PSTA Site

Montgomery County, Maryland
Revised April 15, 2021

Traffic Impact Analysis

Prepared for:

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The Traffic Group®

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Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 27516, Expiration Date: 07/04/2022.



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GEC:amr
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INTRODUCTION AND SUMMARY OF FINDINGS

Study Purpose

The primary purpose of this Traffic Impact Analysis is to determine what impact the redevelopment of this site will have on the adjacent roadways. The site is planned to be developed with 298 apartments (for rent, multi-family), 56 – 2/2's (for sale, multi-family), 276 townhomes, and 2,607 sq ft of retail space.

Study Criteria/Methodology

This Revised Traffic Impact Analysis has been prepared in accordance with the current requirements of the 2016 Subdivision Staging Policy and the 2017 Local Area Transportation Review (LATR) Guidelines for the Maryland-National Capital Park and Planning Commission (M-NCPPC). This property is located in the R&D Village Policy Area, which is in an Orange Policy Area. The revisions reflect minor adjustments to the number of units now planned on the site.

The trip generation determinations made as part of this report are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) and the requirements of the LATR guidelines.

A Scoping Agreement was previously prepared for this proposed development, and a copy of this agreement is contained in Appendix A. This agreement was approved by the transportation planning staff with minor adjustments. These adjustments are also outlined in Appendix A. As a result of the Scoping Agreement and trip generation determination for the project, it was determined that the project would generate more than 50 new peak hour person trips and therefore requires a Motor Vehicle Adequacy Analysis. In addition, it was determined that the subject site would generate sufficient pedestrian activity to require a Pedestrian Adequacy Test for the subject site.

This report focuses on the Motor Vehicle Adequacy Analysis portion utilizing the results of Intersection Capacity Analysis based on the use of the Critical Lane Volume (CLV) methodology and the Highway Capacity Manual (HCM) methodology.

This revision is to address comments received in a letter dated May 7, 2020, from the Maryland Department of Transportation State Highway Administration (MDOT SHA) and comments received from Montgomery County Department of Transportation (MCDOT) and M-NCPPC.

Scope of Services

The principal scope of services undertaken as part of this report are as follows:

- Field investigation to collect physical information concerning the nearby road network.
- Include aerial photos of each of the study area intersections.
- Conduct intersection turning movement counts from 6:30–9:30 AM and 4–7 PM at the 10 study area intersections.
- In addition, conduct 12-hour turning movement counts in order to prepare Traffic Signal Warrant Evaluations for the following intersections:

    1. Great Seneca Highway and Blackwell Road
    2. Great Seneca Highway and Medical Center Drive
    3. Key West Avenue and Medical Center Drive

- Obtain information from M-NCPPC relative to other approved developments planned in the vicinity of the subject site.
- Conduct a Trip Generation and Trip Distribution Analysis for the other nearby developments.
- Conduct Trip Generation and Trip Distribution Analysis for the proposed development of the subject site.
- Conduct an inventory of the existing pedestrian, bicycle, and transit facilities located in the vicinity of the subject property.
- Conduct Intersection Capacity Analyses to determine existing and projected levels of service at the study area intersections to address the Motor Vehicle Adequacy requirements for this site.
- Conduct analysis to satisfy the Pedestrian Adequacy Test for the subject site.
- Conduct Traffic Signal Warrant Evaluations for four intersections.
- Provide recommendations for any off-site improvements that may be necessary in order to meet the requirements of M-NCPPC for this site.

Summary of Findings and Recommendations

The results of our analysis show that three intersections which will serve as access to this site will require roadway improvements to operate at acceptable levels of service with the development of this site. They are as follows:

- MD 28 (Key West Avenue) and Medical Center Drive/Johns Hopkins Drive
- MD 119 (Great Seneca Highway) and Blackwell Road
- MD 119 (Great Seneca Highway) and Medical Center Drive

Three other intersections have been identified that would require some form of mitigation for deficiencies that presently exist or would exist even without the development of this site. They are as follows:

- MD 119 (Great Seneca Highway) and Decoverly Drive
- MD 119 (Great Seneca Highway) and MD 28 (Key West Avenue)
- MD 119 (Great Seneca Highway) and Darnestown Road

All of the above noted intersections and the improvements necessary to achieve acceptable levels of service or to mitigate the impact of the PSTA site will be discussed in more detail in the following sections of this report.

The methodology used to undertake this study is contained in the sections that follow.

EXISTING TRAFFIC CONDITIONS

Site Information

The subject property is located in the southwest quadrant of the Great Seneca Highway (MD 119) and Key West Avenue (MD 28) intersection as shown on Figure 1. Figure 1A is a copy of the proposed site plan for the subject site.

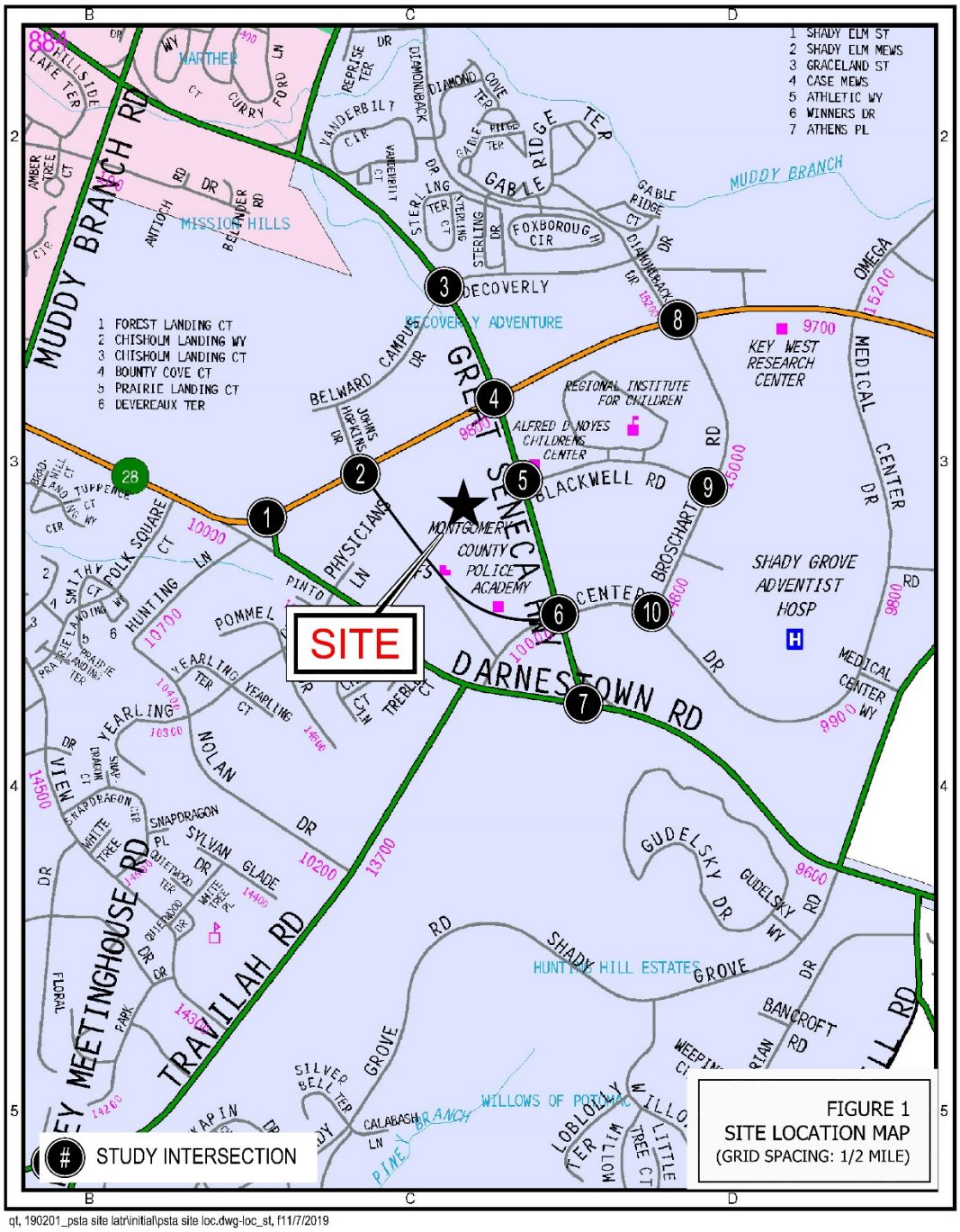


FIGURE 1
SITE LOCATION MAP
(GRID SPACING: 1/2 MILE)

qt, 190201_psta site latr\initial\psta site loc.dwg-loc_st, f11/7/2019

PRELIMINARY NOT FOR CONSTRUCTION

L.56100 F.00050
±131.171 SF

TAX ID# 03315067
FS41
HUMAN GENOME SCIENCES INC
L.57171 F.00222
±434,591 SF

TAX ID# 03307681
FS41 N428
M&M BELWARD SOUTH LLC
L.57545 F.0000
±250,178 SF

JOHNS HOPKINS DRIVE

THE JOHNS HOPKINS BELWARD RESEARCH CAMPUS

KEY WEST AVENUE

(MD RTE 28)

RETAIL

LOT 1

PAR. B

LOT 2

APT. BLDG. 1

APT. BLDG. 2

APT. BLDG. 3

APT. BLDG. 4

PARCEL A

N786
HSRE-CAPMED SHADY GROVE
MED VILLAGE
L.48028 F.0413
±199,500 S.F.
PARCEL D

BLACKWELL ROAD

PAR. C

PAR. B

PAR. C

PARCEL A

STREET C WEST

MEDICAL CENTER DRIVE

PAR. D

STREET A

STREET B

PAR. E

PAR. F

PAR. C

PAR. C

PAR. C

PAR. B

PARCEL A

PAR. C

PAR. D

PARCEL A

PARCEL A

PARCEL B

PARCEL G

PAR. D

PAR. A

PAR. B

PAR. C

PAR. D

PARCEL A

PARCEL B

PARCEL G

PARCEL C

PAR. D

PAR. A

PAR. B

PAR. C

PAR. D

PAR. A

PAR. B

PAR. C

PAR. D

STREET C EAST

STREET A

STREET D

WOOTTON MANOR CT

WOOTTON CREST WAY

DARNESTOWN AT TRAVILAH

WOOTTON CROSSING COURT

TREBLE COURT

DARNESTOWN ROAD

TRAVILAH ROAD

GREAT SENECA HIGHWAY

MEDICAL CENTER DRIVE

PARCEL A

PARCEL B

PARCEL A

PARCEL A

PARCEL A

PARCEL A

PARCEL B

PARCEL G

PARCEL

PARCEL C

PARCEL V

TAX ID#03691613
FFTY LLC
FS41
3.08 AC
A

TAX ID#00775896
P050
LOLATCHY SCHAIN
L.16371 F.00300
±18,720 SF

P50

TAX ID#03671432
FR43 N059
RLL & C CORP
±61,621 SF

TRAVILAH HEIGHTS
A

HUNTING HILL

TAX ID# 03747866
N102 FR43
POTOMAC ELECTRIC POWER CO
±0.9 AC

N103

TAX ID#03210078
FR43 NO66
MONTGOMERY COUNTY
±272,685 SF

SHADY GROVE LIFE SCIENCES CENTER

TAX ID#03210078
FR43 NO66
MONTGOMERY COUNTY
±272,685 SF

TAX ID# 03777744
FR43 N075
ARE-MARYLAND NO 31 LLC
PARCEL 497 SF

PAR. F PPCO 741461A3676

UNIT COUNT

30	2 OVER 2 MPDU
26	2 OVER 2
24	16' MPDU
208	20'
30	24' REAR LOAD
14	24' FRONT LOAD
332	TOTAL
298	APARTMENTS
630	TOTAL

GRAPHIC SCALE
50' 0 20' 50' 100' 200'
1 INCH = 50 FT

REVISION	DATE	REVISION	DATE

APPLICANT:
THE ELMS AT PSTA, LLC

ATTN: KATHRYN KUBIT
1355 BEVERLY ROAD, SUITE 240
McLEAN, VA 22101
PHONE: (703) 734-9730

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:

RELEASE FOR ☐

BY_____ DATE_____

IN PROGRESS
03/09/21

FIGURE 1A

SCALE: 1" = 50'
JOB No.
DATE:
SHEET No. 1 OF 1

N:\MD-Montgomery\PST\Autocad\Plot Plans\Exhibits\Current Layout\dwg Layout2 Mar 09, 2021, 12:22pm

Study Area

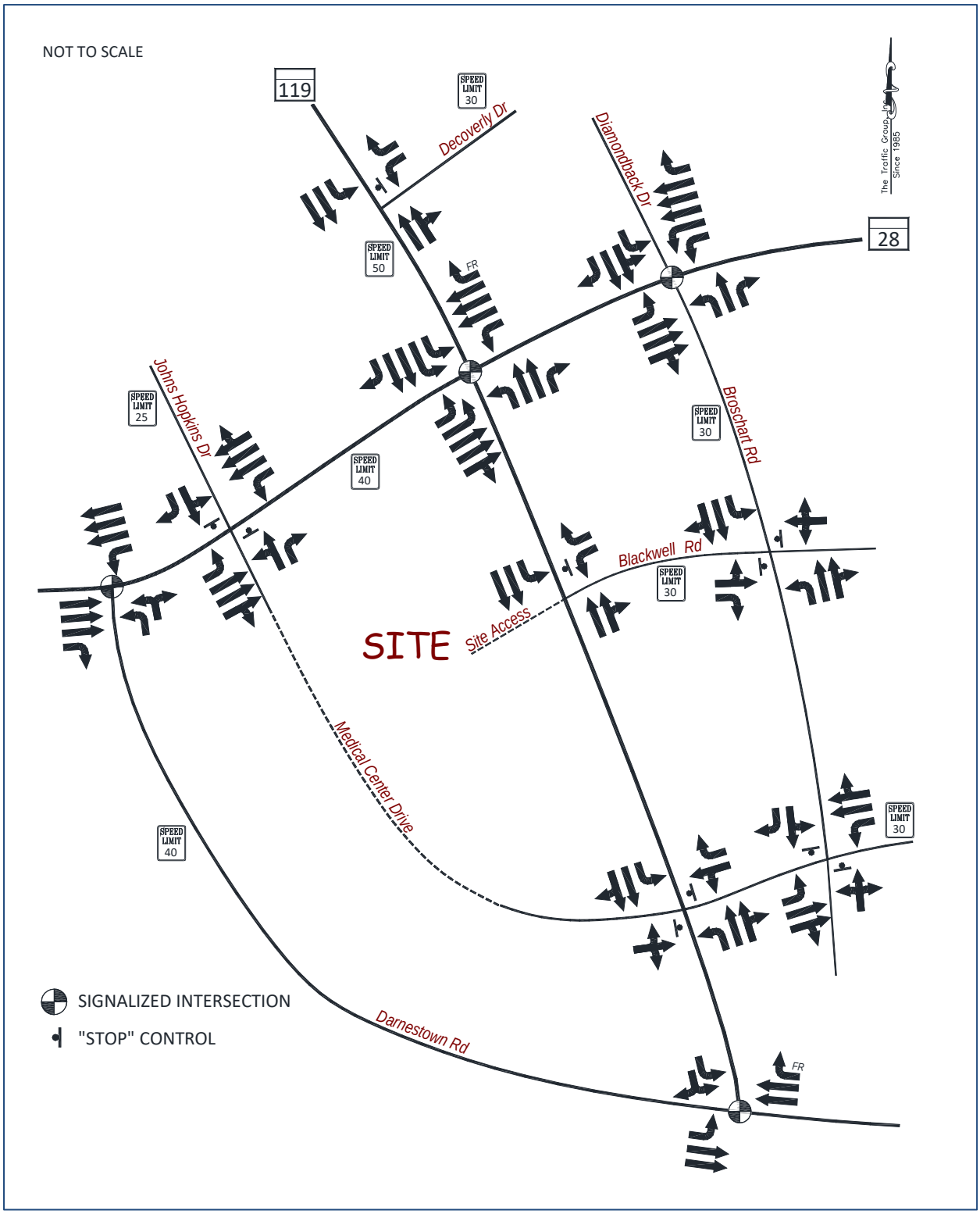
The PSTA Site is bordered by Great Seneca Highway on the east, which is a four-lane divided north-south roadway in the vicinity of the subject property. The posted speed limit along Great Seneca Highway is 50 MPH. Traffic signals presently exist along Great Seneca Highway at its intersection with Darnestown Road to the south and Key West Avenue to the north.

Key West Avenue is a six-lane divided east-west roadway, which borders the subject property to the north. The posted speed limit along Key West Avenue is 40 MPH. Traffic signals presently exist along Key West Avenue at Darnestown Road, Great Seneca Highway, and Diamondback Drive. It should be noted that auxiliary left-turn lanes are provided at all the major intersections in the study area.

All of the other study area intersections are two-way stop sign controlled intersections.

Figure 2 was prepared to show the existing lane use and traffic control at each of the study area intersections.

Figure 2. Existing Lane Use



Traffic Volumes

The Traffic Group, Inc. conducted intersection turning movement counts from 6:30–9:30 AM and 4–7 PM at all of the study area intersections with the exception of three locations. Intersection turning movement counts were conducted from 6 AM to 7 PM at the following intersections:

- Great Seneca Highway and Blackwell Road
- Great Seneca Highway and Medical Center Drive
- Key West Avenue and Johns Hopkins Drive

It should be noted that 12-hour turning movement counts were conducted at these locations in order to conduct traffic signal warrant evaluations later in this report.

The total vehicles observed during these counts are shown on the summary sheets contained in Appendix A to this report. The existing peak hour volumes at each of the study area intersections are identified on Figure 3A.

Analysis of Existing Traffic Conditions

Intersection Capacity Analyses were conducted for each of the study area intersections and the results are shown on Tables 4A and 4B. Table 4A shows the results using the HCM methodology, and Table 4B shows the results of the analysis using the CLV methodology. In addition, pedestrian analyses were also conducted for the surrounding signalized intersections. The results are shown on Table 5. Copies of the capacity worksheets are contained in Appendix B to this report.

A review of Tables 4A, 4B, and 5 indicates that all of the existing intersections are presently operating at acceptable levels with the exception of the unsignalized intersection of Key West Avenue and Johns Hopkins Drive/Medical Center Drive.

Pedestrian Facilities and ADA Compliance

Figure 3B shows the number of peak hour pedestrians observed during our traffic counts. The total pedestrians are shown on the summary sheets contained in Appendix A.

The existing pedestrian crossing times were also determined and are shown on Table 1.

Sidewalks are provided on both sides of all of the major roadways in the vicinity of the subject site with the exception of the west side of Great Seneca Highway along the frontage of the subject property as shown on Figure 4A. Figure 4A also identifies the availability of ADA facilities in the study area. This includes handicap ramps and countdown pedestrian traffic signals.

Figure 3A. Existing Peak Hour Traffic Volumes

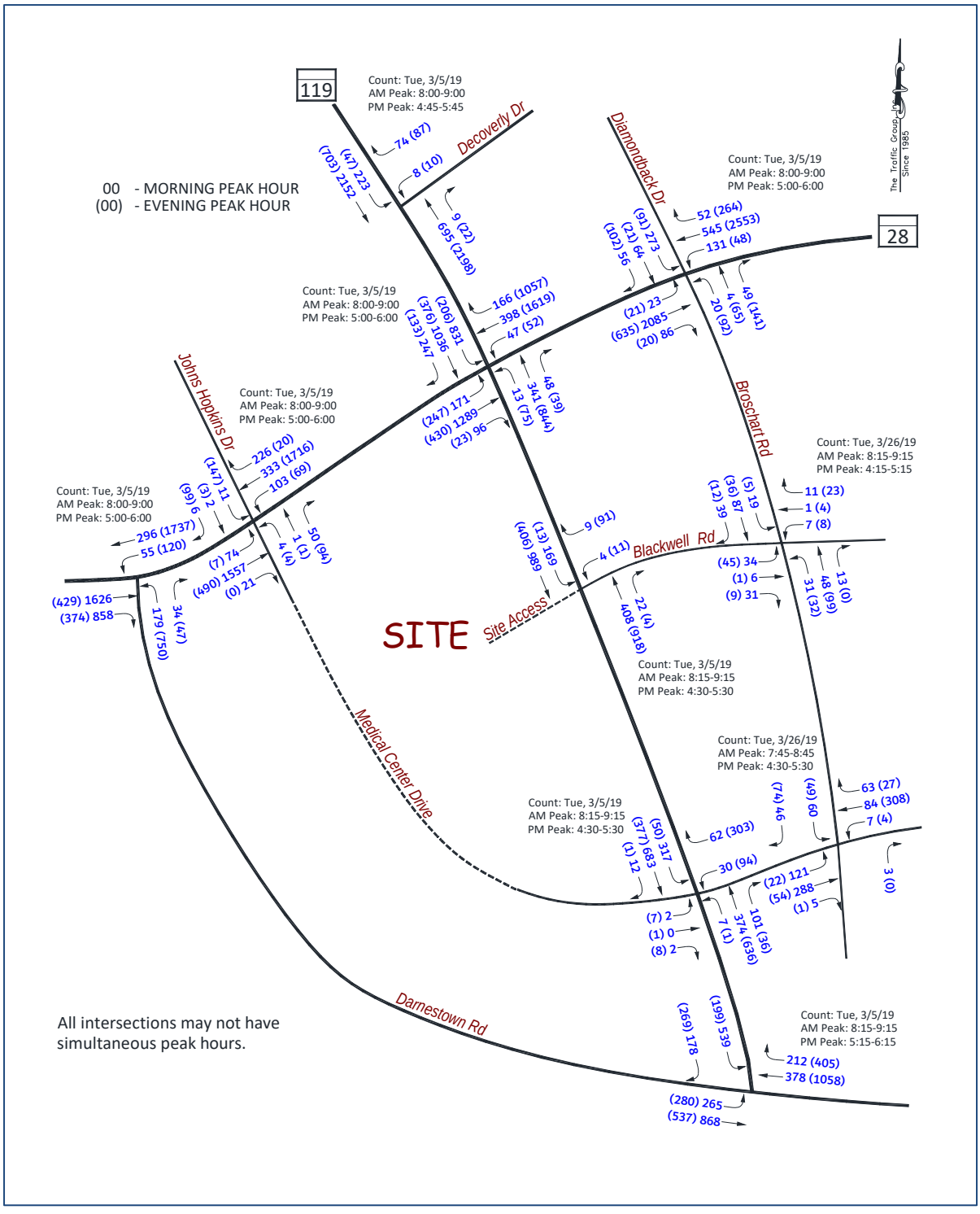


Figure 3B. Existing Peak Hour Pedestrian Volumes

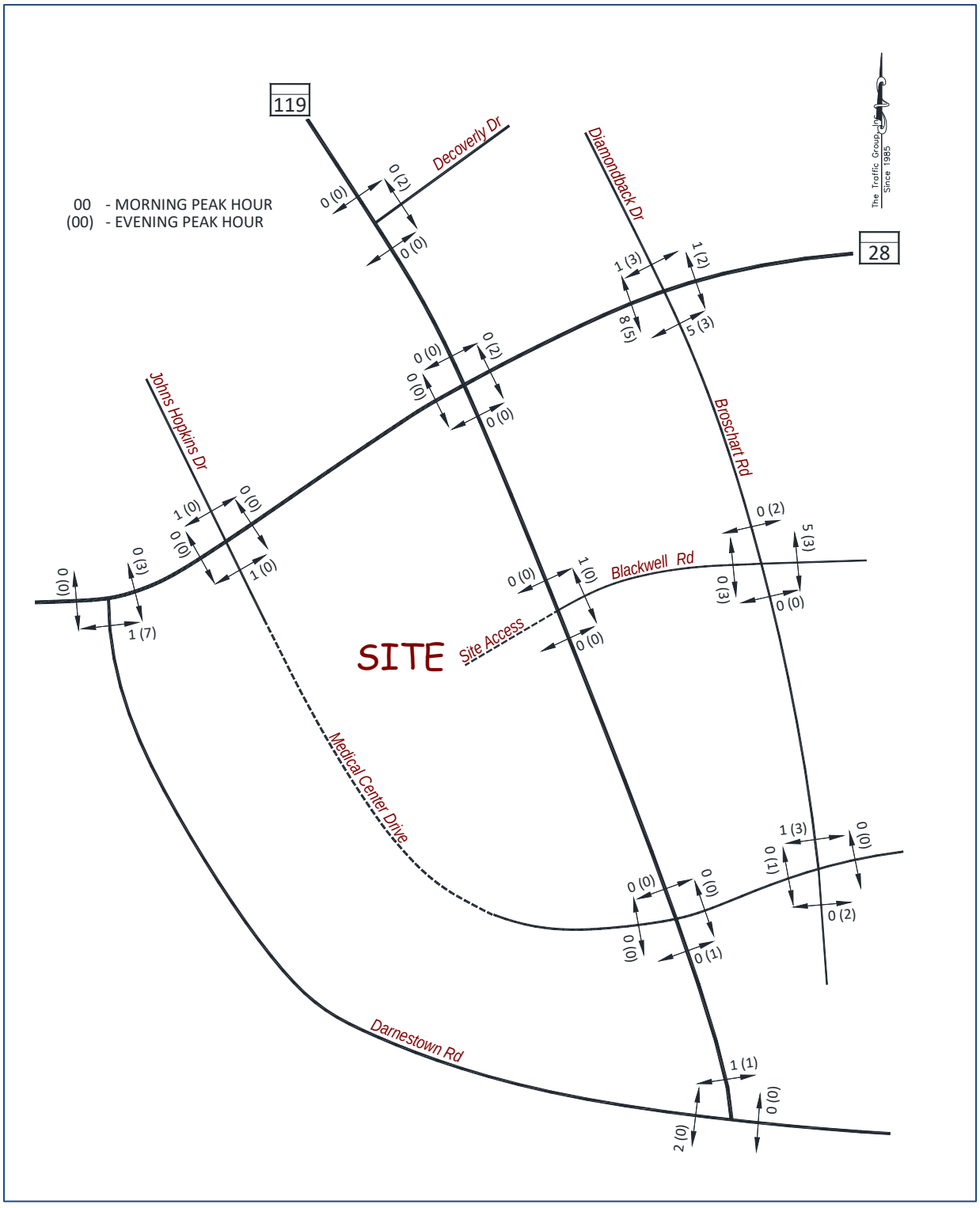


Table 1. Results of Pedestrian Crossing Timing Analysis

INTERSECTION	Crossing Distance[1] (ft)	Total Clearance Time for Associated Veh. Phase[2] (sec)	Desired Time[3] (sec)	Available Time[4] (sec)
1. Key West Ave & Darnestown Rd				
South Leg on Darnestown Rd	52	4.5	10.4	18
East Leg on Key West Ave	95	5.5	21.6	29
West Leg on Key West Ave	98	5.5	22.5	n/a [5]
4. Key West Ave & Great Seneca Hwy				
North Leg on Great Seneca Hwy	114	6.5	26.1	37
South Leg on Great Seneca Hwy	132	6.5	31.2	37
East Leg on Key West Ave	118	7	26.7	31
West Leg on Key West Ave	123	7	28.1	31
7. Darnestown Rd & Great Seneca Hwy				
North Leg on Great Seneca Hwy	127	5.5	30.8	n/a [5]
East Leg on Darnestown Rd	60	6	11.1	n/a [5]
West Leg on Darnestown Rd	51	6	8.6	n/a [5]
8. Key West Ave & Diamondback Dr				
North Leg on Diamondback Dr	90	6.5	19.2	33
South Leg on Broschart Rd	123	6.5	28.6	33
East Leg on Key West Ave	117	6.5	26.9	n/a [5]
West Leg on Key West Ave	127	6.5	29.8	35

Notes:

1. Crossing distance was measured from the curb to the edge of the far travel lane.
2. Total clearance time for the associated vehicular phase includes yellow and all red time.
3. Desired time was determined by dividing the crossing distance by 3.5 ft/sec (walking speed then subtracting the total clearance time for the associated vehicular phase.
4. Available time obtained from signal timing plan provided by Montgomery County.
5. No countdown pedestrian signal for this leg.

Transit Facilities

Existing Transit Facilities and the ride-on routes which serve the study area are shown on Figure 4A. Copies of the transit information including route maps and schedules are provided in Appendix D.

Bicycle Facilities

Bicycle counts were conducted during the turning movement counts and the number of bikes observed are illustrated on Figure 4B. Figure 4C shows a map of the bicycle facilities along the adjacent roadways to the subject site.

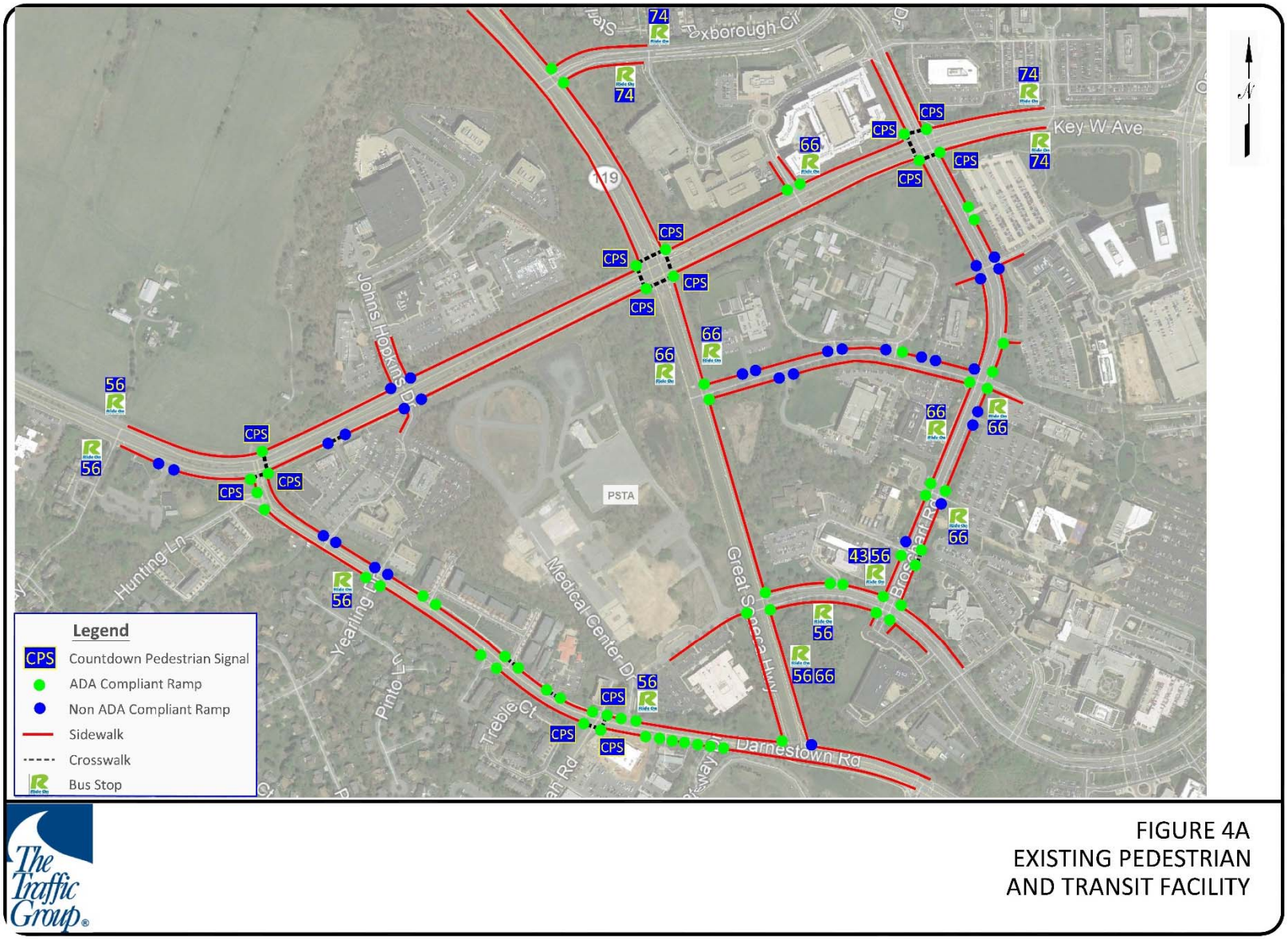


FIGURE 4A
EXISTING PEDESTRIAN
AND TRANSIT FACILITY

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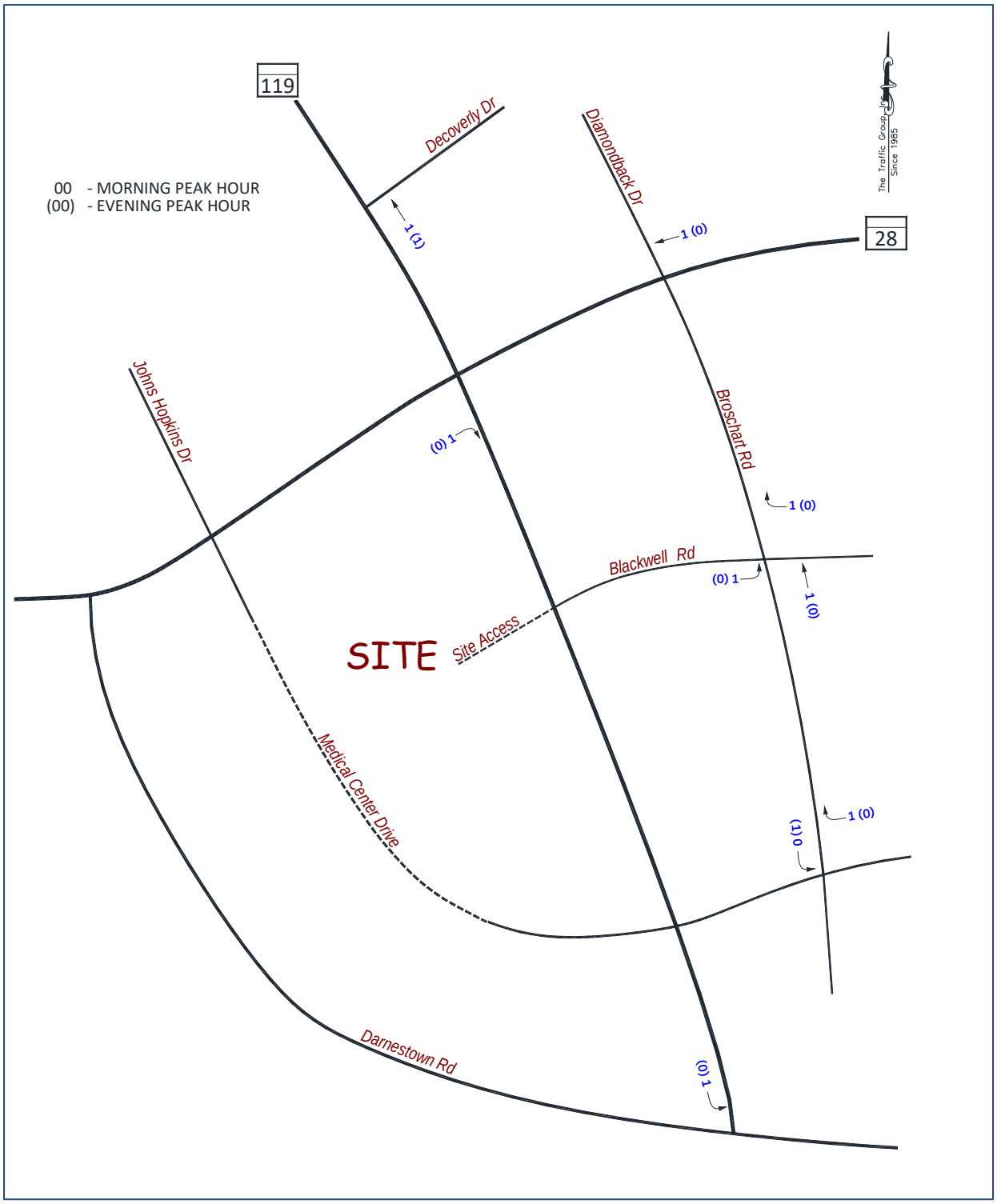
Figure 4B. Existing Peak Hour Bike Volumes



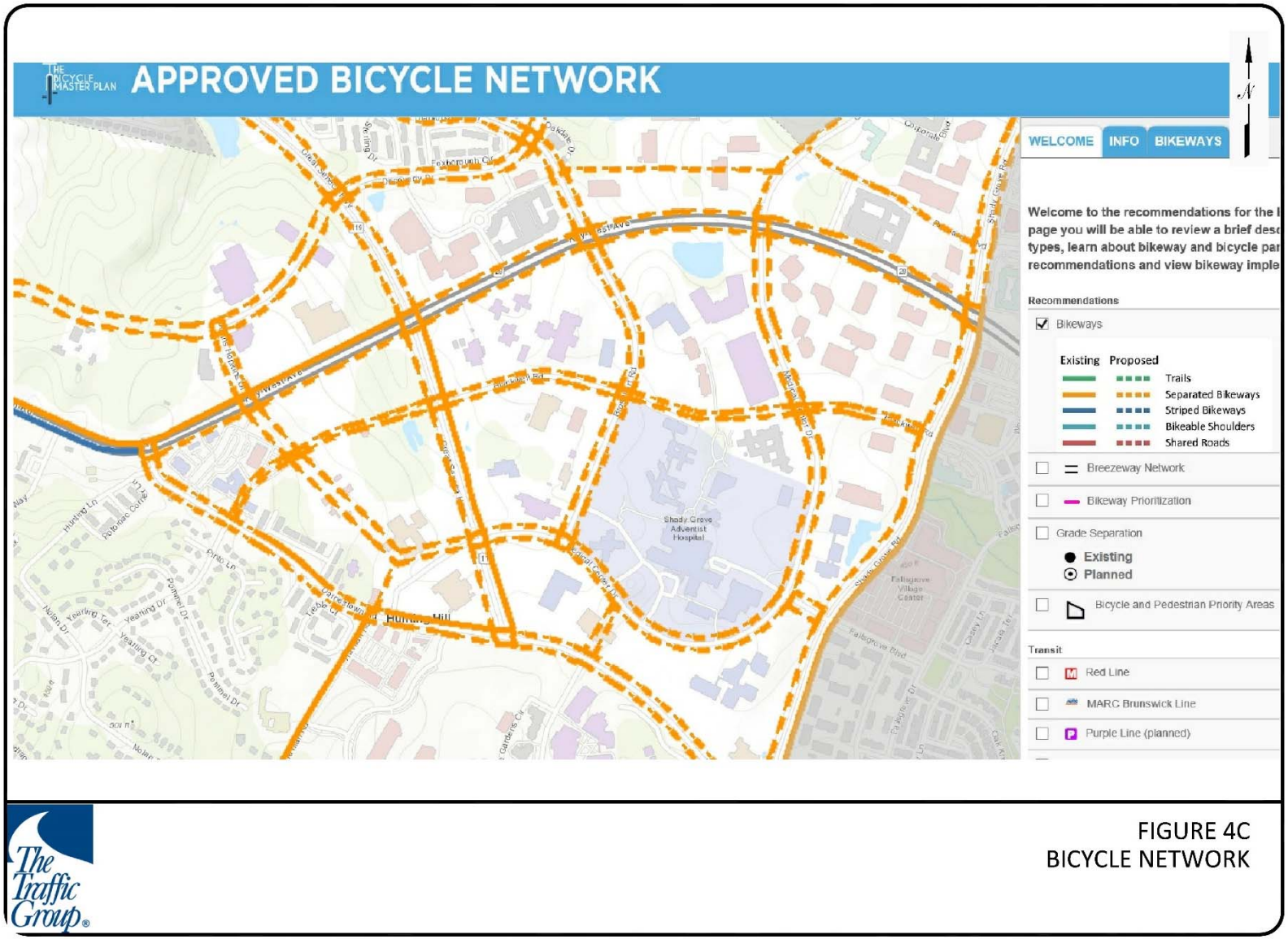


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FIGURE 4C
BICYCLE NETWORK

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BACKGROUND TRAFFIC CONDITIONS

Proposed Developments

As part of the development of the background information for this study, information was obtained from M-NCPPC relative to other approved developments planned in the vicinity of the subject site. Figure 5 was prepared to show the location of 10 developments which are planned in the immediate vicinity of the subject site that would impact the adjacent roadways.

Trip Generation for Nearby Developments

Table 2 was prepared to show the trip generation rates and the peak hour trips to be generated by the nearby developments. The trip generation information shown on Table 2 is based on the trip generation rates as outlined in the ITE Trip Generation Manual (10th Edition).

The peak hour trips projected to be generated by each of the nearby developments were then distributed and assigned to the adjacent road system as shown on the Figures contained in Appendix C. Figure 6 shows the combined trips projected to be generated by all of the nearby developments. Combining these trips with the existing peak hour volumes results in the background peak hour volumes anticipated prior to the development of the subject property, and are shown on Figure 7.

Analysis of Background Traffic Conditions

Intersection Capacity Analyses were conducted for each of the study area intersections and the results are shown on Tables 4A and 4B. In addition, pedestrian analyses were also conducted for the surrounding signalized intersections. The results are shown on Table 5. Copies of capacity worksheets are contained in Appendix B to this report.

A review of Tables 4A, 4B, and 5 indicates that under the background traffic conditions, the intersections of Key West Avenue/Johns Hopkins Drive and Great Seneca Highway/ Decoverly Drive are both projected to experience delay that exceeds the standards established for the R&D Village Policy Area.

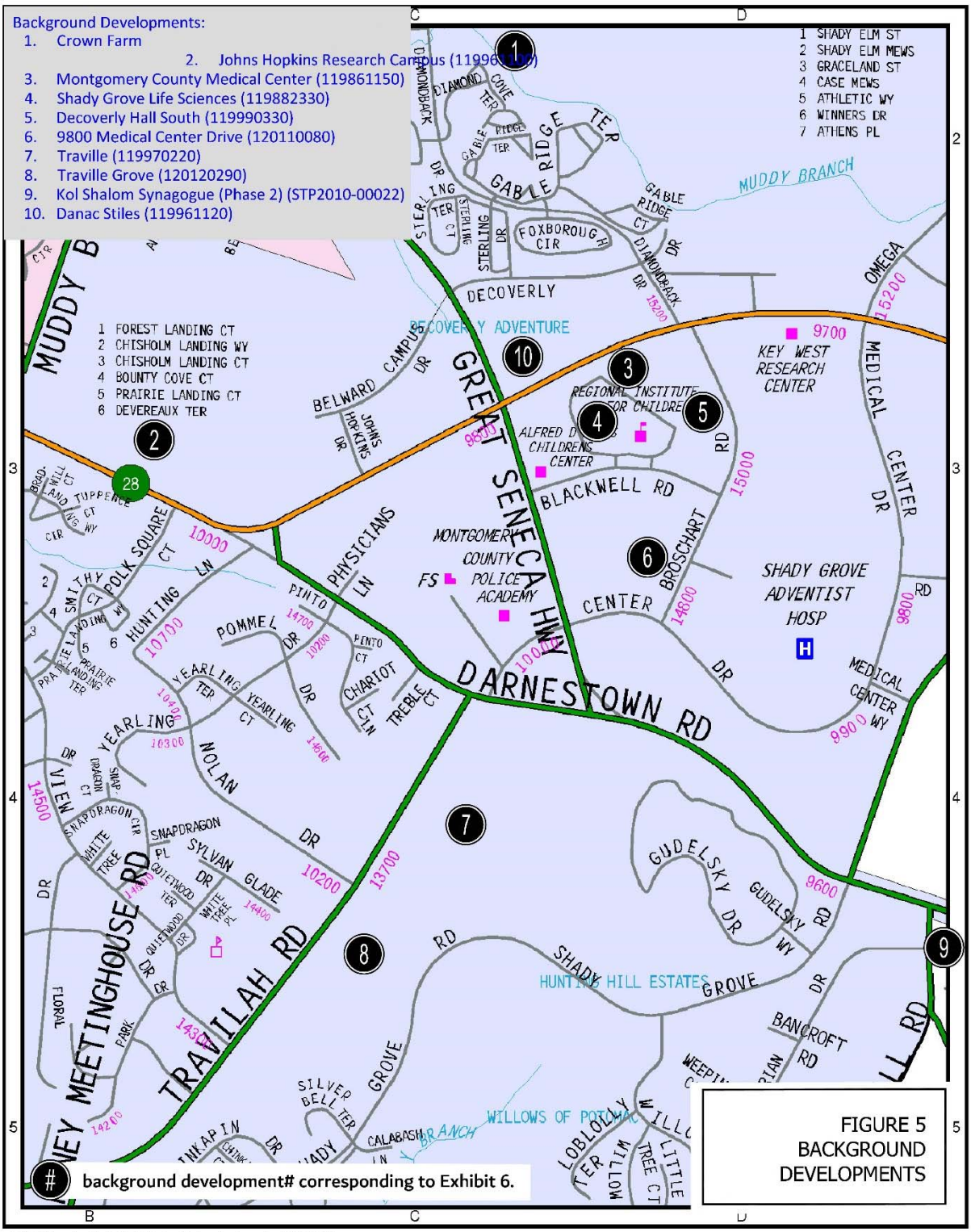

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Table 2. Trip Generation for Background Developments

Trip Rates / Formulae	In/Out %
Single-Family Detached (ITE-210, Units)	
Morning Trips = 0.71 x (Units) + 4.80 (R^2 = 0.89)	25/75
Ln(Evening Trips) = 0.96 x Ln(Units) + 0.20 (R^2 = 0.92)	63/37
Multifamily Housing, Low-Rise (ITE-220, Units)	
Ln(Morning Trips) = 0.95 x Ln(Units) - 0.51 (R^2 = 0.9)	23/77
Ln(Evening Trips) = 0.89 x Ln(Units) - 0.02 (R^2 = 0.86)	63/37
Multifamily Housing, Mid-Rise General Urban/Suburban (ITE-221, Units)	
Morning Trips = 0.36 x Units	26/74
Evening Trips = 0.44 x Units	61/39
Shopping Center (ksf, ITE-820)	
Morning Trips = 0.94 x ksf	62/38
Ln(PM Peak Hour Trips) = 0.74 x Ln(ksf) + 2.89 (R^2 = 0.82)	48/52
Research & Dev. Center (ksf, ITE-760)	
Morning Trips = 0.42 x ksf	75/25
Evening Trips = 0.49 x ksf	15/85
Church (ksf, ITE-560)	
Morning Trips = 0.33 x ksf	60/40
Evening Trips = 0.49 x ksf	45/55
General Office Building (ksf, ITE-710)	
Morning Trips = 0.94 x ksf + 26.49 (R^2 = 0.85)	86/14
Ln(Evening Trips) = 0.95 x Ln(ksf) + 0.36 (R^2 = 0.88)	16/84

NOTE: ITE Trip Generation 10th Edition

Table 2, continued. Trip Generation for Background Developments

TRIP TOTALS		MORNING PEAK HOUR			EVENING PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
1. Crown Farm							
309	Single-Family Detached Units	56	168	224	189	111	300
144	Townhouse Units	15	52	67	52	30	82
688	Apartment Units	64	184	248	185	118	303
	Total Residential Trips:	135	404	539	426	259	685
	Adjusted Trips (89%)	120	360	480	379	231	610
44,797	sq. ft. Retail	26	16	42	144	156	300
	Adjusted Trips (80%)	21	13	34	115	125	240
	Pass-by Trips(pm 34%)				-39	-43	-82
	New Trips	**21**	**13**	**34**	**76**	**82**	**158**
2. Johns Hopkins Research Campus (119961100)							
1,410,000	sq.ft. R&D	444	148	592	104	587	691
	Adjusted Trips (88%)	391	130	521	92	517	608
3. Montgomery County Medical Center (119861150)							
252,071	sq.ft. R&D	79	27	106	19	105	124
	Adjusted Trips (88%)	70	24	93	17	92	109
4. Shady Grove Life Sciences (119882330)							
201,701	sq.ft. R&D	64	21	85	15	84	99
	Adjusted Trips (88%)	56	18	75	13	74	87
5. Decoverly Hall South (119990330)							
19,341	sq.ft. R&D	6	2	8	1	8	9
	Adjusted Trips (88%)	5	2	7	1	7	8
6. 9800 Medical Center Drive (120110080)							
263,200	sq.ft. R&D	83	28	111	19	110	129
	Adjusted Trips (88%)	73	25	98	17	97	114
7. Traville (119970220)							
621,212	sq.ft. R&D	196	65	261	46	258	304
	Adjusted Trips (88%)	172	57	230	40	227	268
8. Traville Grove (120120290)							
41	Single-Family Detached Units	8	26	34	27	16	43
	Adjusted Trips (89%)	7	23	30	24	14	38
9. Kol Shalom Synagogue (Phase 2) (STP2010-00022)							
13,079	sq. ft. Church	2	2	4	3	3	6
	Adjusted Trips (90%)	2	2	4	3	3	6
10. Danac Stiles (119961120)							
146,327	sq. ft. Office	141	23	164	26	137	163
	Adjusted Trips (88%)	124	20	144	23	121	143

Figure 6. Combined Trips Generated by Approved Developments

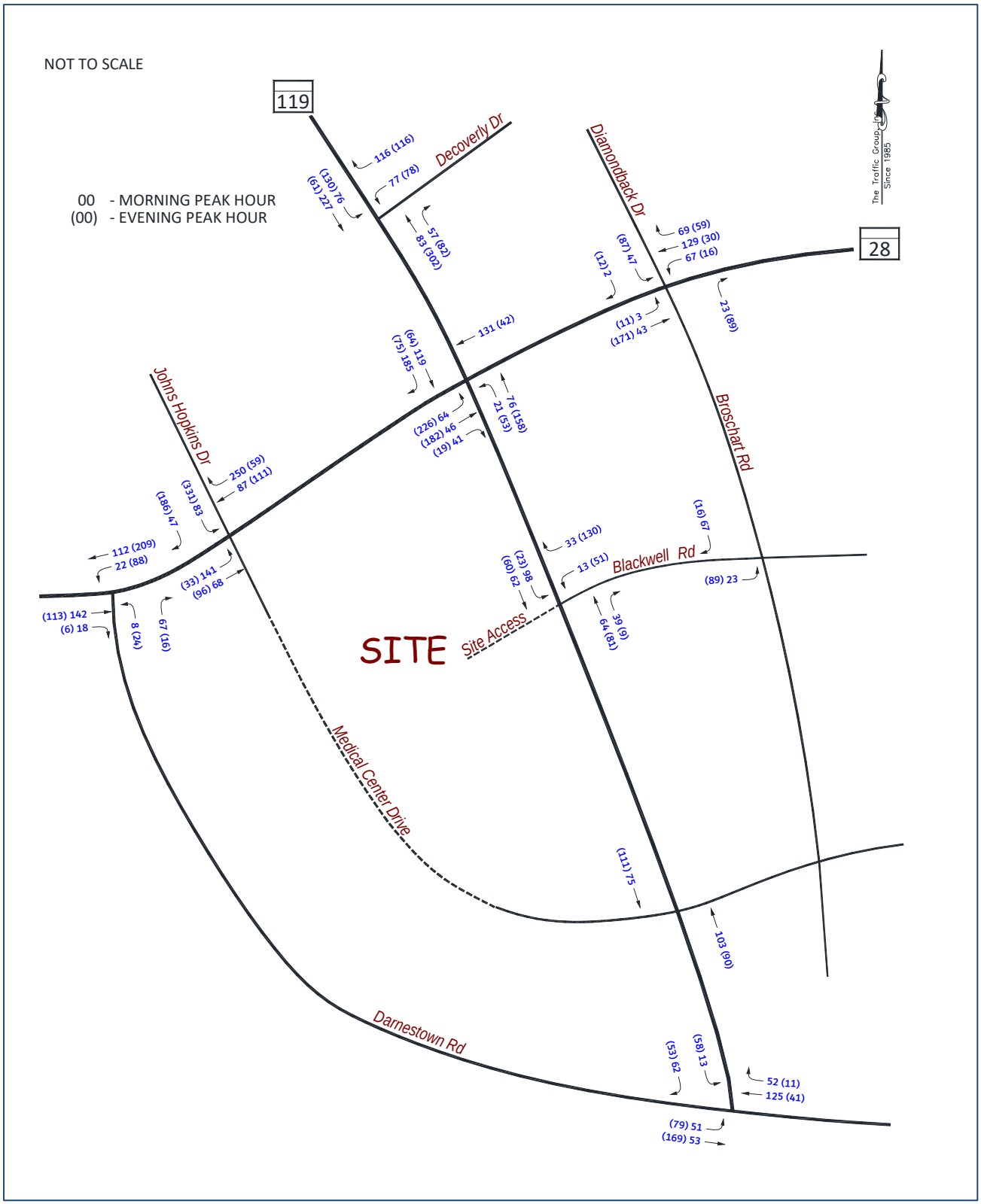
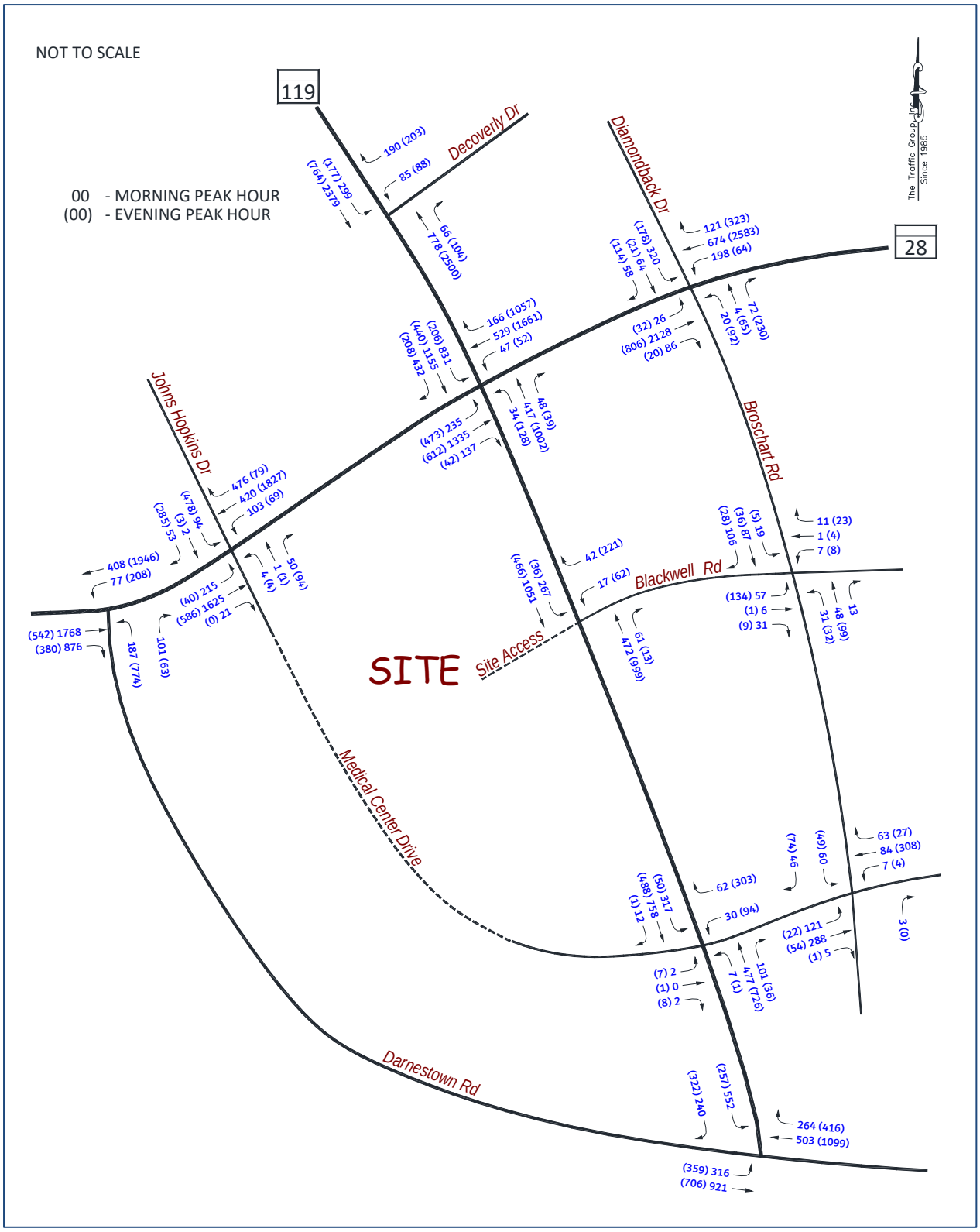


Figure 7. Background Peak Hour Traffic Volumes



TOTAL TRAFFIC CONDITIONS

Site Information

The subject property is located in the southwest quadrant of the Key West Avenue and Great Seneca Highway intersection. Access to this property is proposed at two locations along Great Seneca Highway and at multiple locations along Medical Center Drive. The access points will occur along Great Seneca Highway at Blackwell Road and by the extension and opening of Medical Center Drive to the south. This property is presently planned to be developed with 298 apartments (for rent, multi-family), 56 – 2/2's (for sale, multi-family), 276 townhomes, and 2,607 sq ft of retail space.

As part of the development of this site, Medical Center Drive will likely be completed to provide a connection between Key West Avenue and Great Seneca Highway. This will provide a connection between these two roadways. It is anticipated that this extension will be constructed as two lanes at this time, as discussed in the April 1, 2019, letter contained in Appendix A.

Trip Generation/Distribution

In order to determine the amount of traffic projected to be generated by the subject property, we consulted the ITE Trip Generation Manual (10th Edition) to prepare Table 3, which shows the trip generation rates and the peak hour trips projected to be generated by the proposed redevelopment of the subject property. These trips were then distributed and assigned to the nearby roadways as shown on Figures 8A, 8B, and 8C. Combining the trips shown on Figures 8A, 8B, and 8C with the background peak hour volumes results in the total peak hour volumes as shown on Figure 9.

Analysis of Total Traffic Conditions

Intersection Capacity Analyses were conducted for the total peak hour volumes. The results are shown on Tables 4A and 4B. Table 4C shows the summary of the results of the queuing analysis for the intersections identified in the comments from the reviewing agencies. In addition, pedestrian analyses were also conducted for the surrounding intersections. The results are shown on Tables 5, 6, and 7. Copies of worksheets are contained in Appendix B.

A review of Tables 4A, 4B, and 4C indicates that improvements are required at the following three intersections which all serve as access to the subject site:

- MD 28 and Medical Center Drive/Johns Hopkins Drive
- MD 119 and Blackwell Road
- MD 119 and Medical Center Drive

Furthermore, improvements are needed at three other intersections ***even without the development of this site*** to address capacity or queuing issues. These intersections are as follows:

- MD 119 and Decoverly Drive
- MD 119 and MD 28
- MD 119 and Darnestown Road

The necessary improvements at each location will be discussed in more detail later in this section.

Tables 5, 6, and 7 show the results of the pedestrian evaluations for the study area intersections. The results indicate that the pedestrian conditions will meet the required standards.

Table 3. Trip Generation for PSTA Site

TRIP GENERATION FOR PSTA SITE

Trip Rates / Formulae	In/Out %
Multifamily Housing, Low-Rise (ITE-220, Units)	
Ln(AM Peak Hour Trips) = 0.95 x Ln(Units) - 0.51 (R^2 = 0.9)	23/77
Ln(PM Peak Hour Trips) = 0.89 x Ln(Units) - 0.02 (R^2 = 0.86)	63/37
Multifamily Housing, Mid-Rise General Urban/Suburban (ITE-221, Units)	
AM Peak Hour Trips = 0.36 x Units	26/74
PM Peak Hour Trips = 0.44 x Units	61/39
Shopping Center (ksf, ITE-820)	
AM Peak Hour Trips = 0.94 x ksf	62/38
Ln(PM Peak Hour Trips) = 0.74 x Ln(ksf) + 2.89 (R^2 = 0.82)	48/52

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Multifamily Housing, Low-Rise (ITE-220, Units)						
332 units	34	115	149	108	64	172
Multifamily Housing, Mid-Rise General Urban/Suburban (ITE-221, Units)						
298 units	28	79	107	80	51	131
Total	62	194	256	188	115	303
Adjusted Trips (89%)	55	173	228	167	102	269

Multimodal Trip Generation:		**AM**	**PM**
Vehicle Driver Trips	57.3%	228	269
Vehicle Passenger Trips	27.3%	109	128
Transit Trips	5.7%	23	27
Non-Motorized Trips	9.70%	39	45
Total Person Trips	100.0%	398	469

Shopping Center						
2,607 sq.ft.	1	1	2	18	19	37
Pass-by Trips (PM: 34%)				-6	-6	-12
New Trips	**1**	**1**	**2**	**12**	**13**	**25**
Adjusted Trips (80%)	1	1	2	10	10	20

Multimodal Trip Generation:		**AM**	**PM**
Vehicle Driver Trips	58.0%	2	20
Vehicle Passenger Trips	34.0%	1	12
Transit Trips	2.0%	0	1
Non-Motorized Trips	6.00%	0	2
Total Person Trips	100.0%	3	34

Total Multimodal Trips:		**AM**	**PM**	
Vehicle Driver Trips	58.0%	230	289	
Vehicle Passenger Trips	34.0%	110	140	
Transit Trips	2.0%	23	28	A quantitative transit analysis not required
Non-Motorized Trips	6.00%	39	47	A quantitative bicycle analysis not required
Total Person Trips	100.0%	401	503	**A quantitative auto analysis required**
Transit Trips + Non-Motorized Trips		62	75	**A quantitative pedestrian analysis required**

Figure 8A. New Trip Assignment for Subject Site (Residential)

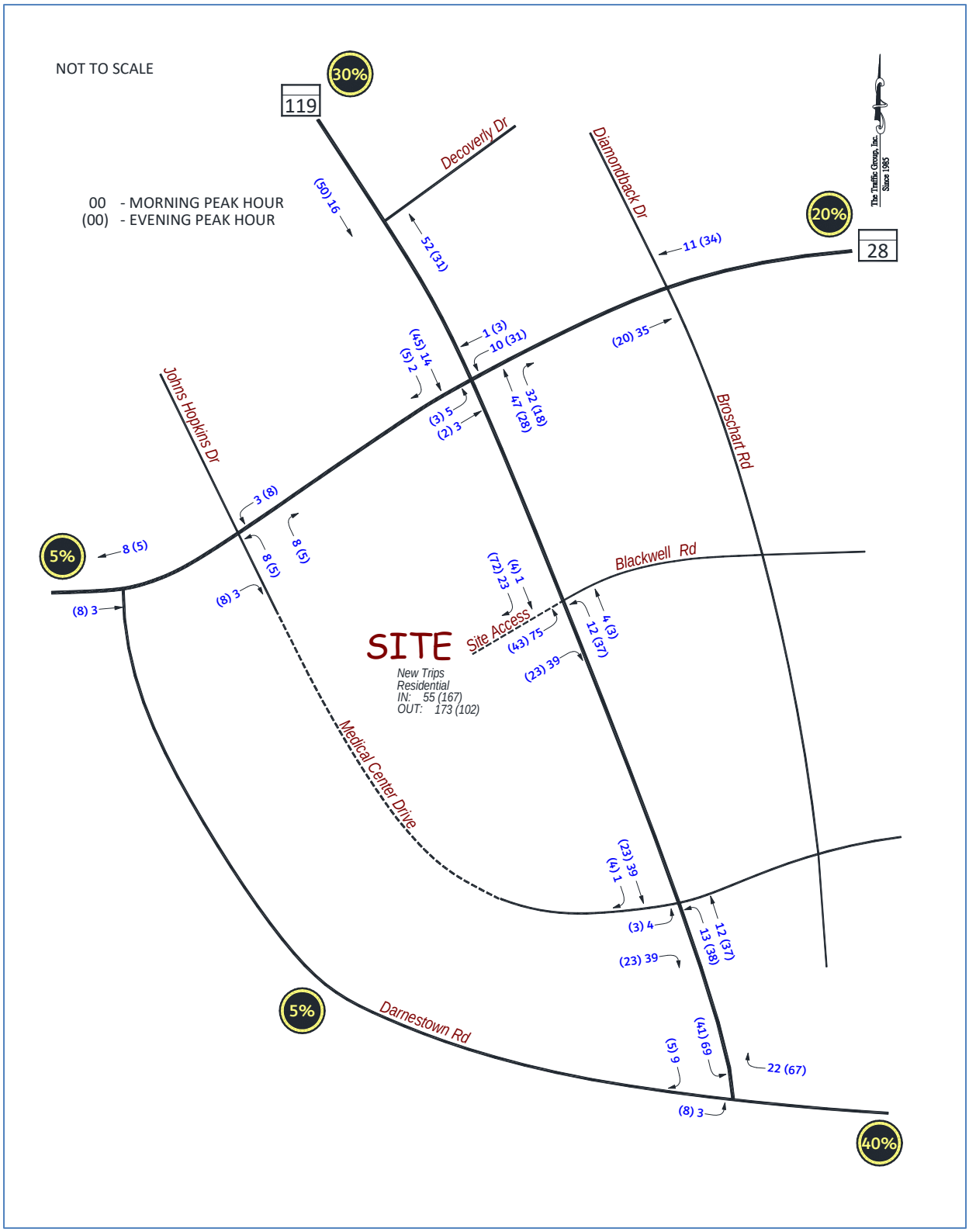


Figure 8B. New Trip Assignment for Subject Site (Retail)

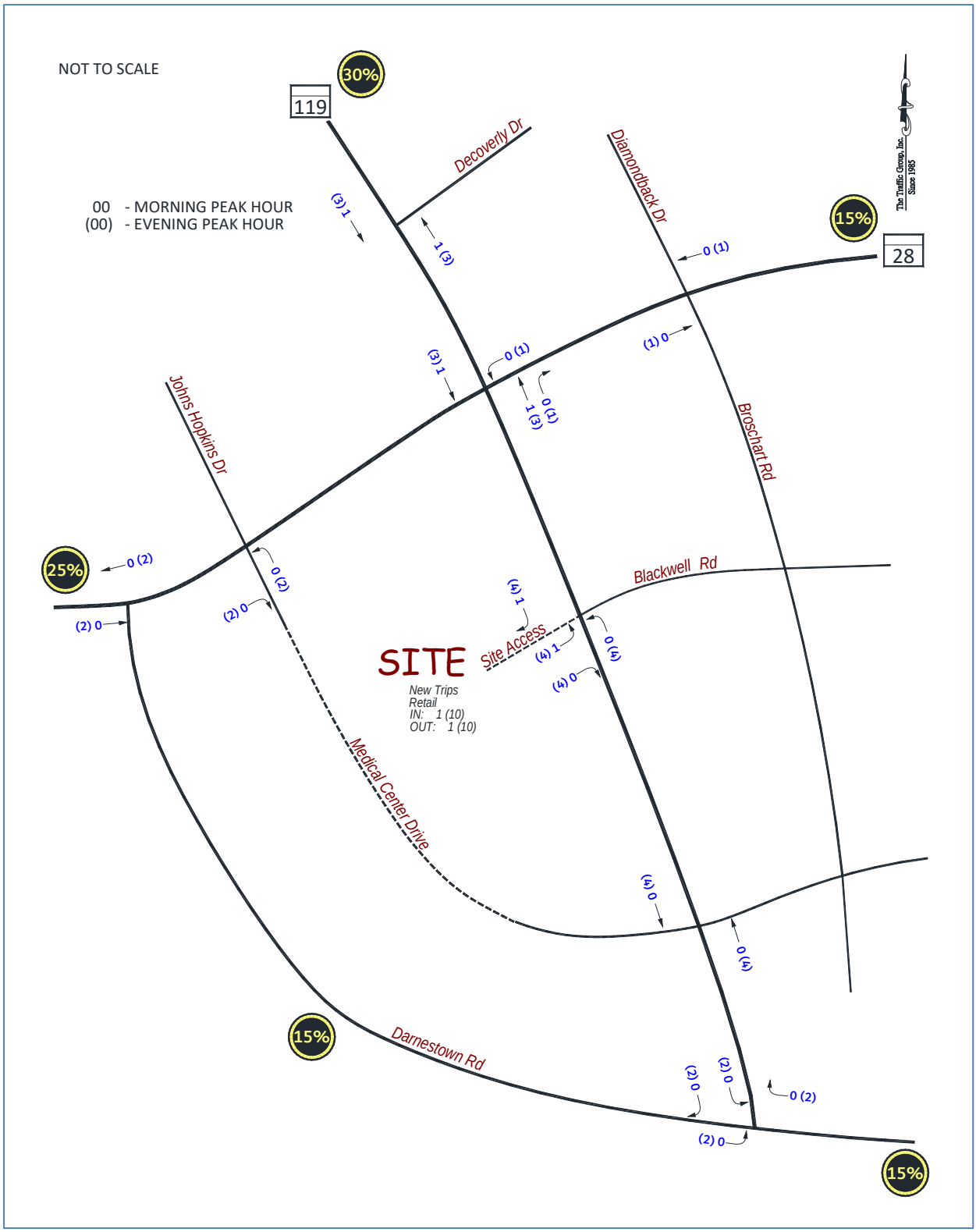


Figure 8C. Pass-By Trip Assignment for Subject Site (Retail)

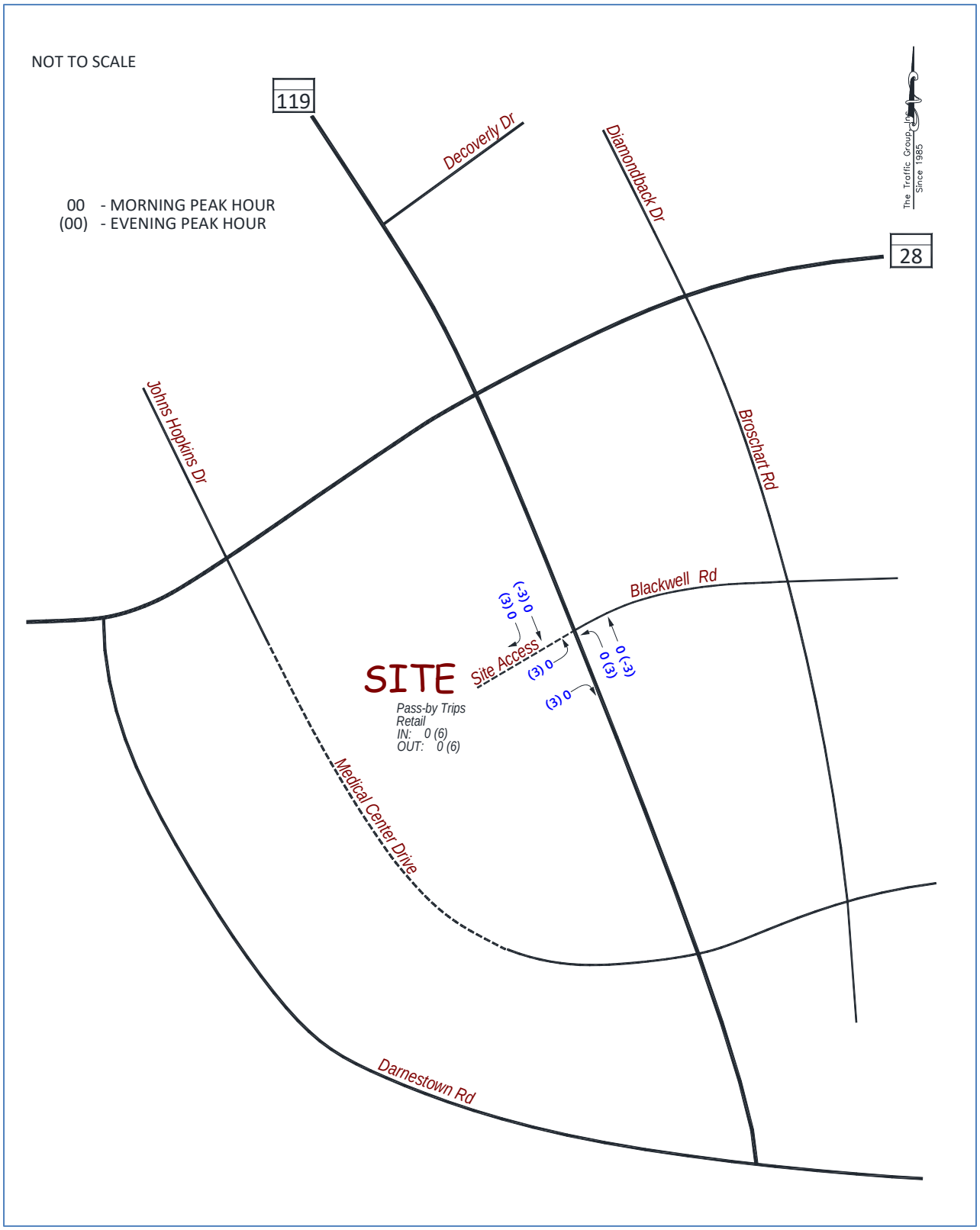


Figure 9. Total Peak Hour Traffic Volumes

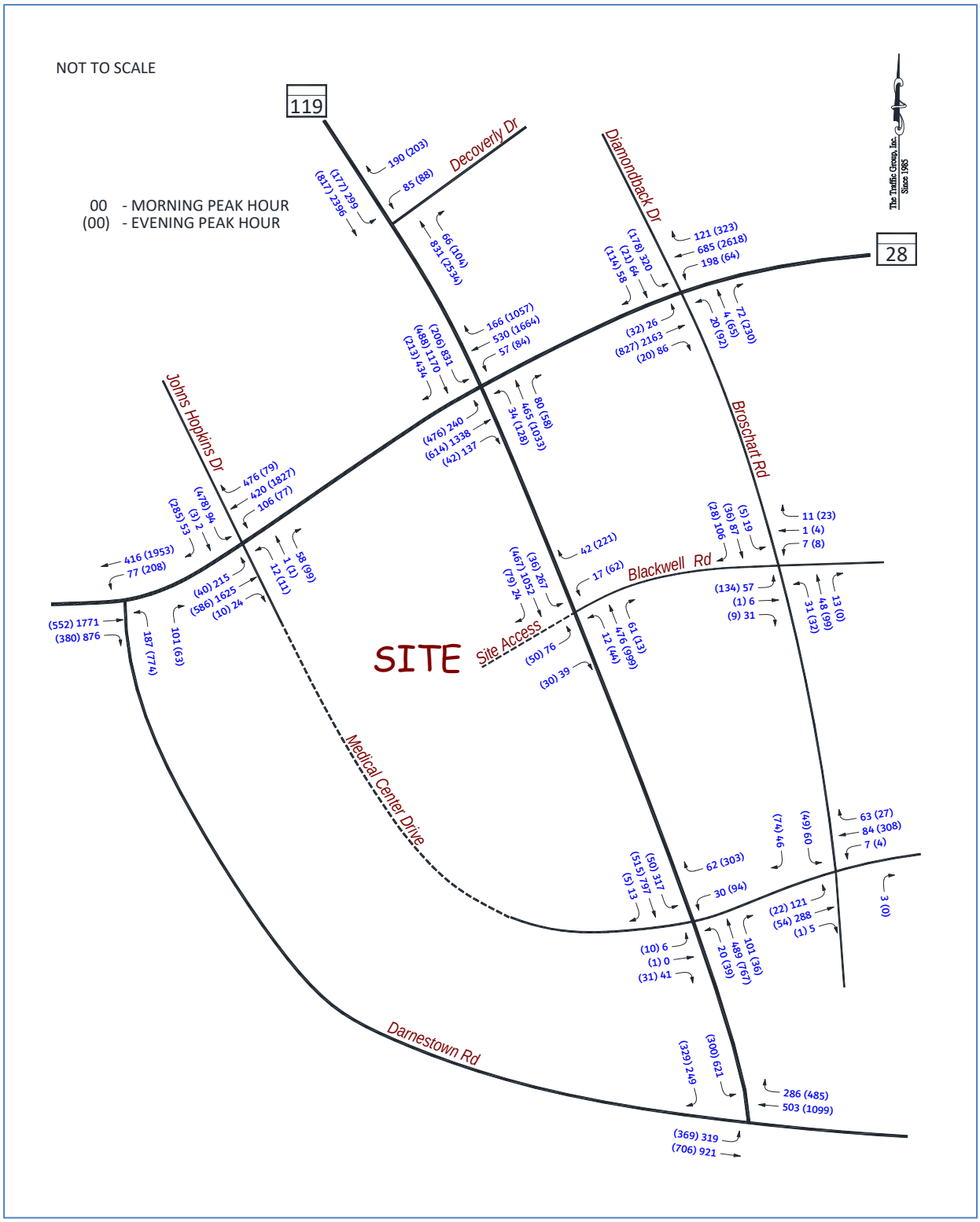


Table 4A. Results of Intersections Capacity Analysis (HCM)

HCM Analysis			Existing Traffic	Back'd Traffic	Total Traffic
Morning Peak Hour Traffic	**Control Type**	**HCM Standard**	**Delay (sec.)**		
1. Key West Ave & Darnestown Rd	Signal	55	9.7	10.7	10.7
2. Key West Ave & Johns Hopkins Dr	Stop Sign	55	3.8	4.4	4.8
With Improvement	***Signal***	***55***	---	---	***5.9***
3. Great Seneca Hwy & Decoverly Dr [3/]	Stop Sign	55	1.6	91.9	104.4
With Improvement	***Stop Sign***	***55***	---	***78.4***	***99.1***
With Improvement	***Signal***	***55***	---	***29.4***	***30.8***
4. Key West Ave & Great Seneca Hwy	Signal	55	40.8	44.0	44.9
With Improvement (SB 3rd LTL)	***Signal***	***55***	---	---	***42.7***
5. Great Seneca Hwy & Blackwell Rd	Stop Sign	55	1.1	2.3	43.6
6. Great Seneca Hwy & Medical Center Dr	Stop Sign	55	4.6	5.4	6.9
7. Darnestown Rd & Great Seneca Hwy	Signal	55	19.2	20.7	25.1
8. Key West Ave & Diamondback Dr	Signal	55	19.2	23.0	23.0
9. Blackwell Road & Broschart Road	Stop Sign	55	3.9	3.8	3.8
10. Medical Center Drive & Broschart Road	Stop Sign	55	3.4	3.4	3.4
Evening Peak Hour Traffic					
1. Key West Ave & Darnestown Rd	Signal	55	20.9	21.2	21.2
2. Key West Ave & Johns Hopkins Dr	Stop Sign	55	103.1	1143.5	1184.7
With Improvement	***Signal***	***55***	---	---	***26.8***
3. Great Seneca Hwy & Decoverly Dr [3/]	Stop Sign	55	4.0	96.6	98.6
With Improvement	***Stop Sign***	55	---	***154.6***	***158.1***
With Improvement	***Signal***	***55***	---	***22.0***	***22.7***
4. Key West Ave & Great Seneca Hwy	Signal	55	33.0	52.3	54.2
With Improvement (SB 3rd LTL)	***Signal***	***55***	---	---	***46.0***
5. Great Seneca Hwy & Blackwell Rd	Stop Sign	55	1.2	4.6	11.7
6. Great Seneca Hwy & Medical Center Dr	Stop Sign	55	6.4	7.5	11.0
7. Darnestown Rd & Great Seneca Hwy	Signal	55	12.9	19.7	21.5
8. Key West Ave & Diamondback Dr	Signal	55	14.6	23.1	23.4
9. Blackwell Road & Broschart Road	Stop Sign	55	4.2	5.8	5.8
10. Medical Center Drive & Broschart Road	Stop Sign	55	2.9	2.9	2.9

Note: 1. Results are based on HCM 6 Reports from HCS 7, worksheets are contained in Appendix B.

2. For stop controled intersections, the average vehicle delay was calculated per LATR Guidelines.

3. Subject site has minimum impact.

Table 4B. Results of Intersections Capacity Analysis (CLV)

CLV Analysis	Existing Traffic	Back'd Traffic	Total Traffic
Morning Peak Hour Traffic		**CLV**	
1. Key West Ave & Darnestown Rd	913	953	953
2. Key West Ave & Johns Hopkins Dr	704	812	824
3. Great Seneca Hwy & Decoverly Dr	1149	1346	1355
With Improvement	---	---	1355
4. Key West Ave & Great Seneca Hwy	1180	1253	1289
With Improvement	---	---	1257
5. Great Seneca Hwy & Blackwell Rd	528	574	675
6. Great Seneca Hwy & Medical Center Dr	603	657	681
7. Darnestown Rd & Great Seneca Hwy	845	1003	1047
8. Key West Ave & Diamondback Dr	1037	1114	1127
9. Blackwell Road & Broschart Road	151	209	209
10. Medical Center Drive & Broschart Road	262	262	262
Evening Peak Hour Traffic		**CLV**	
1. Key West Ave & Darnestown Rd	1065	1164	1167
2. Key West Ave & Johns Hopkins Dr	821	1248	1245
3. Great Seneca Hwy & Decoverly Dr [1/]	1264	1645	1663
With Improvement	---	---	1241
4. Key West Ave & Great Seneca Hwy [1/]	1286	1506	1524
With Improvement	---	---	1491
5. Great Seneca Hwy & Blackwell Rd	580	757	807
6. Great Seneca Hwy & Medical Center Dr	666	714	739
7. Darnestown Rd & Great Seneca Hwy	1110	1263	1284
8. Key West Ave & Diamondback Dr	1163	1278	1291
9. Blackwell Road & Broschart Road	137	235	235
10. Medical Center Drive & Broschart Road	252	252	252

Note: 1. Subject site has minimum impact.

Table 4C. Results of Queuing Analyses (HCM)

HCM Analysis 95% Queues

Total Traffic	Existing Storage	AM	PM
2. Key West Ave & Johns Hopkins Dr			
EB Key West Ave	325'	70 ft	42 ft
WB Key West Ave	325'	37 ft	76 ft
5. Great Seneca Hwy & Blackwell Rd			
NB Great Seneca Hwy	N/A	<25 ft	38 ft
SB Great Seneca Hwy	220'	187 ft	33 ft
6. Great Seneca Hwy & Medical Center Dr			
NB Great Seneca Hwy	200'	<25 ft	38 ft
SB Great Seneca Hwy	200'	172 ft	49 ft

Note: Results are based on HCM 6 Reports from HCS 7, worksheets are contained in Appendix B. This table is to address SHA Comment No. 17 contained in Appendix A.

HCM Analysis

(Movement with queue length over storage)

Morning Peak Hour Traffic	Control Type	Movement	Existing Storage	Existing Traffic	Back'd Traffic	Total Traffic
				95% Queues Length (ft.)		
4. Key West Ave & Great Seneca Hwy	Signal	SBL	450	598	598	598
With Improvement (SB 3rd LTL)	Signal	SBL	450	---	---	404
Evening Peak Hour Traffic						
4. Key West Ave & Great Seneca Hwy	Signal	EBL	250	226	628	650
With Improvement (SB 3rd LTL)	Signal	EBL	250	---	---	412
7. Darnestown Rd & Great Seneca Hwy	Signal	EBL	125' marked, 513' available	229	520	552
With Signal Timing Adjustment	Signal	EBL		---	---	512

Note: 1. Results are based on HCM 6 Reports from HCS 7, worksheets are contained in Appendix B.

2. This table is to respond DOT comments regarding queue length over the storage. Copy is contained in Appendix A.

3. Subject site has minimum impact.

Table 5. Results of Pedestrian Crosswalk Analysis

Pedestrian Crosswalk Analysis	**Existing Traffic**	**Background Traffic**	**Total Traffic**
Morning Peak Hour Traffic	**Pedestrian LOS Score / LOS**		
1. Key West Ave & Darnestown Rd			
Darnestown Rd - South Leg	2.49 / B	2.55 / C	2.55 / C
Key West Ave - East Leg	2.62 / C	2.62 / C	2.62 / C
2. Key West Ave & Medical Center Drive / Johns Hopkins Dr			
Johns Hopkins Dr - North Leg			2.28 / B
Medical Center Drive - South Leg			2.05 / B
Key West Ave - East Leg Crosswalk			3.23 / C
Key West Ave - West Leg Crosswalk			3.13 / C
4. Key West Ave & Great Seneca Hwy			
Great Seneca Hwy - North Leg	3.33 / C	3.44 / C	3.45 / C
Great Seneca Hwy - South Leg	2.93 / C	3.00 / C	3.03 / C
Key West Ave - East Leg	3.28 / C	3.32 / C	3.33 / C
Key West Ave - West Leg	3.17 / C	3.27 / C	3.27 / C
7. Darnestown Rd & Great Seneca Hwy			
Great Seneca Hwy - North Leg	2.56 / C	2.66 / C	2.72 / C
Darnestown Rd - East Leg	2.94 / C	3.01 / C	3.04 / C
Darnestown Rd - West Leg	2.33 / B	2.33 / B	2.33 / B
Evening Peak Hour Traffic	**Pedestrian LOS Score / LOS**		
1. Key West Ave & Darnestown Rd			
Darnestown Rd - South Leg Crosswalk	2.55 / C	2.61 / C	2.61 / C
Key West Ave - East Leg Crosswalk	2.62 / C	2.62 / C	2.62 / C
2. Key West Ave & Medical Center Drive / Johns Hopkins Dr			
Johns Hopkins Dr - North Leg			2.03 / B
Medical Center Drive - South Leg			2.05 / B
Key West Ave - East Leg Crosswalk			3.37 / C
Key West Ave - West Leg Crosswalk			3.22 / C
4. Key West Ave & Great Seneca Hwy			
Great Seneca Hwy - North Leg	3.23 / C	3.30 / C	3.31 / C
Great Seneca Hwy - South Leg	2.88 / C	2.97 / C	3.01 / C
Key West Ave - East Leg	3.41 / C	3.45 / C	3.46 / C
Key West Ave - West Leg	3.24 / C	3.35 / C	3.36 / C
7. Darnestown Rd & Great Seneca Hwy			
Great Seneca Hwy - North Leg	2.49 / B	2.61 / C	2.68 / C
Darnestown Rd - East Leg	2.97 / C	3.06 / C	3.09 / C
Darnestown Rd - West Leg	2.33 / B	2.33 / B	2.33 / B

Note: Signalized intersections around the site were analyzed. To be conservative, five more peds for each movement were assumed under total traffic.

Table 6. Results of Pedestrian Holding-Area Waiting Time Analysis at Signalized Intersections

Holding-Area Waiting Time at Signalized Intersections (seconds)

Crossing	Control Type	Cycle Length (C)	Effective Walk Time (g_{walk})	Holding-Area Waiting Time (Q)
1. Key West Ave & Darnestown Rd	Signal (with Pedestrian Signal Head)			
South Leg (Darnestown Rd)		150	11	64.4
East Leg (Key West Ave)		150	11	64.4
4. Key West Ave & Great Seneca Hwy	Signal (with Pedestrian Signal Head)			
North Leg (Great Seneca Hwy)		150	11	64.4
South Leg (Great Seneca Hwy)		150	11	64.4
East Leg (Key West Ave)		150	11	64.4
West Leg (Key West Ave)		150	11	64.4
7. Darnestown Rd & Great Seneca Hwy	Signal (no Pedestrian Signal Head)			
North Leg (Great Seneca Hwy)		120	54.5	17.9
East Leg (Darnestown Rd)		120	34	30.8
West Leg (Darnestown Rd)		120	34	30.8
8. Key West Ave & Diamondback Dr	Signal (with Pedestrian Signal Head)			
North Leg (Diamondback Dr)		150	11	64.4
South Leg (Broschart Dr)		150	11	64.4
West Leg (Key West Ave)		150	11	64.4

Table 6, continued. Results of Pedestrian Holding-Area Waiting Time Analysis at Signalized Intersections

Holding-Area Waiting Time at Future Signalized Intersections (seconds)

Crossing	Control Type	Cycle Length (C)	Effective Walk Time (g_{walk})	Holding-Area Waiting Time (Q)
2. Key West Ave & Johns Hopkins Dr	Signal (with Pedestrian Signal Head)			
North Leg (Johns Hopkins Dr)		150	11	64.4
South Leg (Medical Center Drive)		150	11	64.4
East Leg (Key West Ave)		150	11	64.4
West Leg (Key West Ave)		150	11	64.4
3. Great Seneca Hwy & Decoverly Dr	Signal (with Pedestrian Signal Head)			
North Leg (Great Seneca Hwy)		120	11	49.5
South Leg (Great Seneca Hwy)		120	11	49.5
East Leg (Decoverly Dr)		120	11	49.5
5. Great Seneca Hwy & Blackwell Rd	Signal (with Pedestrian Signal Head)			
North Leg (Great Seneca Hwy)		120	11	49.5
South Leg (Great Seneca Hwy)		120	11	49.5
East Leg (Blackwell Rd)		120	11	49.5
East Leg (Site Access)		120	11	49.5
6. Great Seneca Hwy & Medical Center Dr	Signal (with Pedestrian Signal Head)			
North Leg (Great Seneca Hwy)		120	11	49.5
South Leg (Great Seneca Hwy)		120	11	49.5
East Leg (Medical Center Dr)		120	11	49.5
East Leg (Medical Center Dr)		120	11	49.5

Note: 1. Results are based on Montgomery County Depart of Planning and HCM 6 Chapter 19.

Table 7. Results of Pedestrian Average Delay at Unsignalized Intersections

Average Delay for Pedestrian at Unsignalized Crossing				Vehicular flow rate (v, veh/s)			Probability of a delayed crossing (P_d)			Average Delay for Pedestrian (seconds)		
Morning Peak Hour Traffic	**Crosswalk Length (L, ft)**	**Critical Headway (t_c, seconds)**	**Number of through lanes crossed (L)**	**Existing Traffic**	**Back'd Traffic**	**Total Traffic**	**Existing Traffic**	**Back'd Traffic**	**Total Traffic**	**Existing Traffic**	**Back'd Traffic**	**Total Traffic**
2. Key West Ave & Johns Hopkins Dr												
North Leg (Johns Hopkins Dr, with median refuge)												
Stage 1:	32	12	1	0.08	0.19	0.19	61.7%	89.8%	89.8%	13.2	38.1	38.1
Stage 2:	30	12	2	0.01	0.04	0.04	11.3%	38.1%	38.1%	6.6	8.9	8.9
Total:										19.8	>45	>45
LOS:										C	F	F
South Leg (Medical Center Dr, with median refuge)												
Stage 1:	31	12	1	0.04	0.04	0.04	38.1%	38.1%	38.1%	8.9	8.9	8.9
Stage 2:	30	12	2	0.02	0.02	0.02	21.3%	21.3%	21.3%	7.3	7.3	7.3
Total:										16.2	16.2	16.2
LOS:										C	C	C
East Leg (Key West Ave, with median refuge)												
Stage 1:	47	16	3	0.45	0.47	0.49	99.9%	100.0%	100.0%	>45	>45	>45
Stage 2:	53	18	3	0.18	0.28	0.28	96.1%	99.4%	99.4%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
West Leg (Key West Ave, with median refuge)												
Stage 1:	43	15	3	0.46	0.52	0.52	99.9%	100.0%	100.0%	>45	>45	>45
Stage 2:	50	17	3	0.10	0.13	0.13	81.7%	89.0%	89.0%	33.9	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
3. Great Seneca Hwy & Decoverly Dr [3/]												
North Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	36	13	2	0.21	0.27	0.28	93.5%	97.0%	97.4%	>45	>45	>45
Stage 2:	40	14	2	0.66	0.74	0.75	100.0%	100.0%	100.0%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
South Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	29	11	2	0.60	0.68	0.69	99.9%	99.9%	100.0%	>45	>45	>45
Stage 2:	45	16	2	0.20	0.23	0.25	95.9%	97.5%	98.2%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
East Leg (Decoverly Dr, with median refuge)												
Stage 1:	34	13	3	0.06	0.10	0.10	54.2%	72.8%	72.8%	12.4	18.8	18.8
Stage 2:	40	14	3	0.02	0.08	0.08	24.4%	67.4%	67.4%	8.8	17.5	17.5
Total:										21.2	36.3	36.3
LOS:										D	E	E

Table 7, continued. Results of Pedestrian Average Delay at Unsignalized Intersections

Average Delay for Pedestrian at Unsignalized Crossing				Vehicular flow rate (v, veh/s)			Probability of a delayed crossing (P_d)			Average Delay for Pedestrian (seconds)		
Morning Peak Hour Traffic	**Crosswalk Length (L, ft)**	**Critical Headway (t_c, seconds)**	**Number of through lanes crossed (L)**	**Existing Traffic**	**Back'd Traffic**	**Total Traffic**	**Existing Traffic**	**Back'd Traffic**	**Total Traffic**	**Existing Traffic**	**Back'd Traffic**	**Total Traffic**
5. Great Seneca Hwy & Blackwell Rd												
North Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	38	14	2	0.12	0.14	0.17	81.4%	85.9%	90.7%	27.5	34.4	>45
Stage 2:	38	14	2	0.32	0.37	0.37	98.9%	99.4%	99.4%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
South Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	24	10	2	0.28	0.30	0.31	93.9%	95.0%	95.5%	>45	>45	>45
Stage 2:	24	10	2	0.12	0.15	0.15	69.9%	77.7%	77.7%	13.4	17.0	17.0
Total:										>45	>45	>45
LOS:										F	F	F
East Leg (Blackwell Rd)												
	58	20	3	0.06	0.11	0.11	69.9%	88.9%	88.9%	26.7	>45	>45
LOS:										D	F	F
West Leg (Site Access, Total traffic only)												
	58	20	3			0.04			55.1%			19.3
LOS:												C
6. Great Seneca Hwy & Medical Center Dr												
North Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	26	10	2	0.12	0.15	0.15	69.9%	77.7%	77.7%	13.4	17.0	17.0
Stage 2:	37	14	2	0.28	0.30	0.31	98.0%	98.5%	98.7%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
South Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	26	10	2	0.20	0.22	0.24	86.5%	88.9%	90.9%	25.4	29.8	34.9
Stage 2:	40	14	2	0.13	0.16	0.17	83.8%	89.4%	90.7%	30.8	43.0	>45
Total:										>45	>45	>45
LOS:										F	F	F
East Leg (Medical Center Drive, with median refuge)												
Stage 1:	31	12	1	0.12	0.12	0.12	76.3%	76.3%	76.3%	19.4	19.4	19.4
Stage 2:	30	12	2	0.03	0.03	0.03	30.2%	30.2%	30.2%	8.1	8.1	8.1
Total:										27.5	27.5	27.5
LOS:										D	D	D
West Leg (Medical Center Drive)												
	46	16	3	0.01	0.01	0.02	14.8%	14.8%	27.4%	9.1	9.1	10.4
LOS:										B	B	C

Table 7, continued. Results of Pedestrian Average Delay at Unsignalized Intersections

Average Delay for Pedestrian at Unsignalized Crossing				Vehicular flow rate (v, veh/s)			Probability of a delayed crossing (P_d)			Average Delay for Pedestrian (seconds)		
Morning Peak Hour Traffic	Crosswalk Length (L, ft)	Critical Headway (t_c, seconds)	Number of through lanes crossed (L)	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic
9. Blackwell Road & Broschart Road												
North Leg (Broschart Road, with median refuge)												
Stage 1:	24	10	2	0.03	0.03	0.03	25.9%	25.9%	25.9%	6.4	6.4	6.4
Stage 2:	36	13	2	0.04	0.06	0.06	40.6%	54.2%	54.2%	10.0	12.4	12.4
Total:										16.4	18.8	18.8
LOS:										C	C	C
South Leg (Broschart Road, with median refuge)												
Stage 1:	32	12	2	0.03	0.03	0.03	30.2%	30.2%	30.2%	8.1	8.1	8.1
Stage 2:	38	14	2	0.03	0.03	0.03	34.3%	34.3%	34.3%	9.9	9.9	9.9
Total:										18.0	18.0	18.0
LOS:										C	C	C
East Leg (Blackwell Rd)												
	39	14	2	0.02	0.02	0.02	24.4%	24.4%	24.4%	8.8	8.8	8.8
LOS:										B	B	B
West Leg (Blackwell Road)												
	58	20	3	0.04	0.06	0.06	55.1%	69.9%	69.9%	19.3	26.7	26.7
LOS:										C	D	D
10. Medical Center Drive & Broschart Road												
North Leg (Broschart Road, with median refuge)												
Stage 1:	48	17	2	0.05	0.05	0.05	57.3%	57.3%	57.3%	17.1	17.1	17.1
Stage 2:	36	13	2	0.03	0.03	0.03	32.3%	32.3%	32.3%	9.0	9.0	9.0
Total:										26.1	26.1	26.1
LOS:										D	D	D
South Leg (Broschart Road, with median refuge)												
Stage 1:	26	10	1	0.00	0.00	0.00	0.0%	0.0%	0.0%	0.0	0.0	0.0
Stage 2:	23	10	1	0.00	0.00	0.00	0.0%	0.0%	0.0%	0.0	0.0	0.0
Total:										0.0	0.0	0.0
LOS:										A	A	A
East Leg (Medical Center Drive, with median refuge)												
Stage 1:	25	10	2	0.10	0.10	0.10	63.2%	63.2%	63.2%	11.4	11.4	11.4
Stage 2:	50	17	2	0.04	0.04	0.04	49.3%	49.3%	49.3%	14.9	14.9	14.9
Total:										26.3	26.3	26.3
LOS:										D	D	D
West Leg (Medical Center Drive, with median refuge)												
Stage 1:	35	13	2	0.04	0.04	0.04	40.6%	40.6%	40.6%	10.0	10.0	10.0
Stage 2:	36	13	2	0.12	0.12	0.12	79.0%	79.0%	79.0%	23.2	23.2	23.2
Total:										33.2	33.2	33.2
LOS:										E	E	E

Note: 1. Results are based on HCM 6 Chapter 20.

2. Average pedestrian walking speed: S_p = 3.5 ft/s.

3. Pedestrian start-up time and end clearance time: t_s = 3 s.

4. Based on low pedestrian volumes observed in this area, no pedestrian platoon is assumed.

Table 7, continued. Results of Pedestrian Average Delay at Unsignalized Intersections

Average Delay for Pedestrian at Unsignalized Crossing				Vehicular flow rate (v, veh/s)			Probability of a delayed crossing (P_d)			Average Delay for Pedestrian (seconds)		
Evening Peak Hour Traffic	Crosswalk Length (L, ft)	Critical Headway (t_c, seconds)	Number of through lanes crossed (L)	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic
2. Key West Ave & Johns Hopkins Dr												
North Leg (Johns Hopkins Dr, with median refuge)												
Stage 1:	32	12	1	0.01	0.03	0.03	11.3%	30.2%	30.2%	6.6	8.1	8.1
Stage 2:	30	12	2	0.07	0.21	0.21	56.8%	92.0%	92.0%	12.0	>45	>45
Total:										18.6	>45	>45
LOS:										C	F	F
South Leg (Medical Center Dr, with median refuge)												
Stage 1:	31	12	1	0.02	0.02	0.03	21.3%	21.3%	30.2%	7.3	7.3	8.1
Stage 2:	30	12	2	0.03	0.03	0.03	30.2%	30.2%	30.2%	8.1	8.1	8.1
Total:										15.4	15.4	16.2
LOS:										C	C	C
East Leg (Key West Ave, with median refuge)												
Stage 1:	47	16	3	0.20	0.32	0.32	95.9%	99.4%	99.4%	>45	>45	>45
Stage 2:	53	18	3	0.50	0.55	0.55	100.0%	100.0%	100.0%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
West Leg (Key West Ave, with median refuge)												
Stage 1:	43	15	3	0.14	0.17	0.18	87.8%	92.2%	93.3%	41.2	>45	>45
Stage 2:	50	17	3	0.51	0.59	0.59	100.0%	100.0%	100.0%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
3. Great Seneca Hwy & Decoverly Dr [3/]												
North Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	36	13	2	0.63	1.26	0.76	100.0%	100.0%	100.0%	>45	>45	>45
Stage 2:	40	14	2	0.21	0.26	0.28	94.7%	97.4%	98.0%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
South Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	29	11	2	0.20	0.24	0.25	88.9%	92.9%	93.6%	32.8	>45	>45
Stage 2:	45	16	2	0.62	0.72	0.73	100.0%	100.0%	100.0%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
East Leg (Decoverly Dr, with median refuge)												
Stage 1:	34	13	3	0.02	0.08	0.08	22.9%	64.7%	64.7%	8.1	15.3	15.3
Stage 2:	40	14	3	0.03	0.08	0.08	34.3%	67.4%	67.4%	9.9	17.5	17.5
Total:										18.0	32.8	32.8
LOS:										C	E	E

Table 7, continued. Results of Pedestrian Average Delay at Unsignalized Intersections

Average Delay for Pedestrian at Unsignalized Crossing				Vehicular flow rate (v, veh/s)			Probability of a delayed crossing (P_d)			Average Delay for Pedestrian (seconds)		
Evening Peak Hour Traffic	Crosswalk Length (L, ft)	Critical Headway (t_c, seconds)	Number of through lanes crossed (L)	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic
5. Great Seneca Hwy & Blackwell Rd												
North Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	38	14	2	0.28	0.34	0.35	98.0%	99.1%	99.3%	>45	>45	>45
Stage 2:	38	14	2	0.12	0.14	0.16	81.4%	85.9%	89.4%	27.5	34.4	43.0
Total:										>45	>45	>45
LOS:										F	F	F
South Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	24	10	2	0.12	0.15	0.16	69.9%	77.7%	79.8%	13.4	17.0	18.4
Stage 2:	24	10	2	0.26	0.28	0.29	92.6%	93.9%	94.5%	41.0	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
East Leg (Blackwell Rd)												
	58	20	3	0.03	0.09	0.09	45.1%	83.5%	83.5%	16.4	43.3	43.3
LOS:										D	E	E
West Leg (Site Access, Total traffic only)												
	58	20	3			0.06			69.9%			26.7
LOS:												D
6. Great Seneca Hwy & Medical Center Dr												
North Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	26	10	2	0.26	0.29	0.30	92.6%	94.5%	95.0%	41.0	>45	>45
Stage 2:	37	14	2	0.12	0.15	0.16	81.4%	87.8%	89.4%	27.5	38.5	43.0
Total:										>45	>45	>45
LOS:										F	F	F
South Leg (Great Seneca Hwy, with median refuge)												
Stage 1:	26	10	2	0.13	0.16	0.18	72.8%	79.8%	83.5%	14.5	18.4	21.6
Stage 2:	40	14	2	0.19	0.21	0.23	93.0%	94.7%	96.0%	>45	>45	>45
Total:										>45	>45	>45
LOS:										F	F	F
East Leg (Medical Center Drive, with median refuge)												
Stage 1:	31	12	1	0.02	0.02	0.02	21.3%	21.3%	21.3%	7.3	7.3	7.3
Stage 2:	30	12	2	0.11	0.11	0.11	73.3%	73.3%	73.3%	17.7	17.7	17.7
Total:										25.0	25.0	25.0
LOS:										D	D	D
West Leg (Medical Center Drive)												
	46	16	3	0.01	0.01	0.02	14.8%	14.8%	27.4%	9.1	9.1	10.4
LOS:										B	B	C

Table 7, continued. Results of Pedestrian Average Delay at Unsignalized Intersections

Average Delay for Pedestrian at Unsignalized Crossing				Vehicular flow rate (v, veh/s)			Probability of a delayed crossing (P_d)			Average Delay for Pedestrian (seconds)		
Evening Peak Hour Traffic	Crosswalk Length (L, ft)	Critical Headway (t_c, seconds)	Number of through lanes crossed (L)	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic	Existing Traffic	Back'd Traffic	Total Traffic
9. Blackwell Road & Broschart Road												
North Leg (Broschart Road, with median refuge)												
Stage 1:	24	10	2	0.05	0.07	0.07	39.4%	50.3%	50.3%	7.6	8.9	8.9
Stage 2:	36	13	2	0.01	0.02	0.02	12.2%	22.9%	22.9%	7.2	8.1	8.1
Total:										14.8	17.0	17.0
LOS:										C	C	C
South Leg (Broschart Road, with median refuge)												
Stage 1:	32	12	2	0.01	0.01	0.01	11.3%	11.3%	11.3%	6.6	6.6	6.6
Stage 2:	38	14	2	0.04	0.04	0.04	42.9%	42.9%	42.9%	11.1	11.1	11.1
Total:										17.7	17.7	17.7
LOS:										C	C	C
East Leg (Blackwell Rd)												
	39	14	2	0.01	0.01	0.01	13.1%	13.1%	13.1%	7.9	7.9	7.9
LOS:										B	B	B
West Leg (Blackwell Road)												
	58	20	3	0.03	0.06	0.06	45.1%	69.9%	69.9%	16.4	26.7	26.7
LOS:										C	D	D
10. Medical Center Drive & Broschart Road												
North Leg (Broschart Road, with median refuge)												
Stage 1:	48	17	2	0.01	0.01	0.01	15.6%	15.6%	15.6%	9.8	9.8	9.8
Stage 2:	36	13	2	0.03	0.03	0.03	32.3%	32.3%	32.3%	9.0	9.0	9.0
Total:										18.8	18.8	18.8
LOS:										C	C	C
South Leg (Broschart Road, with median refuge)												
Stage 1:	26	10	1	0.00	0.00	0.00	0.0%	0.0%	0.0%	0.0	0.0	0.0
Stage 2:	23	10	1	0.00	0.00	0.00	0.0%	0.0%	0.0%	0.0	0.0	0.0
Total:										0.0	0.0	0.0
LOS:										A	A	A
East Leg (Medical Center Drive, with median refuge)												
Stage 1:	25	10	2	0.03	0.03	0.03	25.9%	25.9%	25.9%	6.4	6.4	6.4
Stage 2:	50	17	2	0.09	0.09	0.09	78.4%	78.4%	78.4%	29.6	29.6	29.6
Total:										36.0	36.0	36.0
LOS:										E	E	E
West Leg (Medical Center Drive, with median refuge)												
Stage 1:	35	13	2	0.11	0.11	0.11	76.1%	76.1%	76.1%	20.9	20.9	20.9
Stage 2:	36	13	2	0.02	0.02	0.02	22.9%	22.9%	22.9%	8.1	8.1	8.1
Total:										29.0	29.0	29.0
LOS:										D	D	D

Note: 1. Results are based on HCM 6 Chapter 20.

2. Average pedestrian walking speed: S_p = 3.5 ft/s.

3. Pedestrian start-up time and end clearance time: t_s = 3 s.

4. Based on low pedestrian volumes observed in this area, no pedestrian platoon is assumed.

ACCESS AND OFF-SITE IMPROVEMENTS

The following is a list of the necessary improvements determined by this report. These improvements are graphically illustrated on Figure 10.

MD 28 (Key West Avenue) and Johns Hopkins Drive/Medical Center Drive

Medical Center Drive will serve as access to the subject site to and from the north. Turn lanes along MD 28 are of sufficient length to accommodate future queuing. This intersection will require the installation of a traffic signal. Applicant will design and install the required signal.

MD 119 (Great Seneca Highway) and Medical Center Drive

This intersection will provide access to the property to and from the south along MD 119. Existing turn lanes are of sufficient length to accommodate future queuing. This intersection will require the installation of a traffic signal. Applicant will design and install the required signal.

MD 119 (Great Seneca Highway) and Blackwell Road

This intersection presently is a "T" intersection which provides access to existing development on the eastside of MD 119. A fourth two-lane approach will be required on the west side of MD 119 to serve the subject property with a combination left turn/thru lane and an exclusive right turn lane. A 200-foot northbound left turn lane will also be required along MD 119. This intersection will also require traffic signalization. Applicant will design and install the traffic signal along with the additional roadway improvements.

MD 119 (Great Seneca Highway) and Decoverly Drive

This intersection is projected to operate at an unsatisfactory level of service based on the background traffic conditions. This assumes the addition of a third northbound thru lane along MD 119 to be installed by others. To achieve acceptable conditions at this intersection, the installation of a traffic signal is warranted based on the existing southbound left turn volume along MD 119. PSTA's impact on this intersection is negligible and does not contribute any traffic to the minor movements causing the need for this signal. PSTA only adds 2% of the total traffic at this intersection. The applicant agrees to provide engineered plans for the construction of the future traffic signal, which would then be installed by others.

MD 119 (Great Seneca Highway) and MD 28 (Key West Avenue)

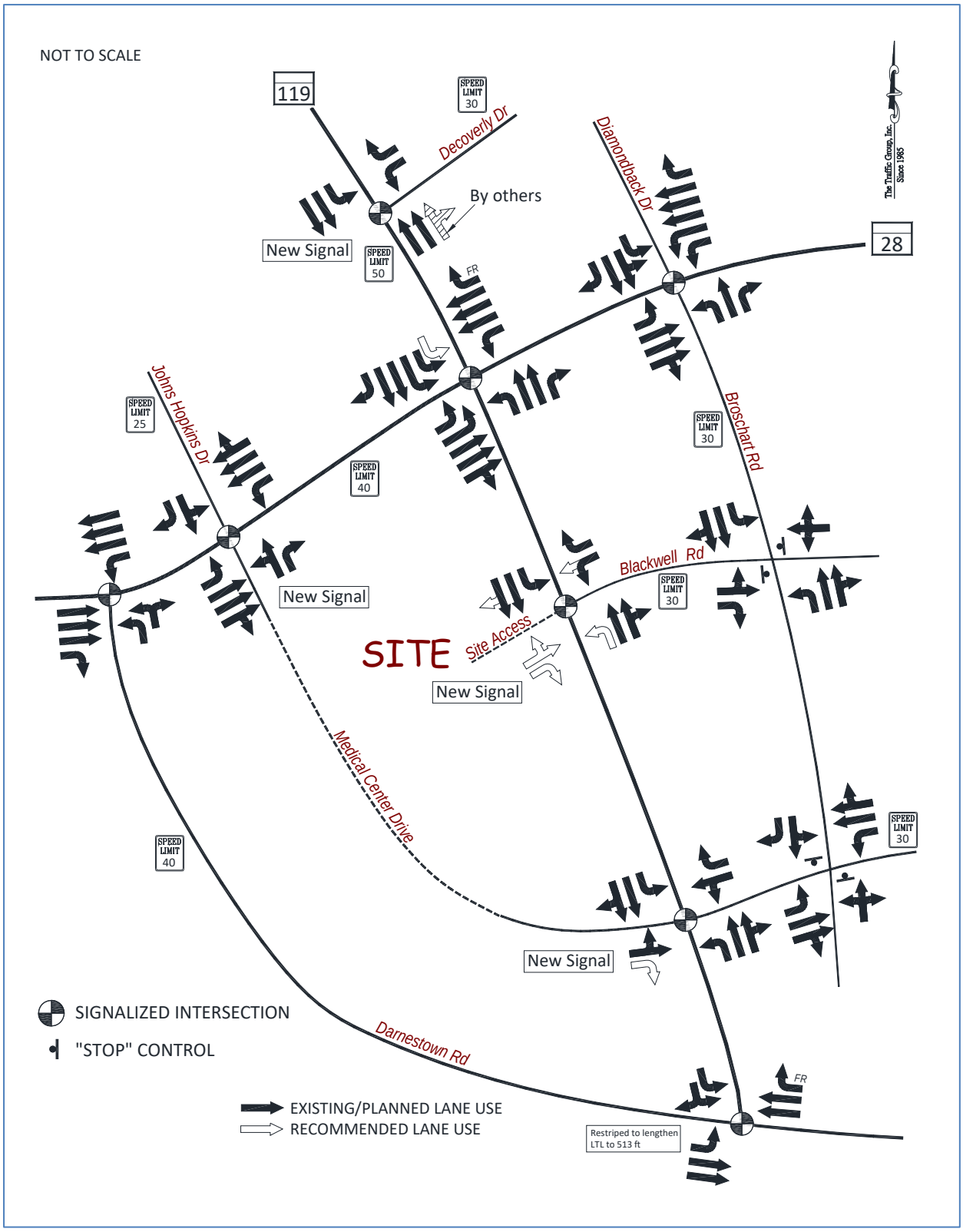
This intersection is also projected to operate at an unacceptable level of service even without the development of the PSTA site. A third southbound left turn lane would be needed along MD 119 to "mitigate" the impact of the PSTA site from a capacity standpoint and the length of

the projected left turn queue along eastbound MD 28. The PSTA site will once again only increase traffic at this intersection by approximately 2%. Despite this, the applicant has agreed to engineer the necessary changes for this intersection, which would then be implemented by others.

Darnestown Road and MD 119 (Great Seneca Highway)

This intersection is projected to operate within the standards required by the County. The only issue at this intersection is the available storage space for the eastbound left turn lane along Darnestown Road. This deficiency can be corrected by restriping the eastbound left turn storage space to 513 feet and with minor signal timing adjustment. Sufficient pavement exists to make this improvement. The applicant will design and restripe the road to address this issue.

Figure 10. Future Recommended Lane Use



TRAFFIC SIGNAL WARRANT EVALUATIONS

Locations

Traffic Signal Warrant Evaluations were conducted for the four intersections discussed in the report. They were as follows:

- MD 28 (Key West Avenue) and Medical Center Drive/Johns Hopkins Drive
- MD 119 (Great Seneca Highway) and Medical Center Drive
- MD 119 (Great Seneca Highway) and Blackwell Road
- MD 119 (Great Seneca Highway) and Decoverly Drive

Based on the existing turning movement counts and with the additional traffic to be generated by the background developments based on diurnal percentages from similar type facilities, along with the subject site, worksheets have been developed and are contained in Appendix E, which show the total hourly projected volumes at each of the above intersections.

Along with these worksheets are Figures which show the hourly volumes at each of these locations. An analysis was then conducted for each intersection. The results of these analyses indicate that traffic signals would be warranted at all four locations based on the minimum requirements outlined in the Manual for Uniform Traffic Control Devices (MUTCD) with the complete development of the site. The intersection of MD 119 and Decoverly Drive warrants a traffic signal based on the background peak hour volumes.

RESULTS, RECOMMENDATIONS, AND CONCLUSIONS

Study Purpose

The primary purpose of this Traffic Impact Analysis is to determine what impact the redevelopment of this site will have on the adjacent roadways. The site is planned to be developed with 298 apartments (for rent, multi-family), 56 – 2/2's (for sale, multi-family), 276 townhomes, and 2,607 sq ft of retail space.

Study Criteria/Methodology

This Revised Traffic Impact Analysis has been prepared in accordance with the current requirements of the 2016 Subdivision Staging Policy and the 2017 LATR Guidelines for the M-NCPPC. This property is located in the R&D Village Policy Area, which is in an Orange Policy Area.

The trip generation determinations made as part of this report are based on the ITE Trip Generation Manual (10th Edition) and the requirements of the LATR guidelines.

A Scoping Agreement was previously prepared for this proposed development, and a copy of this agreement is contained in Appendix A. This agreement was approved by the transportation planning staff with minor adjustments. These adjustments are also outlined in Appendix A. As a result of the Scoping Agreement and trip generation determination for the project, it was determined that the project would generate more than 50 new peak hour person trips and therefore requires a Motor Vehicle Adequacy Analysis. In addition, it was determined that the subject site would generate sufficient pedestrian activity to require a Pedestrian Adequacy Test for the subject site.

This report focuses on the Motor Vehicle Adequacy Analysis portion utilizing the results of Intersection Capacity Analysis based on the use of the CLV methodology and the HCM methodology. This revised report addresses comments previously received from MDOT SHA, MCDOT, and M-NCPPC which are contained in Appendix A.

Summary of Findings and Recommendations

The results of our analysis show that three intersections which will serve as access to this site will require roadway improvements to operate at acceptable levels of service with the development of this site. They are as follows:

- MD 28 (Key West Avenue) and Medical Center Drive/Johns Hopkins Drive
- MD 119 (Great Seneca Highway) and Blackwell Road
- MD 119 (Great Seneca Highway) and Medical Center Drive

Three other intersections have been identified that would require some form of mitigation for deficiencies that presently exist or would exist even without the development of this site. They are as follows:

- MD 119 (Great Seneca Highway) and Decoverly Drive
- MD 119 (Great Seneca Highway) and MD 28 (Key West Avenue)
- MD 119 (Great Seneca Highway) and Darnestown Road

With the improvements outlined in this report, the PSTA site would meet all of the requirements of the M-NCPPC for approval of this project.

APPENDIX A

Correspondence,

Scoping Agreement,

Intersection Turning Movement Counts,

and Aerial Photos

Qiang Tian

From: Freer, Walker <Walker.Freer@montgomeryplanning.org>
Sent: Thursday, November 07, 2019 5:10 PM
To: Qiang Tian
Cc: kkubit@elmstreetdev.com; Wes Guckert; Glenn Cook
Subject: RE: PSTA Site

Qiang,

Here are my comments on the PSTA Site TIS scope, please update accordingly and resubmit:

- Update date on scope ("March 2017")
- Note that the site is located within the Great Seneca Science Corridor Master Plan
- Section 1: Note that full site access is proposed to Key West Avenue
- Section 5: Note that the site is located within the Greater Shady Grove Transportation Management District
- Section 8: Add the intersection of Key West Avenue and Site Access to study intersections
- Conduct a signal warrant analysis for the following intersections (can be conducted independently from TIS):
    a. Great Seneca Highway / Blackwell Drive
    b. Great Seneca Highway / Medical Center Drive
- Page 8 indicates that a pedestrian analysis is not required, but it's marked as being required on page 3

Thanks,
Walker

Walker M. Freer | Transportation Planner Coordinator
Montgomery Planning | Area 2 Division
T: 301.495.4651

From: Qiang Tian <qtian@trafficgroup.com>
Sent: Friday, October 25, 2019 11:27 AM
To: Freer, Walker <Walker.Freer@montgomeryplanning.org>
Cc: kkubit@elmstreetdev.com; Wes Guckert <wguckert@trafficgroup.com>; Glenn Cook <gcook@trafficgroup.com>
Subject: RE: PSTA Site

Hi Walker,

1. The retail changed from 91,000 sf to 2,516, which will not expect to generate external trips;
2. Residential units increased;
3. Trip generation was revised accordingly;
4. No more direct access to Key West Avenue

Thanks,
Qiang

Qiang Tian, P.E., PTOE
Senior Traffic Engineer
The Traffic Group, Inc.

Local Area Transportation Review

TRANSPORTATION IMPACT STUDY SCOPE OF WORK AGREEMENT

Contact Information				
Transportation Consultant (company, contact name, email, and phone number)	The Traffic Group, Inc.			
Name of Applicant / Developer	Elm Street Development			
Project Information	***Include Tables/Graphics, As Needed***			
Project Name (include plan no. if known)	PSTA Site			
Project Location (include address if known)	South west quadrant of Key West Ave & Great Seneca Hwy, See Exhibit 1			
Policy Area(s) (subdivision staging policy map)	R&D Village	Master Plan(s) / Sector Plan Area(s)	Great Seneca Science Corridor Master Plan	
Application Type(s)	☒ Preliminary Plan	☐ Site Plan	☐ Sketch/Concept/Pre-Preliminary (Optional)	☐ Amendment
	☐ Conditional Use (formerly special exception)	☐ Local Map Amendment	☐ Other: _____	
Project Description & Previous Approvals (proposed land uses, zoning, no. of units, square footage, construction phasing, prior approvals and proposals, existing uses, site operations, year built, status of Adequate Public Facilities [APF], other relevant info)	1. 346 Townhouse Units 2. 309 Apartment Units 3. 2,516 sq.ft. of Retail See Exhibit 2			
1.Site Access (proposed access location(s), existing/adjacent/opposite curb cuts, interparcel connections, access configurations and restrictions, internal circulation, private roads, parking/loading areas, other relevant info)	1. Two full access points proposed on Great Seneca Hwy 2. Five access points proposed along new road (joining Johns Hopkins Dr and Medical Center Dr) See Exhibit 2			

2.Transportation Analysis Requirement	☒ Transportation Impact Study Generates 50 or more total weekday peak hour person trips (vehicular, transit, bicycle, and/or pedestrian) with no reductions other than a credit for existing developments over 12 years old, *AND* is outside of the White Flint and White Oak Policy Areas. Fill out remainder of this form and include in transportation impact study appendix.		☐ Transportation Study Exemption Statement Generates 49 or fewer total weekday peak hour person trips (vehicular, transit, bicycle, and/or pedestrian) with no reductions other than a credit for existing developments over 12 years old, *OR* within White Flint and White Oak Policy Areas. Fill out PAR and trip generation sections below, and include with exemption statement.
3.Policy Area Review (PAR) Only for projects filed before 1/1/17	☐ TPAR (1/1/13 – 12/31/16) 0, 25, 50%: _____ (TPAR = Transportation Policy Area Review)	☐ PAMR (11/15/07 - 12/31/12) 0-50%: _____ (PAMR = Policy Area Mobility Review)	☐ Exempt (no square footage increase or fewer than 3 new trips) **or** 1/1/17 or later) ☐ No PAR (7/1/03 – 11/14/07) ☐ PATR (before 6/30/03) (PATR = Policy Area Transportation Review)
4.Transportation Mitigation Agreement (TMAg) Required?	☒ No	☐ Yes (25+ Employees and in Transportation Management District [TMD])	☐ Amend Existing TMAg
5.Established Trans-portation Management District (TMD)?	☐ No	☒ Yes TMD Name: Greater Shady Grove Transportation Management District	

Transportation Impact Study Assumptions	***Include Tables/Graphics, As Needed***	
6.Study Years / Phases	Existing Year: 2019	Phases / Build-out Year(s): 2023
7.Study Periods	☒ AM ☒ PM ☐ Mid-day ☐ Saturday ☐ Sunday ☐ Other: _____	
8.Study Intersections (For projects generating 50 or more person trips, list all signalized & significant unsignalized intersections, and site driveways traffic counts must be collected within 12-months of completed and accepted application)	# of tiers of intersections to study (refer to page 7 of Jan. 2013 LATR): ___2_____ *For the purpose of determining the number of tiers of study intersections, trip calculation for the subject site should also include nearby unbuilt properties in common ownership. No trip reductions should be taken in this calculation other than a credit for existing developments over 12 years old.*	
	1) Key West Ave & Darnestown Rd	7) Darnestown Rd & Great Seneca Hwy
	2) Key West Ave & Johns Hopkins Dr	8) Key West Ave & Diamondback Dr
	3) Great Seneca Hwy & Decoverly Dr	9) Blackwell Road & Broschart Road
	4) Key West Ave & Great Seneca Hwy	10) Medical Center Drive & Broschart Road
	5) Great Seneca Hwy & Blackwell Rd	
	6) Great Seneca Hwy & Medical Center Dr	add more rows if necessary

9.Trip Generation (clearly cite sources and methodology including use of rates vs. equation, include trip generation for existing site, current approvals, proposed uses, and net changes)	Total Person Trips See Exbibit 3	Vehicle Trips*	Transit Trips*	Walking Trips*	Bicycling Trips*
	** Only required if total person trips are 50 or more. Sum of vehicle, transit, walking and biking trips shall be the equivalent of total person trips. Use table at the end of the form to*				

	show all calculations and assumptions for mode break out.
10.Trip Reductions (include justification and supporting documentation for internal capture, pass-by, diverted, Transportation Demand Management [TDM])	None
11.Trip Distribution %	See Exhibit 4
12.Pipeline Developments to be considered as background traffic (include name, plan #, land uses, and sizes for approved but unbuilt developments or concurrently pending applications; info can be obtained from the M-NCPPC Pipeline website)	1. Crown Farm 2. Johns Hopkins Research Campus (119961100) 3. Montgomery County Medical Center (119861150) 4. Shady Grove Life Sciences (119882330) 5. Decoverly Hall South (119990330) 6. 9800 Medical Center Drive (120110080) 7. Traville (119970220) 8. Traville Grove (120120290) 9. Kol Shalom Synagogue (Phase 2) (STP2010-00022) 10. Danac Stiles (119961120)
13.Pipeline Transportation Projects to be considered as background condition (fully funded County Capital Improvement Program [CIP], State Consolidated Transportation Program [CTP], developer projects, etc. within the next 6 years)	None

Preliminary Mitigation Analysis	***Refer to the LATR Guidelines for details on how to mitigate, see #6 above for criteria.***	
14.Vehicular Analysis	☒ HCM Analysis Anticipated [11] (Vehicular mitigation to be determined after study)	• TEST: HCM Analysis is required to be provided for all intersections analyzed in studies for: 1) "Red & Orange" policy areas, and 2) intersections with a CLV of more than 1,350 in "Yellow & Green" policy areas. 3) **CLV analysis required for all intersections regardless of policy area. CLV assessment and signal timing worksheets are to be included in the study appendix.** • MITIGATION: Required if HCM delay analyses exceed policy area standard
15.Pedestrian Analysis	☒ Pedestrian Mitigation Anticipated	• TEST: If the plan generates 50 or more pedestrian peak hour trips, mitigation of surrounding pedestrian conditions i required • MITIGATION: Required if ADA non-compliance issues within 500 foot radius of site boundary and if pedestrian crosswalk delay at LATR intersections within 500 feet of site boundary is lower than Level of Service (LOS) D
16.Bicycle Analysis	☐ Bicycle Mitigation Anticipated	• TEST: If the plan generates 50 or more bicycle peak hour trips and is within 0.25 miles of an existing educational institution or existing/planned bikeshare station, mitigation of surrounding bicycle conditions is required • MITIGATION: Required to make improvements to provide a low Level of Traffic Stress to any existing similar facility within 750 feet of the site boundary; Alternatively, project may provide a master planned improvement that provides an equivalent improvement in the level of traffic stress for cyclists
17.Transit Analysis	☐ Transit Mitigation Anticipated	• TEST: If the plan generates 50 or more transit peak hour trips and the peak load of bus routes at bus stops within 1,000 feet of site boundary exceeds (or is worse than) peak load of LOS D (1.25 transit riders per seat during the peak period in the peak direction), mitigation of transit condition is required • MITIGATION: Required to provide or fund improvements that would mitigate the trips exceeding the standard that are attributable to the development
Additional Analysis or Software Required	☐ Queuing Analysis ☐ Signal Warrant Analysis ☐ Weaving/Merge Analysis	☐ Accident Analysis ☐ Synchro ☐ SIDRA ☐ VISSIM ☐ CORSIM ☐ Other _____
M-NCPPC Clarifications		

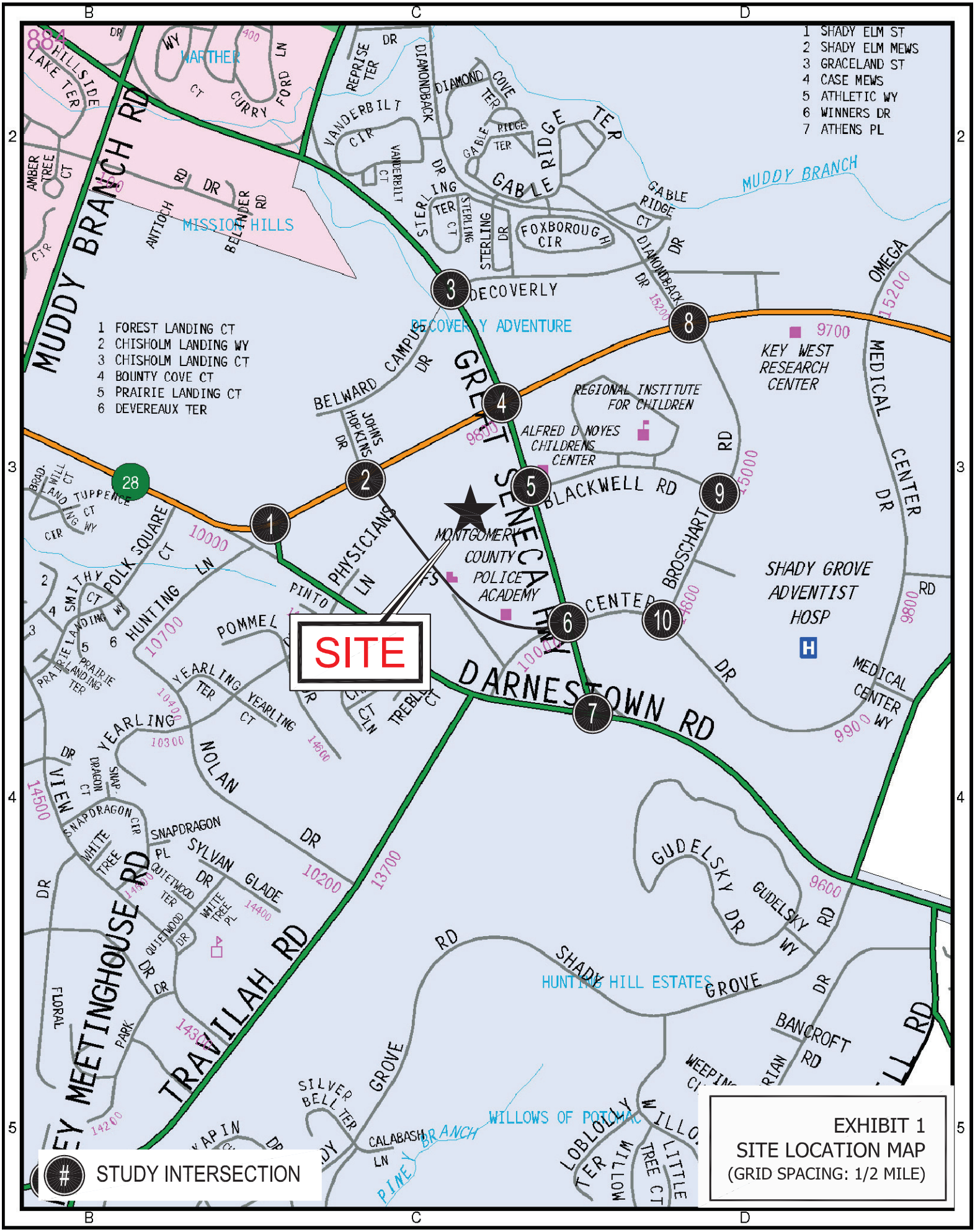
- Transportation impact study will comply with all other requirements of the LATR Guidelines not listed on this form.
- If physical improvements are proposed as mitigation, the transportation impact study will demonstrate feasibility with regards to right-of-way and utility relocation (at a minimum).
- In the event that the development proposal significantly changes after this transportation impact study scope has been agreed to, the Applicant will work with M-NCPPC staff to amend the scope to accurately reflect the new proposal.
- A receipt from MCDOT showing that the transportation impact study review fee has been paid will be provided to M-NCPPC DARC at the time the development application is submitted.
- Minimum of seven "paper copies (more if near the County line or an incorporated City) and two PDF copies of the transportation impact study and appendices will be provided.

Additional Assumptions / Special Circumstances for Discussion

Site Trip Generation Estimate Worksheet				
Step 1: Vehicle Trips				
ITE Land use Code				
Development Size				
ITE trip generation estimate formula/rate* AM		Total AM Vehicle Trips		
ITE Trip generation estimate formula/rate* PM		Total PM Vehicle Trips		
Step 2: Policy Area Conversion				
Policy Area # & Name		Trip Adjustment Factor	_____%	
Applied Policy Area Adjusted Value AM				
Applied Policy Area Adjusted Value PM				
Step 3: Mode Split			AM	PM
Auto Driver	_____%	Results		
Auto Passenger	_____%	Results		
Transit	_____%	Results		
Walking	_____%	Results		
Bicycling	_____%	Results		

Complete one of these tables for EACH use included in the application. Enter results into "Transportation Impacts Analysis" section of the form.

See Exhibit 3


1 SHADY ELM ST
2 SHADY ELM MEWS
3 GRACELAND ST
4 CASE MEWS
5 ATHLETIC WY
6 WINNERS DR
7 ATHENS PL
1 FOREST LANDING CT
2 CHISHOLM LANDING WY
3 CHISHOLM LANDING CT
4 BOUNTY COVE CT
5 PRAIRIE LANDING CT
6 DEVEREAUX TER
SITE
MUDDY BRANCH RD
MISSION HILLS
WARTHER
DECOVERLY
DECOVERLY ADVENTURE
GREAT SENECA HWY
DARNESTOWN RD
TRAVILAH RD
MEETINGHOUSE RD
BELWARD CAMPUS DR
JOHNS HOPKINS DR
PHYSICIANS LN
BLACKWELL RD
BROSCHART RD
CENTER DR
MONTGOMERY COUNTY POLICE ACADEMY
REGIONAL INSTITUTE FOR CHILDREN
ALFRED D NOYES CHILDRENS CENTER
KEY WEST RESEARCH CENTER
SHADY GROVE ADVENTIST HOSP
MEDICAL CENTER DR
MEDICAL CENTER WY
OMEGA
MUDDY BRANCH
GABLE RIDGE TER
FOXBOROUGH CIR
STERLING TER
VANDERBILT CIR
DIAMONDBACK DR
REPRISE TER
DIAMOND COVE TER
GABLE RIDGE CT
HILLSIDE LAKE TER
AMBER TREE CT
ANTIOCH RD
BELINDER RD
POLK SQUARE CT
HUNTING LN
SMITHY CT
PRAIRIE LANDING TER
PRAIRIE LANDING WY
POMMEL
YEARLING TER
YEARLING CT
NOLAN DR
SNAPDRAGON CIR
SNAPDRAGON PL
SYLVAN GLADE DR
QUIETWOOD TER
WHITE TREE PL
VIEW DR
FLORAL PARK
GUDELSKY DR
GUDELSKY WY
SHADY GROVE RD
HUNTING HILL ESTATES
BANCROFT RD
WILLOWS OF POTOMAC
LOBLOLLY TER
WILLOW TREE CT
LITTLE
SILVER BELL TER
CALABASH LN
PINEY BRANCH
STUDY INTERSECTION
EXHIBIT 1
SITE LOCATION MAP
(GRID SPACING: 1/2 MILE)

PRELIMINARY NOT FOR CONSTRUCTION

L.56100 F.00050
±131.171 SF

TAX ID# 03315067
FS41
HUMAN GENOME SCIENCES INC
L.57171 F.00222
±434,591 SF

TAX ID# 03307681
FS41 N428
M&M BELWARD SOUTH LLC
L.57545 F.0000
±250,178 SF

JOHNS HOPKINS DRIVE

THE JOHNS HOPKINS BELWARD RESEARCH CAMPUS

KEY WEST AVENUE

(MD RTE 28)

RETAIL

LOT 1

PAR. B

LOT 2

APT. BLDG. 1

APT. BLDG. 2

APT. BLDG. 3

APT. BLDG. 4

PARCEL A

N786
HSRE-CAPMED SHADY GROVE
MED VILLAGE
L.48028 F.0413
±199,500 S.F.

PARCEL D

BLACKWELL ROAD

PAR. C

PAR. B

PAR. C

STREET C WEST

PARCEL A

MEDICAL CENTER DRIVE

PAR. D

STREET A

STREET B

PAR. E

PAR. F

PAR. C

WOOTTON MANOR CT

DARNESTOWN AT TRAVILAH

WOOTTON CREST WAY

TAX ID #03691613
FFTY LLC
FS41
3.08 AC

PARCEL A

WOOTTON CROSSING COURT

PARCEL B

TAX ID #00775896
P950
LOLATCHY SCHAIN
L.16371 F.00300
±18,720 SF

P50

TRAVILAH HEIGHTS

TAX ID #03671432
FR43 N059
RLL & C CORP
±61,621 SF

PARCEL A

PARCEL B

PAR. C

PAR. D

STREET C EAST

PARCEL A

PAR. B

PAR. C

PARCEL G

PARCEL B

PAR. F

PAR. D

STREET A

PARCEL C

PAR. A

PARCEL G

PAR. A

PAR. C

PAR. B

PAR. D

PAR. A

PAR. B

PAR. C

PAR. D

PAR. E

PAR. F

PAR. G

TRIP GENERATION FOR PSTA SITE

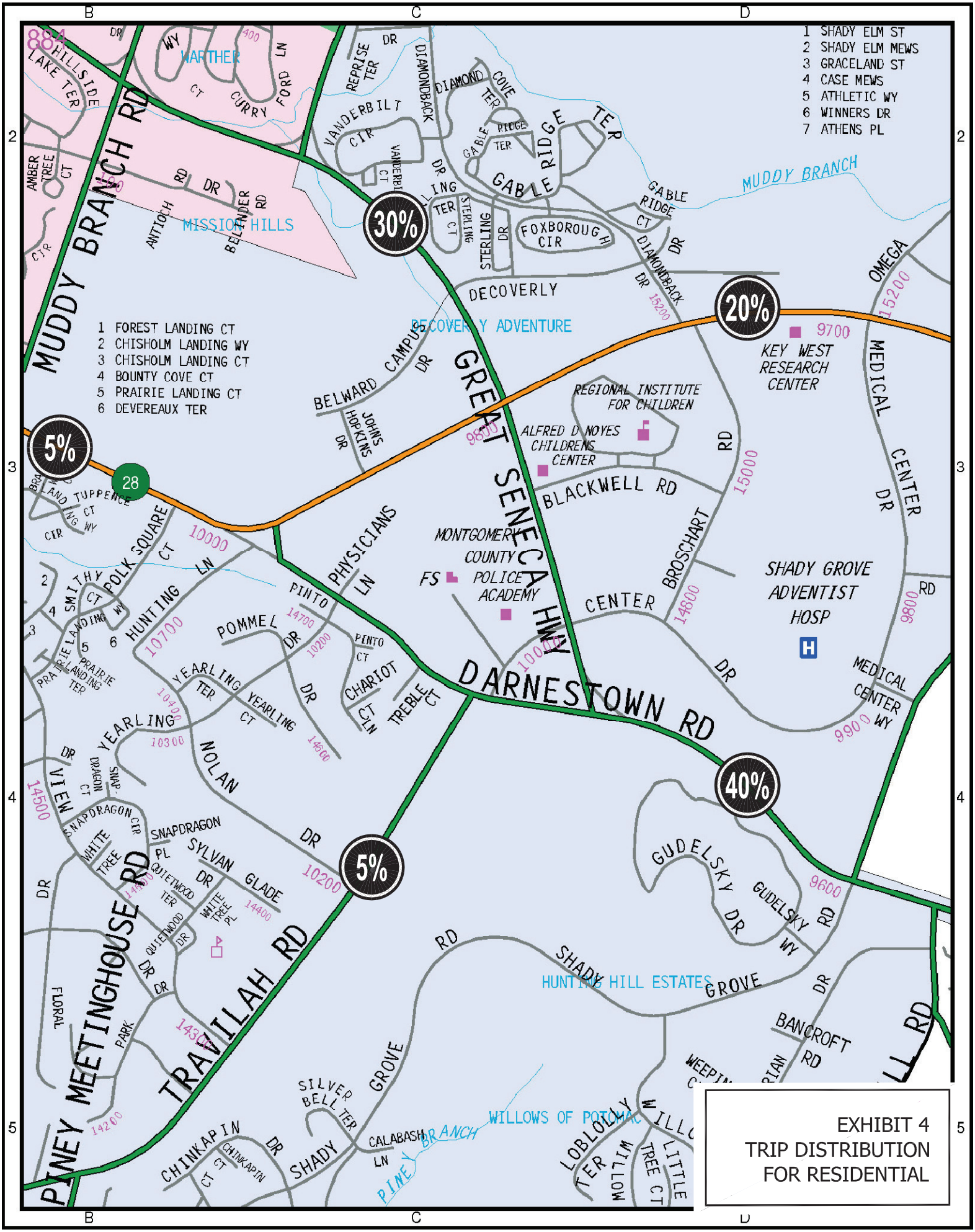
Trip Rates / Formulae	In/Out %
Multifamily Housing, Low-Rise (ITE-220, Units)	
Ln(AM Peak Hour Trips) = 0.95 x Ln(Units) - 0.51	23/77
Ln(PM Peak Hour Trips) = 0.89 x Ln(Units) - 0.02	63/37
Multifamily Housing, Mid-Rise General Urban/Suburban (ITE-221, Units)	
Ln(AM Peak Hour Trips) = 0.98 x Ln(Units) - 0.98	26/74
Ln(PM Peak Hour Trips) = 0.96 x Ln(Units) - 0.63	61/39

		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing, Low-Rise (ITE-220, Units)							
346 units	36	119	155	112	66	178	
Adjusted Trips	32	106	138	100	59	159	
Total Person Trips	277	**A quantitative auto analysis required**					
Transit Trips	16	A quantitative transit analysis not required					
Non-Motorized + Transit Trips	43	A quantitative pedestrian analysis not required					
Non-Motorized Trips	27	A quantitative bicycle analysis not required					
Multifamily Housing, Mid-Rise General Urban/Suburban (ITE-221, Units)							
309 units	27	76	103	80	51	131	
Adjusted Trips	24	68	92	71	45	116	
Total Person Trips	202	**A quantitative auto analysis required**					
Transit Trips	12	A quantitative transit analysis not required					
Non-Motorized + Transit Trips	32	A quantitative pedestrian analysis not required					
Non-Motorized Trips	20	A quantitative bicycle analysis not required					
Residential internal trips	1	1	2	55	19	74	
Shopping Center							
2,516 sq.ft.	Small retail uses are incorporated as ancillary use within the development. No new trips will be generated.						
Total Trips							
Adjusted Trips	56	174	230	171	104	275	
Total Person Trips	479	**A quantitative auto analysis required**					
Transit Trips	28	A quantitative transit analysis not required					
Non-Motorized + Transit Trips	75	**A quantitative pedestrian analysis required**					
Non-Motorized Trips	47	A quantitative bicycle analysis not required					

NOTE: Trips from ITE Trip Generation 10th Edition

EXHIBIT 3
TRIP GENERATION
FOR PSTA SITE

Qt, 190201\INITIAL\Trips 19Oct.xlsx-AmPmSat, F10/24/19


1 SHADY ELM ST
2 SHADY ELM MEWS
3 GRACELAND ST
4 CASE MEWS
5 ATHLETIC WY
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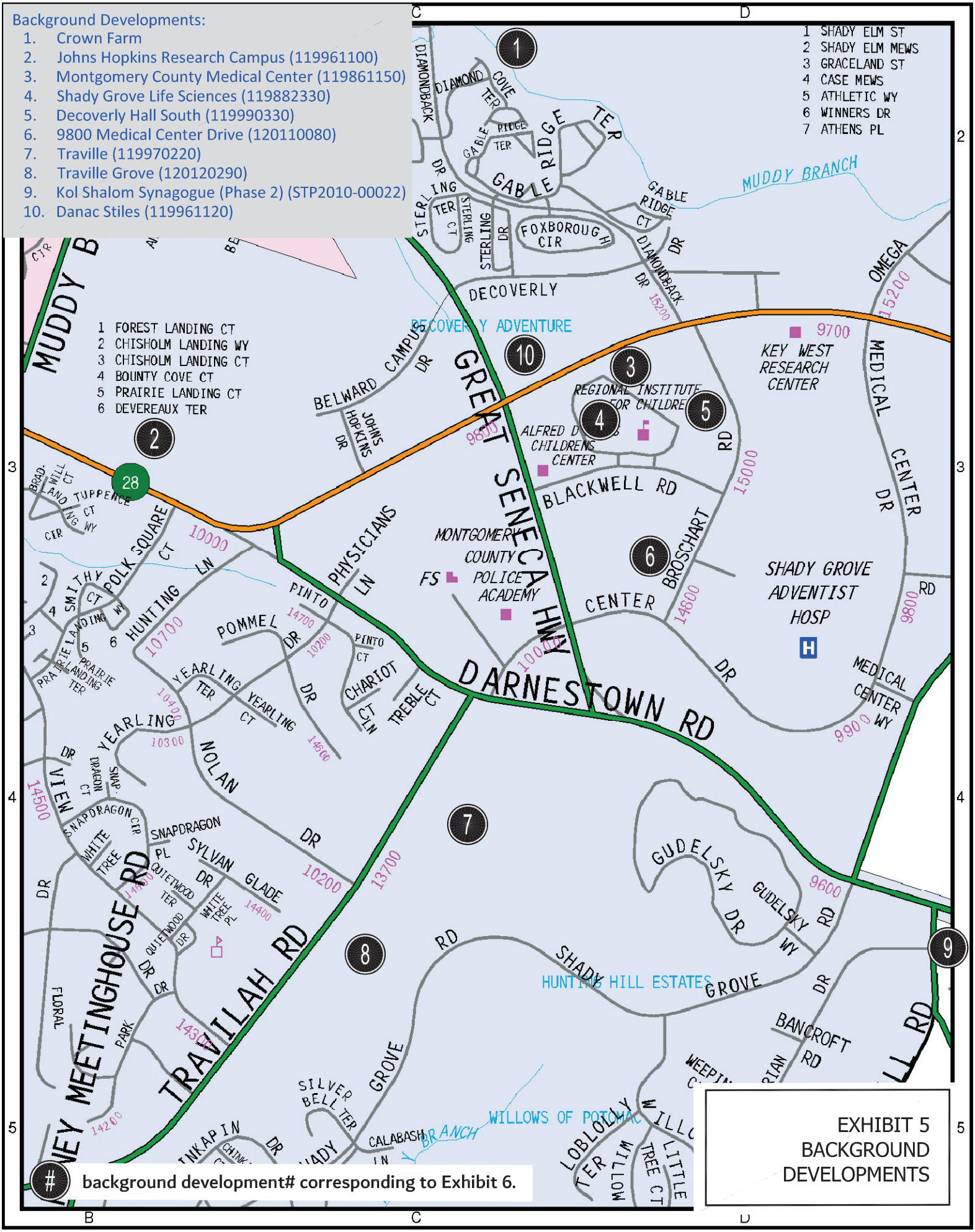
MEDICAL CENTER DR
OMEGA
BLACKWELL RD
BROSCHART
MONTGOMERY COUNTY POLICE ACADEMY
FS
PHYSICIANS CENTER
SHADY GROVE ADVENTIST HOSP
POLK SQUARE CT
HUNTING LN
SMITHY CT
PRAIRIE LANDING TER
PINTO
POMMEL DR
PINTO CT
CHARIOT CT
TREBLE CT
YEARLING TER
YEARLING CT
YEARLING DR
NOLAN DR
VIEW DR
DRAGON CT
SNAPDRAGON CTR
SNAPDRAGON PL
WHITE TREE PL
QUIETWOOD TER
QUIETWOOD DR
SYLVAN GLADE DR
FLORAL PARK DR
SILVER BELL TER
CHINKAPIN DR
CHINKAPIN CT
CALABASH LN
SHADY GROVE RD
GUDELSKY DR
GUDELSKY WY
GUDELSKY RD
BANCROFT RD
HUNTING HILL ESTATES
WILLOWS OF POTOMAC
PINEY BRANCH
LOBLOLLY WILLOW TER
LITTLE TREE CT
MEDICAL CENTER WY
30%
20%
5%
40%
5%
28
EXHIBIT 4
TRIP DISTRIBUTION
FOR RESIDENTIAL

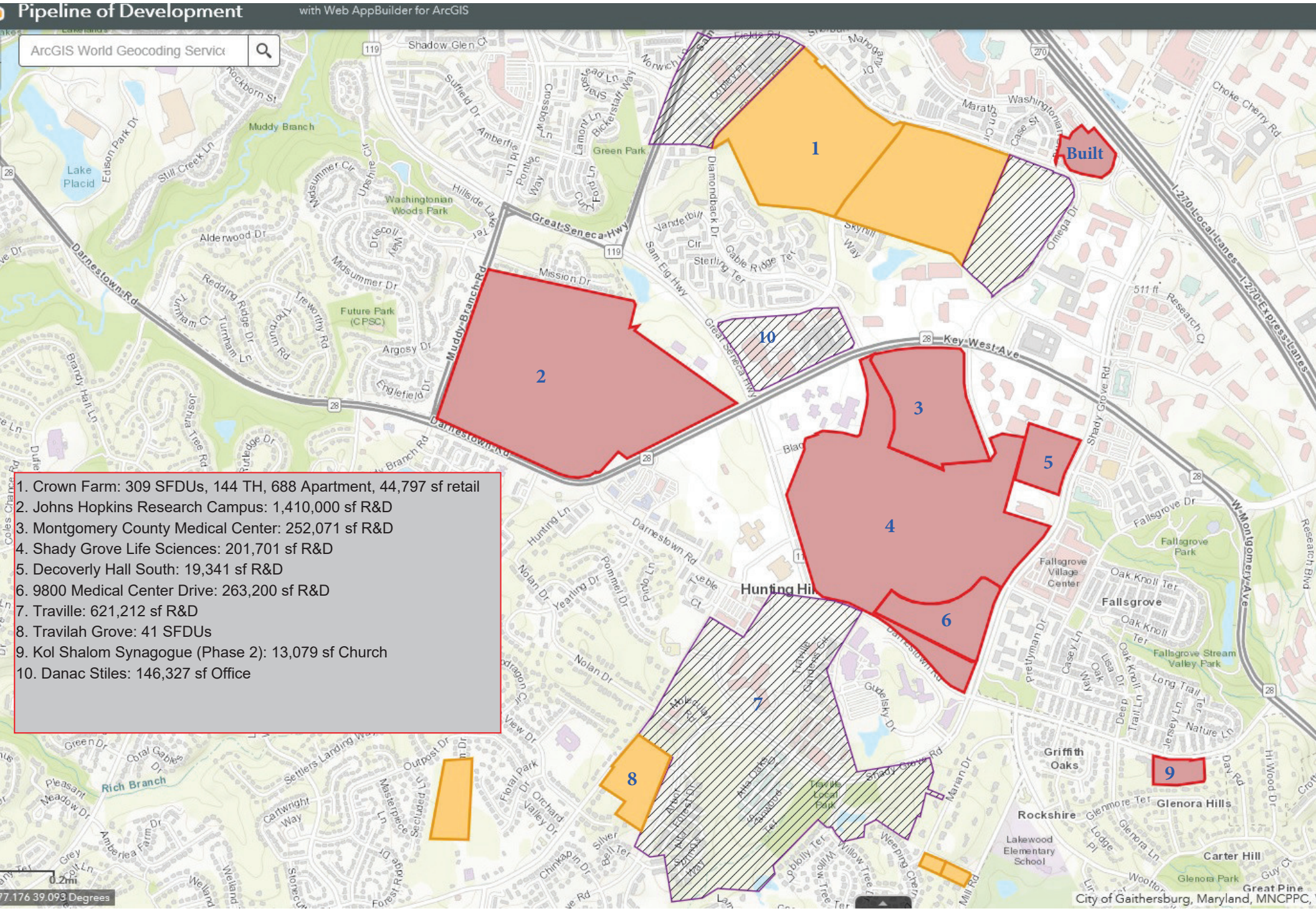
Background Developments:

1. Crown Farm
2. Johns Hopkins Research Campus (119961100)
3. Montgomery County Medical Center (119861150)
4. Shady Grove Life Sciences (119882330)
5. Decoverly Hall South (119990330)
6. 9800 Medical Center Drive (120110080)
7. Traville (119970220)
8. Traville Grove (120120290)
9. Kol Shalom Synagogue (Phase 2) (STP2010-00022)
10. Danac Stiles (119961120)



background development# corresponding to Exhibit 6.

EXHIBIT 5
BACKGROUND
DEVELOPMENTS


Pipeline of Development
with Web AppBuilder for ArcGIS
ArcGIS World Geocoding Servic
Built
1
2
3
4
5
6
7
8
9
10
1. Crown Farm: 309 SFDUs, 144 TH, 688 Apartment, 44,797 sf retail
2. Johns Hopkins Research Campus: 1,410,000 sf R&D
3. Montgomery County Medical Center: 252,071 sf R&D
4. Shady Grove Life Sciences: 201,701 sf R&D
5. Decoverly Hall South: 19,341 sf R&D
6. 9800 Medical Center Drive: 263,200 sf R&D
7. Traville: 621,212 sf R&D
8. Travilah Grove: 41 SFDUs
9. Kol Shalom Synagogue (Phase 2): 13,079 sf Church
10. Danac Stiles: 146,327 sf Office
Great Seneca Hwy
Darnestown Rd
Key West Ave
Muddy Branch Rd
Shady Grove Rd
I-270 Local Lanes
I-270 Express Lanes
Hunting Hill
Fallsgrove
Griffith Oaks
Glenora Hills
Rockshire
Carter Hill
Rich Branch
Muddy Branch
Green Park
Future Park (CPSC)
Lake Placid
Washingtonian Woods Park
Fallsgrove Village Center
Fallsgrove Park
Fallsgrove Stream Valley Park
Traville Local Park
Lakewood Elementary School
0.2mi
77.176 39.093 Degrees
City of Gaithersburg, Maryland, MNCPPC,

Montgomery County Development Pipeline

September 2019 Pipeline

Submittal Date	PB Approval Date	APF Expire Date		Master Plan	Project	Approved Dwelling Units	Unbuilt Dwelling Units	Unbuilt Single-Family Dwellings	Unbuilt Multi-Family Dwellings	Approved Gross Floor Area	Unbuilt Gross Floor Area	Unbuilt Office Jobs	Unbuilt Office GFA	Unbuilt Retail Jobs	Unbuilt Retail GFA	Unbuilt Industrial Jobs	Unbuilt Industrial GFA	Unbuilt Other Jobs	Unbuilt Other GFA
-	-	-	Crown	Neighborhood 1	Mixed	1,030	243	0	243	300,000	33,522	0	0	84	33,522	0	0	0	0
-	-	-	Crown	Neighborhood 2	Residential	346	24	24	0	0	0	0	0	0	0	0	0	0	0
-	-	-	Crown	Neighborhood 3	Residential	429	429	285	144	8,725	0	0	0	0	0	0	0	0	0
-	-	-	Crown	Neighborhood 5	Mixed	445	445	0	445	11,275	11,275	0	0	29	11,275	0	0	0	0
06/11/96	07/21/11	04/06/22	119961100	Johns Hopkins Research Campus	Non-Residential	0	0	0	0	1,800,000	1,410,000	4,029	1,410,000	0	0	0	0	0	0
04/21/86	11/10/11	03/25/23	119861150	Montgomery County Medical Center	Non-Residential	0	0	0	0	1,063,707	252,071	1,004	252,071	0	0	0	0	0	0
09/13/88	09/13/88	07/25/19	119882330	Shady Grove Life Sciences	Non-Residential	0	0	0	0	1,671,454	201,701	576	201,701	0	0	0	0	0	0
10/19/98	05/14/15	06/19/24	119990330	Decoverly Hall South	Non-Residential	0	0	0	0	256,076	19,341	77	19,341	0	0	0	0	0	0
12/22/10	10/06/11	02/23/23	120110080	9800 Medical Center Drive	Non-Residential	0	0	0	0	544,579	263,200	727	263,200	0	0	0	0	0	0
09/12/96	09/11/97	10/12/21	119970220	Traville	Mixed	750	0	0	0	1,322,500	621,212	1,775	621,212	0	0	0	0	0	0
05/08/12	07/16/15	01/19/24	120120290	Travilah Grove	Residential	131	41	41	0	0	0	0	0	0	0	0	0	0	0
-	-	-	STP2010-00022	Kol Shalom Synogogue (Phase 2)	Non-Residential	0	0	0	0	30,379	13,079	0	0	0	0	0	0	5	13,079
			119961120	Danac Stiles	Mixed	475	0	0	0	514,008	146,327	586	146,327	0	0	0	0	0	0

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue
and: Darnestown Road
Location: Montgomery County, Maryland

Date: March 05, 2019
Weather: Cold, Clear
Entered by: BGJ

Tuesday
Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Driveway Access					TRAFFIC FROM SOUTH on: Darnestown Road					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	3	0	9	0	12	0	34	1	0	35	106	234	0	0	340	387
6:45 - 7:00	0	0	0	0	0	6	0	18	0	24	0	42	3	0	45	156	251	0	0	407	476
7:00 - 7:15	0	0	0	0	0	8	0	20	0	28	0	45	4	0	49	213	321	0	1	535	612
7:15 - 7:30	0	0	0	0	0	9	0	25	0	34	0	52	6	1	59	218	355	0	0	573	666
7:30 - 7:45	0	0	0	0	0	4	0	32	0	36	0	62	7	1	70	176	353	0	0	529	635
7:45 - 8:00	0	0	0	0	0	6	0	42	0	48	0	58	13	1	72	206	406	1	0	613	733
8:00 - 8:15	0	0	1	0	1	8	0	43	0	51	0	73	15	1	89	192	387	0	0	579	720
8:15 - 8:30	0	0	0	0	0	7	0	42	0	49	0	68	11	1	80	203	406	0	0	609	738
8:30 - 8:45	0	0	0	0	0	9	0	37	0	46	0	88	12	2	102	243	424	0	1	668	816
8:45 - 9:00	0	0	0	0	0	10	0	57	0	67	0	67	12	1	80	220	408	0	0	628	775
9:00 - 9:15	0	0	0	0	0	16	0	61	0	77	0	68	12	1	81	194	330	0	0	524	682
9:15 - 9:30	0	0	0	0	0	8	0	54	0	62	0	70	12	1	83	175	287	0	0	462	607
3 Hr Totals	0	0	1	0	1	94	0	440	0	534	0	727	108	10	845	2302	4162	1	2	6467	7847
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	26	0	72	0	98	0	173	14	1	188	693	1161	0	1	1855	2141
6:45 - 7:45	0	0	0	0	0	27	0	95	0	122	0	201	20	2	223	763	1280	0	1	2044	2389
7:00 - 8:00	0	0	0	0	0	27	0	119	0	146	0	217	30	3	250	813	1435	1	1	2250	2646
7:15 - 8:15	0	0	1	0	1	27	0	142	0	169	0	245	41	4	290	792	1501	1	0	2294	2754
7:30 - 8:30	0	0	1	0	1	25	0	159	0	184	0	261	46	4	311	777	1552	1	0	2330	2826
7:45 - 8:45	0	0	1	0	1	30	0	164	0	194	0	287	51	5	343	844	1623	1	1	2469	3007
8:00 - 9:00	0	0	1	0	1	34	0	179	0	213	0	296	50	5	351	858	1625	0	1	2484	3049
8:15 - 9:15	0	0	0	0	0	42	0	197	0	239	0	291	47	5	343	860	1568	0	1	2429	3011
8:30 - 9:30	0	0	0	0	0	43	0	209	0	252	0	293	48	5	346	832	1449	0	1	2282	2880
PEAK HOUR																					
8:00 - 9:00	0	0	1	0	1	34	0	179	0	213	0	296	50	5	351	858	1625	0	1	2484	3049
PM																					
4:00 - 4:15	0	0	0	0	0	14	0	132	0	146	0	295	13	1	309	83	117	0	0	200	655
4:15 - 4:30	0	0	0	0	0	3	0	130	0	133	0	290	20	1	311	77	106	0	0	183	627
4:30 - 4:45	1	0	0	0	1	3	0	169	0	172	0	358	22	0	380	76	127	0	0	203	756
4:45 - 5:00	0	0	0	0	0	8	0	173	0	181	0	356	15	2	373	88	102	0	0	190	744
5:00 - 5:15	0	0	0	0	0	10	0	197	0	207	0	410	30	1	441	89	111	0	0	200	848
5:15 - 5:30	0	0	0	0	0	12	0	161	0	173	0	472	30	1	503	80	100	0	0	180	856
5:30 - 5:45	0	0	0	0	0	14	0	196	0	210	0	443	22	2	467	96	114	0	0	210	887
5:45 - 6:00	0	0	0	0	0	11	0	196	0	207	0	412	32	2	446	109	104	0	0	213	866
6:00 - 6:15	0	0	0	0	0	11	0	214	0	225	0	312	41	1	354	123	107	0	1	231	810
6:15 - 6:30	0	0	0	0	0	12	0	181	0	193	0	288	21	0	309	92	105	0	1	198	700
6:30 - 6:45	0	0	0	0	0	16	0	142	0	158	0	293	26	1	320	97	98	0	0	195	673
6:45 - 7:00	0	0	0	0	0	4	0	116	0	120	0	265	18	0	283	75	96	0	0	171	574
3 Hr Totals	1	0	0	0	1	118	0	2007	0	2125	0	4194	290	12	4496	1085	1287	0	2	2374	8996
1 Hr Totals																					
4:00 - 5:00	1	0	0	0	1	28	0	604	0	632	0	1299	70	4	1373	324	452	0	0	776	2782
4:15 - 5:15	1	0	0	0	1	24	0	669	0	693	0	1414	87	4	1505	330	446	0	0	776	2975
4:30 - 5:30	1	0	0	0	1	33	0	700	0	733	0	1596	97	4	1697	333	440	0	0	773	3204
4:45 - 5:45	0	0	0	0	0	44	0	727	0	771	0	1681	97	6	1784	353	427	0	0	780	3335
5:00 - 6:00	0	0	0	0	0	47	0	750	0	797	0	1737	114	6	1857	374	429	0	0	803	3457
5:15 - 6:15	0	0	0	0	0	48	0	767	0	815	0	1639	125	6	1770	408	425	0	1	834	3419
5:30 - 6:30	0	0	0	0	0	48	0	787	0	835	0	1455	116	5	1576	420	430	0	2	852	3263
5:45 - 6:45	0	0	0	0	0	50	0	733	0	783	0	1305	120	4	1429	421	414	0	2	837	3049
6:00 - 7:00	0	0	0	0	0	43	0	653	0	696	0	1158	106	2	1266	387	406	0	2	795	2757
PEAK HOUR																					
5:00 - 6:00	0	0	0	0	0	47	0	750	0	797	0	1737	114	6	1857	374	429	0	0	803	3457

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Darnestown Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	NORTH LEG Driveway Access		SOUTH LEG Darnestown Road	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	1	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	0	1	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	2	0
5:00 - 5:15	0	0	1	0
5:15 - 5:30	0	0	3	1
5:30 - 5:45	0	0	2	0
5:45 - 6:00	0	0	1	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	1	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	10	1

	EAST LEG Key West Avenue		WEST LEG Key West Avenue	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	1	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	2	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	1	0	0
9:15 - 9:30	0	0	0	0
TOTALS	3	1	0	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	2	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	1	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	1	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	3	1	0	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

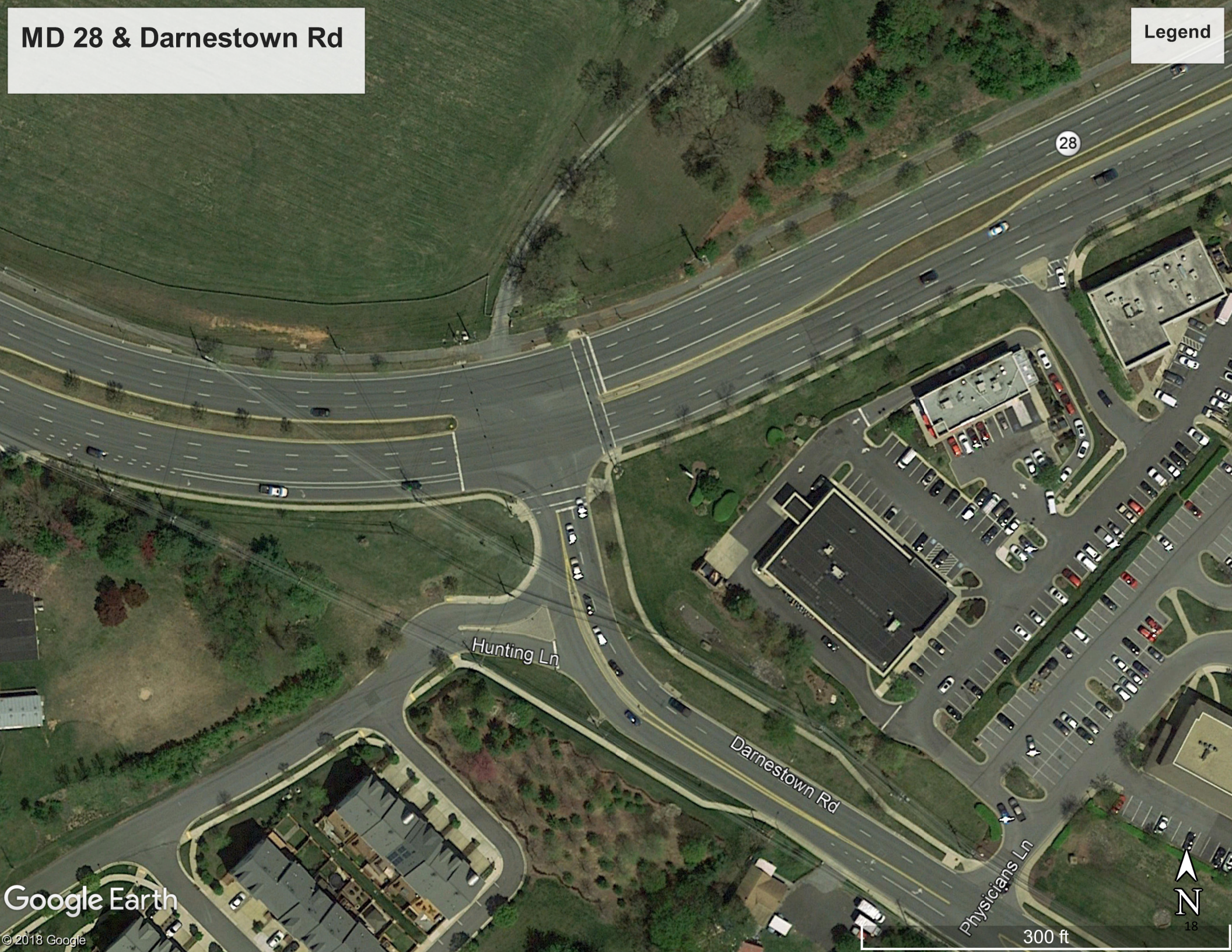
Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Darnestown Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Driveway Access					TRAFFIC FROM SOUTH on: Darnestown Road					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


MD 28 & Darnestown Rd
Legend
28
Hunting Ln
Darnestown Rd
Physicians Ln
N
300 ft
Google Earth
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TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | **Date: March 05, 2019** | **Tuesday**

and: Johns Hopkins Drive | **Weather: Cold, Clear**

Location: Montgomery County, Maryland | **Entered by: BGJ** | **Star Rating: 4**

TIME	TRAFFIC FROM NORTH on: Johns Hopkins Drive					TRAFFIC FROM SOUTH on: Johns Hopkins Drive					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	2	0	2	10	0	1	0	11	15	29	10	1	55	4	223	4	1	232	300
6:45 - 7:00	0	0	1	0	1	9	0	0	0	9	34	42	16	0	92	3	241	9	2	255	357
7:00 - 7:15	0	0	2	0	2	8	0	0	0	8	50	45	14	0	109	0	284	7	1	292	411
7:15 - 7:30	0	0	2	0	2	10	2	0	0	12	23	56	19	0	98	0	341	10	1	352	464
7:30 - 7:45	0	0	2	0	2	11	0	0	0	11	42	71	17	0	130	4	362	7	0	373	516
7:45 - 8:00	0	0	3	0	3	14	0	0	0	14	52	69	29	1	151	7	387	19	2	415	583
8:00 - 8:15	0	1	3	0	4	8	1	0	0	9	59	88	25	0	172	7	360	19	2	388	573
8:15 - 8:30	0	0	0	0	0	10	0	1	0	11	50	76	32	1	159	2	419	13	0	434	604
8:30 - 8:45	2	0	1	0	3	12	0	1	0	13	58	99	24	0	181	6	389	25	0	420	617
8:45 - 9:00	4	1	7	0	12	20	0	2	0	22	59	70	21	0	150	6	389	14	1	410	594
9:00 - 9:15	3	1	1	0	5	14	0	1	0	15	38	73	25	1	137	4	308	15	1	328	485
9:15 - 9:30	6	0	0	0	6	16	0	1	0	17	36	76	30	0	142	4	287	5	0	296	461
3 Hr Totals	15	3	24	0	42	142	3	7	0	152	516	794	262	4	1576	47	3990	147	11	4195	5965
1 Hr Totals																					
6:30 - 7:30	0	0	7	0	7	37	2	1	0	40	122	172	59	1	354	7	1089	30	5	1131	1532
6:45 - 7:45	0	0	7	0	7	38	2	0	0	40	149	214	66	0	429	7	1228	33	4	1272	1748
7:00 - 8:00	0	0	9	0	9	43	2	0	0	45	167	241	79	1	488	11	1374	43	4	1432	1974
7:15 - 8:15	0	1	10	0	11	43	3	0	0	46	176	284	90	1	551	18	1450	55	5	1528	2136
7:30 - 8:30	0	1	8	0	9	43	1	1	0	45	203	304	103	2	612	20	1528	58	4	1610	2276
7:45 - 8:45	2	1	7	0	10	44	1	2	0	47	219	332	110	2	663	22	1555	76	4	1657	2377
8:00 - 9:00	6	2	11	0	19	50	1	4	0	55	226	333	102	1	662	21	1557	71	3	1652	2388
8:15 - 9:15	9	2	9	0	20	56	0	5	0	61	205	318	102	2	627	18	1505	67	2	1592	2300
8:30 - 9:30	15	2	9	0	26	62	0	5	0	67	191	318	100	1	610	20	1373	59	2	1454	2157
PEAK HOUR																					
8:00 - 9:00	6	2	11	0	19	50	1	4	0	55	226	333	102	1	662	21	1557	71	3	1652	2388
PM																					
4:00 - 4:15	19	0	65	0	84	23	0	1	0	24	3	287	22	0	312	0	127	3	0	130	550
4:15 - 4:30	18	0	29	0	47	29	0	4	0	33	5	290	21	1	317	0	114	0	0	114	511
4:30 - 4:45	18	2	48	0	68	23	0	3	0	26	3	352	20	0	375	1	121	0	1	123	592
4:45 - 5:00	22	1	40	0	63	23	0	0	0	23	11	350	22	0	383	1	110	1	2	114	583
5:00 - 5:15	32	0	51	0	83	34	0	1	0	35	4	407	24	2	437	0	127	0	0	127	682
5:15 - 5:30	28	0	32	0	60	29	1	2	0	32	3	455	9	0	467	0	118	1	0	119	678
5:30 - 5:45	22	1	24	0	47	18	0	0	0	18	6	424	16	0	446	0	125	1	2	128	639
5:45 - 6:00	17	2	40	0	59	13	0	1	0	14	7	430	18	0	455	0	120	2	1	123	651
6:00 - 6:15	20	1	32	0	53	20	0	2	0	22	8	330	23	0	361	0	116	1	0	117	553
6:15 - 6:30	12	0	18	0	30	12	0	3	0	15	1	291	16	0	308	1	114	0	1	116	469
6:30 - 6:45	8	0	13	0	21	8	0	0	0	8	3	306	21	0	330	2	105	1	2	110	469
6:45 - 7:00	5	0	18	0	23	13	1	1	0	15	3	270	24	0	297	0	105	2	4	111	446
3 Hr Totals	221	7	410	0	638	245	2	18	0	265	57	4192	236	3	4488	5	1402	12	13	1432	6823
1 Hr Totals																					
4:00 - 5:00	77	3	182	0	262	98	0	8	0	106	22	1279	85	1	1387	2	472	4	3	481	2236
4:15 - 5:15	90	3	168	0	261	109	0	8	0	117	23	1399	87	3	1512	2	472	1	3	478	2368
4:30 - 5:30	100	3	171	0	274	109	1	6	0	116	21	1564	75	2	1662	2	476	2	3	483	2535
4:45 - 5:45	104	2	147	0	253	104	1	3	0	108	24	1636	71	2	1733	1	480	3	4	488	2582
5:00 - 6:00	99	3	147	0	249	94	1	4	0	99	20	1716	67	2	1805	0	490	4	3	497	2650
5:15 - 6:15	87	4	128	0	219	80	1	5	0	86	24	1639	66	0	1729	0	479	5	3	487	2521
5:30 - 6:30	71	4	114	0	189	63	0	6	0	69	22	1475	73	0	1570	1	475	4	4	484	2312
5:45 - 6:45	57	3	103	0	163	53	0	6	0	59	19	1357	78	0	1454	3	455	4	4	466	2142
6:00 - 7:00	45	1	81	0	127	53	1	6	0	60	15	1197	84	0	1296	3	440	4	7	454	1937
PEAK HOUR																					
5:00 - 6:00	99	3	147	0	249	94	1	4	0	99	20	1716	67	2	1805	0	490	4	3	497	2650

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Intersection of: Key West Avenue | **Counted by: VCU** | **Tuesday**

and: Johns Hopkins Drive | **Date: March 05, 2019**

Location: Montgomery County, Maryland | **Weather: Cold, Clear** | **Entered by: BGJ** | **Star Rating: 4**

TIME	NORTH LEG Johns Hopkins Drive		SOUTH LEG Johns Hopkins Drive	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	2	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	1	0	0
7:45 - 8:00	0	0	1	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	1	0	0	0
8:30 - 8:45	0	0	1	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	3	1	2	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	1
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	1
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	0	2

	EAST LEG Key West Avenue		WEST LEG Key West Avenue	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	1	0
7:45 - 8:00	0	0	1	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	0	2	0
PM				
4:00 - 4:15	0	0	3	0
4:15 - 4:30	0	0	1	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	4	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Johns Hopkins Drive | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Johns Hopkins Drive					TRAFFIC FROM SOUTH on: Johns Hopkins Drive					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
PEAK HOUR																					
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


MD 28 & Johns Hopkins Dr
Legend
Johns Hopkins Dr
28
Google Earth
© 2018 Google
300 ft
N

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Decoverly Drive | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Decoverly Drive					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	253	7	2	262	1	61	0	0	62	6	0	0	0	6	0	0	0	0	0	330
6:45 - 7:00	0	369	16	5	390	2	75	0	0	77	9	0	2	0	11	0	0	0	0	0	478
7:00 - 7:15	0	424	13	2	439	1	85	0	0	86	9	0	1	0	10	0	0	0	0	0	535
7:15 - 7:30	0	482	33	5	520	4	141	0	0	145	16	0	0	0	16	0	0	0	0	0	681
7:30 - 7:45	0	485	32	6	523	0	151	0	1	152	12	0	0	0	12	0	0	0	0	0	687
7:45 - 8:00	0	536	45	6	587	1	195	0	0	196	10	0	1	0	11	0	0	0	0	0	794
8:00 - 8:15	0	531	47	5	583	4	166	0	0	170	14	0	0	0	14	0	0	0	0	0	767
8:15 - 8:30	0	537	48	0	585	3	161	0	1	165	24	0	4	0	28	0	0	0	0	0	778
8:30 - 8:45	0	546	62	3	611	0	169	0	0	169	16	0	3	0	19	0	0	0	0	0	799
8:45 - 9:00	0	538	56	2	596	2	197	0	1	200	20	0	1	0	21	0	0	0	0	0	817
9:00 - 9:15	0	490	41	8	539	3	183	0	1	187	9	0	2	0	11	0	0	0	0	0	737
9:15 - 9:30	0	397	30	2	429	5	193	0	0	198	14	0	3	0	17	0	0	0	0	0	644
3 Hr Totals	0	5588	430	46	6064	26	1777	0	4	1807	159	0	17	0	176	0	0	0	0	0	8047
1 Hr Totals																					
6:30 - 7:30	0	1528	69	14	1611	8	362	0	0	370	40	0	3	0	43	0	0	0	0	0	2024
6:45 - 7:45	0	1760	94	18	1872	7	452	0	1	460	46	0	3	0	49	0	0	0	0	0	2381
7:00 - 8:00	0	1927	123	19	2069	6	572	0	1	579	47	0	2	0	49	0	0	0	0	0	2697
7:15 - 8:15	0	2034	157	22	2213	9	653	0	1	663	52	0	1	0	53	0	0	0	0	0	2929
7:30 - 8:30	0	2089	172	17	2278	8	673	0	2	683	60	0	5	0	65	0	0	0	0	0	3026
7:45 - 8:45	0	2150	202	14	2366	8	691	0	1	700	64	0	8	0	72	0	0	0	0	0	3138
8:00 - 9:00	0	2152	213	10	2375	9	693	0	2	704	74	0	8	0	82	0	0	0	0	0	3161
8:15 - 9:15	0	2111	207	13	2331	8	710	0	3	721	69	0	10	0	79	0	0	0	0	0	3131
8:30 - 9:30	0	1971	189	15	2175	10	742	0	2	754	59	0	9	0	68	0	0	0	0	0	2997
PEAK HOUR																					
8:00 - 9:00	0	2152	213	10	2375	9	693	0	2	704	74	0	8	0	82	0	0	0	0	0	3161
PM																					
4:00 - 4:15	0	130	12	3	145	4	420	0	0	424	19	0	0	0	19	0	0	0	0	0	588
4:15 - 4:30	0	147	11	1	159	4	454	0	1	459	19	0	0	0	19	0	0	0	0	0	637
4:30 - 4:45	0	172	12	1	185	6	543	0	0	549	22	0	1	0	23	0	0	0	0	0	757
4:45 - 5:00	0	167	7	4	178	3	522	0	0	525	28	0	0	0	28	0	0	0	0	0	731
5:00 - 5:15	0	160	8	2	170	6	566	0	0	572	22	0	4	0	26	0	0	0	0	0	768
5:15 - 5:30	0	191	16	1	208	4	570	0	0	574	18	0	4	0	22	0	0	0	0	0	804
5:30 - 5:45	0	185	9	0	194	9	531	0	9	549	19	0	2	0	21	0	0	0	0	0	764
5:45 - 6:00	0	159	12	2	173	5	462	0	0	467	29	0	3	0	32	0	0	0	0	0	672
6:00 - 6:15	0	171	17	0	188	4	453	0	0	457	26	0	3	0	29	0	0	0	0	0	674
6:15 - 6:30	0	162	17	2	181	8	444	0	0	452	22	0	3	0	25	0	0	0	0	0	658
6:30 - 6:45	0	124	11	4	139	5	385	0	0	390	26	0	3	0	29	0	0	0	0	0	558
6:45 - 7:00	0	107	19	6	132	6	308	0	0	314	22	0	6	0	28	0	0	0	0	0	474
3 Hr Totals	0	1875	151	26	2052	64	5658	0	10	5732	272	0	29	0	301	0	0	0	0	0	8085
1 Hr Totals																					
4:00 - 5:00	0	616	42	9	667	17	1939	0	1	1957	88	0	1	0	89	0	0	0	0	0	2713
4:15 - 5:15	0	646	38	8	692	19	2085	0	1	2105	91	0	5	0	96	0	0	0	0	0	2893
4:30 - 5:30	0	690	43	8	741	19	2201	0	0	2220	90	0	9	0	99	0	0	0	0	0	3060
4:45 - 5:45	0	703	40	7	750	22	2189	0	9	2220	87	0	10	0	97	0	0	0	0	0	3067
5:00 - 6:00	0	695	45	5	745	24	2129	0	9	2162	88	0	13	0	101	0	0	0	0	0	3008
5:15 - 6:15	0	706	54	3	763	22	2016	0	9	2047	92	0	12	0	104	0	0	0	0	0	2914
5:30 - 6:30	0	677	55	4	736	26	1890	0	9	1925	96	0	11	0	107	0	0	0	0	0	2768
5:45 - 6:45	0	616	57	8	681	22	1744	0	0	1766	103	0	12	0	115	0	0	0	0	0	2562
6:00 - 7:00	0	564	64	12	640	23	1590	0	0	1613	96	0	15	0	111	0	0	0	0	0	2364
PEAK HOUR																					
4:45 - 5:45	0	703	40	7	750	22	2189	0	9	2220	87	0	10	0	97	0	0	0	0	0	3067

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Decoverly Drive | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	NORTH LEG Great Seneca Highway		SOUTH LEG Great Seneca Highway	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	0	0	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	0	0

	EAST LEG Decoverly Drive		WEST LEG	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	1	0		
6:45 - 7:00	0	0		
7:00 - 7:15	0	1		
7:15 - 7:30	0	0		
7:30 - 7:45	1	0		
7:45 - 8:00	0	0		
8:00 - 8:15	0	0		
8:15 - 8:30	0	0		
8:30 - 8:45	0	1		
8:45 - 9:00	0	0		
9:00 - 9:15	0	1		
9:15 - 9:30	0	0		
TOTALS	2	3	0	0
PM				
4:00 - 4:15	0	0		
4:15 - 4:30	0	0		
4:30 - 4:45	1	0		
4:45 - 5:00	0	0		
5:00 - 5:15	0	0		
5:15 - 5:30	1	1		
5:30 - 5:45	1	2		
5:45 - 6:00	0	0		
6:00 - 6:15	4	0		
6:15 - 6:30	2	1		
6:30 - 6:45	1	0		
6:45 - 7:00	1	0		
TOTALS	11	4	0	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Decoverly Drive | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Decoverly Drive					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:45 - 7:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:00 - 7:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:15 - 7:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:30 - 7:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:45 - 8:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:00 - 8:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:15 - 8:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:30 - 8:45		0	0	0	0	0	1		0	1	0		0	0	0					0	1
8:45 - 9:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
9:00 - 9:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
9:15 - 9:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
3 Hr Totals	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 - 9:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 - 9:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 - 9:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HOUR																					
8:00 - 9:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PM																					
4:00 - 4:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
4:15 - 4:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
4:30 - 4:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
4:45 - 5:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:00 - 5:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:15 - 5:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:30 - 5:45		0	0	0	0	0	1		0	1	0		0	0	0					0	1
5:45 - 6:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:00 - 6:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:15 - 6:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:30 - 6:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:45 - 7:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
3 Hr Totals	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 - 6:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 - 6:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 - 6:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
4:45 - 5:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | **Date: March 05, 2019** | **Tuesday**

and: Decoverly Drive | **Weather: Sunny/Cool**

Location: Montgomery County, Maryland | **Entered by: SN** | **Star Rating: 5**

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Decoverly Drive					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	0	97	6	5	108	2	24	0	0	26	9	0	1	0	10	0	0	0	0	0	144
6:15 - 6:30	0	161	5	8	174	1	35	0	0	36	12	0	2	0	14	0	0	0	0	0	224
6:30 - 6:45	0	253	7	2	262	1	61	0	0	62	6	0	0	0	6	0	0	0	0	0	330
6:45 - 7:00	0	369	16	5	390	2	75	0	0	77	9	0	2	0	11	0	0	0	0	0	478
7:00 - 7:15	0	424	13	2	439	1	85	0	0	86	9	0	1	0	10	0	0	0	0	0	535
7:15 - 7:30	0	482	33	5	520	4	141	0	0	145	16	0	0	0	16	0	0	0	0	0	681
7:30 - 7:45	0	485	32	6	523	0	151	0	1	152	12	0	0	0	12	0	0	0	0	0	687
7:45 - 8:00	0	536	45	6	587	1	195	0	0	196	10	0	1	0	11	0	0	0	0	0	794
8:00 - 8:15	0	531	47	5	583	4	166	0	0	170	14	0	0	0	14	0	0	0	0	0	767
8:15 - 8:30	0	537	48	0	585	3	161	0	1	165	24	0	4	0	28	0	0	0	0	0	778
8:30 - 8:45	0	546	62	3	611	0	169	0	0	169	16	0	3	0	19	0	0	0	0	0	799
8:45 - 9:00	0	538	56	2	596	2	197	0	1	200	20	0	1	0	21	0	0	0	0	0	817
9:00 - 9:15	0	490	41	8	539	3	183	0	1	187	9	0	2	0	11	0	0	0	0	0	737
9:15 - 9:30	0	397	30	2	429	5	193	0	0	198	14	0	3	0	17	0	0	0	0	0	644
9:30 - 9:45	0	314	40	11	365	3	202	0	0	205	11	0	0	0	11	0	0	0	0	0	581
9:45 - 10:00	0	245	21	10	276	1	165	0	0	166	11	0	3	0	14	0	0	0	0	0	456
10:00 - 10:15	0	167	10	13	190	4	157	0	0	161	14	0	2	0	16	0	0	0	0	0	367
10:15 - 10:30	0	147	10	9	166	3	115	0	0	118	9	0	1	0	10	0	0	0	0	0	294
10:30 - 10:45	0	183	13	10	206	3	166	0	0	169	10	0	2	0	12	0	0	0	0	0	387
10:45 - 11:00	0	128	8	6	142	5	158	0	0	163	9	0	2	0	11	0	0	0	0	0	316
11:00 - 11:15	0	141	8	8	157	2	167	0	1	170	13	0	1	0	14	0	0	0	0	0	341
11:15 - 11:30	0	112	13	6	131	2	171	0	0	173	10	0	0	0	10	0	0	0	0	0	314
11:30 - 11:45	0	134	5	6	145	1	188	0	1	190	15	0	3	0	18	0	0	0	0	0	353
11:45 - 12:00	0	114	12	3	129	6	176	0	0	182	20	0	0	0	20	0	0	0	0	0	331
12:00 - 12:15	0	139	17	6	162	4	229	0	0	233	20	0	3	0	23	0	0	0	0	0	418
12:15 - 12:30	0	147	20	3	170	0	199	0	0	199	20	0	1	0	21	0	0	0	0	0	390
12:30 - 12:45	0	147	11	6	164	5	197	0	0	202	20	0	3	0	23	0	0	0	0	0	389
12:45 - 1:00	0	181	17	8	206	4	152	0	0	156	20	0	0	0	20	0	0	0	0	0	382
1:00 - 1:15	0	164	24	7	195	1	203	0	0	204	16	0	1	0	17	0	0	0	0	0	416
1:15 - 1:30	0	160	19	6	185	2	209	0	1	212	13	0	1	0	14	0	0	0	0	0	411
1:30 - 1:45	0	163	14	4	181	2	207	0	2	211	13	0	6	0	19	0	0	0	0	0	411
1:45 - 2:00	0	151	19	9	179	2	233	0	1	236	24	0	3	0	27	0	0	0	0	0	442
2:00 - 2:15	0	136	6	7	149	3	212	0	0	215	12	0	4	0	16	0	0	0	0	0	380
2:15 - 2:30	0	128	8	7	143	2	206	0	0	208	11	0	1	0	12	0	0	0	0	0	363
2:30 - 2:45	0	130	7	7	144	0	241	0	0	241	13	0	1	0	14	0	0	0	0	0	399
2:45 - 3:00	0	156	11	7	174	1	246	0	0	247	11	0	3	0	14	0	0	0	0	0	435
3:00 - 3:15	0	123	7	3	133	3	357	0	0	360	23	0	5	0	28	0	0	0	0	0	521
3:15 - 3:30	0	131	5	4	140	5	318	0	1	324	10	0	1	0	11	0	0	0	0	0	475
3:30 - 3:45	0	151	4	7	162	2	372	0	2	376	12	0	1	0	13	0	0	0	0	0	551
3:45 - 4:00	0	169	17	4	190	3	396	0	0	399	26	0	1	0	27	0	0	0	0	0	616
4:00 - 4:15	0	130	12	3	145	4	420	0	0	424	19	0	0	0	19	0	0	0	0	0	588
4:15 - 4:30	0	147	11	1	159	4	454	0	1	459	19	0	0	0	19	0	0	0	0	0	637
4:30 - 4:45	0	172	12	1	185	6	543	0	0	549	22	0	1	0	23	0	0	0	0	0	757
4:45 - 5:00	0	167	7	4	178	3	522	0	0	525	28	0	0	0	28	0	0	0	0	0	731
5:00 - 5:15	0	160	8	2	170	6	566	0	0	572	22	0	4	0	26	0	0	0	0	0	768
5:15 - 5:30	0	191	16	1	208	4	570	0	0	574	18	0	4	0	22	0	0	0	0	0	804
5:30 - 5:45	0	185	9	0	194	9	531	0	9	549	19	0	2	0	21	0	0	0	0	0	764
5:45 - 6:00	0	159	12	2	173	5	462	0	0	467	29	0	3	0	32	0	0	0	0	0	672
6:00 - 6:15	0	171	17	0	188	4	453	0	0	457	26	0	3	0	29	0	0	0	0	0	674
6:15 - 6:30	0	162	17	2	181	8	444	0	0	452	22	0	3	0	25	0	0	0	0	0	658
6:30 - 6:45	0	124	11	4	139	5	385	0	0	390	26	0	3	0	29	0	0	0	0	0	558
6:45 - 7:00	0	107	19	6	132	6	308	0	0	314	22	0	6	0	28	0	0	0	0	0	474
13 Hr Totals	0	11782	938	262	12982	162	13136	0	23	13321	838	0	98	0	936	0	0	0	0	0	27239

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Decoverly Drive | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 5

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Decoverly Drive					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
1 Hr Totals																					
6:00 - 7:00	0	880	34	20	934	6	195	0	0	201	36	0	5	0	41	0	0	0	0	0	1176
6:15 - 7:15	0	1207	41	17	1265	5	256	0	0	261	36	0	5	0	41	0	0	0	0	0	1567
6:30 - 7:30	0	1528	69	14	1611	8	362	0	0	370	40	0	3	0	43	0	0	0	0	0	2024
6:45 - 7:45	0	1760	94	18	1872	7	452	0	1	460	46	0	3	0	49	0	0	0	0	0	2381
7:00 - 8:00	0	1927	123	19	2069	6	572	0	1	579	47	0	2	0	49	0	0	0	0	0	2697
7:15 - 8:15	0	2034	157	22	2213	9	653	0	1	663	52	0	1	0	53	0	0	0	0	0	2929
7:30 - 8:30	0	2089	172	17	2278	8	673	0	2	683	60	0	5	0	65	0	0	0	0	0	3026
7:45 - 8:45	0	2150	202	14	2366	8	691	0	1	700	64	0	8	0	72	0	0	0	0	0	3138
8:00 - 9:00	0	2152	213	10	2375	9	693	0	2	704	74	0	8	0	82	0	0	0	0	0	3161
8:15 - 9:15	0	2111	207	13	2331	8	710	0	3	721	69	0	10	0	79	0	0	0	0	0	3131
8:30 - 9:30	0	1971	189	15	2175	10	742	0	2	754	59	0	9	0	68	0	0	0	0	0	2997
8:45 - 9:45	0	1739	167	23	1929	13	775	0	2	790	54	0	6	0	60	0	0	0	0	0	2779
9:00 - 10:00	0	1446	132	31	1609	12	743	0	1	756	45	0	8	0	53	0	0	0	0	0	2418
9:15 - 10:15	0	1123	101	36	1260	13	717	0	0	730	50	0	8	0	58	0	0	0	0	0	2048
9:30 - 10:30	0	873	81	43	997	11	639	0	0	650	45	0	6	0	51	0	0	0	0	0	1698
9:45 - 10:45	0	742	54	42	838	11	603	0	0	614	44	0	8	0	52	0	0	0	0	0	1504
10:00 - 11:00	0	625	41	38	704	15	596	0	0	611	42	0	7	0	49	0	0	0	0	0	1364
10:15 - 11:15	0	599	39	33	671	13	606	0	1	620	41	0	6	0	47	0	0	0	0	0	1338
10:30 - 11:30	0	564	42	30	636	12	662	0	1	675	42	0	5	0	47	0	0	0	0	0	1358
10:45 - 11:45	0	515	34	26	575	10	684	0	2	696	47	0	6	0	53	0	0	0	0	0	1324
11:00 - 12:00	0	501	38	23	562	11	702	0	2	715	58	0	4	0	62	0	0	0	0	0	1339
11:15 - 12:15	0	499	47	21	567	13	764	0	1	778	65	0	6	0	71	0	0	0	0	0	1416
11:30 - 12:30	0	534	54	18	606	11	792	0	1	804	75	0	7	0	82	0	0	0	0	0	1492
11:45 - 12:45	0	547	60	18	625	15	801	0	0	816	80	0	7	0	87	0	0	0	0	0	1528
12:00 - 1:00	0	614	65	23	702	13	777	0	0	790	80	0	7	0	87	0	0	0	0	0	1579
12:15 - 1:15	0	639	72	24	735	10	751	0	0	761	76	0	5	0	81	0	0	0	0	0	1577
12:30 - 1:30	0	652	71	27	750	12	761	0	1	774	69	0	5	0	74	0	0	0	0	0	1598
12:45 - 1:45	0	668	74	25	767	9	771	0	3	783	62	0	8	0	70	0	0	0	0	0	1620
1:00 - 2:00	0	638	76	26	740	7	852	0	4	863	66	0	11	0	77	0	0	0	0	0	1680
1:15 - 2:15	0	610	58	26	694	9	861	0	4	874	62	0	14	0	76	0	0	0	0	0	1644
1:30 - 2:30	0	578	47	27	652	9	858	0	3	870	60	0	14	0	74	0	0	0	0	0	1596
1:45 - 2:45	0	545	40	30	615	7	892	0	1	900	60	0	9	0	69	0	0	0	0	0	1584
2:00 - 3:00	0	550	32	28	610	6	905	0	0	911	47	0	9	0	56	0	0	0	0	0	1577
2:15 - 3:15	0	537	33	24	594	6	1050	0	0	1056	58	0	10	0	68	0	0	0	0	0	1718
2:30 - 3:30	0	540	30	21	591	9	1162	0	1	1172	57	0	10	0	67	0	0	0	0	0	1830
2:45 - 3:45	0	561	27	21	609	11	1293	0	3	1307	56	0	10	0	66	0	0	0	0	0	1982
3:00 - 4:00	0	574	33	18	625	13	1443	0	3	1459	71	0	8	0	79	0	0	0	0	0	2163
3:15 - 4:15	0	581	38	18	637	14	1506	0	3	1523	67	0	3	0	70	0	0	0	0	0	2230
3:30 - 4:30	0	597	44	15	656	13	1642	0	3	1658	76	0	2	0	78	0	0	0	0	0	2392
3:45 - 4:45	0	618	52	9	679	17	1813	0	1	1831	86	0	2	0	88	0	0	0	0	0	2598
4:00 - 5:00	0	616	42	9	667	17	1939	0	1	1957	88	0	1	0	89	0	0	0	0	0	2713
4:15 - 5:15	0	646	38	8	692	19	2085	0	1	2105	91	0	5	0	96	0	0	0	0	0	2893
4:30 - 5:30	0	690	43	8	741	19	2201	0	0	2220	90	0	9	0	99	0	0	0	0	0	3060
4:45 - 5:45	0	703	40	7	750	22	2189	0	9	2220	87	0	10	0	97	0	0	0	0	0	3067
5:00 - 6:00	0	695	45	5	745	24	2129	0	9	2162	88	0	13	0	101	0	0	0	0	0	3008
5:15 - 6:15	0	706	54	3	763	22	2016	0	9	2047	92	0	12	0	104	0	0	0	0	0	2914
5:30 - 6:30	0	677	55	4	736	26	1890	0	9	1925	96	0	11	0	107	0	0	0	0	0	2768
5:45 - 6:45	0	616	57	8	681	22	1744	0	0	1766	103	0	12	0	115	0	0	0	0	0	2562
6:00 - 7:00	0	564	64	12	640	23	1590	0	0	1613	96	0	15	0	111	0	0	0	0	0	2364
PEAK HOUR																					
8:00 - 9:00	0	2152	213	10	2375	9	693	0	2	704	74	0	8	0	82	0	0	0	0	0	3161
4:45 - 5:45	0	703	40	7	750	22	2189	0	9	2220	87	0	10	0	97	0	0	0	0	0	3067


MD 119 & Decoverly Dr
Legend
Sterling Terrace
Sterling Dr
Foxborough Cir
Decoverly Dr
119
Great Seneca Hwy
Google Earth
© 2018 Google
N
300 ft

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Great Seneca Highway | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	24	142	89	1	256	5	19	0	0	24	22	33	2	1	58	13	196	18	0	227	565
6:45 - 7:00	38	182	139	0	359	6	35	2	0	43	26	57	5	1	89	16	222	17	0	255	746
7:00 - 7:15	32	188	190	0	410	2	36	1	0	39	22	72	3	0	97	12	245	26	0	283	829
7:15 - 7:30	31	214	233	0	478	9	53	2	0	64	32	66	4	0	102	15	289	56	0	360	1004
7:30 - 7:45	44	234	215	0	493	7	66	0	0	73	43	84	4	0	131	1	275	50	0	326	1023
7:45 - 8:00	55	233	245	0	533	14	113	2	0	129	45	92	7	0	144	8	308	46	0	362	1168
8:00 - 8:15	63	247	210	0	520	10	77	4	0	91	39	102	11	0	152	23	277	42	0	342	1105
8:15 - 8:30	61	247	203	0	511	6	84	3	0	93	42	97	9	0	148	24	332	34	0	390	1142
8:30 - 8:45	67	282	202	0	551	18	83	3	0	104	43	104	12	1	160	28	329	40	0	397	1212
8:45 - 9:00	56	260	216	0	532	14	97	3	0	114	42	95	13	1	151	21	351	55	0	427	1224
9:00 - 9:15	61	242	198	0	501	14	96	5	0	115	51	78	10	0	139	22	267	46	0	335	1090
9:15 - 9:30	48	198	136	0	382	21	92	5	0	118	68	85	11	0	164	18	235	49	0	302	966
3 Hr Totals	580	2669	2276	1	5526	126	851	30	0	1007	475	965	91	4	1535	201	3326	479	0	4006	12074
1 Hr Totals																					
6:30 - 7:30	125	726	651	1	1503	22	143	5	0	170	102	228	14	2	346	56	952	117	0	1125	3144
6:45 - 7:45	145	818	777	0	1740	24	190	5	0	219	123	279	16	1	419	44	1031	149	0	1224	3602
7:00 - 8:00	162	869	883	0	1914	32	268	5	0	305	142	314	18	0	474	36	1117	178	0	1331	4024
7:15 - 8:15	193	928	903	0	2024	40	309	8	0	357	159	344	26	0	529	47	1149	194	0	1390	4300
7:30 - 8:30	223	961	873	0	2057	37	340	9	0	386	169	375	31	0	575	56	1192	172	0	1420	4438
7:45 - 8:45	246	1009	860	0	2115	48	357	12	0	417	169	395	39	1	604	83	1246	162	0	1491	4627
8:00 - 9:00	247	1036	831	0	2114	48	341	13	0	402	166	398	45	2	611	96	1289	171	0	1556	4683
8:15 - 9:15	245	1031	819	0	2095	52	360	14	0	426	178	374	44	2	598	95	1279	175	0	1549	4668
8:30 - 9:30	232	982	752	0	1966	67	368	16	0	451	204	362	46	2	614	89	1182	190	0	1461	4492
PEAK HOUR																					
8:00 - 9:00	247	1036	831	0	2114	48	341	13	0	402	166	398	45	2	611	96	1289	171	0	1556	4683
PM																					
4:00 - 4:15	16	68	45	0	129	14	186	17	0	217	168	280	13	0	461	3	123	55	0	181	988
4:15 - 4:30	29	74	45	0	148	4	187	14	0	205	186	276	10	1	473	8	115	61	0	184	1010
4:30 - 4:45	28	91	49	0	168	4	235	23	0	262	231	330	17	0	578	6	110	69	0	185	1193
4:45 - 5:00	29	86	55	0	170	4	212	16	0	232	243	337	12	0	592	3	107	48	0	158	1152
5:00 - 5:15	25	87	46	0	158	9	215	18	0	242	276	407	10	0	693	9	120	72	0	201	1294
5:15 - 5:30	32	110	53	0	195	10	217	19	0	246	293	421	11	0	725	5	102	66	1	174	1340
5:30 - 5:45	41	89	60	0	190	11	219	25	0	255	275	377	12	0	664	4	99	58	0	161	1270
5:45 - 6:00	35	90	47	0	172	9	193	13	0	215	213	414	18	1	646	5	109	50	0	164	1197
6:00 - 6:15	46	81	36	0	163	10	206	9	0	225	197	310	9	1	517	6	109	57	0	172	1077
6:15 - 6:30	24	100	49	1	174	12	183	5	0	200	222	282	15	1	520	2	100	40	0	142	1036
6:30 - 6:45	31	73	30	0	134	9	175	9	0	193	159	292	17	1	469	5	84	49	0	138	934
6:45 - 7:00	30	57	27	0	114	15	130	3	0	148	150	256	12	0	418	4	87	38	0	129	809
3 Hr Totals	366	1006	542	1	1915	111	2358	171	0	2640	2613	3982	156	5	6756	60	1265	663	1	1989	13300
1 Hr Totals																					
4:00 - 5:00	102	319	194	0	615	26	820	70	0	916	828	1223	52	1	2104	20	455	233	0	708	4343
4:15 - 5:15	111	338	195	0	644	21	849	71	0	941	936	1350	49	1	2336	26	452	250	0	728	4649
4:30 - 5:30	114	374	203	0	691	27	879	76	0	982	1043	1495	50	0	2588	23	439	255	1	718	4979
4:45 - 5:45	127	372	214	0	713	34	863	78	0	975	1087	1542	45	0	2674	21	428	244	1	694	5056
5:00 - 6:00	133	376	206	0	715	39	844	75	0	958	1057	1619	51	1	2728	23	430	246	1	700	5101
5:15 - 6:15	154	370	196	0	720	40	835	66	0	941	978	1522	50	2	2552	20	419	231	1	671	4884
5:30 - 6:30	146	360	192	1	699	42	801	52	0	895	907	1383	54	3	2347	17	417	205	0	639	4580
5:45 - 6:45	136	344	162	1	643	40	757	36	0	833	791	1298	59	4	2152	18	402	196	0	616	4244
6:00 - 7:00	131	311	142	1	585	46	694	26	0	766	728	1140	53	3	1924	17	380	184	0	581	3856
PEAK HOUR																					
5:00 - 6:00	133	376	206	0	715	39	844	75	0	958	1057	1619	51	1	2728	23	430	246	1	700	5101

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | **Date: March 05, 2019** | **Tuesday**

and: Great Seneca Highway | **Weather: Cold, Clear**

Location: Montgomery County, Maryland | **Entered by: BGJ** | **Star Rating: 4**

TIME	NORTH LEG Great Seneca Highway		SOUTH LEG Great Seneca Highway	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	0	0	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	1	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	1
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	1	1

	EAST LEG Key West Avenue		WEST LEG Key West Avenue	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	1	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	1	0	0	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	1	0	0	0
5:45 - 6:00	1	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	2	0	0	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Great Seneca Highway | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
9:00 - 9:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:15 - 9:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
8:30 - 9:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
PEAK HOUR																					
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


MD 28 & MD 119
Legend
Great Seneca Hwy
119
28
Key W Ave
Google Earth
© 2018 Google
300 ft
N

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | **Date: March 05, 2019** | **Tuesday**

and: Blackwell Road | **Weather: Cold, Clear**

Location: Montgomery County, Maryland | **Entered by: BGJ** | **Star Rating: 4**

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Blackwell Road					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	130	16	4	150	5	25	0	0	30	2	0	2	0	4	0	0	0	0	0	184
6:45 - 7:00	0	171	14	4	189	3	35	0	0	38	4	0	3	0	7	0	0	0	0	0	234
7:00 - 7:15	0	177	19	1	197	3	38	0	0	41	4	0	1	0	5	0	0	0	0	0	243
7:15 - 7:30	0	192	28	4	224	2	60	0	0	62	3	0	0	0	3	0	0	0	0	0	289
7:30 - 7:45	0	200	34	3	237	3	75	0	0	78	4	0	0	0	4	0	0	0	0	0	319
7:45 - 8:00	0	220	44	4	268	5	111	0	0	116	8	0	1	0	9	0	0	0	0	0	393
8:00 - 8:15	0	252	32	0	284	4	90	0	0	94	6	0	0	0	6	0	0	0	0	0	384
8:15 - 8:30	0	238	41	3	282	9	93	0	0	102	3	0	1	0	4	0	0	0	0	0	388
8:30 - 8:45	0	246	44	6	296	3	94	0	0	97	3	0	1	0	4	0	0	0	0	0	397
8:45 - 9:00	0	257	41	2	300	5	110	0	0	115	1	0	1	0	2	0	0	0	0	0	417
9:00 - 9:15	0	248	32	0	280	5	110	0	1	116	2	0	1	0	3	0	0	0	0	0	399
9:15 - 9:30	0	186	27	0	213	8	105	0	0	113	10	0	2	0	12	0	0	0	0	0	338
3 Hr Totals	0	2517	372	31	2920	55	946	0	1	1002	50	0	13	0	63	0	0	0	0	0	3985
1 Hr Totals																					
6:30 - 7:30	0	670	77	13	760	13	158	0	0	171	13	0	6	0	19	0	0	0	0	0	950
6:45 - 7:45	0	740	95	12	847	11	208	0	0	219	15	0	4	0	19	0	0	0	0	0	1085
7:00 - 8:00	0	789	125	12	926	13	284	0	0	297	19	0	2	0	21	0	0	0	0	0	1244
7:15 - 8:15	0	864	138	11	1013	14	336	0	0	350	21	0	1	0	22	0	0	0	0	0	1385
7:30 - 8:30	0	910	151	10	1071	21	369	0	0	390	21	0	2	0	23	0	0	0	0	0	1484
7:45 - 8:45	0	956	161	13	1130	21	388	0	0	409	20	0	3	0	23	0	0	0	0	0	1562
8:00 - 9:00	0	993	158	11	1162	21	387	0	0	408	13	0	3	0	16	0	0	0	0	0	1586
8:15 - 9:15	0	989	158	11	1158	22	407	0	1	430	9	0	4	0	13	0	0	0	0	0	1601
8:30 - 9:30	0	937	144	8	1089	21	419	0	1	441	16	0	5	0	21	0	0	0	0	0	1551
PEAK HOUR																					
8:15 - 9:15	0	989	158	11	1158	22	407	0	1	430	9	0	4	0	13	0	0	0	0	0	1601
PM																					
4:00 - 4:15	0	81	1	0	82	1	193	0	0	194	28	0	7	0	35	0	0	0	0	0	311
4:15 - 4:30	0	97	4	1	102	2	193	0	1	196	26	0	2	0	28	0	0	0	0	0	326
4:30 - 4:45	0	105	2	0	107	0	242	0	0	242	27	0	2	0	29	0	0	0	0	0	378
4:45 - 5:00	0	92	4	1	97	1	211	0	0	212	19	0	0	0	19	0	0	0	0	0	328
5:00 - 5:15	0	97	2	0	99	0	228	0	0	228	32	0	7	0	39	0	0	0	0	0	366
5:15 - 5:30	0	112	4	0	116	3	237	0	0	240	13	0	2	0	15	0	0	0	0	0	371
5:30 - 5:45	0	107	2	0	109	2	225	0	1	228	24	0	0	0	24	0	0	0	0	0	361
5:45 - 6:00	0	110	6	0	116	1	195	0	0	196	15	0	5	0	20	0	0	0	0	0	332
6:00 - 6:15	0	91	1	2	94	2	209	0	0	211	11	0	1	0	12	0	0	0	0	0	317
6:15 - 6:30	0	109	5	1	115	1	199	0	0	200	10	0	1	0	11	0	0	0	0	0	326
6:30 - 6:45	0	88	2	0	90	2	185	0	0	187	18	0	3	0	21	0	0	0	0	0	298
6:45 - 7:00	0	80	2	0	82	1	144	0	0	145	6	0	0	0	6	0	0	0	0	0	233
3 Hr Totals	0	1169	35	5	1209	16	2461	0	2	2479	229	0	30	0	259	0	0	0	0	0	3947
1 Hr Totals																					
4:00 - 5:00	0	375	11	2	388	4	839	0	1	844	100	0	11	0	111	0	0	0	0	0	1343
4:15 - 5:15	0	391	12	2	405	3	874	0	1	878	104	0	11	0	115	0	0	0	0	0	1398
4:30 - 5:30	0	406	12	1	419	4	918	0	0	922	91	0	11	0	102	0	0	0	0	0	1443
4:45 - 5:45	0	408	12	1	421	6	901	0	1	908	88	0	9	0	97	0	0	0	0	0	1426
5:00 - 6:00	0	426	14	0	440	6	885	0	1	892	84	0	14	0	98	0	0	0	0	0	1430
5:15 - 6:15	0	420	13	2	435	8	866	0	1	875	63	0	8	0	71	0	0	0	0	0	1381
5:30 - 6:30	0	417	14	3	434	6	828	0	1	835	60	0	7	0	67	0	0	0	0	0	1336
5:45 - 6:45	0	398	14	3	415	6	788	0	0	794	54	0	10	0	64	0	0	0	0	0	1273
6:00 - 7:00	0	368	10	3	381	6	737	0	0	743	45	0	5	0	50	0	0	0	0	0	1174
PEAK HOUR																					
4:30 - 5:30	0	406	12	1	419	4	918	0	0	922	91	0	11	0	102	0	0	0	0	0	1443

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Blackwell Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	NORTH LEG Great Seneca Highway		SOUTH LEG Great Seneca Highway	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	0	0	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	0	0

	EAST LEG Blackwell Road		WEST LEG	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0		
6:45 - 7:00	0	0		
7:00 - 7:15	0	0		
7:15 - 7:30	1	0		
7:30 - 7:45	0	0		
7:45 - 8:00	1	1		
8:00 - 8:15	0	0		
8:15 - 8:30	0	0		
8:30 - 8:45	0	0		
8:45 - 9:00	1	2		
9:00 - 9:15	0	0		
9:15 - 9:30	1	0		
TOTALS	4	3	0	0
PM				
4:00 - 4:15	0	0		
4:15 - 4:30	0	0		
4:30 - 4:45	0	0		
4:45 - 5:00	0	0		
5:00 - 5:15	0	0		
5:15 - 5:30	0	1		
5:30 - 5:45	0	1		
5:45 - 6:00	1	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		
TOTALS	1	2	0	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

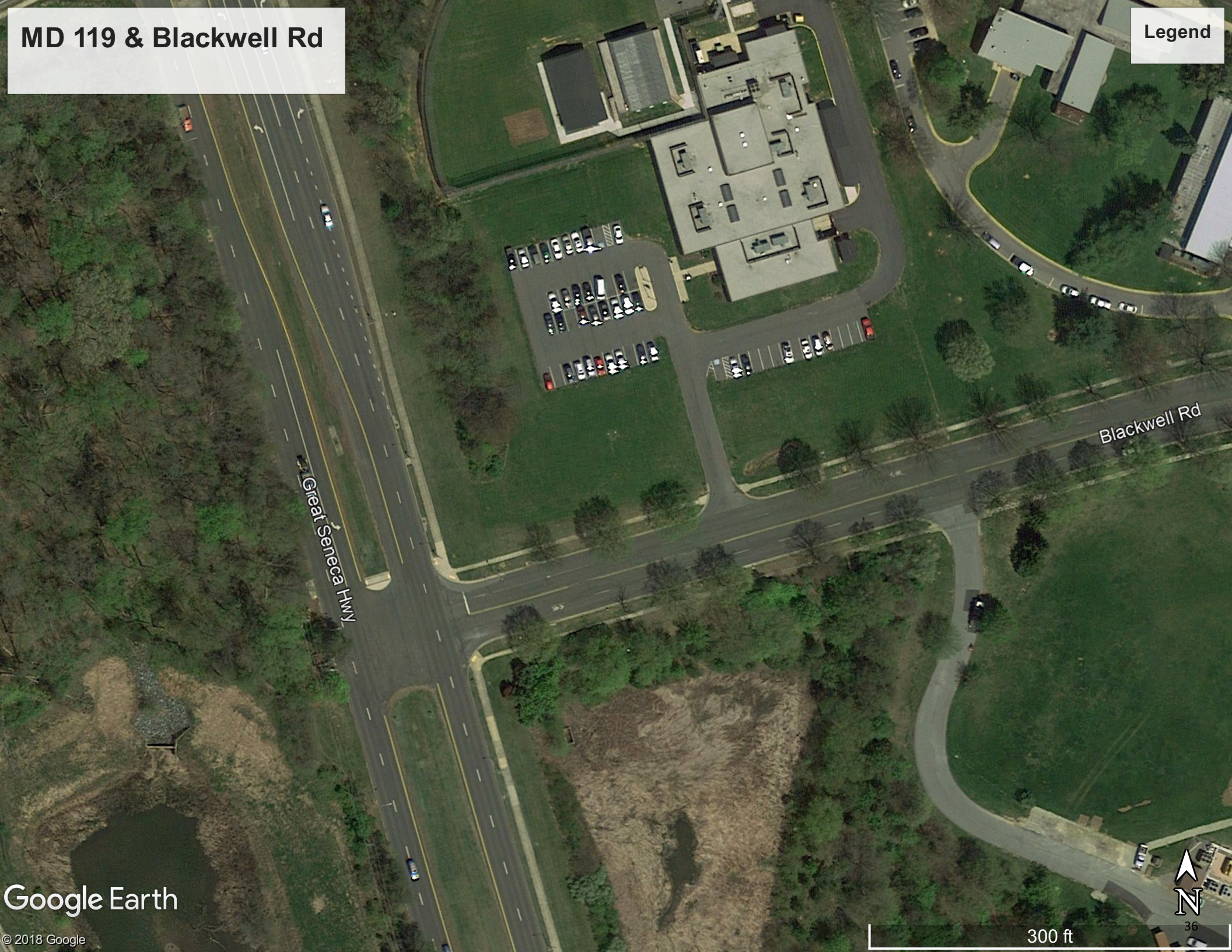
Intersection of: Great Seneca Highway — Date: March 05, 2019 — Tuesday

and: Blackwell Road — Weather: Cold, Clear

Location: Montgomery County, Maryland — Entered by: BGJ — Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Blackwell Road					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:45 - 7:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:00 - 7:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:15 - 7:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:30 - 7:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
7:45 - 8:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:00 - 8:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:15 - 8:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:30 - 8:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
8:45 - 9:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
9:00 - 9:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
9:15 - 9:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM																					
4:00 - 4:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
4:15 - 4:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
4:30 - 4:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
4:45 - 5:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:00 - 5:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:15 - 5:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:30 - 5:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
5:45 - 6:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:00 - 6:15		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:15 - 6:30		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:30 - 6:45		0	0	0	0	0	0		0	0	0		0	0	0					0	0
6:45 - 7:00		0	0	0	0	0	0		0	0	0		0	0	0					0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MD 119 & Blackwell Rd



TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Medical Center Drive | Weather: Cold, Clear

Location: Montgomery Coiunty, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Medical Center Drive					TRAFFIC FROM WEST on: PSTA Access					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	4	76	58	0	138	8	26	7	0	41	3	0	3	0	6	0	0	0	0	0	185
6:45 - 7:00	1	135	48	0	184	12	35	0	0	47	4	0	3	1	8	0	0	0	0	0	239
7:00 - 7:15	1	142	38	0	181	12	31	1	0	44	8	0	0	0	8	0	0	1	0	1	234
7:15 - 7:30	1	147	51	2	201	19	47	1	0	67	18	0	6	0	24	0	0	0	0	0	292
7:30 - 7:45	0	129	75	0	204	28	65	0	0	93	15	1	1	0	17	0	1	0	0	1	315
7:45 - 8:00	0	144	79	0	223	33	100	0	0	133	14	0	7	1	22	0	0	0	0	0	378
8:00 - 8:15	3	176	81	0	260	35	79	1	0	115	13	0	7	2	22	0	0	0	0	0	397
8:15 - 8:30	3	154	83	0	240	17	87	0	0	104	12	0	5	0	17	0	0	1	0	1	362
8:30 - 8:45	4	168	87	1	260	34	94	3	1	132	11	0	3	0	14	2	0	1	0	3	409
8:45 - 9:00	4	183	71	0	258	31	95	2	0	128	21	0	10	1	32	0	0	0	0	0	418
9:00 - 9:15	1	178	75	0	254	19	98	1	0	118	18	0	10	1	29	0	0	0	0	0	401
9:15 - 9:30	4	135	51	0	190	26	94	2	0	122	15	0	7	0	22	0	0	1	0	1	335
3 Hr Totals	26	1767	797	3	2593	274	851	18	1	1144	152	1	62	6	221	2	1	4	0	7	3965
1 Hr Totals																					
6:30 - 7:30	7	500	195	2	704	51	139	9	0	199	33	0	12	1	46	0	0	1	0	1	950
6:45 - 7:45	3	553	212	2	770	71	178	2	0	251	45	1	10	1	57	0	1	1	0	2	1080
7:00 - 8:00	2	562	243	2	809	92	243	2	0	337	55	1	14	1	71	0	1	1	0	2	1219
7:15 - 8:15	4	596	286	2	888	115	291	2	0	408	60	1	21	3	85	0	1	0	0	1	1382
7:30 - 8:30	6	603	318	0	927	113	331	1	0	445	54	1	20	3	78	0	1	1	0	2	1452
7:45 - 8:45	10	642	330	1	983	119	360	4	1	484	50	0	22	3	75	2	0	2	0	4	1546
8:00 - 9:00	14	681	322	1	1018	117	355	6	1	479	57	0	25	3	85	2	0	2	0	4	1586
8:15 - 9:15	12	683	316	1	1012	101	374	6	1	482	62	0	28	2	92	2	0	2	0	4	1590
8:30 - 9:30	13	664	284	1	962	110	381	8	1	500	65	0	30	2	97	2	0	2	0	4	1563
PEAK HOUR																					
8:15 - 9:15	12	683	316	1	1012	101	374	6	1	482	62	0	28	2	92	2	0	2	0	4	1590
PM																					
4:00 - 4:15	1	68	13	0	82	1	133	0	1	135	61	0	26	1	88	2	0	5	0	7	312
4:15 - 4:30	0	77	23	0	100	6	143	0	0	149	52	0	23	0	75	3	0	3	0	6	330
4:30 - 4:45	1	90	14	1	106	9	151	0	0	160	87	0	27	1	115	4	0	3	0	7	388
4:45 - 5:00	0	96	7	0	103	11	144	0	0	155	68	0	23	0	91	1	0	2	0	3	352
5:00 - 5:15	0	92	12	0	104	7	167	0	1	175	73	0	24	0	97	0	0	2	0	2	378
5:15 - 5:30	0	99	16	0	115	9	174	0	0	183	75	0	19	0	94	3	1	0	0	4	396
5:30 - 5:45	0	96	16	0	112	8	145	0	0	153	53	0	20	0	73	0	0	0	0	0	338
5:45 - 6:00	0	110	10	0	120	5	162	0	0	167	35	0	26	0	61	2	0	0	0	2	350
6:00 - 6:15	0	74	13	0	87	8	180	0	0	188	38	0	19	0	57	1	0	1	0	2	334
6:15 - 6:30	1	88	25	0	114	5	159	0	0	164	36	0	19	0	55	0	0	4	0	4	337
6:30 - 6:45	0	82	15	0	97	10	153	0	1	164	32	0	21	1	54	0	0	0	0	0	315
6:45 - 7:00	0	70	9	0	79	6	123	0	0	129	18	0	15	0	33	6	0	2	0	8	249
3 Hr Totals	3	1042	173	1	1219	85	1834	0	3	1922	628	0	262	3	893	22	1	22	0	45	4079
1 Hr Totals																					
4:00 - 5:00	2	331	57	1	391	27	571	0	1	599	268	0	99	2	369	10	0	13	0	23	1382
4:15 - 5:15	1	355	56	1	413	33	605	0	1	639	280	0	97	1	378	8	0	10	0	18	1448
4:30 - 5:30	1	377	49	1	428	36	636	0	1	673	303	0	93	1	397	8	1	7	0	16	1514
4:45 - 5:45	0	383	51	0	434	35	630	0	1	666	269	0	86	0	355	4	1	4	0	9	1464
5:00 - 6:00	0	397	54	0	451	29	648	0	1	678	236	0	89	0	325	5	1	2	0	8	1462
5:15 - 6:15	0	379	55	0	434	30	661	0	0	691	201	0	84	0	285	6	1	1	0	8	1418
5:30 - 6:30	1	368	64	0	433	26	646	0	0	672	162	0	84	0	246	3	0	5	0	8	1359
5:45 - 6:45	1	354	63	0	418	28	654	0	1	683	141	0	85	1	227	3	0	5	0	8	1336
6:00 - 7:00	1	314	62	0	377	29	615	0	1	645	124	0	74	1	199	7	0	7	0	14	1235
PEAK HOUR																					
4:30 - 5:30	1	377	49	1	428	36	636	0	1	673	303	0	93	1	397	8	1	7	0	16	1514

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Medical Center Drive | Weather: Cold, Clear

Location: Montgomery Coiunty, Maryland | Entered by: BGJ | Star Rating: 4

TIME	NORTH LEG Great Seneca Highway		SOUTH LEG Great Seneca Highway	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	1	0
7:30 - 7:45	1	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	1	0	1	0
PM				
4:00 - 4:15	0	0	2	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	1	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	3	0

	EAST LEG Medical Center Drive		WEST LEG PSTA Access	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	1	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	1	0	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	1	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	1	0	0	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

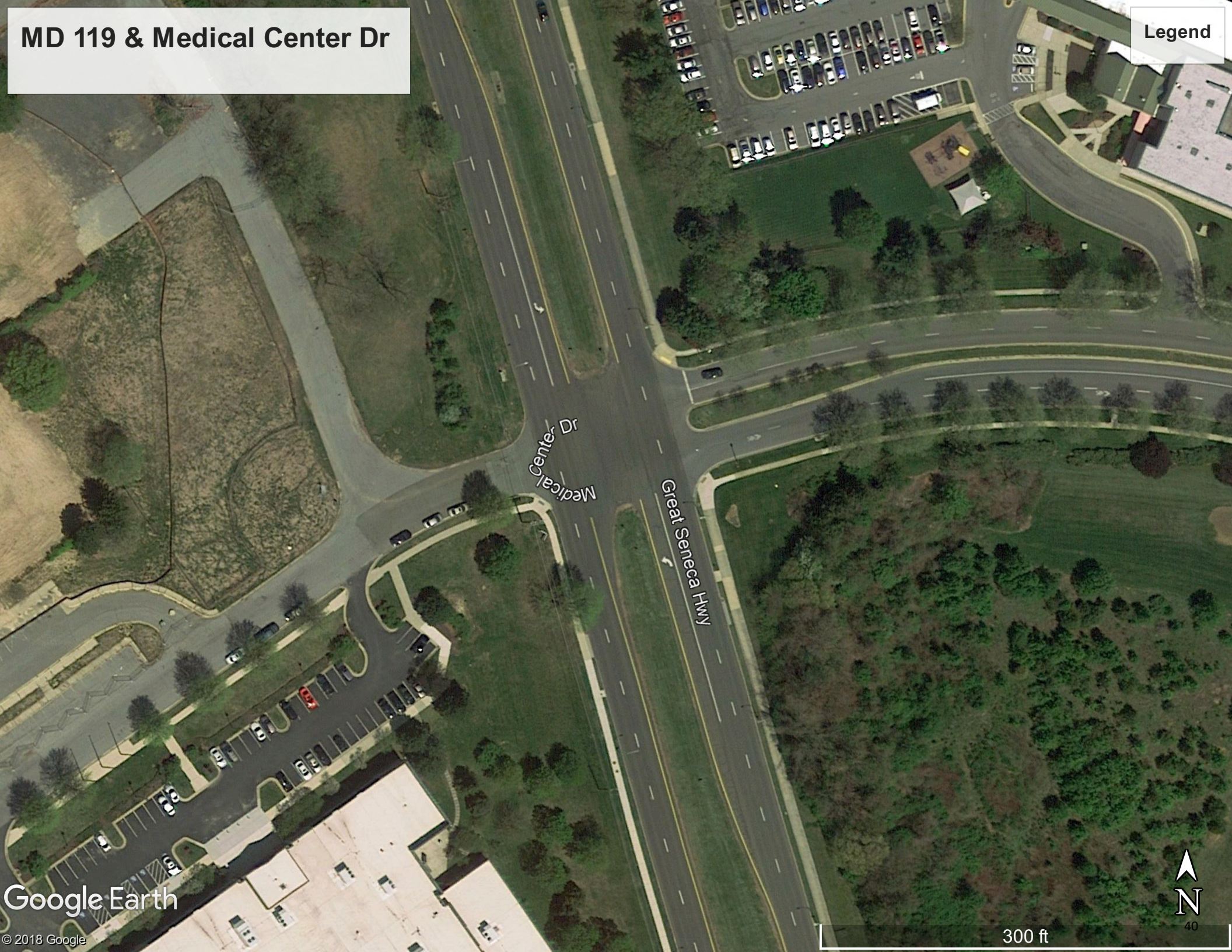
Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Medical Center Drive | Weather: Cold, Clear

Location: Montgomery Coiunty, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Medical Center Drive					TRAFFIC FROM WEST on: PSTA Access					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 - 6:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 - 6:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 - 6:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


MD 119 & Medical Center Dr
Legend
Medical Center Dr
Great Seneca Hwy
Google Earth
© 2018 Google
N
300 ft
40

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Darnestown Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 3

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on:					TRAFFIC FROM EAST on: Darnestown Road					TRAFFIC FROM WEST on: Darnestown Road					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	14	0	65	0	79	0	0	0	0	0	20	21	0	0	41	0	112	22	0	134	254
6:45 - 7:00	25	0	113	0	138	0	0	0	0	0	23	29	0	0	52	0	160	24	0	184	374
7:00 - 7:15	15	0	120	0	135	0	0	0	0	0	17	46	0	0	63	0	207	27	0	234	432
7:15 - 7:30	26	0	127	1	154	0	0	0	0	0	28	61	0	0	89	0	211	40	0	251	494
7:30 - 7:45	19	0	111	0	130	0	0	0	0	0	43	61	0	0	104	0	165	55	0	220	454
7:45 - 8:00	35	0	119	0	154	0	0	0	0	0	62	86	0	0	148	0	205	65	0	270	572
8:00 - 8:15	41	0	138	0	179	0	0	0	0	0	50	72	0	0	122	0	185	68	0	253	554
8:15 - 8:30	36	0	124	0	160	0	0	0	0	0	49	80	0	0	129	0	218	57	0	275	564
8:30 - 8:45	41	0	133	0	174	0	0	0	0	0	54	101	0	0	155	0	236	75	0	311	640
8:45 - 9:00	47	0	146	0	193	0	0	0	0	0	59	106	0	0	165	0	210	65	0	275	633
9:00 - 9:15	54	0	136	0	190	0	0	0	0	0	50	91	0	0	141	0	204	68	0	272	603
9:15 - 9:30	53	0	91	1	145	0	0	0	0	0	53	94	0	0	147	0	192	72	0	264	556
3 Hr Totals	406	0	1423	2	1831	0	0	0	0	0	508	848	0	0	1356	0	2305	638	0	2943	6130
1 Hr Totals																					
6:30 - 7:30	80	0	425	1	506	0	0	0	0	0	88	157	0	0	245	0	690	113	0	803	1554
6:45 - 7:45	85	0	471	1	557	0	0	0	0	0	111	197	0	0	308	0	743	146	0	889	1754
7:00 - 8:00	95	0	477	1	573	0	0	0	0	0	150	254	0	0	404	0	788	187	0	975	1952
7:15 - 8:15	121	0	495	1	617	0	0	0	0	0	183	280	0	0	463	0	766	228	0	994	2074
7:30 - 8:30	131	0	492	0	623	0	0	0	0	0	204	299	0	0	503	0	773	245	0	1018	2144
7:45 - 8:45	153	0	514	0	667	0	0	0	0	0	215	339	0	0	554	0	844	265	0	1109	2330
8:00 - 9:00	165	0	541	0	706	0	0	0	0	0	212	359	0	0	571	0	849	265	0	1114	2391
8:15 - 9:15	178	0	539	0	717	0	0	0	0	0	212	378	0	0	590	0	868	265	0	1133	2440
8:30 - 9:30	195	0	506	1	702	0	0	0	0	0	216	392	0	0	608	0	842	280	0	1122	2432
PEAK HOUR																					
8:15 - 9:15	178	0	539	0	717	0	0	0	0	0	212	378	0	0	590	0	868	265	0	1133	2440
PM																					
4:00 - 4:15	47	0	51	0	98	0	0	0	0	0	80	178	0	0	258	0	122	52	0	174	530
4:15 - 4:30	48	0	48	0	96	0	0	0	0	0	78	171	0	0	249	0	137	72	0	209	554
4:30 - 4:45	75	0	52	0	127	0	0	0	0	0	105	197	0	0	302	0	122	55	0	177	606
4:45 - 5:00	61	0	48	1	110	0	0	0	0	0	85	201	0	0	286	0	129	65	0	194	590
5:00 - 5:15	61	0	52	0	113	0	0	0	0	0	108	262	0	0	370	0	137	65	0	202	685
5:15 - 5:30	59	0	54	0	113	0	0	0	0	0	105	263	0	0	368	0	122	76	0	198	679
5:30 - 5:45	75	0	46	0	121	0	0	0	0	0	105	283	0	0	388	0	123	52	0	175	684
5:45 - 6:00	84	0	50	0	134	0	0	0	0	0	97	246	0	0	343	0	145	68	0	213	690
6:00 - 6:15	51	0	49	0	100	0	0	0	0	0	98	266	0	0	364	0	147	84	0	231	695
6:15 - 6:30	47	0	52	0	99	0	0	0	0	0	87	248	0	0	335	0	135	71	0	206	640
6:30 - 6:45	51	0	48	0	99	0	0	0	0	0	113	179	0	0	292	0	133	51	0	184	575
6:45 - 7:00	60	0	47	0	107	0	0	0	0	0	69	153	0	0	222	0	86	49	0	135	464
3 Hr Totals	719	0	597	1	1317	0	0	0	0	0	1130	2647	0	0	3777	0	1538	760	0	2298	7392
1 Hr Totals																					
4:00 - 5:00	231	0	199	1	431	0	0	0	0	0	348	747	0	0	1095	0	510	244	0	754	2280
4:15 - 5:15	245	0	200	1	446	0	0	0	0	0	376	831	0	0	1207	0	525	257	0	782	2435
4:30 - 5:30	256	0	206	1	463	0	0	0	0	0	403	923	0	0	1326	0	510	261	0	771	2560
4:45 - 5:45	256	0	200	1	457	0	0	0	0	0	403	1009	0	0	1412	0	511	258	0	769	2638
5:00 - 6:00	279	0	202	0	481	0	0	0	0	0	415	1054	0	0	1469	0	527	261	0	788	2738
5:15 - 6:15	269	0	199	0	468	0	0	0	0	0	405	1058	0	0	1463	0	537	280	0	817	2748
5:30 - 6:30	257	0	197	0	454	0	0	0	0	0	387	1043	0	0	1430	0	550	275	0	825	2709
5:45 - 6:45	233	0	199	0	432	0	0	0	0	0	395	939	0	0	1334	0	560	274	0	834	2600
6:00 - 7:00	209	0	196	0	405	0	0	0	0	0	367	846	0	0	1213	0	501	255	0	756	2374
PEAK HOUR																					
5:15 - 6:15	269	0	199	0	468	0	0	0	0	0	405	1058	0	0	1463	0	537	280	0	817	2748

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Darnestown Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 3

TIME	NORTH LEG Great Seneca Highway		SOUTH LEG	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0		
6:45 - 7:00	0	0		
7:00 - 7:15	0	0		
7:15 - 7:30	0	0		
7:30 - 7:45	0	0		
7:45 - 8:00	0	0		
8:00 - 8:15	0	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		
TOTALS	1	0	0	0
PM				
4:00 - 4:15	0	0		
4:15 - 4:30	0	0		
4:30 - 4:45	0	0		
4:45 - 5:00	0	0		
5:00 - 5:15	1	0		
5:15 - 5:30	0	0		
5:30 - 5:45	0	0		
5:45 - 6:00	0	0		
6:00 - 6:15	1	1		
6:15 - 6:30	0	0		
6:30 - 6:45	0	0		
6:45 - 7:00	0	0		
TOTALS	2	1	0	0

	EAST LEG Darnestown Road		WEST LEG Darnestown Road	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	18	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	1	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	1	0
8:45 - 9:00	0	0	1	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	0	0	21	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	8	0
6:45 - 7:00	0	0	0	0
TOTALS	0	0	8	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Darnestown Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 3

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on:					TRAFFIC FROM EAST on: Darnestown Road					TRAFFIC FROM WEST on: Darnestown Road					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0		0	0	0					0	0	0		0	0		0	0	0	0	0
6:45 - 7:00	0		0	0	0					0	0	0		0	0		0	0	0	0	0
7:00 - 7:15	0		0	0	0					0	0	0		0	0		0	0	0	0	0
7:15 - 7:30	0		0	0	0					0	0	0		0	0		0	0	0	0	0
7:30 - 7:45	0		0	0	0					0	0	0		0	0		0	0	0	0	0
7:45 - 8:00	1		0	0	1					0	0	0		0	0		0	0	0	0	1
8:00 - 8:15	0		0	0	0					0	0	0		0	0		0	0	0	0	0
8:15 - 8:30	0		0	0	0					0	0	0		0	0		0	0	0	0	0
8:30 - 8:45	0		0	0	0					0	0	0		0	0		0	0	0	0	0
8:45 - 9:00	0		1	0	1					0	0	0		0	0		0	0	0	0	1
9:00 - 9:15	0		0	0	0					0	0	0		0	0		0	0	0	0	0
9:15 - 9:30	0		0	0	0					0	0	0		0	0		0	0	0	0	0
3 Hr Totals	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 - 8:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 - 8:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 - 8:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 - 9:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 - 9:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 - 9:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HOUR																					
8:15 - 9:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PM																					
4:00 - 4:15	0		0	0	0					0	0	0		0	0		0	0	0	0	0
4:15 - 4:30	0		0	0	0					0	0	0		0	0		0	0	0	0	0
4:30 - 4:45	0		0	0	0					0	0	0		0	0		0	0	0	0	0
4:45 - 5:00	0		0	0	0					0	0	0		0	0		0	0	0	0	0
5:00 - 5:15	0		0	0	0					0	0	0		0	0		0	0	0	0	0
5:15 - 5:30	0		0	0	0					0	0	0		0	0		0	0	0	0	0
5:30 - 5:45	0		0	0	0					0	0	0		0	0		0	0	0	0	0
5:45 - 6:00	0		0	0	0					0	0	0		0	0		0	0	0	0	0
6:00 - 6:15	0		0	0	0					0	0	0		0	0		0	0	0	0	0
6:15 - 6:30	0		0	0	0					0	0	0		0	0		0	0	0	0	0
6:30 - 6:45	0		0	0	0					0	0	0		0	0		0	0	0	0	0
6:45 - 7:00	0		0	0	0					0	0	0		0	0		0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


MD 119 & Darnestown Rd
Legend
Great Seneca Hwy
Darnestown Rd
Google Earth
© 2018 Google
N
300 ft

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue — Date: March 05, 2019 — Tuesday

and: Diamondback Drive - Broschart Road — Weather: Cold, Clear

Location: Montgomery County, Maryland — Entered by: BGJ — Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Diamondback Drive					TRAFFIC FROM SOUTH on: Broschart Road					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	5	4	14	0	23	3	1	3	0	7	7	54	13	0	74	8	264	2	0	274	378
6:45 - 7:00	12	2	34	0	48	8	0	1	0	9	4	75	22	1	102	12	364	0	0	376	535
7:00 - 7:15	8	5	51	0	64	6	0	5	0	11	6	77	13	0	96	5	426	1	0	432	603
7:15 - 7:30	10	7	64	0	81	14	1	3	0	18	5	88	12	0	105	14	510	5	2	531	735
7:30 - 7:45	13	6	66	0	85	16	2	3	0	21	4	112	24	2	142	10	504	3	0	517	765
7:45 - 8:00	10	10	66	0	86	15	1	5	0	21	16	131	35	1	183	15	500	2	0	517	807
8:00 - 8:15	10	9	76	0	95	11	1	4	0	16	9	132	29	2	172	19	508	3	1	531	814
8:15 - 8:30	15	16	68	0	99	9	0	5	0	14	16	129	29	1	175	23	482	3	0	508	796
8:30 - 8:45	8	20	80	0	108	11	0	5	0	16	13	154	33	1	201	25	542	5	1	573	898
8:45 - 9:00	23	19	49	0	91	18	3	6	0	27	14	130	35	1	180	19	553	9	1	582	880
9:00 - 9:15	8	10	41	0	59	15	1	3	0	19	17	123	34	2	176	21	473	5	0	499	753
9:15 - 9:30	13	13	37	0	63	14	3	5	0	22	30	137	38	3	208	21	355	19	0	395	688
3 Hr Totals	135	121	646	0	902	140	13	48	0	201	141	1342	317	14	1814	192	5481	57	5	5735	8652
1 Hr Totals																					
6:30 - 7:30	35	18	163	0	216	31	2	12	0	45	22	294	60	1	377	39	1564	8	2	1613	2251
6:45 - 7:45	43	20	215	0	278	44	3	12	0	59	19	352	71	3	445	41	1804	9	2	1856	2638
7:00 - 8:00	41	28	247	0	316	51	4	16	0	71	31	408	84	3	526	44	1940	11	2	1997	2910
7:15 - 8:15	43	32	272	0	347	56	5	15	0	76	34	463	100	5	602	58	2022	13	3	2096	3121
7:30 - 8:30	48	41	276	0	365	51	4	17	0	72	45	504	117	6	672	67	1994	11	1	2073	3182
7:45 - 8:45	43	55	290	0	388	46	2	19	0	67	54	546	126	5	731	82	2032	13	2	2129	3315
8:00 - 9:00	56	64	273	0	393	49	4	20	0	73	52	545	126	5	728	86	2085	20	3	2194	3388
8:15 - 9:15	54	65	238	0	357	53	4	19	0	76	60	536	131	5	732	88	2050	22	2	2162	3327
8:30 - 9:30	52	62	207	0	321	58	7	19	0	84	74	544	140	7	765	86	1923	38	2	2049	3219
PEAK HOUR																					
8:00 - 9:00	56	64	273	0	393	49	4	20	0	73	52	545	126	5	728	86	2085	20	3	2194	3388
PM																					
4:00 - 4:15	18	2	16	0	36	35	11	15	0	61	40	467	7	1	515	4	173	9	0	186	798
4:15 - 4:30	11	4	15	0	30	29	11	26	0	66	38	431	3	1	473	3	155	6	0	164	733
4:30 - 4:45	17	2	16	0	35	44	9	28	0	81	36	563	2	3	604	3	152	4	0	159	879
4:45 - 5:00	16	8	25	0	49	33	10	26	0	69	46	587	12	1	646	2	164	7	0	173	937
5:00 - 5:15	27	7	24	0	58	48	17	27	0	92	50	672	10	5	737	6	165	2	0	173	1060
5:15 - 5:30	23	5	27	0	55	33	13	24	0	70	82	645	6	5	738	3	152	5	0	160	1023
5:30 - 5:45	28	2	23	0	53	36	24	22	0	82	64	644	8	3	719	5	159	9	0	173	1027
5:45 - 6:00	24	7	17	0	48	24	11	19	0	54	68	592	9	2	671	6	159	5	0	170	943
6:00 - 6:15	18	1	25	0	44	34	7	14	0	55	59	499	8	3	569	1	146	7	0	154	822
6:15 - 6:30	25	1	23	0	49	18	4	13	0	35	88	476	12	2	578	3	151	5	1	160	822
6:30 - 6:45	19	1	12	0	32	14	6	4	0	24	67	450	10	0	527	3	125	6	0	134	717
6:45 - 7:00	23	4	10	0	37	11	5	8	0	24	41	378	5	1	425	3	108	9	0	120	606
3 Hr Totals	249	44	233	0	526	359	128	226	0	713	679	6404	92	27	7202	42	1809	74	1	1926	10367
1 Hr Totals																					
4:00 - 5:00	62	16	72	0	150	141	41	95	0	277	160	2048	24	6	2238	12	644	26	0	682	3347
4:15 - 5:15	71	21	80	0	172	154	47	107	0	308	170	2253	27	10	2460	14	636	19	0	669	3609
4:30 - 5:30	83	22	92	0	197	158	49	105	0	312	214	2467	30	14	2725	14	633	18	0	665	3899
4:45 - 5:45	94	22	99	0	215	150	64	99	0	313	242	2548	36	14	2840	16	640	23	0	679	4047
5:00 - 6:00	102	21	91	0	214	141	65	92	0	298	264	2553	33	15	2865	20	635	21	0	676	4053
5:15 - 6:15	93	15	92	0	200	127	55	79	0	261	273	2380	31	13	2697	15	616	26	0	657	3815
5:30 - 6:30	95	11	88	0	194	112	46	68	0	226	279	2211	37	10	2537	15	615	26	1	657	3614
5:45 - 6:45	86	10	77	0	173	90	28	50	0	168	282	2017	39	7	2345	13	581	23	1	618	3304
6:00 - 7:00	85	7	70	0	162	77	22	39	0	138	255	1803	35	6	2099	10	530	27	1	568	2967
PEAK HOUR																					
5:00 - 6:00	102	21	91	0	214	141	65	92	0	298	264	2553	33	15	2865	20	635	21	0	676	4053

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Diamondback Drive - Broschart Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	NORTH LEG Diamondback Drive		SOUTH LEG Broschart Road	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	1	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	2	0	0
7:45 - 8:00	1	0	0	0
8:00 - 8:15	1	0	2	0
8:15 - 8:30	0	0	2	0
8:30 - 8:45	0	0	1	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	1	0
9:15 - 9:30	0	0	1	0
TOTALS	2	3	7	0
PM				
4:00 - 4:15	1	0	0	0
4:15 - 4:30	1	0	0	0
4:30 - 4:45	1	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	1	0	2	0
5:30 - 5:45	2	1	0	0
5:45 - 6:00	0	0	1	0
6:00 - 6:15	2	0	3	0
6:15 - 6:30	2	0	1	0
6:30 - 6:45	0	0	1	0
6:45 - 7:00	1	0	0	0
TOTALS	11	1	8	0

	EAST LEG Key West Avenue		WEST LEG Key West Avenue	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	1	0
7:15 - 7:30	0	0	1	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	3	0
8:15 - 8:30	1	0	3	0
8:30 - 8:45	0	0	1	0
8:45 - 9:00	0	0	1	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	1	0
TOTALS	1	0	11	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0
4:45 - 5:00	0	0	1	0
5:00 - 5:15	1	0	0	0
5:15 - 5:30	0	0	2	0
5:30 - 5:45	0	0	1	0
5:45 - 6:00	1	0	2	0
6:00 - 6:15	0	0	2	0
6:15 - 6:30	0	0	1	0
6:30 - 6:45	0	0	1	0
6:45 - 7:00	0	0	0	0
TOTALS	2	0	10	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Key West Avenue | Date: March 05, 2019 | Tuesday

and: Diamondback Drive - Broschart Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Diamondback Drive					TRAFFIC FROM SOUTH on: Broschart Road					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
PEAK HOUR																					
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
PEAK HOUR																					
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


MD 28 & Diamondback Dr
Legend
Diamondback Dr
28
Broschart Rd
Google Earth
© 2018 Google
300 ft
N

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Broschart Road | Date: March 26, 2019 | Tuesday

and: Blackwell Road | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Broschart Road					TRAFFIC FROM SOUTH on: Broschart Road					TRAFFIC FROM EAST on: Blackwell Road					TRAFFIC FROM WEST on: Blackwell Road					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	20	1	0	21	1	4	1	0	6	0	1	0	0	1	8	0	1	0	9	37
6:45 - 7:00	5	10	0	0	15	1	5	2	1	9	0	0	0	0	0	6	0	2	1	9	33
7:00 - 7:15	9	17	1	0	27	0	7	0	0	7	1	0	0	0	1	3	1	5	0	9	44
7:15 - 7:30	1	15	1	0	17	4	16	2	0	22	1	0	0	0	1	7	1	3	0	11	51
7:30 - 7:45	6	20	3	0	29	1	11	7	0	19	0	0	1	0	1	7	1	8	0	16	65
7:45 - 8:00	3	23	7	0	33	4	15	6	2	27	1	0	0	0	1	13	5	4	0	22	83
8:00 - 8:15	9	16	3	0	28	4	7	5	0	16	2	0	0	0	2	7	2	6	0	15	61
8:15 - 8:30	15	15	1	0	31	3	13	7	1	24	1	0	4	0	5	11	4	8	0	23	83
8:30 - 8:45	11	26	3	1	41	5	11	6	3	25	4	1	2	0	7	7	0	8	0	15	88
8:45 - 9:00	8	25	7	0	40	5	10	7	1	23	4	0	1	0	5	7	2	7	0	16	84
9:00 - 9:15	5	21	4	3	33	0	14	3	3	20	2	0	0	0	2	6	0	11	0	17	72
9:15 - 9:30	9	11	0	0	20	0	10	3	1	14	1	0	1	0	2	7	0	10	0	17	53
3 Hr Totals	81	219	31	4	335	28	123	49	12	212	17	2	9	0	28	89	16	73	1	179	754
1 Hr Totals																					
6:30 - 7:30	15	62	3	0	80	6	32	5	1	44	2	1	0	0	3	24	2	11	1	38	165
6:45 - 7:45	21	62	5	0	88	6	39	11	1	57	2	0	1	0	3	23	3	18	1	45	193
7:00 - 8:00	19	75	12	0	106	9	49	15	2	75	3	0	1	0	4	30	8	20	0	58	243
7:15 - 8:15	19	74	14	0	107	13	49	20	2	84	4	0	1	0	5	34	9	21	0	64	260
7:30 - 8:30	33	74	14	0	121	12	46	25	3	86	4	0	5	0	9	38	12	26	0	76	292
7:45 - 8:45	38	80	14	1	133	16	46	24	6	92	8	1	6	0	15	38	11	26	0	75	315
8:00 - 9:00	43	82	14	1	140	17	41	25	5	88	11	1	7	0	19	32	8	29	0	69	316
8:15 - 9:15	39	87	15	4	145	13	48	23	8	92	11	1	7	0	19	31	6	34	0	71	327
8:30 - 9:30	33	83	14	4	134	10	45	19	8	82	11	1	4	0	16	27	2	36	0	65	297
PEAK HOUR																					
8:15 - 9:15	39	87	15	4	145	13	48	23	8	92	11	1	7	0	19	31	6	34	0	71	327
PM																					
4:00 - 4:15	2	13	1	0	16	1	15	4	1	21	3	2	1	0	6	4	0	9	0	13	56
4:15 - 4:30	5	11	2	0	18	0	23	7	2	32	5	1	0	0	6	3	1	10	0	14	70
4:30 - 4:45	5	4	1	0	10	0	26	10	0	36	7	1	4	0	12	2	0	12	0	14	72
4:45 - 5:00	2	12	2	0	16	0	22	8	1	31	5	2	3	0	10	1	0	8	0	9	66
5:00 - 5:15	0	9	0	0	9	0	28	4	0	32	6	0	1	0	7	3	0	15	0	18	66
5:15 - 5:30	3	9	3	0	15	0	16	6	0	22	3	0	2	0	5	2	0	10	0	12	54
5:30 - 5:45	1	17	1	2	21	0	21	4	0	25	2	0	1	0	3	2	0	12	0	14	63
5:45 - 6:00	2	18	3	1	24	0	12	2	0	14	2	0	3	0	5	2	1	11	0	14	57
6:00 - 6:15	2	12	0	0	14	2	11	2	3	18	5	0	1	0	6	0	0	3	0	3	41
6:15 - 6:30	2	9	1	0	12	0	17	3	1	21	2	1	0	0	3	3	0	8	0	11	47
6:30 - 6:45	1	17	0	0	18	1	12	1	0	14	0	0	0	0	0	3	0	7	0	10	42
6:45 - 7:00	1	10	0	0	11	0	17	0	0	17	2	0	1	0	3	0	0	3	0	3	34
3 Hr Totals	26	141	14	3	184	4	220	51	8	283	42	7	17	0	66	25	2	108	0	135	668
1 Hr Totals																					
4:00 - 5:00	14	40	6	0	60	1	86	29	4	120	20	6	8	0	34	10	1	39	0	50	264
4:15 - 5:15	12	36	5	0	53	0	99	29	3	131	23	4	8	0	35	9	1	45	0	55	274
4:30 - 5:30	10	34	6	0	50	0	92	28	1	121	21	3	10	0	34	8	0	45	0	53	258
4:45 - 5:45	6	47	6	2	61	0	87	22	1	110	16	2	7	0	25	8	0	45	0	53	249
5:00 - 6:00	6	53	7	3	69	0	77	16	0	93	13	0	7	0	20	9	1	48	0	58	240
5:15 - 6:15	8	56	7	3	74	2	60	14	3	79	12	0	7	0	19	6	1	36	0	43	215
5:30 - 6:30	7	56	5	3	71	2	61	11	4	78	11	1	5	0	17	7	1	34	0	42	208
5:45 - 6:45	7	56	4	1	68	3	52	8	4	67	9	1	4	0	14	8	1	29	0	38	187
6:00 - 7:00	6	48	1	0	55	3	57	6	4	70	9	1	2	0	12	6	0	21	0	27	164
PEAK HOUR																					
4:15 - 5:15	12	36	5	0	53	0	99	29	3	131	23	4	8	0	35	9	1	45	0	55	274

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Counted by: VCU

Intersection of: Broschart Road | Date: March 26, 2019 | Tuesday

and: Blackwell Road | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 4

TIME	NORTH LEG Broschart Road		SOUTH LEG Broschart Road	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	1	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	0	0
TOTALS	1	0	0	0
PM				
4:00 - 4:15	1	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	1	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	1	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	1	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	4	0	0	0

	EAST LEG Blackwell Road		WEST LEG Blackwell Road	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	1	0
7:45 - 8:00	0	0	1	0
8:00 - 8:15	0	0	1	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	3	0	0	0
8:45 - 9:00	2	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	1	0	0	0
TOTALS	6	0	3	0
PM				
4:00 - 4:15	1	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	1	0
4:45 - 5:00	2	0	1	0
5:00 - 5:15	1	0	1	0
5:15 - 5:30	0	0	1	0
5:30 - 5:45	3	0	0	0
5:45 - 6:00	1	0	0	0
6:00 - 6:15	1	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	9	0	4	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Broschart Road | Date: March 26, 2019 | Tuesday

and: Blackwell Road | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Broschart Road					TRAFFIC FROM SOUTH on: Broschart Road					TRAFFIC FROM EAST on: Blackwell Road					TRAFFIC FROM WEST on: Blackwell Road					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	3
1 Hr Totals																					
6:30 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
7:45 - 8:45	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
8:00 - 9:00	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	3
8:15 - 9:15	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	3
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
PEAK HOUR																					
8:15 - 9:15	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	3
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


Broschart Rd & Blackwell Rd
Legend
Broschart Rd
Blackwell Rd
Google Earth
© 2018 Google
N
300 ft

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Broschart Road | Date: March 26, 2019 | Tuesday

and: Medical Center Way | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Broschart Road					TRAFFIC FROM SOUTH on: Broschart Road					TRAFFIC FROM EAST on: Medical Center Way					TRAFFIC FROM WEST on: Medical Center Way					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	3	0	6	0	9	0	0	0	0	0	12	3	0	1	16	0	45	15	0	60	85
6:45 - 7:00	4	0	4	0	8	0	0	1	0	1	9	5	1	0	15	2	38	17	0	57	81
7:00 - 7:15	2	0	8	0	10	0	0	0	0	0	4	10	0	0	14	0	41	18	2	61	85
7:15 - 7:30	6	0	6	0	12	0	0	0	0	0	10	15	0	2	27	1	43	19	11	74	113
7:30 - 7:45	12	0	8	0	20	0	0	0	0	0	9	27	1	0	37	0	60	15	20	95	152
7:45 - 8:00	15	0	12	0	27	0	0	0	0	0	14	27	0	2	43	0	72	34	7	113	183
8:00 - 8:15	15	0	15	0	30	0	0	0	0	0	17	20	0	2	39	1	75	15	9	100	169
8:15 - 8:30	10	0	16	0	26	1	0	0	0	1	15	13	0	2	30	3	70	19	6	98	155
8:30 - 8:45	6	0	17	0	23	2	0	0	0	2	17	24	0	1	42	1	71	24	7	103	170
8:45 - 9:00	19	0	17	0	36	1	0	0	0	1	15	25	2	0	42	0	79	14	11	104	183
9:00 - 9:15	11	0	21	0	32	0	0	3	0	3	14	26	1	3	44	0	72	12	1	85	164
9:15 - 9:30	7	0	10	0	17	1	0	0	0	1	11	15	0	1	27	0	60	15	1	76	121
3 Hr Totals	110	0	140	0	250	5	0	4	0	9	147	210	5	14	376	8	726	217	75	1026	1661
1 Hr Totals																					
6:30 - 7:30	15	0	24	0	39	0	0	1	0	1	35	33	1	3	72	3	167	69	13	252	364
6:45 - 7:45	24	0	26	0	50	0	0	1	0	1	32	57	2	2	93	3	182	69	33	287	431
7:00 - 8:00	35	0	34	0	69	0	0	0	0	0	37	79	1	4	121	1	216	86	40	343	533
7:15 - 8:15	48	0	41	0	89	0	0	0	0	0	50	89	1	6	146	2	250	83	47	382	617
7:30 - 8:30	52	0	51	0	103	1	0	0	0	1	55	87	1	6	149	4	277	83	42	406	659
7:45 - 8:45	46	0	60	0	106	3	0	0	0	3	63	84	0	7	154	5	288	92	29	414	677
8:00 - 9:00	50	0	65	0	115	4	0	0	0	4	64	82	2	5	153	5	295	72	33	405	677
8:15 - 9:15	46	0	71	0	117	4	0	3	0	7	61	88	3	6	158	4	292	69	25	390	672
8:30 - 9:30	43	0	65	0	108	4	0	3	0	7	57	90	3	5	155	1	282	65	20	368	638
PEAK HOUR																					
7:45 - 8:45	46	0	60	0	106	3	0	0	0	3	63	84	0	7	154	5	288	92	29	414	677
PM																					
4:00 - 4:15	24	0	13	0	37	0	0	0	0	0	5	53	0	0	58	0	19	1	0	20	115
4:15 - 4:30	32	0	6	0	38	0	0	0	0	0	3	60	0	0	63	0	8	6	0	14	115
4:30 - 4:45	28	0	12	0	40	0	0	0	0	0	5	77	0	1	83	0	13	6	0	19	142
4:45 - 5:00	18	0	13	0	31	0	0	0	0	0	7	57	0	2	66	1	17	3	1	22	119
5:00 - 5:15	15	0	17	0	32	0	0	0	0	0	6	107	0	1	114	0	10	6	0	16	162
5:15 - 5:30	13	0	7	0	20	0	0	0	0	0	9	67	0	0	76	0	14	4	2	20	116
5:30 - 5:45	13	0	13	1	27	0	0	1	0	1	6	56	0	0	62	0	16	10	0	26	116
5:45 - 6:00	13	0	10	0	23	0	0	0	0	0	7	43	0	0	50	0	9	8	0	17	90
6:00 - 6:15	12	0	8	2	22	0	0	0	0	0	10	42	0	0	52	0	13	8	0	21	95
6:15 - 6:30	14	0	3	1	18	0	0	0	0	0	8	46	0	0	54	0	26	9	1	36	108
6:30 - 6:45	7	0	6	0	13	0	0	0	0	0	9	24	0	0	33	0	19	5	0	24	70
6:45 - 7:00	8	0	5	1	14	0	0	0	0	0	6	24	0	0	30	0	13	3	4	20	64
3 Hr Totals	197	0	113	5	315	0	0	1	0	1	81	656	0	4	741	1	177	69	8	255	1312
1 Hr Totals																					
4:00 - 5:00	102	0	44	0	146	0	0	0	0	0	20	247	0	3	270	1	57	16	1	75	491
4:15 - 5:15	93	0	48	0	141	0	0	0	0	0	21	301	0	4	326	1	48	21	1	71	538
4:30 - 5:30	74	0	49	0	123	0	0	0	0	0	27	308	0	4	339	1	54	19	3	77	539
4:45 - 5:45	59	0	50	1	110	0	0	1	0	1	28	287	0	3	318	1	57	23	3	84	513
5:00 - 6:00	54	0	47	1	102	0	0	1	0	1	28	273	0	1	302	0	49	28	2	79	484
5:15 - 6:15	51	0	38	3	92	0	0	1	0	1	32	208	0	0	240	0	52	30	2	84	417
5:30 - 6:30	52	0	34	4	90	0	0	1	0	1	31	187	0	0	218	0	64	35	1	100	409
5:45 - 6:45	46	0	27	3	76	0	0	0	0	0	34	155	0	0	189	0	67	30	1	98	363
6:00 - 7:00	41	0	22	4	67	0	0	0	0	0	33	136	0	0	169	0	71	25	5	101	337
PEAK HOUR																					
4:30 - 5:30	74	0	49	0	123	0	0	0	0	0	27	308	0	4	339	1	54	19	3	77	539

PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY

Intersection of: Broschart Road | **Counted by: VCU** | | **Tuesday**

and: Medical Center Way | **Date: March 26, 2019** | | | |

Location: Montgomery County, Maryland | **Weather: Sunny/Cool** | | | **Star Rating: 4**

Entered by: SN

TIME	NORTH LEG Broschart Road		SOUTH LEG Broschart Road	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	1	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	1	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	0	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	0	0	2	0
TOTALS	1	0	3	0
PM				
4:00 - 4:15	0	0	0	0
4:15 - 4:30	3	0	0	0
4:30 - 4:45	2	0	0	0
4:45 - 5:00	0	0	1	0
5:00 - 5:15	0	0	1	0
5:15 - 5:30	1	0	0	0
5:30 - 5:45	0	0	1	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	1	0
6:15 - 6:30	0	0	1	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	6	0	5	0

	EAST LEG Medical Center Way		WEST LEG Medical Center Way	
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	1	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	0	0
8:30 - 8:45	0	0	0	0
8:45 - 9:00	0	0	1	0
9:00 - 9:15	0	0	0	0
9:15 - 9:30	1	0	0	0
TOTALS	1	0	2	0
PM				
4:00 - 4:15	1	0	0	0
4:15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	1	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	1	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	1	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
TOTALS	1	0	3	0

BICYCLES TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Broschart Road | Date: March 26, 2019 | Tuesday

and: Medical Center Way | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Broschart Road					TRAFFIC FROM SOUTH on: Broschart Road					TRAFFIC FROM EAST on: Medical Center Way					TRAFFIC FROM WEST on: Medical Center Way					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:30 - 6:45	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	3	0	0	0	3	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	4
1 Hr Totals																					
6:30 - 7:30	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:45 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:15 - 9:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:30 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 - 5:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Hr Totals	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1 Hr Totals																					
4:00 - 5:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 - 5:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 - 5:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 - 5:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR																					
4:30 - 5:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Broschart Rd & Medical Center Drive



Pedestrian Movement

MD 28 & Darnestown Road	SW Corner from West to South	SW Corner from South to West	SE Corner from South to East
8:00-9:00	1	0	2
5:00-6:00	3	4	0

MD 28 & Johns Hopkins	SW Corner from West to South	SW Corner from South to West	SE Corner from South to East
8:00-9:00	0	0	0
5:00-6:00	0	0	0

MD 28 & MD 119	SW Corner from West to South	SW Corner from South to West	SE Corner from South to East
8:00-9:00	0	0	0
5:00-6:00	1	4	4

MD 119 & Darnestown Road	South Sidewalk East to West	South Sidewalk West to East	NW Corner from North to West
8:15-9:15	1	0	0
5:15-6:15	3	2	0

SE Corner from East to South	North Leg East to West	North Leg West to East	West Leg North to South
0	1	0	0
0	6	1	0

SE Corner from East to South	NE Corner from East to North	NE Corner from North to East	NW Corner from North to West
0	1	0	0
0	0	1	3

SE Corner from East to South	NE Corner from East to North	NE Corner from North to East	NW Corner from North to West
3	0	0	1
0	0	0	2

NW Corner from West to North	NE Corner from North to East	NE Corner from East to North	North Leg East to West
0	0	1	0
0	0	0	1

West Leg South to North	South Leg East to West	South Leg West to East	East Leg North to South	East Leg South to North
0	0	0	0	0
0	0	0	3	0

NW Corner from West to North	North Leg East to West	North Leg West to East	West Leg North to South	West Leg South to North
1	0	1	0	0
0	0	0	0	0

NW Corner from West to North	North Leg East to West	North Leg West to East	West Leg North to South	West Leg South to North
0	0	0	0	0
0	0	0	0	0

North Leg West to East	West Leg North to South	West Leg South to North	East Leg North to South	East Leg South to North
1	1	1	0	0
0	0	0	0	0

South Leg East to West	South Leg West to East	East Leg North to South	East Leg South to North
0	1	0	0
0	0	0	0

South Leg East to West	South Leg West to East	East Leg North to South	East Leg South to North
0	0	0	0
0	0	2	0

479 KEY WEST AVENUE (MD 28) & DARNESTOWN ROAD

		WB - MD 28		NB - DARNESTOWN RD	WBLT - MD 28	EB - MD 28		
PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
MIN GRN	**0**	**7**	**0**	**5**	**5**	**7**	**0**	**0**
BK MGRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CS MGRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DLY GRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WALK	**0**	**7**	**0**	**7**	**0**	**7**	**0**	**0**
WALK2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WLK MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PED CLR	**0**	**11**	**0**	**22**	**0**	**11**	**0**	**0**
PD CLR2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PC MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PED CO	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
VEH EXT	**0**	**0**	**0**	**5**	**5**	**0**	**0**	**0**
VH EXT2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MAX1	**0**	**60**	**0**	**30**	**20**	**60**	**0**	**0**
MAX2	**0**	**60**	**0**	**50**	**20**	**60**	**0**	**0**
MAX3	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DYM MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DYM STP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YELLOW	**0**	**3.5**	**0**	**4.5**	**3.5**	**3.5**	**0**	**0**
RED CLR	**0**	**1**	**0**	**1**	**1**	**1**	**0**	**0**
RED MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RED RVT	**5**	**2**	**5**	**5**	**5**	**2**	**5**	**5**
ACT B4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SEC/ACT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MAX INT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TIME B4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CARS WT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
STPTDUC	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TTREDUC	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MIN GAP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	AM	Mid	PM
USE SPLIT PATTERN	1	2	3
CYCLE	150	120	150
OFFSET VAL	60	75	105

PHASE	1	2	3	4	5	6	7	8
SPLIT 1	0	105	0	45	24	81	0	0
COORD		X				X		
PHASE MO	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 2	0	75	0	45	28	47	0	0
COORD		X				X		
PHASE MO	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

369 KEY WEST AVENUE (MD 28) & GREAT SENECA HIGHWAY (MD 119)

	WBLT - MD 28	EB - MD 28	SBLT - MD 119	NB - MD 119	EBLT - MD 28	WB - MD 28	NBLT - MD 119	SB - MD 119
PHASE	1	2	3	4	5	6	7	8
MIN GRN	4	7	4	10	4	7	4	10
BK MGRN	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0
DLY GRN	0	0	0	0	0	0	0	0
WALK	0	7	0	7	0	7	0	7
WALK2	0	0	0	0	0	0	0	0
WLK MAX	0	0	0	0	0	0	0	0
PED CLR	0	30	0	24	0	30	0	24
PD CLR2	0	0	0	0	0	0	0	0
PC MAX	0	0	0	0	0	0	0	0
PED CO	0	0	0	0	0	0	0	0
VEH EXT	3	0	3	3	3	0	3	3
VH EXT2	0	0	0	0	0	0	0	0
MAX1	20	30	20	30	20	30	20	30
MAX2	50	60	60	80	50	60	60	80
MAX3	0	0	80	0	0	0	0	0
DYM MAX	0	0	0	0	0	0	0	0
DYM STP	0	0	0	0	0	0	0	0
YELLOW	4	4.5	4	5	4	4.5	4	5
RED CLR	2	2	2	2	2	2	2	2
RED MAX	0	0	0	0	0	0	0	0
RED RVT	5	5	5	5	5	5	5	5
ACT B4	0	0	0	0	0	0	0	0
SEC/ACT	0	0	0	0	0	0	0	0
MAX INT	0	0	0	0	0	0	0	0
TIME B4	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0
STPTDUC	0	0	0	0	0	0	0	0
TTREDUC	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0

	AM	Mid	PM
USE SPLIT PATTERN	1	2	3
CYCLE	150	135	150
OFFSET VAL	90	4	57

PHASE	1	2	3	4	5	6	7	8
SPLIT 1	18	54	48	30	24	48	24	54
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 2	24	44	29	38	24	44	29	38
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 3	22	62	24	42	22	62	24	42
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

415 KEY WEST AVENUE (MD 28) & DIAMONDBACK DRIVE/BROSCHART ROAD

		WB - MD 28	NB - BROSCHART DR	SB - DIAMONDBACK DR	WBLT - MD 28	EB - MD 28		
PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
MIN GRN	**0**	**7**	**4**	**4**	**5**	**7**	**0**	**0**
BK MGRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CS MGRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DLY GRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WALK	**0**	**7**	**0**	**7**	**0**	**7**	**0**	**0**
WALK2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WLK MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PED CLR	**0**	**26**	**0**	**28**	**0**	**26**	**0**	**0**
PD CLR2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PC MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PED CO	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
VEH EXT	**0**	**0**	**3**	**3**	**5**	**0**	**0**	**0**
VH EXT2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MAX1	**0**	**60**	**30**	**30**	**15**	**60**	**0**	**0**
MAX2	**0**	**60**	**50**	**50**	**40**	**60**	**0**	**0**
MAX3	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DYM MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DYM STP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YELLOW	**0**	**4.5**	**4**	**4**	**3.5**	**4.5**	**0**	**0**
RED CLR	**0**	**2**	**2.5**	**2.5**	**2**	**2**	**0**	**0**
RED MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RED RVT	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
ACT B4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SEC/ACT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MAX INT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TIME B4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CARS WT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
STPTDUC	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TTREDUC	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MIN GAP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	AM	Mid	PM
USE SPLIT PATTERN	1	2	3
CYCLE	150	135	150
OFFSET VAL	30	42	60

PHASE	1	2	3	4	5	6	7	8
SPLIT 1	0	90	24	36	24	66	0	0
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 2	0	75	24	36	24	51	0	0
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 3	0	87	21	42	21	66	0	0
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

368 GREAT SENECA HIGHWAY (MD 119) & DARNESTOWN ROAD

		WB - DARNESTOWN RD		SB - MD 119		EB - DARNESTOWN ROAD		
PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
MIN GRN	**0**	**10**	**0**	**10**	**0**	**10**	**0**	**0**
BK MGRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CS MGRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DLY GRN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WALK	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WALK2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WLK MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PED CLR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PD CLR2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PC MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PED CO	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
VEH EXT	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**
VH EXT2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MAX1	**0**	**60**	**0**	**40**	**0**	**60**	**0**	**0**
MAX2	**0**	**60**	**0**	**80**	**0**	**60**	**0**	**0**
MAX3	**0**	**0**	**0**	**45**	**0**	**0**	**0**	**0**
DYM MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DYM STP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YELLOW	**3**	**4.5**	**3**	**5**	**3**	**4.5**	**3**	**3**
RED CLR	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**
RED MAX	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RED RVT	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
ACT B4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SEC/ACT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MAX INT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TIME B4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CARS WT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
STPTDUC	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TTREDUC	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MIN GAP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	AM	Mid	PM
USE SPLIT PATTERN	1	2	3
CYCLE	120	110	120
OFFSET VAL	10	1	72

PHASE	1	2	3	4	5	6	7	8
SPLIT 1	0	81	0	39	0	81	0	0
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 2	0	69	0	41	0	69	0	0
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE	1	2	3	4	5	6	7	8
SPLIT 3	0	87	0	33	0	87	0	0
COORD		X				X		
PHASE MOI	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

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FIELD LOCATIONS
Arkansas
Georgia
Maryland
New York
North Carolina
Ohio
Pennsylvania
South Carolina
Texas
Utah
Virginia
West Virginia

April 1, 2019

Ms. Barbara Sears
Linowes & Blocher, LLP
7200 Wisconsin Avenue, Suite 800
Bethesda, Maryland 20814-4842

RE: Medical Center Drive
PSTA Site
Montgomery County, Maryland
Our Job No.: 2019-0201

Dear Ms. Sears:

We have determined that, as a four-lane roadway with a 25 MPH speed limit, the hourly capacity of each lane is 1,050 vehicles.

This means that the total capacity of the four-lane road at 25 MPH is 4,200 vehicles per hour.

As such, based upon the attached Exhibit, we are projecting a maximum use of 77 vehicles per hour along Medical Center Drive from the PSTA development.

This results in the fact that PSTA traffic will utilize only 1.8 % of the available capacity of Medical Center Drive. It is clear that a two-lane road is more than sufficient to accommodate PSTA traffic.

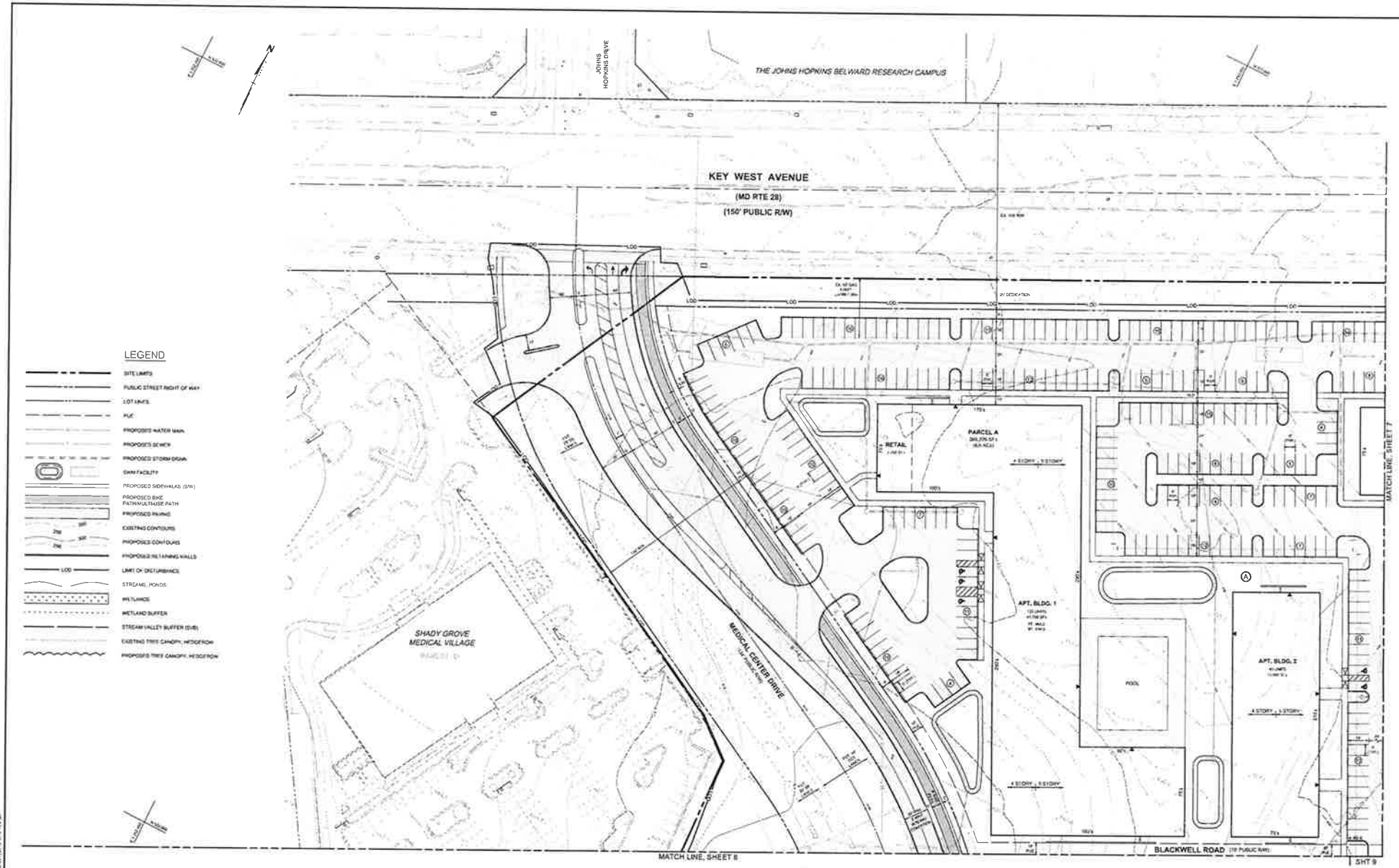
Sincerely,

John W. Guckert, PTP
President

JWG:smb

cc: Steve Lebling
Andrew Lebling

(F:\2019\2019-0201_PSTA Site LATR\DOCS\CORRESP\ANALYST\Total Capacity Ltr_Sears.docx)



GRAPHIC SCALE

SHEET KEY
1" = 2,000'

07-PREL-120200100-006
PRELIMINARY PLAN #120200100
WSSC MAP 220NW10
TAX MAP FS341, GRID FS41

PROFESSIONAL CERTIFICATION

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
GREAT KEY MONTGOMERY, LLC
c/o THE ELMS AT PSTA
ATTN: KATE KUBIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730

OWNER:
MONTGOMERY COUNTY
ESQ 101 MONROE STREET
ROCKVILLE, MD 20850

GREAT KEY/PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 926, L.3862 F. 772 AND PART A, L.15172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

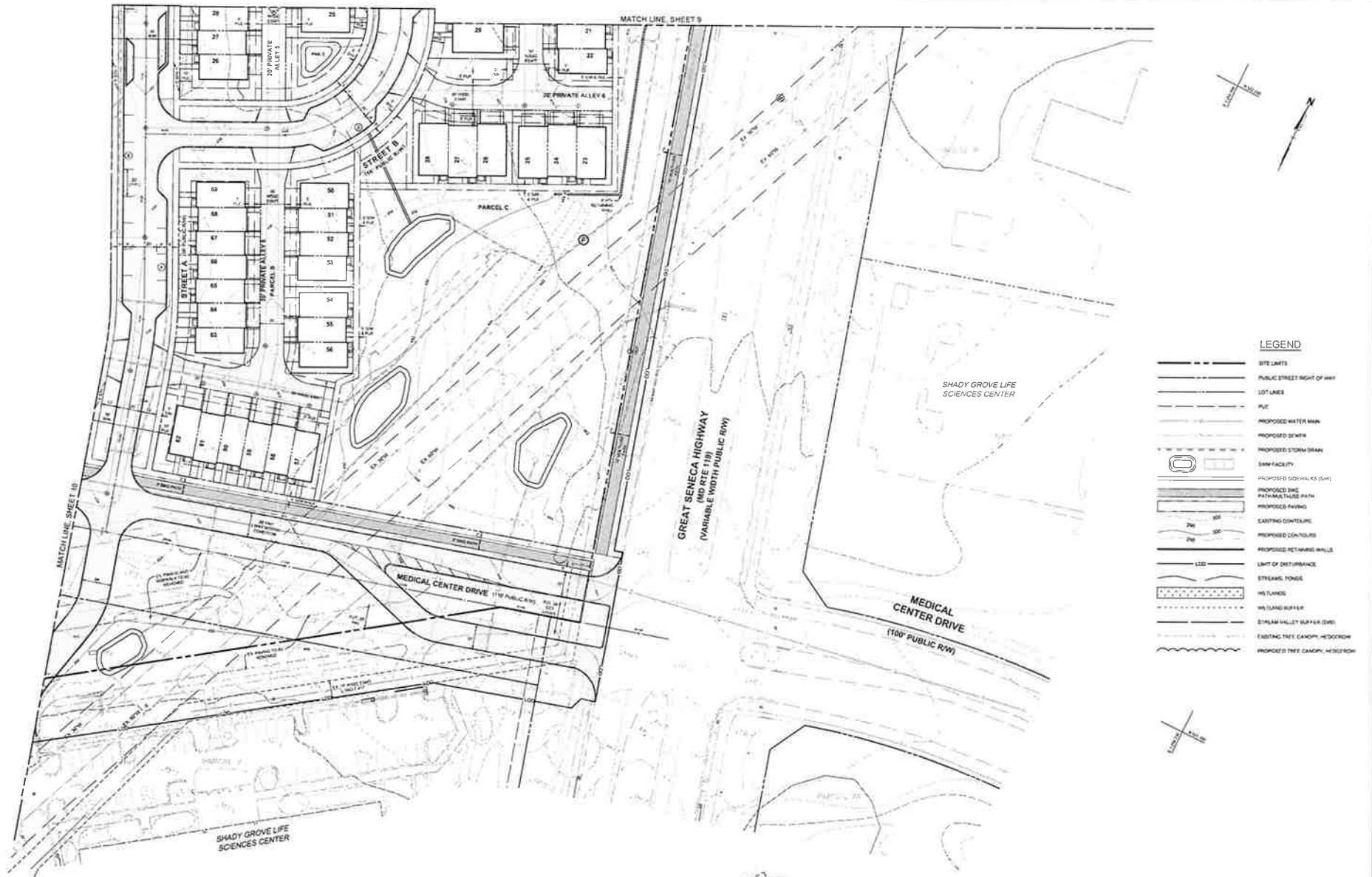
RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph. 301.948.4700 Fx. 301.948.6256 www.rodgers.com

RELEASE FOR

PRELIMINARY PLAN

SCALE: 1" = 30'
JOB #: 06417
DATE: NOV., 2019
SHEET No. 8 of 11

PRELIMINARY NOT FOR CONSTRUCTION



GRAPHIC SCALE

SHEET KEY
1" = 2,000

07-PREL-120200100-011
PRELIMINARY PLAN #120200100
WSSC MAP 220NW10
TAX MAP FS341, GRID FS41

PROFESSIONAL CERTIFICATION

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT
GREAT KEY MONTGOMERY, LLC
c/o THE ELMS AT PSTA
ATTN: KATE KUSIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9700

OWNER
MONTGOMERY COUNTY
EOB 101 MONROE STREET
ROCKVILLE, MD 20850

GREAT KEY/PSTA SITE

PARCEL 850, L 4047 F.003, PARCEL 925, L 3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

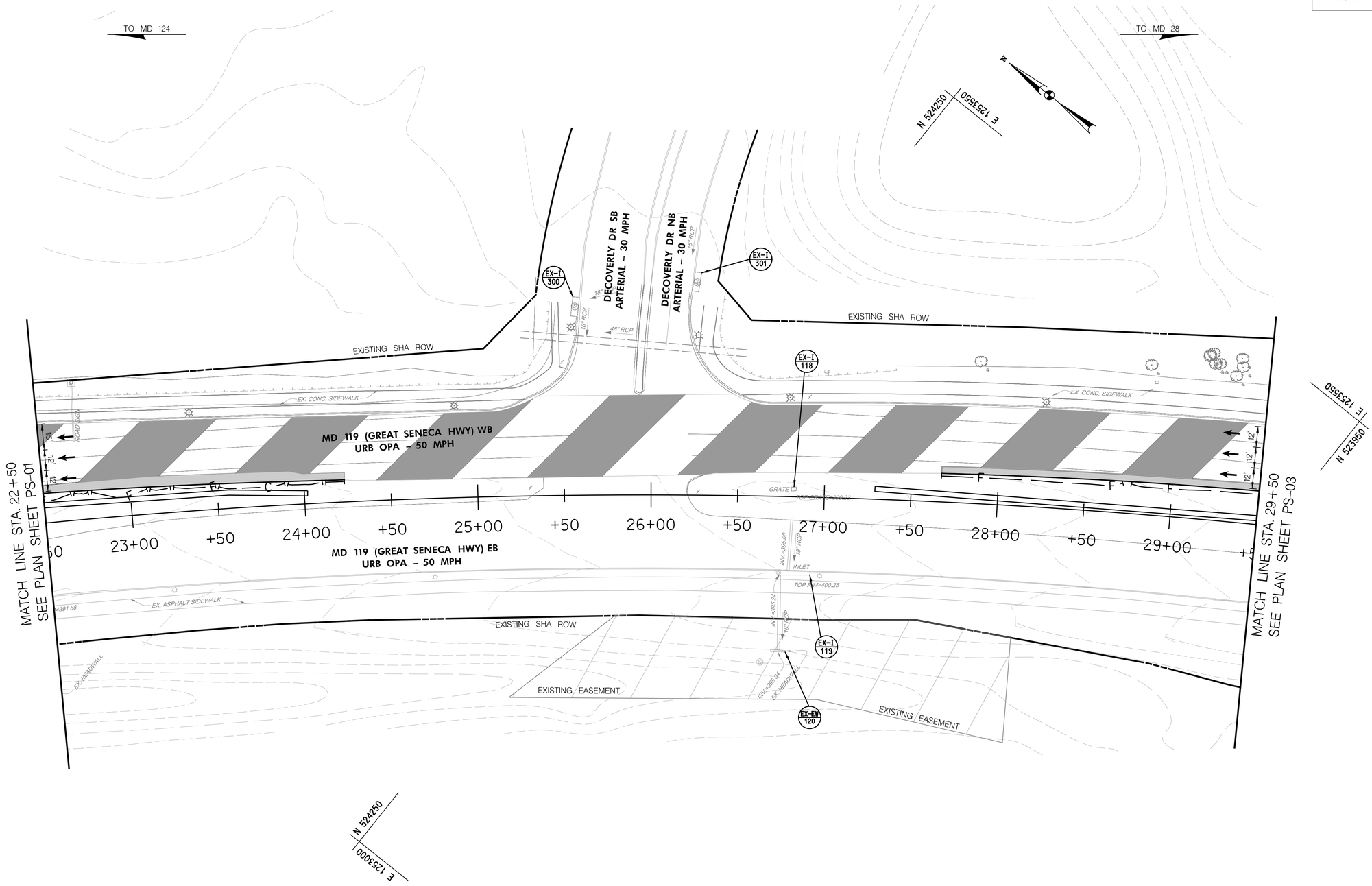
RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph. 301 948-4700 Fx. 301 948.6256 www.rodgers.com

RELEASE FOR

PRELIMINARY PLAN

SCALE: 1" = 30'
JOB NO. 2643T
DATE: NOV. 2018
SHEET No. 11 OF 13

PRELIMINARY NOT FOR CONSTRUCTION



NOTES:

1. REFER TO EROSION AND SEDIMENT CONTROL PLANS FOR THE LIMIT OF DISTURBANCE (LOD).

ROADWAY LEGEND

- FULL DEPTH ASPHALT RECONSTRUCTION
- EXISTING SIDEWALK/PAVEMENT REMOVAL
- FINE MILLING & OVERLAY
- ESD FACILITY

0 30' 60'

PENNONI ASSOCIATES INC.
351 W Camden Street, Suite 200
Baltimore, MD 21201
T 410.878.9550
F 410.878.9551

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 23919, EXPIRATION DATE: 01/25/2021

MD 119 AT DECOVERLY DRIVE IMPROVEMENTS
CITY OF GAITHERSBURG
MONTGOMERY COUNTY, MD

ALEXANDRIA REAL ESTATE EQUITIES, INC.
946 CLOPPER ROAD
GAITHERSBURG, MD 20878

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES: AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	19-AP-MO-043-XX
DATE	MAY 22, 2020
DRAWING SCALE	1" = 30'
DRAWN BY	NMK
APPROVED BY	JRG

ROADWAY PLAN SHEET

SHEET 07 OF 19

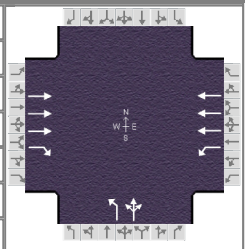
O:\Projects\AREE\AREE1701 MD 119\Phase 2 MD 119 at Sam Eig\DESIGN\CTGD\MDECOVERLY SUBMITTAL\DRAWING MODELS\Plan Sheet Border.dgn PLOTTED: 4/30/2014 1:03 PM, BY: R. Conor Power PLOTSTYLE: Pennoni MCS.stb PROJECT STATUS: —

APPENDIX B

Intersection Capacity Analysis Worksheets

HCS7 Signalized Intersection Results Summary

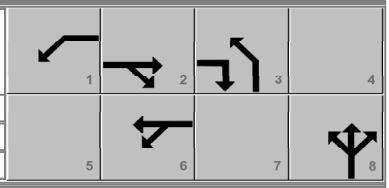
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing AM	PHF	0.93
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	1. MD 28 & Darnestown…	File Name	1EA1.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1626	858	55	296		179	0	34			

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.6	91.4	39.5	0.0	0.0	0.0	
Yellow	3.5	3.5	4.5	0.0	0.0	0.0	
Red	1.0	1.0	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		10.0		
Phase Duration, s		95.9	9.1	105.0		45.0		
Change Period, (*Y+R c*), s		4.5	4.5	4.5		5.5		
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		6.1		
Queue Clearance Time (*g s*), s			3.8			12.5		
Green Extension Time (*g e*), s		0.0	0.2	0.0		1.8		
Phase Call Probability			0.91			1.00		
Max Out Probability			0.00			0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3	8	18			
Adjusted Flow Rate (*v*), veh/h		1748	923	59	318		154	75				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685	1572	1767	1685		1767	1691				
Queue Service Time (*g s*), s		18.0	27.1	1.8	1.1		10.5	5.9				
Cycle Queue Clearance Time (*g c*), s		18.0	27.1	1.8	1.1		10.5	5.9				
Green Ratio (*g/C*)		0.61	0.87	0.65	0.67		0.26	0.26				
Capacity (*c*), veh/h		3081	1373	235	3387		465	445				
Volume-to-Capacity Ratio (*X*)		0.568	0.672	0.251	0.094		0.331	0.169				
Back of Queue (*Q*), ft/ln (95 th percentile)		205.8	235.2	34.6	17.5		214.2	119.7				
Back of Queue (*Q*), veh/ln (95 th percentile)		8.0	9.2	1.4	0.7		8.4	4.8				
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.67	0.20	0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh		7.2	2.9	11.0	2.7		44.6	50.7				
Incremental Delay (*d 2*), s/veh		0.8	2.6	1.1	0.1		1.8	0.8				
Initial Queue Delay (*d 3*), s/veh		0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (*d*), s/veh		7.9	5.6	12.2	2.8		46.4	51.5				
Level of Service (LOS)		A	A	B	A		D	D				
Approach Delay, s/veh / LOS	7.1	A		4.2	A		48.1	D		0.0		
Intersection Delay, s/veh / LOS	9.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.49	B	1.36	A	2.62	C	3.29	C
Bicycle LOS Score / LOS	1.96	B	0.70	A	0.87	A		

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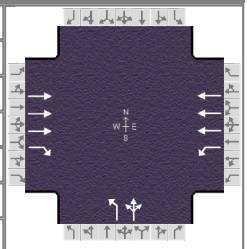
HCS7 Signalized Intersection Results Summary

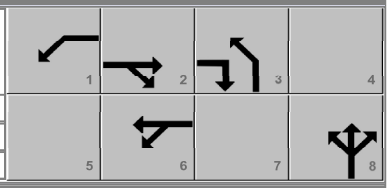
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing PM	PHF	0.97
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	1. MD 28 & Darnestown…	File Name	1EP1.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		429	374	120	1737		750	0	47			

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.2	78.8	49.5	0.0	0.0	0.0
Yellow	3.5	3.5	4.5	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		10.0		
Phase Duration, s		83.3	11.7	95.0		55.0		
Change Period, (*Y+R c*), s		4.5	4.5	4.5		5.5		
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		6.2		
Queue Clearance Time (*g s*), s			6.7			43.7		
Green Extension Time (*g e*), s		0.0	0.6	0.0		3.1		
Phase Call Probability			0.99			1.00		
Max Out Probability			0.03			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3	8	18			
Adjusted Flow Rate (*v*), veh/h		442	386	124	1791		518	304				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685	1572	1767	1685		1767	1742				
Queue Service Time (*g s*), s		4.5	7.0	4.7	19.7		41.7	25.5				
Cycle Queue Clearance Time (*g c*), s		4.5	7.0	4.7	19.7		41.7	25.5				
Green Ratio (*g/C*)		0.53	0.86	0.59	0.60		0.33	0.33				
Capacity (*c*), veh/h		2655	1345	599	3050		583	575				
Volume-to-Capacity Ratio (*X*)		0.167	0.287	0.207	0.587		0.888	0.528				
Back of Queue (*Q*), ft/ln (95 th percentile)		76.1	72.4	86.4	192.1		704.4	450.7				
Back of Queue (*Q*), veh/ln (95 th percentile)		3.0	2.8	3.4	7.5		27.5	18.0				
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.21	0.49	0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh		11.3	2.1	13.9	7.7		47.6	59.7				
Incremental Delay (*d 2*), s/veh		0.1	0.5	0.2	0.5		16.0	3.0				
Initial Queue Delay (*d 3*), s/veh		0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (*d*), s/veh		11.5	2.6	14.1	8.2		63.6	62.6				
Level of Service (LOS)		B	A	B	A		E	E				
Approach Delay, s/veh / LOS	7.3	A		8.6	A		63.3	E		0.0		
Intersection Delay, s/veh / LOS	20.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.55	C	1.38	A	2.62	C	3.34	C
Bicycle LOS Score / LOS	0.94	A	1.54	B	1.84	B		

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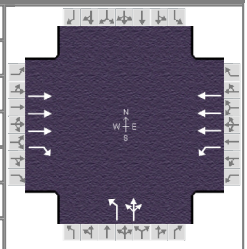
HCS7 Signalized Intersection Results Summary

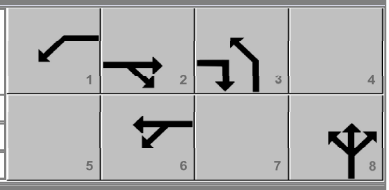
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background AM	PHF	0.93
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	1. MD 28 & Darnestown…	File Name	1BA1.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1768	876	77	408		187	0	101			

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.8	91.2	39.5	0.0	0.0	0.0	
Yellow	3.5	3.5	4.5	0.0	0.0	0.0	
Red	1.0	1.0	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		10.0		
Phase Duration, s		95.7	9.3	105.0		45.0		
Change Period, (*Y+R c*), s		4.5	4.5	4.5		5.5		
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		6.2		
Queue Clearance Time (*g s*), s			4.6			13.7		
Green Extension Time (*g e*), s		0.0	0.4	0.0		2.5		
Phase Call Probability			0.97			1.00		
Max Out Probability			0.00			0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3	8	18			
Adjusted Flow Rate (*v*), veh/h		1901	942	83	439		161	149				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685	1572	1767	1685		1767	1653				
Queue Service Time (*g s*), s		21.5	28.9	2.6	1.6		11.1	11.7				
Cycle Queue Clearance Time (*g c*), s		21.5	28.9	2.6	1.6		11.1	11.7				
Green Ratio (*g/C*)		0.61	0.87	0.65	0.67		0.26	0.26				
Capacity (*c*), veh/h		3072	1370	214	3387		465	435				
Volume-to-Capacity Ratio (*X*)		0.619	0.688	0.386	0.130		0.346	0.342				
Back of Queue (*Q*), ft/ln (95 th percentile)		226.7	251.4	50.7	24.4		219.7	218.1				
Back of Queue (*Q*), veh/ln (95 th percentile)		8.9	9.8	2.0	1.0		8.6	8.7				
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.72	0.29	0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh		7.6	3.1	12.3	2.7		44.8	49.3				
Incremental Delay (*d 2*), s/veh		0.9	2.8	2.3	0.1		1.8	1.9				
Initial Queue Delay (*d 3*), s/veh		0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (*d*), s/veh		8.6	5.9	14.6	2.8		46.6	51.3				
Level of Service (LOS)		A	A	B	A		D	D				
Approach Delay, s/veh / LOS	7.7	A		4.7	A		48.8	D		0.0		
Intersection Delay, s/veh / LOS	10.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.55	C	1.36	A	2.62	C	3.35	C
Bicycle LOS Score / LOS	2.05	B	0.77	A	1.00	A		

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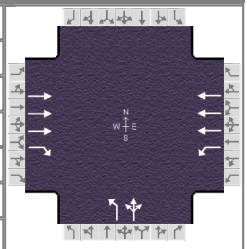
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background PM	PHF	0.97
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	1. MD 28 & Darnestown…	File Name	1BP1.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		542	380	208	1946		774	0	63			

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	11.5	74.5	49.5	0.0	0.0	0.0	5	6	7	8
Yellow	3.5	3.5	4.5	0.0	0.0	0.0				
Red	1.0	1.0	1.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		10.0		
Phase Duration, s		79.0	16.0	95.0		55.0		
Change Period, ($Y+R_c$), s		4.5	4.5	4.5		5.5		
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		6.2		
Queue Clearance Time (g_s), s			10.6			45.6		
Green Extension Time (g_e), s		0.0	0.9	0.0		2.3		
Phase Call Probability			1.00			1.00		
Max Out Probability			0.33			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3	8	18			
Adjusted Flow Rate (*v*), veh/h		559	392	214	2006		535	328				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685	1572	1767	1685		1767	1736				
Queue Service Time (g_s), s		6.6	8.6	8.6	24.7		43.6	27.5				
Cycle Queue Clearance Time (g_c), s		6.6	8.6	8.6	24.7		43.6	27.5				
Green Ratio (*g/C*)		0.50	0.83	0.59	0.60		0.33	0.33				
Capacity (*c*), veh/h		2511	1300	566	3050		583	573				
Volume-to-Capacity Ratio (*X*)		0.223	0.301	0.379	0.658		0.917	0.573				
Back of Queue (*Q*), ft/ln (95 th percentile)		111.6	102.7	146.3	216.4		715	464.8				
Back of Queue (*Q*), veh/ln (95 th percentile)		4.4	4.0	5.7	8.5		27.9	18.6				
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.29	0.84	0.00		0.00	0.00				
Uniform Delay (d_1), s/veh		13.9	3.0	14.9	8.2		48.3	59.8				
Incremental Delay (d_2), s/veh		0.2	0.6	0.5	0.6		16.7	2.9				
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (*d*), s/veh		14.1	3.6	15.4	8.9		65.0	62.8				
Level of Service (LOS)		B	A	B	A		E	E				
Approach Delay, s/veh / LOS	9.7	A		9.5	A		64.1	E		0.0		
Intersection Delay, s/veh / LOS	21.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	1.38	A	2.62	C	3.41	C
Bicycle LOS Score / LOS	1.01	A	1.71	B	1.91	B		

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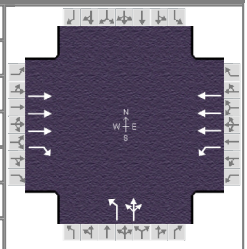
HCS7 Signalized Intersection Results Summary

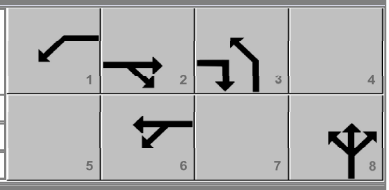
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM	PHF	0.93
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	1. MD 28 & Darnestown…	File Name	1TA1.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1771	876	77	416		187	0	101			

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.8	91.2	39.5	0.0	0.0	0.0	
Yellow	3.5	3.5	4.5	0.0	0.0	0.0	
Red	1.0	1.0	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		10.0		
Phase Duration, s		95.7	9.3	105.0		45.0		
Change Period, (*Y+R c*), s		4.5	4.5	4.5		5.5		
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		6.2		
Queue Clearance Time (*g s*), s			4.6			13.7		
Green Extension Time (*g e*), s		0.0	0.4	0.0		2.5		
Phase Call Probability			0.97			1.00		
Max Out Probability			0.00			0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3	8	18			
Adjusted Flow Rate (*v*), veh/h		1904	942	83	447		161	149				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685	1572	1767	1685		1767	1653				
Queue Service Time (*g s*), s		21.5	28.9	2.6	1.6		11.1	11.7				
Cycle Queue Clearance Time (*g c*), s		21.5	28.9	2.6	1.6		11.1	11.7				
Green Ratio (*g/C*)		0.61	0.87	0.65	0.67		0.26	0.26				
Capacity (*c*), veh/h		3072	1370	214	3387		465	435				
Volume-to-Capacity Ratio (*X*)		0.620	0.688	0.387	0.132		0.346	0.342				
Back of Queue (*Q*), ft/ln (95 th percentile)		227	251.4	50.7	24.9		215.5	214				
Back of Queue (*Q*), veh/ln (95 th percentile)		8.9	9.8	2.0	1.0		8.4	8.6				
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.72	0.29	0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh		7.6	3.1	12.3	2.7		44.8	49.3				
Incremental Delay (*d 2*), s/veh		1.0	2.8	2.3	0.1		1.7	1.8				
Initial Queue Delay (*d 3*), s/veh		0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (*d*), s/veh		8.6	5.9	14.7	2.8		46.5	51.1				
Level of Service (LOS)		A	A	B	A		D	D				
Approach Delay, s/veh / LOS	7.7	A		4.7	A		48.7	D		0.0		
Intersection Delay, s/veh / LOS	10.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.55	C	1.36	A	2.62	C	3.36	C
Bicycle LOS Score / LOS	2.05	B	0.78	A	1.00	A		

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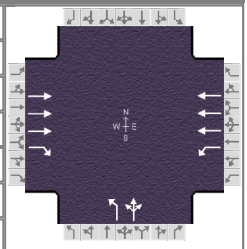
HCS7 Signalized Intersection Results Summary

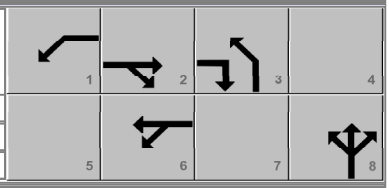
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM	PHF	0.97
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	1. MD 28 & Darnestown…	File Name	1TP1.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		552	380	208	1953		774	0	63			

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	11.5	74.5	49.5	0.0	0.0	0.0	
Yellow	3.5	3.5	4.5	0.0	0.0	0.0	
Red	1.0	1.0	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		10.0		
Phase Duration, s		79.0	16.0	95.0		55.0		
Change Period, (*Y+R c*), s		4.5	4.5	4.5		5.5		
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		6.2		
Queue Clearance Time (*g s*), s			10.6			45.6		
Green Extension Time (*g e*), s		0.0	0.9	0.0		2.3		
Phase Call Probability			1.00			1.00		
Max Out Probability			0.33			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3	8	18			
Adjusted Flow Rate (*v*), veh/h		569	392	214	2013		535	328				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685	1572	1767	1685		1767	1736				
Queue Service Time (*g s*), s		6.7	8.6	8.6	24.9		43.6	27.5				
Cycle Queue Clearance Time (*g c*), s		6.7	8.6	8.6	24.9		43.6	27.5				
Green Ratio (*g/C*)		0.50	0.83	0.59	0.60		0.33	0.33				
Capacity (*c*), veh/h		2511	1300	561	3050		583	573				
Volume-to-Capacity Ratio (*X*)		0.227	0.301	0.382	0.660		0.917	0.573				
Back of Queue (*Q*), ft/ln (95 th percentile)		113.9	102.7	146.4	217.3		715	464.8				
Back of Queue (*Q*), veh/ln (95 th percentile)		4.4	4.0	5.7	8.5		27.9	18.6				
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.29	0.84	0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh		13.9	3.0	14.9	8.3		48.3	59.8				
Incremental Delay (*d 2*), s/veh		0.2	0.6	0.5	0.6		16.7	2.9				
Initial Queue Delay (*d 3*), s/veh		0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (*d*), s/veh		14.1	3.6	15.4	8.9		65.0	62.8				
Level of Service (LOS)		B	A	B	A		E	E				
Approach Delay, s/veh / LOS	9.8	A		9.5	A		64.1	E		0.0		
Intersection Delay, s/veh / LOS	21.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	1.38	A	2.62	C	3.42	C
Bicycle LOS Score / LOS	1.02	A	1.71	B	1.91	B		

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HCS7 Two-Way Stop-Control Report

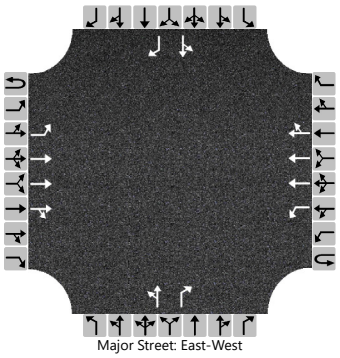
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	2. MD 28 & Johns Hopkins
Jurisdiction	Montgomery, MD
East/West Street	MD 28
North/South Street	Johns Hopkins Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	3	0		0	1	1		0	1	1
Configuration		L	T	TR		L	T	TR		LT		R		LT		R
Volume (veh/h)	0	74	1557	21	0	103	333	226		4	1	50		11	2	6
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No				No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3				5.3				6.4	6.5	7.1		6.4	6.5	7.1
Critical Headway (sec)		5.36				5.36				6.46	6.56	7.16		6.46	6.56	7.16
Base Follow-Up Headway (sec)		3.1				3.1				3.8	4.0	3.9		3.8	4.0	3.9
Follow-Up Headway (sec)		3.13				3.13				3.83	4.03	3.93		3.83	4.03	3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		76				106				5		52		13		6
Capacity, c (veh/h)		620				191				41		274		83		602
v/c Ratio		0.12				0.56				0.12		0.19		0.16		0.01
95% Queue Length, Q_{95} (veh)		0.4				2.9				0.4		0.7		0.5		0.0
Control Delay (s/veh)		11.6				45.3				104.2		21.1		56.4		11.0
Level of Service (LOS)		B				E				F		C		F		B
Approach Delay (s/veh)		0.5				7.0				28.7				42.1		
Approach LOS										D				E		

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HCS7 Two-Way Stop-Control Report

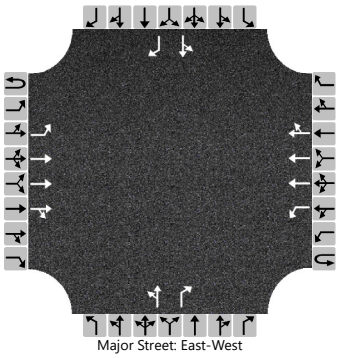
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing PM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	2. MD 28 & Johns Hopkins
Jurisdiction	Montgomery, MD
East/West Street	MD 28
North/South Street	Johns Hopkins Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	3	0		0	1	1		0	1	1
Configuration		L	T	TR		L	T	TR		LT		R		LT		R
Volume (veh/h)	0	7	490	0	0	69	1716	20		4	1	94		147	3	99
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No				No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3				5.3				6.4	6.5	7.1		6.4	6.5	7.1
Critical Headway (sec)		5.36				5.36				6.46	6.56	7.16		6.46	6.56	7.16
Base Follow-Up Headway (sec)		3.1				3.1				3.8	4.0	3.9		3.8	4.0	3.9
Follow-Up Headway (sec)		3.13				3.13				3.83	4.03	3.93		3.83	4.03	3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				71				5		97		155		102
Capacity, c (veh/h)		158				670				117		634		35		242
v/c Ratio		0.05				0.11				0.04		0.15		4.37		0.42
95% Queue Length, Q_{95} (veh)		0.1				0.4				0.1		0.5		18.1		2.0
Control Delay (s/veh)		28.9				11.0				37.3		11.7		1743.1		30.3
Level of Service (LOS)		D				B				E		B		F		D
Approach Delay (s/veh)		0.4				0.4				13.0				1062.1		
Approach LOS										B				F		

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HCS7 Two-Way Stop-Control Report

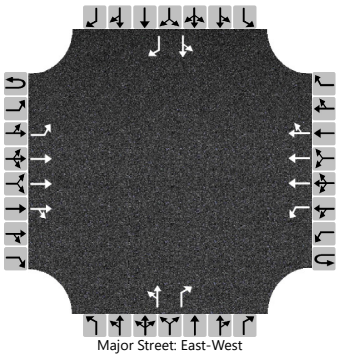
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	2. MD 28 & Johns Hopkins
Jurisdiction	Montgomery, MD
East/West Street	MD 28
North/South Street	Johns Hopkins Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	3	0		0	1	1		0	1	1
Configuration		L	T	TR		L	T	TR		LT		R		LT		R
Volume (veh/h)	0	215	1625	21	0	103	420	476		4	1	50		94	2	53
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No				No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3				5.3				6.4	6.5	7.1		6.4	6.5	7.1
Critical Headway (sec)		5.36				5.36				6.46	6.56	7.16		6.46	6.56	7.16
Base Follow-Up Headway (sec)		3.1				3.1				3.8	4.0	3.9		3.8	4.0	3.9
Follow-Up Headway (sec)		3.13				3.13				3.83	4.03	3.93		3.83	4.03	3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		222				106				5		52		99		55
Capacity, c (veh/h)		423				176						260				465
v/c Ratio		0.52				0.60						0.20				0.12
95% Queue Length, Q_{95} (veh)		3.0				3.3						0.7				0.4
Control Delay (s/veh)		22.5				52.6						22.2				13.8
Level of Service (LOS)		C				F						C				B
Approach Delay (s/veh)		2.6				5.4										
Approach LOS																

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HCS7 Two-Way Stop-Control Report

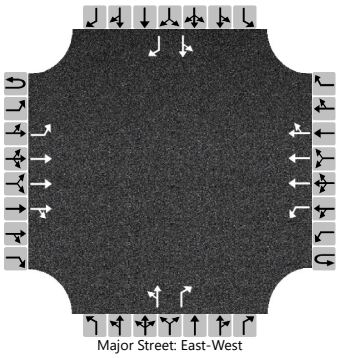
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	2. MD 28 & Johns Hopkins
Jurisdiction	Montgomery, MD
East/West Street	MD 28
North/South Street	Johns Hopkins Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	3	0		0	1	1		0	1	1
Configuration		L	T	TR		L	T	TR		LT		R		LT		R
Volume (veh/h)	0	40	586	0	0	69	1827	79		4	1	94		478	3	285
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No				No		
Median Type | Storage	Left + Thru									1						

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3				5.3				6.4	6.5	7.1		6.4	6.5	7.1
Critical Headway (sec)		5.36				5.36				6.46	6.56	7.16		6.46	6.56	7.16
Base Follow-Up Headway (sec)		3.1				3.1				3.8	4.0	3.9		3.8	4.0	3.9
Follow-Up Headway (sec)		3.13				3.13				3.83	4.03	3.93		3.83	4.03	3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		41				71				5		97		496		294
Capacity, c (veh/h)		129				601						590		27		212
v/c Ratio		0.32				0.12						0.16		18.36		1.39
95% Queue Length, Q_{95} (veh)		1.3				0.4						0.6		61.6		16.8
Control Delay (s/veh)		45.6				11.8						12.3		8087.1		244.5
Level of Service (LOS)		E				B						B		F		F
Approach Delay (s/veh)	2.9				0.4								5169.1			
Approach LOS													F			

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HCS7 Two-Way Stop-Control Report

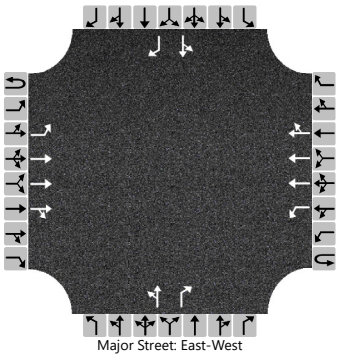
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	2. MD 28 & Johns Hopkins
Jurisdiction	Montgomery, MD
East/West Street	MD 28
North/South Street	Johns Hopkins Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	3	0		0	1	1		0	1	1
Configuration		L	T	TR		L	T	TR		LT		R		LT		R
Volume (veh/h)	0	215	1625	24	0	106	420	476		12	1	58		94	2	53
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No				No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3				5.3				6.4	6.5	7.1		6.4	6.5	7.1
Critical Headway (sec)		5.36				5.36				6.46	6.56	7.16		6.46	6.56	7.16
Base Follow-Up Headway (sec)		3.1				3.1				3.8	4.0	3.9		3.8	4.0	3.9
Follow-Up Headway (sec)		3.13				3.13				3.83	4.03	3.93		3.83	4.03	3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		222				109				13		60		99		55
Capacity, c (veh/h)		423				175						259				465
v/c Ratio		0.52				0.62						0.23				0.12
95% Queue Length, Q_{95} (veh)		3.0				3.5						0.9				0.4
Control Delay (s/veh)		22.5				54.6						23.0				13.8
Level of Service (LOS)		C				F						C				B
Approach Delay (s/veh)		2.6				5.8										
Approach LOS																

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HCS7 Two-Way Stop-Control Report

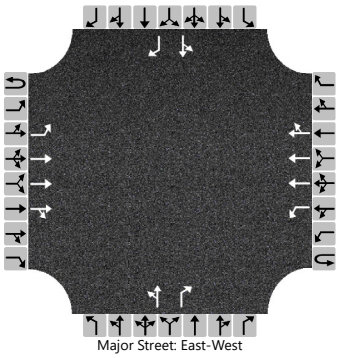
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	2. MD 28 & Johns Hopkins
Jurisdiction	Montgomery, MD
East/West Street	MD 28
North/South Street	Johns Hopkins Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	3	0		0	1	1		0	1	1
Configuration		L	T	TR		L	T	TR		LT		R		LT		R
Volume (veh/h)	0	40	586	10	0	77	1827	79		11	1	99		478	3	285
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No				No		
Median Type | Storage	Left + Thru									1						

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3				5.3				6.4	6.5	7.1		6.4	6.5	7.1
Critical Headway (sec)		5.36				5.36				6.46	6.56	7.16		6.46	6.56	7.16
Base Follow-Up Headway (sec)		3.1				3.1				3.8	4.0	3.9		3.8	4.0	3.9
Follow-Up Headway (sec)		3.13				3.13				3.83	4.03	3.93		3.83	4.03	3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		41				79				12		102		496		294
Capacity, c (veh/h)		129				595						585		26		212
v/c Ratio		0.32				0.13						0.17		19.15		1.39
95% Queue Length, Q_{95} (veh)		1.3				0.5						0.6		61.8		16.8
Control Delay (s/veh)		45.6				12.0						12.4		8454.2		244.5
Level of Service (LOS)		E				B						B		F		F
Approach Delay (s/veh)	2.9				0.5								5399.7			
Approach LOS													F			

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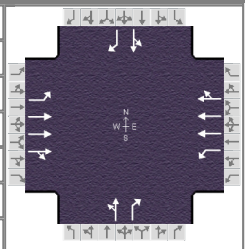
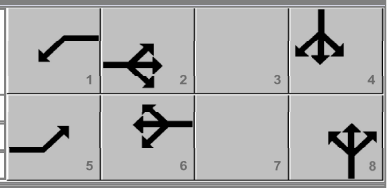
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM	PHF	0.97
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	2. MD 28 & Medical Ctr Dr	File Name	2TA-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	215	1625	24	106	420	476	12	1	58	94	2	53

Signal Information					EB			WB					
Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	4.6	2.8		110.0	13.1	0.0	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	0.0		4.5	5.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	0.0		2.0	2.0	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		7.0		7.0
Phase Duration, s	13.4	119.3	10.6	116.5		20.1		20.1
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		7.0		7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0		4.3		4.3
Queue Clearance Time (g_s), s	6.7		4.3			7.4		12.3
Green Extension Time (g_e), s	0.8	0.0	0.3	0.0		0.8		0.8
Phase Call Probability	1.00		0.99			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	222	1136	564	109	433	491		13	60		99	55
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1841	1767	1856			1436	1572		1412	1572
Queue Service Time (g_s), s	4.7	0.0	0.8	2.3	0.5			0.0	5.4		9.1	4.9
Cycle Queue Clearance Time (g_c), s	4.7	0.0	0.8	2.3	0.5			1.2	5.4		10.3	4.9
Green Ratio (*g/C*)	0.78	0.75	0.75	0.76	0.73			0.09	0.09		0.09	0.09
Capacity (*c*), veh/h	503	2791	1385	312	2721			171	137		171	137
Volume-to-Capacity Ratio (*X*)	0.441	0.407	0.407	0.350	0.159			0.078	0.436		0.580	0.399
Back of Queue (*Q*), ft/ln (95 th percentile)	69.9	7	22.1	37.3	8.7			22.3	104.5		178.9	94.9
Back of Queue (*Q*), veh/ln (95 th percentile)	2.7	0.3	0.9	1.5	0.3			0.9	4.1		7.0	3.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.21	0.00	0.00	0.11	0.00			0.00	0.70		0.00	0.32
Uniform Delay (d_1), s/veh	5.8	0.0	0.2	4.5	0.4			63.0	65.0		67.2	64.7
Incremental Delay (d_2), s/veh	0.5	0.4	0.8	0.7	0.1			0.2	2.2		3.1	1.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	6.3	0.4	1.0	5.1	0.6	0.0		63.2	67.1		70.3	66.6
Level of Service (LOS)	A	A	A	A	A	A		E	E		E	E
Approach Delay, s/veh / LOS	1.3	A		0.8	A		66.4	E		69.0	E	
Intersection Delay, s/veh / LOS	5.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.05	B	2.28	B	3.23	C	3.13	C
Bicycle LOS Score / LOS	1.54	B	1.06	A	0.61	A	0.74	A

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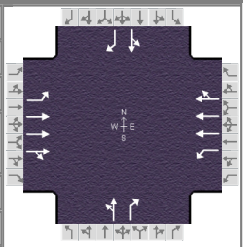
HCS7 Signalized Intersection Results Summary

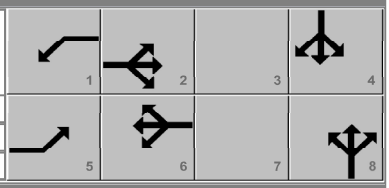
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM w. Improvement	PHF	0.97
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	2. MD 28 & Medical Ctr Dr	File Name	2TP-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	586	10	77	1827	79	11	1	99	478	3	285

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	2.4	61.8	63.0	0.0	0.0
Yellow	4.0	0.0	4.5	5.0	0.0	0.0
Red	2.0	0.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		7.0		7.0
Phase Duration, s	9.4	68.3	11.7	70.6		70.0		70.0
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		7.0		7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0		4.2		4.2
Queue Clearance Time (g_s), s	4.0		5.9			8.0		49.3
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0		3.8		3.1
Phase Call Probability	0.82		0.96			1.00		1.00
Max Out Probability	0.00		0.11			0.00		0.13

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	41	410	204	79	1319	646		12	102		496	253
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1839	1767	1856			1433	1572		1407	1572
Queue Service Time (g_s), s	2.0	8.8	8.9	3.9	43.5			0.0	6.0		46.6	16.6
Cycle Queue Clearance Time (g_c), s	2.0	8.8	8.9	3.9	43.5			0.7	6.0		47.3	16.6
Green Ratio (*g/C*)	0.43	0.41	0.41	0.45	0.43			0.42	0.42		0.42	0.42
Capacity (*c*), veh/h	114	1528	757	398	1587			648	660		639	660
Volume-to-Capacity Ratio (*X*)	0.363	0.269	0.269	0.199	0.831			0.019	0.155		0.776	0.382
Back of Queue (*Q*), ft/ln (95 th percentile)	42.1	171.8	177.9	76.1	637.8			12.7	111.2		629.2	280.4
Back of Queue (*Q*), veh/ln (95 th percentile)	1.6	6.7	6.9	3.0	24.9			0.5	4.3		24.6	11.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.13	0.00	0.00	0.23	0.00			0.00	0.74		0.00	0.93
Uniform Delay (d_1), s/veh	32.5	21.9	22.3	24.0	27.8			25.4	27.0		39.0	30.1
Incremental Delay (d_2), s/veh	1.9	0.4	0.9	0.2	5.2			0.1	0.5		9.0	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	34.4	22.3	23.1	24.3	33.0	0.0		25.5	27.5		47.9	31.7
Level of Service (LOS)	C	C	C	C	C	A		C	C		D	C
Approach Delay, s/veh / LOS	23.3	C		22.2	C		27.3	C		42.5	D	
Intersection Delay, s/veh / LOS	26.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.05	B	2.03	B	3.37	C	3.22	C
Bicycle LOS Score / LOS	0.85	A	1.61	B	0.68	A	1.72	B

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HCS7 Two-Way Stop-Control Report

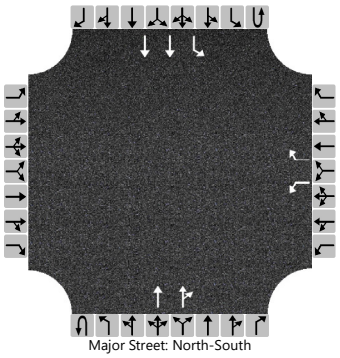
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						8		74			695	9	0	223	2152	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						8		76						230		
Capacity, c (veh/h)						24		631						866		
v/c Ratio						0.34		0.12						0.27		
95% Queue Length, Q_{95} (veh)						1.0		0.4						1.1		
Control Delay (s/veh)						220.1		11.5						10.6		
Level of Service (LOS)						F		B						B		
Approach Delay (s/veh)						31.8								1.0		
Approach LOS						D										

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HCS7 Two-Way Stop-Control Report

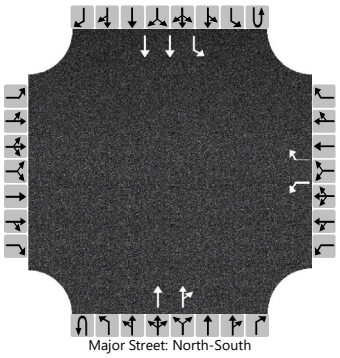
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						10		87			2198	22	0	47	703	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11		92						49		
Capacity, c (veh/h)						11		185						205		
v/c Ratio						0.95		0.50						0.24		
95% Queue Length, Q_{95} (veh)						2.0		2.4						0.9		
Control Delay (s/veh)						694.6		42.3						28.0		
Level of Service (LOS)						F		E						D		
Approach Delay (s/veh)						109.5								1.8		
Approach LOS						F										

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HCS7 Two-Way Stop-Control Report

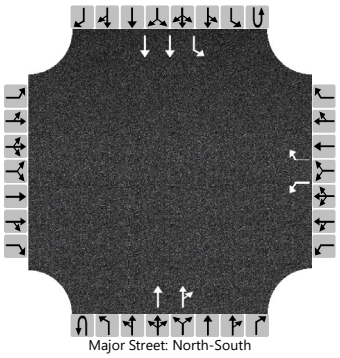
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						85		190			778	66	0	299	2379	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						88		196						308		
Capacity, c (veh/h)						10		566						764		
v/c Ratio						8.38		0.35						0.40		
95% Queue Length, Q_{95} (veh)						12.3		1.5						2.0		
Control Delay (s/veh)						4025.1		14.7						12.9		
Level of Service (LOS)						F		B						B		
Approach Delay (s/veh)						1254.3								1.4		
Approach LOS						F										

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HCS7 Two-Way Stop-Control Report

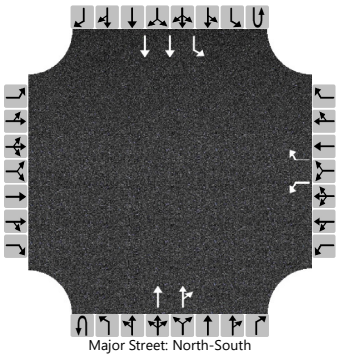
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						88		203			2500	104	0	177	764	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						93		214						186		
Capacity, c (veh/h)								135						141		
v/c Ratio								1.59						1.32		
95% Queue Length, Q_{95} (veh)								15.1						11.6		
Control Delay (s/veh)								354.1						244.5		
Level of Service (LOS)								F						F		
Approach Delay (s/veh)														46.0		
Approach LOS																

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HCS7 Two-Way Stop-Control Report

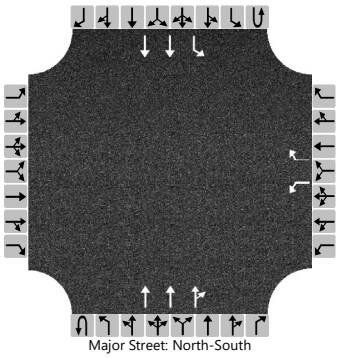
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM with imp
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	3	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						85		190			778	65	0	299	2379	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						6.4		7.1						5.3		
Critical Headway (sec)						5.76		7.16						5.36		
Base Follow-Up Headway (sec)						3.8		3.9						3.1		
Follow-Up Headway (sec)						3.83		3.93						3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						88		196						308		
Capacity, c (veh/h)						12		485						449		
v/c Ratio						7.13		0.40						0.69		
95% Queue Length, Q_{95} (veh)						12.1		1.9						5.1		
Control Delay (s/veh)						3362.4		17.4						28.8		
Level of Service (LOS)						F		C						D		
Approach Delay (s/veh)						1051.3								3.2		
Approach LOS						F										

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HCS7 Two-Way Stop-Control Report

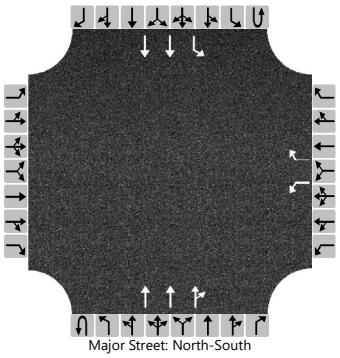
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM with imp
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	3	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						88		203			2500	104	0	177	764	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						6.4		7.1						5.3		
Critical Headway (sec)						5.76		7.16						5.36		
Base Follow-Up Headway (sec)						3.8		3.9						3.1		
Follow-Up Headway (sec)						3.83		3.93						3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						93		214						186		
Capacity, c (veh/h)								116						51		
v/c Ratio								1.85						3.65		
95% Queue Length, Q_{95} (veh)								17.0						20.3		
Control Delay (s/veh)								476.2						1360.0		
Level of Service (LOS)								F						F		
Approach Delay (s/veh)														255.8		
Approach LOS																

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HCS7 Two-Way Stop-Control Report

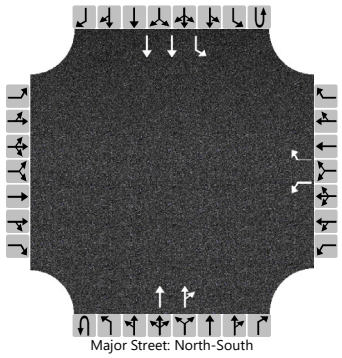
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						85		190			831	66	0	299	2396	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						88		196						308		
Capacity, c (veh/h)						9		544						728		
v/c Ratio						9.60		0.36						0.42		
95% Queue Length, Q_{95} (veh)						12.5		1.6						2.1		
Control Delay (s/veh)						4669.5		15.3						13.5		
Level of Service (LOS)						F		C						B		
Approach Delay (s/veh)						1453.9								1.5		
Approach LOS						F										

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HCS7 Two-Way Stop-Control Report

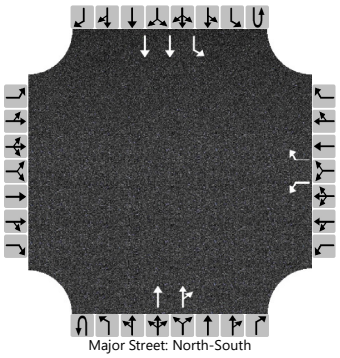
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						88		203			2534	104	0	177	817	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						93		214						186		
Capacity, c (veh/h)								131						137		
v/c Ratio								1.63						1.36		
95% Queue Length, Q_{95} (veh)								15.5						12.0		
Control Delay (s/veh)								374.9						264.2		
Level of Service (LOS)								F						F		
Approach Delay (s/veh)														47.0		
Approach LOS																

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HCS7 Two-Way Stop-Control Report

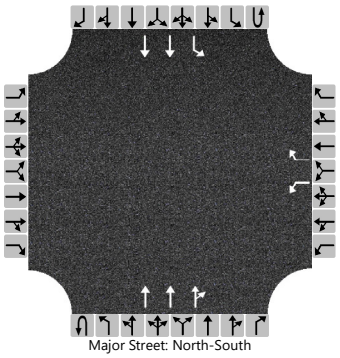
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM with improvement
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	3	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						85		190			831	66	0	299	2396	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						6.4		7.1						5.3		
Critical Headway (sec)						5.76		7.16						5.36		
Base Follow-Up Headway (sec)						3.8		3.9						3.1		
Follow-Up Headway (sec)						3.83		3.93						3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						88		196						308		
Capacity, c (veh/h)						10		465						422		
v/c Ratio						9.00		0.42						0.73		
95% Queue Length, Q_{95} (veh)						12.4		2.1						5.8		
Control Delay (s/veh)						4349.4		18.3						33.3		
Level of Service (LOS)						F		C						D		
Approach Delay (s/veh)						1357.0								3.7		
Approach LOS						F										

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HCS7 Two-Way Stop-Control Report

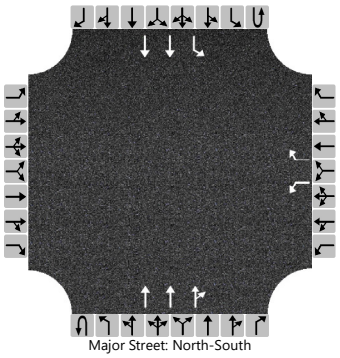
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM with improvement
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	3. MD 119 & Docoverly Dr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Docoverly Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	3	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						88		203			2534	104	0	177	817	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						6.4		7.1						5.3		
Critical Headway (sec)						5.76		7.16						5.36		
Base Follow-Up Headway (sec)						3.8		3.9						3.1		
Follow-Up Headway (sec)						3.83		3.93						3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						93		214						186		
Capacity, c (veh/h)								112						49		
v/c Ratio								1.90						3.82		
95% Queue Length, Q_{95} (veh)								17.3						20.6		
Control Delay (s/veh)								501.1						1438.8		
Level of Service (LOS)								F						F		
Approach Delay (s/veh)														256.2		
Approach LOS																

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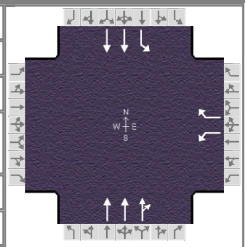
HCS7 Signalized Intersection Results Summary

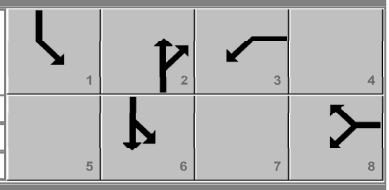
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	6/15/2020	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background AM w. Imp.	PHF	0.97
Urban Street	MD 119	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	3. MD 119 & Decoverly Dr	File Name	3BA-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				85		190		778	66	299	2379	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.0	65.0	29.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0
Red	1.0	1.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				35.0		70.0	15.0	85.0
Change Period, ($Y+R_c$), s				6.0		5.0	5.0	5.0
Max Allow Headway (*MAH*), s				4.1		0.0	4.0	0.0
Queue Clearance Time (g_s), s				14.9			11.1	
Green Extension Time (g_e), s				0.8		0.0	0.0	0.0
Phase Call Probability				1.00			1.00	
Max Out Probability				0.00			1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1	6	
Adjusted Flow Rate (*v*), veh/h				88		196		587	283	308	2453	
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1767		1572		1856	1779	1767	1766	
Queue Service Time (g_s), s				4.7		12.9		10.3	7.7	9.1	80.0	
Cycle Queue Clearance Time (g_c), s				4.7		12.9		10.3	7.7	9.1	80.0	
Green Ratio (*g/C*)				0.24		0.24		0.54	0.54	0.64	0.67	
Capacity (*c*), veh/h				427		380		2010	963	495	2355	
Volume-to-Capacity Ratio (*X*)				0.205		0.515		0.292	0.294	0.623	1.041	
Back of Queue (*Q*), ft/ln (50 th percentile)				54		136.4		59.5	67.5	85.9	348.7	
Back of Queue (*Q*), veh/ln (50 th percentile)				2.1		5.3		2.3	2.7	3.4	13.6	
Queue Storage Ratio (*RQ*) (50 th percentile)				0.00		0.00		0.00	0.00	0.43	0.00	
Uniform Delay (d_1), s/veh				36.3		39.4		8.6	10.1	10.6	6.7	
Incremental Delay (d_2), s/veh				1.1		4.9		0.2	0.5	2.4	30.4	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh				37.4		44.3		8.8	10.6	13.0	37.0	
Level of Service (LOS)				D		D		A	B	B	F	
Approach Delay, s/veh / LOS	0.0			42.2		D	9.4		A	34.4		C
Intersection Delay, s/veh / LOS	29.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.32	B	2.48	B	1.90	B	0.68	A
Bicycle LOS Score / LOS				F	0.97	A	2.77	C

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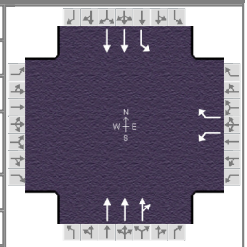
HCS7 Signalized Intersection Results Summary

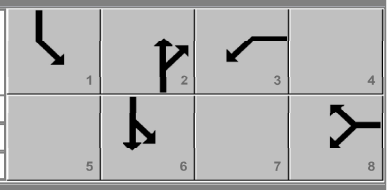
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	6/15/2020	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background PM w. Imp.	PHF	0.95
Urban Street	MD 119	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	3. MD 119 & Decoverly Dr	File Name	3BP-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				88		203		2500	104	177	764	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.7	64.3	29.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0
Red	1.0	1.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				35.0		69.3	15.7	85.0
Change Period, ($Y+R_c$), s				6.0		5.0	5.0	5.0
Max Allow Headway (*MAH*), s				4.1		0.0	4.0	0.0
Queue Clearance Time (g_s), s				16.3			10.3	
Green Extension Time (g_e), s				0.9		0.0	0.4	0.0
Phase Call Probability				1.00			1.00	
Max Out Probability				0.01			0.01	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1	6	
Adjusted Flow Rate (*v*), veh/h				93		214		1830	911	186	804	
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1767		1572		1856	1816	1767	1766	
Queue Service Time (g_s), s				5.0		14.3		63.9	52.5	8.3	4.4	
Cycle Queue Clearance Time (g_c), s				5.0		14.3		63.9	52.5	8.3	4.4	
Green Ratio (*g/C*)				0.24		0.24		0.54	0.54	0.64	0.67	
Capacity (*c*), veh/h				427		380		1990	974	217	2355	
Volume-to-Capacity Ratio (*X*)				0.217		0.562		0.920	0.935	0.858	0.341	
Back of Queue (*Q*), ft/ln (50 th percentile)				57.3		152		345.9	427.8	152.5	30.5	
Back of Queue (*Q*), veh/ln (50 th percentile)				2.2		5.9		13.5	17.1	6.0	1.2	
Queue Storage Ratio (*RQ*) (50 th percentile)				0.00		0.00		0.00	0.00	0.76	0.00	
Uniform Delay (d_1), s/veh				36.4		39.9		15.0	16.6	38.3	2.5	
Incremental Delay (d_2), s/veh				1.2		5.9		5.8	12.2	10.9	0.4	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh				37.6		45.8		20.8	28.8	49.2	2.9	
Level of Service (LOS)				D		D		C	C	D	A	
Approach Delay, s/veh / LOS	0.0			43.3		D	23.4		C	11.6		B
Intersection Delay, s/veh / LOS	22.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.32	B	2.48	B	1.90	B	0.68	A
Bicycle LOS Score / LOS				F	2.00	B	1.30	A

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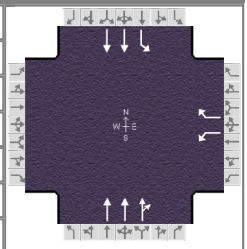
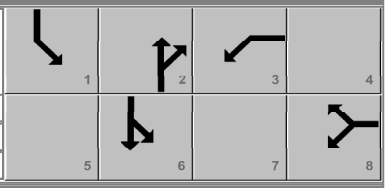
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	6/15/2020	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM w. Imp.	PHF	0.97
Urban Street	MD 119	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	3. MD 119 & Decoverly Dr	File Name	3TA-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				85		190		831	66	299	2396	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.0	65.0	29.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0
Red	1.0	1.0	2.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				35.0		70.0	15.0	85.0
Change Period, (*Y+R c*), s				6.0		5.0	5.0	5.0
Max Allow Headway (*MAH*), s				4.1		0.0	4.0	0.0
Queue Clearance Time (*g s*), s				14.9			11.1	
Green Extension Time (*g e*), s				0.8		0.0	0.0	0.0
Phase Call Probability				1.00			1.00	
Max Out Probability				0.00			1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1	6	
Adjusted Flow Rate (*v*), veh/h				88		196		624	301	308	2470	
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1767		1572		1856	1783	1767	1766	
Queue Service Time (*g s*), s				4.7		12.9		11.1	8.2	9.1	80.0	
Cycle Queue Clearance Time (*g c*), s				4.7		12.9		11.1	8.2	9.1	80.0	
Green Ratio (*g/C*)				0.24		0.24		0.54	0.54	0.64	0.67	
Capacity (*c*), veh/h				427		380		2010	966	477	2355	
Volume-to-Capacity Ratio (*X*)				0.205		0.515		0.310	0.312	0.647	1.049	
Back of Queue (*Q*), ft/ln (50 th percentile)				54		136.4		63.7	71.9	87.6	369.8	
Back of Queue (*Q*), veh/ln (50 th percentile)				2.1		5.3		2.5	2.9	3.4	14.4	
Queue Storage Ratio (*RQ*) (50 th percentile)				0.00		0.00		0.00	0.00	0.44	0.00	
Uniform Delay (*d 1*), s/veh				36.3		39.4		8.6	10.1	10.8	6.7	
Incremental Delay (*d 2*), s/veh				1.1		4.9		0.3	0.5	3.0	32.9	
Initial Queue Delay (*d 3*), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh				37.4		44.3		8.9	10.6	13.8	39.6	
Level of Service (LOS)				D		D		A	B	B	F	
Approach Delay, s/veh / LOS	0.0			42.2		D	9.5		A	36.7		D
Intersection Delay, s/veh / LOS	30.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.32	B	2.48	B	1.90	B	0.68	A
Bicycle LOS Score / LOS				F	1.00	A	2.78	C

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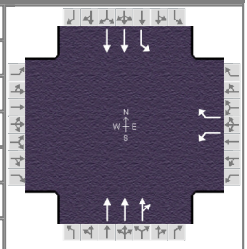
HCS7 Signalized Intersection Results Summary

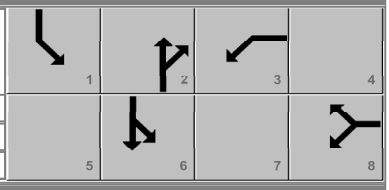
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	6/15/2020	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM w. Imp.	PHF	0.95
Urban Street	MD 119	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	3. MD 119 & Decoverly Dr	File Name	3TP-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				88		203		2534	104	177	817	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.7	64.3	29.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0
Red	1.0	1.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				35.0		69.3	15.7	85.0
Change Period, (*Y+R c*), s				6.0		5.0	5.0	5.0
Max Allow Headway (*MAH*), s				4.1		0.0	4.0	0.0
Queue Clearance Time (*g s*), s				16.3			10.3	
Green Extension Time (*g e*), s				0.9		0.0	0.4	0.0
Phase Call Probability				1.00			1.00	
Max Out Probability				0.01			0.01	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1	6	
Adjusted Flow Rate (*v*), veh/h				93		214		1854	923	186	860	
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1767		1572		1856	1817	1767	1766	
Queue Service Time (*g s*), s				5.0		14.3		65.5	54.6	8.3	4.8	
Cycle Queue Clearance Time (*g c*), s				5.0		14.3		65.5	54.6	8.3	4.8	
Green Ratio (*g/C*)				0.24		0.24		0.54	0.54	0.64	0.67	
Capacity (*c*), veh/h				427		380		1989	974	217	2355	
Volume-to-Capacity Ratio (*X*)				0.217		0.562		0.932	0.948	0.858	0.365	
Back of Queue (*Q*), ft/ln (50 th percentile)				57.3		152		364.4	451.4	152.5	32.8	
Back of Queue (*Q*), veh/ln (50 th percentile)				2.2		5.9		14.2	18.1	6.0	1.3	
Queue Storage Ratio (*RQ*) (50 th percentile)				0.00		0.00		0.00	0.00	0.76	0.00	
Uniform Delay (*d 1*), s/veh				36.4		39.9		15.2	16.9	38.4	2.5	
Incremental Delay (*d 2*), s/veh				1.2		5.9		6.6	13.8	10.9	0.4	
Initial Queue Delay (*d 3*), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh				37.6		45.8		21.9	30.7	49.3	2.9	
Level of Service (LOS)				D		D		C	C	D	A	
Approach Delay, s/veh / LOS	0.0			43.3		D	24.8		C	11.2		B
Intersection Delay, s/veh / LOS	22.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.32	B	2.48	B	1.90	B	0.68	A
Bicycle LOS Score / LOS				F	2.01	B	1.35	A

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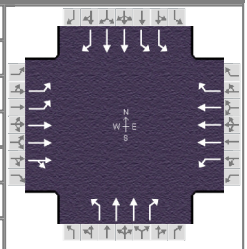
HCS7 Signalized Intersection Results Summary

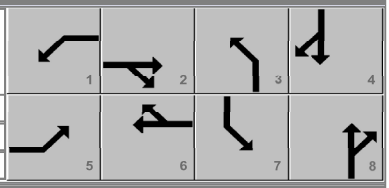
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing AM	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4EA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	171	1289	96	47	398	166	13	341	48	831	1036	247

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	4.8	56.9	1.7	33.6	22.1	
Yellow	4.0	0.0	4.5	4.0	0.0	5.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	16.2	68.2	11.4	63.4	7.7	29.1	41.4	62.7
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	9.7		6.1		3.1	16.0	38.6	41.0
Green Extension Time (g_e), s	0.6	0.0	0.1	0.0	0.0	6.1	2.7	7.5
Phase Call Probability	1.00		0.87		0.43	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.33	0.24	0.12

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	178	974	469	49	415	173	14	355	50	866	1079	168
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1787	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	7.7	27.3	28.3	4.1	6.8		1.1	14.0	4.2	36.6	39.0	11.3
Cycle Queue Clearance Time (g_c), s	7.7	27.3	28.3	4.1	6.8		1.1	14.0	4.2	36.6	39.0	11.3
Green Ratio (*g/C*)	0.07	0.41	0.41	0.04	0.38		0.01	0.15	0.15	0.28	0.37	0.37
Capacity (*c*), veh/h	233	1526	735	63	1916		20	520	231	946	1312	584
Volume-to-Capacity Ratio (*X*)	0.763	0.638	0.638	0.771	0.216		0.666	0.683	0.216	0.915	0.822	0.287
Back of Queue (*Q*), ft/ln (95 th percentile)	160.3	417.9	439.9	99.6	124.2		31.7	256.1	76.9	598.2	551.8	195.3
Back of Queue (*Q*), veh/ln (95 th percentile)	6.3	16.3	17.2	3.9	4.9		1.2	10.0	3.0	23.4	21.6	7.6
Queue Storage Ratio (*RQ*) (95 th percentile)	0.64	0.00	0.00	0.33	0.00		0.13	0.00	0.31	1.33	0.00	0.49
Uniform Delay (d_1), s/veh	68.7	26.1	28.0	71.7	24.7		73.9	57.0	56.3	52.6	33.7	33.2
Incremental Delay (d_2), s/veh	4.6	1.8	3.8	17.5	0.3		31.5	1.7	0.5	10.7	3.5	0.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	73.3	28.0	31.8	89.2	25.0	0.0	105.4	58.7	56.8	63.3	37.1	33.4
Level of Service (LOS)	E	C	C	F	C	A	F	E	E	E	D	C
Approach Delay, s/veh / LOS	34.1	C		23.1	C		60.0	E		47.5	D	
Intersection Delay, s/veh / LOS	40.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.93	C	3.33	C	3.28	C	3.17	C
Bicycle LOS Score / LOS	1.38	A	0.84	A	0.83	A	2.23	B

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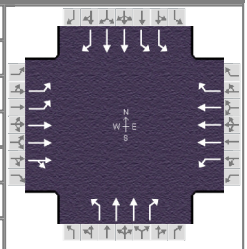
HCS7 Signalized Intersection Results Summary

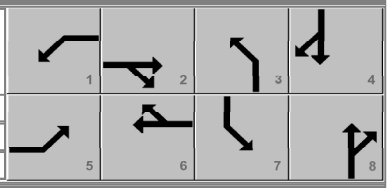
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing PM	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4EP.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	247	430	23	52	1619	1057	75	844	39	206	376	133

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	1.8	62.9	11.9	2.5	39.4						
Yellow	4.0	4.0	4.5	0.0	0.0	5.0						
Red	2.0	2.0	2.0	0.0	0.0	2.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	19.8	77.1	12.0	69.4	14.4	48.9	11.9	46.4
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	13.2		6.6		8.6	37.6	11.3	14.8
Green Extension Time (g_e), s	0.6	0.0	0.1	0.0	0.1	4.3	0.6	6.8
Phase Call Probability	1.00		0.90		0.96	1.00	1.00	1.00
Max Out Probability	0.07		0.00		0.00	0.46	0.00	0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	260	319	157	55	1704	1113	79	888	41	217	396	140
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1806	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	11.2	5.4	5.8	4.6	40.5		6.6	35.6	2.9	9.3	12.8	10.8
Cycle Queue Clearance Time (g_c), s	11.2	5.4	5.8	4.6	40.5		6.6	35.6	2.9	9.3	12.8	10.8
Green Ratio (*g/C*)	0.09	0.47	0.47	0.04	0.42		0.06	0.28	0.28	0.08	0.26	0.26
Capacity (*c*), veh/h	315	1748	850	71	2119		99	987	440	273	929	413
Volume-to-Capacity Ratio (*X*)	0.825	0.183	0.185	0.773	0.804		0.797	0.900	0.093	0.795	0.426	0.339
Back of Queue (*Q*), ft/ln (95 th percentile)	226.4	105.5	113.8	103.8	495.6		152.4	558	51.4	193.4	230.5	193.1
Back of Queue (*Q*), veh/ln (95 th percentile)	8.8	4.1	4.4	4.1	19.4		6.0	21.8	2.0	7.6	9.0	7.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.91	0.00	0.00	0.35	0.00		0.61	0.00	0.21	0.43	0.00	0.48
Uniform Delay (d_1), s/veh	66.9	15.8	16.9	71.3	28.2		70.0	45.1	40.0	67.8	40.1	44.7
Incremental Delay (d_2), s/veh	6.7	0.2	0.5	9.3	1.8		13.5	9.3	0.1	5.2	0.3	0.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	73.7	16.0	17.3	80.6	30.0	0.0	83.4	54.4	40.1	73.1	40.4	45.2
Level of Service (LOS)	E	B	B	F	C	A	F	D	D	E	D	D
Approach Delay, s/veh / LOS	36.6	D		19.3	B		56.1	E		50.7	D	
Intersection Delay, s/veh / LOS	33.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.88	C	3.23	C	3.41	C	3.24	C
Bicycle LOS Score / LOS	0.89	A	2.07	B	1.32	A	1.11	A

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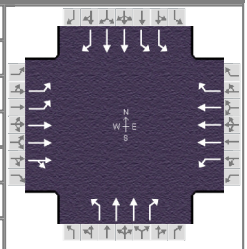
HCS7 Signalized Intersection Results Summary

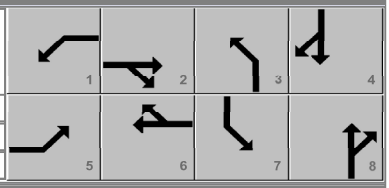
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background AM	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4BA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	235	1335	137	47	529	166	34	417	48	831	1155	432

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	1.8	50.6	3.9	31.5	25.4	
Yellow	4.0	4.0	4.5	4.0	0.0	5.0	
Red	2.0	2.0	2.0	2.0	0.0	2.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	19.1	64.9	11.4	57.1	9.9	32.4	41.4	63.9
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	12.5		6.1		5.0	19.1	38.6	48.3
Green Extension Time (g_e), s	0.6	0.0	0.1	0.0	0.0	6.3	2.7	7.2
Phase Call Probability	1.00		0.87		0.77	1.00	1.00	1.00
Max Out Probability	0.02		0.00		0.00	0.60	0.24	0.51

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	245	1039	494	49	551	173	35	434	50	866	1203	327
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1764	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	10.5	32.3	33.3	4.1	10.5		3.0	17.1	4.1	36.6	46.3	24.5
Cycle Queue Clearance Time (g_c), s	10.5	32.3	33.3	4.1	10.5		3.0	17.1	4.1	36.6	46.3	24.5
Green Ratio (*g/C*)	0.09	0.39	0.39	0.04	0.34		0.03	0.17	0.17	0.28	0.38	0.38
Capacity (*c*), veh/h	301	1444	686	63	1705		46	598	266	946	1339	596
Volume-to-Capacity Ratio (*X*)	0.814	0.720	0.720	0.773	0.323		0.775	0.726	0.188	0.915	0.898	0.549
Back of Queue (*Q*), ft/ln (95 th percentile)	208.4	490.9	516.2	99.7	190.8		75.2	301.5	74.5	598.2	655.5	364.7
Back of Queue (*Q*), veh/ln (95 th percentile)	8.1	19.2	20.2	3.9	7.5		2.9	11.8	2.9	23.4	25.6	14.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.83	0.00	0.00	0.33	0.00		0.30	0.00	0.30	1.33	0.00	0.91
Uniform Delay (d_1), s/veh	67.2	29.8	32.4	71.7	30.2		72.6	54.9	53.5	52.6	34.5	36.5
Incremental Delay (d_2), s/veh	4.8	2.8	5.7	17.7	0.5		23.7	3.2	0.3	10.7	7.6	0.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	72.0	32.6	38.1	89.4	30.7	0.0	96.4	58.0	53.8	63.3	42.0	37.4
Level of Service (LOS)	E	C	D	F	C	A	F	E	D	E	D	D
Approach Delay, s/veh / LOS	39.5	D		27.6	C		60.2	E		49.1	D	
Intersection Delay, s/veh / LOS	44.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.00	C	3.44	C	3.32	C	3.27	C
Bicycle LOS Score / LOS	1.47	A	0.91	A	0.92	A	2.46	B

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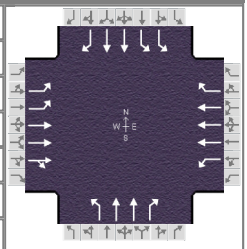
HCS7 Signalized Intersection Results Summary

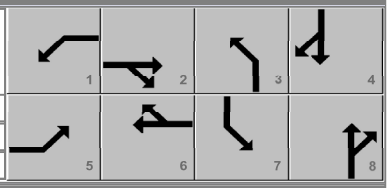
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background PM	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4BP.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	473	612	42	52	1661	1057	128	1002	39	206	440	208

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	4.4		55.5	11.9	1.4	39.2					
Yellow	4.0	4.0		4.5	0.0	4.0	5.0					
Red	2.0	2.0		2.0	0.0	2.0	2.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.4	72.4	12.0	62.0	19.4	53.7	11.9	46.2
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	18.4		6.6		13.3	45.5	11.3	19.9
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.1	1.1	0.6	7.8
Phase Call Probability	1.00		0.90		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		0.51	1.00	0.00	0.21

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	498	463	226	55	1748	1113	135	1055	41	217	463	219
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1792	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	16.4	9.3	9.9	4.6	48.8		11.3	43.5	2.8	9.3	15.5	17.9
Cycle Queue Clearance Time (g_c), s	16.4	9.3	9.9	4.6	48.8		11.3	43.5	2.8	9.3	15.5	17.9
Green Ratio (*g/C*)	0.11	0.44	0.44	0.04	0.37		0.09	0.31	0.31	0.08	0.26	0.26
Capacity (*c*), veh/h	376	1631	788	71	1869		157	1099	489	273	924	411
Volume-to-Capacity Ratio (*X*)	1.324	0.284	0.286	0.776	0.935		0.856	0.960	0.084	0.795	0.501	0.532
Back of Queue (*Q*), ft/ln (95 th percentile)	627.6	178	191.4	103.9	623.8		230.5	644	48.7	193.4	266.1	290.7
Back of Queue (*Q*), veh/ln (95 th percentile)	24.5	7.0	7.5	4.1	24.4		9.0	25.2	1.9	7.6	10.4	11.4
Queue Storage Ratio (*RQ*) (95 th percentile)	2.51	0.00	0.00	0.35	0.00		0.92	0.00	0.19	0.43	0.00	0.73
Uniform Delay (d_1), s/veh	66.8	19.3	20.8	71.3	36.3		67.4	43.0	36.5	67.8	41.1	47.5
Incremental Delay (d_2), s/veh	162.9	0.4	0.9	9.4	6.2		16.4	14.3	0.1	5.2	0.4	1.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	229.7	19.8	21.7	80.8	42.5	0.0	83.8	57.2	36.6	73.1	41.6	48.8
Level of Service (LOS)	F	B	C	F	D	A	F	E	D	E	D	D
Approach Delay, s/veh / LOS	108.2	F		27.0	C		59.5	E		50.9	D	
Intersection Delay, s/veh / LOS	52.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.97	C	3.30	C	3.45	C	3.35	C
Bicycle LOS Score / LOS	1.14	A	2.09	B	1.50	B	1.23	A

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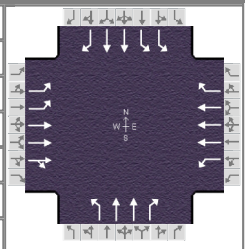
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4TA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	240	1338	137	57	530	166	34	465	80	831	1170	434

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.5	0.9	49.1	3.9	31.5	26.8	1	2	3	4		
Yellow	4.0	4.0	4.5	4.0	0.0	5.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	0.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	19.3	62.4	12.5	55.6	9.9	33.8	41.4	65.2
Change Period, (*Y+R c*), s	6.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (*g s*), s	12.7		7.0		5.0	21.2	38.6	48.2
Green Extension Time (*g e*), s	0.6	0.0	0.1	0.0	0.0	5.6	2.7	7.5
Phase Call Probability	1.00		0.92		0.77	1.00	1.00	1.00
Max Out Probability	0.06		0.01		0.00	0.73	0.24	0.54

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	250	1041	495	59	552	173	35	484	83	866	1219	327
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1764	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (*g s*), s	10.7	33.8	34.7	5.0	10.8		3.0	19.2	6.9	36.6	46.2	24.1
Cycle Queue Clearance Time (*g c*), s	10.7	33.8	34.7	5.0	10.8		3.0	19.2	6.9	36.6	46.2	24.1
Green Ratio (*g/C*)	0.09	0.37	0.37	0.04	0.33		0.03	0.18	0.18	0.28	0.39	0.39
Capacity (*c*), veh/h	305	1383	658	76	1653		46	630	281	946	1372	611
Volume-to-Capacity Ratio (*X*)	0.820	0.753	0.753	0.780	0.334		0.775	0.769	0.297	0.915	0.888	0.536
Back of Queue (*Q*), ft/ln (95 th percentile)	213.3	518.2	542.1	118.5	195.7		75.2	334.3	125.5	598.2	648.3	359.5
Back of Queue (*Q*), veh/ln (95 th percentile)	8.3	20.2	21.2	4.6	7.6		2.9	13.1	4.9	23.4	25.3	14.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.85	0.00	0.00	0.39	0.00		0.30	0.00	0.50	1.33	0.00	0.90
Uniform Delay (*d 1*), s/veh	67.2	32.2	34.7	71.1	31.5		72.6	54.3	53.5	52.6	33.3	35.4
Incremental Delay (*d 2*), s/veh	5.7	3.4	7.0	15.5	0.5		23.7	4.7	0.6	10.7	7.0	0.8
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	72.8	35.6	41.7	86.6	32.1	0.0	96.4	59.0	54.0	63.3	40.2	36.2
Level of Service (LOS)	E	D	D	F	C	A	F	E	D	E	D	D
Approach Delay, s/veh / LOS	42.5	D		29.1	C		60.5	E		48.0	D	
Intersection Delay, s/veh / LOS	44.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.03	C	3.45	C	3.33	C	3.27	C
Bicycle LOS Score / LOS	1.47	A	0.92	A	0.99	A	2.48	B

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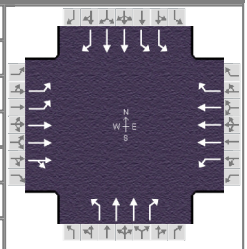
HCS7 Signalized Intersection Results Summary

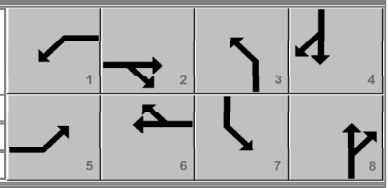
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4TP.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	476	614	42	84	1664	1057	128	1033	58	206	488	213

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.3	0.8	55.5	11.9	1.4	39.6						
Yellow	4.0	4.0	4.5	0.0	4.0	5.0						
Red	2.0	2.0	2.0	0.0	2.0	2.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.0	68.7	15.3	62.0	19.4	54.1	11.9	46.6
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	18.1		9.4		13.3	47.5	11.3	20.4
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.1	0.0	0.6	8.3
Phase Call Probability	1.00		0.97		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.07		0.51	1.00	0.00	0.25

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	501	464	226	88	1752	1113	135	1087	61	217	514	224
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1793	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	16.1	10.1	10.7	7.4	49.0		11.3	45.5	4.2	9.3	17.5	18.4
Cycle Queue Clearance Time (g_c), s	16.1	10.1	10.7	7.4	49.0		11.3	45.5	4.2	9.3	17.5	18.4
Green Ratio (*g/C*)	0.11	0.41	0.41	0.06	0.37		0.09	0.31	0.31	0.08	0.26	0.26
Capacity (*c*), veh/h	368	1540	744	109	1868		157	1109	493	273	933	415
Volume-to-Capacity Ratio (*X*)	1.363	0.301	0.304	0.809	0.938		0.856	0.981	0.124	0.795	0.550	0.540
Back of Queue (*Q*), ft/ln (95 th percentile)	650.4	194.1	204.1	137.7	596.9		226.1	676.3	73.1	193.4	292.8	296.5
Back of Queue (*Q*), veh/ln (95 th percentile)	25.4	7.6	8.0	5.4	23.3		8.8	26.4	2.9	7.6	11.4	11.6
Queue Storage Ratio (*RQ*) (95 th percentile)	2.60	0.00	0.00	0.46	0.00		0.90	0.00	0.29	0.43	0.00	0.74
Uniform Delay (d_1), s/veh	67.0	21.9	23.3	69.5	36.4		67.4	43.2	36.7	67.8	41.4	47.4
Incremental Delay (d_2), s/veh	179.7	0.5	1.0	5.4	4.7		15.5	17.5	0.1	5.2	0.7	1.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	246.7	22.4	24.4	74.9	41.1	0.0	82.8	60.7	36.8	73.1	42.1	48.8
Level of Service (LOS)	F	C	C	E	D	A	F	E	D	E	D	D
Approach Delay, s/veh / LOS	117.1	F		26.6	C		61.9	E		50.7	D	
Intersection Delay, s/veh / LOS	54.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.00	C	3.31	C	3.46	C	3.36	C
Bicycle LOS Score / LOS	1.14	A	2.11	B	1.55	B	1.28	A

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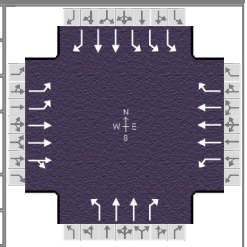
HCS7 Signalized Intersection Results Summary

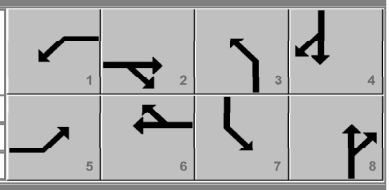
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM w. Improvement	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4TA-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	240	1338	137	57	530	166	34	465	80	831	1170	434

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.5	1.1	56.5	3.9	20.2	36.4	
Yellow	4.0	0.0	4.5	4.0	0.0	5.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	13.6	64.1	12.5	63.0	9.9	43.4	30.0	63.6
Change Period, ($Y+R_c$), s	0.0	6.5	6.0	6.5	6.0	7.0	0.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	12.7		7.0		5.0	19.0	26.2	49.6
Green Extension Time (g_e), s	0.8	0.0	0.1	0.0	0.0	10.1	3.8	7.0
Phase Call Probability	1.00		0.92		0.77	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.29	0.01	0.59

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	250	1041	495	59	552	173	35	484	83	866	1219	327
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1764	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	10.7	32.8	33.9	5.0	9.5		3.0	17.0	6.4	24.2	47.6	24.5
Cycle Queue Clearance Time (g_c), s	10.7	32.8	33.9	5.0	9.5		3.0	17.0	6.4	24.2	47.6	24.5
Green Ratio (*g/C*)	0.09	0.38	0.38	0.04	0.38		0.03	0.24	0.24	0.20	0.38	0.38
Capacity (*c*), veh/h	310	1424	677	76	1903		46	858	382	1031	1333	593
Volume-to-Capacity Ratio (*X*)	0.806	0.731	0.731	0.779	0.290		0.775	0.565	0.218	0.840	0.914	0.551
Back of Queue (*Q*), ft/ln (95 th percentile)	211.4	500.5	525.7	118.4	170.9		75.2	287.5	113.8	403.8	679.2	365.9
Back of Queue (*Q*), veh/ln (95 th percentile)	8.3	19.6	20.5	4.6	6.7		2.9	11.2	4.4	15.8	26.5	14.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.85	0.00	0.00	0.39	0.00		0.30	0.00	0.46	0.90	0.00	0.91
Uniform Delay (d_1), s/veh	66.9	30.6	33.2	71.1	25.7		72.6	44.2	45.4	57.7	35.1	36.7
Incremental Delay (d_2), s/veh	4.4	3.0	6.1	15.4	0.4		23.7	0.6	0.3	2.3	8.9	0.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	71.3	33.6	39.3	86.5	26.0	0.0	96.4	44.8	45.7	59.9	44.0	37.6
Level of Service (LOS)	E	C	D	F	C	A	F	D	D	E	D	D
Approach Delay, s/veh / LOS	40.4	D		24.9	C		47.9	D		48.8	D	
Intersection Delay, s/veh / LOS	42.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.03	C	3.53	D	3.33	C	3.27	C
Bicycle LOS Score / LOS	1.47	A	0.92	A	0.99	A	2.48	B

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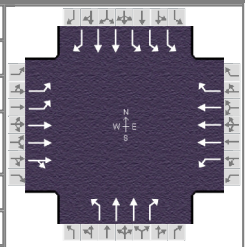
HCS7 Signalized Intersection Results Summary

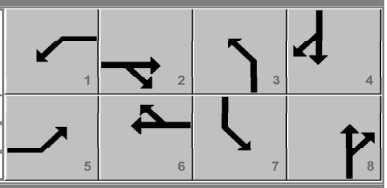
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM w. Improvement	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	4. MD 28 & MD 119	File Name	4TP-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	476	614	42	83	1664	1057	128	1033	58	206	488	213

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.2	8.7	53.6	8.8	4.6	39.6						
Yellow	4.0	0.0	4.5	4.0	0.0	5.0						
Red	2.0	0.0	2.0	2.0	0.0	2.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	23.9	68.8	15.2	60.1	19.4	51.2	14.8	46.6
Change Period, ($Y+R_c$), s	0.0	6.5	6.0	6.5	6.0	7.0	6.0	7.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s	23.6		9.3		13.3	46.2	8.2	20.4
Green Extension Time (g_e), s	0.4	0.0	0.1	0.0	0.1	0.0	0.6	8.3
Phase Call Probability	1.00		0.97		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		0.51	1.00	0.01	0.25

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	501	464	226	87	1752	1113	135	1087	61	217	514	224
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1716	1856	1793	1767	1685		1767	1766	1572	1716	1766	1572
Queue Service Time (g_s), s	21.6	10.0	10.7	7.3	50.6		11.3	44.2	4.3	6.2	17.5	18.4
Cycle Queue Clearance Time (g_c), s	21.6	10.0	10.7	7.3	50.6		11.3	44.2	4.3	6.2	17.5	18.4
Green Ratio (*g/C*)	0.16	0.42	0.42	0.06	0.36		0.09	0.29	0.29	0.06	0.26	0.26
Capacity (*c*), veh/h	547	1541	744	108	1806		157	1042	464	301	933	415
Volume-to-Capacity Ratio (*X*)	0.916	0.301	0.304	0.805	0.970		0.856	1.044	0.132	0.721	0.550	0.540
Back of Queue (*Q*), ft/ln (95 th percentile)	411.8	194	204	136.3	632.2		226.1	757.6	75.4	127.5	292.8	296.5
Back of Queue (*Q*), veh/ln (95 th percentile)	16.1	7.6	8.0	5.3	24.7		8.8	29.6	2.9	5.0	11.4	11.6
Queue Storage Ratio (*RQ*) (95 th percentile)	1.65	0.00	0.00	0.45	0.00		0.90	0.00	0.30	0.28	0.00	0.74
Uniform Delay (d_1), s/veh	62.0	21.8	23.3	69.5	38.5		67.4	45.5	38.8	69.4	41.4	47.4
Incremental Delay (d_2), s/veh	19.0	0.5	1.0	5.3	7.8		15.5	35.0	0.1	3.3	0.7	1.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	81.0	22.3	24.3	74.8	46.3	0.0	82.8	80.5	38.9	72.7	42.1	48.8
Level of Service (LOS)	F	C	C	E	D	A	F	F	D	E	D	D
Approach Delay, s/veh / LOS	47.4	D		29.7	C		78.8	E		50.6	D	
Intersection Delay, s/veh / LOS	46.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.00	C	3.38	C	3.46	C	3.36	C
Bicycle LOS Score / LOS	1.14	A	2.11	B	1.55	B	1.28	A

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HCS7 Two-Way Stop-Control Report

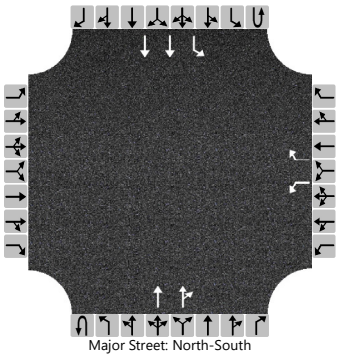
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	5. MD 119 & Blackwell Rd
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Blackwell Rd
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						4		9			408	22	0	169	989	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4		9						176		
Capacity, c (veh/h)						127		776						1102		
v/c Ratio						0.03		0.01						0.16		
95% Queue Length, Q_{95} (veh)						0.1		0.0						0.6		
Control Delay (s/veh)						34.4		9.7						8.9		
Level of Service (LOS)						D		A						A		
Approach Delay (s/veh)						17.3								1.3		
Approach LOS						C										

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HCS7 Two-Way Stop-Control Report

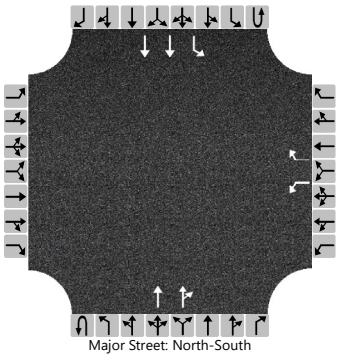
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	5. MD 119 & Blackwell Rd
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Blackwell Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						11		91			918	4	0	13	406	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						12		96						14		
Capacity, c (veh/h)						170		525						700		
v/c Ratio						0.07		0.18						0.02		
95% Queue Length, Q_{95} (veh)						0.2		0.7						0.1		
Control Delay (s/veh)						27.7		13.4						10.2		
Level of Service (LOS)						D		B						B		
Approach Delay (s/veh)						14.9								0.3		
Approach LOS						B										

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HCS7 Two-Way Stop-Control Report

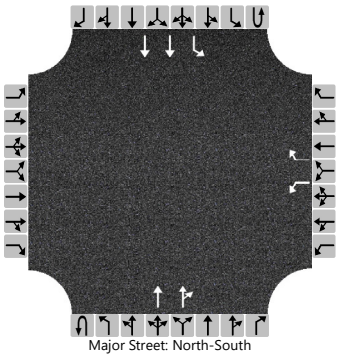
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	5. MD 119 & Blackwell Rd
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Blackwell Rd
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						17		42			472	61	0	267	1051	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						18		44						278		
Capacity, c (veh/h)						66		717						1004		
v/c Ratio						0.27		0.06						0.28		
95% Queue Length, Q_{95} (veh)						0.9		0.2						1.1		
Control Delay (s/veh)						77.8		10.3						10.0		
Level of Service (LOS)						F		B						A		
Approach Delay (s/veh)						29.8								2.0		
Approach LOS						D										

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HCS7 Two-Way Stop-Control Report

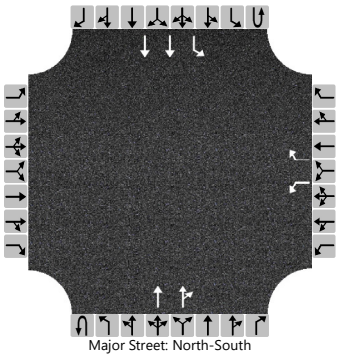
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	5. MD 119 & Blackwell Rd
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Blackwell Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	2	0	0	1	2	0
Configuration						L		R			T	TR		L	T	
Volume (veh/h)						62		221			999	13	0	36	466	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						65		233						38		
Capacity, c (veh/h)						126		489						644		
v/c Ratio						0.52		0.48						0.06		
95% Queue Length, Q_{95} (veh)						2.4		2.5						0.2		
Control Delay (s/veh)						60.5		18.9						10.9		
Level of Service (LOS)						F		C						B		
Approach Delay (s/veh)						28.0								0.8		
Approach LOS						D										

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HCS7 Two-Way Stop-Control Report

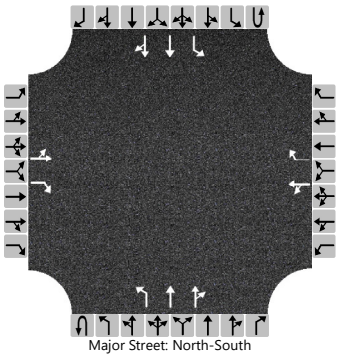
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	5. MD 119 & Blackwell Rd
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Blackwell Rd / Site Acc
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	1	2	0	0	1	2	0
Configuration		LT		R		LT		R		L	T	TR		L	T	TR
Volume (veh/h)		76	0	39		17	0	42	0	12	476	61	0	267	1052	24
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		79		41		18		44		13				278		
Capacity, c (veh/h)		28		469		45		714		613				1001		
v/c Ratio		2.80		0.09		0.39		0.06		0.02				0.28		
95% Queue Length, Q_{95} (veh)		9.5		0.3		1.4		0.2		0.1				1.1		
Control Delay (s/veh)		1106.0		13.4		129.8		10.4		11.0				10.0		
Level of Service (LOS)		F		B		F		B		B				A		
Approach Delay (s/veh)	735.4				44.8				0.2				2.0			
Approach LOS	F				E											

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HCS7 Two-Way Stop-Control Report

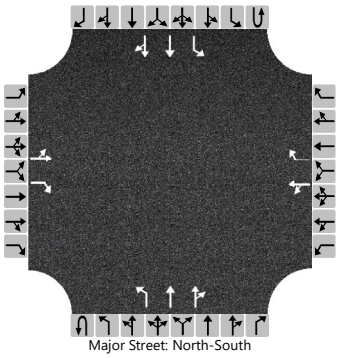
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	5. MD 119 & Blackwell Rd
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Blackwell Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	1	2	0	0	1	2	0
Configuration		LT		R		LT		R		L	T	TR		L	T	TR
Volume (veh/h)		50	0	30		62	0	221	0	44	999	13	0	36	467	79
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		53		32		65		233		46				38		
Capacity, c (veh/h)		64		706		77		489		988				644		
v/c Ratio		0.82		0.04		0.85		0.48		0.05				0.06		
95% Queue Length, Q_{95} (veh)		3.8		0.1		4.3		2.5		0.1				0.2		
Control Delay (s/veh)		169.3		10.3		155.4		18.9		8.8				10.9		
Level of Service (LOS)		F		B		F		C		A				B		
Approach Delay (s/veh)	109.7				48.8				0.4				0.7			
Approach LOS	F				E											

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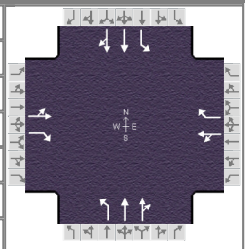
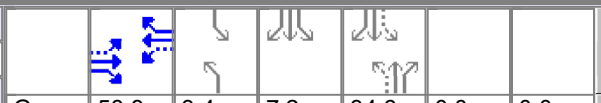
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM w. Imp.	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	5. MD 119 & Blackwell…	File Name	5TA-Imp.xus		
Project Description	PSTA				

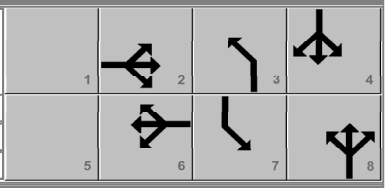


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	76	0	39	17	0	42	12	476	61	267	1052	24

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	58.8	3.4	7.2	34.6	0.0	0.0
Yellow	4.0	4.0	0.0	4.0	0.0	0.0
Red	2.0	1.0	0.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6	3	8	7	4
Case Number		7.0		7.0	1.1	4.0	1.1	4.0
Phase Duration, s		64.8		64.8	8.4	39.6	15.6	46.8
Change Period, ($Y+R_c$), s		6.0		6.0	5.0	5.0	0.0	5.0
Max Allow Headway (*MAH*), s		0.0		0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s					2.6	16.7	14.7	34.8
Green Extension Time (g_e), s		0.0		0.0	0.0	7.3	0.9	7.0
Phase Call Probability					0.34	1.00	1.00	1.00
Max Out Probability					0.00	0.02	0.00	0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		79	41		18	44	13	284	275	278	563	558
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1406	1572		1406		1767	1856	1781	1767	1856	1841
Queue Service Time (g_s), s		2.9	1.6		0.0		0.6	14.2	14.7	12.7	32.7	32.8
Cycle Queue Clearance Time (g_c), s		3.7	1.6		0.8		0.6	14.2	14.7	12.7	32.7	32.8
Green Ratio (*g/C*)		0.49	0.49		0.49		0.32	0.29	0.29	0.43	0.35	0.35
Capacity (*c*), veh/h		749	771		749		139	535	514	430	646	641
Volume-to-Capacity Ratio (*X*)		0.106	0.053		0.024		0.090	0.532	0.535	0.647	0.871	0.871
Back of Queue (*Q*), ft/ln (95 th percentile)		55.1	27.3		11.8		11.4	242.3	244.1	187	411.4	412
Back of Queue (*Q*), veh/ln (95 th percentile)		2.2	1.1		0.5		0.4	9.5	9.5	7.3	16.1	16.1
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00		0.00	0.00	0.00	0.85	0.00	0.00
Uniform Delay (d_1), s/veh		16.5	16.0		15.8		31.5	30.7	31.9	24.5	29.7	30.0
Incremental Delay (d_2), s/veh		0.3	0.1		0.1		0.2	0.7	0.8	0.6	2.2	2.2
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		16.8	16.1		15.9	0.0	31.7	31.4	32.7	25.1	31.9	32.2
Level of Service (LOS)		B	B		B	A	C	C	C	C	C	C
Approach Delay, s/veh / LOS	16.6	B		4.6	A		32.0	C		30.7	C	
Intersection Delay, s/veh / LOS	29.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.88	C	2.90	C	2.16	B	2.04	B
Bicycle LOS Score / LOS	0.69	A	0.59	A	0.96	A	1.64	B

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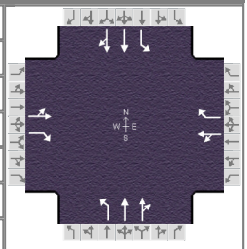
HCS7 Signalized Intersection Results Summary

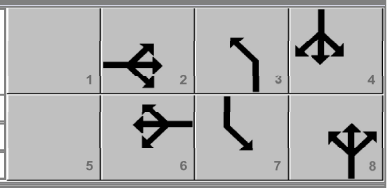
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM w. Imp.	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	5. MD 119 & Blackwell…	File Name	5TP-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	0	30	62	0	221	44	999	13	36	467	79

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	61.8	7.2	0.7	34.3	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	2.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6	3	8	7	4
Case Number		7.0		7.0	1.1	4.0	1.1	4.0
Phase Duration, s		67.8		67.8	12.9	45.0	7.2	39.3
Change Period, ($Y+R_c$), s		6.0		6.0	5.0	5.0	0.0	5.0
Max Allow Headway (*MAH*), s		0.0		0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s					4.0	33.2	3.7	17.4
Green Extension Time (g_e), s		0.0		0.0	0.1	6.8	0.1	7.0
Phase Call Probability					0.79	1.00	0.72	1.00
Max Out Probability					0.00	0.04	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		53	32		65	233	46	534	531	38	294	281
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1406	1572		1406		1767	1856	1847	1767	1856	1762
Queue Service Time (g_s), s		0.0	1.2		0.6		2.0	31.1	31.2	1.7	14.9	15.4
Cycle Queue Clearance Time (g_c), s		2.3	1.2		2.8		2.0	31.1	31.2	1.7	14.9	15.4
Green Ratio (*g/C*)		0.52	0.52		0.52		0.37	0.33	0.33	0.35	0.29	0.29
Capacity (*c*), veh/h		785	810		785		307	618	615	195	530	503
Volume-to-Capacity Ratio (*X*)		0.067	0.039		0.083		0.151	0.864	0.864	0.194	0.554	0.558
Back of Queue (*Q*), ft/ln (95 th percentile)		33.7	19.8		42.5		38.4	430.7	431.4	33.1	245.9	248
Back of Queue (*Q*), veh/ln (95 th percentile)		1.3	0.8		1.7		1.5	16.8	16.9	1.3	9.6	9.7
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00		0.00	0.00	0.00	0.15	0.00	0.00
Uniform Delay (d_1), s/veh		14.6	14.4		14.8		26.0	30.9	31.1	29.7	31.1	32.7
Incremental Delay (d_2), s/veh		0.1	0.1		0.2		0.1	3.0	3.0	0.4	0.7	0.8
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		14.8	14.5		15.0	0.0	26.1	33.8	34.0	30.0	31.9	33.5
Level of Service (LOS)		B	B		B	A	C	C	C	C	C	C
Approach Delay, s/veh / LOS	14.7	B		3.3	A		33.6	C		32.5	C	
Intersection Delay, s/veh / LOS	28.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.87	C	2.88	C	2.13	B	2.06	B
Bicycle LOS Score / LOS	0.63	A	0.98	A	1.40	A	0.99	A

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HCS7 Two-Way Stop-Control Report

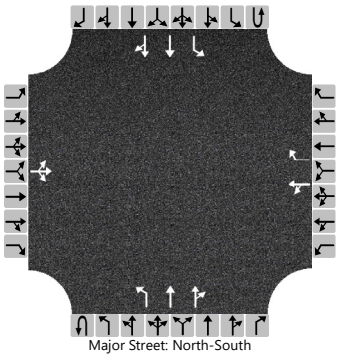
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	6. MD 119 & Medical Ctr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Medical Center Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	1	0	1	2	0	0	1	2	0
Configuration			LTR			LT		R		L	T	TR		L	T	TR
Volume (veh/h)		2	0	2		30	0	62	0	7	374	101	0	317	683	12
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized					No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			4			32		65		7				334		
Capacity, c (veh/h)			89			64		747		862				1053		
v/c Ratio			0.05			0.50		0.09		0.01				0.32		
95% Queue Length, Q_{95} (veh)			0.1			2.0		0.3		0.0				1.4		
Control Delay (s/veh)			47.6			107.9		10.3		9.2				10.0		
Level of Service (LOS)			E			F		B		A				A		
Approach Delay (s/veh)	47.6				42.1				0.1				3.1			
Approach LOS	E				E											

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HCS7 Two-Way Stop-Control Report

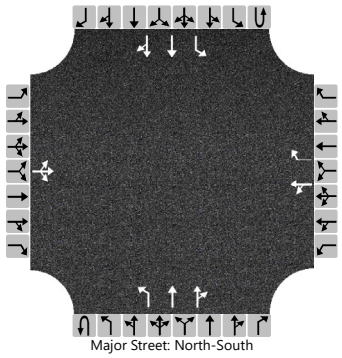
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	6. MD 119 & Medical Ctr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Medical Center Dr
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	1	0	1	2	0	0	1	2	0
Configuration			LTR			LT		R		L	T	TR		L	T	TR
Volume (veh/h)		7	1	8		94	0	303	0	1	636	36	0	50	377	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized					No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			17			98		316		1				52		
Capacity, c (veh/h)			225			189		643		1154				886		
v/c Ratio			0.07			0.52		0.49		0.00				0.06		
95% Queue Length, Q_{95} (veh)			0.2			2.6		2.7		0.0				0.2		
Control Delay (s/veh)			22.2			42.8		15.9		8.1				9.3		
Level of Service (LOS)			C			E		C		A				A		
Approach Delay (s/veh)	22.2				22.2				0.0				1.1			
Approach LOS	C				C											

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HCS7 Two-Way Stop-Control Report

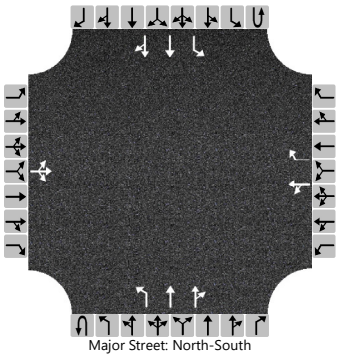
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	6. MD 119 & Medical Ctr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Medical Center Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	1	0	1	2	0	0	1	2	0
Configuration			LTR			LT		R		L	T	TR		L	T	TR
Volume (veh/h)		2	0	2		30	0	62	0	7	477	101	0	317	758	12
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized					No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			4			32		65		7				334		
Capacity, c (veh/h)			68			48		689		805				959		
v/c Ratio			0.06			0.66		0.09		0.01				0.35		
95% Queue Length, Q_{95} (veh)			0.2			2.6		0.3		0.0				1.6		
Control Delay (s/veh)			61.1			173.0		10.8		9.5				10.7		
Level of Service (LOS)			F			F		B		A				B		
Approach Delay (s/veh)	61.1				63.7				0.1				3.1			
Approach LOS	F				F											

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HCS7 Two-Way Stop-Control Report

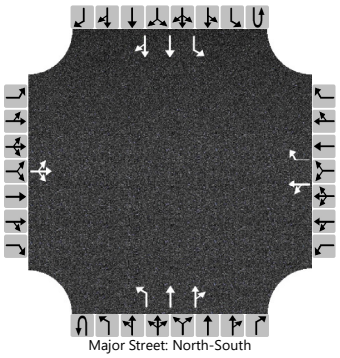
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	6. MD 119 & Medical Ctr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Medical Center Dr
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	1	0	1	2	0	0	1	2	0
Configuration			LTR			LT		R		L	T	TR		L	T	TR
Volume (veh/h)		7	1	8		94	0	303	0	1	726	36	0	50	488	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized					No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			17			98		316		1				52		
Capacity, c (veh/h)			165			145		600		1045				817		
v/c Ratio			0.10			0.67		0.53		0.00				0.06		
95% Queue Length, Q_{95} (veh)			0.3			3.8		3.1		0.0				0.2		
Control Delay (s/veh)			29.3			69.9		17.5		8.4				9.7		
Level of Service (LOS)			D			F		C		A				A		
Approach Delay (s/veh)	29.3				29.9				0.0				0.9			
Approach LOS	D				D											

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HCS7 Two-Way Stop-Control Report

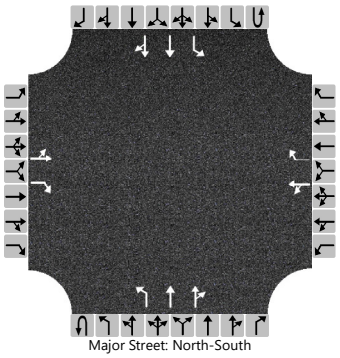
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	6. MD 119 & Medical Ctr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Medical Center Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	1	2	0	0	1	2	0
Configuration		LT		R		LT		R		L	T	TR		L	T	TR
Volume (veh/h)		6	0	41		30	0	62	0	20	489	101	0	317	797	13
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		6		43		32		65		21				334		
Capacity, c (veh/h)		31		574		39		682		776				949		
v/c Ratio		0.20		0.08		0.81		0.10		0.03				0.35		
95% Queue Length, Q_{95} (veh)		0.6		0.2		3.0		0.3		0.1				1.6		
Control Delay (s/veh)		147.3		11.8		241.7		10.8		9.8				10.8		
Level of Service (LOS)		F		B		F		B		A				B		
Approach Delay (s/veh)	29.1				86.1				0.3				3.0			
Approach LOS	D				F											

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HCS7 Two-Way Stop-Control Report

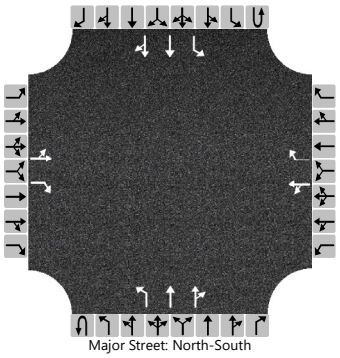
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	6. MD 119 & Medical Ctr
Jurisdiction	Montgomery, MD
East/West Street	MD 119
North/South Street	Medical Center Dr
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	1	2	0	0	1	2	0
Configuration		LT		R		LT		R		L	T	TR		L	T	TR
Volume (veh/h)		10	1	31		94	0	303	0	39	767	36	0	50	515	5
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No											
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11		32		98		316		41				52		
Capacity, c (veh/h)		69		724		108		581		1016				787		
v/c Ratio		0.17		0.04		0.91		0.54		0.04				0.07		
95% Queue Length, Q_{95} (veh)		0.6		0.1		5.5		3.3		0.1				0.2		
Control Delay (s/veh)		67.5		10.2		136.5		18.3		8.7				9.9		
Level of Service (LOS)		F		B		F		C		A				A		
Approach Delay (s/veh)	25.2				46.3				0.4				0.9			
Approach LOS	D				E											

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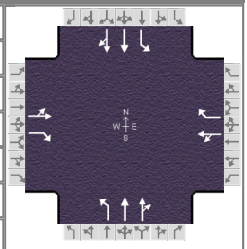
HCS7 Signalized Intersection Results Summary

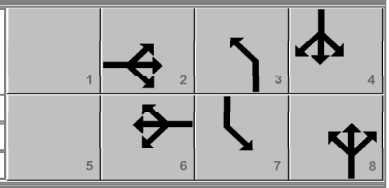
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM w. Imp.	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	6. MD 119 & Medical Ce…	File Name	6TA-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	6	0	41	30	0	62	20	489	101	317	797	13

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	41.6	5.0	32.0	25.4	0.0	0.0
Yellow	4.0	4.0	0.0	4.0	0.0	0.0
Red	2.0	1.0	0.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6	3	8	7	4
Case Number		7.0		7.0	1.1	4.0	1.1	4.0
Phase Duration, s		47.6		47.6	10.0	30.4	42.0	62.4
Change Period, ($Y+R_c$), s		6.0		6.0	5.0	5.0	0.0	5.0
Max Allow Headway (*MAH*), s		0.0		0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s					3.1	21.5	13.8	16.6
Green Extension Time (g_e), s		0.0		0.0	0.0	3.9	1.1	5.9
Phase Call Probability					0.50	1.00	1.00	1.00
Max Out Probability					0.00	0.49	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		6	43		32	65	21	319	302	334	428	425
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1406	1572		1406		1767	1856	1745	1767	1856	1845
Queue Service Time (g_s), s		0.0	2.2		1.4		1.1	19.2	19.5	11.8	14.5	14.6
Cycle Queue Clearance Time (g_c), s		0.4	2.2		1.8		1.1	19.2	19.5	11.8	14.5	14.6
Green Ratio (*g/C*)		0.35	0.35		0.35		0.25	0.21	0.21	0.58	0.48	0.48
Capacity (*c*), veh/h		547	545		547		270	393	370	717	887	882
Volume-to-Capacity Ratio (*X*)		0.012	0.079		0.058		0.078	0.811	0.818	0.465	0.482	0.482
Back of Queue (*Q*), ft/ln (95 th percentile)		5.6	39.4		28.8		21	337.3	335.7	171.5	186.3	188.2
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2	1.5		1.1		0.8	13.2	13.1	6.7	7.3	7.3
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00		0.11	0.00	0.00	0.86	0.00	0.00
Uniform Delay (d_1), s/veh		25.7	26.3		26.2		33.8	40.8	42.4	15.9	14.0	14.2
Incremental Delay (d_2), s/veh		0.0	0.3		0.2		0.1	7.6	8.5	1.0	0.2	0.2
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		25.8	26.6		26.4	0.0	33.9	48.5	50.9	16.9	14.2	14.4
Level of Service (LOS)		C	C		C	A	C	D	D	B	B	B
Approach Delay, s/veh / LOS	26.5	C		8.6	A		49.1	D		15.0	B	
Intersection Delay, s/veh / LOS	26.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.82	C	2.85	C	2.22	B	2.00	B
Bicycle LOS Score / LOS	0.57	A	0.65	A	1.02	A	1.47	A

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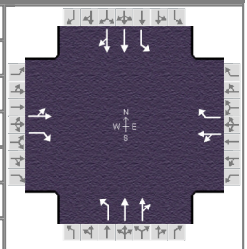
HCS7 Signalized Intersection Results Summary

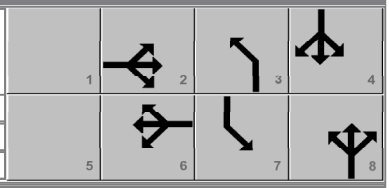
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM w. Imp.	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	6. MD 119 & Medical Ce…	File Name	6TP-Imp.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	1	31	94	0	303	39	767	36	50	515	5

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	68.4	8.2	4.2	28.2	0.0	0.0
Yellow	4.0	0.0	0.0	4.0	0.0	0.0
Red	2.0	0.0	0.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6	3	8	7	4
Case Number		7.0		7.0	1.1	4.0	1.1	4.0
Phase Duration, s		74.4		74.4	12.4	37.4	8.2	33.2
Change Period, ($Y+R_c$), s		6.0		6.0	5.0	5.0	0.0	5.0
Max Allow Headway (*MAH*), s		0.0		0.0	4.0	3.9	4.0	3.9
Queue Clearance Time (g_s), s					4.0	27.1	4.5	17.0
Green Extension Time (g_e), s		0.0		0.0	0.1	5.3	0.1	5.3
Phase Call Probability					0.74	1.00	0.82	1.00
Max Out Probability					0.00	0.01	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		11	32		98	316	41	422	415	52	271	270
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1439	1572		1405		1767	1856	1826	1767	1856	1849
Queue Service Time (g_s), s		0.0	1.1		3.5		2.0	25.0	25.1	2.5	15.0	15.0
Cycle Queue Clearance Time (g_c), s		0.3	1.1		3.9		2.0	25.0	25.1	2.5	15.0	15.0
Green Ratio (*g/C*)		0.57	0.57		0.57		0.31	0.27	0.27	0.30	0.24	0.24
Capacity (*c*), veh/h		877	896		861		264	501	493	210	436	435
Volume-to-Capacity Ratio (*X*)		0.013	0.036		0.114		0.154	0.842	0.842	0.248	0.622	0.622
Back of Queue (*Q*), ft/ln (95 th percentile)		5.9	17.5		56.3		37.8	392	391.5	48.7	227.6	227.4
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2	0.7		2.2		1.5	15.3	15.3	1.9	8.9	8.9
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00		0.19	0.00	0.00	0.24	0.00	0.00
Uniform Delay (d_1), s/veh		10.7	11.3		11.9		30.7	36.1	36.5	32.4	36.6	36.7
Incremental Delay (d_2), s/veh		0.0	0.1		0.3		0.2	3.5	3.6	0.3	0.7	0.7
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.8	11.4		12.2	0.0	30.9	39.6	40.1	32.6	37.3	37.4
Level of Service (LOS)		B	B		B	A	C	D	D	C	D	D
Approach Delay, s/veh / LOS	11.2	B		2.9	A		39.4	D		36.9	D	
Intersection Delay, s/veh / LOS	30.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.82	C	2.84	C	2.20	B	2.00	B
Bicycle LOS Score / LOS	0.56	A	1.17	A	1.21	A	0.98	A

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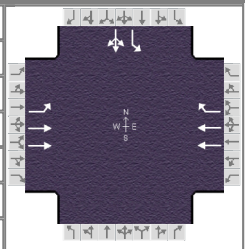
HCS7 Signalized Intersection Results Summary

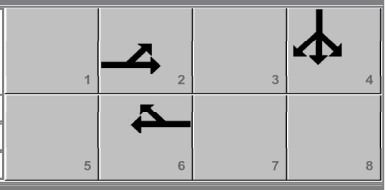
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing AM	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7EA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	265	868			378	212				539	0	178

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	77.4	31.1	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		82.9		82.9				37.1
Change Period, (*Y+R c*), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (*g s*), s								29.7
Green Extension Time (*g e*), s		0.0		0.0				1.4
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	279	914			398	223				420	335	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	979	1766			1766					1767	1658	
Queue Service Time (*g s*), s	17.9	6.6			2.2					27.7	23.4	
Cycle Queue Clearance Time (*g c*), s	20.1	6.6			2.2					27.7	23.4	
Green Ratio (*g/C*)	0.64	0.64			0.64					0.26	0.26	
Capacity (*c*), veh/h	673	2278			2278					458	430	
Volume-to-Capacity Ratio (*X*)	0.414	0.401			0.175					0.916	0.779	
Back of Queue (*Q*), ft/ln (95 th percentile)	177	85.3			34.6					436.8	359.6	
Back of Queue (*Q*), veh/ln (95 th percentile)	6.9	3.3			1.4					17.1	14.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.35	0.00			0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh	11.7	3.4			3.1					43.2	48.0	
Incremental Delay (*d 2*), s/veh	1.7	0.5			0.2					12.2	4.1	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	13.4	3.9			3.3	0.0				55.3	52.1	
Level of Service (LOS)	B	A			A	A				E	D	
Approach Delay, s/veh / LOS	6.1	A		2.1	A		0.0			53.9	D	
Intersection Delay, s/veh / LOS	19.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.74	B	2.56	C	2.94	C	2.33	B
Bicycle LOS Score / LOS	1.47	A	1.00	A			1.73	B

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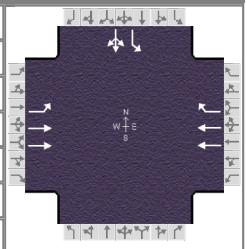
HCS7 Signalized Intersection Results Summary

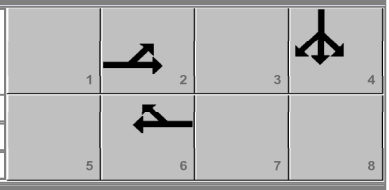
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing PM	PHF	0.99
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7EP.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	280	537			1058	405				199	0	269

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	85.2	23.3	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		90.7		90.7				29.3
Change Period, (*Y+R c*), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (*g s*), s								22.2
Green Extension Time (*g e*), s		0.0		0.0				1.2
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	283	542			1069	409				201	272	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	524	1766			1766					1767	1572	
Queue Service Time (*g s*), s	44.7	1.2			3.3					12.4	20.2	
Cycle Queue Clearance Time (*g c*), s	48.0	1.2			3.3					12.4	20.2	
Green Ratio (*g/C*)	0.71	0.71			0.71					0.19	0.19	
Capacity (*c*), veh/h	417	2507			2507					344	306	
Volume-to-Capacity Ratio (*X*)	0.678	0.216			0.426					0.585	0.888	
Back of Queue (*Q*), ft/ln (95 th percentile)	228.6	17.9			39					231	358.6	
Back of Queue (*Q*), veh/ln (95 th percentile)	8.9	0.7			1.5					9.0	14.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.46	0.00			0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh	13.2	1.0			1.0					43.9	47.1	
Incremental Delay (*d 2*), s/veh	7.7	0.2			0.5					2.0	20.2	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	20.8	1.1			1.6	0.0				46.0	67.2	
Level of Service (LOS)	C	A			A	A				D	E	
Approach Delay, s/veh / LOS	7.9	A		1.1	A		0.0			58.2	E	
Intersection Delay, s/veh / LOS	12.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.74	B	2.49	B	2.97	C	2.33	B
Bicycle LOS Score / LOS	1.17	A	1.71	B			1.27	A

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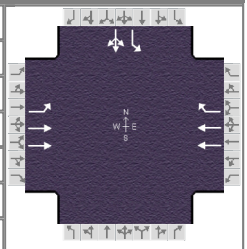
HCS7 Signalized Intersection Results Summary

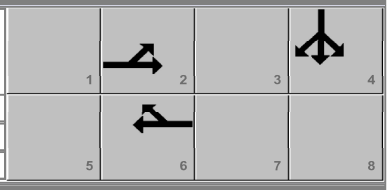
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background AM	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7BA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	316	921			503	264				552	0	240

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	76.5	32.0	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		82.0		82.0				38.0
Change Period, ($Y+R_c$), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (g_s), s								31.0
Green Extension Time (g_e), s		0.0		0.0				1.0
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	333	969			529	278				430	404	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	867	1766			1766					1767	1645	
Queue Service Time (g_s), s	29.2	7.8			3.4					28.3	29.0	
Cycle Queue Clearance Time (g_c), s	32.5	7.8			3.4					28.3	29.0	
Green Ratio (*g/C*)	0.64	0.64			0.64					0.27	0.27	
Capacity (*c*), veh/h	588	2253			2253					471	439	
Volume-to-Capacity Ratio (*X*)	0.565	0.430			0.235					0.913	0.920	
Back of Queue (*Q*), ft/ln (95 th percentile)	243.5	98.6			50.3					444.1	458.1	
Back of Queue (*Q*), veh/ln (95 th percentile)	9.5	3.9			2.0					17.3	17.9	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.49	0.00			0.00					0.00	0.00	
Uniform Delay (d_1), s/veh	14.8	3.8			3.5					42.7	48.7	
Incremental Delay (d_2), s/veh	3.5	0.5			0.2					11.9	13.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	18.3	4.4			3.8	0.0				54.5	62.2	
Level of Service (LOS)	B	A			A	A				D	E	
Approach Delay, s/veh / LOS	7.9	A		2.5	A		0.0			58.2	E	
Intersection Delay, s/veh / LOS	20.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.81	B	2.66	C	3.01	C	2.33	B
Bicycle LOS Score / LOS	1.56	B	1.15	A			1.86	B

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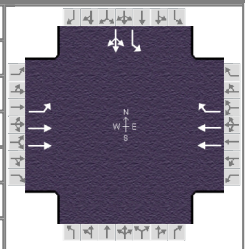
HCS7 Signalized Intersection Results Summary

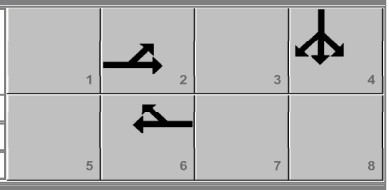
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background PM	PHF	0.99
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7BP.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	359	706			1099	416				257	0	322

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	81.9	26.6	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		87.4		87.4				32.6
Change Period, (*Y+R c*), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (*g s*), s								26.4
Green Extension Time (*g e*), s		0.0		0.0				0.2
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	363	713			1110	420				260	325	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	504	1766			1766					1767	1572	
Queue Service Time (*g s*), s	76.1	3.0			5.8					16.1	24.4	
Cycle Queue Clearance Time (*g c*), s	81.9	3.0			5.8					16.1	24.4	
Green Ratio (*g/C*)	0.68	0.68			0.68					0.22	0.22	
Capacity (*c*), veh/h	379	2411			2411					392	349	
Volume-to-Capacity Ratio (*X*)	0.956	0.296			0.460					0.663	0.933	
Back of Queue (*Q*), ft/ln (95 th percentile)	519.8	39.9			67.1					290.3	441.5	
Back of Queue (*Q*), veh/ln (95 th percentile)	20.3	1.6			2.6					11.3	17.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	1.04	0.00			0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh	26.5	1.8			2.0					42.6	45.8	
Incremental Delay (*d 2*), s/veh	33.9	0.3			0.6					4.1	29.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	60.4	2.1			2.6	0.0				46.7	74.8	
Level of Service (LOS)	E	A			A	A				D	E	
Approach Delay, s/veh / LOS	21.8	C		1.9	A		0.0			62.3	E	
Intersection Delay, s/veh / LOS	19.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.86	B	2.61	C	3.06	C	2.33	B
Bicycle LOS Score / LOS	1.38	A	1.75	B			1.45	A

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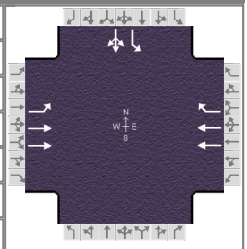
HCS7 Signalized Intersection Results Summary

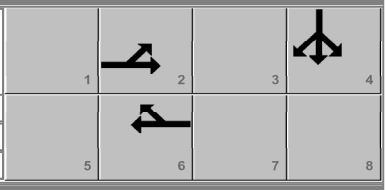
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM	PHF	0.95
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7TA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	319	921			503	286				621	0	249

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	75.5	33.0	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		81.0		81.0				39.0
Change Period, (*Y+R c*), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (*g s*), s								34.8
Green Extension Time (*g e*), s		0.0		0.0				0.0
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	336	969			529	301				484	432	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	867	1766			1766					1767	1649	
Queue Service Time (*g s*), s	30.4	8.4			3.6					32.8	31.1	
Cycle Queue Clearance Time (*g c*), s	34.0	8.4			3.6					32.8	31.1	
Green Ratio (*g/C*)	0.63	0.63			0.63					0.28	0.28	
Capacity (*c*), veh/h	579	2223			2223					486	454	
Volume-to-Capacity Ratio (*X*)	0.580	0.436			0.238					0.995	0.953	
Back of Queue (*Q*), ft/ln (95 th percentile)	254.1	106.8			54.6					556.6	506.1	
Back of Queue (*Q*), veh/ln (95 th percentile)	9.9	4.2			2.1					21.7	19.8	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.51	0.00			0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh	15.7	4.3			3.9					43.4	49.2	
Incremental Delay (*d 2*), s/veh	3.7	0.6			0.3					26.5	18.4	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	19.5	4.8			4.1	0.0				69.9	67.6	
Level of Service (LOS)	B	A			A	A				E	E	
Approach Delay, s/veh / LOS	8.6	A		2.6	A		0.0			68.9	E	
Intersection Delay, s/veh / LOS	25.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.82	B	2.72	C	3.04	C	2.33	B
Bicycle LOS Score / LOS	1.56	B	1.17	A			2.00	B

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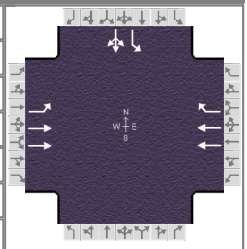
HCS7 Signalized Intersection Results Summary

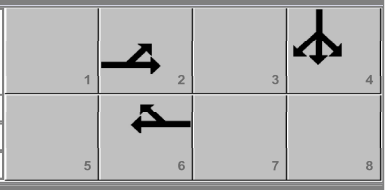
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM	PHF	0.99
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7TP.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	369	706			1099	485				300	0	329

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	81.5	27.0	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		87.0		87.0				33.0
Change Period, (*Y+R c*), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (*g s*), s								26.9
Green Extension Time (*g e*), s		0.0		0.0				0.0
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	373	713			1110	490				303	332	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	504	1766			1766					1767	1572	
Queue Service Time (*g s*), s	75.4	3.1			6.1					19.3	24.9	
Cycle Queue Clearance Time (*g c*), s	81.5	3.1			6.1					19.3	24.9	
Green Ratio (*g/C*)	0.68	0.68			0.68					0.22	0.22	
Capacity (*c*), veh/h	377	2401			2401					397	353	
Volume-to-Capacity Ratio (*X*)	0.990	0.297			0.462					0.763	0.941	
Back of Queue (*Q*), ft/ln (95 th percentile)	552.3	41.8			70.2					348.1	454.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	21.6	1.6			2.7					13.6	17.7	
Queue Storage Ratio (*RQ*) (95 th percentile)	1.10	0.00			0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh	28.0	2.0			2.1					43.5	45.7	
Incremental Delay (*d 2*), s/veh	41.3	0.3			0.6					8.1	30.6	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	69.2	2.2			2.7	0.0				51.6	76.4	
Level of Service (LOS)	E	A			A	A				D	E	
Approach Delay, s/veh / LOS	25.2	C		1.9	A		0.0			64.6	E	
Intersection Delay, s/veh / LOS	21.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	2.68	C	3.09	C	2.33	B
Bicycle LOS Score / LOS	1.38	A	1.81	B			1.54	B

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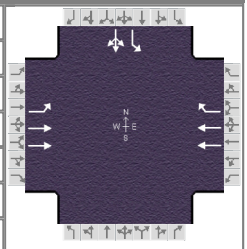
HCS7 Signalized Intersection Results Summary

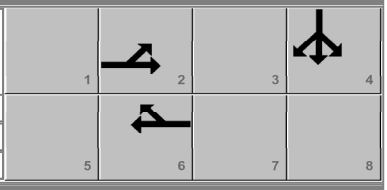
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM	PHF	0.99
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	7. MD 119 & Darnestow…	File Name	7TP-timing adj.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	369	706			1099	485				300	0	329

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	84.5	24.0	0.0	0.0	0.0	0.0	
Yellow	4.5	5.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		7.0				10.0
Phase Duration, s		90.0		90.0				30.0
Change Period, (*Y+R c*), s		5.5		5.5				6.0
Max Allow Headway (*MAH*), s		0.0		0.0				5.1
Queue Clearance Time (*g s*), s								26.0
Green Extension Time (*g e*), s		0.0		0.0				0.0
Phase Call Probability								1.00
Max Out Probability								1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	373	713			1110	490				303	332	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	504	1766			1766					1767	1572	
Queue Service Time (*g s*), s	80.5	2.0			4.0					19.9	24.0	
Cycle Queue Clearance Time (*g c*), s	84.5	2.0			4.0					19.9	24.0	
Green Ratio (*g/C*)	0.70	0.70			0.70					0.20	0.20	
Capacity (*c*), veh/h	398	2488			2488					353	315	
Volume-to-Capacity Ratio (*X*)	0.936	0.287			0.446					0.857	1.057	
Back of Queue (*Q*), ft/ln (95 th percentile)	512.3	27.1			46					383.1	539.5	
Back of Queue (*Q*), veh/ln (95 th percentile)	20.0	1.1			1.8					15.0	21.1	
Queue Storage Ratio (*RQ*) (95 th percentile)	1.02	0.00			0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh	23.5	1.1			1.2					46.3	48.0	
Incremental Delay (*d 2*), s/veh	29.3	0.3			0.6					17.2	63.6	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	52.8	1.4			1.8	0.0				63.6	111.6	
Level of Service (LOS)	D	A			A	A				E	F	
Approach Delay, s/veh / LOS	19.0	B		1.2	A		0.0			88.7	F	
Intersection Delay, s/veh / LOS	23.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.87	B	2.68	C	3.09	C	2.33	B
Bicycle LOS Score / LOS	1.38	A	1.81	B			1.54	B

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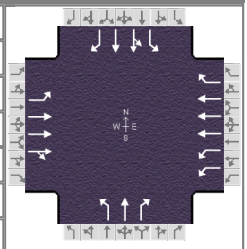
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing AM	PHF	0.94
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	8. MD 28 & Broschart Rd	File Name	8EA.xus		
Project Description	PSTA				

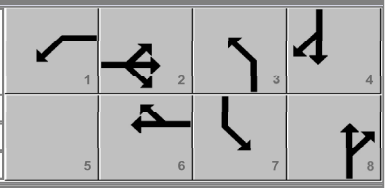


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	23	2085	86	131	545	52	20	4	49	273	64	56

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.1	90.8	15.5	9.6	0.0	0.0
Yellow	3.5	4.5	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.5	2.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		6.3	2.0	3.0		9.0		9.0
Phase Duration, s		97.3	14.6	111.9		16.1		22.0
Change Period, ($Y+R_c$), s		6.5	5.5	6.5		6.5		6.5
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		4.3		4.2
Queue Clearance Time (g_s), s			8.0			6.8		14.0
Green Extension Time (g_e), s		0.0	1.2	0.0		0.2		1.4
Phase Call Probability			1.00			0.96		1.00
Max Out Probability			0.00			0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	24	1547	763	139	580	55	21	4	52	145	213	60
Adjusted Saturation Flow Rate (*s*), veh/h/ln	828	1856	1816	1716	1685		1767	1856	1572	1767	1795	1572
Queue Service Time (g_s), s	1.8	27.1	29.9	6.0	1.3		1.7	0.3	4.8	12.0	8.5	5.3
Cycle Queue Clearance Time (g_c), s	1.8	27.1	29.9	6.0	1.3		1.7	0.3	4.8	12.0	8.5	5.3
Green Ratio (*g/C*)	0.61	0.61	0.61	0.06	0.70		0.06	0.06	0.06	0.10	0.10	0.10
Capacity (*c*), veh/h	549	2247	1100	208	3552		113	119	101	182	371	162
Volume-to-Capacity Ratio (*X*)	0.045	0.689	0.693	0.670	0.163		0.188	0.036	0.518	0.796	0.575	0.367
Back of Queue (*Q*), ft/ln (50 th percentile)	8.8	168	218.6	72.3	10.5		20.5	4	52.7	149.7	102	56.2
Back of Queue (*Q*), veh/ln (50 th percentile)	0.3	6.6	8.5	2.8	0.4		0.8	0.2	2.1	5.8	4.0	2.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.03	0.00	0.00	0.24	0.00		0.05	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	12.0	8.3	9.7	69.0	1.4		66.5	65.9	68.0	65.7	64.1	62.7
Incremental Delay (d_2), s/veh	0.1	1.1	2.2	7.7	0.1		0.8	0.1	4.1	7.7	1.4	1.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	12.1	9.4	11.9	76.7	1.5	0.0	67.3	66.0	72.0	73.4	65.5	64.1
Level of Service (LOS)	B	A	B	E	A	A	E	E	E	E	E	E
Approach Delay, s/veh / LOS	10.2	B		15.0	B		70.4	E		68.1	E	
Intersection Delay, s/veh / LOS	19.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.23	B	2.88	C	2.62	C
Bicycle LOS Score / LOS	1.77	B	0.91	A	0.62	A	0.83	A

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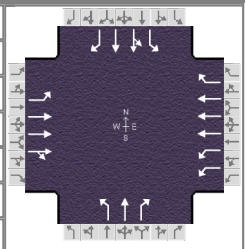
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Existing PM	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	8. MD 28 & Broschart Rd	File Name	8EP.xus		
Project Description	PSTA				

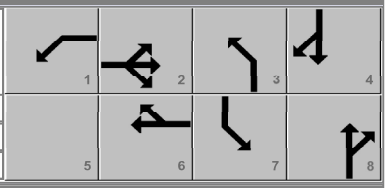


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	21	635	20	48	2553	264	92	65	141	91	21	102

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	3.9	91.5	12.8	16.8	0.0	0.0
Yellow	3.5	4.5	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.5	2.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		6.3	2.0	3.0		9.0		9.0
Phase Duration, s		98.0	9.4	107.4		23.3		19.3
Change Period, ($Y+R_c$), s		6.5	5.5	6.5		6.5		6.5
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		4.3		4.3
Queue Clearance Time (g_s), s			4.2			15.7		11.9
Green Extension Time (g_e), s		0.0	0.3	0.0		1.1		0.8
Phase Call Probability			0.88			1.00		1.00
Max Out Probability			0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	22	457	226	50	2659	275	96	68	147	47	69	106
Adjusted Saturation Flow Rate (*s*), veh/h/ln	111	1856	1825	1716	1685		1767	1856	1572	1767	1795	1572
Queue Service Time (g_s), s	18.7	4.1	4.5	2.2	27.2		7.6	5.0	13.7	3.8	2.7	9.9
Cycle Queue Clearance Time (g_c), s	36.6	4.1	4.5	2.2	27.2		7.6	5.0	13.7	3.8	2.7	9.9
Green Ratio (*g/C*)	0.61	0.61	0.61	0.03	0.67		0.11	0.11	0.11	0.09	0.09	0.09
Capacity (*c*), veh/h	103	2264	1113	90	3401		198	208	176	150	305	134
Volume-to-Capacity Ratio (*X*)	0.213	0.202	0.203	0.557	0.782		0.484	0.325	0.833	0.315	0.227	0.794
Back of Queue (*Q*), ft/ln (50 th percentile)	15.7	39.9	45.1	27.7	102.9		91	62.7	153.6	45.2	32.3	112.4
Back of Queue (*Q*), veh/ln (50 th percentile)	0.6	1.6	1.8	1.1	4.0		3.6	2.4	6.0	1.8	1.3	4.4
Queue Storage Ratio (*RQ*) (50 th percentile)	0.05	0.00	0.00	0.09	0.00		0.21	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	24.2	5.8	6.5	72.2	3.9		62.5	61.4	65.2	64.5	64.0	67.3
Incremental Delay (d_2), s/veh	4.4	0.2	0.4	11.1	1.9		1.8	0.9	9.7	1.2	0.4	10.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	28.6	6.0	6.9	83.2	5.8	0.0	64.3	62.3	74.9	65.7	64.4	77.5
Level of Service (LOS)	C	A	A	F	A	A	E	E	E	E	E	E
Approach Delay, s/veh / LOS	7.0	A		6.6	A		68.9	E		70.9	E	
Intersection Delay, s/veh / LOS	14.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.25	B	2.24	B	2.88	C	2.61	C
Bicycle LOS Score / LOS	0.87	A	2.13	B	1.00	A	0.67	A

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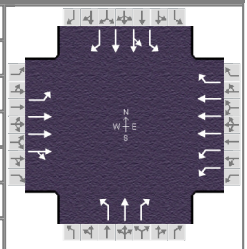
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background AM	PHF	0.94
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	8. MD 28 & Broschart Rd	File Name	8BA.xus		
Project Description	PSTA				

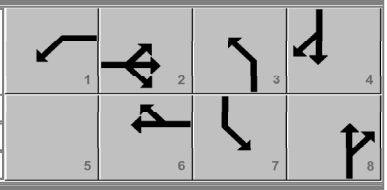


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26	2128	86	198	674	121	20	4	72	320	64	58

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	12.7	84.7	17.7	9.9	0.0	0.0
Yellow	3.5	4.5	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.5	2.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		6.3	2.0	3.0		9.0		9.0
Phase Duration, s		91.2	18.2	109.5		16.4		24.2
Change Period, (*Y+R c*), s		6.5	5.5	6.5		6.5		6.5
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		4.4		4.2
Queue Clearance Time (*g s*), s			11.0			9.2		16.1
Green Extension Time (*g e*), s		0.0	1.8	0.0		0.3		1.6
Phase Call Probability			1.00			0.99		1.00
Max Out Probability			0.00			0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	28	1577	778	211	717	129	21	4	77	170	238	62
Adjusted Saturation Flow Rate (*s*), veh/h/ln	729	1856	1817	1716	1685		1767	1856	1572	1767	1792	1572
Queue Service Time (*g s*), s	2.6	36.3	38.8	9.0	2.2		1.7	0.3	7.2	14.1	9.4	5.4
Cycle Queue Clearance Time (*g c*), s	2.6	36.3	38.8	9.0	2.2		1.7	0.3	7.2	14.1	9.4	5.4
Green Ratio (*g/C*)	0.56	0.56	0.56	0.08	0.69		0.07	0.07	0.07	0.12	0.12	0.12
Capacity (*c*), veh/h	460	2096	1027	291	3470		116	122	103	208	422	185
Volume-to-Capacity Ratio (*X*)	0.060	0.752	0.758	0.723	0.207		0.183	0.035	0.741	0.818	0.564	0.333
Back of Queue (*Q*), ft/ln (50 th percentile)	11.4	283.2	330.9	107.2	17.8		20.5	4	81.6	174.8	112.4	57.1
Back of Queue (*Q*), veh/ln (50 th percentile)	0.4	11.1	12.9	4.2	0.7		0.8	0.2	3.2	6.8	4.4	2.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.04	0.00	0.00	0.36	0.00		0.05	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	14.8	12.5	14.0	66.9	2.1		66.3	65.6	68.8	64.6	62.5	60.8
Incremental Delay (*d 2*), s/veh	0.2	1.5	3.2	7.0	0.1		0.7	0.1	9.9	7.7	1.2	1.0
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	14.9	14.1	17.2	74.0	2.2	0.0	67.0	65.7	78.7	72.3	63.7	61.8
Level of Service (LOS)	B	B	B	E	A	A	E	E	E	E	E	E
Approach Delay, s/veh / LOS	15.1	B		16.3	B		75.8	E		66.6	E	
Intersection Delay, s/veh / LOS	23.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.24	B	2.88	C	2.62	C
Bicycle LOS Score / LOS	1.80	B	1.07	A	0.66	A	0.88	A

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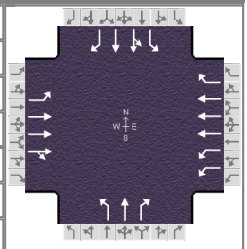
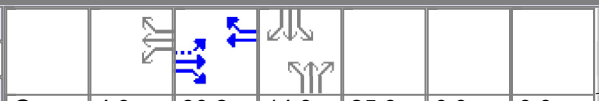
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Background PM	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	8. MD 28 & Broschart Rd	File Name	8BP.xus		
Project Description	PSTA				

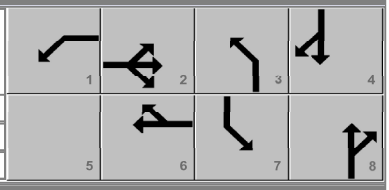


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	32	806	20	64	2583	323	92	65	230	178	21	114

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	4.9	80.2	14.3	25.6	0.0	0.0
Yellow	3.5	4.5	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.5	2.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		6.3	2.0	3.0		9.0		9.0
Phase Duration, s		86.7	10.4	97.1		32.1		20.8
Change Period, (*Y+R c*), s		6.5	5.5	6.5		6.5		6.5
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		4.3		4.2
Queue Clearance Time (*g s*), s			4.9			24.4		13.1
Green Extension Time (*g e*), s		0.0	0.4	0.0		1.2		1.2
Phase Call Probability			0.94			1.00		1.00
Max Out Probability			0.00			0.05		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	33	576	285	67	2691	336	96	68	240	93	115	119
Adjusted Saturation Flow Rate (*s*), veh/h/ln	108	1856	1831	1716	1685		1767	1856	1572	1767	1784	1572
Queue Service Time (*g s*), s	37.3	8.4	8.8	2.9	53.5		7.1	4.7	22.4	7.5	4.5	11.1
Cycle Queue Clearance Time (*g c*), s	80.2	8.4	8.8	2.9	53.5		7.1	4.7	22.4	7.5	4.5	11.1
Green Ratio (*g/C*)	0.53	0.53	0.53	0.03	0.60		0.17	0.17	0.17	0.10	0.10	0.10
Capacity (*c*), veh/h	75	1984	979	113	3054		301	316	268	168	340	150
Volume-to-Capacity Ratio (*X*)	0.446	0.290	0.291	0.592	0.881		0.318	0.214	0.893	0.550	0.337	0.792
Back of Queue (*Q*), ft/ln (50 th percentile)	41.8	83	88.6	36.2	318.1		83.5	57.8	263.1	90.5	53.4	124
Back of Queue (*Q*), veh/ln (50 th percentile)	1.6	3.2	3.5	1.4	12.4		3.3	2.3	10.3	3.5	2.1	4.8
Queue Storage Ratio (*RQ*) (50 th percentile)	0.14	0.00	0.00	0.12	0.00		0.20	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	60.0	11.2	11.8	71.6	11.0		54.6	53.6	60.9	64.8	63.4	66.4
Incremental Delay (*d 2*), s/veh	17.1	0.3	0.7	10.2	4.1		0.6	0.3	17.9	2.8	0.6	9.0
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	77.1	11.6	12.5	81.7	15.0	0.0	55.2	53.9	78.7	67.6	64.0	75.4
Level of Service (LOS)	E	B	B	F	B	A	E	D	E	E	E	E
Approach Delay, s/veh / LOS	14.3	B		14.8	B		69.0	E		69.2	E	
Intersection Delay, s/veh / LOS	23.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	2.26	B	2.88	C	2.61	C
Bicycle LOS Score / LOS	0.98	A	2.19	B	1.15	A	0.76	A

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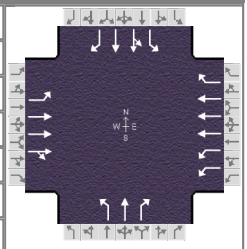
HCS7 Signalized Intersection Results Summary

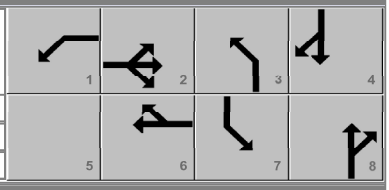
General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total AM	PHF	0.94
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	8. MD 28 & Broschart Rd	File Name	8TA.xus		
Project Description	PSTA				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26	2163	86	198	685	121	20	4	72	320	64	58

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.7	84.7	17.7	9.9	0.0	0.0
Yellow	3.5	4.5	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.5	2.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		6.3	2.0	3.0		9.0		9.0
Phase Duration, s		91.2	18.2	109.5		16.4		24.2
Change Period, (*Y+R c*), s		6.5	5.5	6.5		6.5		6.5
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		4.4		4.2
Queue Clearance Time (*g s*), s			11.0			9.2		16.1
Green Extension Time (*g e*), s		0.0	1.8	0.0		0.3		1.6
Phase Call Probability			1.00			0.99		1.00
Max Out Probability			0.00			0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	28	1602	791	211	729	129	21	4	77	170	238	62
Adjusted Saturation Flow Rate (*s*), veh/h/ln	721	1856	1818	1716	1685		1767	1856	1572	1767	1792	1572
Queue Service Time (*g s*), s	2.6	37.6	40.2	9.0	2.3		1.7	0.3	7.2	14.1	9.4	5.4
Cycle Queue Clearance Time (*g c*), s	2.6	37.6	40.2	9.0	2.3		1.7	0.3	7.2	14.1	9.4	5.4
Green Ratio (*g/C*)	0.56	0.56	0.56	0.08	0.69		0.07	0.07	0.07	0.12	0.12	0.12
Capacity (*c*), veh/h	455	2096	1027	291	3470		116	122	103	208	422	185
Volume-to-Capacity Ratio (*X*)	0.061	0.764	0.770	0.723	0.210		0.183	0.035	0.741	0.818	0.564	0.333
Back of Queue (*Q*), ft/ln (50 th percentile)	11.4	293.4	343.1	107.2	18.1		20.5	4	81.6	174.8	112.4	57.1
Back of Queue (*Q*), veh/ln (50 th percentile)	0.4	11.5	13.4	4.2	0.7		0.8	0.2	3.2	6.8	4.4	2.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.04	0.00	0.00	0.36	0.00		0.05	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	14.8	12.7	14.2	66.9	2.1		66.3	65.6	68.8	64.6	62.5	60.8
Incremental Delay (*d 2*), s/veh	0.2	1.6	3.4	7.0	0.1		0.7	0.1	9.9	7.7	1.2	1.0
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	14.9	14.3	17.6	74.0	2.2	0.0	67.0	65.7	78.7	72.3	63.7	61.8
Level of Service (LOS)	B	B	B	E	A	A	E	E	E	E	E	E
Approach Delay, s/veh / LOS	15.4	B		16.1	B		75.8	E		66.6	E	
Intersection Delay, s/veh / LOS	23.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.24	B	2.88	C	2.62	C
Bicycle LOS Score / LOS	1.82	B	1.08	A	0.66	A	0.88	A

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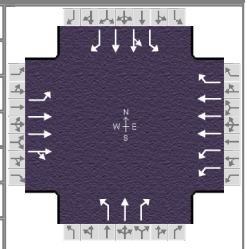
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TTG, Inc.			Duration, h	0.250
Analyst	QT	Analysis Date	Nov 4, 2019	Area Type	Other
Jurisdiction	Montgomery, MD	Time Period	Total PM	PHF	0.96
Urban Street	MD 28	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	8. MD 28 & Broschart Rd	File Name	8TP.xus		
Project Description	PSTA				

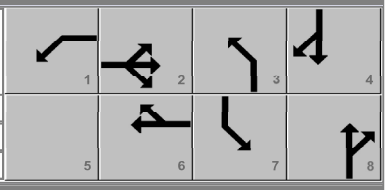


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	32	827	20	64	2618	323	92	65	230	178	21	114

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	4.9	80.2	14.3	25.6	0.0	0.0
Yellow	3.5	4.5	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.5	2.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		6.3	2.0	3.0		9.0		9.0
Phase Duration, s		86.7	10.4	97.1		32.1		20.8
Change Period, (*Y+R c*), s		6.5	5.5	6.5		6.5		6.5
Max Allow Headway (*MAH*), s		0.0	6.1	0.0		4.3		4.2
Queue Clearance Time (*g s*), s			4.9			24.4		13.1
Green Extension Time (*g e*), s		0.0	0.4	0.0		1.2		1.2
Phase Call Probability			0.94			1.00		1.00
Max Out Probability			0.00			0.05		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	33	590	292	67	2727	336	96	68	240	93	115	119
Adjusted Saturation Flow Rate (*s*), veh/h/ln	104	1856	1832	1716	1685		1767	1856	1572	1767	1784	1572
Queue Service Time (*g s*), s	34.7	8.7	9.1	2.9	56.1		7.1	4.7	22.4	7.5	4.5	11.1
Cycle Queue Clearance Time (*g c*), s	80.2	8.7	9.1	2.9	56.1		7.1	4.7	22.4	7.5	4.5	11.1
Green Ratio (*g/C*)	0.53	0.53	0.53	0.03	0.60		0.17	0.17	0.17	0.10	0.10	0.10
Capacity (*c*), veh/h	72	1984	980	113	3054		301	316	268	168	340	150
Volume-to-Capacity Ratio (*X*)	0.463	0.298	0.298	0.592	0.893		0.318	0.214	0.893	0.550	0.337	0.792
Back of Queue (*Q*), ft/ln (50 th percentile)	42.3	85.3	91.1	36.2	335.6		83.5	57.8	263.1	90.5	53.4	124
Back of Queue (*Q*), veh/ln (50 th percentile)	1.7	3.3	3.6	1.4	13.1		3.3	2.3	10.3	3.5	2.1	4.8
Queue Storage Ratio (*RQ*) (50 th percentile)	0.14	0.00	0.00	0.12	0.00		0.20	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	62.5	11.3	11.8	71.6	11.2		54.6	53.6	60.9	64.8	63.4	66.4
Incremental Delay (*d 2*), s/veh	18.8	0.4	0.7	10.2	4.5		0.6	0.3	17.9	2.8	0.6	9.0
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	81.3	11.6	12.6	81.7	15.7	0.0	55.2	53.9	78.7	67.6	64.0	75.4
Level of Service (LOS)	F	B	B	F	B	A	E	D	E	E	E	E
Approach Delay, s/veh / LOS	14.5	B		15.4	B		69.0	E		69.2	E	
Intersection Delay, s/veh / LOS	23.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	2.26	B	2.88	C	2.61	C
Bicycle LOS Score / LOS	0.99	A	2.21	B	1.15	A	0.76	A

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HCS7 Two-Way Stop-Control Report

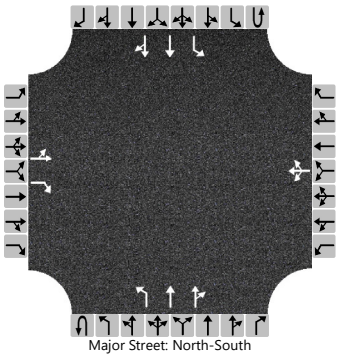
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	9. Broschart & Blackwell
Jurisdiction	Montgomery, MD
East/West Street	Broschart Rd
North/South Street	Blackwell Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	0	0	1	2	0	0	1	2	0
Configuration		LT		R			LTR			L	T	TR		L	T	TR
Volume (veh/h)		34	6	31		7	1	11	0	31	48	13	0	19	87	39
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		43		33			20			33				20		
Capacity, c (veh/h)		655		978			832			1439				1527		
v/c Ratio		0.07		0.03			0.02			0.02				0.01		
95% Queue Length, Q_{95} (veh)		0.2		0.1			0.1			0.1				0.0		
Control Delay (s/veh)		10.9		8.8			9.4			7.6				7.4		
Level of Service (LOS)		B		A			A			A				A		
Approach Delay (s/veh)	10.0				9.4				2.5				1.0			
Approach LOS	A				A											

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HCS7 Two-Way Stop-Control Report

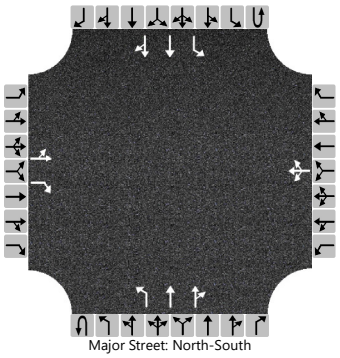
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	9. Broschart & Blackwell
Jurisdiction	Montgomery, MD
East/West Street	Broschart Rd
North/South Street	Blackwell Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	0	0	1	2	0	0	1	2	0
Configuration		LT		R			LTR			L	T	TR		L	T	TR
Volume (veh/h)		45	1	9		8	4	23	0	32	99	0	0	5	36	12
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		48		9			37			34				5		
Capacity, c (veh/h)		730		1042			867			1547				1478		
v/c Ratio		0.07		0.01			0.04			0.02				0.00		
95% Queue Length, Q_{95} (veh)		0.2		0.0			0.1			0.1				0.0		
Control Delay (s/veh)		10.3		8.5			9.3			7.4				7.4		
Level of Service (LOS)		B		A			A			A				A		
Approach Delay (s/veh)	10.0				9.3				1.8				0.7			
Approach LOS	A				A											

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HCS7 Two-Way Stop-Control Report

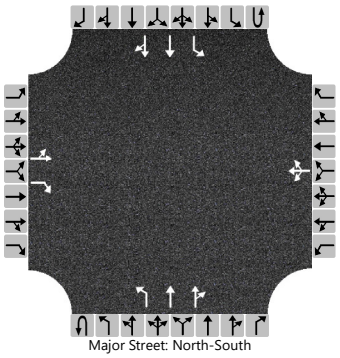
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	9. Broschart & Blackwell
Jurisdiction	Montgomery, MD
East/West Street	Broschart Rd
North/South Street	Blackwell Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	0	0	1	2	0	0	1	2	0
Configuration		LT		R			LTR			L	T	TR		L	T	TR
Volume (veh/h)		57	6	31		7	1	11	0	31	48	13	0	19	87	106
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		68		33			20			33				20		
Capacity, c (veh/h)		617		928			824			1354				1527		
v/c Ratio		0.11		0.04			0.02			0.02				0.01		
95% Queue Length, Q_{95} (veh)		0.4		0.1			0.1			0.1				0.0		
Control Delay (s/veh)		11.6		9.0			9.5			7.7				7.4		
Level of Service (LOS)		B		A			A			A				A		
Approach Delay (s/veh)	10.7				9.5				2.6				0.7			
Approach LOS	B				A											

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HCS7 Two-Way Stop-Control Report

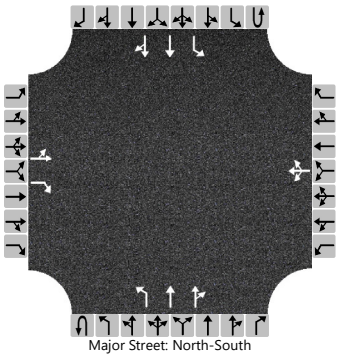
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	9. Broschart & Blackwell
Jurisdiction	Montgomery, MD
East/West Street	Broschart Rd
North/South Street	Blackwell Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	0	0	1	2	0	0	1	2	0
Configuration		LT		R			LTR			L	T	TR		L	T	TR
Volume (veh/h)		134	1	9		8	4	23	0	32	99	0	0	5	36	28
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		142		9			37			34				5		
Capacity, c (veh/h)		720		1029			864			1525				1478		
v/c Ratio		0.20		0.01			0.04			0.02				0.00		
95% Queue Length, Q_{95} (veh)		0.7		0.0			0.1			0.1				0.0		
Control Delay (s/veh)		11.2		8.5			9.4			7.4				7.4		
Level of Service (LOS)		B		A			A			A				A		
Approach Delay (s/veh)	11.1				9.4				1.8				0.5			
Approach LOS	B				A											

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HCS7 Two-Way Stop-Control Report

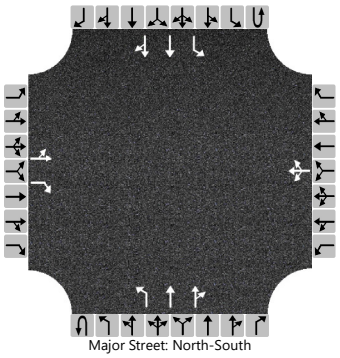
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	9. Broschart & Blackwell
Jurisdiction	Montgomery, MD
East/West Street	Broschart Rd
North/South Street	Blackwell Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	0	0	1	2	0	0	1	2	0
Configuration		LT		R			LTR			L	T	TR		L	T	TR
Volume (veh/h)		57	6	31		7	1	11	0	31	48	13	0	19	87	106
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		68		33			20			33				20		
Capacity, c (veh/h)		617		928			824			1354				1527		
v/c Ratio		0.11		0.04			0.02			0.02				0.01		
95% Queue Length, Q_{95} (veh)		0.4		0.1			0.1			0.1				0.0		
Control Delay (s/veh)		11.6		9.0			9.5			7.7				7.4		
Level of Service (LOS)		B		A			A			A				A		
Approach Delay (s/veh)	10.7				9.5				2.6				0.7			
Approach LOS	B				A											

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HCS7 Two-Way Stop-Control Report

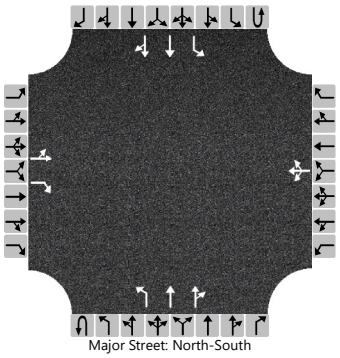
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM
Intersection Orientation	North-South
Project Description	PSTA

Site Information

Intersection	9. Broschart & Blackwell
Jurisdiction	Montgomery, MD
East/West Street	Broschart Rd
North/South Street	Blackwell Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	0	0	1	2	0	0	1	2	0
Configuration		LT		R			LTR			L	T	TR		L	T	TR
Volume (veh/h)		134	1	9		8	4	23	0	32	99	0	0	5	36	28
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		142		9			37			34				5		
Capacity, c (veh/h)		720		1029			864			1525				1478		
v/c Ratio		0.20		0.01			0.04			0.02				0.00		
95% Queue Length, Q_{95} (veh)		0.7		0.0			0.1			0.1				0.0		
Control Delay (s/veh)		11.2		8.5			9.4			7.4				7.4		
Level of Service (LOS)		B		A			A			A				A		
Approach Delay (s/veh)	11.1				9.4				1.8				0.5			
Approach LOS	B				A											

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HCS7 Two-Way Stop-Control Report

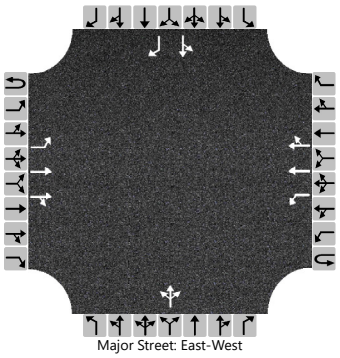
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	10. Medical Ctr & Bros.
Jurisdiction	Montgomery, MD
East/West Street	Medical Ctr Drive
North/South Street	Broschart Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume (veh/h)	0	121	288	5	0	7	84	63		0	0	3		60	0	46
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		132				8					3			65		50
Capacity, c (veh/h)		1410				1231					855			441		961
v/c Ratio		0.09				0.01					0.00			0.15		0.05
95% Queue Length, Q_{95} (veh)		0.3				0.0					0.0			0.5		0.2
Control Delay (s/veh)		7.8				7.9					9.2			14.6		9.0
Level of Service (LOS)		A				A					A			B		A
Approach Delay (s/veh)		2.3				0.4				9.2				12.1		
Approach LOS										A				B		

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HCS7 Two-Way Stop-Control Report

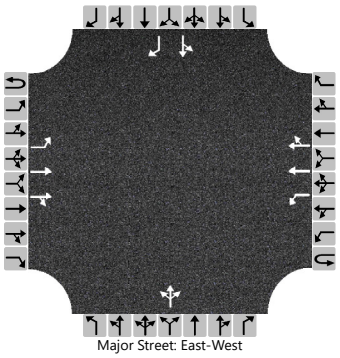
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Existing PM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	10. Medical Ctr & Bros.
Jurisdiction	Montgomery, MD
East/West Street	Medical Ctr Drive
North/South Street	Broschart Rd
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume (veh/h)	0	22	54	1	0	4	308	27		0	0	0		49	0	74
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.96		6.86	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				5					0			59		89
Capacity, c (veh/h)		1144				1526								553		802
v/c Ratio		0.02				0.00								0.11		0.11
95% Queue Length, Q_{95} (veh)		0.1				0.0								0.4		0.4
Control Delay (s/veh)		8.2				7.4								12.3		10.0
Level of Service (LOS)		A				A								B		B
Approach Delay (s/veh)		2.3				0.1								10.9		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

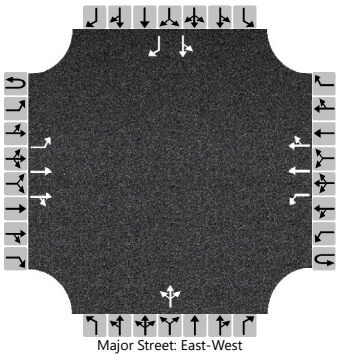
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	10. Medical Ctr & Bros.
Jurisdiction	Montgomery, MD
East/West Street	Medical Ctr Drive
North/South Street	Broschart Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume (veh/h)	0	121	288	5	0	7	84	63		0	0	3		60	0	46
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		132				8					3			65		50
Capacity, c (veh/h)		1410				1231					855			441		961
v/c Ratio		0.09				0.01					0.00			0.15		0.05
95% Queue Length, Q_{95} (veh)		0.3				0.0					0.0			0.5		0.2
Control Delay (s/veh)		7.8				7.9					9.2			14.6		9.0
Level of Service (LOS)		A				A					A			B		A
Approach Delay (s/veh)		2.3				0.4				9.2				12.1		
Approach LOS										A				B		

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HCS7 Two-Way Stop-Control Report

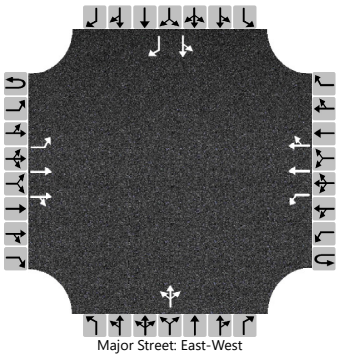
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	10. Medical Ctr & Bros.
Jurisdiction	Montgomery, MD
East/West Street	Medical Ctr Drive
North/South Street	Broschart Rd
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume (veh/h)	0	22	54	1	0	4	308	27		0	0	0		49	0	74
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized													No			
Median Type | Storage	Left + Thru								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.96		6.86	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				5					0			59		89
Capacity, c (veh/h)		1144				1526								553		802
v/c Ratio		0.02				0.00								0.11		0.11
95% Queue Length, Q_{95} (veh)		0.1				0.0								0.4		0.4
Control Delay (s/veh)		8.2				7.4								12.3		10.0
Level of Service (LOS)		A				A								B		B
Approach Delay (s/veh)	2.3				0.1								10.9			
Approach LOS													B			

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HCS7 Two-Way Stop-Control Report

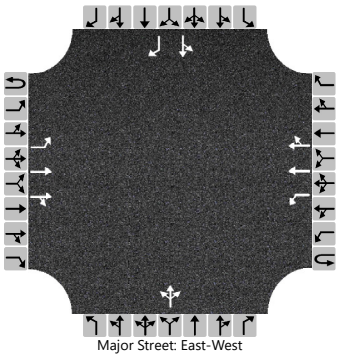
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	10. Medical Ctr & Bros.
Jurisdiction	Montgomery, MD
East/West Street	Medical Ctr Drive
North/South Street	Broschart Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume (veh/h)	0	121	288	5	0	7	84	63		0	0	3		60	0	46
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		132				8					3			65		50
Capacity, c (veh/h)		1410				1231					855			441		961
v/c Ratio		0.09				0.01					0.00			0.15		0.05
95% Queue Length, Q_{95} (veh)		0.3				0.0					0.0			0.5		0.2
Control Delay (s/veh)		7.8				7.9					9.2			14.6		9.0
Level of Service (LOS)		A				A					A			B		A
Approach Delay (s/veh)		2.3				0.4				9.2				12.1		
Approach LOS										A				B		

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HCS7 Two-Way Stop-Control Report

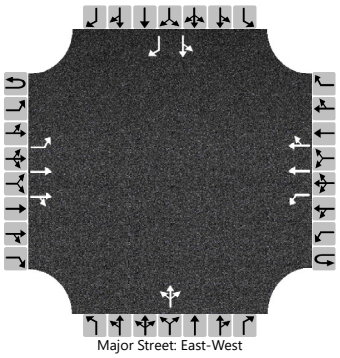
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	11/1/2019
Analysis Year	2019
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	PSTA

Site Information

Intersection	10. Medical Ctr & Bros.
Jurisdiction	Montgomery, MD
East/West Street	Medical Ctr Drive
North/South Street	Broschart Rd
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume (veh/h)	0	22	54	1	0	4	308	27		0	0	0		49	0	74
Percent Heavy Vehicles (%)	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized													No			
Median Type | Storage	Left + Thru								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.96		6.86	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				5					0			59		89
Capacity, c (veh/h)		1144				1526								553		802
v/c Ratio		0.02				0.00								0.11		0.11
95% Queue Length, Q_{95} (veh)		0.1				0.0								0.4		0.4
Control Delay (s/veh)		8.2				7.4								12.3		10.0
Level of Service (LOS)		A				A								B		B
Approach Delay (s/veh)	2.3				0.1								10.9			
Approach LOS													B			

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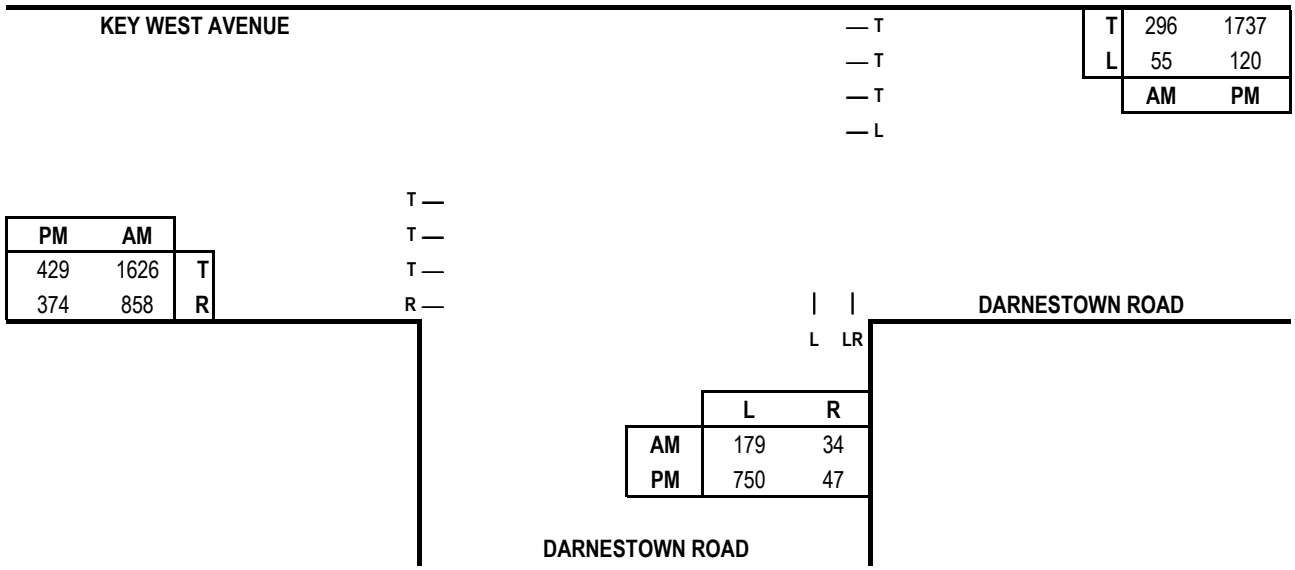
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Darnestown Road/Key West Avenue
N/S Road: Darnestown Road
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



	T	L
AM	296	55
PM	1737	120

	T	R
AM	1626	858
PM	429	374

	L	R
AM	179	34
PM	750	47

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	213	0.53	113				113
EB	745	1.00	745	55	1.00	55	800
WB	296	0.37	110				
						CLV TOTAL=	**913**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	797	0.53	422				422
EB	429	0.37	159	120	1.00	120	643
WB	1737	0.37	643				
						CLV TOTAL=	**1,065**

Scenario ID - EXIST1

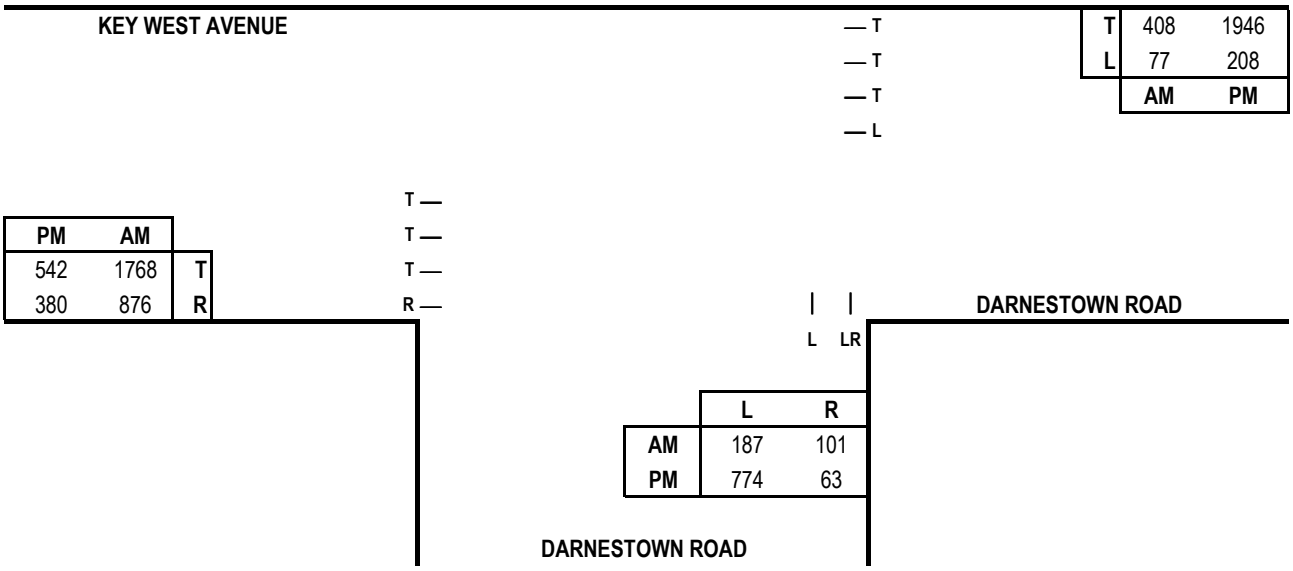
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Darnestown Road/Key West Avenue
N/S Road: Darnestown Road
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



	T	L
AM	408	77
PM	1946	208

	T	R
AM	1768	876
PM	542	380

	L	R
AM	187	101
PM	774	63

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	288	0.53	153				153
EB	723	1.00	723	77	1.00	77	800
WB	408	0.37	151				
						CLV TOTAL=	**953**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	837	0.53	444				444
EB	542	0.37	201	208	1.00	208	720
WB	1946	0.37	720				
						CLV TOTAL=	**1,164**

Scenario ID - BACK1

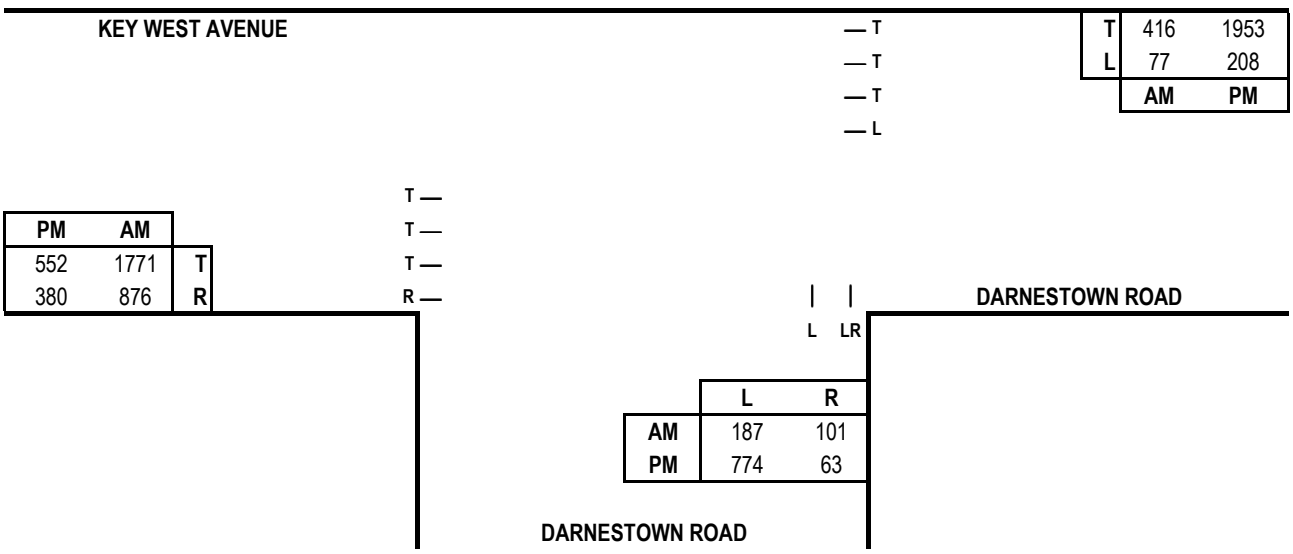
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Darnestown Road/Key West Avenue
N/S Road: Darnestown Road
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	288	0.53	153				153
EB	723	1.00	723	77	1.00	77	800
WB	416	0.37	154				
			CLV TOTAL=				**953**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	837	0.53	444				444
EB	552	0.37	204	208	1.00	208	723
WB	1953	0.37	723				
			CLV TOTAL=				**1,167**

Scenario ID - TOT1

CRITICAL LANE VOLUME (CLV) METHODOLOGY

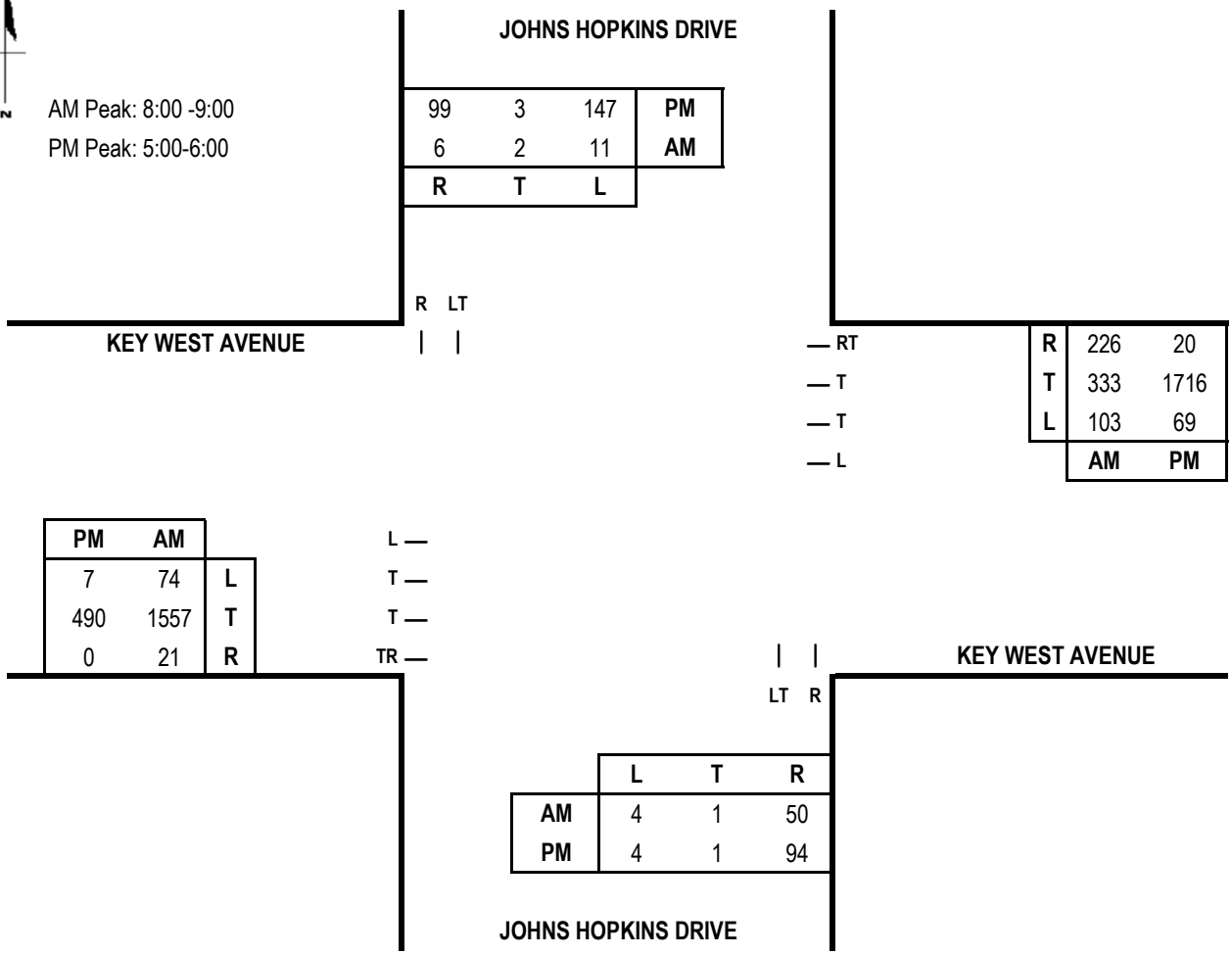
for Montgomery County

E/W Road: Key West Avenue
N/S Road: Johns Hopkins Drive
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian



AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	1.00	5	11	1.00	11	
							17
SB	13	1.00	13	4	1.00	4	
EB	1578	0.37	584	103	1.00	103	
							687
WB	559	0.37	207	74	1.00	74	
					CLV TOTAL=		**704**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	25	1.00	25	147	1.00	147	
							172
SB	150	1.00	150	4	1.00	4	
EB	490	0.37	181	69	1.00	69	
							649
WB	1736	0.37	642	7	1.00	7	
					CLV TOTAL=		**821**

Scenario ID - EXIST2

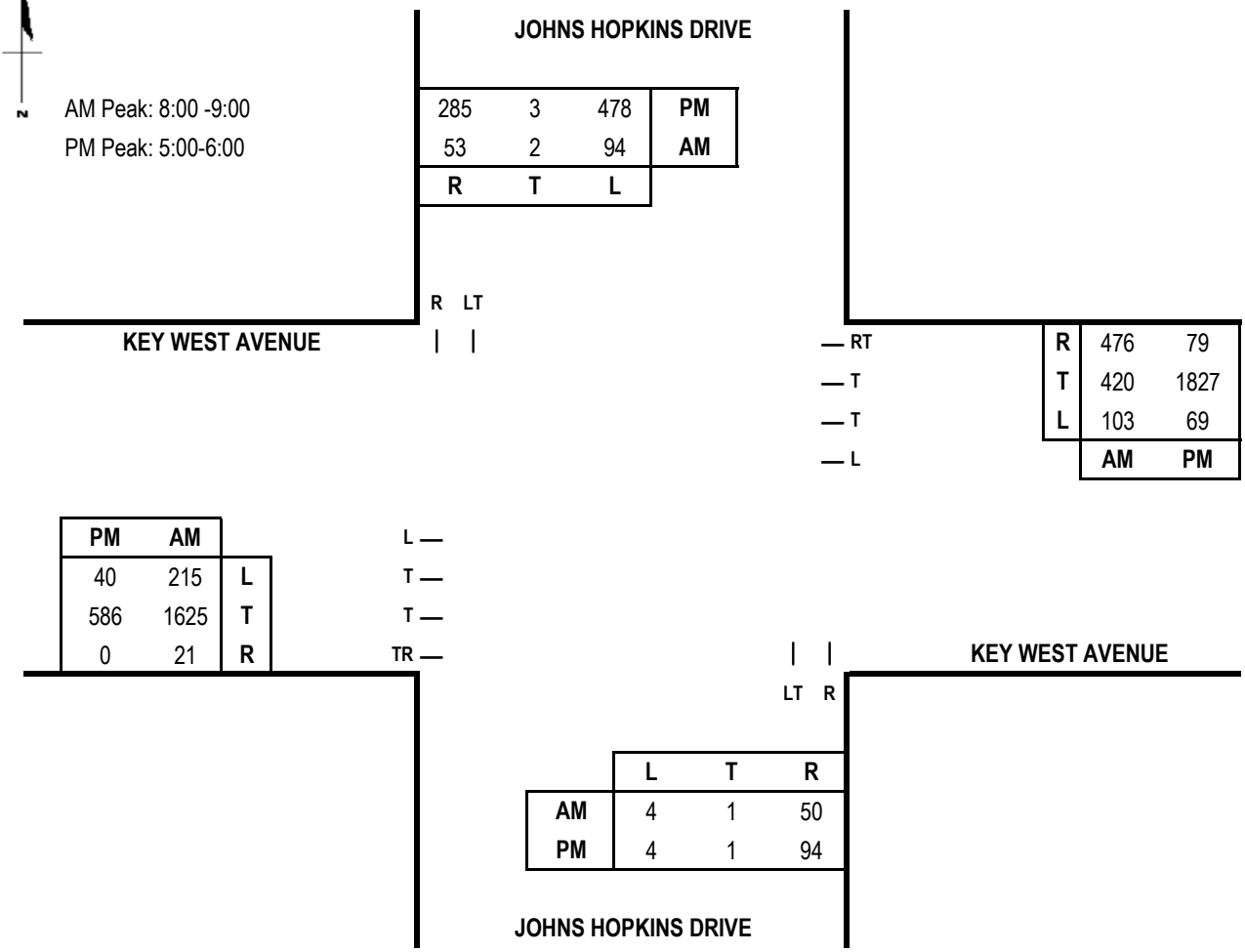
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Johns Hopkins Drive
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	1.00	5	94	1.00	94	
							100
SB	96	1.00	96	4	1.00	4	
EB	1646	0.37	609	103	1.00	103	
							712
WB	896	0.37	332	215	1.00	215	
					CLV TOTAL=		**812**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	25	1.00	25	478	1.00	478	
							503
SB	481	1.00	481	4	1.00	4	
EB	586	0.37	217	69	1.00	69	
							745
WB	1906	0.37	705	40	1.00	40	
					CLV TOTAL=		**1,248**

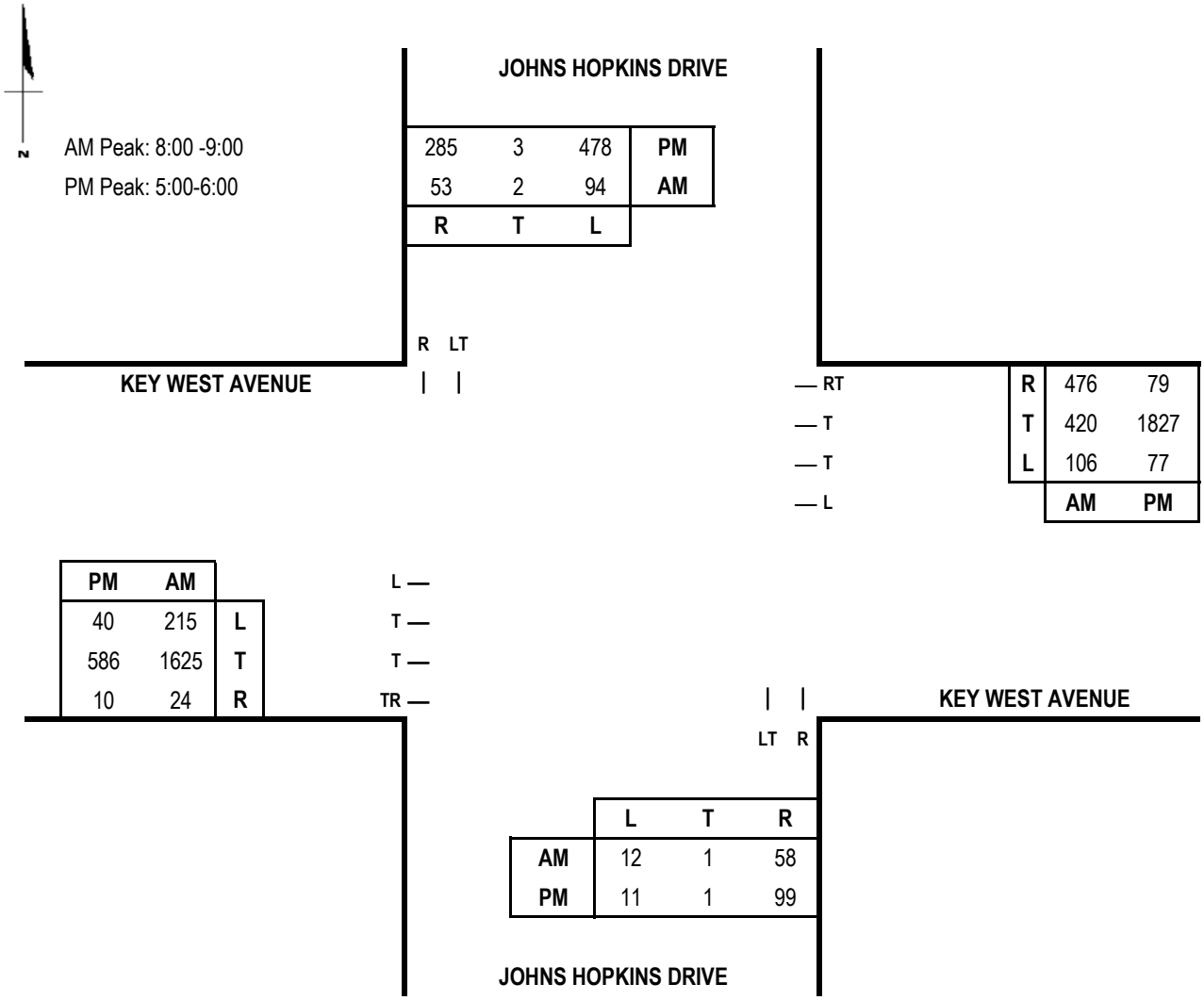
Scenario ID - BACK2

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Johns Hopkins Drive
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	13	1.00	13	94	1.00	94	
							108
SB	96	1.00	96	12	1.00	12	
EB	1649	0.37	610	106	1.00	106	
							716
WB	896	0.37	332	215	1.00	215	
					CLV TOTAL=		**824**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	22	1.00	22	478	1.00	478	
							500
SB	481	1.00	481	11	1.00	11	
EB	596	0.37	221	77	1.00	77	
							745
WB	1906	0.37	705	40	1.00	40	
					CLV TOTAL=		**1,245**

Scenario ID - TOT2

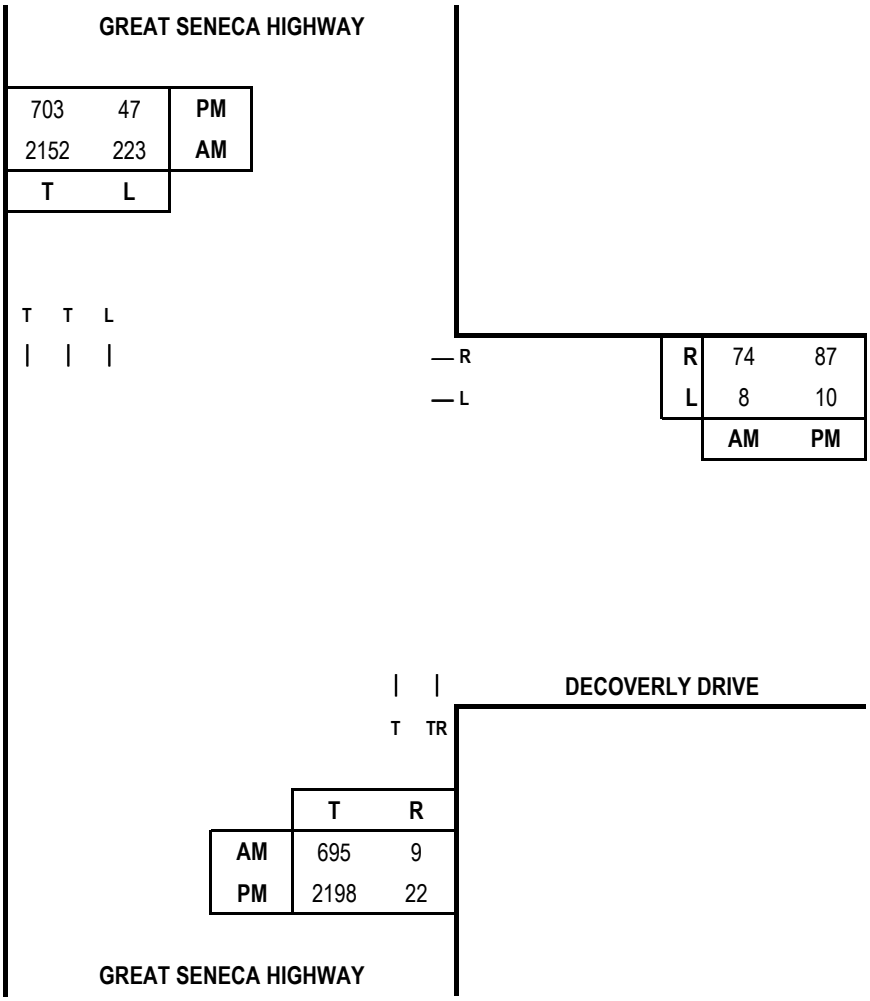
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Decoverly Drive
N/S Road: Great Seneca Highway
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

Peak: 8:00 -9:00
Peak: 4:45 -5:45



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
WB	8	1.00	8				8
NB	704	0.53	373	223	1.00	223	1141
SB	2152	0.53	1141				
						CLV TOTAL=	**1,149**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
WB	40	1.00	40				40
NB	2220	0.53	1177	47	1.00	47	1224
SB	703	0.53	373				
						CLV TOTAL=	**1,264**

Scenario ID - EXIST3

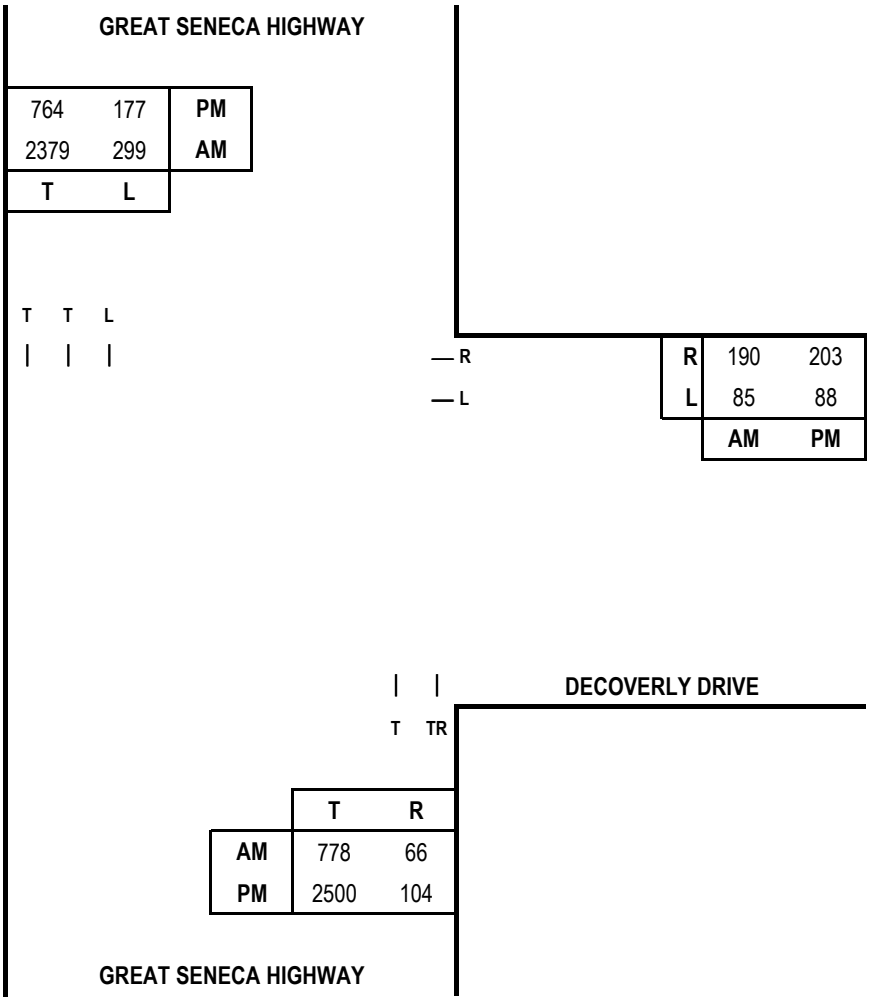
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Decoverly Drive
N/S Road: Great Seneca Highway
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

Peak: 8:00 -9:00
Peak: 4:45 -5:45



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
WB	85	1.00	85				85
NB	844	0.53	447	299	1.00	299	1261
SB	2379	0.53	1261				
						CLV TOTAL=	**1,346**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
WB	88	1.00	88				88
NB	2604	0.53	1380	177	1.00	177	1557
SB	764	0.53	405				
						CLV TOTAL=	**1,645**

Scenario ID - BACK3

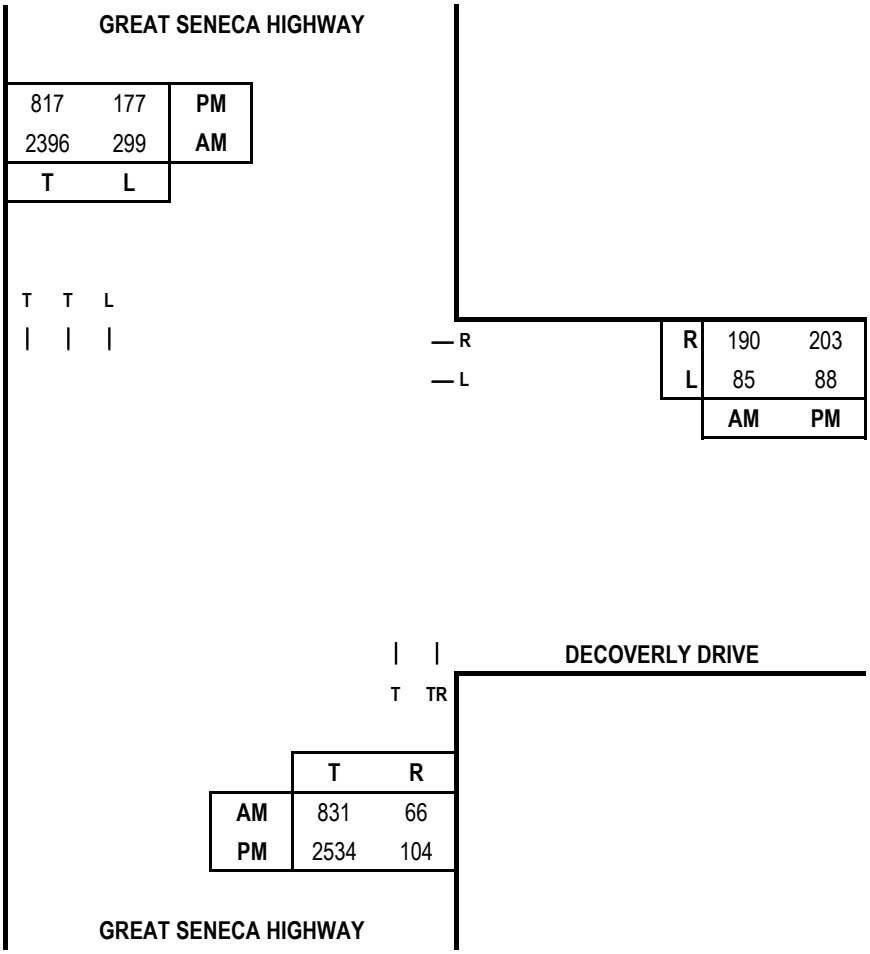
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Decoverly Drive
N/S Road: Great Seneca Highway
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

Peak: 8:00 -9:00
Peak: 4:45 -5:45



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
WB	85	1.00	85				85
NB	897	0.53	475	299	1.00	299	1270
SB	2396	0.53	1270				
						CLV TOTAL=	**1,355**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
WB	88	1.00	88				88
NB	2638	0.53	1398	177	1.00	177	1575
SB	817	0.53	433				
						CLV TOTAL=	**1,663**

Scenario ID - TOT3

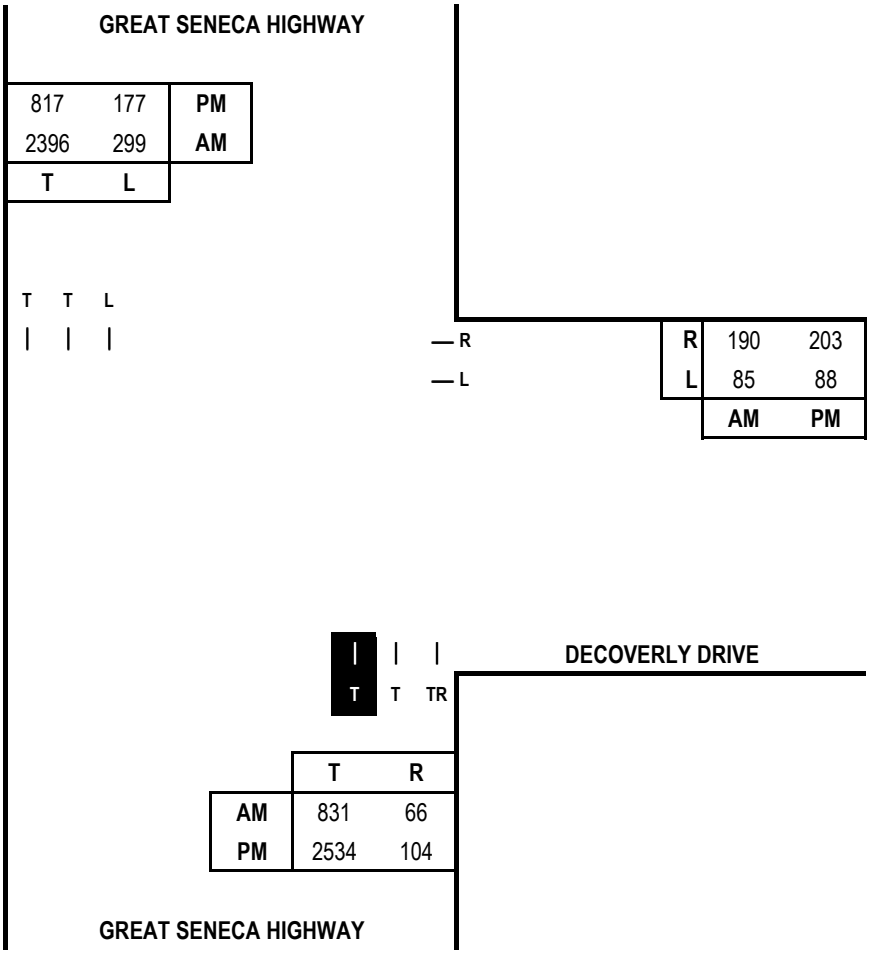
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Decoverly Drive
N/S Road: Great Seneca Highway
Conditions: Total Traffic w/ improvement

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

Peak: 8:00 -9:00
Peak: 4:45 -5:45



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
WB	85	1.00	85				85
NB	897	0.37	332	299	1.00	299	1270
SB	2396	0.53	1270				
						CLV TOTAL=	1,355

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
WB	88	1.00	88				88
NB	2638	0.37	976	177	1.00	177	1153
SB	817	0.53	433				
						CLV TOTAL=	1,241

Scenario ID - TOT3

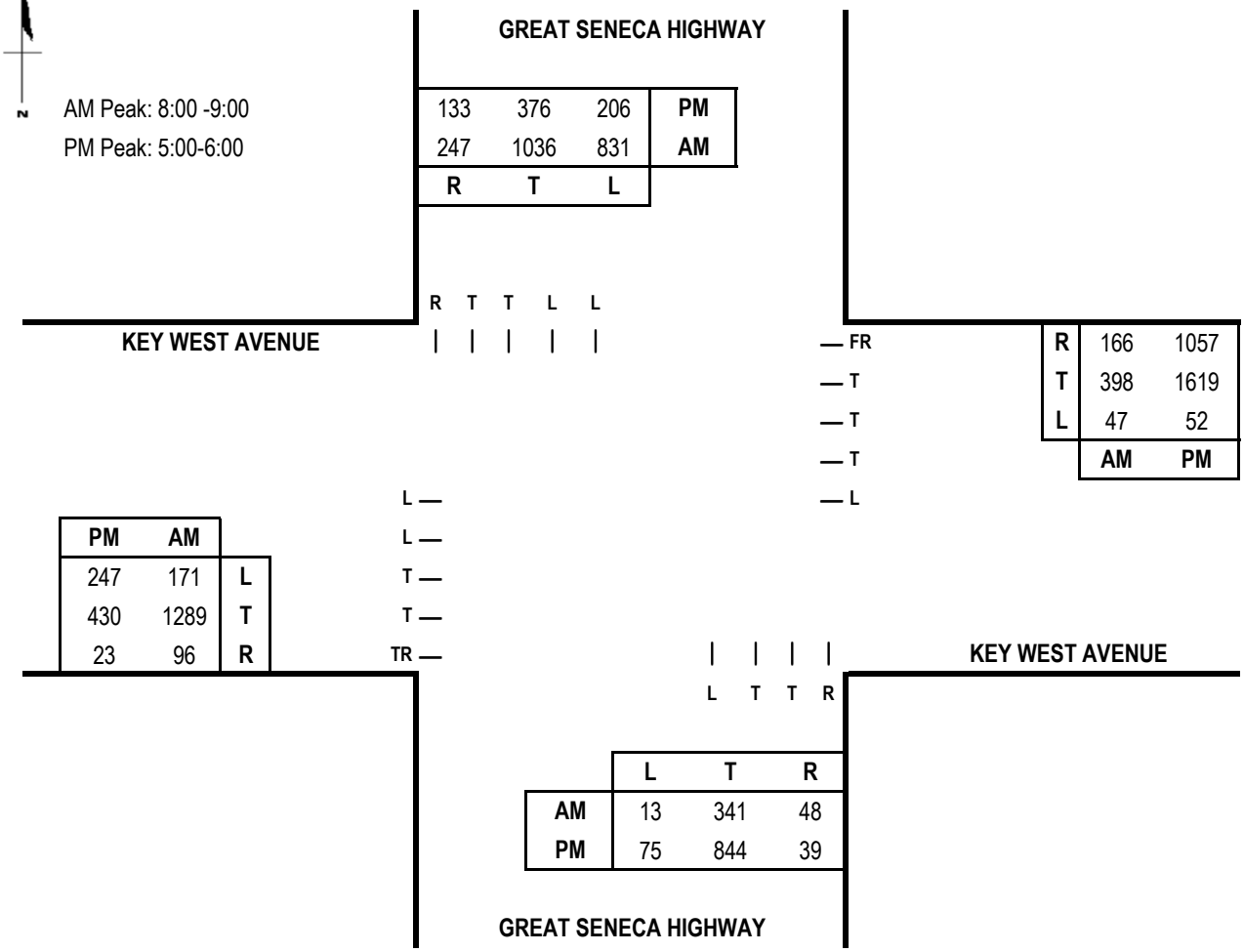
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Great Seneca Highway
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



PM	AM	
133	376	206	PM
247	1036	831	AM
R	T	L	

R	166	1057
T	398	1619
L	47	52
	AM	PM

PM	AM	
247	171	L
430	1289	T
23	96	R

	L	T	R
AM	13	341	48
PM	75	844	39

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	341	0.53	181	831	0.53	440	621
SB	1036	0.53	549	13	1.00	13	
EB	1385	0.37	512	47	1.00	47	559
WB	398	0.37	147	171	0.53	91	
						CLV TOTAL=	1,180

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	844	0.53	447	206	0.53	109	556
SB	376	0.53	199	75	1.00	75	
EB	453	0.37	168	52	1.00	52	730
WB	1619	0.37	599	247	0.53	131	
						CLV TOTAL=	1,286

Scenario ID - EXIST4

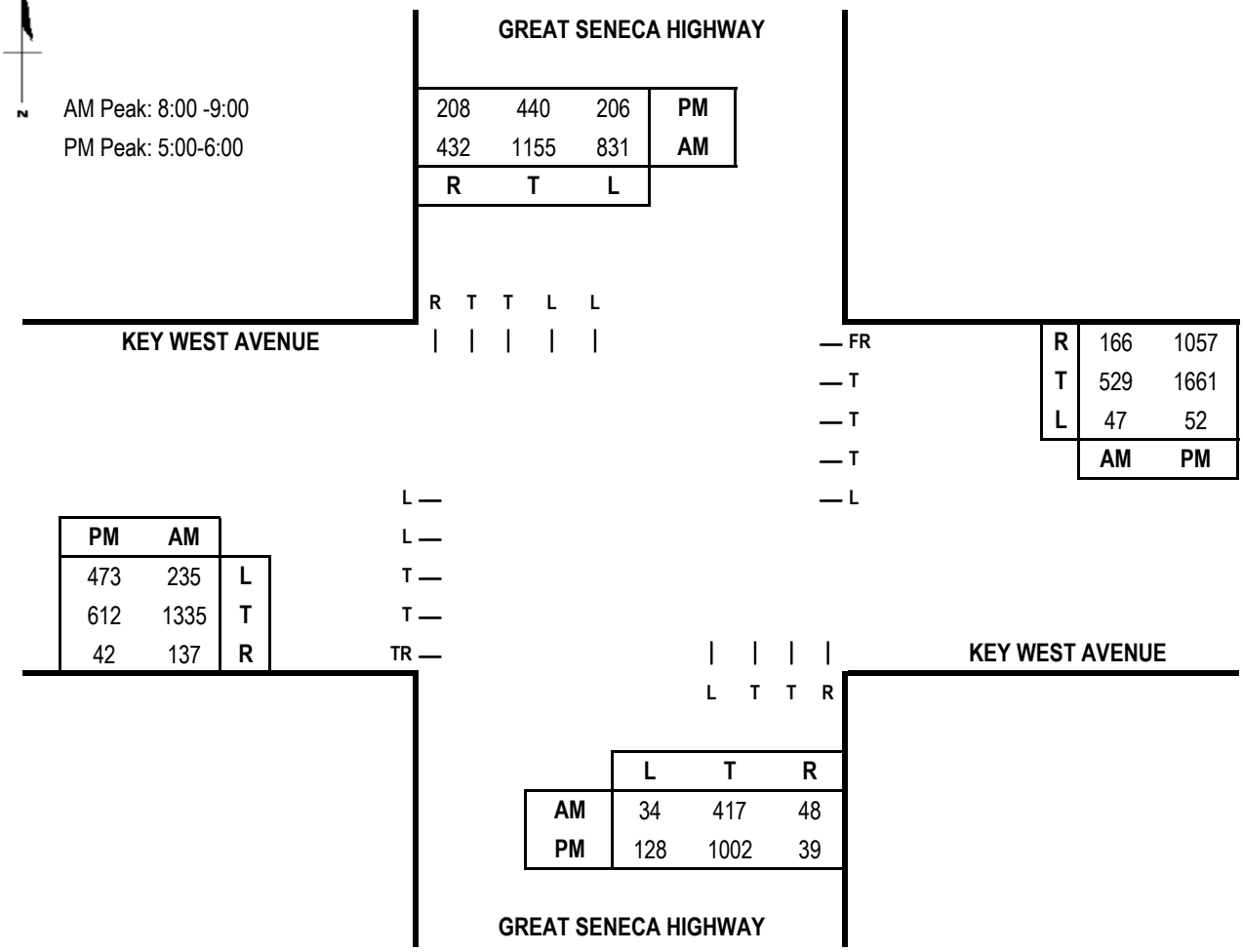
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Great Seneca Highway
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	417	0.53	221	831	0.53	440	661
SB	1155	0.53	612	34	1.00	34	
EB	1472	0.37	545	47	1.00	47	592
WB	529	0.37	196	235	0.53	125	
						CLV TOTAL=	**1,253**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1002	0.53	531	206	0.53	109	640
SB	440	0.53	233	128	1.00	128	
EB	654	0.37	242	52	1.00	52	866
WB	1661	0.37	615	473	0.53	251	
						CLV TOTAL=	**1,506**

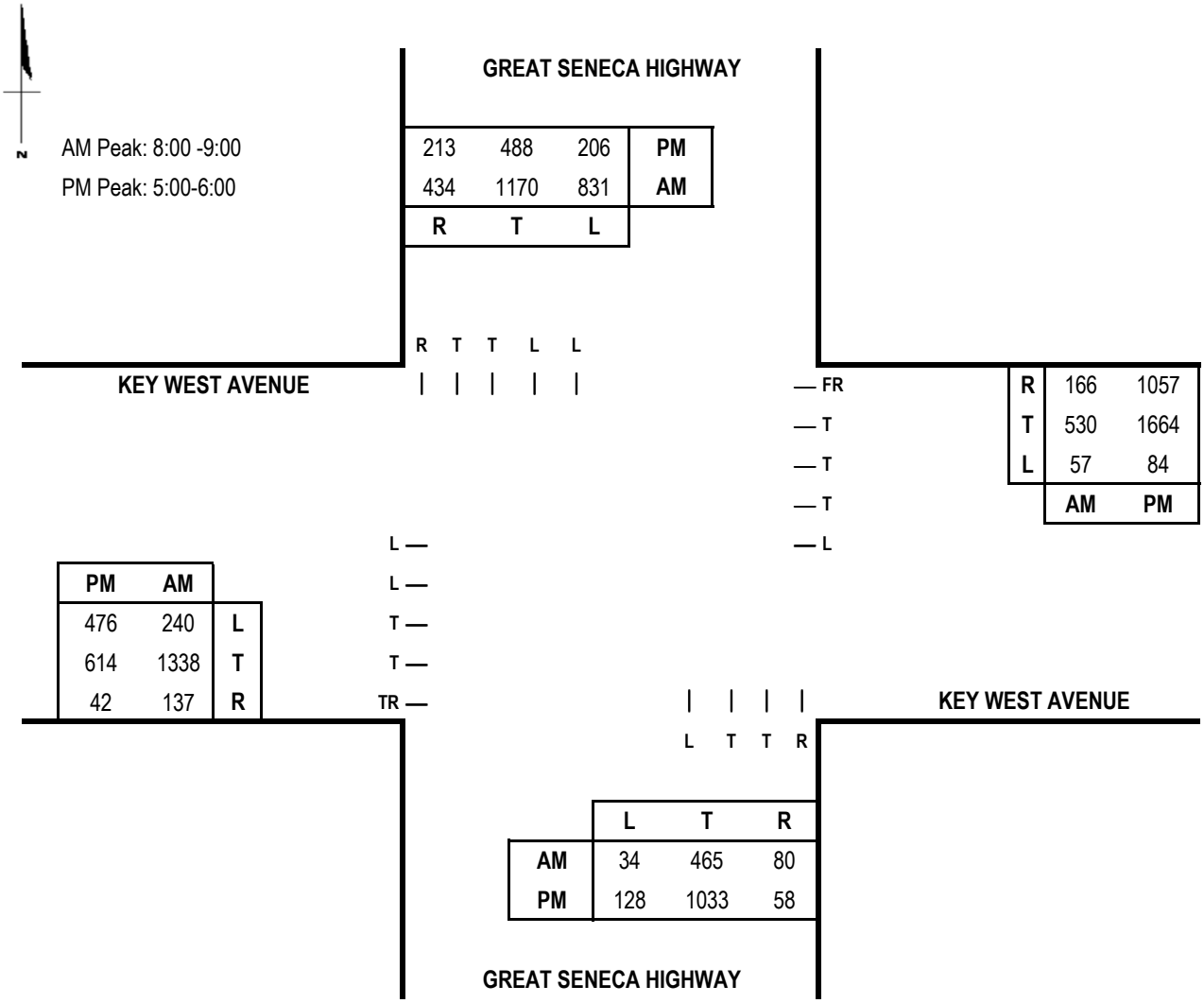
Scenario ID - BACK4

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Great Seneca Highway
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	465	0.53	246	831	0.53	440	686
SB	1170	0.53	620	34	1.00	34	
EB	1475	0.37	546	57	1.00	57	603
WB	530	0.37	196	240	0.53	127	
						CLV TOTAL=	**1,289**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1033	0.53	547	206	0.53	109	656
SB	488	0.53	259	128	1.00	128	
EB	656	0.37	243	84	1.00	84	868
WB	1664	0.37	616	476	0.53	252	
						CLV TOTAL=	**1,524**

Scenario ID - TOT4

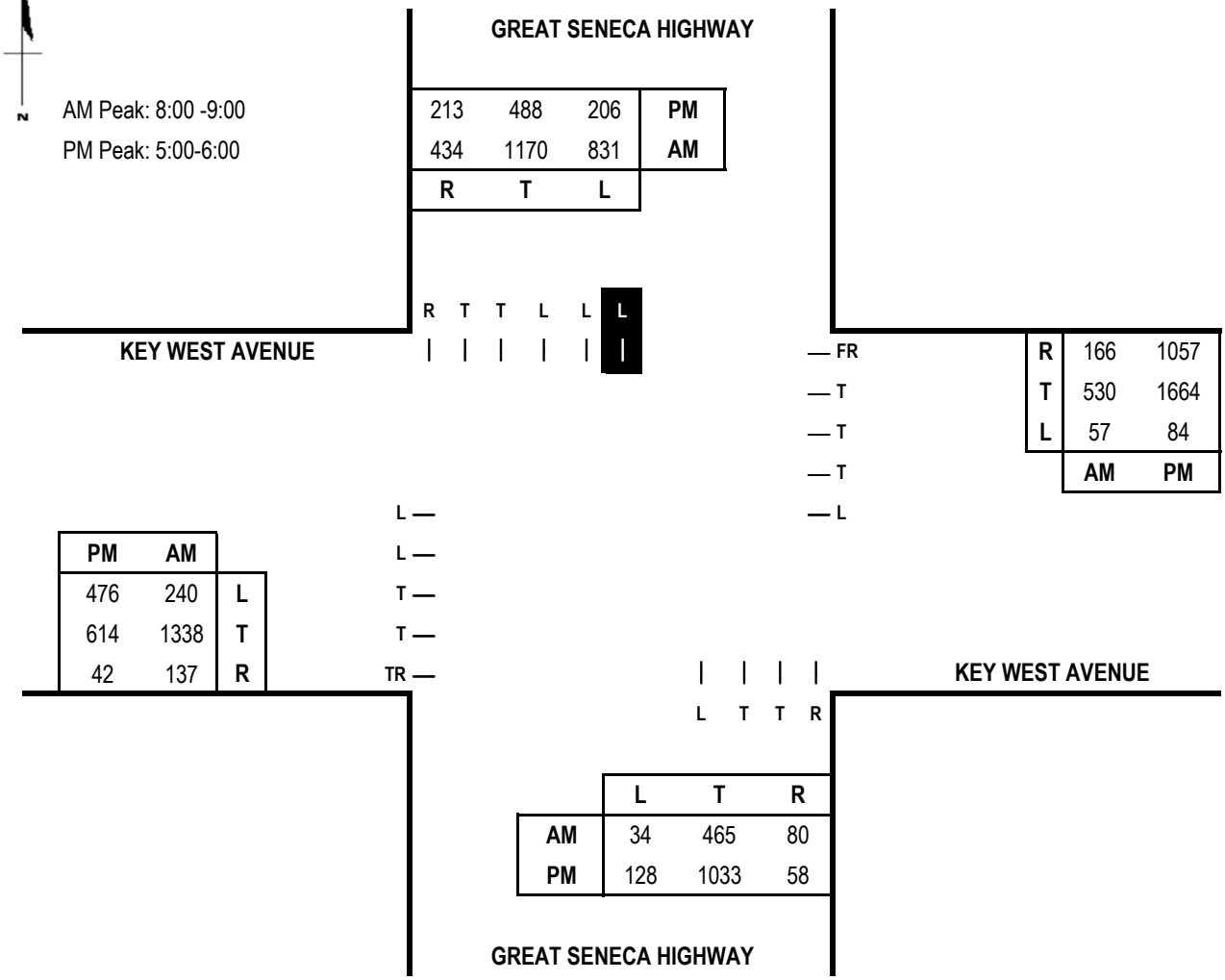
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Great Seneca Highway
Conditions: Total Traffic
Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

w. Improvement

AM Peak: 8:00 -9:00
PM Peak: 5:00-6:00



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	465	0.53	246	831	0.37	307	654
SB	1170	0.53	620	34	1.00	34	
EB	1475	0.37	546	57	1.00	57	603
WB	530	0.37	196	240	0.53	127	
						CLV TOTAL=	**1,257**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1033	0.53	547	206	0.37	76	623
SB	488	0.53	259	128	1.00	128	
EB	656	0.37	243	84	1.00	84	868
WB	1664	0.37	616	476	0.53	252	
						CLV TOTAL=	**1,491**

Scenario ID - TOT4

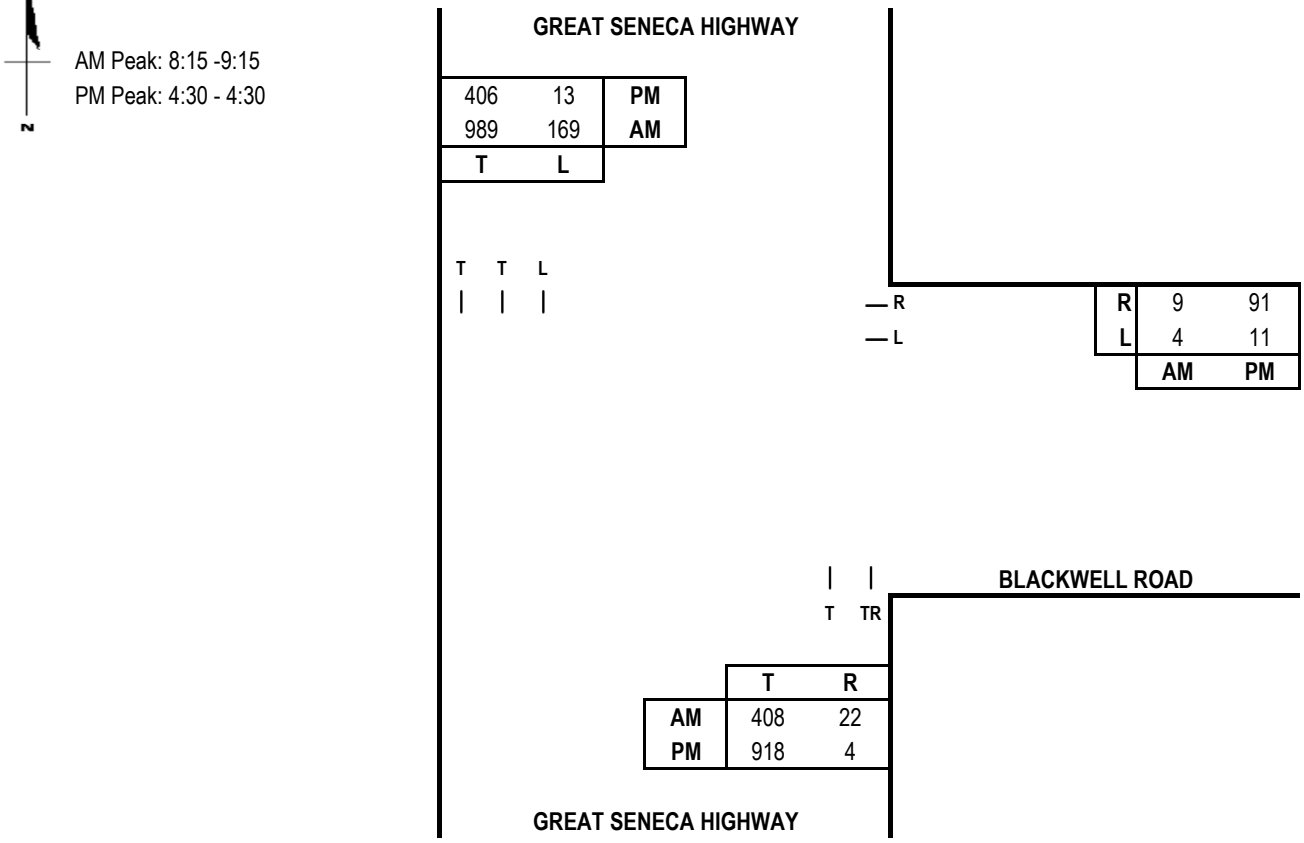
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Blackwell Road
N/S Road: Great Seneca Highway
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:30 - 4:30



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
WB	4	1.00	4				4
NB	430	0.53	228	169	1.00	169	
							524
SB	989	0.53	524				
					CLV TOTAL=		528

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
WB	78	1.00	78				78
NB	922	0.53	489	13	1.00	13	
							502
SB	406	0.53	215				
					CLV TOTAL=		580

Scenario ID - EXIST5

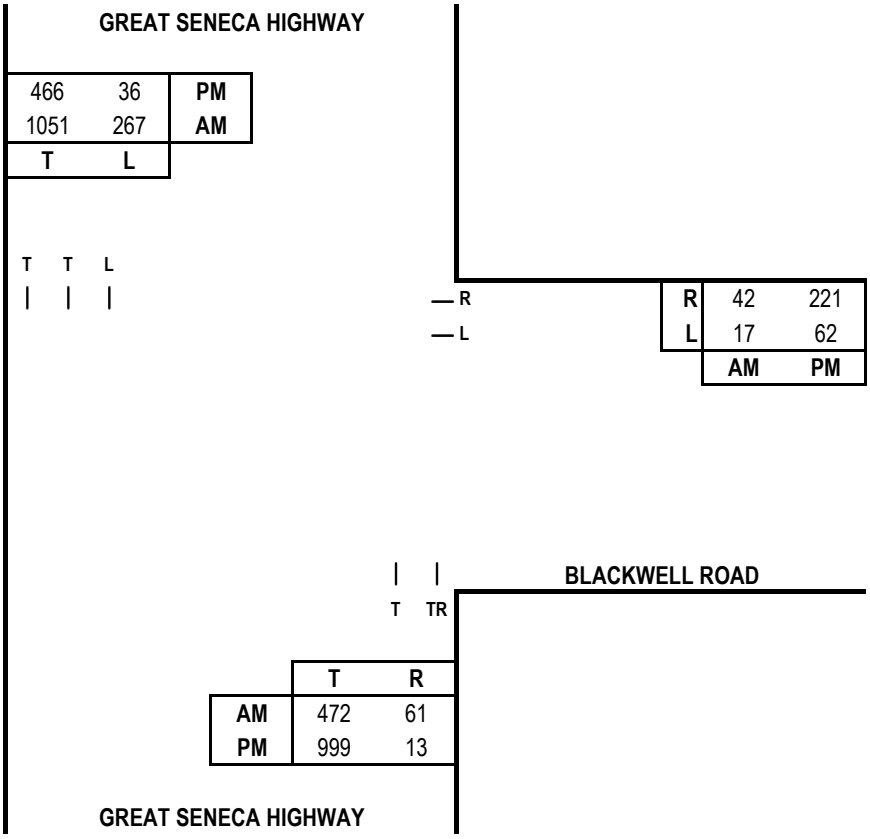
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Blackwell Road
N/S Road: Great Seneca Highway
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:30 - 4:30



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
WB	17	1.00	17				17
NB	533	0.53	282	267	1.00	267	
SB	1051	0.53	557				557
					CLV TOTAL=		**574**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
WB	185	1.00	185				185
NB	1012	0.53	536	36	1.00	36	
SB	466	0.53	247				572
					CLV TOTAL=		**757**

Scenario ID - BACK5

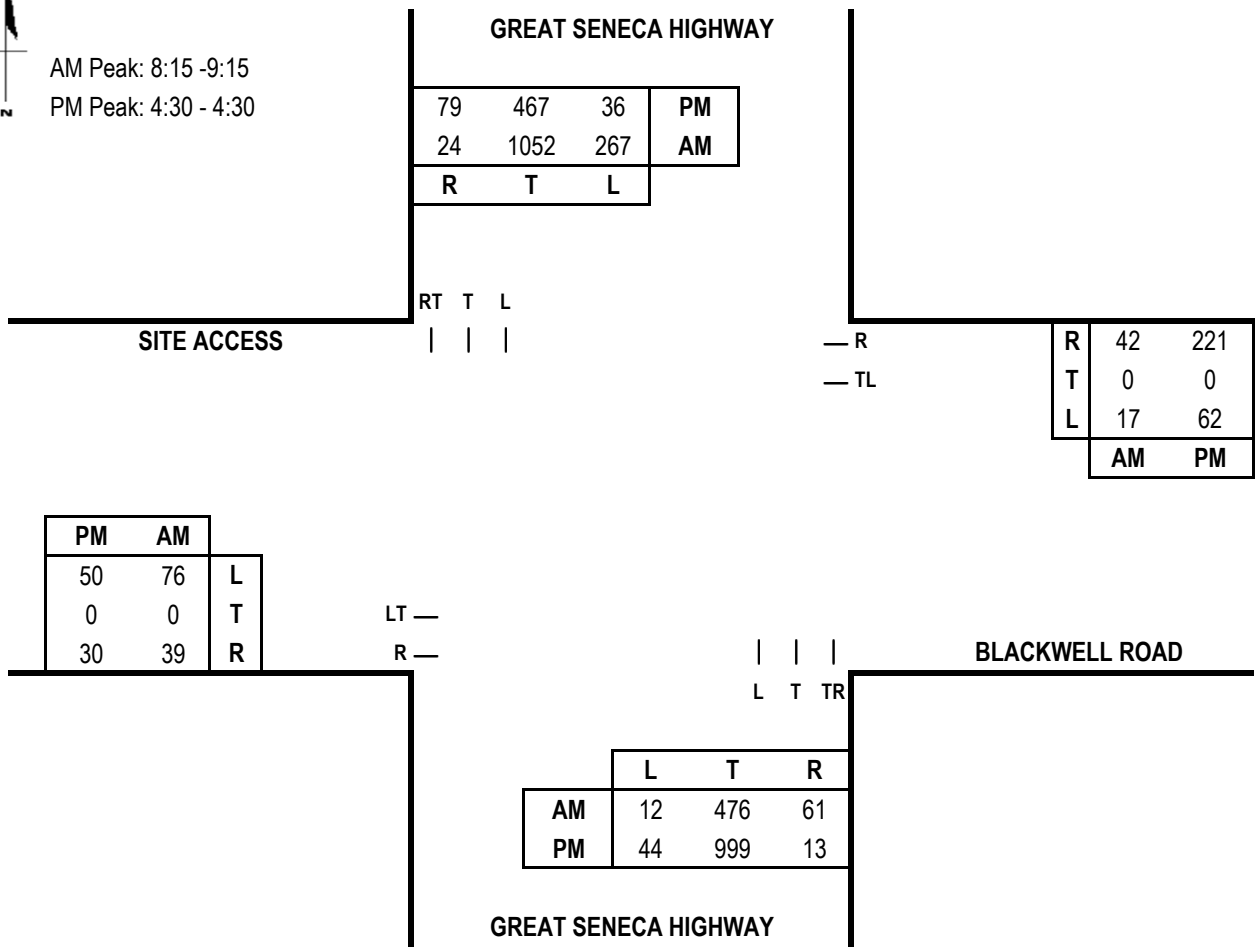
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Blackwell Road/Site Access
N/S Road: Great Seneca Highway
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

AM Peak: 8:15 -9:15
PM Peak: 4:30 - 4:30



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	537	0.53	285	267	1.00	267	582
SB	1076	0.53	570	12	1.00	12	
EB	76	1.00	76	17	1.00	17	93
WB	17	1.00	17	76	1.00	76	
						CLV TOTAL=	**675**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1012	0.53	536	36	1.00	36	572
SB	546	0.53	289	44	1.00	44	
EB	50	1.00	50	62	1.00	62	235
WB	185	1.00	185	50	1.00	50	
						CLV TOTAL=	**807**

Scenario ID - TOT5

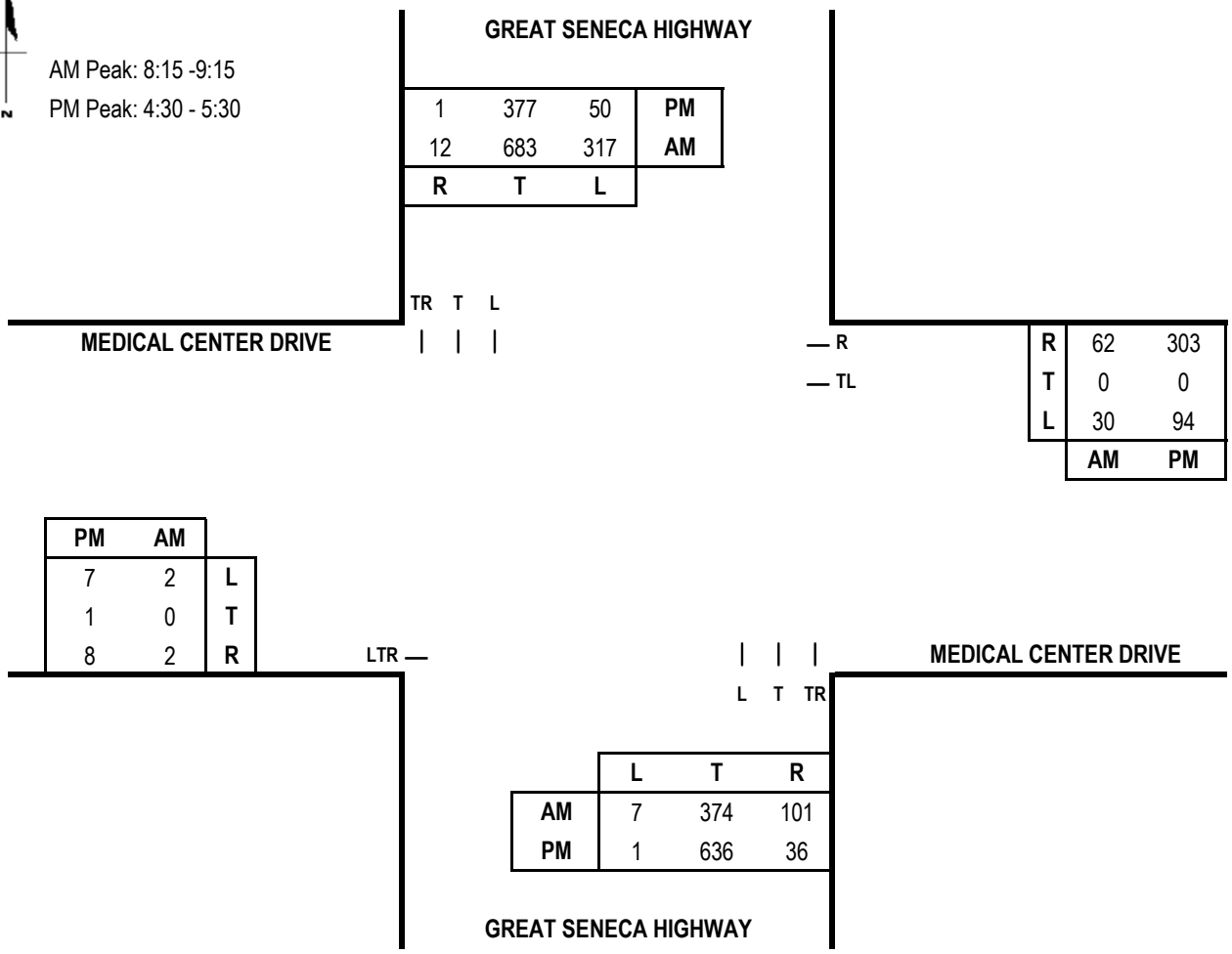
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Medical Center Drive
N/S Road: Great Seneca Highway
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:30 - 5:30



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	475	0.53	252	317	1.00	317	569
SB	695	0.53	368	7	1.00	7	
EB	4	1.00	4	30	1.00	30	34
WB	30	1.00	30	2	1.00	2	
						CLV TOTAL=	**603**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	672	0.53	356	50	1.00	50	406
SB	378	0.53	200	1	1.00	1	
EB	16	1.00	16	94	1.00	94	260
WB	253	1.00	253	7	1.00	7	
						CLV TOTAL=	**666**

Scenario ID - EXIST6

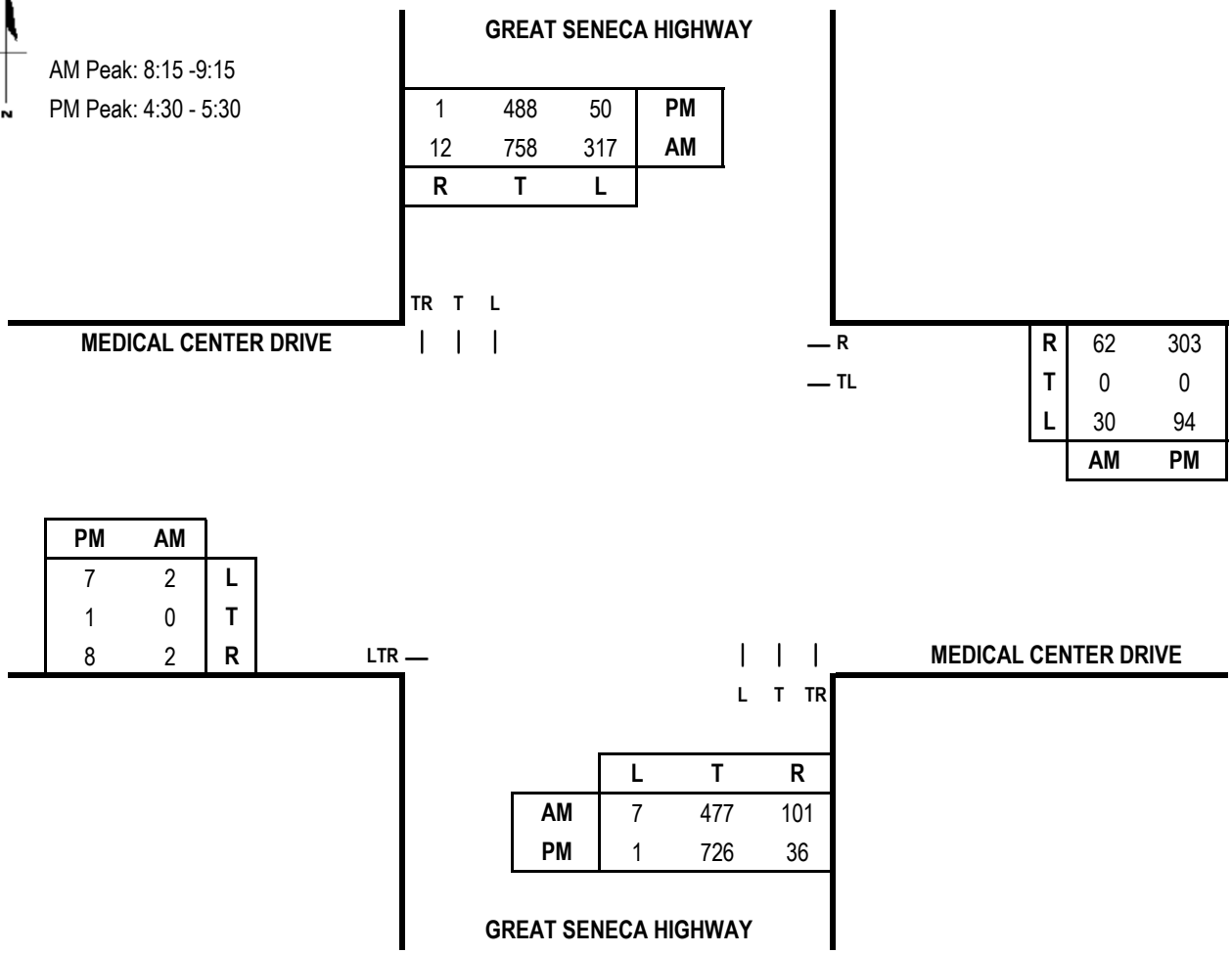
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Medical Center Drive
N/S Road: Great Seneca Highway
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:30 - 5:30



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	578	0.53	306	317	1.00	317	
							623
SB	770	0.53	408	7	1.00	7	
EB	4	1.00	4	30	1.00	30	
							34
WB	30	1.00	30	2	1.00	2	
					CLV TOTAL=		**657**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	762	0.53	404	50	1.00	50	
							454
SB	489	0.53	259	1	1.00	1	
EB	16	1.00	16	94	1.00	94	
							260
WB	253	1.00	253	7	1.00	7	
					CLV TOTAL=		**714**

Scenario ID - BACK6

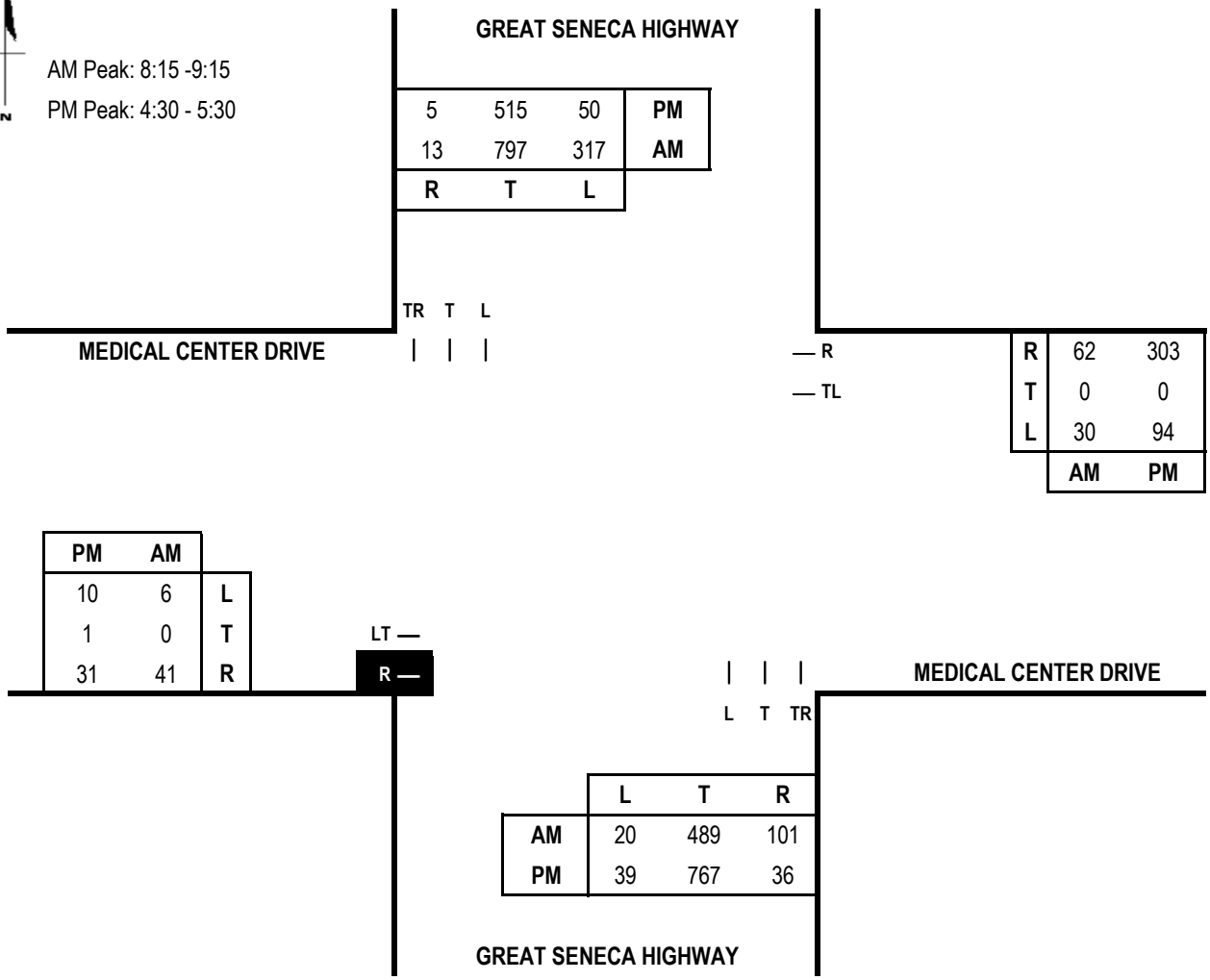
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Medical Center Drive
N/S Road: Great Seneca Highway
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

AM Peak: 8:15 -9:15
PM Peak: 4:30 - 5:30



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	590	0.53	313	317	1.00	317	630
SB	810	0.53	429	20	1.00	20	
EB	21	1.00	21	30	1.00	30	51
WB	30	1.00	30	6	1.00	6	
						CLV TOTAL=	**681**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	803	0.53	426	50	1.00	50	476
SB	520	0.53	276	39	1.00	39	
EB	11	1.00	11	94	1.00	94	263
WB	253	1.00	253	10	1.00	10	
						CLV TOTAL=	**739**

Scenario ID - TOT6

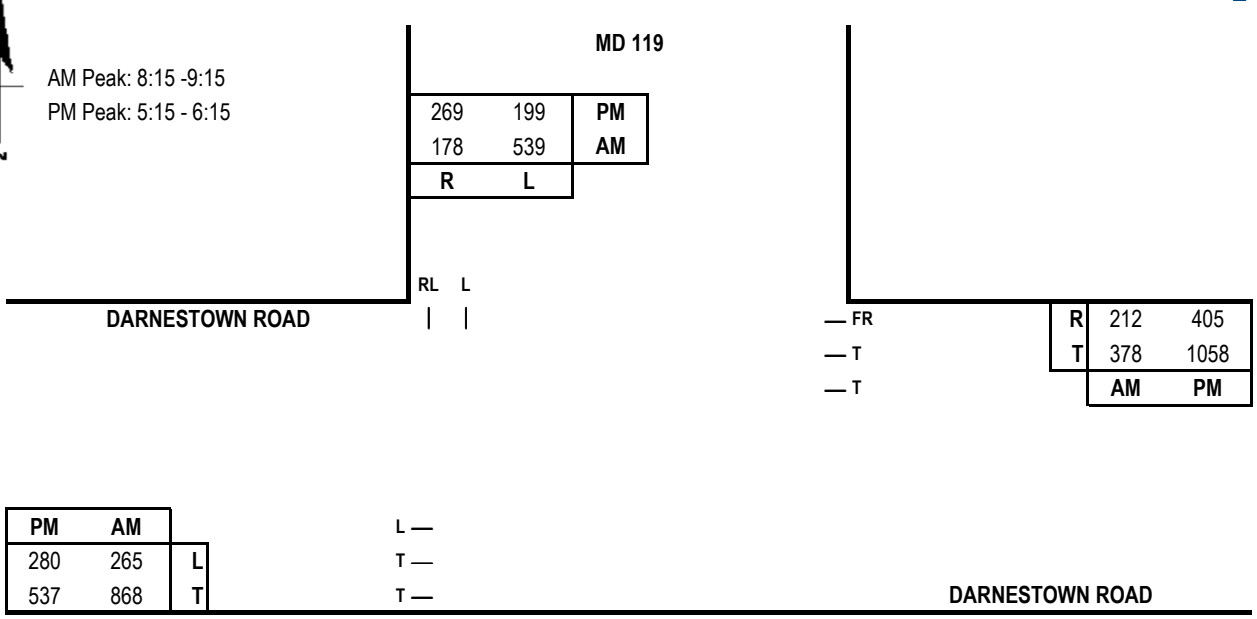
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Darnestown Road
N/S Road: MD 119
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 5:15 - 6:15



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	717	0.53	380				380
EB	868	0.53	460				465
WB	378	0.53	200	265	1.00	265	
						CLV TOTAL=	**845**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	269	1.00	269				269
EB	537	0.53	285				841
WB	1058	0.53	561	280	1.00	280	
						CLV TOTAL=	**1,110**

Scenario ID - EXIST7

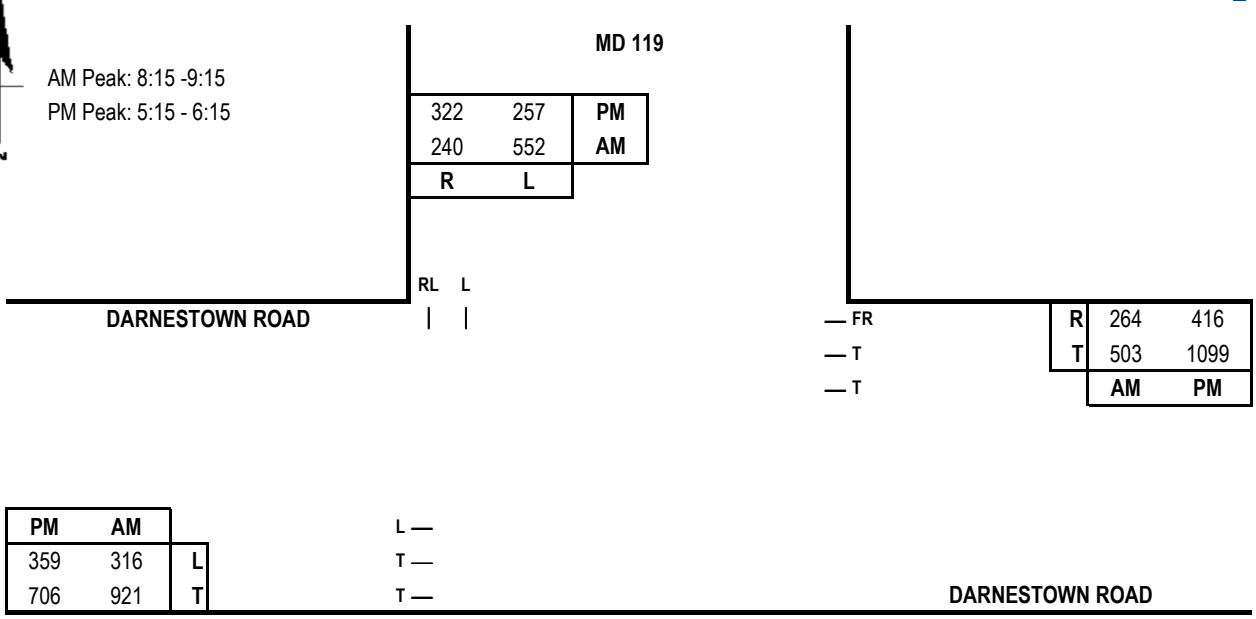
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Darnestown Road
N/S Road: MD 119
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 5:15 - 6:15



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	792	0.53	420				420
EB	921	0.53	488				
WB	503	0.53	267	316	1.00	316	583
						CLV TOTAL=	1,003

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	322	1.00	322				322
EB	706	0.53	374				
WB	1099	0.53	582	359	1.00	359	941
						CLV TOTAL=	1,263

Scenario ID - BACK7

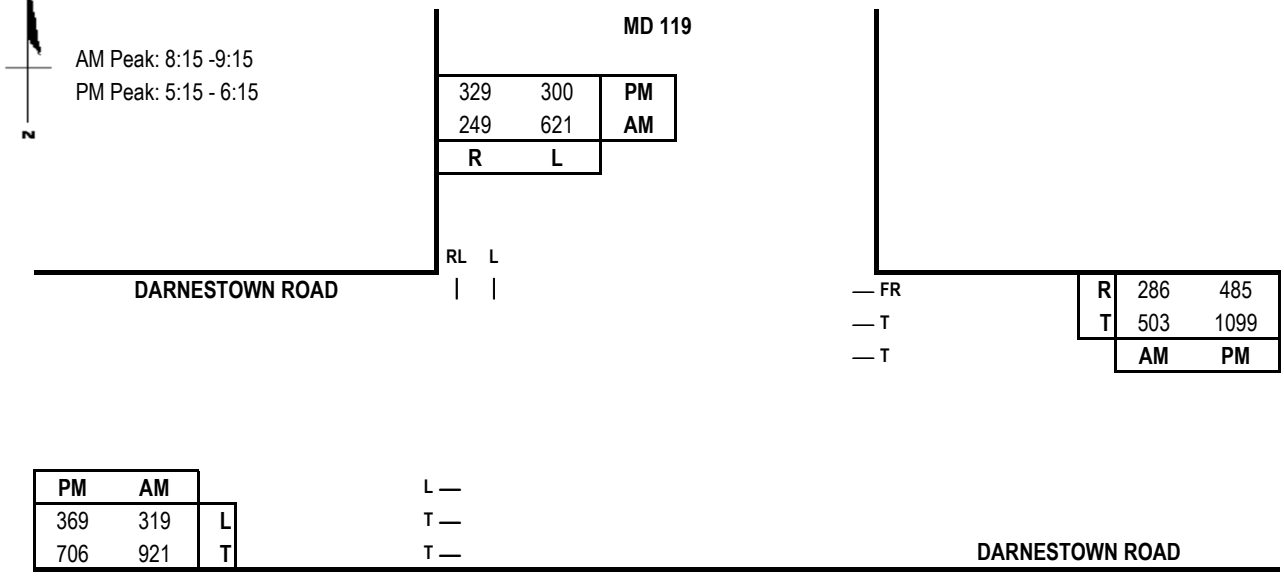
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Darnestown Road
N/S Road: MD 119
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

AM Peak: 8:15 -9:15
PM Peak: 5:15 - 6:15



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	870	0.53	461				461
EB	921	0.53	488				586
WB	503	0.53	267	319	1.00	319	
						CLV TOTAL=	**1,047**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	629	0.53	333				333
EB	706	0.53	374				951
WB	1099	0.53	582	369	1.00	369	
						CLV TOTAL=	**1,284**

Scenario ID - TOT7

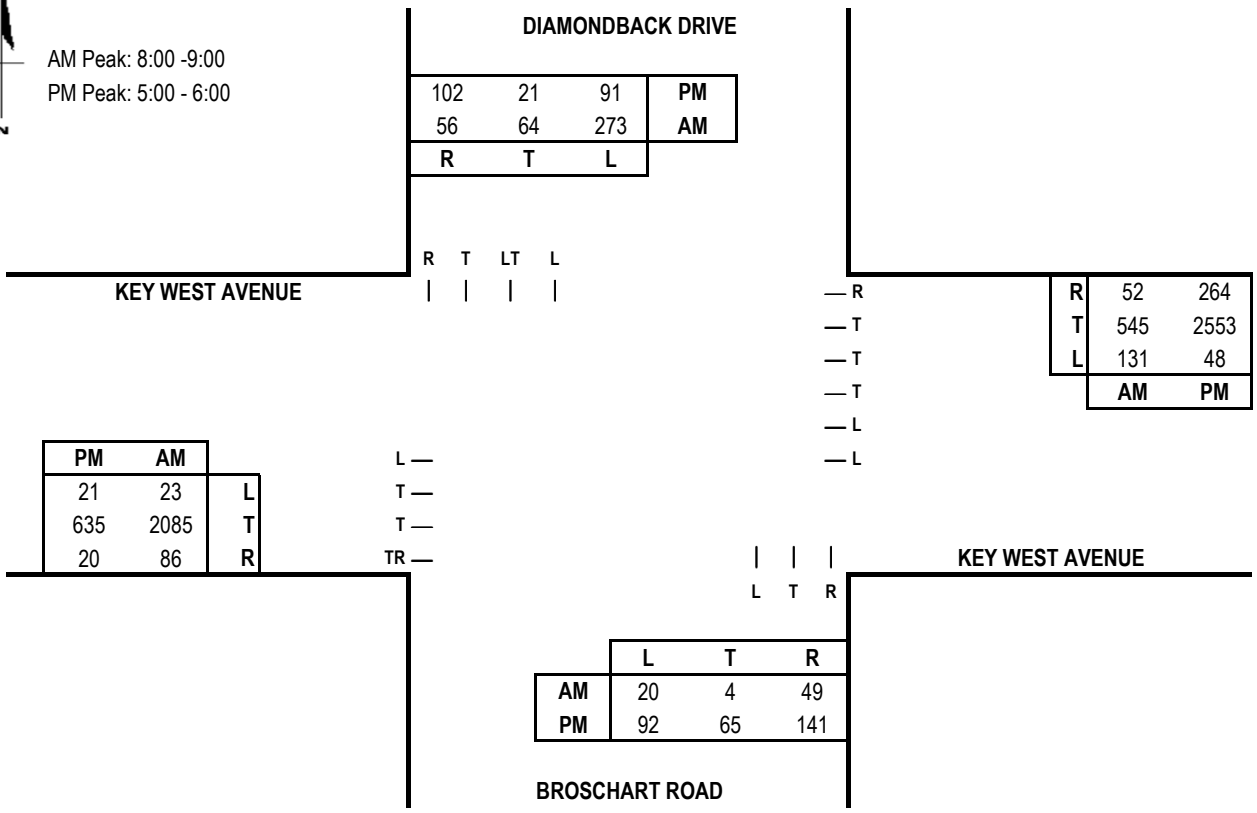
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Diamondback Drive/Broschart Road
Conditions: Existing Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00 - 6:00



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	20	1.00	20				20
SB	273	0.53	145				145
EB	2171	0.37	803	131	0.53	69	872
WB	545	0.37	202	23	1.00	23	
						CLV TOTAL=	1,037

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	116	1.00	116				116
SB	81	1.00	81				81
EB	655	0.37	242	48	0.53	25	966
WB	2553	0.37	945	21	1.00	21	
						CLV TOTAL=	1,163

Scenario ID - EXIST8

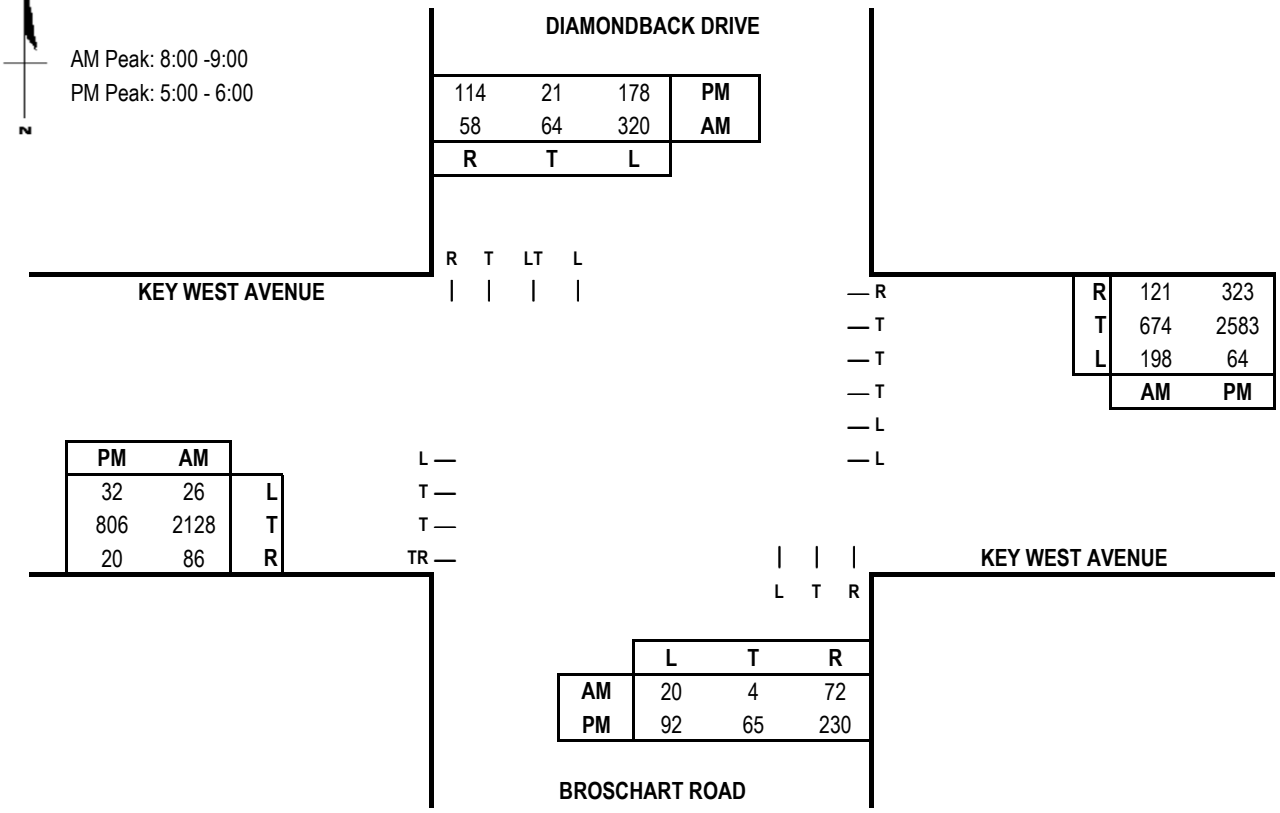
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Diamondback Drive/Broschart Road
Conditions: Background Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:00 -9:00
PM Peak: 5:00 - 6:00



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	20	1.00	20				20
SB	320	0.53	170				170
EB	2214	0.37	819	198	0.53	105	924
WB	674	0.37	249	26	1.00	26	
						CLV TOTAL=	1,114

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	196	1.00	196				196
SB	178	0.53	94				94
EB	826	0.37	306	64	0.53	34	988
WB	2583	0.37	956	32	1.00	32	
						CLV TOTAL=	1,278

Scenario ID - BACK8

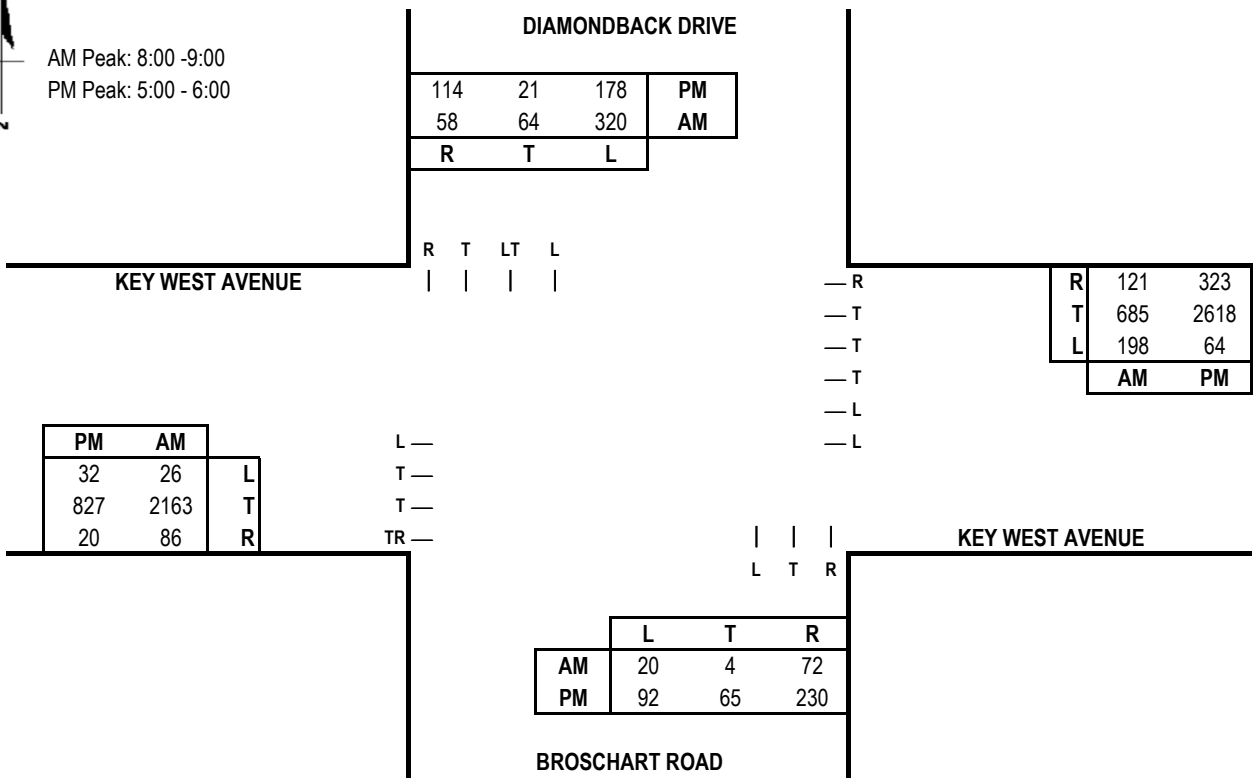
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Key West Avenue
N/S Road: Diamondback Drive/Broschart Road
Conditions: Total Traffic

Date of Count: 3/5/2019
Day of Count: Tuesday
Analyst: Ming-Yu Chien

AM Peak: 8:00 -9:00
PM Peak: 5:00 - 6:00



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	20	1.00	20				20
SB	320	0.53	170				170
EB	2249	0.37	832	198	0.53	105	937
WB	685	0.37	253	26	1.00	26	
						CLV TOTAL=	**1,127**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	196	1.00	196				196
SB	178	0.53	94				94
EB	847	0.37	313	64	0.53	34	1001
WB	2618	0.37	969	32	1.00	32	
						CLV TOTAL=	**1,291**

Scenario ID - TOT8

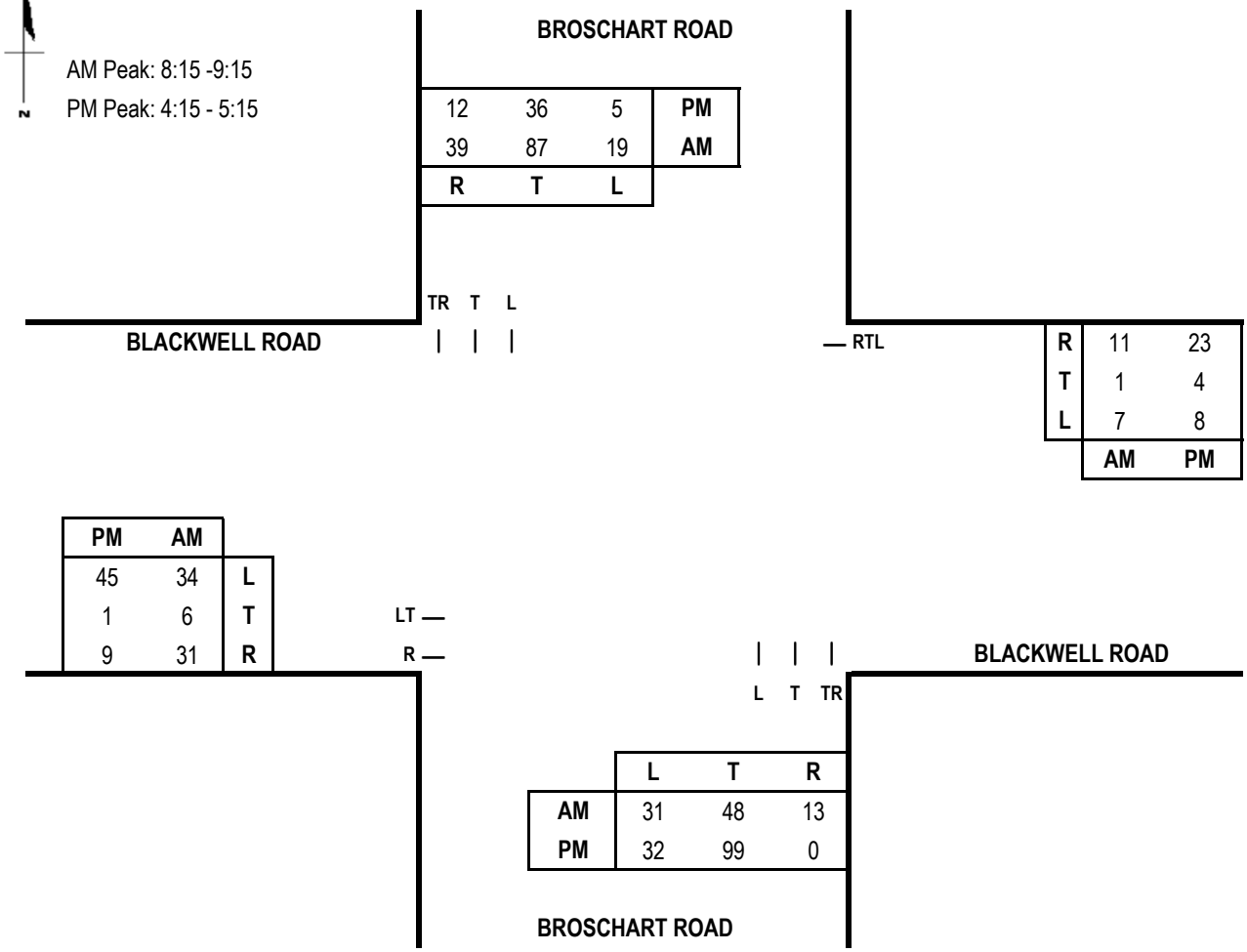
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Blackwell Road
N/S Road: Broschart Road
Conditions: Existing Traffic

Date of Count: 3/26/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:15 - 5:15



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	61	0.53	32	19	1.00	19	98
SB	126	0.53	67	31	1.00	31	
EB	40	1.00	40	7	1.00	7	53
WB	19	1.00	19	34	1.00	34	
						CLV TOTAL=	**151**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	99	0.53	52	5	1.00	5	57
SB	48	0.53	25	32	1.00	32	
EB	46	1.00	46	8	1.00	8	80
WB	35	1.00	35	45	1.00	45	
						CLV TOTAL=	**137**

Scenario ID - EXIST9

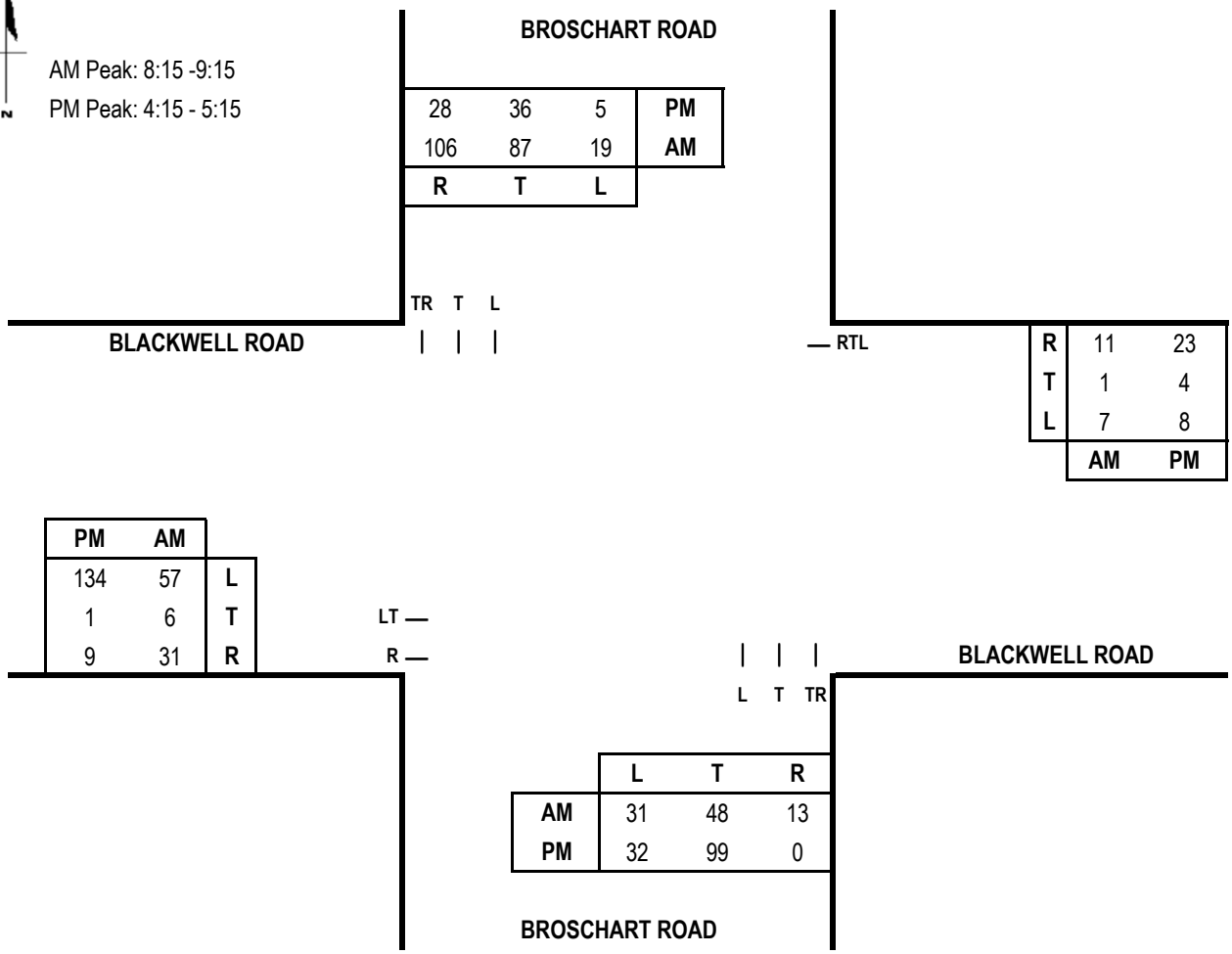
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Blackwell Road
N/S Road: Broschart Road
Conditions: Background Traffic

Date of Count: 3/26/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:15 - 5:15



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	61	0.53	32	19	1.00	19	133
SB	193	0.53	102	31	1.00	31	
EB	63	1.00	63	7	1.00	7	76
WB	19	1.00	19	57	1.00	57	
						CLV TOTAL=	**209**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	99	0.53	52	5	1.00	5	66
SB	64	0.53	34	32	1.00	32	
EB	135	1.00	135	8	1.00	8	169
WB	35	1.00	35	134	1.00	134	
						CLV TOTAL=	**235**

Scenario ID - BACK9

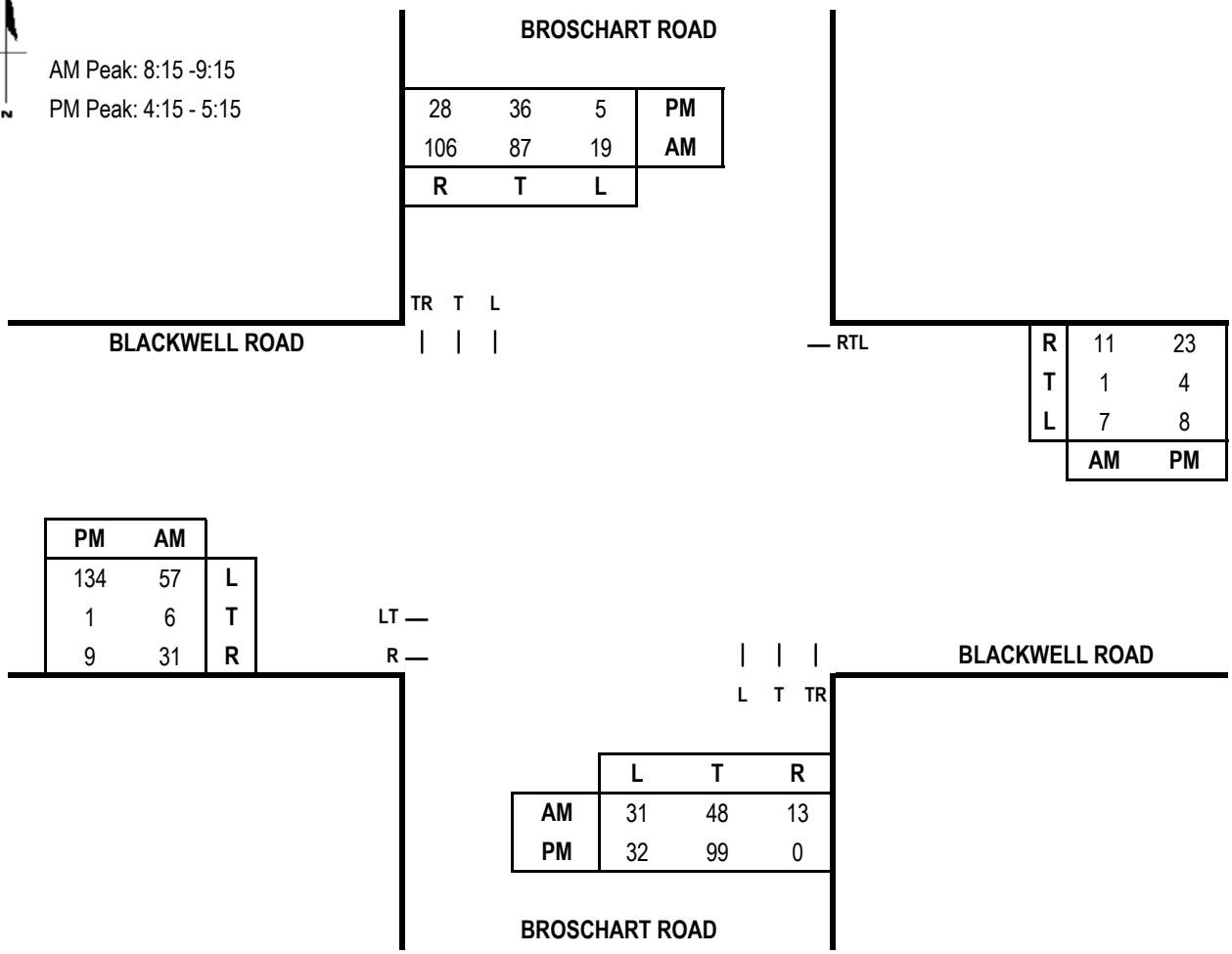
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Blackwell Road
N/S Road: Broschart Road
Conditions: Total Traffic

Date of Count: 3/26/2019
Day of Count: Tuesday
Analyst: Qiang Tian

AM Peak: 8:15 -9:15
PM Peak: 4:15 - 5:15



R	T	L	
28	36	5	PM
106	87	19	AM

	AM	PM
R	11	23
T	1	4
L	7	8

PM	AM	
134	57	L
1	6	T
9	31	R

	L	T	R
AM	31	48	13
PM	32	99	0

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	61	0.53	32	19	1.00	19	133
SB	193	0.53	102	31	1.00	31	
EB	63	1.00	63	7	1.00	7	76
WB	19	1.00	19	57	1.00	57	
						CLV TOTAL=	**209**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	99	0.53	52	5	1.00	5	66
SB	64	0.53	34	32	1.00	32	
EB	135	1.00	135	8	1.00	8	169
WB	35	1.00	35	134	1.00	134	
						CLV TOTAL=	**235**

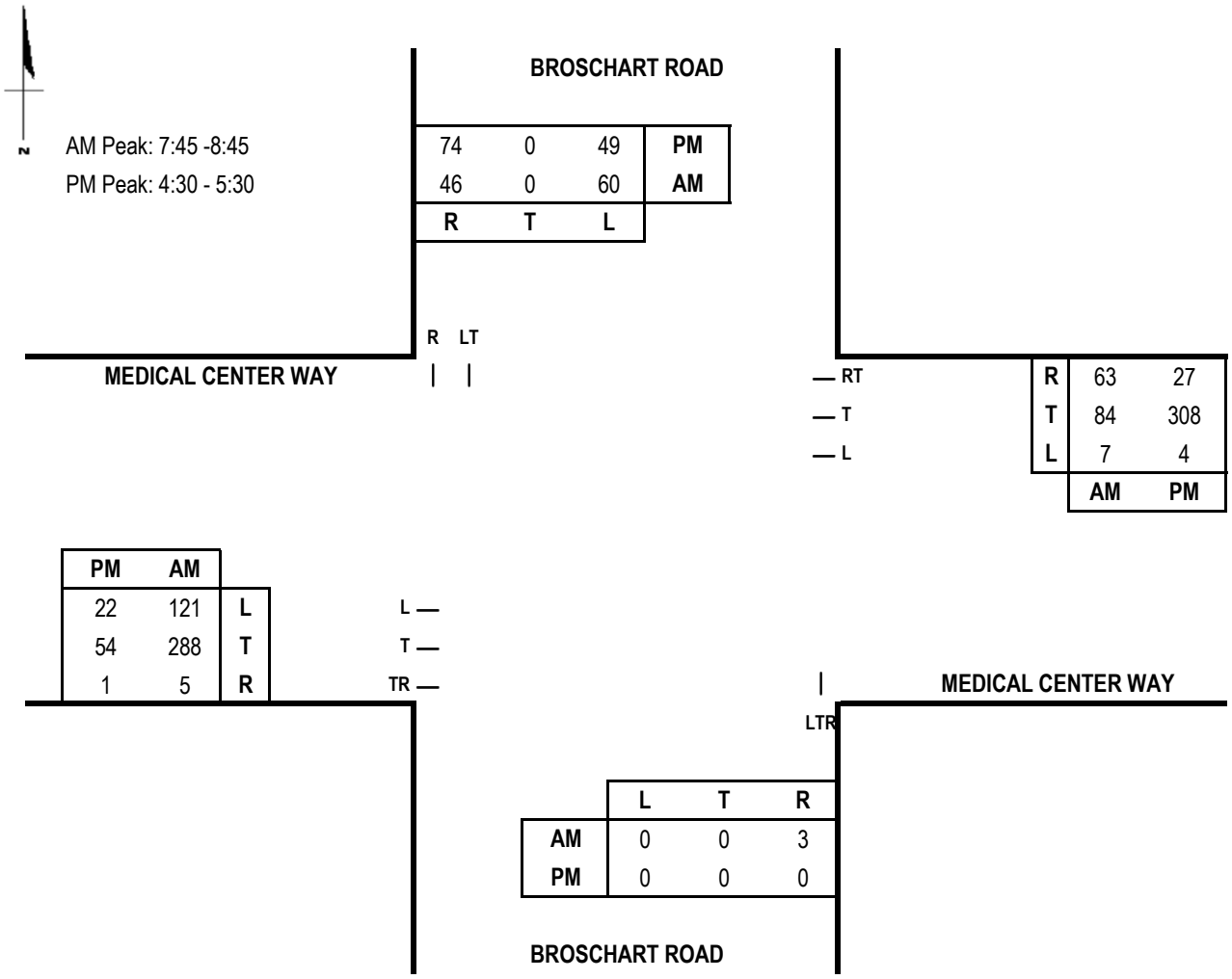
Scenario ID - TOT9

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Medical Center Way
N/S Road: Broschart Road
Conditions: Existing Traffic

Date of Count: 3/26/2019
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	3	1.00	3	60	1.00	60	63
SB	60	1.00	60	0	1.00	0	
EB	293	0.53	155	7	1.00	7	199
WB	147	0.53	78	121	1.00	121	
						CLV TOTAL=	**262**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	0	1.00	0	49	1.00	49	52
SB	52	1.00	52	0	1.00	0	
EB	55	0.53	29	4	1.00	4	200
WB	335	0.53	178	22	1.00	22	
						CLV TOTAL=	**252**

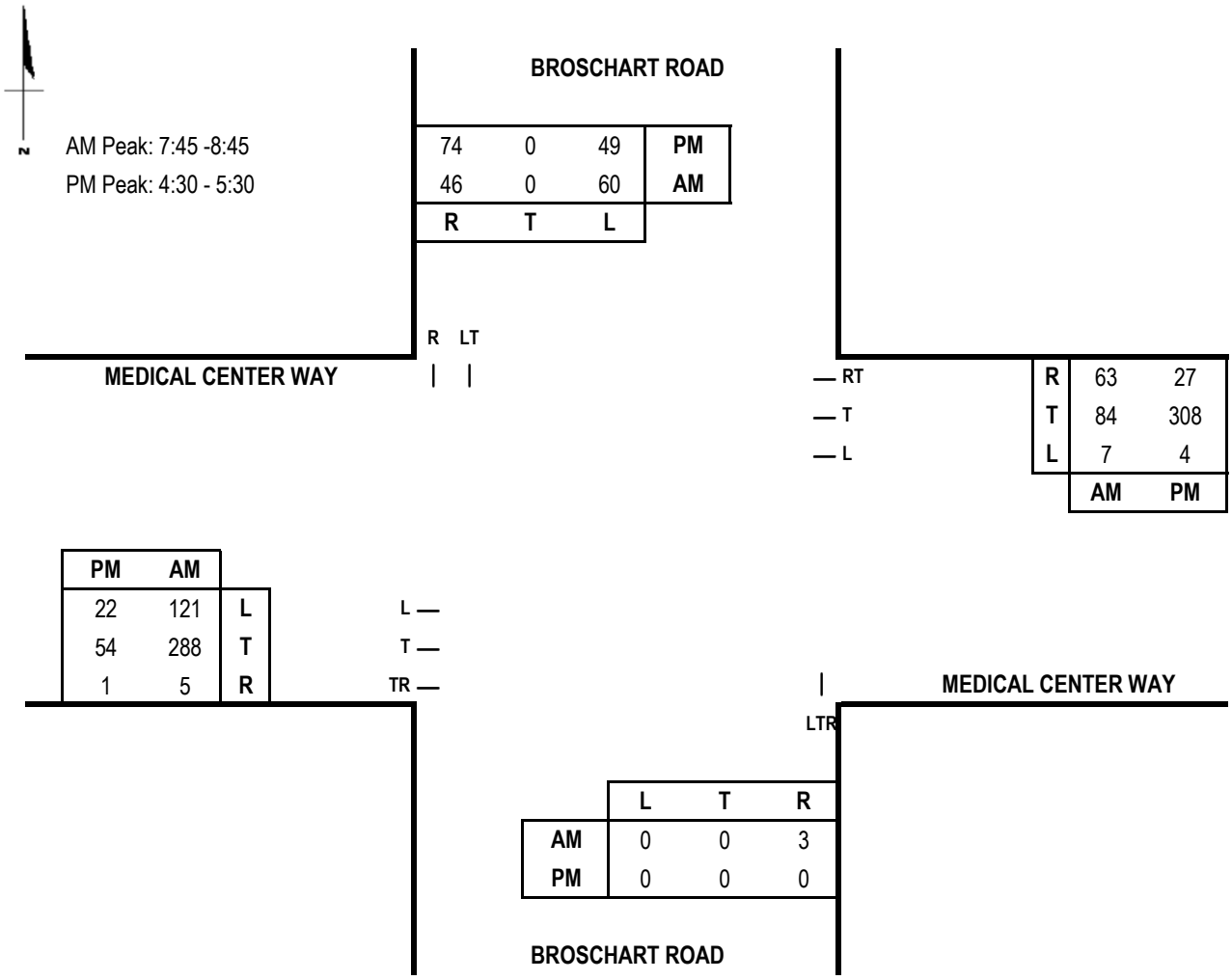
Scenario ID - EXIST10

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Medical Center Way
N/S Road: Broschart Road
Conditions: Background Traffic

Date of Count: 3/26/2019
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	3	1.00	3	60	1.00	60	63
SB	60	1.00	60	0	1.00	0	
EB	293	0.53	155	7	1.00	7	199
WB	147	0.53	78	121	1.00	121	
						CLV TOTAL=	**262**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	0	1.00	0	49	1.00	49	52
SB	52	1.00	52	0	1.00	0	
EB	55	0.53	29	4	1.00	4	200
WB	335	0.53	178	22	1.00	22	
						CLV TOTAL=	**252**

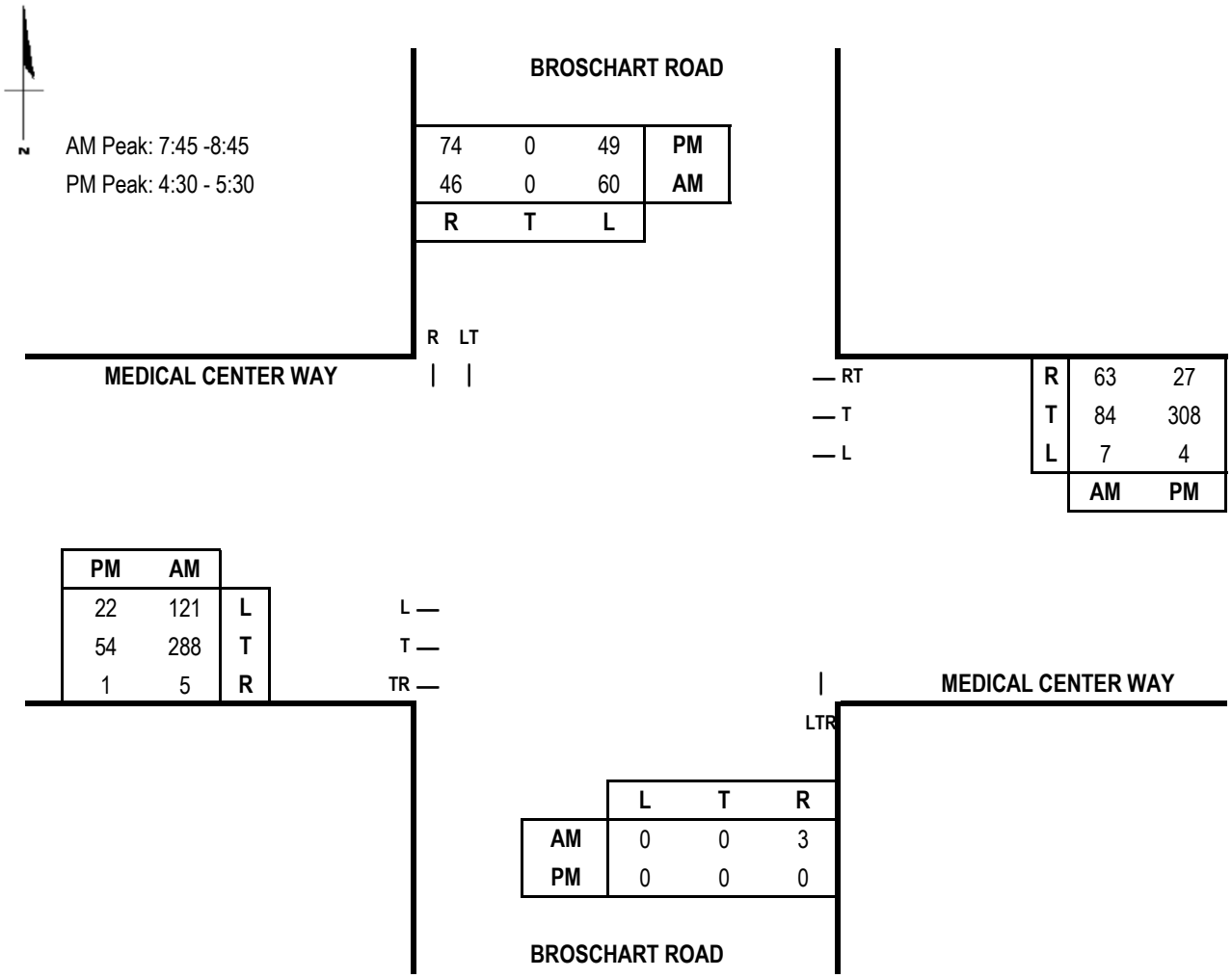
Scenario ID - BACK10

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

E/W Road: Medical Center Way
N/S Road: Broschart Road
Conditions: Total Traffic

Date of Count: 3/26/2019
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	3	1.00	3	60	1.00	60	63
SB	60	1.00	60	0	1.00	0	
EB	293	0.53	155	7	1.00	7	199
WB	147	0.53	78	121	1.00	121	
						CLV TOTAL=	**262**

Evening Peak Hour

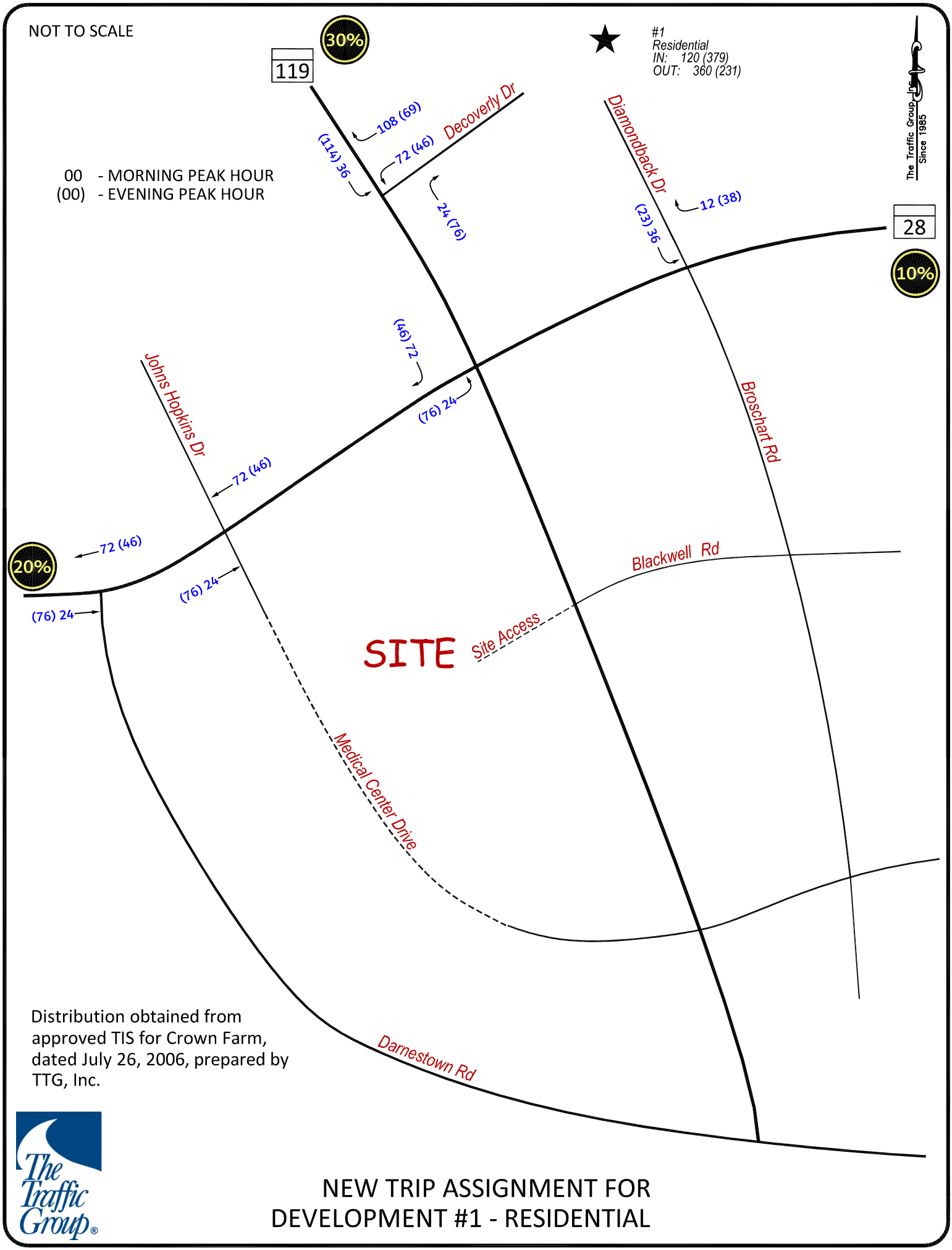
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	0	1.00	0	49	1.00	49	52
SB	52	1.00	52	0	1.00	0	
EB	55	0.53	29	4	1.00	4	200
WB	335	0.53	178	22	1.00	22	
						CLV TOTAL=	**252**

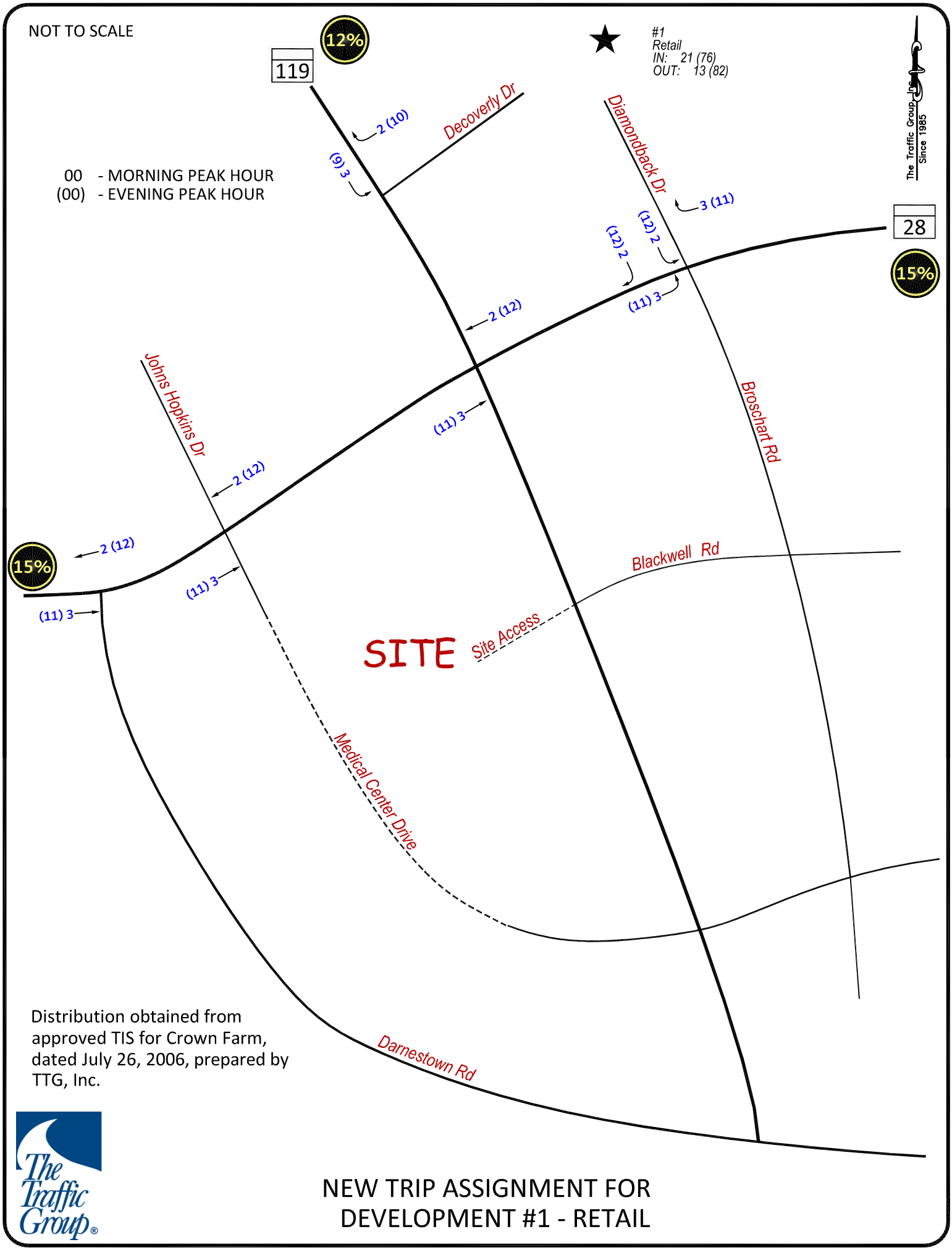
Scenario ID - TOT10

APPENDIX C

Trip Assignment for

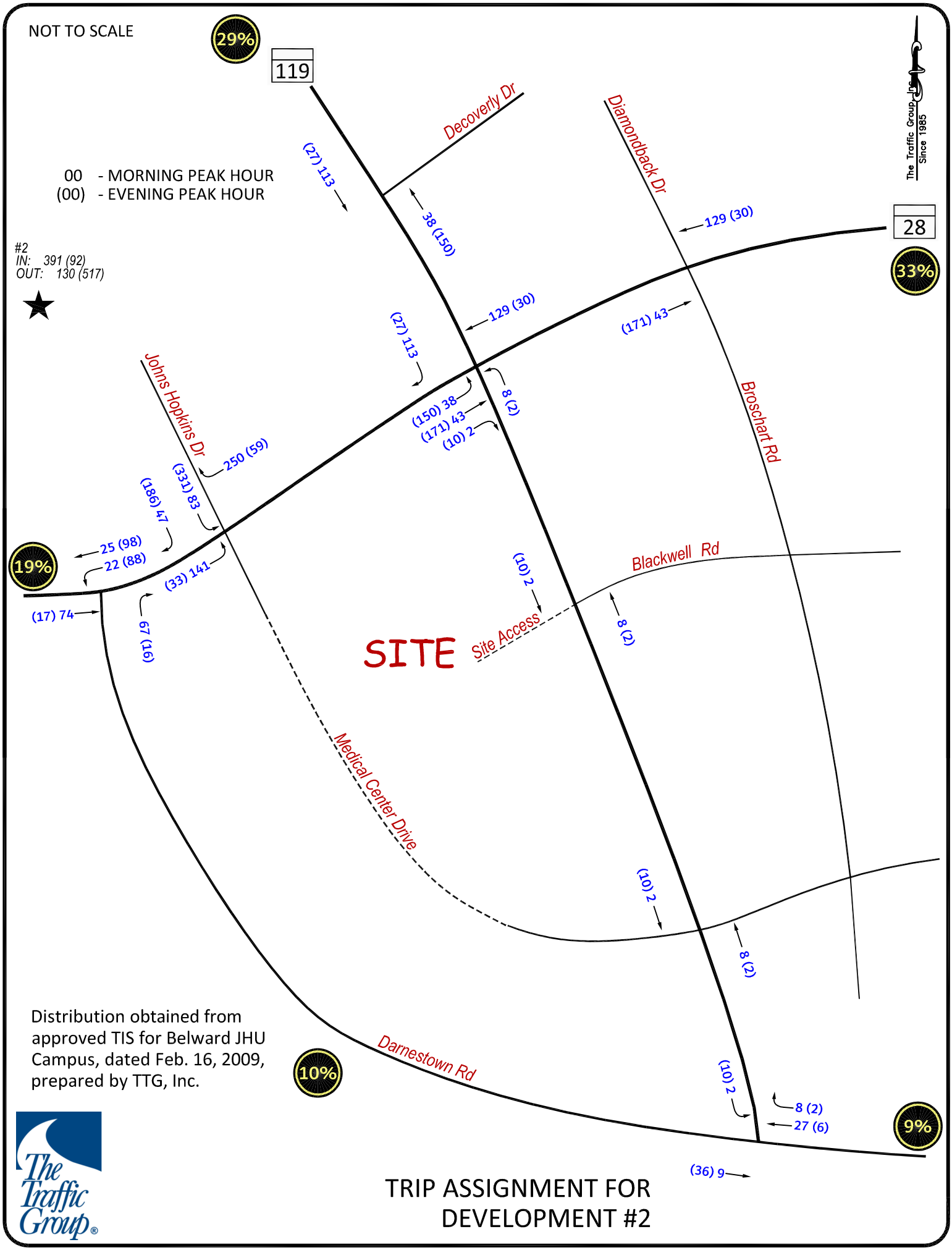
Approved Developments


NOT TO SCALE
30%
119
#1
Residential
IN: 120 (379)
OUT: 360 (231)
The Traffic Group, Inc.
Since 1985
00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR
108 (69)
72 (46)
Decoverly Dr
(114) 36
24 (76)
Diamondback Dr
12 (38)
(23) 36
28
10%
(46) 72
(76) 24
Johns Hopkins Dr
72 (46)
Broschart Rd
72 (46)
20%
(76) 24
(76) 24
Blackwell Rd
SITE
Site Access
Medical Center Drive
Darnestown Rd
Distribution obtained from approved TIS for Crown Farm, dated July 26, 2006, prepared by TTG, Inc.
The Traffic Group®
NEW TRIP ASSIGNMENT FOR
DEVELOPMENT #1 - RESIDENTIAL

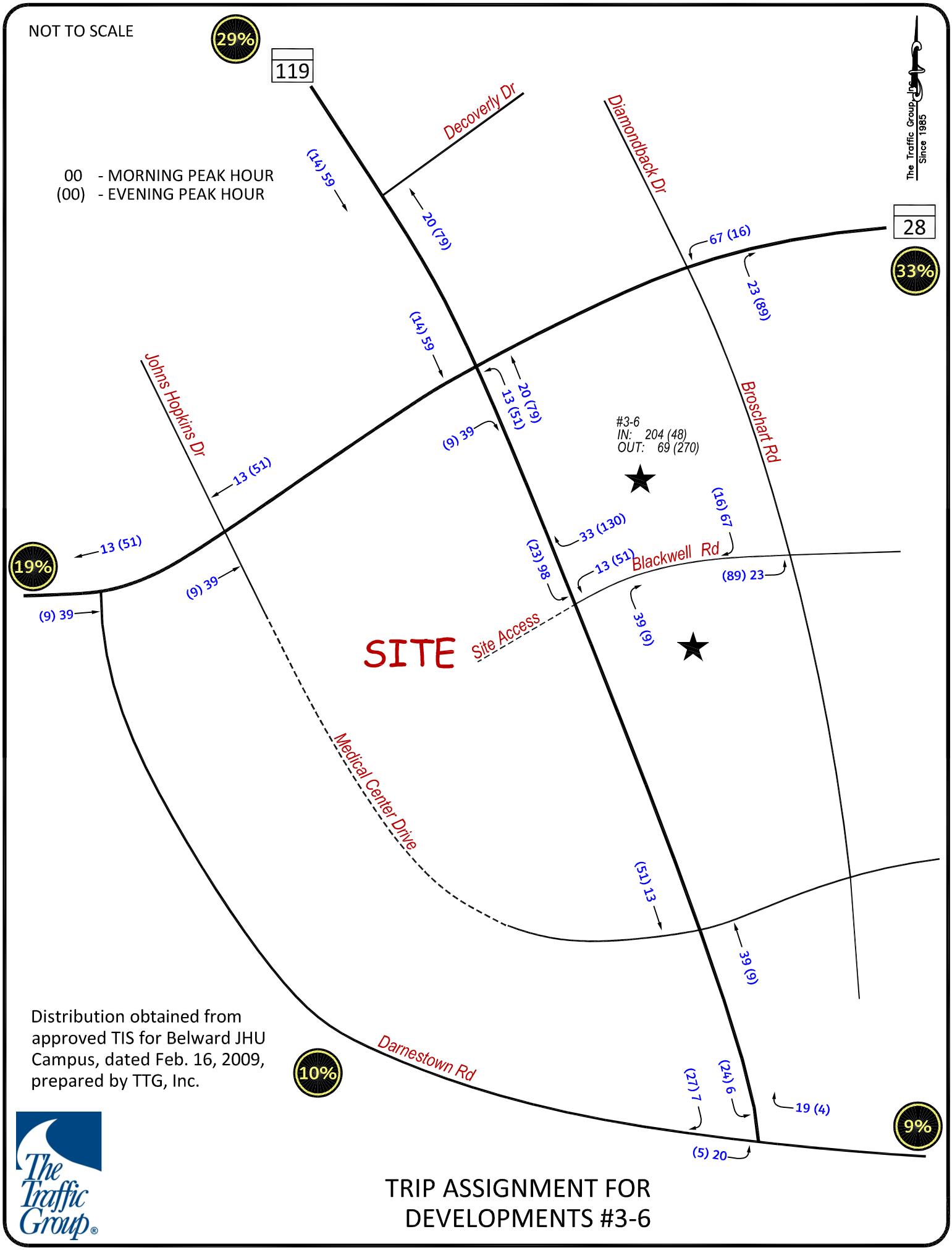


Distribution obtained from approved TIS for Crown Farm, dated July 26, 2006, prepared by TTG, Inc.

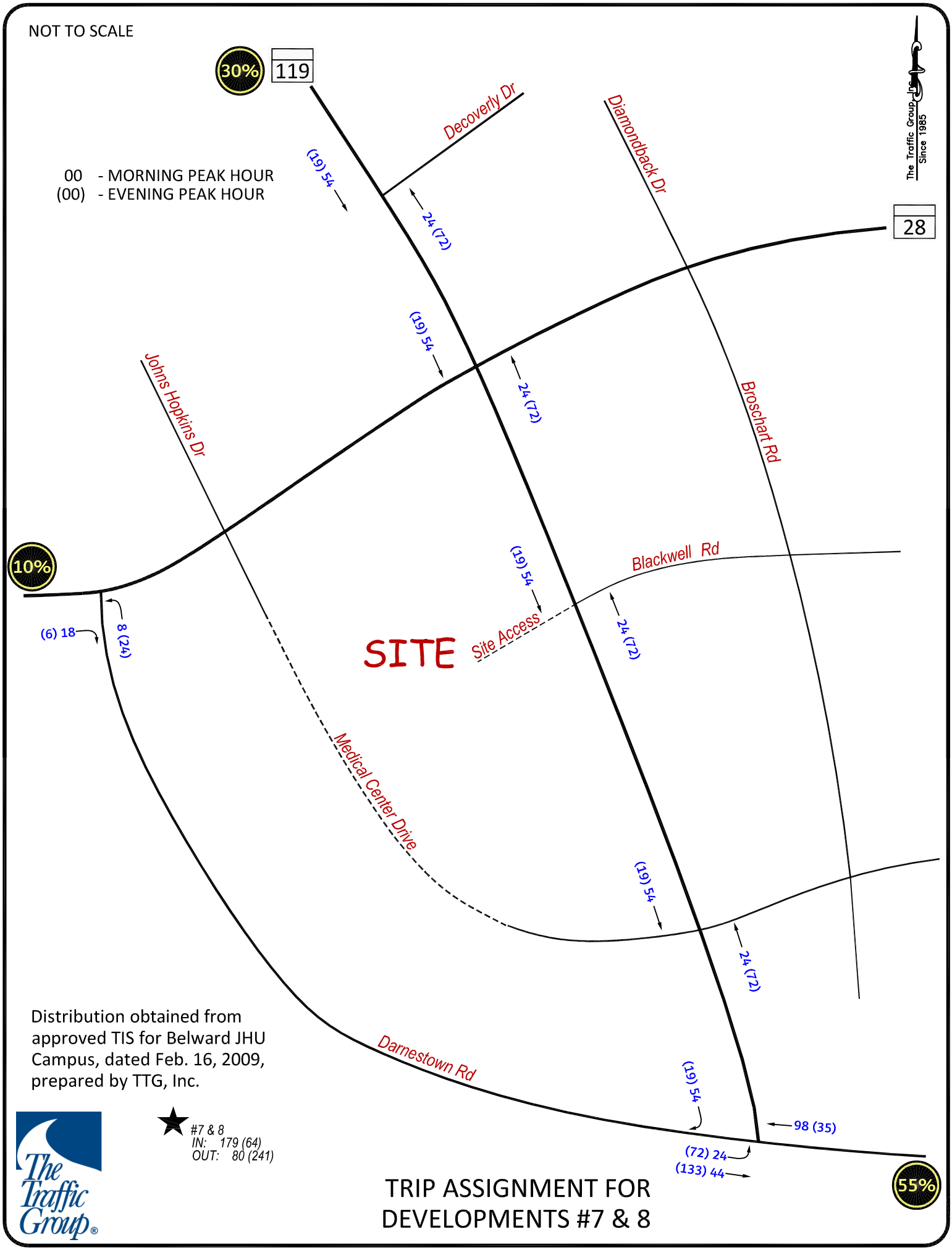
NEW TRIP ASSIGNMENT FOR DEVELOPMENT #1 - RETAIL

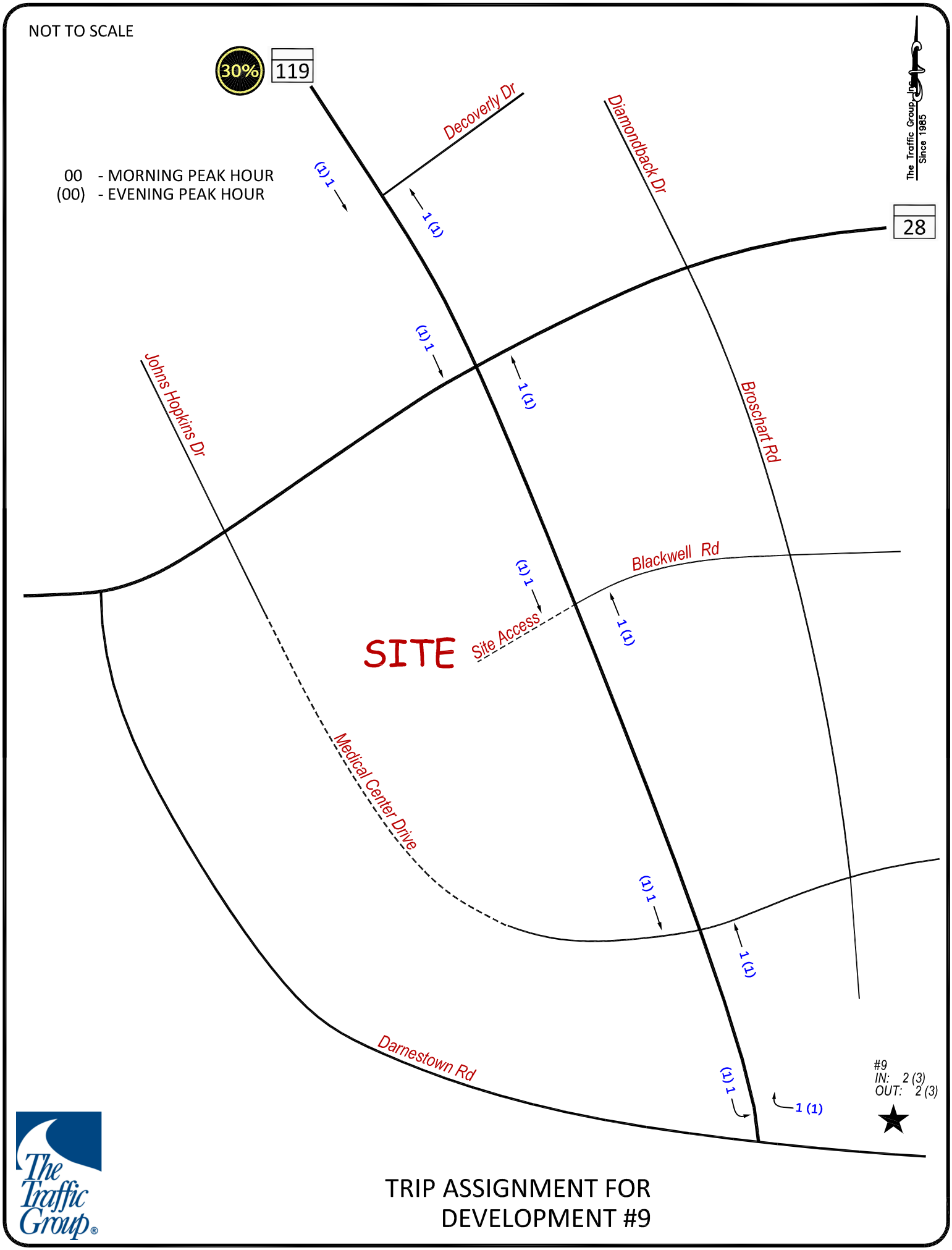


TRIP ASSIGNMENT FOR DEVELOPMENT #2

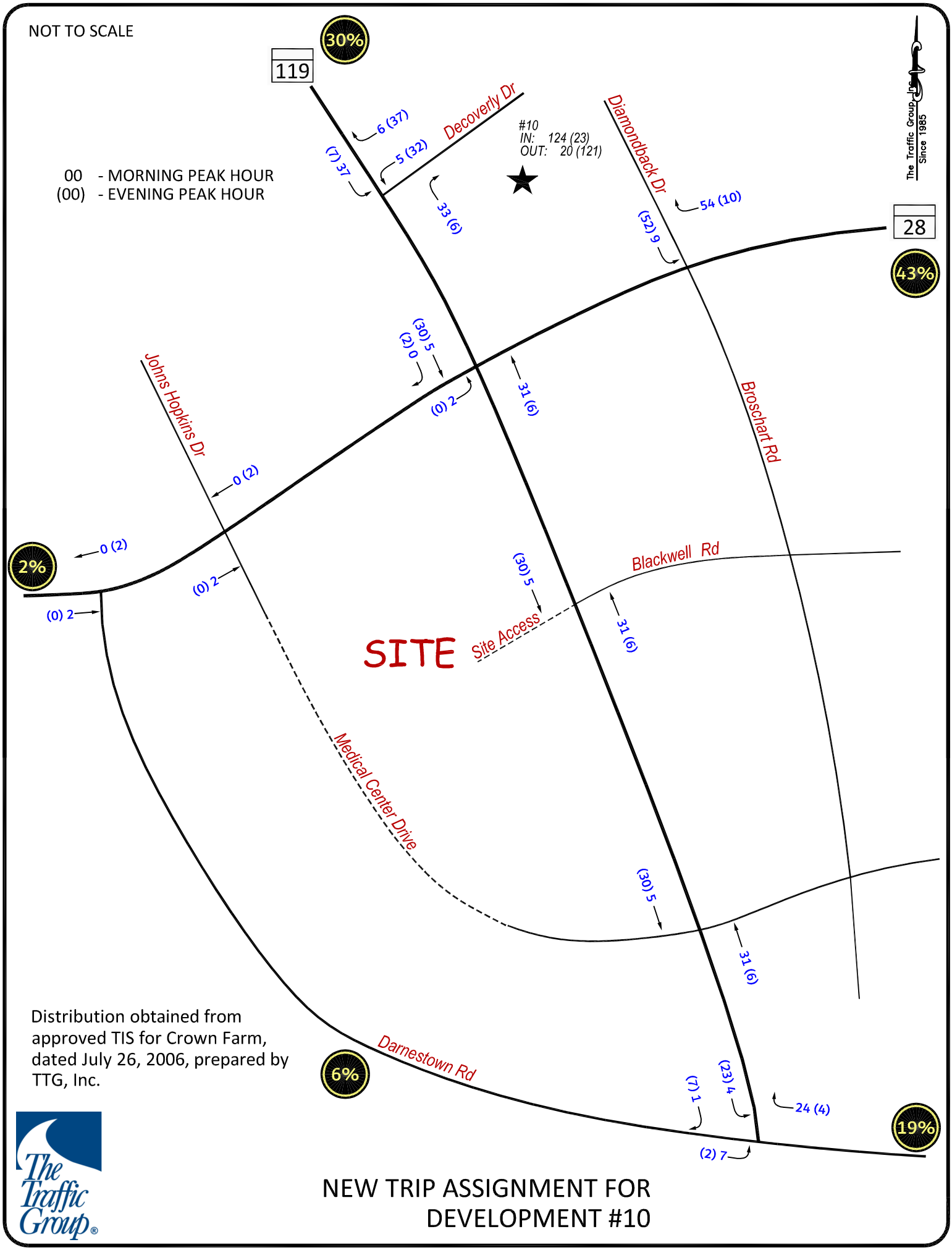


TRIP ASSIGNMENT FOR DEVELOPMENTS #3-6


NOT TO SCALE
30%
119
Decoverly Dr
Diamondback Dr
The Traffic Group, Inc.
Since 1985
00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR
(19) 54
24 (72)
28
(19) 54
Johns Hopkins Dr
24 (72)
Broschart Rd
10%
Blackwell Rd
(19) 54
(6) 18
8 (24)
SITE
Site Access
24 (72)
Medical Center Drive
(19) 54
24 (72)
Distribution obtained from approved TIS for Belward JHU Campus, dated Feb. 16, 2009, prepared by TTG, Inc.
Darnestown Rd
(19) 54
98 (35)
(72) 24
(133) 44
55%
#7 & 8
IN: 179 (64)
OUT: 80 (241)
The Traffic Group®
TRIP ASSIGNMENT FOR
DEVELOPMENTS #7 & 8



TRIP ASSIGNMENT FOR
DEVELOPMENT #9



Distribution obtained from approved TIS for Crown Farm, dated July 26, 2006, prepared by TTG, Inc.

NEW TRIP ASSIGNMENT FOR DEVELOPMENT #10

APPENDIX D

Bicycle and Transit Information

Bikeway Stress Levels



November 11, 2019

- High Stress - Inappropriate for Children and Most Adults
- Low Stress - Appropriate for Most Adults
- Very Low Stress - Appropriate for Most Children

1:14,915

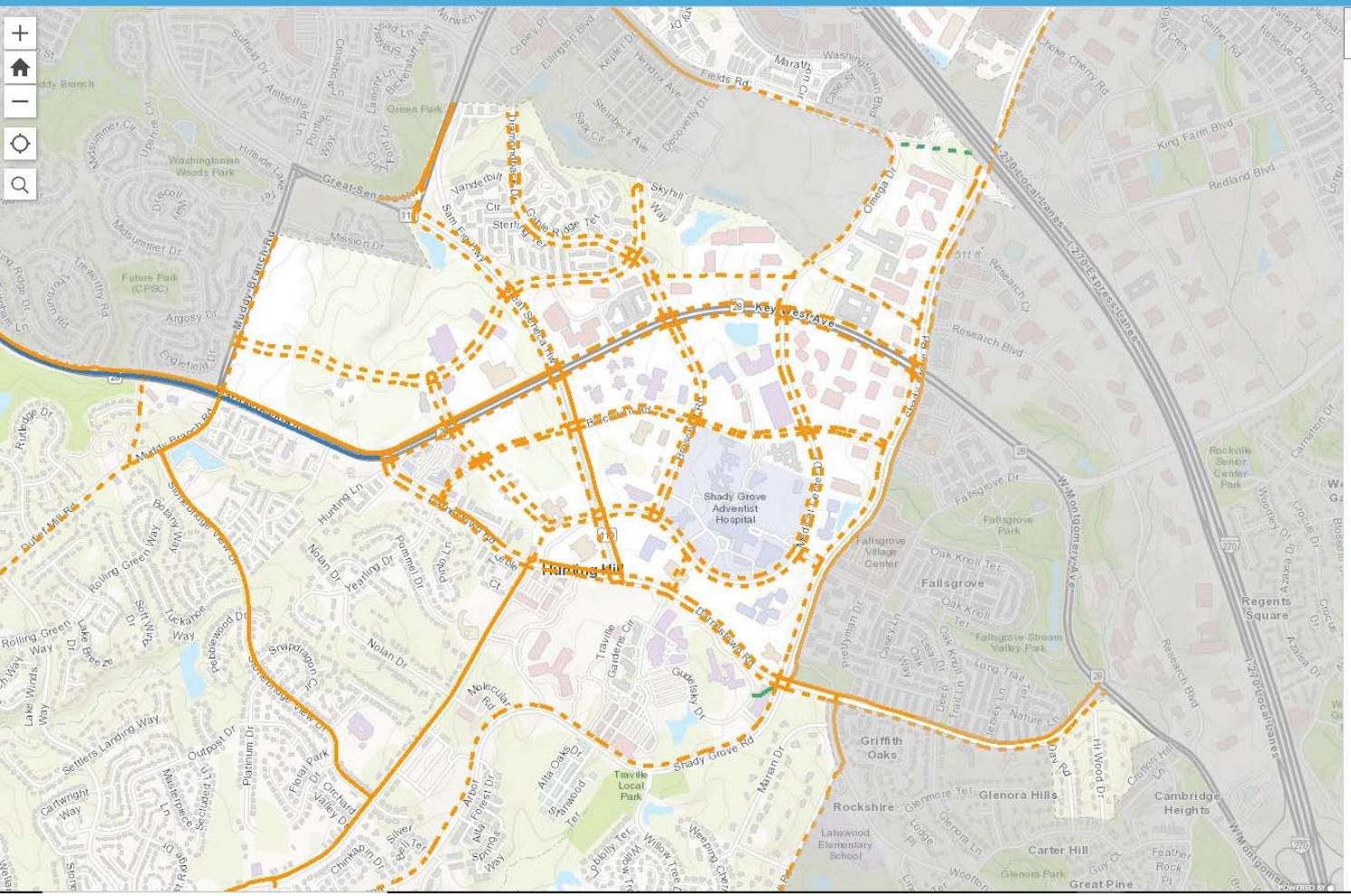
0 0.125 0.25 0.5 mi

0 0.2 0.4 0.8 km

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

melissa.noakes

APPROVED BICYCLE NETWORK



WELCOME | INFO | BIKEWAYS

Welcome to the recommendations for the Bicycle Master Plan. On this page you will be able to review a brief description of bikeway facility types, learn about bikeway and bicycle parking station recommendations and view bikeway implementation prioritization.

Recommendations

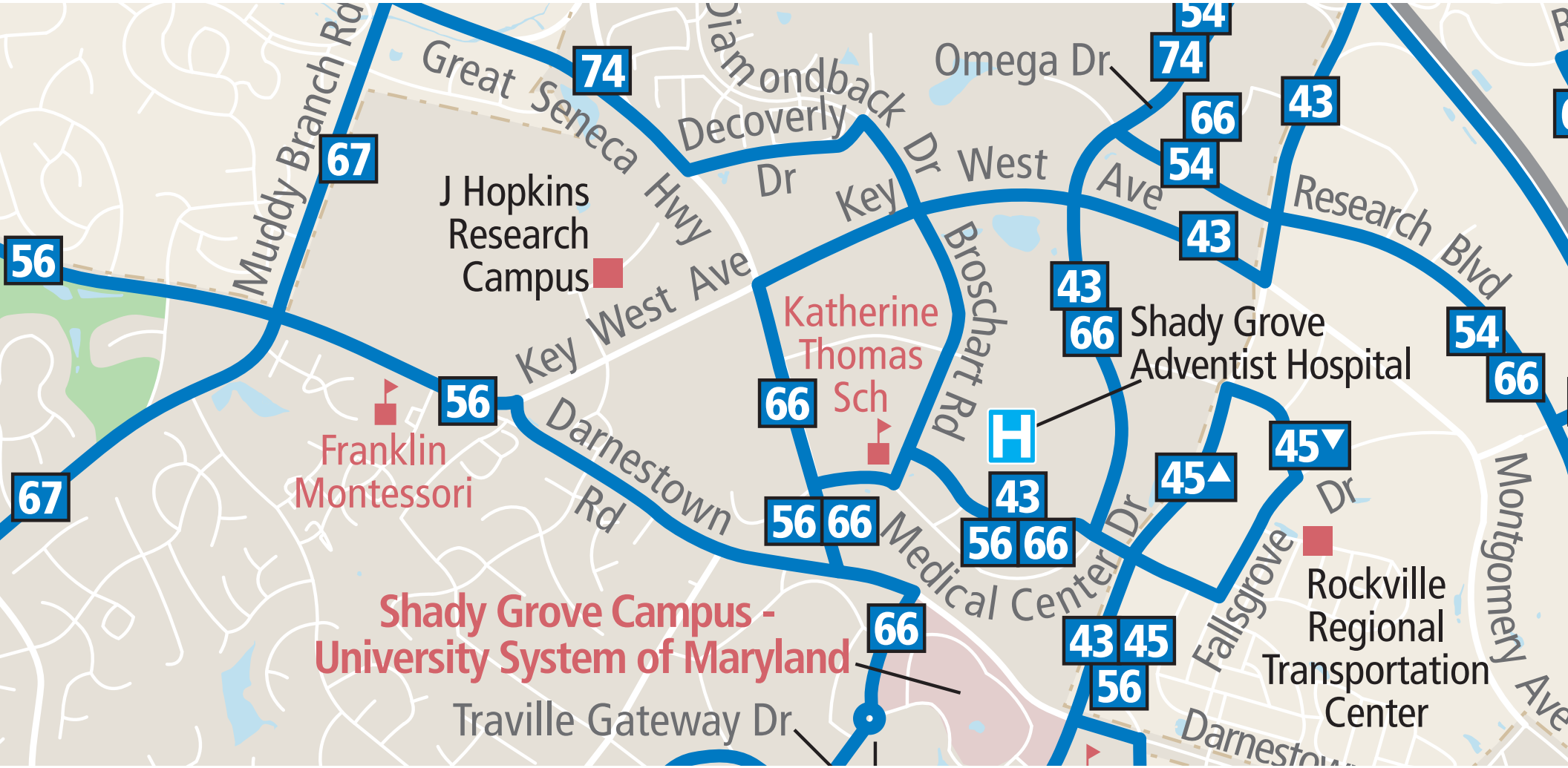
- [x] Bikeways

Existing	Proposed
	Trails
	Separated Bikeways
	Striped Bikeways
	Bikeable Shoulders
	Shared Roads

- [ ] Breezeway Network
- [ ] Bikeway Prioritization
- [ ] Bicycle Parking Stations
- [ ] Grade Separation
  - ● Existing
  - ⦿ Planned
- [ ] Bicycle and Pedestrian Priority Areas

Transit

- [ ] Red Line
- [ ] MARC Brunswick Line
- [ ] Purple Line (planned)



Muddy Branch Rd
Great Seneca Hwy
Diamondback Dr
Decoverly Dr
Omega Dr
Key West Ave
Research Blvd
J Hopkins Research Campus
Key West Ave
Broschart Rd
Katherine Thomas Sch
Shady Grove Adventist Hospital
Franklin Montessori
Darnestown Rd
Medical Center Dr
Fallsgrove Dr
Rockville Regional Transportation Center
Montgomery Ave
Shady Grove Campus - University System of Maryland
Traville Gateway Dr
Darnestown

56 To Rockville M

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Lakeforest Transit Center	Firstfield & Clopper Rds	Quince Or. Rd & Quince Or. Blvd	Kentlands Blvd & Tschiffely Sq. Rd	Quince Or. Rd & MD 28	Shady Grove Adventist Hospital	Wootton Pkwy & Hurley Ave	Maryland Ave & Falls Rd	Rockville M
1	2	3	4	5	6	7	8	9
4:45	4:50	4:54	5:00	5:04	5:13	5:19	5:24	5:28
5:15	5:20	5:24	5:30	5:34	5:43	5:49	5:54	5:58
5:45	5:52	5:57	6:04	6:09	6:20	6:27	6:34	6:38
6:10*	6:17	6:22	6:29	6:34	6:49	6:56	7:03	7:07
6:35	6:42	6:47	6:54	6:59	7:10	7:17	7:24	7:28
7:00*	7:07	7:12	7:19	7:24	7:39	7:46	7:53	7:57
7:25	7:36	7:41	7:49	7:55	8:06	8:13	8:20	8:24
7:50*	8:01	8:06	8:14	8:20	8:35	8:42	8:49	8:53
8:15	8:26	8:31	8:39	8:45	8:56	9:03	9:10	9:14
8:40*	8:49	8:53	9:00	9:05	9:19	9:25	9:31	9:35
9:10	9:19	9:23	9:30	9:35	9:45	9:51	9:57	10:01
9:40*	9:49	9:53	10:00	10:05	10:19	10:25	10:31	10:35
10:10	10:19	10:23	10:30	10:35	10:45	10:51	10:57	11:01
10:40	10:49	10:53	11:00	11:05	11:15	11:21	11:27	11:31
11:10	11:19	11:23	11:30	11:35	11:45	11:51	11:57	12:01
11:40	11:49	11:53	12:00	12:05	12:15	12:21	12:27	12:31
12:10*	12:19	12:23	12:30	12:35	12:49	12:55	1:01	1:05
12:40	12:49	12:53	1:00	1:05	1:15	1:21	1:27	1:31
1:10	1:19	1:23	1:30	1:35	1:45	1:51	1:57	2:01
1:35	1:44	1:49	1:56	2:01	2:13	2:20	2:27	2:31
2:00	2:09	2:14	2:21	2:26	2:38	2:45	2:52	2:56
2:25	2:34	2:39	2:46	2:51	3:03	3:10	3:17	3:21
2:50*	2:59	3:04	3:11	3:16	3:32	3:39	3:46	3:50
3:15*	3:24	3:29	3:36	3:41	3:57	4:04	4:11	4:15
3:40*	3:49	3:54	4:02	4:08	4:26	4:33	4:40	4:44
4:05*	4:14	4:19	4:27	4:33	4:51	4:58	5:05	5:09
4:30*	4:39	4:44	4:52	4:58	5:16	5:23	5:30	5:34
4:55*	5:04	5:09	5:17	5:23	5:41	5:48	5:55	5:59
5:20*	5:29	5:34	5:42	5:48	6:06	6:13	6:20	6:24
5:45*	5:54	5:59	6:07	6:13	6:31	6:38	6:45	6:49
6:10*	6:18	6:22	6:28	6:33	6:48	6:54	7:00	7:04
6:35*	6:43	6:47	6:53	6:58	7:13	7:19	7:25	7:29
7:00	7:08	7:12	7:18	7:23	7:34	7:40	7:46	7:50
7:30	7:38	7:42	7:48	7:53	8:04	8:10	8:16	8:20
8:00	8:08	8:12	8:18	8:23	8:34	8:40	8:46	8:50
8:30*	8:38	8:42	8:48	8:53	9:08	9:14	9:20	9:24
9:00	9:08	9:12	9:18	9:23	9:34	9:40	9:46	9:50
9:30*	9:38	9:42	9:48	9:53	10:08	10:14	10:20	10:24

NOTES: AM PM

* Trip serves Edison Park.

56 To Lakeforest Transit Center

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Rockville M	Maryland Ave & Falls Rd	Wootton Pkwy & Hurley Ave	Shady Grove Adventist Hospital	Quince Or. Rd & MD 28	Kentlands Blvd & Tschiffely Sq. Rd	Quince Or. Rd & Quince Or. Blvd	Firstfield & Clopper Rds	Lakeforest Transit Center
9	8	7	6	5	4	3	2	1
5:10*	5:14	5:18	5:23	5:37	5:39	5:45	5:49	5:56
5:40*	5:44	5:48	5:54	6:09	6:11	6:18	6:23	6:30
6:10*	6:14	6:18	6:24	6:39	6:41	6:48	6:53	7:00
6:35*	6:39	6:43	6:49	7:04	7:06	7:13	7:18	7:25
7:00*	7:05	7:11	7:18	7:34	7:36	7:43	7:49	7:56
7:25*	7:30	7:36	7:43	7:59	8:01	8:08	8:14	8:21
7:50*	7:55	8:01	8:08	8:24	8:26	8:33	8:39	8:46
8:20*	8:24	8:29	8:36	8:52	8:54	9:01	9:06	9:13
8:50*	8:54	8:59	9:06	9:22	9:24	9:31	9:36	9:43
9:20*	9:24	9:29	9:36	9:52	9:54	10:01	10:06	10:13
9:50*	9:54	9:59	10:06	10:22	10:24	10:31	10:36	10:43
10:20	10:24	10:29	10:36	10:49	10:51	10:58	11:03	11:10
10:50	10:54	10:59	11:06	11:19	11:21	11:28	11:33	11:40
11:20	11:24	11:29	11:36	11:49	11:51	11:58	12:03	12:10
11:50	11:54	11:59	12:06	12:19	12:21	12:28	12:33	12:40
12:20*	12:24	12:29	12:36	12:52	12:54	1:01	1:06	1:13
12:50	12:54	12:59	1:06	1:19	1:21	1:28	1:33	1:40
1:20	1:24	1:29	1:36	1:49	1:51	1:58	2:03	2:10
1:45	1:50	1:56	2:03	2:17	2:20	2:28	2:34	2:44
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2:35	2:40	2:46	2:53	3:07	3:10	3:18	3:24	3:34
3:00	3:05	3:11	3:18	3:32	3:35	3:43	3:49	3:59
3:25*	3:30	3:36	3:43	4:00	4:03	4:11	4:17	4:27
3:50	3:55	4:01	4:08	4:22	4:25	4:33	4:39	4:49
4:15*	4:20	4:26	4:33	4:50	4:53	5:01	5:07	5:17
4:40	4:45	4:51	4:58	5:12	5:15	5:23	5:29	5:39
5:05*	5:10	5:16	5:23	5:39	5:42	5:50	5:55	6:03
5:30	5:35	5:41	5:48	6:01	6:04	6:12	6:17	6:25
5:55*	6:00	6:06	6:13	6:29	6:32	6:40	6:45	6:53
6:25	6:30	6:36	6:43	6:56	6:59	7:07	7:12	7:20
6:55	7:00	7:05	7:11	7:22	7:24	7:31	7:36	7:43
7:25	7:30	7:35	7:41	7:52	7:54	8:01	8:06	8:13
7:55	8:00	8:05	8:11	8:22	8:24	8:31	8:36	8:43
8:25	8:30	8:35	8:41	8:52	8:54	9:01	9:06	9:13
8:55*	9:00	9:05	9:11	9:25	9:27	9:34	9:39	9:46
9:25	9:30	9:35	9:41	9:52	9:54	10:01	10:06	10:13
9:55*	10:00	10:05	10:11	10:25	10:27	10:34	10:39	10:46

NOTES: AM PM

* Trip serves Edison Park.

56 To Rockville M

SATURDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Lakeforest Transit Center	Firstfield & Clopper Rds	Quince Or. Rd & Quince Or. Blvd	Kentlands Blvd & Tschiffely Sq. Rd	Quince Or. Rd & MD 28	Shady Grove Adventist Hospital	Wootton Pkwy & Hurley Ave	Maryland Ave & Falls Rd	Rockville M
9	8	7	6	5	4	3	2	1
5:53	5:58	6:02	6:08	6:12	6:21	6:27	6:32	6:36
6:20	6:25	6:29	6:35	6:39	6:48	6:54	6:59	7:03
6:50	6:55	6:59	7:05	7:09	7:18	7:24	7:29	7:33
7:20	7:25	7:29	7:35	7:39	7:48	7:54	7:59	8:03
7:50	7:55	7:59	8:05	8:09	8:18	8:24	8:29	8:33
8:20	8:25	8:29	8:35	8:39	8:48	8:54	8:59	9:03
8:50	8:59	9:03	9:10	9:15	9:24	9:30	9:35	9:39
9:20	9:29	9:33	9:40	9:45	9:54	10:00	10:05	10:09
9:50	9:59	10:03	10:10	10:15	10:24	10:30	10:35	10:39
10:20	10:29	10:33	10:40	10:45	10:54	11:00	11:05	11:09
10:50	10:59	11:03	11:10	11:15	11:24	11:30	11:35	11:39
11:20	11:29	11:33	11:40	11:45	11:54	12:00	12:05	12:09
11:50	12:02	12:06	12:13	12:19	12:28	12:34	12:40	12:44
12:20	12:32	12:36	12:43	12:49	12:58	1:04	1:10	1:14
12:50	1:02	1:06	1:13	1:19	1:28	1:34	1:40	1:44
1:20	1:32	1:36	1:43	1:49	1:58	2:04	2:10	2:14
1:50	2:02	2:06	2:13	2:19	2:28	2:34	2:40	2:44
2:20	2:32	2:36	2:43	2:49	2:58	3:04	3:10	3:14
2:50	3:02	3:06	3:13	3:19	3:28	3:34	3:40	3:44
3:20	3:32	3:36	3:43	3:49	3:58	4:04	4:10	4:14
3:50	4:02	4:06	4:13	4:19	4:28	4:34	4:40	4:44
4:20	4:32	4:36	4:43	4:49	4:58	5:04	5:10	5:14
4:50	5:02	5:06	5:13	5:19	5:28	5:34	5:40	5:44
5:20	5:32	5:36	5:43	5:49	5:58	6:04	6:10	6:14
5:50	5:59	6:03	6:09	6:14	6:23	6:29	6:34	6:38
6:20	6:29	6:33	6:39	6:44	6:53	6:59	7:04	7:08
6:50	6:59	7:03	7:09	7:14	7:23	7:29	7:34	7:38
7:20	7:29	7:33	7:39	7:44	7:53	7:59	8:04	8:08
7:50	7:59	8:03	8:09	8:14	8:23	8:29	8:34	8:38
8:20	8:29	8:33	8:39	8:44	8:53	8:59	9:04	9:08
8:53	9:01	9:04	9:10	9:15	9:23	9:28	9:32	9:36

NOTES: AM PM

SEE REVERSE FOR SUNDAY SERVICE

Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed due to traffic or weather.

56 To Lakeforest Transit Center

SATURDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Rockville M	Maryland Ave & Falls Rd	Wootton Pkwy & Hurley Ave	Shady Grove Adventist Hospital	Quince Or. Rd & MD 28	Kentlands Blvd & Tschiffely Sq. Rd	Quince Or. Rd & Quince Or. Blvd	Firstfield & Clopper Rds	Lakeforest Transit Center
1	2	3	4	5	6	7	8	9
6:20	6:24	6:28	6:33	6:43	6:45	6:51	6:55	7:02
6:50	6:54	6:58	7:03	7:13	7:15	7:21	7:25	7:32
7:20	7:24	7:28	7:33	7:43	7:45	7:51	7:55	8:02
7:50	7:54	7:58	8:03	8:13	8:15	8:21	8:25	8:32
8:20	8:24	8:29	8:35	8:46	8:49	8:56	9:01	9:09
8:50	8:54	8:59	9:05	9:16	9:19	9:26	9:31	9:39
9:20	9:24	9:29	9:35	9:46	9:49	9:56	10:01	10:09
9:50	9:54	9:59	10:05	10:16	10:19	10:26	10:31	10:39
10:20	10:24	10:29	10:35	10:46	10:49	10:56	11:01	11:09
10:50	10:54	10:59	11:05	11:16	11:19	11:26	11:31	11:39
11:20	11:24	11:29	11:35	11:46	11:49	11:56	12:01	12:09
11:50	11:54	11:59	12:05	12:16	12:19	12:26	12:31	12:39
12:20	12:24	12:29	12:35	12:46	12:49	12:56	1:01	1:09
12:50	12:54	12:59	1:05	1:16	1:19	1:26	1:31	1:39
1:20	1:24	1:29	1:35	1:46	1:49	1:56	2:01	2:09
1:50	1:54	1:59	2:05	2:16	2:19	2:26	2:31	2:39
2:20	2:24	2:29	2:35	2:46	2:49	2:56	3:01	3:09
2:50	2:54	2:59	3:05	3:16	3:19	3:26	3:31	3:39
3:20	3:24	3:29	3:35	3:46	3:49	3:56	4:01	4:09
3:50	3:54	3:59	4:05	4:16	4:19	4:26	4:31	4:39
4:20	4:24	4:29	4:35	4:46	4:49	4:56	5:01	5:09
4:50	4:54	4:59	5:05	5:16	5:19	5:26	5:31	5:39
5:20	5:24	5:29	5:35	5:46	5:49	5:56	6:01	6:09
5:50	5:54	5:59	6:05	6:16	6:18	6:24	6:29	6:36
6:20	6:24	6:29	6:35	6:46	6:48	6:54	6:59	7:06
6:50	6:54	6:59	7:05	7:16	7:18	7:24	7:29	7:36
7:20	7:24	7:29	7:35	7:46	7:48	7:54	7:59	8:06
7:50	7:54	7:59	8:05	8:16	8:18	8:24	8:29	8:36
8:20	8:24	8:29	8:35	8:46	8:48	8:54	8:59	9:06

NOTES: AM PM

SEE REVERSE FOR SUNDAY SERVICE

HOW TO RIDE A BUS

Check schedule for timepoint nearest your location. Wait at the blue and white **RIDE ON** bus stop sign. Arrive several minutes before scheduled time. Have exact fare ready (drivers do not make change).

- Not all stops are listed on a public timetable.
- If you are unfamiliar with your stop, sit or stand behind the line near the front of the bus and ask the bus driver to notify you when your stop is approaching.
- Ask the bus driver if you are not sure if the bus goes to your stop.
- If you have internet access (at home or somewhere else, such as a public library), it may be easier for you to use an online trip planner rather than a paper timetable.
- Be mindful of changes in the schedule, for holidays or bad weather.
- Please observe the following rules for all patrons: No eating, drinking, or smoking.
- Electronic devices may be played with earphones set *at low level.*

HOW TO READ A TIMETABLE

- Find the schedule for the day of the week and the direction you wish to ride.
- Find the timepoints closest to your origin and destination. The timepoints are shown on the route map and indicate the time the bus is scheduled to be at the particular location. Your nearest bus stop may be between timepoints.
- Read down the column to see the times when a trip will be at the given timepoint. Read the times across to the right to see when the trip reaches other timepoints. If no time is shown, that trip does not serve that timepoint.

FARES Effective September 2, 2017

Regular Fare, Token, or SmarTrip®	**$2.00**
SmarTrip® Fare Transfer from MetroRail	**$1.50**
Seniors and persons with disability with valid ID (including attendant-eligible) except during free periods:	
Senior/Disabled SmarTrip® or Cash	**$1.00**
Senior/Disabled SmarTrip® Transfer from Metrorail	**$0.50**
Seniors age 65 years or older with a Senior SmarTrip® card or valid Metro Senior ID Card or with valid Medicare Card and Photo ID from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disabled ID Card from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disability ID Card – Attendant Eligible from 9:30 am – 3:00 pm Mon. through Fri. and Sat. from 8:30 am – 4:00 pm. Attendant rides half fare or free depending on time.	**FREE**
MetroAccess - Certified Customer with ID **MetroAccess** - Companion	**FREE**
Children under age 5 Limit 2 children per paying passenger	**FREE**
Local Bus Transfer with SmarTrip®	**FREE**
Children 5 to 18 with a student ID or Youth Cruiser SmarTrip® Card Monday to Friday, 2:00 - 8:00 pm	**FREE**

GUARANTEED RIDE HOME

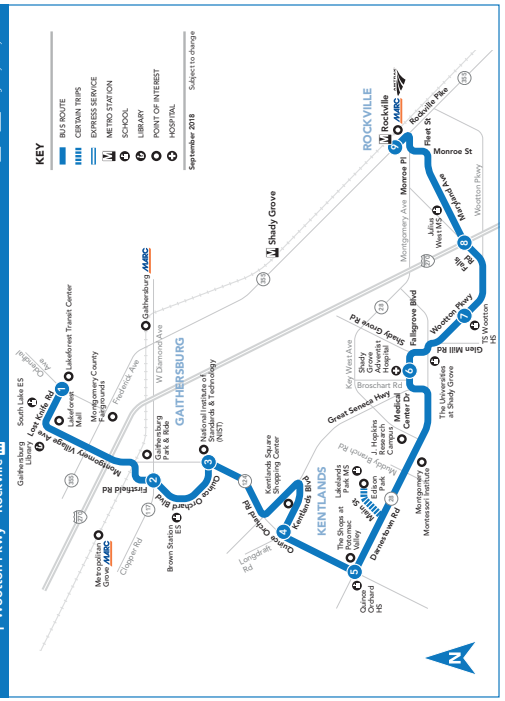
When you take Metrobus, Metrorail and Ride On to work, you are eligible to participate in the free Commuter Connections Guaranteed Ride Home Program. To register and to receive program details call:
Commuter Services at **301-770-POOL(7665)**.

METROACCESS

Alternative paratransit service to this Ride On route for people with certified disabilities is available. Call MetroAccess at **301-562-5360**.

Ride On
Montgomery County Transit

56 | Lakeforest Transit Center – Quince Orchard – Kentlands – MD 28-Darnestown Rd – Shady Grove Hospital – Wootton Pkwy – Rockville M



56 To Rockville M

SUNDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Lakeforest Transit Center	Firstfield & Clopper Rds	Quince Or. Rd & Quince Or. Blvd	Kentlands Blvd & Tschiffely Sq. Rd	Quince Or. Rd & MD 28	Shady Grove Adventist Hospital	Wootton Pkwy & Hurley Ave	Maryland Ave & Falls Rd	Rockville M
1	2	3	4	5	6	7	8	9
6:53	7:00	7:03	7:10	7:15	7:23	7:28	7:33	7:37
7:20	7:27	7:30	7:37	7:42	7:50	7:55	8:00	8:04
7:50	7:57	8:00	8:07	8:12	8:20	8:25	8:30	8:34
8:20	8:27	8:30	8:37	8:42	8:50	8:55	9:00	9:04
8:50	9:00	9:04	9:11	9:16	9:25	9:31	9:36	9:40
9:20	9:30	9:34	9:41	9:46	9:55	10:01	10:06	10:10
9:50	10:00	10:04	10:11	10:16	10:25	10:31	10:36	10:40
10:20	10:30	10:34	10:41	10:46	10:55	11:01	11:06	11:10
10:50	11:00	11:04	11:11	11:16	11:25	11:31	11:36	11:40
11:20	11:30	11:34	11:41	11:46	11:55	12:01	12:06	12:10
11:50	12:00	12:04	12:11	12:16	12:25	12:31	12:36	12:40
12:20	12:30	12:34	12:41	12:46	12:55	1:01	1:06	1:10
12:50	1:00	1:04	1:11	1:16	1:25	1:31	1:36	1:40
1:20	1:30	1:34	1:41	1:46	1:55	2:01	2:06	2:10
1:50	2:00	2:04	2:11	2:16	2:25	2:31	2:36	2:40
2:20	2:30	2:34	2:41	2:46	2:55	3:01	3:06	3:10
2:50	3:00	3:04	3:11	3:16	3:25	3:31	3:36	3:40
3:20	3:30	3:34	3:41	3:46	3:55	4:01	4:06	4:10
3:50	4:00	4:04	4:11	4:16	4:25	4:31	4:36	4:40
4:20	4:28	4:32	4:38	4:43	4:51	4:57	5:02	5:06
4:50	4:58	5:02	5:08	5:13	5:21	5:27	5:32	5:36
5:20	5:28	5:32	5:38	5:43	5:51	5:57	6:02	6:06
5:50	5:58	6:02	6:08	6:13	6:21	6:27	6:32	6:36
6:20	6:28	6:32	6:38	6:43	6:51	6:57	7:02	7:06
6:50	6:58	7:02	7:08	7:13	7:21	7:27	7:32	7:36
7:20	7:28	7:32	7:38	7:43	7:51	7:57	8:02	8:06
7:50	7:58	8:02	8:08	8:13	8:21	8:27	8:32	8:36
8:23	8:31	8:35	8:41	8:46	8:54	9:00	9:05	9:09

NOTES: AM PM

Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed due to traffic or weather.

56 To Lakeforest Transit Center

SUNDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Rockville M	Maryland Ave & Falls Rd	Wootton Pkwy & Hurley Ave	Shady Grove Adventist Hospital	Quince Or. Rd & MD 28	Kentlands Blvd & Tschiffely Sq. Rd	Quince Or. Rd & Quince Or. Blvd	Firstfield & Clopper Rds	Lakeforest Transit Center
9	8	7	6	5	4	3	2	1
7:20	7:24	7:28	7:33	7:42	7:45	7:51	7:55	8:02
7:50	7:54	7:58	8:03	8:12	8:15	8:21	8:25	8:32
8:20	8:24	8:28	8:33	8:42	8:45	8:51	8:55	9:02
8:50	8:54	8:58	9:03	9:12	9:15	9:21	9:25	9:32
9:20	9:24	9:28	9:33	9:42	9:45	9:51	9:55	10:02
9:50	9:54	9:58	10:03	10:12	10:15	10:21	10:25	10:32
10:20	10:24	10:28	10:33	10:42	10:45	10:51	10:55	11:02
10:50	10:54	10:58	11:03	11:12	11:15	11:21	11:25	11:32
11:20	11:24	11:29	11:35	11:45	11:48	11:55	12:00	12:07
11:50	11:54	11:59	12:05	12:15	12:18	12:25	12:30	12:37
12:20	12:24	12:29	12:35	12:45	12:48	12:55	1:00	1:07
12:50	12:54	12:59	1:05	1:15	1:18	1:25	1:30	1:37
1:20	1:24	1:29	1:35	1:45	1:48	1:55	2:00	2:07
1:50	1:54	1:59	2:05	2:15	2:18	2:25	2:30	2:37
2:20	2:24	2:29	2:35	2:45	2:48	2:55	3:00	3:07
2:50	2:54	2:59	3:05	3:15	3:18	3:25	3:30	3:37
3:20	3:24	3:29	3:35	3:45	3:48	3:55	4:00	4:07
3:50	3:54	3:59	4:05	4:15	4:18	4:25	4:30	4:37
4:20	4:24	4:29	4:35	4:45	4:48	4:55	5:00	5:07
4:50	4:54	4:59	5:05	5:15	5:18	5:25	5:30	5:37
5:20	5:24	5:29	5:35	5:45	5:48	5:55	6:00	6:07
5:50	5:54	5:59	6:05	6:15	6:17	6:24	6:28	6:34
6:20	6:24	6:29	6:35	6:45	6:47	6:54	6:58	7:04
6:50	6:54	6:59	7:05	7:15	7:17	7:24	7:28	7:34
7:20	7:24	7:29	7:35	7:45	7:47	7:54	7:58	8:04
7:50	7:54	7:59	8:05	8:15	8:17	8:24	8:28	8:34
8:20	8:24	8:29	8:35	8:45	8:47	8:54	8:58	9:04

NOTES: AM PM

WELCOME TO RIDE ON

RIDE ON is a community bus service operated by the Montgomery County Department of Transportation.

RIDE ON operates over 75 routes that serve all 13 Montgomery County Metrorail stations and 7 MARC stations.

For detailed information, or to have timetables mailed, call **311**.

Outside Montgomery County **240-777-0311**

Visit our web site at: **www.rideonbus.com**

Real Time information is available at: **www.rideonrealtime.com**

Regular Mailing Address:
Montgomery County DOT
Division of Transit Services
101 Monroe Street, 5th
Floor Rockville, MD 20850

For more information, or to request this document in an alternate format or translated into another language, please call 311, or outside Montgomery County 240-777-0311.

Para más información o para pedir este documento en un formato diferente o traducido a otro idioma, por favor, llame al 311 o de fuera del Condado de Montgomery al 240-777-0311.

如需更多信息，需要以其它格式提供本文檔或需要將本文檔翻譯成其它語言，請撥打311。如果您不在蒙哥馬利郡，請撥打240-777-0311。

자세한 정보를 원하시거나 본 문서를 다른 형식 또는 다른 언어로의 번역본으로 원하실 경우, 전화번호 311, 또는 몽고메리 카운티 이외의 지역에서는 240-777-0311로 연락하시기 바랍니다.

ለተጨማሪ መረጃ፡ ወይም ይህንን ጽሕሙጉት በተለየሞ መልክ ለመጠየቅ ወይም ወዲሌላ ቋንቋ ለማስተርጎም፡ ኣብክሞትን በ 311 ወይም ከሞሞንትጎመሪ ኣውራጃ ውጪ 240-777-0311 ይደውሉ።

Pour plus d'informations ou pour recevoir un exemplaire de ce document sous un format différent ou traduit dans une autre langue, veuillez composer le 311 ou le 240-777-0311, à l'extérieur du comté de Montgomery.

Để tìm hiểu thêm, hoặc để yêu cầu cung cấp tài liệu này theo dạng khác hay chuyển ngữ sang ngôn ngữ khác, vui lòng gọi 311 hoặc số 240-777-0311 nếu gọi từ bên ngoài Quận Montgomery.

HOLIDAY SCHEDULE

Weekday Schedule operates on Columbus Day

Saturday Schedule operates on Independence Day

Sunday Schedule operates on New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, Christmas Day

Special Schedule operates on MLK, Jr. Day, Presidents' Day, Veterans Day

Like us on Facebook facebook.com/RideOnMCT

Follow us on Twitter twitter.com/RideOnMCT

Subscribe to email alerts at www.montgomerycountymd.gov/govdelivery

Subscribe to text alerts by texting MONTGOMERY RIDEON to 468311

YouTube youtube.com/RideOnMCT

Thank You for Riding with Us!

♻ Printed on recycled paper with soy-based ink

EFFECTIVE: SEPTEMBER 16, 2018

56

Approximate travel time between stops

- Lakeforest Transit Center
- 5-12 mins
- Firstfield & Clopper Rds
- 3-5 mins
- Quince Orchard Rd & Quince Orchard Blvd
- 5-9 mins
- Kentlands Blvd & Tschiffely Square Rd
- 2-4 mins
- Quince Orchard Rd & MD 28
- 8-14 mins
- Shady Grove Adventist Hospital
- 5-6 mins
- Wootton Pkwy & Hurley Ave
- 3-6 mins
- Maryland Ave & Falls Rd
- 5-7 mins
- Rockville M

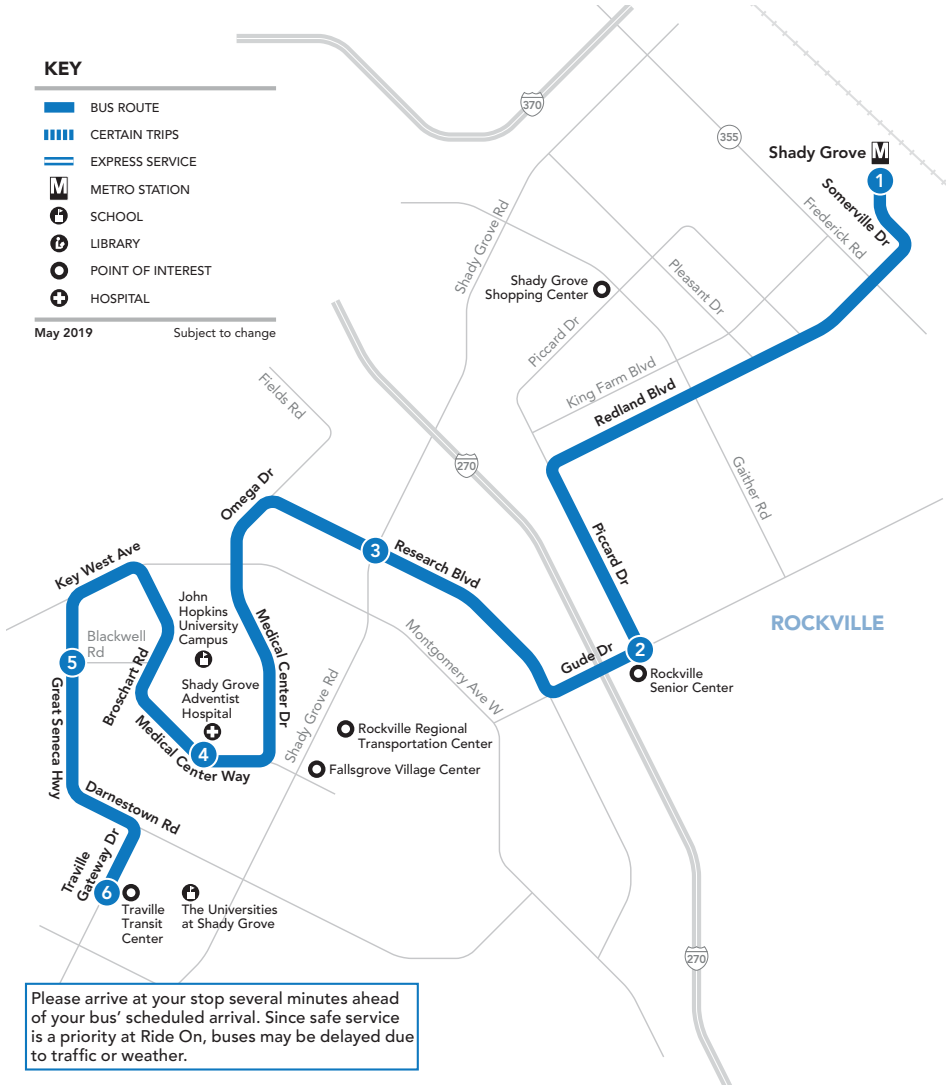
SERVICE DAYS
DAILY

Ride On Montgomery County Transit

Telephone **311**
Online at **www.rideonbus.com**
Real Time Info at **www.rideonrealtime.com**

66 Shady Grove (West) - Piccard Dr - Research Blvd - Shady Grove Hopital - Traville Transit Center

Ride On Montgomery County Transit



Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed due to traffic or weather.

66 To Traville Transit Center

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Shady Grove (West)	Piccard & Gude Drs	Research Blvd & Shady Grove Rd	Shady Grove Hospital	Blackwell Rd & Gt. Seneca Hwy	Traville Transit Center
1	2	3	4	5	6
5:30	5:35	5:39	5:45	5:50	5:52
6:00	6:05	6:09	6:15	6:20	6:22
6:30	6:35	6:39	6:45	6:50	6:52
7:00	7:06	7:10	7:16	7:21	7:23
7:30	7:36	7:40	7:46	7:51	7:53
8:00	8:06	8:10	8:16	8:21	8:23
8:40	8:46	8:50	8:56	9:01	9:03
NOTES: AM Service Only					AM

66 To Shady Grove

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Traville Transit Center	Blackwell Rd & Gt. Seneca Hwy	Shady Grove Hospital	Research Blvd & Shady Grove Rd	Piccard & Gude Drs	Shady Grove (West)
6	5	4	3	2	1
3:30	3:32	3:35	3:42	3:46	3:51
4:12	4:14	4:17	4:24	4:28	4:33
4:42	4:44	4:47	4:54	4:58	5:03
5:12	5:15	5:19	5:26	5:30	5:36
5:42	5:45	5:49	5:56	6:00	6:06
6:12	6:15	6:18	6:24	6:27	6:32
6:50	6:53	6:56	7:02	7:05	7:10
NOTES: PM Service Only					PM

HOW TO READ A TIMETABLE

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Ride On Montgomery County Transit

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- If you are unfamiliar with your stop, sit or stand behind the line near the front of the bus and ask the bus driver to notify you when your stop is approaching.
- Ask the bus driver if you are not sure if the bus goes to your stop.
- If you have internet access (at home or somewhere else, such as a public library), it may be easier for you to use an online trip planner rather than a paper timetable.
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SmarTrip® Fare Transfer from MetroRail	**$1.50**
Seniors and persons with disability with valid ID (including attendant-eligible) except during free periods:	
Senior/Disabled SmarTrip® or Cash	**$1.00**
Senior/Disabled SmarTrip® Transfer from Metrorail	**$0.50**
Seniors age 65 years or older with a Senior SmarTrip® card or valid Metro Senior ID Card or with valid Medicare Card and Photo ID from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disabled ID Card from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	
Person with disability with Metro Disability ID Card – Attendant Eligible from 9:30 am – 3:00 pm Mon. through Fri. and Sat. from 8:30 am – 4:00 pm. Attendant rides half fare or free depending on time.	
MetroAccess - Certified Customer with ID **MetroAccess** - Companion	
Children under age 5 Limit 2 children per paying passenger	**FREE**
Local Bus Transfer with SmarTrip®	
Children 5 to 18 with a student ID or Youth Cruiser SmarTrip® Card Monday to Friday, 2:00 - 8:00 pm	

WELCOME TO RIDE ON

RIDE ON is a community bus service operated by the Montgomery County Department of Transportation.

RIDE ON operates over 75 routes that serve all 13 Montgomery County Metrorail stations and 7 MARC stations.

For detailed information, or to have timetables mailed, call **311**.

Outside Montgomery County **240-777-0311**

Visit our web site at:
www.rideonbus.com

Real Time information is available at:
www.rideonrealtime.com

Regular Mailing Address:
Montgomery County DOT
Division of Transit Services
101 Monroe Street, 5th Floor
Rockville, MD 20850

For more information, or to request this document in an alternate format or translated into another language, please call 311, or outside Montgomery County 240-777-0311.

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如需更多信息、需要以其它格式提供本文檔或需要將本文檔翻譯成其它語言，請撥打311。如果您不在蒙哥馬利郡，請撥打240–777–0311。

자세한 정보를 원하시거나 본 문서를 다른 형식 또는 다른 언어로의 번역본으로 원하실 경우, 전화번호 311, 또는 몽고메리 카운티 이외의 지역에서는 240-777-0311로 연락하시기 바랍니다.

ለተጨማሪ መረጃ፡ ወይም ይህንን ዶኩመንት በተለዋጭ መልክ ለመጠየቅ ወይም ወደሌላ ቋንቋ ለማስተርጎም፡ አባከዎትን በ 311 ወይም ከሞንትጎመሪ ካውንቲ ውጪ 240-777-0311 ይደውሉ።

Pour plus d'informations ou pour recevoir un exemplaire de ce document sous un format différent ou traduit dans une autre langue, veuillez composer le 311 ou le 240-777-0311, à l'extérieur du comté de Montgomery.

Để tìm hiểu thêm, hoặc để yêu cầu cung cấp tài liệu này theo định dạng khác hay chuyển ngữ sang ngôn ngữ khác, vui lòng gọi 311 hoặc số 240-777-0311 nếu gọi từ bên ngoài Quận Montgomery.

HOLIDAY SCHEDULE

Weekday Schedule operates on Columbus Day

Saturday Schedule operates on Independence Day

Sunday Schedule operates on New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, Christmas Day

Special Schedule operates on MLK, Jr. Day, Presidents' Day, Veterans Day

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Subscribe to text alerts by texting
MONTGOMERY RIDEON to 468311

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youtube.com/RideOnMCT

Thank You for Riding with Us!

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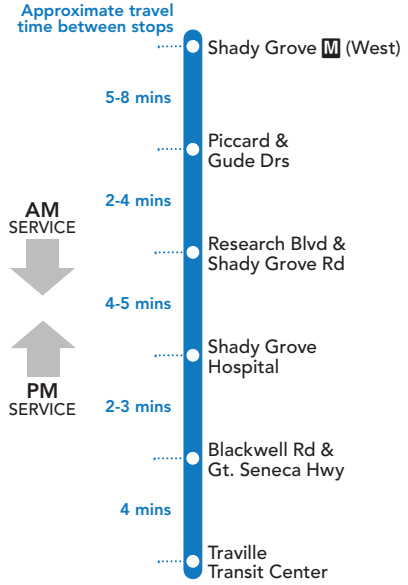
EFFECTIVE: MAY 12, 2019

66



SERVICE DAYS

MONDAY - FRIDAY RUSH HOURS ONLY

Ride On
Montgomery County Transit

Telephone **311**
Online at **www.rideonbus.com**
Real Time Info at **www.rideonrealtime.com**

74 To Shady Grove M

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

1 Germantown Transit Center (GTC)	2 Great Seneca Hwy & Clopper Rd	3 Great Seneca Hwy & Mateny Rd	4 Great Seneca Hwy & Muddy Branch Rd	5 Diamondback & Decoverly D/s	6 Washingtonian & Rio Blvds	7 Shady Grove M (East)
5:00	5:06	5:10	5:18	5:21	5:26	5:32
5:30	5:38	5:43	5:49	5:52	5:59	6:05
6:00	6:08	6:13	6:19	6:22	6:29	6:35
6:30	6:38	6:43	6:49	6:52	6:59	7:05
7:00	7:08	7:13	7:19	7:22	7:29	7:35
7:30	7:38	7:44	7:52	7:55	8:02	8:08
8:00	8:08	8:14	8:22	8:25	8:32	8:38
8:30	8:38	8:44	8:52	8:55	9:02	9:08
9:00	9:08	9:14	9:22	9:25	9:32	9:38
9:30	9:38	9:43	9:50	9:53	9:59	10:05
10:00	10:08	10:13	10:20	10:23	10:29	10:35
10:30	10:38	10:43	10:50	10:53	10:59	11:05
11:00	11:08	11:13	11:20	11:23	11:29	11:35
11:30	11:38	11:43	11:50	11:53	11:59	**12:05**
12:00	**12:08**	**12:13**	**12:20**	**12:23**	**12:29**	**12:35**
12:30	**12:38**	**12:43**	**12:50**	**12:53**	**12:59**	**1:05**
1:00	**1:08**	**1:13**	**1:20**	**1:23**	**1:29**	**1:35**
1:30	**1:38**	**1:43**	**1:50**	**1:53**	**1:59**	**2:05**
2:00	**2:08**	**2:13**	**2:20**	**2:23**	**2:29**	**2:35**
2:30	**2:39**	**2:45**	**2:54**	**2:57**	**3:04**	**3:11**
3:00	**3:09**	**3:15**	**3:24**	**3:27**	**3:34**	**3:41**
3:30	**3:39**	**3:45**	**3:54**	**3:57**	**4:04**	**4:11**
4:00	**4:09**	**4:15**	**4:24**	**4:27**	**4:34**	**4:41**
4:30	**4:39**	**4:45**	**4:54**	**4:57**	**5:04**	**5:11**
5:00	**5:09**	**5:15**	**5:24**	**5:27**	**5:34**	**5:41**
5:30	**5:39**	**5:45**	**5:54**	**5:57**	**6:04**	**6:11**
6:00	**6:09**	**6:15**	**6:24**	**6:27**	**6:34**	**6:41**
6:30	**6:38**	**6:43**	**6:51**	**6:54**	**7:00**	**7:06**
7:00	**7:08**	**7:13**	**7:21**	**7:24**	**7:30**	**7:36**
7:30	**7:38**	**7:43**	**7:51**	**7:54**	**8:00**	**8:06**
8:00	**8:07**	**8:12**	**8:20**	**8:22**	**8:28**	**8:34**
8:35	**8:42**	**8:47**	**8:55**	**8:57**	**9:03**	**9:09**
9:20	**9:27**	**9:32**	**9:40**	**9:42**	**9:48**	**9:54**

NOTES: AM PM

74 To Germantown Transit Center (GTC)

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

7 Shady Grove M (East)	6 Washingtonian & Rio Blvds	5 Diamondback & Decoverly D/s	4 Great Seneca Hwy & Muddy Branch Rd	3 Great Seneca Hwy & Mateny Rd	2 Great Seneca Hwy & Clopper Rd	1 Germantown Transit Center (GTC)
5:40	5:48	5:52	5:55	6:01	6:06	6:12
6:10	6:18	6:22	6:25	6:31	6:36	6:42
6:40	6:50	6:55	6:59	7:07	7:13	7:19
7:10	7:20	7:25	7:29	7:37	7:43	7:49
7:40	7:50	7:55	7:59	8:07	8:13	8:19
8:10	8:20	8:25	8:29	8:37	8:43	8:49
8:40	8:50	8:55	8:59	9:07	9:13	9:19
9:10	9:18	9:22	9:26	9:33	9:38	9:44
9:40	9:48	9:52	9:56	10:03	10:08	10:14
10:10	10:18	10:22	10:26	10:33	10:38	10:44
10:40	10:48	10:52	10:56	11:03	11:08	11:14
11:10	11:18	11:22	11:26	11:33	11:38	11:44
11:40	11:48	11:52	11:56	**12:03**	**12:08**	**12:14**
12:10	**12:18**	**12:22**	**12:26**	**12:33**	**12:38**	**12:44**
12:40	**12:48**	**12:52**	**12:56**	**1:03**	**1:08**	**1:14**
1:10	**1:18**	**1:22**	**1:26**	**1:33**	**1:38**	**1:44**
1:40	**1:48**	**1:52**	**1:56**	**2:03**	**2:08**	**2:14**
2:10	**2:19**	**2:24**	**2:27**	**2:36**	**2:44**	**2:52**
2:40	**2:49**	**2:54**	**2:57**	**3:06**	**3:14**	**3:22**
3:10	**3:19**	**3:24**	**3:27**	**3:36**	**3:44**	**3:52**
3:40	**3:49**	**3:54**	**3:57**	**4:06**	**4:14**	**4:22**
4:10	**4:19**	**4:24**	**4:27**	**4:36**	**4:44**	**4:52**
4:40	**4:50**	**4:56**	**5:01**	**5:12**	**5:18**	**5:25**
5:10	**5:20**	**5:26**	**5:31**	**5:42**	**5:48**	**5:55**
5:40	**5:50**	**5:56**	**6:01**	**6:12**	**6:18**	**6:25**
6:10	**6:20**	**6:26**	**6:31**	**6:42**	**6:48**	**6:55**
6:40	**6:50**	**6:56**	**7:01**	**7:12**	**7:18**	**7:25**
7:10	**7:18**	**7:22**	**7:26**	**7:34**	**7:39**	**7:45**
7:40	**7:48**	**7:52**	**7:56**	**8:04**	**8:09**	**8:15**
8:10	**8:18**	**8:22**	**8:26**	**8:34**	**8:39**	**8:45**
8:40	**8:48**	**8:52**	**8:56**	**9:04**	**9:09**	**9:15**
9:15	**9:23**	**9:27**	**9:31**	**9:39**	**9:44**	**9:50**
10:00	**10:08**	**10:12**	**10:16**	**10:24**	**10:29**	**10:35**

NOTES: AM PM

74 To Shady Grove M

SATURDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

1 Germantown Transit Center (GTC)	2 Great Seneca Hwy & Clopper Rd	3 Great Seneca Hwy & Mateny Rd	4 Great Seneca Hwy & Muddy Branch Rd	5 Diamondback & Decoverly D/s	6 Washingtonian & Rio Blvds	7 Shady Grove M (East)
6:00	6:06	6:10	6:17	6:19	6:25	6:31
6:30	6:36	6:40	6:47	6:49	6:55	7:01
7:00	7:06	7:10	7:17	7:19	7:25	7:31
7:30	7:36	7:40	7:47	7:49	7:55	8:01
8:00	8:06	8:10	8:17	8:19	8:25	8:31
8:30	8:36	8:40	8:47	8:49	8:55	9:01
9:00	9:06	9:11	9:19	9:21	9:27	9:33
9:30	9:36	9:41	9:49	9:51	9:57	10:03
10:00	10:06	10:11	10:19	10:21	10:27	10:33
10:30	10:36	10:41	10:49	10:51	10:57	11:03
11:00	11:06	11:11	11:19	11:21	11:27	11:33
11:30	11:36	11:41	11:49	11:51	11:57	**12:03**
12:00	**12:06**	**12:11**	**12:19**	**12:21**	**12:27**	**12:33**
12:30	**12:36**	**12:41**	**12:50**	**12:52**	**12:58**	**1:04**
1:00	**1:06**	**1:11**	**1:20**	**1:22**	**1:28**	**1:34**
1:30	**1:36**	**1:41**	**1:50**	**1:52**	**1:58**	**2:04**
2:00	**2:06**	**2:11**	**2:20**	**2:22**	**2:28**	**2:34**
2:30	**2:36**	**2:41**	**2:50**	**2:52**	**2:58**	**3:04**
3:00	**3:06**	**3:11**	**3:20**	**3:22**	**3:28**	**3:34**
3:30	**3:37**	**3:42**	**3:50**	**3:53**	**3:59**	**4:05**
4:00	**4:07**	**4:12**	**4:20**	**4:23**	**4:29**	**4:35**
4:30	**4:37**	**4:42**	**4:50**	**4:53**	**4:59**	**5:05**
5:00	**5:07**	**5:12**	**5:20**	**5:23**	**5:29**	**5:35**
5:30	**5:37**	**5:42**	**5:50**	**5:53**	**5:59**	**6:05**
6:00	**6:07**	**6:11**	**6:19**	**6:21**	**6:27**	**6:33**
6:30	**6:37**	**6:41**	**6:49**	**6:51**	**6:57**	**7:03**
7:00	**7:07**	**7:11**	**7:19**	**7:21**	**7:27**	**7:33**
7:30	**7:37**	**7:41**	**7:49**	**7:51**	**7:57**	**8:03**
8:00	**8:07**	**8:11**	**8:19**	**8:21**	**8:27**	**8:33**

NOTES: AM PM

There is NO Sunday service on this route

74 To Germantown Transit Center (GTC)

SATURDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

7 Shady Grove M (East)	6 Washingtonian & Rio Blvds	5 Diamondback & Decoverly D/s	4 Great Seneca Hwy & Muddy Branch Rd	3 Great Seneca Hwy & Mateny Rd	2 Great Seneca Hwy & Clopper Rd	1 Germantown Transit Center (GTC)
6:10	6:17	6:21	6:24	6:31	6:35	6:41
6:40	6:47	6:51	6:54	7:01	7:05	7:11
7:10	7:17	7:21	7:24	7:31	7:35	7:41
7:40	7:47	7:51	7:54	8:01	8:05	8:11
8:10	8:17	8:21	8:24	8:31	8:35	8:41
8:40	8:47	8:51	8:54	9:01	9:05	9:11
9:10	9:19	9:23	9:27	9:34	9:39	9:46
9:40	9:49	9:53	9:57	10:04	10:09	10:16
10:10	10:19	10:23	10:27	10:34	10:39	10:46
10:40	10:49	10:53	10:57	11:04	11:09	11:16
11:10	11:19	11:23	11:27	11:34	11:39	11:46
11:40	11:49	11:53	11:57	**12:04**	**12:09**	**12:16**
12:10	**12:19**	**12:24**	**12:28**	**12:35**	**12:40**	**12:47**
12:40	**12:49**	**12:54**	**12:58**	**1:05**	**1:10**	**1:17**
1:10	**1:19**	**1:24**	**1:28**	**1:35**	**1:40**	**1:47**
1:40	**1:49**	**1:54**	**1:58**	**2:05**	**2:10**	**2:17**
2:10	**2:19**	**2:24**	**2:28**	**2:35**	**2:40**	**2:47**
2:40	**2:49**	**2:54**	**2:58**	**3:05**	**3:10**	**3:17**
3:10	**3:20**	**3:24**	**3:28**	**3:36**	**3:41**	**3:48**
3:40	**3:50**	**3:54**	**3:58**	**4:06**	**4:11**	**4:18**
4:10	**4:20**	**4:24**	**4:28**	**4:36**	**4:41**	**4:48**
4:40	**4:50**	**4:54**	**4:58**	**5:06**	**5:11**	**5:18**
5:10	**5:20**	**5:24**	**5:28**	**5:36**	**5:41**	**5:48**
5:40	**5:50**	**5:54**	**5:58**	**6:06**	**6:11**	**6:18**
6:10	**6:19**	**6:23**	**6:27**	**6:34**	**6:39**	**6:45**
6:40	**6:49**	**6:53**	**6:57**	**7:04**	**7:09**	**7:15**
7:10	**7:19**	**7:23**	**7:27**	**7:34**	**7:39**	**7:45**
7:40	**7:49**	**7:53**	**7:57**	**8:04**	**8:09**	**8:15**
8:10	**8:19**	**8:23**	**8:27**	**8:34**	**8:39**	**8:45**

NOTES: AM PM

Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed due to traffic or weather.

HOW TO READ A TIMETABLE

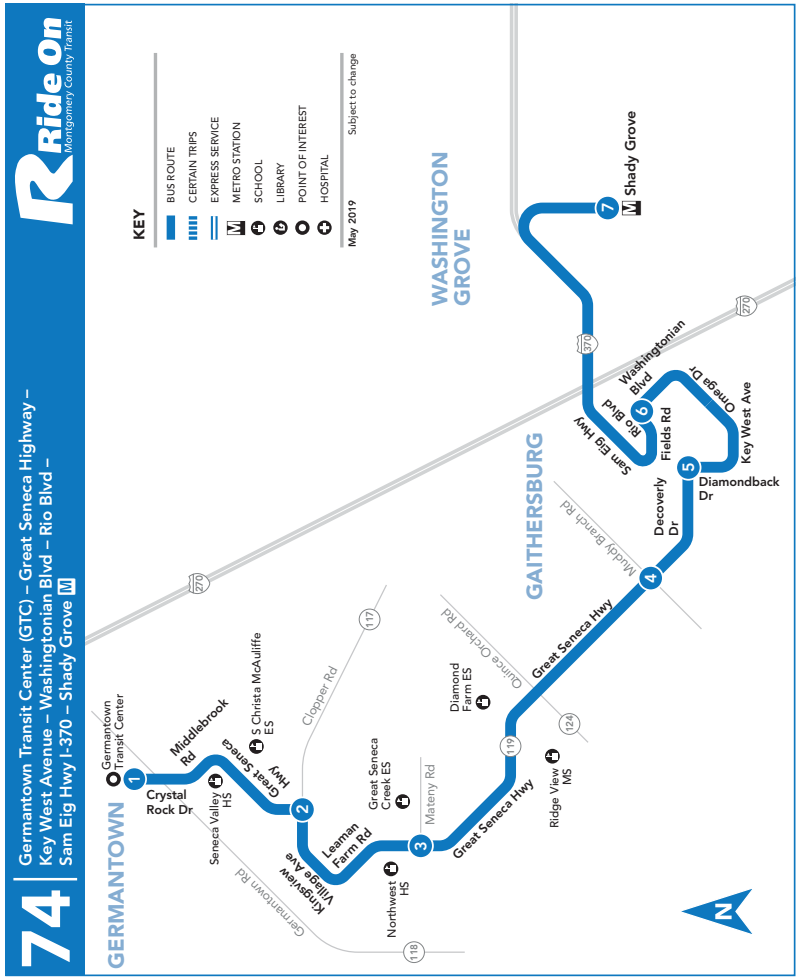
- Find the schedule for the day of the week and the direction you wish to ride.
- Find the timepoints closest to your origin and destination. The timepoints are shown on the route map and indicate the time the bus is scheduled to be at the particular location. Your nearest bus stop may be between timepoints.
- Read down the column to see the times when a trip will be at the given timepoint. Read the times across to the right to see when the trip reaches other timepoints. If no time is shown, that trip does not serve that timepoint.

FARES

Effective September 2, 2017

Regular Fare, Token, or SmarTrip®	**$2.00**
SmarTrip® Fare Transfer from MetroRail	**$1.50**
Seniors and persons with disability with valid ID (including attendant-eligible) except during free periods:	
Senior/Disabled SmarTrip® or Cash	**$1.00**
Senior/Disabled SmarTrip® Transfer from Metrorail	**$0.50**
Seniors age 65 years or older with a Senior SmarTrip® card or valid Metro Senior ID Card or with valid Medicare Card and Photo ID from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disabled ID Card from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disability ID Card – Attendant Eligible from 9:30 am – 3:00 pm Mon. through Fri. and Sat. from 8:30 am – 4:00 pm. Attendant rides half fare or free depending on time.	**FREE**
MetroAccess - Certified Customer with ID **MetroAccess** - Companion	**FREE**
Children under age 5 Limit 2 children per paying passenger	**FREE**
Local Bus Transfer with SmarTrip®	**FREE**
Children 5 to 18 with a student ID or Youth Cruiser SmarTrip® Card Monday to Friday, 2:00 - 8:00 pm	**FREE**

Ride On
Montgomery County Transit



GUARANTEED RIDE HOME

When you take Metrobus, Metrorail and Ride On to work, you are eligible to participate in the free Commuter Connections Guaranteed Ride Home Program. To register and to receive program details call:
Commuter Services at **301-770-POOL(7665)**.

METROACCESS

Alternative paratransit service to this Ride On route for people with certified disabilities is available. Call MetroAccess at **301-562-5360**.

HOW TO RIDE A BUS

Check schedule for timepoint nearest your location. Wait at the blue and white **RIDE ON** bus stop sign. Arrive several minutes before scheduled time. Have exact fare ready (drivers do not make change).

- Not all stops are listed on a public timetable.
- If you are unfamiliar with your stop, sit or stand behind the line near the front of the bus and ask the bus driver to notify you when your stop is approaching.
- Ask the bus driver if you are not sure if the bus goes to your stop.
- If you have internet access (at home or somewhere else, such as a public library), it may be easier for you to use an online trip planner rather than a paper timetable.
- Be mindful of changes in the schedule, for holidays or bad weather.
- Please observe the following rules for all patrons: No eating, drinking, or smoking.
- Electronic devices may be played with earphones set *at low level.*

WELCOME TO RIDE ON

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For detailed information, or to have timetables mailed, call **311**.

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www.rideonbus.com

Real Time information is available at:
www.rideonrealtime.com

Regular Mailing Address:
Montgomery County DOT
Division of Transit Services
101 Monroe Street, 5th Floor Rockville, MD 20850

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如需更多信息、需要以其它格式提供本文檔或需要將本文檔翻譯成其它語言，請撥打311。如果您不在蒙哥馬利郡，請撥打240–777–0311。

자세한 정보를 원하시거나 본 문서를 다른 형식 또는 다른 언어로의 번역본으로 원하실 경우, 전화번호 311, 또는 몽고메리 카운티 이외의 지역에서는 240-777-0311로 연락하시기 바랍니다.

ለተጨማሪ መረጃ፡ ወይም ይህንን ዶኩመንት በተለዋጭ መልክ ለመጠየቅ ወይም ወደሌላ ቋንቋ ለማስተርጎም፡ እባክዎትን በ 311 ወይም ከሞንትጎመሪ ካውንቲ ውጪ 240-777-0311 ይደውሉ።

Pour plus d'informations ou pour recevoir un exemplaire de ce document sous un format différent ou traduit dans une autre langue, veuillez composer le 311 ou le 240-777-0311, à l'extérieur du comté de Montgomery.

Để tìm hiểu thêm, hoặc để yêu cầu cung cấp tài liệu này theo định dạng khác hay chuyển ngữ sang ngôn ngữ khác, vui lòng gọi 311 hoặc số 240-777-0311 nếu gọi từ bên ngoài Quận Montgomery.

HOLIDAY SCHEDULE

Weekday Schedule operates on Columbus Day

Saturday Schedule operates on Independence Day

Sunday Schedule operates on New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, Christmas Day

Special Schedule operates on MLK, Jr. Day, Presidents' Day, Veterans Day

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facebook.com/RideOnMCT

Follow us on Twitter
twitter.com/RideOnMCT

Subscribe to email alerts at
www.montgomerycountymd.gov/govdelivery

Subscribe to text alerts by texting
MONTGOMERY RIDEON to 468311

YouTube
youtube.com/RideOnMCT

Thank You for Riding with Us!

♻ Printed on recycled paper with soy-based ink

EFFECTIVE: MAY 12, 2019

74

Approximate travel time between stops

- Germantown Transit Center (GTC)
- 7-10 mins
- Great Seneca Hwy & Clopper Rd
- 4-5 mins
- Great Seneca Hwy & Mateny Rd
- 6-8 mins
- Great Seneca Hwy & Muddy Branch Rd
- 2-4 mins
- Diamondback & Decoverly Drs
- 4-7 mins
- Washingtonian & Rio Blvds
- 7-9 mins
- Shady Grove M (East)

SERVICE DAYS

MONDAY - SATURDAY

Ride On
Montgomery County Transit

Telephone **311**
Online at **www.rideonbus.com**
Real Time Info at **www.rideonrealtime.com**

43 To Traville Transit Center

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Shady Grove (East)	Shady Grove Rd & MD 355	Shady Grove Rd & Research Blvd	Shady Grove Adventist Hospital	Traville Transit Center
1	2	3	4	5
5:00	5:03	5:08	5:12	5:17
5:30	5:35	5:41	5:47	5:53
6:00	6:05	6:11	6:17	6:23
6:25	6:30	6:36	6:42	6:48
6:48	6:53	6:59	7:05	7:11
7:11	7:16	7:22	7:28	7:34
7:35	7:40	7:46	7:52	7:58
8:00	8:05	8:11	8:17	8:23
8:25	8:31	8:40	8:46	8:52
8:50	8:56	9:05	9:11	9:17
9:20	9:26	9:35	9:41	9:47
9:50	9:56	10:05	10:11	10:17
10:20	10:26	10:35	10:41	10:47
10:50	10:55	11:02	11:07	11:14
11:20	11:25	11:32	11:37	11:44
11:50	11:56	**12:05**	**12:11**	**12:17**
12:20	**12:26**	**12:35**	**12:41**	**12:47**
12:50	**12:56**	**1:05**	**1:11**	**1:17**
1:20	**1:26**	**1:35**	**1:41**	**1:47**
1:50	**1:56**	**2:05**	**2:11**	**2:17**
2:20	**2:26**	**2:35**	**2:41**	**2:47**
2:50	**2:56**	**3:05**	**3:11**	**3:17**
3:20	**3:26**	**3:35**	**3:41**	**3:47**
3:50	**3:56**	**4:05**	**4:11**	**4:17**
4:20	**4:26**	**4:35**	**4:41**	**4:47**
4:50	**4:56**	**5:05**	**5:11**	**5:17**
5:20	**5:26**	**5:35**	**5:41**	**5:47**
5:50	**5:56**	**6:05**	**6:11**	**6:17**
6:20	**6:26**	**6:35**	**6:41**	**6:47**
6:50	**6:56**	**7:05**	**7:11**	**7:17**
7:20	**7:26**	**7:35**	**7:41**	**7:47**
7:50	**7:54**	**8:01**	**8:06**	**8:11**
8:25	**8:29**	**8:36**	**8:41**	**8:46**
9:00	**9:04**	**9:11**	**9:16**	**9:21**
9:45	**9:49**	**9:56**	**10:01**	**10:06**
10:30	**10:34**	**10:41**	**10:46**	**10:51**
11:15	**11:19**	**11:26**	**11:31**	**11:36**
NOTES:			AM	**PM**

43 To Shady Grove M

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Traville Transit Center	Shady Grove Adventist Hospital	Shady Grove Rd & Research Blvd	Shady Grove Rd & MD 355	Shady Grove (East)
5	4	3	2	1
5:27	5:32	5:38	5:44	5:48
5:57	6:02	6:08	6:14	6:18
6:27	6:32	6:38	6:44	6:48
6:55	7:00	7:06	7:12	7:16
7:20	7:25	7:31	7:37	7:41
7:45	7:51	7:58	8:06	8:10
8:10	8:16	8:23	8:31	8:35
8:35	8:41	8:48	8:56	9:00
9:00	9:06	9:13	9:21	9:25
9:25	9:31	9:38	9:46	9:50
9:52	9:58	10:05	10:13	10:17
10:22	10:28	10:35	10:43	10:47
10:52	10:58	11:05	11:13	11:17
11:22	11:28	11:35	11:42	11:47
11:52	11:58	**12:05**	**12:12**	**12:17**
12:22	**12:28**	**12:35**	**12:42**	**12:47**
12:52	**12:58**	**1:05**	**1:12**	**1:17**
1:22	**1:28**	**1:35**	**1:42**	**1:47**
1:52	**1:58**	**2:05**	**2:12**	**2:17**
2:22	**2:28**	**2:35**	**2:42**	**2:47**
2:52	**2:58**	**3:05**	**3:12**	**3:17**
3:22	**3:28**	**3:35**	**3:42**	**3:47**
3:52	**3:58**	**4:05**	**4:12**	**4:17**
4:22	**4:29**	**4:37**	**4:46**	**4:50**
4:52	**4:59**	**5:07**	**5:16**	**5:20**
5:22	**5:29**	**5:37**	**5:46**	**5:50**
5:52	**5:59**	**6:07**	**6:16**	**6:20**
6:22	**6:29**	**6:36**	**6:43**	**6:46**
6:52	**6:59**	**7:06**	**7:13**	**7:16**
7:22	**7:27**	**7:33**	**7:39**	**7:42**
7:52	**7:57**	**8:03**	**8:09**	**8:12**
8:22	**8:27**	**8:33**	**8:39**	**8:42**
8:53	**8:58**	**9:04**	**9:10**	**9:13**
9:27	**9:32**	**9:38**	**9:44**	**9:47**
10:10	**10:15**	**10:21**	**10:27**	**10:30**
10:55	**11:00**	**11:06**	**11:12**	**11:15**
11:40	**11:45**	**11:51**	**11:57**	12:00
NOTES:			AM	**PM**

43 To Traville Transit Center

SATURDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Shady Grove (East)	Shady Grove Rd & MD 355	Shady Grove Rd & Research Blvd	Shady Grove Adventist Hospital	Traville Transit Center
1	2	3	4	5
6:40	6:45	6:51	6:56	7:01
7:20	7:25	7:31	7:36	7:41
7:50	7:55	8:01	8:06	8:11
8:20	8:25	8:31	8:36	8:41
8:50	8:55	9:01	9:06	9:11
9:20	9:25	9:33	9:39	9:45
9:50	9:55	10:03	10:09	10:15
10:20	10:25	10:33	10:39	10:45
10:50	10:55	11:03	11:09	11:15
11:20	11:25	11:33	11:39	11:45
11:50	11:55	**12:03**	**12:09**	**12:15**
12:20	**12:25**	**12:33**	**12:39**	**12:45**
12:50	**12:55**	**1:03**	**1:09**	**1:15**
1:20	**1:25**	**1:33**	**1:39**	**1:45**
1:50	**1:55**	**2:03**	**2:09**	**2:15**
2:20	**2:25**	**2:33**	**2:39**	**2:45**
2:50	**2:55**	**3:03**	**3:09**	**3:15**
3:20	**3:25**	**3:33**	**3:39**	**3:45**
3:50	**3:55**	**4:03**	**4:09**	**4:15**
4:20	**4:25**	**4:33**	**4:39**	**4:45**
4:50	**4:55**	**5:02**	**5:07**	**5:13**
5:20	**5:25**	**5:32**	**5:37**	**5:43**
5:50	**5:55**	**6:01**	**6:06**	**6:12**
6:20	**6:25**	**6:31**	**6:36**	**6:42**
6:50	**6:55**	**7:01**	**7:06**	**7:12**
7:25	**7:30**	**7:36**	**7:41**	**7:47**
8:00	**8:05**	**8:11**	**8:16**	**8:22**
8:45	**8:50**	**8:56**	**9:01**	**9:07**
NOTES:			AM	**PM**

SEE REVERSE FOR SUNDAY SERVICE

Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed due to traffic or weather.

43 To Shady Grove M

SATURDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Traville Transit Center	Shady Grove Adventist Hospital	Shady Grove Rd & Research Blvd	Shady Grove Rd & MD 355	Shady Grove (East)
5	4	3	2	1
7:10	7:15	7:20	7:25	7:29
7:46	7:51	7:57	8:03	8:07
8:18	8:23	8:29	8:35	8:39
8:50	8:55	9:01	9:07	9:11
9:22	9:27	9:33	9:39	9:43
9:52	9:57	10:03	10:09	10:13
10:22	10:27	10:33	10:39	10:43
10:52	10:57	11:03	11:09	11:13
11:22	11:27	11:33	11:39	11:43
11:52	11:57	**12:03**	**12:09**	**12:13**
12:22	**12:28**	**12:34**	**12:41**	**12:45**
12:52	**12:58**	**1:04**	**1:11**	**1:15**
1:22	**1:28**	**1:34**	**1:41**	**1:45**
1:52	**1:58**	**2:04**	**2:11**	**2:15**
2:22	**2:28**	**2:34**	**2:41**	**2:45**
2:52	**2:58**	**3:04**	**3:11**	**3:15**
3:22	**3:28**	**3:34**	**3:41**	**3:45**
3:52	**3:58**	**4:04**	**4:11**	**4:15**
4:22	**4:28**	**4:34**	**4:41**	**4:45**
4:52	**4:58**	**5:04**	**5:10**	**5:13**
5:22	**5:28**	**5:34**	**5:40**	**5:43**
5:52	**5:58**	**6:04**	**6:10**	**6:13**
6:22	**6:28**	**6:34**	**6:40**	**6:43**
6:52	**6:58**	**7:04**	**7:10**	**7:13**
7:22	**7:28**	**7:34**	**7:40**	**7:43**
7:52	**7:58**	**8:04**	**8:10**	**8:13**
8:25	**8:31**	**8:37**	**8:43**	**8:46**
9:10	**9:16**	**9:22**	**9:28**	**9:31**
NOTES:			AM	**PM**

SEE REVERSE FOR SUNDAY SERVICE

HOW TO RIDE A BUS

Check schedule for timepoint nearest your location. Wait at the blue and white **RIDE ON** bus stop sign. Arrive several minutes before scheduled time. Have exact fare ready (drivers do not make change).

- Not all stops are listed on a public timetable.
- If you are unfamiliar with your stop, sit or stand behind the line near the front of the bus and ask the bus driver to notify you when your stop is approaching.
- Ask the bus driver if you are not sure if the bus goes to your stop.
- If you have internet access (at home or somewhere else, such as a public library), it may be easier for you to use an online trip planner rather than a paper timetable.
- Be mindful of changes in the schedule, for holidays or bad weather.
- Please observe the following rules for all patrons: No eating, drinking, or smoking.
- Electronic devices may be played with earphones set *at low level.*

HOW TO READ A TIMETABLE

- Find the schedule for the day of the week and the direction you wish to ride.
- Find the timepoints closest to your origin and destination. The timepoints are shown on the route map and indicate the time the bus is scheduled to be at the particular location. Your nearest bus stop may be between timepoints.
- Read down the column to see the times when a trip will be at the given timepoint. Read the times across to the right to see when the trip reaches other timepoints. If no time is shown, that trip does not serve that timepoint.

FARES

Effective September 2, 2017

Regular Fare, Token, or SmarTrip®	**$2.00**
SmarTrip® Fare Transfer from MetroRail	**$1.50**
Seniors and persons with disability with valid ID (including attendant-eligible) except during free periods:	
Senior/Disabled SmarTrip® or Cash	**$1.00**
Senior/Disabled SmarTrip® Transfer from Metrorail	**$0.50**
Seniors age 65 years or older with a Senior SmarTrip® card or valid Metro Senior ID Card or with valid Medicare Card and Photo ID from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disabled ID Card from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disability ID Card – Attendant Eligible from 9:30 am – 3:00 pm Mon. through Fri. and Sat. from 8:30 am – 4:00 pm. Attendant rides half fare or free depending on time.	**FREE**
MetroAccess - Certified Customer with ID **MetroAccess** - Companion	**FREE**
Children under age 5 Limit 2 children per paying passenger	**FREE**
Local Bus Transfer with SmarTrip®	**FREE**
Children 5 to 18 with a student ID or Youth Cruiser SmarTrip® Card Monday to Friday, 2:00 - 8:00 pm	**FREE**

GUARANTEED RIDE HOME

When you take Metrobus, Metrorail and Ride On to work, you are eligible to participate in the free Commuter Connections Guaranteed Ride Home Program. To register and to receive program details call:
Commuter Services at **301-770-POOL(7665)**.

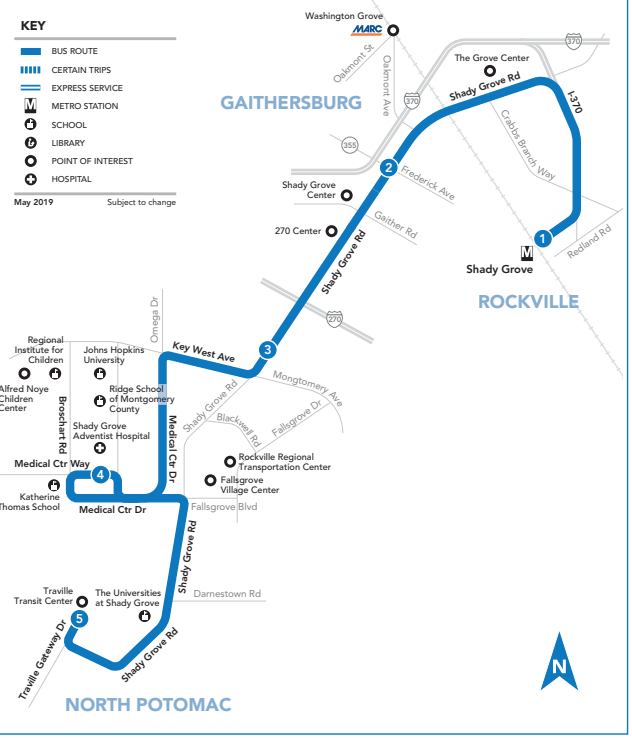
METROACCESS

Alternative paratransit service to this Ride On route for people with certified disabilities is available. Call MetroAccess at **301-562-5360**.

Ride On
Montgomery County Transit

43 Shady Grove M – Shady Grove Rd – Shady Grove Hospital – Traville Transit Center

Ride On Montgomery County Transit



43 To Traville Transit Center

SUNDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Shady Grove M (East)	Shady Grove Rd & MD 355	Shady Grove Rd & Research Blvd	Shady Grove Adventist Hospital	Traville Transit Center
1	2	3	4	5
6:40	6:45	6:50	6:55	6:59
7:20	7:25	7:30	7:35	7:39
7:50	7:55	8:00	8:05	8:09
8:20	8:25	8:30	8:35	8:39
8:50	8:55	9:00	9:05	9:09
9:20	9:25	9:30	9:35	9:39
9:50	9:56	10:02	10:07	10:12
10:20	10:26	10:32	10:37	10:42
10:50	10:56	11:02	11:07	11:12
11:20	11:26	11:32	11:37	11:42
11:50	11:56	**12:02**	**12:07**	**12:12**
12:20	**12:26**	**12:32**	**12:37**	**12:42**
12:50	**12:56**	**1:02**	**1:07**	**1:12**
1:20	**1:26**	**1:32**	**1:37**	**1:42**
1:50	**1:56**	**2:02**	**2:07**	**2:12**
2:20	**2:26**	**2:32**	**2:37**	**2:42**
2:50	**2:56**	**3:02**	**3:07**	**3:12**
3:20	**3:26**	**3:33**	**3:38**	**3:43**
3:50	**3:56**	**4:03**	**4:08**	**4:13**
4:20	**4:26**	**4:33**	**4:38**	**4:43**
4:50	**4:56**	**5:03**	**5:08**	**5:13**
5:20	**5:26**	**5:33**	**5:38**	**5:43**
5:50	**5:55**	**6:01**	**6:06**	**6:11**
6:20	**6:25**	**6:31**	**6:36**	**6:41**
6:50	**6:55**	**7:01**	**7:06**	**7:11**
7:25	**7:30**	**7:36**	**7:41**	**7:46**
8:00	**8:05**	**8:11**	**8:16**	**8:21**

NOTES: AM PM

43 To Shady Grove M

SUNDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Traville Transit Center	Shady Grove Adventist Hospital	Shady Grove Rd & Research Blvd	Shady Grove Rd & MD 355	Shady Grove M (East)
5	4	3	2	1
7:10	7:16	7:21	7:26	7:29
7:46	7:52	7:57	8:02	8:05
8:18	8:24	8:29	8:34	8:37
8:50	8:56	9:01	9:06	9:09
9:22	9:28	9:33	9:38	9:41
9:52	9:58	10:04	10:10	10:13
10:22	10:28	10:34	10:40	10:43
10:52	10:58	11:04	11:10	11:13
11:22	11:28	11:34	11:40	11:43
11:52	11:58	**12:04**	**12:10**	**12:13**
12:22	**12:28**	**12:34**	**12:40**	**12:43**
12:52	**12:58**	**1:04**	**1:10**	**1:13**
1:22	**1:28**	**1:34**	**1:40**	**1:43**
1:52	**1:58**	**2:04**	**2:10**	**2:13**
2:22	**2:28**	**2:34**	**2:40**	**2:43**
2:52	**2:58**	**3:04**	**3:10**	**3:13**
3:22	**3:28**	**3:34**	**3:40**	**3:43**
3:52	**3:58**	**4:04**	**4:10**	**4:13**
4:22	**4:28**	**4:34**	**4:40**	**4:43**
4:52	**4:58**	**5:04**	**5:10**	**5:13**
5:22	**5:28**	**5:34**	**5:40**	**5:43**
5:52	**5:58**	**6:04**	**6:10**	**6:13**
6:22	**6:28**	**6:34**	**6:40**	**6:43**
6:52	**6:58**	**7:04**	**7:10**	**7:13**
7:22	**7:28**	**7:34**	**7:40**	**7:43**
7:52	**7:58**	**8:04**	**8:10**	**8:13**
8:25	**8:31**	**8:37**	**8:43**	**8:46**

NOTES: AM PM

Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed due to traffic or weather.

WELCOME TO RIDE ON

RIDE ON is a community bus service operated by the Montgomery County Department of Transportation.

RIDE ON operates over 75 routes that serve all 13 Montgomery County Metrorail stations and 7 MARC stations.

For detailed information, or to have timetables mailed, call **311**.

Outside Montgomery County **240-777-0311**

Visit our web site at: **www.rideonbus.com**

Real Time information is available at: **www.rideonrealtime.com**

Regular Mailing Address:
Montgomery County DOT
Division of Transit Services
101 Monroe Street, 5th Floor
Rockville, MD 20850

For more information, or to request this document in an alternate format or translated into another language, please call 311, or outside Montgomery County 240-777-0311.

Para más información o para pedir este documento en un formato diferente o traducido a otro idioma, por favor, llame al 311 o de fuera del Condado de Montgomery al 240-777-0311.

如需更多信息，需要以其它格式提供本文檔或需要將本文檔翻譯成其它語言，請撥打311。如果您不在蒙哥馬利郡，請撥打240–777–0311。

자세한 정보를 원하시거나 본 문서를 다른 형식 또는 다른 언어로의 번역본으로 원하실 경우, 전화번호 311, 또는 몽고메리 카운티 이외의 지역에서는 240-777-0311로 연락하시기 바랍니다.

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Pour plus d'informations ou pour recevoir un exemplaire de ce document sous un format différent ou traduit dans une autre langue, veuillez composer le 311 ou le 240-777-0311, à l'extérieur du comté de Montgomery.

Để tìm hiểu thêm, hoặc để yêu cầu cung cấp tài liệu này theo định dạng khác hay chuyển ngữ sang ngôn ngữ khác, vui lòng gọi 311 hoặc số 240-777-0311 nếu gọi từ bên ngoài Quận Montgomery.

HOLIDAY SCHEDULE

Weekday Schedule operates on Columbus Day

Saturday Schedule operates on Independence Day

Sunday Schedule operates on New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, Christmas Day

Special Schedule operates on MLK, Jr. Day, Presidents' Day, Veterans Day

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EFFECTIVE: MAY 12, 2019

43

Approximate travel time between stops

- Shady Grove M (East)
- 4-7 mins
- Shady Grove Rd and MD 355
- 5-7 mins
- Shady Grove Rd and Research Blvd
- 4-7 mins
- Shady Grove Adventist Hospital
- 5-7 mins
- Traville Transit Center

SERVICE DAYS

DAILY

Ride On Montgomery County Transit

Telephone **311**

Online at **www.rideonbus.com**

Real Time Info at **www.rideonrealtime.com**

APPENDIX E

Traffic Signal Warrant Analysis Worksheets

Key West Ave & Medical Center Dr	HOURS MEETING WARRANTS					
	Existing Traffic		Background Traffic		Total Traffic	
TRAFFIC VOLUME WARRANTS	**Total Volume**	**Left Lane Volume**	**Total Volume**	**Left Lane Volume**	**Total Volume**	**Left Lane Volume**
Warrant #1-A (8 hours required)	3	2	***13***	***12***	***13***	***12***
Warrant #1-B (8 hours required)	***9***	7	***13***	***13***	***13***	***13***
Warrant #1-combination A & B (8 hours req.)	5	2	***13***	***13***	***13***	***13***
Warrant #2 (4 hours required)	***9***	***7***	***13***	***13***	***13***	***13***
Warrant #3 (1 hour required)	***5***	***5***	***13***	***13***	***13***	***13***

Note: A bold and italic number indicates that warrant is satisfied.

The Traffic Group

EXHIBIT E-1
RESULTS OF
TRAFFIC SIGNAL WARRANT ANALYSES
KEY WEST AVE AT MEDICAL CENTER DR

Qt, 190201\REV2\TSWA.xls-TSWAsum, F06/23/20

	HOURS MEETING WARRANTS					
Great Seneca Highway & Blackwell Road	**Existing Traffic**		**Background Traffic**		**Total Traffic**	
TRAFFIC VOLUME WARRANTS	**Total Volume**	**Left Lane Volume**	**Total Volume**	**Left Lane Volume**	**Total Volume**	**Left Lane Volume**
Warrant #1-A (8 hours required)	0	0	***10***	0	***12***	1
Warrant #1-B (8 hours required)	3	0	***12***	6	***13***	***8***
Warrant #1-combination A & B (8 hours req.)	1	0	***12***	0	***12***	2
Warrant #2 (4 hours required)	3	0	***12***	***4***	***12***	***7***
Warrant #3 (1 hour required)	***1***	0	***12***	0	***12***	***2***

Note: A bold and italic number indicates that warrant is satisfied.

The Traffic Group

EXHIBIT E-2
RESULTS OF
TRAFFIC SIGNAL WARRANT ANALYSES
GREAT SENECA HIGHWAY AT BLACKWELL ROAD

Qt, 190201\REV2\TSWA1.xls-TSWAsum, F06/23/20

Great Seneca Highway & Medical Center Drive	HOURS MEETING WARRANTS					
	Existing Traffic		Background Traffic		Total Traffic	
TRAFFIC VOLUME WARRANTS	**Total Volume**	**Left Lane Volume**	**Total Volume**	**Left Lane Volume**	**Total Volume**	**Left Lane Volume**
Warrant #1-A (8 hours required)	6	0	6	0	6	0
Warrant #1-B (8 hours required)	***11***	6	***12***	6	***12***	6
Warrant #1-combination A & B (8 hours req.)	***8***	2	***8***	2	***8***	2
Warrant #2 (4 hours required)	***9***	***4***	***11***	***6***	***11***	***6***
Warrant #3 (1 hour required)	***5***	***1***	***8***	***2***	***8***	***2***

Note: A bold and italic number indicates that warrant is satisfied.

The Traffic Group

EXHIBIT E-3
RESULTS OF
TRAFFIC SIGNAL WARRANT ANALYSES
GREAT SENECA HIGHWAY AT MEDICAL CENTER DRIVE

Qt, 190201\REV2\TSWA2.xls-TSWAsum, F06/23/20

	HOURS MEETING WARRANTS		
MD 119 NB & MD 119 SB left to Decoverly Dr	**Existing Traffic**	**Background Traffic**	**Total Traffic**
TRAFFIC VOLUME WARRANTS	**Left Lane Volume**	**Left Lane Volume**	**Left Lane Volume**
Warrant #1-A (8 hours required)	3	***12***	***12***
Warrant #1-B (8 hours required)	7	***12***	***12***
Warrant #1-combination A & B (8 hours req.)	5	***12***	***12***
Warrant #2 (4 hours required)	***7***	***12***	***12***
Warrant #3 (1 hour required)	***2***	***11***	***11***

Note: A bold and italic number indicates that warrant is satisfied.

The Traffic Group

EXHIBIT E-4
RESULTS OF
TRAFFIC SIGNAL WARRANT ANALYSES
MD 119 NB AT MD 119 SB LEFT TO DECOVERLY DR

Qt, 190201\REV2\TSWA3.xls-TSWAsum, F06/23/20

	KEY WEST AVE & MEDICAL CENTER DR						
	EXISTING TRAFFIC						
	MAJOR	MINOR NB (Medical Center Dr)			MINOR SB (Johns Hopkins Dr)		
Time	Key West Ave	left	thru	right	left	thru	right
6:00 AM	1013	8	0	19	6	0	6
7:00 AM	1920	0	2	43	9	0	0
8:00 AM	2314	4	1	50	11	2	6
9:00 AM	1548	9	1	32	4	1	39
10:00 AM	998	29	5	12	7	1	76
11:00 AM	999	55	11	40	7	5	90
12:00 PM	1195	66	10	70	11	7	91
1:00 PM	1106	45	2	21	7	0	90
2:00 PM	1127	59	2	23	1	1	67
3:00 PM	1550	79	2	32	9	0	78
4:00 PM	1868	8	0	98	182	3	77
5:00 PM	2302	4	1	94	147	3	99
6:00 PM	1750	6	1	53	81	1	45

The Traffic Group

EXHIBIT E1-1

EXISTING HOURLY TRAFFIC VOLUMES

KEY WEST AVE & MEDICAL CENTER DR

Qt, 190201\INITIAL\TSWA\TSWA.xls-Existing, F11/15/19

	1. Crown Farm			
	1,141	Residential Units	**ADT -**	6,881
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	27	226
7:00 AM	0.8%	6.6%	54	452
8:00 AM	1.1%	7.3%	75	500
9:00 AM	1.5%	3.7%	104	258
10:00 AM	1.2%	2.5%	83	174
11:00 AM	2.2%	2.4%	154	166
12:00 PM	2.5%	2.5%	174	169
1:00 PM	2.2%	2.6%	152	179
2:00 PM	2.7%	2.0%	183	140
3:00 PM	3.3%	2.3%	226	159
4:00 PM	4.9%	2.6%	336	180
5:00 PM	7.1%	2.4%	486	167
6:00 PM	5.7%	3.4%	393	235

	1. Crown Farm			
	44,797	sq. ft. Retail	**ADT -**	2,786
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	6	4
7:00 AM	0.5%	0.3%	15	8
8:00 AM	1.4%	0.5%	38	14
9:00 AM	2.9%	1.1%	80	29
10:00 AM	4.1%	2.2%	113	61
11:00 AM	4.1%	3.0%	115	84
12:00 PM	4.8%	4.0%	135	112
1:00 PM	4.5%	4.7%	126	130
2:00 PM	3.8%	4.4%	106	123
3:00 PM	3.7%	4.0%	103	111
4:00 PM	4.3%	4.2%	119	118
5:00 PM	4.8%	4.7%	134	132
6:00 PM	4.1%	4.3%	114	119

The Traffic Group

EXHIBIT E1-2

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA.xls-Dev., F11/15/19

	2. Johns Hopkins Research Campus			
	1,410,000	sq. ft. R&D	**ADT -**	13,971
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	199	142
7:00 AM	2.8%	2.0%	398	284
8:00 AM	3.5%	2.3%	491	316
9:00 AM	4.0%	3.4%	556	480
10:00 AM	3.0%	2.7%	414	382
11:00 AM	3.3%	3.4%	458	469
12:00 PM	4.3%	4.6%	600	643
1:00 PM	4.7%	3.4%	654	480
2:00 PM	3.3%	4.9%	458	687
3:00 PM	3.4%	3.3%	480	464
4:00 PM	1.2%	3.0%	164	425
5:00 PM	1.6%	2.7%	229	382
6:00 PM	0.6%	4.1%	87	578

	#3-#6			
	736,313	sq. ft. R&D	**ADT -**	7,296
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	104	74
7:00 AM	2.8%	2.0%	208	148
8:00 AM	3.5%	2.3%	256	165
9:00 AM	4.0%	3.4%	290	251
10:00 AM	3.0%	2.7%	216	199
11:00 AM	3.3%	3.4%	239	245
12:00 PM	4.3%	4.6%	313	336
1:00 PM	4.7%	3.4%	342	251
2:00 PM	3.3%	4.9%	239	359
3:00 PM	3.4%	3.3%	251	242
4:00 PM	1.2%	3.0%	85	222
5:00 PM	1.6%	2.7%	120	199
6:00 PM	0.6%	4.1%	46	302

The Traffic Group

EXHIBIT E1-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA.xls-Dev. (2), F11/15/19

	7. Traville			
	621,212	sq. ft. R&D	**ADT -**	6,155
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	88	62
7:00 AM	2.8%	2.0%	175	125
8:00 AM	3.5%	2.3%	216	139
9:00 AM	4.0%	3.4%	245	211
10:00 AM	3.0%	2.7%	183	168
11:00 AM	3.3%	3.4%	202	207
12:00 PM	4.3%	4.6%	264	283
1:00 PM	4.7%	3.4%	288	211
2:00 PM	3.3%	4.9%	202	303
3:00 PM	3.4%	3.3%	211	204
4:00 PM	1.2%	3.0%	72	187
5:00 PM	1.6%	2.7%	101	168
6:00 PM	0.6%	4.1%	38	255

	8. Traville Grove			
	41	Residential Units	**ADT -**	407
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	2	13
7:00 AM	0.8%	6.6%	3	27
8:00 AM	1.1%	7.3%	4	30
9:00 AM	1.5%	3.7%	6	15
10:00 AM	1.2%	2.5%	5	10
11:00 AM	2.2%	2.4%	9	10
12:00 PM	2.5%	2.5%	10	10
1:00 PM	2.2%	2.6%	9	11
2:00 PM	2.7%	2.0%	11	8
3:00 PM	3.3%	2.3%	13	9
4:00 PM	4.9%	2.6%	20	11
5:00 PM	7.1%	2.4%	29	10
6:00 PM	5.7%	3.4%	23	14

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EXHIBIT E1-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

	9. Kol Shalom Synagogue (Phase 2)			
	13,079	sq. ft. Church	**ADT -**	82
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	3	0
7:00 AM	7.8%	1.1%	6	1
8:00 AM	8.2%	1.0%	7	1
9:00 AM	3.6%	1.4%	3	1
10:00 AM	1.0%	2.2%	1	2
11:00 AM	2.3%	3.0%	2	2
12:00 PM	4.4%	5.0%	4	4
1:00 PM	4.9%	3.9%	4	3
2:00 PM	2.2%	3.0%	2	2
3:00 PM	2.5%	4.8%	2	4
4:00 PM	2.6%	7.6%	2	6
5:00 PM	2.3%	6.7%	2	5
6:00 PM	0.7%	3.4%	1	3

	10. Danac Stiles			
	146,327	sq. ft. Office	**ADT -**	1,351
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	53	7
7:00 AM	7.8%	1.1%	105	15
8:00 AM	8.2%	1.0%	111	14
9:00 AM	3.6%	1.4%	49	19
10:00 AM	1.0%	2.2%	14	30
11:00 AM	2.3%	3.0%	31	41
12:00 PM	4.4%	5.0%	59	68
1:00 PM	4.9%	3.9%	66	53
2:00 PM	2.2%	3.0%	30	41
3:00 PM	2.5%	4.8%	34	65
4:00 PM	2.6%	7.6%	35	103
5:00 PM	2.3%	6.7%	31	91
6:00 PM	0.7%	3.4%	9	46

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EXHIBIT E1-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

	KEY WEST AVE & MEDICAL CENTER DR						
	BACKGROUND TRAFFIC						
	MAJOR	MINOR EB (Medical Center Dr)			MINOR WB (Johns Hopkins Dr)		
Time	Key West Ave	left	thru	right	left	thru	right
6:00 AM	1299	8	0	19	97	0	57
7:00 AM	2493	0	2	43	191	0	102
8:00 AM	3010	4	1	50	213	2	120
9:00 AM	2297	9	1	32	311	1	212
10:00 AM	1569	29	5	12	251	1	214
11:00 AM	1644	55	11	40	307	5	259
12:00 PM	2014	66	10	70	423	7	322
1:00 PM	1967	45	2	21	314	0	263
2:00 PM	1787	59	2	23	441	1	314
3:00 PM	2224	79	2	32	306	0	245
4:00 PM	2220	8	0	98	454	3	230
5:00 PM	2751	4	1	94	391	3	237
6:00 PM	2053	6	1	53	451	1	253

The Traffic Group

EXHIBIT E1-3

PROJECTED HOURLY

BACKGROUND TRAFFIC VOLUMES

Qt, 190201\INITIAL\TSWA\TSWA.xls-Back, F11/15/19

	PSTA			
	630	Residential Units	**ADT -**	3,641
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	14	120
7:00 AM	0.8%	6.6%	29	239
8:00 AM	1.1%	7.3%	39	265
9:00 AM	1.5%	3.7%	55	136
10:00 AM	1.2%	2.5%	44	92
11:00 AM	2.2%	2.4%	82	88
12:00 PM	2.5%	2.5%	92	89
1:00 PM	2.2%	2.6%	81	95
2:00 PM	2.7%	2.0%	97	74
3:00 PM	3.3%	2.3%	120	84
4:00 PM	4.9%	2.6%	178	95
5:00 PM	7.1%	2.4%	257	88
6:00 PM	5.7%	3.4%	208	124

	PSTA			
	2,607	sq. ft. Retail	**ADT -**	403
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	1	1
7:00 AM	0.5%	0.3%	2	1
8:00 AM	1.4%	0.5%	6	2
9:00 AM	2.9%	1.1%	12	4
10:00 AM	4.1%	2.2%	16	9
11:00 AM	4.1%	3.0%	17	12
12:00 PM	4.8%	4.0%	19	16
1:00 PM	4.5%	4.7%	18	19
2:00 PM	3.8%	4.4%	15	18
3:00 PM	3.7%	4.0%	15	16
4:00 PM	4.3%	4.2%	17	17
5:00 PM	4.8%	4.7%	19	19
6:00 PM	4.1%	4.3%	16	17

The Traffic Group

EXHIBIT E1-4
PROJECTED HOURLY TRAFFIC VOLUMES
FOR SUBJECT SITE

Myc, 190201\REV3\TSWA.xls-Site, F04/15/21

	KEY WEST AVE & MEDICAL CENTER DR						
	TOTAL TRAFFIC						
	MAJOR	MINOR NB (Medical Center Dr)			MINOR SB (Johns Hopkins Dr)		
Time	Key West Ave	left	thru	right	left	thru	right
6:00 AM	1300	14	0	25	97	0	57
7:00 AM	2495	12	2	55	191	0	102
8:00 AM	3013	18	1	63	213	2	120
9:00 AM	2303	17	1	39	311	1	212
10:00 AM	1575	36	5	17	251	1	214
11:00 AM	1652	62	11	44	307	5	259
12:00 PM	2022	73	10	74	423	7	322
1:00 PM	1974	53	2	26	314	0	263
2:00 PM	1794	66	2	27	441	1	314
3:00 PM	2232	86	2	36	306	0	245
4:00 PM	2232	16	0	103	454	3	230
5:00 PM	2767	12	1	98	391	3	237
6:00 PM	2066	15	1	59	451	1	253

The Traffic Group

EXHIBIT E1-5
PROJECTED HOURLY
TOTAL TRAFFIC VOLUMES

Myc, 190201\REV3\TSWA.xls-Total, F04/15/21

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: KEY WEST AVE & MEDICAL CENTER DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	1013	27	x		x					
7:00 AM	1920	45	x		x					
8:00 AM	2314	55	x		x					
9:00 AM	1548	44	x		x					
10:00 AM	998	84	x		x	x		x	x	
11:00 AM	999	106	x		x	x		x	x	
12:00 PM	1195	146	x	x	x	x	x	x	x	x
1:00 PM	1106	97	x		x	x		x	x	
2:00 PM	1127	84	x		x	x		x	x	
3:00 PM	1550	113	x		x	x	x	x	x	x
4:00 PM	1868	262	x	x	x	x	x	x	x	x
5:00 PM	2302	249	x	x	x	x	x	x	x	x
6:00 PM	1750	127	x		x	x	x	x	x	x
hours satisfied			*3*		*9*		*5*		*9*	*5*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E1-6
SIGNAL WARRANT ANALYSIS
KEY WEST AVE & MEDICAL CENTER DR
(EXISTING CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA.xls-Warrant(E), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: KEY WEST AVE & MEDICAL CENTER DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	1013	8	x		x					
7:00 AM	1920	9	x		x					
8:00 AM	2314	13	x		x					
9:00 AM	1548	10	x		x					
10:00 AM	998	34	x		x					
11:00 AM	999	66	x		x	x		x	x	
12:00 PM	1195	76	x		x	x		x	x	x
1:00 PM	1106	47	x		x			x		
2:00 PM	1127	61	x		x	x		x	x	
3:00 PM	1550	81	x		x	x		x	x	x
4:00 PM	1868	185	x	x	x	x	x	x	x	x
5:00 PM	2302	150	x	x	x	x	x	x	x	x
6:00 PM	1750	82	x		x	x		x	x	x
hours satisfied			*2*		*7*		*2*		*7*	*5*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E1-7
SIGNAL WARRANT ANALYSIS
KEY WEST AVE & MEDICAL CENTER DR
(EXISTING CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA.xls-Warrant(E-L), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: KEY WEST AVE & MEDICAL CENTER DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	1299	154	x	x	x	x	x	x	x	x
7:00 AM	2493	293	x	x	x	x	x	x	x	x
8:00 AM	3010	335	x	x	x	x	x	x	x	x
9:00 AM	2297	524	x	x	x	x	x	x	x	x
10:00 AM	1569	466	x	x	x	x	x	x	x	x
11:00 AM	1644	571	x	x	x	x	x	x	x	x
12:00 PM	2014	752	x	x	x	x	x	x	x	x
1:00 PM	1967	577	x	x	x	x	x	x	x	x
2:00 PM	1787	756	x	x	x	x	x	x	x	x
3:00 PM	2224	551	x	x	x	x	x	x	x	x
4:00 PM	2220	687	x	x	x	x	x	x	x	x
5:00 PM	2751	631	x	x	x	x	x	x	x	x
6:00 PM	2053	705	x	x	x	x	x	x	x	x
hours satisfied			*13*		*13*		*13*		*13*	*13*

→ **WARRANT #1-A (8 hours required) IS SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E1-8
SIGNAL WARRANT ANALYSIS
KEY WEST AVE & MEDICAL CENTER DR
(BACKGROUND CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA.xls-Warrant(B), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: KEY WEST AVE & MEDICAL CENTER DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	1299	97	x		x	x	x	x	x	x
7:00 AM	2493	191	x	x	x	x	x	x	x	x
8:00 AM	3010	215	x	x	x	x	x	x	x	x
9:00 AM	2297	312	x	x	x	x	x	x	x	x
10:00 AM	1569	252	x	x	x	x	x	x	x	x
11:00 AM	1644	312	x	x	x	x	x	x	x	x
12:00 PM	2014	430	x	x	x	x	x	x	x	x
1:00 PM	1967	314	x	x	x	x	x	x	x	x
2:00 PM	1787	442	x	x	x	x	x	x	x	x
3:00 PM	2224	306	x	x	x	x	x	x	x	x
4:00 PM	2220	457	x	x	x	x	x	x	x	x
5:00 PM	2751	394	x	x	x	x	x	x	x	x
6:00 PM	2053	452	x	x	x	x	x	x	x	x
hours satisfied			*12*		*13*		*13*		*13*	*13*

WARRANT #1-A (8 hours required) IS SATISFIED

WARRANT #1-B (8 hours required) IS SATISFIED

WARRANT #1-combination A + B (8 hours required) IS SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

The Traffic Group

EXHIBIT E1-9
SIGNAL WARRANT ANALYSIS
KEY WEST AVE & MEDICAL CENTER DR
(BACKGROUND CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA.xls-Warrant(B-L), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: KEY WEST AVE & MEDICAL CENTER DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(140 VPH)	(630 VPH)	(70 VPH)	(336vph)&(112 vph)	(504vph)&(56 vph)		
6:00 AM	1300	154	x	x	x	x	x	x	x	x
7:00 AM	2495	293	x	x	x	x	x	x	x	x
8:00 AM	3013	335	x	x	x	x	x	x	x	x
9:00 AM	2303	524	x	x	x	x	x	x	x	x
10:00 AM	1575	466	x	x	x	x	x	x	x	x
11:00 AM	1652	571	x	x	x	x	x	x	x	x
12:00 PM	2022	752	x	x	x	x	x	x	x	x
1:00 PM	1974	577	x	x	x	x	x	x	x	x
2:00 PM	1794	756	x	x	x	x	x	x	x	x
3:00 PM	2232	551	x	x	x	x	x	x	x	x
4:00 PM	2232	687	x	x	x	x	x	x	x	x
5:00 PM	2767	631	x	x	x	x	x	x	x	x
6:00 PM	2066	705	x	x	x	x	x	x	x	x
hours satisfied			*13*		*13*		*13*		*13*	*13*

→ **WARRANT #1-A (8 hours required) IS SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E1-10
SIGNAL WARRANT ANALYSIS
KEY WEST AVE & MEDICAL CENTER DR
(TOTAL CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA.xls-Warrant(T), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: KEY WEST AVE & MEDICAL CENTER DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (105 VPH)	MAJOR (630 VPH)	MINOR (53 VPH)	80% x Condition A (336vph)&(84 vph)	80% x Condition B (504vph)&(42 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	1300	97	x		x	x	x	x	x	x
7:00 AM	2495	191	x	x	x	x	x	x	x	x
8:00 AM	3013	215	x	x	x	x	x	x	x	x
9:00 AM	2303	312	x	x	x	x	x	x	x	x
10:00 AM	1575	252	x	x	x	x	x	x	x	x
11:00 AM	1652	312	x	x	x	x	x	x	x	x
12:00 PM	2022	430	x	x	x	x	x	x	x	x
1:00 PM	1974	314	x	x	x	x	x	x	x	x
2:00 PM	1794	442	x	x	x	x	x	x	x	x
3:00 PM	2232	306	x	x	x	x	x	x	x	x
4:00 PM	2232	457	x	x	x	x	x	x	x	x
5:00 PM	2767	394	x	x	x	x	x	x	x	x
6:00 PM	2066	452	x	x	x	x	x	x	x	x
hours satisfied			*12*		*13*		*13*		*13*	*13*

WARRANT #1-A (8 hours required) IS SATISFIED

WARRANT #1-B (8 hours required) IS SATISFIED

WARRANT #1-combination A + B (8 hours required) IS SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

The Traffic Group

EXHIBIT E1-11
SIGNAL WARRANT ANALYSIS
KEY WEST AVE & MEDICAL CENTER DR
(TOTAL CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA.xls-Warrant(T-L), F11/15/19

	GREAT SENECA HIGHWAY & BLACKWELL ROAD						
	EXISTING TRAFFIC						
	MAJOR	MINOR EB (Blackwell Road)			MINOR WB (Blackwell Road)		
Time	Great Seneca Highway	left	thru	right	left	thru	right
6:00 AM	581				5	0	10
7:00 AM	1223				2		19
8:00 AM	1570				3		13
9:00 AM	1280				6		22
10:00 AM	693				4		13
11:00 AM	662				5		33
12:00 PM	748				6		26
1:00 PM	842				3		25
2:00 PM	845				7		32
3:00 PM	1026				13		99
4:00 PM	1232				11		100
5:00 PM	1332				14		84
6:00 PM	1124				5		45

EXHIBIT E2-1

EXISTING HOURLY TRAFFIC VOLUMES

GREAT SENECA HIGHWAY & BLACKWELL ROAD

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Existing, F11/15/19

	1. Crown Farm			
	1,141	Residential Units	**ADT -**	6,881
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	27	226
7:00 AM	0.8%	6.6%	54	452
8:00 AM	1.1%	7.3%	75	500
9:00 AM	1.5%	3.7%	104	258
10:00 AM	1.2%	2.5%	83	174
11:00 AM	2.2%	2.4%	154	166
12:00 PM	2.5%	2.5%	174	169
1:00 PM	2.2%	2.6%	152	179
2:00 PM	2.7%	2.0%	183	140
3:00 PM	3.3%	2.3%	226	159
4:00 PM	4.9%	2.6%	336	180
5:00 PM	7.1%	2.4%	486	167
6:00 PM	5.7%	3.4%	393	235

	1. Crown Farm			
	44,797	sq. ft. Retail	**ADT -**	2,786
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	6	4
7:00 AM	0.5%	0.3%	15	8
8:00 AM	1.4%	0.5%	38	14
9:00 AM	2.9%	1.1%	80	29
10:00 AM	4.1%	2.2%	113	61
11:00 AM	4.1%	3.0%	115	84
12:00 PM	4.8%	4.0%	135	112
1:00 PM	4.5%	4.7%	126	130
2:00 PM	3.8%	4.4%	106	123
3:00 PM	3.7%	4.0%	103	111
4:00 PM	4.3%	4.2%	119	118
5:00 PM	4.8%	4.7%	134	132
6:00 PM	4.1%	4.3%	114	119

The Traffic Group

EXHIBIT E2-2

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Dev., F11/15/19

	2. Johns Hopkins Research Campus			
	1,410,000	sq. ft. R&D	**ADT -**	13,971
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	199	142
7:00 AM	2.8%	2.0%	398	284
8:00 AM	3.5%	2.3%	491	316
9:00 AM	4.0%	3.4%	556	480
10:00 AM	3.0%	2.7%	414	382
11:00 AM	3.3%	3.4%	458	469
12:00 PM	4.3%	4.6%	600	643
1:00 PM	4.7%	3.4%	654	480
2:00 PM	3.3%	4.9%	458	687
3:00 PM	3.4%	3.3%	480	464
4:00 PM	1.2%	3.0%	164	425
5:00 PM	1.6%	2.7%	229	382
6:00 PM	0.6%	4.1%	87	578

	#3-#6			
	736,313	sq. ft. R&D	**ADT -**	7,296
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	104	74
7:00 AM	2.8%	2.0%	208	148
8:00 AM	3.5%	2.3%	256	165
9:00 AM	4.0%	3.4%	290	251
10:00 AM	3.0%	2.7%	216	199
11:00 AM	3.3%	3.4%	239	245
12:00 PM	4.3%	4.6%	313	336
1:00 PM	4.7%	3.4%	342	251
2:00 PM	3.3%	4.9%	239	359
3:00 PM	3.4%	3.3%	251	242
4:00 PM	1.2%	3.0%	85	222
5:00 PM	1.6%	2.7%	120	199
6:00 PM	0.6%	4.1%	46	302

The Traffic Group

EXHIBIT E2-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Dev. (2), F11/15/19

	7. Traville			
	621,212	sq. ft. R&D	**ADT -**	6,155
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	88	62
7:00 AM	2.8%	2.0%	175	125
8:00 AM	3.5%	2.3%	216	139
9:00 AM	4.0%	3.4%	245	211
10:00 AM	3.0%	2.7%	183	168
11:00 AM	3.3%	3.4%	202	207
12:00 PM	4.3%	4.6%	264	283
1:00 PM	4.7%	3.4%	288	211
2:00 PM	3.3%	4.9%	202	303
3:00 PM	3.4%	3.3%	211	204
4:00 PM	1.2%	3.0%	72	187
5:00 PM	1.6%	2.7%	101	168
6:00 PM	0.6%	4.1%	38	255

	8. Traville Grove			
	41	Residential Units	**ADT -**	407
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	2	13
7:00 AM	0.8%	6.6%	3	27
8:00 AM	1.1%	7.3%	4	30
9:00 AM	1.5%	3.7%	6	15
10:00 AM	1.2%	2.5%	5	10
11:00 AM	2.2%	2.4%	9	10
12:00 PM	2.5%	2.5%	10	10
1:00 PM	2.2%	2.6%	9	11
2:00 PM	2.7%	2.0%	11	8
3:00 PM	3.3%	2.3%	13	9
4:00 PM	4.9%	2.6%	20	11
5:00 PM	7.1%	2.4%	29	10
6:00 PM	5.7%	3.4%	23	14

The Traffic Group

EXHIBIT E2-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Dev. (3), F11/15/19

	9. Kol Shalom Synagogue (Phase 2)			
	13,079	sq. ft. Church	**ADT -**	82
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	3	0
7:00 AM	7.8%	1.1%	6	1
8:00 AM	8.2%	1.0%	7	1
9:00 AM	3.6%	1.4%	3	1
10:00 AM	1.0%	2.2%	1	2
11:00 AM	2.3%	3.0%	2	2
12:00 PM	4.4%	5.0%	4	4
1:00 PM	4.9%	3.9%	4	3
2:00 PM	2.2%	3.0%	2	2
3:00 PM	2.5%	4.8%	2	4
4:00 PM	2.6%	7.6%	2	6
5:00 PM	2.3%	6.7%	2	5
6:00 PM	0.7%	3.4%	1	3

	10. Danac Stiles			
	146,327	sq. ft. Office	**ADT -**	1,351
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	53	7
7:00 AM	7.8%	1.1%	105	15
8:00 AM	8.2%	1.0%	111	14
9:00 AM	3.6%	1.4%	49	19
10:00 AM	1.0%	2.2%	14	30
11:00 AM	2.3%	3.0%	31	41
12:00 PM	4.4%	5.0%	59	68
1:00 PM	4.9%	3.9%	66	53
2:00 PM	2.2%	3.0%	30	41
3:00 PM	2.5%	4.8%	34	65
4:00 PM	2.6%	7.6%	35	103
5:00 PM	2.3%	6.7%	31	91
6:00 PM	0.7%	3.4%	9	46

The Traffic Group

EXHIBIT E2-2 CONT'D
PROJECTED HOURLY TRAFFIC VOLUMES
FOR BACKGROUND DEVELOPMENTS

	GREAT SENECA HIGHWAY & BLACKWELL ROAD						
	BACKGROUND TRAFFIC						
	MAJOR	MINOR EB (Blackwell Road)			MINOR WB (Blackwell Road)		
Time	Great Seneca Highway	left	thru	right	left	thru	right
6:00 AM	723	0	0	0	19	0	46
7:00 AM	1507	0	0	0	30	0	90
8:00 AM	1908	0	0	0	34	0	92
9:00 AM	1656	0	0	0	54	0	142
10:00 AM	975	0	0	0	42	0	109
11:00 AM	988	0	0	0	52	0	151
12:00 PM	1187	0	0	0	70	0	187
1:00 PM	1281	0	0	0	51	0	145
2:00 PM	1204	0	0	0	75	0	204
3:00 PM	1371	0	0	0	59	0	215
4:00 PM	1425	0	0	0	53	0	207
5:00 PM	1550	0	0	0	52	0	180
6:00 PM	1282	0	0	0	62	0	190

The Traffic Group

EXHIBIT E2-3

PROJECTED HOURLY

BACKGROUND TRAFFIC VOLUMES

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Back, F11/15/19

	PSTA			
	630	Residential Units	**ADT -**	3,641
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	14	120
7:00 AM	0.8%	6.6%	29	239
8:00 AM	1.1%	7.3%	39	265
9:00 AM	1.5%	3.7%	55	136
10:00 AM	1.2%	2.5%	44	92
11:00 AM	2.2%	2.4%	82	88
12:00 PM	2.5%	2.5%	92	89
1:00 PM	2.2%	2.6%	81	95
2:00 PM	2.7%	2.0%	97	74
3:00 PM	3.3%	2.3%	120	84
4:00 PM	4.9%	2.6%	178	95
5:00 PM	7.1%	2.4%	257	88
6:00 PM	5.7%	3.4%	208	124

	PSTA			
	2,607	sq. ft. Retail	**ADT -**	403
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	1	1
7:00 AM	0.5%	0.3%	2	1
8:00 AM	1.4%	0.5%	6	2
9:00 AM	2.9%	1.1%	12	4
10:00 AM	4.1%	2.2%	16	9
11:00 AM	4.1%	3.0%	17	12
12:00 PM	4.8%	4.0%	19	16
1:00 PM	4.5%	4.7%	18	19
2:00 PM	3.8%	4.4%	15	18
3:00 PM	3.7%	4.0%	15	16
4:00 PM	4.3%	4.2%	17	17
5:00 PM	4.8%	4.7%	19	19
6:00 PM	4.1%	4.3%	16	17



EXHIBIT E2-4
PROJECTED HOURLY TRAFFIC VOLUMES
FOR SUBJECT SITE

Myc, 190201\REV3\TSWA1.xls-Site, F04/15/21

	GREAT SENECA HIGHWAY & BLACKWELL ROAD						
	TOTAL TRAFFIC						
	MAJOR	MINOR EB (Blackwell Road)			MINOR WB (Blackwell Road)		
Time	Great Seneca Highway	left	thru	right	left	thru	right
6:00 AM	737	51	0	27	19	0	46
7:00 AM	1535	101	0	54	30	0	90
8:00 AM	1947	112	0	60	34	0	92
9:00 AM	1706	59	0	32	54	0	142
10:00 AM	1019	43	0	23	42	0	109
11:00 AM	1059	42	0	23	52	0	151
12:00 PM	1261	45	0	26	70	0	187
1:00 PM	1347	49	0	28	51	0	145
2:00 PM	1279	39	0	23	75	0	204
3:00 PM	1462	43	0	25	59	0	215
4:00 PM	1556	48	0	28	53	0	207
5:00 PM	1736	46	0	27	52	0	180
6:00 PM	1434	60	0	34	62	0	190

The Traffic Group

EXHIBIT E2-5
PROJECTED HOURLY
TOTAL TRAFFIC VOLUMES

Myc, 190201\REV3\TSWA1.xls-Total, F04/15/21

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & BLACKWELL ROAD

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	581	15	x							
7:00 AM	1223	21	x		x					
8:00 AM	1570	16	x		x					
9:00 AM	1280	28	x		x					
10:00 AM	693	17	x		x					
11:00 AM	662	38	x		x					
12:00 PM	748	32	x		x					
1:00 PM	842	28	x		x					
2:00 PM	845	39	x		x					
3:00 PM	1026	112	x		x	x	x	x	x	
4:00 PM	1232	111	x		x	x		x	x	x
5:00 PM	1332	98	x		x	x		x	x	
6:00 PM	1124	50	x		x					
hours satisfied			*0*		*3*		*1*		*3*	*1*

WARRANT #1-A (8 hours required) IS NOT SATISFIED

WARRANT #1-B (8 hours required) IS NOT SATISFIED

WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED

WARRANT #2 (4 hours required) IS NOT SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

The Traffic Group

EXHIBIT E2-6
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & BLACKWELL ROAD
(EXISTING CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Warrant(E), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & BLACKWELL ROAD

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	581	5	x							
7:00 AM	1223	2	x		x					
8:00 AM	1570	3	x		x					
9:00 AM	1280	6	x		x					
10:00 AM	693	4	x		x					
11:00 AM	662	5	x		x					
12:00 PM	748	6	x		x					
1:00 PM	842	3	x		x					
2:00 PM	845	7	x		x					
3:00 PM	1026	13	x		x					
4:00 PM	1232	11	x		x					
5:00 PM	1332	14	x		x					
6:00 PM	1124	5	x		x					
hours satisfied			*0*		*0*		*0*		*0*	*0*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #2 (4 hours required) IS NOT SATISFIED**

→ **WARRANT #3 (1 hour required) IS NOT SATISFIED**

The Traffic Group

EXHIBIT E2-7
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & BLACKWELL ROAD
(EXISTING CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Warrant(E-L), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & BLACKWELL ROAD

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	723	65	x		x			x		
7:00 AM	1507	120	x		x	x	x	x	x	x
8:00 AM	1908	126	x		x	x	x	x	x	x
9:00 AM	1656	196	x	x	x	x	x	x	x	x
10:00 AM	975	151	x	x	x	x	x	x	x	x
11:00 AM	988	203	x	x	x	x	x	x	x	x
12:00 PM	1187	257	x	x	x	x	x	x	x	x
1:00 PM	1281	196	x	x	x	x	x	x	x	x
2:00 PM	1204	279	x	x	x	x	x	x	x	x
3:00 PM	1371	274	x	x	x	x	x	x	x	x
4:00 PM	1425	260	x	x	x	x	x	x	x	x
5:00 PM	1550	232	x	x	x	x	x	x	x	x
6:00 PM	1282	252	x	x	x	x	x	x	x	x
hours satisfied			*10*		*12*		*12*		*12*	*12*

→ **WARRANT #1-A (8 hours required) IS SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E2-8
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & BLACKWELL ROAD
(BACKGROUND CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Warrant(B), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & BLACKWELL ROAD

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	723	19	x		x					
7:00 AM	1507	30	x		x					
8:00 AM	1908	34	x		x					
9:00 AM	1656	54	x		x	x		x		
10:00 AM	975	42	x		x			x		
11:00 AM	988	52	x		x			x		
12:00 PM	1187	70	x		x	x		x	x	
1:00 PM	1281	51	x		x			x		
2:00 PM	1204	75	x		x	x		x	x	
3:00 PM	1371	59	x		x	x		x	x	
4:00 PM	1425	53	x		x	x		x		
5:00 PM	1550	52	x		x			x		
6:00 PM	1282	62	x		x	x		x	x	
hours satisfied			*0*		*6*		*0*		*4*	*0*

WARRANT #1-A (8 hours required) IS NOT SATISFIED

WARRANT #1-B (8 hours required) IS NOT SATISFIED

WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS NOT SATISFIED

The Traffic Group

EXHIBIT E2-9
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & BLACKWELL ROAD
(BACKGROUND CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA1.xls-Warrant(B-L), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & BLACKWELL ROAD

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	737	78	x		x	x		x		
7:00 AM	1535	155	x	x	x	x	x	x	x	x
8:00 AM	1947	172	x	x	x	x	x	x	x	x
9:00 AM	1706	196	x	x	x	x	x	x	x	x
10:00 AM	1019	151	x	x	x	x	x	x	x	x
11:00 AM	1059	203	x	x	x	x	x	x	x	x
12:00 PM	1261	257	x	x	x	x	x	x	x	x
1:00 PM	1347	196	x	x	x	x	x	x	x	x
2:00 PM	1279	279	x	x	x	x	x	x	x	x
3:00 PM	1462	274	x	x	x	x	x	x	x	x
4:00 PM	1556	260	x	x	x	x	x	x	x	x
5:00 PM	1736	232	x	x	x	x	x	x	x	x
6:00 PM	1434	252	x	x	x	x	x	x	x	x
hours satisfied			*12*		*13*		*12*		*12*	*12*

→ **WARRANT #1-A (8 hours required) IS SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E2-10
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & BLACKWELL ROAD
(TOTAL CONDITION, ALL MINOR VOLUMES)

Myc, 190201\REV3\TSWA1.xls-Warrant(T), F04/15/21

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & BLACKWELL ROAD

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (105 VPH)	MAJOR (630 VPH)	MINOR (53 VPH)	80% x Condition A (336vph)&(84 vph)	80% x Condition B (504vph)&(42 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	737	51	x		x			x		
7:00 AM	1535	101	x		x	x	x	x	x	x
8:00 AM	1947	112	x	x	x	x	x	x	x	x
9:00 AM	1706	59	x		x	x		x	x	
10:00 AM	1019	43	x		x			x		
11:00 AM	1059	52	x		x			x		
12:00 PM	1261	70	x		x	x		x	x	
1:00 PM	1347	51	x		x			x		
2:00 PM	1279	75	x		x	x		x	x	
3:00 PM	1462	59	x		x	x		x	x	
4:00 PM	1556	53	x		x	x		x		
5:00 PM	1736	52	x		x			x		
6:00 PM	1434	62	x		x	x		x	x	
hours satisfied			*1*		*8*		*2*		*7*	*2*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E2-11
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & BLACKWELL ROAD
(TOTAL CONDITION, LEFT LANE VOLUMES)

Myc, 190201\REV3\TSWA1.xls-Warrant(T-L), F04/15/21

	GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE						
	EXISTING TRAFFIC						
	MAJOR	MINOR EB (Medical Center Drive)			MINOR WB (Medical Center Drive)		
Time	Great Seneca Highway	left	thru	right	left	thru	right
6:00 AM	590	0	0	1	14	0	14
7:00 AM	1146	1	1	0	15	1	55
8:00 AM	1497	2	0	2	28	0	57
9:00 AM	1205	2	0	2	33	0	68
10:00 AM	634	1	0	2	28	1	75
11:00 AM	586	4	0	2	45	0	84
12:00 PM	687	3	3	0	57	1	85
1:00 PM	794	4	0	3	40	0	86
2:00 PM	735	10	1	13	60	1	120
3:00 PM	872	10	0	11	74	0	190
4:00 PM	990	13	0	10	101	0	268
5:00 PM	1129	2	1	5	89	0	236
6:00 PM	1022	7	0	7	75	0	124

EXHIBIT E3-1

EXISTING HOURLY TRAFFIC VOLUMES

GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Existing, F11/15/19

	1. Crown Farm			
	1,141	Residential Units	**ADT -**	6,881
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	27	226
7:00 AM	0.8%	6.6%	54	452
8:00 AM	1.1%	7.3%	75	500
9:00 AM	1.5%	3.7%	104	258
10:00 AM	1.2%	2.5%	83	174
11:00 AM	2.2%	2.4%	154	166
12:00 PM	2.5%	2.5%	174	169
1:00 PM	2.2%	2.6%	152	179
2:00 PM	2.7%	2.0%	183	140
3:00 PM	3.3%	2.3%	226	159
4:00 PM	4.9%	2.6%	336	180
5:00 PM	7.1%	2.4%	486	167
6:00 PM	5.7%	3.4%	393	235

	1. Crown Farm			
	44,797	sq. ft. Retail	**ADT -**	2,786
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	6	4
7:00 AM	0.5%	0.3%	15	8
8:00 AM	1.4%	0.5%	38	14
9:00 AM	2.9%	1.1%	80	29
10:00 AM	4.1%	2.2%	113	61
11:00 AM	4.1%	3.0%	115	84
12:00 PM	4.8%	4.0%	135	112
1:00 PM	4.5%	4.7%	126	130
2:00 PM	3.8%	4.4%	106	123
3:00 PM	3.7%	4.0%	103	111
4:00 PM	4.3%	4.2%	119	118
5:00 PM	4.8%	4.7%	134	132
6:00 PM	4.1%	4.3%	114	119

The Traffic Group

EXHIBIT E3-2

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Dev., F11/15/19

	2. Johns Hopkins Research Campus			
	1,410,000	sq. ft. R&D	**ADT -**	13,971
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	199	142
7:00 AM	2.8%	2.0%	398	284
8:00 AM	3.5%	2.3%	491	316
9:00 AM	4.0%	3.4%	556	480
10:00 AM	3.0%	2.7%	414	382
11:00 AM	3.3%	3.4%	458	469
12:00 PM	4.3%	4.6%	600	643
1:00 PM	4.7%	3.4%	654	480
2:00 PM	3.3%	4.9%	458	687
3:00 PM	3.4%	3.3%	480	464
4:00 PM	1.2%	3.0%	164	425
5:00 PM	1.6%	2.7%	229	382
6:00 PM	0.6%	4.1%	87	578

	#3-#6			
	736,313	sq. ft. R&D	**ADT -**	7,296
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	104	74
7:00 AM	2.8%	2.0%	208	148
8:00 AM	3.5%	2.3%	256	165
9:00 AM	4.0%	3.4%	290	251
10:00 AM	3.0%	2.7%	216	199
11:00 AM	3.3%	3.4%	239	245
12:00 PM	4.3%	4.6%	313	336
1:00 PM	4.7%	3.4%	342	251
2:00 PM	3.3%	4.9%	239	359
3:00 PM	3.4%	3.3%	251	242
4:00 PM	1.2%	3.0%	85	222
5:00 PM	1.6%	2.7%	120	199
6:00 PM	0.6%	4.1%	46	302

The Traffic Group

EXHIBIT E3-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Dev. (2), F11/15/19

	7. Traville			
	621,212	sq. ft. R&D	**ADT -**	6,155
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	88	62
7:00 AM	2.8%	2.0%	175	125
8:00 AM	3.5%	2.3%	216	139
9:00 AM	4.0%	3.4%	245	211
10:00 AM	3.0%	2.7%	183	168
11:00 AM	3.3%	3.4%	202	207
12:00 PM	4.3%	4.6%	264	283
1:00 PM	4.7%	3.4%	288	211
2:00 PM	3.3%	4.9%	202	303
3:00 PM	3.4%	3.3%	211	204
4:00 PM	1.2%	3.0%	72	187
5:00 PM	1.6%	2.7%	101	168
6:00 PM	0.6%	4.1%	38	255

	8. Traville Grove			
	41	Residential Units	**ADT -**	407
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	2	13
7:00 AM	0.8%	6.6%	3	27
8:00 AM	1.1%	7.3%	4	30
9:00 AM	1.5%	3.7%	6	15
10:00 AM	1.2%	2.5%	5	10
11:00 AM	2.2%	2.4%	9	10
12:00 PM	2.5%	2.5%	10	10
1:00 PM	2.2%	2.6%	9	11
2:00 PM	2.7%	2.0%	11	8
3:00 PM	3.3%	2.3%	13	9
4:00 PM	4.9%	2.6%	20	11
5:00 PM	7.1%	2.4%	29	10
6:00 PM	5.7%	3.4%	23	14

The Traffic Group

EXHIBIT E3-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Dev. (3), F11/15/19

	9. Kol Shalom Synagogue (Phase 2)			
	13,079	sq. ft. Church	**ADT -**	82
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	3	0
7:00 AM	7.8%	1.1%	6	1
8:00 AM	8.2%	1.0%	7	1
9:00 AM	3.6%	1.4%	3	1
10:00 AM	1.0%	2.2%	1	2
11:00 AM	2.3%	3.0%	2	2
12:00 PM	4.4%	5.0%	4	4
1:00 PM	4.9%	3.9%	4	3
2:00 PM	2.2%	3.0%	2	2
3:00 PM	2.5%	4.8%	2	4
4:00 PM	2.6%	7.6%	2	6
5:00 PM	2.3%	6.7%	2	5
6:00 PM	0.7%	3.4%	1	3

	10. Danac Stiles			
	146,327	sq. ft. Office	**ADT -**	1,351
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	53	7
7:00 AM	7.8%	1.1%	105	15
8:00 AM	8.2%	1.0%	111	14
9:00 AM	3.6%	1.4%	49	19
10:00 AM	1.0%	2.2%	14	30
11:00 AM	2.3%	3.0%	31	41
12:00 PM	4.4%	5.0%	59	68
1:00 PM	4.9%	3.9%	66	53
2:00 PM	2.2%	3.0%	30	41
3:00 PM	2.5%	4.8%	34	65
4:00 PM	2.6%	7.6%	35	103
5:00 PM	2.3%	6.7%	31	91
6:00 PM	0.7%	3.4%	9	46

The Traffic Group

EXHIBIT E3-2 CONT'D
PROJECTED HOURLY TRAFFIC VOLUMES
FOR BACKGROUND DEVELOPMENTS

	GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE						
	BACKGROUND TRAFFIC						
	MAJOR	MINOR EB (Medical Center Drive)			MINOR WB (Medical Center Drive)		
Time	Great Seneca Highway	left	thru	right	left	thru	right
6:00 AM	696	0	0	1	14	0	14
7:00 AM	1358	1	1	0	15	1	55
8:00 AM	1743	2	0	2	28	0	57
9:00 AM	1490	2	0	2	33	0	68
10:00 AM	850	1	0	2	28	1	75
11:00 AM	844	4	0	2	45	0	84
12:00 PM	1039	3	3	0	57	1	85
1:00 PM	1117	4	0	3	40	0	86
2:00 PM	1048	10	1	13	60	1	120
3:00 PM	1142	10	0	11	74	0	190
4:00 PM	1184	13	0	10	101	0	268
5:00 PM	1327	2	1	5	89	0	236
6:00 PM	1215	7	0	7	75	0	124

EXHIBIT E3-3
PROJECTED HOURLY
BACKGROUND TRAFFIC VOLUMES

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Back, F11/15/19

	PSTA			
	630	Residential Units	**ADT -**	3,641
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	14	120
7:00 AM	0.8%	6.6%	29	239
8:00 AM	1.1%	7.3%	39	265
9:00 AM	1.5%	3.7%	55	136
10:00 AM	1.2%	2.5%	44	92
11:00 AM	2.2%	2.4%	82	88
12:00 PM	2.5%	2.5%	92	89
1:00 PM	2.2%	2.6%	81	95
2:00 PM	2.7%	2.0%	97	74
3:00 PM	3.3%	2.3%	120	84
4:00 PM	4.9%	2.6%	178	95
5:00 PM	7.1%	2.4%	257	88
6:00 PM	5.7%	3.4%	208	124

	PSTA			
	2,607	sq. ft. Retail	**ADT -**	403
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	1	1
7:00 AM	0.5%	0.3%	2	1
8:00 AM	1.4%	0.5%	6	2
9:00 AM	2.9%	1.1%	12	4
10:00 AM	4.1%	2.2%	16	9
11:00 AM	4.1%	3.0%	17	12
12:00 PM	4.8%	4.0%	19	16
1:00 PM	4.5%	4.7%	18	19
2:00 PM	3.8%	4.4%	15	18
3:00 PM	3.7%	4.0%	15	16
4:00 PM	4.3%	4.2%	17	17
5:00 PM	4.8%	4.7%	19	19
6:00 PM	4.1%	4.3%	16	17

The Traffic Group

EXHIBIT E3-4
PROJECTED HOURLY TRAFFIC VOLUMES
FOR SUBJECT SITE

Myc, 190201\REV3\TSWA2.xls-Site, F04/15/21

	GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE						
	TOTAL TRAFFIC						
	MAJOR	MINOR EB (Medical Center Drive)			MINOR WB (Medical Center Drive)		
Time	Great Seneca Highway	left	thru	right	left	thru	right
6:00 AM	730	4	0	28	14	0	14
7:00 AM	1427	8	1	54	15	1	55
8:00 AM	1824	10	0	62	28	0	57
9:00 AM	1552	6	0	33	33	0	68
10:00 AM	899	4	0	23	28	1	75
11:00 AM	912	7	0	22	45	0	84
12:00 PM	1110	6	3	20	57	1	85
1:00 PM	1185	7	0	24	40	0	86
2:00 PM	1118	12	1	30	60	1	120
3:00 PM	1225	13	0	30	74	0	190
4:00 PM	1298	16	0	31	101	0	268
5:00 PM	1478	5	1	25	89	0	236
6:00 PM	1349	11	0	35	75	0	124

The Traffic Group

EXHIBIT E3-5
PROJECTED HOURLY
TOTAL TRAFFIC VOLUMES

Myc, 190201\REV3\TSWA2.xls-Total, F04/15/21

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	590	28	x					x		
7:00 AM	1146	71	x		x	x		x		
8:00 AM	1497	85	x		x	x		x	x	
9:00 AM	1205	101	x		x	x		x	x	x
10:00 AM	634	104	x		x	x		x		
11:00 AM	586	129	x			x	x	x		
12:00 PM	687	143	x	x	x	x	x	x	x	
1:00 PM	794	126	x		x	x	x	x	x	
2:00 PM	735	181	x	x	x	x	x	x	x	
3:00 PM	872	264	x	x	x	x	x	x	x	x
4:00 PM	990	369	x	x	x	x	x	x	x	x
5:00 PM	1129	325	x	x	x	x	x	x	x	x
6:00 PM	1022	199	x	x	x	x	x	x	x	x
hours satisfied			*6*		*11*		*8*		*9*	*5*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E3-6
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE
(EXISTING CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Warrant(E), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	590	14	x							
7:00 AM	1146	16	x		x					
8:00 AM	1497	28	x		x					
9:00 AM	1205	33	x		x					
10:00 AM	634	29	x		x					
11:00 AM	586	45	x					x		
12:00 PM	687	58	x		x	x		x		
1:00 PM	794	40	x		x					
2:00 PM	735	61	x		x	x		x		
3:00 PM	872	74	x		x	x		x	x	
4:00 PM	990	101	x		x	x	x	x	x	
5:00 PM	1129	89	x		x	x	x	x	x	x
6:00 PM	1022	75	x		x	x		x	x	
hours satisfied			*0*		*6*		*2*		*4*	*1*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E3-7
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE
(EXISTING CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Warrant(E-L), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	696	28	x		x					
7:00 AM	1358	71	x		x	x		x		
8:00 AM	1743	85	x		x	x		x	x	
9:00 AM	1490	101	x		x	x		x	x	x
10:00 AM	850	104	x		x	x		x	x	
11:00 AM	844	129	x		x	x	x	x	x	
12:00 PM	1039	143	x	x	x	x	x	x	x	x
1:00 PM	1117	126	x		x	x	x	x	x	x
2:00 PM	1048	181	x	x	x	x	x	x	x	x
3:00 PM	1142	264	x	x	x	x	x	x	x	x
4:00 PM	1184	369	x	x	x	x	x	x	x	x
5:00 PM	1327	325	x	x	x	x	x	x	x	x
6:00 PM	1215	199	x	x	x	x	x	x	x	x
hours satisfied			*6*		*12*		*8*		*11*	*8*

WARRANT #1-A (8 hours required) IS NOT SATISFIED

WARRANT #1-B (8 hours required) IS SATISFIED

WARRANT #1-combination A + B (8 hours required) IS SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

The Traffic Group

EXHIBIT E3-8
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE
(BACKGROUND CONDITION, ALL MINOR VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Warrant(B), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	MINOR	MAJOR (420 VPH)	MINOR (105 VPH)	MAJOR (630 VPH)	MINOR (53 VPH)	80% x Condition A (336vph)&(84 vph)	80% x Condition B (504vph)&(42 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	696	14	x		x					
7:00 AM	1358	16	x		x					
8:00 AM	1743	28	x		x					
9:00 AM	1490	33	x		x					
10:00 AM	850	29	x		x					
11:00 AM	844	45	x		x			x		
12:00 PM	1039	58	x		x	x		x	x	
1:00 PM	1117	40	x		x					
2:00 PM	1048	61	x		x	x		x	x	
3:00 PM	1142	74	x		x	x		x	x	
4:00 PM	1184	101	x		x	x	x	x	x	x
5:00 PM	1327	89	x		x	x	x	x	x	x
6:00 PM	1215	75	x		x	x		x	x	
hours satisfied			*0*		*6*		*2*		*6*	*2*

WARRANT #1-A (8 hours required) IS NOT SATISFIED

WARRANT #1-B (8 hours required) IS NOT SATISFIED

WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

The Traffic Group

EXHIBIT E3-9
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE
(BACKGROUND CONDITION, LEFT LANE VOLUMES)

Qt, 190201\INITIAL\TSWA\TSWA2.xls-Warrant(B-L), F11/15/19

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 2 lane(s)

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (140 VPH)	MAJOR (630 VPH)	MINOR (70 VPH)	80% x Condition A (336vph)&(112 vph)	80% x Condition B (504vph)&(56 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	730	32	x		x					
7:00 AM	1427	71	x		x	x		x		
8:00 AM	1824	85	x		x	x		x	x	
9:00 AM	1552	101	x		x	x		x	x	x
10:00 AM	899	104	x		x	x		x	x	
11:00 AM	912	129	x		x	x	x	x	x	
12:00 PM	1110	143	x	x	x	x	x	x	x	x
1:00 PM	1185	126	x		x	x	x	x	x	x
2:00 PM	1118	181	x	x	x	x	x	x	x	x
3:00 PM	1225	264	x	x	x	x	x	x	x	x
4:00 PM	1298	369	x	x	x	x	x	x	x	x
5:00 PM	1478	325	x	x	x	x	x	x	x	x
6:00 PM	1349	199	x	x	x	x	x	x	x	x
hours satisfied			*6*		*12*		*8*		*11*	*8*

→ **WARRANT #1-A (8 hours required) IS NOT SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E3-10
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE
(TOTAL CONDITION, ALL MINOR VOLUMES)

Myc, 190201\REV3\TSWA2.xls-Warrant(T), F04/15/21

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (105 VPH)	MAJOR (630 VPH)	MINOR (53 VPH)	80% x Condition A (336vph)&(84 vph)	80% x Condition B (504vph)&(42 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	730	14	x		x					
7:00 AM	1427	16	x		x					
8:00 AM	1824	28	x		x					
9:00 AM	1552	33	x		x					
10:00 AM	899	29	x		x					
11:00 AM	912	45	x		x			x		
12:00 PM	1110	58	x		x	x		x	x	
1:00 PM	1185	40	x		x					
2:00 PM	1118	61	x		x	x		x	x	
3:00 PM	1225	74	x		x	x		x	x	
4:00 PM	1298	101	x		x	x	x	x	x	x
5:00 PM	1478	89	x		x	x	x	x	x	x
6:00 PM	1349	75	x		x	x		x	x	
hours satisfied			*0*		*6*		*2*		*6*	*2*

WARRANT #1-A (8 hours required) IS NOT SATISFIED

WARRANT #1-B (8 hours required) IS NOT SATISFIED

WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

The Traffic Group

EXHIBIT E3-11
SIGNAL WARRANT ANALYSIS
GREAT SENECA HIGHWAY & MEDICAL CENTER DRIVE
(TOTAL CONDITION, LEFT LANE VOLUMES)

Myc, 190201\REV3\TSWA2.xls-Warrant(T-L), F04/15/21

	MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR						
	EXISTING TRAFFIC						
	MAJOR	MINOR SB (MD 119 SB left to Decoverly Dr)			MINOR SB (Decoverly Dr)		
Time	MD 119 NB	left	thru	right	left	thru	right
6:00 AM	201	54					
7:00 AM	579	142					
8:00 AM	704	223					
9:00 AM	756	163					
10:00 AM	611	79					
11:00 AM	715	61					
12:00 PM	790	88					
1:00 PM	863	102					
2:00 PM	911	60					
3:00 PM	1459	51					
4:00 PM	1957	51					
5:00 PM	2162	50					
6:00 PM	1613	76					

The Traffic Group

EXHIBIT E4-1

EXISTING HOURLY TRAFFIC VOLUMES

MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR

Qt, 190201\REV2\TSWA3.xls-Existing, F06/23/20

	1. Crown Farm			
	1,141	Residential Units	**ADT -**	6,881
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	27	226
7:00 AM	0.8%	6.6%	54	452
8:00 AM	1.1%	7.3%	75	500
9:00 AM	1.5%	3.7%	104	258
10:00 AM	1.2%	2.5%	83	174
11:00 AM	2.2%	2.4%	154	166
12:00 PM	2.5%	2.5%	174	169
1:00 PM	2.2%	2.6%	152	179
2:00 PM	2.7%	2.0%	183	140
3:00 PM	3.3%	2.3%	226	159
4:00 PM	4.9%	2.6%	336	180
5:00 PM	7.1%	2.4%	486	167
6:00 PM	5.7%	3.4%	393	235

	1. Crown Farm			
	44,797	sq. ft. Retail	**ADT -**	2,786
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	6	4
7:00 AM	0.5%	0.3%	15	8
8:00 AM	1.4%	0.5%	38	14
9:00 AM	2.9%	1.1%	80	29
10:00 AM	4.1%	2.2%	113	61
11:00 AM	4.1%	3.0%	115	84
12:00 PM	4.8%	4.0%	135	112
1:00 PM	4.5%	4.7%	126	130
2:00 PM	3.8%	4.4%	106	123
3:00 PM	3.7%	4.0%	103	111
4:00 PM	4.3%	4.2%	119	118
5:00 PM	4.8%	4.7%	134	132
6:00 PM	4.1%	4.3%	114	119

The Traffic Group

EXHIBIT E4-2

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\REV2\TSWA3.xls-Dev., F06/23/20

	2. Johns Hopkins Research Campus			
	1,410,000	sq. ft. R&D	**ADT -**	13,971
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	199	142
7:00 AM	2.8%	2.0%	398	284
8:00 AM	3.5%	2.3%	491	316
9:00 AM	4.0%	3.4%	556	480
10:00 AM	3.0%	2.7%	414	382
11:00 AM	3.3%	3.4%	458	469
12:00 PM	4.3%	4.6%	600	643
1:00 PM	4.7%	3.4%	654	480
2:00 PM	3.3%	4.9%	458	687
3:00 PM	3.4%	3.3%	480	464
4:00 PM	1.2%	3.0%	164	425
5:00 PM	1.6%	2.7%	229	382
6:00 PM	0.6%	4.1%	87	578

	#3-#6			
	736,313	sq. ft. R&D	**ADT -**	7,296
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	104	74
7:00 AM	2.8%	2.0%	208	148
8:00 AM	3.5%	2.3%	256	165
9:00 AM	4.0%	3.4%	290	251
10:00 AM	3.0%	2.7%	216	199
11:00 AM	3.3%	3.4%	239	245
12:00 PM	4.3%	4.6%	313	336
1:00 PM	4.7%	3.4%	342	251
2:00 PM	3.3%	4.9%	239	359
3:00 PM	3.4%	3.3%	251	242
4:00 PM	1.2%	3.0%	85	222
5:00 PM	1.6%	2.7%	120	199
6:00 PM	0.6%	4.1%	46	302

The Traffic Group

EXHIBIT E4-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\REV2\TSWA3.xls-Dev. (2), F06/23/20

	7. Traville			
	621,212	sq. ft. R&D	**ADT -**	6,155
Time	**In**	**Out**	**In**	**Out**
6:00 AM	1.4%	1.0%	88	62
7:00 AM	2.8%	2.0%	175	125
8:00 AM	3.5%	2.3%	216	139
9:00 AM	4.0%	3.4%	245	211
10:00 AM	3.0%	2.7%	183	168
11:00 AM	3.3%	3.4%	202	207
12:00 PM	4.3%	4.6%	264	283
1:00 PM	4.7%	3.4%	288	211
2:00 PM	3.3%	4.9%	202	303
3:00 PM	3.4%	3.3%	211	204
4:00 PM	1.2%	3.0%	72	187
5:00 PM	1.6%	2.7%	101	168
6:00 PM	0.6%	4.1%	38	255

	8. Traville Grove			
	41	Residential Units	**ADT -**	407
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	2	13
7:00 AM	0.8%	6.6%	3	27
8:00 AM	1.1%	7.3%	4	30
9:00 AM	1.5%	3.7%	6	15
10:00 AM	1.2%	2.5%	5	10
11:00 AM	2.2%	2.4%	9	10
12:00 PM	2.5%	2.5%	10	10
1:00 PM	2.2%	2.6%	9	11
2:00 PM	2.7%	2.0%	11	8
3:00 PM	3.3%	2.3%	13	9
4:00 PM	4.9%	2.6%	20	11
5:00 PM	7.1%	2.4%	29	10
6:00 PM	5.7%	3.4%	23	14

The Traffic Group

EXHIBIT E4-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\REV2\TSWA3.xls-Dev. (3), F06/23/20

	9. Kol Shalom Synagogue (Phase 2)			
	13,079	sq. ft. Church	**ADT -**	82
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	3	0
7:00 AM	7.8%	1.1%	6	1
8:00 AM	8.2%	1.0%	7	1
9:00 AM	3.6%	1.4%	3	1
10:00 AM	1.0%	2.2%	1	2
11:00 AM	2.3%	3.0%	2	2
12:00 PM	4.4%	5.0%	4	4
1:00 PM	4.9%	3.9%	4	3
2:00 PM	2.2%	3.0%	2	2
3:00 PM	2.5%	4.8%	2	4
4:00 PM	2.6%	7.6%	2	6
5:00 PM	2.3%	6.7%	2	5
6:00 PM	0.7%	3.4%	1	3

	10. Danac Stiles			
	146,327	sq. ft. Office	**ADT -**	1,351
Time	**In**	**Out**	**In**	**Out**
6:00 AM	3.9%	0.6%	53	7
7:00 AM	7.8%	1.1%	105	15
8:00 AM	8.2%	1.0%	111	14
9:00 AM	3.6%	1.4%	49	19
10:00 AM	1.0%	2.2%	14	30
11:00 AM	2.3%	3.0%	31	41
12:00 PM	4.4%	5.0%	59	68
1:00 PM	4.9%	3.9%	66	53
2:00 PM	2.2%	3.0%	30	41
3:00 PM	2.5%	4.8%	34	65
4:00 PM	2.6%	7.6%	35	103
5:00 PM	2.3%	6.7%	31	91
6:00 PM	0.7%	3.4%	9	46

The Traffic Group

EXHIBIT E4-2 CONT'D

PROJECTED HOURLY TRAFFIC VOLUMES

FOR BACKGROUND DEVELOPMENTS

Qt, 190201\REV2\TSWA3.xls-Dev. (4), F06/23/20

	MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR						
	BACKGROUND TRAFFIC						
	MAJOR	MINOR EB (MD 119 SB left to Decoverly Dr)			MINOR WB (Decoverly Dr)		
Time	MD 119 NB	left	thru	right	left	thru	right
6:00 AM	306	79					
7:00 AM	789	192					
8:00 AM	939	283					
9:00 AM	1070	219					
10:00 AM	854	122					
11:00 AM	1027	130					
12:00 PM	1214	169					
1:00 PM	1191	177					
2:00 PM	1353	132					
3:00 PM	1783	137					
4:00 PM	2282	172					
5:00 PM	2491	216					
6:00 PM	2031	206					

The Traffic Group

EXHIBIT E4-3

PROJECTED HOURLY

BACKGROUND TRAFFIC VOLUMES

Qt, 190201\REV2\TSWA3.xls-Back, F06/23/20

	PSTA			
	630	Residential Units	**ADT -**	3,641
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.4%	3.3%	14	120
7:00 AM	0.8%	6.6%	29	239
8:00 AM	1.1%	7.3%	39	265
9:00 AM	1.5%	3.7%	55	136
10:00 AM	1.2%	2.5%	44	92
11:00 AM	2.2%	2.4%	82	88
12:00 PM	2.5%	2.5%	92	89
1:00 PM	2.2%	2.6%	81	95
2:00 PM	2.7%	2.0%	97	74
3:00 PM	3.3%	2.3%	120	84
4:00 PM	4.9%	2.6%	178	95
5:00 PM	7.1%	2.4%	257	88
6:00 PM	5.7%	3.4%	208	124

	PSTA			
	2,607	sq. ft. Retail	**ADT -**	403
Time	**In**	**Out**	**In**	**Out**
6:00 AM	0.2%	0.1%	1	1
7:00 AM	0.5%	0.3%	2	1
8:00 AM	1.4%	0.5%	6	2
9:00 AM	2.9%	1.1%	12	4
10:00 AM	4.1%	2.2%	16	9
11:00 AM	4.1%	3.0%	17	12
12:00 PM	4.8%	4.0%	19	16
1:00 PM	4.5%	4.7%	18	19
2:00 PM	3.8%	4.4%	15	18
3:00 PM	3.7%	4.0%	15	16
4:00 PM	4.3%	4.2%	17	17
5:00 PM	4.8%	4.7%	19	19
6:00 PM	4.1%	4.3%	16	17

The Traffic Group

EXHIBIT E4-4
PROJECTED HOURLY TRAFFIC VOLUMES
FOR SUBJECT SITE

Myc, 190201\REV3\TSWA3.xls-Site, F04/15/21

	MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR						
	TOTAL TRAFFIC						
	MAJOR	MINOR NB (MD 119 SB left to Decoverly Dr)			MINOR SB (Decoverly Dr)		
Time	MD 119 NB	left	thru	right	left	thru	right
6:00 AM	311	79					
7:00 AM	798	192					
8:00 AM	953	283					
9:00 AM	1090	219					
10:00 AM	872	122					
11:00 AM	1057	130					
12:00 PM	1245	169					
1:00 PM	1219	177					
2:00 PM	1385	132					
3:00 PM	1822	137					
4:00 PM	2339	172					
5:00 PM	2572	216					
6:00 PM	2097	206					

The Traffic Group

EXHIBIT E4-5
PROJECTED HOURLY
TOTAL TRAFFIC VOLUMES

Myc, 190201\REV3\TSWA3.xls-Total, F04/15/21

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: **MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR**

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	201	54				x				
7:00 AM	579	142	x	x		x	x	x	x	
8:00 AM	704	223	x	x	x	x	x	x	x	x
9:00 AM	756	163	x	x	x	x	x	x	x	
10:00 AM	611	79	x			x		x		
11:00 AM	715	61	x		x	x		x		
12:00 PM	790	88	x		x	x	x	x	x	
1:00 PM	863	102	x		x	x	x	x	x	
2:00 PM	911	60	x		x	x		x	x	
3:00 PM	1459	51	x		x			x		
4:00 PM	1957	51	x		x			x		
5:00 PM	2162	50	x		x			x		
6:00 PM	1613	76	x		x	x		x	x	x
hours satisfied			*3*		*7*		*5*		*7*	*2*

WARRANT #1-A (8 hours required) IS NOT SATISFIED

WARRANT #1-B (8 hours required) IS NOT SATISFIED

WARRANT #1-combination A + B (8 hours required) IS NOT SATISFIED

WARRANT #2 (4 hours required) IS SATISFIED

WARRANT #3 (1 hour required) IS SATISFIED

EXHIBIT E4-6
SIGNAL WARRANT ANALYSIS
MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR
(EXISTING CONDITION, LEFT LANE VOLUMES)

Qt, 190201\REV2\TSWA3.xls-Warrant(E-L), F06/23/20

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: **MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR**

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**

MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
	TOTAL TRAFFIC		MAJOR	MINOR	MAJOR	MINOR	80% x Condition A	80% x Condition B	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
Time	MAJOR	MINOR	(420 VPH)	(105 VPH)	(630 VPH)	(53 VPH)	(336vph)&(84 vph)	(504vph)&(42 vph)		
6:00 AM	306	79				x				#N/A
7:00 AM	789	192	x	x	x	x	x	x	x	x
8:00 AM	939	283	x	x	x	x	x	x	x	x
9:00 AM	1070	219	x	x	x	x	x	x	x	x
10:00 AM	854	122	x	x	x	x	x	x	x	
11:00 AM	1027	130	x	x	x	x	x	x	x	x
12:00 PM	1214	169	x	x	x	x	x	x	x	x
1:00 PM	1191	177	x	x	x	x	x	x	x	x
2:00 PM	1353	132	x	x	x	x	x	x	x	x
3:00 PM	1783	137	x	x	x	x	x	x	x	x
4:00 PM	2282	172	x	x	x	x	x	x	x	x
5:00 PM	2491	216	x	x	x	x	x	x	x	x
6:00 PM	2031	206	x	x	x	x	x	x	x	x
hours satisfied			*12*		*12*		*12*		*12*	*11*

→ **WARRANT #1-A (8 hours required) IS SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

EXHIBIT E4-7
SIGNAL WARRANT ANALYSIS
MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR
(BACKGROUND CONDITION, LEFT LANE VOLUMES)

Qt, 190201\REV2\TSWA3.xls-Warrant(B-L), F06/23/20

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEET

INTERSECTION: MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR

MAJOR - 2 lane(s) **85% Speed is > 40 mph** **=> speed factor = 0.7**
MINOR - 1 lane(s) ***(LEFT LANE ONLY)***

			WARRANT #1						WARRANT #2	WARRANT #3
			Condition A Minimum Vehicular		Condition B Interruption of Cont. Traf.		Combination of Conditions A and B		Four Hour Volumes	Peak Hour Volume
Time	TOTAL TRAFFIC MAJOR	TOTAL TRAFFIC MINOR	MAJOR (420 VPH)	MINOR (105 VPH)	MAJOR (630 VPH)	MINOR (53 VPH)	80% x Condition A (336vph)&(84 vph)	80% x Condition B (504vph)&(42 vph)	see Figure 4C-2 of MUTCD	see Figure 4C-4 of MUTCD
6:00 AM	311	79				x				#N/A
7:00 AM	798	192	x	x	x	x	x	x	x	x
8:00 AM	953	283	x	x	x	x	x	x	x	x
9:00 AM	1090	219	x	x	x	x	x	x	x	x
10:00 AM	872	122	x	x	x	x	x	x	x	
11:00 AM	1057	130	x	x	x	x	x	x	x	x
12:00 PM	1245	169	x	x	x	x	x	x	x	x
1:00 PM	1219	177	x	x	x	x	x	x	x	x
2:00 PM	1385	132	x	x	x	x	x	x	x	x
3:00 PM	1822	137	x	x	x	x	x	x	x	x
4:00 PM	2339	172	x	x	x	x	x	x	x	x
5:00 PM	2572	216	x	x	x	x	x	x	x	x
6:00 PM	2097	206	x	x	x	x	x	x	x	x
hours satisfied			*12*		*12*		*12*		*12*	*11*

→ **WARRANT #1-A (8 hours required) IS SATISFIED**

→ **WARRANT #1-B (8 hours required) IS SATISFIED**

→ **WARRANT #1-combination A + B (8 hours required) IS SATISFIED**

→ **WARRANT #2 (4 hours required) IS SATISFIED**

→ **WARRANT #3 (1 hour required) IS SATISFIED**

The Traffic Group

EXHIBIT E4-8
SIGNAL WARRANT ANALYSIS
MD 119 NB & MD 119 SB LEFT TO DECOVERLY DR
(TOTAL CONDITION, LEFT LANE VOLUMES)

Myc, 190201\REV3\TSWA3.xls-Warrant(T-L), F04/15/21

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Johns Hopkins Drive | Date: March 05, 2019 | Tuesday

and: Key West Avenue | Weather: Cold, Clear

Location: Montgomerey County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Johns Hopkins Drive					TRAFFIC FROM SOUTH on: Johns Hopkins Drive					TRAFFIC FROM EAST on: Key West Avenue					TRAFFIC FROM WEST on: Key West Avenue					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	3	0	1	0	4	0	0	4	0	4	0	94	2	2	98	23	31	4	0	58	164
6:15 - 6:30	3	0	2	0	5	0	0	3	0	3	0	163	3	0	166	11	38	7	1	57	231
6:30 - 6:45	0	0	2	0	2	10	0	1	0	11	15	29	10	1	55	4	223	4	1	232	300
6:45 - 7:00	0	0	1	0	1	9	0	0	0	9	34	42	16	0	92	3	241	9	2	255	357
7:00 - 7:15	0	0	2	0	2	8	0	0	0	8	50	45	14	0	109	0	284	7	1	292	411
7:15 - 7:30	0	0	2	0	2	10	2	0	0	12	23	56	19	0	98	0	341	10	1	352	464
7:30 - 7:45	0	0	2	0	2	11	0	0	0	11	42	71	17	0	130	4	362	7	0	373	516
7:45 - 8:00	0	0	3	0	3	14	0	0	0	14	52	69	29	1	151	7	387	19	2	415	583
8:00 - 8:15	0	1	3	0	4	8	1	0	0	9	59	88	25	0	172	7	360	19	2	388	573
8:15 - 8:30	0	0	0	0	0	10	0	1	0	11	50	76	32	1	159	2	419	13	0	434	604
8:30 - 8:45	2	0	1	0	3	12	0	1	0	13	58	99	24	0	181	6	389	25	0	420	617
8:45 - 9:00	4	1	7	0	12	20	0	2	0	22	59	70	21	0	150	6	389	14	1	410	594
9:00 - 9:15	3	1	1	0	5	14	0	1	0	15	38	73	25	1	137	4	308	15	1	328	485
9:15 - 9:30	6	0	0	0	6	16	0	1	0	17	36	76	30	0	142	4	287	5	0	296	461
9:30 - 9:45	11	0	1	0	12	1	0	6	1	8	1	216	5	0	222	19	71	26	1	117	359
9:45 - 10:00	19	0	2	0	21	1	1	1	0	3	5	163	4	0	172	15	93	26	0	134	330
10:00 - 10:15	17	0	2	0	19	2	0	6	0	8	1	132	3	1	137	18	74	20	0	112	276
10:15 - 10:30	23	1	2	0	26	3	1	4	0	8	1	133	2	0	136	13	88	25	1	127	297
10:30 - 10:45	17	0	3	0	20	3	2	10	0	15	1	133	1	0	135	12	72	20	0	104	274
10:45 - 11:00	19	0	0	0	19	4	2	9	0	15	1	123	5	1	130	8	87	21	1	117	281
11:00 - 11:15	18	0	1	0	19	2	3	15	0	20	1	118	4	0	123	8	97	17	0	122	284
11:15 - 11:30	24	1	3	0	28	11	2	8	1	22	2	96	4	0	102	11	73	31	0	115	267
11:30 - 11:45	21	2	3	0	26	11	4	14	1	30	1	112	4	1	118	10	116	20	0	146	320
11:45 - 12:00	27	2	0	0	29	16	2	16	0	34	4	132	2	0	138	5	100	30	0	135	336
12:00 - 12:15	19	3	1	0	23	24	4	23	0	51	4	114	4	0	122	15	112	21	2	150	346
12:15 - 12:30	27	0	2	0	29	20	2	20	0	42	2	110	10	2	124	15	121	36	0	172	367
12:30 - 12:45	22	3	2	0	27	19	2	18	0	39	2	112	11	0	125	21	120	32	0	173	364
12:45 - 1:00	23	1	6	0	30	7	2	5	0	14	5	121	14	2	142	27	125	35	0	187	373
1:00 - 1:15	20	0	2	0	22	3	1	16	0	20	2	114	7	2	125	16	105	19	0	140	307
1:15 - 1:30	22	0	2	0	24	9	1	9	0	19	2	115	10	0	127	23	119	30	1	173	343
1:30 - 1:45	23	0	2	0	25	4	0	9	0	13	3	110	5	0	118	19	93	32	0	144	300
1:45 - 2:00	25	0	1	0	26	5	0	10	1	16	3	123	6	1	133	18	106	22	0	146	321
2:00 - 2:15	13	0	1	0	14	4	0	21	0	25	2	102	8	0	112	8	116	24	0	148	299
2:15 - 2:30	14	0	0	0	14	3	0	8	0	11	3	108	5	2	118	10	115	19	0	144	287
2:30 - 2:45	20	0	0	0	20	7	1	12	0	20	2	79	1	0	82	4	161	31	0	196	318
2:45 - 3:00	20	1	0	0	21	9	1	18	0	28	1	117	4	0	122	10	167	27	1	205	376
3:00 - 3:15	15	0	1	0	16	9	0	13	0	22	2	125	3	1	131	4	208	24	2	238	407
3:15 - 3:30	29	0	4	0	33	0	1	13	0	14	2	104	2	0	108	9	232	19	1	261	416
3:30 - 3:45	17	0	2	0	19	13	1	28	0	42	1	110	1	2	114	11	228	25	0	264	439
3:45 - 4:00	17	0	2	0	19	10	0	25	0	35	1	126	4	0	131	11	272	20	0	303	488
4:00 - 4:15	19	0	65	0	84	23	0	1	0	24	3	287	22	0	312	0	127	3	0	130	550
4:15 - 4:30	18	0	29	0	47	29	0	4	0	33	5	290	21	1	317	0	114	0	0	114	511
4:30 - 4:45	18	2	48	0	68	23	0	3	0	26	3	352	20	0	375	1	121	0	1	123	592
4:45 - 5:00	22	1	40	0	63	23	0	0	0	23	11	350	22	0	383	1	110	1	2	114	583
5:00 - 5:15	32	0	51	0	83	34	0	1	0	35	4	407	24	2	437	0	127	0	0	127	682
5:15 - 5:30	28	0	32	0	60	29	1	2	0	32	3	455	9	0	467	0	118	1	0	119	678
5:30 - 5:45	22	1	24	0	47	18	0	0	0	18	6	424	16	0	446	0	125	1	2	128	639
5:45 - 6:00	17	2	40	0	59	13	0	1	0	14	7	430	18	0	455	0	120	2	1	123	651
6:00 - 6:15	20	1	32	0	53	20	0	2	0	22	8	330	23	0	361	0	116	1	0	117	553
6:15 - 6:30	12	0	18	0	30	12	0	3	0	15	1	291	16	0	308	1	114	0	1	116	469
6:30 - 6:45	8	0	13	0	21	8	0	0	0	8	3	306	21	0	330	2	105	1	2	110	469
6:45 - 7:00	5	0	18	0	23	13	1	1	0	15	3	270	24	0	297	0	105	2	4	111	446
13 Hr Totals	764	24	482	0	1270	587	38	369	4	998	628	8391	632	24	9675	426	8732	822	35	10015	21958
1 Hr Totals																					
6:00 - 7:00	6	0	6	0	12	19	0	8	0	27	49	328	31	3	411	41	533	24	4	602	1052
6:15 - 7:15	3	0	7	0	10	27	0	4	0	31	99	279	43	1	422	18	786	27	5	836	1299
6:30 - 7:30	0	0	7	0	7	37	2	1	0	40	122	172	59	1	354	7	1089	30	5	1131	1532
6:45 - 7:45	0	0	7	0	7	38	2	0	0	40	149	214	66	0	429	7	1228	33	4	1272	1748
7:00 - 8:00	0	0	9	0	9	43	2	0	0	45	167	241	79	1	488	11	1374	43	4	1432	1974
7:15 - 8:15	0	1	10	0	11	43	3	0	0	46	176	284	90	1	551	18	1450	55	5	1528	2136
7:30 - 8:30	0	1	8	0	9	43	1	1	0	45	203	304	103	2	612	20	1528	58	4	1610	2276
7:45 - 8:45	2	1	7	0	10	44	1	2	0	47	219	332	110	2	663	22	1555	76	4	1657	2377
8:00 - 9:00	6	2	11	0	19	50	1	4	0	55	226	333	102	1	662	21	1557	71	3	1652	2388
8:15 - 9:15	9	2	9	0	20	56	0	5	0	61	205	318	102	2	627	18	1505	67	2	1592	2300
8:30 - 9:30	15	2	9	0	26	62	0	5	0	67	191	318	100	1	610	20	1373	59	2	1454	2157

8:45 - 9:45	24	2	9	0	35	51	0	10	1	62	134	435	81	1	651	33	1055	60	3	1151	1899
9:00 - 10:00	39	1	4	0	44	32	1	9	1	43	80	528	64	1	673	42	759	72	2	875	1635
9:15 - 10:15	53	0	5	0	58	20	1	14	1	36	43	587	42	1	673	56	525	77	1	659	1426
9:30 - 10:30	70	1	7	0	78	7	2	17	1	27	8	644	14	1	667	65	326	97	2	490	1262
9:45 - 10:45	76	1	9	0	86	9	4	21	0	34	8	561	10	1	580	58	327	91	1	477	1177
10:00 - 11:00	76	1	7	0	84	12	5	29	0	46	4	521	11	2	538	51	321	86	2	460	1128
10:15 - 11:15	77	1	6	0	84	12	8	38	0	58	4	507	12	1	524	41	344	83	2	470	1136
10:30 - 11:30	78	1	7	0	86	20	9	42	1	72	5	470	14	1	490	39	329	89	1	458	1106
10:45 - 11:45	82	3	7	0	92	28	11	46	2	87	5	449	17	2	473	37	373	89	1	500	1152
11:00 - 12:00	90	5	7	0	102	40	11	53	2	106	8	458	14	1	481	34	386	98	0	518	1207
11:15 - 12:15	91	8	7	0	106	62	12	61	2	137	11	454	14	1	480	41	401	102	2	546	1269
11:30 - 12:30	94	7	6	0	107	71	12	73	1	157	11	468	20	3	502	45	449	107	2	603	1369
11:45 - 12:45	95	8	5	0	108	79	10	77	0	166	12	468	27	2	509	56	453	119	2	630	1413
12:00 - 1:00	91	7	11	0	109	70	10	66	0	146	13	457	39	4	513	78	478	124	2	682	1450
12:15 - 1:15	92	4	12	0	108	49	7	59	0	115	11	457	42	6	516	79	471	122	0	672	1411
12:30 - 1:30	87	4	12	0	103	38	6	48	0	92	11	462	42	4	519	87	469	116	1	673	1387
12:45 - 1:45	88	1	12	0	101	23	4	39	0	66	12	460	36	4	512	85	442	116	1	644	1323
1:00 - 2:00	90	0	7	0	97	21	2	44	1	68	10	462	28	3	503	76	423	103	1	603	1271
1:15 - 2:15	83	0	6	0	89	22	1	49	1	73	10	450	29	1	490	68	434	108	1	611	1263
1:30 - 2:30	75	0	4	0	79	16	0	48	1	65	11	443	24	3	481	55	430	97	0	582	1207
1:45 - 2:45	72	0	2	0	74	19	1	51	1	72	10	412	20	3	445	40	498	96	0	634	1225
2:00 - 3:00	67	1	1	0	69	23	2	59	0	84	8	406	18	2	434	32	559	101	1	693	1280
2:15 - 3:15	69	1	1	0	71	28	2	51	0	81	8	429	13	3	453	28	651	101	3	783	1388
2:30 - 3:30	84	1	5	0	90	25	3	56	0	84	7	425	10	1	443	27	768	101	4	900	1517
2:45 - 3:45	81	1	7	0	89	31	3	72	0	106	6	456	10	3	475	34	835	95	4	968	1638
3:00 - 4:00	78	0	9	0	87	32	2	79	0	113	6	465	10	3	484	35	940	88	3	1066	1750
3:15 - 4:15	82	0	73	0	155	46	2	67	0	115	7	627	29	2	665	31	859	67	1	958	1893
3:30 - 3:30	71	0	98	0	169	75	1	58	0	134	10	813	48	3	874	22	741	48	0	811	1988
3:45 - 4:45	72	2	144	0	218	85	0	33	0	118	12	1055	67	1	1135	12	634	23	1	670	2141
4:00 - 5:00	77	3	182	0	262	98	0	8	0	106	22	1279	85	1	1387	2	472	4	3	481	2236
4:15 - 5:15	90	3	168	0	261	109	0	8	0	117	23	1399	87	3	1512	2	472	1	3	478	2368
4:30 - 5:30	100	3	171	0	274	109	1	6	0	116	21	1564	75	2	1662	2	476	2	3	483	2535
4:45 - 5:45	104	2	147	0	253	104	1	3	0	108	24	1636	71	2	1733	1	480	3	4	488	2582
5:00 - 6:00	99	3	147	0	249	94	1	4	0	99	20	1716	67	2	1805	0	490	4	3	497	2650
5:15 - 6:15	87	4	128	0	219	80	1	5	0	86	24	1639	66	0	1729	0	479	5	3	487	2521
5:30 - 6:30	71	4	114	0	189	63	0	6	0	69	22	1475	73	0	1570	1	475	4	4	484	2312
5:45 - 6:45	57	3	103	0	163	53	0	6	0	59	19	1357	78	0	1454	3	455	4	4	466	2142
6:00 - 7:00	45	1	81	0	127	53	1	6	0	60	15	1197	84	0	1296	3	440	4	7	454	1937
PEAK HOUR																					
5:00 - 6:00	99	3	147	0	249	94	1	4	0	99	20	1716	67	2	1805	0	490	4	3	497	2650

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Blackwell Road | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Blackwell Road					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	0	40	9	1	50	3	15	0	0	18	1	0	0	0	1	0	0	0	0	0	69
6:15 - 6:30	0	84	5	0	89	1	15	0	1	17	3	0	0	0	3	0	0	0	0	0	109
6:30 - 6:45	0	130	16	4	150	5	25	0	0	30	2	0	2	0	4	0	0	0	0	0	184
6:45 - 7:00	0	171	14	4	189	3	35	0	0	38	4	0	3	0	7	0	0	0	0	0	234
7:00 - 7:15	0	177	19	1	197	3	38	0	0	41	4	0	1	0	5	0	0	0	0	0	243
7:15 - 7:30	0	192	28	4	224	2	60	0	0	62	3	0	0	0	3	0	0	0	0	0	289
7:30 - 7:45	0	200	34	3	237	3	75	0	0	78	4	0	0	0	4	0	0	0	0	0	319
7:45 - 8:00	0	220	44	4	268	5	111	0	0	116	8	0	1	0	9	0	0	0	0	0	393
8:00 - 8:15	0	252	32	0	284	4	90	0	0	94	6	0	0	0	6	0	0	0	0	0	384
8:15 - 8:30	0	238	41	3	282	9	93	0	0	102	3	0	1	0	4	0	0	0	0	0	388
8:30 - 8:45	0	246	44	6	296	3	94	0	0	97	3	0	1	0	4	0	0	0	0	0	397
8:45 - 9:00	0	257	41	2	300	5	110	0	0	115	1	0	1	0	2	0	0	0	0	0	417
9:00 - 9:15	0	248	32	0	280	5	110	0	1	116	2	0	1	0	3	0	0	0	0	0	399
9:15 - 9:30	0	186	27	0	213	8	105	0	0	113	10	0	2	0	12	0	0	0	0	0	338
9:30 - 9:45	0	170	29	0	199	5	117	0	0	122	3	0	3	0	6	0	0	0	0	0	327
9:45 - 10:00	0	125	12	1	138	3	95	0	1	99	7	0	0	0	7	0	0	0	0	0	244
10:00 - 10:15	0	77	4	3	84	3	82	0	0	85	2	0	0	0	2	0	0	0	0	0	171
10:15 - 10:30	0	90	5	0	95	3	69	0	0	72	6	0	1	0	7	0	0	0	0	0	174
10:30 - 10:45	0	99	8	0	107	0	80	0	0	80	1	0	0	0	1	0	0	0	0	0	188
10:45 - 11:00	0	80	9	0	89	1	80	0	0	81	4	0	3	0	7	0	0	0	0	0	177
11:00 - 11:15	0	82	5	1	88	2	81	0	0	83	7	0	2	0	9	0	0	0	0	0	180
11:15 - 11:30	0	64	5	2	71	2	89	0	0	91	11	0	1	0	12	0	0	0	0	0	174
11:30 - 11:45	0	65	7	1	73	2	89	0	0	91	4	0	1	0	5	0	0	0	0	0	169
11:45 - 12:00	0	80	6	0	86	0	79	0	0	79	11	0	1	0	12	0	0	0	0	0	177
12:00 - 12:15	0	81	5	0	86	2	91	0	2	95	14	0	3	0	17	0	0	0	0	0	198
12:15 - 12:30	0	75	7	1	83	5	100	0	0	105	4	0	1	0	5	0	0	0	0	0	193
12:30 - 12:45	0	80	9	0	89	7	108	0	0	115	6	0	0	0	6	0	0	0	0	0	210
12:45 - 1:00	0	79	15	1	95	2	78	0	0	80	2	0	2	0	4	0	0	0	0	0	179
1:00 - 1:15	0	89	7	0	96	1	109	0	0	110	6	0	0	0	6	0	0	0	0	0	212
1:15 - 1:30	0	77	2	0	79	3	127	0	0	130	5	0	1	0	6	0	0	0	0	0	215
1:30 - 1:45	0	84	4	1	89	2	110	0	0	112	6	0	2	0	8	0	0	0	0	0	209
1:45 - 2:00	0	90	7	4	101	2	123	0	0	125	8	0	0	0	8	0	0	0	0	0	234
2:00 - 2:15	0	92	5	0	97	1	126	0	1	128	4	0	3	0	7	0	0	0	0	0	232
2:15 - 2:30	0	80	5	2	87	5	109	0	1	115	14	0	2	0	16	0	0	0	0	0	218
2:30 - 2:45	0	64	7	0	71	4	120	0	0	124	7	0	2	0	9	0	0	0	0	0	204
2:45 - 3:00	0	83	6	1	90	3	130	0	0	133	7	0	0	0	7	0	0	0	0	0	230
3:00 - 3:15	0	71	1	1	73	0	162	0	0	162	27	0	1	0	28	0	0	0	0	0	263
3:15 - 3:30	0	87	6	1	94	1	137	0	1	139	14	0	6	0	20	0	0	0	0	0	253
3:30 - 3:45	0	86	2	2	90	4	175	0	0	179	23	0	1	0	24	0	0	0	0	0	293
3:45 - 4:00	0	104	4	1	109	0	180	0	0	180	35	0	5	0	40	0	0	0	0	0	329
4:00 - 4:15	0	81	1	0	82	1	193	0	0	194	28	0	7	0	35	0	0	0	0	0	311
4:15 - 4:30	0	97	4	1	102	2	193	0	1	196	26	0	2	0	28	0	0	0	0	0	326
4:30 - 4:45	0	105	2	0	107	0	242	0	0	242	27	0	2	0	29	0	0	0	0	0	378
4:45 - 5:00	0	92	4	1	97	1	211	0	0	212	19	0	0	0	19	0	0	0	0	0	328
5:00 - 5:15	0	97	2	0	99	0	228	0	0	228	32	0	7	0	39	0	0	0	0	0	366
5:15 - 5:30	0	112	4	0	116	3	237	0	0	240	13	0	2	0	15	0	0	0	0	0	371
5:30 - 5:45	0	107	2	0	109	2	225	0	1	228	24	0	0	0	24	0	0	0	0	0	361
5:45 - 6:00	0	110	6	0	116	1	195	0	0	196	15	0	5	0	20	0	0	0	0	0	332
6:00 - 6:15	0	91	1	2	94	2	209	0	0	211	11	0	1	0	12	0	0	0	0	0	317
6:15 - 6:30	0	109	5	1	115	1	199	0	0	200	10	0	1	0	11	0	0	0	0	0	326
6:30 - 6:45	0	88	2	0	90	2	185	0	0	187	18	0	3	0	21	0	0	0	0	0	298
6:45 - 7:00	0	80	2	0	82	1	144	0	0	145	6	0	0	0	6	0	0	0	0	0	233
13 Hr Totals	0	6064	603	60	6727	138	6283	0	10	6431	521	0	84	0	605	0	0	0	0	0	13763
1 Hr Totals																					
6:00 - 7:00	0	425	44	9	478	12	90	0	1	103	10	0	5	0	15	0	0	0	0	0	596
6:15 - 7:15	0	562	54	9	625	12	113	0	1	126	13	0	6	0	19	0	0	0	0	0	770
6:30 - 7:30	0	670	77	13	760	13	158	0	0	171	13	0	6	0	19	0	0	0	0	0	950
6:45 - 7:45	0	740	95	12	847	11	208	0	0	219	15	0	4	0	19	0	0	0	0	0	1085
7:00 - 8:00	0	789	125	12	926	13	284	0	0	297	19	0	2	0	21	0	0	0	0	0	1244
7:15 - 8:15	0	864	138	11	1013	14	336	0	0	350	21	0	1	0	22	0	0	0	0	0	1385
7:30 - 8:30	0	910	151	10	1071	21	369	0	0	390	21	0	2	0	23	0	0	0	0	0	1484
7:45 - 8:45	0	956	161	13	1130	21	388	0	0	409	20	0	3	0	23	0	0	0	0	0	1562
8:00 - 9:00	0	993	158	11	1162	21	387	0	0	408	13	0	3	0	16	0	0	0	0	0	1586
8:15 - 9:15	0	989	158	11	1158	22	407	0	1	430	9	0	4	0	13	0	0	0	0	0	1601
8:30 - 9:30	0	937	144	8	1089	21	419	0	1	441	16	0	5	0	21	0	0	0	0	0	1551

8:45 - 9:45	0	861	129	2	992	23	442	0	1	466	16	0	7	0	23	0	0	0	0	0	1481
9:00 - 10:00	0	729	100	1	830	21	427	0	2	450	22	0	6	0	28	0	0	0	0	0	1308
9:15 - 10:15	0	558	72	4	634	19	399	0	1	419	22	0	5	0	27	0	0	0	0	0	1080
9:30 - 10:30	0	462	50	4	516	14	363	0	1	378	18	0	4	0	22	0	0	0	0	0	916
9:45 - 10:45	0	391	29	4	424	9	326	0	1	336	16	0	1	0	17	0	0	0	0	0	777
10:00 - 11:00	0	346	26	3	375	7	311	0	0	318	13	0	4	0	17	0	0	0	0	0	710
10:15 - 11:15	0	351	27	1	379	6	310	0	0	316	18	0	6	0	24	0	0	0	0	0	719
10:30 - 11:30	0	325	27	3	355	5	330	0	0	335	23	0	6	0	29	0	0	0	0	0	719
10:45 - 11:45	0	291	26	4	321	7	339	0	0	346	26	0	7	0	33	0	0	0	0	0	700
11:00 - 12:00	0	291	23	4	318	6	338	0	0	344	33	0	5	0	38	0	0	0	0	0	700
11:15 - 12:15	0	290	23	3	316	6	348	0	2	356	40	0	6	0	46	0	0	0	0	0	718
11:30 - 12:30	0	301	25	2	328	9	359	0	2	370	33	0	6	0	39	0	0	0	0	0	737
11:45 - 12:45	0	316	27	1	344	14	378	0	2	394	35	0	5	0	40	0	0	0	0	0	778
12:00 - 1:00	0	315	36	2	353	16	377	0	2	395	26	0	6	0	32	0	0	0	0	0	780
12:15 - 1:15	0	323	38	2	363	15	395	0	0	410	18	0	3	0	21	0	0	0	0	0	794
12:30 - 1:30	0	325	33	1	359	13	422	0	0	435	19	0	3	0	22	0	0	0	0	0	816
12:45 - 1:45	0	329	28	2	359	8	424	0	0	432	19	0	5	0	24	0	0	0	0	0	815
1:00 - 2:00	0	340	20	5	365	8	469	0	0	477	25	0	3	0	28	0	0	0	0	0	870
1:15 - 2:15	0	343	18	5	366	8	486	0	1	495	23	0	6	0	29	0	0	0	0	0	890
1:30 - 2:30	0	346	21	7	374	10	468	0	2	480	32	0	7	0	39	0	0	0	0	0	893
1:45 - 2:45	0	326	24	6	356	12	478	0	2	492	33	0	7	0	40	0	0	0	0	0	888
2:00 - 3:00	0	319	23	3	345	13	485	0	2	500	32	0	7	0	39	0	0	0	0	0	884
2:15 - 3:15	0	298	19	4	321	12	521	0	1	534	55	0	5	0	60	0	0	0	0	0	915
2:30 - 3:30	0	305	20	3	328	8	549	0	1	558	55	0	9	0	64	0	0	0	0	0	950
2:45 - 3:45	0	327	15	5	347	8	604	0	1	613	71	0	8	0	79	0	0	0	0	0	1039
3:00 - 4:00	0	348	13	5	366	5	654	0	1	660	99	0	13	0	112	0	0	0	0	0	1138
3:15 - 4:15	0	358	13	4	375	6	685	0	1	692	100	0	19	0	119	0	0	0	0	0	1186
3:30 - 3:30	0	368	11	4	383	7	741	0	1	749	112	0	15	0	127	0	0	0	0	0	1259
3:45 - 4:45	0	387	11	2	400	3	808	0	1	812	116	0	16	0	132	0	0	0	0	0	1344
4:00 - 5:00	0	375	11	2	388	4	839	0	1	844	100	0	11	0	111	0	0	0	0	0	1343
4:15 - 5:15	0	391	12	2	405	3	874	0	1	878	104	0	11	0	115	0	0	0	0	0	1398
4:30 - 5:30	0	406	12	1	419	4	918	0	0	922	91	0	11	0	102	0	0	0	0	0	1443
4:45 - 5:45	0	408	12	1	421	6	901	0	1	908	88	0	9	0	97	0	0	0	0	0	1426
5:00 - 6:00	0	426	14	0	440	6	885	0	1	892	84	0	14	0	98	0	0	0	0	0	1430
5:15 - 6:15	0	420	13	2	435	8	866	0	1	875	63	0	8	0	71	0	0	0	0	0	1381
5:30 - 6:30	0	417	14	3	434	6	828	0	1	835	60	0	7	0	67	0	0	0	0	0	1336
5:45 - 6:45	0	398	14	3	415	6	788	0	0	794	54	0	10	0	64	0	0	0	0	0	1273
6:00 - 7:00	0	368	10	3	381	6	737	0	0	743	45	0	5	0	50	0	0	0	0	0	1174
PEAK HOUR																					
4:30 - 5:30	0	406	12	1	419	4	918	0	0	922	91	0	11	0	102	0	0	0	0	0	1443

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Medical Center Drive | Weather: Cold, Clear

Location: Montgomery County, Maryland | Entered by: BGJ | Star Rating: 4

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Medical Center Drive					TRAFFIC FROM WEST on: Medical Center Drive					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	1	18	15	1	35	5	16	7	0	28	2	0	4	0	6	0	0	0	0	0	69
6:15 - 6:30	3	35	47	0	85	9	13	10	0	32	5	0	3	0	8	1	0	0	0	1	126
6:30 - 6:45	4	76	58	0	138	8	26	7	0	41	3	0	3	0	6	0	0	0	0	0	185
6:45 - 7:00	1	135	48	0	184	12	35	0	0	47	4	0	3	1	8	0	0	0	0	0	239
7:00 - 7:15	1	142	38	0	181	12	31	1	0	44	8	0	0	0	8	0	0	1	0	1	234
7:15 - 7:30	1	147	51	2	201	19	47	1	0	67	18	0	6	0	24	0	0	0	0	0	292
7:30 - 7:45	0	129	75	0	204	28	65	0	0	93	15	1	1	0	17	0	1	0	0	1	315
7:45 - 8:00	0	144	79	0	223	33	100	0	0	133	14	0	7	1	22	0	0	0	0	0	378
8:00 - 8:15	3	176	81	0	260	35	79	1	0	115	13	0	7	2	22	0	0	0	0	0	397
8:15 - 8:30	3	154	83	0	240	17	87	0	0	104	12	0	5	0	17	0	0	1	0	1	362
8:30 - 8:45	4	168	87	1	260	34	94	3	1	132	11	0	3	0	14	2	0	1	0	3	409
8:45 - 9:00	4	183	71	0	258	31	95	2	0	128	21	0	10	1	32	0	0	0	0	0	418
9:00 - 9:15	1	178	75	0	254	19	98	1	0	118	18	0	10	1	29	0	0	0	0	0	401
9:15 - 9:30	4	135	51	0	190	26	94	2	0	122	15	0	7	0	22	0	0	1	0	1	335
9:30 - 9:45	3	123	44	0	170	17	103	2	1	123	17	0	4	0	21	0	0	1	0	1	315
9:45 - 10:00	1	97	30	0	128	14	81	5	0	100	18	0	10	1	29	2	0	0	0	2	259
10:00 - 10:15	4	71	15	0	90	7	58	1	0	66	25	0	6	0	31	1	0	1	0	2	189
10:15 - 10:30	0	63	14	1	78	8	57	1	0	66	16	0	5	2	23	0	0	0	0	0	167
10:30 - 10:45	0	81	21	0	102	12	61	0	0	73	18	1	7	0	26	1	0	0	0	1	202
10:45 - 11:00	1	73	15	0	89	7	63	0	0	70	16	0	8	0	24	0	0	0	0	0	183
11:00 - 11:15	0	59	19	0	78	12	68	0	0	80	14	0	13	2	29	0	0	1	0	1	188
11:15 - 11:30	1	52	13	0	66	6	71	0	0	77	18	0	8	0	26	1	0	0	0	1	170
11:30 - 11:45	0	64	14	0	78	6	68	2	0	76	25	0	11	2	38	1	0	2	0	3	195
11:45 - 12:00	2	50	17	0	69	9	52	1	0	62	27	0	9	0	36	0	0	1	0	1	168
12:00 - 12:15	0	75	17	1	93	6	78	0	0	84	26	1	13	0	40	0	1	0	0	1	218
12:15 - 12:30	1	59	17	0	77	10	76	0	1	87	22	0	14	0	36	0	0	1	0	1	201
12:30 - 12:45	2	58	13	1	74	13	89	0	1	103	22	0	20	0	42	0	2	0	0	2	221
12:45 - 1:00	1	65	24	0	90	14	64	1	0	79	15	0	9	1	25	0	0	2	0	2	196
1:00 - 1:15	0	72	20	0	92	18	94	0	1	113	14	0	10	0	24	0	0	0	0	0	229
1:15 - 1:30	2	61	12	0	75	11	103	0	1	115	23	0	8	0	31	0	0	2	0	2	223
1:30 - 1:45	1	77	12	0	90	13	90	1	0	104	21	0	14	0	35	1	0	0	0	1	230
1:45 - 2:00	0	83	20	0	103	10	92	0	0	102	28	0	8	0	36	2	0	2	0	4	245
2:00 - 2:15	0	65	16	0	81	7	92	0	1	100	37	0	18	0	55	1	0	0	0	1	237
2:15 - 2:30	0	70	14	0	84	15	92	0	0	107	27	1	15	0	43	4	1	0	0	5	239
2:30 - 2:45	0	60	12	0	72	9	92	2	1	104	23	0	8	0	31	3	0	4	0	7	214
2:45 - 3:00	1	63	13	0	77	8	101	1	0	110	33	0	18	1	52	5	0	6	0	11	250
3:00 - 3:15	1	61	18	0	80	9	119	1	0	129	39	0	24	0	63	5	0	3	0	8	280
3:15 - 3:30	0	79	15	1	95	12	93	1	2	108	41	0	17	0	58	4	0	2	0	6	267
3:30 - 3:45	0	75	13	0	88	7	124	0	0	131	57	0	18	1	76	2	0	3	0	5	300
3:45 - 4:00	0	93	19	1	113	5	122	1	0	128	53	0	13	1	67	0	0	2	0	2	310
4:00 - 4:15	1	68	13	0	82	1	133	0	1	135	61	0	26	1	88	2	0	5	0	7	312
4:15 - 4:30	0	77	23	0	100	6	143	0	0	149	52	0	23	0	75	3	0	3	0	6	330
4:30 - 4:45	1	90	14	1	106	9	151	0	0	160	87	0	27	1	115	4	0	3	0	7	388
4:45 - 5:00	0	96	7	0	103	11	144	0	0	155	68	0	23	0	91	1	0	2	0	3	352
5:00 - 5:15	0	92	12	0	104	7	167	0	1	175	73	0	24	0	97	0	0	2	0	2	378
5:15 - 5:30	0	99	16	0	115	9	174	0	0	183	75	0	19	0	94	3	1	0	0	4	396
5:30 - 5:45	0	96	16	0	112	8	145	0	0	153	53	0	20	0	73	0	0	0	0	0	338
5:45 - 6:00	0	110	10	0	120	5	162	0	0	167	35	0	26	0	61	2	0	0	0	2	350
6:00 - 6:15	0	74	13	0	87	8	180	0	0	188	38	0	19	0	57	1	0	1	0	2	334
6:15 - 6:30	1	88	25	0	114	5	159	0	0	164	36	0	19	0	55	0	0	4	0	4	337
6:30 - 6:45	0	82	15	0	97	10	153	0	1	164	32	0	21	1	54	0	0	0	0	0	315
6:45 - 7:00	0	70	9	0	79	6	123	0	0	129	18	0	15	0	33	6	0	2	0	8	249
13 Hr Totals	54	4711	1489	10	6264	638	4917	55	13	5623	1462	4	639	20	2125	58	6	59	0	123	14135
1 Hr Totals																					
6:00 - 7:00	9	264	168	1	442	34	90	24	0	148	14	0	13	1	28	1	0	0	0	1	619
6:15 - 7:15	9	388	191	0	588	41	105	18	0	164	20	0	9	1	30	1	0	1	0	2	784
6:30 - 7:30	7	500	195	2	704	51	139	9	0	199	33	0	12	1	46	0	0	1	0	1	950
6:45 - 7:45	3	553	212	2	770	71	178	2	0	251	45	1	10	1	57	0	1	1	0	2	1080
7:00 - 8:00	2	562	243	2	809	92	243	2	0	337	55	1	14	1	71	0	1	1	0	2	1219
7:15 - 8:15	4	596	286	2	888	115	291	2	0	408	60	1	21	3	85	0	1	0	0	1	1382
7:30 - 8:30	6	603	318	0	927	113	331	1	0	445	54	1	20	3	78	0	1	1	0	2	1452
7:45 - 8:45	10	642	330	1	983	119	360	4	1	484	50	0	22	3	75	2	0	2	0	4	1546
8:00 - 9:00	14	681	322	1	1018	117	355	6	1	479	57	0	25	3	85	2	0	2	0	4	1586
8:15 - 9:15	12	683	316	1	1012	101	374	6	1	482	62	0	28	2	92	2	0	2	0	4	1590
8:30 - 9:30	13	664	284	1	962	110	381	8	1	500	65	0	30	2	97	2	0	2	0	4	1563

8:45 - 9:45	12	619	241	0	872	93	390	7	1	491	71	0	31	2	104	0	0	2	0	2	1469
9:00 - 10:00	9	533	200	0	742	76	376	10	1	463	68	0	31	2	101	2	0	2	0	4	1310
9:15 - 10:15	12	426	140	0	578	64	336	10	1	411	75	0	27	1	103	3	0	3	0	6	1098
9:30 - 10:30	8	354	103	1	466	46	299	9	1	355	76	0	25	3	104	3	0	2	0	5	930
9:45 - 10:45	5	312	80	1	398	41	257	7	0	305	77	1	28	3	109	4	0	1	0	5	817
10:00 - 11:00	5	288	65	1	359	34	239	2	0	275	75	1	26	2	104	2	0	1	0	3	741
10:15 - 11:15	1	276	69	1	347	39	249	1	0	289	64	1	33	4	102	1	0	1	0	2	740
10:30 - 11:30	2	265	68	0	335	37	263	0	0	300	66	1	36	2	105	2	0	1	0	3	743
10:45 - 11:45	2	248	61	0	311	31	270	2	0	303	73	0	40	4	117	2	0	3	0	5	736
11:00 - 12:00	3	225	63	0	291	33	259	3	0	295	84	0	41	4	129	2	0	4	0	6	721
11:15 - 12:15	3	241	61	1	306	27	269	3	0	299	96	1	41	2	140	2	1	3	0	6	751
11:30 - 12:30	3	248	65	1	317	31	274	3	1	309	100	1	47	2	150	1	1	4	0	6	782
11:45 - 12:45	5	242	64	2	313	38	295	1	2	336	97	1	56	0	154	0	3	2	0	5	808
12:00 - 1:00	4	257	71	2	334	43	307	1	2	353	85	1	56	1	143	0	3	3	0	6	836
12:15 - 1:15	4	254	74	1	333	55	323	1	3	382	73	0	53	1	127	0	2	3	0	5	847
12:30 - 1:30	5	256	69	1	331	56	350	1	3	410	74	0	47	1	122	0	2	4	0	6	869
12:45 - 1:45	4	275	68	0	347	56	351	2	2	411	73	0	41	1	115	1	0	4	0	5	878
1:00 - 2:00	3	293	64	0	360	52	379	1	2	434	86	0	40	0	126	3	0	4	0	7	927
1:15 - 2:15	3	286	60	0	349	41	377	1	2	421	109	0	48	0	157	4	0	4	0	8	935
1:30 - 2:30	1	295	62	0	358	45	366	1	1	413	113	1	55	0	169	8	1	2	0	11	951
1:45 - 2:45	0	278	62	0	340	41	368	2	2	413	115	1	49	0	165	10	1	6	0	17	935
2:00 - 3:00	1	258	55	0	314	39	377	3	2	421	120	1	59	1	181	13	1	10	0	24	940
2:15 - 3:15	2	254	57	0	313	41	404	4	1	450	122	1	65	1	189	17	1	13	0	31	983
2:30 - 3:30	2	263	58	1	324	38	405	5	3	451	136	0	67	1	204	17	0	15	0	32	1011
2:45 - 3:45	2	278	59	1	340	36	437	3	2	478	170	0	77	2	249	16	0	14	0	30	1097
3:00 - 4:00	1	308	65	2	376	33	458	3	2	496	190	0	72	2	264	11	0	10	0	21	1157
3:15 - 4:15	1	315	60	2	378	25	472	2	3	502	212	0	74	3	289	8	0	12	0	20	1189
3:30 - 3:30	1	313	68	1	383	19	522	1	1	543	223	0	80	3	306	7	0	13	0	20	1252
3:45 - 4:45	2	328	69	2	401	21	549	1	1	572	253	0	89	3	345	9	0	13	0	22	1340
4:00 - 5:00	2	331	57	1	391	27	571	0	1	599	268	0	99	2	369	10	0	13	0	23	1382
4:15 - 5:15	1	355	56	1	413	33	605	0	1	639	280	0	97	1	378	8	0	10	0	18	1448
4:30 - 5:30	1	377	49	1	428	36	636	0	1	673	303	0	93	1	397	8	1	7	0	16	1514
4:45 - 5:45	0	383	51	0	434	35	630	0	1	666	269	0	86	0	355	4	1	4	0	9	1464
5:00 - 6:00	0	397	54	0	451	29	648	0	1	678	236	0	89	0	325	5	1	2	0	8	1462
5:15 - 6:15	0	379	55	0	434	30	661	0	0	691	201	0	84	0	285	6	1	1	0	8	1418
5:30 - 6:30	1	368	64	0	433	26	646	0	0	672	162	0	84	0	246	3	0	5	0	8	1359
5:45 - 6:45	1	354	63	0	418	28	654	0	1	683	141	0	85	1	227	3	0	5	0	8	1336
6:00 - 7:00	1	314	62	0	377	29	615	0	1	645	124	0	74	1	199	7	0	7	0	14	1235
PEAK HOUR																					
8:15 - 9:15	12	683	316	1	1012	101	374	6	1	482	62	0	28	2	92	2	0	2	0	4	1590

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | **Date: March 05, 2019** | **Tuesday**

and: Decoverly Drive | **Weather: Sunny/Cool**

Location: Montgomery County, Maryland | **Entered by: SN** | **Star Rating: 5**

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Decoverly Drive					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	0	97	6	5	108	2	24	0	0	26	9	0	1	0	10	0	0	0	0	0	144
6:15 - 6:30	0	161	5	8	174	1	35	0	0	36	12	0	2	0	14	0	0	0	0	0	224
6:30 - 6:45	0	253	7	2	262	1	61	0	0	62	6	0	0	0	6	0	0	0	0	0	330
6:45 - 7:00	0	369	16	5	390	2	75	0	0	77	9	0	2	0	11	0	0	0	0	0	478
7:00 - 7:15	0	424	13	2	439	1	85	0	0	86	9	0	1	0	10	0	0	0	0	0	535
7:15 - 7:30	0	482	33	5	520	4	141	0	0	145	16	0	0	0	16	0	0	0	0	0	681
7:30 - 7:45	0	485	32	6	523	0	151	0	1	152	12	0	0	0	12	0	0	0	0	0	687
7:45 - 8:00	0	536	45	6	587	1	195	0	0	196	10	0	1	0	11	0	0	0	0	0	794
8:00 - 8:15	0	531	47	5	583	4	166	0	0	170	14	0	0	0	14	0	0	0	0	0	767
8:15 - 8:30	0	537	48	0	585	3	161	0	1	165	24	0	4	0	28	0	0	0	0	0	778
8:30 - 8:45	0	546	62	3	611	0	169	0	0	169	16	0	3	0	19	0	0	0	0	0	799
8:45 - 9:00	0	538	56	2	596	2	197	0	1	200	20	0	1	0	21	0	0	0	0	0	817
9:00 - 9:15	0	490	41	8	539	3	183	0	1	187	9	0	2	0	11	0	0	0	0	0	737
9:15 - 9:30	0	397	30	2	429	5	193	0	0	198	14	0	3	0	17	0	0	0	0	0	644
9:30 - 9:45	0	314	40	11	365	3	202	0	0	205	11	0	0	0	11	0	0	0	0	0	581
9:45 - 10:00	0	245	21	10	276	1	165	0	0	166	11	0	3	0	14	0	0	0	0	0	456
10:00 - 10:15	0	167	10	13	190	4	157	0	0	161	14	0	2	0	16	0	0	0	0	0	367
10:15 - 10:30	0	147	10	9	166	3	115	0	0	118	9	0	1	0	10	0	0	0	0	0	294
10:30 - 10:45	0	183	13	10	206	3	166	0	0	169	10	0	2	0	12	0	0	0	0	0	387
10:45 - 11:00	0	128	8	6	142	5	158	0	0	163	9	0	2	0	11	0	0	0	0	0	316
11:00 - 11:15	0	141	8	8	157	2	167	0	1	170	13	0	1	0	14	0	0	0	0	0	341
11:15 - 11:30	0	112	13	6	131	2	171	0	0	173	10	0	0	0	10	0	0	0	0	0	314
11:30 - 11:45	0	134	5	6	145	1	188	0	1	190	15	0	3	0	18	0	0	0	0	0	353
11:45 - 12:00	0	114	12	3	129	6	176	0	0	182	20	0	0	0	20	0	0	0	0	0	331
12:00 - 12:15	0	139	17	6	162	4	229	0	0	233	20	0	3	0	23	0	0	0	0	0	418
12:15 - 12:30	0	147	20	3	170	0	199	0	0	199	20	0	1	0	21	0	0	0	0	0	390
12:30 - 12:45	0	147	11	6	164	5	197	0	0	202	20	0	3	0	23	0	0	0	0	0	389
12:45 - 1:00	0	181	17	8	206	4	152	0	0	156	20	0	0	0	20	0	0	0	0	0	382
1:00 - 1:15	0	164	24	7	195	1	203	0	0	204	16	0	1	0	17	0	0	0	0	0	416
1:15 - 1:30	0	160	19	6	185	2	209	0	1	212	13	0	1	0	14	0	0	0	0	0	411
1:30 - 1:45	0	163	14	4	181	2	207	0	2	211	13	0	6	0	19	0	0	0	0	0	411
1:45 - 2:00	0	151	19	9	179	2	233	0	1	236	24	0	3	0	27	0	0	0	0	0	442
2:00 - 2:15	0	136	6	7	149	3	212	0	0	215	12	0	4	0	16	0	0	0	0	0	380
2:15 - 2:30	0	128	8	7	143	2	206	0	0	208	11	0	1	0	12	0	0	0	0	0	363
2:30 - 2:45	0	130	7	7	144	0	241	0	0	241	13	0	1	0	14	0	0	0	0	0	399
2:45 - 3:00	0	156	11	7	174	1	246	0	0	247	11	0	3	0	14	0	0	0	0	0	435
3:00 - 3:15	0	123	7	3	133	3	357	0	0	360	23	0	5	0	28	0	0	0	0	0	521
3:15 - 3:30	0	131	5	4	140	5	318	0	1	324	10	0	1	0	11	0	0	0	0	0	475
3:30 - 3:45	0	151	4	7	162	2	372	0	2	376	12	0	1	0	13	0	0	0	0	0	551
3:45 - 4:00	0	169	17	4	190	3	396	0	0	399	26	0	1	0	27	0	0	0	0	0	616
4:00 - 4:15	0	130	12	3	145	4	420	0	0	424	19	0	0	0	19	0	0	0	0	0	588
4:15 - 4:30	0	147	11	1	159	4	454	0	1	459	19	0	0	0	19	0	0	0	0	0	637
4:30 - 4:45	0	172	12	1	185	6	543	0	0	549	22	0	1	0	23	0	0	0	0	0	757
4:45 - 5:00	0	167	7	4	178	3	522	0	0	525	28	0	0	0	28	0	0	0	0	0	731
5:00 - 5:15	0	160	8	2	170	6	566	0	0	572	22	0	4	0	26	0	0	0	0	0	768
5:15 - 5:30	0	191	16	1	208	4	570	0	0	574	18	0	4	0	22	0	0	0	0	0	804
5:30 - 5:45	0	185	9	0	194	9	531	0	9	549	19	0	2	0	21	0	0	0	0	0	764
5:45 - 6:00	0	159	12	2	173	5	462	0	0	467	29	0	3	0	32	0	0	0	0	0	672
6:00 - 6:15	0	171	17	0	188	4	453	0	0	457	26	0	3	0	29	0	0	0	0	0	674
6:15 - 6:30	0	162	17	2	181	8	444	0	0	452	22	0	3	0	25	0	0	0	0	0	658
6:30 - 6:45	0	124	11	4	139	5	385	0	0	390	26	0	3	0	29	0	0	0	0	0	558
6:45 - 7:00	0	107	19	6	132	6	308	0	0	314	22	0	6	0	28	0	0	0	0	0	474
13 Hr Totals	0	11782	938	262	12982	162	13136	0	23	13321	838	0	98	0	936	0	0	0	0	0	27239

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Counted by: VCU

Intersection of: Great Seneca Highway | Date: March 05, 2019 | Tuesday

and: Decoverly Drive | Weather: Sunny/Cool

Location: Montgomery County, Maryland | Entered by: SN | Star Rating: 5

TIME	TRAFFIC FROM NORTH on: Great Seneca Highway					TRAFFIC FROM SOUTH on: Great Seneca Highway					TRAFFIC FROM EAST on: Decoverly Drive					TRAFFIC FROM WEST on:					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
1 Hr Totals																					
6:00 - 7:00	0	880	34	20	934	6	195	0	0	201	36	0	5	0	41	0	0	0	0	0	1176
6:15 - 7:15	0	1207	41	17	1265	5	256	0	0	261	36	0	5	0	41	0	0	0	0	0	1567
6:30 - 7:30	0	1528	69	14	1611	8	362	0	0	370	40	0	3	0	43	0	0	0	0	0	2024
6:45 - 7:45	0	1760	94	18	1872	7	452	0	1	460	46	0	3	0	49	0	0	0	0	0	2381
7:00 - 8:00	0	1927	123	19	2069	6	572	0	1	579	47	0	2	0	49	0	0	0	0	0	2697
7:15 - 8:15	0	2034	157	22	2213	9	653	0	1	663	52	0	1	0	53	0	0	0	0	0	2929
7:30 - 8:30	0	2089	172	17	2278	8	673	0	2	683	60	0	5	0	65	0	0	0	0	0	3026
7:45 - 8:45	0	2150	202	14	2366	8	691	0	1	700	64	0	8	0	72	0	0	0	0	0	3138
8:00 - 9:00	0	2152	213	10	2375	9	693	0	2	704	74	0	8	0	82	0	0	0	0	0	3161
8:15 - 9:15	0	2111	207	13	2331	8	710	0	3	721	69	0	10	0	79	0	0	0	0	0	3131
8:30 - 9:30	0	1971	189	15	2175	10	742	0	2	754	59	0	9	0	68	0	0	0	0	0	2997
8:45 - 9:45	0	1739	167	23	1929	13	775	0	2	790	54	0	6	0	60	0	0	0	0	0	2779
9:00 - 10:00	0	1446	132	31	1609	12	743	0	1	756	45	0	8	0	53	0	0	0	0	0	2418
9:15 - 10:15	0	1123	101	36	1260	13	717	0	0	730	50	0	8	0	58	0	0	0	0	0	2048
9:30 - 10:30	0	873	81	43	997	11	639	0	0	650	45	0	6	0	51	0	0	0	0	0	1698
9:45 - 10:45	0	742	54	42	838	11	603	0	0	614	44	0	8	0	52	0	0	0	0	0	1504
10:00 - 11:00	0	625	41	38	704	15	596	0	0	611	42	0	7	0	49	0	0	0	0	0	1364
10:15 - 11:15	0	599	39	33	671	13	606	0	1	620	41	0	6	0	47	0	0	0	0	0	1338
10:30 - 11:30	0	564	42	30	636	12	662	0	1	675	42	0	5	0	47	0	0	0	0	0	1358
10:45 - 11:45	0	515	34	26	575	10	684	0	2	696	47	0	6	0	53	0	0	0	0	0	1324
11:00 - 12:00	0	501	38	23	562	11	702	0	2	715	58	0	4	0	62	0	0	0	0	0	1339
11:15 - 12:15	0	499	47	21	567	13	764	0	1	778	65	0	6	0	71	0	0	0	0	0	1416
11:30 - 12:30	0	534	54	18	606	11	792	0	1	804	75	0	7	0	82	0	0	0	0	0	1492
11:45 - 12:45	0	547	60	18	625	15	801	0	0	816	80	0	7	0	87	0	0	0	0	0	1528
12:00 - 1:00	0	614	65	23	702	13	777	0	0	790	80	0	7	0	87	0	0	0	0	0	1579
12:15 - 1:15	0	639	72	24	735	10	751	0	0	761	76	0	5	0	81	0	0	0	0	0	1577
12:30 - 1:30	0	652	71	27	750	12	761	0	1	774	69	0	5	0	74	0	0	0	0	0	1598
12:45 - 1:45	0	668	74	25	767	9	771	0	3	783	62	0	8	0	70	0	0	0	0	0	1620
1:00 - 2:00	0	638	76	26	740	7	852	0	4	863	66	0	11	0	77	0	0	0	0	0	1680
1:15 - 2:15	0	610	58	26	694	9	861	0	4	874	62	0	14	0	76	0	0	0	0	0	1644
1:30 - 2:30	0	578	47	27	652	9	858	0	3	870	60	0	14	0	74	0	0	0	0	0	1596
1:45 - 2:45	0	545	40	30	615	7	892	0	1	900	60	0	9	0	69	0	0	0	0	0	1584
2:00 - 3:00	0	550	32	28	610	6	905	0	0	911	47	0	9	0	56	0	0	0	0	0	1577
2:15 - 3:15	0	537	33	24	594	6	1050	0	0	1056	58	0	10	0	68	0	0	0	0	0	1718
2:30 - 3:30	0	540	30	21	591	9	1162	0	1	1172	57	0	10	0	67	0	0	0	0	0	1830
2:45 - 3:45	0	561	27	21	609	11	1293	0	3	1307	56	0	10	0	66	0	0	0	0	0	1982
3:00 - 4:00	0	574	33	18	625	13	1443	0	3	1459	71	0	8	0	79	0	0	0	0	0	2163
3:15 - 4:15	0	581	38	18	637	14	1506	0	3	1523	67	0	3	0	70	0	0	0	0	0	2230
3:30 - 4:30	0	597	44	15	656	13	1642	0	3	1658	76	0	2	0	78	0	0	0	0	0	2392
3:45 - 4:45	0	618	52	9	679	17	1813	0	1	1831	86	0	2	0	88	0	0	0	0	0	2598
4:00 - 5:00	0	616	42	9	667	17	1939	0	1	1957	88	0	1	0	89	0	0	0	0	0	2713
4:15 - 5:15	0	646	38	8	692	19	2085	0	1	2105	91	0	5	0	96	0	0	0	0	0	2893
4:30 - 5:30	0	690	43	8	741	19	2201	0	0	2220	90	0	9	0	99	0	0	0	0	0	3060
4:45 - 5:45	0	703	40	7	750	22	2189	0	9	2220	87	0	10	0	97	0	0	0	0	0	3067
5:00 - 6:00	0	695	45	5	745	24	2129	0	9	2162	88	0	13	0	101	0	0	0	0	0	3008
5:15 - 6:15	0	706	54	3	763	22	2016	0	9	2047	92	0	12	0	104	0	0	0	0	0	2914
5:30 - 6:30	0	677	55	4	736	26	1890	0	9	1925	96	0	11	0	107	0	0	0	0	0	2768
5:45 - 6:45	0	616	57	8	681	22	1744	0	0	1766	103	0	12	0	115	0	0	0	0	0	2562
6:00 - 7:00	0	564	64	12	640	23	1590	0	0	1613	96	0	15	0	111	0	0	0	0	0	2364
PEAK HOUR																					
8:00 - 9:00	0	2152	213	10	2375	9	693	0	2	704	74	0	8	0	82	0	0	0	0	0	3161
4:45 - 5:45	0	703	40	7	750	22	2189	0	9	2220	87	0	10	0	97	0	0	0	0	0	3067