RCCG Jesus House

Preliminary Plan # 120160040

TRAFFIC STUDY

Prepared for: RCCG Jesus House Montgomery County, Maryland



January 18, 2016

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INTRODUCTION

This report presents the results of a Traffic Study for Jesus House's (the "Applicant") planned 1,600 seat house of worship, a 350 student K-12th grade school and a multipurpose youth center located at 15730 New Hampshire Avenue in the Cloverly Policy Area of Montgomery County, Maryland, The Center is expected to be used during weekday evening hours after 7:00 PM and on weekends.

january 18, 2016

Table 1-1 Proposed Development					
Land Use	Size				
House of worship	1600 Seat				
K-12th grade school	350 Students				
Total area of the buildings	110,000 square feet				

Table 1-1 Proposed Development	Table 1	-1 Proposed	Development
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- 1. This Traffic Study was originally dated August 9, 2015 with three alternative analysis of three traffic operation scenarios for the weekday peak for the school traffic that include:
 - A full median break on New Hampshire Avenue at the site entrance. This included a A. queuing analysis using SYNCHRO model.
 - U-turns allowed at New Hampshire Avenue and Harding Lane. (No median break) B.
 - C. U-turns at New Hampshire Avenue and Norbeck Road. (No median break and no "U" turns permitted at Harding Lane)

The Maryland State Highway Administration (SHA) has informed the applicant that they will consider a median break at the site entrance as a T-Intersection only allowing left-turn in and out of the subject site. This revised traffic study includes SHA, Montgomery County Department of Transportation (MCDOT) and M-NCPPC Montgomery County Planning Department's (MCPD) comments and suggested changes. A formal response letter has been submitted to reviewing agencies comments.

This study is conducted in accordance with the Maryland-National Capital Park and Planning Commission's (M-NCPPC) current Local Area Transportation Review and Transportation Policy Area Review (LATR/TPAR) Guidelines. The study parameters were established in consultation with M-NCPPC staff. An approved copy of the M-NCPPC scope of work forms is included in Appendix A.

The following are the tasks that were performed to prepare this study:

- 2. Review proposed development plans, previous traffic studies conducted in the area, and other background materials.
- 3. A field reconnaissance of existing roadway and intersection geometrics, traffic controls, traffic signal phasing, and speed limits.
- 4. Conduct existing vehicular and pedestrian traffic counts at seven (7) off-site intersections and at the location where the future site access will be located.
- 5. Analysis of existing critical lane volumes (CLVs) at each of the seven (7) off-site intersections.
- 6. Forecast of background traffic volumes based on existing traffic counts and added generated trips from eleven (11) background developments (approved but un-built development in the area) that were given to us by M-NCPPC staff.



- 7. Conduct background development trip distribution and assignments based on M-NCPPC procedure in the LATR and TPAR Guidelines.
- 8. Calculate future background development CLVs at each of the seven (7) off-site intersections for the weekday AM and PM peak hours.
- 9. Calculate the site generated trips during weekday AM and PM peak hours based on current LATR and TPAR Guidelines trip rates and /or trip calculation equations.
- 10. Calculate the site-generated trip distributions and assignments based on M-NCPPC procedures.
- 11. Calculate future traffic forecasts with the Project based on future background traffic plus site traffic assignments.
- 12. Calculate future CLVs with the Project at each of the seven (7) off-site intersections and the site access intersection with New Hampshire Avenue based on future traffic forecasts with the Project, existing traffic controls, and existing intersection geometrics.
- 13. Analysis of a full median break ("T" intersection only allowing left-turns in and out of the subject site) on New Hampshire Avenue at the site entrance. This includes a queuing analysis and Level of Service (LOS) and delay results using SYNCHRO model.
- 14. Prepare a pedestrian and bicycle statement in accordance with the current LATR and TPAR Guidelines.
- 15. Evaluate and discuss transit routes, services and bus stops at all study intersections. A map of transit routes in the study area is provided.
- 16. Conduct and prepare a Transportation Policy Area Review analysis.
- 17. Prepare a traffic circulation statement and map.

Sources of data and background information for this analysis include the M-NCPPC's current LATR and TPAR Guidelines; M-NCPPC's Growing Smarter 2012-2016 Subdivision Staging Policy Report; Institute of Transportation Engineers (ITE) Trip Generation Manual-9th Edition, traffic counts conducted by STS Consulting, the Montgomery County Department of Transportation (MCDOT), and the Maryland State Highway Administration (MSHA).

The summary of the traffic study findings and conclusions are as follows:

- 1. Currently, all seven (7) studied intersections operate within the congestion standard of 1,475 CLV for the Cloverly Policy Area during the weekday AM and PM peak hours.
- 2. Sidewalks and other pedestrian amenities including crosswalks, pedestrian signal heads and ADA ramps are located at some of the intersections and missing at other locations partly due to the rural character of the area. Bus service is limited and bus stops are sparsely located on the major roads.



- 3. Eleven (11) pipeline developments will generate 167 weekday AM peak hour trips and 270 weekday PM peak hour trips, upon completion.
- 4. With the additional traffic that would be added to the road network by pipeline developments, all seven (7) study intersections will continue to operate within the congestion standard.
- 5. The proposed new uses (350 student school) will generate a net 177 weekday AM peak hour trips and 177 weekday PM peak hour trips. The house of worship and the multipurpose youth center do not generate weekday peak hour trips. Six percent pass-by trips and 29 percent diverted trips were deducted to reach the net trips.
- 6. With the additional weekday peak hour traffic that would be added to the road network by the Project, all seven (7) study intersections will continue to operate within the congestion standard.
- 7. The Project passes the new TPAR test for highway capacity but fails due to inadequate transit services. The applicant should pay 25% of the impact tax to mitigate the inadequacy of transit services to pass the TPAR test.
- 8. Sidewalk/crosswalk and bicycle facilities (or missing) on segments of the road network and at a number of locations approaching the intersections. The list of facilities where these facilities are provided or links missing is discussed under the Pedestrian/Bicycle Statement.
- 9. Internal circulation and access would operate safely and efficiently with or without the median break on New Hampshire Avenue.







SECTION 2 - EXISTING CONDITIONS

Public Road Network

Definitions of classes of roadways are as follows:

Freeways

Provide for movement of vehicles at high speed over significant distances. Access is limited to grade-separated interchanges.

Major Highways

Provide less speed and mobility, but more access at intersections.

Arterial Roads

Connect major highways and provide more access points while moving traffic at lower speeds. Typically, more than half of the traffic on an arterial is through traffic.

Commercial Business District Streets

Are restricted to commercial areas, provide on-street parking, more pedestrian space, and more access points to stores and offices.

Primary Residential Streets

May carry some through traffic but their main purpose is to provide access for 200 or more households and to connect to arterial roads.

Secondary or Tertiary Residential Streets

Provide direct access to homes and allow for the possibility of traffic management measures to discourage through traffic movements and speeding. (These are not listed in master plans.)

Existing Road Network

Regional access to the Property is provided by the Intercounty Connector (ICCMD 200), New Hampshire Avenue (MD 650), Norbeck Road (MD 28) and Spencerville Road (MD 198). Direct access to the Property is provided from New Hampshire Avenue (MD 650). Existing intersection lane use and traffic control at key intersections in the site vicinity are shown in Figure 2-1.

The ICC (MD 200) is a limited access highway linking I-370 to US 1 in Prince George's County. It is a six-lane toll road with bikeways provided along most sections of the road. There is an interchange at MD 650 providing regional access to the site.

New Hampshire Avenue (MD 650) within the study area is a six-lane, median-divided, major highway providing both regional and local access to the site. MD 650 connects Washington, D.C. and the upper east side of Montgomery County. Sidewalks and crosswalks are located on the road near the site. Additional discussion of pedestrian and bicycle facilities at all intersections are provided in Section 2 of this traffic study.









Norbeck Road (**MD 28**) is a two-lane major highway from west of MD 650 to just east of Norwood Road and it then becomes a two-lane median-divided road to just west of Layhill Road (MD 182), providing regional access to the site.

Spencerville Road (MD198) is two-lane major highway providing regional access to the site from points east including Howard and Prince George's Counties.

Briggs Chaney Road is an arterial road connecting New Hampshire Avenue just south of the site to points east, providing regional and mostly local access to the site.

Norwood Road is an arterial road connecting New Hampshire Avenue south of the site to points west, providing regional and mostly local access to the site.

Ednor Road is an arterial road connecting points east and west of New Hampshire Avenue to the north of the site, providing regional and mostly local access to the site.

Study Area Definition

According to the current LATR and TPAR Guidelines, the study area is determined based on the number of trips that will be generated by the total development.

Based on the current LATR and TPAR Guidelines rates/equations, the proposed K-12 private school will generate a total of 273 weekday AM peak hour trips. All students arriving at the school in the morning are expected to remain in school until 5 or 6 PM. Therefore, we assumed the same number of 273 generated trips for the weekday PM peak hour.

M-NCPPC's LATR and TPAR Guidelines specify that the study area shall include a minimum of two (2) signalized intersections in each direction from the site driveways for sites that generate between 250 and 749 weekday peak hour trips. Access is proposed via New Hampshire Avenue.

The following study intersections were specified by M-NCPPC staff:

- 1. New Hampshire Avenue (MD 650) and Norbeck Road (MD 28)
- 2. New Hampshire Avenue (MD 650) and Ednor Road
- 3. New Hampshire Avenue (MD 650) and Briggs Chaney Road
- 4. New Hampshire Avenue (MD 650) and Norwood Road
- 5. Briggs Chaney Road and Good Hope Road
- 6. Spencerville Road (MD 198) and Peach Orchard Road
- 7. Norbeck Road (MD 28) and Norwood Road

Transit Facilities and Services

Metrobus Bus Service. Metrobus service provided by the Washington Metropolitan Area Transit Authority (WMATA) operates along New Hampshire Avenue. (Metrobus lineZ2 operates only during the peak periods.)

Ride-On Bus Service. Ride-On Route 39 operates on Bonifant Road, Good Hope Road and Briggs Chaney Road near the site during the peak hours with 30 minute headways. Figure 2-2 Shows Transit Routes.



Figure 2-2 Transit Routs





Existing Traffic Counts

Overview. Existing vehicular and pedestrian traffic counts were conducted by STS Consulting at the seven (7) off-site study intersections on Thursday, April 30, 2015. The traffic counts at the planned site access on New Hampshire Avenue were taken on June 4, 2015[,] during the AM and PM peak hours to calculate the CLV for the site's intersection with New Hampshire Avenue. These counts were conducted during a non-holiday week when Montgomery County public schools were in session from 6:30 to 9:30 AM, and from 4:00 to 7:00 PM, in accordance with the LATR and TPAR Guidelines.

The existing vehicular traffic counts are presented in Appendix B and summarized in Figure 2-3.

New Hampshire Avenue carries 1,520 AM peak hour trips and 1,399 PM peak hour trips, south of the site and 1,109 AM and 1,448 PM peak hour trips north of the site. During the AM peak hour, 66 percent travel southbound and 33 percent travel northbound. During the PM peak hour, 35 percent travel southbound and 65 percent travel northbound.

A total of 40 pedestrians and one bicyclist were observed at all seven off-site intersections during the weekday AM and PM peak periods. Additional information is provided in the next section under Pedestrian and Bicycle Statement.



Figure 2-3 Existing Traffic Volume





Pedestrian/Bicycle Statement

The pedestrian/bicycle statement discusses the safe and efficient pedestrian and bicycle access and circulation to and within the site as well as other off-site intersections evaluated for this traffic study.

The site is located in the suburban area of Cloverly where population density is low and, due to land use characteristics of the area, minimal pedestrian and bicycle activities are taking place. Most locations have good sidewalks and limited bicycle facilities.

<u>Hiker/Bikers Lanes</u>. Some areas have Hiker/Biker lanes which is defined as a minimum of 8-foot wide separate shared use path for bicyclists and pedestrians use.

The following is a summary of existing pedestrian and bicycle facilities:

1. New Hampshire Avenue (MD 650) and Spencerville Road (MD 198)

On the west side and south of the intersection, there is a 5-foot wide sidewalk terminating 200 feet south of the intersection. There are no sidewalk or bicycle facilities along the road to a point near the planned site access. There is a 5' sidewalk along the site frontage that is in a good shape and extends south for more than a mile. There are wide shoulders along this segment of New Hampshire Avenue. The applicant plans to provide lead-in sidewalks connecting to the facilities along the road.

On the east side, south of the intersection, there is a 6-foot wide sidewalk in good condition for about 300' and then a 3-foot wide sidewalk connects to it extending south about half a mile. There are bus stops near the intersection on the east and west side of New Hampshire Avenue.

To the north of the intersection, a 5-foot wide sidewalk extends about 330' on the east side and a 10' wide hiker biker lane is provided on the west side extending north to Ednor Road.

A hiker biker lane extends to Norwood Road on the west side of MD 198 and a short segment of sidewalk exists on the south side of MD 198.

On the east side of the intersection, north of MD 198, there are no sidewalk or bicycle facilities. On the south side, a sidewalk extends for a short distance.

Currently there exists handicap ramps and crosswalks on the north, east and west of the intersection but not on New Hampshire Avenue (MD-650) on the south side of the intersection. There is no pedestrian activated signal at the intersection of New Hampshire Road (MD-650) and Norbeck/Spencerville Road (MD-198) at the following locations:

- a. Pedestrian crossing Norbeck Road on the west side of the intersection.
- b. Pedestrian crossing New Hampshire Road on the south side of the intersection.

2. New Hampshire Avenue (MD 650) and Ednor Road

There is a 10' hiker/ biker lane on the west side of New Hampshire Avenue extending south. No other sidewalk or bicycle facilities are in place. The intersection has no activated pedestrian signals. There are crosswalks on the north and west sides of the intersection. There are existing handicapped ramps on the northwest, northeast and southwest sides of the intersection.



3. New Hampshire Avenue (MD 650) and Briggs Chaney Road

Sidewalks (5-foot wide) exist along New Hampshire Avenue north of the intersection. There are missing links on the south side of the intersection. There are 5-foot wide sidewalks on the north side of Briggs Chaney Road extending east. There are crosswalks on the east and north sides of the intersection with handicapped ramps and pedestrian-activated signals for the directions that the crosswalks exist. There are bus stops on the northwest corner of the intersection for the Metrobus Z2 route.

4. New Hampshire Avenue (MD 650) and Norwood Road

Sidewalks (5-foot wide) are located along MD 650 north of the intersection. Sidewalks also exist along the west side of MD 650 to the north and south of the intersection. There are crosswalks located on the south and west side of the intersection with pedestrian- activated signals and handicapped ramps. However, the ramp on the southwest corner of the intersection does not connect with the corresponding crosswalk.

There are Metrobus stops on southwest and southeast corners of the intersection.

5. Briggs Chaney Road and Good Hope Road

There are no sidewalks along any approaches but there are pedestrian-activated signals and crosswalks located on all sides. There is a handicapped ramp on the southwest corner of the intersection. There are Ride-On bus stops on the north and south sides of Briggs Chaney Road east of the intersection.

6. Spencerville Road (MD 198) and Peach Orchard Road

There are no pedestrian, bicycle, pedestrian activated signals or handicapped ramps at or near the intersection. As we understand it, this intersection is being considered for improvements by SHA and the appropriate safety features would be part of the new design for the intersection.

7. Norbeck Road (MD 28) Norwood Road

There is a 10-foot wide hiker/ biker lane on the north side of MD 28 extending east to MD 650 and to the west extending to Layhill Road (MD 182). A pedestrian walkway extends west on the south side of MD 28 for a short segment. Also, short sidewalks exist on Norwood Road extending south of the intersection. There are crosswalks on the west and north sides with pedestrian-activated signals. The handicapped ramp on the southeast corner of the intersection is offset from the crosswalks.

8. Site Access

A short section of sidewalk along New Hampshire Avenue (MD 650) site entrance is located adjacent to the edge of the pavement. There will be acceleration/deceleration lanes at the site entrance with the sidewalk and bike lanes included in the cross section according to the SHA design guidelines.

Congestion Standard

The Project is located within the Cloverly Policy Area of Montgomery County. The congestion standard in this area is 1,450 CLV according to the LATR and TPAR Guidelines. The seven (7) studied intersections are located within the Cloverly Policy Area.



Existing Intersection Critical Lane Volumes

Existing weekday peak hour critical lane volumes (CLV) were calculated at the seven (7) signalized intersections within the study area based on the existing lane use and traffic control shown in Figure 2-1. The existing vehicular traffic volumes are shown in Figure 2-4. M-NCPPC's CLV intersection capacity analysis procedures were used to determine the level of congestion at each studied intersection and the results are presented in Appendix C and summarized in Table 2-1.

Table 2-1 indicates that each of the studied intersections currently operate within the congestion standard during the weekday AM and PM peak hours.

	Table 2-1 Intersection Capacity Analyses-Existing Condition (CLV Method)				
	Intersection	Existing	g Traffic		
		AM	PM		
1.	MD 650/MD 198/MD 28	823	988		
2.	MD 650/Ednor Road	919	1128		
3.	MD 650/Briggs Chaney Road	670	853		
4.	MD 650/Norwood Road	1348	1118		
5.	Briggs Chaney Road/ Good Hope Road	795	804		
6.	MD 198/Peach Orchard Road	1206	1192		
7.	MD 28/ Norwood Road	1056	839		

Table 2-1 Intersection Capacity Analyses-Existing Condition (CLV Method)

SECTION 3 - FUTURE TRAFFIC CONDITIONS WITHOUT THE PROJECT

Overview

This section presents analyses of future traffic conditions in the study area without the proposed site development for the 350 student K-12 private school.

Pipeline Developments

M-NCPPC staff identified 11 developments within the study area to be included as pipeline or background development in the scoping document (Appendix A). The developments include the following:

- St. Constantine & Helen Greek (120100240) West of Norwood Road and straddles Norbeck Road. Northeast and southeast corner of Norwood Road and Norbeck Road intersection. 35,930 square feet church (600 seats).
- 2. Bryants Nursery Road (120060720) South of Norbeck Road and 1,500 feet east of Norwood Road/Norbeck Road intersection. 2 single family detached homes.
- 3. Bryants Nursery Road (120050760) South of Norbeck Road and 1,800 feet east of Norwood Road/Norbeck Road intersection. 2 single family detached homes.
- 4. Hill Farm (120000790) North of Norwood and 300 feet east of Crimson Spine Court 1 single family detached home.
- 5. Quershi (120060050) North of Norwood and just to the east of Hill Farm (120000790) noted above in #4) 3 single family detached homes.



- 6. Cloverly Farm Market (119970830) West of New Hampshire (MD 650) and 200 feet north of Briggs Chaney Road behind the existing shopping center 56,000 square feet religious use.
- Anselmo (120100160)) North of Briggs Chaney Road and approximately 0.4 miles to the east of the Briggs Chaney Road/New Hampshire Avenue intersection (MD 650) 32 single family detached homes and 5 single family attached homes.
- 8. Bernhard Acres (119960240) Southeast corner of New Hampshire Avenue (MD 650) and Spencerville Road (MD 198) 5 single family detached homes.
- 9. Jacot Property (120060340) South of Spencerville Road (MD 198) and 100 feet to the west of Oak Hill Road 1 single family detached home.
- 10. Spencerville Knolls (120061010) North of Spencerville Road (MD 198) and 300 feet west of Thompson Road 4,800 square foot expansion of landscaping business.
- 11. PMG Silver Spring ()– Northeast corner of MD 198 and MD 650 Approved by the Planning Board on September 3, 2015 1,770 square foot convenience store with one drive through carwash and 10 gasoline pumps.



Table 3-1 Pipeline Project Trip Generation								
Development Name	Land Use AM					PM		
		In	Out	Total	In	Out	Total	
1.St. Constantine Church (New Trip)*	35,930 Square Ft.*	12	8	20	22	24	46	
2. Bryant Nursery Road	2 SF Res. Units	1	1	2	1	1	2	
3. Bryant Nursery Road	2 SF Res. Units	1	1	2	1	1	2	
3.Hill Farm	1 SF Res. Unit	0	1	1	1	0	1	
4.Quershi	3 SF res. Units	1	2	3	2	1	3	
5.Angelmo	32 Townhouses	3	12	15	18	9	27	
6.Cloverly Farm Church	56,000 Square Ft.	19	12	31	15	16	31	
7.Angelmo	5 SF Res. Units	1	4	5	2	4	6	
8.Bernhard Acres	5 SF Res. Units	1	4	5	2	6	8	
9.Jacot Property	1 SF Res. Unit	1	1	2	1	1	2	
10.Spencervill Knolls Nursery	4,800 Square Feet	6	6	12	16	17	33	
11.PMG Silver Spring Conv. Store	1,770 Square	37	32	69	55	54	109	
	Feet/10 Pump/Car							
	Wash							
TOTAL		83	84	167	136	134	270	

The pipeline development locations are listed in Table 3-1 and shown in Figure 3-1.





Figure 3-1 Location of Pipeline Development



Pipeline Development Weekday Peak Hour Traffic

The number of weekday peak hour trips that will be generated by the 11 pipeline developments located within the study area were estimated based on standard M-NCPPC trip generation rates or the ITE trip rates/equations (8th Edition) as well as from an approved traffic study for one of the developments.

As shown in Table 3-1, it is estimated that these projects will generate a total of 167 (83 in and 84 out) new weekday AM peak hour trips, and 270 (136 in and 134 out) new weekday PM peak hour trips, upon completion.

Future Traffic Forecasts without the Project

The weekday peak hour trips generated by the pipeline developments shown in Table 3-1 were assigned to the road network using the Trip Distribution and Traffic Assignment methodology for Super District 6 (White Oak, Fairland and Cloverly Policy Areas) published in the LATR and TPAR Guidelines. The combined peak hour traffic forecasts for all 11 developments are shown in Figure 3-2. The combined background traffic was added to existing weekday peak hour traffic at each intersection (Figure 3-2) to determine the future weekday peak hour traffic forecasts without the proposed development of the site as shown in Figure 3-3.

Future Intersection Critical Lane Volumes without the Project

Future weekday peak hour critical lane volumes without the Project were calculated at the seven (7) studied intersections based on the existing lane use and traffic control shown in Figure 2-1. The future weekday peak hour forecasts without the Project and the CLV intersection capacity analysis procedures, in accordance with M-NCPPC LATR guidelines, are shown in Figure 3-3. The results are presented in Appendix C and summarized in Table 3-2.

Table 3-2 indicates that each of the seven (7) intersections would continue to operate within the congestion standard during both the weekday AM and PM peak hours.

Intersection			Background Traffic		
		AM	PM		
1.	MD 650/MD 198/MD 28	857	1046		
2.	MD 650/Ednor Road	930	1228		
3.	MD 650/Briggs Chaney Road	726	932		
4.	MD 650/Norwood Road	1413	1171		
5.	Briggs Chaney Road/ Good Hope Road	808	832		
6.	MD 198/Peach Orchard Road	1256	1284		
7.	MD 28/ Norwood Road	1089	862		

Table 3-2 Intersection Capacity Analysis-Dackground Traffic Without Troject





Figure 3-2 Pipeline Development Peak Hour Forecast





Figure 3-3 Future Peak Hour Forecast without Project



SECTION 4 - FUTURE CONDITIONS WITH THE PROJECT

Overview

This section presents analyses of total future weekday peak hour traffic conditions in the study area with the Project.

Site Access /Median Break Concept

As shown in Figure 4-1, (Site Plan) a single access to the Project is proposed on MD 650. The median on MD 650 currently prohibits the site access to operate as a full movement entrance. The original traffic study presented three scenarios as to how the site access may operate in the future:

- 1. There will be a median break to allow a full movement access.
- 2. The median will remain in place and the traffic generated to the site from the south will make a "U" turn at Harding Lane to reach its destination.
- 3. The median will remain in place and a "NO U TURN" sign will be installed at Harding Lane to prevent site traffic from making a "U" turn at Harding Lane. Therefore, the site generated traffic will be required to travel north to the intersection of MD 650 and MD 198 and make a "U" turn to reach its destination at the site.



Figure 4-1 Site Plan Access Location

STS Consulting presented a traffic analysis of possible median break along New Hampshire Avenue (in the initial traffic study) for a full movement access to the site. Maryland State Highway Administration has reviewed the results of the traffic operation and safety of a median break and has concluded that a T-



Intersection median break to provide a left in and left out only to and from the site access is justified and has the merit to pursue. Therefore, this revised traffic study presents the result of the traffic operation with the T-Intersection median break access to the site. The detailed analysis and result of the traffic operation with a median break is presented in <u>Section 6-Interanl Circulation and Access</u>.

Site Trip Generation

The site trip generation was calculated based on the LATR/TPAR Guidelines trip generation rate for a K-12 private school. However, based on LATR/TPAR Guidelines, we suggested and MNCPPC staff approved a 6% pass-by trip and a 29% diverted trip reduction. The following table shows the site generated trips. (Table 4-1)

Land Use		AM		PM		
	In	Out	Total	In	Out	Total
350 K-12 Private School	161	112	273	112	161	273
6% Pass By Trips	10	7	17	7	10	17
29% Diverted Trips	47	32	79	32	47	79
Total Trip Reduction	-57	-39	-96	-39	-57	-96
Net New Trips	104	73	177	73	104	177

As shown in Table 4-1 above, the proposed school would generate 273 (161 in and 112 out) total weekday AM peak hour trips and 273 (112 in and 161 out) total weekday PM peak hour trips. The Project will add 177 net new trips to the road network during the weekday AM and PM peak hours.

Site Trip Distribution and Assignment

The distribution of weekday peak hour trips generated by the Project was determined based on the Trip Distribution and Traffic Assignment Guidelines published in the LATR and TPAR Guidelines. The directions of approach for the Project are as follows:

To/ From	Via	% Assigned
North	New Hampshire Avenue	2%
South	New Hampshire Avenue	75%
East	Briggs Chaney and MD 198	12%
West	<u>MD 28</u>	11%
Total		100%

The future site-generated weekday peak hour trips were distributed and assigned to the public road network according to the directional distribution described above and shown in Figure 4-2. The result of site traffic forecasts assignments are shown in Figure 4-3.











Figure 4-3 Site Trip Assignment



Pass-By and Diverted Trip Assignment

Based on discussion with MNCPPC staff and according to the approved scope of work, we have estimated 6% pass-by trips and 29% diverted trips. The assigned pass-by and diverted trips are shown in Figure 4-5. These trips exist on the network independent of the proposed project but stop at the site while traveling on the road network to some other destination. The distribution of these trips is determined based on the same distribution as site-generated trips.

Future Traffic Forecasts with the Project

The proposed future site traffic and background traffic were combined with existing traffic to yield the total future traffic shown in Figure 4-4.

Future Intersection Critical Lane Volumes with the Project

Future weekday peak hour CLVs with the Project were calculated at the studied intersections and at the site access point with the different scenarios based on the future median break, or "U" turns at Harding Lane or MD 198 and New Hampshire Avenue and are shown in Figure 4-4.

As shown in Table 4-3, all studied intersections would continue to operate within the congestion standard during the weekday AM and PM peak hours with the Project.

	Table 4-5 Intersection Capacity Analyses-Total Future Traine Condition								
	Intersection Existing Traffic		g Traffic	Backgrou	nd Traffic	Total Future			
						Traffic			
		AM	PM	AM	PM	AM	PM		
1.	MD 650/MD 198/MD 28	823	988	857	1046	886	1056		
2.	MD 650/Ednor Road	919	1128	930	1228	932	1230		
3.	MD 650/Briggs Chaney Road	670	853	726	932	770	967		
4.	MD 650/Norwood Road	1348	1118	1413	1171	1442	1212		
5.	Briggs Chaney Road/ Good Hope Road	795	804	808	832	811	836		
6.	MD 198/Peach Orchard Road	1206	1192	1256	1284	1264	1292		
7.	MD 28/ Norwood Road	1056	839	1089	862	1093	866		

Table 4-3 Intersection Capacity Analyses-Total Future Traffic Condition











Figure 4-5 Pass-by and Diverted Trips



SECTION 5 - TRANSPORTATION POLICY AREA REVIEW (TPAR)

Overview

The site is located within the Cloverly Policy Area. This area has adequate roadway capacity but inadequate transit services.

Mitigation

The applicant should make a 25% Impact Tax payment as a mitigation measure to pass the test for inadequate transit services. Upon the additional impact tax, this application passes the TPAR test section of the transportation APFO.

SECTION 6 – INTERNAL CIRCULATION AND ACCESS

The Jesus House is planned for a 1,600 seat house of worship mostly active on Sundays, a 350 student K-12th grade School and a multipurpose youth center. The multipurpose youth center is expected to be used on weekends and after weekday evening peak hours. Two (2) Sunday services are planned with about 30 minutes intervals in between each service to avoid traffic exiting and entering the site to coincide. The access is designed to have one lane in and two lanes out to allow for the traffic exiting the site to separate between those traveling north and south with a T-Intersection design median break on New Hampshire Avenue. STS Consulting used SYNCHRO model to simulate the traffic operation at the site access intersection with New Hampshire Avenue to determine, Level of Service (LOS) operation, queuing and delay for all turning movements at the site. Table 6-1 presents the result of SYNCHRO model and the output result is included in Appendix D.

With the T-Intersection median break considered by SHA for implementation, the site would be provided with a more efficient and safe traffic operation at the site access point. Without a median break, traffic generated to the site from the south (75% via New Hampshire combined with 4% from the east on Briggs Chaney Road for a total of 79% of the site-generated trips traveling north to make left turns into the site) must travel north to Harding Lane (located on the east side of New Hampshire Avenue) and make a "U" turn to come back to the site. This location is not the safest place for traffic to make "U" turns. Traffic entering and exiting Harding Lane, combined with traffic traveling north and south on New Hampshire Avenue and allowing "U" turns without a left turn storage lane within the median creates too many points of conflict without channelization control.

Alternatively, the site-generated traffic must travel north to the intersection of New Hampshire Avenue and MD 198/MD 28 and make a "U" turn to reach their destination at the site. This will result in an unnecessary increased in traffic on New Hampshire Avenue and at the intersection of MD 650 and MD 198/MD 28. SHA has determined that it would be safer if a T-Intersection median break was provide to allow northbound traffic to turn left onto the site via a deceleration lane and traffic exiting the site and destined north, to turn left onto an exclusive acceleration lane and merge safely with the northbound traffic. The design of this T-Intersection median break will comply with the SHA design guidelines. The conceptual design is shown in Figure 6-1. A more detailed design is shown as prat of the revised Preliminary Pan.

The proposed internal circulation planned (Figure 6-1) will maximize the safety and efficiency of the





Figure 6-1 Internal Circulation and Access

traffic within the site. The applicant proposes to provide an exclusive right turn lane (deceleration lane) and an acceleration lane for the traffic turning right in and right out of the site. These turn lanes will provide for a safer turn for a high number of trips during the Sunday Services.

To attend the Sunday Services, the traffic will enter the site (one lane in) and continue west along the main internal roadway without the ability to make a left turn as shown in Figure 6-1 and continue to the parking lot under the buildings or make a turn onto the circular drive in front of the main sanctuary. After dropping off or picking up at this location, traffic will continue on the circular drive to park or exit the site. Traffic will be controlled by temporarily placing traffic cones at locations where traffic movements will be appropriately controlled.

This will force the traffic to enter the parking lot under the buildings and then move east towards the site access at New Hampshire Avenue. The exit point has two lanes separating the traffic making a left turn to go north on New Hampshire Avenue and the traffic traveling south.

This circulation pattern provides a safe, efficient and orderly traffic movement within the site because the points of conflict are minimized. By providing a more efficient traffic operation within the site based on the proposed



traffic pattern, delays will be reduced within the site and, therefore, there will be no risk of spill over traffic into New Hampshire Avenue.

There will be at least one off duty police officer to direct traffic at the intersection of New Hampshire Avenue and the site access during the Sunday services

As part of this traffic circulation study, we have used SYNCHRO traffic simulation model to evaluate the efficiency of the traffic operation at the site access. The results are summarized in Table 6-1 and output results are included in Appendix D.

Table 6-1 SYNCHRO Results- Total Future Intersection Level of Service Analysis at Site Access with Median Break

Total Future Intersection								
Level of Service Analysis I	Results							
			AM Peak			PM Peak		
Scenario	Intersection	Movement	Approach LOS	Delay (seconds/veh)	95th percentile Queue (feet)	LOS	Delay (seconds/veh)	95th percentile Queue (feet)
		EBL	С	19.5	17	С	18.6	24
Site Access -W/ Median		EBR	Free Flow	0	18	Free Flow	0	22
Break on MD 650	MD 650/Site Access	NBL	Free Flow	0	20	Free Flow	0	10
		Free flow and n Overall Intersec	o delay for The tion LOS "A"	rough Movements for both AM and	s on MD 650 a PM Peaks	nd Right Turn L	anes.	

As shown in the table above, the median break option will result in an efficient and safe traffic operation as compared to making a "U" turn at Harding Lane. The safety aspects of the proposed internal and access circulation have been discussed in this section.

It is our conclusion that the proposed plan to provide a median break at the site access along New Hampshire Avenue and the internal traffic circulation pattern will provide the best option for safe, efficient and orderly traffic operation in the area.

SECTION 7 - CONCLUSIONS

The conclusions of this traffic impact study are as follows:

- 1. Currently, all seven (7) studied intersections operate within the Cloverly congestion standard of 1,450 CLV during the weekday AM and PM peak hours.
- 2. Sidewalks and other pedestrian amenities including crosswalks, pedestrian signal heads and ADA ramps are not completely adequate at every location partly due to the rural nature of the area. The traffic counts show minimal pedestrian or bicycle traffic at the studied locations. However, adequate sidewalks, wide shoulders and a wide median exist along the site frontage and at newly-constructed roads and intersections. There are limited bus services to the area but there are bus stops about quarter of a mile to half a mile from the site.
- 3. 11 pipeline developments will generate 167 weekday AM peak hour trips and 270 weekday PM peak hour trips, upon completion.



- 4. With the additional traffic that would be added to the road network by pipeline developments, all seven (7) study intersections would continue to operate within the congestion standard.
- 5. The proposed new school (350 student K-12th grade) will generate a total of 273 weekday AM and PM peak hour trips and 177 weekday AM and PM net peak hour trips (excluding pass-by and diverted trips.)
- 6. With the additional traffic that would be added to the road network by the Project, all seven (7) studied intersections and the site access intersection would continue to operate within the congestion standard.
- 7. The project passes the LATR test.
- 8. The Project passes the new TPAR test for highway capacity but fails the test for adequacy of transit services. The applicant will pay 25% of the impact tax to mitigate the inadequacy of the transit services and pass the TPAR test.
- 9. A T-Intersection median break is proposed and is considered by SHA for implementation provided that it complies with the SHA design guidelines. This median break provides for efficient, safe and orderly site generated traffic to enter and exit the site. The overall intersection traffic operates at LOS A. Bothe northbound left turn lane and eastbound left turn lane have a 95th percentile queue of not exceeding 24 feet either in the AM or PM peak hours.

APPENDIX A SCOPING DOCUMENTS





Local Area Transportation Review / Transportation Policy Area Review

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TRAFFIC STUDY SCOPE OF WORK AGREEMENT

Contact Information							
Transportation Consultant (company, contact, email, and phone number)	STS Consulting Shahriar Etemadi <u>Etemadi.sts@gmail.com</u> (410) 718-8660						
Name of Applicant / Developer	RCCG Jesus House						
Project Information	II	nclude	Tables/Gra	phics, As N	eeded		
Project Name (include plan no. if known)	RCCG Jesus House						
Project Location (include address if known)	Cloverly Area along New Hampshire Avenue south of MD 198						
Policy Area(s) (subdivision staging policy map)	Cloverly	Master Plan Sector Plan		in / n Area(s)	Area(s) Cloverly		
Application Type(s)	X Preliminary Plan	🗆 Si	te Plan	Sketch Plan		Amendment	
Conditional Use Conditional Use Amended (formerly special exception)		ocal Map ndment	Iment 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 APF, other relevant info)	The plan for the site includes a 1,600 seat house of worship, 350 K-12 private school and a youth center. The Youth Center will be in use during off- peak hours. Access to the surface and underground parking garage is planned on New Hampshire Avenue. The site is currently vacant land. The church is exempt from traffic analysis but the LATR/TPAR Guidelines states that " On sites with public or private facilities with 800 or more seats or that can otherwise accommodate 800 or more people during an event, which may have high traffic impacts, traffic studies should address concerns about the site access and circulation." STS Consulting will prepare a circulation plan as part of the traffic analysis to meet this requirement.						
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)	Currently one access from	New H	ampshire Av	enue is propo	osed.		

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Transportation Analysis Requirement (refer to pages 4 and 6 in the Jan. 2013 LATR Guldelines; staff can provide additional guidance and support)	X Traffic Study Generates <u>30 or more</u> total weekday peak hour trips (no reductions other than a credit for existing developments over 12 years old) <u>ANP</u> outside of White Flint Policy Area. Fill out remainder of this form, sign last page, and include in traffic study appendix.				□ Traffic Study Exemption Statement Generates <u>29 or fewer</u> total weekday peak hour trips (no reductions other than a credit for existing developments over 12 years old) <u>OR</u> within White Flint Policy Area. Fill out PAR and trip generation sections below, sign last page, and include with statement.		
Policy Area Review (PAR) (refer to pages 27 - 31 of the Jan. 2013 LATR Guidelines)	X TPAR (1/1/13 - Present) 0, 25, 50%: 25%)	□ PAMR (11/15/07 - 12/3) 0-50%:	/12)	 Exempt (no SF increase or fewer than 3 new trips) No PAR (7/1/03 - 11/14/07) PATR (before 6/30/03) 		
Transportation Mitigation Agreement (TMAg) Required?	X No	X No C Yes (25+ Employees and in TME) Amend Existing TMAg		
Transportation Management District (TMD)?	🗆 No	🗆 Ye	s TMD Name:	3:			
Traffic Impact Study	Assumptions		Include Tab.	les/c	Graphics, As Needed		
Study Years / Phases	Existing Year: 201	.5	Phases / Build-out	Year(s): 2017-18		
Study Periods	X AM X PM I Mid-day Saturday Sunday Other:						
# of tiers of intersections to study (refer to page 7 of Jan. 2013 LATR): _2							
	Norbeck Road (MD 28) Road						
(list all signalized & significant unsignalized intersections, and	2) New Hampshire Avenue (MD 650) and Ednor Road			8) Site Access			
corresponding CLV thresholds;	 New Hampshire Avenue (MD 650) and Briggs Chapey Road 			9)			
collected within 12-months of completed DARC application)	4) New Hampshire Avenue (MD 650) and Norwood Road			10)			
	5) Briggs Chaney Road and Good Hope Road				11)		
	 Spencerville Road (MD 198) and Peach Orchard Road 						

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Trip Generation (clearly cite sources and methodology, include trip gen for existing site, current approvals, proposed uses, and net changes)	According to the Local Area Transportation Review (LATR) and Transportation Policy Area Review (TPAR) Guidelines, we expect the school to generate 273 weekdays AM and 273 PM peak hour trips during the weekday peak periods. It is our understanding that the students coming to the site in the morning will remain in school until the evening peak hours and therefore, we assumed the same number of trips (as the AM peak hour) will be generated during the PM peak hour. The youth center will have events for the students and others during off-peak hours of the day.
Reductions / Mode Split (include justification and supporting documentation for internal capture, pass-by, diverted, transit, TDM)	According to January 2013 LATR/TPAR Guidelines, the Private School K-12 will have 6% Pass-by trips and 29% diverted trips, resulting 69% or 188 new trips will be the site generated trips in calculation of site impact in the traffic study.
Trip Distribution % (show percentage distribution throughout study area, refer to Appendix 4 of the Jan. 2013 LATR Guidelines for additional information on distributions)	Approximately 74% south, 16% west, 8% north and 2% east. These percentages may be modified as we adjust upon further analysis.
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; background growth rate, if applicable)	 According to MNCPPC staff, the following are the background developments. There are two churches in the list that will not be used as the background traffic due to no trips being generated during the peak hours and being exempt from traffic study. Eliminating the churches from the background traffic has been confirmed by MNCPPC staff. 1. St. Constantine & Helen Greek (120100240) – West of Norwood Road and straddles Norbeck Road. Northeast and southeast corner of Norwood Road and Norbeck Road intersection. 35,930 square feet church (600 seats) 2. Bryants Nursery Road (120060720) – South of Norbeck Road and 1,500 feet east of Norwood Road/Norbeck Road intersection. 2 single family detached homes 3. Bryants Nursery Road (120050760) – South of Norbeck Road and 1,800 feet east of Norwood Road/Norbeck Road intersection. 2 single family detached homes 4. Hill Farm (120000790 – North of Norwood and 300 feet east of Crimson Spine Court 1 single family detached house 5. Quershi (120060050 – North of Norwood and just to the east of Hill Farm (120000790) noted above in #4) 3 single family detached houses 6. Cloverly Farm Market (119970830) – West of New Hampshire (MD 650) and 200 feet north of Briggs Chaney Road behind the existing shopping center

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Preliminary Plan # 120160040 RCCG Jesus House Revised Traffic Study January 18, 2016

Pipeline Transportation Projects to be considered as background condition	 Angelmo (120100160)) – North of Brig miles to the east of the Briggs Chaney (MD 650) 32 single family detached homes 5 single family attached homes 8. Bernhard Acres (119960240) – Souther 650) and Spencerville Road (MD 198) 5 single family detached homes 9. Jacot Property (120060340) – South of to the west of Oak Hill Road 1 single family detached house 10. Spencerville Knoll (120061010) – North feet west of Thompson Road 4,800 square foot expansion of landsca 11. PMG Silver Spring (120140100 – North GOING TO THE PLANNING BOARD In J 3,250 square foot convenience store wi gasoline pumps. None 	gs Chaney Road and approximately 0.4 Road/New Hampshire Avenue intersection ast corner of New Hampshire Avenue (MD Spencerville Road (MD 198) and 100 feet h of Spencerville Road (MD 198) and 300 ping business past corner of MD 198 and MD 650) – JME 2015 th one drive through carwash and 10
(funded County CIP, State CTP, developer projects, etc.)		
Additional Analysis or Software Required	Queuing Analysis Accident Accident Signal Warrant Analysis Synchro Weaving/Merge Analysis SIDRA	Analysis VISSIM CORSIM Other
M-NCPPC Clarification	15	
 Traffic study will com 	ply with all other requirements of the LATR & TPA	R Guidelines not listed on this form.
 If physical improvements right-of-way and utility 	ents are proposed as mitigation, the traffic study v by relocation (at a minimum).	vill demonstrate feasibility with regards to
 In the event that the the Applicant will work 	development proposal significantly changes after k with M-NCPPC staff to amend the scope to accu	this traffic study scope has been agreed to, rately reflect the new proposal.
 A receipt from MCDO at the time the development 	T showing that the traffic study review fee has be opment application is submitted.	an paid will be provided to M-NCPPC DARC
 A PDF copy of the tra 	ffic study and appendices will be provided.	
Additional Assumption	ns / Special Circumstances for Discus	sion

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Traffic study scope agreement is not final until signed by M-NCPPC staff. AGREED 4/27/15 DATE 3 APPLICANT OR TRAFFIC CONSULTANT SIGNATURE SHAHRIAR ETEMADI, PTP PRINT NAME STS Consulting Michae) 5/-7/15 DATE Janew Michael Garcia

Please include a signed copy of this document and accompanying graphics with submitted traffic study or statement.



APPENDIX B Traffic VOLUME VEHICLE AND PEDESTRIAN CONTS



VEHICLES TURNING MOVEMENT COUNT - SUMMARY

VEHICLES	106	GAING	WOV				- 301	MAR		Cour	ted by:	VCU									
	Interse	ction of:	MD 650							Cour	Date:	April 30	, 2015				Thursd	ay		SIS	
		and:	MD 28/	MD 198						W	leather:	Sunny/	Warm					-			
	L	ocation:	Montgo	mery C	ounty, N	laryland				Ente	red by:	DR					Star R	ating: 5			
	on:	TRAFFI MD 650	C FROM	NORTH		on:	TRAFFI MD 650	C FROM	SOUTH		on:	TRAFF MD 28	FIC FROM	EAST		on:	TRAFF MD 28	IC FROM	WEST		TOTAL N+S
TIME	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	+ E+W
АМ																					
6:30 - 6:45	0	102	15	0	117	29	60	8	0	97	22	195	27	0	244	5	116	0	0	121	579
6:45 - 7:00	12	125	29	0	166	45	59	7	1	112	27	230	44	0	301	7	107	2	0	116	695
7:00 - 7:15	16	142	24	0	182	42	54	17	2	115	24	202	29	0	255	9	113	9	0	131	683
7:15 - 7:30	15	145	38	0	198	35	40	17	1	93	23	261	41	0	325	11	126	1	0	138	754
7:30 - 7:45	9	118	45	0	172	42	45	16	0	103	38	208	43	1	290	9	143	5	0	157	722
7:45 - 8:00		138	40	0	191	45	48	13	2	108	32	220	33	0	285		158	1	0	108	/52
0.00-0.10	1	140	50	0	201	21	20	4	2	75	10	170	41		207		150	8		168	870
8-30 - 8-45	8	115	43	0	164	57	58		1	125	21	157	21		200	7	100	2	0	118	614
8:45 - 9:00	5	95	29	ő	129	51	47	8	1	107	16	145	42	ő	203	6	111	3	ő	120	559
9:00 - 9:15	6	82	34	ō	122	39	44	10	0	93	37	112	27	1	177	7	87	5	ō	99	491
9:15 - 9:30	5	76	30	0	111	31	39	7	0	77	21	113	34	0	168	7	87	4	2	100	456
3 Hr Totals	92	1415	439	0	1946	480	566	126	10	1182	299	2227	433	2	2961	92	1446	41	2	1581	7670
1 Hr Totals																					
6:30 - 7:30	43	514	106	0	663	151	213	49	4	417	96	888	141	0	1125	32	462	12	0	506	2711
6:45 - 7:45	52	530	136	0	718	164	198	57	4	423	112	901	157	1	1171	36	489	17	0	542	2854
7:00 - 8:00	47	543	153	0	743	164	187	63	5	419	117	891	146	1	1155	38	540	16	0	594	2911
7:15 - 8:15	41	529	184	0	754	155	167	56	3	381	113	895	158	1	1167	40	562	10	0	612	2914
7:30 - 8:30	27	533	197	0	757	151	165	43	4	363	108	812	158	1	1079	33	592	15	0	640	2839
7:45 - 8:45	24	530	195	0	/49	100	1/8	30	5	385	91	/01	140	0	998	31	500	12	0	599	2/31
0.00-9.00	10	40/	157	0	818	172	107	21	7	400	02	602	141	1	078	20	461	18		501	2030
8:30 - 9:30	22	368	136	0	528	178	188	34	2	402	95	527	134	1	757	27	302	14	2	435	2120
PEAK HOUR				-					-					1					-		2.20
7:15 - 8:15	41	529	184	0	754	155	167	56	3	381	113	895	158	1	1167	40	562	10	0	612	2914
PM 4:00 4:15	2	45	17		85	52	112	10		105	20	112	24		172		122	7		140	574
4:00 - 4:15	3	40	28	0	00	40	113	10		100	55	113	42	0	220	24	132	6	0	140	870
4:30 - 4:45	3	78	25	0	106	40	132	24	2	198	35	160	32	0	200	11	156	10	0	177	708
4:45 - 5:00	4	82	18	ō	104	52	140	16	ō	208	40	181	42	ō	263	12	129	9	ō	150	725
5:00 - 5:15	3	63	34	0	100	60	150	14	1	225	53	156	47	2	258	18	186	6	1	211	794
5:15 - 5:30	6	69	22	0	97	57	188	17	0	262	62	161	47	0	270	14	199	4	0	217	846
5:30 - 5:45	2	63	25	0	90	44	152	12	2	210	50	159	39	0	248	7	125	7	0	139	687
5:45 - 6:00	6	81	15	0	102	40	180	18	0	238	44	141	45	0	230	18	163	10	0	191	761
6:00 - 6:15	7	57	28	0	92	43	114	15	0	172	45	137	31	0	213	8	166	9	0	183	660
6:15 - 6:30	6	76	29	0	111	32	115	9	0	156	40	142	41	0	223	12	150	6	0	168	658
6:30 - 6:45	9	61	17	1	88	43	117	11	0	171	36	104	54	0	194	13	125	2	0	140	593
6:45 - 7:00	6	/1	19	0	96	30	110	11	2	153	24	109	45	1	1/9	13	104	5	0	122	550
3 Hr Totals	08	191	210	1	1132	043	1032	180	8	2304	923	1090	480	3	2708	109	1//9	80	1	2019	8223
4:00 - 5:00	14	258	88	0	358	104	506	73	4	777	160	587	137	0	803	58	581	31	0	848	2674
4:15 - 5:15	14	274	103	0	391	201	543	69	4	817	183	630	163	2	978	65	615	30	1	711	2897
4:30 - 5:30	16	292	99	ō	407	209	610	71	3	893	190	658	168	2	1018	55	670	29	1	755	3073
4:45 - 5:45	15	277	99	0	391	213	630	59	3	905	205	657	175	2	1039	51	639	26	1	717	3052
5:00 - 6:00	17	276	96	0	389	201	670	61	3	935	209	617	178	2	1006	57	673	27	1	758	3088
5:15 - 6:15	21	270	90	0	381	184	634	62	2	882	201	598	162	0	961	47	653	30	0	730	2954
5:30 - 6:30	21	277	97	0	395	159	561	54	2	776	179	579	156	0	914	45	604	32	0	681	2766
5:45 - 6:45	28	275	89	1	393	158	526	53	0	737	165	524	171	0	860	51	604	27	0	682	2672
6:00 - 7:00 PEAK HOUP	28	265	93	1	387	148	456	46	2	652	145	492	171	1	809	46	545	22	0	613	2461
5:00 - 6:00	17	276	96	0	389	201	670	61	3	935	209	617	178	2	1006	57	673	27	1	758	3088



PEDESTR	IAN AND BICYCLE OBSER	VATIONS - SUMMARY		
		Cour	nted by: VCU	AB
	Intersection of: MD 650		Date: April 30, 2015	Thursday Consulting
	and: MD 28/MD 198	W Included Entr	leather: Sunny/Warm	Star Dation: 5
	Eddadon: Montgomery County, M	HIFG	source sources	Star Rating, 5
7145	MD	650 Bisweise	MD	650
TIME	Pedestrians	Bicycles	Pedesulans	Bicycles
AM			-	
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15				0
7:10 - 7:30		1	0	0
7:45 - 9:00			, , , , , , , , , , , , , , , , , , ,	0
8:00 - 8:15	0	0	0	0
8:15 - 8:30	0	0	1	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	1	1	0
PM				
4:00 - 4:10				0
4:10 - 4:30				0
4:45 - 5:00	0	0	0	0
4:40 - 5:00				0
5:15 - 5:30	, i i i i i i i i i i i i i i i i i i i	, i i i i i i i i i i i i i i i i i i i	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				
	U U	U	U	0
TOTALS	0	0	0	0
TOTALS	0	0	0	0
TOTALS	O O EAS	0 0 7 LEG 228	U U U U U U U U U U U U U U U U U U U	0 0 1 LEG 2 28
TOTALS	0 EAS Pedestrians	0 C F LEG 28 Bicycles	0 0 WES Pedestrians	U 0 T LEG 28 Bicycles
TOTALS	0 0 EAS Mt Pedestrians	U O I LEG 128 Bicycles	0 0 WES MC Pedestrians	U 0 1 LEG 28 Bicycles
TOTALS AM 6:30 - 6:45	0 EAS MC Pedestrians 0	TLEG 228 Bicycles	0 0 WES ME Pedestrians 0	U 0 T LEG 28 Bicycles 0
AM 6:30 - 6:45 6:45 - 7:00	CAST	C C C C C C C C C C C C C C C C C C C	U U VES O VES ME Pedestrians O O	U 0 28 Bicycles 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15	0 EAS Pedestrians 0 0 0	0 126 28 0 0 0	0 0 Pedestrians 0 0 0	0 0 28 Bicycles 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:20 - 7:45	0 EAS Pedestrians 0 0 0 1	0 T LEG 28 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES Pedestrians 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 9:00	0 EAS Pedestrians 0 0 0 1 0	0 r LEG 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES ME Pedestrians 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 9:15	0 EAS Pedestrians 0 0 0 0 1 0 0 0	0 FLEG 228 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES ME Pedestrians 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30	0 EAS Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 F LEG 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 WES Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45	0 EAS Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00	0 EAS Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 126 28 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES MC Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15	0 EAS Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 F LEG 28 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30	0 EAS Pedestrians 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	C C C C C C C C C C C C C C C C C C C	0 0 WES ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 228 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
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AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15	0 EAS ME Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r LEG 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30	0 EAS Pedestrians 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	C C C C C C C C C C C C C C C C C C C	0 0 WES ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:10 - 4:30 4:30 - 4:45	0 EAS MC Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U U U U U U U U U U U U U U U U U U U	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 7 LEG 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
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AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:15 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:35 - 4:30 4:30 - 4:45 4:45 - 5:00 6:00 - 6:15	0 EAS ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r LEG 228 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES' ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:16 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:16 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30	0 EA3 EA3 Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r LEG 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 VWES ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 6:30 - 4:45 5:15 - 5:30 6:30 - 5:45 6:45 - 9:00	0 EAS EAS A Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T LEG 228 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WES ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0	0 0 28 Bicycles 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 0:30 - 0:45 0:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:30 - 4:15 4:45 - 5:30 5:30 - 5:45 5:45 - 6:00 9:00 - 9:15	0 EAS EAS MC Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r LEG 228 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TLEG 228 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:30 8:30 - 8:15 8:15 - 8:30 8:30 - 8:15 8:15 - 8:30 8:30 - 8:15 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:15 5:15 - 5:30 5:30 - 5:15 5:15 - 5:30 5:30 - 6:45 5:45 - 6:30	0 EAS: ME Pedestrians 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r LEG 226 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0	0 VES	0 0 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 6:30 - 6:45 6:15 - 6:30 6:30 - 6:45	0 EAS: ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r LEG 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 WEs ME Pedestrians 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 Bicycles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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VEHICLES	STUR	NING	MOV	EME	NT CC	UNT	- SUM	MAR	Y												
										Cour	nted by:	VCU								A	
	Interse	ction of:	MD 650								Date:	April 30	, 2015				Thursd	ау		Consultin	3
		and:	Ednor F	Road						W	leather:	Sunny/\	Warm								
		ocation:	Montgo	mery C	County, N	laryland				Ente	ered by:	DR					Star R	ating: 5			
	on:	MD 650	C FROM	NORTH		on:	MD 650	C FROM	SOUTH		on:	Ednor R	OC FROM	LEAST		on:	Ednor R	IC FROM oad	WEST		N+S
TIME	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	+ E+W
6:30 - 6:45	10	85	4	0	108	10	70	1	0	on	2	33	14	0	40	3	10	2	0	15	262
6:45 - 7:00	38	122	7	0	167	9	67	7	0	83	3	52	14	0	69	4	16	6	0	26	345
7:00 - 7:15	38	136	1	0	175	5	65	2	0	72	5	64	27	0	96	3	20	16	0	39	382
7:15 - 7:30	26	149	4	0	179	12	60	6	0	78	1	68	30	0	99	6	24	11	0	41	397
7:30 - 7:45	27	129	4	0	160	7	54	6	0	67	0	66	17	0	83	8	16	9	0	33	343
7:45 - 8:00	27	158	3	0	188	8	56	6	0	70	1	65	20	0	86	7	33	9	0	49	393
8:00 - 8:15	26	144	4	0	174	9	48	4	0	61	4	56	19	0	79	6	17	8	0	31	345
8:15 - 8:30	25	155	5	0	185	14	33	10	0	57	4	42	10	0	56	12	14	4	0	30	328
8:30 - 8:45	15	120	5	0	140	6	46	10	0	62	3	41	17	0	61	9	23	15	0	47	310
8:45 - 9:00	16	100	5	0	121	8	47	1	0	56	7	43	8	0	58	12	22	10	0	44	279
9:00 - 9:15	20	89	2	0	111	9	54	1	0	64	4	30	11	0	45	4	18	10	0	32	252
9:15 - 9:30	13	75	11	0	99	14	47	0	0	61	1	36	5	0	42	7	17	9	0	33	235
3 Hr Totals	290	1462	55	0	1807	111	656	54	0	821	35	596	192	0	823	81	230	109	0	420	3871
1 Hr Totals 8:20 - 7:20	121	402	18	0	820	28	271	18	0	222	11	217	95	0	212	18	70	25	0	121	1298
6:45 - 7:45	120	538	16	0	681	33	248	21	0	300		250	88	0	347	21	76	42	0	120	1467
7:00 - 8:00	118	572	12	0	702	32	235	20	0	287	7	263	04	0	364	24	93	45	0	162	1515
7:15 - 8:15	106	580	15	0	701	36	218	22	0	276	6	255	86	0	347	27	90	37	0	154	1478
7:30 - 8:30	105	586	16	ō	707	38	191	26	o	255	9	229	66	ō	304	33	80	30	ō	143	1409
7:45 - 8:45	93	577	17	0	687	37	183	30	0	250	12	204	66	0	282	34	87	36	0	157	1376
8:00 - 9:00	82	519	19	0	620	37	174	25	0	236	18	182	54	0	254	39	76	37	0	152	1262
8:15 - 9:15	76	464	17	0	557	37	180	22	0	239	18	156	46	0	220	37	77	39	0	153	1169
8:30 - 9:30	64	384	23	0	471	37	194	12	0	243	15	150	41	0	206	32	80	44	0	156	1076
7:00 - 8:00	118	572	12	0	702	32	235	20	0	287	7	263	94	0	364	24	93	45	0	162	1515
PM				-										-					-		
4:00 - 4:15	9	58	4	0	71	25	99	5	0	129	4	18	10	0	32	5	50	12	0	67	299
4:15 - 4:30	10	56	4	0	70	14	155	6	0	175	4	29	9	0	42	5	38	16	0	59	346
4:30 - 4:45	14	75	8	0	97	27	130	11	0	168	8	22	9	0	39	5	69	26	0	100	404
4:45 - 5:00	10	81	4	0	95	22	131	2	0	155	5	24	9	0	38	4	55	20	0	79	367
5:00 - 5:15	12	77	4	0	93	24	187	8	0	219	5	21	7	0	33	6	66	22	0	94	439
5:15 - 5:30	18	69	6	0	93	39	177	8	0	224	7	27	9	0	43	10	47	17	0	74	434
5:30 - 5:45	11	71	4	0	86	33	155	5	0	193	6	39	10	0	55	2	68	26	0	96	430
5:45 - 6:00	15	58	3	0	76	27	160	6	0	193	4	33	11	0	48	3	70	27	0	100	417
0:00 - 6:15	12	62	5	0	79	23	142	8	0	173	11	23	6	0	40	5	31	20	0	56	348
0:15 - 0:30 8:20 - 8:4F	11	/3	9	0	83	17	105	13	0	135	2	20	12	0	30	2	40	18	0	70	334
6:45 - 7:00	13	48 53	о 8	0	73	22	103	4	0	138	3	20	10	0	41	2	42 30	20	0	70 64	310
3 Hr Totals	140	781	65	0	995	290	1655	86	0	2031	67	307	111	0	485	58	631	252	0	041	4452
1 Hr Totals					000	200	1000			2001					100			202	ŭ		
4:00 - 5:00	43	270	20	0	333	88	515	24	0	627	21	93	37	0	151	19	212	74	0	305	1416
4:15 - 5:15	46	289	20	0	355	87	603	27	0	717	22	96	34	0	152	20	228	84	0	332	1556
4:30 - 5:30	54	302	22	0	378	112	625	29	0	766	25	94	34	0	153	25	237	85	0	347	1644
4:45 - 5:45	51	298	18	0	367	118	650	23	0	791	23	111	35	0	169	22	236	85	0	343	1670
5:00 - 6:00	56	275	17	0	348	123	679	27	0	829	22	120	37	0	179	21	251	92	0	364	1720
5:15 - 6:15	56	260	18	0	334	122	634	27	0	783	28	122	36	0	186	20	216	90	0	326	1629
5:30 - 6:30	49	264	21	0	334	100	562	32	0	694	23	115	35	0	173	12	225	91	0	328	1529
5:45 - 6:45	51	241	25	0	317	84	518	37	0	639	20	101	38	0	159	18	199	91	0	308	1423
6:00 - 7:00 PEAK HOUR	50	236	28	0	314	79	461	35	0	575	24	94	37	0	155	18	168	86	0	272	1316
FEAR HOUR			47		0.40							400	07		470		054				



	Internetion of ND 050	Cour	nted by: VCU			
	Intersection of: MD 650		Date: April 30, 2015	Thursday Consult		
	and: Ednor Road	W Incidend	veather: Sunny/Warm	Star Dation 5		
	Location: Montgomery County, N	HIEG	ered by: DK	Star Rating: 5		
	MD	650	MD	650		
TIME	Pedestrians	Bicycles	Pedestrians	Bicycles		
AM						
3:30 - 6:45	0	0	0	0		
3:45 - 7:00	0	0	0	0		
7:00 - 7:15	0	0	0	0		
7:15 - 7:30	0	0	0	0		
: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	O		
8:30 - 8:45	0	0	0	0		
3:45 - 9:00	0	0	0	O		
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	2	0	0	0		
4:45 - 5:00	0	0	0	0		
5:00 - 5:15	2	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		
8:00 - 6:15	0	0	0	0		
3:15 - 6:30	0	0	0	0		
8:30 - 6:45	0	0	0	O		
8:45 - 7:00	0	0	0	O		
TOTALS	4	0	0	0		
	EAS	r Road	WES	Road		
	Pedestrians	Bicycles	Pedestrians	Bicycles		
AM						
30 - 6:45	0	0	1	O		
:45 - 7:00	0	0	0	O		
:00 - 7:15	0	0	0	o		
:15 - 7:30	0	0	0	O		
:30 - 7:45						
	0	0	1	O		
7:45 - 8:00	0	0	1	0		
:45 - 8:00 8:00 - 8:15	0	0 0 0	1 0 0	0 0 0		
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30	0 0 0	0 0 0	1 0 0	0 0 0		
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45	0 0 0 0	0 0 0	1 0 0	0 0 0 0		
2:45 - 8:00 2:00 - 8:15 2:15 - 8:30 2:30 - 8:45 2:45 - 9:00			1 0 0 0			
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15						
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30						
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS			1 0 0 0 0 0 0 0			
:45 - 8:00 :00 - 8:15 :15 - 8:30 :30 - 8:45 :45 - 9:00 :00 - 9:15 :15 - 9:30 TOTALS PM			1 0 0 0 0 0 0 0 0 2			
:45 - 8:00 :00 - 8:15 :15 - 8:30 :30 - 8:45 :45 - 9:00 :00 - 9:15 :15 - 9:30 TOTALS PM :00 - 4:15			1 0 0 0 0 0 0 0 0 0 2			
 :45 - 8:00 :00 - 8:15 :15 - 8:30 :30 - 8:45 :45 - 9:00 :00 - 9:15 :15 - 9:30 TOTALS PM :00 - 4:15 :15 - 4:30 			1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
(45 - 8:00 (00 - 8:15 (15 - 8:30 (30 - 8:45 (45 - 9:00 (00 - 9:15 (15 - 9:30 TOTALS PM (00 - 4:15 (15 - 4:30 (30 - 4:45			1 0 0 0 0 0 0 0 0 2 0 0 2			
:45 - 8:00 :00 - 8:15 :15 - 8:30 :30 - 8:45 :45 - 9:00 :00 - 9:15 :15 - 9:30 PM :00 - 4:15 :15 - 4:30 :30 - 4:45			1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
(45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 9:00 - 9:15 1:15 - 9:30 TOTALS PM 8:00 - 4:15 1:5 - 4:30 1:30 - 4:45 1:45 - 5:00 1:00 - 5:15			1 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0			
(45 - 8:00 (00 - 8:15) (15 - 8:30) (30 - 8:45) (45 - 9:00) (00 - 9:15) (15 - 9:30) TOTALS PM (00 - 4:15) (15 - 4:30) (30 - 4:45) (45 - 8:00) (15 - 8:30) (15 - 8:30)			1 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 2 0			
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 8:00 - 9:15 9:15 - 9:30 PM 8:00 - 4:15 8:15 - 4:30 8:30 - 4:45 8:45 - 5:00 5:00 - 5:15 9:15 - 9:30			1 0 0 0 0 0 0 0 0 2 0 0 0 2 0 0 0 0 0 0			
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 8:45 - 9:00			1 0 0 0 0 0 0 0 0 2 0 0 0 2 0 0 0 0 0 0			
7-45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:45 - 9:00 8:45 - 9:00 707ALS PM 4:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00			1 0 0 0 0 0 0 0 0 2 0 0 0 2 0 0 0 0 0 0			
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 9:45 - 9:00 8:45 - 9:00 TOTALS PM 4:00 - 4:15 8:15 - 4:30 4:45 - 6:00 5:00 - 5:15 5:15 - 5:30 5:45 - 5:45 5:45 - 6:00 8:00 - 8:15			1 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0			
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 6:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 8:00 - 8:16 8:15 - 8:30			1 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0			
7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 700 - 8:15 8:45 - 9:00 707ALS PM 8:00 - 4:15 8:15 - 8:30 8:30 - 4:45 8:45 - 5:00 5:00 - 5:15 8:15 - 5:30 8:00 - 6:15 8:15 - 6:30 8:30 - 6:45 8:30 -			1 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0			



VEHICLES		NING	MOV	EME		UNT	- SUM	MAR	Y												
										Cou	nted by:	VCU								A	
	Interse	ction of:	MD 650)							Date:	April 30	, 2015				Thursda	ay		Consulting	1
		and:	Briggs	Chaney	Road					W	leather:	Sunny/	Warm								
	L.	ocation:	Montgo	mery C	ounty, N	laryland	TOAFFI	- FROM	0.011711	Ente	ered by:	DR	10 5001	FACT			Star R	ating: 5	WEAT		TOTAL
TIME	on:	MD 650	CFROM	NORTH		on:	MD 650	CFROM	SOUTH		on:	Briggs C	haney R	oad		on:	TRAFF	IC FROM	WEST		N+S
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	E+W
AM																					
6:30 - 6:45		126	10	0	136	15	95		0	110	18		30	0	48					0	294
6:45 - 7:00		158	25	0	183	29	111		1	141	9		52	0	61					0	385
7:00 - 7:15		153	21	0	174	29	104		5	138	23		70	0	93					0	405
7:15 - 7:30		193	32	0	225	55	102		5	162	14		66	0	80					0	467
7:30 - 7:45		175	32	0	207	43	79		1	123	16		73	0	89					0	419
7:45 - 8:00		154	32	0	186	38	87		0	125	22		59	0	81					0	392
8:00 - 8:15		163	33	0	196	43	69		0	112	22		44	0	66					0	374
8:15 - 8:30		144	52	0	196	42	67		1	110	16		46	0	62					0	368
8:30 - 8:45		147	50	0	197	29	91		2	122	38		53	0	91					0	410
8:45 - 9:00		148	37	0	185	52	93		0	145	29		42	0	71					0	401
9:00 - 9:15		127	20	0	147	18	79		1	98	23		48	0	71					0	316
9:15 - 9:30		118	12	0	130	34	79		0	113	23		37	0	60					0	303
3 Hr Totals	0	1806	356	0	2162	427	1056	0	16	1499	253	0	620	0	873	0	0	0	0	0	4534
1 Hr Totals																					
6:30 - 7:30	0	630	88	0	718	128	412	0	11	551	64	0	218	0	282	0	0	0	0	0	1551
6:45 - 7:45	0	679	110	0	789	156	396	0	12	564	62	0	261	0	323	0	0	0	0	0	1676
7:00 - 8:00	0	675	117	0	792	165	372	0	11	548	75	0	268	0	343	0	0	0	0	0	1683
7:15 - 8:15	0	685	129	0	814	179	337	0	6	522	74	0	242	0	316	0	0	0	0	0	1652
7:30 - 8:30	0	636	149	0	785	166	302	0	2	470	76	0	222	0	298	0	0	0	0	0	1553
7:45 - 8:45	0	608	167	0	775	152	314	0	3	469	98	0	202	0	300	0	0	0	0	0	1544
8:00 - 9:00	0	602	172	0	774	166	320	0	3	489	105	0	185	0	290	0	0	0	0	0	1553
8:15 - 9:15	0	566	159	0	725	141	330	0	4	475	106	0	189	0	295	0	0	0	0	0	1495
8:30 - 9:30 PEAK HOUR	0	540	119	0	659	133	342	0	3	478	113	0	180	0	293	0	0	0	0	0	1430
7:00 - 8:00	0	675	117	0	792	165	372	0	11	548	75	0	268	0	343	0	0	0	0	0	1683
PM																					
4:00 - 4:15		78	17	0	95	48	155		1	204	34		49	0	83					0	382
4:15 - 4:30		79	23	0	102	47	185		0	232	34		49	0	83					0	417
4:30 - 4:45		125	22	0	147	41	184		0	225	45		58	0	103					0	475
4:45 - 5:00		125	22	0	147	42	221		0	263	37		44	0	81					0	491
5:00 - 5:15		118	17	0	135	43	224		1	268	50		43	0	93					0	496
5:15 - 5:30		123	18	1	142	58	250		2	310	44		46	0	90					0	542
5:30 - 5:45		132	18	0	150	42	211		0	253	41		51	0	92					0	495
5:45 - 6:00		124	23	0	147	60	229		0	289	30		44	0	74					0	510
6:00 - 6:15		115	20	0	135	48	163		0	211	38		46	0	84					0	430
6:15 - 6:30		136	19	0	155	52	156		0	208	30		42	0	72					0	435
6:30 - 6:45		113	15	0	128	48	167		0	215	36		45	0	81					0	424
6:45 - 7:00		139	21	1	161	42	162		0	204	30		41	0	71					0	436
3 Hr Totals	0	1407	235	2	1644	571	2307	0	4	2882	449	0	558	0	1007	0	0	0	0	0	5533
1 Hr Totals																					
4:00 - 5:00	0	407	84	0	491	178	745	0	1	924	150	0	200	0	350	0	0	0	0	0	1765
4:15 - 5:15	0	447	84	0	531	173	814	0	1	988	166	0	194	0	360	0	0	0	0	0	1879
4:30 - 5:30	0	491	79	1	571	184	879	U	3	1066	176	0	191	0	367	0	U	U	0	0	2004
4:45 - 5:45	0	498	75	1	574	185	906	0	3	1094	172	0	184	0	356	0	0	0	0	0	2024
5:00 - 6:00	0	497	76	1	5/4	203	914	U	3	1120	165	0	184	0	349	0	U	U	0	0	2043
5:15 - 6:15		494	79	1	5/4	208	853	0	2	1063	153	0	187	0	340	0	U	U	0	0	1977
5.30 - 0.30	0	100	8U 77	U	287	202	745	0	0	901	139	0	103	0	322	0	0	0	0	0	1700
6:00 7:00		+00	75	1	570	200	649	0	0	923	134	0	174	0	200	0	0	0	0	0	1739
PEAK HOUR	U	505	75	<u> </u>	519	190	040	0	U	030	134	U	174	U	300	0	U	U	U	U	1723
5:00 6:00	0	407	76	4	574	202	014	0	2	1120	165	0	104	0	240	0	0	0	0	0	2042



PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY Counted by: VCU ŚŚ Date: April 30, 2015 Intersection of: MD 650 Thursday and: Briggs Chaney Road Weather: Sunny/Warm Location: Montgomery County, Maryland Entered by: DR Star Rating: 5 NORTH LEG MD 650 SOUTH LEG MD 650 TIME Pedestrians Bicycles Pedestrians Bicycles AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS РМ 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 6:00 - 6:15 6:15 - 6:30 6:30 - 6:45 6:45 - 7:00 TOTALS

	EAS'	T LEG	WES	T 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	2	0		
7:45 - 8:00	0	0		
8:00 - 8:15	0	0		
8:15 - 8:30	1	0		
8:30 - 8:45	0	0		
8:45 - 9:00	0	0		
9:00 - 9:15	0	0		
9:15 - 9:30	0	0		
TOTALS	3	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	0	0		
5:15 - 5:30	0	0		
5:30 - 5:45	0	0		
5:45 - 6:00	0	0		
6:00 - 6:15	2	0		
6:15 - 6:30	0	0		
6:30 - 6:45	0	0		
6:45 - 7:00	2	1		
TOTALS	4	1	0	0



VEHICLES	OIUF	GNING	WOV				- 5010	IWAR	T	Cour	nted by:	VCU									
	Interse	ction of:	MD 650								Date:	April 30	, 2015				Thursda	y		SS	
		and:	Norwoo	d Road						w	leather:	Sunny/	Narm								-
	L	ocation:	Montgo	mery C	ounty, N	laryland	1			Ente	ered by:	DR					Star Ra	ating: 5			
		TRAFFI	C FROM	NORTH			TRAFFI	C FROM	SOUTH			TRAFF	IC FROM	EAST			TRAFF	IC FROM	WEST		TOTAL
TIME	on:	MD 650				on:	MD 650				on:					on:	Norwood	Road			N+S +
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	E+W
AM																					
6:30 - 6:45	34	125		0	159		87	79	1	167					0	81		23	0	104	430
6:45 - 7:00	52	156		0	208		105	117	0	222					0	113		36	0	149	579
7:00 - 7:15	110	128		0	238		104	162	3	269					0	137		42	0	179	686
7:10 - 7:30	87	188		0	200		87	122	1	209					0	150		24	0	219	688
7:45 - 8:00	44	176		0	200		00	03		185					0	80		33	0	128	520
8:00 - 8:15	36	159		0	195		69	74	2	145					0	98		34	0	132	472
8:15 - 8:30	33	164		ō	197		76	49	3	128					0	123		34	ō	157	482
8:30 - 8:45	47	141		0	188		102	66	2	170					0	91		31	0	122	480
8:45 - 9:00	29	152		0	181		98	83	2	183					0	93		25	0	118	482
9:00 - 9:15	32	130		1	163		88	85	3	176					0	61		21	0	82	421
9:15 - 9:30	26	119		0	145		65	69	3	137					0	77		38	0	115	397
3 Hr Totals	582	1804	0	1	2387	0	1063	1103	20	2186	0	0	0	0	0	1214	0	414	0	1628	6201
1 Hr Totals																					
6:30 - 7:30	268	597	0	0	865	0	383	480	4	867	0	0	0	0	0	487	0	164	0	651	2383
0:45 - 7:45	301	638	0	0	939	0	384	505	4	893	0	0	0	0	0	501	0	1/5	0	6/6	2508
7:00 - 8:00	293	800	0	0	801		3/3	481	4	808		0	0	0	0	4//	0	172	0	602	2458
7:30 - 8:30	180	665	0	0	845	0	327	320	6	653	0	0	0	0	0	405	0	135	0	540	2038
7:45 - 8:45	160	640	ō	o	800	0	341	282	7	630	0	0	ō	ō	0	401	ō	132	ō	533	1963
8:00 - 9:00	145	616	0	0	761	0	345	272	9	626	0	0	0	0	0	405	0	124	0	529	1916
8:15 - 9:15	141	587	0	1	729	0	364	283	10	657	0	0	0	0	0	368	0	111	0	479	1865
8:30 - 9:30	134	542	0	1	677	0	353	303	10	666	0	0	0	0	0	322	0	115	0	437	1780
PEAK HOUR																					
6:40 - 7:40 PM	301	038	U	U	838	U	384	505	4	893	U	U	U	U	U	501	U	1/5	U	0/0	2508
4:00 - 4:15	38	75		0	113		181	79	3	263					0	90		44	0	134	510
4:15 - 4:30	43	88		0	131		188	105	5	298					0	98		33	0	131	560
4:30 - 4:45	44	124		0	168		187	109	1	297					0	95		46	0	141	606
4:45 - 5:00	41	124		0	165		212	134	2	348					0	79		44	0	123	636
5:00 - 5:15	38	121		0	159		237	136	3	376					0	91		47	0	138	673
5:15 - 5:30	48	144		0	192		212	121	2	335					0	80		52	0	132	659
5:30 - 5:45	40	124		0	164		232	122	4	358					0	72		51	0	123	645
5:45 - 6:00	37	134		0	171		216	132	0	348					0	71		44	0	115	634
0:00 - 0:15	44	107		0	151		189	140	4	333					0	65		44	0	109	593
0:10 - 0:30 6:30 - 6:45	32	109		0	101		108	100	1	274					0	51		40	0	00	529
6:45 - 7:00	45	137		0	182		158	89	2	249					0	81		39	0	120	551
3 Hr Totals	487	1445	0	ō	1932	0	2362	1374	27	3763	0	0	0	0	ō	944	0	537	0	1481	7176
1 Hr Totals																					
4:00 - 5:00	166	411	0	0	577	0	768	427	11	1206	0	0	0	0	0	362	0	167	0	529	2312
4:15 - 5:15	166	457	0	0	623	0	824	484	11	1319	0	0	0	0	0	363	0	170	0	533	2475
4:30 - 5:30	171	513	0	0	684	0	848	500	8	1356	0	0	0	0	0	345	0	189	0	534	2574
4:45 - 5:45	167	513	0	0	680	0	893	513	11	1417	0	0	0	0	0	322	0	194	0	516	2613
5:00 - 6:00	163	523	0	0	686	0	897	511	9	1417	0	0	0	0	0	314	0	194	0	508	2611
5:15 - 6:15	169	509	0	0	678	0	849	515	10	1374		0	0	0	0	288	0	191	0	479	2531
5:30 - 6:30	153	524	0	0	677		805	500	8	1313		0	0	0	0	279	0	184	0	463	2453
0:40 - 0:45 8:00 - 7:00	150	508	0	0	880	0	/00	4/8	2	1239	0	0	0	0	0	208	0	181	0	439	2336
PEAK HOUR	100	911	3	0	008		087	430		1140	<u> </u>	0	5	9	0	200	5	170	5		2203
4:45 - 5:45	167	513	0	0	680	0	893	513	11	1417	0	0	0	0	0	322	0	194	0	516	2613



		Cour	nted by: VCU	
	Intersection of: MD 650		Date: April 30, 2015	Thursday Consultin
	and: Norwood Road	w Set	/eather: Sunny/Warm	Star Dation: 5
	Location: Montgomery County, M	aryland Ente	ered by: DR	Star Rating: 5
	MD	550	MD	650
TIME	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
30 - 6:45	0	O	0	0
3:45 - 7:00	0	0	0	0
:00 - 7:15	0	0	0	0
:15 - 7:30	0	0	1	0
:30 - 7:45	0	0	0	0
:45 - 8:00	0	0	0	0
:00 - 8:15	0	0	3	0
3:15 - 8:30	0	0	0	0
3:30 - 8:45	0	0	0	0
3:45 - 9:00	0	0	0	0
9:00 - 9:15	0	O	0	D
0:15 - 9:30 TOTALS	0	0	0	0
DM	U	U	4	0
FM		C		0
1:15 - 4:20	0	0		
1.20 4.45		5		
1:45 - 5:00	0	0	0	0
5-00 5-15	0	0	0	0
5:15 5:20	0	0	0	0
0.10-0.30		0		0
5:45 - 8:00	0	0	0	0
2.00 8.15	0	0	0	0
0.00-0.10		0		
0.10-0.30		0		
0:30 - 0:40 8:45 - 7:00	0	0	1	0
TOTALS	0	0	1	0
	EAST	LEG	WES	T LEG
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
3:30 - 6:45			0	0
3:45 - 7:00			0	0
7:00 - 7:15			0	0
7:15 - 7:30			0	0
:30 - 7:45			0	0
7:45 - 8:00			0	0
8:00 - 8:15			0	o
8:15 - 8:30			0	o
8:30 - 8:45			0	o
9-45 - 0-00				
0.40 - 8.00			0	0
9:00 - 9:15			0	0
9:00 - 9:15 9:15 - 9:30			0 0 0	0 0 0
9:00 - 9:15 9:15 - 9:30 TOTALS	0	0	0 0 0	0 0 0
9:00 - 9:15 9:15 - 9:30 TOTALS PM	0	0	0 0 0	
):15 - 9:30):15 - 9:30 TOTALS PM 1:00 - 4:15	0	0	0 0 0 1	
):00 - 9:15):15 - 9:30 TOTALS PM 1:00 - 4:15 1:15 - 4:30	0	0	0 0 0 1 0	
0:00 - 9:15 0:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45	0	0	0 0 0 1 0	
2:00 - 9:15 2:00 - 9:15 2:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00	0	0	0 0 0 1 0 0 0	
2.40 - 8.00 9:00 - 9:15 9:05 - 9:30 TOTALS PM 4:00 - 4:15 4:30 - 4:45 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:00 - 5:15	0	0	0 0 0 1 0 0 0 0 0	
2.10 - 8.00 9:00 - 9:15 9:15 9:30 TOTALS PM 9:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30	0	0	0 0 0 1 0 0 0 0 0 0	
2:00 - 0:15 0:00 - 0:15 0:15 - 0:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45	0	0	0 0 0 1 0 0 0 0 0 0 0 0	
2.40 - 3:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00	0	0	0 0 0 1 0 0 0 0 0 0 0 0 0 0 0	
2:00 - 9:15 9:00 - 9:15 9:00 - 9:15 PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 8:00 - 6:15	0	0	0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	0	0	0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	0	0		





5:45 - 6:00

6:00 - 6:15

6:15 - 6:30

6:30 - 6:45

6:45 - 7:00 TOTALS PEDESTRIAN AND BICYCLE OBSERVATIONS - SUMMARY Counted by: VCU đÈ Intersection of: Briggs Chaney Road Date: Thursday April 30, 2015 and: Good Hope Road Weather: Sunny/Warm Entered by: DR Star Rating: 5 Location: Montgomery County, Maryland NORTH LEG SOUTH LEG Good Hope Road Good Hope Road TIME Pedestrians Pedestrians Bicycles Bicycles AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 6:00 - 6:15 6:15 - 6:30 6:30 - 6:45 6:45 - 7:00 TOTALS EAST LEG WEST LEG Briggs Chaney Road Briggs Chaney Road Pedestrians Bicycles Pedestrians Bicycles AM 6:30 - 6:45 6:45 - 7:00 7:00 - 7:15 7:15 - 7:30 7:30 - 7:45 7:45 - 8:00 8:00 - 8:15 8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45



1158 29

0 0

4:45 - 5:45

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4:45 - 5:00

5:00 - 5:15

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5:30 - 5:45

5:45 - 6:00

6:00 - 6:15

6:15 - 6:30

6:30 - 6:45

6:45 - 7:00 TOTALS

PEDESTR	IAN AND BICYCLE OBSER	VATIONS - SUMMARY		A				
		Cour	nted by: VCU	Consulting				
	Intersection of: MD 198		Date: April 30, 2015	Thursday				
	and: Peach Orchard Road	v	leather: Sunny/Warm					
	Location: Montgomery County, N	Maryland Ente	ered by: DR	Star Rating: 5				
	NORT Peach Ord	'H LEG shard Road	SOUT Peach Ord	TH LEG chard Road				
TIME	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					
DM	U	0	0	U				
PM 4:00 - 4:15	0	0	0	0				
4:15 - 4:30		, i i i i i i i i i i i i i i i i i i i	0	0				
4.10 - 4.30		, , , , , , , , , , , , , , , , , , ,	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				
	EAS	198	WES	T LEG) 198				
	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	o				
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				
DM	0	0	0	0				
PM 4:00 4:45	_	_	<u>_</u>	_				
4:15 4:20								
4:30 - 4:30	0	0	0	0				
4.00 - 4.40	u	v	v	U U				



VEHICLES		NING	MOV	EME	ит со	UNT	- SUN	IMAR	Y											1	
										Cour	nted by:	VCU								S	S
	Interse	ction of:	MD 28						Thursday		Date:	April 30	, 2015							/Con	willing \
		and:	Norwoo	od Road	1					w	leather:	Sunny/\	Narm								
	L.	ocation:	Montgo	mery C	ounty, N	laryland	1			Ente	ered by:	DR					Star Ra	ating: 4			
		TRAFFI	C FROM	NORTH			TRAFF	C FRON	SOUTH			TRAFF	IC FROM	I EAST			TRAFF	IC FROM	WEST		TOTAL
TIME	on:	Norwood	1 Road			on:	Norwoo	d Road			on:	MD 28				on:	MD 28				N+S +
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	E+W
AM																					
6:30 - 6:45	2	82	20	0	104	1	64	36	0	101	23	140	3	1	167	31	99	1	0	131	503
6:45 - 7:00	2	105	24	0	131	7	63	43	0	113	23	207	12	1	243	33	80	1	0	114	601
7:00 - 7:15	3	93	17	0	113	6	63	59	0	128	29	176	24	0	229	72	113	1	0	186	656
7:15 - 7:30	3	96	39	0	138	16	95	77	0	188	43	205	35	0	283	58	91	1	0	150	759
7:30 - 7:45	3	76	25	0	104	2	112	54	0	168	37	232	3	0	272	41	136	5	0	182	726
7:45 - 8:00	1	90	28	0	119	0	98	59	0	157	55	214	5	1	275	28	117	7	0	152	703
8:00 - 8:15	0	107	28	0	135	2	61	38	0	101	31	200	3	0	234	35	137	4	0	176	646
8:15 - 8:30	2	113	34	0	149	2	55	40	0	97	23	177	4	0	204	28	133	0	0	161	611
8:30 - 8:45	1	81	36	0	118	1	55	51	0	107	20	132	1	0	153	37	70	0	0	107	485
8:45 - 9:00	0	70	27	0	97	1	58	37	0	96	21	145	2	0	168	34	96	0	0	130	491
9:00 - 9:15	1	52	10	0	63	2	41	41	0	84	24	121	2	0	147	9	79	0	0	88	382
9:15 - 9:30	2	05	29	0	96	3	58	33	0	94	14	102	1	0	11/	25	86	0	0	111	418
3 Hr Totals	20	1030	317	U	1367	43	823	968	U	1434	343	2051	82	3	2492	431	1237	20	U	1688	0981
1 Hr Iotais	10	278	100		408	20	205	215	0	620	110	720	74	2	022	104	202			501	2510
0.30 - 7.30	11	370	105	0	400	21	200	210	0	507	122	920	74	1	1027	204	420	~	0	822	2018
7:00 - 9:00	10	355	100	0	400	24	289	233	0	841	184	927	87	1	1027	100	457	14	0	870	2/42
7:15 - 9:15	7	360	120	0	408	20	266	270	0	814	166	951	48	1	1084	182	491	17	0	860	2014
7:30 - 8:30	6	386	115	0	507	6	326	191	0	523	146	823	15	1	985	132	523	16	0	671	2686
7:45 - 8:45	4	391	126	0	521	5	269	188	0	462	129	723	13	1	866	128	457	11	0	596	2445
8:00 - 9:00	3	371	125	0	499	6	229	166	0	401	95	654	10	0	759	134	436	4	0	574	2233
8:15 - 9:15	4	316	107	0	427	6	209	169	0	384	88	575	9	0	672	108	378	0	0	486	1969
8:30 - 9:30	4	268	102	0	374	7	212	162	0	381	79	500	6	0	585	105	331	0	0	436	1776
PEAK HOUR																					
7:00 - 8:00	10	355	109	0	474	24	368	249	0	641	164	827	67	1	1059	199	457	14	0	670	2844
PM																					
4:00 - 4:15	0	88	30	0	118	3	93	49	1	146	25	107	4	0	136	42	121	1	0	164	564
4:15 - 4:30	0	73	36	0	109	4	98	34	0	136	26	116	1	0	143	31	168	2	0	201	589
4:30 - 4:45	1	90	31	0	122	6	97	48	0	151	35	141	1	0	177	43	155	1	0	199	649
4:45 - 5:00	0	61	38	0	99	6	119	45	0	170	45	141	7	0	193	52	128	2	1	183	645
5:00 - 5:15		09	30	0	105	11	111	40	0	108	38	101	3	0	192	50	1/5	2	0	227	092
0:10 - 0:30 5:20 - 5:45		82	31	0	115		120	04 40	0	179	40	100	3	0	204	50	104	0	0	215	/13
5:45 - 6:00	2	85	23	0	04	5	110	-18 50	0	185	30	141	4	0	171	54	152	0	0	209	639
6:00 - 6:15		57	20	0	90 78	7	116	30 45	0	169	32	127	1	0	160	43	150	1	1	207	610
6:15 - 6:30	2	64	29	0	95		107	39	0	147	33	138	1	0	172	46	131	0	0	177	591
6:30 - 6:45	2	52	19	0	73	2	93	28	0	121	28	98	0	0	122	47	141	1	0	189	505
6:45 - 7:00	1	66	13	0	80	0	80	34	0	114	23	80	3	0	106	53	119	1	D D	173	473
3 Hr Totals	11	828	334	0	1173	51	1264	519	1	1835	389	1508	29	0	1926	571	1763	11	3	2348	7282
1 Hr Totals																					
4:00 - 5:00	1	312	135	0	448	19	407	176	1	603	131	505	13	0	649	168	572	6	1	747	2447
4:15 - 5:15	2	293	140	0	435	27	425	173	0	625	144	549	12	0	705	176	626	7	1	810	2575
4:30 - 5:30	4	302	135	0	441	28	447	193	0	668	163	589	14	0	766	196	622	5	1	824	2699
4:45 - 5:45	3	273	127	0	403	23	470	194	0	687	163	562	14	0	739	212	616	4	2	834	2663
5:00 - 6:00	5	277	117	0	399	22	461	199	0	682	144	562	11	0	717	214	641	2	1	858	2656
5:15 - 6:15	4	265	103	0	372	18	466	198	0	682	138	538	9	0	685	207	625	1	2	835	2574
5:30 - 6:30	4	247	101	0	352	14	453	183	0	650	126	520	7	0	653	202	592	1	2	797	2452
5:45 - 6:45	6	238	97	0	341	15	426	160	0	601	117	502	6	0	625	190	584	2	1	777	2344
6:00 - 7:00	5	239	82	0	326	10	396	144	0	550	114	441	5	0	560	189	550	3	1	743	2179
4:30 - 5:30	4	302	135	0	441	28	447	102	0	668	162	580	14	0	766	108	622	5	1	824	2800



PEDESTR	IAN AND BICYCLE OBSER	VATIONS - SUMMARY		
	Interneting of ND 20	Cour	nted by: VCU	AB.
	Intersection of: MD 28		Date: April 30, 2015	Thursday /Consulling
	Location: Montromery County N	aryland Ente	ared by: DR	Star Rating: 4
	NORT	H LEG	SOUT	H LEG
THE	Norwo	od Road	Norwoo	od Road
TIME	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
8:00 - 8:15	ů o	0	ő	0
8:15 - 8:30	ů o	0	ő	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
0:30 - 0:40	0	0	0	0
TOTALS	0	0	0	0
	EAS	LEG	WES	T LEG
	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	1	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
8:15 - 8:30 8:30 - 8:45	0 0 1	0 0 0	0 0 0	0 0 0
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00	0 0 1 0	0	0 0 0	0 0 0
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15	0 0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30	0 0 1 0 0 0			
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM	0 0 1 0 0 0 1	0 0 0 0 0 0	0 0 0 0 0 1	0 0 0 0 0 0
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15	0 0 1 0 0 0 1		0 0 0 0 0 1	
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:20	0 0 1 0 0 0 1		0 0 0 0 0 1	
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45	0 0 1 0 0 0 0 1 0 0 0 0 0			
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45	0 0 1 0 0 0 1 0 0 0 0 0 0			
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15	0 0 1 0 0 0 1 0 0 0 0 0 0 0 0			
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:15 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30				
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45				
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00				
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 6:00 - 6:15				
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 5:45 5:45 - 6:00 6:00 - 6:15 6:15 - 6:30				
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 6:00 - 6:15 6:15 - 6:30 6:30 - 6:45				
8:15 - 8:30 8:30 - 8:45 8:45 - 9:00 9:00 - 9:15 9:15 - 9:30 TOTALS PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:30 6:30 - 6:45 6:45 - 7:00				



VEHICLES TURNING MOVEMENT COUNT - SUMMARY AB Counted by: SE Intersection of: MD 650 Date: Thursday June 11,2015 and: Site Access Weather: Mostly Sunny Location: Montgomery County, Maryland Entered by: TOTAL N+S TRAFFIC FROM NORTH TRAFFIC FROM SOUTH TRAFFIC FROM EAST TRAFFIC FROM WEST on: MD 650 on: MD 650 on: on: TIME RIGHT THRU LEFT U-TN TOTAL THRU LEFT U-TN TOTAL RIGHT THRU LEFT U-TN TOTAL RIGHT THRU LEFT U-TN TOTAL E+W RIGHT AM 6:30 - 7:30 6:45 - 7:45 7:00 - 8:00 7:15 - 8:15 7:30 - 8:30 7:45 - 8:45 8:00 - 9:00 8:15 - 9:15 8:30 - 9:30 PEAK HOUR 7:00 - 8:00 PM 4:00 - 4:15 4:15 - 4:30 4:30 - 4:45 4:45 - 5:00 5:00 - 5:15 5:15 - 5:30 5:30 - 5:45 5:45 - 6:00 6:00 - 6:15 6:15 - 6:30 6:30 - 6:45 6:45 - 7:00 PEAK HOUR 4:30 - 5:30



4:45 - 5:00

5:00 - 5:15

5:15 - 5:30

5:30 - 5:45

5:45 - 6:00

6:00 - 6:15

6:15 - 6:30

6:30 - 6:45

6:45 - 7:00 TOTALS

		Cour	nted by: SE	
1	ntersection of: MD 650	Date: June 1	11, 2015	Thursday 🖉
	and: Site Access	v	leather: Mostly Sunny	
	Location: Montgomery County, N	faryland Ente	ered by:	
	NORT	TH LEG	SOUT	TH LEG
TIME	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
8:30 - 6:45	0	0	0	0
3:45 - 7:00	0	0	0	0
.00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
:30 - 7:45	0	0	0	0
:45 - 8:00	0	0	0	0
3:00 - 8:15	0	0	0	0
15 - 8:30	0	0	0	0
:30 - 8:45	0	0	0	0
3:45 - 9:00	0	0	0	0
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
:45 - 5:00	0	0	0	0
:00 - 5:15	0	0	0	0
5:15 - 5:30	0	0	0	0
:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
3:00 - 6:15	0	0	0	0
:15 - 6:30	0	0	0	0
3:30 - 6:45	0	0	0	0
3:45 - 7:00	0	0	0	0
TOTALS	0	0	0	0
	EAS	1 LEG) 28	WES	1 LEG D 28
ľ	Pedestrians	Bicycles	Pedestrians	Bicycles
AM				
3:30 - 6:45	0	0	0	0
:45 - 7:00	0	0	0	0
:00 - 7:15	0	0	0	0
7:15 - 7:30	0	0	0	0
7:30 - 7:45	0	0	0	0
:45 - 8:00	0	0	0	0
3:00 - 8:15	0	0	0	0
:15 - 8:30	0	0	0	0
:30 - 8:45	0	0	0	0
:45 - 9:00	0	0	0	0
00 - 9:15	0	0	0	0
15 - 9:30	0	0	0	0
TOTALS	0	ŏ	ŏ	0
PM				
:00 - 4:15	0	0	0	0
15 - 4:30	0	0	0	0
4:30 - 4:45	0	0	0	0



APPENDIX C

CRITICAL LAN VOLUME WORKSHEET

Existing/Background/Total Future Traffic Conditions



Analyst: SE

Preliminary Plan # 120160040 RCCG Jesus House Revised Traffic Study january 18, 2016

Intersection NB Road: New Humashire Avenue (MD 650)
EB Road: MD 198/MD 28
Jurisdiction: Monizomery County, Marshand
Critical Lane Volume
Calculation
CLV Standard: 1450

SB Road: New Harnoshire Avenue (MD 650) WB Road: MD 198/MD 28

for Existing



STSConsitingUS.com

(410) 718-8660

Lane Configuration





АМ	Movement	Ap proach	Lane Use Factor	Adjusted Larre Volume	opposite (rega	Opposing Lane Use Facor	Adjumed Opposing Volume	Effective Approach Volume	V.D. ritebologiani = *
EB	т	562	0.53	297.86	159	1.00	159	457	
WB	т	895	0.53	474.35	10	1.00	10	484	•
NB	т	167	0.53	88.51	184	1.00	184	273	
SB	т	529	0.53	280.37	59	1.00	59	339	•
lote							CLV	823	
							vic	0.57	
							LOS		

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	0.55
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		



PM	Movement	Approach	Lane Use Room	Adjusted Lane Volume	Opposing Lods	Opposing Lane Use Factor	Admond Opposing Volume	Blective Approach Volume	* = indeded in CLV
EB	т	673	0.53	356.69	180	1.00	180	537	•
WB	т	617	0.53	327.01	28	1.00	28	355	
NB	т	670	0.53	355.1	96	1.00	96	451	٠
SB	т	276	0.53	146.28	64	1.00	64	210	
Note		-		-	-		CLV	988	
							vic	0.68	
							LOS	A	







Ednor Road



АМ	Movemen.	Approach	Lane Use Factor	Adjusted Lane Volume	Opposing Lafe	Opposing Lane Use Facor	Adjussed Opposing Volume	Effective Approach Volume	* = included in G.V
EB	LT	138	1.00	138	94	1.00	94	232	
WB	TR	270	1.00	270	45	1.00	45	315	•
NB	TR	267	1.00	267	12	1.00	12	279	
58	n	584	1.00	584	20	1.00	20	604	
Note							CLV	919	
							vic	0.63	
							LOS	A	

Factors

Level of Volume Use Service Factor Capacit 1.00 A 0.69 i. в 0.53 0.79 2 с 0.90 3 0.37 D 1.00 0.30 4 E 1.10 F 1.10



PM	Movemen c.	Approach	Lane Use factor	Adjusced Lane Volume	Opposing Lats	Opposing Lime Use Factor	Adjusted Opposing Volume	Blicche Approach Volume	* = inducted in CLV
EB	ιτ	272	1.00	272	37	1.00	37	309	٠
WB	TR	144	1.00	144	92	1.00	92	236	
NB	TR	802	1.00	802	17	1.00	17	819	٠
SB	π	292	1.00	292	27	1.00	27	319	
Note							CLV	1128	-
							vic	0.78	
							LOS	в	



Intersection 3	NB Road: MD 650 EB Road: Brizes Chaner Road Juriseliction: Monitsomery County, Maryland	58 Road: MD 650 WB Road: Brizz Chaner Road	(410) /18-5060 STBoonsuttingUS.com
Critical Lane Volume	Policy Area: Cloverby	Scenario: Existine	
Calculation	CLV Standard: 1450	Analvat: SE	





АМ	Pilo ververc	Approach	Larve Une Factor	Adjusted Lane Volume		Opposing Lane Use Factor	Adjusted Oppeding Volume	Effective Approach Volume	* = included in Q.V
EB	т	0	0.00	۰	0	0.00	0	۰	
WB	L	268	1.00	268	0	1.00	0	268	٠
NB	TR	537	0.53	284.61	117	1.00	117	402	٠
SB	TR	675	0.53	357.75		1.00		369	
Note							CLV	670	
							wic	0.46	
							LOS		

Factors

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

PM Peak

iriggi Chaney B



PM	Movemen t	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lats	Opposing Lane Use Factor	Adunced Opposing Volume	Bleche Approach Volume	* = inducted in CLV
EB	т	0	0.00	0	0	0.00	0	0	
WB	L	184	1.00	184	0	1.00	0	184	٠
NB	TR	1117	0.53	592.01	77	1.00	π	669	٠
58	TR	497	0.53	263.41	3	1.00	3	266	
Notec							CLV	853	
							wic	0.59	
							LOS	A	









АМ	Mo werners	Approach	Lame Une Factor	Adjusted Lane Volume	Opposing Lafes	Opposing Lane Use Facor	Adjusted Opposing Volume	Efective Approach Volume	* = included in Q.V
EB	R	501	1.00	501	0	1.00	0	501	٠
WB	TR	0	0.00	0	0	0.00	0	۰	
NB	L	509	1.00	509	0	0.00	0	509	
SB	т	638	0.53	338.14	509	1.00	509	847	•
							CLV	1348	
							vic	0.93	
							LOS	D	

Factors

Level of Volume Use Factor ofl Service Capat ī. 1.00 A 0.69 2 0.53 в 0.79 с 3 0.37 0.90 D 1.00 4 0.30 E 1.10 -1.10 F

PM Peak

Annual Road



PM	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lats	Opposing Lime Use Factor	Adjusted Opposing Volume	Effective Approach Volume	* = induded in CLV
EB	R	322	1.00	322	0	1.00	0	322	•
WB	TR	0	0.00	0	0	0.00	0	۰	
NB	L	893	0.53	473.29	0	0.00	0	473	
58	т	513	0.53	271.89	524	1.00	524	796	٠
							CLV	1118	
							vic	0.77	
							LOS	в	



5 Critical Lane Volume Calculation

Intersection

Jurindiction: Montecomery County, Maryland Policy Area: Cloverly CLV Standard: 1450 /B Road: Brizze Chaner Road Scenario: Estatine Analyst: SE



Lane Configuration





AM	Mo ververc	Approach	Lane Uni Fador	Adjussed Lane Volume	Opposing Lefts	Opposing Lane Une Factor	Adjussed Opposing Volume	Effective Approach Volume	* = included in C.V
EB	TR	257	1.00	257	230	1.00	230	487	•
WB	т	289	1.00	289	34	1.00	34	323	
NB	π	87	1.00	87	118	1.00	118	205	
58	RTL	296	1.00	296	12	1.00	12	308	•
Note							CLV	795	
							vic	0.55	
							LOS	A	

Factors

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

PM Peak



РМ	Movement	Approach	Lane Use Riccor	Adjusted Lare Volume	Opposing Lats	Opposing Lime Use Factor	Adjusted Opposing Volume	Blicche Approach Volume	* = inducted in CLV
EB	TR	306	1.00	306	216	1.00	216	522	•
WB	т	288	1.00	288	26	1.00	26	314	
NB	R	243	1.00	243	39	1.00	39	282	٠
58	RTL	120	1.00	120	30	1.00	30	150	
							CLV	804	
							vic	0.55	
							LOS	A	



january 18, 2016

Intersection NB Road: Peach Orchard Road EBR 6 Ju Critical Lane Volume Calculation CLV Se

ad: MD 198 C Montzomery County, Maryland Policy Area: Cloverly rd: 1450

SB Road: Peach Orchard Road WB Road: MD 198

Scenario: Existing

nt: SE

Consulti

(410) 718-866 STSConslEngUS.com

Lane Configuration





АМ	Mo verver.	Approach	Lane Use Factor	Adjussed Lane Volume	Opposing Lafes	Opposing Lane Use Factor	Adjussed Opposing Volume	Effective Approach Volume	* = included in Q.V
EB	т	939	1.00	939	89	1.00	89	1028	
WB	т	1090	1.00	1090	0	1.00	0	1090	•
NB	TR	116	1.00	116	0	0.53	0	116	•
SB	TR	1	1.00	1.1	10	1.00	10		
							CLV	1206	
							wic	0.83	
							LOS	с	

Level of Service	Volume / Capacitr	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		



PM	1	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lats	Opposing Lane Use Factor	Adjusted Opposing Volume	Blicche Approach Volume	 Induction CLV
EB		т	981	1.00	981	118	1.00	118	1099	٠
W	8	т	1039	1.00	1039	0	1.00	0	1039	
NB		TR	92	1.00	92	1	0.53	0.53	93	•
SB		TR	1	1.00	1	н	1.00	н	12	
_								CLV	1192	
								vic	0.82	
								LOS	с	







NO 28



АМ	Movement.	Ap proach	Lame Une Factor	Adjusted Larre Volume	Opposing Lafes	Opposing Lane Use Facor	Adjusted Opposing Volume	Efective Approach Volume	* = included in G.V
EB	т	457	0.53	242.21	68	1.00	68	310	
WB	т	827	0.53	438.31	14	1.00	14	452	•
NB	TR	392	0.53	207.76	109	1.00	109	317	
SB	т	355	1.00	355	249	1.00	249	604	•
Note							CLV	1056	
							wic	0.73	
							LOS	в	

Factors

Level of Service	Volume / Capacitr	# of Lanes	Use Factor
A	0.69	1.1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

PM Peak



PM	Movement	Approach	Lane Use factor	Adjusced Lane Volume	Opposing Lads	Opposing Lane Use Factor	Adjusted Opposing Volume	Blictive Approach Volume	* = indicated in CLV
EB	т	622	0.53	329.66	14	1.00	14	344	•
WB	т	589	0.53	312.17	5	1.00	5	317	
NB	TR	475	0.53	251.75	135	1.00	135	387	
SB	т	302	1.00	302	193	1.00	193	495	
Note							CLV	839	
							vic	0.58	
							LOS	A	



See

Preliminary Plan # 120160040 RCCG Jesus House **Revised Traffic Study** january 18, 2016

Intersection 1 Critical Lane Volume Calculation

NB Road: New Hampshire Avenue (MD 650) EBI ad: MD 198/MD 28 r: Montzomery County, Maryland Policy Area: Cloverly CLV S ret 1450

SB Road: New Hamoshire Avenue (MD 650) WB Read: MD 198/MD 28

nto: Backzorund Traffic Analyst: SE



STSConsitingUS.com

(410) 718-86

Lane Configuration





АМ	Plo ververc	Approach	Lame Une Factor	Adjusted Larre Volume	Opposing Lafes	Opposing Lane Use Facor	Adjusted Opposing Volume	Efective Approach Volume	 Included in Q.V
EB	т	569	0.53	301.57	198	1.00	198	500	•
WB	т	906	0.53	480.18	18	1.00	18	498	
NB	R	180	0.53	95.4	202	1.00	202	297	
SB	т	548	0.53	290.44	67	1.00	67	357	•
Note							CLV	857	
							vic	0.59	
							LOS	A	

Level of Service	Volume / Casactor	# of Lanes	Use Facto
A	0.69	1	0.55
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

PM	Peak	
		L



PM	Plovemen c.	Appr and	Lane Use factor	Adjusted Lane Voltarie	Opposing Lads	Opposing Lane Use Factor	Adjusted Opposing Volume	Blicche Approach Volume	* = inducted in CLV
EB	т	693	0.53	367.29	189	1.00	189	556	•
WB	т	637	0.53	337.61	39	1.00	39	377	
NB	т	686	0.53	363.58	126	1.00	126	490	•
58	т	300	0.53	159	87	1.00	87	246	
Notec							CLV	1046	
							víc	0.72	
							LOS	в	







Ednor Road



AM	Movement.	Ap proach	Lane Use Factor	Adjusted Larre Volume	Opposing Lates	Opposing Lane Use Facor	Adjumed Opposing Volume	Effective Approach Volume	* = included in Q.V
EB	ιτ	139	1.00	138	94	1.00	94	232	
WB	TR	271	1.00	271	46	1.00	46	317	٠
NB	TR	285	1.00	285	12	1.00	12	297	
58	π	593	1.00	593	20	1.00	20	613	٠
Votec							CLV	930	
							wic	0.64	
							LOS		

Factors

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

PM Peak



РМ	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lats	Opposing Lane Use Factor	Adunced Opposing Volume	Effective Approach Volume	* = inducted in CLV
EB	ιτ	346	1.00	346	37	1.00	37	383	٠
WB	TR	143	1.00	143	94	1.00	94	237	
NB	TR	828	1.00	828	17	1.00	17	845	٠
SB	π	303	1.00	303	27	1.00	27	330	
Note							CLV	1228	
							wic	0.85	
							LOS	с	







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Briggs Chargy



АМ	Movement	Approach	Lans Uni Factor	A djutted Lane Volume		Opposing Lane Use Factor	A dusted Opposing Volume	Effective Approach Volume	 Induduite CLV
EB	т	0	0.00	0	0	0.00	0	0	
WB	L	288	1.00	288	0	1.00	0	288	•
NB	TR	598	0.53	316.94	121	1.00	121	438	•
SB	т	727	0.53	385.31	п	1.00	n	396	
Note:							CLV	726	
							vic	0.50	
							LOS	A	

Factors

Level of Volume Capacity ofL lae Fr See A 0.69 1 1.00 в 0.79 0.53 2 0.37 с 0.90 3 D 1.00 0.30 Е 1.10 >1.10 F



РМ	Merr anote	App roach	Late Use Pictor	Adjusted Lane Volume	Opposing Lefts	Opposing Lane Use Factor	Adjusted Opposing Volume	Effective Approach Volume	* = Included in CLV
EB	т	0	0.00	0	0	0.00	0	0	
WB	L	195	1.00	195	0	1.00	0	195	•
NB	TR	1231	0.53	652.43	85	1.00	85	737	•
SB	т	578	0.53	306.34	3	1.00	3	309	
Note:							CLV	932	
							v/c	0.64	
							LOS		

Sustainable Transportation • Planning • Engineering Solutions, LLC Consulting

Intersection SS NB Road: MD 650 SB Road: MD 650 EB Road: Norwood Road WB Road: Norwood Road 4 (410) 718- 8660 STSConsitingUS.com Jurisdiction: Montgomery County, Maryland Critical Lane Volume Scenario: Background Traffic Policy Area: Cloverly Calculation CLV Standard: 1450 Analyst: SE AM Peak









Factors

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
Е	1.10		
F	>1.10		



Norwood Road



РМ	Movement	Approach	Lane Use Factor	Adjusted Lane Volume	Opposing Lefts	Opposing Lane Use Factor	Adjusted Opposing Volume	Effective Approach Volume	* = Included in CLV
EB	R	332	1.00	332	0	1.00	0	332	*
WB	TR	0	0.00	0	0	0.00	0	0	
NB	т	1007	0.53	533.71	0	0.00	0	534	
SB	т	583	0.53	308.99	530	1.00	530	839	*
							CLV	1171	
							v/c	0.81	
							LOS	с	



Consult Intersection NB Road: Good Hope Road SB Road: Good Hope Road 5 EB d: Brizzs Chaner Road WBR d Brizz Chaner Road merr County, Marvland STSConsiEngUS.co Montes Critical Lane Volume no: Background Traffic Policy Area: Cloverly So Calculation CLV Se ndard: 1450 Analyst: SE

Lane Configuration Good Hope Road RTL R Briggs Chaney Road L т TR L

TL R

Good Hope Road

Briggt Changel



АМ	Pilo ververc	Approach.	Lane Use Factor	Adjusted Larre Volume	Opposing Lafes	Opposing Lane Use Factor	Adjusted Opposing Volume	Effective Approach Volume	* = included in C.V
EB	TR	268	1.00	268	230	1.00	230	498	•
WB	т	313	1.00	313	34	1.00	34	347	
NB	R	192	1.00	192	118	1.00	118	310	•
58	RTL	296	1.00	296	12	1.00	12	308	
Note							CLV	808	
							vic	0.56	
						-	LOS	A	

(410) 718-864

Factors

Use Factor Level of Volume Service Capacit A 0.69 1.00 i. 0.79 в 2 0.53 с 0.90 3 0.37 D 1.00 0.30 4 Е 1.10 F >1.10

R ę 8 0 2 t 5 26 7 294 \rightarrow 40 7

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PM Peak

PM	Movement	Approach	Lane Use factor	Adjusced Lane Volume	Opposing Lats	Opposing Lime Use Factor	Adjusted Opposing Volume	Blactive Approach Volume	* = inducted in CLV
EB	TR	334	1.00	334	216	1.00	216	550	٠
WB	т	304	1.00	304	26	1.00	26	330	
NB	R	243	1.00	243	39	1.00	39	282	•
58	RTL	120	1.00	120	30	1.00	30	150	
							CLV	832	
							vic	0.57	
							LOS	A	







MD 198



АМ	Movement	Ap proach	Lans Use Factor	Adjusted Lane Volume	Opposing Latits	Opposing Lane Use Facor	Adjussed Opposing Volume	Effective Approach Volume	* = included in G.V
EB	т	989	1.00	989	89	1.00	89	1078	
WB	т	1140	1.00	1140	0	1.00	0	1140	٠
NB	TR	116	1.00	116	0	0.53	0	116	•
SB	RTL	1	1.00	1.1	10	1.00	10	п.	
							CLV	1256	
							vic	0.87	
							LOS	с	

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		



РМ	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lods	Opposing Lane Use Factor	Admond Opposing Volume	Blective Approach Volume	* = indeded in CLV
EB	т	1073	1.00	1073	118	1.00	118	1191	•
WB	т	1068	1.00	1068	0	1.00	0	1068	
NB	TR	92	1.00	92	1	0.53	0.53	93	٠
58	RTL	2	1.00	2	н	1.00	п.	13	
							CLV	1284	
							vic	0.89	
						-	LOS	с	







10 20



АМ	Mo ververc	Approach	Lane Use Factor	Adjusted Larre Viduate	Opposing Lofes	Opposing Lane Use Factor	Adjusted Opposing Volume	Effective Approach Volume	* = included in C.V
EB	т	473	0.53	250.69	68	1.00	68	319	
WB	т	852	0.53	451.56	21	1.00	21	473	•
NB	TR	405	0.53	214.65	109	1.00	109	324	
SB	т	367	1.00	367	249	1.00	249	616	•
Note							CLV	1089	
							víc	0.75	
							LOS	в	

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

DM	D
F m	геак



PM	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lats	Opposing Lime Use Factor	Adjussed Opposing Volume	Blische Approach Volume	* = Induded in CLV
EB	т	660	0.53	349.8	14	1.00	14	364	•
WB	т	643	0.53	340.79	17	1.00	17	358	
NB	TR	490	0.53	259.7	135	1.00	135	395	
58	т	305	1.00	305	193	1.00	193	498	
lote							CLV	862	
							vic	0.59	
							LOS	A	









АМ	Plo ververe.	Ap proach	Lane Use Factor	Adjusted Larre Volume	Opposing Lafes	Opposing Lane Use Facor	Adjusted Opposing Volume	Efective Approach Volume	* = included in G.V.
EB	т	569	0.53	301.57	217	1.00	217	519	
WB	т	906	0.53	480.18	18	1.00	18	498	
NB	R	186	0.53	98.58	202	1.00	202	301	
SB	т	550	0.53	291.5	75	1.00	75	367	•
Note							CLV	886	
							wic	0.61	
							LOS		

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	0.55
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		





РМ	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lods	Opposing Lane Use Factor	Adjusted Opposing Volume	Blective Approach Volume	* = indeded in CLV
EB	т	693	0.53	367.29	199	1.00	199	566	٠
WB	т	637	0.53	337.61	39	1.00	39	377	
NB	R	686	0.53	363.58	126	1.00	126	490	٠
58	т	301	0.53	159.53	99	1.00	99	259	
Note							CLV	1056	
							vic	0.73	
							LOS	в	









АМ	Plo ververc	Approach.	Larre Une Factor	Adjusted Lane Volume	Opposing Lafes	Opposing Lane Use Facor	Adjusted Opposing Volume	Effective Approach Volume	* = included in Q.V
EB	LT	139	1.00	138	94	1.00	94	232	
WB	TR	271	1.00	271	46	1.00	46	317	٠
NB	TR	286	1.00	286	12	1.00	12	298	
SB	π	595	1.00	595	20	1.00	20	615	•
Notec							CLV	932	
							víc	0.64	
<u> </u>							1.05		

Factors

Use Factor Level of Volume l of L Service Capada A 0.69 ī. 1.00 в 2 0.53 0.79 с 0.90 3 0.37 0.30 D 1.00 4 E 1.10 >1.10

PM Peak

Ednor Road



PM	Movement	Approach	Lane Use factor	Adjusted Lane Volume	Opposing Lats	Opposing Lane Use Factor	Adjusted Opposing Volume	Effective Approach Volume	* = indeded in CLV
EB	ш	346	1.00	346	37	1.00	37	383	•
WB	TR	143	1.00	143	94	1.00	94	237	
NB	TR	830	1.00	830	17	1.00	17	847	٠
58	π	304	1.00	304	27	1.00	27	331	
Votec							CLV	1230	
							vic	0.85	
							LOS	с	







Changy Road



АМ	Movement	Approach	Lans Uni Factor	A djutted Lane Volume	Left or U-Turn	Opposing Lane Use Footoe	A djutted Opposing Volume	Effective Approach Volume	 Indeddia CLV
EB	т	0	0.00	0	0	0.00	0	0	
WB	L	288	1.00	288	0	1.00	0	288	•
NB	TR	678	0.53	359.34	123	1.00	123	482	•
SB	т	782	0.53	414.46	n	1.00	п	425	
Note:							CLV	770	
							vic	0.53	
							LOS		

Factors

Level of Service	Volume / Capacity	# of Lanes	Use Fa
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
Е	1.10		
F	>1.10		



РМ	Mov anote	App much	Lane Use Picete	Adjusted Lane Volume	Opposing Lefts	Opposing Lans Use Factor	Adjusted Opposing Volume	Effective Approach Volume	*= included in CLV
EB	т	0	0.00	0	0	0.00	0	0	
WB	L	195	1.00	195	0	1.00	0	195	•
NB	TR	1289	0.53	683.17	89	1.00	89	772	•
SB	т	656	0.53	347.68	3	1.00	3	351	
Note:						CLV	967		
						vle	0.67		
						LOS			




Lane Configuration





АМ	Movemen.	Mo wannans.		Lane Use Factor Adjusted Lane Volume		Opposing Lane Use Facor	Adjussed Opposing Volume	Effective Approach Volume	* = included in Q.V
EB	R	504	1.00	504	0	1.00	0	504	•
WB	TR	0	0.00	۰	0	0.00	0	۰	
NB	L	523	1.00	512	0	0.00	0	512	
SB	т	804	0.53	426.12	512	1.00	512	938	•
							CLV	1442	
							vic	0.99	
							LOS	D	

Factors

Level of Volume Use d Service Capada Factor 0.69 A i. 1.00 в 0.79 2 0.53 с 0.90 3 0.37 D 1.00 0.30 4 E 1.10 >1.10 F



Pł	¥	Movement.	Approach.	Line Use facor Advanced Line Volume		Opposing Lats	Opposing Lime Use Factor	Adjunced Opposing Volume	Macaho Approach Volume	* = Inducted in CLV
E	8	R	332	1.00	332	0	1.00	0	332	•
w	в	TR	0	0.00	۰	0	0.00	0	0	
N	в	т	1062	0.53	562.86	0	0.00	0	563	
s	3	т	661	0.53	350.33	530	1.00	530	880	
								CLV	1212	
								wic	0.84	
								LOS	с	









Chaney R and

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АМ	Plo ververe.	Movement Approach Lane Use Fracor Volume Coposing Lane Opposing Lane Use Fracor		Adjussed Opposing Volume	Effective Approach Volume	* = included in G.V			
EB	TR	271	1.00	271	230	1.00	230	501	•
WB	т	317	1.00	317	34	1.00	34	351	
NB	R	192	1.00	192	118	1.00	118	310	٠
SB	RTL	296	1.00	296	12	1.00	12	308	
Note							CLV	811	
							vic	0.56	
							LOS	A	

Factors

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		

PM Peak



PM	Plovemen c.	Approach	Lane Use factor	Adjusted Lane Voltarie	Opposing Lats	Opposing Lane Use Factor	Adjusted Opposing Volume	Bleatre Approach Volume	* = inducted in CLV
EB	TR	338	1.00	338	216	1.00	216	554	•
WB	т	304	1.00	304	26	1.00	26	330	
NB	R	243	1.00	243	39	1.00	39	282	•
58	RTL	120	1.00	120	30	1.00	30	150	
							CLV	836	
							vic	0.58	
							LOS	A	









MD198



АМ	Movemene.	Approach	Lane Use Factor	Adjusted Lane Victoria	Opposing Lafes	Opposing Lane Use Facor	Adjured Oppeding Volume	Effective Approach Volume	 Included in QLV
EB	т	995	1.00	995	89	1.00	89	1084	
WB	т	1148	1.00	1148	0	1.00	0	1148	•
NB	TR	116	1.00	116	0	0.53	0	116	•
58	RTL	1	1.00	1.1	10	1.00	10	н	
							CLV	1264	
							wic	0.87	
							LOS	с	

Factors





AM Peak



PM	Movement	spin addy	Lane Use Room	Adjusted Lare	opposing Lots	Opposing Lane Use Factor	Adjunted Opposing Volume	interne Approach Wolane	* = Inducted in CLV
EB	т	1081	1.00	1081	118	1.00	118	1199	•
WB	т	1074	1.00	1074	0	1.00	0	1074	
NB	TR	92	1.00	92	1.1	0.53	0.53	93	٠
58	RTL	2	1.00	2	н	1.00	н	13	
	·						CLV	1292	
_							wic	0.89	
							LOS	с	





Lane Configuration



802



АМ	Movement.	Approach	Larre Une Factor	Adjussed Lane Volume	Opposing Lefts	Opposing Lane Use Factor	Adjumed Opposing Volume	Effective Approach Volume	* = included in Q.V
EB	т	485	0.53	257.05	68	1.00	68	325	
WB	т	860	0.53	455.8	21	1.00	21	477	•
NB	TR	485	0.53	257.05	109	1.00	109	366	
58	т	367	1.00	367	249	1.00	249	616	•
Note							CLV	1093	
							wic	0.75	
							LOS	в	

Factors

Level of Service	Volume / Capacity	# of Lanes	Use Factor
A	0.69	1	1.00
в	0.79	2	0.53
с	0.90	3	0.37
D	1.00	4	0.30
E	1.10		
F	>1.10		





PM	Plovement.	Approach	Lane Use factor	Lane Use Record Adjusted Lane Volume Opposing Lada		Opposing Lane Use Factor	Adjurood Opposing Yolumo	Macaho Approach Volume	* = Inducted in CLV
EB	т	668	0.53	354.04	14	1.00	14	368	٠
WB	т	655	0.53	347.15	17	1.00	17	364	
NB	TR	490	0.53	259.7	135	1.00	135	395	
58	т	305	1.00	305	193	1.00	193	498	
Note							CLV	866	-
							vic	0.60	
							LOS	A	



APPENDIX D

SYNCHRO OUTPUT RESULTS

RCCC Revised Sustainable Transportation • Planning • Engineering Solutions, LLC

Preliminary Plan # 120160040 RCCG Jesus House Revised Traffic Study january 18, 2016

HCM Unsignalized Intersection Capacity Analysis

MovementEBLEBRNBLNBTSBTSBRLane ConfigurationsiiiiiiiiiVolume (veh/h)159714057286321Sign ControlStopFreeFreeGrade0%0%0%Peak Hour Factor0.920.920.920.92Hourly flow rate (vph)1610515262293823PedestriansLane Width (ft)Valking Speed (ft/s)Fercent BlockageFercent BlockageRight tum flare (veh)Median typeNoneNoneNone
Movement EBL EBR NBL NBT SBT SBR Lane Configurations 1
Lane Configurations Image: Configuration in the image: Configuration in th
Volume (veh/h) 15 97 140 572 863 21 Sign Control Stop Free Free Free Grade 0%
Sign Control Stop Free Free Grade 0% 0% 0% Peak Hour Factor 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 16 105 152 622 938 23 Pedestrians Image: Speed (ft/s) Percent Blockage Image: Speed (ft/s)
Grade 0% 0% 0% Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 16 105 152 622 938 23 Pedestrians
Peak Hour Factor 0.92
Hourly flow rate (vph) 16 105 152 622 938 23 Pedestrians
Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None None
Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None None
Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None None
Percent Blockage Right turn flare (veh) Median type None None
Right turn flare (veh) Median type None None
Median type None None
71
Median storage veh)
Upstream signal (ft)
pX, platoon unblocked
C. conflicting volume 1553 469 961
vC1, stage 1 conf vol
vC2, stage 2 conf vol
vCu, unblocked vol 1553 469 961
tC, single (s) 6.8 6.9 4.1
tC, 2 stage (s)
tF (s) 3.5 3.3 2.2
p0 gueue free % 80 81 79
cM capacity (veh/h) 82 541 712
Direction, Lane # EB 1 EB 2 NB 1 NB 2 NB 3 SB 1 SB 2 SB 3
Volume Total 16 105 152 311 311 469 469 23
Volume Left 16 0 152 0 0 0 0 0
Volume Right 0 105 0 0 0 0 0 23
cSH 82 541 712 1700 1700 1700 1700 1700
Volume to Capacity 0.20 0.19 0.21 0.18 0.18 0.28 0.28 0.01
Queue Length 95th (ft) 17 18 20 0 0 0 0 0
Control Delay (s) 59.7 13.3 11.4 0.0 0.0 0.0 0.0 0.0
Lane LOS F B B
Approach Delay (s) 19.5 2.2 0.0
Approach LOS C
Intersection Summary
Average Delay 2.2
Intersection Capacity Utilization 44.9% ICU Level of Service A
Analysis Period (min) 15

Jesus House-MD 650 & Site Access w/ Median Break-AM Peak $\ 1/23/2016$ Future ShivaN

Synchro 8 Report Page 1 Preliminary Plan # 120160040 RCCG Jesus House Revised Traffic Study january 18, 2016

HCM Unsignalized Intersection Capacity Analysis 4[.] MD 650 & Site Access Road

4: MD 650 & Site Access Road 1/2										1/23/2016
	٨	\mathbf{F}	1	Ť	ŧ	4				
Movement	EBL	EBR	NBL	NBT	SBT	SBR				
Lane Configurations	٦	1	۲	††	<u>††</u>	1				
Volume (veh/h)	21	140	97	1296	629	15				
Sign Control	Stop			Free	Free					
Grade	0%			0%	0%					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				
Hourly flow rate (vph)	23	152	105	1409	684	16				
Pedestrians										
Lane Width (ft)										
Walking Speed (ft/s)										
Percent Blockage										
Right turn flare (veh)										
Median type				None	None					
Median storage veh)										
Upstream signal (ft)										
pX. platoon unblocked										
vC, conflicting volume	1599	342	700							
vC1. stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1599	342	700							
tC, single (s)	6.8	6.9	4.1							
tC, 2 stage (s)										
tF (s)	3.5	3.3	2.2							
p0 queue free %	73	77	88							
cM capacity (veh/h)	85	654	893							
Direction Lane #	FR 1	EB 2	NR 1	NR 2	NB 3	SR 1	SB 2	SB 3		
Volume Total	23	152	105	704	704	342	342	16		
Volume Left	23	0	105	0	0	0	0	0		
Volume Right	0	152	0	0	Ő	Ő	0	16		
cSH	85	654	803	1700	1700	1700	1700	1700		
Volume to Canacity	0.27	0.23	0.12	0.41	0.41	0.20	0.20	0.01		
Oueue Length 95th (ft)	24	22	10	0	0.11	0.20	0.20	0.01		
Control Delay (s)	61.8	12.2	9.6	0.0	0.0	0.0	0.0	0.0		
Lane LOS	01.0 F	12.2 R	Δ	0.0	0.0	0.0	0.0	0.0		
Approach Delay (s)	18.6	U	07			0.0				
Approach LOS	10.0 C		0.7			0.0				
Intersection Summary	-									
Average Deley			4.0							
Average Delay	ation		1.0	10		of Comiles			٨	
Analysis Deried (min)	auon		43.8%		JU Level (of Service			A	
Analysis Period (min)			15							