

Lenhart Traffic Consulting, Inc.
Transportation Planning & Traffic Engineering

Memorandum:

Date: January 20, 2023

TO: Brian Fields
800 Rabbitt Road
Gaithersburg, MD 20878

FROM: Mike Lenhart

RE: Sheetz – Walnut Hill Shopping Center Preliminary Traffic Impact Analysis Comments

A point-by-point response to the comments for the Sheetz – Walnut Hill Shopping Center is below.

Comment #1: The TIS will need to address the future conditions at project buildout under two conditions: with the MD 355 BRT and without it. One major change with the BRT is the MD 355 median closure at N. Westland Drive. All distributions and analysis will need to show both conditions. The BRT is an expected future condition, but there is no certainty that it will be installed, plus there may be an interim period when Sheetz is open and the BRT has not been constructed.

Response: *Noted. The updated TIS includes future conditions with and without the MD 355 BRT.*

Comment #2: Please note that u-turns are currently prohibited on westbound MD 355 at Deer Park Road, but they will be allowed after the BRT is in place. Update the traffic distribution accordingly.

Response: *Noted. The traffic distribution for the future scenario including the MD 355 BRT accounts for the allowed U-turns.*

Comment #3: Please include the MD 355 / N. Westland Drive intersection as a study intersection and update the applicable exhibits.

Response: *The intersection of MD 355 & N. Westland Drive has been included in the updated TIA.*

Comment #4: Remove references to the 2009 Transportation Master Plan. Add applicable information from the proposed MD 355 BRT improvements, based on the latest plans (currently 35%).

Response: *Noted.*

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Comment #5: Exhibit 7a – clarify the distribution to and from MD 355 and I-370. Show I-370 on the diagram, or use a separate diagram.

Response: *To access I-370 from the proposed site, vehicles must continue south along MD 355 through Intersection 5. As such, the 23 AM- and 20 PM peak hour southbound through volumes at Intersection 5 include outbound site trips destined south along MD 355, east along I-370, and west along I-370. These trips account for 60% of the outbound site trips (20% from the south along MD 355, 20% from the west along I-370, and 20% from the east along I-370).*

The off-ramp for I-370 Eastbound is located between Intersections 3 and 5. As such, the 8 AM- and 7 PM inbound peak hour trips from I-370 Eastbound enter the study network between Intersections 3 and 5. The 24 AM- and 21 PM northbound volumes at Intersection 3 include the 8 AM- and 7 PM peak hour trips from MD 355 to the south, 8 AM- and 7 PM peak hour trips from I-370 Westbound, and 8 AM- and 7 PM peak hour trips from I-370 Eastbound (which do not pass through Intersection 3 as they enter the study network between Intersections 3 and 5).

Comment #6: Provide an internal trip distribution exhibit showing internal travel patterns with the Sheetz in place. Show onsite peak hour volumes before and after the BRT. Include the three site entry/exit locations.

Response: *The internal trip distribution is included as Appendix D of the updated TIA.*

Comment #7: Update the Preliminary Site Plan (graphic on page 22) with the latest Sheetz design.

Response: *The most recent site plan has been included in the updated TIA.*

Comment #8: Please note that the City is in the process of updating its TIS Standards, with the new standards expected to be in place before the end of 2023

Response: *Noted.*

If you have any questions regarding this matter, please do not hesitate to contact me at the number below.

Thanks,
Mike

TRAFFIC IMPACT ANALYSIS

FOR

SHEETZ – WALNUT HILL SHOPPING CENTER

Prepared by:

LENHART TRAFFIC CONSULTING, INC.

TRAFFIC ENGINEERING & TRANSPORTATION PLANNING

October 17, 2022

Revised: January 20, 2023



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Section 1 Introduction

1.1 Project Description

This Traffic Impact Analysis was prepared for the development of a Sheetz convenience store and gas station in the Walnut Hill Shopping Center, in Gaithersburg, Maryland. The location of the site is shown on **Exhibit 1**.

The proposed development will include a 4,959 square foot convenience store with 12 fueling positions. The Sheetz will displace a portion of the existing parking in the shopping center. 49,490 square feet of the 95,806 square foot Walnut Hill Shopping Center is currently occupied. The remaining space is vacant. The most recent site plan has been included in Appendix A.

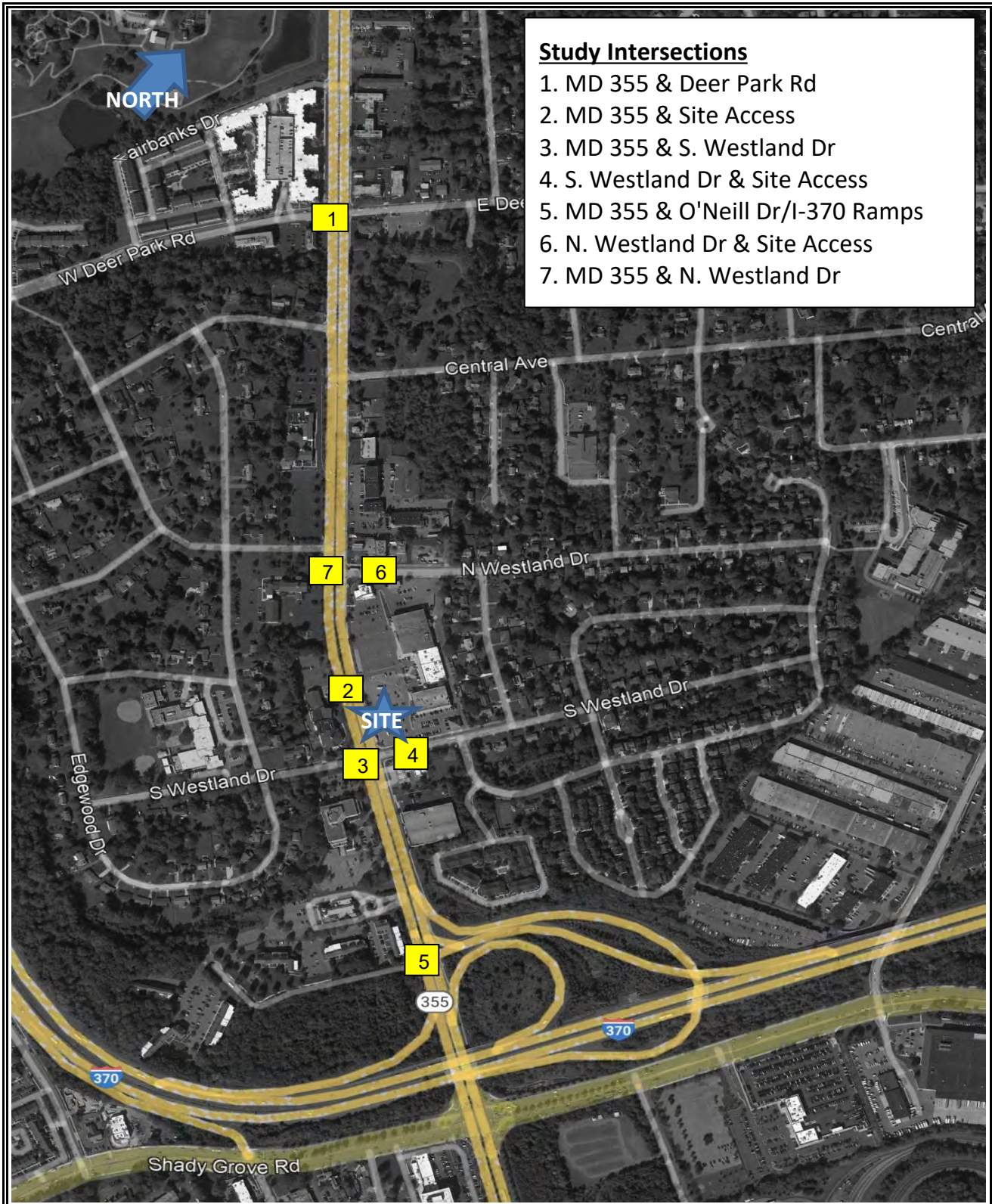
The site is currently accessed with a right-in/right-out only access along MD 355 and a full movement access along S. Westland Drive. The site access points will remain unchanged with the proposed development.

A Bus Rapid Transit (BRT) is proposed along MD 355 with impacts to several study intersections. The BRT project is not currently funded, and it is unclear when/if it will be completed. As such, this report analyzes two scenarios of the future condition. Scenario 1 analyzes the study intersections without the completion of the BRT along MD 355 and Scenario 2 provides analysis with the completion of the MD 355 BRT.

1.2 Scope of Study

The study was conducted based upon the approved scoping correspondence contained in Appendix A.

This Traffic Impact Analysis has been prepared in accordance with the City of Gaithersburg's and MDOT SHA's TIS Guidelines. Both City of Gaithersburg and MDOT SHA Guidelines require that the study intersections must operate with CLV less than 1,450.



- Study Intersections**
1. MD 355 & Deer Park Rd
 2. MD 355 & Site Access
 3. MD 355 & S. Westland Dr
 4. S. Westland Dr & Site Access
 5. MD 355 & O'Neill Dr/I-370 Ramps
 6. N. Westland Dr & Site Access
 7. MD 355 & N. Westland Dr

Traffic Impact Analysis

Site Location
Map

Exhibit


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 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
 SEVERNA PARK, MD 21146
www.lenharttraffic.com

1

Section 2 Existing Conditions

2.1 Description of Roadway Network

The key roads in the study area are:

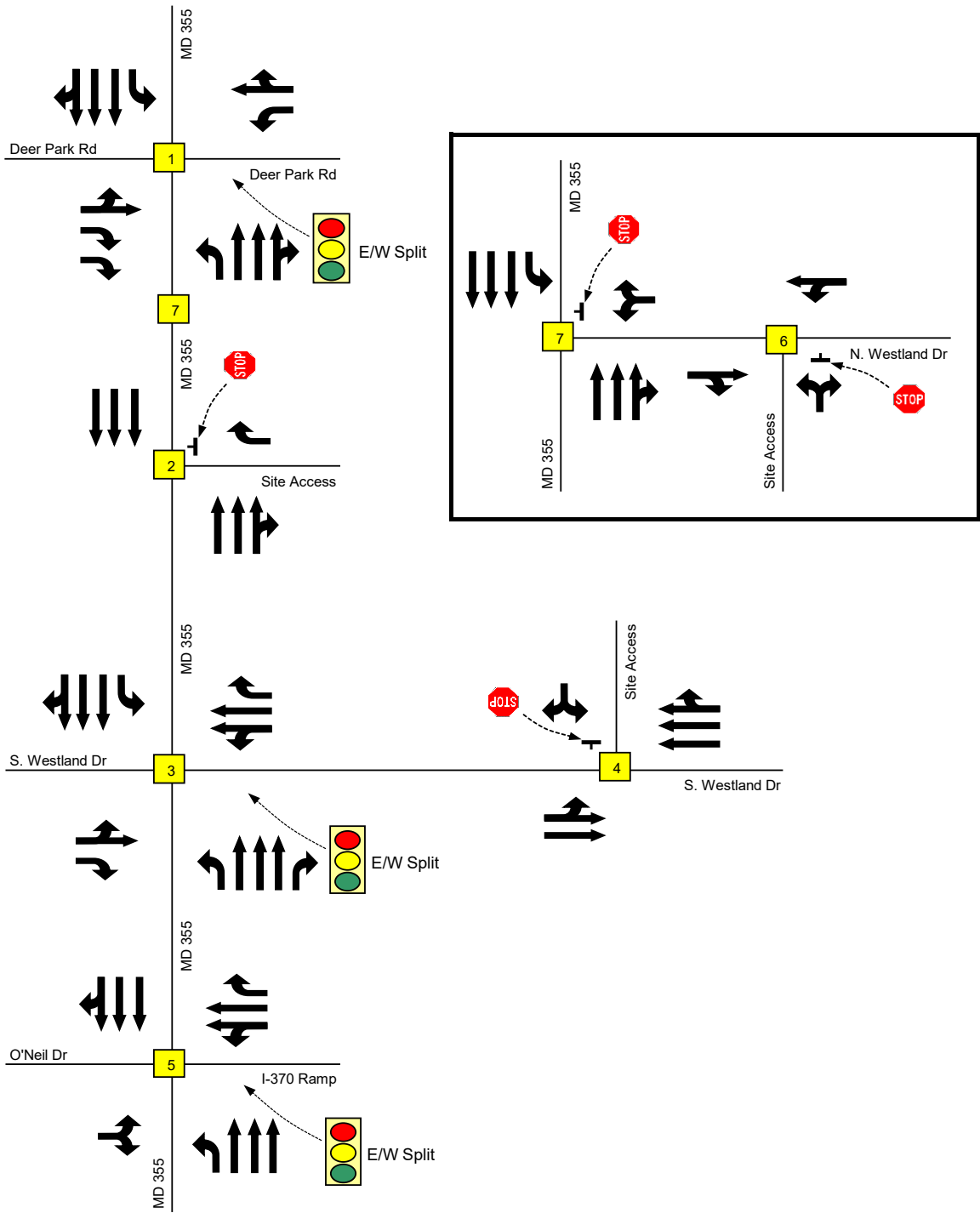
- MD 355 is a major highway as classified by Montgomery County with three lanes in each direction and a north-south orientation. The posted speed limit is 40 MPH within the vicinity of the site.
- S. Westland Drive is a two-lane roadway (one in each direction) with an east-west orientation. The posted speed limit is 25 MPH within the vicinity of the site.

2.2 Existing Lane Configurations

The Lane Use & Traffic Control Devices are shown on **Exhibit 2**.

2.3 Existing Traffic Counts

Morning and evening peak hour traffic counts were conducted and the results are shown on **Exhibit 3**.



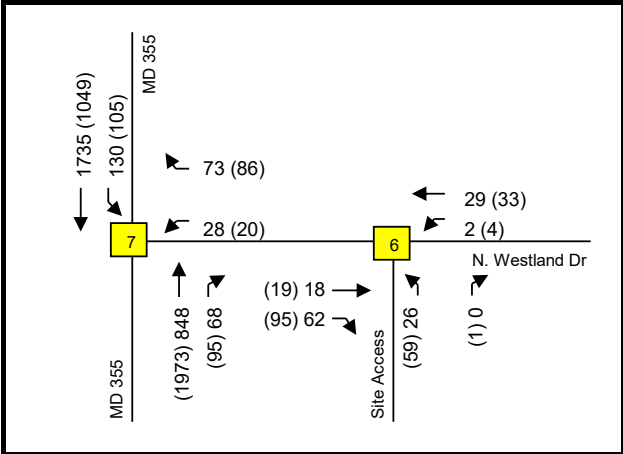
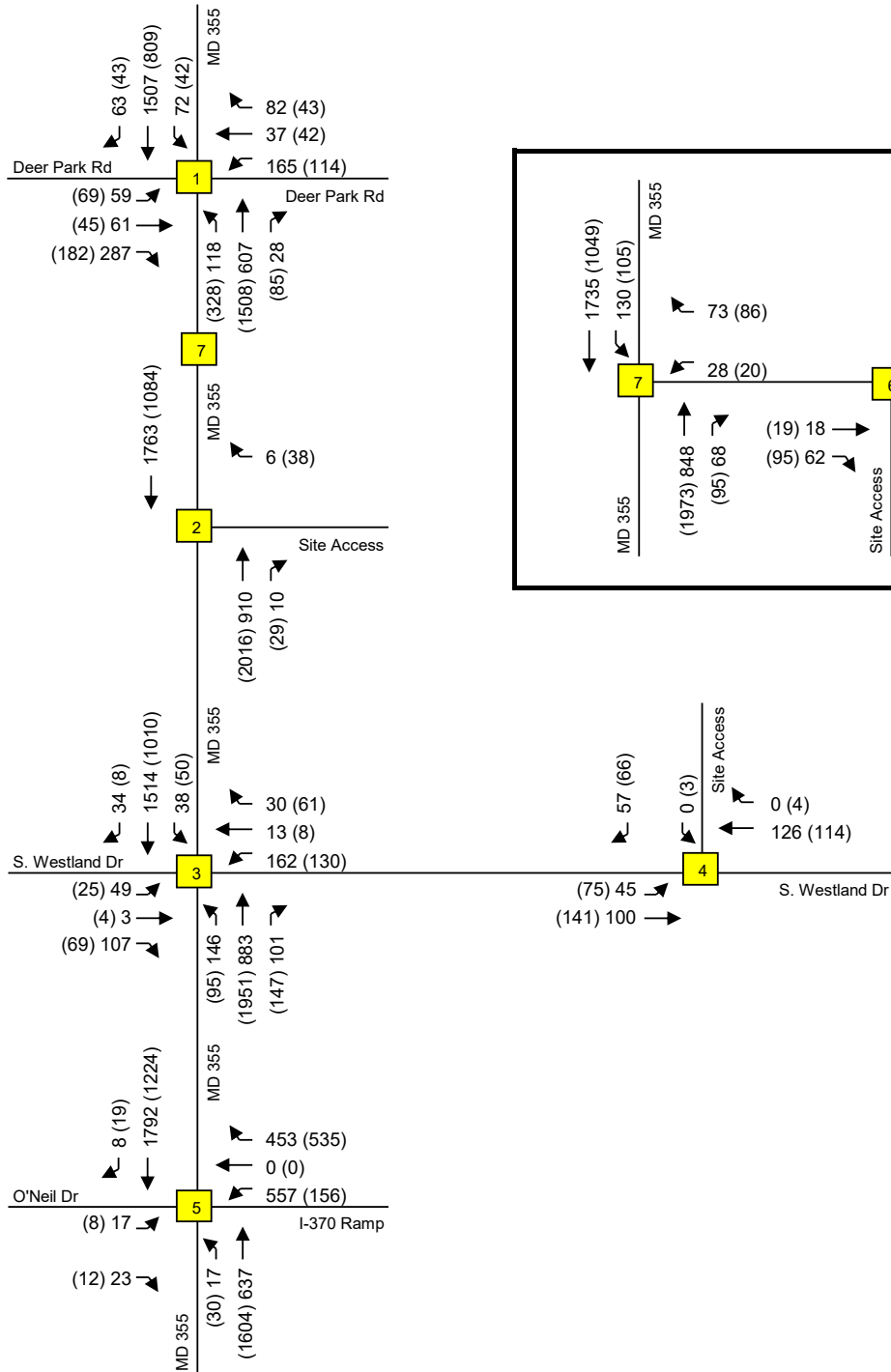
Traffic Impact Analysis

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Existing Lane Use & Traffic Control Devices

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit
2



Traffic Impact Analysis

Existing Peak Hour Volumes

Exhibit 3

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Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Section 3 **Background Conditions**

3.1 Annual Growth

ADT data was analyzed along MD 355, south of MD 124, over the previous 10 years. The data shows a negative growth rate over this time period. ADT data was also analyzed along MD 355, south of the I-370 ramps. This data shows a 0.3% growth rate over the previous 10 years.

In order to provide a conservative analysis, a 0.5% growth rate was applied for 3 years to the volumes on Exhibit 3 to obtain the Base Peak Hour Volumes, shown on **Exhibit 4**. The AADT analysis is included in Appendix A.

3.2 Approved Background Developments

The following background developments were identified by City of Gaithersburg Staff that would impact the study intersections of the TIA:

- Sears Addition to Shady Grove
- Rashidian Estates
- Oakmont

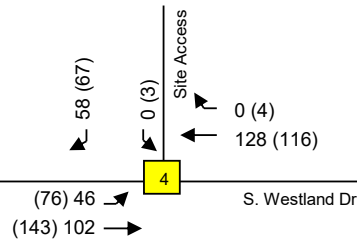
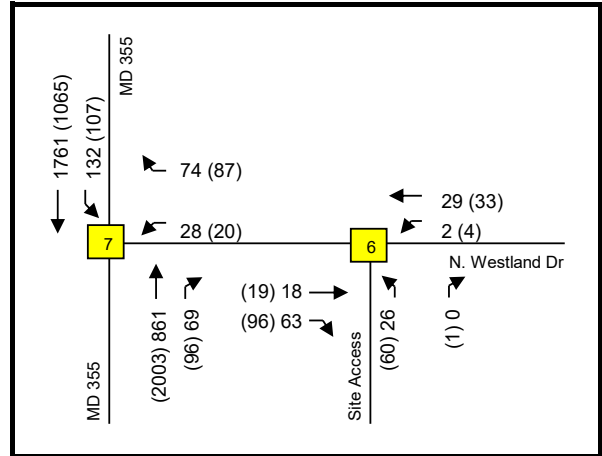
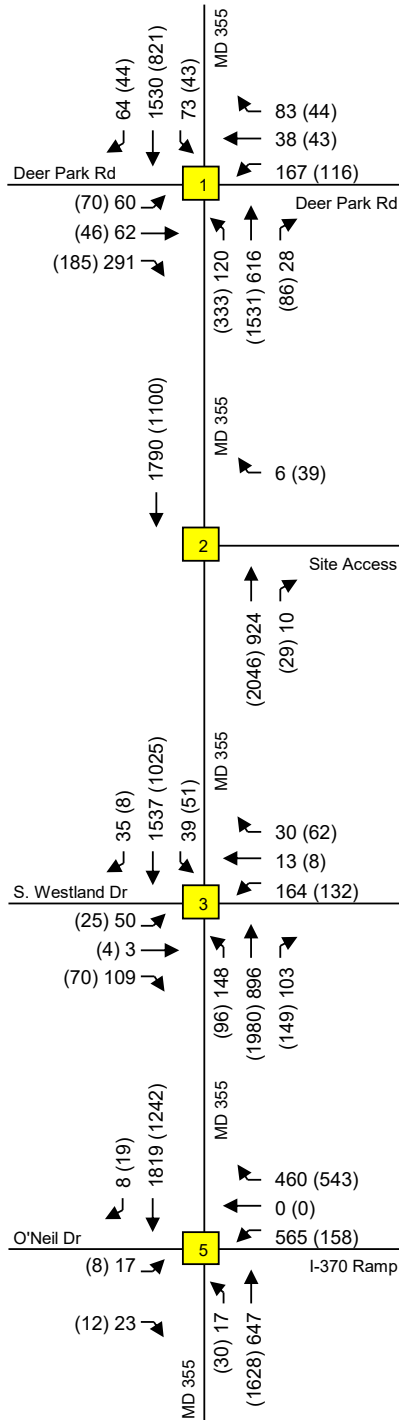
In addition to the above, the vacant space of the Walnut Hill Shopping Center, totaling 46,316 square feet, is considered a background development for the purposes of this Traffic Impact Analysis.

The trip generation and assignment for each of the background development is located in Appendix B.

3.3 Background Traffic Volumes

The Background Peak Hour Volumes, which include the base peak hour volumes and trips generated by approved background developments, are shown on **Exhibit 5**.

0.5%	Growth Rate
3	Years of Growth
1.0151	Total Growth



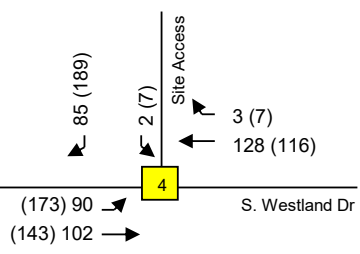
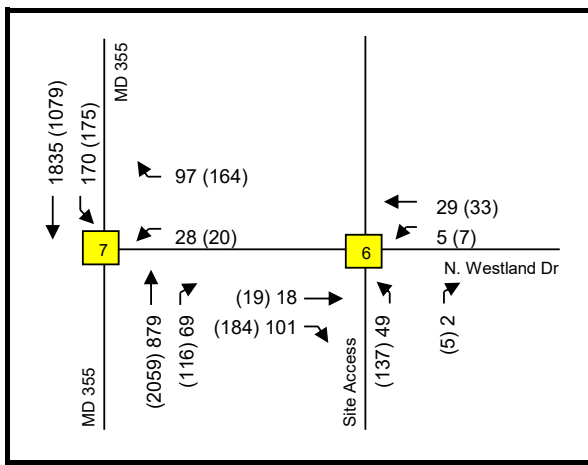
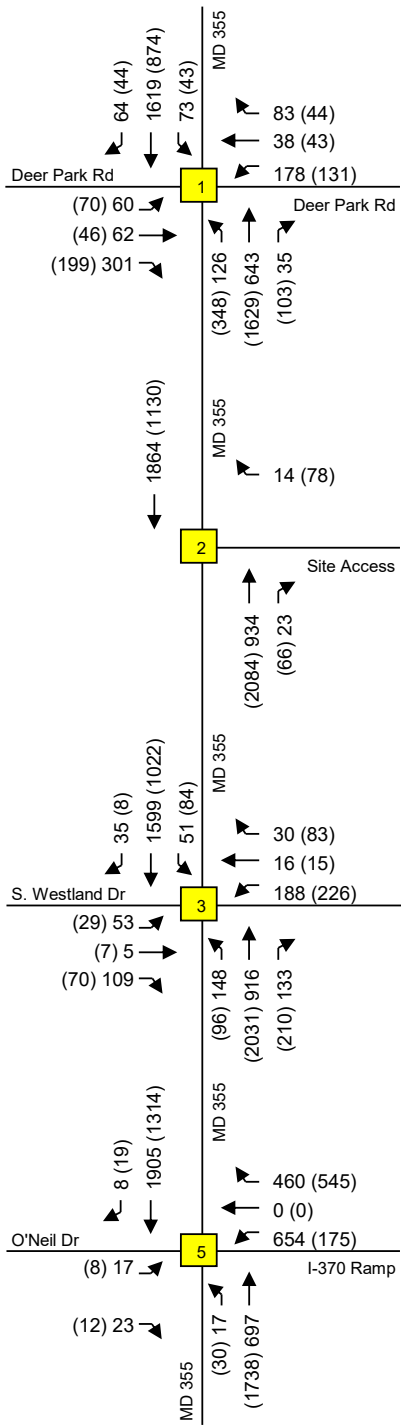
Traffic Impact Analysis

Base Peak Hour Volumes

Exhibit 4

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Key: xx = AM Peak Vol's (xx) = PM Peak Vol's



Traffic Impact Analysis	Background Peak Hour Volumes	Exhibit 5
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Section 4 Projected Conditions with Site

4.1 Site Trip Generation

The proposed development will include a 4,959 square foot convenience store with 12 fueling positions. **Exhibit 6** shows the trip generation for the redevelopment. The trip generation and pass-by rates were obtained from the ITE Trip Generation Manual, 11th Edition.

4.2 Scenario 1 Site Trip Distribution & Trip Assignment

The primary and pass-by trip assignments for Scenario 1 are shown on **Exhibits 7a and 7b**, respectively. Scenario 1 does not include the construction of the BRT along MD 355. The trip distributions were determined based on existing traffic patterns.

4.3 Scenario 1 Total Traffic Volumes

The Total Peak Hour Volumes for Scenario 1 (Without BRT) are shown on **Exhibit 8**. These volumes combine the Background Peak Hour Volumes with the primary and pass-by trip assignments for Scenario 1.

4.4 Scenario 2 Site Trip Distribution & Trip Assignment

The primary and pass-by trip assignments for Scenario 2 are shown on **Exhibits 9a and 9b**, respectively. Scenario 2 includes the construction of the BRT along MD 355. The trip distributions were determined based on existing traffic patterns.

As part of the construction of the BRT along MD 355, the existing median break along MD 355 at N. Westland Drive will be closed, prohibiting left-turns to/from N. Westland Drive along MD 355. The resulting diversions of the left-turning volumes are shown on **Exhibit 9c**.

4.5 Scenario 2 Site Trip Distribution & Trip Assignment

The Total Peak Hour Volumes for Scenario 2 (With BRT) are shown on **Exhibit 10**. These volumes combine the Background Peak Hour Volumes with the primary and pass-by trip assignments for Scenario 2 and the diversions due to the construction of the BRT along MD 355

4.6 Projected Level of Service

The results of the CLV analyses are shown on **Exhibit 11**.

As shown, each study intersection operates with a LOS “C” or better during both morning and evening peak hours under total conditions for Scenario 1. Each study intersection operates with a LOS “D” or better during both morning and evening peak hours under total conditions for Scenario 2.

As the study intersections will continue to operate acceptably with the development of the site, no off-site road improvements or modifications to existing traffic signals should be required.

4.7 Pedestrian and Bicycle Analysis

A pedestrian and bicycle analysis was conducted for each of the study intersections along MD 355, per the City of Gaithersburg Guidelines. The results of the analyses are detailed below.

MD 355 & Deer Park Road:

Peak hour turning movement counts at the intersection indicate relatively low pedestrian and bicycle volume through the intersection. During the morning peak hours, a maximum of 20 pedestrians/bicycles were observed over the course of any single hour. A maximum of 27 pedestrians/bicycles were observed over the course of any single hour during the evening peak hours.

The intersection is signalized, with crosswalks, pedestrian beacons, and call buttons available to cross the north, east, and west legs of the intersection. Pedestrian facilities are not available to cross the south leg. Sidewalks are provided on each approach of the intersection.

There are no dedicated bicycle facilities at the intersection. The sidewalks along MD 355 are at least 5 feet in width as requested in the 2009 Transportation Master Plan. Sharrows are proposed along Deer Park Road and MD 355 requires further study to determine an appropriate type of bicycle facility according to Map 6 of the Transportation Master Plan. Discussion of potential pedestrian/bicycle facilities along MD 355 follow the analyses of the intersections.

MD 355 & S. Westland Drive:

Peak hour turning movement counts at the intersection indicate relatively low pedestrian and bicycle volume through the intersection. During the morning peak hours, a maximum of 25 pedestrians/bicycles were observed over the course of any single hour. A maximum of 15 pedestrians/bicycles were observed over the course of any single hour during the evening peak hours.

The intersection is signalized, with crosswalks, pedestrian beacons, and call buttons available to cross the north, east, and west legs of the intersection. Pedestrian facilities are not available to cross the south leg. Sidewalks are provided on each approach of the intersection.

There are no dedicated bicycle facilities at the intersection. The sidewalks along MD 355 are at least 5 feet in width as requested in the 2009 Transportation Master Plan. No facilities are proposed along S. Westland Drive and MD 355 requires further study to determine an appropriate type of bicycle facility according to Map 6 of the Transportation Master Plan. Discussion of potential pedestrian/bicycle facilities along MD 355 follow the analyses of the intersections.

MD 355 & I-370 Ramp/O'Neill Drive:

Peak hour turning movement counts at the intersection indicate low pedestrian and bicycle volume through the intersection. During the morning peak hours, a maximum of 8 pedestrians/bicycles were observed over the course of any single hour. A maximum of 15 pedestrians/bicycles were observed over the course of any single hour during the evening peak hours.

The intersection is signalized, with crosswalks, pedestrian beacons, and call buttons available to cross the east and west legs of the intersection. Pedestrian facilities are not available to cross the north or south legs. Sidewalks are provided along MD 355 and O'Neill Drive. Pedestrian traffic is not permitted along I-370.

There are no dedicated bicycle facilities at the intersection. The sidewalks along MD 355 are at least 5 feet in width as requested in the 2009 Transportation Master Plan. No facilities are proposed along O'Neill Drive or I-370 and MD 355 requires further study to determine an appropriate type of bicycle facility according to Map 6 of the Transportation Master Plan. Discussion of potential pedestrian/bicycle facilities along MD 355 follow the analyses of the intersections.

MD 355 Corridor Pedestrian/Bicycle Facility Analysis:

Map 6 of the 2009 City of Gaithersburg Transportation Master Plan identifies MD 355 as deficient in facilities but requiring further study to determine what type of facility is most appropriate. Based on peak hour turning movement counts conducted along MD 355 within the vicinity of the proposed Sheetz, there is minimal bicycle/pedestrian traffic currently utilizing the corridor. Sidewalks of at least 5 feet in width are provided along the east and west sides of MD 355 throughout the study area. These sidewalks provide sufficient facility for the current volumes of pedestrians and bicyclists.

MD 355 has a posted speed limit of 40 MPH with high traffic volume. Given the speed and volume of vehicles operating on the roadway, plus numerous transit routes and stops, on-road facilities such as shared roads/sharrows could result in dangerous conditions for bicyclists. There is also minimal available right-of-way along MD 355 to provide off-road facilities like separate bike lanes.

As there is minimal pedestrian/bicycle volume currently utilizing the MD 355 corridor and additional facilities are not feasible for the reasons detailed above, we do not recommend any additional pedestrian/bicycle facilities along MD 355 through the intersections studied in this report.

Trip Generation Rates

Convenience Store / Gas Station w/GFA from 4-5.5 ksf (VFP, ITE-945)

Morning Trips = 27.04 x Fueling Positions

Evening Trips = 22.76 x Fueling Positions

Trip Distribution (In/Out)

50/50

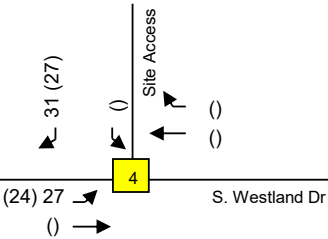
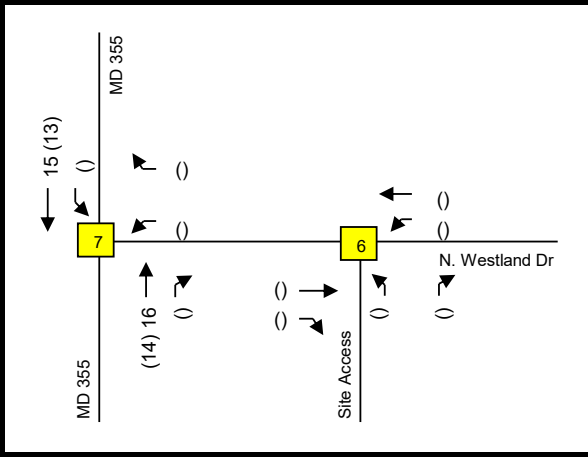
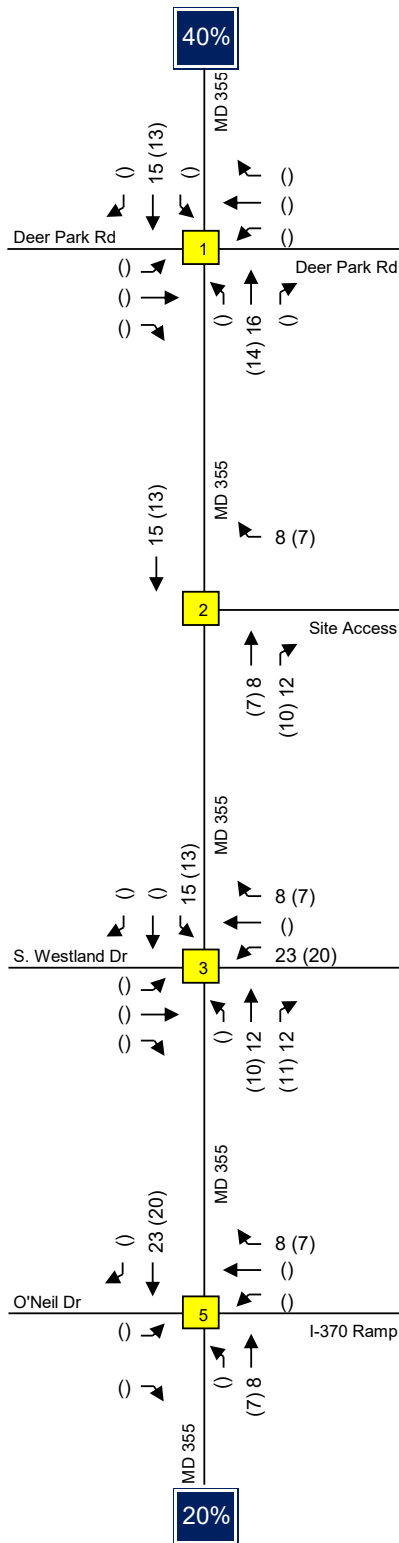
50/50

Trip Generation Totals

		AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Convenience Store / Gas Station w/GFA from 4-5.5 ksf (VFP, ITE-945)	12 Fueling Positions	162	162	324	136	137	273
<i>Pass-By Trips (76% AM, 75% PM)</i>		123	123	246	102	103	205
Total Primary (New) Trips:		39	39	78	34	34	68

NOTE: Trip Generation Rates obtained from the ITE Trip Generation Manual, 11th Edition

Traffic Impact Analysis	Trip Generation for Site	Exhibit 5
 LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com		

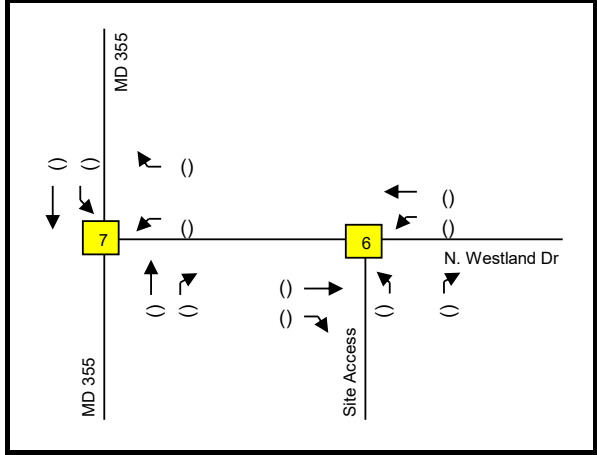
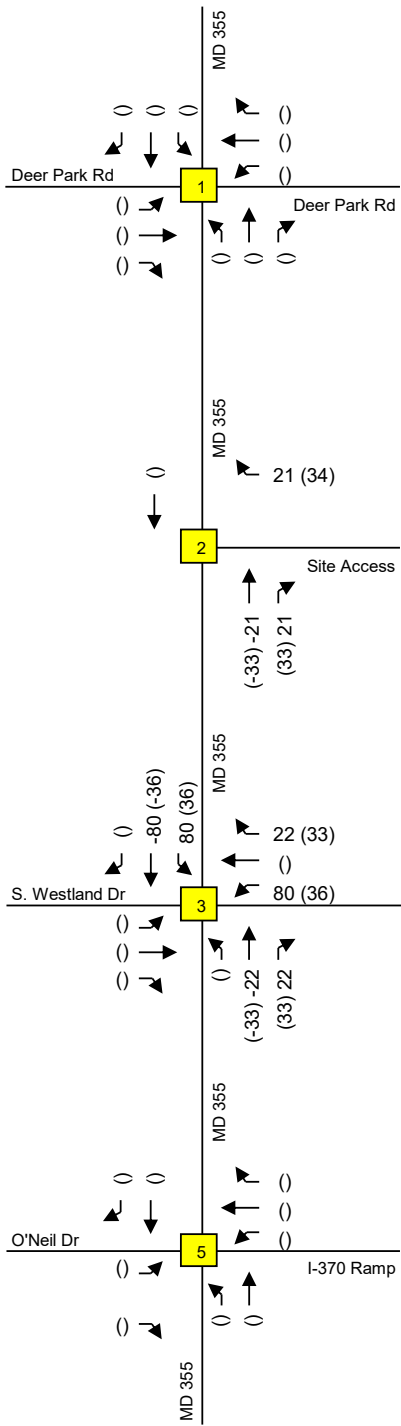


20% to/from I-370 Westbound

20% to/from I-370 Eastbound

Note: The off-ramp for I-370 Eastbound is located between Intersections 3 and 5. As such, the 8 AM- and 7 PM inbound peak hour trips from I-370 Eastbound enter the study network between Intersections 3 and 5. The 24 AM- and 21 PM northbound volumes at Intersection 3 include the 8 AM- and 7 PM peak hour trips from MD 355 to the south, 8 AM- and 7 PM peak hour trips from I-370 Westbound, and 8 AM- and 7 PM peak hour trips from I-370 Eastbound (which do not pass through Intersection 3 as they enter the study network between Intersections 3 and 5).

Outbound trips destined to I-370 Eastbound access I-370 south of Intersection 5. The 23 AM- and 20 PM peak hour trips south along MD 355 include the 20% destined south along MD 355, 20% destined to I-370 Eastbound, and 20% destined to I-370 Westbound.



Pass-by Trip Assumptions:

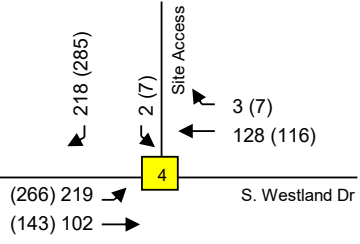
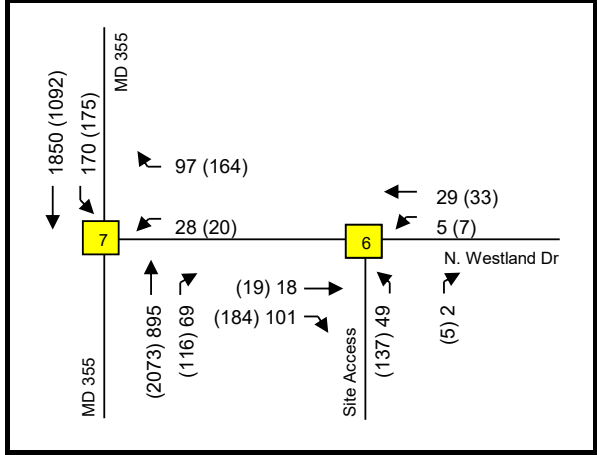
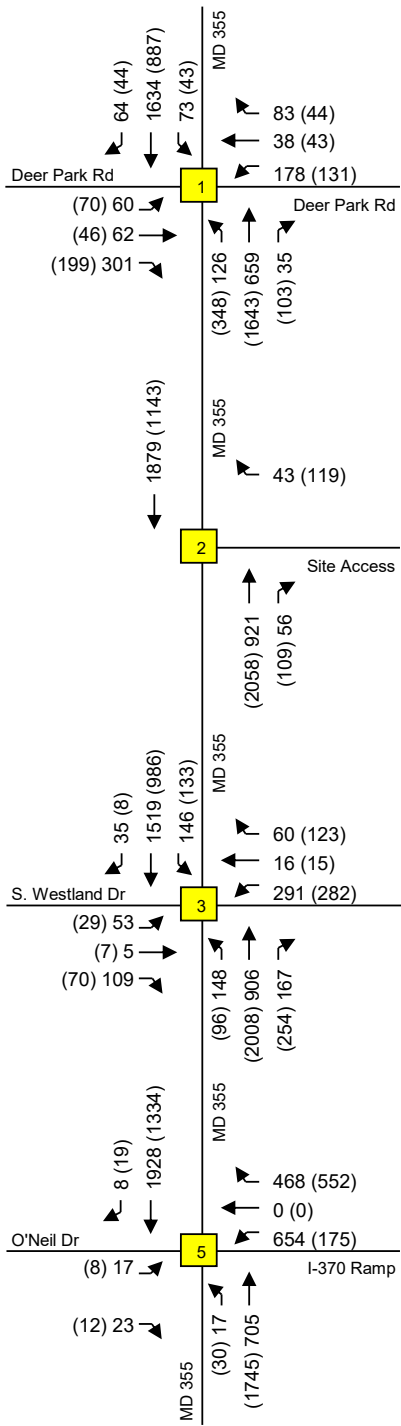
Morning Peak Hour:

- 35% of pass-by trips along MD 355 NB Split between Int. 2 and 4
- 65% of pass-by trips along MD 355 SB

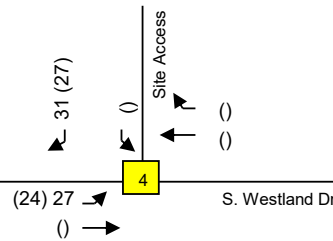
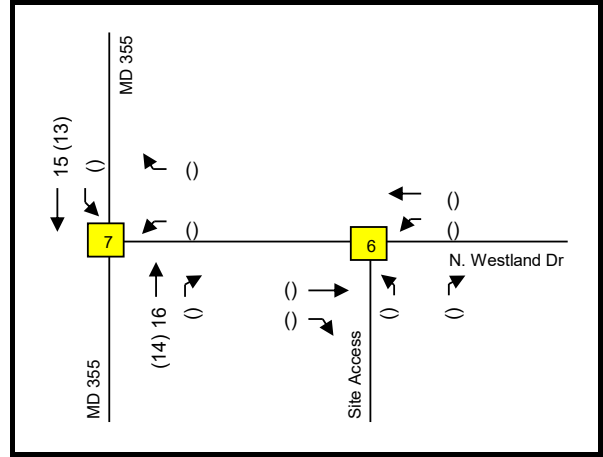
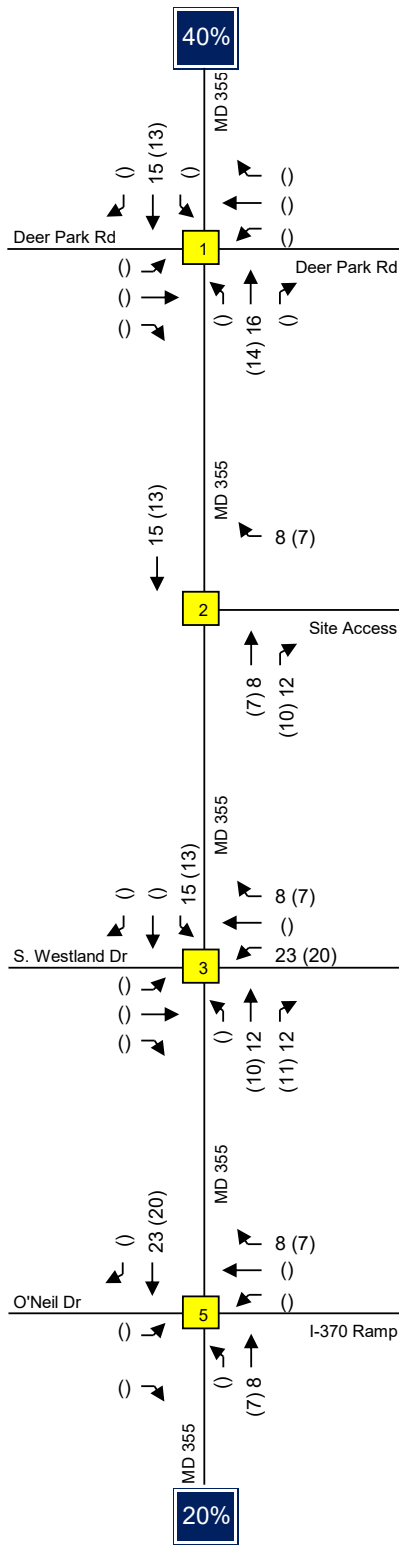
Evening Peak Hour:

- 65% of pass-by trips along MD 355 NB Split between Int. 2 and 4
- 35% of pass-by trips along MD 355 SB

Traffic Impact Analysis	Pass-by Trip Assignment for Site Scenario 1 - No MD 355 BRT	Exhibit 7b
Lenhart Traffic Consulting, Inc.	Key: xx = AM Peak Vol's (xx) = PM Peak Vol's	
Traffic Engineering & Transportation Planning		



Traffic Impact Analysis	<h2 style="margin: 0;">Total Peak Hour Volumes</h2> <h3 style="margin: 0;">Scenario 1 - No MD 355 BRT</h3>	<h1 style="margin: 0;">Exhibit</h1> <h2 style="margin: 0;">8</h2>
Lenhart Traffic Consulting, Inc.		
Traffic Engineering & Transportation Planning	Key: xx = AM Peak Vol's (xx) = PM Peak Vol's	



20% to/from I-370 Westbound

20% to/from I-370 Eastbound

Note: The off-ramp for I-370 Eastbound is located between Intersections 3 and 5. As such, the 8 AM- and 7 PM inbound peak hour trips from I-370 Eastbound enter the study network between Intersections 3 and 5. The 24 AM- and 21 PM northbound volumes at Intersection 3 include the 8 AM- and 7 PM peak hour trips from MD 355 to the south, 8 AM- and 7 PM peak hour trips from I-370 Westbound, and 8 AM- and 7 PM peak hour trips from I-370 Eastbound (which do not pass through Intersection 3 as they enter the study network between Intersections 3 and 5).

Outbound trips destined to I-370 Eastbound access I-370 south of Intersection 5. The 23 AM- and 20 PM peak hour trips south along MD 355 include the 20% destined south along MD 355, 20% destined to I-370 Eastbound, and 20% destined to I-370 Westbound.

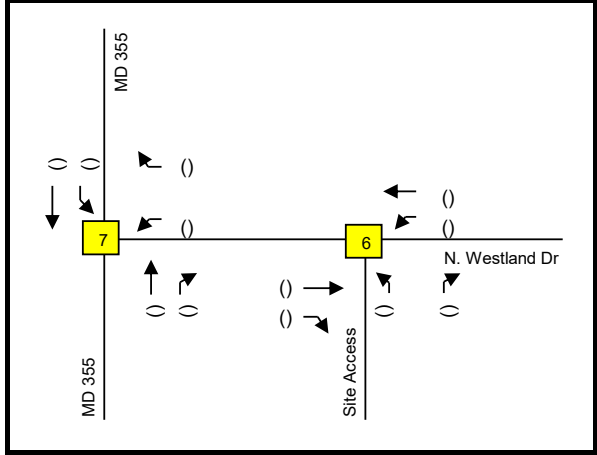
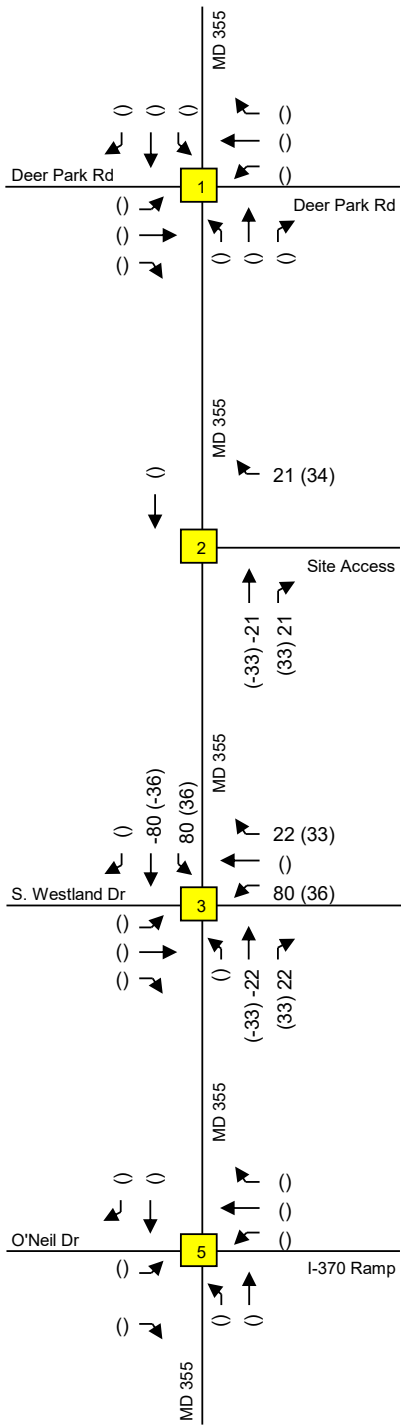
Traffic Impact Analysis

Primary Trip Assignment for Site Scenario 2 - With MD 355 BRT

Exhibit 9a

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Key: xx = AM Peak Vol's (xx) = PM Peak Vol's



Pass-by Trip Assumptions:

Morning Peak Hour:

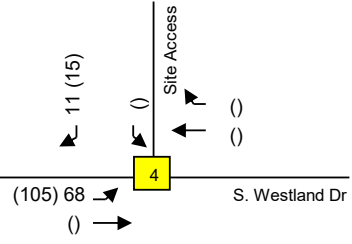
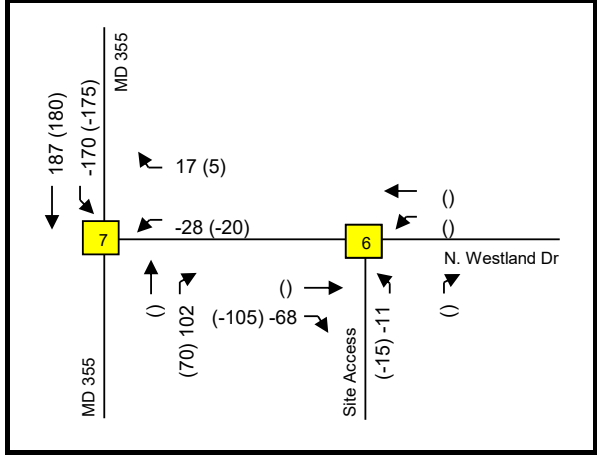
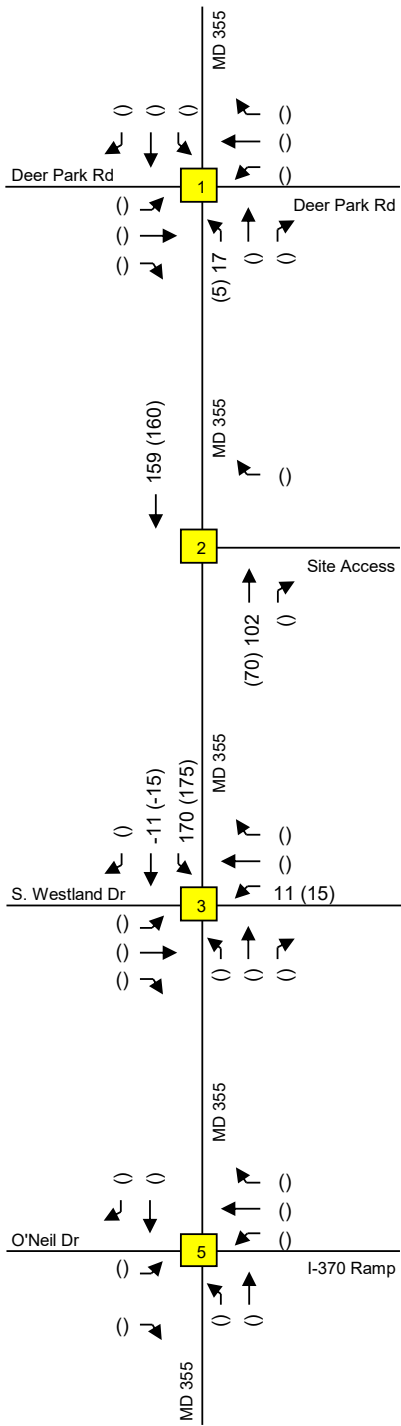
- 35% of pass-by trips along MD 355 NB Split between Int. 2 and 4
- 65% of pass-by trips along MD 355 SB

Evening Peak Hour:

- 65% of pass-by trips along MD 355 NB Split between Int. 2 and 4
- 35% of pass-by trips along MD 355 SB

Traffic Impact Analysis	<h2 style="margin: 0;">Pass-by Trip Assignment for Site Scenario 2 - With MD 355 BRT</h2>	<h1 style="margin: 0;">Exhibit 9b</h1>
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

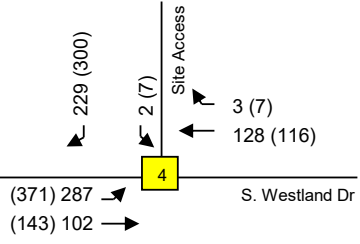
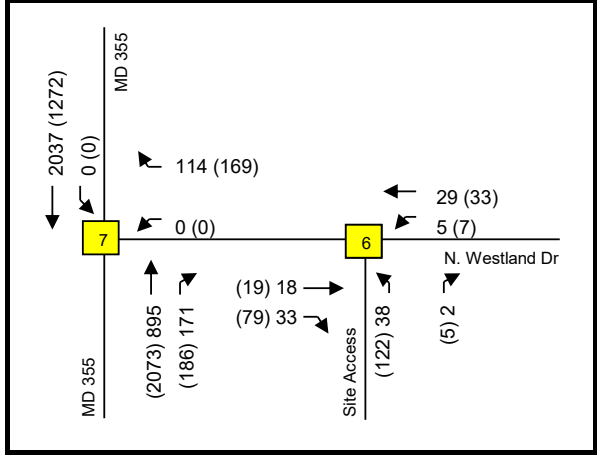
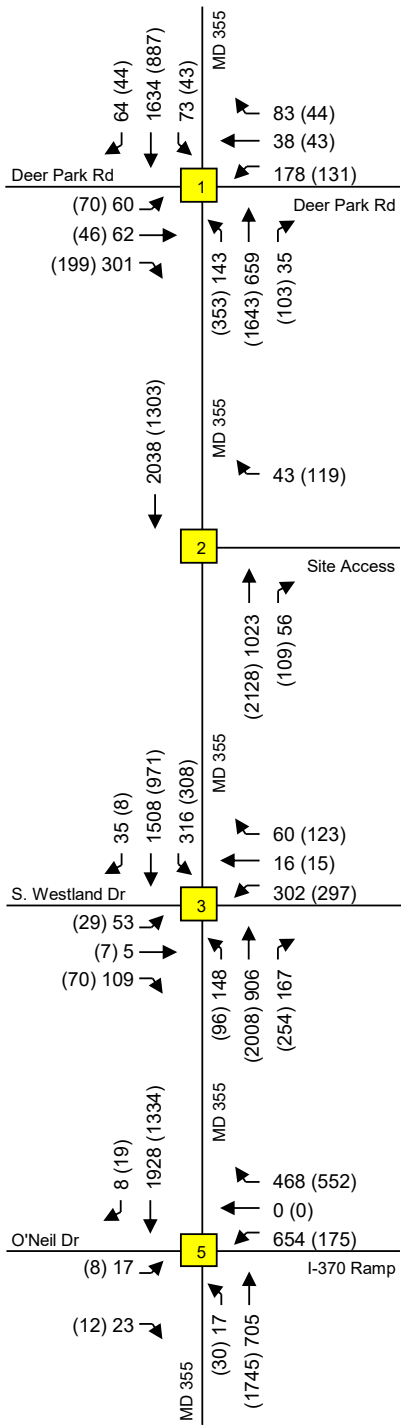
Key: xx = AM Peak Vol's (xx) = PM Peak Vol's



Notes:

1. The planned BRT route along MD 355 through the study intersections will result in the closure of the median break at the intersection of MD 355 & N. Westland Drive. Left-turn volumes from MD 355 to N. Westland Drive are expected to continue south to U-turn at S. Westland Drive and left-turn volume from N. Westland Drive to MD 355 is expected to continue north along MD 355 to U-turn at Deer Park Road.
2. Approximately 40% of the morning peak and 60% of the evening peak volume east along N. Westland enters the Walnut Hill Shopping Center. It is assumed that this percentage of the diverted trips will enter the shopping center at Intersection 4, rather than Intersection 6 after diverting south along MD 355.
3. Approximately 40% of the morning peak and 75% of the evening peak volume west along N. Westland exits the Walnut Hill Shopping Center. It is assumed that this percentage of the diverted trips will exit the shopping center at Intersection 4, rather than Intersection 6 to continue south along MD 355.

Traffic Impact Analysis	Diversion of Back. Volumes Due to MD 355 BRT	Exhibit 9C
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		




Traffic Impact Analysis	Total Peak Hour Volumes Scenario 2 - With MD 355 BRT	Exhibit 10
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		
Key: xx = AM Peak Vol's (xx) = PM Peak Vol's		

CLV Level-of-Service Results

Morning Peak Hour	Existing CLV	Background CLV	Total Scenario 1 CLV	Total Scenario 2 CLV	Meets Adequacy?
1). MD 355 & Deer Park Road	B / 1031	B / 1099	B / 1105	B / 1122	Y
2). MD 355 & Site Access	A / 711	A / 760	A / 795	A / 858	Y
3). MD 355 & S. Westland Drive	A / 979	B / 1048	B / 1119	B / 1125	Y
4). S. Westland Drive & Site Access	A / 152	A / 229	A / 491	A / 570	Y
5). MD 355 & I-370 Ramp	C / 1230	C / 1282	C / 1299	C / 1299	Y
6). N. Westland Drive & Site Access	A / 108	A / 175	A / 175	A / 96	Y
Evening Peak Hour	Existing CLV	Background CLV	Total Scenario 1 CLV	Total Scenario 2 CLV	Meets Adequacy?
1). MD 355 & Deer Park Road	A / 907	A / 983	A / 988	A / 988	Y
2). MD 355 & Site Access	A / 856	A / 938	A / 986	B / 1014	Y
3). MD 355 & S. Westland Drive	A / 989	C / 1158	C / 1254	D / 1444	Y
4). S. Westland Drive & Site Access	A / 192	A / 418	A / 607	A / 727	Y
5). MD 355 & I-370 Ramp	C / 1197	C / 1260	C / 1270	C / 1270	Y
6). N. Westland Drive & Site Access	A / 178	A / 352	A / 352	A / 232	Y

NOTES:

1. All intersections satisfy City of Gaithersburg and MDOT SHA Guidelines of LOS "D" or better.

Traffic Impact Analysis	Results of Level-of-Service Analyses	Exhibit 11
 LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com		

Section 5 Conclusions / Recommendations

5.1 Results of Analyses

This Traffic Impact Analysis was prepared for the development of a Sheetz convenience store and gas station in the Walnut Hill Shopping Center, in Gaithersburg, Maryland.

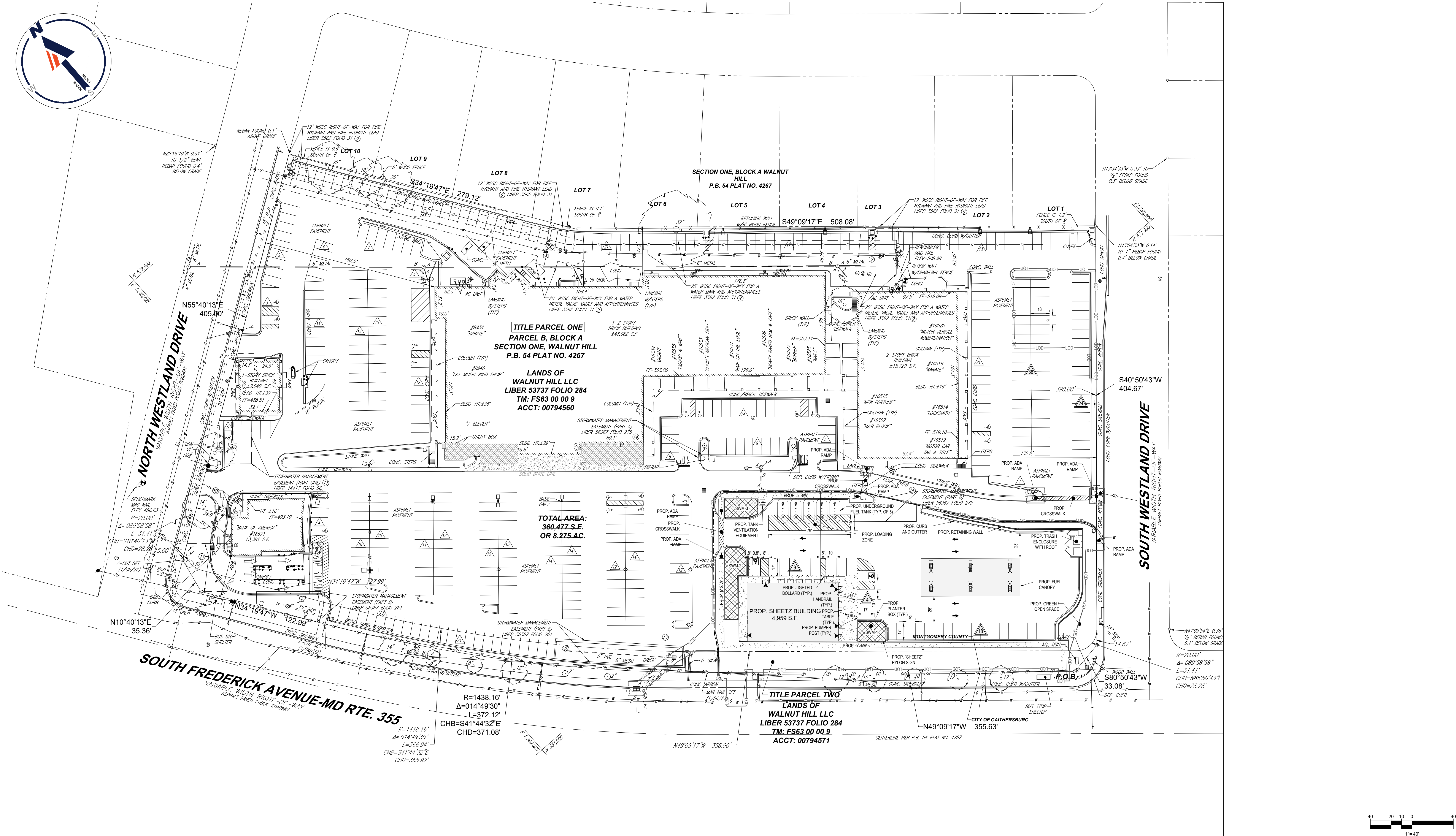
The proposed development will include a 4,959 square foot convenience store with 12 fueling positions. The Sheetz will displace a portion of the existing parking in the shopping center. 49,490 square feet of the 95,806 square foot Walnut Hill Shopping Center is currently occupied. The remaining space is vacant.

Based on the analyses contained in this report, all of the study intersections meet the City of Gaithersburg's and MDOT SHA's Guidelines of CLVs less than 1,450 in all conditions.

In light of the results of this study, this project will satisfy the City of Gaithersburg's and MDOT SHA's Guidelines and should be approved without any additional requirements.

Appendix A

Supplemental Information
Turning Movement Counts



TITLE PARCEL ONE
PARCEL B, BLOCK A
SECTION ONE, WALNUT HILL
P.B. 54 PLAT NO. 4267

LANDS OF
WALNUT HILL LLC
LIBER 53737 FOLIO 284
TM: FS63 00 00 9
ACCT: 00794560

TOTAL AREA:
360,477 S.F.
OR 8.275 AC.

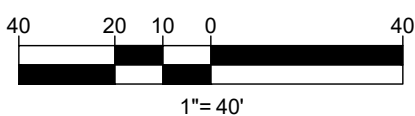
TITLE PARCEL TWO
LANDS OF
WALNUT HILL LLC
LIBER 53737 FOLIO 284
TM: FS63 00 00 9
ACCT: 00794571

BOHLER

16701 MELFORD BLVD, SUITE 310
 BOWIE, MARYLAND 20715
 Phone: (301) 809-4500
 Fax: (301) 809-4501
 MD@BohlerEng.com

EXHIBIT - SITE PLAN
GRANITE PARTNERS WALNUT HILL

16529 S FREDERICK AVENUE, GAITHERSBURG, MD 20877



TRAFFIC GROWTH PROJECTION

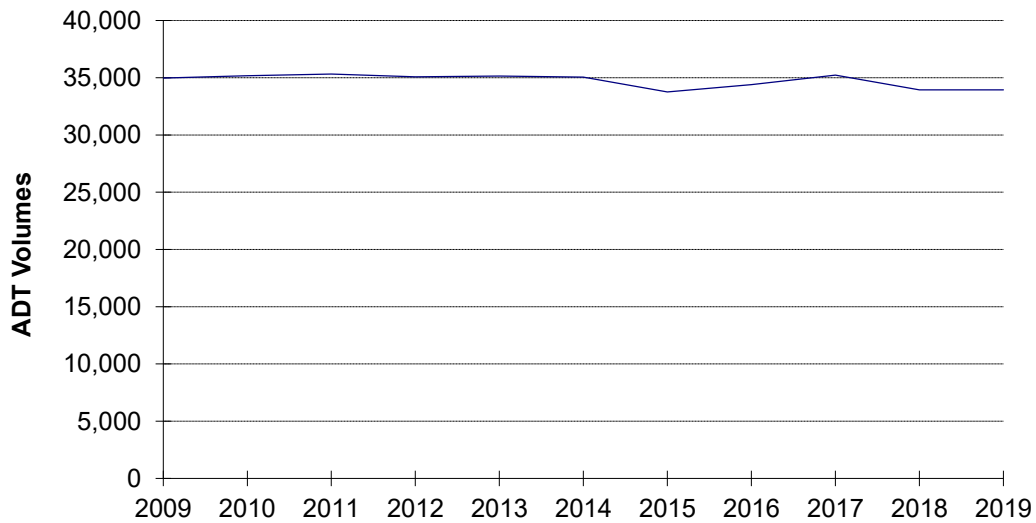
LOCATION: MD 355, south of MD 124

REPORT DATE: 20-Sep-22

AVERAGE GROWTH: -0.28%

MATHEMATICAL GROWTH: -0.30%

Year	ADT Volume	Vol. increase	% increase	Average %
2009	34,970			
2010	35,181	211	0.60%	0.60%
2011	35,322	141	0.40%	0.50%
2012	35,080	-242	-0.69%	0.11%
2013	35,151	71	0.20%	0.13%
2014	35,052	-99	-0.28%	0.05%
2015	33,760	-1,292	-3.69%	-0.57%
2016	34,401	641	1.90%	-0.22%
2017	35,232	831	2.42%	0.11%
2018	33,940	-1,292	-3.67%	-0.31%
2019	33,941	1	0.00%	-0.28%



TRAFFIC GROWTH
MD 355, south of MD 124

TRAFFIC GROWTH PROJECTION

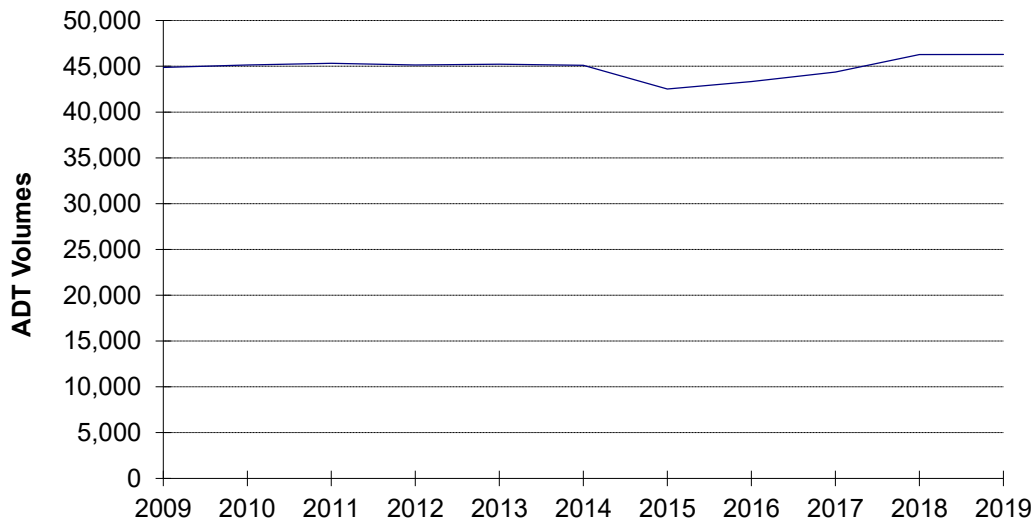
LOCATION: MD 355, south of I-370

REPORT DATE: 20-Sep-22

AVERAGE GROWTH: 0.34%

MATHEMATICAL GROWTH: 0.31%

Year	ADT Volume	Vol. increase	% increase	Average %
2009	44,870			
2010	45,141	271	0.60%	0.60%
2011	45,322	181	0.40%	0.50%
2012	45,140	-182	-0.40%	0.20%
2013	45,231	91	0.20%	0.20%
2014	45,102	-129	-0.29%	0.10%
2015	42,520	-2,582	-5.72%	-0.87%
2016	43,331	811	1.91%	-0.47%
2017	44,372	1,041	2.40%	-0.11%
2018	46,291	1,919	4.32%	0.38%
2019	46,292	1	0.00%	0.34%



TRAFFIC GROWTH
MD 355, south of I-370

Weekday Morning Peak Hour (6:30 am - 9:30 am)																					
Time:	MD 355 Northbound					MD 355 Southbound					Deer Park Rd Eastbound					Deer Park Rd Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	11	92	4	0	2	2	199	4	2	0	8	6	65	1	0	33	3	4	1	433
6:45-7:00	0	14	97	5	0	1	4	242	3	1	0	15	8	82	3	0	24	3	4	2	502
7:00-7:15	1	19	128	8	0	0	5	300	6	0	0	10	13	79	1	0	36	7	11	1	623
7:15-7:30	0	25	160	4	0	1	7	320	16	4	0	23	9	68	3	0	37	3	27	0	700
7:30-7:45	1	25	155	7	0	1	27	325	13	3	0	29	14	79	1	0	43	5	40	0	764
7:45-8:00	0	25	158	8	0	0	28	462	21	2	0	14	18	84	1	0	36	8	20	1	882
8:00-8:15	0	32	121	4	0	0	8	369	17	3	0	8	18	69	2	0	48	16	11	0	721
8:15-8:30	0	35	173	9	0	0	8	351	12	0	0	8	11	55	0	0	38	8	11	0	719
8:30-8:45	1	35	160	6	0	0	2	336	16	1	0	11	13	64	0	0	35	16	5	0	700
8:45-9:00	2	32	204	17	0	0	7	326	8	4	0	12	15	81	3	0	38	8	3	0	753
9:00-9:15	0	33	130	17	0	1	7	236	4	1	0	11	8	67	1	0	21	6	6	1	547
9:15-9:30	0	21	103	8	0	0	1	161	6	1	0	6	2	26	0	0	25	8	3	0	370

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30	1	69	477	21	0	4	18	1061	29	7	0	56	36	294	8	0	130	16	46	4	2277
6:45-7:45	2	83	540	24	0	3	43	1187	38	8	0	77	44	308	8	0	140	18	82	3	2608
7:00-8:00	2	94	601	27	0	2	67	1407	56	9	0	76	54	310	6	0	152	23	98	2	2986
7:15-8:15	1	107	594	23	0	2	70	1476	67	12	0	74	59	300	7	0	164	32	98	1	3087
7:30-8:30	1	117	607	28	0	1	71	1507	63	8	0	59	61	287	4	0	165	37	82	1	3099
7:45-8:45	1	127	612	27	0	0	46	1518	66	6	0	41	60	272	3	0	157	48	47	1	3032
8:00-9:00	3	134	658	36	0	0	25	1382	53	8	0	39	57	269	5	0	159	48	30	0	2906
8:15-9:15	3	135	667	49	0	1	24	1249	40	6	0	42	47	267	4	0	132	38	25	1	2730
8:30-9:30	3	121	597	48	0	1	17	1059	34	7	0	40	38	238	4	0	119	38	17	1	2382
AM Peak Hour	Northbound					Southbound					Eastbound					Westbound					Total
7:30-8:30	1	117	607	28	0	1	71	1507	63	8	0	59	61	287	4	0	165	37	82	1	3099

Weekday Evening Peak Hour (4 pm - 7 pm)																					
Time:	MD 355 Northbound					MD 355 Southbound					Deer Park Rd Eastbound					Deer Park Rd Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	1	73	348	24	0	1	7	206	10	4	0	14	12	60	0	0	26	10	6	2	798
4:15-4:30	0	75	330	27	0	3	8	181	8	3	0	18	8	49	1	0	30	14	15	4	766
4:30-4:45	1	94	328	19	0	1	8	173	6	4	0	16	12	65	0	0	22	11	7	3	763
4:45-5:00	1	59	373	17	1	1	10	205	9	3	0	19	14	56	1	0	32	11	11	1	818
5:00-5:15	0	98	391	26	0	0	11	189	12	2	0	13	12	42	2	0	28	10	10	1	842
5:15-5:30	1	95	382	12	0	2	11	219	13	0	0	22	11	48	0	0	21	14	13	1	864
5:30-5:45	0	74	362	30	0	0	7	196	9	2	0	15	8	36	1	0	33	7	9	3	786
5:45-6:00	1	65	379	20	0	0	6	207	15	3	0	14	17	39	0	0	20	16	10	0	809
6:00-6:15	0	69	356	23	0	1	3	204	10	2	0	15	13	46	0	0	14	9	5	0	768
6:15-6:30	2	73	357	20	0	0	8	170	11	4	0	22	12	47	0	0	18	12	10	0	762
6:30-6:45	0	66	285	20	0	0	3	138	16	0	0	21	12	35	0	0	9	4	12	0	621
6:45-7:00	0	48	259	11	0	0	8	140	10	5	0	15	8	32	1	0	10	13	10	0	564

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	3	301	1379	87	1	6	33	765	33	14	0	67	46	230	2	0	110	46	39	10	3172
4:15-5:15	2	326	1422	89	1	5	37	748	35	12	0	66	46	212	4	0	112	46	43	9	3215
4:30-5:30	3	346	1474	74	1	4	40	786	40	9	0	70	49	211	3	0	103	46	41	6	3306
4:45-5:45	2	326	1508	85	1	3	39	809	43	7	0	69	45	182	4	0	114	42	43	6	3328
5:00-6:00	2	332	1514	88	0	2	35	811	49	7	0	64	48	165	3	0	102	47	42	5	3316
5:15-6:15	2	303	1479	85	0	3	27	826	47	7	0	66	49	169	1	0	88	46	37	4	3239
5:30-6:30	3	281	1454	93	0	1	24	777	45	11	0	66	50	168	1	0	85	44	34	3	3140
5:45-6:45	3	273	1377	83	0	1	20	719	52	9	0	72	54	167	0	0	61	41	37	0	2969
6:00-7:00	2	256	1257	74	0	1	22	652	47	11	0	73	45	160	1	0	51	38	37	0	2727
PM Peak Hour	Northbound					Southbound					Eastbound					Westbound					Total
4:45-5:45	2	326	1508	85	1	3	39	809	43	7	0	69	45	182	4	0	114	42	43	6	3328

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 355 & Deer Park Road
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Wednesday, September 7, 2022
Jurisdiction: City of Gaithersburg

Weekday Morning Peak Hour (6:30 am - 9:30 am)																					
Time:	MD 355 Northbound					MD 355 Southbound					N/A Eastbound					Site Access Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	0	116	0	0	0	0	276	0	0	0	0	0	0	0	0	0	0	1	0	393
6:45-7:00	0	0	115	0	0	0	0	340	0	0	0	0	0	0	0	0	0	0	0	1	455
7:00-7:15	0	0	176	1	0	0	0	400	0	0	0	0	0	0	0	0	0	0	1	0	578
7:15-7:30	0	0	191	0	0	0	0	403	0	0	0	0	0	0	0	0	0	0	1	0	595
7:30-7:45	0	0	210	2	0	0	0	420	0	0	0	0	0	0	0	0	0	0	2	0	634
7:45-8:00	0	0	219	1	0	0	0	542	0	0	0	0	0	0	0	0	0	0	1	0	763
8:00-8:15	0	0	210	2	0	0	0	425	0	0	0	0	0	0	0	0	0	0	1	1	638
8:15-8:30	0	0	242	3	0	0	0	393	0	0	0	0	0	0	0	0	0	0	2	0	640
8:30-8:45	0	0	239	4	0	0	0	403	0	0	0	0	0	0	0	0	0	0	2	0	648
8:45-9:00	0	0	265	4	0	0	0	394	0	0	0	0	0	0	0	0	0	0	5	0	668
9:00-9:15	0	0	255	5	0	0	0	276	0	0	0	0	0	0	0	0	0	0	3	1	539
9:15-9:30	0	0	214	6	0	0	0	304	0	0	0	0	0	0	0	0	0	0	0	0	524

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30	0	0	598	1	0	0	0	1419	0	0	0	0	0	0	0	0	0	0	3	1	2022
6:45-7:45	0	0	692	3	0	0	0	1563	0	0	0	0	0	0	0	0	0	0	4	1	2263
7:00-8:00	0	0	796	4	0	0	0	1765	0	0	0	0	0	0	0	0	0	0	5	0	2570
7:15-8:15	0	0	830	5	0	0	0	1790	0	0	0	0	0	0	0	0	0	0	5	1	2631
7:30-8:30	0	0	881	8	0	0	0	1780	0	0	0	0	0	0	0	0	0	0	6	1	2676
7:45-8:45	0	0	910	10	0	0	0	1763	0	0	0	0	0	0	0	0	0	0	6	1	2690
8:00-9:00	0	0	956	13	0	0	0	1615	0	0	0	0	0	0	0	0	0	0	10	1	2595
8:15-9:15	0	0	1001	16	0	0	0	1466	0	0	0	0	0	0	0	0	0	0	12	1	2496
8:30-9:30	0	0	973	19	0	0	0	1377	0	0	0	0	0	0	0	0	0	0	10	1	2380
AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
7:45-8:45	0	0	910	10	0	0	0	1763	0	0	0	0	0	0	0	0	0	0	6	1	2690

Weekday Evening Peak Hour (4 pm - 7 pm)																					
Time:	MD 355 Northbound					MD 355 Southbound					N/A Eastbound					Site Access Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	0	445	9	0	0	0	281	0	0	0	0	0	0	0	0	0	0	12	0	747
4:15-4:30	0	0	443	10	1	0	0	240	0	0	0	0	0	0	0	0	0	0	11	1	704
4:30-4:45	0	0	478	8	0	0	0	261	0	0	0	0	0	0	1	0	0	0	12	0	759
4:45-5:00	0	0	469	5	0	0	0	283	0	0	0	0	0	0	0	0	0	0	4	1	761
5:00-5:15	0	0	509	7	0	0	0	261	0	0	0	0	0	0	1	0	0	0	8	1	785
5:15-5:30	0	0	560	9	0	0	0	279	0	1	0	0	0	0	1	0	0	0	14	0	862
5:30-5:45	0	0	496	2	0	0	0	246	0	0	0	0	0	0	0	0	0	0	8	0	752
5:45-6:00	0	0	493	4	0	0	0	254	0	0	0	0	0	0	0	0	0	0	19	0	770
6:00-6:15	0	0	505	7	0	0	0	268	0	0	0	0	0	0	0	0	0	0	4	1	784
6:15-6:30	0	0	442	8	0	0	0	228	0	0	0	0	0	0	0	0	0	0	13	0	691
6:30-6:45	0	0	395	1	0	0	0	181	0	0	0	0	0	0	0	0	0	0	4	0	581
6:45-7:00	0	0	333	0	0	0	0	171	0	0	0	0	0	0	1	0	0	0	4	0	508

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	0	0	1835	32	1	0	0	1065	0	0	0	0	0	0	1	0	0	0	39	2	2975
4:15-5:15	0	0	1899	30	1	0	0	1045	0	0	0	0	0	0	2	0	0	0	35	3	3015
4:30-5:30	0	0	2016	29	0	0	0	1084	0	1	0	0	0	0	3	0	0	0	38	2	3173
4:45-5:45	0	0	2034	23	0	0	0	1069	0	1	0	0	0	0	2	0	0	0	34	2	3165
5:00-6:00	0	0	2058	22	0	0	0	1040	0	1	0	0	0	0	2	0	0	0	49	1	3173
5:15-6:15	0	0	2054	22	0	0	0	1047	0	1	0	0	0	0	1	0	0	0	45	1	3171
5:30-6:30	0	0	1936	21	0	0	0	996	0	0	0	0	0	0	0	0	0	0	44	1	2998
5:45-6:45	0	0	1835	20	0	0	0	931	0	0	0	0	0	0	0	0	0	0	40	1	2827
6:00-7:00	0	0	1675	16	0	0	0	848	0	0	0	0	0	0	1	0	0	0	25	1	2566
PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:30-5:30	0	0	2016	29	0	0	0	1084	0	1	0	0	0	0	3	0	0	0	38	2	3173

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 355 & Site Access
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Wednesday, September 7, 2022
Jurisdiction: City of Gaithersburg

Weekday Morning Peak Hour (6:30 am - 9:30 am)																					
Time:	MD 355 Northbound					MD 355 Southbound					S. Westland Dr Eastbound					S. Westland Dr Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	2	4	111	0	0	0	1	276	0	0	0	2	0	9	1	0	16	0	4	0	425
6:45-7:00	1	3	109	5	0	0	1	337	1	1	0	2	0	7	0	0	27	0	4	0	497
7:00-7:15	2	6	172	6	0	1	7	382	6	4	0	1	0	4	4	0	35	0	4	0	626
7:15-7:30	1	3	186	9	0	0	3	394	4	2	0	2	1	7	2	0	24	0	6	0	640
7:30-7:45	5	10	200	12	0	0	8	395	1	1	0	4	1	11	1	0	36	2	4	0	689
7:45-8:00	6	8	206	11	0	1	10	530	2	2	0	5	0	6	2	0	31	0	3	0	819
8:00-8:15	5	14	204	13	0	1	10	406	4	1	0	2	0	6	2	0	34	2	4	0	705
8:15-8:30	6	30	235	24	0	1	9	368	7	1	0	1	0	15	0	0	52	1	4	0	753
8:30-8:45	1	34	212	23	0	1	8	371	10	2	0	19	2	37	2	0	40	4	13	0	775
8:45-9:00	10	46	232	41	0	1	7	369	13	1	0	27	1	49	7	0	36	6	9	0	847
9:00-9:15	13	25	227	25	0	2	7	263	4	3	0	19	3	43	2	0	41	3	11	0	686
9:15-9:30	6	20	203	26	2	2	10	283	2	3	0	2	1	9	3	0	40	0	14	0	618

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30	6	16	578	20	0	1	12	1389	11	7	0	7	1	27	7	0	102	0	18	0	2202
6:45-7:45	9	22	667	32	0	1	19	1508	12	8	0	9	2	29	7	0	122	2	18	0	2467
7:00-8:00	14	27	764	38	0	2	28	1701	13	9	0	12	2	28	9	0	126	2	17	0	2792
7:15-8:15	17	35	796	45	0	2	31	1725	11	6	0	13	2	30	7	0	125	4	17	0	2866
7:30-8:30	22	62	845	60	0	3	37	1699	14	5	0	12	1	38	5	0	153	5	15	0	2976
7:45-8:45	18	86	857	71	0	4	37	1675	23	6	0	27	2	64	6	0	157	7	24	0	3064
8:00-9:00	22	124	883	101	0	4	34	1514	34	5	0	49	3	107	11	0	162	13	30	0	3096
8:15-9:15	30	135	906	113	0	5	31	1371	34	7	0	66	6	144	11	0	169	14	37	0	3079
8:30-9:30	30	125	874	115	2	6	32	1286	29	9	0	67	7	138	14	0	157	13	47	0	2951

AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
8:00-9:00	22	124	883	101	0	4	34	1514	34	5	0	49	3	107	11	0	162	13	30	0	3096

Weekday Evening Peak Hour (4 pm - 7 pm)																					
Time:	MD 355 Northbound					MD 355 Southbound					S. Westland Dr Eastbound					S. Westland Dr Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	8	14	418	37	0	9	16	253	4	1	0	7	0	27	1	0	46	2	16	0	857
4:15-4:30	4	13	433	34	0	1	6	224	7	2	0	4	0	15	2	0	41	0	14	0	796
4:30-4:45	4	15	458	36	1	2	12	241	0	2	0	10	1	22	3	0	34	4	19	0	858
4:45-5:00	7	18	469	42	0	0	13	261	4	0	0	9	2	13	0	0	40	1	5	3	884
5:00-5:15	9	14	494	32	0	1	15	240	1	1	0	3	1	17	0	0	30	2	18	1	877
5:15-5:30	2	26	530	37	0	3	4	268	3	0	0	3	0	17	3	0	26	1	19	1	939
5:30-5:45	6	14	484	33	0	2	12	233	0	1	0	6	2	14	1	0	29	1	16	0	852
5:45-6:00	6	17	482	31	1	2	9	238	5	0	0	2	0	3	0	0	31	0	8	0	834
6:00-6:15	1	24	486	31	1	5	10	252	0	0	0	4	0	13	0	0	25	2	11	1	864
6:15-6:30	3	21	430	28	0	4	8	212	2	0	0	1	1	9	0	0	28	0	13	0	760
6:30-6:45	4	9	379	25	0	1	10	168	4	0	0	2	1	22	0	0	26	1	9	0	661
6:45-7:00	4	8	311	33	0	2	8	162	1	0	0	3	0	8	1	0	19	1	13	0	573

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	23	60	1778	149	1	12	47	979	15	5	0	30	3	77	6	0	161	7	54	3	3410
4:15-5:15	24	60	1854	144	1	4	46	966	12	5	0	26	4	67	5	0	145	7	56	4	3430
4:30-5:30	22	73	1951	147	1	6	44	1010	8	3	0	25	4	69	6	0	130	8	61	5	3573
4:45-5:45	24	72	1977	144	0	6	44	1002	8	2	0	21	5	61	4	0	125	5	58	5	3563
5:00-6:00	23	71	1990	133	1	8	40	979	9	2	0	14	3	51	4	0	116	4	61	2	3511
5:15-6:15	15	81	1982	132	2	12	35	991	8	1	0	15	2	47	4	0	111	4	54	2	3498
5:30-6:30	16	76	1882	123	2	13	39	935	7	1	0	13	3	39	1	0	113	3	48	1	3315
5:45-6:45	14	71	1777	115	2	12	37	870	11	0	0	9	2	47	0	0	110	3	41	1	3122
6:00-7:00	12	62	1606	117	1	12	36	794	7	0	0	10	2	52	1	0	98	4	46	1	2861

PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:30-5:30	22	73	1951	147	1	6	44	1010	8	3	0	25	4	69	6	0	130	8	61	5	3573

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 355 & S. Westland Drive
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Wednesday, September 7, 2022
Jurisdiction: City of Gaithersburg

Weekday Morning Peak Hour (6:30 am - 9:30 am)																					
Time:	N/A Northbound					Site Access Southbound					S. Westland Dr Eastbound					S. Westland Dr Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	16	0	0	17
6:45-7:00	0	0	0	0	0	0	0	0	5	0	1	2	3	0	0	0	0	26	0	0	37
7:00-7:15	0	0	0	0	1	0	1	0	12	3	0	2	7	0	0	0	0	22	0	1	44
7:15-7:30	0	0	0	0	1	0	0	0	5	2	0	4	7	0	1	0	0	24	0	0	40
7:30-7:45	0	0	0	0	2	0	1	0	7	1	0	4	12	0	0	0	0	26	0	0	50
7:45-8:00	0	0	0	0	1	0	0	0	5	0	1	5	13	0	2	0	0	26	0	1	50
8:00-8:15	0	0	0	0	0	0	0	0	10	0	0	7	15	0	0	1	0	30	0	0	63
8:15-8:30	0	0	0	0	1	0	0	0	11	2	1	8	20	0	0	0	0	40	1	0	81
8:30-8:45	0	0	0	0	0	0	0	0	13	1	3	8	20	0	0	0	0	29	0	0	73
8:45-9:00	0	0	0	0	0	0	0	0	11	0	1	13	36	0	0	0	0	33	0	0	94
9:00-9:15	0	0	0	0	2	0	0	0	16	4	3	7	20	0	0	0	0	33	0	0	79
9:15-9:30	0	0	0	0	0	0	0	0	17	3	1	9	24	0	0	0	0	31	0	0	82

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30	0	0	0	0	3	0	1	0	22	5	1	8	18	0	1	0	0	88	0	1	148
6:45-7:45	0	0	0	0	4	0	2	0	29	6	1	12	29	0	1	0	0	98	0	1	183
7:00-8:00	0	0	0	0	5	0	2	0	29	6	1	15	39	0	3	0	0	98	0	2	200
7:15-8:15	0	0	0	0	4	0	1	0	27	3	1	20	47	0	3	1	0	106	0	1	214
7:30-8:30	0	0	0	0	4	0	1	0	33	3	2	24	60	0	2	1	0	122	1	1	254
7:45-8:45	0	0	0	0	2	0	0	0	39	3	5	28	68	0	2	1	0	125	1	1	275
8:00-9:00	0	0	0	0	1	0	0	0	45	3	5	36	91	0	0	1	0	132	1	0	315
8:15-9:15	0	0	0	0	3	0	0	0	51	7	8	36	96	0	0	0	0	135	1	0	337
8:30-9:30	0	0	0	0	2	0	0	0	57	8	8	37	100	0	0	0	0	126	0	0	338
AM Peak Hour	Northbound					Southbound					Eastbound					Westbound					Total
8:30-9:30	0	0	0	0	2	0	0	0	57	8	8	37	100	0	0	0	0	126	0	0	338

Weekday Evening Peak Hour (4 pm - 7 pm)																					
Time:	N/A Northbound					Site Access Southbound					S. Westland Dr Eastbound					S. Westland Dr Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	0	0	0	1	0	1	0	20	1	2	20	27	0	0	0	0	22	1	0	93
4:15-4:30	0	0	0	0	2	0	1	0	20	0	1	20	28	0	1	0	0	30	0	0	100
4:30-4:45	0	0	0	0	3	0	0	0	20	1	3	15	36	0	0	0	0	33	0	0	107
4:45-5:00	0	0	0	0	0	0	1	0	17	0	3	19	35	0	1	0	0	24	1	0	100
5:00-5:15	0	0	0	0	1	0	1	0	12	2	2	13	38	0	1	0	0	32	0	0	98
5:15-5:30	0	0	0	0	1	0	1	0	17	4	2	18	32	0	2	0	0	25	3	2	98
5:30-5:45	0	0	0	0	0	0	0	0	20	0	2	21	25	0	0	0	0	21	0	0	89
5:45-6:00	0	0	0	0	1	0	0	0	17	1	1	21	37	0	0	0	0	18	0	1	94
6:00-6:15	0	0	0	0	1	0	1	0	13	2	1	18	25	0	1	0	0	32	0	1	90
6:15-6:30	0	0	0	0	1	0	0	0	9	2	4	11	23	0	0	0	0	21	0	0	68
6:30-6:45	0	0	0	0	0	0	0	0	15	3	1	11	24	0	0	0	0	13	0	1	64
6:45-7:00	0	0	0	0	1	0	0	0	10	3	0	14	30	0	0	0	0	22	1	3	77

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	0	0	0	0	6	0	3	0	77	2	9	74	126	0	2	0	0	109	2	0	410
4:15-5:15	0	0	0	0	6	0	3	0	69	3	9	67	137	0	3	0	0	119	1	0	417
4:30-5:30	0	0	0	0	5	0	3	0	66	7	10	65	141	0	4	0	0	114	4	2	421
4:45-5:45	0	0	0	0	2	0	3	0	66	6	9	71	130	0	4	0	0	102	4	2	399
5:00-6:00	0	0	0	0	3	0	2	0	66	7	7	73	132	0	3	0	0	96	3	3	395
5:15-6:15	0	0	0	0	3	0	2	0	67	7	6	78	119	0	3	0	0	96	3	4	388
5:30-6:30	0	0	0	0	3	0	1	0	59	5	8	71	110	0	1	0	0	92	0	2	352
5:45-6:45	0	0	0	0	3	0	1	0	54	8	7	61	109	0	1	0	0	84	0	3	331
6:00-7:00	0	0	0	0	3	0	1	0	47	10	6	54	102	0	1	0	0	88	1	5	318
PM Peak Hour	Northbound					Southbound					Eastbound					Westbound					Total
4:30-5:30	0	0	0	0	5	0	3	0	66	7	10	65	141	0	4	0	0	114	4	2	421

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: S. Westland Drive & Site Access
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Wednesday, September 7, 2022
Jurisdiction: City of Gaithersburg

Weekday Morning Peak Hour (6:30 am - 9:30 am)																					
Time:	MD 355 Northbound					MD 355 Southbound					O'Neil Dr Eastbound					I-370 Ramp Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	2	72	0	0	0	0	304	1	0	0	1	0	9	2	0	25	0	42	0	456
6:45-7:00	0	2	71	0	0	0	0	366	1	0	0	4	0	13	1	0	55	0	42	1	554
7:00-7:15	1	4	90	0	0	0	0	416	0	0	0	2	0	7	1	0	45	0	94	0	659
7:15-7:30	0	2	108	0	0	0	0	413	1	0	0	3	0	13	3	0	67	0	81	0	688
7:30-7:45	0	0	132	0	0	0	0	427	2	0	0	4	0	4	0	0	102	0	95	1	766
7:45-8:00	0	3	128	0	0	0	0	556	0	0	0	5	0	5	0	0	94	0	103	0	894
8:00-8:15	0	1	137	0	0	0	0	457	0	0	0	2	0	6	1	0	123	0	89	0	815
8:15-8:30	0	3	166	0	0	0	0	434	2	0	0	4	0	5	0	0	133	0	118	1	865
8:30-8:45	0	7	172	0	0	0	0	438	3	0	0	2	0	5	1	0	145	0	92	0	864
8:45-9:00	0	6	162	0	0	0	0	463	3	0	0	9	0	7	4	0	156	0	154	0	960
9:00-9:15	0	4	179	0	0	0	0	352	1	0	0	3	0	10	0	0	91	0	102	1	742
9:15-9:30	0	2	163	0	0	0	0	341	3	0	0	1	0	3	2	0	64	0	79	0	656

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30	1	10	341	0	0	0	0	1499	3	0	0	10	0	42	7	0	192	0	259	1	2365
6:45-7:45	1	8	401	0	0	0	0	1622	4	0	0	13	0	37	5	0	269	0	312	2	2674
7:00-8:00	1	9	458	0	0	0	0	1812	3	0	0	14	0	29	4	0	308	0	373	1	3012
7:15-8:15	0	6	505	0	0	0	0	1853	3	0	0	14	0	28	4	0	386	0	368	1	3168
7:30-8:30	0	7	563	0	0	0	0	1874	4	0	0	15	0	20	1	0	452	0	405	2	3343
7:45-8:45	0	14	603	0	0	0	0	1885	5	0	0	13	0	21	2	0	495	0	402	1	3441
8:00-9:00	0	17	637	0	0	0	0	1792	8	0	0	17	0	23	6	0	557	0	453	1	3511
8:15-9:15	0	20	679	0	0	0	0	1687	9	0	0	18	0	27	5	0	525	0	466	2	3438
8:30-9:30	0	19	676	0	0	0	0	1594	10	0	0	15	0	25	7	0	456	0	427	1	3230

AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
8:00-9:00	0	17	637	0	0	0	0	1792	8	0	0	17	0	23	6	0	557	0	453	1	3511

Weekday Evening Peak Hour (4 pm - 7 pm)																					
Time:	MD 355 Northbound					MD 355 Southbound					O'Neil Dr Eastbound					I-370 Ramp Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	3	350	0	0	0	0	345	2	0	0	5	0	1	4	0	44	0	114	0	864
4:15-4:30	0	7	374	0	0	0	0	278	4	0	0	2	0	3	2	0	42	0	109	0	819
4:30-4:45	0	10	360	0	0	0	0	297	2	0	0	2	0	4	1	0	38	0	151	0	864
4:45-5:00	1	6	398	0	0	0	0	321	3	1	0	0	0	0	0	0	42	0	131	3	902
5:00-5:15	0	9	407	0	0	0	0	288	7	0	0	6	0	3	2	0	32	0	128	0	880
5:15-5:30	1	3	439	0	0	0	0	318	7	0	0	0	0	5	7	0	44	0	125	1	942
5:30-5:45	0	9	379	0	0	0	0	281	4	0	0	4	0	4	1	0	29	0	142	0	852
5:45-6:00	0	5	381	0	0	0	0	264	4	0	0	3	0	7	0	0	42	0	143	0	849
6:00-6:15	0	9	382	0	0	0	0	292	2	0	0	5	0	3	2	0	45	0	143	0	881
6:15-6:30	1	4	329	0	0	0	0	252	1	0	0	0	0	4	1	0	45	1	142	0	779
6:30-6:45	0	4	280	0	0	0	0	208	2	0	0	2	0	5	1	0	22	0	119	1	642
6:45-7:00	0	1	228	0	0	0	0	185	6	0	0	2	0	5	0	0	29	0	126	0	582

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	1	26	1482	0	0	0	0	1241	11	1	0	9	0	8	7	0	166	0	505	3	3460
4:15-5:15	1	32	1539	0	0	0	0	1184	16	1	0	10	0	10	5	0	154	0	519	3	3474
4:30-5:30	2	28	1604	0	0	0	0	1224	19	1	0	8	0	12	10	0	156	0	535	4	3603
4:45-5:45	2	27	1623	0	0	0	0	1208	21	1	0	10	0	12	10	0	147	0	526	4	3591
5:00-6:00	1	26	1606	0	0	0	0	1151	22	0	0	13	0	19	10	0	147	0	538	1	3534
5:15-6:15	1	26	1581	0	0	0	0	1155	17	0	0	12	0	19	10	0	160	0	553	1	3535
5:30-6:30	1	27	1471	0	0	0	0	1089	11	0	0	12	0	18	4	0	161	1	570	0	3365
5:45-6:45	1	22	1372	0	0	0	0	1016	9	0	0	10	0	19	4	0	154	1	547	1	3156
6:00-7:00	1	18	1219	0	0	0	0	937	11	0	0	9	0	17	4	0	141	1	530	1	2889

PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:30-5:30	2	28	1604	0	0	0	0	1224	19	1	0	8	0	12	10	0	156	0	535	4	3603

Peak Hour
Turning Movement Count

Intersection: MD 355 & I-370 Ramp
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Wednesday, September 7, 2022
Jurisdiction: City of Gaithersburg



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Weekday Morning Peak Hour (6:30 am - 9:30 am)																					
Time:	Site Access Northbound					N/A Southbound					N. Westland Dr Eastbound					N. Westland Dr Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	9		1	0					0			1	21	0	0	1	5		2	38
6:45-7:00	0	6		0	0					0			0	23	0	0	0	3		0	32
7:00-7:15	0	6		0	0					0			4	17	0	0	1	8		0	36
7:15-7:30	0	4		0	0					0			3	16	0	0	0	6		0	29
7:30-7:45	0	10		0	0					0			1	18	0	0	0	7		0	36
7:45-8:00	0	4		0	0					0			4	17	0	0	0	10		0	35
8:00-8:15	0	5		0	0					0			8	13	0	0	2	9		0	37
8:15-8:30	0	7		0	0					0			5	14	1	0	0	3		0	29
8:30-8:45	0	3		0	1					0			3	15	0	0	1	1		0	23
8:45-9:00	0	7		1	0					0			4	24	2	0	2	4		0	42
9:00-9:15	0	11		1	0					0			6	11	0	0	0	4		0	33
9:15-9:30	0	8		1	0					0			4	15	0	0	1	4		0	33

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30	0	25	0	1	0	0	0	0	0	0	0	0	8	77	0	0	2	22	0	2	137
6:45-7:45	0	26	0	0	0	0	0	0	0	0	0	0	8	74	0	0	1	24	0	0	133
7:00-8:00	0	24	0	0	0	0	0	0	0	0	0	0	12	68	0	0	1	31	0	0	136
7:15-8:15	0	23	0	0	0	0	0	0	0	0	0	0	16	64	0	0	2	32	0	0	137
7:30-8:30	0	26	0	0	0	0	0	0	0	0	0	0	18	62	1	0	2	29	0	0	138
7:45-8:45	0	19	0	0	1	0	0	0	0	0	0	0	20	59	1	0	3	23	0	0	126
8:00-9:00	0	22	0	1	1	0	0	0	0	0	0	0	20	66	3	0	5	17	0	0	135
8:15-9:15	0	28	0	2	1	0	0	0	0	0	0	0	18	64	3	0	3	12	0	0	131
8:30-9:30	0	29	0	3	1	0	0	0	0	0	0	0	17	65	2	0	4	13	0	0	134
AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
7:30-8:30	0	26	0	0	0	0	0	0	0	0	0	0	18	62	1	0	2	29	0	0	138

Weekday Evening Peak Hour (4 pm - 7 pm)																					
Time:	Site Access Northbound					N/A Southbound					N. Westland Dr Eastbound					N. Westland Dr Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	9		1	0					0			6	18	0	0	1	7		0	42
4:15-4:30	0	14		1	0					0			15	21	0	0	1	18		0	70
4:30-4:45	0	9		1	0					0			3	14	0	0	0	16		0	43
4:45-5:00	0	7		0	0					0			3	18	0	0	0	11		0	39
5:00-5:15	0	11		0	0					0			0	17	0	0	0	5		0	33
5:15-5:30	0	14		0	3					0			4	16	0	0	1	1		0	36
5:30-5:45	0	10		0	0					0			2	21	0	0	0	7		0	40
5:45-6:00	0	10		1	0					0			3	17	0	0	2	5		0	38
6:00-6:15	0	12		0	0					0			5	24	0	0	0	6		0	47
6:15-6:30	0	15		0	0					0			6	30	0	0	1	14		0	66
6:30-6:45	0	22		0	0					0			5	24	0	0	1	8		0	60
6:45-7:00	0	11		0	0					0			1	9	0	0	1	4		0	26

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	0	39	0	3	0	0	0	0	0	0	0	0	27	71	0	0	2	52	0	0	194
4:15-5:15	0	41	0	2	0	0	0	0	0	0	0	0	21	70	0	0	1	50	0	0	185
4:30-5:30	0	41	0	1	3	0	0	0	0	0	0	0	10	65	0	0	1	33	0	0	154
4:45-5:45	0	42	0	0	3	0	0	0	0	0	0	0	9	72	0	0	1	24	0	0	151
5:00-6:00	0	45	0	1	3	0	0	0	0	0	0	0	9	71	0	0	3	18	0	0	150
5:15-6:15	0	46	0	1	3	0	0	0	0	0	0	0	14	78	0	0	3	19	0	0	164
5:30-6:30	0	47	0	1	0	0	0	0	0	0	0	0	16	92	0	0	3	32	0	0	191
5:45-6:45	0	59	0	1	0	0	0	0	0	0	0	0	19	95	0	0	4	33	0	0	211
6:00-7:00	0	60	0	0	0	0	0	0	0	0	0	0	17	87	0	0	3	32	0	0	199
PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
5:45-6:45	0	59	0	1	0	0	0	0	0	0	0	0	19	95	0	0	4	33	0	0	211

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: N. Westland Drive & Site Access
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, October 6, 2022
Jurisdiction: City of Gaithersburg

Weekday Morning Peak Hour (6:30 am - 9:30 am)																						
		MD 355 Northbound					MD 355 Southbound					N/A Eastbound					N. Westland Dr Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total	
6:30-6:45			109	8		42		265								11		9			444	
6:45-7:00			85	30		36		328								12		18			509	
7:00-7:15			149	28		38		388								12		22			637	
7:15-7:30			171	21		22		392								11		14			631	
7:30-7:45			185	27		31		407								13		18			681	
7:45-8:00			199	21		32		530								12		20			814	
8:00-8:15			194	17		38		418								7		24			698	
8:15-8:30			226	18		35		390								3		13			685	
8:30-8:45			229	12		25		397								6		16			685	
8:45-9:00			260	10		28		387								7		18			710	
9:00-9:15			234	24		30		261								15		23			587	
9:15-9:30			192	22		27		294								10		20			565	

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:30-7:30			514	87		138		1373								46		63			2221
6:45-7:45			590	106		127		1515								48		72			2458
7:00-8:00			704	97		123		1717								48		74			2763
7:15-8:15			749	86		123		1747								43		76			2824
7:30-8:30			804	83		136		1745								35		75			2878
7:45-8:45			848	68		130		1735								28		73			2882
8:00-9:00			909	57		126		1592								23		71			2778
8:15-9:15			949	64		118		1435								31		70			2667
8:30-9:30			915	68		110		1339								38		77			2547
AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:45-8:45	0	0	848	68	0	0	130	1735	0	0	0	0	0	0	0	0	28	0	73	0	2882

Weekday Evening Peak Hour (4 pm - 7 pm)																						
		MD 355 Northbound					MD 355 Southbound					N/A Eastbound					N. Westland Dr Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total	
4:00-4:15			421	36		26		280								1		23			787	
4:15-4:30			422	32		23		233								7		32			749	
4:30-4:45			460	30		23		253								8		25			799	
4:45-5:00			450	23		29		276								7		23			808	
5:00-5:15			492	25		27		260								1		22			827	
5:15-5:30			557	17		23		275								4		17			893	
5:30-5:45			474	30		26		238								8		24			800	
5:45-6:00			490	22		20		249								5		15			801	
6:00-6:15			480	29		29		262								6		19			825	
6:15-6:30			433	22		36		221								7		30			749	
6:30-6:45			379	20		36		174								7		23			639	
6:45-7:00			308	29		27		168								3		22			557	

Hourly Totals																					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00			1753	121		101		1042								23		103			3143
4:15-5:15			1824	110		102		1022								23		102			3183
4:30-5:30			1959	95		102		1064								20		87			3327
4:45-5:45			1973	95		105		1049								20		86			3328
5:00-6:00			2013	94		96		1022								18		78			3321
5:15-6:15			2001	98		98		1024								23		75			3319
5:30-6:30			1877	103		111		970								26		88			3175
5:45-6:45			1782	93		121		906								25		87			3014
6:00-7:00			1600	100		128		825								23		94			2770
PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:45-5:45	0	0	1973	95	0	0	105	1049	0	0	0	0	0	0	0	0	20	0	86	0	3328

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 355 & N. Westland Drive
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, October 6, 2022
Jurisdiction: City of Gaithersburg

Appendix B

Background Developments



Traffic Impact Analysis

Background Dev.
Map

**Exhibit
B-1**



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com


Trip Generation Rates

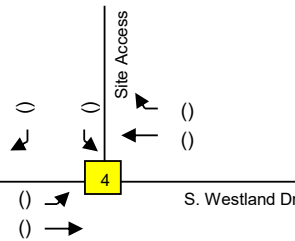
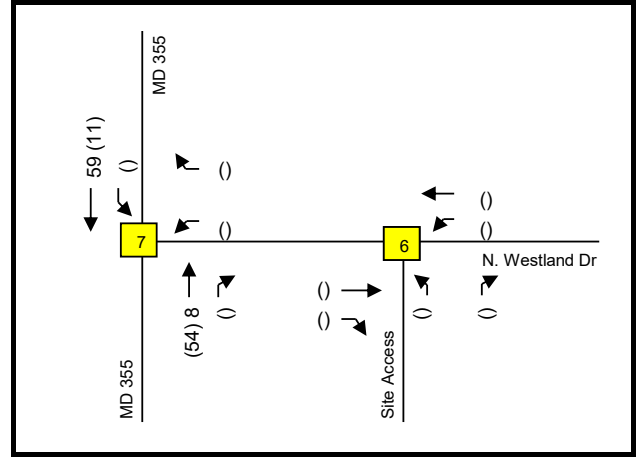
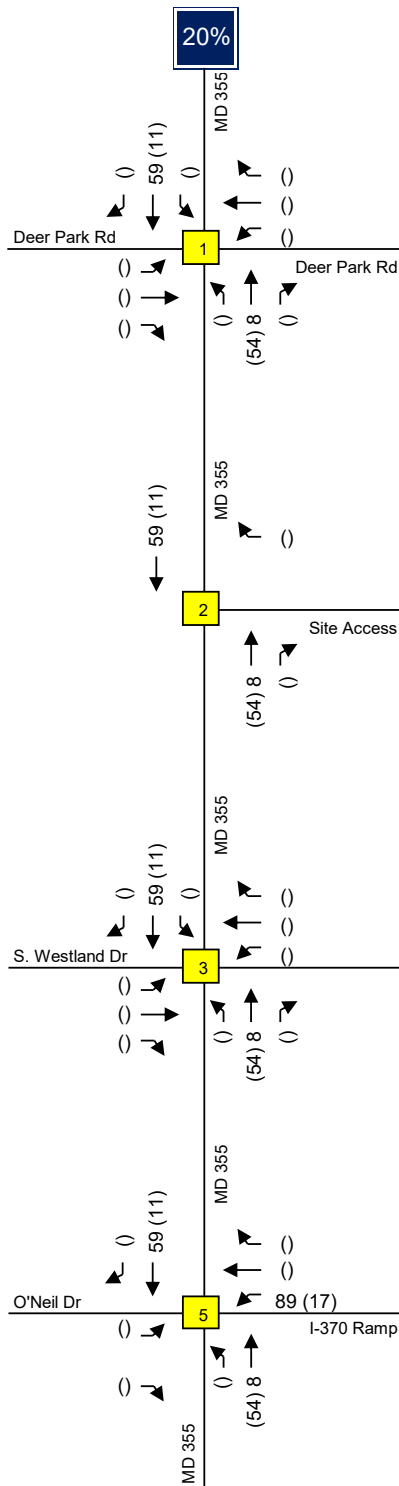
General Office (ksf, ITE-710)	<u>Trip Distribution (In/Out)</u>
Ln(Morning Trips) = 0.86 x Ln(ksf) + 1.16	88/12
Ln(Evening Trips) = 0.83 x Ln(ksf) + 1.29	17/83
Single-Family Detached Housing (ITE-210, Units)	<u>Trip Distribution (In/Out)</u>
Ln(Morning Trips) = 0.91 x Ln(Units) + 0.12	26/74
Ln(Evening Trips) = 0.94 x Ln(Units) + 0.27	63/37
Shopping Plaza w/ Supermarket (40-150ksf) (ksf, ITE-821)	<u>Trip Distribution (In/Out)</u>
Morning Trips = 3.53 x ksf	62/38
Evening Trips = 7.67 x ksf + 118.86	48/52

Trip Generation Totals

			AM Peak			PM Peak			
			In	Out	Total	In	Out	Total	
1	Sears Addition	General Office (ksf, ITE-710)	225,000 sq.ft.	296	40	336	55	271	326
2	Rashidian Est.	Single-Family Detached Housing (ITE-210, Units)	3 units	1	2	3	3	1	4
3	Oakmont	Single-Family Detached Housing (ITE-210, Units)	2 units	1	1	2	2	1	3
3	W.H.S.C (Vacant)	Shopping Plaza w/ Supermarket (40-150ksf) (ksf, ITE-821)	46,316 sq.ft.	101	62	163	228	246	474
<i>Pass-by Trips (0% AM/40% PM)</i>				0	0	0	92	98	190

NOTE: Trip Generation Rates obtained from the ITE Trip Generation Manual, 11th Edition

Traffic Impact Analysis	Trip Generation for Background Developments	Exhibit B-2
 LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com		



30% to/from I-370 in the east

30% to/from I-370 in the west

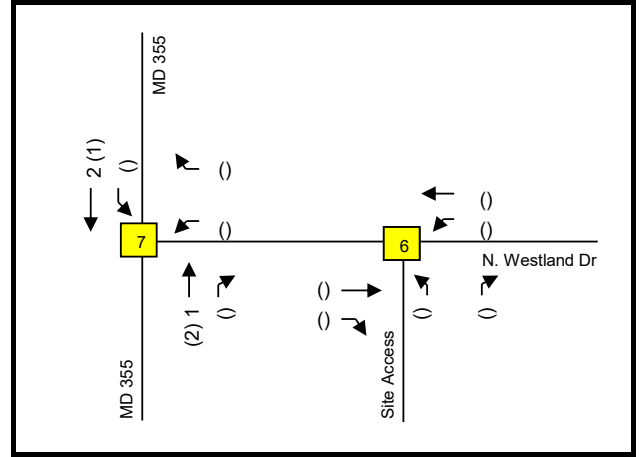
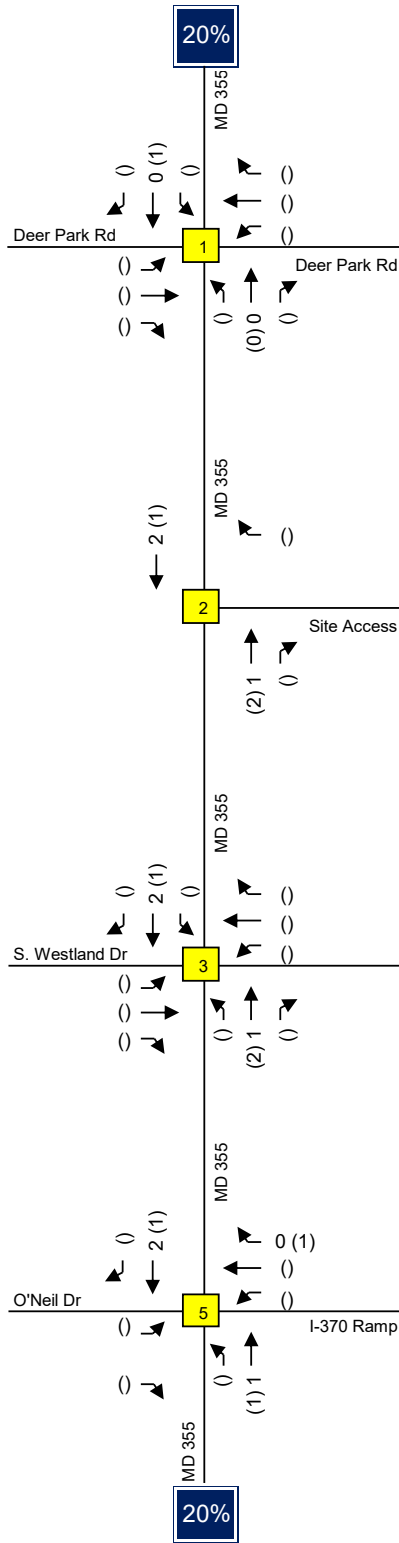
Traffic Impact Analysis

Trip Assignment for Background Development 1

Exhibit B-3a

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's



30% to/from I-370 in the east

30% to/from I-370 in the west

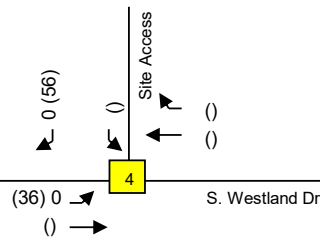
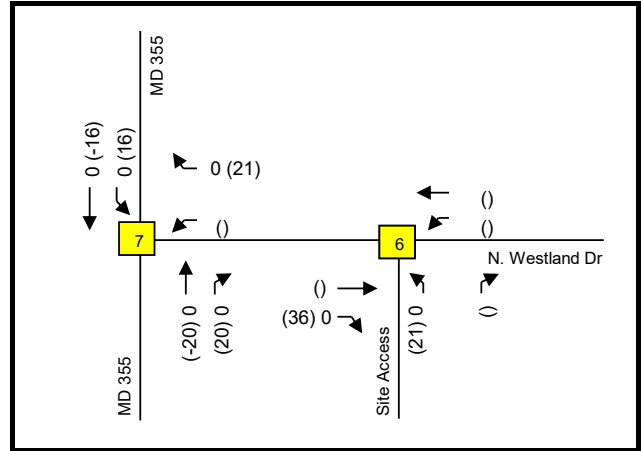
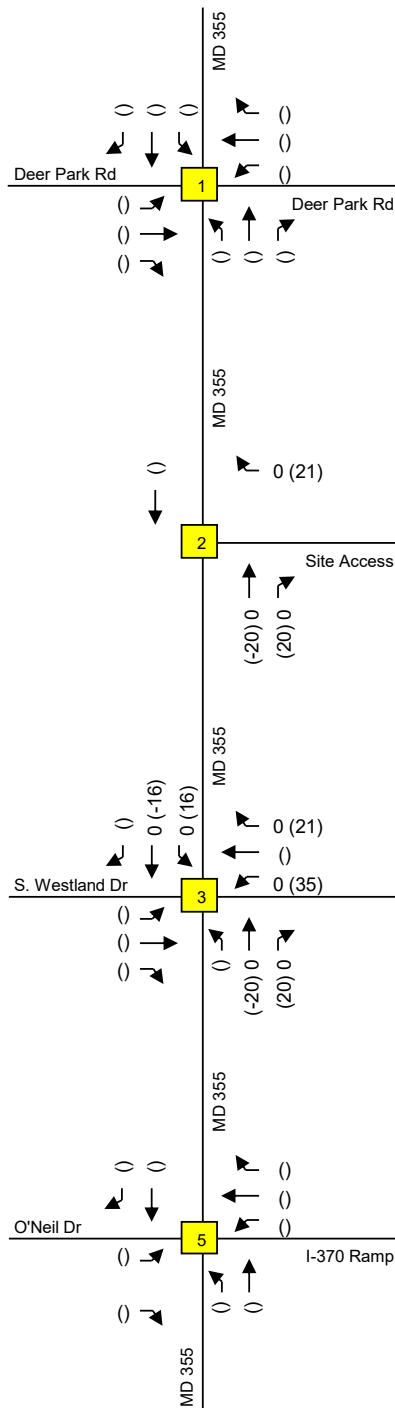
Traffic Impact Analysis

Trip Assignment for Background Development 2

Exhibit B-3b

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's



Pass-by Trip Assumptions:

Morning Peak Hour:

35% of pass-by trips along MD 355 NB
Split between Int. 2, 4 and 6

65% of pass-by trips along MD 355 SB
Split between Int. 6 and 4

Evening Peak Hour:

65% of pass-by trips along MD 355 NB
Split between Int. 2, 4 and 6

35% of pass-by trips along MD 355 SB
Split between Int. 6 and 4

Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Pass-by Trip Assignment for
Background Development 4

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit
B-3e

Appendix C

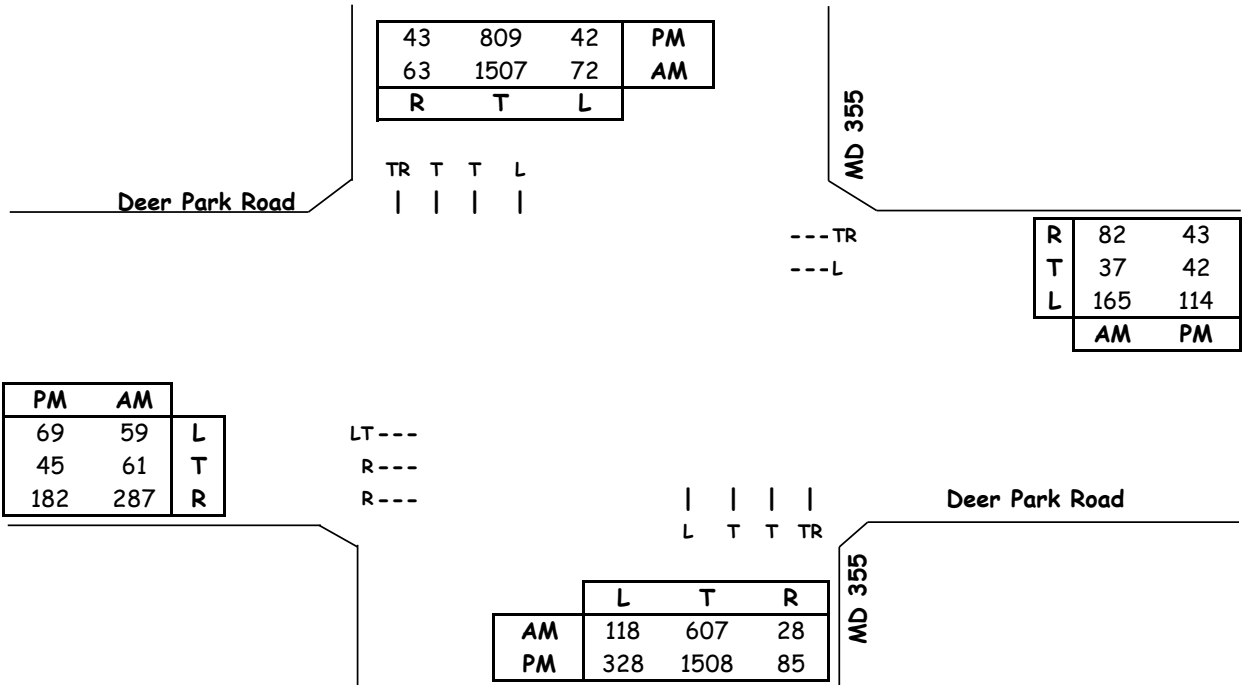
Background Developments

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: Deer Park Road
 Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	120	1.00	120				120
WB	165	1.00	165				165
NB	635	0.40	254	72	1.00	72	746
SB	1570	0.40	628	118	1.00	118	
CLV TOTAL=							1031
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	114	1.00	114				114
WB	114	1.00	114				114
NB	1593	0.40	637	42	1.00	42	679
SB	852	0.40	341	328	1.00	328	
CLV TOTAL=							907
Level of Service (LOS)=							A

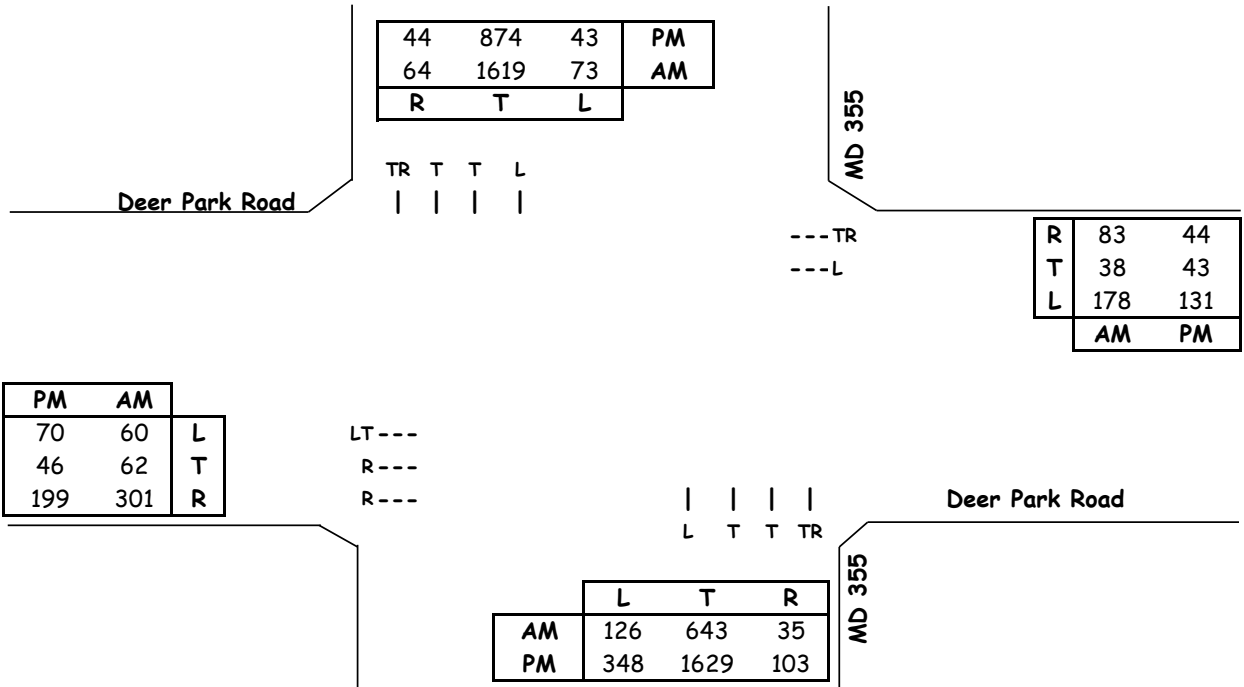
Critical Lane Volume Analysis		MD 355 & Deer Park Road (Existing Traffic)	Intersection 1
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: Deer Park Road
 Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	122	1.00	122				122
WB	178	1.00	178				178
NB	678	0.40	271	73	1.00	73	799
SB	1683	0.40	673	126	1.00	126	
CLV TOTAL=							1099
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	116	1.00	116				116
WB	131	1.00	131				131
NB	1732	0.40	693	43	1.00	43	736
SB	918	0.40	367	348	1.00	348	
CLV TOTAL=							983
Level of Service (LOS)=							A

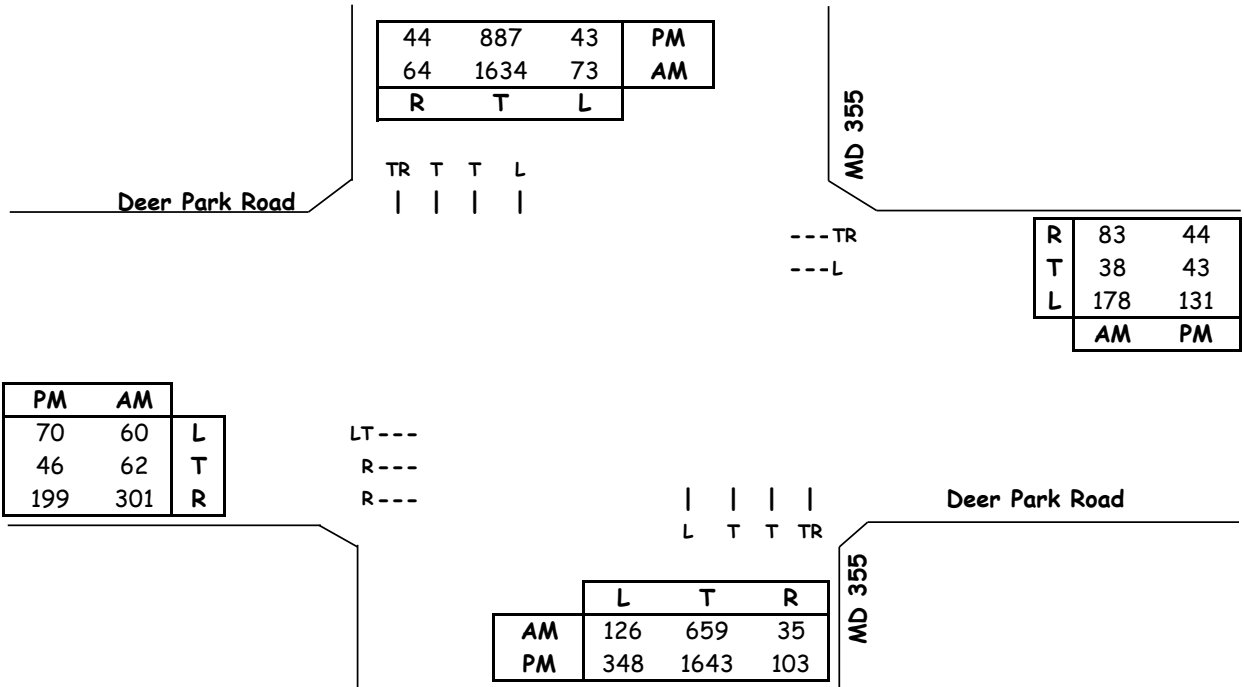
Critical Lane Volume Analysis		MD 355 & Deer Park Road (Background Traffic)	Intersection 1
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: Deer Park Road
 Study Period: Total Traffic - Scenario 1 (no BRT)

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	122	1.00	122				122
WB	178	1.00	178				178
NB	694	0.40	278	73	1.00	73	805
SB	1698	0.40	679	126	1.00	126	
CLV TOTAL=							1105
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	116	1.00	116				116
WB	131	1.00	131				131
NB	1746	0.40	698	43	1.00	43	741
SB	931	0.40	372	348	1.00	348	
CLV TOTAL=							988
Level of Service (LOS)=							A

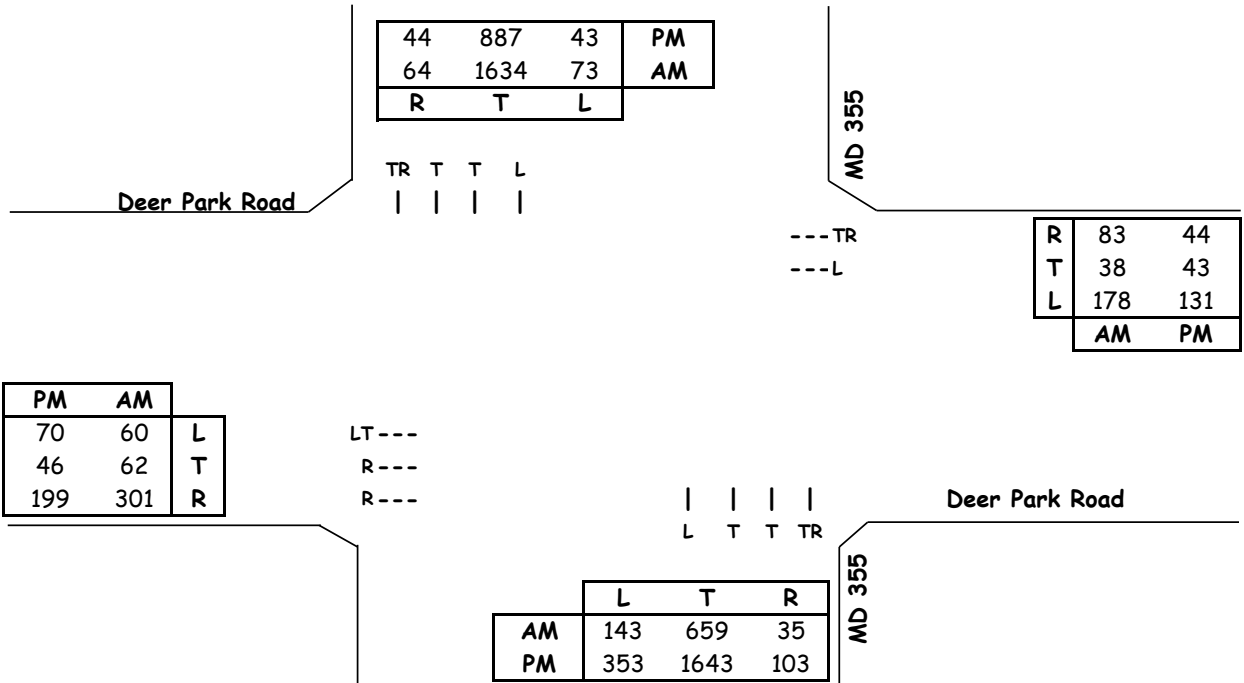
Critical Lane Volume Analysis		Intersection
Lenhart Traffic Consulting, Inc.	MD 355 & Deer Park Road	1
Traffic Engineering & Transportation Planning	(Total Traffic - Scenario 1 (no BRT))	

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: Deer Park Road
 Study Period: Total Traffic - Scenario 2 (with BRT)

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	122	1.00	122				122
WB	178	1.00	178				178
NB	694	0.40	278	73	1.00	73	822
SB	1698	0.40	679	143	1.00	143	
CLV TOTAL=							1122
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	116	1.00	116				116
WB	131	1.00	131				131
NB	1746	0.40	698	43	1.00	43	741
SB	931	0.40	372	353	1.00	353	
CLV TOTAL=							988
Level of Service (LOS)=							A

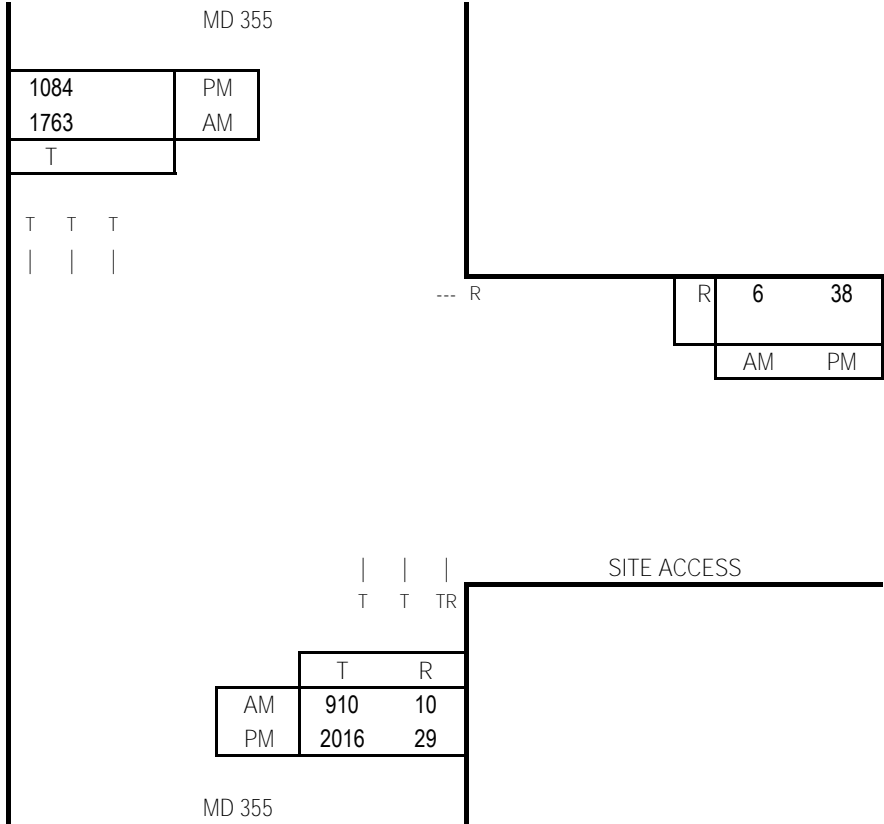
Critical Lane Volume Analysis		Intersection
Lenhart Traffic Consulting, Inc.	MD 355 & Deer Park Road	1
Traffic Engineering & Transportation Planning	(Total Traffic - Scenario 2 (with BRT))	

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

Intersection of: MD 355
and: Site Access
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

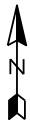
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	6	1.00	6				6
NB	920	0.40	368	0	0.00	0	705
SB	1763	0.40	705				
CLV TOTAL=							711
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	38	1.00	38				38
NB	2045	0.40	818	0	0.00	0	818
SB	1084	0.40	434				
CLV TOTAL=							856
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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**MD 355 &
Site Access
(Existing Traffic)**

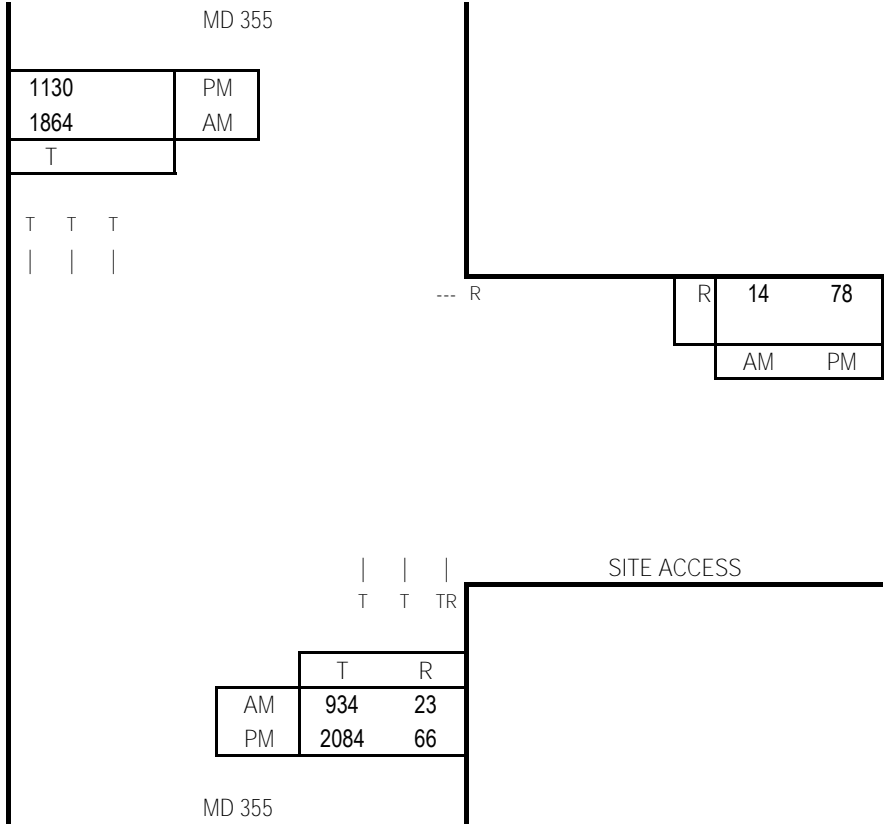
Intersection
2

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

Intersection of: MD 355
and: Site Access
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

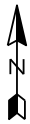
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	14	1.00	14				14
NB	957	0.40	383	0	0.00	0	746
SB	1864	0.40	746				
CLV TOTAL=							760
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	78	1.00	78				78
NB	2150	0.40	860	0	0.00	0	860
SB	1130	0.40	452				
CLV TOTAL=							938
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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**MD 355 &
Site Access
(Background Traffic)**

Intersection
2

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

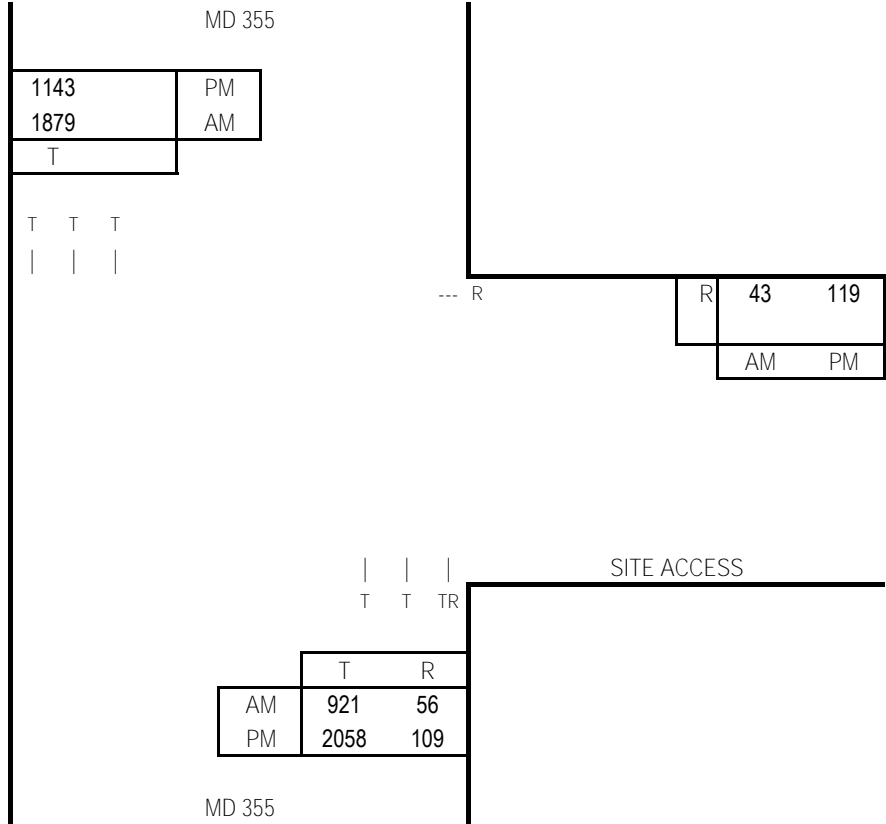
Intersection of: MD 355

Analyst: Lenhart Traffic Consulting

and: Site Access

Conditions: Total Traffic - Scenario 1 (no BRT)

Lane Use + Traffic Volumes



Capacity Analysis

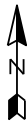
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	43	1.00	43				43
NB	977	0.40	391	0	0.00	0	752
SB	1879	0.40	752				
CLV TOTAL=							795
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	119	1.00	119				119
NB	2167	0.40	867	0	0.00	0	867
SB	1143	0.40	457				
CLV TOTAL=							986
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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**MD 355 &
Site Access**
(Total Traffic - Scenario 1 (no BRT))

Intersection
2

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

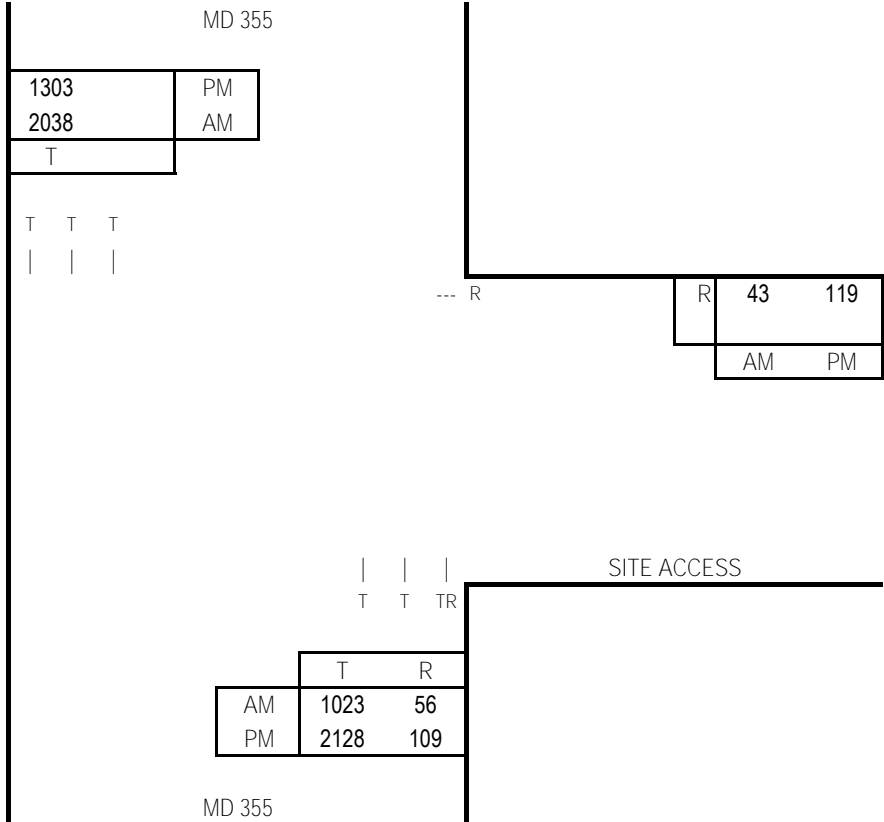
Intersection of: MD 355

Analyst: Lenhart Traffic Consulting

and: Site Access

Conditions: Total Traffic - Scenario 2 (with BRT)

Lane Use + Traffic Volumes



Capacity Analysis

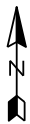
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	43	1.00	43				43
NB	1079	0.40	432	0	0.00	0	815
SB	2038	0.40	815				
CLV TOTAL=							858
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	119	1.00	119				119
NB	2237	0.40	895	0	0.00	0	895
SB	1303	0.40	521				
CLV TOTAL=							1014
Level of Service (LOS)=							B

Critical Lane Volume Analysis



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**MD 355 &
Site Access**
(Total Traffic - Scenario 2 (with BRT))

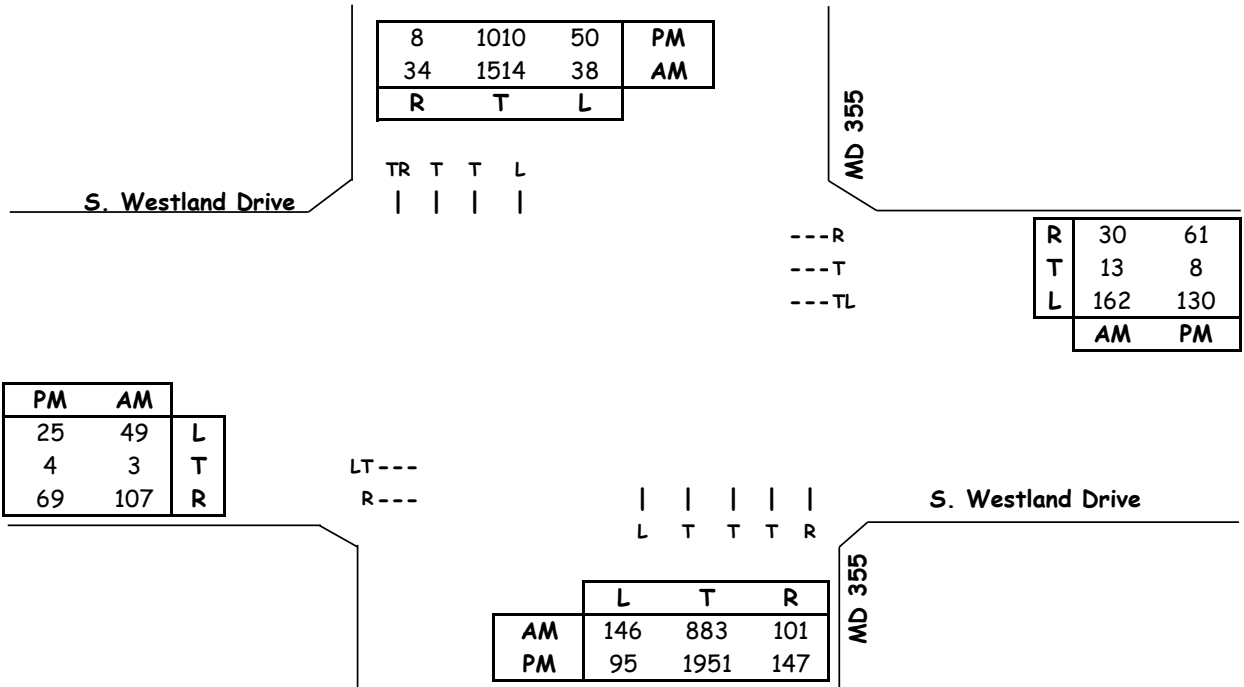
Intersection
2

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: S. Westland Drive
 Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	52	1.00	52				52
WB	162	1.00	162				162
NB	883	0.40	353	38	1.00	38	765
SB	1548	0.40	619	146	1.00	146	
CLV TOTAL=							979
Level of Service (LOS)=							A

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	29	1.00	29				29
WB	130	1.00	130				130
NB	1951	0.40	780	50	1.00	50	830
SB	1018	0.40	407	95	1.00	95	
CLV TOTAL=							989
Level of Service (LOS)=							A

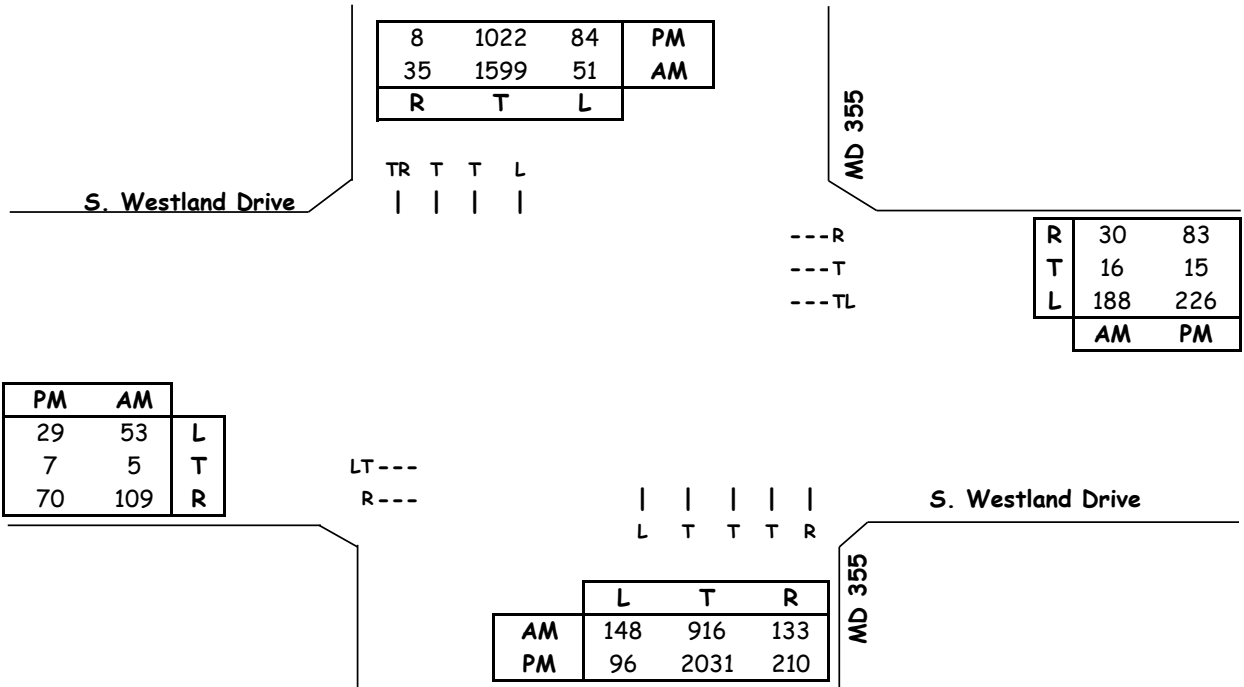
Critical Lane Volume Analysis		MD 355 & S. Westland Drive (Existing Traffic)	Intersection 3
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: S. Westland Drive
 Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	58	1.00	58				58
WB	188	1.00	188				188
NB	916	0.40	366	51	1.00	51	802
SB	1634	0.40	654	148	1.00	148	
CLV TOTAL=							1048
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	36	1.00	36				36
WB	226	1.00	226				226
NB	2031	0.40	812	84	1.00	84	896
SB	1030	0.40	412	96	1.00	96	
CLV TOTAL=							1158
Level of Service (LOS)=							C

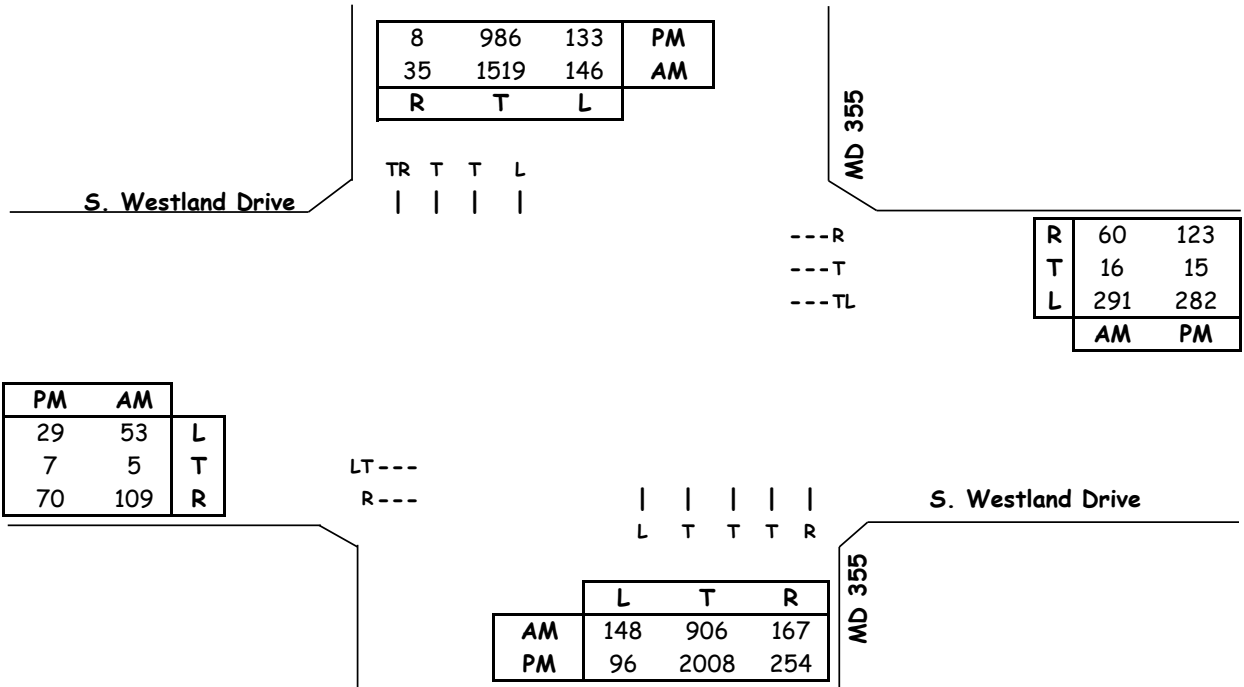
Critical Lane Volume Analysis			Intersection
Lenhart Traffic Consulting, Inc.		MD 355 & S. Westland Drive	3
Traffic Engineering & Transportation Planning		(Background Traffic)	

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: S. Westland Drive
 Study Period: Total Traffic - Scenario 1 (no BRT)

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	58	1.00	58				58
WB	291	1.00	291				291
NB	906	0.40	362	146	1.00	146	770
SB	1554	0.40	622	148	1.00	148	
CLV TOTAL=							1119
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	36	1.00	36				36
WB	282	1.00	282				282
NB	2008	0.40	803	133	1.00	133	936
SB	994	0.40	398	96	1.00	96	
CLV TOTAL=							1254
Level of Service (LOS)=							C

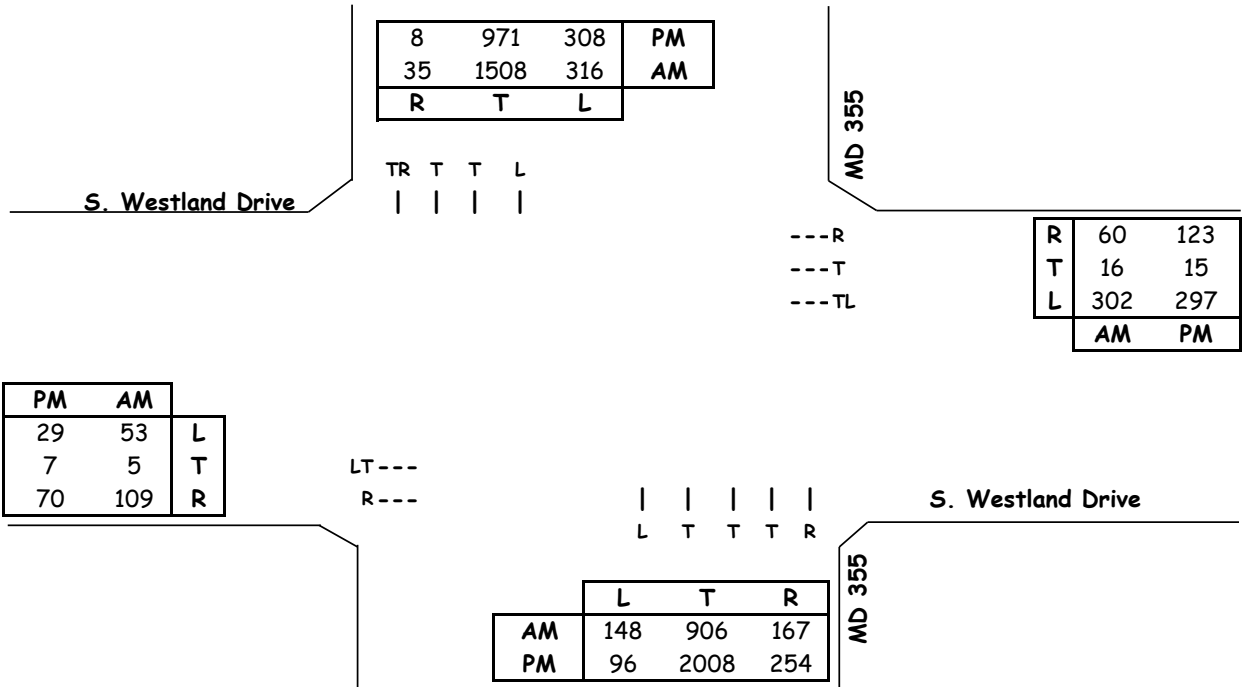
Critical Lane Volume Analysis		MD 355 & S. Westland Drive (Total Traffic - Scenario 1 (no BRT))	Intersection 3
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: S. Westland Drive
 Study Period: Total Traffic - Scenario 2 (with BRT)

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	58	1.00	58				58
WB	302	1.00	302				302
NB	906	0.40	362	316	1.00	316	765
SB	1543	0.40	617	148	1.00	148	
CLV TOTAL=							1125
Level of Service (LOS)=							B

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	36	1.00	36				36
WB	297	1.00	297				297
NB	2008	0.40	803	308	1.00	308	1111
SB	979	0.40	392	96	1.00	96	
CLV TOTAL=							1444
Level of Service (LOS)=							D

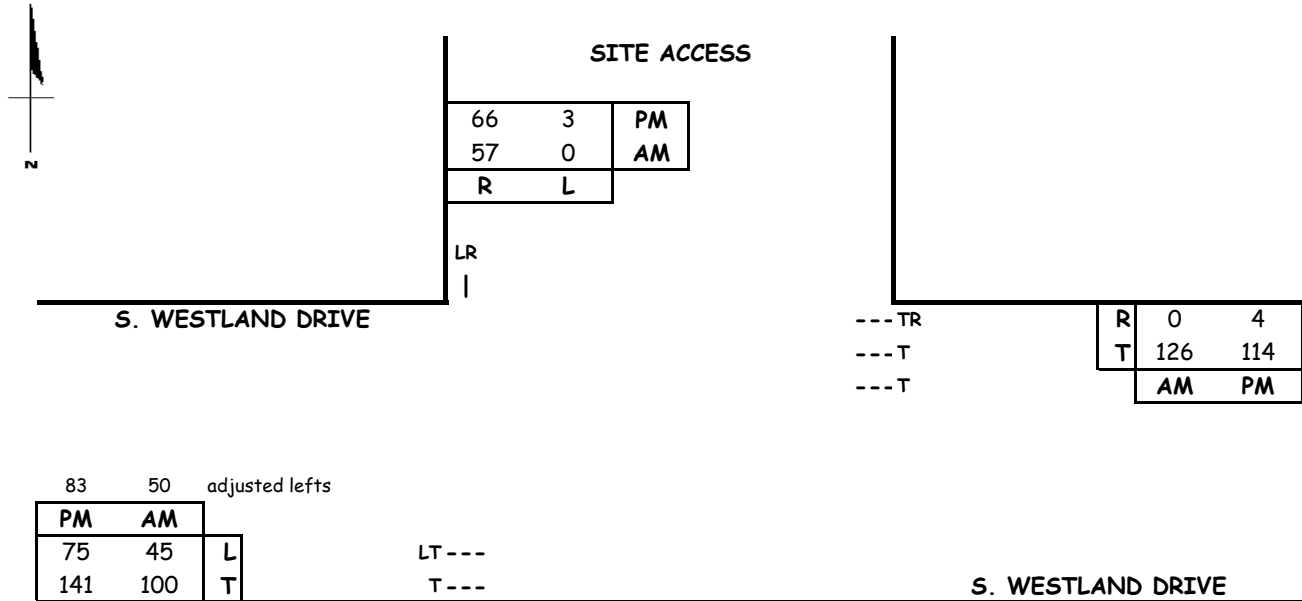
Critical Lane Volume Analysis		Intersection
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	MD 355 & S. Westland Drive (Total Traffic - Scenario 2 (with BRT))	3

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

Intersection of: S. Westland Drive
and: Site Access
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	57	1.00	57				57
EB	150	0.55	82				95
WB	126	0.40	50	45	1.00	45	
CLV TOTAL=							152
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	69	1.00	69				69
EB	224	0.55	123				123
WB	118	0.40	47	75	1.00	75	
CLV TOTAL=							192
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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S. Westland Drive &
Site Access
(Existing Traffic)

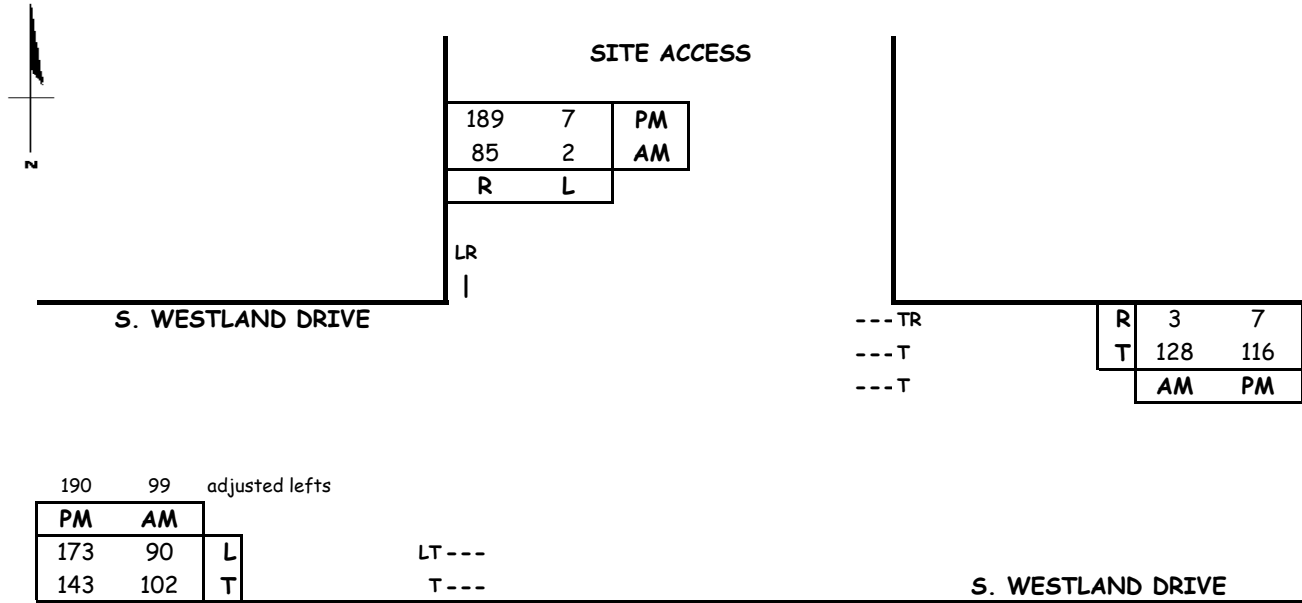
Intersection
4

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

Intersection of: S. Westland Drive
and: Site Access
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
SB	87	1.00	87				87
EB	201	0.55	111				142
WB	131	0.40	52	90	1.00	90	
CLV TOTAL=							229
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
SB	196	1.00	196				196
EB	333	0.55	183				222
WB	123	0.40	49	173	1.00	173	
CLV TOTAL=							418
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**S. Westland Drive &
Site Access
(Background Traffic)**

Intersection
4

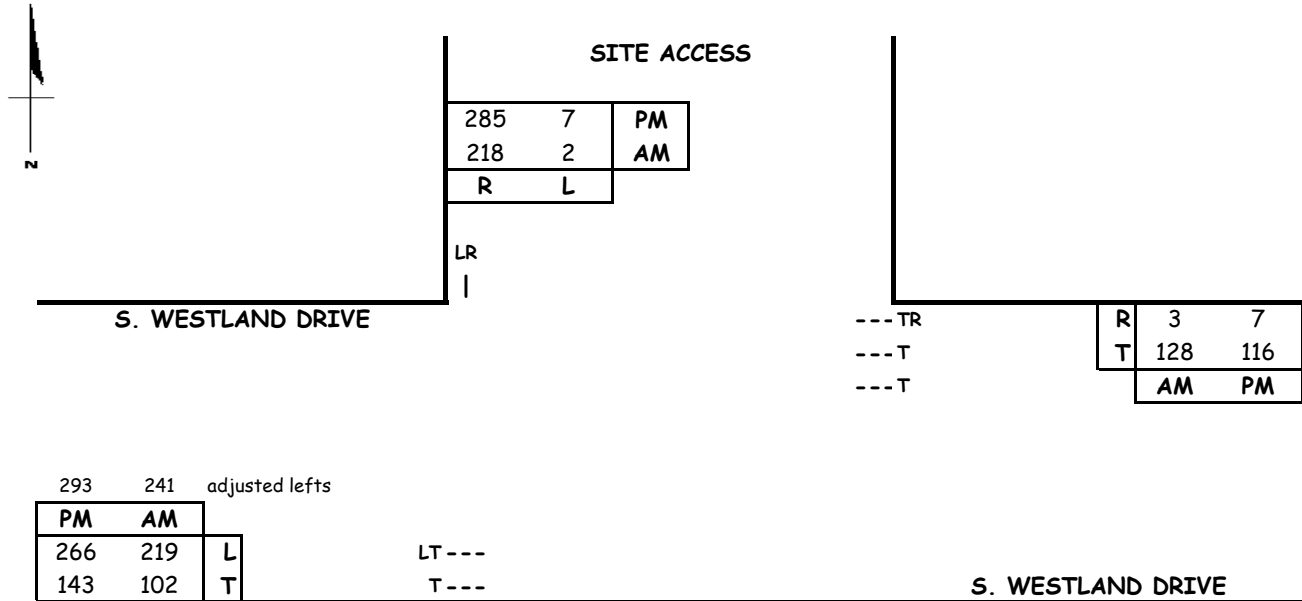
CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

Intersection of: S. Westland Drive
and: Site Access

Analyst: Lenhart Traffic Consulting

Conditions: Total Traffic - Scenario 1 (no BRT)

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	220	1.00	220				220
EB	343	0.55	189				271
WB	131	0.40	52	219	1.00	219	
CLV TOTAL=							491
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	292	1.00	292				292
EB	436	0.55	240				315
WB	123	0.40	49	266	1.00	266	
CLV TOTAL=							607
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**S. Westland Drive &
Site Access**
(Total Traffic - Scenario 1 (no BRT))

Intersection
4

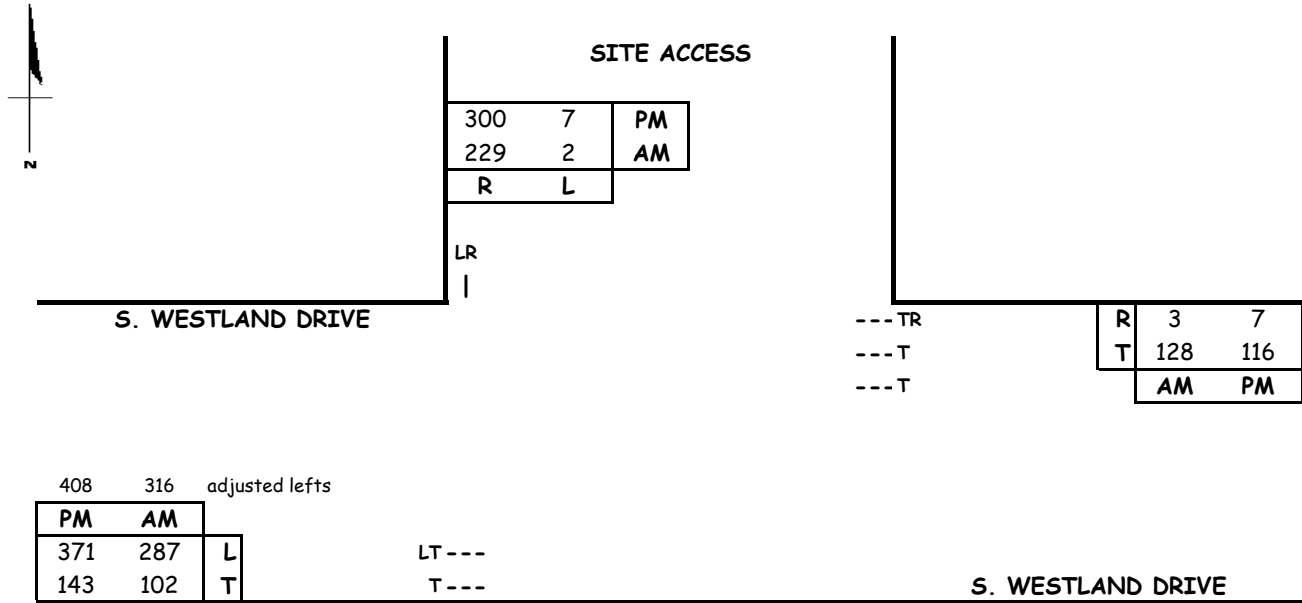
CRITICAL LANE VOLUME (CLV) METHODOLOGY for MDOT SHA

Intersection of: S. Westland Drive
and: Site Access

Analyst: Lenhart Traffic Consulting

Conditions: Total Traffic - Scenario 2 (with BRT)

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	231	1.00	231				231
EB	418	0.55	230				339
WB	131	0.40	52	287	1.00	287	
CLV TOTAL=							570
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	307	1.00	307				307
EB	551	0.55	303				420
WB	123	0.40	49	371	1.00	371	
CLV TOTAL=							727
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**S. Westland Drive &
Site Access**
(Total Traffic - Scenario 2 (with BRT))

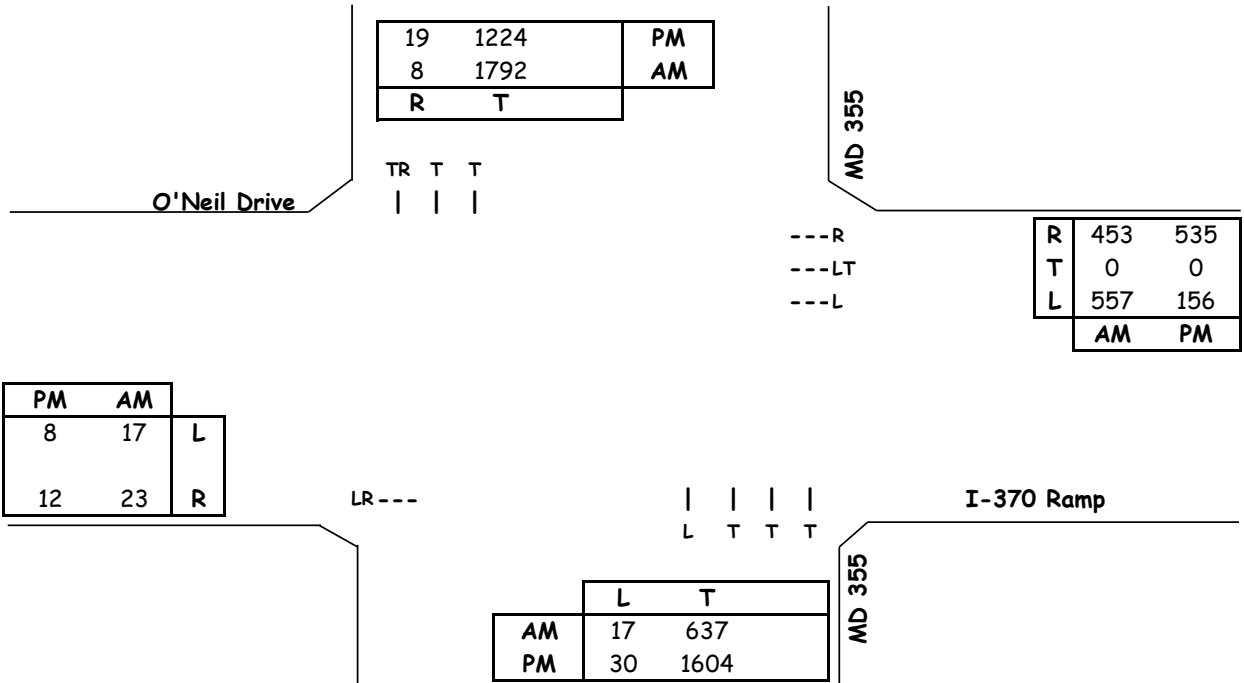
Intersection
4

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: I-370 Ramp
 Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	40	1.00	40				40
WB	453	1.00	453				453
NB	637	0.40	255	0	0.00	0	737
SB	1800	0.40	720	17	1.00	17	
CLV TOTAL=							1230
Level of Service (LOS)=							C

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	20	1.00	20				20
WB	535	1.00	535				535
NB	1604	0.40	642	0	0.00	0	642
SB	1243	0.40	497	30	1.00	30	
CLV TOTAL=							1197
Level of Service (LOS)=							C

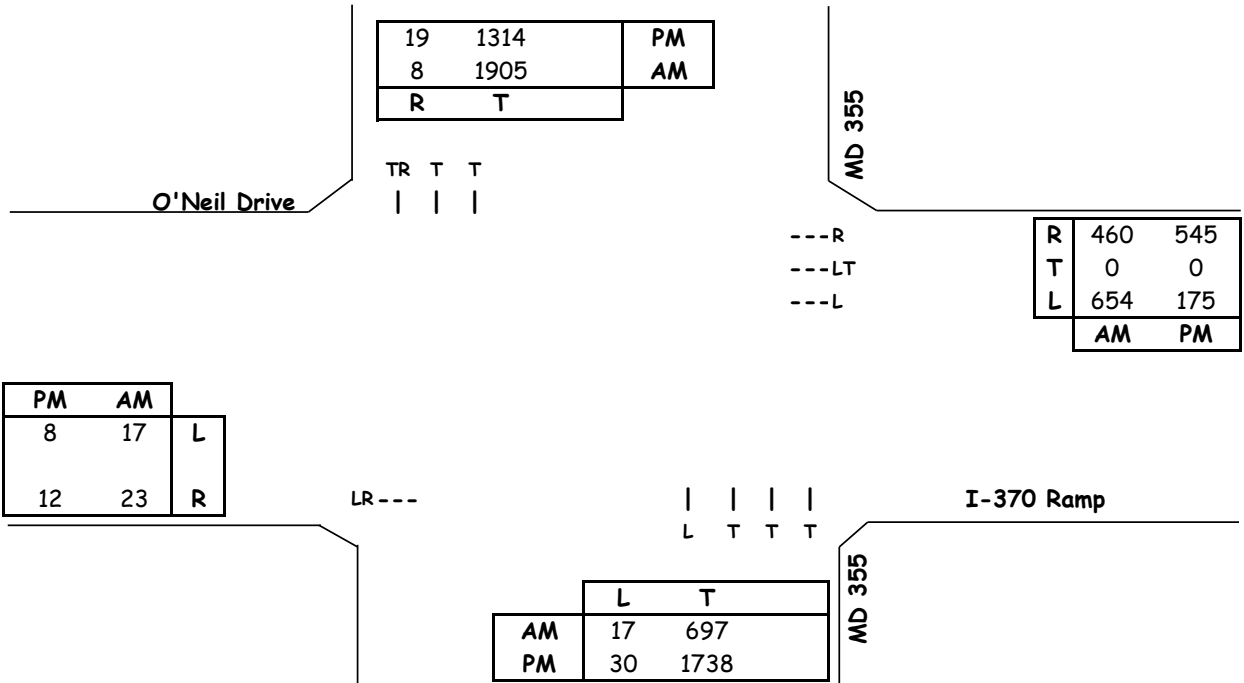
Critical Lane Volume Analysis		MD 355 & I-370 Ramp (Existing Traffic)	Intersection 5
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: I-370 Ramp
 Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	40	1.00	40				40
WB	460	1.00	460				460
NB	697	0.40	279	0	0.00	0	782
SB	1913	0.40	765	17	1.00	17	
CLV TOTAL=							1282
Level of Service (LOS)=							C

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	20	1.00	20				20
WB	545	1.00	545				545
NB	1738	0.40	695	0	0.00	0	695
SB	1333	0.40	533	30	1.00	30	
CLV TOTAL=							1260
Level of Service (LOS)=							C

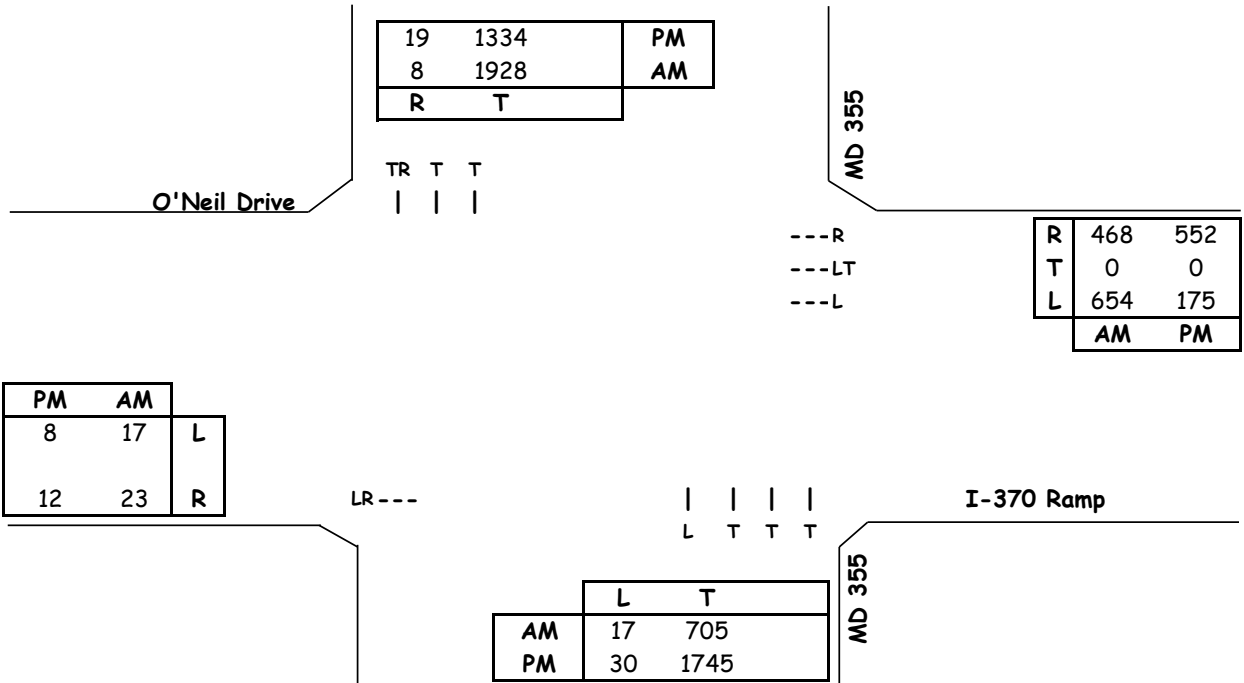
Critical Lane Volume Analysis		MD 355 & I-370 Ramp (Background Traffic)	Intersection 5
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: I-370 Ramp
 Study Period: Total Traffic - Scenario 1 (no BRT)

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	40	1.00	40				40
WB	468	1.00	468				468
NB	705	0.40	282	0	0.00	0	791
SB	1936	0.40	774	17	1.00	17	
CLV TOTAL=							1299
Level of Service (LOS)=							C

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	20	1.00	20				20
WB	552	1.00	552				552
NB	1745	0.40	698	0	0.00	0	698
SB	1353	0.40	541	30	1.00	30	
CLV TOTAL=							1270
Level of Service (LOS)=							C

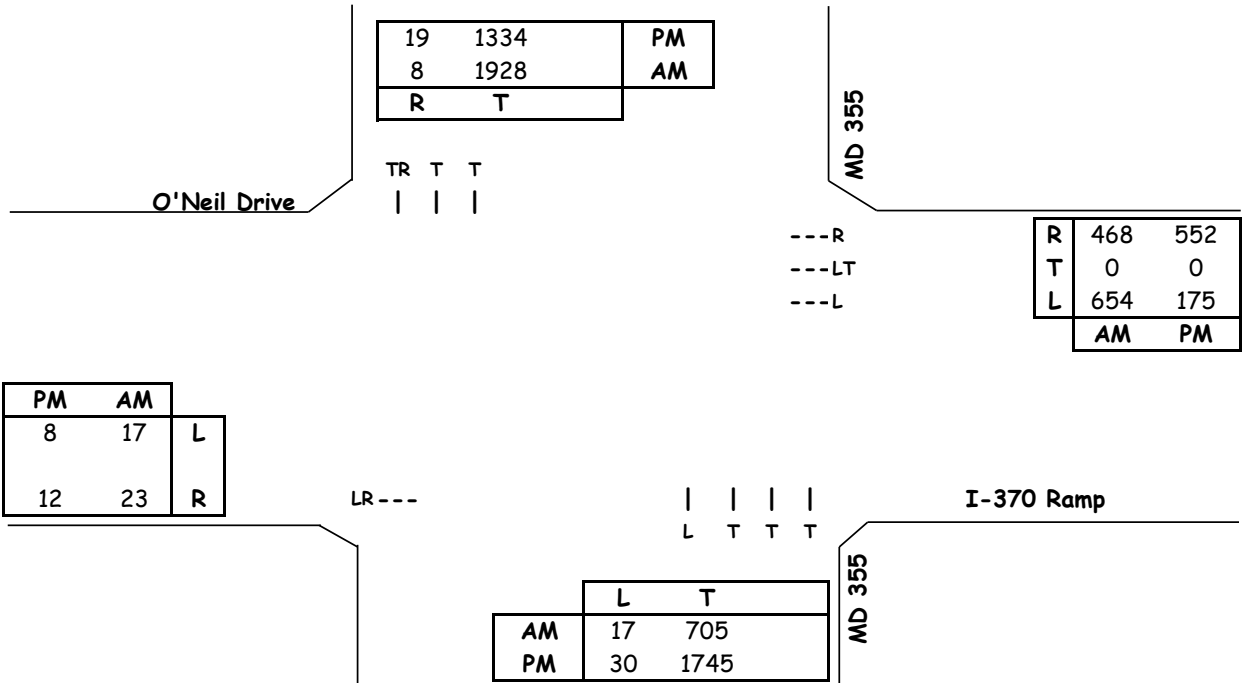
Critical Lane Volume Analysis		Intersection
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	MD 355 & I-370 Ramp (Total Traffic - Scenario 1 (no BRT))	5

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: MD 355
 Minor Street: I-370 Ramp
 Study Period: Total Traffic - Scenario 2 (with BRT)

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	40	1.00	40				40
WB	468	1.00	468				468
NB	705	0.40	282	0	0.00	0	791
SB	1936	0.40	774	17	1.00	17	
CLV TOTAL=							1299
Level of Service (LOS)=							C

PM Peak Hour							
Dir	Through Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	20	1.00	20				20
WB	552	1.00	552				552
NB	1745	0.40	698	0	0.00	0	698
SB	1353	0.40	541	30	1.00	30	
CLV TOTAL=							1270
Level of Service (LOS)=							C

Critical Lane Volume Analysis		MD 355 & I-370 Ramp (Total Traffic - Scenario 2 (with BRT))	Intersection 5
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning			

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: N. Westland Drive
Minor Street: Site Access
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

N. WESTLAND DRIVE

---TL

	AM	PM
T	29	33
L	2	4

adjusted lefts 2.2 4.4

PM	AM	
19	18	T
95	62	R

TR---

N. WESTLAND DRIVE

|
LR

Site Access

	L	R
AM	26	0
PM	59	1

Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		AM CLV
	VOL	x LUF	= Total	VOL	x LUF = Total	
NB	26	1.00	26			26
EB	80	1.00	80	2	1.00 2	82
WB	31	1.00	31			
CLV TOTAL=						108
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		PM CLV
	VOL	x LUF	= Total	VOL	x LUF = Total	
NB	60	1.00	60			60
EB	114	1.00	114	4	1.00 4	118
WB	37	1.00	37			
CLV TOTAL=						178
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**N. Westland Drive &
 Site Access
 (Existing Traffic)**

Intersection
6

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: N. Westland Drive
Minor Street: Site Access
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

N. WESTLAND DRIVE

---TL

	AM	PM
T	29	33
L	5	7

adjusted lefts 5.5 14

PM	AM	
19	18	T
184	101	R

TR---

N. WESTLAND DRIVE

|
LR

Site Access

	L	R
AM	49	2
PM	137	5

Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	51	1.00	51				51
EB	119	1.00	119	5	1.00	5	124
WB	35	1.00	35				
CLV TOTAL=							175
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	142	1.00	142				142
EB	203	1.00	203	7	1.00	7	210
WB	47	1.00	47				
CLV TOTAL=							352
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**N. Westland Drive &
 Site Access
 (Background Traffic)**

Intersection
6

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: N. Westland Drive
Minor Street: Site Access
Study Period: Total Traffic - Scenario 1 (no BRT)

Analyst: Lenhart Traffic Consulting

N. WESTLAND DRIVE

---TL

	AM	PM
T	29	33
L	5	7

adjusted lefts 5.5 14

PM	AM	
19	18	T
184	101	R

TR---

N. WESTLAND DRIVE

|
LR

Site Access

	L	R
AM	49	2
PM	137	5

Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	51	1.00	51				51
EB	119	1.00	119	5	1.00	5	124
WB	35	1.00	35				
CLV TOTAL=							175
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	142	1.00	142				142
EB	203	1.00	203	7	1.00	7	210
WB	47	1.00	47				
CLV TOTAL=							352
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**N. Westland Drive &
 Site Access**
 (Total Traffic - Scenario 1 (no BRT))

Intersection
6

Critical Lane Volume (CLV) Methodology for MDOT SHA

Main Line: N. Westland Drive
Minor Street: Site Access
Study Period: Total Traffic - Scenario 2 (with BRT)

Analyst: Lenhart Traffic Consulting

N. WESTLAND DRIVE

---TL

	AM	PM
T	29	33
L	5	7

adjusted lefts 5.5 7.7

PM	AM	
19	18	T
79	33	R

TR---

N. WESTLAND DRIVE

|
LR

Site Access

	L	R
AM	38	2
PM	122	5

Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		AM CLV
	VOL	x LUF	= Total	VOL	x LUF = Total	
NB	40	1.00	40			40
EB	51	1.00	51	5	1.00 5	56
WB	35	1.00	35			
CLV TOTAL=						96
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		PM CLV
	VOL	x LUF	= Total	VOL	x LUF = Total	
NB	127	1.00	127			127
EB	98	1.00	98	7	1.00 7	105
WB	41	1.00	41			
CLV TOTAL=						232
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**N. Westland Drive &
 Site Access**
 (Total Traffic - Scenario 2 (with BRT))

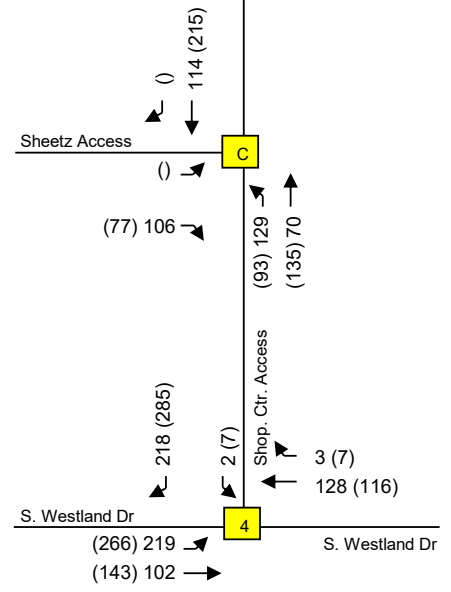
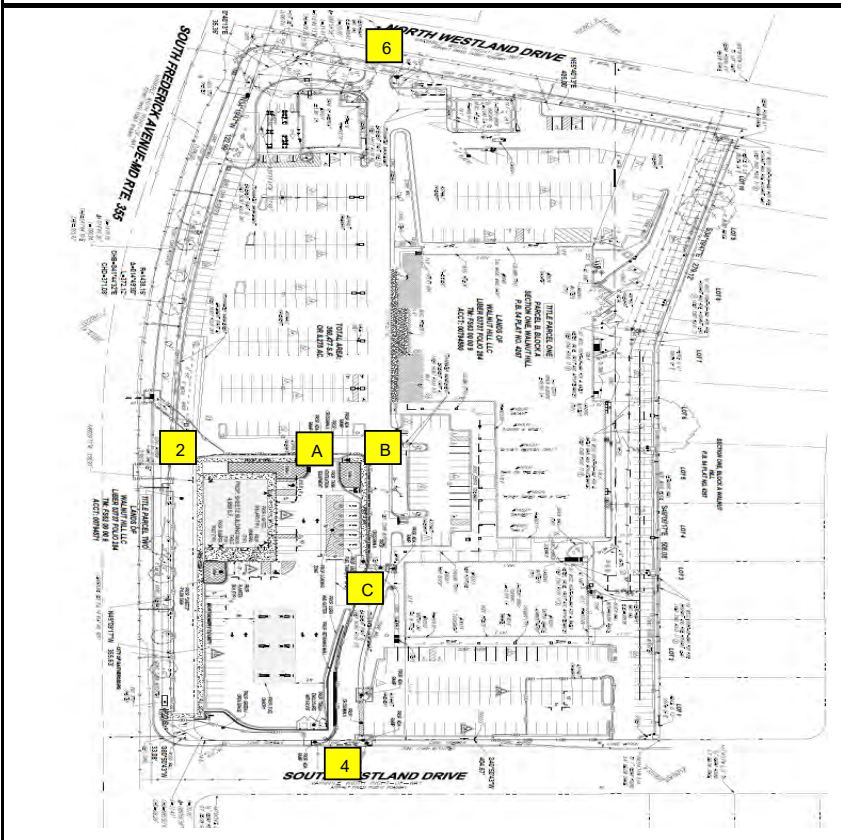
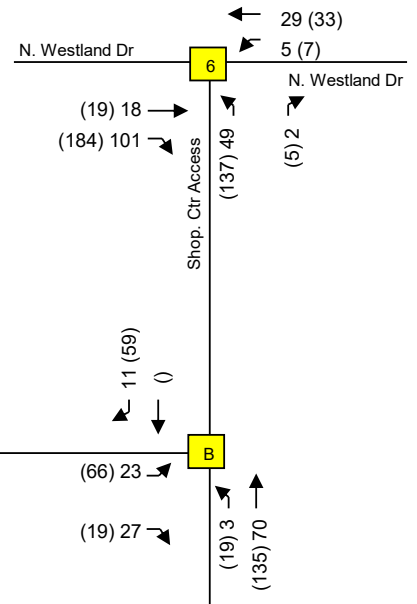
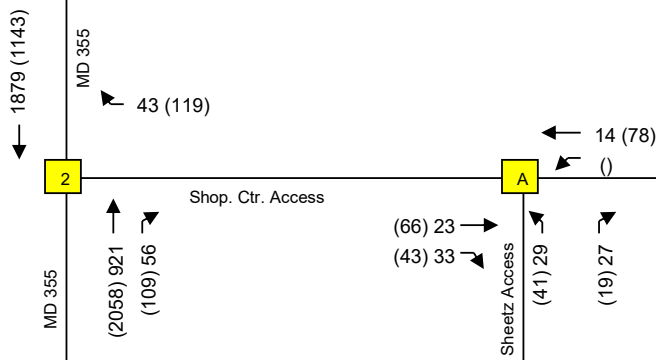
Intersection
6

Appendix D

Internal Circulation

Notes:

1. No trips to the Sheetz are expected to enter or exit the site at Intersection 6.
2. Trips in and out of the shopping center at Intersection 6 are assumed to utilize the parking lot between Intersections 6 and B.
3. It is assumed that 80% of outbound trips from the Sheetz through Intersection 4 will exit the Sheetz at Intersection C and 20% at Intersection A.
4. 75% of inbound shopping center trips at Intersection 4 (not including trips destined for the Sheetz) are expected to utilize parking lot between Intersections 6 and B and the remaining 25% to utilize the parking lot between Intersections 4 and C.



Traffic Impact Analysis

Internal Traffic Volumes
Scenario 1 - No MD 355 BRT

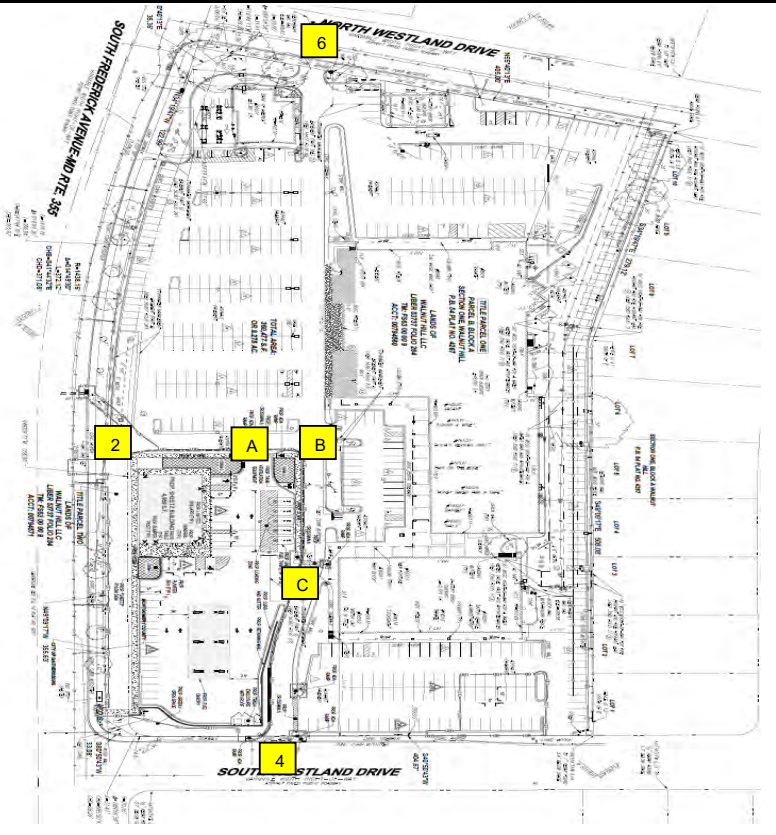
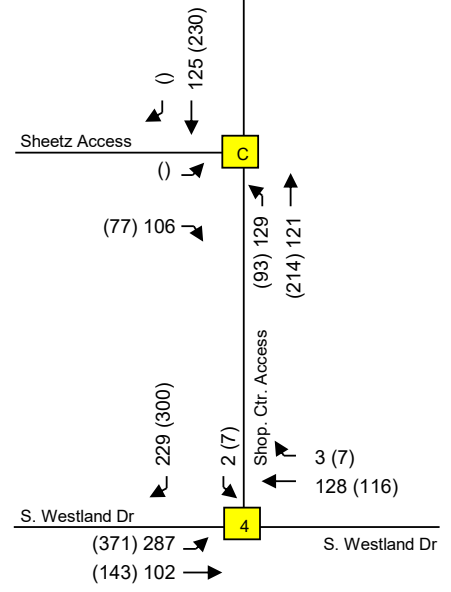
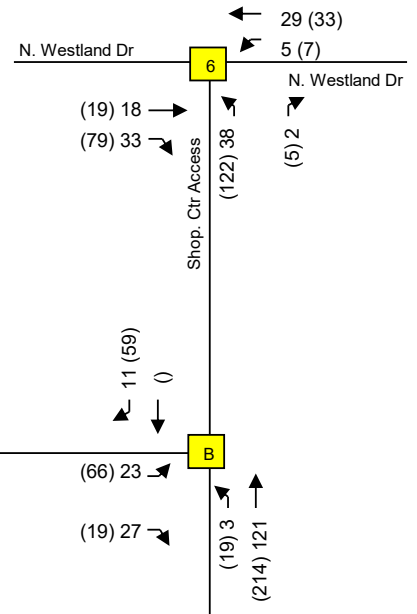
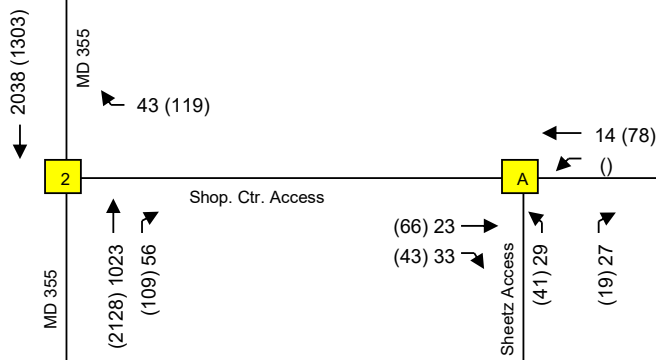
Exhibit
D1

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Notes:

1. No trips to the Sheetz are expected to enter or exit the site at Intersection 6.
2. Trips in and out of the shopping center at Intersection 6 are assumed to utilize the parking lot between Intersections 6 and B.
3. It is assumed that 80% of outbound trips from the Sheetz through Intersection 4 will exit the Sheetz at Intersection C and 20% at Intersection A.
4. 75% of inbound shopping center trips at Intersection 4 (not including trips destined for the Sheetz) are expected to utilize parking lot between Intersections 6 and B and the remaining 25% to utilize the parking lot between Intersections 4 and C.



Traffic Impact Analysis

Internal Traffic Volumes
Scenario 2 - With MD 355 BRT

Exhibit
D2

Lenhart Traffic Consulting, Inc.
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Key: xx = AM Peak Vol's (xx) = PM Peak Vol's