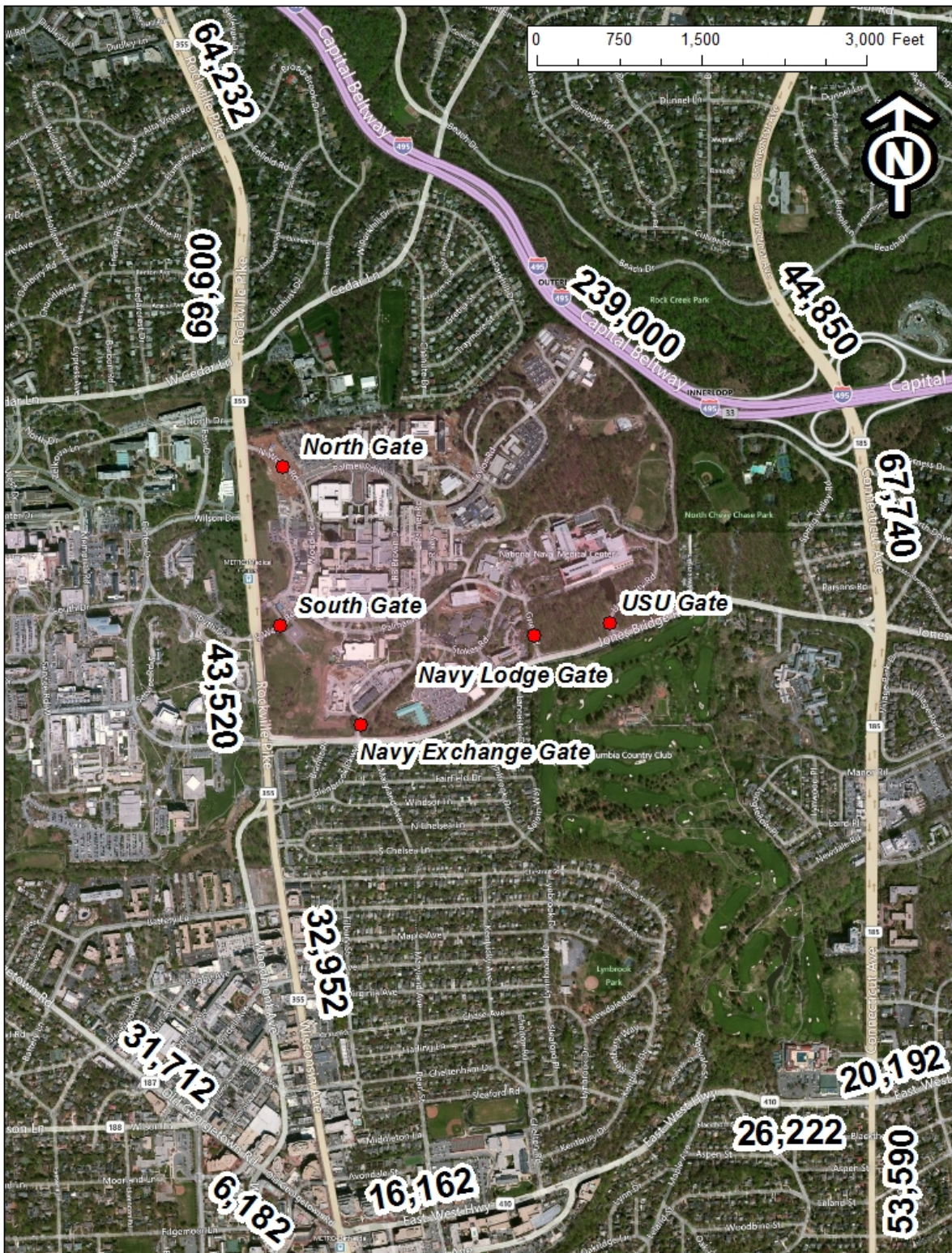


Figure 34: Person Mode Split - WRNMMC²⁴



²⁴ At-gate counters not positioned to directly capture transit riders due to long walk from station and bus stops to base gates. 100% of non-motorized person trips at South Wood Gate assumed to be transit as it is the closest gate to Metrorail exit and bus stops. This assertion was confirmed by review of Metrorail station counts obtained from WMATA.

Figure 35: AADTs for Roadways near WRNMMC



Virginia

Army National Guard Readiness Center

The Army National Guard Readiness Center (ARNGRC) is a National Guard facility located at the southeast quadrant of the interchange between Arlington Boulevard (US 50) and South George Mason Dr in Arlington County. Immediately adjacent to the installation and intersection, but outside the fence line, are a Masonic Lodge (a source of informal parking) and three newly constructed housing units. The base occupies approximately 15 acres that were originally part of historic Arlington Hall; the historic structure itself and the balance of the original estate land lie just to the east and house the George P. Shultz National Foreign Affairs Training Center, named for the former Secretary of State under President Reagan. The two complexes are separated by a security fence and have separate access points. The original building at ARNGRC was completed in 1992 and housed approximately 1,300 employees. The BRAC action increased the total personnel to approximately 2,500 and construction of a second building and additional parking to accommodate the new employees (relocated from Jefferson Plaza 1 in Crystal City) was completed last year. As part of the construction, the main gate was moved approximately 50 feet north on South George Mason Dr. The old gate was retained for truck deliveries to the new building.

There are two access points to ARNGRC (see Figure 36): the relocated gate on South George Mason Dr, and a new gate on Arlington Blvd.²⁵ Transit service is provided by Metrobus Route 22A, which stops at the gate on South George Mason Dr., and Route 4A, which stops at Arlington Blvd and George Mason Dr.²⁶ These routes connect with the Ballston-MU (Orange Line), Pentagon (Yellow / Blue Lines) and Rosslyn (Orange / Blue Lines) Metrorail stations, respectively. Ballston-MU is the closest Metrorail station, about a mile away to the north. DoD operates a series of shuttle routes to the site that connect with Ballston, the Pentagon City Metrorail station (Blue/Yellow Lines), the Pentagon, Crystal City, and Joint Base Myer-Henderson Hall (JBM-HH).²⁷

South George Mason Dr is a four-lane divided roadway with a posted speed limit of 30 miles per hour, although observed speeds often exceed the speed limit in uncongested conditions, particularly travelling southbound. The gate on South George Mason Dr has a crosswalk but is not signalized for either vehicle or pedestrian movements; as a result, two uniformed DoD police officers (one for each carriageway) provide traffic control to allow safe pedestrian crossing between 7am and 8am and 5pm and 6pm on weekdays. A Transportation Management Plan was completed for the site in June 2008 and contains information about employees' home location and travel mode based on an employee survey, including those workers relocated from Crystal City.²⁸

²⁵ The intersection of Arlington Blvd and George Mason Dr is grade-separated (George Mason over Arlington). The entrance to the site is actually from the eastbound service road that serves as the on-ramp for traffic from George Mason to eastbound Arlington Blvd.

²⁶ Using the aforementioned service roads / ramps

²⁷ Under the BRAC 2005 action, this joint base was created by merging the operations of Fort Myer and Henderson Hall in Arlington with Fort McNair in the District of Columbia.

²⁸ See <http://www.bracarlingtonva.us/default/index.cfm?LinkServID=991B76D5-1D09-08FB-3BB35E6FF49F3949&showMeta=0>

Figure 37 shows the distribution of vehicles and people entering ARNGRC during the morning analysis period. Just over 1,100 vehicles carrying just under 2,100 people entering the facility during the five hours analyzed. Average auto occupancy for this period was 1.16. During the peak hour of 6:45am to 7:45am, 398 people entered the site and average auto occupancy was 1.22.

The mode split for people entering ARNGRC during the analysis period is shown in Figure 38. Slightly less than half of people entering the facility during this time drove alone, the lowest proportion of the active and occupied sites. The rest of the trips are split between transit, non-motorized, and carpool / vanpool. Some of the non-motorized person-trips may be transit riders alighting at the bus stop at the intersection of South George Mason Dr and Arlington Blvd and walking to the facility gates.

Figure 39 shows AADTs for roadways near ARNGRC. South George Mason Dr near the facility has a volume of just under 30,000 vehicles.

Figure 36: Army National Guard Readiness Center – Gate Location



Figure 37: Distribution of Persons and Vehicles Entering ARNGRC

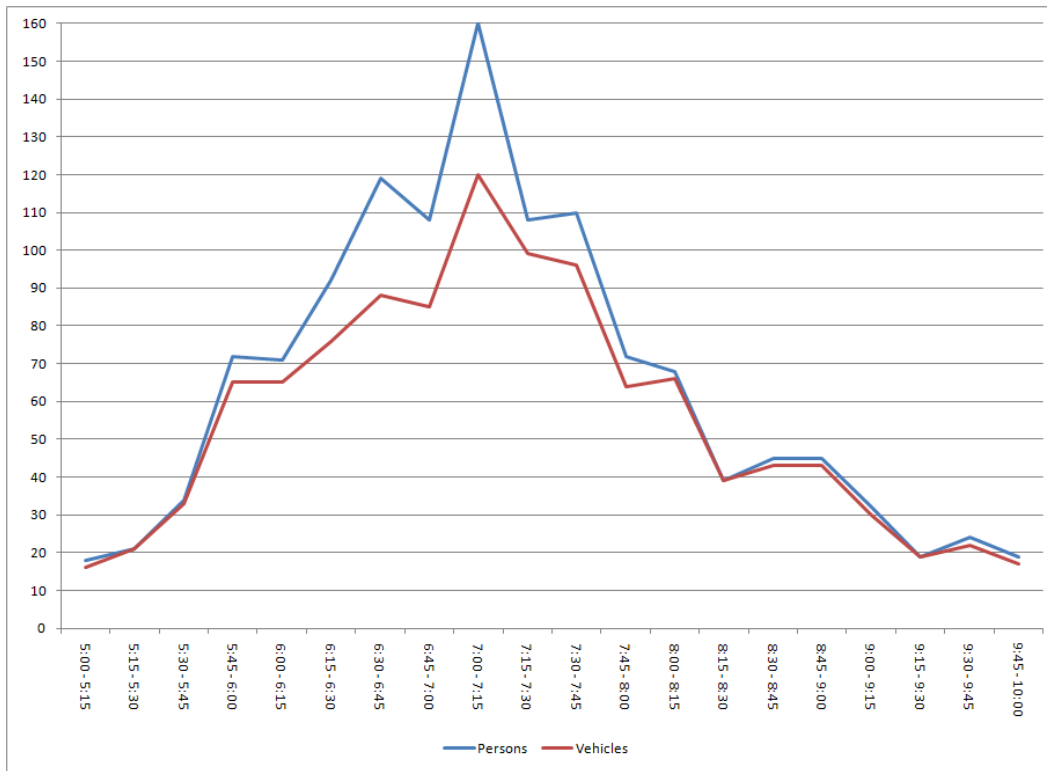
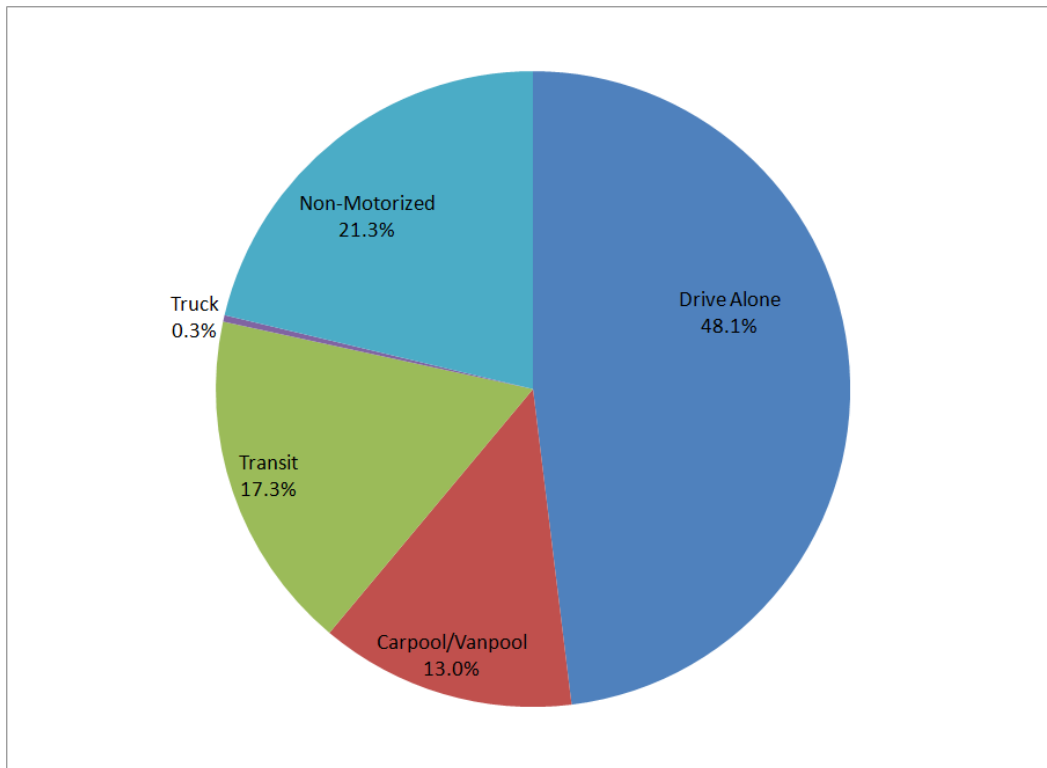


Figure 38: Person Mode Split - ARNGRC



Fort Belvoir and Fort Belvoir North

Fort Belvoir is located along Richmond Highway (US 1) and I-95 in Fairfax County. It consists of two separate sites, the larger main post (located on the east and west sides of US 1 south of Mount Vernon Highway (VA 235) and the smaller Fort Belvoir North area (the former Engineer Proving Ground), generally bounded by I-95, the Fairfax County Parkway (VA 286) and the neighborhoods just south of the Franconia-Springfield Parkway (VA 289).²⁹ The National Geospatial Agency (NGA) is the primary tenant at Fort Belvoir North, while the main post hosts a number of Army functions. In 2006, there were about 23,300 jobs at Fort Belvoir and Fort Belvoir North. As of 2011, there were about 36,400 jobs on the two sites. NGA represents 8,500 of that total.

Recent transportation improvements in the area include:

- Completion of the final section of VA 286 between Newington and VA 289, including a new interchange on the west side of Fort Belvoir North at Barta Road
- A new ramp from the I-95 Express Lanes (HOV-3 restricted during peak commute times) to Heller Road on Fort Belvoir North

In addition, the Federal Highway Administration (FHWA) and VDOT are studying improvements to US 1, which may include widening of the highway from four to six lanes through the Fort Belvoir area, and improvements to ease turning movements along US 1 between VA 7100 and Pohick Road, which provides access to Tulley Gate for the main post. There were nine (9) monitored access points at the main post, as many parts of the installation are not geographically contiguous (see Figure 40). Gunston Rd crosses US 1 on an overpass, so base personnel using one of the access points on the east side of US 1 (Tulley Gate, Pence Gate, or Walker Gate) can securely proceed to the portion of the installation west of US 1 not otherwise access controlled. Parking at NGA at Fort Belvoir North is capped at 5,100 spaces. The three Fort Belvoir North gates are well inside the perimeter roadway of the site (see Figure 41).

Transit service is provided to the main post by Metrobus Richmond Highway Express (REX) service, which enters the base via Pence Gate and makes several stops inside the installation, including the Fort Belvoir Community Hospital, whose construction was authorized under the BRAC 2005 action and began serving patients on August 31, 2011. REX provides limited stop service via US 1 to the Huntington and Eisenhower Ave Metrorail stations on the Yellow Line and the King Street-Old Town station (Yellow / Blue Lines). Fairfax Connector Route 335 (also called Eagle or Eagle Express³⁰) provides weekday peak period express service between the Franconia-Springfield Metrorail terminal station on the Blue Line and the main post, stopping near the Kingman Gate close to the Defense Logistics Agency (DLA) and proceeding along Gunston Rd to the east side of the installation before also stopping at the hospital. DoD-operated shuttles connect NGA to the Franconia Springfield Metrorail station.

²⁹ Previously VA 7100 and VA 7900. Both of these facilities have been renumbered as part of their placement onto the VDOT primary road network as a result of Commonwealth Transportation Board (CTB) action earlier this year.

³⁰ This route was also proposed to the WMATA Board as Route 27X, but after consultation between the two agencies was operated as a Fairfax Connector route. Initially there was a DoD-operated shuttle that mirrored this route, but it since has been discontinued.

Due to security concerns raised by NGA personnel, data for Fort Belvoir and Fort Belvoir North are presented three different ways: for both installations combined, for main post Fort Belvoir, and for Fort Belvoir North without total vehicle and person volumes. The distribution of vehicles and people entering each site are shown in Figure 42 for both of the installations combined, Figure 44 for the main post Fort Belvoir, and Figure 47 for Belvoir North. The y-axis labels have been removed on Figure 47 to meet the requirements of NGA. Just over 26,000 vehicles carrying more than 28,400 people entered the combined installations during the five-hour morning analysis period. Average auto occupancy during this period was 1.1. During the peak hour of 6:45am to 7:45am, just over 8,900 people entered the combined sites and average auto occupancy was 1.15. For just main post Fort Belvoir, average auto occupancy was 1.1 for the analysis period and 1.17 for the peak hour of 6:45am to 7:45am. For Fort Belvoir North, average auto occupancy was 1.1 for both the analysis period and peak hour of 6:45am to 7:45am. Entries to Belvoir North drop off sharply after 7:30am.

The mode split for people entering the sites during the analysis period are shown in Figure 43 for both installations combined, Figure 45 for the main post, and Figure 48 for Belvoir North. For the combined installations, 83% of the people entering during the analysis period drove alone, with most of the rest using a carpool or vanpool. The proportion of drive alone entries is 82.5% for just the main post, and 81.2% for just Belvoir North. Belvoir North has the higher carpool / vanpool and transit share. The results for main post Fort Belvoir differ slightly from the results of their 2008 commuter survey, which showed 84.8% drive alone, 9.9% carpool / vanpool, 4% transit, 0.7% non-motorized, and the rest “other.” Given the parking caps at NGA, the higher share for travel modes other than drive-alone is expected.

AADTs for roadways near Fort Belvoir and Fort Belvoir North are shown in Figure 46 and Figure 49, respectively. Volumes on US 1 bisecting the main post are nearly 44,000 vehicles.

Figure 40: Fort Belvoir Gate Location

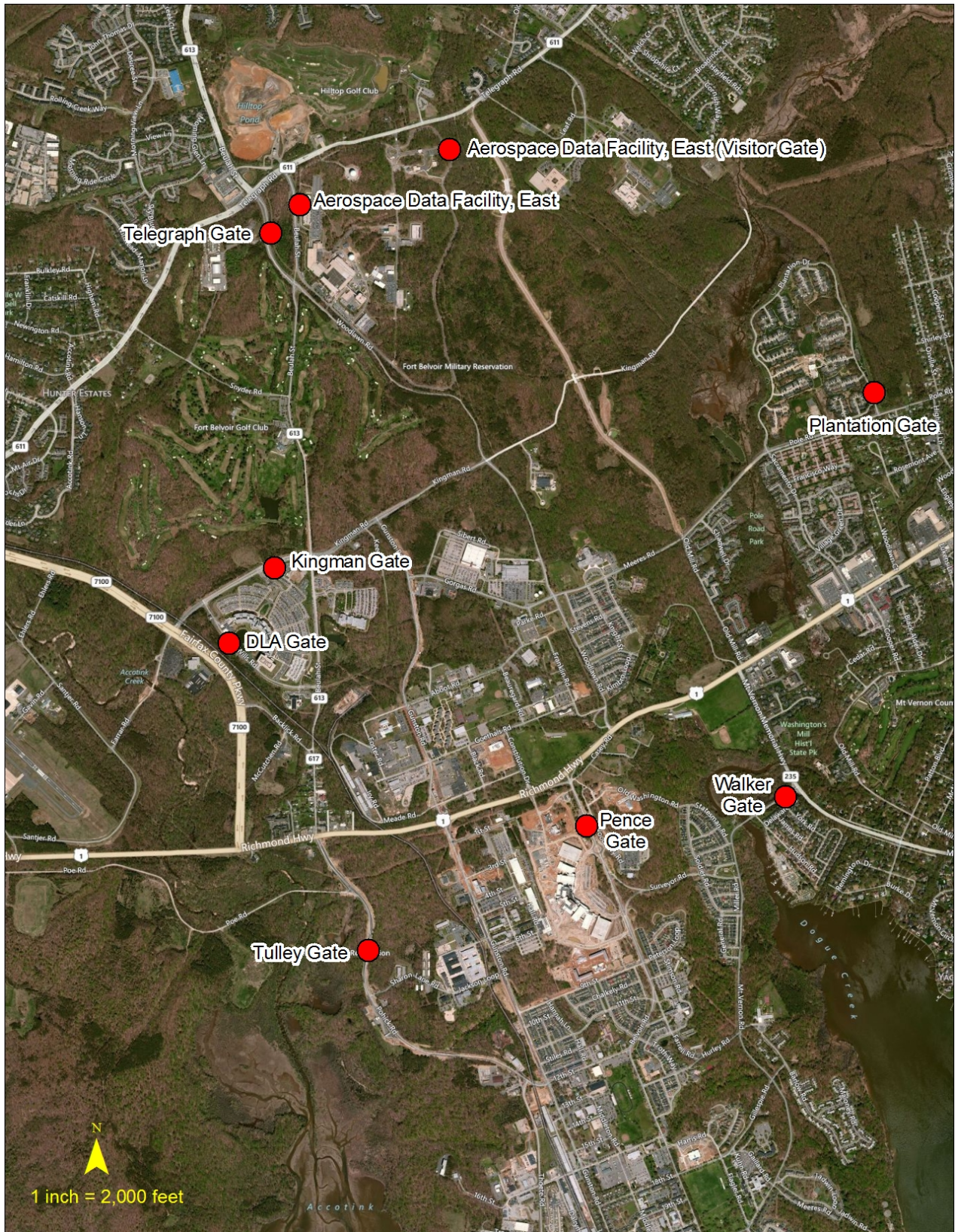


Figure 41: Fort Belvoir North Access Locations

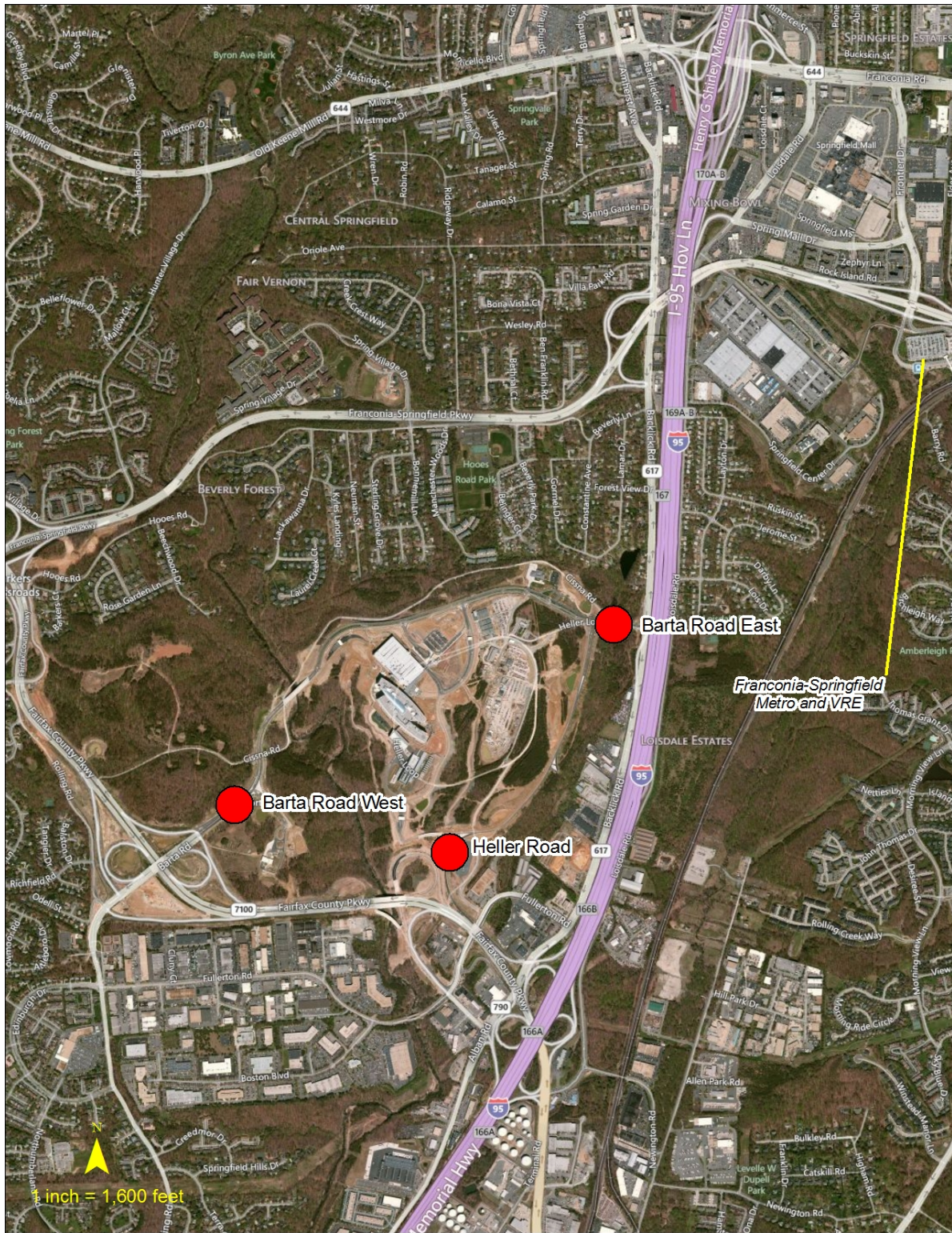


Figure 42: Distribution of Persons and Vehicles Entering Fort Belvoir and Fort Belvoir North

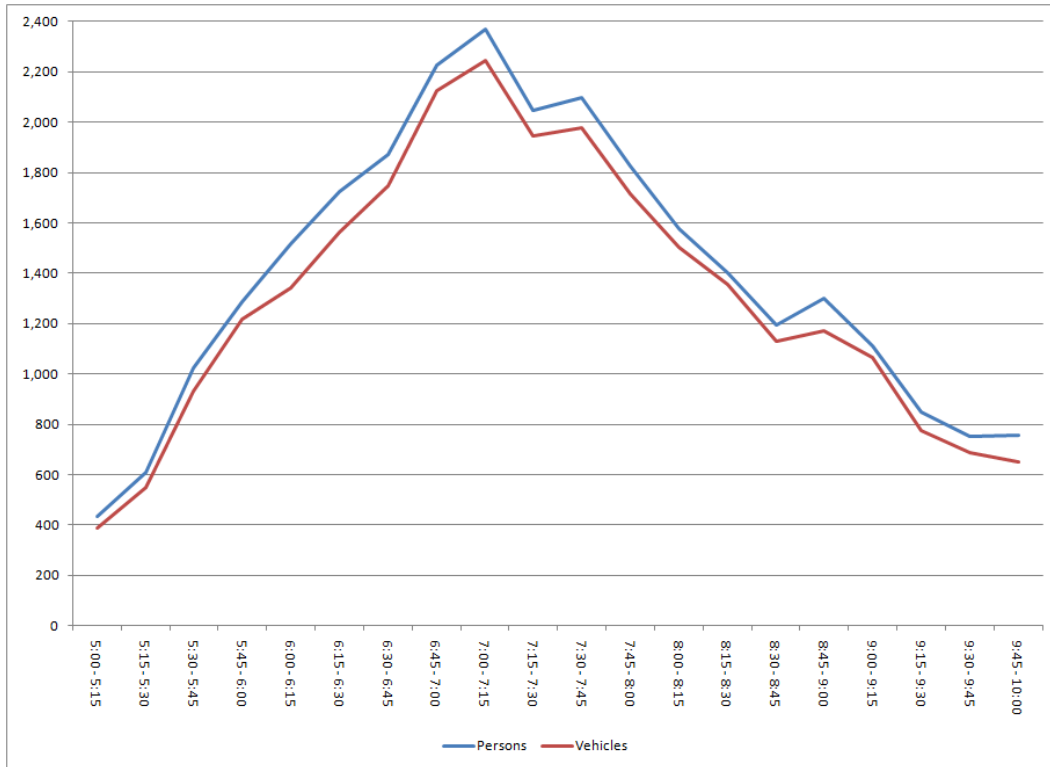


Figure 43: Person Mode Split – Fort Belvoir and Fort Belvoir North

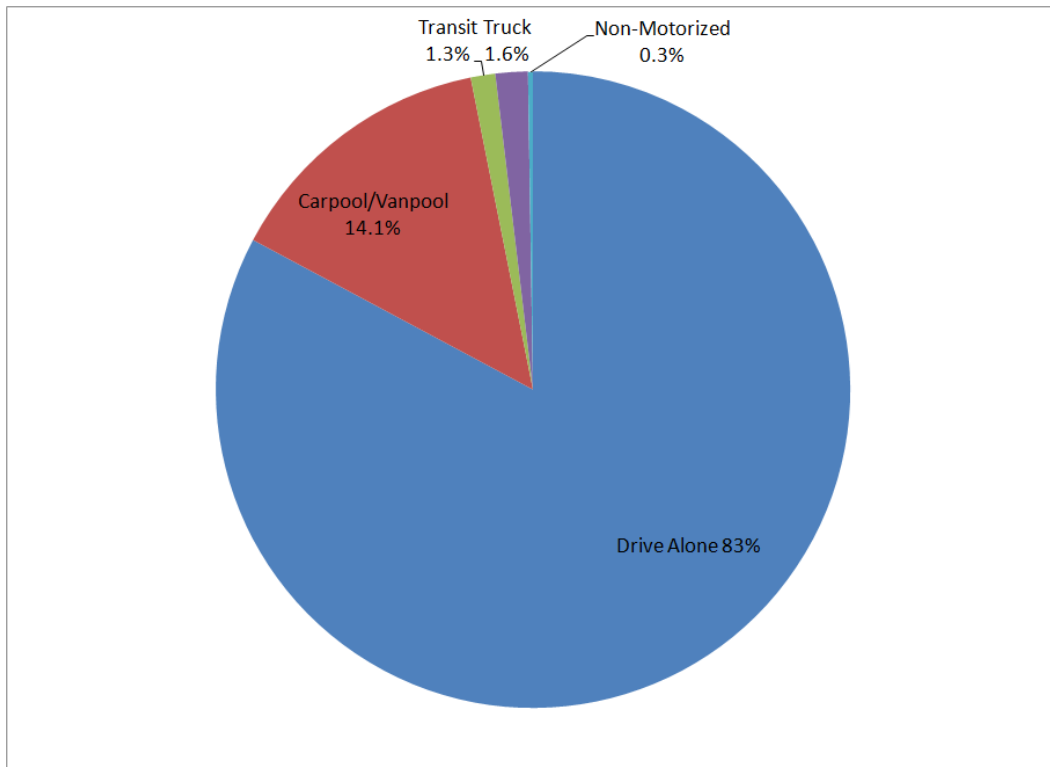


Figure 44: Distribution of Vehicles and Persons Entering Fort Belvoir

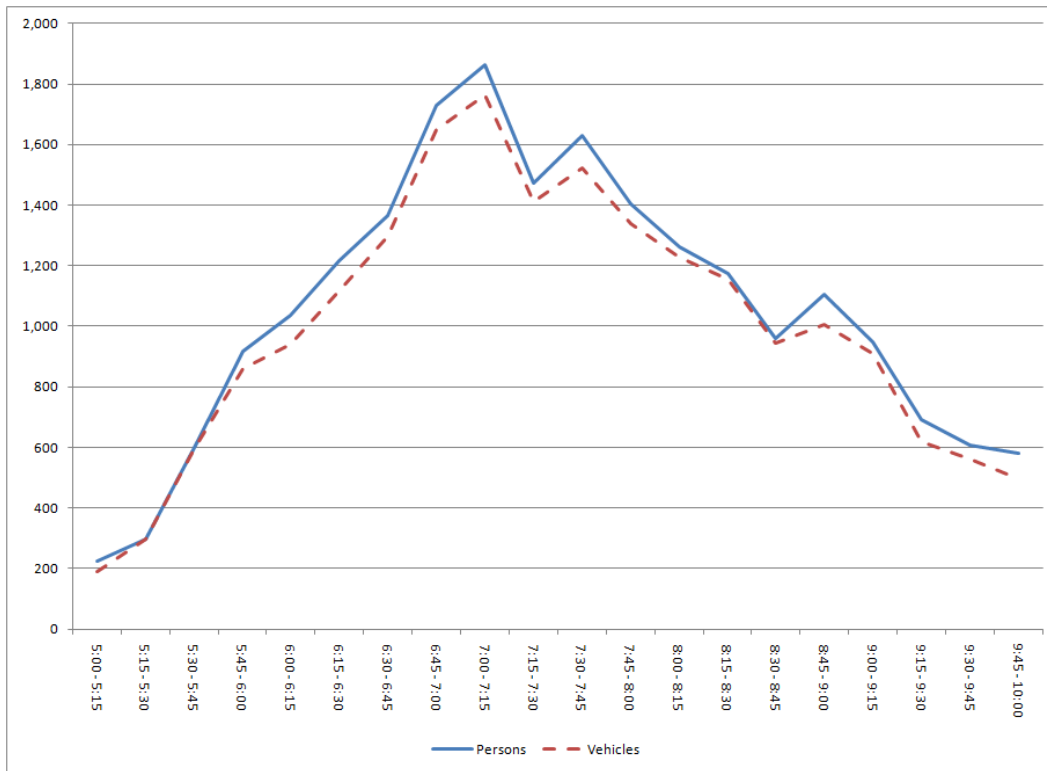


Figure 45: Person Mode Split – Fort Belvoir

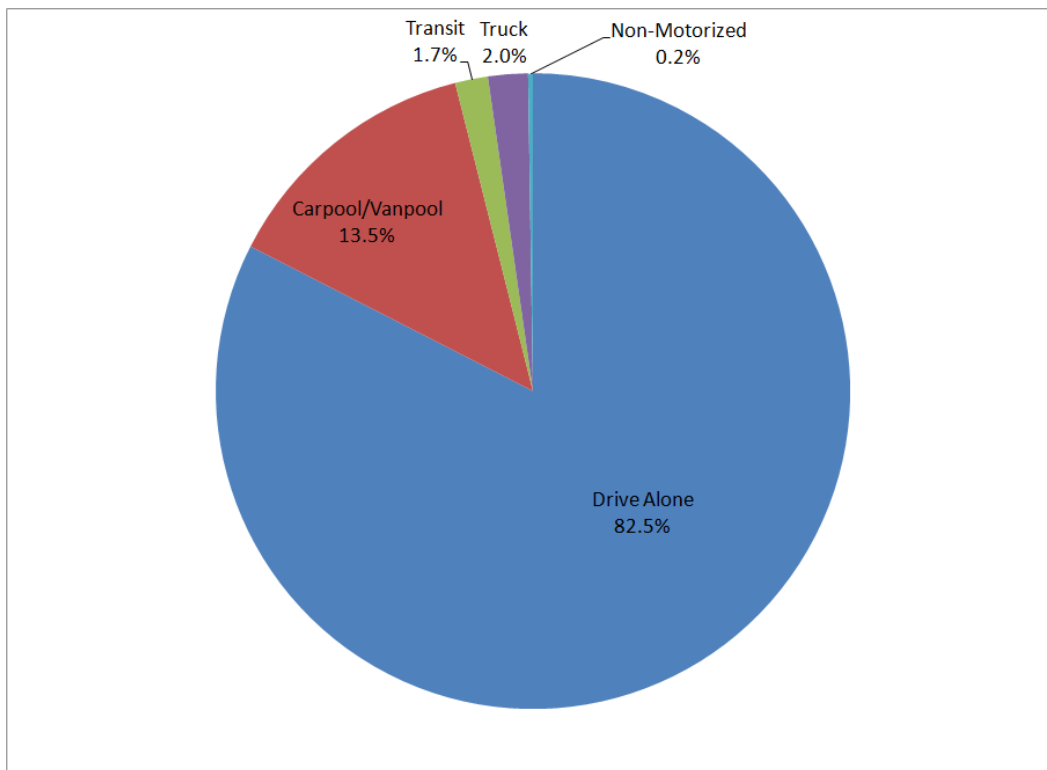


Figure 46: AADTs for Roadways near Fort Belvoir

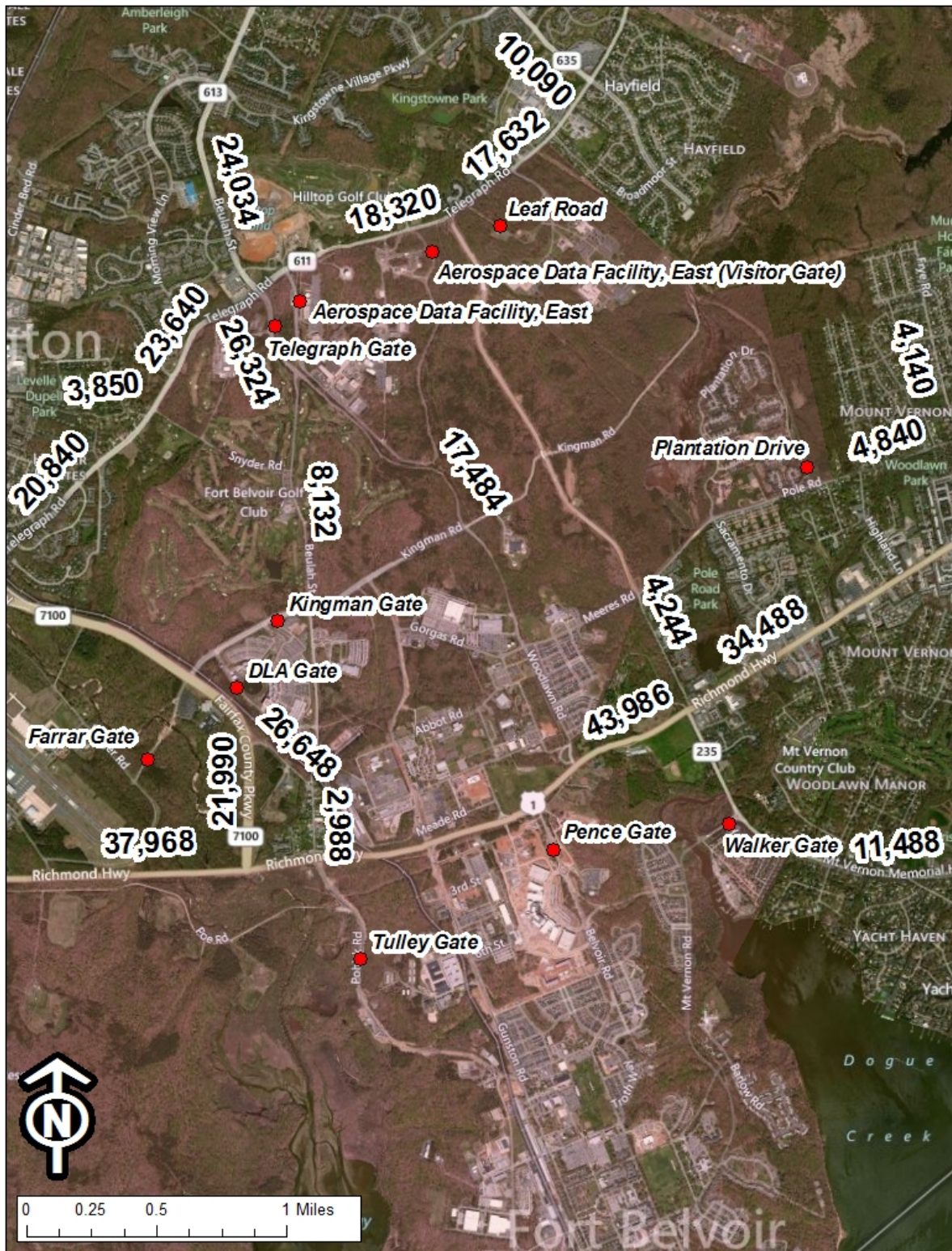


Figure 47: Distribution of Persons and Vehicles Entering Fort Belvoir North

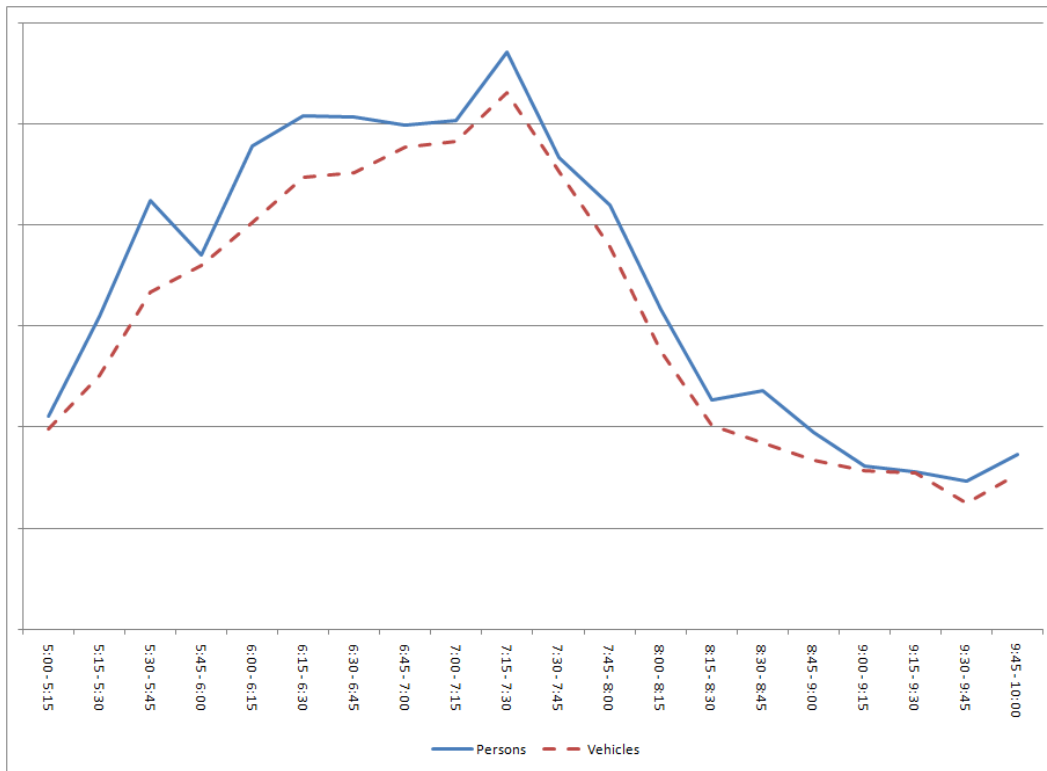


Figure 48: Person Mode Split – Fort Belvoir North

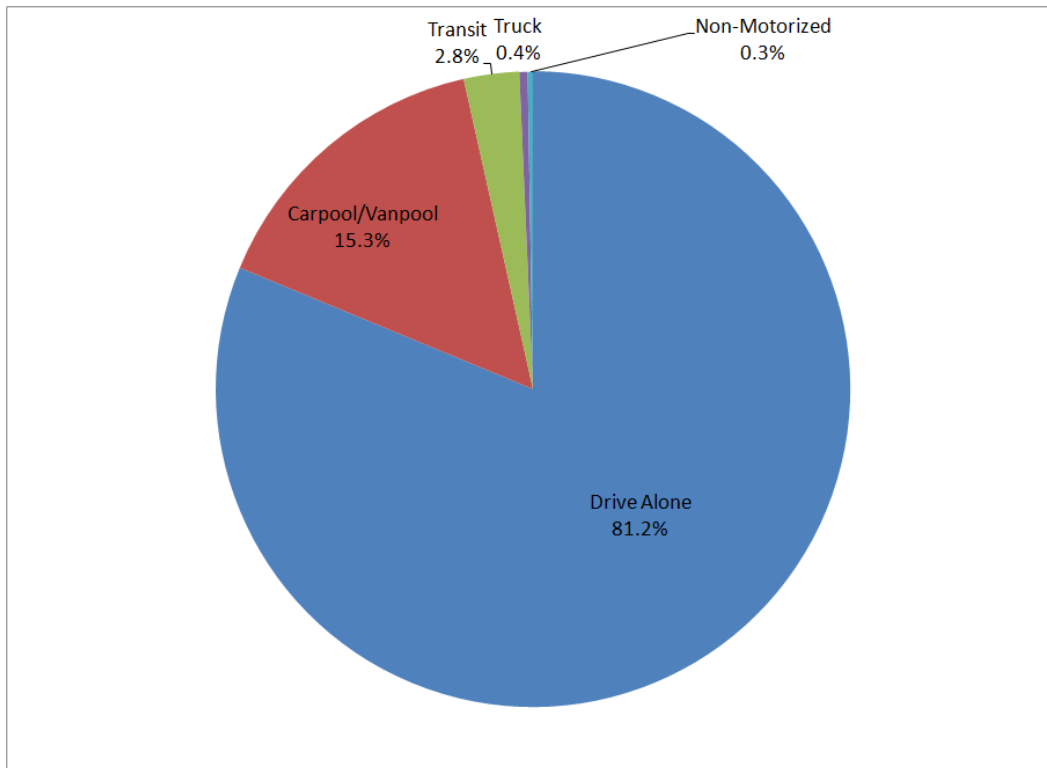


Figure 49: AADTs for Roadways near Fort Belvoir North



Mark Center

The Mark Center is located at the southwest quadrant of the interchange of I-395 and Seminary Road in the City of Alexandria. Access to the site is via Mark Center Avenue, which intersects Seminary Road, and Mark Center Drive, which intersects North Beauregard Street (see Figure 50). The Mark Center was built to house about 6,400 employees of the Department of Defense (of which more than half have moved in as of May 2012). Adjacent is the Institute for Defense Analysis (IDA), which houses about 600 employees.

A new transit bus station with five bus bays, which accommodates service from WMATA Metrobus, Alexandria DASH and private providers was built a short walk from the Mark Center. The Beauregard corridor is one of three under study by the City for high-capacity transit service. The Virginia Department of Transportation (VDOT) is planning to build a new reversible ramp from the I-395 High Occupancy Vehicle (HOV) lanes to enable direct access from those lanes to Seminary Road during the morning peak commute period, and from Seminary Road to the HOV lanes in the afternoon commute period. These lanes are limited to HOV-3+ (three-or more person car-pools, van-pools, buses and motorcycles) while in northbound operation from 6:00 AM to 9:00 AM and southbound from 3:30 PM to 6:00 PM.

An Environmental Assessment (EA) for the direct ramp connection was recently completed and resulted in a Finding of No Significant Impact (FONSI). Construction is expected to begin on the \$80 million project in spring 2013, with completion estimated for summer 2015. The Washington Headquarters Services (WHS), the DoD administrative landlord for the Mark Center, will soon hire a consultant to assist with the implementation phase of the site's Transportation Management Plan (TMP). Currently, Mark Center parking is capped at 2,000 usable spaces (out of 3,800 total spaces) for WHS employees and contractors.

The site and its bus station are served by Metrobus Route 28X, Route 7A/F/M/W/X/Y, and 8W and DASH routes AT-1 and AT-2. Route 28X provides limited stop service along Leesburg Pike (VA 7) and connects with Bailey's Crossroads, Seven Corners, the West Falls Church Metrorail station on the Orange Line and Tysons Corner. Route 28A provides local service on the same corridor; however, it stops on Seminary Rd near the Mark Center, whereas the 28X stops at the Mark Center transit station. The multiple variations on Metrobus Route 7 provide connectivity between the site and parts of Alexandria, Arlington, and downtown Washington, including stops at the Pentagon and Federal Triangle Metrorail stations (Blue / Orange Lines). The 7M provides direct service between the Mark Center and Pentagon via I-395. The 8W also connects to the Pentagon. The AT-1 operates largely on Beauregard St and connects with the Van Dorn Street Metrorail Station on the Blue Line. A service extension through the Eisenhower Valley is proposed for the AT-1, terminating at the Eisenhower Avenue Metrorail station on the Yellow Line. The AT-2 operates from Lincolnia to the Mark Center and then along Seminary Rd, Janneys Ln, and King St (VA 7) and connects with the King Street-Old Town Metrorail station (Blue / Yellow Lines).

Previous traffic studies for the Mark Center have been the subject of controversy and pointed exchanges between the Army, the DoD Office of the Inspector General, and other federal, state, and local officials. The counts at the Mark Center taken for this report are intended as another data point, a supplement to all the previous work and not as a replacement or a substitute. In

addition to the counts at the site entrance included in the report body, field staff also collected volume and occupancy counts (not turning movements) during the five-hour morning analysis period along Mark Center Drive near the entrance to IDA and the Mark Center building, as well as the ramps from the general purpose lanes of I-395 (in both directions) to Seminary Rd. Those counts are available in with the rest of the individual base counts in Appendix A.

The distribution of vehicles and people entering the Mark Center during the five-hour morning analysis people is shown in Figure 51. Slightly fewer than 4,300 vehicles carrying just under 5,600 people entered the site during the analysis period. Average auto occupancy during the analysis period was 1.14. During the peak hour from 8:00am to 9:00am, just over 1,500 people entered the site and the average auto occupancy was 1.13. The data collection at Mark Center occurred prior to full occupancy of the complex by BRAC-relocated personnel.

The mode split for people entering the site during the morning analysis period is shown in Figure 52. 66% of the people entering the site drove alone, 15% arrived via carpool / vanpool, and 17% by transit. It is expected that completion of the direct connection to Seminary Rd from the northbound HOV lanes on I-395 will increase the proportion of person-trips entering the site via carpool or vanpool, since the use of the grade-separated lanes and the direct connection will introduce a time savings for travelers over the general purpose lanes and over the route HOV lane users must currently take to reach the Mark Center.³¹

AADTs for roadways near the Mark Center are shown in Figure 53. AADT for Seminary Road next to the complex is over 50,000 vehicles, with a diversion of 10,000 at Beauregard Street.

³¹ Morning travelers using the HOV lanes on I-95 currently have two options to reach the Mark Center: exit the HOV lanes and enter the general purpose lanes using the Newington flyover and continue the remainder of their trip in the general purpose lanes (nearly seven miles in highly congestion conditions), or continue in the HOV lanes to the Pentagon and then proceed in the reverse direction (southbound) in the general purpose lanes to Seminary Rd (adding nearly eight miles to their overall trip).

Figure 50: Mark Center – Monitoring Locations

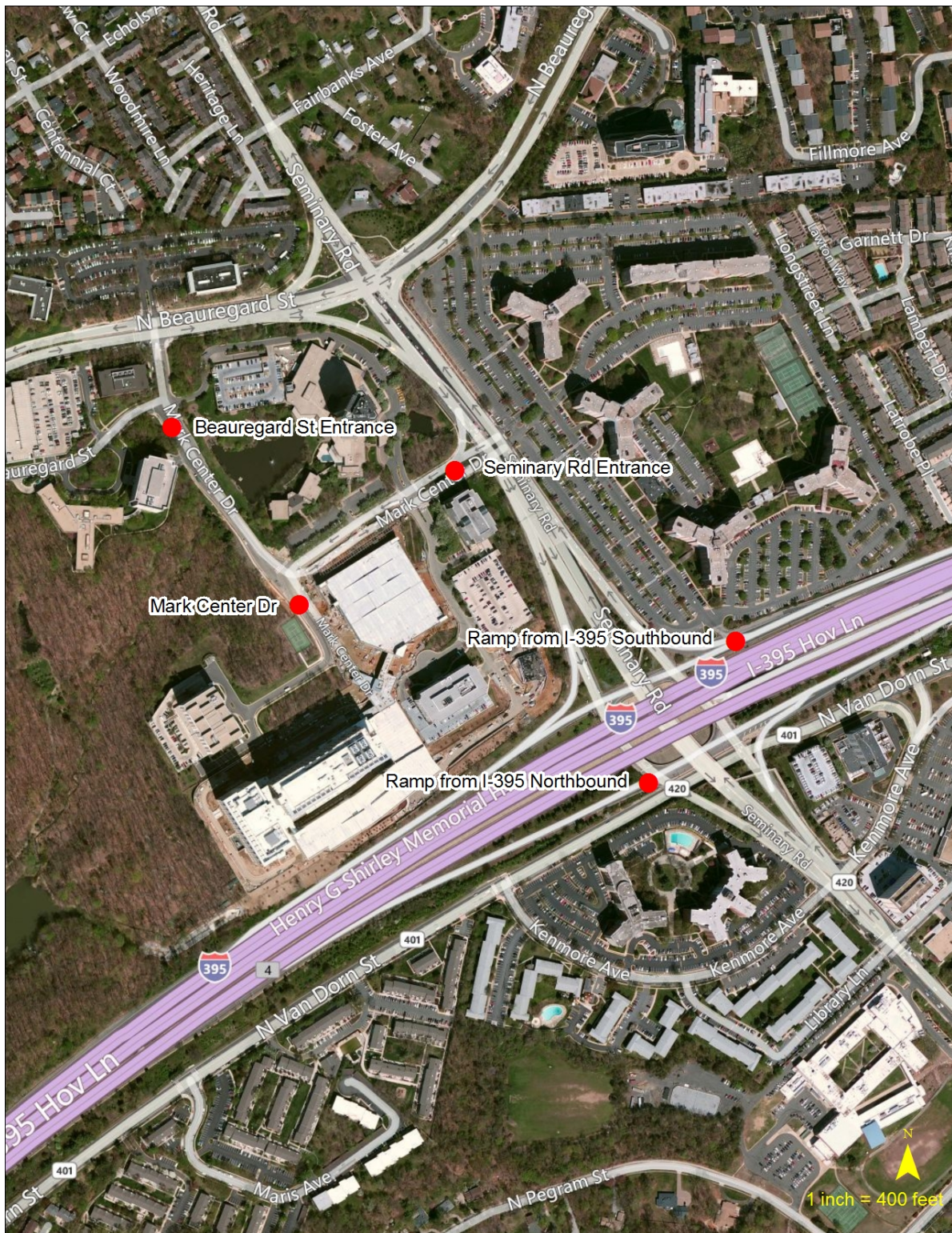


Figure 51: Distribution of Persons and Vehicles Entering Mark Center

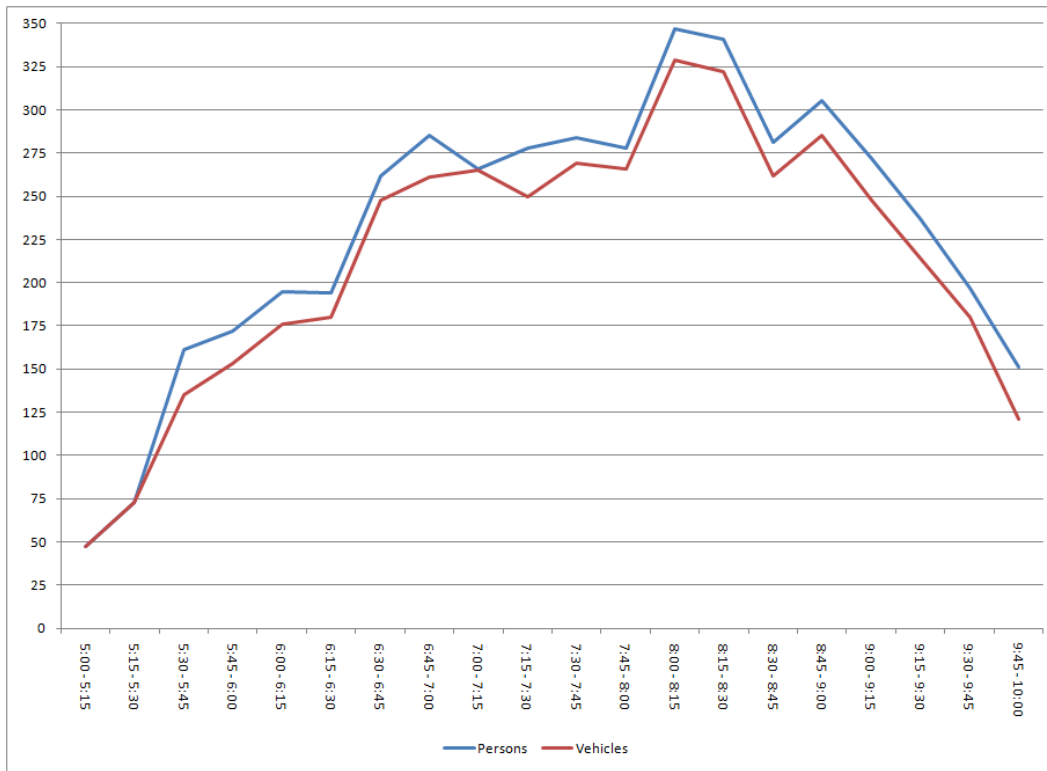


Figure 52: Person Mode Split – Mark Center

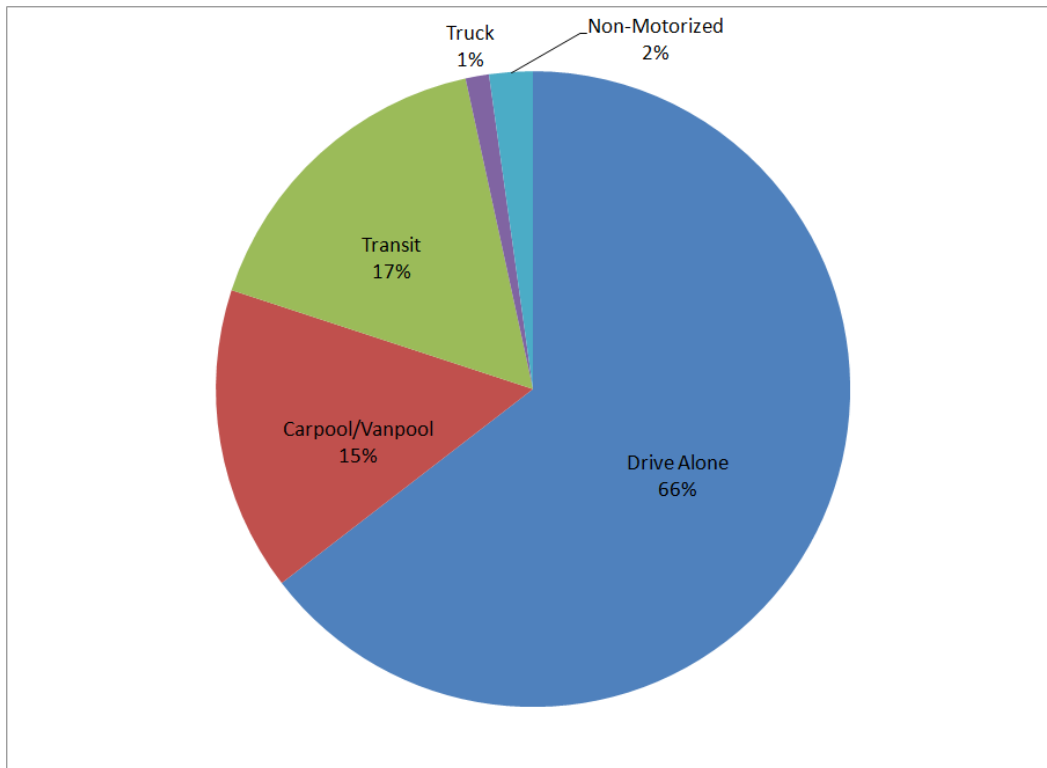
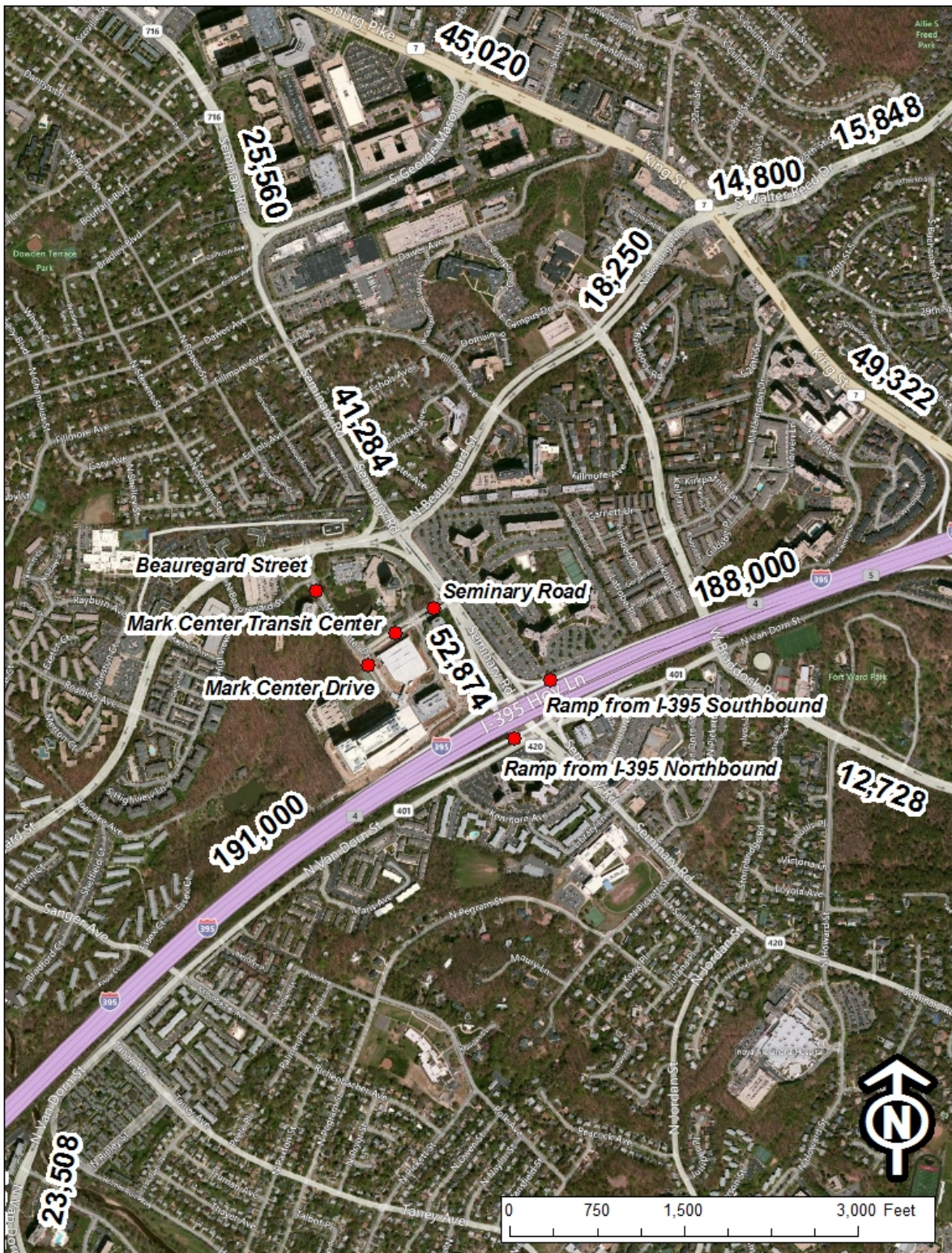


Figure 53: AADTs for Roadways near Mark Center



Marine Corps Base Quantico

Marine Corps Base Quantico (MCB Quantico) covers nearly 100 square miles on both the east and west sides of I-95 near Triangle in Prince William County. Base property also extends into Stafford and Fauquier counties. The Town of Quantico on the Potomac River in eastern Prince William County is surrounded by the base on three sides. The base is home to the Marines' Officer Candidate School, Marine Helicopter Squadron One (HMX-1, which transports the President of the United States), as well as the training facilities for the Federal Bureau of Investigation (FBI) and the Drug Enforcement Agency (DEA), which are located west of I-95. Numerous other commands also are housed at the base, which has a population of approximately 28,000 personnel and families. Of this total, about 16,000 are on the main side of the base and the rest on the west side. The base gained approximately 2,600 personnel under the recent BRAC action.

There are two access points to the main side of the base, shown in Figure 54. The Main Gate is located at US 1 and Fuller Rd, and the Back Gate is located at US 1 and Russell Rd. The Quantico Amtrak/VRE (Fredericksburg Line) rail station is located on the far east side of the main base within the Town; a DoD shuttle connects the rail station with locations on the main side of the installation and The Basic School (TBS) for new officer training on the west side. There are three access points to the west side of the base, also called the training area, shown in Figure 55. The Onville Rd Gate is located at the far southwestern part of the installation. The Russell Road Gate provides access to TBS and other facilities. The Telegraph Rd Gate on the west side is adjacent to the Russell-Knox Building, which was constructed to house the majority of the agencies (the Military Department Investigative Agencies and the Defense Intelligence Agency) relocated to Quantico under the BRAC action and reached full occupancy in September 2011. Most of the agencies relocated from other sites in the Washington region.

The distribution of vehicles and persons entering MCB Quantico (both main side and west side) is shown in Figure 56. Just over 15,500 vehicles carrying more than 16,900 people entered the base during the five-hour morning analysis period. Average auto occupancy for the period was 1.1. During the peak hour of 6:45am to 7:45am, nearly 7,100 people entered the base and average auto occupancy was 1.08. Volumes nearly consistent with those experienced during the peak hour occur between 6:15am and 8:15am.

Figure 57 shows the mode split for people entering MCB Quantico during the analysis period. 83% of people entering the base during this period drove alone, with 14% entering via carpool or vanpool and a small percentage using transit (including those arriving via the Quantico rail station). The Russell-Knox Building has nearly a 1-to-1 parking space to employee ratio, so it is speculated that most of those personnel drive alone and that the BRAC action may have increased the overall proportion of workers driving alone to the installation as a whole. Some of the agencies in Russell-Knox were relocated from locations better served by transit, such as WNY and Crystal City.

NAVFAC has just begun an effort to update the TMP for MCB Quantico, which was last updated in 2001. As part of that effort, a commuter survey was conducted in May and June of this year; the results were not available at the time of publication. The TMP will look at all base

transportation issues including travel times and mode split and is part of a larger update of the installation master plan, which can recommend transportation improvements.

Figure 58 shows AADTs for roadways near MCB Quantico. Volumes along US 1 adjacent to the main base are around 20,000.

Figure 54: Marine Corps Base Quantico, Main Base – Gate Location

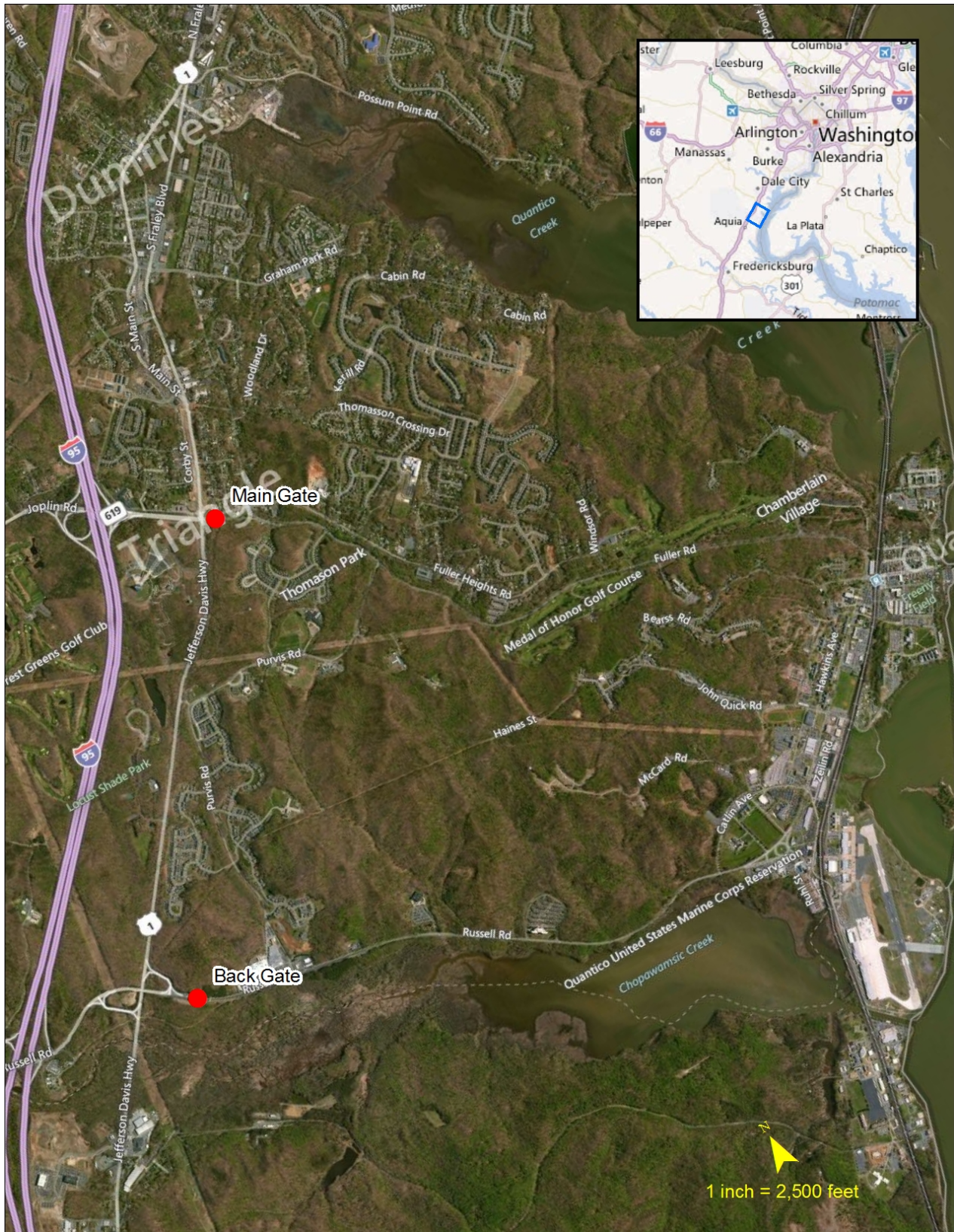


Figure 55: Marine Corps Base Quantico, Training Area – Gate Location

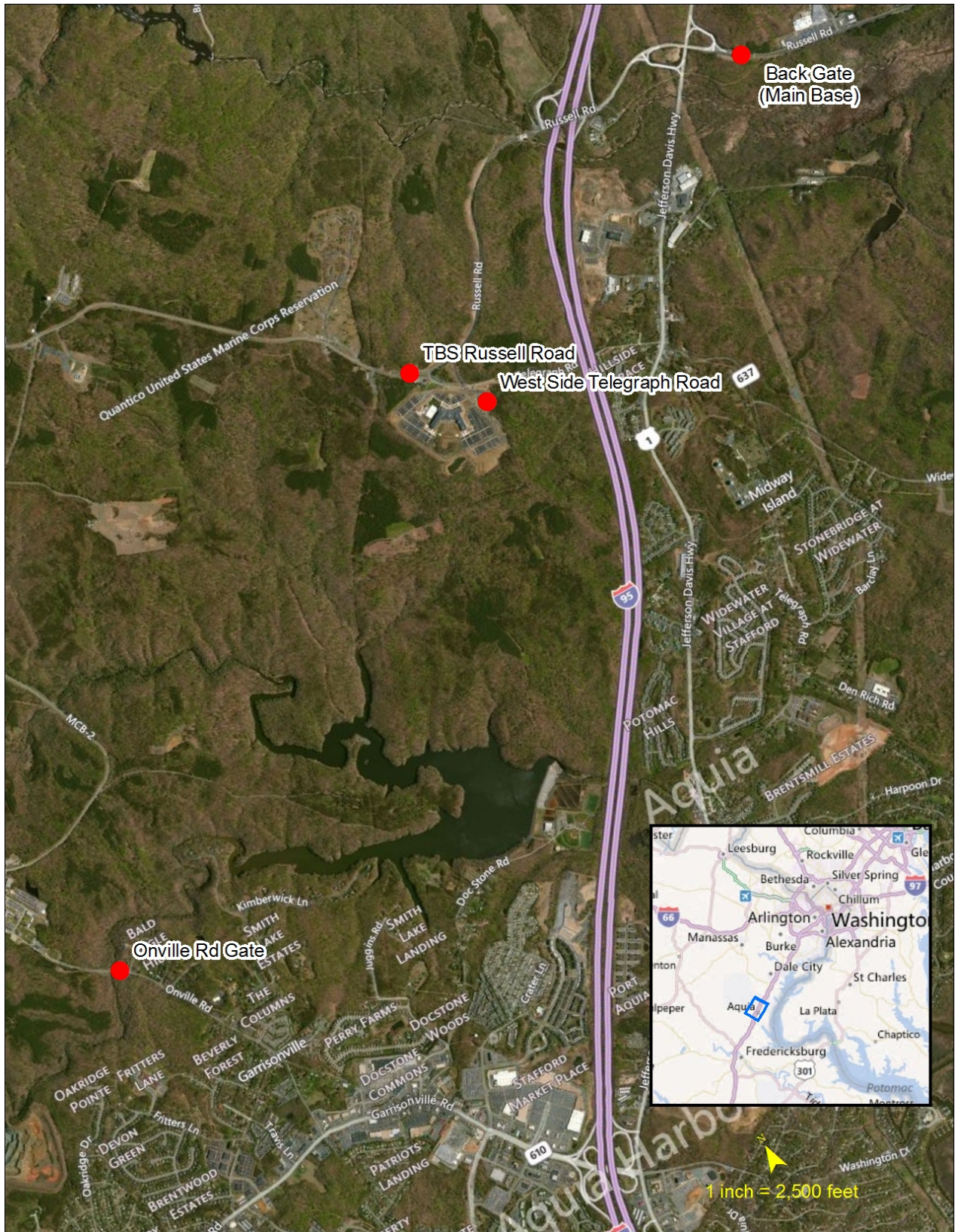


Figure 56: Distribution of Persons and Vehicles Entering MCB Quantico

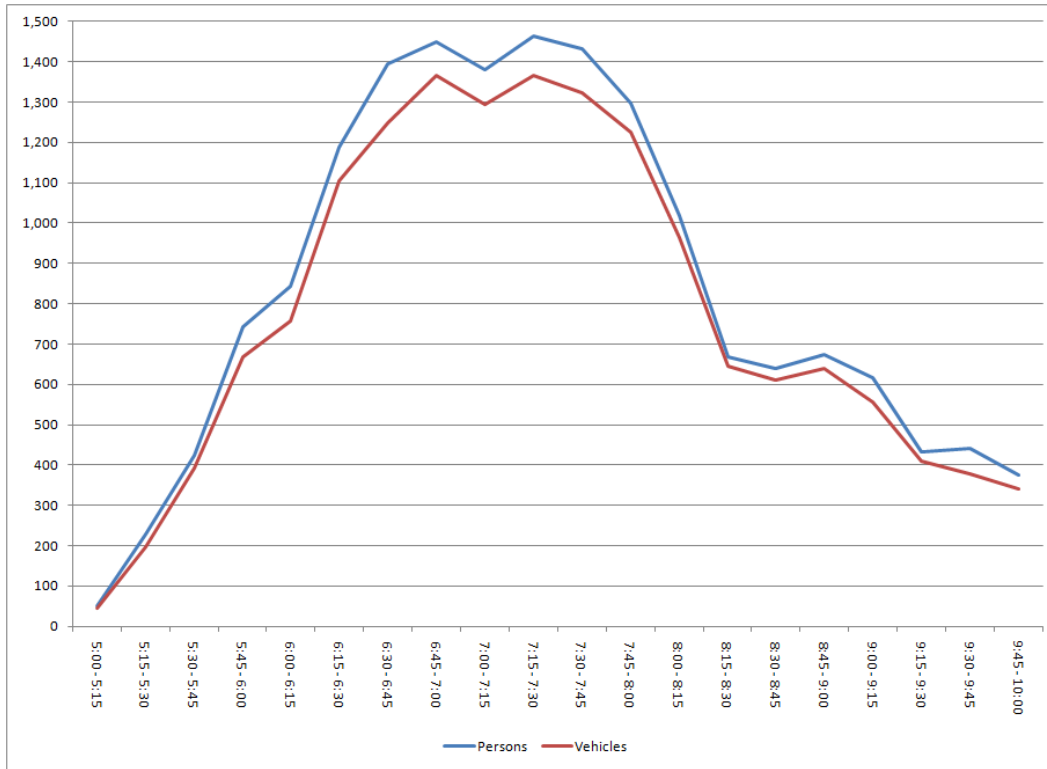


Figure 57: Person Mode Split – MCB Quantico

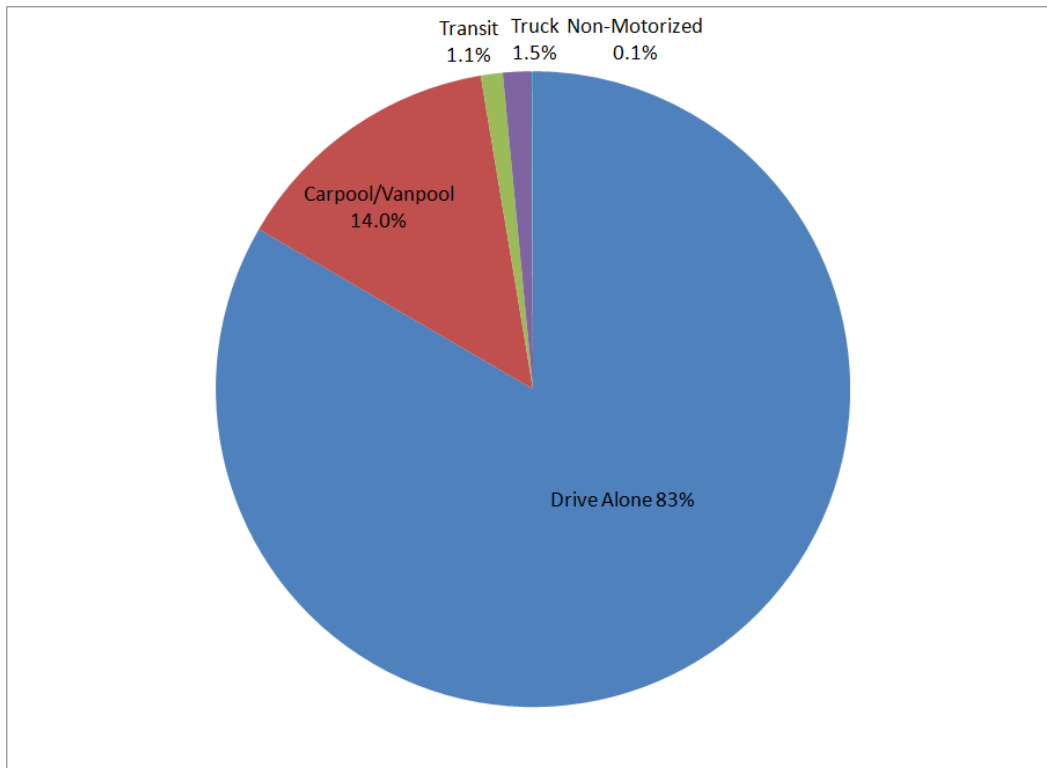
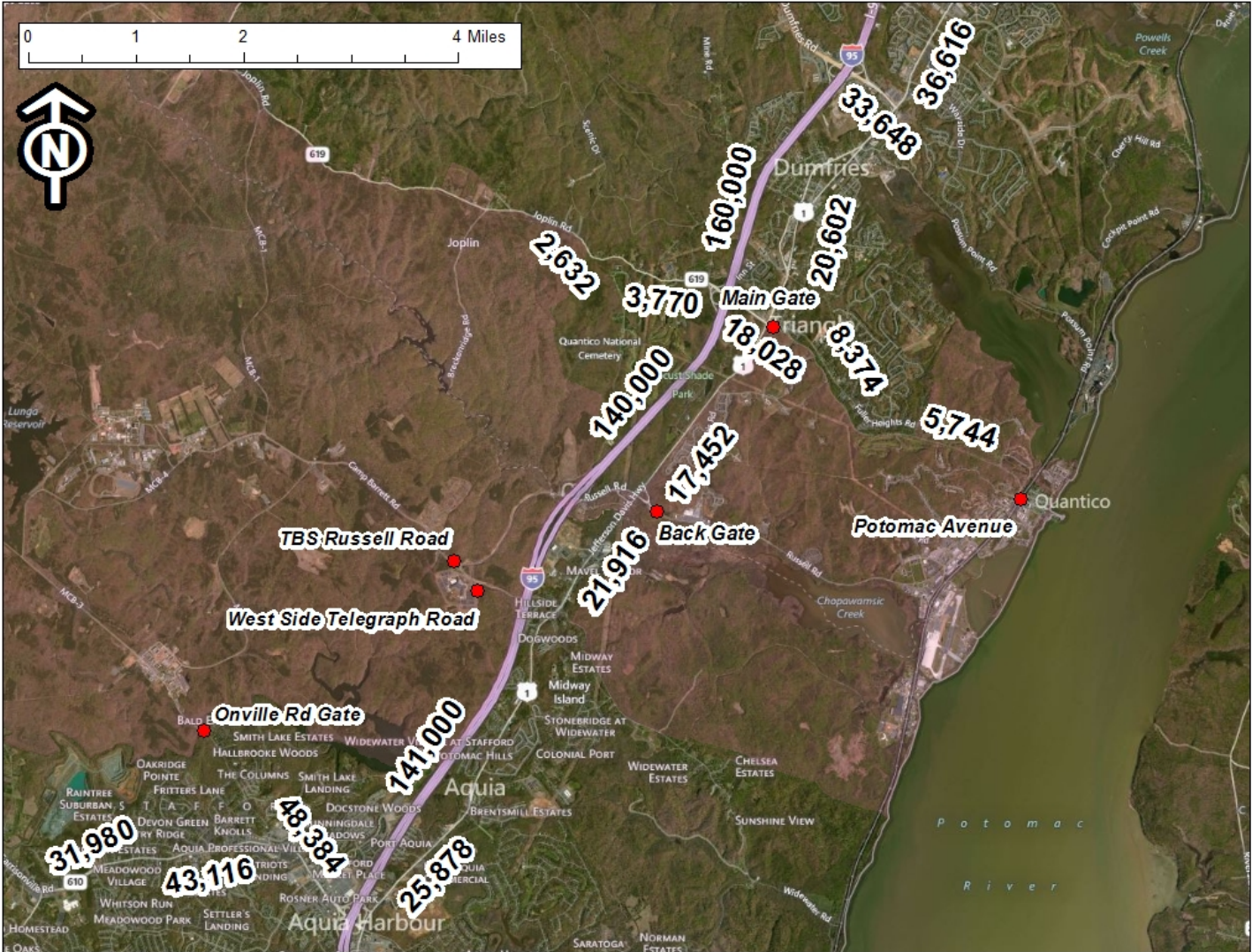


Figure 58: AADTs for Roadways near MCB Quantico



Defense Health Headquarters

Although not initially included, on request of VDOT and the Northern Virginia Regional Commission (NVRC), this site referred to as DHHQ was added to the list of monitoring sites. Once known as the Melpar site for the military contractor that first constructed a building on what was then rural land in 1952, the Raytheon Corporation was the last tenant before the DoD acquired the complex at 7700 Arlington Boulevard in the Falls Church area of Fairfax County. DoD retrofitted the buildings to collocate the following offices in a single campus as mandated by the BRAC 2005 action:

- DoD Office of Health Affairs (HA), excluding positions housed in the Pentagon
- TRICARE Management Activity (TMA)
- U.S. Army Office of the Surgeon General (OTSG)
- U.S. Air Force Surgeon General's Office (HAF-SG)
- U.S. Navy Bureau of Medicine (BUMED)

Approximately 3,050 employees will be located at DHHQ by the end of June 2012.

Access to DHHQ is from the main gate near the signalized intersection of Arlington Boulevard (US 50) and Jaguar Trail, and a second gate off of Fairview Park Drive on the west side of the campus (see Figure 59). The site is less than one mile from the US 50 interchange with the Capital Beltway (I-495) and about two and a half miles from the Dunn Loring Metrorail station served by the Orange Line. A direct ramp (northbound exit and southbound entrance only) from the I-495 Express Lanes to Lee Highway (US 29) will allow access to DHHQ for those travelers via US 29 and Fairview Park Drive once the facility opens later this year. DoD currently operates two shuttles connecting Metrorail to DHHQ:

- Shuttle service from the Pentagon Metrorail station on the Blue and Yellow lines to the DHHQ runs from 5:30 a.m. to 6:00 p.m., departing every 15 to 20 minutes.
- Shuttle service to the DHHQ from the Dunn Loring Metrorail station runs from 6:00 a.m. to 6:00 p.m., departing every 30 minutes during peak hours.

Metrobus Routes 1A and 1B operates along US 50 and stop near the main gate to DHHQ. There are approximately 2,000 parking spaces available at the site and reserved spaces for carpools and vanpools. Staff has heard anecdotally that the operation of the DHHQ shuttle from the Pentagon station brings slug commuters who use the HOV lanes on I-395 to the site. It is speculated that this pattern may shift with the opening of the I-495 Express Lanes.

Figure 60 show the distribution of vehicle and people entering DHHQ during the five-hour morning analysis period. Just over 1,100 vehicles carrying nearly 1,500 people entered the site during the analysis period, and the average auto occupancy was 1.28. During the peak hour from 6:45am to 7:45am, 506 people entered the site and the average auto occupancy was 1.26. DHHQ had the highest average auto occupancy of the Virginia analysis sites.

The mode split of people entering DHHQ during the morning analysis period is shown in Figure 61. About two-thirds of people entering the complex drove alone. Nearly 27% entered via

carpool or vanpool, the highest proportion of the actively occupied sites. Some of the non-motorized proportion may be people walking from transit stops to the complex gates.

Figure 62 shows AADTs for roadways near DHHQ. Volumes on US 50 near the site are approximately 50,000 vehicles, and about 28,000 on US 29.

As with the Mark Center, data collection for DHHQ occurred prior to full occupancy. While the proportion of people driving alone might increase as full occupancy is achieved, the opening of the I-495 Express Lanes later this year may shift a greater proportion of person-trips to carpool and vanpool due to the time savings offered relative to the general purpose lanes. In order for travel on the Express Lanes to be toll-free, automobile occupancy must be three people or more.

Figure 59: DHHQ Gate Location

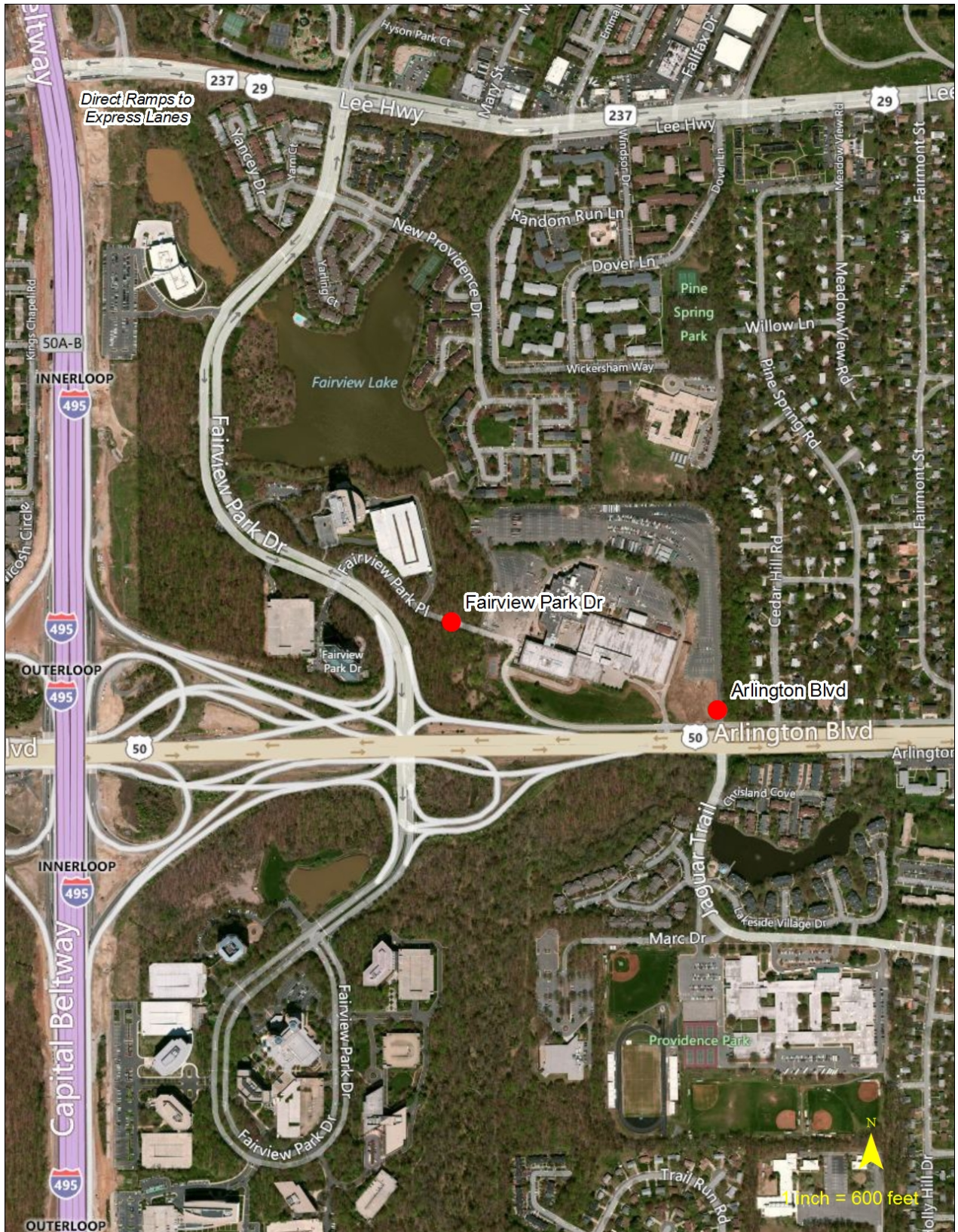


Figure 60: Distribution of Persons and Vehicles Entering DHHQ

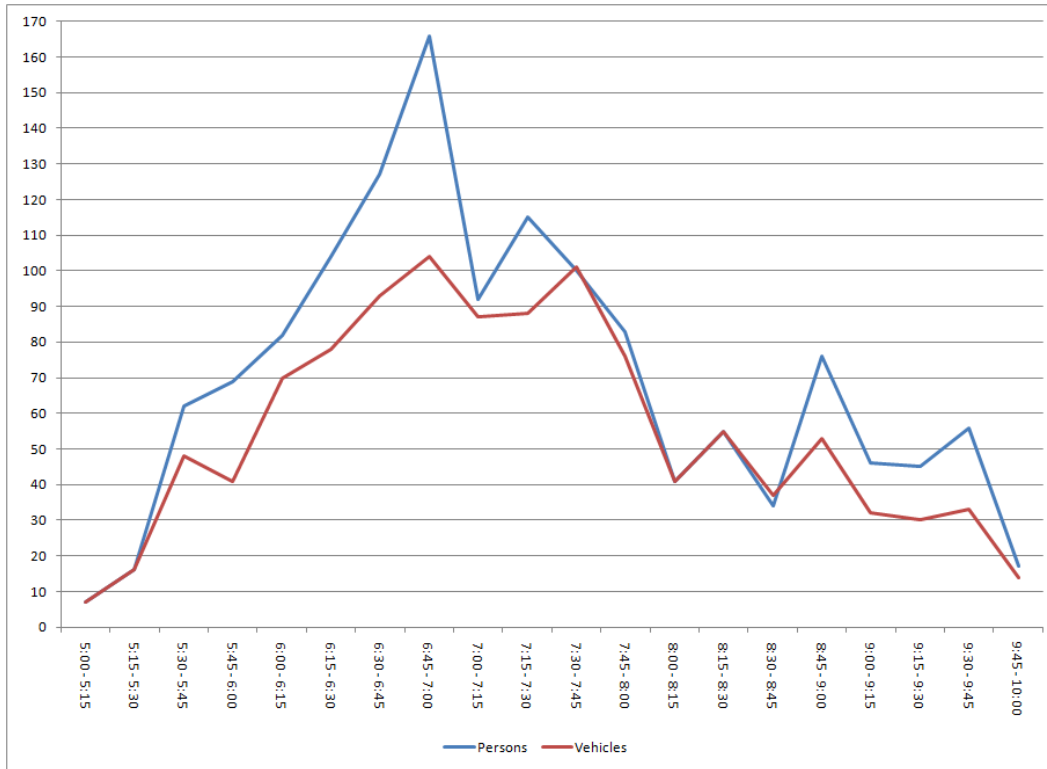


Figure 61: Person Mode Split - DHHQ

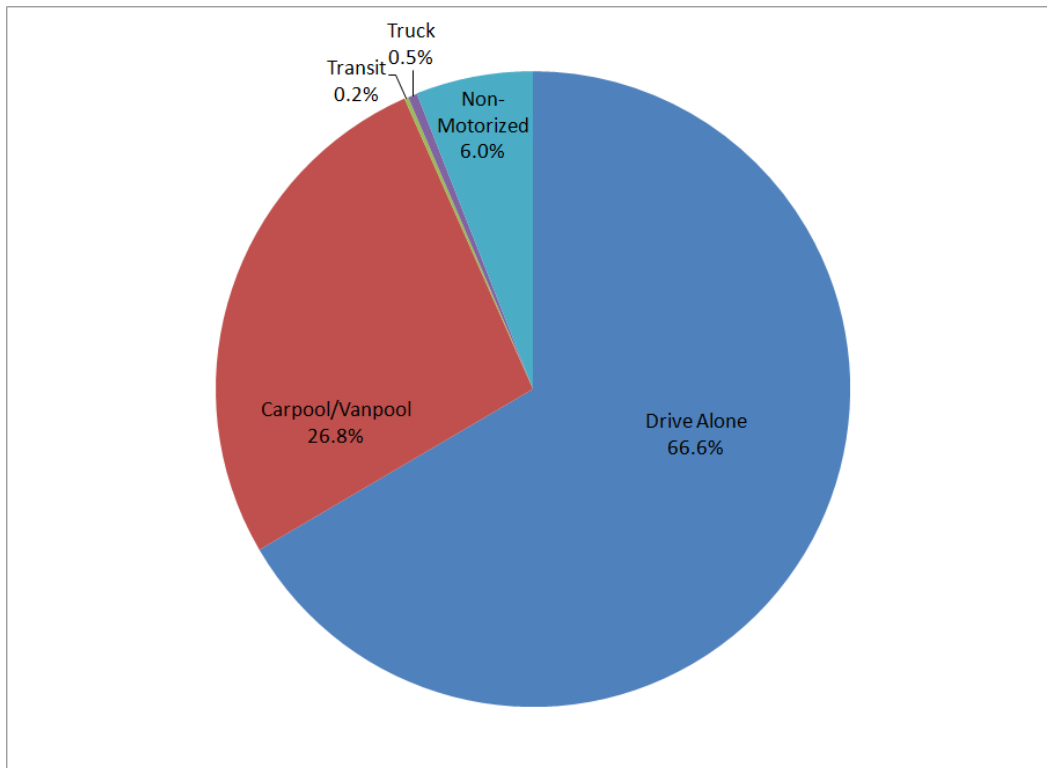
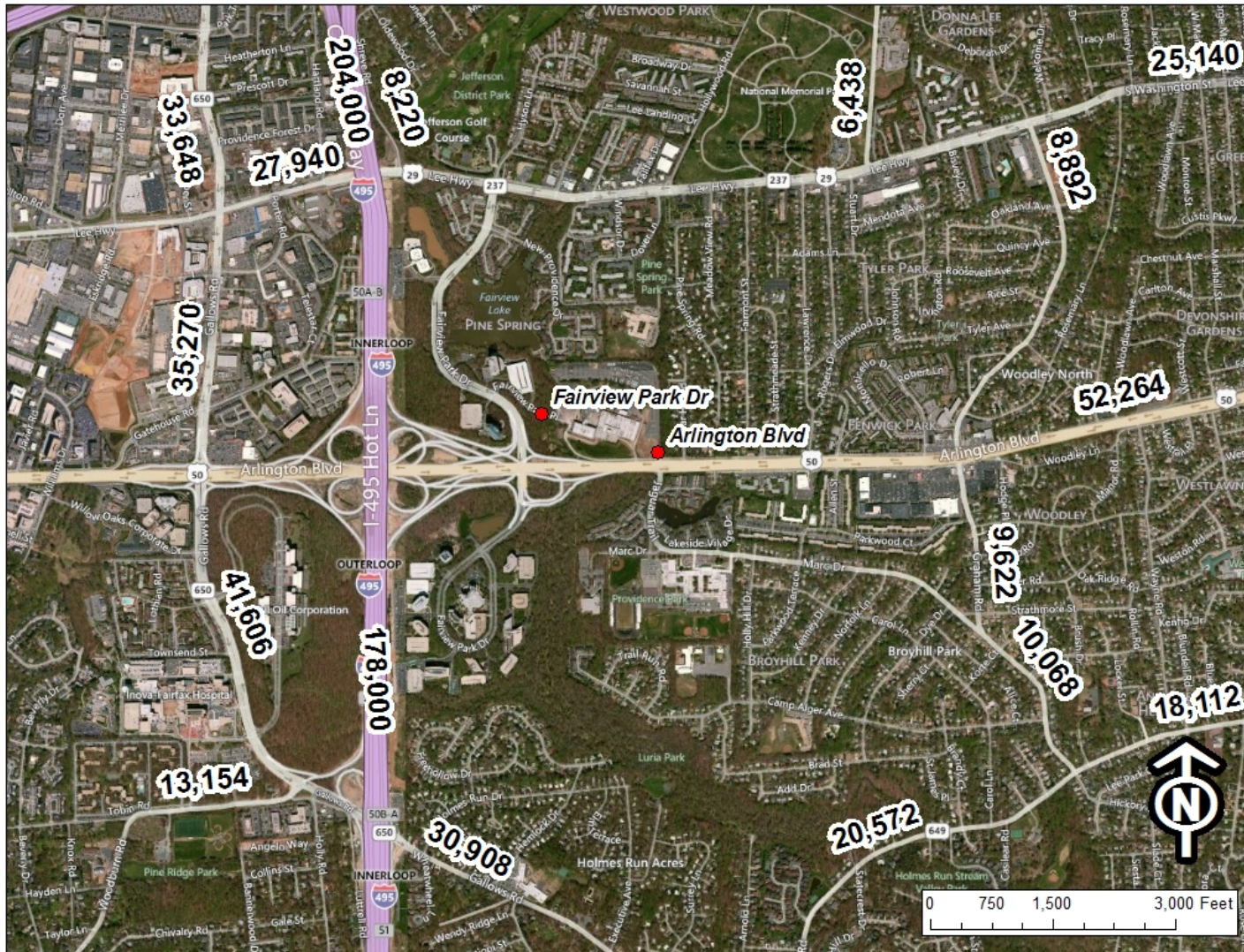


Figure 62: AADTs for Roadways near DHHQ



NEXT STEPS / CONTINUED MONITORING OF CONDITIONS

This report establishes initial conditions at the fifteen monitored BRAC and federal employment consolidation sites in the Washington region. While it is not true baseline or “before” data, it provides a useful snapshot of conditions just after the completion of the majority of the BRAC moves and serves as a benchmark for future monitoring of the same sites. The BRAC 2005 action has both added jobs to the region and greatly redistributed jobs around the region, with some jurisdictions seeing a net increase in jobs and others seeing a net decrease. The regional shift in jobs means a regional shift in travel behavior, and potentially, a shift residential location (which will further change travel behavior).

These last two sets of changes happen only over time as workers relocated under the BRAC action perform their household calculus and weigh the costs and benefits of their current (new) commute trip against shifting their residential location. It is also only over time that the BRAC and federal employment consolidation sites will have the opportunity to fully develop and implement their TMPs and provide transportation alternatives to their personnel as specified in those plans. Some of those TMPs may also further restrict on-site parking. Finally, sites that were vacated as part of the BRAC action, such the former Walter Reed site in Northwest Washington and the former NGA site in Bethesda are likely to redevelop (although not necessarily with another Federal tenant).³²

Because any shifts in travel behavior will only happen over time, all of the sites monitored in this report should be monitored again at a point in the future. Staff’s initial recommendation is that data be collected at all the sites again in five (5) years, during the spring of calendar year 2017 (TPB fiscal year 2017). This recommendation, which is subject to review and approval by the TPB Technical Committee, includes the St. Elizabeths campus, with the realization that since full occupancy for the campus is currently scheduled for 2019, it may need to be monitored for a third time in the distant future. The next round of monitoring will include explicit comparison of the observed mode share for each installation with the mode share goals described in each base’s TMP. It will also include a closer examination of parking availability and utilization at each base.

Finally, there is the high probability of further BRAC actions during the next five years. The BRAC 2005 report recommended another BRAC action in 2015. Earlier this year, DoD submitted a proposal to Congress to conduct BRAC actions in 2013 and 2015. Congress did not look favorably on this initial proposal, and so the timing of any future BRAC action(s) is undetermined at this time; however, the continued interest in both the executive and legislative branches of the Federal government in cost reduction and downsizing the military virtually ensures that there will be another round of realignment and closure in the foreseeable future.

Any discussion of how those actions may further impact the region is pure speculation, yet by observing the results of the BRAC 2005 action it is possible to engage in speculation with historical evidence. In this region, DoD appears to favor leaving leased space in highly

³² The Army has already submitted a draft master plan to redevelop the former NGA site at 4600 Sangamore Rd in Bethesda as a secure facility known as the Intelligence Community Campus – Bethesda (ICC-B) to support activities of the Defense Intelligence Agency (DIA). The draft master plan was approved by NCPC in December 2011 and a TMP completed in April 2012. See <http://www.nab.usace.army.mil/Projects/ICC-B/ICCB%20TMP%204-16-12.pdf>

urbanized areas (e.g., Crystal City) and entering either owned space on existing installations in both urban and suburban settings (e.g., WNY, Walter Reed, Fort Belvoir, etc.) the latter of which generally has more room to accommodate new tenants and new construction, or constructing or retrofitting new secure space on infill sites either greenfield or brownfield (e.g., Mark Center, DHHQ, St. Elizabeths). These decisions, made to satisfy a number of criteria including operational efficiency and locational security, have regional transportation and land use implications, and while it is difficult to forecast the outcome of each individual decision, the data collected for this report and its subsequent follow-up work help illustrate the regional impact of all the BRAC actions and provide additional observed data for use in the regional travel demand forecasting process.

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APPENDIX A: TRANSIT INVENTORY AND VEHICLE COUNTS

2012 BRAC Counts - Summary of Observed Transit Service

Location	Rail Service	Bus Service (Metrobus unless annotated with provider)			
Joint Base Anacostia Bolling	Green Line (Anacostia Station) [shuttle bus service provided to JBAB]	A4 Quick's	A5	W4	MTA 907
St. Elizabeth's Campus	Green Line (Anacostia Station)	A1 A46 A7 W2	A2 A48 A8 W3	A4 A5 A9	A42 A6
Washington Navy Yard	Green Line (Navy Yard Station)	A2 V7 MTA 903	A48 V9 MTA 915	P1 W2 PRTC	Circulator Quick's
Federal Research Center White Oak		C8 MTA 204	K6	R2	Ride On 22
Fort Detrick		TransIT 30			
Joint Base Andrews		D13	D14	THE BUS 30	
Naval Support Facility Indian Head		W19			
Walter Reed National Military Medical Center	Red Line (Medical Center Station)	J1 J7 Ride on 30 MTA 203	J2 J9 Ride On 33	J3 Ride On 46	Ride On 70
Army National Guard Readiness Center	[Shuttle bus service to Pentagon and Crystal City VRE station]	4A	22A		
Defense Health Headquarters		1A	1B		
Fort Belvoir (and Fort Belvoir North Area)		REX Ffx. Conn. 171	Ffx. Conn. 17 Ffx. Conn. 333	Ffx. Conn. 335 Ffx. Conn. 334	Quick's
Marine Corps Base Quantico	VRE Fredericksburg Line (Quantico Station)				
Mark Center		28X 7W DASH AT1	7A 7X DASH AT2	7F 8M DASH AT2X	7M 8W Quick's

**BRAC counts
 Joint Base Anacostia Bolling
 24-May-12
 All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:45 AM - 7:45 AM)	Percent of person trips
Person Trips by single-occupant vehicle	8,330	85%	2,612	88%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	1,314	13%	331	11%
Bus Transit Patrons	0	0%	0	0%
Pedestrians	81	1%	23	1%
Bicycles	<u>31</u>	0%	<u>9</u>	0%
Total Person Trips	<u>9,756</u>		<u>2,975</u>	
Autos and Motorcycles	8,824		2,751	
Average Auto Occupancy (computation includes motorcycles)	1.09		1.07	

BRAC counts
Joint Base Anacostia Bolling
24-May-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Total		Rail	Comm.	
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	+ MC Riders	Transit	Other	Transit	Other	+ MC Riders	Trucks	Vehicles		Metro
5:00 - 5:15	67	1	1	0	1.06	4.00	0	69	73	0	0	0	0	73	3	72	0	0
5:15 - 5:30	144	2	0	0	1.01	0.00	0	146	148	0	0	0	0	148	2	148	0	0
5:30 - 5:45	230	13	0	1	1.10	12.00	0	244	268	0	0	0	0	268	5	249	0	0
5:45 - 6:00	405	18	1	2	1.10	9.00	2	428	470	0	0	0	0	470	3	431	0	0
6:00 - 6:15	584	18	1	1	1.05	7.50	2	606	637	0	2	0	0	637	13	621	0	0
6:15 - 6:30	574	19	0	3	1.09	12.00	3	599	651	0	2	0	0	651	11	612	0	0
6:30 - 6:45	611	21	0	10	1.20	12.00	1	643	774	0	4	0	0	774	11	658	0	0
6:45 - 7:00	650	25	2	3	1.09	8.40	2	682	744	0	2	0	0	744	10	694	0	0
7:00 - 7:15	651	32	0	2	1.08	12.00	0	685	739	0	4	0	0	739	3	693	0	0
7:15 - 7:30	692	23	1	0	1.03	3.00	0	716	741	1	3	0	0	741	6	727	0	0
7:30 - 7:45	619	42	4	0	1.08	3.25	3	668	719	0	10	0	0	719	4	682	0	0
7:45 - 8:00	599	25	1	1	1.06	7.50	2	628	666	0	0	0	0	666	5	633	0	0
8:00 - 8:15	472	39	5	3	1.16	6.63	5	524	608	0	3	0	0	608	5	535	0	0
8:15 - 8:30	498	19	1	2	1.08	9.33	3	523	567	0	4	0	0	567	5	532	0	0
8:30 - 8:45	370	12	2	2	1.10	7.75	0	386	425	2	4	0	0	425	4	396	0	0
8:45 - 9:00	316	17	1	1	1.10	8.50	1	336	368	0	4	0	0	368	6	347	0	0
9:00 - 9:15	286	23	0	1	1.11	12.00	0	310	344	0	2	0	0	344	6	319	0	0
9:15 - 9:30	210	22	1	0	1.10	3.00	5	238	262	0	2	0	0	262	8	249	0	0
9:30 - 9:45	178	14	1	0	1.08	3.00	0	193	209	0	1	0	0	209	5	200	0	0
9:45 - 10:00	174	24	2	0	1.16	4.50	0	200	231	0	1	0	0	231	6	209	0	0

5-Hour Totals

Vehicles	8,330	409	24	32	N/A	N/A	29	8,824	9,644	3	48	0	0	9,644	121	9,007	0	0
Persons	8,330	818	83	384			29											

BRAC counts
Joint Base Anacostia Bolling
24-May-12
All Entrance Gates Total

Time	Total	Total	Total	Average	Total	Total	Total	Average
	Persons	Vehicles	Autos + MC	Auto Occupancy	Persons	Vehicles	Autos + MC	Auto Occupancy
	by 15 minutes				by Hour			

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT	HOURLY
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	VEHICLES	VEHICLES		

5:00 - 5:15	73	72	69	1.06												72
5:15 - 5:30	148	148	146	1.01												148
5:30 - 5:45	268	249	244	1.10												249
5:45 - 6:00	470	431	428	1.10	959	900	887	1.08								900
6:00 - 6:15	637	621	606	1.05	1,523	1,449	1,424	1.07								1,449
6:15 - 6:30	651	612	599	1.09	2,026	1,913	1,877	1.08								1,913
6:30 - 6:45	774	658	643	1.20	2,532	2,322	2,276	1.11								2,322
6:45 - 7:00	744	694	682	1.09	2,806	2,585	2,530	1.11								2,585
7:00 - 7:15	739	693	685	1.08	2,908	2,657	2,609	1.11								2,657
7:15 - 7:30	741	727	716	1.03	2,998	2,772	2,726	1.10								2,772
7:30 - 7:45	719	682	668	1.08	2,943	2,796	2,751	1.07								2,796
7:45 - 8:00	666	633	628	1.06	2,865	2,735	2,697	1.06								2,735
8:00 - 8:15	608	535	524	1.16	2,734	2,577	2,536	1.08								2,577
8:15 - 8:30	567	532	523	1.08	2,560	2,382	2,343	1.09								2,382
8:30 - 8:45	425	396	386	1.10	2,266	2,096	2,061	1.10								2,096
8:45 - 9:00	368	347	336	1.10	1,968	1,810	1,769	1.11								1,810
9:00 - 9:15	344	319	310	1.11	1,704	1,594	1,555	1.10								1,594
9:15 - 9:30	262	249	238	1.10	1,399	1,311	1,270	1.10								1,311
9:30 - 9:45	209	200	193	1.08	1,183	1,115	1,077	1.10								1,115
9:45 - 10:00	231	209	200	1.16	1,046	977	941	1.11								977

2,796

5-Hour Totals																								
Vehicles	9,644	9,007	8,824	1.09	N/A	N/A	N/A	N/A	8,330	409	17	4	2	1	0	32	3	48	11	29	120	1	9,007	N/A
Persons																								

BRAC counts
Joint Base Anacostia Bolling
24-May-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	2	0
5:30 - 5:45	1	1
5:45 - 6:00	3	0
6:00 - 6:15	1	1
6:15 - 6:30	2	1
6:30 - 6:45	12	2
6:45 - 7:00	5	2
7:00 - 7:15	5	2
7:15 - 7:30	5	1
7:30 - 7:45	8	4
7:45 - 8:00	7	2
8:00 - 8:15	2	3
8:15 - 8:30	0	1
8:30 - 8:45	6	3
8:45 - 9:00	8	3
9:00 - 9:15	5	0
9:15 - 9:30	3	0
9:30 - 9:45	0	4
9:45 - 10:00	6	1

5-Hour Totals

Vehicles	81	31
Persons		

**BRAC counts
DHS St. Elizabeth's West Campus
30-May-12
All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (5:15 AM - 6:15 AM)	Percent of person trips
Person Trips by single-occupant vehicle	447	34%	168	23%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	538	41%	341	47%
Transit Bus Passengers	79	6%	40	6%
Pedestrians	226	17%	172	24%
Bicycles	<u>8</u>	1%	<u>6</u>	1%
Total Person Trips	<u>1,298</u>		<u>727</u>	
Autos and Motorcycles	616		271	
Average Auto Occupancy (computation includes motorcycles)	1.60		1.88	

BRAC counts
DHS St. Elizabeth's West Campus
30-May-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers	Total Auto Pers.	Total	Rail		
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	+ MC Riders	Transit	Other	+ MC Riders	Trucks	Vehicles	Metro	Comm.
5:00 - 5:15	24	12	5	1	1.86	5.00	0	42	78	0	1	0	1	44	0	0
5:15 - 5:30	45	23	14	2	1.92	4.44	1	85	163	0	0	0	2	87	0	0
5:30 - 5:45	50	15	10	2	1.81	5.00	1	78	141	0	1	0	2	81	0	0
5:45 - 6:00	42	11	1	5	2.15	10.50	0	59	127	0	0	40	5	64	0	0
6:00 - 6:15	31	11	7	0	1.59	3.57	0	49	78	0	0	0	4	53	0	0
6:15 - 6:30	23	3	1	2	1.93	9.00	0	29	56	0	0	4	8	37	0	0
6:30 - 6:45	30	7	2	1	1.58	6.33	0	40	63	0	0	0	6	46	0	0
6:45 - 7:00	28	6	0	0	1.18	0.00	0	34	40	0	0	12	4	38	0	0
7:00 - 7:15	23	5	0	0	1.18	0.00	0	28	33	0	0	0	4	32	0	0
7:15 - 7:30	15	2	0	0	1.12	0.00	0	17	19	0	0	3	3	20	0	0
7:30 - 7:45	12	0	1	0	1.15	3.00	0	13	15	0	0	0	5	18	0	0
7:45 - 8:00	11	1	0	0	1.08	0.00	0	12	13	0	0	6	6	18	0	0
8:00 - 8:15	12	2	1	0	1.33	4.00	0	15	20	0	0	0	4	19	0	0
8:15 - 8:30	14	5	0	0	1.26	0.00	0	19	24	0	0	5	4	23	0	0
8:30 - 8:45	14	0	0	0	1.00	0.00	0	14	14	0	0	0	9	23	0	0
8:45 - 9:00	24	5	0	0	1.17	0.00	0	29	34	0	0	1	10	39	0	0
9:00 - 9:15	11	0	0	1	1.92	12.00	0	12	23	0	0	0	5	17	0	0
9:15 - 9:30	18	0	0	0	1.00	0.00	0	18	18	0	0	7	5	23	0	0
9:30 - 9:45	13	1	0	0	1.07	0.00	0	14	15	0	0	0	5	19	0	0
9:45 - 10:00	7	2	0	0	1.22	0.00	0	9	11	0	0	1	5	14	0	0

5-Hour Totals																				
Vehicles	447	111	42	14	N/A		N/A		2	616	985	0	2	79	0	1,064	97	715	0	0
Persons	447	222	146	168					2											

BRAC counts
DHS St. Elizabeth's West Campus
30-May-12
All Entrance Gates Total

Time	by 15 minutes				by Hour			
	Total Persons	Total Vehicles	Total Autos + MC	Average Auto Occupancy	Total Persons	Total Vehicles	Total Autos + MC	Average Auto Occupancy

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT VEHICLES	HOURLY TOT VEHICLES
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK				

5:00 - 5:15	78	44	42	1.86														24	12	3	1	1	0	0	1	0	1	0	0	1	0	44	
5:15 - 5:30	163	87	85	1.92														45	23	10	3	1	0	0	2	0	0	0	1	2	0	87	
5:30 - 5:45	141	81	78	1.81														50	15	4	6	0	0	0	2	0	1	0	1	2	0	81	
5:45 - 6:00	127	64	59	2.15	509	276	264	1.93										42	11	1	0	0	0	0	5	0	0	0	0	5	0	276	
6:00 - 6:15	78	53	49	1.59	509	285	271	1.88										31	11	4	2	1	0	0	0	0	0	0	4	0	53	285	
6:15 - 6:30	56	37	29	1.93	402	235	215	1.87										23	3	1	0	0	0	0	2	0	0	0	0	8	0	37	235
6:30 - 6:45	63	46	40	1.58	324	200	177	1.83										30	7	1	1	0	0	0	1	0	0	0	0	6	0	46	200
6:45 - 7:00	40	38	34	1.18	237	174	152	1.56										28	6	0	0	0	0	0	0	0	0	0	4	0	38	174	
7:00 - 7:15	33	32	28	1.18	192	153	131	1.47										23	5	0	0	0	0	0	0	0	0	0	4	0	32	153	
7:15 - 7:30	19	20	17	1.12	155	136	119	1.30										15	2	0	0	0	0	0	0	0	0	0	3	0	20	136	
7:30 - 7:45	15	18	13	1.15	107	108	92	1.16										12	0	1	0	0	0	0	0	0	0	0	5	0	18	108	
7:45 - 8:00	13	18	12	1.08	80	88	70	1.14										11	1	0	0	0	0	0	0	0	0	0	6	0	18	88	
8:00 - 8:15	20	19	15	1.33	67	75	57	1.18										12	2	0	1	0	0	0	0	0	0	0	4	0	19	75	
8:15 - 8:30	24	23	19	1.26	72	78	59	1.22										14	5	0	0	0	0	0	0	0	0	0	4	0	23	78	
8:30 - 8:45	14	23	14	1.00	71	83	60	1.18										14	0	0	0	0	0	0	0	0	0	0	9	0	23	83	
8:45 - 9:00	34	39	29	1.17	92	104	77	1.19										24	5	0	0	0	0	0	0	0	0	0	10	0	39	104	
9:00 - 9:15	23	17	12	1.92	95	102	74	1.28										11	0	0	0	0	0	0	1	0	0	0	5	0	17	102	
9:15 - 9:30	18	23	18	1.00	89	102	73	1.22										18	0	0	0	0	0	0	0	0	0	0	5	0	23	102	
9:30 - 9:45	15	19	14	1.07	90	98	73	1.23										13	1	0	0	0	0	0	0	0	0	0	5	0	19	98	
9:45 - 10:00	11	14	9	1.22	67	73	53	1.26										7	2	0	0	0	0	0	0	0	0	0	5	0	14	73	

5-Hour Totals																								
Vehicles	985	715	616	1.60	N/A	N/A	N/A	N/A	447	111	25	14	3	0	0	14	0	2	0	2	97	0	715	N/A
Persons																								

BRAC counts
DHS St. Elizabeth's West Campus
30-May-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	25	1
5:15 - 5:30	48	0
5:30 - 5:45	85	5
5:45 - 6:00	30	1
6:00 - 6:15	9	0
6:15 - 6:30	9	1
6:30 - 6:45	4	0
6:45 - 7:00	6	0
7:00 - 7:15	2	0
7:15 - 7:30	1	0
7:30 - 7:45	2	0
7:45 - 8:00	1	0
8:00 - 8:15	3	0
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	1	0
9:15 - 9:30	0	0
9:30 - 9:45	0	0
9:45 - 10:00	0	0

5-Hour Totals

Vehicles	226	8
Persons		

**BRAC counts
 Naval Support Activity Washington (Washington Navy Yard)
 31-May-12
 All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:15 AM - 7:15 AM)	Percent of person trips
Person Trips by single-occupant vehicle	5,146	52%	1,960	60%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	1,715	17%	657	20%
Bus Transit Patrons	437	4%	118	4%
Pedestrians	2,424	25%	530	16%
Bicycles	<u>120</u>	1%	<u>24</u>	1%
Total Person Trips	<u>9,842</u>		<u>3,289</u>	
Autos and Motorcycles	5,652		2,147	
Average Auto Occupancy (computation includes motorcycles)	1.21		1.22	

BRAC counts
Naval Support Activity Washington (Washington Navy Yard)
31-May-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Total		Rail	Comm.	
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other	+ MC Riders + Bus Passengers	Trucks	Vehicles		Metro
5:00 - 5:15	62	1	0	0	1.02	0.00	0	63	64	0	0	0	0	64	0	63	0	0
5:15 - 5:30	115	7	4	1	1.21	5.00	1	128	155	0	1	0	0	155	0	129	0	0
5:30 - 5:45	203	13	1	5	1.31	10.50	3	225	295	0	1	0	0	295	3	229	0	0
5:45 - 6:00	320	26	1	2	1.14	9.00	0	349	399	0	1	6	0	405	1	351	0	0
6:00 - 6:15	440	18	1	5	1.16	10.50	6	470	545	0	0	0	0	545	2	472	0	0
6:15 - 6:30	442	35	0	10	1.30	12.00	3	490	635	0	1	59	0	694	0	491	0	0
6:30 - 6:45	567	28	6	8	1.21	8.14	6	615	743	0	1	0	0	743	1	617	0	0
6:45 - 7:00	491	36	4	10	1.28	9.43	13	554	708	0	1	59	0	767	1	556	0	0
7:00 - 7:15	460	18	1	2	1.09	9.33	7	488	531	0	1	0	0	531	0	489	0	0
7:15 - 7:30	389	28	4	2	1.14	6.17	6	429	488	0	0	80	0	568	4	433	0	0
7:30 - 7:45	328	20	0	0	1.06	0.00	2	350	370	0	1	0	0	370	0	351	0	0
7:45 - 8:00	314	22	3	1	1.12	5.50	1	341	381	0	0	108	0	489	1	342	0	0
8:00 - 8:15	316	15	1	15	1.52	11.44	5	352	534	0	0	0	0	534	0	352	0	0
8:15 - 8:30	207	13	2	1	1.13	6.33	2	225	254	0	0	50	0	304	5	230	0	0
8:30 - 8:45	131	6	0	3	1.27	12.00	3	143	182	0	1	0	0	182	0	144	0	0
8:45 - 9:00	89	9	1	1	1.22	7.50	0	100	122	0	0	32	0	154	1	101	0	0
9:00 - 9:15	102	10	1	1	1.20	7.50	0	114	137	0	2	0	0	137	1	117	0	0
9:15 - 9:30	60	7	2	1	1.33	6.67	2	72	96	0	0	35	0	131	4	76	0	0
9:30 - 9:45	54	7	3	3	1.69	7.50	0	67	113	0	5	0	0	113	3	75	0	0
9:45 - 10:00	56	10	5	1	1.42	4.67	5	77	109	0	0	8	0	117	2	79	0	0

5-Hour Totals

Vehicles	5,146	329	40	72	N/A	N/A	65	5,652	6,861	0	16	437	0	7,298	29	5,697	0	0
Persons	5,146	658	128	864			65											

BRAC counts
Naval Support Activity Washington (I
31-May-12

All Entrance Gates Total

Time	Average				Average			
	Total Persons	Total Vehicles	Total Autos + MC by 15 minutes	Auto Occupancy	Total Persons	Total Vehicles	Total Autos + MC by Hour	Auto Occupancy

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT	HOURLY
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	VEHICLES	TOT VEHICLES		

5:00 - 5:15	64	63	63	1.02												63
5:15 - 5:30	155	129	128	1.21												129
5:30 - 5:45	295	229	225	1.31												229
5:45 - 6:00	399	351	349	1.14	913	772	765	1.19								351 772
6:00 - 6:15	545	472	470	1.16	1,394	1,181	1,172	1.19								472 1,181
6:15 - 6:30	635	491	490	1.30	1,874	1,543	1,534	1.22								491 1,543
6:30 - 6:45	743	617	615	1.21	2,322	1,931	1,924	1.21								617 1,931
6:45 - 7:00	708	556	554	1.28	2,631	2,136	2,129	1.24								556 2,136
7:00 - 7:15	531	489	488	1.09	2,617	2,153	2,147	1.22								489 2,153
7:15 - 7:30	488	433	429	1.14	2,470	2,095	2,086	1.18								433 2,095
7:30 - 7:45	370	351	350	1.06	2,097	1,829	1,821	1.15								351 1,829
7:45 - 8:00	381	342	341	1.12	1,770	1,615	1,608	1.10								342 1,615
8:00 - 8:15	534	352	352	1.52	1,773	1,478	1,472	1.20								352 1,478
8:15 - 8:30	254	230	225	1.13	1,539	1,275	1,268	1.21								230 1,275
8:30 - 8:45	182	144	143	1.27	1,351	1,068	1,061	1.27								144 1,068
8:45 - 9:00	122	101	100	1.22	1,092	827	820	1.33								101 827
9:00 - 9:15	137	117	114	1.20	695	592	582	1.19								117 592
9:15 - 9:30	96	76	72	1.33	537	438	429	1.25								76 438
9:30 - 9:45	113	75	67	1.69	468	369	353	1.33								75 369
9:45 - 10:00	109	79	77	1.42	455	347	330	1.38								79 347

5-Hour Totals																								
Vehicles	6,861	5,697	5,652	1.21	N/A	N/A	N/A	N/A	5,146	329	33	6	1	0	0	72	0	16	0	65	29	0	5,697	N/A
Persons																								

BRAC counts
Naval Support Activity Washington (1)
31-May-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	2	0
5:15 - 5:30	20	0
5:30 - 5:45	18	0
5:45 - 6:00	52	1
6:00 - 6:15	65	0
6:15 - 6:30	50	5
6:30 - 6:45	156	9
6:45 - 7:00	83	3
7:00 - 7:15	241	7
7:15 - 7:30	180	32
7:30 - 7:45	226	14
7:45 - 8:00	179	15
8:00 - 8:15	223	7
8:15 - 8:30	163	12
8:30 - 8:45	215	8
8:45 - 9:00	175	2
9:00 - 9:15	130	1
9:15 - 9:30	70	0
9:30 - 9:45	108	4
9:45 - 10:00	68	0

5-Hour Totals

Vehicles	2,424	120
Persons		

**BRAC counts
 FDA/U.S. Army/Federal Research Center at White Oak
 22-May-12
 All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (8:15 AM - 9:15 AM)	Percent of person trips
Person Trips by single-occupant vehicle	5,022	80%	1,552	83%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	850	14%	198	11%
Bus Transit Patrons	311	5%	87	5%
Pedestrians	62	1%	20	1%
Bicycles	<u>7</u>	0%	<u>4</u>	0%
Total Person Trips	<u>6,252</u>		<u>1,861</u>	
Autos and Motorcycles	5,295		1,631	
Average Auto Occupancy (computation includes motorcycles)	1.11		1.07	

BRAC counts
FDA/U.S. Army/Federal Research Center at White Oak
22-May-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers	Total Auto Pers.	Total	Rail	Comm.			
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other	+ Bus Passengers		Trucks	Vehicles	Metro
5:00 - 5:15	63	1	0	0	1.02	0.00	0	64	65	0	0	0	0	65	1	65	0	0
5:15 - 5:30	102	7	0	0	1.06	0.00	0	109	116	0	0	0	0	116	0	109	0	0
5:30 - 5:45	152	12	1	0	1.08	3.00	0	165	179	1	0	0	0	179	0	166	0	0
5:45 - 6:00	181	7	1	0	1.07	7.00	0	189	202	0	0	0	0	202	2	191	0	0
6:00 - 6:15	155	8	1	0	1.06	3.00	2	166	176	3	0	0	0	176	3	172	0	0
6:15 - 6:30	154	5	0	1	1.10	12.00	0	160	176	0	1	29	0	205	1	162	0	29
6:30 - 6:45	199	7	1	2	1.15	9.00	0	209	240	2	1	0	0	240	2	214	0	0
6:45 - 7:00	236	5	0	3	1.16	12.00	1	245	283	3	2	34	0	317	7	257	0	34
7:00 - 7:15	297	9	0	3	1.14	12.00	0	309	351	0	0	0	0	351	2	312	0	0
7:15 - 7:30	247	16	2	4	1.25	9.33	0	269	335	2	1	63	0	398	4	276	0	63
7:30 - 7:45	266	12	1	2	1.13	9.33	0	281	318	1	2	0	0	318	4	289	0	0
7:45 - 8:00	322	23	1	6	1.26	10.71	0	352	443	0	2	58	0	501	3	358	0	58
8:00 - 8:15	336	19	0	2	1.11	12.00	0	357	398	1	1	0	0	398	9	368	0	0
8:15 - 8:30	357	14	0	2	1.10	12.00	1	374	410	1	6	68	0	478	5	386	0	68
8:30 - 8:45	436	20	1	1	1.07	7.50	0	458	491	1	1	0	0	491	8	468	0	0
8:45 - 9:00	398	24	0	1	1.08	12.00	0	423	458	2	0	19	0	477	7	432	0	19
9:00 - 9:15	361	15	0	0	1.04	0.00	0	376	391	1	0	0	0	391	6	383	0	0
9:15 - 9:30	292	12	1	1	1.08	8.00	0	306	332	0	2	40	0	372	11	319	0	40
9:30 - 9:45	271	7	0	0	1.03	0.00	1	279	286	1	1	0	0	286	8	289	0	0
9:45 - 10:00	197	5	1	1	1.09	7.50	0	204	222	0	0	0	0	222	6	210	0	0

5-Hour Totals																		
Vehicles	5,022	228	11	29	N/A	N/A	5	5,295	5,872	19	20	311	0	6,183	89	5,426	0	311
Persons	5,022	456	41	348			5											

BRAC counts
 FDA/U.S. Army/Federal Research Cen
 22-May-12
 All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	0	0
5:30 - 5:45	0	0
5:45 - 6:00	7	0
6:00 - 6:15	6	0
6:15 - 6:30	0	0
6:30 - 6:45	2	0
6:45 - 7:00	1	0
7:00 - 7:15	3	0
7:15 - 7:30	2	0
7:30 - 7:45	4	1
7:45 - 8:00	5	0
8:00 - 8:15	3	0
8:15 - 8:30	0	1
8:30 - 8:45	7	1
8:45 - 9:00	1	1
9:00 - 9:15	12	1
9:15 - 9:30	2	0
9:30 - 9:45	2	1
9:45 - 10:00	5	1

5-Hour Totals

Vehicles	62	7
Persons		

**BRAC counts
Fort Detrick, Frederick County, Maryland
26-Jun-12
All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (7:15 AM - 8:15 AM)	Percent of person trips
Person Trips by single-occupant vehicle	5,636	79%	2,442	84%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	1,393	20%	459	16%
Transit Bus Passengers	10	0%	1	0%
Pedestrians	45	1%	5	0%
Bicycles	<u>36</u>	1%	<u>11</u>	0%
Total Person Trips	<u>7,120</u>		<u>2,918</u>	
Autos and Motorcycles	6,211		2,640	
Average Auto Occupancy (computation includes motorcycles)	1.13		1.10	

BRAC counts
Fort Detrick, Frederick County, Maryland
26-Jun-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers	Total Auto Pers.	Total	Rail		
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	+ MC Riders	Transit	Other	+ MC Riders +Bus Passengers	Trucks	Vehicles	Metro	Comm.
5:00 - 5:15	24	3	2	0	1.27	3.50	1	30	38	0	0	0	1	31	0	0
5:15 - 5:30	75	3	0	0	1.04	0.00	2	80	83	0	0	0	2	82	0	0
5:30 - 5:45	106	3	1	1	1.14	7.50	0	111	127	0	0	0	1	112	0	0
5:45 - 6:00	184	20	4	0	1.14	3.50	5	213	243	0	0	0	1	214	0	0
6:00 - 6:15	331	32	6	0	1.12	3.17	6	375	420	0	0	1	1	376	0	0
6:15 - 6:30	355	36	10	4	1.25	5.79	2	407	510	0	0	0	3	410	0	0
6:30 - 6:45	332	27	14	7	1.37	6.52	2	382	525	0	0	0	7	389	0	0
6:45 - 7:00	276	20	7	2	1.19	5.22	6	311	369	0	0	0	6	317	0	0
7:00 - 7:15	373	20	3	1	1.10	5.50	1	398	436	0	0	0	13	411	0	0
7:15 - 7:30	417	41	4	0	1.10	3.00	9	471	520	0	0	0	8	479	0	0
7:30 - 7:45	520	26	2	3	1.11	8.40	2	553	616	0	0	0	4	557	0	0
7:45 - 8:00	455	22	3	0	1.06	3.00	5	485	513	0	0	0	6	491	0	0
8:00 - 8:15	401	14	0	1	1.06	12.00	6	422	447	0	0	1	16	438	0	0
8:15 - 8:30	357	21	1	0	1.06	3.00	6	385	408	0	0	1	3	388	0	0
8:30 - 8:45	331	19	3	2	1.13	6.80	5	360	408	0	0	3	5	365	0	0
8:45 - 9:00	308	27	4	0	1.10	3.00	4	343	378	0	1	1	12	356	0	0
9:00 - 9:15	263	25	0	0	1.09	0.00	0	288	313	0	0	2	9	298	0	0
9:15 - 9:30	232	19	2	0	1.09	3.00	2	255	278	1	1	0	9	266	0	0
9:30 - 9:45	150	20	1	1	1.19	7.50	3	175	208	0	1	1	10	186	0	0
9:45 - 10:00	146	20	1	0	1.13	3.00	0	167	189	1	2	0	11	181	0	0

5-Hour Totals																			
Vehicles	5,636	418	68	22	N/A	N/A	67	6,211	7,029	2	5	10	0	7,039	128	6,347	0	0	
Persons	5,636	836	226	264			67												

BRAC counts
Fort Detrick, Frederick County, Maryland
26-Jun-12
All Entrance Gates Total

Time	by 15 minutes				by Hour				VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION														TOT VEHICLES	HOURLY TOT VEHICLES
	Total Persons	Total Vehicles	Total Autos + MC	Average Auto Occupancy	Total Persons	Total Vehicles	Total Autos + MC	Average Auto Occupancy	1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK		
5:00 - 5:15	38	31	30	1.27					24	3	1	1	0	0	0	0	0	0	0	1	1	0	31	
5:15 - 5:30	83	82	80	1.04					75	3	0	0	0	0	0	0	0	0	0	2	2	0	82	
5:30 - 5:45	127	112	111	1.14					106	3	1	0	0	0	0	1	0	0	0	0	1	0	112	
5:45 - 6:00	243	214	213	1.14	491	439	434	1.13	184	20	2	2	0	0	0	0	0	0	5	1	0	214	439	
6:00 - 6:15	420	376	375	1.12	873	784	779	1.12	331	32	5	1	0	0	0	0	0	0	6	1	0	376	784	
6:15 - 6:30	510	410	407	1.25	1,300	1,112	1,106	1.18	355	36	7	3	0	0	0	4	0	0	2	3	0	410	1,112	
6:30 - 6:45	525	389	382	1.37	1,698	1,389	1,377	1.23	332	27	4	9	1	0	0	7	0	0	2	7	0	389	1,389	
6:45 - 7:00	369	317	311	1.19	1,824	1,492	1,475	1.24	276	20	5	2	0	0	0	2	0	0	6	6	0	317	1,492	
7:00 - 7:15	436	411	398	1.10	1,840	1,527	1,498	1.23	373	20	2	1	0	0	0	1	0	0	1	13	0	411	1,527	
7:15 - 7:30	520	479	471	1.10	1,850	1,596	1,562	1.18	417	41	4	0	0	0	0	0	0	0	9	8	0	479	1,596	
7:30 - 7:45	616	557	553	1.11	1,941	1,764	1,733	1.12	520	26	2	0	0	0	0	3	0	0	2	4	0	557	1,764	
7:45 - 8:00	513	491	485	1.06	2,085	1,938	1,907	1.09	455	22	3	0	0	0	0	0	0	0	5	6	0	491	1,938	
8:00 - 8:15	447	438	422	1.06	2,096	1,965	1,931	1.09	401	14	0	0	0	0	0	1	0	0	6	16	0	438	1,965	
8:15 - 8:30	408	388	385	1.06	1,984	1,874	1,845	1.08	357	21	1	0	0	0	0	0	0	0	6	3	0	388	1,874	
8:30 - 8:45	408	365	360	1.13	1,776	1,682	1,652	1.08	331	19	2	1	0	0	0	2	0	0	5	5	0	365	1,682	
8:45 - 9:00	378	356	343	1.10	1,641	1,547	1,510	1.09	308	27	4	0	0	0	0	0	0	1	4	12	0	356	1,547	
9:00 - 9:15	313	298	288	1.09	1,507	1,407	1,376	1.10	263	25	0	0	0	0	0	0	0	1	0	9	0	298	1,407	
9:15 - 9:30	278	266	255	1.09	1,377	1,285	1,246	1.11	232	19	2	0	0	0	0	0	1	1	0	2	9	0	266	1,285
9:30 - 9:45	208	186	175	1.19	1,177	1,106	1,061	1.11	150	20	1	0	0	0	0	1	0	1	0	3	10	0	186	1,106
9:45 - 10:00	189	181	167	1.13	988	931	885	1.12	146	20	1	0	0	0	0	0	1	2	0	0	11	0	181	931

5-Hour Totals				N/A	N/A	N/A	N/A	VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION														6,347	N/A	
Vehicles	Persons	Average Occupancy	Auto Occupancy					1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK			
Vehicles	7,029	6,347	6,211	1.13	N/A	N/A	N/A	N/A	####	418	47	20	1	0	0	22	2	5	1	67	128	0	6,347	N/A
Persons																								

BRAC counts
Fort Detrick, Frederick County, Maryl
26-Jun-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	0	0
5:30 - 5:45	0	0
5:45 - 6:00	2	0
6:00 - 6:15	2	2
6:15 - 6:30	1	3
6:30 - 6:45	1	0
6:45 - 7:00	1	1
7:00 - 7:15	0	1
7:15 - 7:30	1	1
7:30 - 7:45	0	3
7:45 - 8:00	0	1
8:00 - 8:15	3	4
8:15 - 8:30	5	3
8:30 - 8:45	9	3
8:45 - 9:00	5	4
9:00 - 9:15	8	1
9:15 - 9:30	2	1
9:30 - 9:45	3	3
9:45 - 10:00	2	5

5-Hour Totals

Vehicles	45	36
Persons		

**BRAC counts
 Joint Base Andrews
 03-May-12
 All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:45 AM - 7:45 AM)	Percent of person trips
Person Trips by single-occupant vehicle	7,837	86%	2,920	87%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	1,188	13%	381	11%
Bus Transit Patrons	0	0%	0	0%
Pedestrians	77	1%	38	1%
Bicycles	<u>15</u>	0%	<u>2</u>	0%
Total Person Trips	<u>9,117</u>		<u>3,341</u>	
Autos and Motorcycles	8,315		3,074	
Average Auto Occupancy (computation includes motorcycles)	1.09		1.07	

**BRAC counts
Joint Base Andrews
03-May-12
All Entrance Gates Total**

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Total		Rail	Comm.	
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other	+ MC Riders + Bus Passengers	Trucks	Vehicles		Metro
5:00 - 5:15	20	5	0	0	1.20	0.00	0	25	30	0	0	0	0	30	1	26	0	0
5:15 - 5:30	54	2	0	1	1.23	12.00	0	57	70	0	0	0	0	70	0	57	0	0
5:30 - 5:45	154	7	0	0	1.04	0.00	2	163	170	0	1	0	0	170	6	170	0	0
5:45 - 6:00	336	29	2	0	1.09	3.00	2	369	402	0	0	0	0	402	2	372	0	0
6:00 - 6:15	393	13	0	0	1.03	0.00	0	406	419	0	1	0	0	419	6	413	0	0
6:15 - 6:30	497	9	0	4	1.10	12.00	0	510	563	0	0	0	0	563	1	511	0	0
6:30 - 6:45	608	21	1	3	1.09	10.00	2	635	692	0	1	0	0	692	3	639	0	0
6:45 - 7:00	700	27	0	3	1.08	12.00	2	732	792	0	1	0	0	792	7	740	0	0
7:00 - 7:15	743	22	4	4	1.10	7.50	4	777	851	0	2	0	0	851	9	788	0	0
7:15 - 7:30	755	46	1	1	1.07	7.50	3	806	865	0	2	0	0	865	6	815	0	0
7:30 - 7:45	722	31	1	0	1.04	4.00	5	759	793	0	3	0	0	793	3	767	0	0
7:45 - 8:00	566	27	1	0	1.05	3.00	5	599	628	0	8	0	0	628	13	621	0	0
8:00 - 8:15	449	17	0	4	1.13	12.00	1	471	532	0	5	0	0	532	8	486	0	0
8:15 - 8:30	415	27	5	0	1.08	3.00	0	447	484	0	2	0	0	484	13	463	0	0
8:30 - 8:45	302	17	2	1	1.10	6.00	2	324	356	0	4	0	0	356	2	331	0	0
8:45 - 9:00	320	21	0	0	1.06	0.00	0	341	362	0	0	0	0	362	13	355	0	0
9:00 - 9:15	242	27	1	1	1.15	7.50	0	271	311	0	0	0	0	311	8	280	0	0
9:15 - 9:30	208	20	2	1	1.15	6.00	0	231	266	0	1	0	0	266	14	246	0	0
9:30 - 9:45	170	16	0	0	1.09	0.00	2	188	204	0	2	0	0	204	8	198	0	0
9:45 - 10:00	183	20	0	1	1.15	12.00	0	204	235	0	0	0	0	235	11	215	0	0

5-Hour Totals

Vehicles	7,837	404	20	24	N/A	N/A	30	8,315	9,025	0	33	0	0	9,025	134	8,493	0	0
Persons	7,837	808	62	288			30											

BRAC counts
Joint Base Andrews
03-May-12
All Entrance Gates Total

Time	Total	Total	Total	Average	Total	Total	Total	Average
	Persons	Vehicles	Autos + MC	Auto Occupancy	Persons	Vehicles	Autos + MC	Auto Occupancy
	by 15 minutes				by Hour			
5:00 - 5:15	30	26	25	1.20				
5:15 - 5:30	70	57	57	1.23				
5:30 - 5:45	170	170	163	1.04				
5:45 - 6:00	402	372	369	1.09	672	625	614	1.09
6:00 - 6:15	419	413	406	1.03	1,061	1,012	995	1.07
6:15 - 6:30	563	511	510	1.10	1,554	1,466	1,448	1.07
6:30 - 6:45	692	639	635	1.09	2,076	1,935	1,920	1.08
6:45 - 7:00	792	740	732	1.08	2,466	2,303	2,283	1.08
7:00 - 7:15	851	788	777	1.10	2,898	2,678	2,654	1.09
7:15 - 7:30	865	815	806	1.07	3,200	2,982	2,950	1.08
7:30 - 7:45	793	767	759	1.04	3,301	3,110	3,074	1.07
7:45 - 8:00	628	621	599	1.05	3,137	2,991	2,941	1.07
8:00 - 8:15	532	486	471	1.13	2,818	2,689	2,635	1.07
8:15 - 8:30	484	463	447	1.08	2,437	2,337	2,276	1.07
8:30 - 8:45	356	331	324	1.10	2,000	1,901	1,841	1.09
8:45 - 9:00	362	355	341	1.06	1,734	1,635	1,583	1.10
9:00 - 9:15	311	280	271	1.15	1,513	1,429	1,383	1.09
9:15 - 9:30	266	246	231	1.15	1,295	1,212	1,167	1.11
9:30 - 9:45	204	198	188	1.09	1,143	1,079	1,031	1.11
9:45 - 10:00	235	215	204	1.15	1,016	939	894	1.14

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																	TOT	HOURLY
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	VEHICLES	TOT	VEHICLES		
20	5	0	0	0	0	0	0	0	0	0	0	1	0	26				
54	2	0	0	0	0	0	1	0	0	0	0	0	0	57				
154	7	0	0	0	0	0	0	0	1	0	2	6	0	170				
336	29	2	0	0	0	0	0	0	0	1	2	2	0	372	625			
393	13	0	0	0	0	0	0	0	1	0	0	6	0	413	1,012			
497	9	0	0	0	0	0	4	0	0	0	0	1	0	511	1,466			
608	21	0	1	0	0	0	3	0	1	0	2	3	0	639	1,935			
700	27	0	0	0	0	0	3	0	1	0	2	7	0	740	2,303			
743	22	4	0	0	0	0	4	0	2	0	4	9	0	788	2,678			
755	46	1	0	0	0	0	1	0	2	1	3	6	0	815	2,982			
722	31	0	1	0	0	0	0	0	3	2	5	3	0	767	3,110			
566	27	1	0	0	0	0	0	0	8	1	5	13	0	621	2,991			
449	17	0	0	0	0	0	4	0	5	2	1	8	0	486	2,689			
415	27	5	0	0	0	0	0	0	2	1	0	13	0	463	2,337			
302	17	2	0	0	0	0	1	0	4	1	2	2	0	331	1,901			
320	21	0	0	0	0	0	0	0	0	1	0	13	0	355	1,635			
242	27	1	0	0	0	0	1	0	0	1	0	8	0	280	1,429			
208	20	2	0	0	0	0	1	0	1	0	0	14	0	246	1,212			
170	16	0	0	0	0	0	0	0	2	0	2	8	0	198	1,079			
183	20	0	0	0	0	0	1	0	0	0	0	11	0	215	939			

5-Hour Totals																									
Vehicles	9,025	8,493	8,315	1.09	N/A	N/A	N/A	N/A	7,837	404	18	2	0	0	0	24	0	33	11	30	134	0	8,493	N/A	
Persons																									

BRAC counts
Joint Base Andrews
03-May-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	0	0
5:30 - 5:45	0	0
5:45 - 6:00	4	2
6:00 - 6:15	2	4
6:15 - 6:30	1	0
6:30 - 6:45	11	2
6:45 - 7:00	5	1
7:00 - 7:15	19	1
7:15 - 7:30	1	0
7:30 - 7:45	13	0
7:45 - 8:00	2	1
8:00 - 8:15	3	1
8:15 - 8:30	2	1
8:30 - 8:45	7	2
8:45 - 9:00	1	0
9:00 - 9:15	0	0
9:15 - 9:30	0	0
9:30 - 9:45	4	0
9:45 - 10:00	2	0

5-Hour Totals

Vehicles	77	15
Persons		

BRAC counts
Naval Support Facility Indian Head - Charles County, Maryland
21-Jun-12
Entrance Gate Total

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:15 AM - 7:15 AM)	Percent of person trips
Person Trips by single-occupant vehicle	1,836	86%	569	86%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	288	13%	86	13%
Transit Bus Passengers	5	0%	4	1%
Pedestrians	2	0%	2	0%
Bicycles	<u>6</u>	0%	<u>1</u>	0%
Total Person Trips	<u>2,137</u>		<u>662</u>	
Autos and Motorcycles	1,963		611	
Average Auto Occupancy (computation includes motorcycles)	1.08		1.07	

BRAC counts
Naval Support Facility Indian Head - Charles County, Maryland
21-Jun-12
Entrance Gate Total

Time	Total																	
	1 Autos	HOV-2 Autos	HOV-3+ Autos	Van-Pool Vans	Avg Auto Occ.	3+ Avg Auto Occ.	Motorcycles (MC)	Total Autos + MC	Total Auto Persons + MC Riders	Buses Transit	Buses Other	Bus Passengers Transit	Bus Passengers Other	Total Auto Pers. + MC Riders + Bus Passengers	Trucks	Total Vehicles	Rail Metro	Comm.
5:00 - 5:15	22	5	8	0	1.69	3.38	0	35	59	0	0	0	0	59	0	35	0	0
5:15 - 5:30	27	0	0	0	1.00	0.00	0	27	27	0	0	0	0	27	0	27	0	0
5:30 - 5:45	62	0	0	0	1.00	0.00	0	62	62	0	0	0	0	62	0	62	0	0
5:45 - 6:00	118	8	0	0	1.06	0.00	2	128	136	0	0	1	0	137	0	128	0	0
6:00 - 6:15	127	8	0	0	1.06	0.00	1	136	144	0	0	0	0	144	0	136	0	0
6:15 - 6:30	148	7	0	0	1.04	0.00	3	158	165	0	0	1	0	166	0	158	0	0
6:30 - 6:45	150	10	0	0	1.06	0.00	1	161	171	0	0	0	0	171	2	163	0	0
6:45 - 7:00	125	6	2	0	1.09	4.00	0	133	145	0	0	3	0	148	0	133	0	0
7:00 - 7:15	146	9	3	0	1.09	3.00	1	159	174	0	0	0	0	174	7	166	0	0
7:15 - 7:30	132	5	2	0	1.06	3.00	1	140	149	0	0	0	0	149	3	143	0	0
7:30 - 7:45	132	6	0	2	1.20	12.00	1	141	169	0	0	0	0	169	4	145	0	0
7:45 - 8:00	120	3	1	0	1.04	3.00	1	125	130	0	0	0	0	130	2	127	0	0
8:00 - 8:15	89	1	0	0	1.01	0.00	1	91	92	0	0	0	0	92	2	93	0	0
8:15 - 8:30	99	9	0	0	1.08	0.00	0	108	117	0	0	0	0	117	2	110	0	0
8:30 - 8:45	78	2	0	0	1.02	0.00	1	81	83	0	0	0	0	83	3	84	0	0
8:45 - 9:00	85	2	0	0	1.02	0.00	0	87	89	0	0	0	0	89	5	92	0	0
9:00 - 9:15	57	2	0	0	1.03	0.00	1	60	62	0	0	0	0	62	0	60	0	0
9:15 - 9:30	40	2	0	0	1.05	0.00	1	43	45	0	0	0	0	45	3	46	0	0
9:30 - 9:45	43	1	0	1	1.26	12.00	2	47	59	0	0	0	0	59	1	48	0	0
9:45 - 10:00	36	5	0	0	1.12	0.00	0	41	46	0	0	0	0	46	6	47	0	0

5-Hour Totals					N/A	N/A												
Vehicles	1,836	91	16	3			17	1,963	2,124	0	0	5	0	2,129	40	2,003	0	0
Persons	1,836	182	53	36	17													

BRAC counts
Naval Support Facility Indian Head -
21-Jun-12

Entrance Gate Total

Time	Average by 15 minutes				Average by Hour			
	Total Persons	Total Vehicles	Total Autos + MC	Average Occupancy	Total Persons	Total Vehicles	Total Autos + MC	Average Occupancy

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT VEHICLES	HOURLY TOT VEHICLES
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	TOT VEHICLES	HOURLY TOT VEHICLES		

5:00 - 5:15	59	35	35	1.69												22	5	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	35
5:15 - 5:30	27	27	27	1.00												27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	
5:30 - 5:45	62	62	62	1.00												62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62		
5:45 - 6:00	136	128	128	1.06	284	252	252	1.13								118	8	0	0	0	0	0	0	0	0	0	0	2	0	0	128	252	
6:00 - 6:15	144	136	136	1.06	369	353	353	1.05								127	8	0	0	0	0	0	0	0	0	0	0	1	0	0	136	353	
6:15 - 6:30	165	158	158	1.04	507	484	484	1.05								148	7	0	0	0	0	0	0	0	0	0	0	3	0	0	158	484	
6:30 - 6:45	171	163	161	1.06	616	585	583	1.06								150	10	0	0	0	0	0	0	0	0	0	0	1	2	0	163	585	
6:45 - 7:00	145	133	133	1.09	625	590	588	1.06								125	6	1	0	1	0	0	0	0	0	0	0	0	0	0	133	590	
7:00 - 7:15	174	166	159	1.09	655	620	611	1.07								146	9	3	0	0	0	0	0	0	0	0	0	1	7	0	166	620	
7:15 - 7:30	149	143	140	1.06	639	605	593	1.08								132	5	2	0	0	0	0	0	0	0	0	0	1	2	1	143	605	
7:30 - 7:45	169	145	141	1.20	637	587	573	1.11								132	6	0	0	0	0	0	2	0	0	0	0	1	4	0	145	587	
7:45 - 8:00	130	127	125	1.04	622	581	565	1.10								120	3	1	0	0	0	0	0	0	0	0	0	1	2	0	127	581	
8:00 - 8:15	92	93	91	1.01	540	508	497	1.09								89	1	0	0	0	0	0	0	0	0	0	0	1	2	0	93	508	
8:15 - 8:30	117	110	108	1.08	508	475	465	1.09								99	9	0	0	0	0	0	0	0	0	0	0	2	0	0	110	475	
8:30 - 8:45	83	84	81	1.02	422	414	405	1.04								78	2	0	0	0	0	0	0	0	0	0	0	1	3	0	84	414	
8:45 - 9:00	89	92	87	1.02	381	379	367	1.04								85	2	0	0	0	0	0	0	0	0	0	0	0	5	0	92	379	
9:00 - 9:15	62	60	60	1.03	351	346	336	1.04								57	2	0	0	0	0	0	0	0	0	0	0	1	0	0	60	346	
9:15 - 9:30	45	46	43	1.05	279	282	271	1.03								40	2	0	0	0	0	0	0	0	0	0	0	1	3	0	46	282	
9:30 - 9:45	59	48	47	1.26	255	246	237	1.08								43	1	0	0	0	0	0	1	0	0	0	0	2	1	0	48	246	
9:45 - 10:00	46	47	41	1.12	212	201	191	1.11								36	5	0	0	0	0	0	0	0	0	0	0	6	0	47	201		

5-Hour Totals

Vehicles	2,124	2,003	1,963	1.08	N/A	N/A	N/A	N/A	1,836	91	12	3	1	0	0	3	0	0	0	0	0	17	39	1	2,003	N/A					
Persons																															

BRAC counts
Naval Support Facility Indian Head -
21-Jun-12
Entrance Gate Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	0	0
5:30 - 5:45	0	0
5:45 - 6:00	0	0
6:00 - 6:15	0	0
6:15 - 6:30	0	0
6:30 - 6:45	0	0
6:45 - 7:00	0	0
7:00 - 7:15	2	1
7:15 - 7:30	0	0
7:30 - 7:45	0	0
7:45 - 8:00	0	1
8:00 - 8:15	0	0
8:15 - 8:30	0	1
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	0	0
9:15 - 9:30	0	0
9:30 - 9:45	0	3
9:45 - 10:00	0	0

5-Hour Totals

Vehicles	2	6
Persons		

**BRAC counts
Walter Reed National Military Medical Center at Bethesda
08-May-12
All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:15 AM - 7:15 AM)	Percent of person trips
Person Trips by single-occupant vehicle	7,319	62%	2,713	64%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	2,780	24%	787	18%
Rail Transit Patrons	1,390	12%	644	15%
Pedestrians	207	2%	75	2%
Bicycles	<u>129</u>	1%	<u>38</u>	1%
Total Person Trips	<u>11,825</u>		<u>4,257</u>	
Autos and Motorcycles	8,432		3,057	
Average Auto Occupancy (computation includes motorcycles)	1.20		1.14	

BRAC counts
Walter Reed National Military Medical Center at Bethesda
08-May-12

All Entrance Gates Total
Navy Lodge and University Gates (only) re-counted on 19-June-2012

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers	Total Auto Pers.	Total	Rail		
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	+ MC Riders	Transit	Other	+ MC Riders +Bus Passengers	Trucks	Vehicles	Metro	Comm.
5:00 - 5:15	136	21	2	0	1.16	3.50	0	159	185	0	1	0	2	164	0	0
5:15 - 5:30	246	27	0	0	1.10	0.00	4	277	304	0	0	0	1	278	0	0
5:30 - 5:45	325	43	1	2	1.18	9.00	2	373	440	0	0	0	3	377	0	0
5:45 - 6:00	462	58	0	0	1.11	0.00	1	521	579	0	4	0	2	528	0	0
6:00 - 6:15	617	61	2	3	1.14	8.40	3	686	784	0	5	0	0	691	27	0
6:15 - 6:30	708	72	4	3	1.15	7.14	3	790	905	1	7	0	2	800	95	0
6:30 - 6:45	631	70	11	1	1.14	3.75	10	723	826	0	5	0	2	730	143	0
6:45 - 7:00	773	60	2	2	1.10	7.75	8	845	932	0	1	0	2	848	210	0
7:00 - 7:15	601	85	4	4	1.20	7.63	5	699	837	0	2	0	6	707	196	0
7:15 - 7:30	515	56	3	5	1.20	8.75	3	582	700	0	4	0	7	593	170	0
7:30 - 7:45	345	58	1	6	1.31	10.71	1	411	537	0	3	0	5	419	96	0
7:45 - 8:00	266	41	1	4	1.28	10.20	4	316	403	0	2	0	1	319	110	0
8:00 - 8:15	252	42	1	4	1.29	10.20	1	300	388	0	1	0	7	308	57	0
8:15 - 8:30	210	35	1	2	1.25	9.67	0	248	309	0	8	0	2	258	53	0
8:30 - 8:45	209	45	3	4	1.37	8.29	1	262	358	0	2	0	1	265	52	0
8:45 - 9:00	190	40	3	3	1.33	7.50	0	236	315	1	1	0	8	247	59	0
9:00 - 9:15	224	52	1	1	1.23	7.50	0	278	343	0	3	0	4	285	39	0
9:15 - 9:30	208	40	2	3	1.31	8.60	1	254	332	0	3	0	6	265	46	0
9:30 - 9:45	176	36	1	5	1.42	10.50	1	219	312	0	3	0	4	226	25	0
9:45 - 10:00	225	24	0	3	1.23	12.00	1	253	310	0	2	0	3	258	12	0

5-Hour Totals

Vehicles	7,319	966	43	55	N/A	N/A	49	8,432	10,099	2	57	0	0	10,099	68	8,566	1,390	0
Persons	7,319	1,932	139	660			49											

BRAC counts
Walter Reed National Military Medical Center
08-May-12

All Entrance Gates Total
Navy Lodge and University Gates (only)

Time	Average				Average			
	Total Persons	Total Vehicles	Total Autos + MC	Auto Occupancy	Total Persons	Total Vehicles	Total Autos + MC	Auto Occupancy

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT VEHICLES	HOURLY TOT VEHICLES
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK				

5:00 - 5:15	185	164	159	1.16														136	21	1	1	0	0	0	0	0	0	0	1	2	0	2	0	164
5:15 - 5:30	304	278	277	1.10														246	27	0	0	0	0	0	0	0	0	0	0	4	1	0	278	
5:30 - 5:45	440	377	373	1.18														325	43	1	0	0	0	0	2	0	0	1	2	3	0	377		
5:45 - 6:00	579	528	521	1.11	1,508	1,347	1,330	1.13										462	58	0	0	0	0	0	0	4	1	1	2	0	528	1,347		
6:00 - 6:15	784	691	686	1.14														617	61	2	0	0	0	0	3	0	5	0	3	0	0	691	1,874	
6:15 - 6:30	905	800	790	1.15														708	72	2	2	0	0	0	3	1	7	0	3	2	0	800	2,396	
6:30 - 6:45	826	730	723	1.14														631	70	11	0	0	0	0	1	0	5	0	10	2	0	730	2,749	
6:45 - 7:00	932	848	845	1.10	3,447	3,069	3,044	1.13										773	60	1	1	0	0	0	2	0	1	0	8	2	0	848	3,069	
7:00 - 7:15	837	707	699	1.20														601	85	3	1	0	0	0	4	0	2	0	5	6	0	707	3,085	
7:15 - 7:30	700	593	582	1.20														515	56	2	1	0	0	0	5	0	4	0	3	7	0	593	2,878	
7:30 - 7:45	537	419	411	1.31														345	58	1	0	0	0	0	6	0	3	0	1	5	0	419	2,567	
7:45 - 8:00	403	319	316	1.28														266	41	1	0	0	0	0	4	0	2	0	4	1	0	319	2,038	
8:00 - 8:15	388	308	300	1.29														252	42	1	0	0	0	0	4	0	1	0	1	6	1	308	1,639	
8:15 - 8:30	309	258	248	1.25														210	35	0	0	1	0	0	2	0	8	0	0	2	0	258	1,304	
8:30 - 8:45	358	265	262	1.37														209	45	2	1	0	0	0	4	0	2	0	1	1	0	265	1,150	
8:45 - 9:00	315	247	236	1.33														190	40	3	0	0	0	0	3	1	1	1	0	8	0	247	1,078	
9:00 - 9:15	343	285	278	1.23	1,325	1,055	1,024	1.29										224	52	1	0	0	0	0	1	0	3	0	0	4	0	285	1,055	
9:15 - 9:30	332	265	254	1.31	1,348	1,062	1,030	1.31										208	40	1	1	0	0	0	3	0	3	2	1	6	0	265	1,062	
9:30 - 9:45	312	226	219	1.42	1,302	1,023	987	1.32										176	36	1	0	0	0	0	5	0	3	0	1	4	0	226	1,023	
9:45 - 10:00	310	258	253	1.23	1,297	1,034	1,004	1.29										225	24	0	0	0	0	0	0	3	0	2	0	1	3	0	258	1,034

5-Hour Totals																											
Vehicles	10,099	8,566	8,432	1.20	N/A	N/A	N/A	N/A	7,319	966	34	8	1	0	0	55	2	57	7	49	67	1	8,566	N/A			
Persons																											

BRAC counts
Walter Reed National Military Medical Center
08-May-12
All Entrance Gates Total
Navy Lodge and University Gates (only)

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	3	1
5:15 - 5:30	1	5
5:30 - 5:45	2	4
5:45 - 6:00	11	4
6:00 - 6:15	6	5
6:15 - 6:30	13	6
6:30 - 6:45	25	17
6:45 - 7:00	23	6
7:00 - 7:15	14	9
7:15 - 7:30	15	14
7:30 - 7:45	15	16
7:45 - 8:00	18	8
8:00 - 8:15	5	5
8:15 - 8:30	8	6
8:30 - 8:45	5	7
8:45 - 9:00	16	6
9:00 - 9:15	6	3
9:15 - 9:30	5	3
9:30 - 9:45	7	2
9:45 - 10:00	9	2

5-Hour Totals

Vehicles	207	129
Persons		

BRAC counts
National Guard Readiness Center - Arlington County, Va.
14-Jun-12
All Entrance Gates Total

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:45 AM - 7:45 AM)	Percent of person trips
Person Trips by single-occupant vehicle	982	47%	349	42%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	294	14%	137	17%
Bus Transit Patrons	362	17%	152	18%
Pedestrians	425	20%	179	22%
Bicycles	<u>19</u>	1%	<u>5</u>	1%
Total Person Trips	<u>2,082</u>		<u>822</u>	
Autos and Motorcycles	1,100		398	
Average Auto Occupancy (computation includes motorcycles)	1.16		1.22	

BRAC counts
National Guard Readiness Center - Arlington County, Va.
14-Jun-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Total		Rail	Comm.	
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other	+ MC Riders + Bus Passengers	Trucks	Vehicles		Metro
5:00 - 5:15	14	2	0	0	1.13	0.00	0	16	18	0	0	2	0	20	0	16	0	0
5:15 - 5:30	20	0	0	0	1.00	0.00	1	21	21	0	0	4	0	25	0	21	0	0
5:30 - 5:45	32	1	0	0	1.03	0.00	0	33	34	0	0	3	0	37	0	33	0	0
5:45 - 6:00	58	5	1	0	1.11	3.00	1	65	72	0	0	15	0	87	0	65	0	0
6:00 - 6:15	59	6	0	0	1.09	0.00	0	65	71	0	0	7	0	78	0	65	0	0
6:15 - 6:30	67	6	0	1	1.23	12.00	1	75	92	0	0	18	0	110	1	76	0	0
6:30 - 6:45	71	10	0	2	1.37	12.00	4	87	119	0	0	26	0	145	1	88	0	0
6:45 - 7:00	77	2	0	2	1.29	12.00	3	84	108	0	0	31	0	139	1	85	0	0
7:00 - 7:15	100	13	2	2	1.33	7.75	3	120	160	0	0	40	0	200	0	120	0	0
7:15 - 7:30	87	10	0	0	1.10	0.00	1	98	108	0	0	31	0	139	1	99	0	0
7:30 - 7:45	85	8	2	0	1.15	4.00	1	96	110	0	0	50	0	160	0	96	0	0
7:45 - 8:00	52	9	0	0	1.14	0.00	2	63	72	0	0	16	0	88	1	64	0	0
8:00 - 8:15	61	1	1	0	1.05	3.00	2	65	68	0	0	29	0	97	1	66	0	0
8:15 - 8:30	39	0	0	0	1.00	0.00	0	39	39	0	0	23	0	62	0	39	0	0
8:30 - 8:45	39	2	0	0	1.05	0.00	2	43	45	0	0	17	0	62	0	43	0	0
8:45 - 9:00	41	2	0	0	1.05	0.00	0	43	45	0	0	13	0	58	0	43	0	0
9:00 - 9:15	26	1	1	0	1.10	3.00	1	29	32	0	0	17	0	49	1	30	0	0
9:15 - 9:30	19	0	0	0	1.00	0.00	0	19	19	0	0	5	0	24	0	19	0	0
9:30 - 9:45	20	2	0	0	1.09	0.00	0	22	24	0	0	9	0	33	0	22	0	0
9:45 - 10:00	15	2	0	0	1.12	0.00	0	17	19	0	0	6	0	25	0	17	0	0

5-Hour Totals

Vehicles	982	82	7	7	N/A	N/A	22	1,100	1,276	0	0	362	0	1,638	7	1,107	0	0
Persons	982	164	24	84			22											

BRAC counts
National Guard Readiness Center - Ar
14-Jun-12

All Entrance Gates Total

Time	Average by 15 minutes				Average by Hour			
	Total Persons	Total Vehicles	Total Autos + MC	Total Auto Occupancy	Total Persons	Total Vehicles	Total Autos + MC	Total Auto Occupancy

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT VEHICLES	HOURLY TOT VEHICLES
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	TOT VEHICLES	HOURLY TOT VEHICLES		

5:00 - 5:15	18	16	16	1.13												16	
5:15 - 5:30	21	21	21	1.00												21	
5:30 - 5:45	34	33	33	1.03												33	
5:45 - 6:00	72	65	65	1.11	145	135	135	1.07								65	135
6:00 - 6:15	71	65	65	1.09	198	184	184	1.08								65	184
6:15 - 6:30	92	76	75	1.23	269	239	238	1.13								76	239
6:30 - 6:45	119	88	87	1.37	354	294	292	1.21								88	294
6:45 - 7:00	108	85	84	1.29	390	314	311	1.25								85	314
7:00 - 7:15	160	120	120	1.33	479	369	366	1.31								120	369
7:15 - 7:30	108	99	98	1.10	495	392	389	1.27								99	392
7:30 - 7:45	110	96	96	1.15	486	400	398	1.22								96	400
7:45 - 8:00	72	64	63	1.14	450	379	377	1.19								64	379
8:00 - 8:15	68	66	65	1.05	358	325	322	1.11								66	325
8:15 - 8:30	39	39	39	1.00	289	265	263	1.10								39	265
8:30 - 8:45	45	43	43	1.05	224	212	210	1.07								43	212
8:45 - 9:00	45	43	43	1.05	197	191	190	1.04								43	191
9:00 - 9:15	32	30	29	1.10	161	155	154	1.05								30	155
9:15 - 9:30	19	19	19	1.00	141	135	134	1.05								19	135
9:30 - 9:45	24	22	22	1.09	120	114	113	1.06								22	114
9:45 - 10:00	19	17	17	1.12	94	88	87	1.08								17	88

5-Hour Totals																								
Vehicles	1,276	1,107	1,100	1.16	N/A	N/A	N/A	N/A	982	82	4	3	0	0	0	7	0	0	0	22	7	0	1,107	N/A
Persons																								

BRAC counts
National Guard Readiness Center - Ar
14-Jun-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	2	0
5:15 - 5:30	5	0
5:30 - 5:45	4	1
5:45 - 6:00	17	0
6:00 - 6:15	8	0
6:15 - 6:30	21	0
6:30 - 6:45	31	0
6:45 - 7:00	36	3
7:00 - 7:15	48	0
7:15 - 7:30	36	0
7:30 - 7:45	59	2
7:45 - 8:00	18	7
8:00 - 8:15	34	3
8:15 - 8:30	26	1
8:30 - 8:45	21	2
8:45 - 9:00	16	0
9:00 - 9:15	20	0
9:15 - 9:30	5	0
9:30 - 9:45	11	0
9:45 - 10:00	7	0

5-Hour Totals

Vehicles	425	19
Persons		

BRAC counts
Tricare - 7700 Arlington Boulevard, Falls Church, Fairfax County, Va.
14-Jun-12
All Entrance Gates Total

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:45 AM - 7:45 AM)	Percent of person trips
Person Trips by single-occupant vehicle	982	66%	345	68%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	411	28%	128	25%
Transit Bus Passengers	3	0%	0	0%
Pedestrians	84	6%	30	6%
Bicycles	<u>5</u>	0%	<u>3</u>	1%
Total Person Trips	<u>1,485</u>		<u>506</u>	
Autos and Motorcycles	1,087		376	
Average Auto Occupancy (computation includes motorcycles)	1.28		1.26	

BRAC counts
Tricare - 7700 Arlington Boulevard, Falls Church, Fairfax County, Va.
14-Jun-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers	Total Auto Pers.	Total	Rail				
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	+ MC Riders	Transit	Other	+ MC Riders +Bus Passengers	Trucks	Vehicles	Metro	Comm.		
5:00 - 5:15	7	0	0	0	1.00	0.00	0	7	7	0	0	0	0	7	0	7	0	0
5:15 - 5:30	15	0	0	0	1.00	0.00	1	16	16	0	0	0	0	16	0	16	0	0
5:30 - 5:45	44	3	0	1	1.29	12.00	0	48	62	0	0	0	0	62	0	48	0	0
5:45 - 6:00	34	2	1	2	1.73	10.00	1	40	69	0	0	0	0	69	1	41	0	0
6:00 - 6:15	67	0	1	1	1.19	7.50	0	69	82	0	0	0	0	82	1	70	0	0
6:15 - 6:30	72	4	0	2	1.33	12.00	0	78	104	0	0	0	0	104	0	78	0	0
6:30 - 6:45	80	10	1	2	1.37	9.00	0	93	127	0	0	0	0	127	0	93	0	0
6:45 - 7:00	88	6	1	5	1.61	10.50	3	103	166	0	0	0	0	166	1	104	0	0
7:00 - 7:15	82	5	0	0	1.06	0.00	0	87	92	0	0	0	0	92	0	87	0	0
7:15 - 7:30	79	5	0	2	1.31	12.00	2	88	115	0	0	0	0	115	0	88	0	0
7:30 - 7:45	96	2	0	0	1.02	0.00	0	98	100	0	3	0	0	100	0	101	0	0
7:45 - 8:00	65	9	0	0	1.12	0.00	0	74	83	0	2	1	0	84	0	76	0	0
8:00 - 8:15	40	0	0	0	1.00	0.00	1	41	41	0	0	0	0	41	0	41	0	0
8:15 - 8:30	53	1	0	0	1.02	0.00	0	54	55	0	1	1	0	56	0	55	0	0
8:30 - 8:45	34	0	0	0	1.00	0.00	0	34	34	0	2	0	0	34	1	37	0	0
8:45 - 9:00	46	3	0	2	1.49	12.00	0	51	76	0	2	1	0	77	0	53	0	0
9:00 - 9:15	22	4	1	1	1.59	7.50	1	29	46	0	0	0	0	46	3	32	0	0
9:15 - 9:30	24	4	0	1	1.50	12.00	1	30	45	0	0	0	0	45	0	30	0	0
9:30 - 9:45	23	5	3	1	1.70	5.50	1	33	56	0	0	0	0	56	0	33	0	0
9:45 - 10:00	11	3	0	0	1.21	0.00	0	14	17	0	0	0	0	17	0	14	0	0

5-Hour Totals				N/A	N/A												
Vehicles	982	66	8			20	11	1,087	1,393	0	10	3	0	1,396	7	1,104	0
Persons	982	132	28	240		11											

BRAC counts
Tricare - 7700 Arlington Boulevard, Ft
14-Jun-12
All Entrance Gates Total

Time	by 15 minutes				by Hour			
	Total Persons	Total Vehicles	Total Autos + MC	Average Auto Occupancy	Total Persons	Total Vehicles	Total Autos + MC	Average Auto Occupancy

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT VEHICLES	HOURLY TOT VEHICLES
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK				

5:00 - 5:15	7	7	7	1.00															7	
5:15 - 5:30	16	16	16	1.00															16	
5:30 - 5:45	62	48	48	1.29															48	
5:45 - 6:00	69	41	40	1.73	154	112	111	1.39											41	112
6:00 - 6:15	82	70	69	1.19	229	175	173	1.32											70	175
6:15 - 6:30	104	78	78	1.33	317	237	235	1.35											78	237
6:30 - 6:45	127	93	93	1.37	382	282	280	1.36											93	282
6:45 - 7:00	166	104	103	1.61	479	345	343	1.40											104	345
7:00 - 7:15	92	87	87	1.06	489	362	361	1.35											87	362
7:15 - 7:30	115	88	88	1.31	500	372	371	1.35											88	372
7:30 - 7:45	100	101	98	1.02	473	380	376	1.26											101	380
7:45 - 8:00	83	76	74	1.12	390	352	347	1.12											76	352
8:00 - 8:15	41	41	41	1.00	339	306	301	1.13											41	306
8:15 - 8:30	55	55	54	1.02	279	273	267	1.04											55	273
8:30 - 8:45	34	37	34	1.00	213	209	203	1.05											37	209
8:45 - 9:00	76	53	51	1.49	206	186	180	1.14											53	186
9:00 - 9:15	46	32	29	1.59	211	177	168	1.26											32	177
9:15 - 9:30	45	30	30	1.50	201	152	144	1.40											30	152
9:30 - 9:45	56	33	33	1.70	223	148	143	1.56											33	148
9:45 - 10:00	17	14	14	1.21	164	109	106	1.55											14	109

5-Hour Totals																								
Vehicles	1,393	1,104	1,087	1.28	N/A	N/A	N/A	N/A	982	66	6	1	0	1	0	20	0	10	0	11	7	0	1,104	N/A
Persons																								

BRAC counts
Tricare - 7700 Arlington Boulevard, F:
14-Jun-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	0	0
5:30 - 5:45	2	0
5:45 - 6:00	3	0
6:00 - 6:15	0	0
6:15 - 6:30	5	1
6:30 - 6:45	2	0
6:45 - 7:00	4	1
7:00 - 7:15	4	1
7:15 - 7:30	14	0
7:30 - 7:45	8	1
7:45 - 8:00	6	1
8:00 - 8:15	4	0
8:15 - 8:30	6	0
8:30 - 8:45	1	0
8:45 - 9:00	7	0
9:00 - 9:15	7	0
9:15 - 9:30	8	0
9:30 - 9:45	2	0
9:45 - 10:00	1	0

5-Hour Totals

Vehicles	84	5
Persons		

**BRAC counts
Fort Belvoir Main Post and Fort Belvoir North Area
05-Jun-12
All Entrances Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:45 AM - 7:45 AM)	Percent of person trips
Person Trips by single-occupant vehicle	23,724	83%	7,750	86%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	4,245	15%	987	11%
Bus Transit Patrons	567	2%	241	3%
Pedestrians	21	0%	7	0%
Bicycles	<u>52</u>	0%	<u>14</u>	0%
Total Person Trips	<u>28,609</u>		<u>8,999</u>	
Autos and Motorcycles	25,382		8,178	
Average Auto Occupancy (computation includes motorcycles)	1.10		1.07	

**BRAC counts
Fort Belvoir Main Post and Fort Belvoir North Area
05-Jun-12
All Entrances Total**

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Total	Rail	Comm.		
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other	+ MC Riders +Bus Passengers	Trucks		Vehicles	Metro
5:00 - 5:15	326	23	10	2	1.20	5.00	2	363	434	0	1	0	0	434	20	387	0	0
5:15 - 5:30	503	16	1	5	1.14	10.83	7	532	607	5	2	10	0	617	15	550	0	0
5:30 - 5:45	817	37	3	9	1.16	9.75	14	880	1,022	0	2	0	0	1,022	40	930	0	0
5:45 - 6:00	1,074	68	3	5	1.11	8.75	8	1,158	1,288	8	5	6	0	1,294	51	1,219	0	0
6:00 - 6:15	1,212	68	5	11	1.15	9.19	21	1,317	1,516	0	2	0	0	1,516	19	1,343	0	0
6:15 - 6:30	1,478	47	5	11	1.12	9.25	5	1,546	1,725	10	8	66	0	1,791	6	1,564	0	0
6:30 - 6:45	1,636	58	2	8	1.09	10.20	17	1,721	1,871	0	6	0	0	1,871	15	1,748	0	0
6:45 - 7:00	1,984	80	3	5	1.07	8.75	14	2,086	2,228	9	6	102	0	2,330	24	2,124	0	0
7:00 - 7:15	2,109	85	10	4	1.07	5.64	10	2,218	2,368	0	4	0	0	2,368	18	2,246	0	0
7:15 - 7:30	1,803	94	6	2	1.07	5.25	12	1,917	2,045	12	10	139	0	2,184	13	1,943	0	0
7:30 - 7:45	1,854	83	10	3	1.07	5.31	7	1,957	2,096	0	3	0	0	2,096	12	1,977	0	0
7:45 - 8:00	1,575	78	13	3	1.08	4.81	16	1,685	1,824	13	5	98	0	1,922	19	1,715	0	0
8:00 - 8:15	1,378	61	6	4	1.08	6.60	12	1,461	1,578	0	5	0	0	1,578	30	1,501	0	0
8:15 - 8:30	1,218	56	4	4	1.09	7.88	8	1,290	1,401	12	10	67	0	1,468	53	1,357	0	0
8:30 - 8:45	989	60	6	5	1.12	7.09	8	1,068	1,195	0	22	0	0	1,195	37	1,130	0	0
8:45 - 9:00	1,045	80	5	6	1.14	8.00	9	1,145	1,302	10	10	37	0	1,339	13	1,173	0	0
9:00 - 9:15	924	72	5	2	1.10	5.71	4	1,007	1,112	0	32	0	0	1,112	22	1,065	0	0
9:15 - 9:30	671	59	5	3	1.14	6.50	7	745	848	8	1	25	0	873	26	775	0	0
9:30 - 9:45	585	59	3	3	1.15	7.50	6	656	754	0	2	0	0	754	24	686	0	0
9:45 - 10:00	543	78	6	3	1.20	6.22	0	630	755	10	1	17	0	772	18	651	0	0

5-Hour Totals

Vehicles	23,724	1,262	111	98	N/A	N/A	187	25,382	27,969	97	137	567	0	28,536	475	26,084	0	0
Persons	23,724	2,524	358	1,176			187											

BRAC counts
Fort Belvoir Main Post and Fort Belvo
05-Jun-12

All Entrances Total

Time	Total	Total	Total	Average	Total	Total	Total	Average
	Persons	Vehicles	Autos + MC	Auto Occupancy	Persons	Vehicles	Autos + MC	Auto Occupancy
	by 15 minutes				by Hour			

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT	HOURLY
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	TOT VEHICLES	TOT VEHICLES		

5:00 - 5:15	434	387	363	1.20												326	23	6	3	0	1	0	2	3	1	0	2	20	0	387	
5:15 - 5:30	607	550	532	1.14												503	16	0	0	1	0	0	5	1	2	0	7	15	0	550	
5:30 - 5:45	1,022	930	880	1.16												817	37	3	0	0	0	0	9	6	2	2	14	40	0	930	
5:45 - 6:00	1,288	1,219	1,158	1.11	3,351	3,086	2,933	1.14	1,074	68	2	1	0	0	0	1,074	68	2	1	0	0	0	5	3	5	2	8	51	0	1,219	3,086
6:00 - 6:15	1,516	1,343	1,317	1.15	4,433	4,042	3,887	1.14	1,212	68	5	0	0	0	0	1,212	68	5	0	0	0	11	4	2	1	21	19	0	1,343	4,042	
6:15 - 6:30	1,725	1,564	1,546	1.12	5,551	5,056	4,901	1.13	1,478	47	4	1	0	0	0	1,478	47	4	1	0	0	11	3	8	1	5	6	0	1,564	5,056	
6:30 - 6:45	1,871	1,748	1,721	1.09	6,400	5,874	5,742	1.11	1,636	58	2	0	0	0	0	1,636	58	2	0	0	0	8	4	6	2	17	15	0	1,748	5,874	
6:45 - 7:00	2,228	2,124	2,086	1.07	7,340	6,779	6,670	1.10	1,984	80	2	1	0	0	0	1,984	80	2	1	0	0	5	7	6	1	14	24	0	2,124	6,779	
7:00 - 7:15	2,368	2,246	2,218	1.07	8,192	7,682	7,571	1.08	2,109	85	9	1	0	0	0	2,109	85	9	1	0	0	4	4	4	2	10	18	0	2,246	7,682	
7:15 - 7:30	2,045	1,943	1,917	1.07	8,512	8,061	7,942	1.07	1,803	94	6	0	0	0	0	1,803	94	6	0	0	0	2	2	10	1	12	13	0	1,943	8,061	
7:30 - 7:45	2,096	1,977	1,957	1.07	8,737	8,290	8,178	1.07	1,854	83	7	3	0	0	0	1,854	83	7	3	0	0	3	3	3	2	7	11	1	1,977	8,290	
7:45 - 8:00	1,824	1,715	1,685	1.08	8,333	7,881	7,777	1.07	1,575	78	11	2	0	0	0	1,575	78	11	2	0	0	3	3	5	3	16	19	0	1,715	7,881	
8:00 - 8:15	1,578	1,501	1,461	1.08	7,543	7,136	7,020	1.07	1,378	61	6	0	0	0	0	1,378	61	6	0	0	0	4	3	5	2	12	30	0	1,501	7,136	
8:15 - 8:30	1,401	1,357	1,290	1.09	6,899	6,550	6,393	1.08	1,218	56	2	1	1	0	0	1,218	56	2	1	1	0	4	3	10	1	8	53	0	1,357	6,550	
8:30 - 8:45	1,195	1,130	1,068	1.12	5,998	5,703	5,504	1.09	989	60	6	0	0	0	0	989	60	6	0	0	0	5	2	22	1	8	37	0	1,130	5,703	
8:45 - 9:00	1,302	1,173	1,145	1.14	5,476	5,161	4,964	1.10	1,045	80	4	1	0	0	0	1,045	80	4	1	0	0	6	2	10	3	9	12	1	1,173	5,161	
9:00 - 9:15	1,112	1,065	1,007	1.10	5,010	4,725	4,510	1.11	924	72	4	1	0	0	0	924	72	4	1	0	0	2	2	32	2	4	22	0	1,065	4,725	
9:15 - 9:30	848	775	745	1.14	4,457	4,143	3,965	1.12	671	59	4	1	0	0	0	671	59	4	1	0	0	3	2	1	1	7	25	1	775	4,143	
9:30 - 9:45	754	686	656	1.15	4,016	3,699	3,553	1.13	585	59	3	0	0	0	0	585	59	3	0	0	0	3	4	2	0	6	24	0	686	3,699	
9:45 - 10:00	755	651	630	1.20	3,469	3,177	3,038	1.14	543	78	4	2	0	0	0	543	78	4	2	0	0	3	2	1	0	0	18	0	651	3,177	

5-Hour Totals																									
Vehicles	27,969	26,084	25,382	1.10	N/A	N/A	N/A	N/A	23,724	1,262	90	18	2	1	0	98	63	137	27	187	472	3	26,084	N/A	
Persons																									

BRAC counts
Fort Belvoir Main Post and Fort Belvo
05-Jun-12
All Entrances Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	0
5:15 - 5:30	0	2
5:30 - 5:45	0	0
5:45 - 6:00	2	0
6:00 - 6:15	0	5
6:15 - 6:30	1	8
6:30 - 6:45	5	4
6:45 - 7:00	3	2
7:00 - 7:15	2	4
7:15 - 7:30	1	4
7:30 - 7:45	1	4
7:45 - 8:00	0	2
8:00 - 8:15	0	3
8:15 - 8:30	0	0
8:30 - 8:45	2	0
8:45 - 9:00	0	2
9:00 - 9:15	0	2
9:15 - 9:30	0	4
9:30 - 9:45	2	4
9:45 - 10:00	2	2

5-Hour Totals

Vehicles	21	52
Persons		

**BRAC counts
Marine Corps Base Quantico
17-May-12
All Entrance Gates Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (6:45 AM - 7:45 AM)	Percent of person trips
Person Trips by single-occupant vehicle	14,079	83%	4,911	85%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	2,673	16%	810	14%
Commuter Rail Patrons	175	1%	58	1%
Pedestrians	2	0%	0	0%
Bicycles	<u>9</u>	0%	<u>5</u>	0%
Total Person Trips	<u>16,938</u>		<u>5,784</u>	
Autos and Motorcycles	15,253		5,287	
Average Auto Occupancy (computation includes motorcycles)	1.10		1.08	

BRAC counts
Marine Corps Base Quantico
17-May-12
All Entrance Gates Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Trucks	Total	Rail	Comm.
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other +Bus Passengers		Vehicles	Metro	
5:00 - 5:15	45	0	1	0	1.13	7.00	0	46	52	0	0	0	0	52	0	46	0
5:15 - 5:30	172	18	3	0	1.17	6.33	2	195	229	0	0	0	0	229	1	196	0
5:30 - 5:45	361	17	0	2	1.10	12.00	4	384	423	0	1	0	0	423	6	391	0
5:45 - 6:00	620	30	1	4	1.11	10.20	11	666	742	0	0	0	0	742	1	667	0
6:00 - 6:15	683	44	1	5	1.14	10.50	9	742	843	0	0	0	0	843	14	756	0
6:15 - 6:30	1,020	47	2	4	1.09	9.00	21	1,094	1,189	0	2	0	0	1,189	8	1,104	0
6:30 - 6:45	1,135	57	3	9	1.13	9.75	28	1,232	1,394	0	0	0	0	1,394	16	1,248	0
6:45 - 7:00	1,255	60	1	3	1.07	9.75	34	1,353	1,448	0	1	0	0	1,448	13	1,367	0
7:00 - 7:15	1,205	48	4	4	1.08	7.63	17	1,278	1,379	0	0	0	0	1,379	16	1,294	0
7:15 - 7:30	1,242	56	8	4	1.09	6.17	35	1,345	1,463	0	2	0	0	1,463	18	1,365	0
7:30 - 7:45	1,209	65	5	4	1.09	7.11	28	1,311	1,431	0	1	0	0	1,431	11	1,323	0
7:45 - 8:00	1,127	58	3	2	1.07	6.80	20	1,210	1,297	0	0	0	0	1,297	14	1,224	0
8:00 - 8:15	889	41	1	2	1.07	9.00	19	952	1,017	0	0	0	0	1,017	11	963	0
8:15 - 8:30	580	29	3	1	1.07	5.25	9	622	668	0	2	0	0	668	20	644	0
8:30 - 8:45	538	38	2	1	1.09	6.00	7	586	639	0	1	0	0	639	20	612	0
8:45 - 9:00	557	48	0	1	1.10	12.00	8	614	673	0	4	0	0	673	21	639	0
9:00 - 9:15	491	32	5	3	1.14	6.63	7	538	615	0	0	0	0	615	18	556	0
9:15 - 9:30	362	30	2	0	1.09	3.50	4	398	433	0	1	0	0	433	10	409	0
9:30 - 9:45	315	44	3	2	1.20	6.60	5	369	441	0	0	0	0	441	10	379	0
9:45 - 10:00	273	38	4	1	1.18	5.00	2	318	376	0	1	0	0	376	23	342	0

5-Hour Totals

Vehicles	14,079	800	52	52
Persons	14,079	1,600	179	624

N/A N/A

270	15,253	16,752	0	16	0	0	16,752	251	15,525	0	175
270											

BRAC counts
Marine Corps Base Quantico
17-May-12
All Entrance Gates Total

Time	Total			Average	Total			Average
	Persons	Vehicles	Autos + MC	Auto Occupancy	Persons	Vehicles	Autos + MC	Auto Occupancy
	by 15 minutes				by Hour			

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT VEHICLES	HOURLY TOT VEHICLES
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK				

5:00 - 5:15	52	46	46	1.13														46	
5:15 - 5:30	229	196	195	1.17														196	
5:30 - 5:45	423	391	384	1.10														391	
5:45 - 6:00	742	667	666	1.11	1,446	1,300	1,291	1.12										667	1,300
6:00 - 6:15	843	756	742	1.14	2,237	2,010	1,987	1.13										756	2,010
6:15 - 6:30	1,189	1,104	1,094	1.09	3,197	2,918	2,886	1.11										1,104	2,918
6:30 - 6:45	1,394	1,248	1,232	1.13	4,168	3,775	3,734	1.12										1,248	3,775
6:45 - 7:00	1,448	1,367	1,353	1.07	4,874	4,475	4,421	1.10										1,367	4,475
7:00 - 7:15	1,379	1,294	1,278	1.08	5,410	5,013	4,957	1.09										1,294	5,013
7:15 - 7:30	1,463	1,365	1,345	1.09	5,684	5,274	5,208	1.09										1,365	5,274
7:30 - 7:45	1,431	1,323	1,311	1.09	5,721	5,349	5,287	1.08										1,323	5,349
7:45 - 8:00	1,297	1,224	1,210	1.07	5,570	5,206	5,144	1.08										1,224	5,206
8:00 - 8:15	1,017	963	952	1.07	5,208	4,875	4,818	1.08										963	4,875
8:15 - 8:30	668	644	622	1.07	4,413	4,154	4,095	1.08										644	4,154
8:30 - 8:45	639	612	586	1.09	3,621	3,443	3,370	1.07										612	3,443
8:45 - 9:00	673	639	614	1.10	2,997	2,858	2,774	1.08										639	2,858
9:00 - 9:15	615	556	538	1.14	2,595	2,451	2,360	1.10										556	2,451
9:15 - 9:30	433	409	398	1.09	2,360	2,216	2,136	1.10										409	2,216
9:30 - 9:45	441	379	369	1.20	2,162	1,983	1,919	1.13										379	1,983
9:45 - 10:00	376	342	318	1.18	1,865	1,686	1,623	1.15										342	1,686

5-Hour Totals																								
Vehicles	16,752	15,525	15,253	1.10	N/A	N/A	N/A	N/A	14,079	800	39	9	1	0	3	52	0	16	5	270	250	1	15,525	N/A
Persons																								

BRAC counts
Marine Corps Base Quantico
17-May-12
All Entrance Gates Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	0	1
5:15 - 5:30	0	0
5:30 - 5:45	0	1
5:45 - 6:00	0	0
6:00 - 6:15	0	0
6:15 - 6:30	0	0
6:30 - 6:45	0	2
6:45 - 7:00	0	0
7:00 - 7:15	0	1
7:15 - 7:30	0	3
7:30 - 7:45	0	1
7:45 - 8:00	0	0
8:00 - 8:15	0	0
8:15 - 8:30	1	0
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	0	0
9:15 - 9:30	0	0
9:30 - 9:45	1	0
9:45 - 10:00	0	0

5-Hour Totals

Vehicles	2	9
Persons		

**BRAC counts
 Mark Center, Alexandria, Virginia
 10-May-12
 All Entrances Total**

	5 Hours (5:00 AM - 10:00 AM)	Percent of person trips	Peak Hour (8:00 AM - 9:00 AM)	Percent of person trips
Person Trips by single-occupant vehicle	3,710	65%	1,037	67%
Other person trips by auto (includes car-poolers, van-poolers and motorcycles)	916	16%	237	15%
Bus Transit Patrons	956	17%	230	15%
Pedestrians	106	2%	29	2%
Bicycles	<u>22</u>	0%	<u>10</u>	1%
Total Person Trips	<u>5,710</u>		<u>1,543</u>	
Autos and Motorcycles	4,048		1,130	
Average Auto Occupancy (computation includes motorcycles)	1.14		1.13	

BRAC counts
Mark Center, Alexandria, Virginia
10-May-12
All Entrances Total

Time	1	HOV-2	HOV-3+	Van-Pool	Avg	3+ Avg	Motorcycles	Total Autos	Total	Buses	Bus Passengers		Total Auto Pers.	Total		Rail	Comm.	
	Autos	Autos	Autos	Vans	Auto Occ.	Auto Occ.	(MC)	+ MC	Auto Persons + MC Riders	Transit	Other	Transit	Other	+ MC Riders + Bus Passengers	Trucks	Vehicles		Metro
5:00 - 5:15	43	2	0	0	1.04	0.00	0	45	47	1	0	0	0	47	1	47	0	0
5:15 - 5:30	63	5	0	0	1.07	0.00	0	68	73	4	0	0	0	73	1	73	0	0
5:30 - 5:45	118	9	0	2	1.24	12.00	1	130	161	3	0	0	0	161	2	135	0	0
5:45 - 6:00	122	12	0	2	1.25	12.00	2	138	172	1	3	43	0	215	11	153	0	0
6:00 - 6:15	147	10	1	2	1.21	9.00	1	161	195	6	2	0	0	195	7	176	0	0
6:15 - 6:30	157	12	0	1	1.13	12.00	1	171	194	4	3	75	0	269	1	180	0	0
6:30 - 6:45	217	15	0	1	1.11	12.00	3	236	262	5	6	0	0	262	1	248	0	0
6:45 - 7:00	226	18	3	1	1.15	5.75	0	248	285	5	7	131	0	416	1	261	0	0
7:00 - 7:15	235	14	1	0	1.06	3.00	0	250	266	6	7	0	0	266	2	265	0	0
7:15 - 7:30	214	13	3	2	1.19	7.20	2	234	278	10	4	181	0	459	2	250	0	0
7:30 - 7:45	227	19	1	1	1.13	7.50	4	252	284	7	2	0	0	284	8	269	0	0
7:45 - 8:00	223	16	3	1	1.13	5.25	2	245	278	10	5	183	0	461	6	266	0	0
8:00 - 8:15	279	26	1	1	1.13	7.50	1	308	347	9	5	0	0	347	7	329	0	0
8:15 - 8:30	282	20	2	1	1.12	6.33	0	305	341	6	4	92	0	433	7	322	0	0
8:30 - 8:45	217	19	0	2	1.17	12.00	2	240	281	11	3	0	0	281	8	262	0	0
8:45 - 9:00	259	15	1	1	1.10	7.50	1	277	305	3	3	138	0	443	2	285	0	0
9:00 - 9:15	220	18	1	1	1.13	8.00	0	240	272	4	4	0	0	272	0	248	0	0
9:15 - 9:30	193	12	2	1	1.14	6.67	0	208	237	1	4	85	0	322	1	214	0	0
9:30 - 9:45	165	8	1	1	1.13	8.00	0	175	197	4	1	0	0	197	0	180	0	0
9:45 - 10:00	103	12	0	2	1.29	12.00	0	117	151	2	1	28	0	179	1	121	0	0

5-Hour Totals

Vehicles	3,710	275	20	23	N/A	N/A	20	4,048	4,626	102	64	956	0	5,582	69	4,284	0	0
Persons	3,710	550	70	276			20											

BRAC counts
Mark Center, Alexandria, Virginia
10-May-12
All Entrances Total

Time	Total	Total	Total	Average	Total	Total	Total	Average
	Persons	Vehicles	Autos + MC	Auto Occupancy	Persons	Vehicles	Autos + MC	Auto Occupancy
	by 15 minutes				by Hour			
5:00 - 5:15	47	47	45	1.04				
5:15 - 5:30	73	73	68	1.07				
5:30 - 5:45	161	135	130	1.24				
5:45 - 6:00	172	153	138	1.25	453	408	381	1.19
6:00 - 6:15	195	176	161	1.21	601	537	497	1.21
6:15 - 6:30	194	180	171	1.13	722	644	600	1.20
6:30 - 6:45	262	248	236	1.11	823	757	706	1.17
6:45 - 7:00	285	261	248	1.15	936	865	816	1.15
7:00 - 7:15	266	265	250	1.06	1,007	954	905	1.11
7:15 - 7:30	278	250	234	1.19	1,091	1,024	968	1.13
7:30 - 7:45	284	269	252	1.13	1,113	1,045	984	1.13
7:45 - 8:00	278	266	245	1.13	1,106	1,050	981	1.13
8:00 - 8:15	347	329	308	1.13	1,187	1,114	1,039	1.14
8:15 - 8:30	341	322	305	1.12	1,250	1,186	1,110	1.13
8:30 - 8:45	281	262	240	1.17	1,247	1,179	1,098	1.14
8:45 - 9:00	305	285	277	1.10	1,274	1,198	1,130	1.13
9:00 - 9:15	272	248	240	1.13	1,199	1,117	1,062	1.13
9:15 - 9:30	237	214	208	1.14	1,095	1,009	965	1.13
9:30 - 9:45	197	180	175	1.13	1,011	927	900	1.12
9:45 - 10:00	151	121	117	1.29	857	763	740	1.16

VEHICLES - BY AUTO OCCUPANCY AND CLASSIFICATION																TOT	HOURLY
1	2	3	4	5	6	7	VAN POOLS	TRANSIT BUS	OTHER BUS	EMPTY BUS	MOT CYC	TRK	HAZMAT TRK	VEHICLES	TOT VEHICLES		
43	2	0	0	0	0	0	0	1	0	0	0	1	0	47			
63	5	0	0	0	0	0	0	4	0	0	0	1	0	73			
118	9	0	0	0	0	0	2	3	0	0	1	2	0	135			
122	12	0	0	0	0	0	2	1	3	0	2	11	0	153	408		
147	10	1	0	0	0	0	2	6	2	0	1	7	0	176	537		
157	12	0	0	0	0	0	1	4	3	1	1	1	0	180	644		
217	15	0	0	0	0	0	1	5	6	0	3	1	0	248	757		
226	18	1	2	0	0	0	1	5	7	0	0	1	0	261	865		
235	14	1	0	0	0	0	0	6	7	0	0	2	0	265	954		
214	13	0	3	0	0	0	2	10	4	0	2	2	0	250	1,024		
227	19	1	0	0	0	0	1	7	2	0	4	8	0	269	1,045		
223	16	3	0	0	0	0	1	10	5	0	2	6	0	266	1,050		
279	26	1	0	0	0	0	1	9	5	0	1	7	0	329	1,114		
282	20	1	1	0	0	0	1	6	4	0	0	7	0	322	1,186		
217	19	0	0	0	0	0	2	11	3	0	2	8	0	262	1,179		
259	15	1	0	0	0	0	1	3	3	0	1	2	0	285	1,198		
220	18	0	1	0	0	0	1	4	4	0	0	0	0	248	1,117		
193	12	1	0	1	0	0	1	1	4	0	0	1	0	214	1,009		
165	8	0	1	0	0	0	1	4	1	0	0	0	0	180	927		
103	12	0	0	0	0	0	2	2	1	0	0	1	0	121	763		

5-Hour Totals																									
Vehicles	4,626	4,284	4,048	1.14	N/A	N/A	N/A	N/A	3,710	275	11	8	1	0	0	23	102	64	1	20	69	0	4,284	N/A	
Persons																									

BRAC counts
Mark Center, Alexandria, Virginia
10-May-12
All Entrances Total

NON-MOTORIZED	
PED	BIKE

Time

5:00 - 5:15	4	0
5:15 - 5:30	6	0
5:30 - 5:45	2	1
5:45 - 6:00	1	0
6:00 - 6:15	0	0
6:15 - 6:30	7	0
6:30 - 6:45	2	1
6:45 - 7:00	4	3
7:00 - 7:15	9	1
7:15 - 7:30	8	3
7:30 - 7:45	12	1
7:45 - 8:00	6	2
8:00 - 8:15	7	3
8:15 - 8:30	12	2
8:30 - 8:45	8	3
8:45 - 9:00	2	2
9:00 - 9:15	4	0
9:15 - 9:30	5	0
9:30 - 9:45	4	0
9:45 - 10:00	3	0

5-Hour Totals

Vehicles	106	22
Persons		