NEW ALBANY
COMMUNITY CONNECTS US

To: Stephen Mayer, Planning Manager

From: Chris Christian, Planner II

Re: Hamlet at Sugar Run Traffic Impact Study Summary

Date: October 25, 2022

A traffic impact study (TIS) was submitted to the city as part of the Hamlet at Sugar Run zoning change application. The city traffic engineer reviewed and approved the results of the study with recommendations. The intent of this memo is to provide a high-level overview of the study results and the recommendations made by the city traffic engineer. The entire study and review memo are attached to this document as Exhibit A.

Background/Process

Prior to performing a traffic impact study, applicants are required to submit a Memorandum of Understanding (MOU) to be reviewed and approved by the city traffic engineer. An MOU is an agreement between an applicant and the city that outlines the terms and data that will be used to complete the traffic impact study. Prior to performing the traffic impact study for this project, the applicant submitted an MOU to the city traffic engineer who reviewed and provided comments that were incorporated into the traffic impact study.

Traffic impact studies are used to determine the impact that a proposed development will have on existing traffic patterns. Dependent upon the result of a study, off site roadway or access improvements may be warranted to accommodate the development traffic, and sometimes identify improvements needed regardless of that development. These studies are more focused on traffic volume capacity and turning movements. Detailed intersection design plans are typically provided at the time of a final development plan in the case of this development proposal.

Traffic Generation

- New traffic data was collected during the school day in September 2022 and used for the study. The 2021 traffic study used data from 2019. In comparison, the traffic volumes generated from the 2022 are lower than the data from the early study. The city traffic engineer states that the lower volumes are a result of the closure of the nearby Discover

facility, employees continuing to work remotely and new roadways/improvements in the area which have impacted traffic flow patterns.
    - The new study assumes that the Discover site will be reused as a general office facility and accounts for it in the results.
- Compared to the 2021 traffic study, the proposed development generates 40% less traffic during the morning commuter peak hour. Morning commuter peak hour is measured between the hours of 7:30am and 8:30am.
- Compared to the 2021 traffic study, the proposed development generates 24% less traffic during the evening commuter peak hour. Evening commuter peak hour is measured between the hours of 5:00pm and 6:00pm.
- The study notes that the proposed development would have its greatest traffic impact during normal commuter peaks as listed above, and a lesser impact during school peak periods. Specifically, the study notes that there is 40% less traffic along State Route 605 during the school afternoon peak times compared to the volumes during the evening commuter peak hour. No additional roadway improvements are warranted nor recommended in the traffic study related to school peak periods and the city traffic engineer concurs with this result.

Roadway Improvements

The study recommends the following left turn lane roadway improvements and the city traffic engineer agrees. These improvements are consistent with the 2021 traffic study however, the length of the turn lanes has been reduced due to the lower site trips.

- Left hand turn lanes are needed on State Route 605 for site access points 3/4 and 5 as shown in the image below. State Route 605 will need to be widened to 3 lanes in order to accomplish these improvements.
- A westbound left turn lane is needed at access point 2 along Central College Road as shown in the image below. The existing pavement will need to be restriped in order to accomplish this improvement.

Figure 2 – Location of the Proposed Development (Yellow), Site Drives, and Study Intersections

City Traffic Engineer Recommendations

- Provide left turn lanes in the locations identified above.
- State Route 605 will need to be widened to 3 lanes in order to accommodate the installation of the left-hand turn lanes.
- Coordination between the city and the applicant is needed regarding the final design at the intersection of State Route 605 and Snider Loop, to address any left-hand turn concerns. Final design of intersections is typically provided at the time of a final development plan application. The city will continue to monitor this intersection to determine if other traffic control measures or design features need to be considered in the future after construction is completed.
- In conjunction with the development, the city will determine the steps for potentially lowering the speed limit to 35 MPH along, State Route 605 between Central College Road and Walton Parkway.

- Although it is not warranted as a result of this development, the city traffic engineer recommends that additional right-of-way be dedicated by the developer on the east side of the Central College/605 intersection in order to accommodate a potential northbound right turn lane onto Central College Road.

401-60-141
October 25, 2022

To: Stephen Mayer
Planning Manager

From: Matt Ferris, P.E., P.S., City Engineer

Re: Review of the Sugar Run Development Traffic Impact Study dated October 13, 2022

By: David L. Samuelson, PE
cc: Ryan Ohly, City of New Albany

The following summarizes the review of the Sugar Run Development Traffic Impact Study (Sugar Run TIS) for the above development.

Overall, we concur with the Sugar Run TIS recommendations. The following provides additional information related to concerns or questions that have previously been raised by the City and residents about this development, several of which are the same items raised for a study of the same development area in 2021, previously referred to as the NMD TIS prepared in mid-2021 (referred to below as the 2021 NMD). Because they essentially address the same issues, the comments below first outline differences between the two studies, followed by comments that still apply to the Sugar Run TIS.

1-Comparison of Non-Site (Background)Traffic Data-

Resident concerns about the age of available traffic data resulted in new traffic data being collected for the Sugar Run TIS, on a school day in September 2022. A comparative review of this 2022 data to the 2019 or earlier data used in the 2021 NMD showed 2022 volumes are generally lower. Reasons for this include the closure of the nearby Discovery facility, area employees working remotely, and new roadways/improvements in the surrounding area which in turn affected traffic flows through this area. The results in the Sugar Run TIS show acceptable delay conditions for background traffic, similar to but slightly improved over the 2021 NMD results.

The Sugar Run TIS also assumes that in the future the Discover facility site will be redeveloped/reused as a general office facility with a size of just over 333,000 gsf. The 2021 NMD had assumed the same general office size plus some residential units, but the residential-related traffic was relatively small. Of that office space traffic, 25 percent was assumed to enter/exit at the driveway opposite the north site driveway for Sugar Run, but was otherwise assumed to be included in general growth at other Study intersections. This was also consistent with the 2021 NMD analysis.

2-Comparison of Sugar Run site traffic to the 2021 NMD traffic-

The Sugar Run TIS shows 210 new trips in the AM peak hour (730-830 AM), and 233 new trips in the PM commuter peak hour (5-6 PM). In comparison, the 2021 NMD had proposed 350 AM and 316 PM peak hour trips. This represents a 40 percent reduction in AM peak hour trips, and a 24 percent reduction in PM peak hour trips. This results in reduced delays compared to results in the 2021 NMD.

Review of the Sugar Run Development Traffic Impact Study-Continued

3-Turn lane warrants/Turn lane lengths-

The Sugar Run TIS, compared to the 2021 NMD, still shows left turn lanes needed at:

- SR 605 at access 3/access 4 (widen SR 605 for the turn lanes),
- SR 605 at access 5/Snider Loop (widen SR 605 for the turn lanes), and
- Westbound Central College at access 2/Discover access (restripe Central College Road).

This is consistent with the 2021 NMD. However, the turn lane lengths in the Sugar Run TIS are shorter due to the lowered site trips.

4-Capacity analysis-

With one exception, intersection delays presented in the Sugar Run TIS show acceptable conditions. The exception is the westbound approach of Snider Loop at SR 605, which is anticipated to operate at LOS E in 2034 PM peak with site development. However, the Sugar Run TIS notes this assumes the approach of Snider Loop functions as a single approach lane. However, the width of that approach can allow for two vehicle lanes on the approach. With that assumption of two approach lanes, the results show acceptable delay conditions. It is recommended a short channelizing line and centerline on that approach be installed to designate a thru/left and a right turn lane. Although we concur with this general conclusion, the geometric design of adding a new driveway opposite Snider Loop raises roadway design concerns, which are outlined further below.

5-SR 605 at Central College-

The Sugar Run TIS noted no improvements are needed at this intersection. The 2021 NMD with higher background and site volumes, though, indicated a northbound right turn lane would be needed. Although we concur with the Sugar Run TIS that no improvements are needed at this intersection, longer term development activity by others (either unanticipated area development or, as an example, development on the Discover site generating higher traffic volumes) may indicate the need for a future northbound right turn lane. Providing additional right of way for a future right turn lane, although not required as part of the Sugar Run development, is recommended. The right of way width for a potential right turn lane by others is discussed further below.

6-School Traffic Issues not related to the Sugar Run Development-

The Sugar Run TIS, similar to the 2021 NMD, notes that the development would have the greatest impacts during normal commuter peak periods, and a lesser impact during school peak periods. Specifically, the Sugar Run TIS notes that PM school peak hour traffic along SR 605 is about 40 percent less than during the commuter PM peak. Further, No additional improvements are identified or recommended in the Sugar Run TIS related to the school peak periods. We concur. The Sugar Run TIS also notes that the City and the New Albany-Plain Local Schools District have been in discussions to further address School peak period traffic concerns. Those improvement options are on-going and are separate from the Sugar Run development.

Review of the Sugar Run Development Traffic Impact Study-Continued

The following were raised in the 2021 NMD, and still apply to the Sugar Run development.

7-Snider loop issue design issues-

The Sugar Run TIS recommends adding a north and south left turn lane on SR 605 at Snider Loop/Access 5. We concur. However, the medians on Snider Loop and Access 5 could result in potential conflicts between left turning vehicles. This represents a safety condition that will need to be addressed through detailed design. As part of detailed design, it is recommended the applicant provide detailed design options to address these left turn movement concerns and included with a Final Development Plan submittal. Further, it is recommended the City continue to monitor this intersection, to determine if other traffic control measures or design features might need to be considered in the future after construction is completed.

8-Speed limit reduction-

For SR 605 between Walton Parkway and Central College Road, the Sugar Run development may be considered to represent a change in character to the roadway, and potentially a reduction in speed limit in conformance with the Ohio Revised Code. In conjunction with development approvals, it is recommended the City pursue steps needed for potentially lowering the speed limit.

9-Widening of SR 605-

Presently, SR 605 is 3 lanes wide at Central College and to the south at Walton Parkway. The proposed development will widen SR 605 to 3 lanes at two driveway locations. The result is that there will be a short 2-lane section of SR 605 remaining between Central College Road and Walton Parkway. It is instead recommended this part of SR 605 be designed as a continuous 3-lane road between Central College Road and Walton Parkway.

10-Cross section of SR 605-

Per the 2020 Strategic Plan, this part of SR 605 is categorized as a Business Park Transitional Roadway. The roadway characteristics of this type of roadway is uncurbed and is recommended to remain uncurbed. This would also be consistent with SR 605 to the north and south. Travel lanes would generally be the typical 12-foot width and middle turn lanes are recommended at 11-foot widths (consistent with the Strategic Plan).

Consistent with the 2021 NMD review, SR 605 right of way along development frontage is recommended to be a minimum 40-foot width each side of centerline (80-foot total), to allow for a 3-lane section, tree lawn and multi-use pathways. This width is also based upon existing right of way width along SR 605 just south of Central College. As noted previously, additional right of way should be considered for a future right turn lane by others, on northbound SR 605 at Central College Road. If provided, this additional right of way is recommended to provide 50-55 feet right of way east of the centerline of SR 605, subject to City approvals, and extending about 400 feet south of the intersection.

Review of the Sugar Run Development Traffic Impact Study-Continued

The following summarizes these study review recommendations for the Sugar Run development.

- Provide left turn lanes at lengths and locations as indicated in the Sugar Run TIS.
- Coordination between City and applicant regarding detailed geometric design of the intersection for SR 605 at Snider Loop/Access 5, to address left turn concerns.
- Continued monitoring by City of the SR 605 at Snider Loop/Access 5 intersection, to determine if other traffic control measures or design features might need to be considered in the future.
- Provide a short center line and channelizing line on the Snider Loop approach to designate two approach lanes (a thru/left lane and a thru/right lane).
- In conjunction with this development, City pursue steps for potentially lowering the speed limit to 35 MPH on SR 605, between Central College Road and Walton Parkway.
- Provide a continuous 3-lane section along SR 605 between Central College Road and Walton Parkway.
- Per the Strategic Plan, meet roadway characteristics for a Business Park Transitional Roadway (80-foot total right of way). Although not required as part of the Sugar Run development, provide additional right of way, subject to City approvals, on SR 605 south of Central College Road, to allow for a potential northbound right turn lane by others (50-55 feet of right of way on east side of SR 605 for the right turn lane).

Sugar Run Development

Traffic Impact Study

Prepared for: NoNA Master Development, LLC

October 13, 2022

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I. Executive Summary

Carpenter Marty Transportation was retained to complete a traffic impact study (TIS) for the proposed mixed-use Sugar Run development located along Central College Road, SR-605 (New Albany-Condit Road), and New Albany Road E. in New Albany, Ohio. The TIS evaluates all of the proposed site access points as well as the signalized intersections of Walton Parkway and Central College Road with SR-605. The development is expected to have an Opening Year of 2024.

The analysis finds the following turn lanes are warranted for the proposed development:

- Central College Road & Discover Access / Site Access 2
  - 125' westbound left turn lane
- SR-605 & Site Access 3 / Site Access 4
  - 175' northbound left turn lane
  - 175' southbound left turn lane
- SR-605 & Snider Loop / Site Access 5
  - 175' northbound left turn lane
  - 175' southbound left turn lane

All turn lanes listed are Build improvements and are inclusive of a 50' diverging taper. Based on the results of the capacity analysis, no additional improvements are required or recommended for the study area. New, updated count data was collected at all off-site study intersections while school was in session to ensure the highest peak hours of the day were evaluated.

II. Purpose of Report & Study Objectives

The purpose of this traffic analysis and report is to document the potential traffic impacts of the proposed mixed-use Sugar Run development located in the southwest and southeast corners of the intersection of Central College Road & SR-605 in New Albany, Ohio. This analysis and report are being required by the City of New Albany as part of the development approval process. A Memorandum of Understanding (MOU) was provided to the City for review. The MOU and comments provided can be found in **Appendix A**.

III. Proposed Development

A. Off-Site Developments

The study area is bounded by Central College Road to the north, SR-605 to the east, and Walton Parkway to the south. The surrounding area includes restaurants and retail development to the west, office buildings to the north and south, and residential development to the east.

B. On-Site Development

Location

The majority of the site is located on the south side of Central College Road and the west side of SR-605. A small portion of the site is located on the east side of SR-605. **Figure 1** shows the location of the proposed site in central Ohio and **Figure 2** shows the study area.

Figure 1 – Location in Central Ohio (New Albany limits outlined in red)

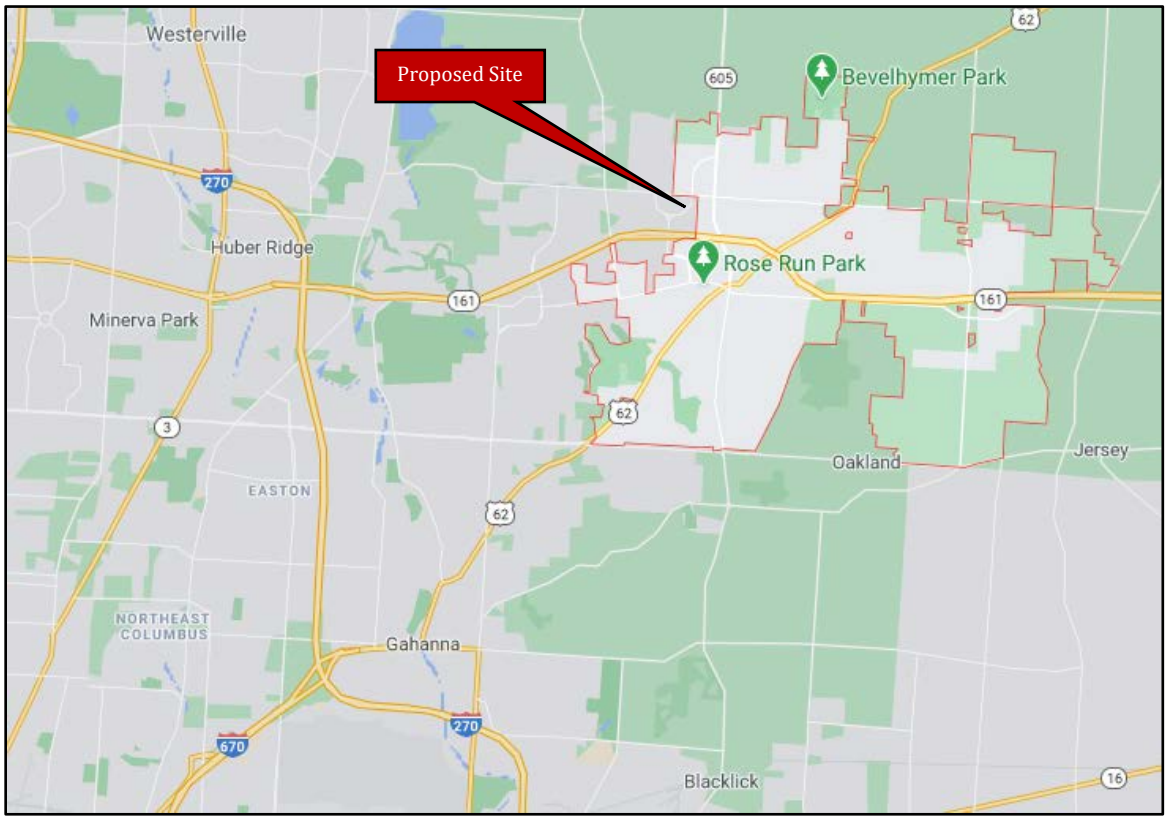


Figure 2 – Location of the Proposed Development (Yellow), Site Drives, and Study Intersections

Land Use & Intensity

The site is currently developed with several single-family homes. The site is proposed to develop as a mixed-use site with the following land uses and sizes:

- 40 multifamily units
- 116 single-family attached homes (townhomes)
- 32 single-family detached homes
- 17,500 SF of office space
- 30,000 SF of mixed retail space

Five access points are proposed for the development:

- One existing right-in, right-out (RIRO) access on New Albany Road E. just south of the intersection with Central College Road (Site Access 1). Note that this access is

contingent upon a cross access agreement between property owners, which is currently in process.
- One full access aligned with the existing Discover Complex Access intersection on Central College Road (Site Access 2)
- Two full access points on SR-605
    - One located between Central College Road and Snider Loop, accessing the development on both sides of SR-605 (Site Access 3/4)
    - One tying into the existing intersection with Snider Loop (Site Access 5)

It should be noted that an additional access to Central College Road is provided via cross access to the existing Taco Bell development. However, site traffic using this access is expected to be negligible, so the access was not included in this TIS.

The site plan is provided in **Appendix A.**

IV. Area Conditions

A. Area of Influence

The study intersections for the proposed development are listed below. Numbers correspond to **Figure 2**.

1. SR-605 & Central College Road
2. SR-605 & Snider Loop / Site Access 5
3. SR-605 & Walton Parkway
4. New Albany Road E. & Site Access 1
5. Central College Road & Site Access 2
6. SR-605 & Site Access 3/Site Access 4

B. Jurisdictions

All access points and study intersections are under City of New Albany jurisdiction with the exception of the New Albany Road E. & Site Access 1 intersection which is under the City of Columbus jurisdiction.

C. Traffic Volumes & Conditions

AM and PM peak hour turning movement counts were collected for the following study intersections in September 2022 while school was in session:

- SR-605 & Central College Road
- SR-605 & Snider Loop / Site Access 5
- SR-605 & Walton Parkway
- New Albany Road E. & Site Access 1

Counts were collected from 7:00–9:00 AM and from 2:00-6:00 PM to ensure the highest volume peak hours were utilized, inclusive of school peak hours. All count data can be found in **Appendix B**.

V. Projected Traffic

A. Background Traffic

For analysis, the Opening Year of the development is 2024 and the Design, or Horizon Year, is 2034. In order to project the count data to the Opening and Horizon Years, linear, annual growth rates from various sources were used. The Mid-Ohio Regional Planning Commission (MORPC) provided annual, linear growth rates for the intersection of SR-605 and Central College Road for a previously completed traffic access study. All other growth rates were derived from a City of New Albany Transportation study completed by Carpenter Marty Transportation and were calculated based on the comparison of 2020 ADT count data to 2050 MORPC ADT data provided by the City of New Albany. **Table 1** below shows the growth rates utilized in the TIS.

Table 1 – Growth Rates

Location	Linear Annual Growth Rate
New Albany Road E. e/o Walton Parkway	1.3%
Central College Road e/o SR-605	1.3%
Central College Road w/o SR-605	1.1%
SR-605 n/o Central College Road	1.7%
SR-605 s/o Central College Road	1.3%
Walton Parkway e/o SR-605	3.0%
Walton Parkway w/o SR-605	3.0%
SR-605 n/o Walton Parkway	1.2%
SR-605 s/o Walton Parkway	1.8%

Growth rates were applied to the count data to develop Background traffic for the Opening and Horizon Years. All growth rate data can be found in **Appendix B.**

B. Site Traffic

Trip Generation

Trips for the proposed site development were generated using ITE practices and the *Trip Generation Manual*, 11th edition, via the OTISS program[1]. Land use codes *(LUC) 220 – Multifamily Housing (Low-Rise), 215 – Single-Family Attached Housing, 210 – Single-Family Detached Housing, 710 – General Office Building,* and *822 – Strip Retail Plaza (<40k)* were used to generate trips for the proposed development. ITE recommended internal capture and pass-by rates were applied. **Table 2** shows a summary of the trip generation for the proposed development. The full trip generation details can be found in **Appendix C.**

[1] Online Traffic Impact Study Software developed by ITE and Transoft Solutions.

Table 2 – Proposed Sugar Run Site Trip Generation Summary

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
220 – Multifamily Housing (Low-Rise)	40 Dwelling Units	8	27	15	10
Internal		0	0	2	1
Pass-By		0	0	0	0
Non-Pass-By		8	27	13	9
215 – Single-Family Attached Housing	116 Dwelling Units	17	38	37	28
Internal		0	0	6	3
Pass-By		0	0	0	0
Non-Pass-By		17	38	31	25
210 – Single-Family Detached Housing	32 Dwelling Units	7	20	21	13
Internal		0	0	3	2
Pass-By		0	0	0	0
Non-Pass-By		7	20	18	11
710 – General Office Building	17,500 SF	33	4	7	32
Internal		1	1	2	7
Pass-By		0	0	0	0
Non-Pass-By		32	3	5	27
822 – Strip Retail Plaza (<40k)	30,000 SF	36	24	85	85
Internal		1	1	13	13
Pass-By		0	0	24	24
Non-Pass-By		35	23	48	48
TOTAL		**101**	**113**	**165**	**168**
Internal		**2**	**2**	**26**	**26**
Pass-By		**0**	**0**	**24**	**24**
Non-Pass-By		**99**	**111**	**115**	**118**

Site Access 2 for the proposed development is aligned with an access to the existing Discover Complex office park on the north side of Central College Road. Trips were generated for this development and applied to the access assuming the development is open and operational. It is our understanding that the Discover Complex building is mostly unused, and the access is currently closed. However, trips were still generated and applied to the access to produce conservative results. The City of New Albany has indicated that the Discover Complex is expected to be redeveloped in the future which will require its own traffic impact study. *LUC 710 – General Office Building* was used to generate trips for the development. It was assumed that 25% of the Discover Complex office building traffic utilizes the Central College Road access opposite of Site Access 2. It should also be noted that trips for this development were only applied to the turning movements of the access point to represent an access opposing Site Access 2.

Table 3 below summarizes the trip generation for the above-described Discover Complex. Existing development trip generation details can be found in **Appendix C.**

Table 3 – Background Discover Complex Trip Generation Summary

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
710 – General Office Building	333,200 SF	292	48	57	300

Discover Complex traffic was added to Background traffic to produce No Build traffic. Site traffic was distributed to/from the site based on count data, existing traffic patterns in the area, proximity to other land uses and major roadways/state routes, and engineering judgment. Proposed Sugar Run site traffic was added to the No Build traffic to produce Build traffic for the Opening and Horizon Years. The full volume calculations can be found in **Appendix D.**

VI. Traffic Analysis

A. Turn Lane Warrant Analysis

Turn lane warrant analysis was conducted at all unsignalized intersections using standard ODOT turn lane warrant graphs. If a turn lane was warranted in any particular scenario, the length was calculated using methodologies in the ODOT Location and Design (L&D) Manual and the turn lane was included in the capacity analysis for Build scenarios, as described further in this report. Turn lane lengths are based on the posted speed of each roadway within the study area. Said posted speeds are described below.

- SR-605
  - 45 MPH north of Walton Parkway
  - 35 MPH south of Walton Parkway
- Central College Road
  - 35 MPH west of SR-605
  - 45 MPH east of SR-605
- New Albany Road E.
  - 35 MPH

B. Capacity Analysis

The HCM 6th Edition module of Synchro Version 11 software was used to analyze capacity at all study intersections. Level of service (LOS) of D and E are typical for urbanized areas with high volumes of traffic where LOS of A, B, and C are more typical for lower volume, less dense areas. A minimum LOS of D for the overall intersection/approaches and LOS E for each individual movement during peak traffic hours is considered acceptable at each intersection based on both City of New Albany and City of Columbus criteria. If an intersection fell below these criteria, mitigation strategies were developed to bring each movement or intersection back to an acceptable LOS. **Table 4** below summarizes LOS/delay criteria for unsignalized and signalized intersections.

Table 4 – LOS Criteria

LOS	Signalized Intersection Delay (sec)	Unsignalized Intersection Delay (sec)
A	≤ 10	≤ 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

VII. Results

A. Turn Lane Warrant Analysis

The below list summarizes the turn lanes which meet warrants at the various unsignalized study intersections. All turn lane lengths are inclusive of a 50' diverging taper. The full turn lane warrant analysis can be found in **Appendix E.**

- Central College Road & Discover Access / Site Access 2
  - 125' westbound left turn lane
- SR-605 & Site Access 3 / Site Access 4
  - 175' northbound left turn lane
  - 175' southbound left turn lane
- SR-605 & Snider Loop / Site Access 5
  - 175' northbound left turn lane
  - 175' southbound left turn lane

B. Capacity Analysis

Results of the capacity analysis can be seen in **Table 5**. Baseline capacity analysis utilizes planning-level signal timings and assumes all warranted turn lanes are installed. The full capacity analysis can be found in **Appendix F.**

Table 5 – Baseline Capacity Analysis Summary

Intersection*	Approach or Movement	Opening Year				Horizon Year			
		AM No Build	AM Build	PM No Build	PM Build	AM No Build	AM Build	PM No Build	PM Build
(1) SR-605 & Central College Rd **Signalized**	EB	C/27.6	C/27.5	C/34.8	D/35.9	C/27.9	C/28.1	D/38.4	D/38.6
	WB	C/24.4	C/24.8	C/31.2	C/31.6	C/25.1	C/25.9	C/32.0	C/32.0
	NB	B/19.2	B/19.9	A/6.9	A/7.5	C/20.6	C/21.3	A/9.2	B/10.6
	SB	C/21.0	C/21.2	B/18.9	B/19.0	C/22.5	C/22.6	B/19.9	C/20.3
	TOTAL	**C/22.7**	**C/23.0**	**C/21.0**	**C/21.6**	**C/23.7**	**C/24.1**	**C/22.9**	**C/23.6**
(2) SR-605 & Snider Loop / Site Access 5 **Unsignalized**	EB	---	C/18.6	---	C/22.2	---	C/21.1	---	D/26.6
	WB	C/19.5	D/25.9	C/21.8	D/30.1	C/22.4	D/31.0	D/26.0	E/37.5
	NBL	---	A/8.8	---	A/8.6	---	A/9.0	---	A/8.8
	SBL	A/8.2	A/8.2	A/8.9	A/9.0	A/8.3	A/8.4	A/9.2	A/9.3
(3) SR-605 & Walton Pkwy **Signalized**	EB	D/38.0	D/38.0	D/35.7	D/35.2	D/37.4	D/37.3	C/33.1	C/32.7
	WB	C/34.4	C/34.5	D/38.7	D/38.4	C/31.7	C/31.8	D/37.8	D/37.9
	NB	A/7.9	A/8.1	A/7.2	A/7.7	B/11.4	B/11.8	B/10.3	B/11.0
	SB	A/7.8	A/8.1	A/1.0	A/1.1	B/11.0	B/11.6	A/1.5	A/1.8
	TOTAL	**B/16.1**	**B/16.0**	**B/14.7**	**B/14.5**	**B/18.6**	**B/18.8**	**B/16.4**	**B/16.3**
(4) New Albany Rd E. & Site Access 1 **Unsignalized**	WBR	A/8.8	A/8.9	A/9.4	A/9.5	A/8.9	A/9.0	A/9.5	A/9.6
(5) Central College Rd & Discover Access / Site Access 2 **Unsignalized**	EBL	A/8.0	A/8.0	A/8.0	A/8.0	A/8.1	A/8.1	A/8.1	A/8.1
	WBL	---	A/7.8	---	A/8.2	---	A/7.8	---	A/8.3
	NB	---	B/12.3	---	C/15.3	---	B/12.6	---	C/16.5
	SB	B/10.6	B/12.1	B/11.6	B/13.3	B/10.9	B/12.5	A/9.4	B/14.2
(6) SR-605 & Site Access 3 / Site Access 4	EB	---	C/15.9	---	C/21.5	---	C/17.9	---	D/26.3
	WB	---	C/18.4	---	C/24.7	---	C/21.4	---	D/30.2
	NBL	---	A/8.8	---	A/8.7	---	A/9.0	---	A/8.9
	SBL	---	A/8.2	---	A/8.9	---	A/8.3	---	A/9.2

Numbers correspond to **Figure 2*

As seen above in **Table 5**, all intersections operate with acceptable LOS/delay with the exception of the westbound approach of the SR-605 & Snider Loop / Site Access 5 intersection in the Horizon Year PM Build scenario only. However, it should be noted that the width of the westbound approach of the intersection varies from roughly 26' to 30'. Thus, it is expected that the single-lane approach operates as a de facto two-lane approach in real-world conditions, separating left and right turning vehicles. Additionally, the volume to capacity (V/C) ratio for the approach is 0.136, well under 1.0, and the calculated, 95th percentile queue length is 0.5 vehicles. Thus, this result is acceptable, and no mitigation is necessary.

VIII. Recommendations and Conclusions

Based on the results of the turn lane warrant analysis, the following turn lane installations are recommended as a part of the proposed development. All turn lanes are inclusive of 50' diverging tapers.

- Central College Road & Discover Access / Site Access 2
  - 125' westbound left turn lane
- SR-605 & Site Access 3 / Site Access 4
  - 175' northbound left turn lane
  - 175' southbound left turn lane
- SR-605 & Snider Loop / Site Access 5

- 175' northbound left turn lane
- 175' southbound left turn lane

The above listed improvements are triggered by the proposed development traffic and are recommended as Build improvements. It should be noted that there are ongoing discussions between the developer and the City of New Albany regarding a change of the roadway classification of SR-605 and a potential reduction in speed limit due to the number of existing and proposed site development access points. Reducing the speed limit and design speed of the roadway would reduce the required lengths of the warranted turn lanes described above. It is recommended that the required turn lane lengths be reevaluated if a speed limit reduction is implemented.

Based on the results of the capacity analysis, no additional improvements are required and thus, none are recommended.

Concerns have been expressed regarding the proposed development and potential impacts on traffic during school peak hours. This occurs for a 15-20 minute period in the early afternoon south along SR-605 near Chatham Greene Drive (approximately ¾ miles south of the proposed development) and into the downtown area. The developer has agreed to work with the City of New Albany on potential solutions to these existing issues.

However, it should be noted that the proposed development is not expected to add significant school peak hour traffic to the surrounding area and the majority of site generated traffic will be expected during typical roadway AM and PM peak hours. School peak traffic volumes typically occur over a period of 15-20 minutes in both the morning and early afternoon hours versus a disbursement of traffic over an entire peak hour, which results in a lower peak hour factor.

The count data collected for this TIS includes both the typical AM and PM Peak hours of the day along with the AM and PM Peak hours of school traffic. The TIS herein evaluates the highest volume AM peak hour and highest volume PM peak hour of each intersection in the study area. The AM peak hour occurs during both the school peak and overall morning peak. The PM peak hour occurs approximately between 4:45 PM and 5:45 PM and the school PM Peak hour occurs approximately from 3:15 PM to 4:15 PM.

Comparison of the PM Peak hour to the school PM peak hour shows traffic volumes are approximately 40% lower during the school PM Peak hour compared to the overall PM Peak hour. Due to the lower peak hour factor for the school PM peak hour, most of the traffic volumes occur over a 15-20 minute period, and the volumes are significantly lower for the rest of the hour.

The analysis herein evaluates the worst-case conditions for both the AM and PM Peaks, and proposed development impacts to the school 15-20 minute peak are expected to be negligible. About 63% of the PM site trips are related to the office and retail portion of the development, which are not expected to impact the school PM peak hour.

It is our understanding that there are ongoing discussions between the City of New Albany and the school district to determine improvements to the school peak issue. Improvements are still to be determined, but mitigation for the school peak traffic is required with or without the proposed development.

IX. Appendices

Appendix A – MOU & Site Plan
Appendix B – Count Data and Growth Rate Data
Appendix C – Trip Generation
Appendix D – Volume Calculations
Appendix E – Turn Lane Warrant Analysis
Appendix F – Capacity Analysis

Appendix A
MOU & Site Plan

Appendix A

CARPENTER MARTY transportation

Traffic Study Memorandum of Understanding

RE: Sugar Run New Albany Traffic Impact Study
To: City of New Albany
From: Carpenter Marty Transportation
Date: October 3, 2022

Carpenter Marty Transportation was retained to complete a traffic impact study for the proposed Sugar Run development located in the southwest and southeast quadrants of SR-605 & Central College Road in New Albany. The development is proposed to be mixed-use residential and commercial.

The following access points are proposed:

- Cross access connection to existing right-in, right-out access on New Albany Road E.
- Full access to Central College Road aligning with the former Discover building full access
- Full access to SR-605 shared by the development on both sides of SR-605
- Full access to SR-605 aligning with Snider Loop

A draft concept plan showing the proposed development and access points is provided in the **Attachment**.

Trips for the proposed site were generated based on Institute of Transportation Engineers (ITE) practices and the Trip Generation Manual, 11th edition. Land use codes (LUC) *220 – Multifamily Housing (Low-Rise) – Not Close to Rail Transit, 215 – Single-Family Detached Housing, 210 – Single-Family Detached Housing, 710 – General Office Building,* and *822 – Strip Retail Plaza (<40k)* were utilized to generate trips for the proposed development. ITE recommended internal capture and pass-by reductions were applied. **Table 1** shows the trip generation of the expected entering/exiting trips for the AM and PM peaks for the entire development. The ITE trip generation outputs can be found in the **Attachment**.

Table 1 - Site Trip Generation Summary

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
220 – Multifamily Housing (Low-Rise) – Not Close to Rail Transit	40 Dwelling Units	**8**	**27**	**15**	**10**
Internal		0	0	2	1
Non-Pass-By		8	27	13	9
Pass-By		0	0	0	0
215 – Single-Family Attached Housing	116 Dwelling Units	**17**	**38**	**37**	**28**
Internal		0	0	6	3
Non-Pass-By		17	38	31	25
Pass-By		0	0	0	0
210 – Single-Family Detached Housing	32 Dwelling Units	**7**	**20**	**21**	**13**
Internal		0	0	3	2
Non-Pass-By		7	20	18	11
Pass-By		0	0	0	0
710 – General Office Building	17.5k SF	**33**	**4**	**7**	**32**
Internal		1	1	2	7
Non-Pass-By		32	3	5	27
Pass-By		0	0	0	0
710 – Strip Retail Plaza (<40k)	30k SF	**36**	**24**	**85**	**85**
Internal		1	1	13	13
Non-Pass-By		35	23	48	48
Pass-By		0	0	24	24
TOTAL		**101**	**113**	**165**	**168**
Internal		**2**	**2**	**26**	**26**
Non-Pass-By		**99**	**111**	**115**	**118**
Pass-By		**0**	**0**	**24**	**24**

Table 2 summarizes the recommended traffic study scope for the proposed development. The proposed scope is derived from the previous traffic impact study of this property.

Table 2 – Traffic Study Scope

Data Collection	Obtain peak hour count data from 7-9 AM and 2-6 PM at the following intersections while school is in session: 1) SR-605 & Central College Road 2) Existing RIRO access point to New Albany Road E. 3) SR-605 & Snider Loop 4) SR-605 & Walton Parkway
Analysis	Generate trips for the proposed development using ITE land use codes and the OTISS program. Assign traffic to the proposed site access points using a distribution determined from count data, area knowledge/travel patterns, previously completed traffic studies, and engineering judgment. Trip generation is provided with this MOU for preliminary review.
Analysis	Develop Opening Day (2024) and Horizon Year (2034) traffic plates for Build, No Build, AM, and PM Peaks based on growth rates that will be obtained from MORPC, calculated using historic data. Provide volume calculations and growth rates to the City of New Albany for preliminary review and approval.
Analysis	Perform turn lane warrant analyses at all unsignalized study intersections based on ODOT criteria and standard ODOT turn lane warrant graphs. Design lengths for any turn lanes which meet warrants. Calculate required turn lane lengths for existing turn lanes, if necessary.
Analysis	Use Synchro 11 software to perform capacity analysis the intersection at the following intersections: 1) SR-605 & Central College Road 2) New Albany Road E. & RIRO Access 3) Central College Road & Full Access 4) SR-605 & Shared Full Access East & West 5) SR-605 & Snider Loop / Full Access 6) SR-605 & Walton Parkway If acceptable LOS is not obtained under Build or No Build conditions, determine what improvements are necessary to obtain acceptable LOS.
Report	Develop a report that documents what is necessary to satisfy the City of New Albany which generally includes analysis, results, conclusions, and recommendations. Coordination with the City of Columbus on the New Albany Road E. & RIRO Access intersection will be conducted.

If you have any questions or comments, please contact me at 614-656-2421 or dlaurent@cmtran.com.

Sincerely,

Drew Laurent, AICP
Transportation Planner
Carpenter Marty Transportation

October 3, 2022

RE: Disposition of Comments for the Sugar Run New Albany TIS MOU submittal dated 9/2/22

The Sugar Run New Albany TIS MOU was submitted on September 2, 2022. TE.P. Farris, on the behalf of the City of New Albany, provided comments by September 7, 2022. The comments are provided below, followed by the Carpenter Marty Transportation (CM) response in red.

1) Please include the study of the intersection of SR 605 at Walton Parkway, which had also been studied in the previous TIS.
   CM Response: Complied.
2) The New Albany Road E. and RIRO Access is within City of Columbus jurisdiction. As with a previous TIS for this site, coordination with City of Columbus will be needed on review of that access location, and those review comments provided to the City of New Albany as part of a TIS.
   CM Response: Will comply.
3) This TIS may have improvement recommendations and road improvement issues similar to those identified in a previous TIS for this site. This may include but not be limited to addressing geometric design issues/constraints of improvements that had been identified in the previous TIS.
   CM Response: Noted.

SITE DATA

Total Acreage	33 ac
Developed Land	24.48 ac (75%)
Open Space	8.52 ac (25%)

DEVELOPMENT DATA

Residential Units	~ 188 units
Multi-Family	~ 40 units
Townhomes	~ 116 units
Single Family	~ 32 units
Density	~ 5.7 du/ac
Total Commercial	~ 47,500 SF
Residential to Commercial Ratio	1 du/252 SF
Traditional Stormwater	~ 1.5 ac

SUGAR RUN MASTER PLAN

22 AUGUST 2022

CENTRAL COLLEGE ROAD

NEW ALBANY ROAD EAST

NEW ALBANY CONDIT ROAD

TRANSITION ZONE

TRANSITION ZONE

TRANSITION ZONE

SUBAREA 1
~5 ACRES

SUBAREA 2
~10.5 ACRES

SUBAREA 3
~5.25 ACRES

SUBAREA 4
4.4 ACRES

SUBAREA 4
~1.35 ACRES

SUBAREA 5
7.4 ACRES

0' 30' 60' 120'

SUGAR RUN SUBAREA PLAN

22 AUGUST 2022

Appendix B
Count Data & Growth Rate Data

Appendix B

CARPENTER MARTY transportation

New Albany Road E & RIRO Access - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

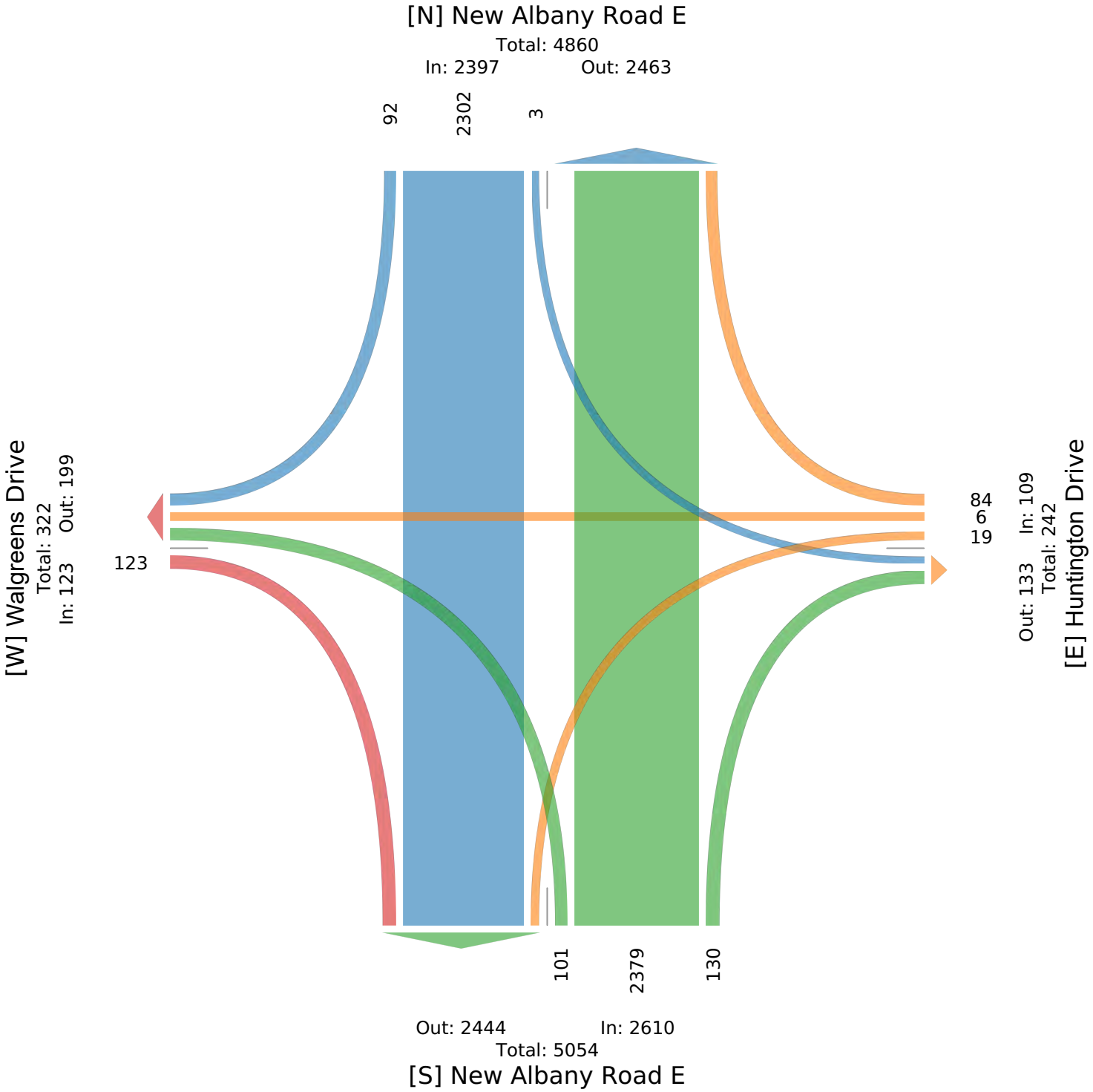
Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993487, Location: 40.097524, -82.817567

Leg	Walgreens Drive					Huntington Drive					New Albany Road E					New Albany Road E					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2022-09-27 7:00AM	0	0	0	0	**0**	0	0	0	0	**0**	0	86	0	0	**86**	0	111	0	0	**111**	**197**
7:15AM	0	0	1	0	**1**	1	0	1	0	**2**	0	81	1	0	**82**	0	139	0	0	**139**	**224**
7:30AM	0	0	4	0	**4**	1	0	1	0	**2**	0	81	2	0	**83**	0	155	3	0	**158**	**247**
7:45AM	0	0	0	0	**0**	0	0	2	0	**2**	1	101	2	0	**104**	0	133	1	0	**134**	**240**
Hourly Total	0	0	5	0	**5**	2	0	4	0	**6**	1	349	5	0	**355**	0	538	4	0	**542**	**908**
8:00AM	0	0	2	0	**2**	1	0	0	0	**1**	1	77	0	0	**78**	0	117	3	0	**120**	**201**
8:15AM	0	0	2	0	**2**	0	0	1	0	**1**	2	75	3	0	**80**	0	128	1	0	**129**	**212**
8:30AM	0	0	2	0	**2**	0	0	2	0	**2**	2	98	4	0	**104**	0	78	3	0	**81**	**189**
8:45AM	0	0	3	0	**3**	0	0	2	0	**2**	2	83	3	0	**88**	1	92	0	0	**93**	**186**
Hourly Total	0	0	9	0	**9**	1	0	5	0	**6**	7	333	10	0	**350**	1	415	7	0	**423**	**788**
2:00PM	0	0	6	0	**6**	1	0	3	0	**4**	4	57	6	0	**67**	0	59	5	0	**64**	**141**
2:15PM	0	0	8	0	**8**	0	1	4	0	**5**	7	100	5	0	**112**	0	65	3	0	**68**	**193**
2:30PM	0	0	10	0	**10**	3	0	8	0	**11**	3	86	7	0	**96**	1	74	4	0	**79**	**196**
2:45PM	0	0	4	0	**4**	0	0	1	0	**1**	4	80	4	0	**88**	0	78	4	0	**82**	**175**
Hourly Total	0	0	28	0	**28**	4	1	16	0	**21**	18	323	22	0	**363**	1	276	16	0	**293**	**705**
3:00PM	0	0	5	0	**5**	4	2	5	0	**11**	6	89	12	0	**107**	0	88	6	0	**94**	**217**
3:15PM	0	0	11	0	**11**	0	0	3	0	**3**	4	102	9	0	**115**	0	77	10	0	**87**	**216**
3:30PM	0	0	5	0	**5**	0	0	11	0	**11**	6	102	8	0	**116**	0	109	6	0	**115**	**247**
3:45PM	0	0	5	0	**5**	2	0	7	0	**9**	9	117	4	0	**130**	0	72	5	0	**77**	**221**
Hourly Total	0	0	26	0	**26**	6	2	26	0	**34**	25	410	33	0	**468**	0	346	27	0	**373**	**901**
4:00PM	0	0	6	0	**6**	1	0	4	0	**5**	4	118	9	0	**131**	0	88	4	0	**92**	**234**
4:15PM	0	0	4	0	**4**	1	0	0	0	**1**	11	103	5	0	**119**	0	79	3	0	**82**	**206**
4:30PM	0	0	5	0	**5**	0	0	7	0	**7**	3	96	8	0	**107**	0	98	3	0	**101**	**220**
4:45PM	0	0	9	0	**9**	2	2	3	0	**7**	9	97	11	0	**117**	1	76	3	0	**80**	**213**
Hourly Total	0	0	24	0	**24**	4	2	14	0	**20**	27	414	33	0	**474**	1	341	13	0	**355**	**873**
5:00PM	0	0	9	0	**9**	0	0	7	0	**7**	7	117	6	0	**130**	0	113	1	0	**114**	**260**
5:15PM	0	0	7	0	**7**	0	0	5	0	**5**	4	134	7	0	**145**	0	83	10	0	**93**	**250**
5:30PM	0	0	8	0	**8**	1	1	3	0	**5**	4	139	7	0	**150**	0	103	6	0	**109**	**272**
5:45PM	0	0	7	0	**7**	1	0	4	0	**5**	8	160	7	0	**175**	0	87	8	0	**95**	**282**
Hourly Total	0	0	31	0	**31**	2	1	19	0	**22**	23	550	27	0	**600**	0	386	25	0	**411**	**1064**
Total	0	0	123	0	**123**	19	6	84	0	**109**	101	2379	130	0	**2610**	3	2302	92	0	**2397**	**5239**
% Approach	0%	0%	100%	0%	**-**	17.4%	5.5%	77.1%	0%	**-**	3.9%	91.1%	5.0%	0%	**-**	0.1%	96.0%	3.8%	0%	**-**	-
% Total	0%	0%	2.3%	0%	**2.3%**	0.4%	0.1%	1.6%	0%	**2.1%**	1.9%	45.4%	2.5%	0%	**49.8%**	0.1%	43.9%	1.8%	0%	**45.8%**	-
Lights	0	0	121	0	**121**	19	6	84	0	**109**	101	2312	127	0	**2540**	3	2246	91	0	**2340**	5110
% Lights	0%	0%	98.4%	0%	**98.4%**	100%	100%	100%	0%	**100%**	100%	97.2%	97.7%	0%	**97.3%**	100%	97.6%	98.9%	0%	**97.6%**	97.5%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	10	0	0	**10**	0	10	0	0	**10**	20
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.4%	0%	0%	**0.4%**	0%	0.4%	0%	0%	**0.4%**	0.4%
Buses and Single-Unit Trucks	0	0	2	0	**2**	0	0	0	0	**0**	0	57	3	0	**60**	0	46	1	0	**47**	109
% Buses and Single-Unit Trucks	0%	0%	1.6%	0%	**1.6%**	0%	0%	0%	0%	**0%**	0%	2.4%	2.3%	0%	**2.3%**	0%	2.0%	1.1%	0%	**2.0%**	2.1%

*L: Left, R: Right, T: Thru, U: U-Turn

New Albany Road E & RIRO Access - TMC
Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993487, Location: 40.097524, -82.817567

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



New Albany Road E & RIRO Access - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

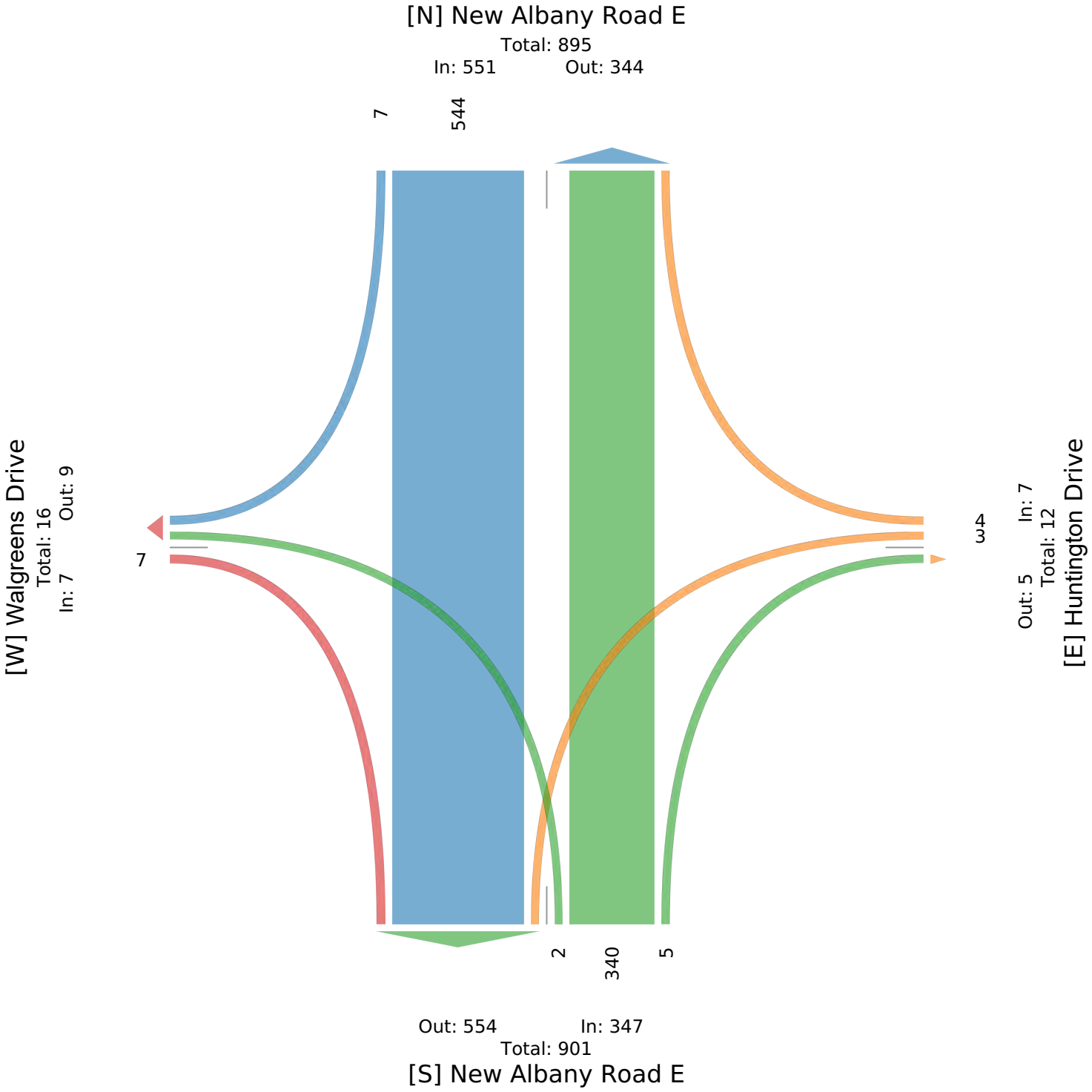
Tue Sep 27, 2022
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993487, Location: 40.097524, -82.817567

Leg	Walgreens Drive					Huntington Drive					New Albany Road E					New Albany Road E					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2022-09-27 7:15AM	0	0	1	0	**1**	1	0	1	0	**2**	0	81	1	0	**82**	0	139	0	0	**139**	**224**
7:30AM	0	0	4	0	**4**	1	0	1	0	**2**	0	81	2	0	**83**	0	155	3	0	**158**	**247**
7:45AM	0	0	0	0	**0**	0	0	2	0	**2**	1	101	2	0	**104**	0	133	1	0	**134**	**240**
8:00AM	0	0	2	0	**2**	1	0	0	0	**1**	1	77	0	0	**78**	0	117	3	0	**120**	**201**
Total	0	0	7	0	**7**	3	0	4	0	**7**	2	340	5	0	**347**	0	544	7	0	**551**	**912**
% Approach	0%	0%	100%	0%	**-**	42.9%	0%	57.1%	0%	**-**	0.6%	98.0%	1.4%	0%	**-**	0%	98.7%	1.3%	0%	**-**	-
% Total	0%	0%	0.8%	0%	**0.8%**	0.3%	0%	0.4%	0%	**0.8%**	0.2%	37.3%	0.5%	0%	**38.0%**	0%	59.6%	0.8%	0%	**60.4%**	-
PHF	-	-	0.438	-	**0.438**	0.750	-	0.500	-	**0.875**	0.500	0.842	0.625	-	**0.834**	-	0.877	0.583	-	**0.872**	0.923
Lights	0	0	7	0	**7**	3	0	4	0	**7**	2	327	5	0	**334**	0	530	7	0	**537**	885
% Lights	0%	0%	100%	0%	**100%**	100%	0%	100%	0%	**100%**	100%	96.2%	100%	0%	**96.3%**	0%	97.4%	100%	0%	**97.5%**	97.0%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	5	0	0	**5**	5
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.9%	0%	0%	**0.9%**	0.5%
Buses and Single-Unit Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	13	0	0	**13**	0	9	0	0	**9**	22
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	3.8%	0%	0%	**3.7%**	0%	1.7%	0%	0%	**1.6%**	2.4%

*L: Left, R: Right, T: Thru, U: U-Turn

New Albany Road E & RIRO Access - TMC
Tue Sep 27, 2022
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993487, Location: 40.097524, -82.817567

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



New Albany Road E & RIRO Access - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

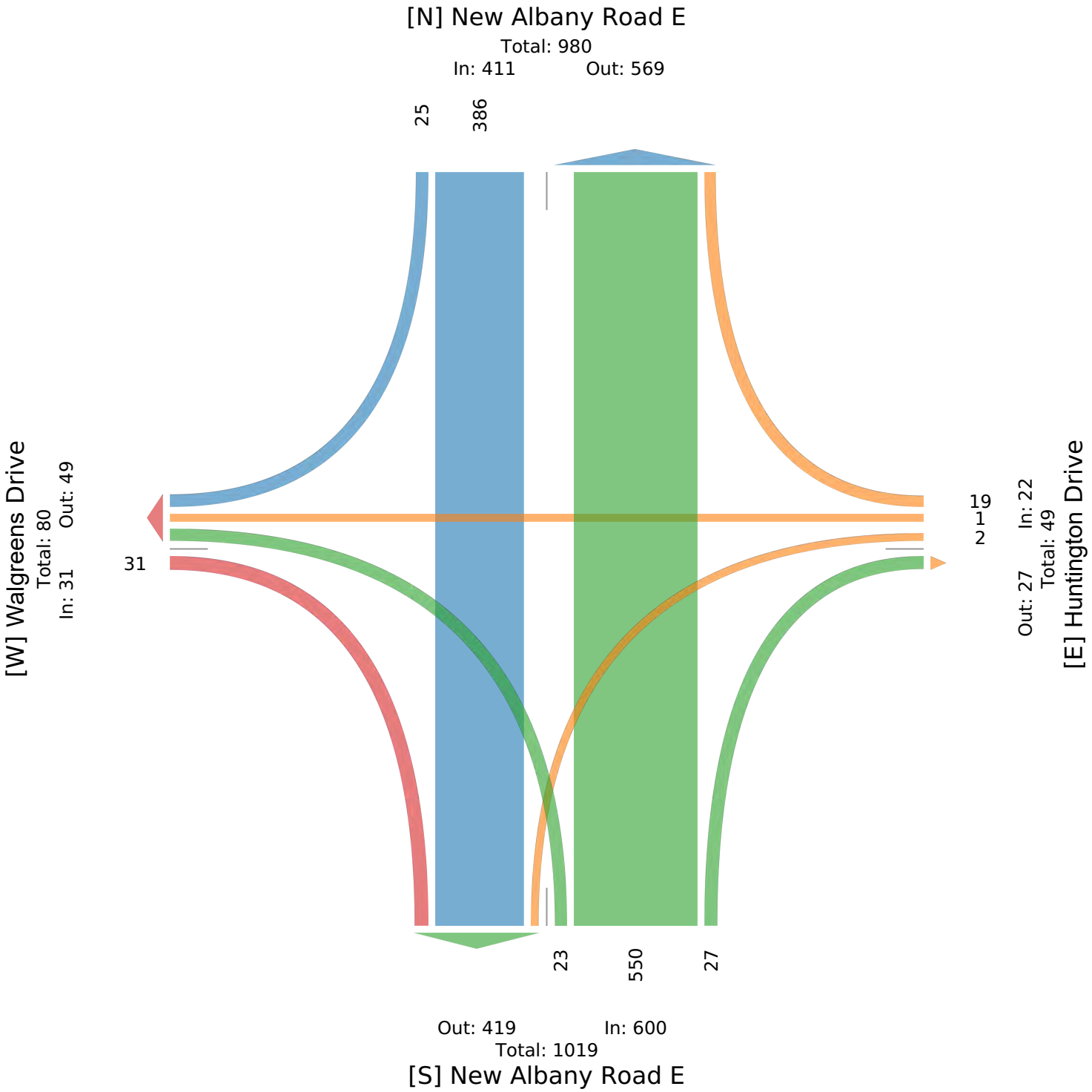
Tue Sep 27, 2022
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993487, Location: 40.097524, -82.817567

Leg	Walgreens Drive					Huntington Drive					New Albany Road E					New Albany Road E					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2022-09-27 5:00PM	0	0	9	0	**9**	0	0	7	0	**7**	7	117	6	0	**130**	0	113	1	0	**114**	**260**
5:15PM	0	0	7	0	**7**	0	0	5	0	**5**	4	134	7	0	**145**	0	83	10	0	**93**	**250**
5:30PM	0	0	8	0	**8**	1	1	3	0	**5**	4	139	7	0	**150**	0	103	6	0	**109**	**272**
5:45PM	0	0	7	0	**7**	1	0	4	0	**5**	8	160	7	0	**175**	0	87	8	0	**95**	**282**
Total	0	0	31	0	**31**	2	1	19	0	**22**	23	550	27	0	**600**	0	386	25	0	**411**	**1064**
% Approach	0%	0%	100%	0%	**-**	9.1%	4.5%	86.4%	0%	**-**	3.8%	91.7%	4.5%	0%	**-**	0%	93.9%	6.1%	0%	**-**	-
% Total	0%	0%	2.9%	0%	**2.9%**	0.2%	0.1%	1.8%	0%	**2.1%**	2.2%	51.7%	2.5%	0%	**56.4%**	0%	36.3%	2.3%	0%	**38.6%**	-
PHF	-	-	0.861	-	**0.861**	0.500	0.250	0.679	-	**0.786**	0.719	0.859	0.964	-	**0.857**	-	0.854	0.625	-	**0.901**	0.943
Lights	0	0	31	0	**31**	2	1	19	0	**22**	23	545	27	0	**595**	0	386	25	0	**411**	1059
% Lights	0%	0%	100%	0%	**100%**	100%	100%	100%	0%	**100%**	100%	99.1%	100%	0%	**99.2%**	0%	100%	100%	0%	**100%**	99.5%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	2	0	0	**2**	0	0	0	0	**0**	2
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.4%	0%	0%	**0.3%**	0%	0%	0%	0%	**0%**	0.2%
Buses and Single-Unit Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	3	0	0	**3**	0	0	0	0	**0**	3
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.5%	0%	0%	**0.5%**	0%	0%	0%	0%	**0%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

New Albany Road E & RIRO Access - TMC
Tue Sep 27, 2022
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993487, Location: 40.097524, -82.817567

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Central College Road - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

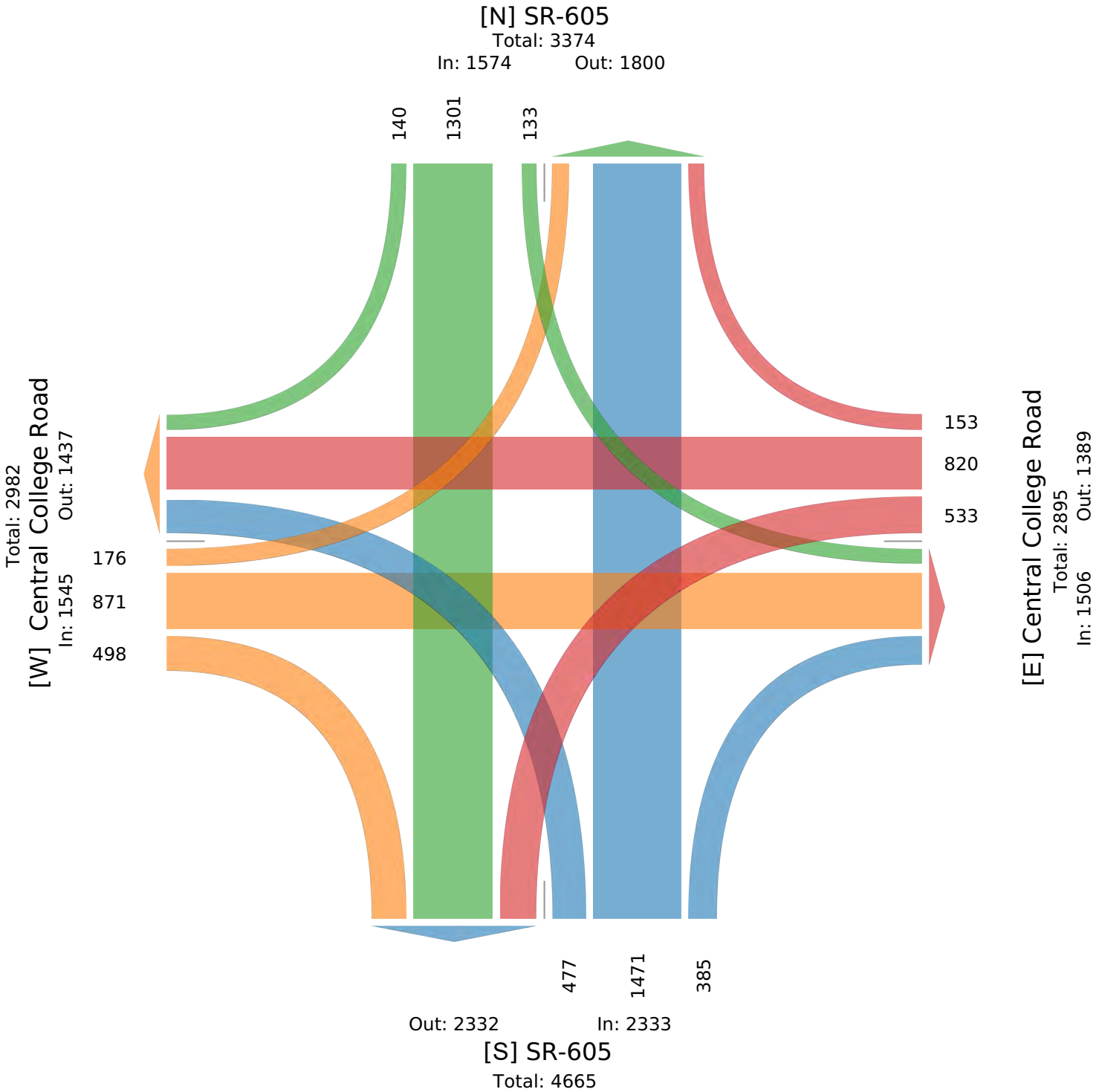
Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993495, Location: 40.098076, -82.812418

Leg	Central College Road					Central College Road					SR-605					SR-605					
Direction	Westbound					Eastbound					Southbound					Northbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2022-09-27 7:00AM	12	24	3	0	**39**	2	7	8	0	**17**	2	47	5	0	**54**	10	31	2	0	**43**	**153**
7:15AM	46	42	3	0	**91**	2	16	22	0	**40**	1	89	5	0	**95**	10	33	7	0	**50**	**276**
7:30AM	60	56	6	0	**122**	3	22	25	0	**50**	6	94	8	0	**108**	13	38	18	0	**69**	**349**
7:45AM	10	57	10	0	**77**	11	34	24	0	**69**	8	65	1	0	**74**	28	56	18	0	**102**	**322**
Hourly Total	128	179	22	0	**329**	18	79	79	0	**176**	17	295	19	0	**331**	61	158	45	0	**264**	**1100**
8:00AM	44	53	7	0	**104**	1	34	29	0	**64**	15	67	6	0	**88**	25	48	10	0	**83**	**339**
8:15AM	28	36	3	0	**67**	4	34	23	0	**61**	14	60	7	0	**81**	15	63	30	0	**108**	**317**
8:30AM	11	28	4	0	**43**	7	48	20	0	**75**	13	65	3	0	**81**	14	40	17	0	**71**	**270**
8:45AM	20	26	2	0	**48**	3	28	21	0	**52**	14	67	4	0	**85**	8	35	7	0	**50**	**235**
Hourly Total	103	143	16	0	**262**	15	144	93	0	**252**	56	259	20	0	**335**	62	186	64	0	**312**	**1161**
2:00PM	9	19	6	0	**34**	11	27	12	0	**50**	2	28	4	0	**34**	15	50	7	0	**72**	**190**
2:15PM	18	14	3	0	**35**	3	37	19	0	**59**	4	33	4	0	**41**	19	56	17	0	**92**	**227**
2:30PM	18	13	3	0	**34**	3	33	16	0	**52**	1	48	3	0	**52**	14	58	15	0	**87**	**225**
2:45PM	17	25	7	0	**49**	10	27	18	0	**55**	1	35	8	0	**44**	20	35	2	0	**57**	**205**
Hourly Total	62	71	19	0	**152**	27	124	65	0	**216**	8	144	19	0	**171**	68	199	41	0	**308**	**847**
3:00PM	7	20	2	0	**29**	10	21	15	0	**46**	2	34	6	0	**42**	22	38	26	0	**86**	**203**
3:15PM	12	27	4	0	**43**	6	41	17	0	**64**	1	37	9	0	**47**	18	65	14	0	**97**	**251**
3:30PM	15	33	4	0	**52**	9	35	17	0	**61**	3	38	7	0	**48**	23	61	17	0	**101**	**262**
3:45PM	15	19	2	0	**36**	5	51	20	0	**76**	3	40	7	0	**50**	16	57	18	0	**91**	**253**
Hourly Total	49	99	12	0	**160**	30	148	69	0	**247**	9	149	29	0	**187**	79	221	75	0	**375**	**969**
4:00PM	12	24	7	0	**43**	8	32	14	0	**54**	5	46	4	0	**55**	25	85	11	0	**121**	**273**
4:15PM	14	25	8	0	**47**	11	38	12	0	**61**	5	46	4	0	**55**	18	81	8	0	**107**	**270**
4:30PM	28	37	9	0	**74**	6	55	25	0	**86**	3	51	6	0	**60**	19	80	21	0	**120**	**340**
4:45PM	23	43	8	0	**74**	9	40	24	0	**73**	6	63	8	0	**77**	24	76	36	0	**136**	**360**
Hourly Total	77	129	32	0	**238**	34	165	75	0	**274**	19	206	22	0	**247**	86	322	76	0	**484**	**1243**
5:00PM	27	43	5	0	**75**	7	47	35	0	**89**	4	64	13	0	**81**	34	92	9	0	**135**	**380**
5:15PM	37	53	22	0	**112**	12	53	38	0	**103**	7	75	8	0	**90**	32	104	28	0	**164**	**469**
5:30PM	20	45	16	0	**81**	17	54	16	0	**87**	8	54	5	0	**67**	27	89	20	0	**136**	**371**
5:45PM	30	58	9	0	**97**	16	57	28	0	**101**	5	55	5	0	**65**	28	100	27	0	**155**	**418**
Hourly Total	114	199	52	0	**365**	52	211	117	0	**380**	24	248	31	0	**303**	121	385	84	0	**590**	**1638**
Total	533	820	153	0	**1506**	176	871	498	0	**1545**	133	1301	140	0	**1574**	477	1471	385	0	**2333**	**6958**
% Approach	35.4%	54.4%	10.2%	0%	**-**	11.4%	56.4%	32.2%	0%	**-**	8.4%	82.7%	8.9%	0%	**-**	20.4%	63.1%	16.5%	0%	**-**	-
% Total	7.7%	11.8%	2.2%	0%	**21.6%**	2.5%	12.5%	7.2%	0%	**22.2%**	1.9%	18.7%	2.0%	0%	**22.6%**	6.9%	21.1%	5.5%	0%	**33.5%**	-
Lights	524	811	147	0	**1482**	174	864	477	0	**1515**	130	1258	139	0	**1527**	460	1413	363	0	**2236**	6760
% Lights	98.3%	98.9%	96.1%	0%	**98.4%**	98.9%	99.2%	95.8%	0%	**98.1%**	97.7%	96.7%	99.3%	0%	**97.0%**	96.4%	96.1%	94.3%	0%	**95.8%**	97.2%
Articulated Trucks	0	0	1	0	**1**	0	1	1	0	**2**	0	11	0	0	**11**	1	7	0	0	**8**	22
% Articulated Trucks	0%	0%	0.7%	0%	**0.1%**	0%	0.1%	0.2%	0%	**0.1%**	0%	0.8%	0%	0%	**0.7%**	0.2%	0.5%	0%	0%	**0.3%**	0.3%
Buses and Single-Unit Trucks	9	9	5	0	**23**	2	6	20	0	**28**	3	32	1	0	**36**	16	51	22	0	**89**	176
% Buses and Single-Unit Trucks	1.7%	1.1%	3.3%	0%	**1.5%**	1.1%	0.7%	4.0%	0%	**1.8%**	2.3%	2.5%	0.7%	0%	**2.3%**	3.4%	3.5%	5.7%	0%	**3.8%**	2.5%

*L: Left, R: Right, T: Thru, U: U-Turn

SR-605 & Central College Road - TMC
Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993495, Location: 40.098076, -82.812418

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Central College Road - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

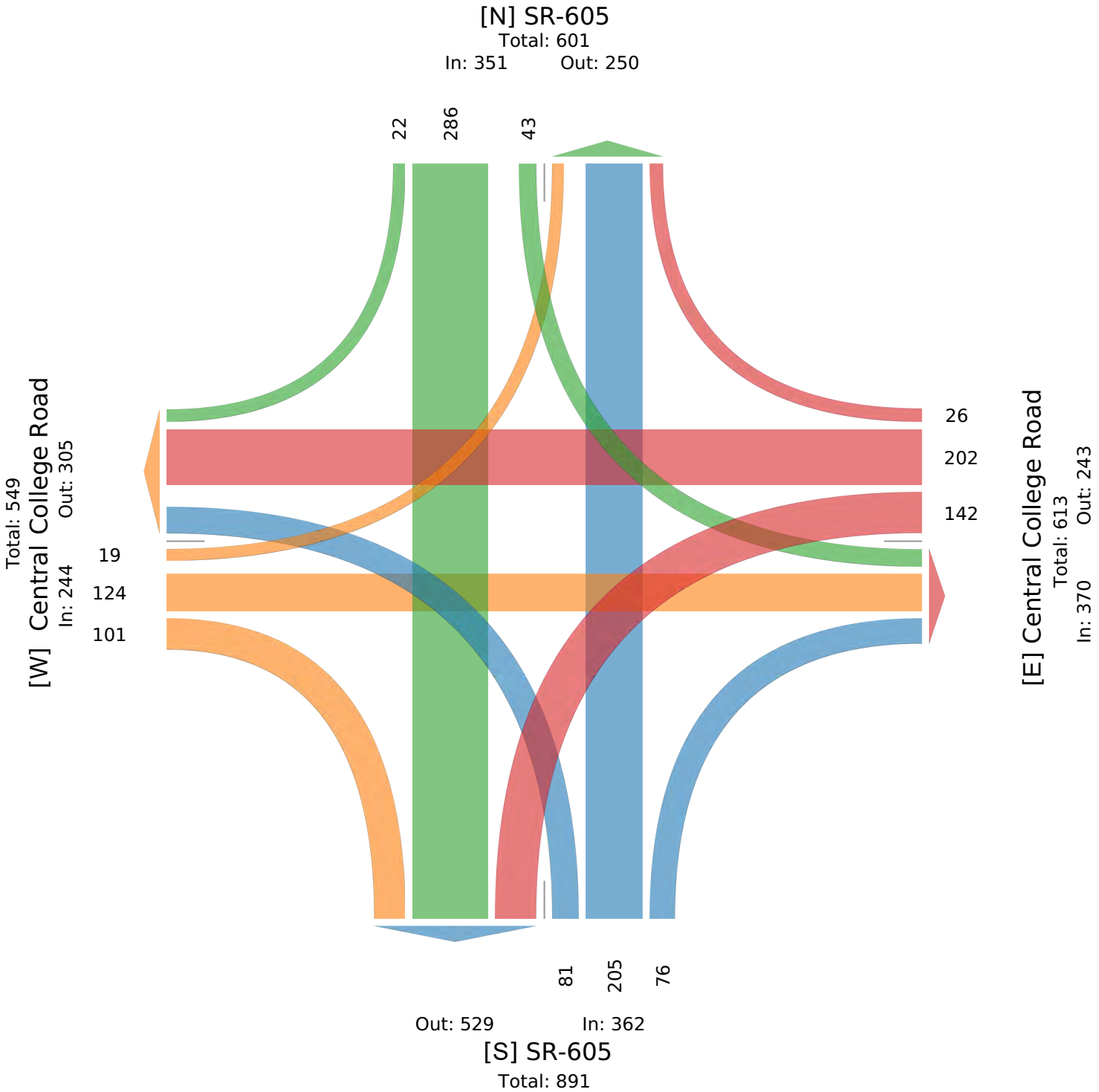
Tue Sep 27, 2022
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993495, Location: 40.098076, -82.812418

Leg Direction	Central College Road Westbound					Central College Road Eastbound					SR-605 Southbound					SR-605 Northbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2022-09-27 7:30AM	60	56	6	0	**122**	3	22	25	0	**50**	6	94	8	0	**108**	13	38	18	0	**69**	**349**
7:45AM	10	57	10	0	**77**	11	34	24	0	**69**	8	65	1	0	**74**	28	56	18	0	**102**	**322**
8:00AM	44	53	7	0	**104**	1	34	29	0	**64**	15	67	6	0	**88**	25	48	10	0	**83**	**339**
8:15AM	28	36	3	0	**67**	4	34	23	0	**61**	14	60	7	0	**81**	15	63	30	0	**108**	**317**
Total	142	202	26	0	**370**	19	124	101	0	**244**	43	286	22	0	**351**	81	205	76	0	**362**	**1327**
% Approach	38.4%	54.6%	7.0%	0%	**-**	7.8%	50.8%	41.4%	0%	**-**	12.3%	81.5%	6.3%	0%	**-**	22.4%	56.6%	21.0%	0%	**-**	-
% Total	10.7%	15.2%	2.0%	0%	**27.9%**	1.4%	9.3%	7.6%	0%	**18.4%**	3.2%	21.6%	1.7%	0%	**26.5%**	6.1%	15.4%	5.7%	0%	**27.3%**	-
PHF	0.592	0.886	0.650	-	**0.758**	0.432	0.912	0.871	-	**0.884**	0.717	0.761	0.688	-	**0.813**	0.723	0.813	0.633	-	**0.838**	0.951
Lights	138	201	26	0	**365**	19	123	96	0	**238**	43	278	22	0	**343**	76	191	72	0	**339**	1285
% Lights	97.2%	99.5%	100%	0%	**98.6%**	100%	99.2%	95.0%	0%	**97.5%**	100%	97.2%	100%	0%	**97.7%**	93.8%	93.2%	94.7%	0%	**93.6%**	96.8%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**	0	4	0	0	**4**	5
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.3%	0%	0%	**0.3%**	0%	2.0%	0%	0%	**1.1%**	0.4%
Buses and Single-Unit Trucks	4	1	0	0	**5**	0	1	5	0	**6**	0	7	0	0	**7**	5	10	4	0	**19**	37
% Buses and Single-Unit Trucks	2.8%	0.5%	0%	0%	**1.4%**	0%	0.8%	5.0%	0%	**2.5%**	0%	2.4%	0%	0%	**2.0%**	6.2%	4.9%	5.3%	0%	**5.2%**	2.8%

*L: Left, R: Right, T: Thru, U: U-Turn

SR-605 & Central College Road - TMC
Tue Sep 27, 2022
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993495, Location: 40.098076, -82.812418

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Central College Road - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

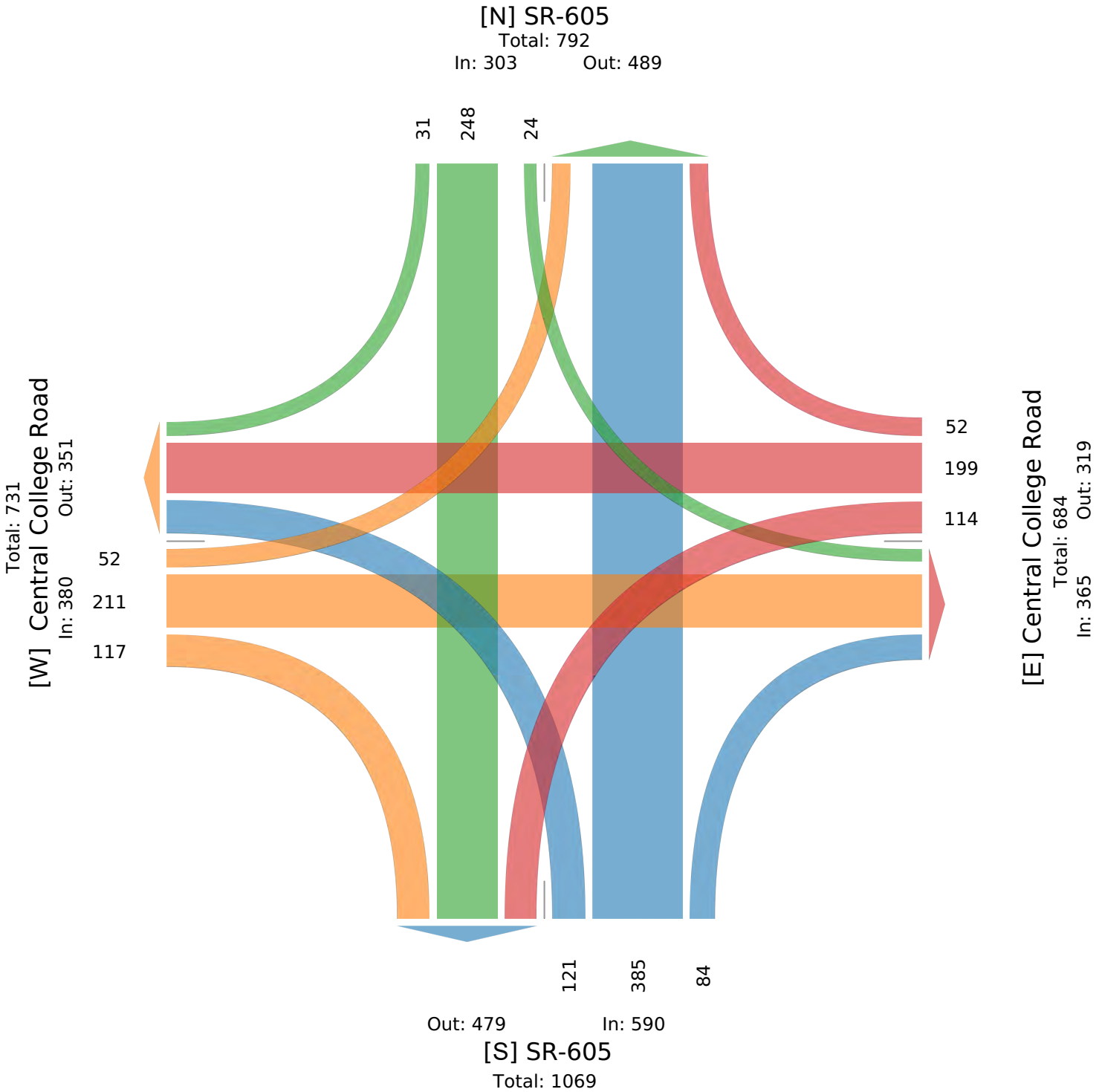
Tue Sep 27, 2022
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993495, Location: 40.098076, -82.812418

Leg / Direction	Central College Road Westbound					Central College Road Eastbound					SR-605 Southbound					SR-605 Northbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2022-09-27 5:00PM	27	43	5	0	**75**	7	47	35	0	**89**	4	64	13	0	**81**	34	92	9	0	**135**	**380**
5:15PM	37	53	22	0	**112**	12	53	38	0	**103**	7	75	8	0	**90**	32	104	28	0	**164**	**469**
5:30PM	20	45	16	0	**81**	17	54	16	0	**87**	8	54	5	0	**67**	27	89	20	0	**136**	**371**
5:45PM	30	58	9	0	**97**	16	57	28	0	**101**	5	55	5	0	**65**	28	100	27	0	**155**	**418**
Total	114	199	52	0	**365**	52	211	117	0	**380**	24	248	31	0	**303**	121	385	84	0	**590**	**1638**
% Approach	31.2%	54.5%	14.2%	0%	**-**	13.7%	55.5%	30.8%	0%	**-**	7.9%	81.8%	10.2%	0%	**-**	20.5%	65.3%	14.2%	0%	**-**	-
% Total	7.0%	12.1%	3.2%	0%	**22.3%**	3.2%	12.9%	7.1%	0%	**23.2%**	1.5%	15.1%	1.9%	0%	**18.5%**	7.4%	23.5%	5.1%	0%	**36.0%**	-
PHF	0.770	0.858	0.591	-	**0.815**	0.765	0.925	0.770	-	**0.922**	0.750	0.827	0.596	-	**0.842**	0.890	0.925	0.750	-	**0.899**	0.873
Lights	114	199	52	0	**365**	52	209	116	0	**377**	24	247	31	0	**302**	120	378	84	0	**582**	1626
% Lights	100%	100%	100%	0%	**100%**	100%	99.1%	99.1%	0%	**99.2%**	100%	99.6%	100%	0%	**99.7%**	99.2%	98.2%	100%	0%	**98.6%**	99.3%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**	0	1	0	0	**1**	2
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.4%	0%	0%	**0.3%**	0%	0.3%	0%	0%	**0.2%**	0.1%
Buses and Single-Unit Trucks	0	0	0	0	**0**	0	2	1	0	**3**	0	0	0	0	**0**	1	6	0	0	**7**	10
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0.9%	0.9%	0%	**0.8%**	0%	0%	0%	0%	**0%**	0.8%	1.6%	0%	0%	**1.2%**	0.6%

*L: Left, R: Right, T: Thru, U: U-Turn

SR-605 & Central College Road - TMC
Tue Sep 27, 2022
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993495, Location: 40.098076, -82.812418

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Snider Loop - TMC

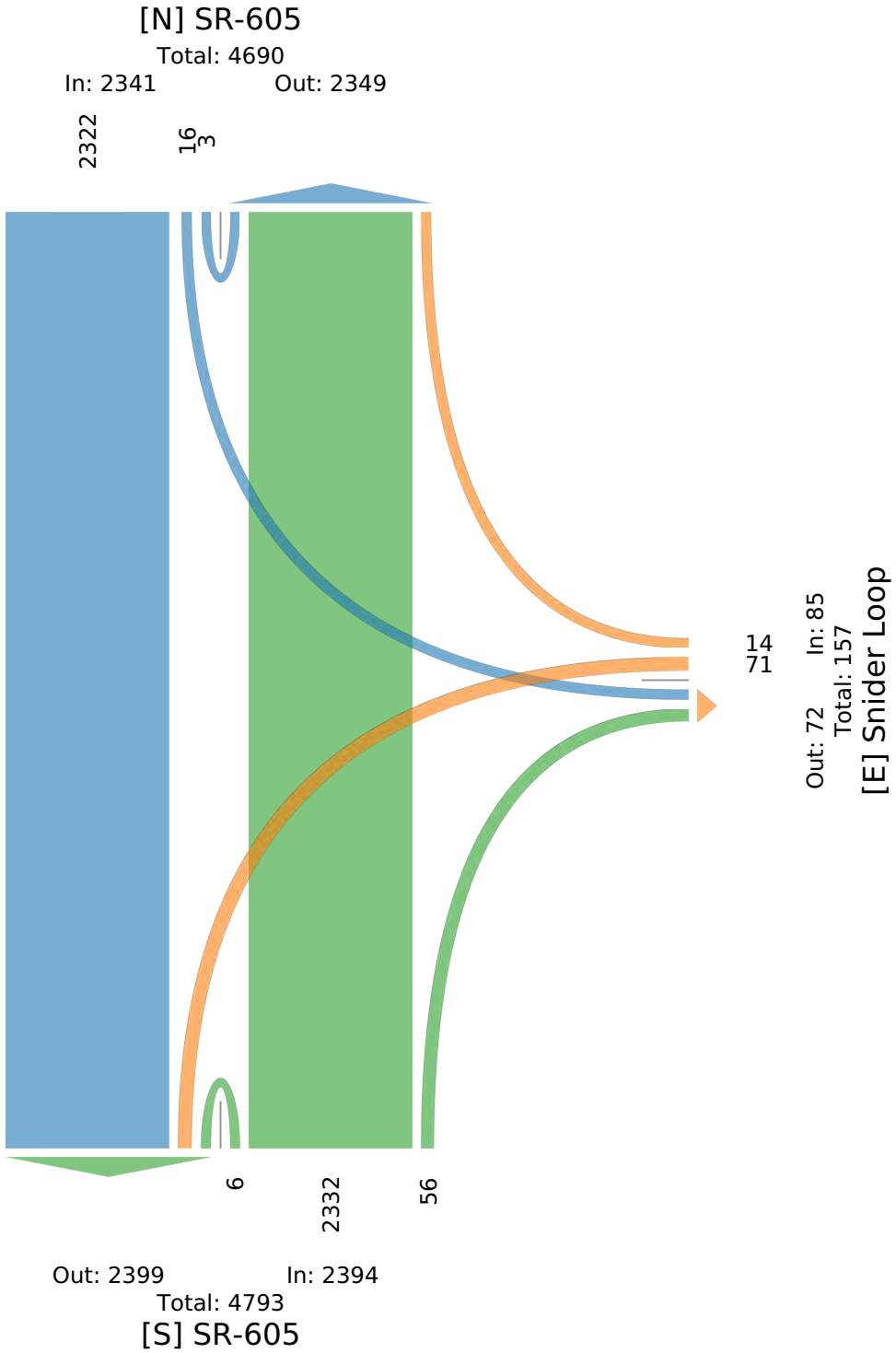
Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993467, Location: 40.094979, -82.812529

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Snider Loop				SR-605				SR-605				
Direction	Westbound				Northbound				Southbound				
Time	L	R	U	**App**	T	R	U	**App**	L	T	U	**App**	**Int**
2022-09-27 7:00AM	2	1	0	**3**	47	0	0	**47**	1	69	0	**70**	**120**
7:15AM	4	0	0	**4**	49	1	1	**51**	0	160	0	**160**	**215**
7:30AM	8	0	0	**8**	82	5	0	**87**	0	174	0	**174**	**269**
7:45AM	2	0	0	**2**	92	0	0	**92**	1	103	0	**104**	**198**
Hourly Total	16	1	0	**17**	270	6	1	**277**	2	506	0	**508**	**802**
8:00AM	10	0	0	**10**	81	0	0	**81**	1	138	0	**139**	**230**
8:15AM	2	1	0	**3**	110	4	1	**115**	1	110	0	**111**	**229**
8:30AM	2	1	0	**3**	73	2	0	**75**	2	90	0	**92**	**170**
8:45AM	2	2	0	**4**	46	1	0	**47**	1	110	0	**111**	**162**
Hourly Total	16	4	0	**20**	310	7	1	**318**	5	448	0	**453**	**791**
2:00PM	1	0	0	**1**	74	1	0	**75**	1	52	0	**53**	**129**
2:15PM	5	0	0	**5**	98	2	0	**100**	1	68	0	**69**	**174**
2:30PM	2	1	0	**3**	76	1	0	**77**	0	86	0	**86**	**166**
2:45PM	2	0	0	**2**	52	2	0	**54**	0	64	0	**64**	**120**
Hourly Total	10	1	0	**11**	300	6	0	**306**	2	270	0	**272**	**589**
3:00PM	2	0	0	**2**	101	2	1	**104**	1	57	0	**58**	**164**
3:15PM	4	0	0	**4**	90	3	0	**93**	2	64	0	**66**	**163**
3:30PM	4	3	0	**7**	97	2	0	**99**	0	72	0	**72**	**178**
3:45PM	0	0	0	**0**	99	2	0	**101**	0	72	0	**72**	**173**
Hourly Total	10	3	0	**13**	387	9	1	**397**	3	265	0	**268**	**678**
4:00PM	1	0	0	**1**	116	2	0	**118**	0	73	0	**73**	**192**
4:15PM	1	2	0	**3**	107	5	0	**112**	1	76	0	**77**	**192**
4:30PM	2	0	0	**2**	121	1	0	**122**	0	99	0	**99**	**223**
4:45PM	2	0	0	**2**	139	9	2	**150**	0	110	1	**111**	**263**
Hourly Total	6	2	0	**8**	483	17	2	**502**	1	358	1	**360**	**870**
5:00PM	3	0	0	**3**	130	0	0	**130**	1	128	0	**129**	**262**
5:15PM	3	3	0	**6**	174	2	0	**176**	0	145	0	**145**	**327**
5:30PM	3	0	0	**3**	136	3	0	**139**	2	91	0	**93**	**235**
5:45PM	4	0	0	**4**	142	6	1	**149**	0	111	2	**113**	**266**
Hourly Total	13	3	0	**16**	582	11	1	**594**	3	475	2	**480**	**1090**
Total	71	14	0	**85**	2332	56	6	**2394**	16	2322	3	**2341**	**4820**
% Approach	83.5%	16.5%	0%	**-**	97.4%	2.3%	0.3%	**-**	0.7%	99.2%	0.1%	**-**	-
% Total	1.5%	0.3%	0%	**1.8%**	48.4%	1.2%	0.1%	**49.7%**	0.3%	48.2%	0.1%	**48.6%**	-
Lights	71	14	0	**85**	2239	56	4	**2299**	15	2245	2	**2262**	4646
% Lights	100%	100%	0%	**100%**	96.0%	100%	66.7%	**96.0%**	93.8%	96.7%	66.7%	**96.6%**	96.4%
Articulated Trucks	0	0	0	**0**	4	0	0	**4**	1	6	0	**7**	11
% Articulated Trucks	0%	0%	0%	**0%**	0.2%	0%	0%	**0.2%**	6.3%	0.3%	0%	**0.3%**	0.2%
Buses and Single-Unit Trucks	0	0	0	**0**	89	0	2	**91**	0	71	1	**72**	163
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	3.8%	0%	33.3%	**3.8%**	0%	3.1%	33.3%	**3.1%**	3.4%

*L: Left, R: Right, T: Thru, U: U-Turn

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Snider Loop - TMC

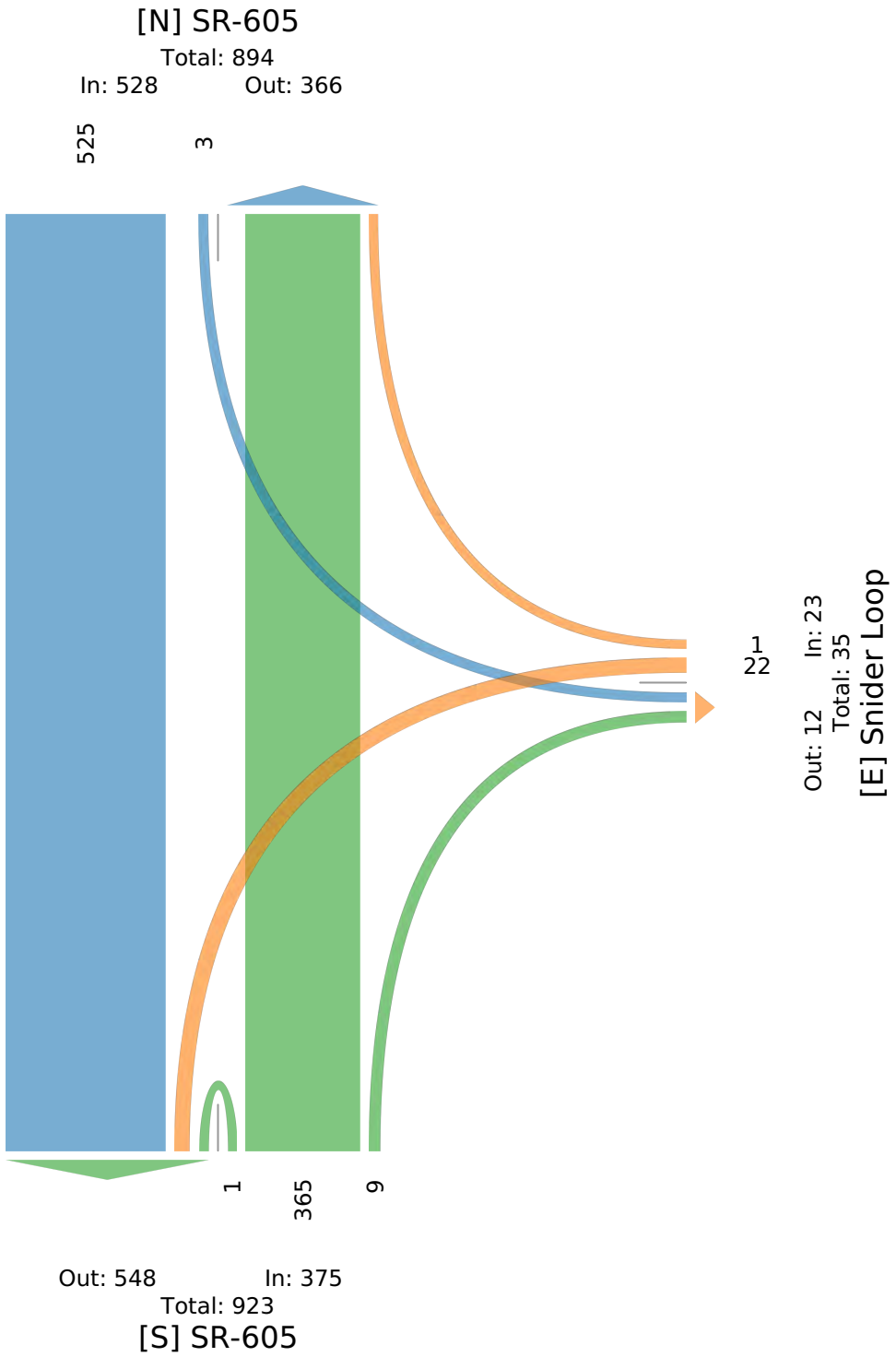
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Tue Sep 27, 2022
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993467, Location: 40.094979, -82.812529

Leg	Snider Loop				SR-605				SR-605				
Direction	Westbound				Northbound				Southbound				
Time	L	R	U	**App**	T	R	U	**App**	L	T	U	**App**	**Int**
2022-09-27 7:30AM	8	0	0	**8**	82	5	0	**87**	0	174	0	**174**	**269**
7:45AM	2	0	0	**2**	92	0	0	**92**	1	103	0	**104**	**198**
8:00AM	10	0	0	**10**	81	0	0	**81**	1	138	0	**139**	**230**
8:15AM	2	1	0	**3**	110	4	1	**115**	1	110	0	**111**	**229**
Total	22	1	0	**23**	365	9	1	**375**	3	525	0	**528**	**926**
% Approach	95.7%	4.3%	0%	**-**	97.3%	2.4%	0.3%	**-**	0.6%	99.4%	0%	**-**	-
% Total	2.4%	0.1%	0%	**2.5%**	39.4%	1.0%	0.1%	**40.5%**	0.3%	56.7%	0%	**57.0%**	-
PHF	0.550	0.250	-	**0.575**	0.830	0.450	0.250	**0.815**	0.750	0.754	-	**0.759**	0.861
Lights	22	1	0	**23**	342	9	1	**352**	3	509	0	**512**	887
% Lights	100%	100%	0%	**100%**	93.7%	100%	100%	**93.9%**	100%	97.0%	0%	**97.0%**	95.8%
Articulated Trucks	0	0	0	**0**	2	0	0	**2**	0	1	0	**1**	3
% Articulated Trucks	0%	0%	0%	**0%**	0.5%	0%	0%	**0.5%**	0%	0.2%	0%	**0.2%**	0.3%
Buses and Single-Unit Trucks	0	0	0	**0**	21	0	0	**21**	0	15	0	**15**	36
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	5.8%	0%	0%	**5.6%**	0%	2.9%	0%	**2.8%**	3.9%

*L: Left, R: Right, T: Thru, U: U-Turn

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Snider Loop - TMC

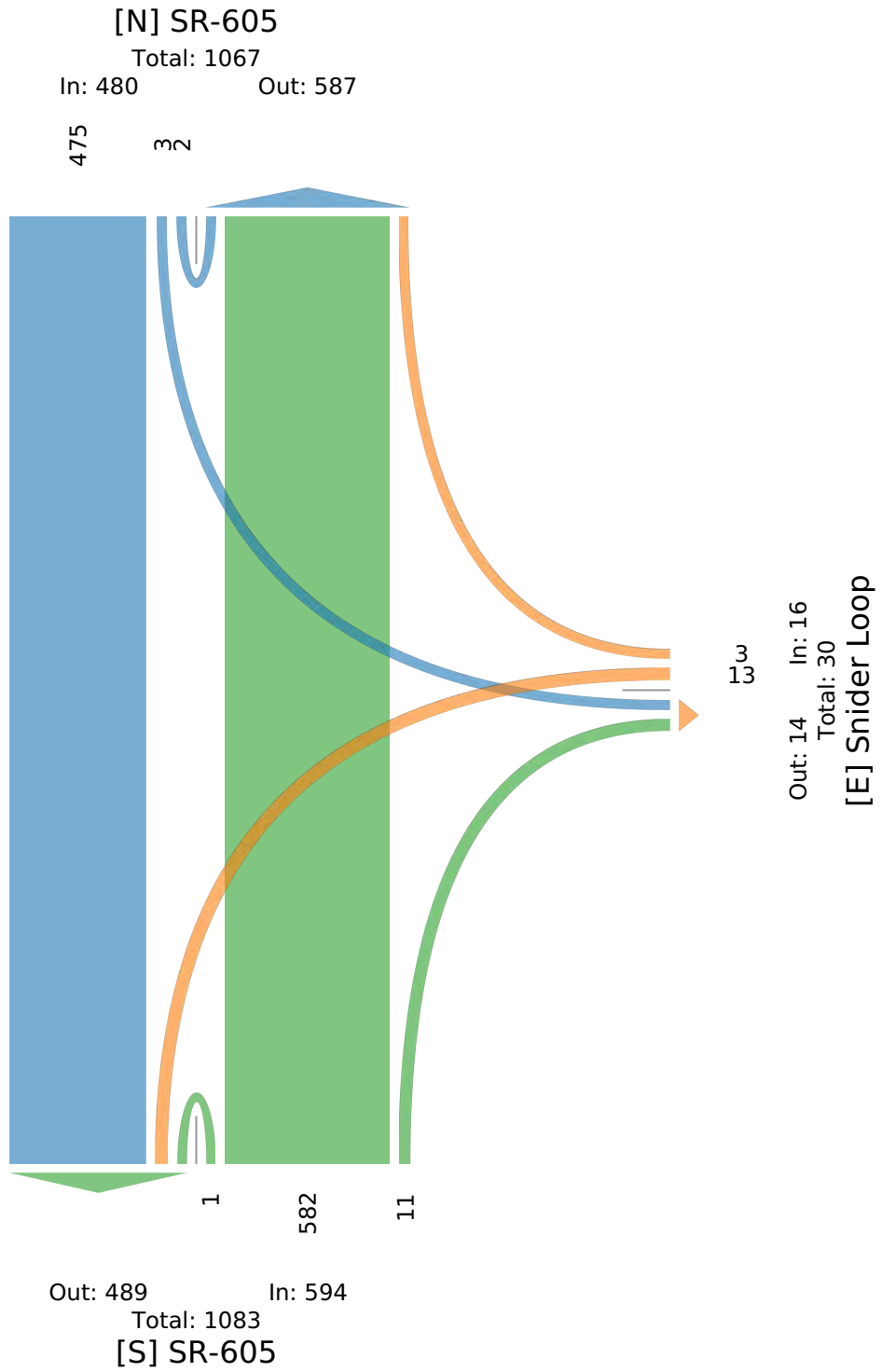
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Tue Sep 27, 2022
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993467, Location: 40.094979, -82.812529

Leg	Snider Loop				SR-605				SR-605				
Direction	Westbound				Northbound				Southbound				
Time	L	R	U	**App**	T	R	U	**App**	L	T	U	**App**	**Int**
2022-09-27 5:00PM	3	0	0	**3**	130	0	0	**130**	1	128	0	**129**	**262**
5:15PM	3	3	0	**6**	174	2	0	**176**	0	145	0	**145**	**327**
5:30PM	3	0	0	**3**	136	3	0	**139**	2	91	0	**93**	**235**
5:45PM	4	0	0	**4**	142	6	1	**149**	0	111	2	**113**	**266**
Total	13	3	0	**16**	582	11	1	**594**	3	475	2	**480**	**1090**
% Approach	81.3%	18.8%	0%	**-**	98.0%	1.9%	0.2%	**-**	0.6%	99.0%	0.4%	**-**	-
% Total	1.2%	0.3%	0%	**1.5%**	53.4%	1.0%	0.1%	**54.5%**	0.3%	43.6%	0.2%	**44.0%**	-
PHF	0.813	0.250	-	**0.667**	0.836	0.458	0.250	**0.844**	0.375	0.819	0.250	**0.828**	0.833
Lights	13	3	0	**16**	574	11	1	**586**	3	474	2	**479**	1081
% Lights	100%	100%	0%	**100%**	98.6%	100%	100%	**98.7%**	100%	99.8%	100%	**99.8%**	99.2%
Articulated Trucks	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	1
% Articulated Trucks	0%	0%	0%	**0%**	0.2%	0%	0%	**0.2%**	0%	0%	0%	**0%**	0.1%
Buses and Single-Unit Trucks	0	0	0	**0**	7	0	0	**7**	0	1	0	**1**	8
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	1.2%	0%	0%	**1.2%**	0%	0.2%	0%	**0.2%**	0.7%

*L: Left, R: Right, T: Thru, U: U-Turn

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Walton Parkway - TMC

Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993460, Location: 40.09303, -82.812182

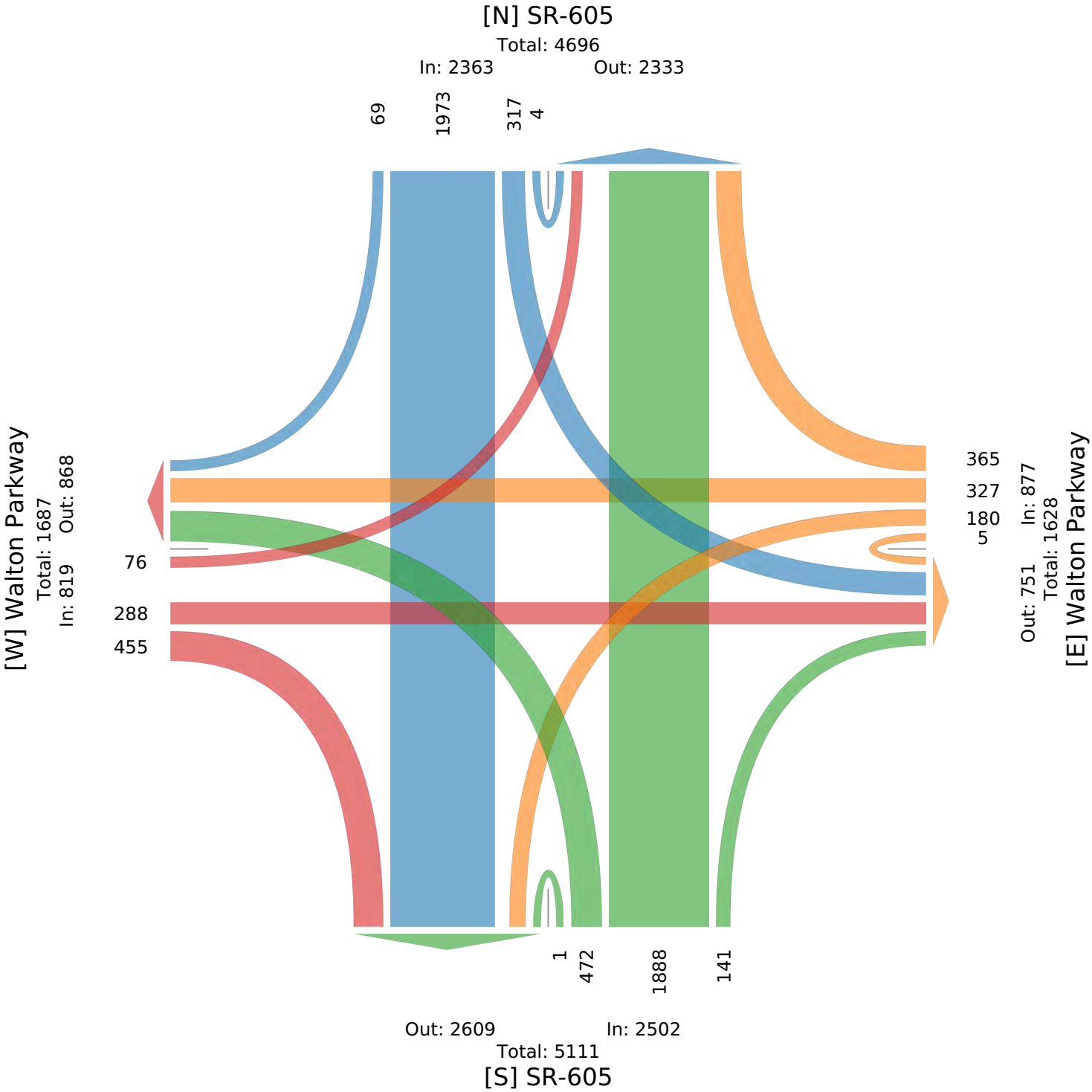
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Walton Parkway					Walton Parkway					SR-605					SR-605					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2022-09-27 7:00AM	1	8	12	0	**21**	3	4	3	0	**10**	10	42	3	0	**55**	13	50	3	0	**66**	**152**
7:15AM	2	9	20	0	**31**	3	2	5	0	**10**	8	44	2	0	**54**	17	126	2	0	**145**	**240**
7:30AM	1	31	38	0	**70**	6	17	18	0	**41**	23	51	13	0	**87**	24	162	8	0	**194**	**392**
7:45AM	0	24	14	0	**38**	7	22	21	0	**50**	20	74	9	0	**103**	26	71	5	0	**102**	**293**
Hourly Total	4	72	84	0	**160**	19	45	47	0	**111**	61	211	27	0	**299**	80	409	18	0	**507**	**1077**
8:00AM	3	34	17	0	**54**	3	15	13	4	**35**	31	52	15	0	**98**	29	100	6	0	**135**	**322**
8:15AM	2	30	36	0	**68**	8	7	16	0	**31**	40	97	11	0	**148**	23	85	6	1	**115**	**362**
8:30AM	3	21	16	0	**40**	2	13	6	0	**21**	24	64	6	0	**94**	18	72	1	0	**91**	**246**
8:45AM	0	19	15	0	**34**	6	7	3	0	**16**	11	46	6	0	**63**	29	80	7	0	**116**	**229**
Hourly Total	8	104	84	0	**196**	19	42	38	4	**103**	106	259	38	0	**403**	99	337	20	1	**457**	**1159**
2:00PM	3	8	7	0	**18**	22	4	15	0	**41**	11	54	6	1	**72**	3	44	0	1	**48**	**179**
2:15PM	2	6	9	0	**17**	7	9	10	0	**26**	20	81	6	0	**107**	8	65	2	0	**75**	**225**
2:30PM	2	6	10	0	**18**	1	6	4	0	**11**	22	80	7	0	**109**	9	74	2	0	**85**	**223**
2:45PM	1	2	28	0	**31**	6	7	9	0	**22**	6	47	1	0	**54**	10	59	3	0	**72**	**179**
Hourly Total	8	22	54	0	**84**	36	26	38	0	**100**	59	262	20	1	**342**	30	242	7	1	**280**	**806**
3:00PM	1	5	15	0	**21**	7	15	6	0	**28**	29	79	5	0	**113**	3	42	1	0	**46**	**208**
3:15PM	3	4	15	0	**22**	4	10	15	1	**30**	38	84	3	0	**125**	9	64	3	0	**76**	**253**
3:30PM	3	9	20	0	**32**	6	6	12	0	**24**	22	87	3	0	**112**	8	64	1	0	**73**	**241**
3:45PM	3	2	8	0	**13**	6	11	6	0	**23**	24	83	12	0	**119**	12	62	0	0	**74**	**229**
Hourly Total	10	20	58	0	**88**	23	42	39	1	**105**	113	333	23	0	**469**	32	232	5	0	**269**	**931**
4:00PM	4	6	22	0	**32**	4	19	29	0	**52**	17	87	3	0	**107**	12	60	2	0	**74**	**265**
4:15PM	6	7	13	0	**26**	9	12	17	0	**38**	18	83	2	0	**103**	6	63	2	0	**71**	**238**
4:30PM	5	6	13	0	**24**	5	22	26	0	**53**	17	93	6	0	**116**	15	90	2	1	**108**	**301**
4:45PM	4	16	21	0	**41**	9	21	26	0	**56**	13	109	1	0	**123**	12	96	3	0	**111**	**331**
Hourly Total	19	35	69	0	**123**	27	74	98	0	**199**	65	372	12	0	**449**	45	309	9	1	**364**	**1135**
5:00PM	2	7	35	0	**44**	21	37	34	0	**92**	13	89	3	0	**105**	5	114	6	0	**125**	**366**
5:15PM	9	16	32	0	**57**	13	25	27	0	**65**	13	124	8	0	**145**	7	141	2	1	**151**	**418**
5:30PM	7	6	25	0	**38**	12	25	21	0	**58**	24	114	8	0	**146**	10	84	2	0	**96**	**338**
5:45PM	9	6	14	0	**29**	10	11	23	0	**44**	18	124	2	0	**144**	9	105	0	0	**114**	**331**
Hourly Total	27	35	106	0	**168**	56	98	105	0	**259**	68	451	21	0	**540**	31	444	10	1	**486**	**1453**
Total	76	288	455	0	**819**	180	327	365	5	**877**	472	1888	141	1	**2502**	317	1973	69	4	**2363**	**6561**
% Approach	9.3%	35.2%	55.6%	0%	**-**	20.5%	37.3%	41.6%	0.6%	**-**	18.9%	75.5%	5.6%	0%	**-**	13.4%	83.5%	2.9%	0.2%	**-**	-
% Total	1.2%	4.4%	6.9%	0%	**12.5%**	2.7%	5.0%	5.6%	0.1%	**13.4%**	7.2%	28.8%	2.1%	0%	**38.1%**	4.8%	30.1%	1.1%	0.1%	**36.0%**	-
Lights	75	282	419	0	**776**	141	323	351	2	**817**	438	1810	125	1	**2374**	305	1908	67	4	**2284**	6251
% Lights	98.7%	97.9%	92.1%	0%	**94.7%**	78.3%	98.8%	96.2%	40.0%	**93.2%**	92.8%	95.9%	88.7%	100%	**94.9%**	96.2%	96.7%	97.1%	100%	**96.7%**	95.3%
Articulated Trucks	0	0	0	0	**0**	1	0	0	0	**1**	0	3	0	0	**3**	0	7	0	0	**7**	11
% Articulated Trucks	0%	0%	0%	0%	**0%**	0.6%	0%	0%	0%	**0.1%**	0%	0.2%	0%	0%	**0.1%**	0%	0.4%	0%	0%	**0.3%**	0.2%
Buses and Single-Unit Trucks	1	6	36	0	**43**	38	4	14	3	**59**	34	75	16	0	**125**	12	58	2	0	**72**	299
% Buses and Single-Unit Trucks	1.3%	2.1%	7.9%	0%	**5.3%**	21.1%	1.2%	3.8%	60.0%	**6.7%**	7.2%	4.0%	11.3%	0%	**5.0%**	3.8%	2.9%	2.9%	0%	**3.0%**	4.6%

*L: Left, R: Right, T: Thru, U: U-Turn

SR-605 & Walton Parkway - TMC
Tue Sep 27, 2022
Full Length (7 AM-9 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993460, Location: 40.09303, -82.812182

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Walton Parkway - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

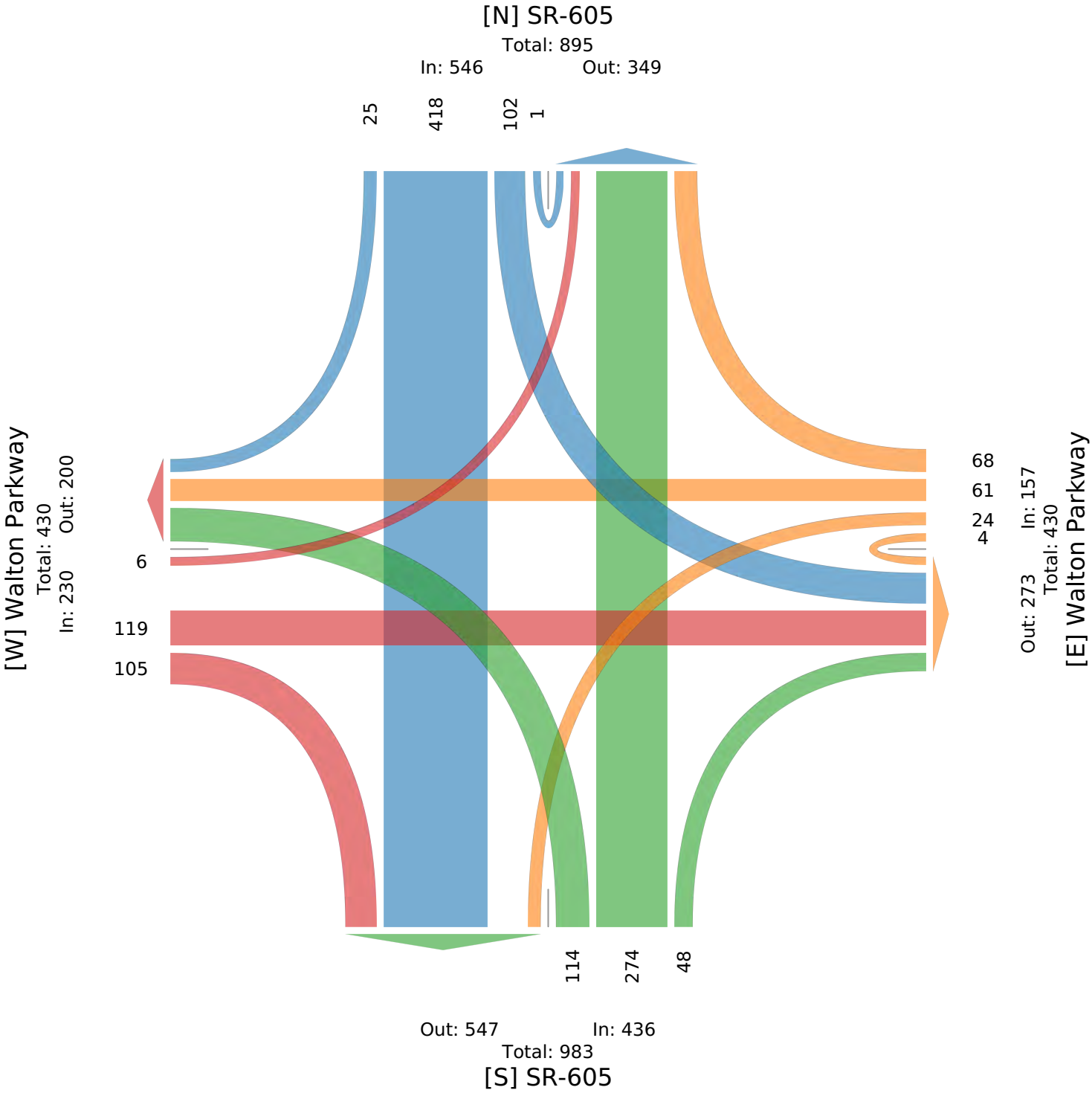
Tue Sep 27, 2022
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993460, Location: 40.09303, -82.812182

Leg	Walton Parkway					Walton Parkway					SR-605					SR-605					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2022-09-27 7:30AM	1	31	38	0	**70**	6	17	18	0	**41**	23	51	13	0	**87**	24	162	8	0	**194**	**392**
7:45AM	0	24	14	0	**38**	7	22	21	0	**50**	20	74	9	0	**103**	26	71	5	0	**102**	**293**
8:00AM	3	34	17	0	**54**	3	15	13	4	**35**	31	52	15	0	**98**	29	100	6	0	**135**	**322**
8:15AM	2	30	36	0	**68**	8	7	16	0	**31**	40	97	11	0	**148**	23	85	6	1	**115**	**362**
Total	6	119	105	0	**230**	24	61	68	4	**157**	114	274	48	0	**436**	102	418	25	1	**546**	**1369**
% Approach	2.6%	51.7%	45.7%	0%	**-**	15.3%	38.9%	43.3%	2.5%	**-**	26.1%	62.8%	11.0%	0%	**-**	18.7%	76.6%	4.6%	0.2%	**-**	-
% Total	0.4%	8.7%	7.7%	0%	**16.8%**	1.8%	4.5%	5.0%	0.3%	**11.5%**	8.3%	20.0%	3.5%	0%	**31.8%**	7.5%	30.5%	1.8%	0.1%	**39.9%**	-
PHF	0.500	0.875	0.691	-	**0.821**	0.750	0.693	0.810	0.250	**0.785**	0.713	0.706	0.800	-	**0.736**	0.879	0.645	0.781	0.250	**0.704**	0.873
Lights	6	118	91	0	**215**	17	60	66	2	**145**	105	256	40	0	**401**	100	403	25	1	**529**	1290
% Lights	100%	99.2%	86.7%	0%	**93.5%**	70.8%	98.4%	97.1%	50.0%	**92.4%**	92.1%	93.4%	83.3%	0%	**92.0%**	98.0%	96.4%	100%	100%	**96.9%**	94.2%
Articulated Trucks	0	0	0	0	**0**	1	0	0	0	**1**	0	1	0	0	**1**	0	1	0	0	**1**	3
% Articulated Trucks	0%	0%	0%	0%	**0%**	4.2%	0%	0%	0%	**0.6%**	0%	0.4%	0%	0%	**0.2%**	0%	0.2%	0%	0%	**0.2%**	0.2%
Buses and Single-Unit Trucks	0	1	14	0	**15**	6	1	2	2	**11**	9	17	8	0	**34**	2	14	0	0	**16**	76
% Buses and Single-Unit Trucks	0%	0.8%	13.3%	0%	**6.5%**	25.0%	1.6%	2.9%	50.0%	**7.0%**	7.9%	6.2%	16.7%	0%	**7.8%**	2.0%	3.3%	0%	0%	**2.9%**	5.6%

*L: Left, R: Right, T: Thru, U: U-Turn

SR-605 & Walton Parkway - TMC
Tue Sep 27, 2022
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993460, Location: 40.09303, -82.812182

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



SR-605 & Walton Parkway - TMC

Tue Sep 27, 2022
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993460, Location: 40.09303, -82.812182

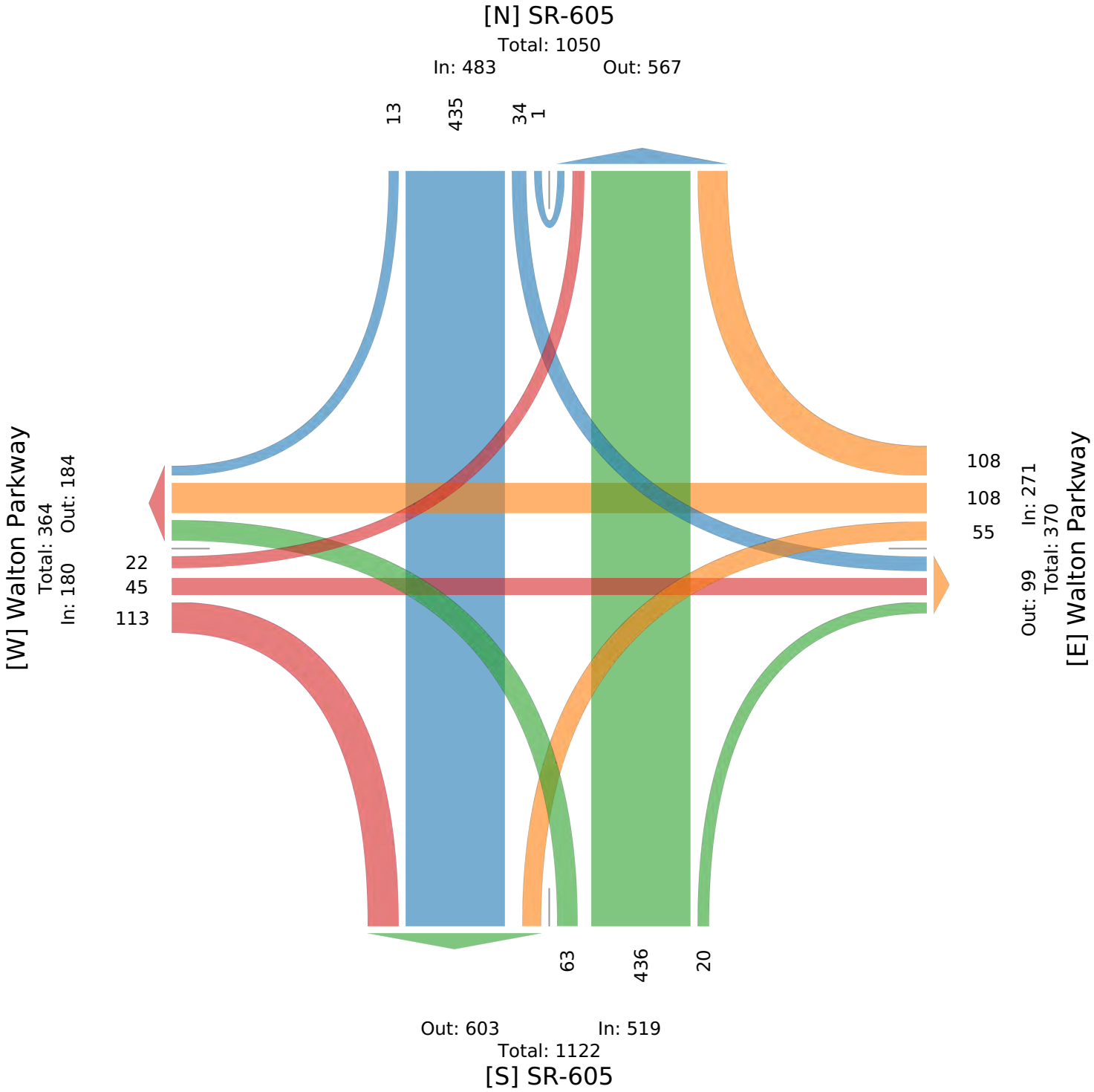
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Walton Parkway					Walton Parkway					SR-605					SR-605					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2022-09-27 4:45PM	4	16	21	0	**41**	9	21	26	0	**56**	13	109	1	0	**123**	12	96	3	0	**111**	**331**
5:00PM	2	7	35	0	**44**	21	37	34	0	**92**	13	89	3	0	**105**	5	114	6	0	**125**	**366**
5:15PM	9	16	32	0	**57**	13	25	27	0	**65**	13	124	8	0	**145**	7	141	2	1	**151**	**418**
5:30PM	7	6	25	0	**38**	12	25	21	0	**58**	24	114	8	0	**146**	10	84	2	0	**96**	**338**
Total	22	45	113	0	**180**	55	108	108	0	**271**	63	436	20	0	**519**	34	435	13	1	**483**	**1453**
% Approach	12.2%	25.0%	62.8%	0%	**-**	20.3%	39.9%	39.9%	0%	**-**	12.1%	84.0%	3.9%	0%	**-**	7.0%	90.1%	2.7%	0.2%	**-**	-
% Total	1.5%	3.1%	7.8%	0%	**12.4%**	3.8%	7.4%	7.4%	0%	**18.7%**	4.3%	30.0%	1.4%	0%	**35.7%**	2.3%	29.9%	0.9%	0.1%	**33.2%**	-
PHF	0.611	0.703	0.807	-	**0.789**	0.655	0.730	0.794	-	**0.736**	0.656	0.879	0.625	-	**0.889**	0.708	0.771	0.542	0.250	**0.800**	0.869
Lights	22	44	113	0	**179**	55	107	107	0	**269**	63	429	20	0	**512**	34	432	13	1	**480**	1440
% Lights	100%	97.8%	100%	0%	**99.4%**	100%	99.1%	99.1%	0%	**99.3%**	100%	98.4%	100%	0%	**98.7%**	100%	99.3%	100%	100%	**99.4%**	99.1%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**	0	1	0	0	**1**	2
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.2%	0%	0%	**0.2%**	0%	0.2%	0%	0%	**0.2%**	0.1%
Buses and Single-Unit Trucks	0	1	0	0	**1**	0	1	1	0	**2**	0	6	0	0	**6**	0	2	0	0	**2**	11
% Buses and Single-Unit Trucks	0%	2.2%	0%	0%	**0.6%**	0%	0.9%	0.9%	0%	**0.7%**	0%	1.4%	0%	0%	**1.2%**	0%	0.5%	0%	0%	**0.4%**	0.8%

*L: Left, R: Right, T: Thru, U: U-Turn

SR-605 & Walton Parkway - TMC
Tue Sep 27, 2022
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 993460, Location: 40.09303, -82.812182

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Chelsea Cousins

From: Hwashik Jang <hjang@morpc.org>
Sent: Friday, March 6, 2020 3:16 PM
To: Chelsea Cousins
Cc: Drew Laurent; Nick Gill; Zhuojun Jiang
Subject: RE: Growth Rate Request - New Albany Microbrewery

Chelsea,

We have completed processing growth rates for your study intersection.
Please use linear annual growth rates as summarized below.

Location	Linear Annual Growth Rate
Central College Rd e/o SR 605	1.30%
SR 605 n/o Central College Rd	1.70%
Central College Rd w/o SR 605	1.10%
SR 605 s/o Central College Rd	1.30%

Note: *The above rate was derived based on planning level analysis by using MORPC's regional travel demand model.*

If you have any questions, please let me know.

Thanks,

HWASHIK JANG
Senior Planner | **Mid-Ohio Regional Planning Commission**
T: 614.233.4145 | hjang@morpc.org
111 Liberty Street, Suite 100 | Columbus, OH 43215

From: Chelsea Cousins <ccousins@cmtran.com>
Sent: Monday, February 3, 2020 10:22 AM
To: Hwashik Jang <hjang@morpc.org>; Nick Gill <NGILL@morpc.org>; Zhuojun Jiang <zjiang@morpc.org>
Cc: Drew Laurent <dlaurent@cmtran.com>
Subject: Growth Rate Request - New Albany Microbrewery

All,

We would like to request growth rates for the intersection of New Albany-Condit Road & Central College Road in New Albany, OH. We are conducting a traffic study for a development in the northeast corner of the intersection. The site is proposed to develop as a microbrewery. The opening year will be 2020 with a 10 year horizon. The study will be reviewed by the City of New Albany. See the attached count and preliminary site plan for your use.

Thank you,

Chelsea Cousins, EIT

Segment	2020 Count ADT	2050 MORPC ADT	ADT Site Traffic Removed	2050 No Build ADT	Growth Rate
New Albany Road W- West of New Albany Rd	19100	21400	382	21018	1.00%
New Albany Road E- East of New Albany Rd	17900	24900	0	24900	1.30%
New Albany Road- New Albany Rd to SR-161 Westbound Ramps	30300	37400	382	37018	1.00%
New Albany Road- SR-161 Westbound Ramps to SR-161 Eastbound Ramps	22400	27300	3917	23383	1.00%
New Albany Road- SR-161 Eastbound Ramps to Fodor Rd	13900	17200	7452	9748	1.00%
SR-161 Eastbound Exit Ramp to New Albany Rd	12800	16000	3535	12465	1.00%
SR-161 Westbound Exit Ramp to New Albany Rd	3400	3300	0	3300	1.00%
Fodor Road- West of New Albany Rd	5700	5900	0	5900	1.00%
Fodor Road- New Albany Rd to Dublin Granville Road	9000	11200	7452	3748	1.00%
Swickard Woods Boulevard- North of Fodor Rd	900	1800	0	1800	3.00%
Dublin Granville Road- West of Fodor Rd/Market St	6800	13700	647	13053	3.00%
Dublin Granville Road- Fodor Rd/Market St to High St	3300	7900	2520	5380	2.10%
Dublin Granville Road- High St to Kitzmiller Rd	2800	5000	560	4440	1.95%
Dublin Granville Road- East of Kitzmiller Rd	3000	6800	0	6800	3.00%
Kitzmiller Road- North of Dublin Granville Rd	3900	10300	0	10300	3.00%
Kitzmiller Road- South of Dublin Granville Rd	2600	5400	0	5400	3.00%
Market Street- Dublin Granville Rd to Main St	9600	16000	4553	11447	1.00%
Market Street- Main St to High St	4000	7400	2515	4885	1.00%
Main Street- South of Market St to Thurston Hall Blvd/Theisen Rd	9200	14600	6145	8455	1.00%
Johnstown Road- Thurston Hall Blvd/Theisen Rd to SR-161 Eastbound Ramps	9500	16300	9758	6542	1.00%
Johnstown Road- SR-161 Eastbound Ramps to SR-161 Westbound Ramps	17600	25100	5526	19574	1.00%

Segment	2020 Count ADT	2050 MORPC ADT	ADT Site Traffic Removed	2050 No Build ADT	Growth Rate
Johnstown Road- SR-161 Westbound Ramps to Walton Pkwy	26200	37700	1294	36406	1.30%
SR-161 Eastbound Exit Ramp to Johnstown Rd	10600	13100	348	12752	1.00%
SR-161 Westbound Exit Ramp to Johnstown Rd	2500	4600	3884	716	1.00%
High Street/New Albany-Condit Road- South of Market St to Walton Pkwy	9000	15500	1781	13719	1.75%
New Albany-Condit Road- North of Walton Pkwy	9600	14200	1105	13095	1.21%
Walton Parkway- New Albany Rd to East of New Albany-Condit Rd	3800	9100	0	9100	3.00%
3rd Street- Dublin Granville Rd to Main St	700	400	1492	-1092	1.00%

*If the calculated growth rate was less than 1%, a minimum of 1% was used. Likewise, if the calculated growth rate was greater than 3%, a maximum of 3% was used.

Appendix C
Trip Generation

CARPENTER MARTY transportation

Scenario - 1

Scenario Name: AM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	General Urban/Suburban	Dwelling Units	40	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)	8	27	35
Data Source: Trip Generation Manual, 11th Ed					T = 0.31(X) + 22.85	24%	76%	
215 - Single-Family Attached Housing	General Urban/Suburban	Dwelling Units	116	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)	17	38	55
Data Source: Trip Generation Manual, 11th Ed					T = 0.52(X) - 5.70	31%	69%	
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	32	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG)	7	20	27
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.91Ln(X) + 0.12	26%	74%	
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	17.5	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG)	33	4	37
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.86Ln(X) + 1.16	88%	12%	
822 - Strip Retail Plaza (<40k)	General Urban/Suburban	1000 Sq. Ft. GLA	30	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG)	36	24	60
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.66Ln(X) + 1.84	60%	40%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	100	100	1	1	24	76
215 - Single-Family Attached Housing	100	100	1	1	31	69
210 - Single-Family Detached Housing	100	100	1	1	26	74
710 - General Office Building	99	100	1.1	1.1	88	12
822 - Strip Retail Plaza (<40k)	100	100	1	1	60	40

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	8	27	0	0	8	27
	35		0		35	
215 - Single-Family Attached Housing	17	38	0	0	17	38
	55		0		55	
210 - Single-Family Detached Housing	7	20	0	0	7	20
	27		0		27	
710 - General Office Building	36	5	0	0	36	5
	41		0		41	
822 - Strip Retail Plaza (<40k)	36	24	0	0	36	24
	60		0		60	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	Residential
215 - Single-Family Attached Housing	Residential
210 - Single-Family Detached Housing	Residential
710 - General Office Building	Office
822 - Strip Retail Plaza (<40k)	Retail

BALANCED PERSON TRIPS:

220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit

215 - Single-Family Attached Housing

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
27	1	0	0	**0**	0	0	1	17
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**
8	1	0	0	**0**	0	0	1	38

220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit								210 - Single-Family Detached Housing
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
27	1	0	0	**0**	0	0	1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
8	1	0	0	**0**	0	0	1	20

220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit								710 - General Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
27	1	0.6666666666666666	0	**0**	0	1	1	37
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
8	1	0	0	**0**	0	0.3333333333333333	1	5

220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
27	1	0.3333333333333333	0	**0**	2	5.666666666666667	1	36
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
8	1	0.6666666666666666	0	**0**	1	4.666666666666667	1	24

215 - Single-Family Attached Housing								210 - Single-Family Detached Housing
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
38	1	0	0	**0**	0	0	1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
17	1	0	0	**0**	0	0	1	20

215 - Single-Family Attached Housing								710 - General Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
38	1	0.6666666666666666	0	**0**	0	1	1	37
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
17	1	0	0	**0**	0	0.3333333333333333	1	5

215 - Single-Family Attached Housing								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
38	1	0.3333333333333333	0	**0**	2	5.666666666666667	1	36
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
17	1	0.6666666666666666	0	**0**	1	4.666666666666667	1	24

210 - Single-Family Detached Housing								710 - General Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
20	1	0.6666666666666666	0	**0**	0	1	1	37
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
7	1	0	0	**0**	0	0.3333333333333333	1	5

210 - Single-Family Detached Housing								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
20	1	0.3333333333333333	0	**0**	2	5.666666666666667	1	36
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
7	1	0.6666666666666666	0	**0**	1	4.666666666666667	1	24

710 - General Office Building								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
5	1	28	1	**1**	11	32	1	36

Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
37	1	4	1	**1**	7	29	1	24

INTERNAL PERSON TRIPS:

220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit

Internal Person Trips From	Entry	Exit	Total
215 - Single-Family Attached Housing	0	0	0
210 - Single-Family Detached Housing	0	0	0
710 - General Office Building	0	0	0
822 - Strip Retail Plaza (<40k)	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

215 - Single-Family Attached Housing

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit	0	0	0
210 - Single-Family Detached Housing	0	0	0
710 - General Office Building	0	0	0
822 - Strip Retail Plaza (<40k)	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

210 - Single-Family Detached Housing

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit	0	0	0
215 - Single-Family Attached Housing	0	0	0
710 - General Office Building	0	0	0
822 - Strip Retail Plaza (<40k)	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

710 - General Office Building

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit	0	0	0
215 - Single-Family Attached Housing	0	0	0
210 - Single-Family Detached Housing	0	0	0
822 - Strip Retail Plaza (<40k)	1	1	3
Total Internal Person Trips	**1**	**1**	**2**

822 - Strip Retail Plaza (<40k)

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit	0	0	0
215 - Single-Family Attached Housing	0	0	0
210 - Single-Family Detached Housing	0	0	0
710 - General Office Building	1	1	3
Total Internal Person Trips	**1**	**1**	**2**

INTERNAL VEHICLE TRIPS AND CAPTURE:

220 - Multifamily Housing (Low-Rise)-Not Close to Rail Transit

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	8	27	35
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

215 - Single-Family Attached Housing

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	17	38	55
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

210 - Single-Family Detached Housing

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-

Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	7	20	27
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

710 - General Office Building

Total Internal Person Trips	1	1	2
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**1**	**1**	**2**
Total External Vehicle Trips	32	3	35
Internal Vehicle Trip Capture	**3%**	**22%**	**0%**

822 - Strip Retail Plaza (<40k)

Total Internal Person Trips	1	1	2
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**1**	**1**	**2**
Total External Vehicle Trips	35	23	58
Internal Vehicle Trip Capture	**3%**	**4%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	8	27	0.00%	0.00%	0	0
215 - Single-Family Attached Housing	17	38	0.00%	0.00%	0	0
210 - Single-Family Detached Housing	7	20	0.00%	0.00%	0	0
710 - General Office Building	32	3	0.00%	0.00%	0	0
822 - Strip Retail Plaza (<40k)	35	23	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	8	27	0.00%	0.00%	0	0
215 - Single-Family Attached Housing	17	38	0.00%	0.00%	0	0
210 - Single-Family Detached Housing	7	20	0.00%	0.00%	0	0
710 - General Office Building	32	3	0.00%	0.00%	0	0
822 - Strip Retail Plaza (<40k)	35	23	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	8	27	0.00%	0.00%	0	0
215 - Single-Family Attached Housing	17	38	0.00%	0.00%	0	0
210 - Single-Family Detached Housing	7	20	0.00%	0.00%	0	0
710 - General Office Building	32	3	0.00%	0.00%	0	0
822 - Strip Retail Plaza (<40k)	35	23	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise) - Not Close to Rail Transit	8	27	35
215 - Single-Family Attached Housing	17	38	55
210 - Single-Family Detached Housing	7	20	27
710 - General Office Building	32	3	35
822 - Strip Retail Plaza (<40k)	35	23	58

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	101	113	214

Internal Vehicle Trips	2	2	4
External Vehicle Trips	99	111	210
Internal Vehicle Trip Capture	2%	2%	2%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	99	111	210

Scenario - 2

Scenario Name: PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	General Urban/Suburban	Dwelling Units	40	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	15	10	25
Data Source: Trip Generation Manual, 11th Ed					0.61	60%	40%	
215 - Single-Family Attached Housing	General Urban/Suburban	Dwelling Units	116	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN)	37	28	65
Data Source: Trip Generation Manual, 11th Ed					T = 0.60(X) - 3.93	57%	43%	
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	32	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	21	13	34
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.94Ln(X) + 0.27	63%	37%	
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	17.5	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	7	32	39
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.83Ln(X) + 1.29	17%	83%	
822 - Strip Retail Plaza (<40k)	General Urban/Suburban	1000 Sq. Ft. GLA	30	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	85	85	170
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.71Ln(X) + 2.72	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	100	100	1	1	60	40
215 - Single-Family Attached Housing	100	100	1	1	57	43
210 - Single-Family Detached Housing	100	100	1	1	63	37
710 - General Office Building	100	99	1.1	1.1	17	83
822 - Strip Retail Plaza (<40k)	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	15	10	0	0	15	10
	25		0		25	
215 - Single-Family Attached Housing	37	28	0	0	37	28
	65		0		65	
210 - Single-Family Detached Housing	21	13	0	0	21	13
	34		0		34	
710 - General Office Building	7	36	0	0	7	36
	43		0		43	
822 - Strip Retail Plaza (<40k)	85	85	0	0	85	85
	170		0		170	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	Residential
215 - Single-Family Attached Housing	Residential
210 - Single-Family Detached Housing	Residential
710 - General Office Building	Office
822 - Strip Retail Plaza (<40k)	Retail

BALANCED PERSON TRIPS:

220 - Multifamily Housing (Low-Rise)-Close to Rail Transit

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
10	1	0	0	**0**	0	0	1	37
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**
15	1	0	0	**0**	0	0	1	28

215 - Single-Family Attached Housing

220 - Multifamily Housing (Low-Rise)-Close to Rail Transit								210 - Single-Family Detached Housing
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
10	1	0	0	**0**	0	0	1	21
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
15	1	0	0	**0**	0	0	1	13

220 - Multifamily Housing (Low-Rise)-Close to Rail Transit								710 - General Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
10	1	1.3333333333333333	0	**0**	1	19	1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
15	1	1.3333333333333333	0	**0**	0	0.6666666666666666	1	36

220 - Multifamily Housing (Low-Rise)-Close to Rail Transit								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
10	1	14	1	**1**	3	3.3333333333333335	1	85
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
15	1	15.333333333333334	2	**2**	7	8.666666666666666	1	85

215 - Single-Family Attached Housing								210 - Single-Family Detached Housing
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
28	1	0	0	**0**	0	0	1	21
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
37	1	0	0	**0**	0	0	1	13

215 - Single-Family Attached Housing								710 - General Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
28	1	1.3333333333333333	0	**0**	1	19	1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
37	1	1.3333333333333333	0	**0**	0	0.6666666666666666	1	36

215 - Single-Family Attached Housing								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
28	1	14	4	**3**	3	3.3333333333333335	1	85
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
37	1	15.333333333333334	6	**6**	7	8.666666666666666	1	85

210 - Single-Family Detached Housing								710 - General Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
13	1	1.3333333333333333	0	**0**	1	19	1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
21	1	1.3333333333333333	0	**0**	0	0.6666666666666666	1	36

210 - Single-Family Detached Housing								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
13	1	14	2	**2**	3	3.3333333333333335	1	85
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
21	1	15.333333333333334	3	**3**	7	8.666666666666666	1	85

710 - General Office Building								822 - Strip Retail Plaza (<40k)
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
36	1	20	7	**7**	7	8	1	85

Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
7	1	31	2	**2**	2	2	1	85

INTERNAL PERSON TRIPS:

220 - Multifamily Housing (Low-Rise)-Close to Rail Transit

Internal Person Trips From	Entry	Exit	Total
215 - Single-Family Attached Housing	0	0	0
210 - Single-Family Detached Housing	0	0	0
710 - General Office Building	0	0	0
822 - Strip Retail Plaza (<40k)	2	1	4
Total Internal Person Trips	**2**	**1**	**3**

215 - Single-Family Attached Housing

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Close to Rail Transit	0	0	0
210 - Single-Family Detached Housing	0	0	0
710 - General Office Building	0	0	1
822 - Strip Retail Plaza (<40k)	6	3	9
Total Internal Person Trips	**6**	**3**	**9**

210 - Single-Family Detached Housing

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Close to Rail Transit	0	0	0
215 - Single-Family Attached Housing	0	0	0
710 - General Office Building	0	0	0
822 - Strip Retail Plaza (<40k)	3	2	5
Total Internal Person Trips	**3**	**2**	**5**

710 - General Office Building

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Close to Rail Transit	0	0	0
215 - Single-Family Attached Housing	0	0	1
210 - Single-Family Detached Housing	0	0	0
822 - Strip Retail Plaza (<40k)	2	7	8
Total Internal Person Trips	**2**	**7**	**9**

822 - Strip Retail Plaza (<40k)

Internal Person Trips From	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)-Close to Rail Transit	1	2	4
215 - Single-Family Attached Housing	3	6	9
210 - Single-Family Detached Housing	2	3	5
710 - General Office Building	7	2	8
Total Internal Person Trips	**13**	**13**	**26**

INTERNAL VEHICLE TRIPS AND CAPTURE:

220 - Multifamily Housing (Low-Rise)-Close to Rail Transit

Total Internal Person Trips	2	1	3
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**2**	**1**	**3**
Total External Vehicle Trips	13	9	22
Internal Vehicle Trip Capture	**14%**	**10%**	**0%**

215 - Single-Family Attached Housing

Total Internal Person Trips	6	3	9
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**6**	**3**	**9**
Total External Vehicle Trips	31	25	56
Internal Vehicle Trip Capture	**16%**	**11%**	**0%**

210 - Single-Family Detached Housing

Total Internal Person Trips	3	2	5
Vehicle Mode Share	100%	100%	-

Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**3**	**2**	**5**
Total External Vehicle Trips	18	11	29
Internal Vehicle Trip Capture	**14%**	**16%**	**0%**

710 - General Office Building

Total Internal Person Trips	2	7	9
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**2**	**7**	**9**
Total External Vehicle Trips	5	25	30
Internal Vehicle Trip Capture	**30%**	**22%**	**0%**

822 - Strip Retail Plaza (<40k)

Total Internal Person Trips	13	13	26
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**13**	**13**	**26**
Total External Vehicle Trips	72	72	144
Internal Vehicle Trip Capture	**15%**	**15%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	13	9	0.00%	0.00%	0	0
215 - Single-Family Attached Housing	31	25	0.00%	0.00%	0	0
210 - Single-Family Detached Housing	18	11	0.00%	0.00%	0	0
710 - General Office Building	5	25	0.00%	0.00%	0	0
822 - Strip Retail Plaza (<40k)	72	72	34.00%	34.00%	24	24

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	13	9	0.00%	0.00%	0	0
215 - Single-Family Attached Housing	31	25	0.00%	0.00%	0	0
210 - Single-Family Detached Housing	18	11	0.00%	0.00%	0	0
710 - General Office Building	5	25	0.00%	0.00%	0	0
822 - Strip Retail Plaza (<40k)	72	72	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	13	9	0.00%	0.00%	0	0
215 - Single-Family Attached Housing	31	25	0.00%	0.00%	0	0
210 - Single-Family Detached Housing	18	11	0.00%	0.00%	0	0
710 - General Office Building	5	25	0.00%	0.00%	0	0
822 - Strip Retail Plaza (<40k)	48	48	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise) - Close to Rail Transit	13	9	22
215 - Single-Family Attached Housing	31	25	56
210 - Single-Family Detached Housing	18	11	29
710 - General Office Building	5	25	30
822 - Strip Retail Plaza (<40k)	48	48	96

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	165	168	333

Internal Vehicle Trips	26	26	52
External Vehicle Trips	139	142	281
Internal Vehicle Trip Capture	16%	15%	16%
Pass-by Vehicle Trips	24	24	48
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	115	118	233

Scenario - 2

Scenario Name: Background AM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	333.2	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)	292	48	340
Data Source: Trip Gen Manual, 10th Ed +					T = 0.94(X) + 26.49	86%	14%	
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	50	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)	10	30	40
Data Source: Trip Gen Manual, 10th Ed +					T = 0.71(X) + 4.80	25%	75%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
710 - General Office Building	100	100	1	1	86	14
210 - Single-Family Detached Housing	100	100	1	1	25	75

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
710 - General Office Building	292	48	0	0	292	48
	340		0		340	
210 - Single-Family Detached Housing	10	30	0	0	10	30
	40		0		40	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
710 - General Office Building	292	48	340
210 - Single-Family Detached Housing	10	30	40

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	302	78	380
External Vehicle Trips	302	78	380
New Vehicle Trips	302	78	380

Scenario - 3

Scenario Name: Background PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	333.2	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	57	300	357
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.95Ln(X) + 0.36	16%	84%	
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	50	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	33	19	52
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.96Ln(X) + 0.20	63%	37%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
710 - General Office Building	100	100	1	1	16	84
210 - Single-Family Detached Housing	100	100	1	1	63	37

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
710 - General Office Building	57	300	0	0	57	300
	357		0		357	
210 - Single-Family Detached Housing	33	19	0	0	33	19
	52		0		52	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
710 - General Office Building	57	300	357
210 - Single-Family Detached Housing	33	19	52

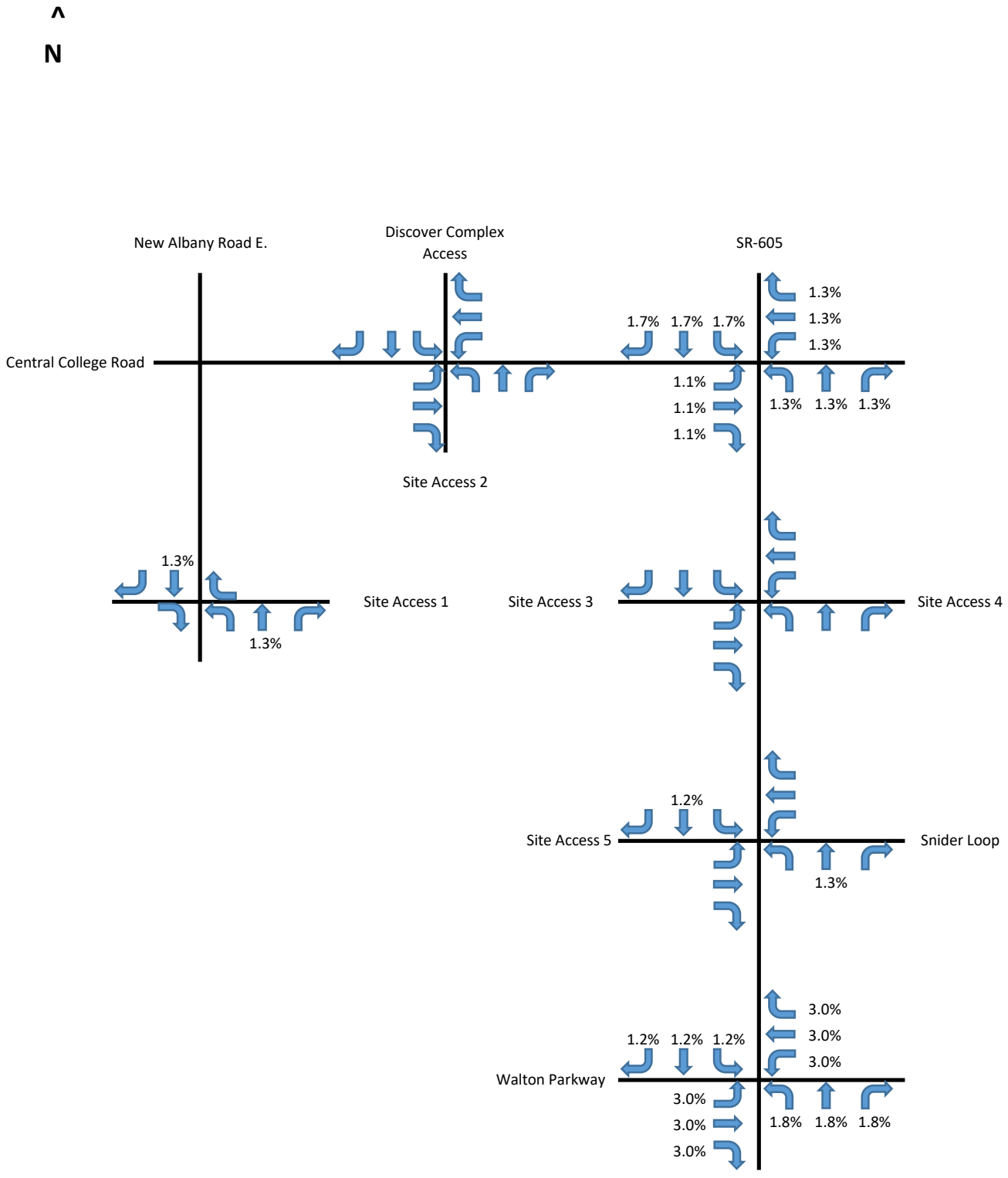
RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	90	319	409
External Vehicle Trips	90	319	409
New Vehicle Trips	90	319	409

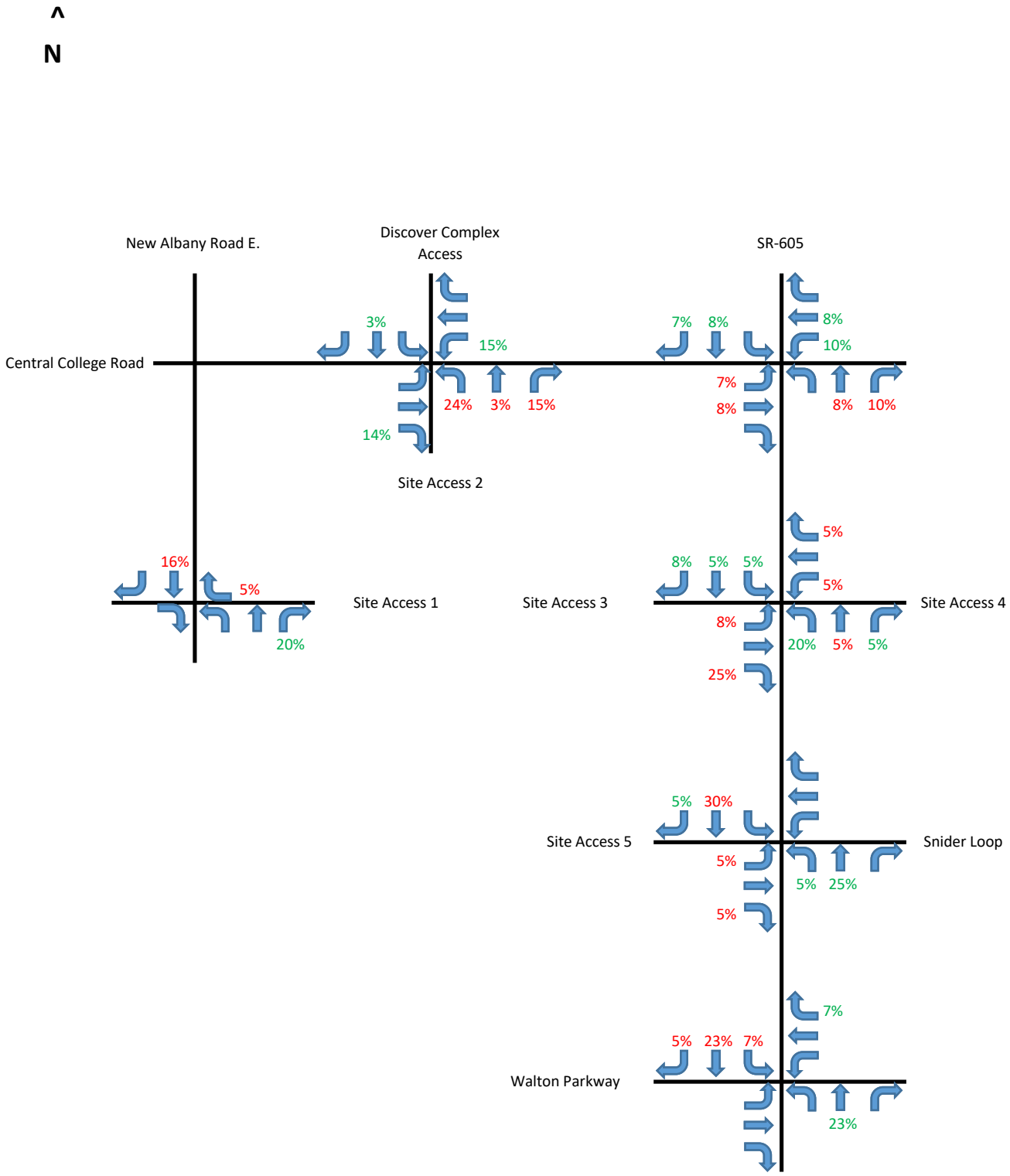
Appendix D
Volume Calculations

CARPENTER MARTY transportation

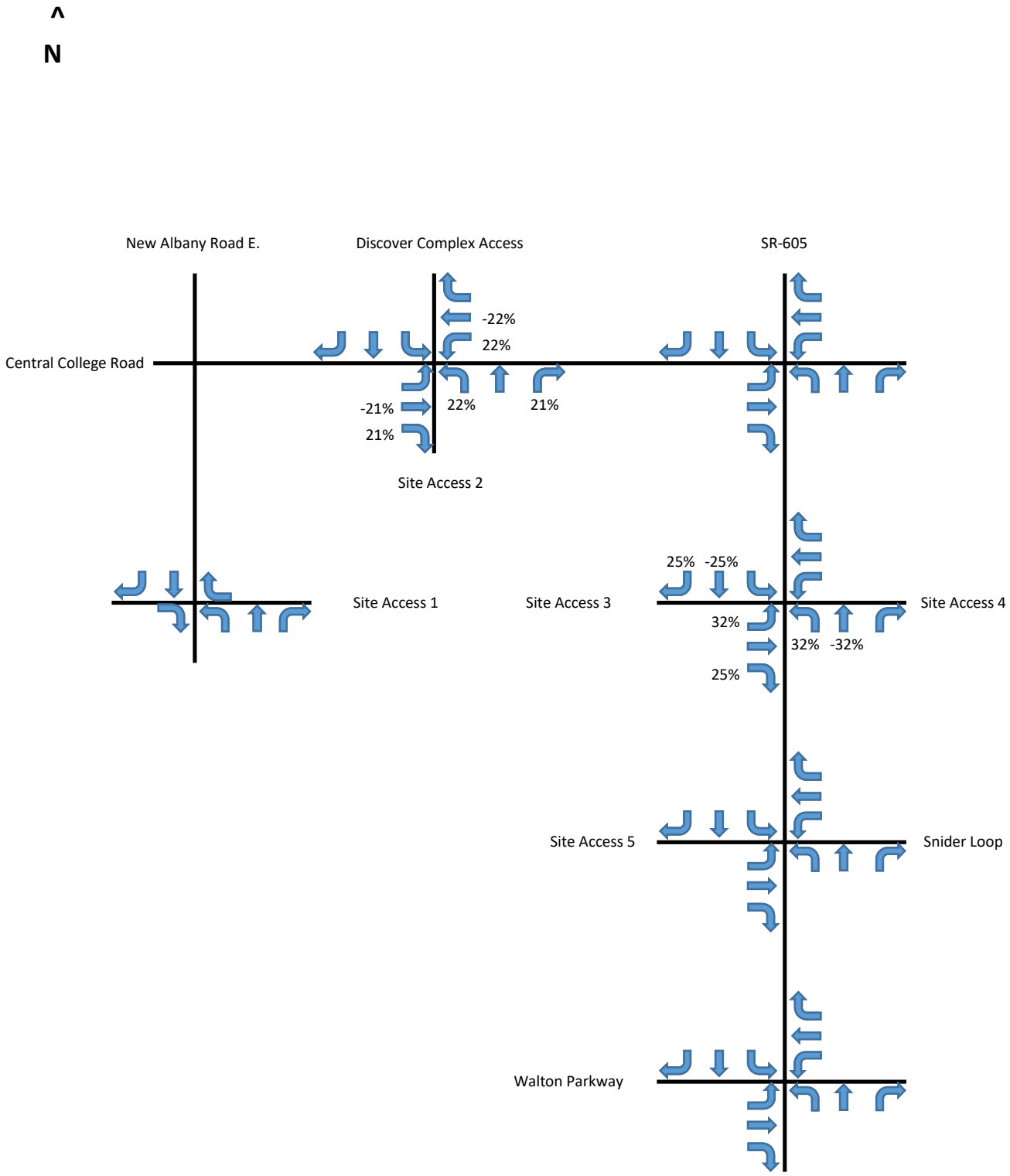
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
			Growth Rates	



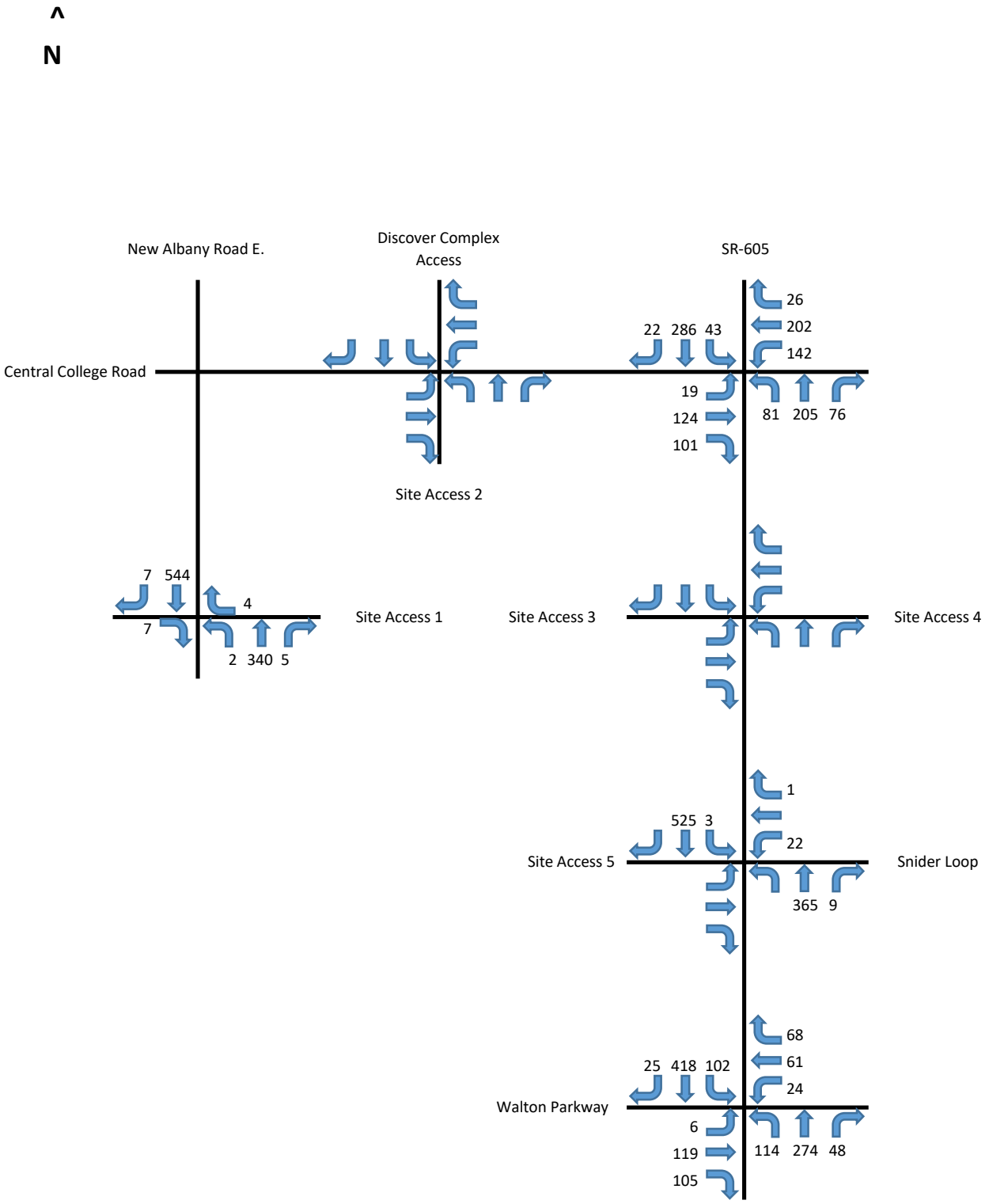
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
			Non-Pass-By Distribution	



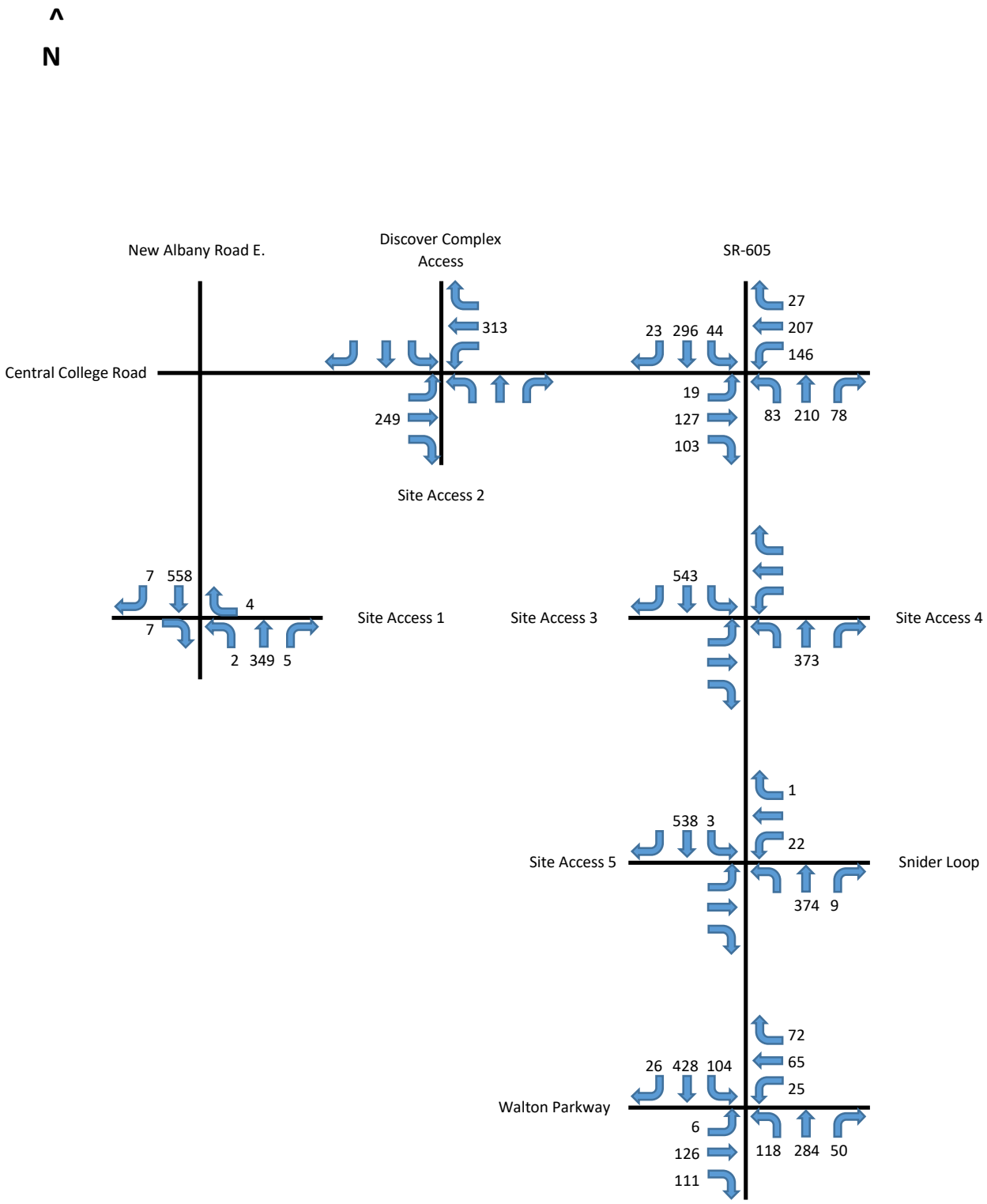
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
			Pass-By Distribution	



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2022	AM	Count	



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	AM	Background	A1

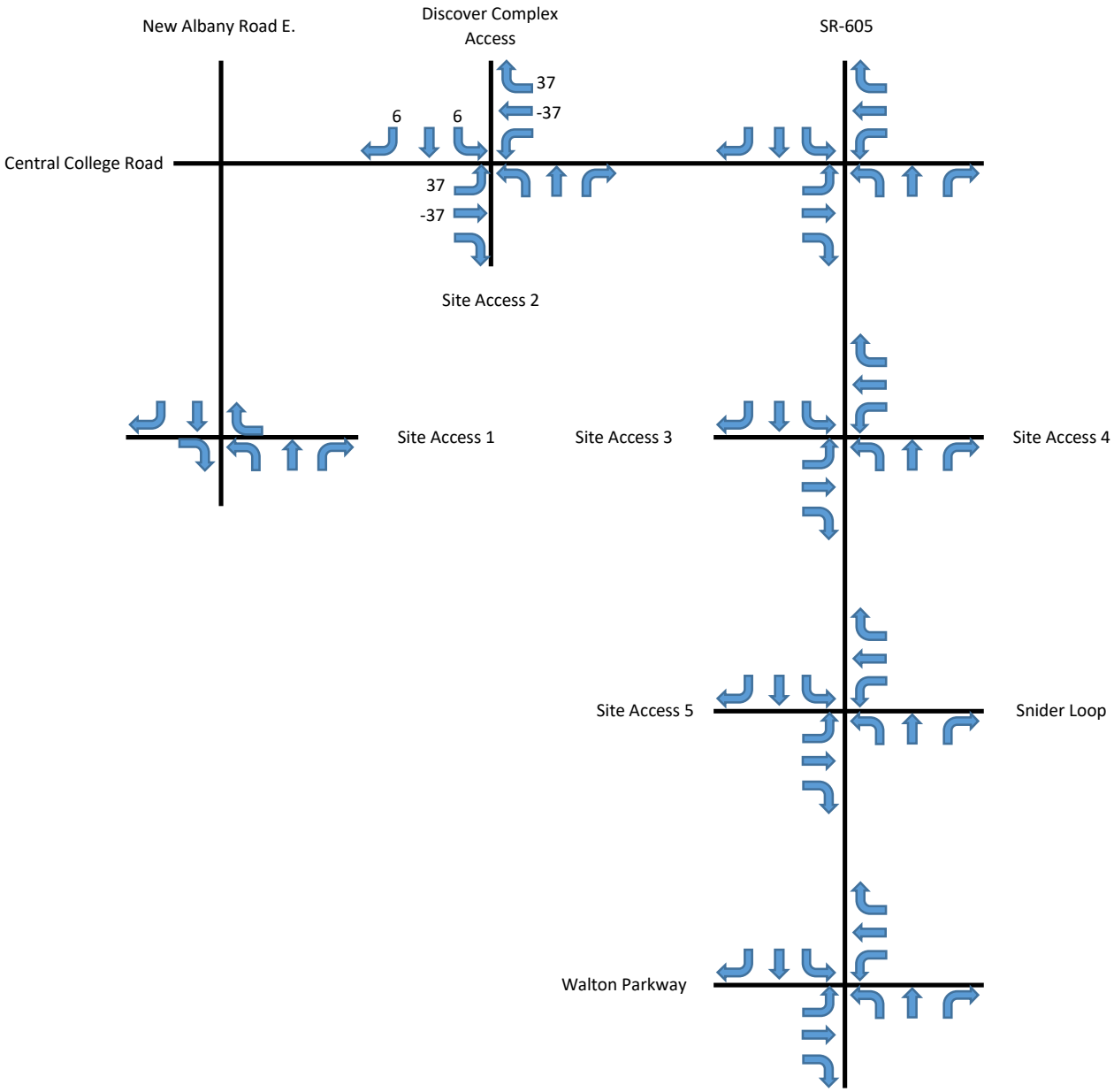


CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Background Traffic - Discover Office Building	B1

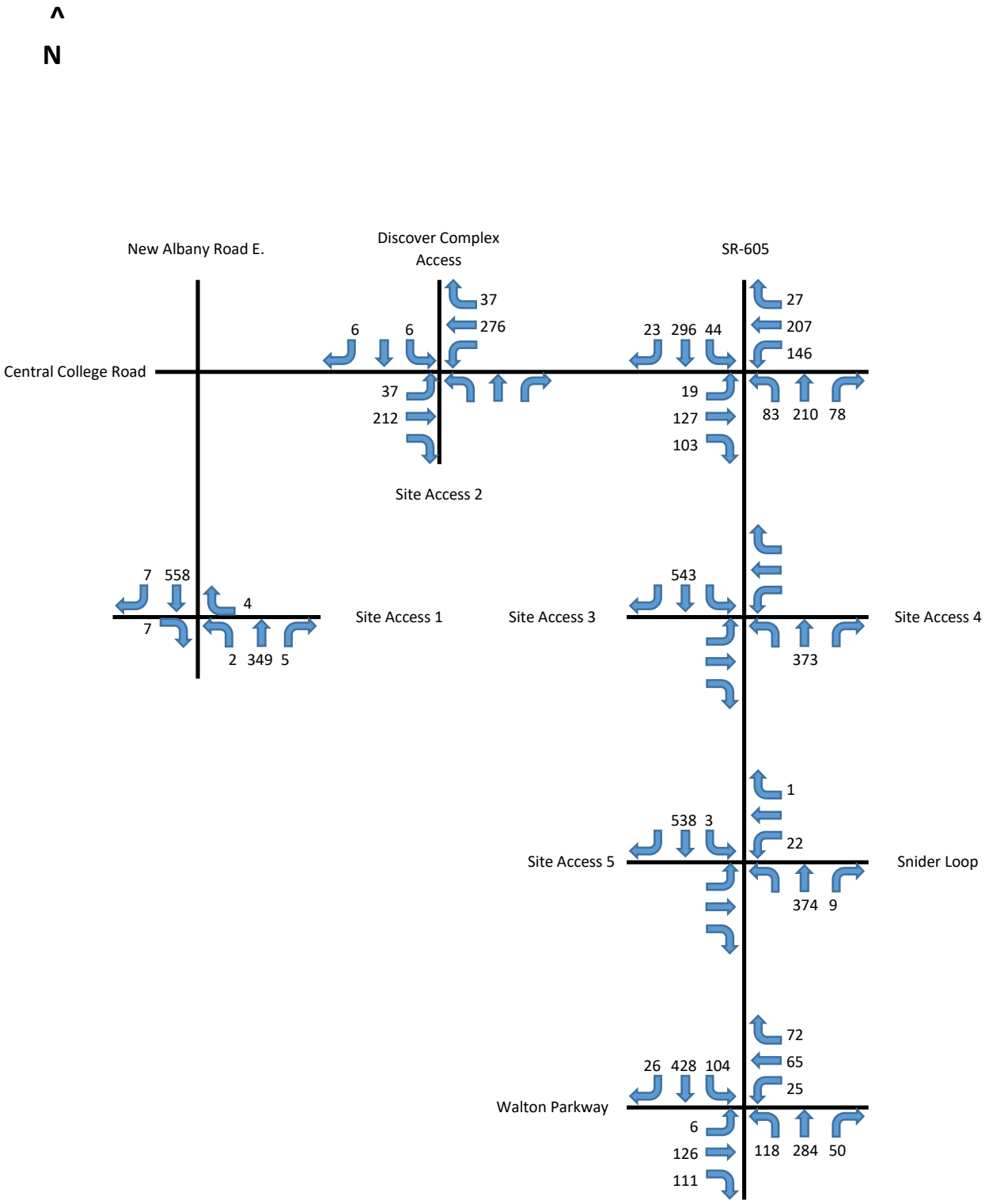
^
N

	Total	Using Access
Entry	292	73
Exit	48	12

* It was assumed that 25% of the traffic generated by the Discover office building utilizes the Central College Road access. It was also assumed that there was an even 50/50 split coming from/going to the east/west.



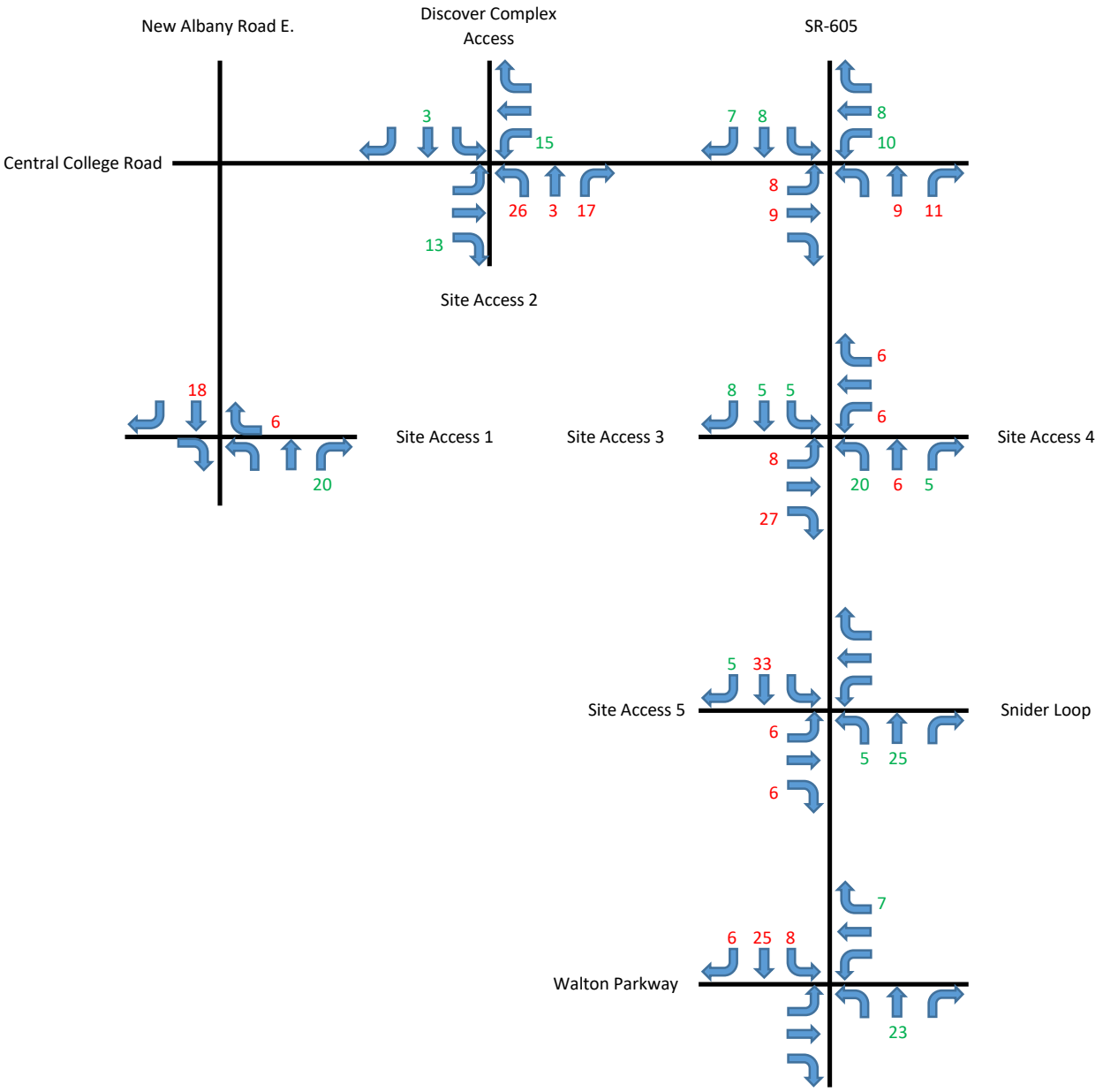
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	AM	No Build	C1 = A1 + B1



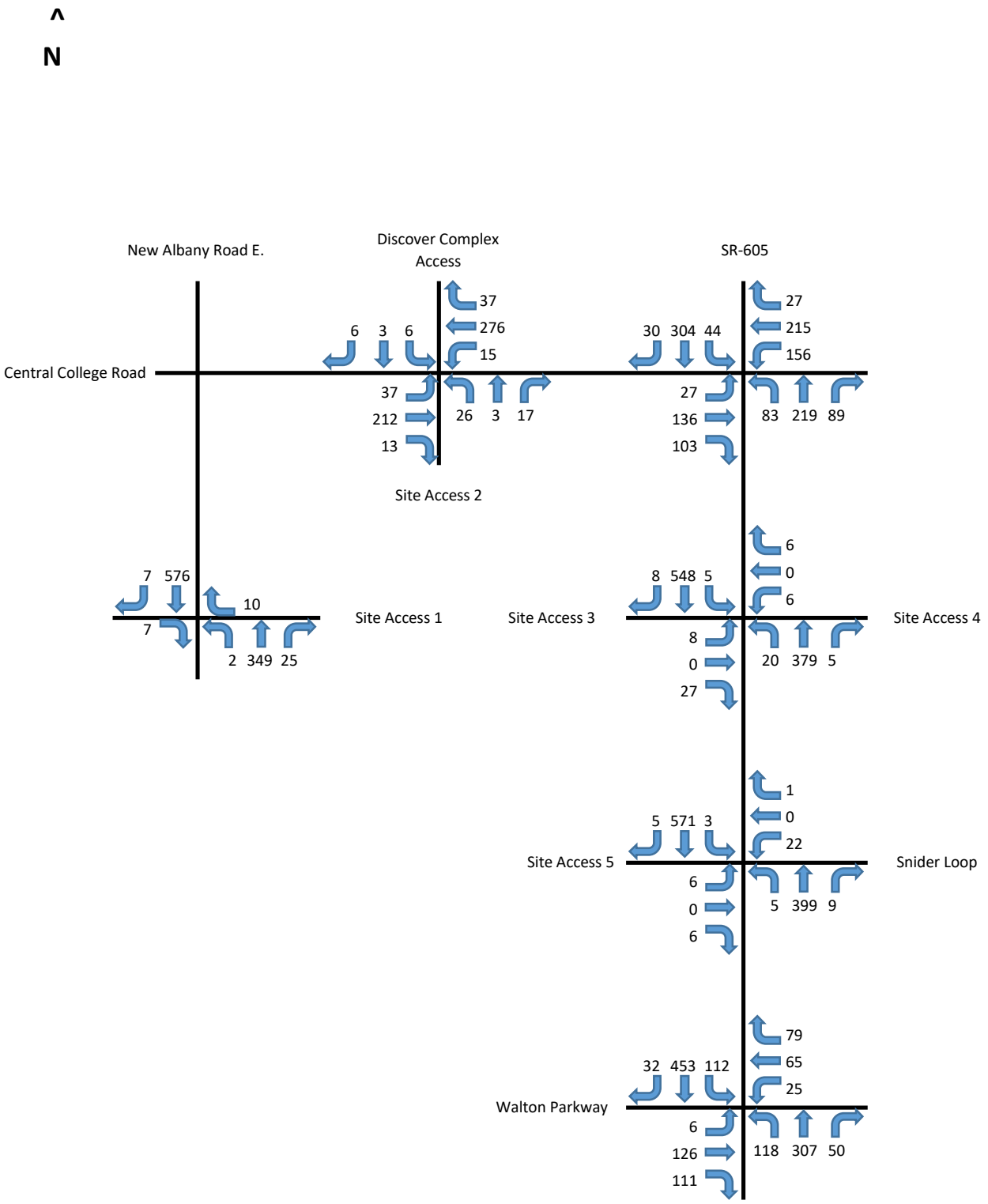
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Non-Pass-By Traffic	D1

^
N

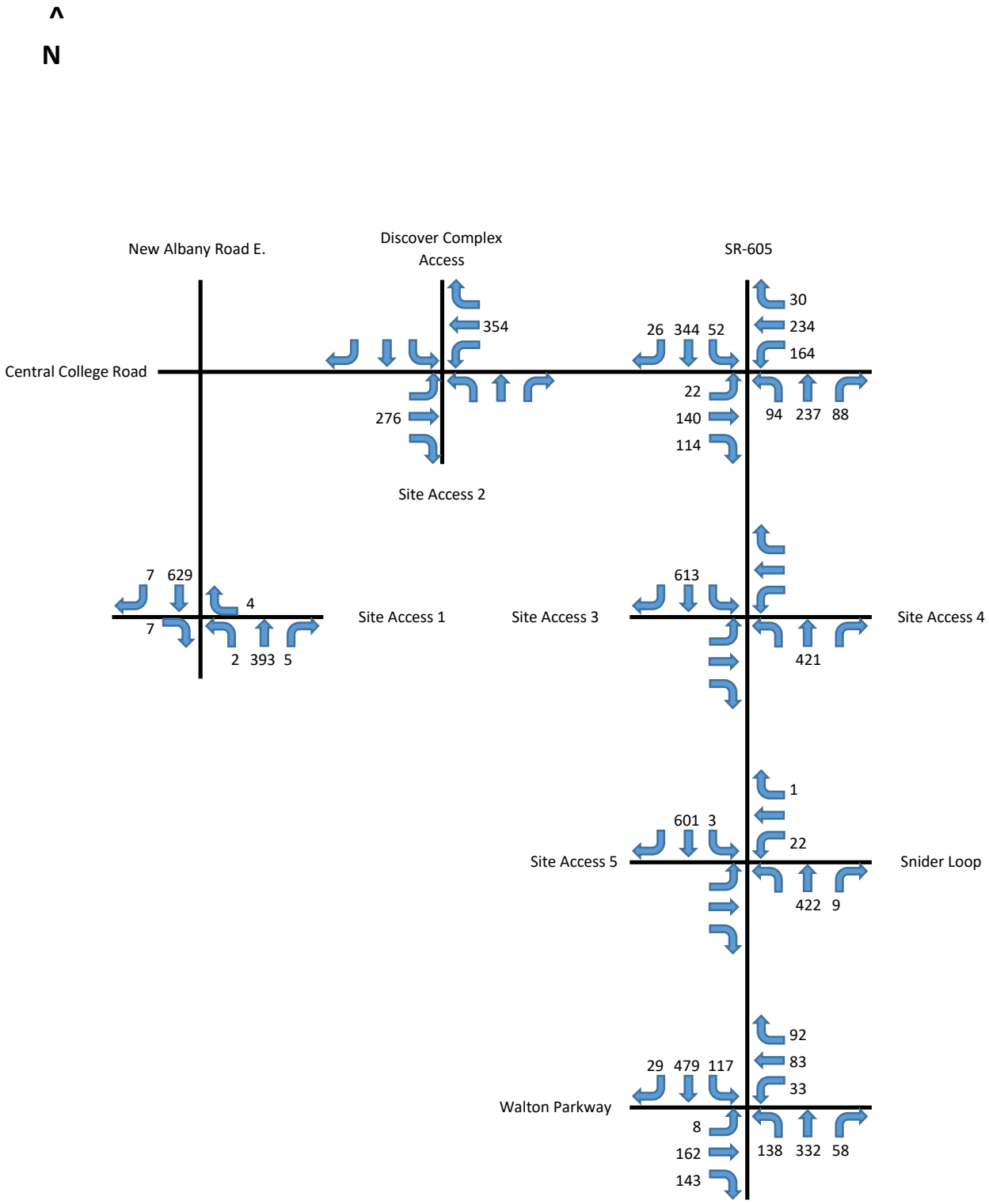
Entry 99
Exit 111



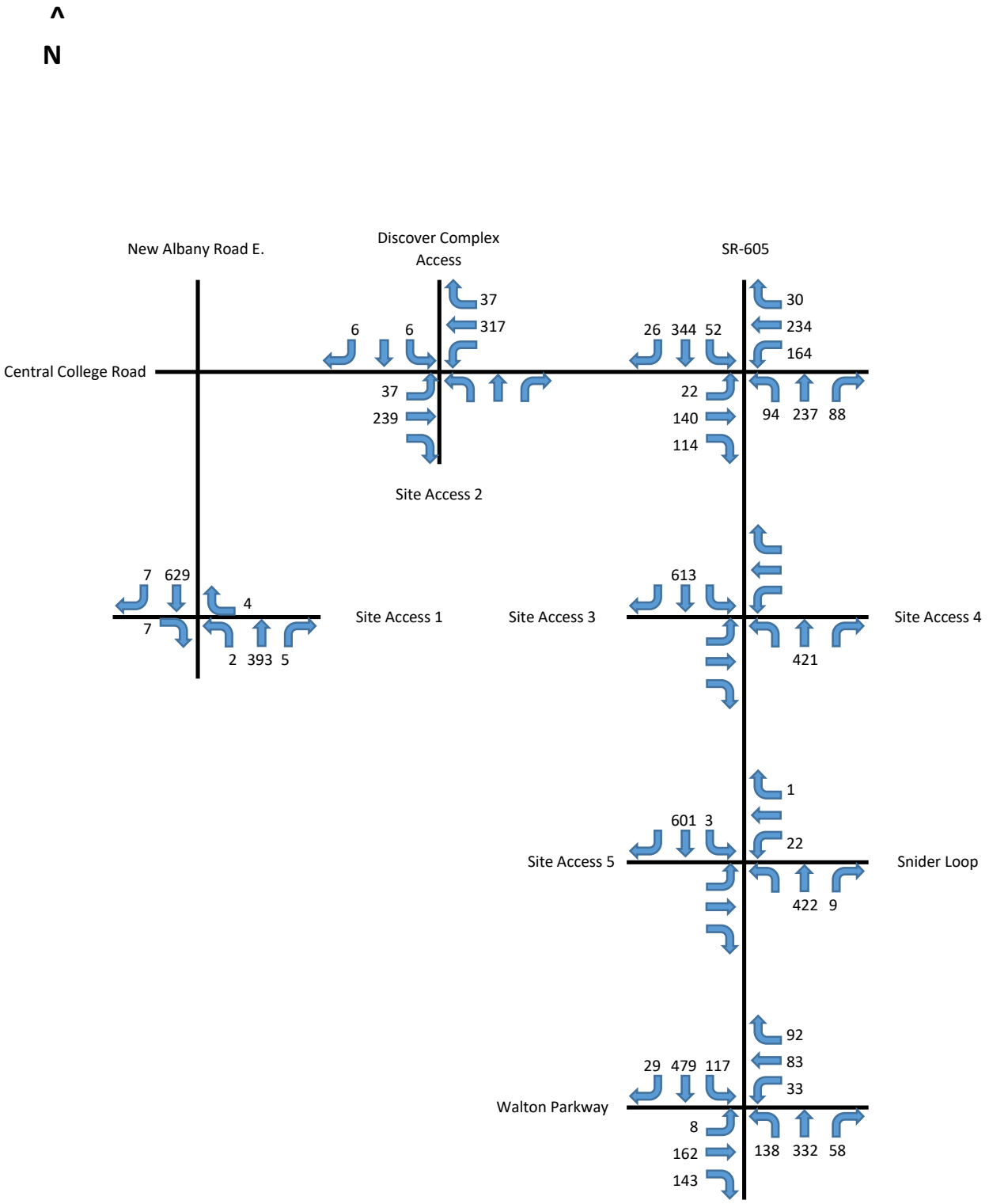
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	AM	Build	E1 = C1 + D1



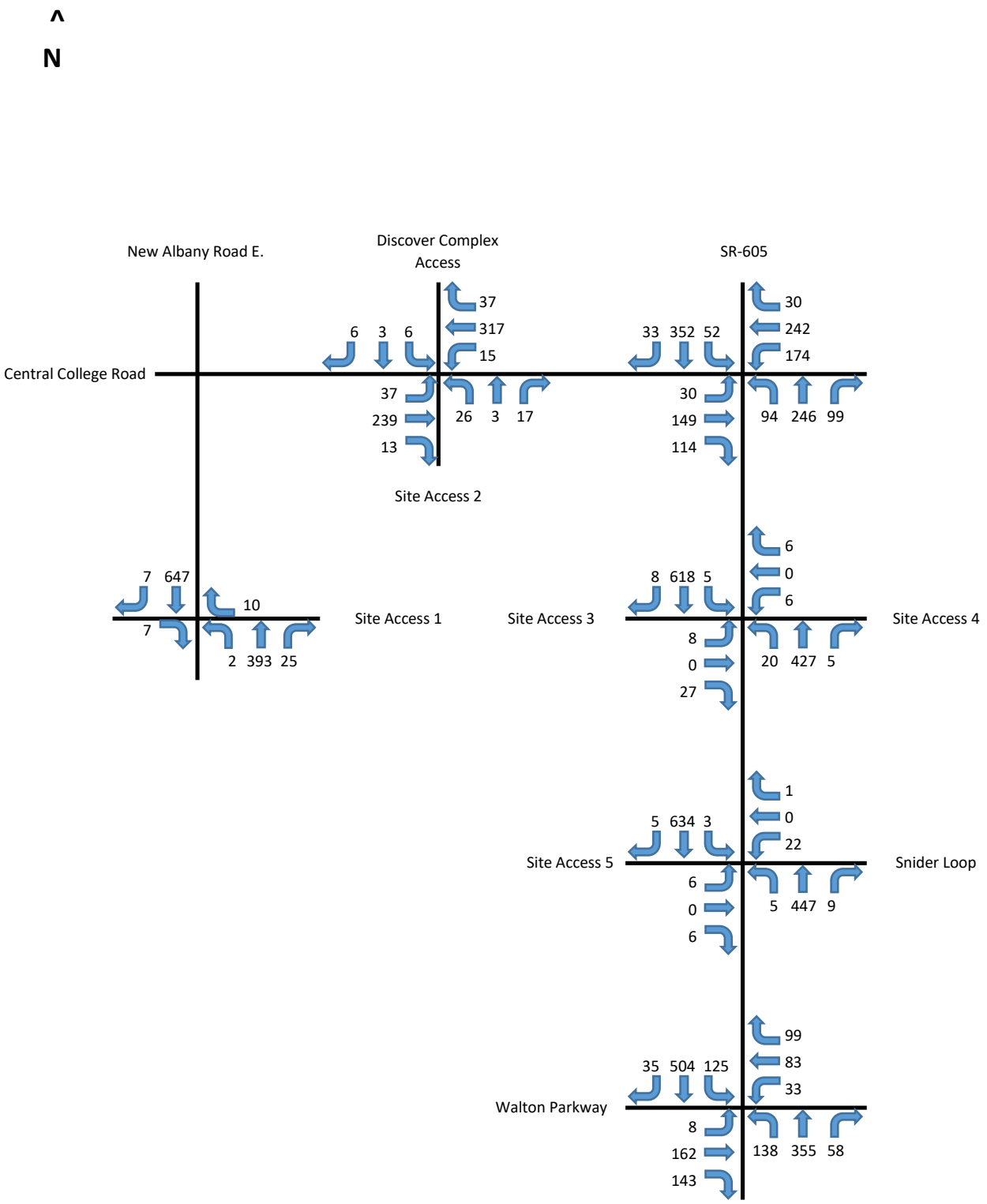
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	AM	Background	F1



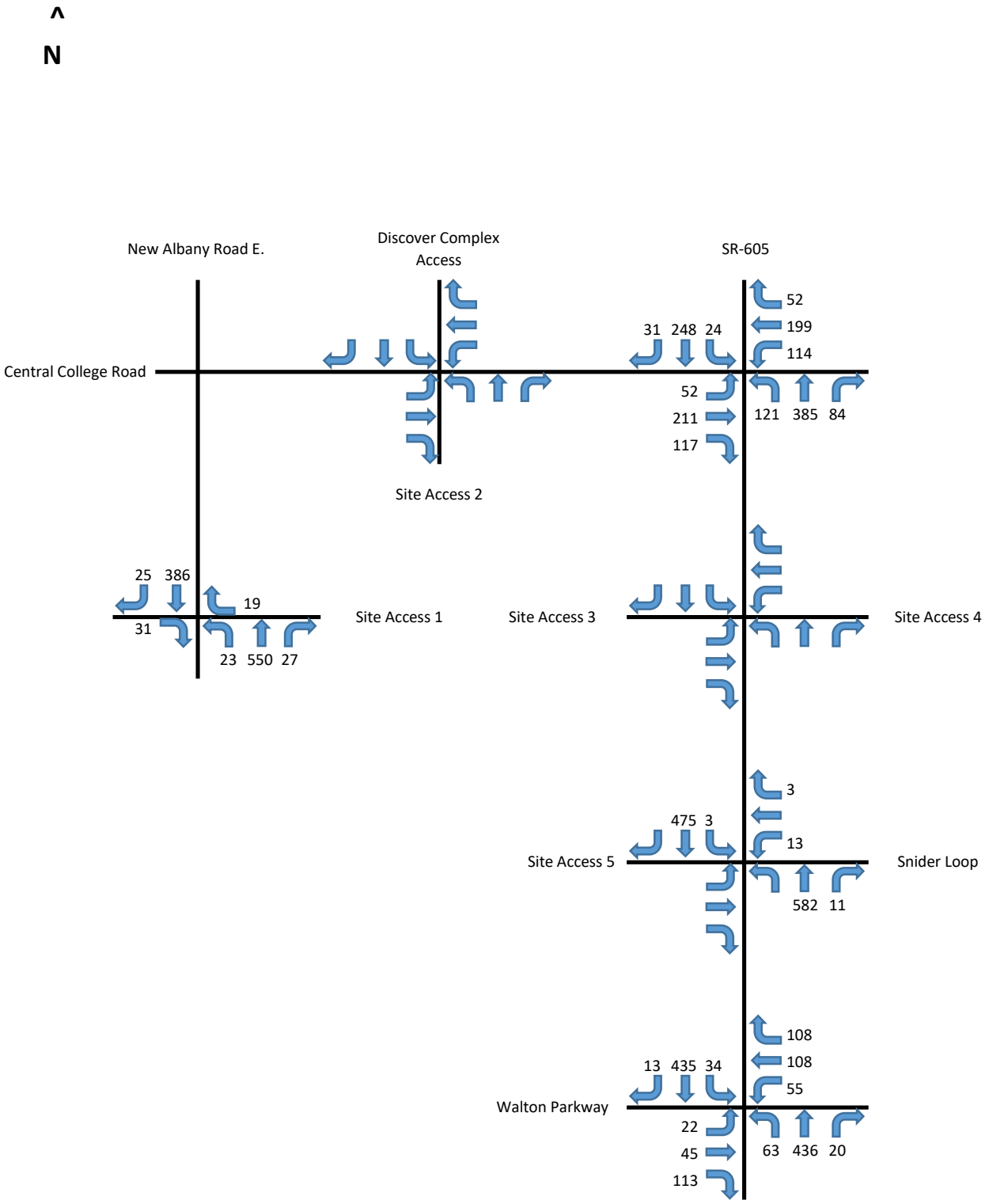
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	AM	No Build	G1 = B1 + F1



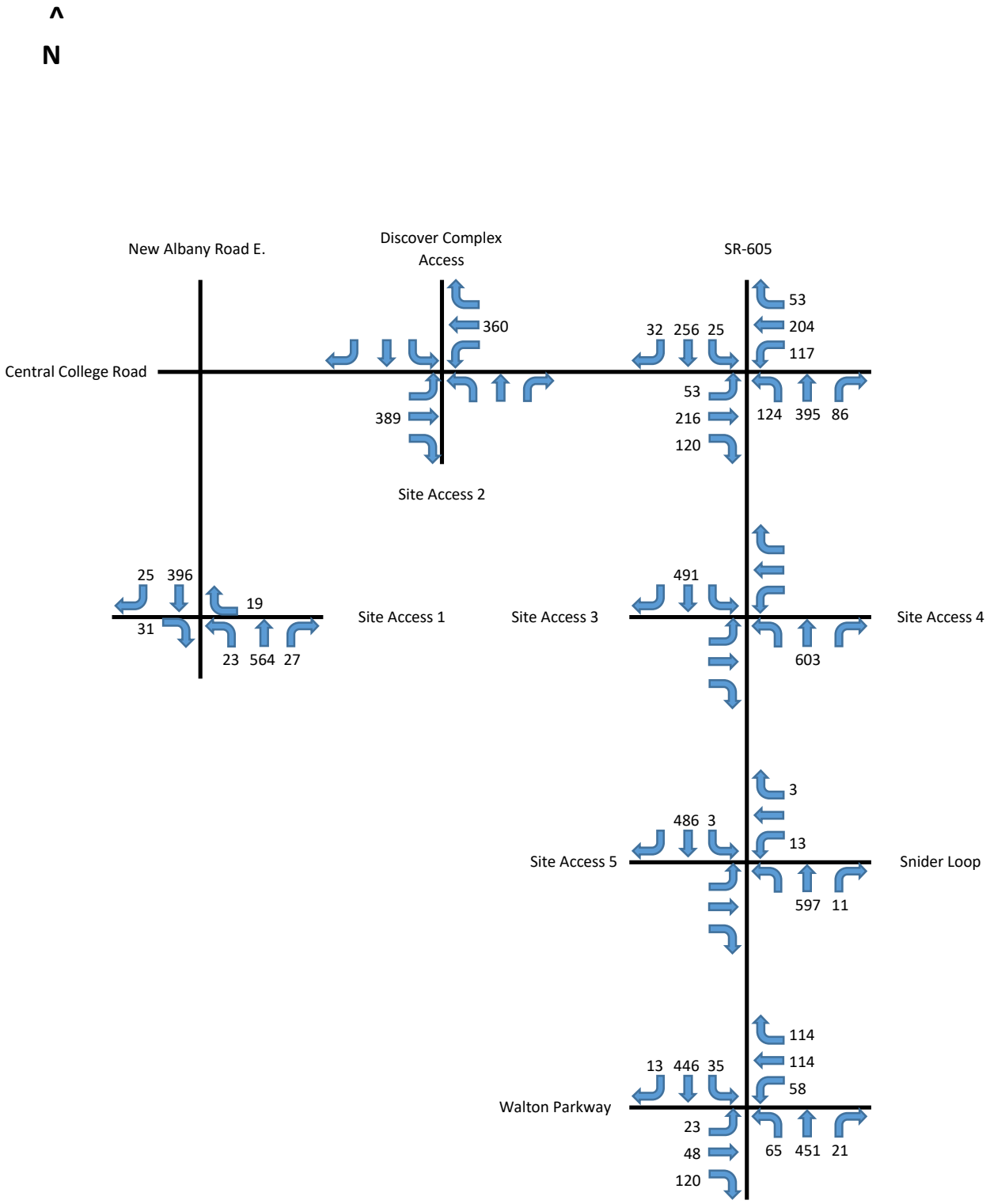
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	AM	Build	H1 = D1 + G1



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2022	PM	Count	



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	PM	Background	A2

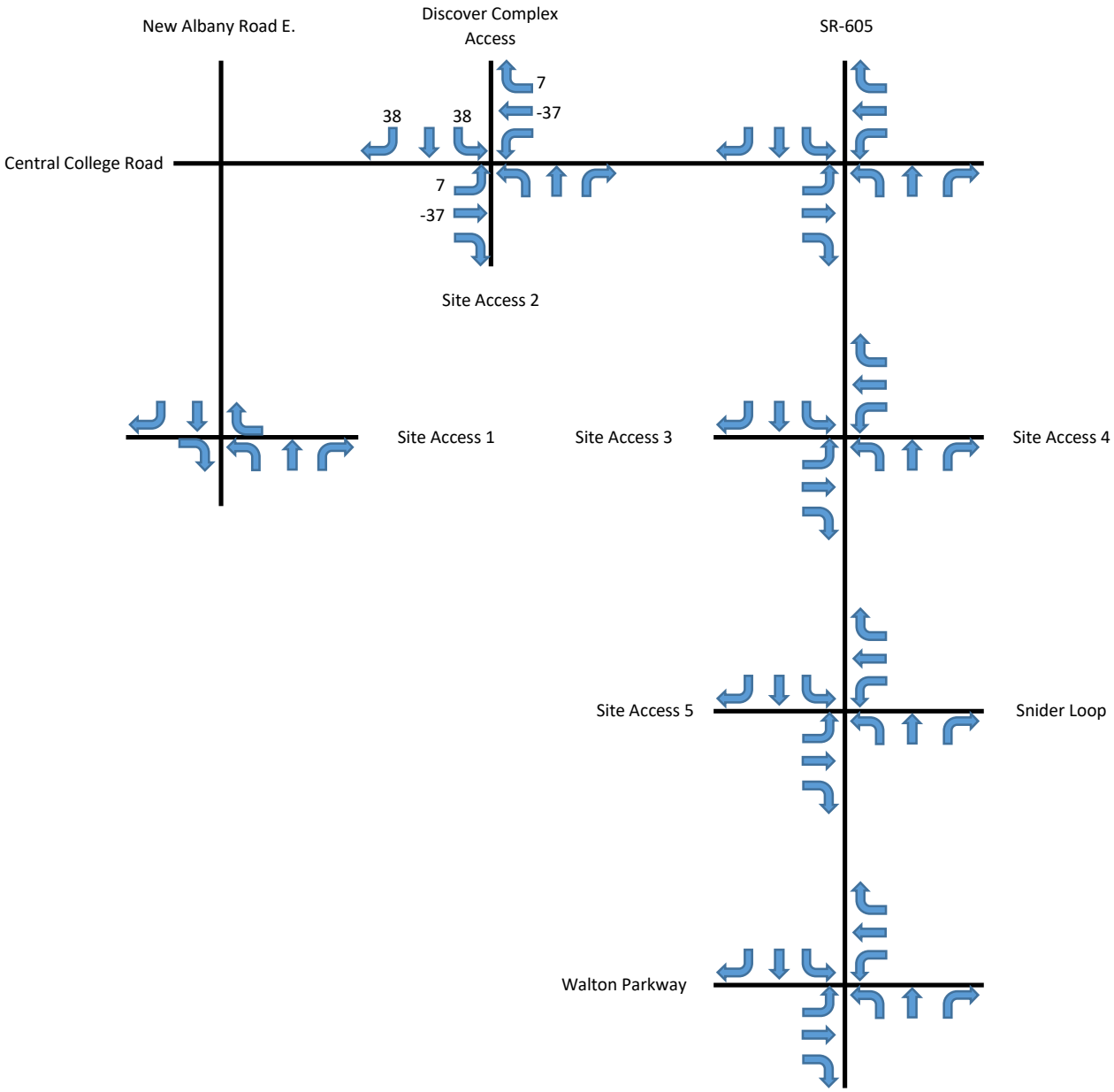


CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Background Traffic - Discover Office Building	B2

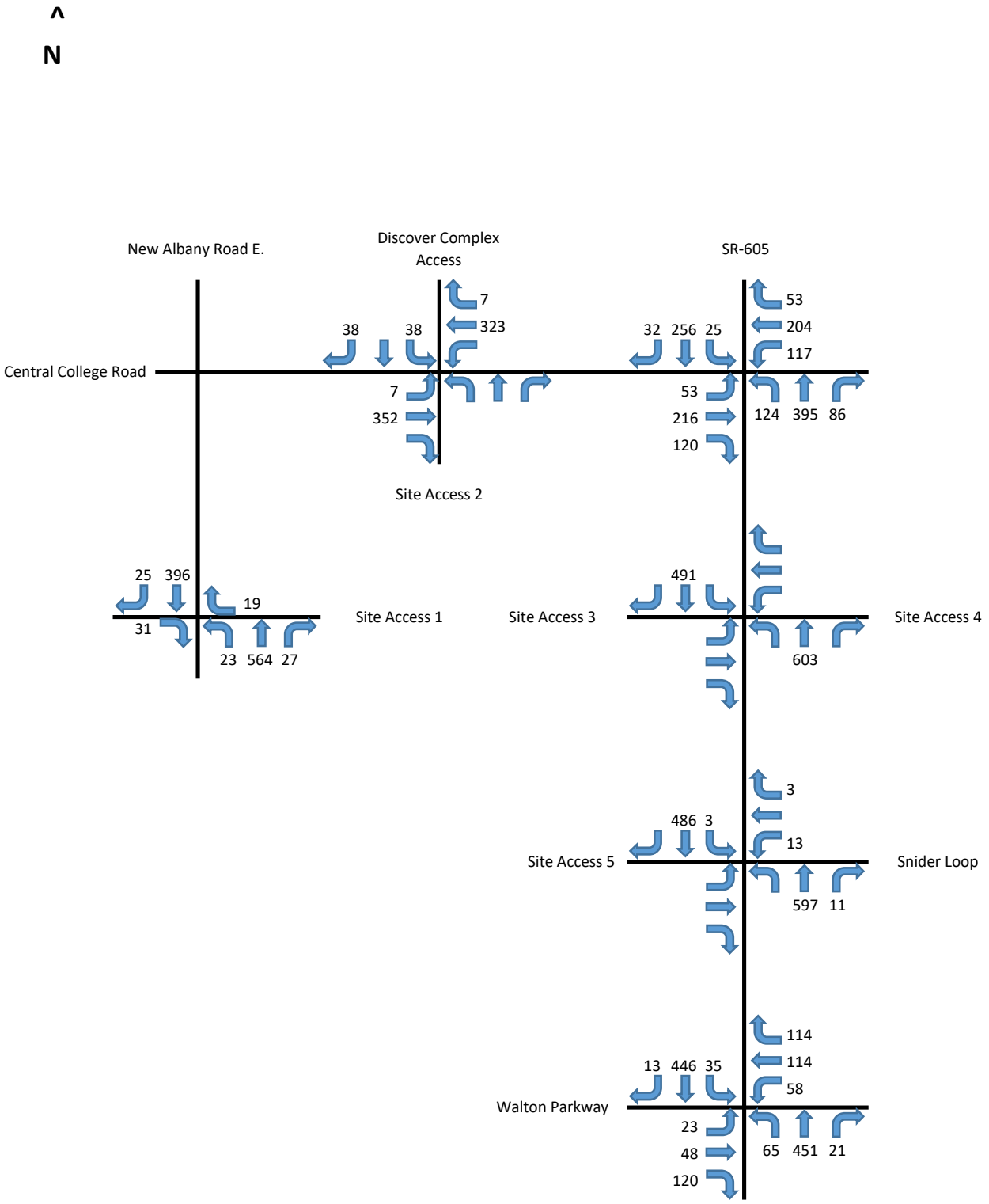
^
N

	Total	Using Access
Entry	57	14
Exit	300	75

* It was assumed that 25% of the traffic generated by the Discover office building utilizes the Central College Road access. It was also assumed that there was an even 50/50 split coming from/going to the east/west.



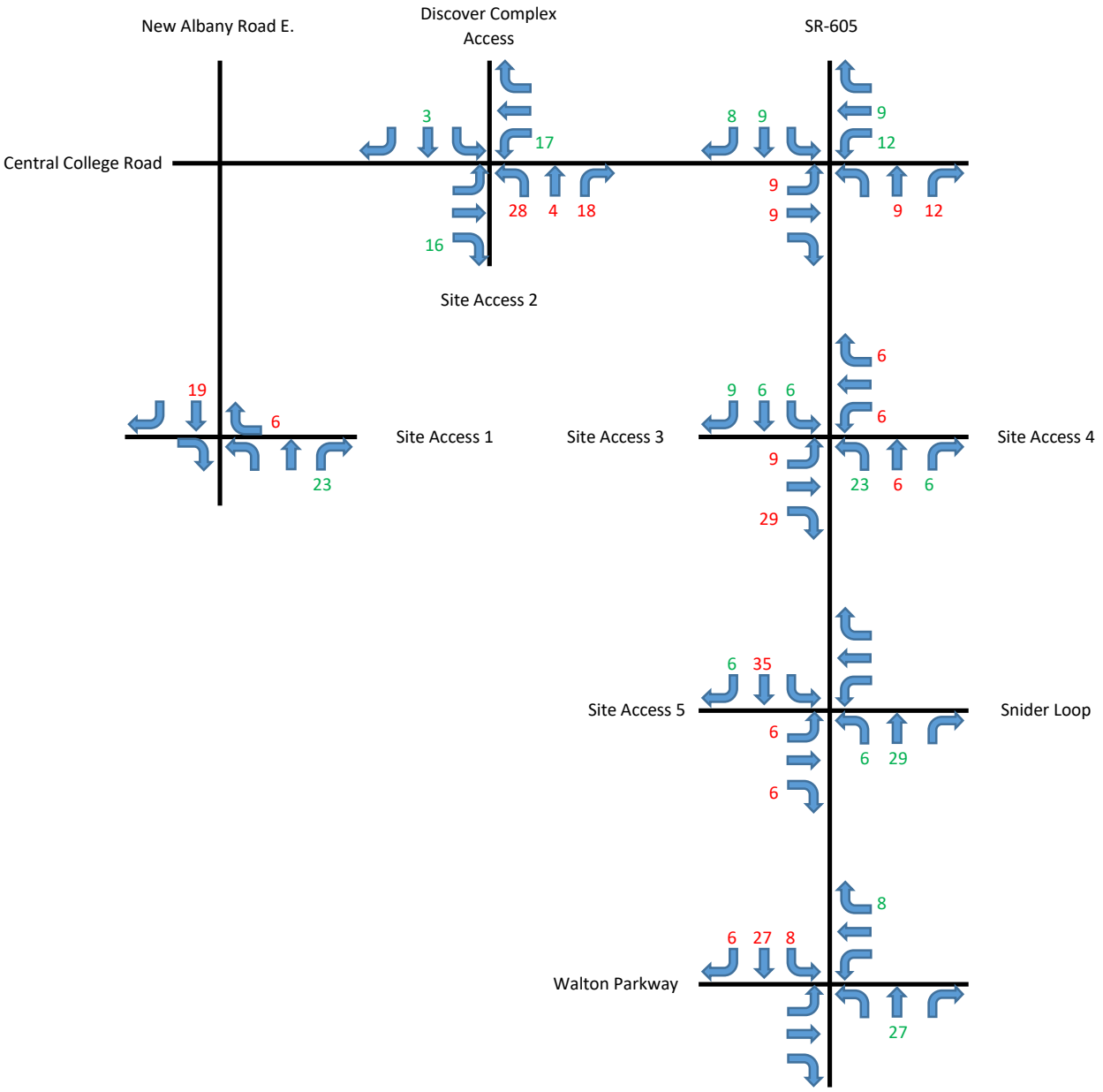
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	PM	No Build	C2 = A2 + B2



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Non-Pass-By Traffic	D2

^
N

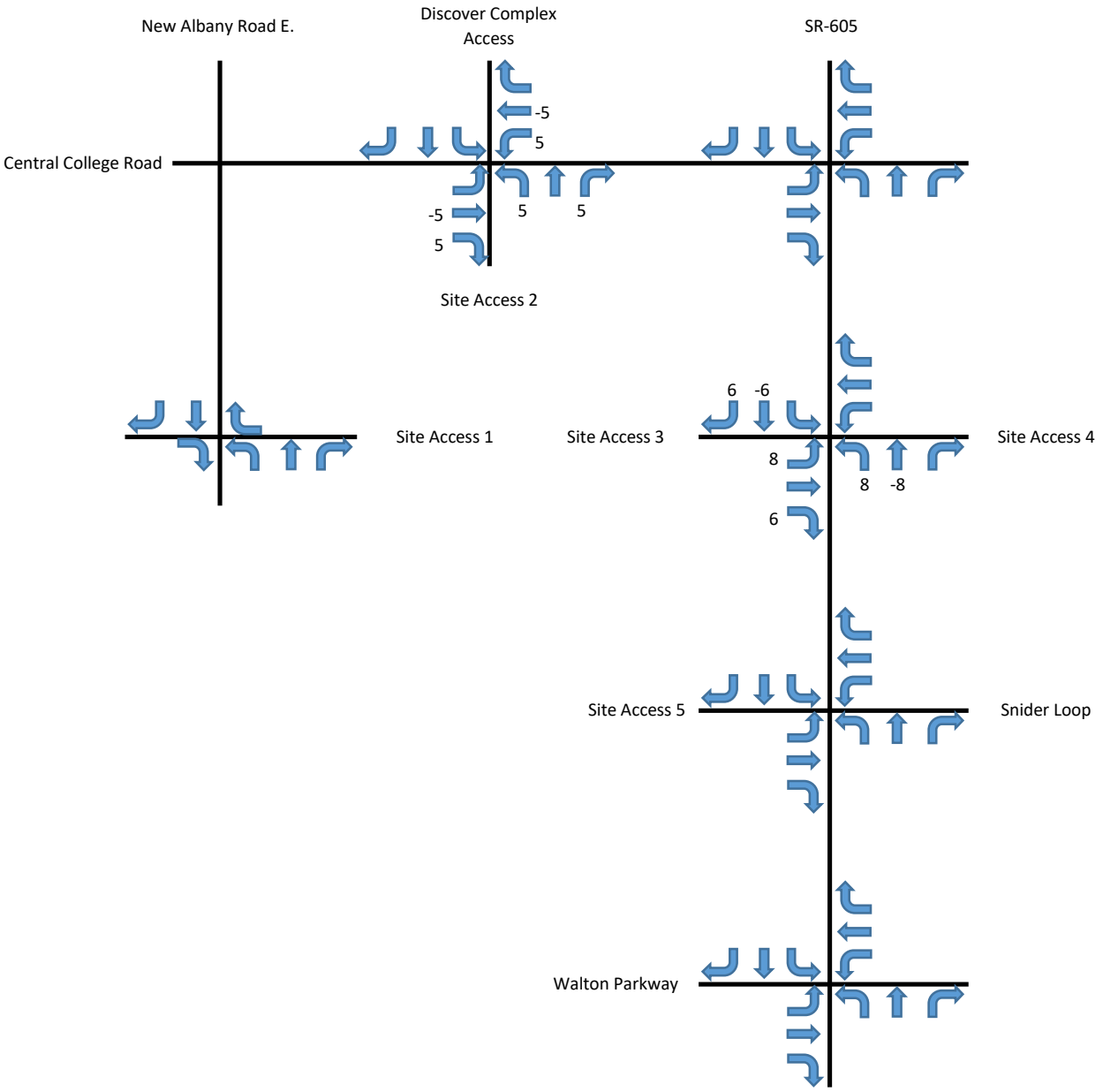
Entry 115
Exit 118



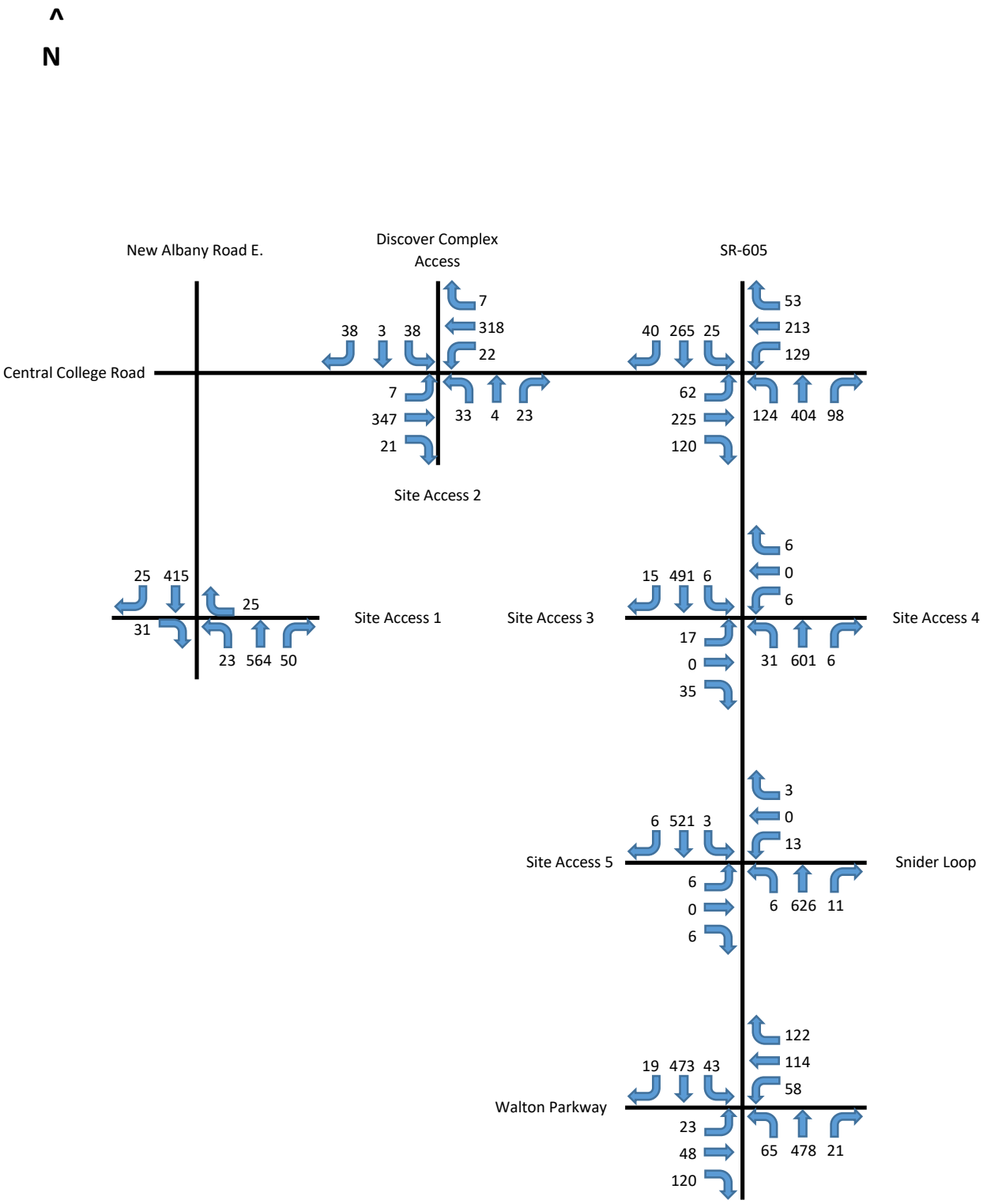
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Pass-By Traffic	E2

^
N

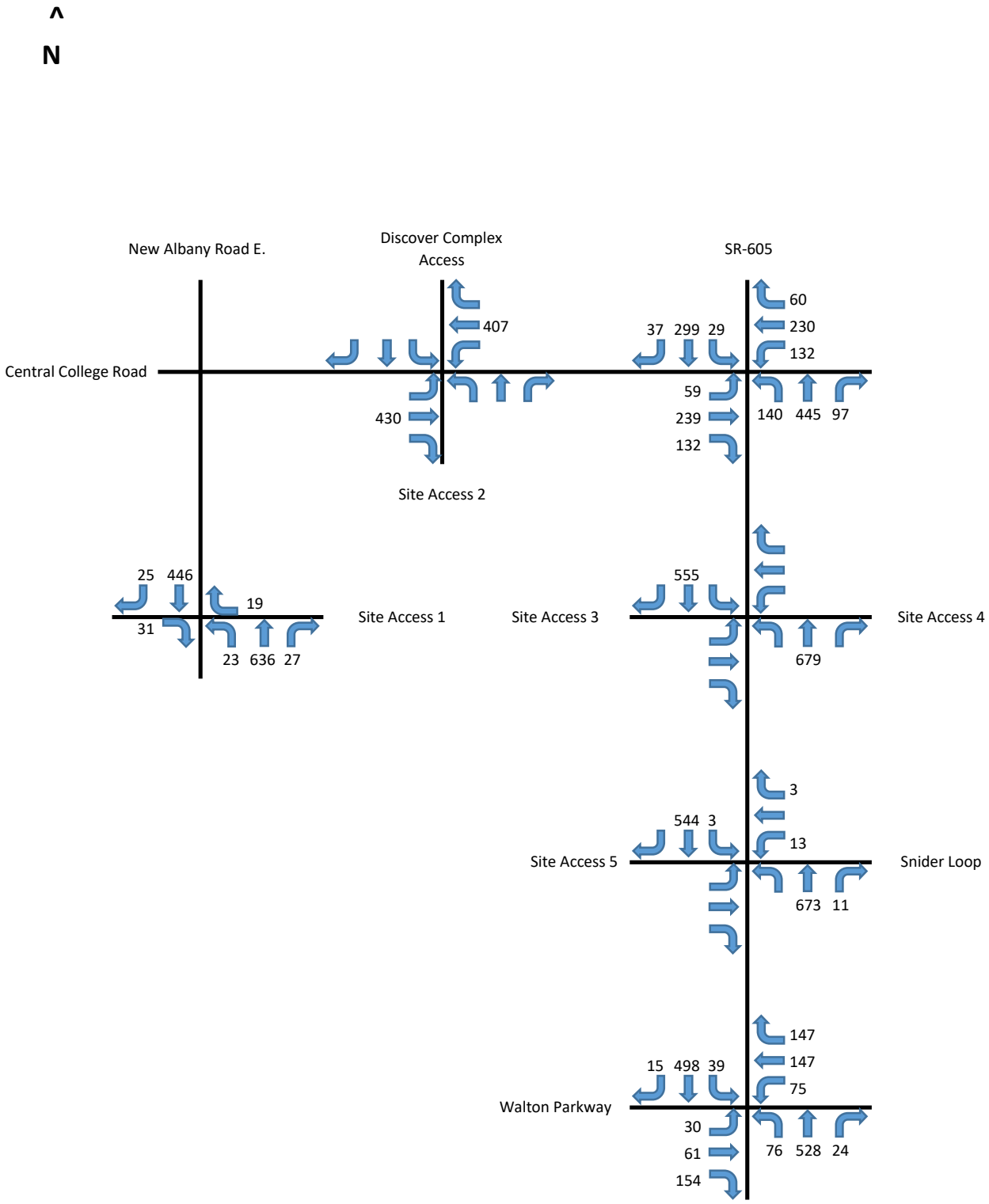
Entry	24
Exit	24
Average	24



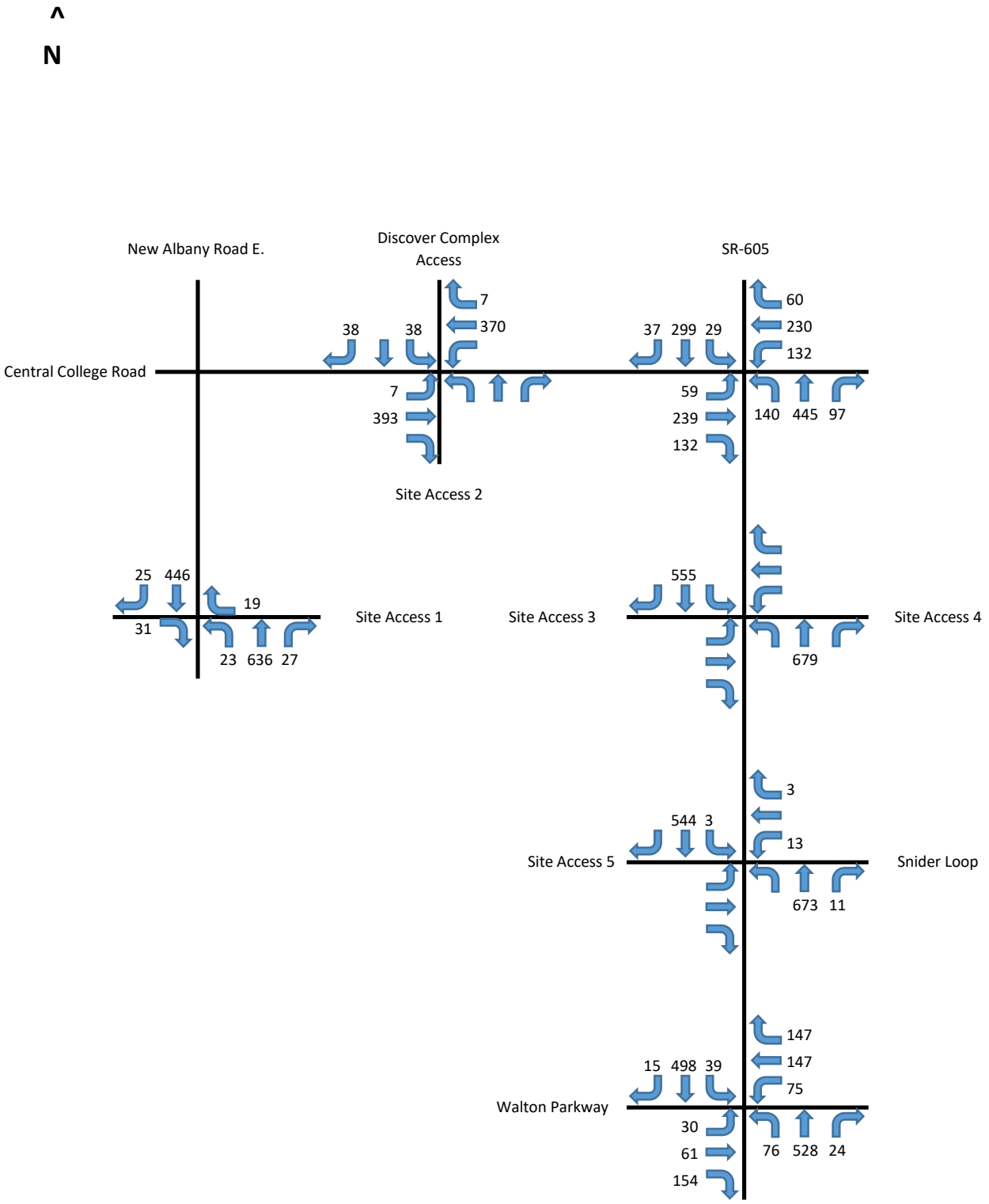
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	PM	Build	F2 = C2 + D2 + E2



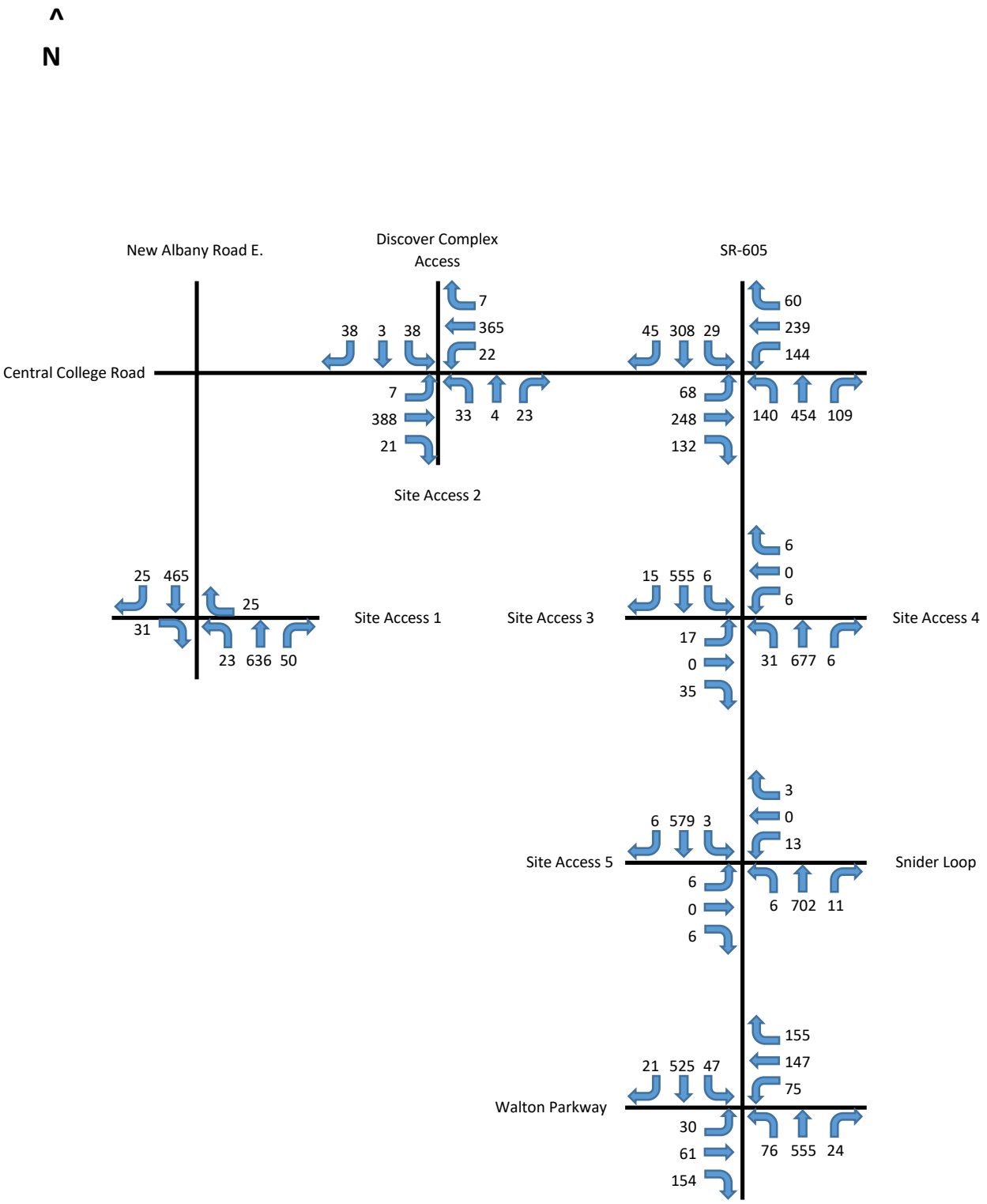
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	PM	Background	G2



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	PM	No Build	H2 = B2 + G2



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	PM	Build	I2 = D2 + E2 + H2

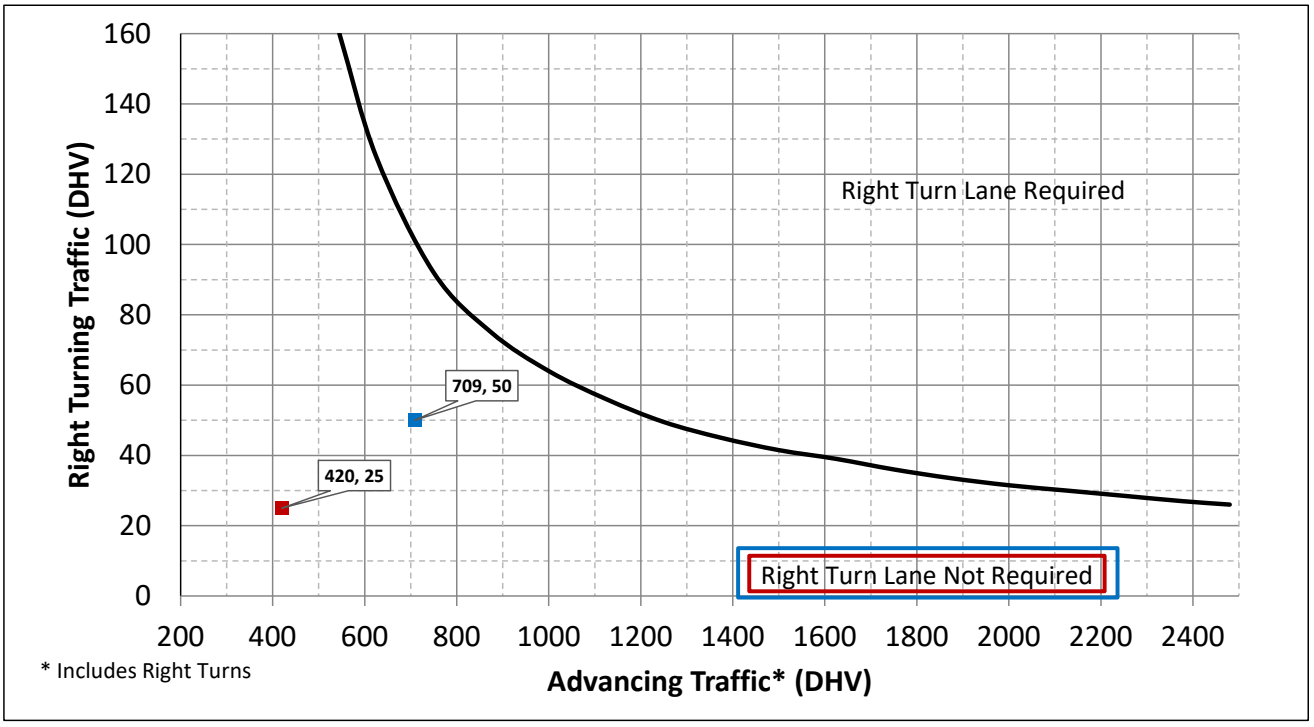


Appendix E
Turn Lane Warrant Analysis

CARPENTER MARTY transportation

4-Lane Highway Right Turn Lane Warrant

(= < 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

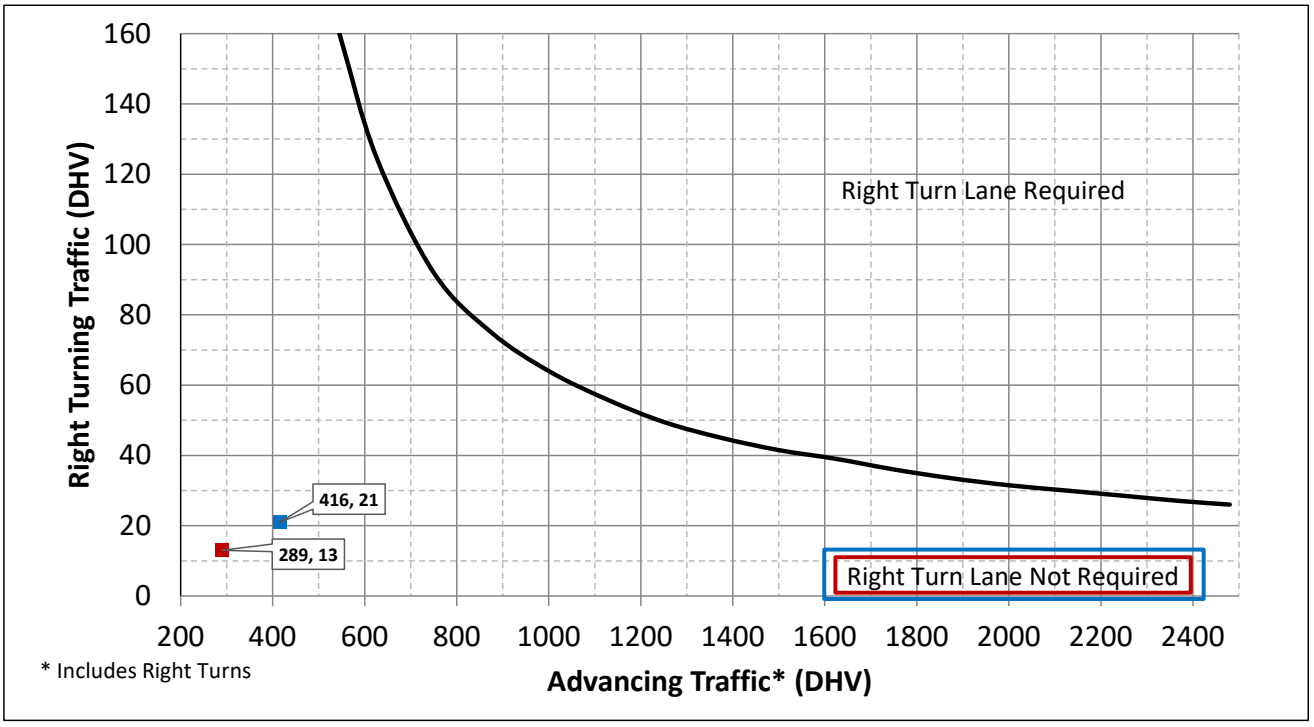
AM Peak	Design Speed	35	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	25	VPH
	Advancing Traffic	420	VPH
	Right Turn Percentage	6%	
	Location Type	Through Road	
	Condition	A	
	Vehicles/Cycle	1	
	Turn Lane Length	100	
PM Peak	Design Speed	35	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	50	VPH
	Advancing Traffic	709	VPH
	Right Turn Percentage	7%	
	Location Type	Through Road	
	Condition	A	
	Vehicles/Cycle	1	
	Turn Lane Length	100	
Is Right Turn Warrant Met		No	**No Right Turn Lane Required**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

4-Lane Highway Right Turn Lane Warrant

(= < 40 mph or 70 kph Posted Speed)



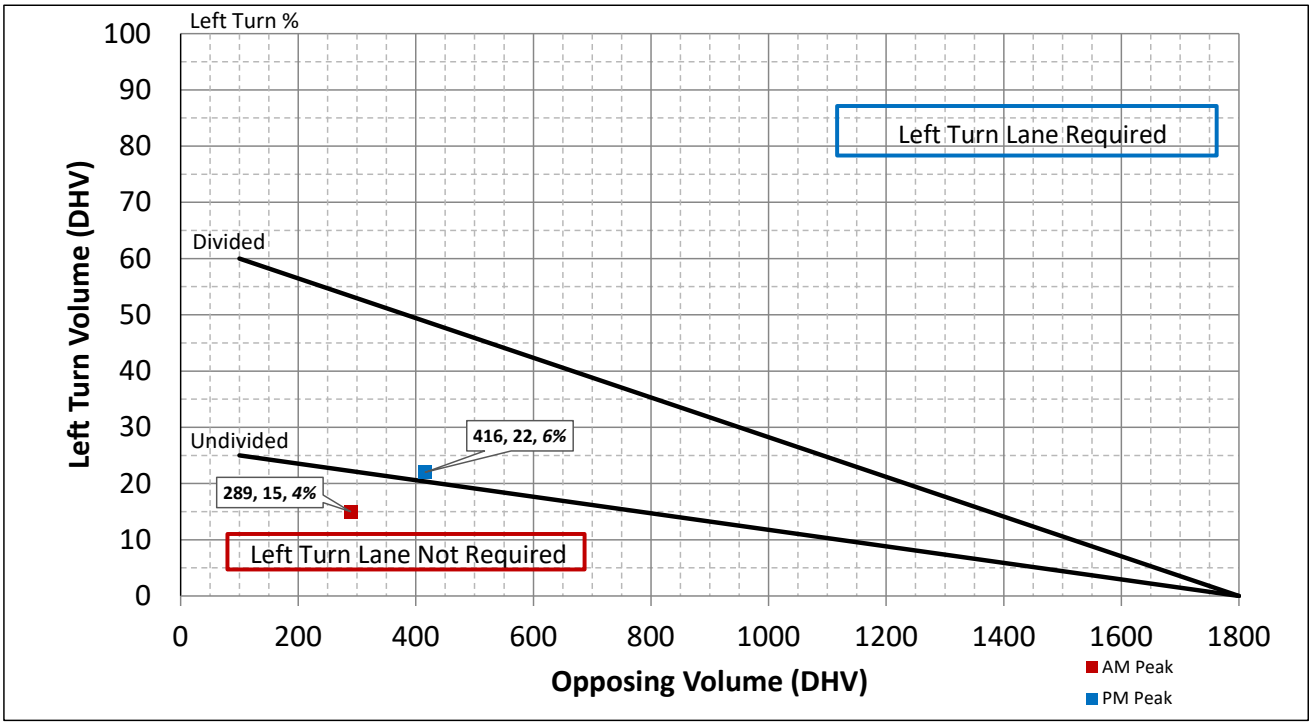
Turn Lane Length Calculations

AM Peak	Design Speed	35	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	13	VPH
	Advancing Traffic	289	VPH
	Right Turn Percentage	4%	
	Location Type	Through Road	
	Condition	A	
	Vehicles/Cycle	1	
	Turn Lane Length	100	
PM Peak	Design Speed	35	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	21	VPH
	Advancing Traffic	416	VPH
	Right Turn Percentage	5%	
	Location Type	Through Road	
	Condition	A	
	Vehicles/Cycle	1	
	Turn Lane Length	100	
Is Right Turn Warrant Met		No	**No Right Turn Lane Required**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

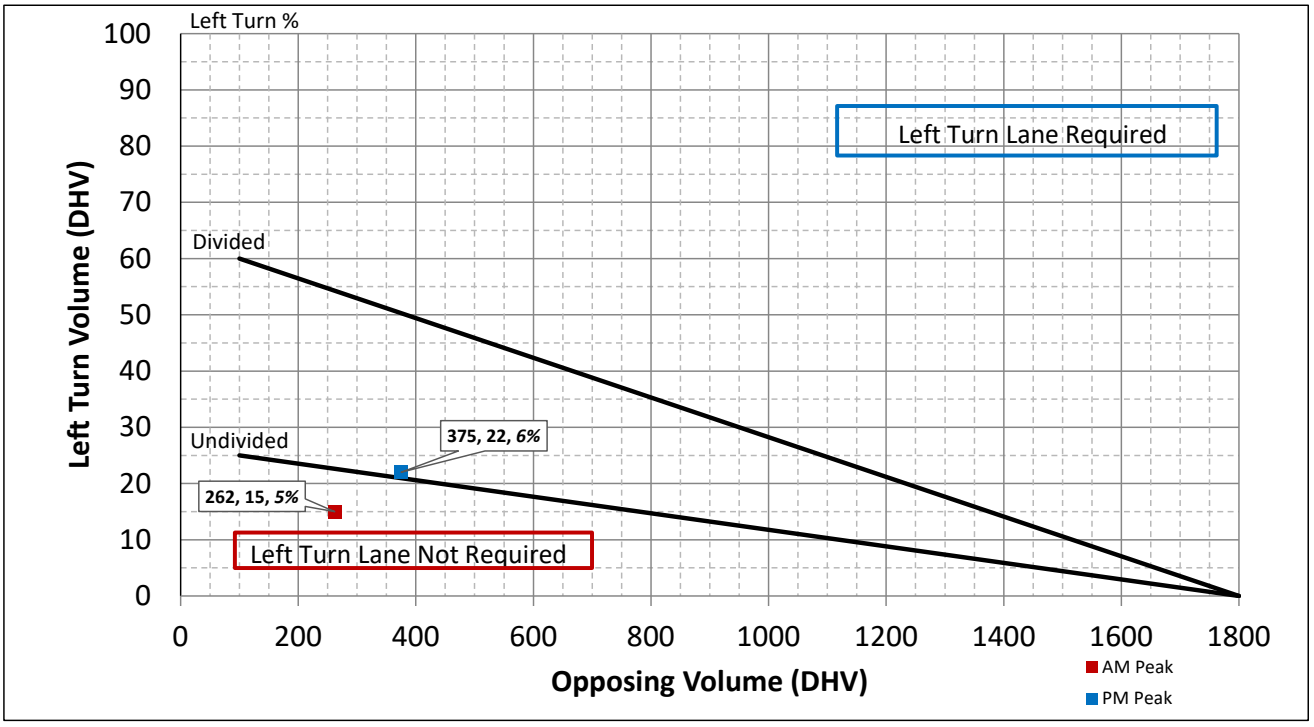
4-Lane Highway Left Turn Lane Warrant



Turn Lane Length Calculations

AM Peak	Design Speed	35	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	15	VPH	
	Advancing Traffic	369	VPH	
	Opposing Volume	289	VPH	
	Left Turn Percentage	4%		
	Location Type	Through Road		
	Condition	A		
	Vehicles/Cycle	1		
	Turn Lane Length	100		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	245		
PM Peak	Design Speed	35	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	22	VPH	
	Advancing Traffic	394	VPH	
	Opposing Volume	416	VPH	
	Left Turn Percentage	6%		
	Location Type	Through Road		
	Condition	A		
	Vehicles/Cycle	1		
	Turn Lane Length	100		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	245		
Is Left Turn Warrant Met		Yes	**See Above**	

4-Lane Highway Left Turn Lane Warrant

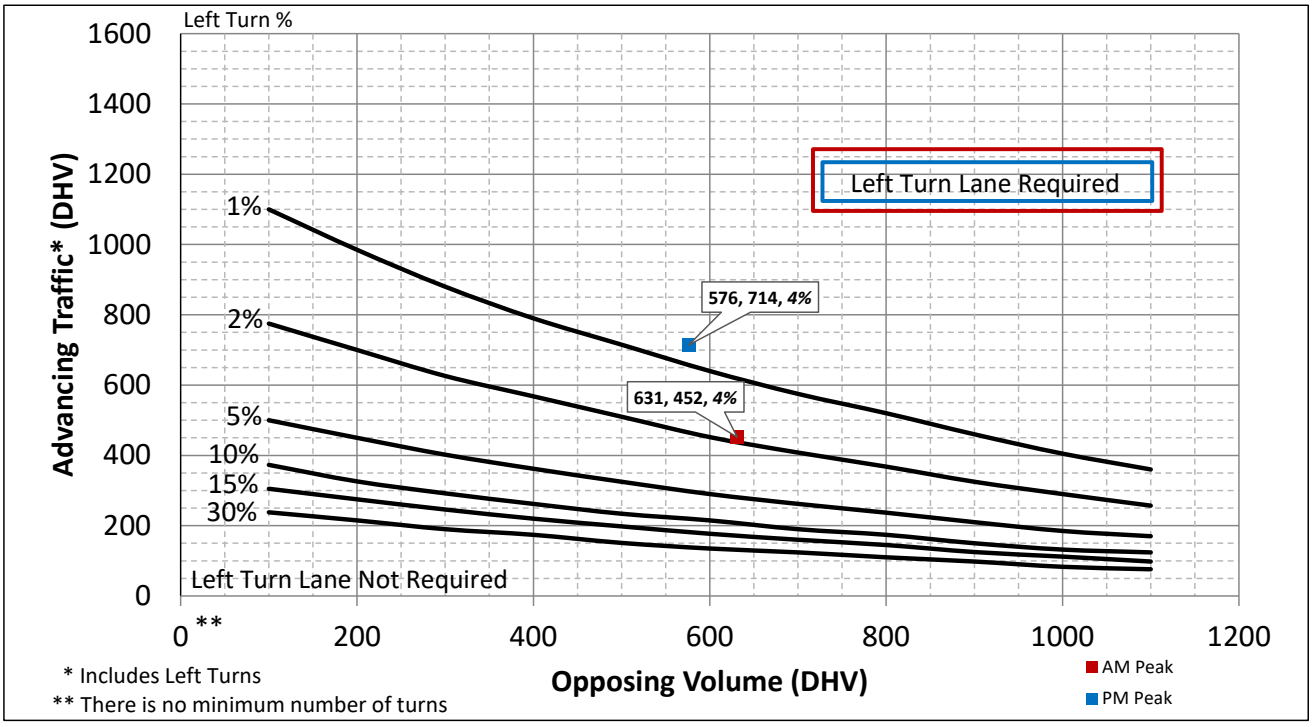


Turn Lane Length Calculations

AM Peak	Design Speed	35	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	15	VPH	
	Advancing Traffic	328	VPH	
	Opposing Volume	262	VPH	
	Left Turn Percentage	5%		
	Location Type	Through Road		
	Condition	A		
	Vehicles/Cycle	1		
	Turn Lane Length	100		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	245		
PM Peak	Design Speed	35	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	22	VPH	
	Advancing Traffic	347	VPH	
	Opposing Volume	375	VPH	
	Left Turn Percentage	6%		
	Location Type	Through Road		
	Condition	A		
	Vehicles/Cycle	1		
	Turn Lane Length	100		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	245		
Is Left Turn Warrant Met		Yes	**See Above**	

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)

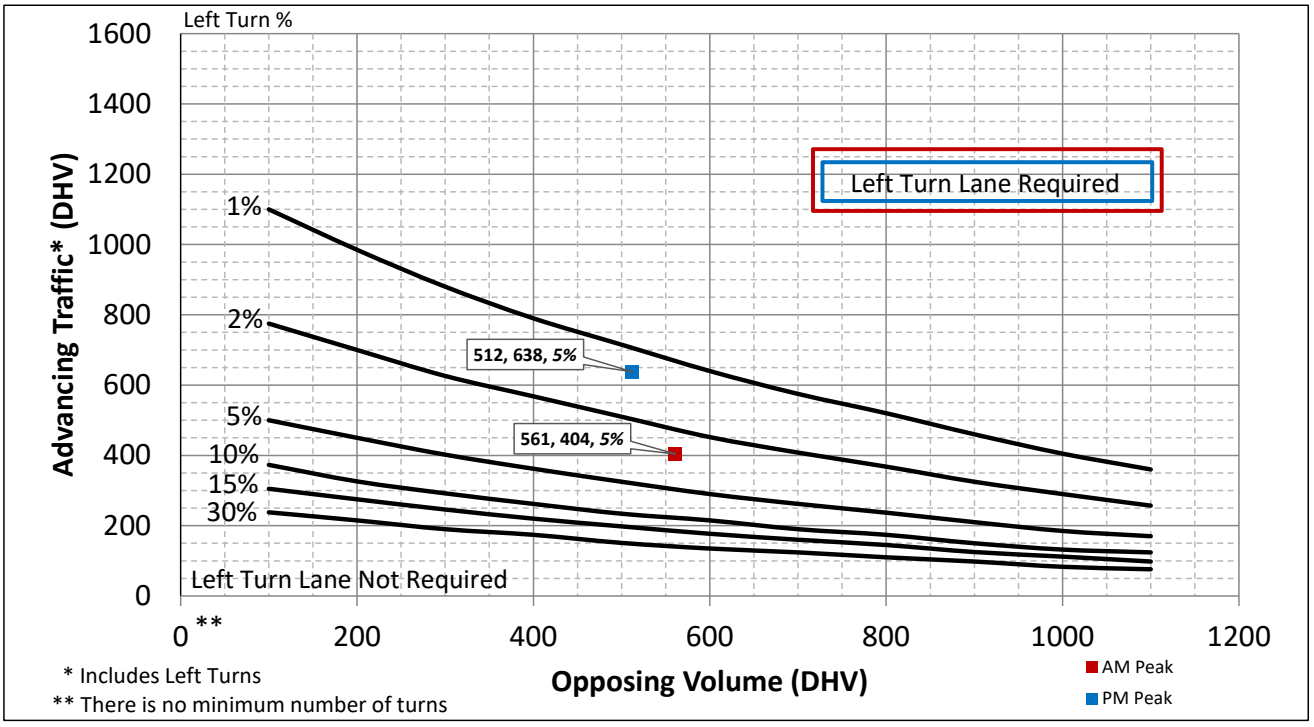


Turn Lane Length Calculations

AM Peak	Design Speed	45	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	20	VPH	
	Advancing Traffic	452	VPH	
	Opposing Volume	631	VPH	
	Left Turn Percentage	4%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	175		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	405		
PM Peak	Design Speed	45	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	31	VPH	
	Advancing Traffic	714	VPH	
	Opposing Volume	576	VPH	
	Left Turn Percentage	4%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	175		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	405		
Is Left Turn Warrant Met		Yes	**See Above**	

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)

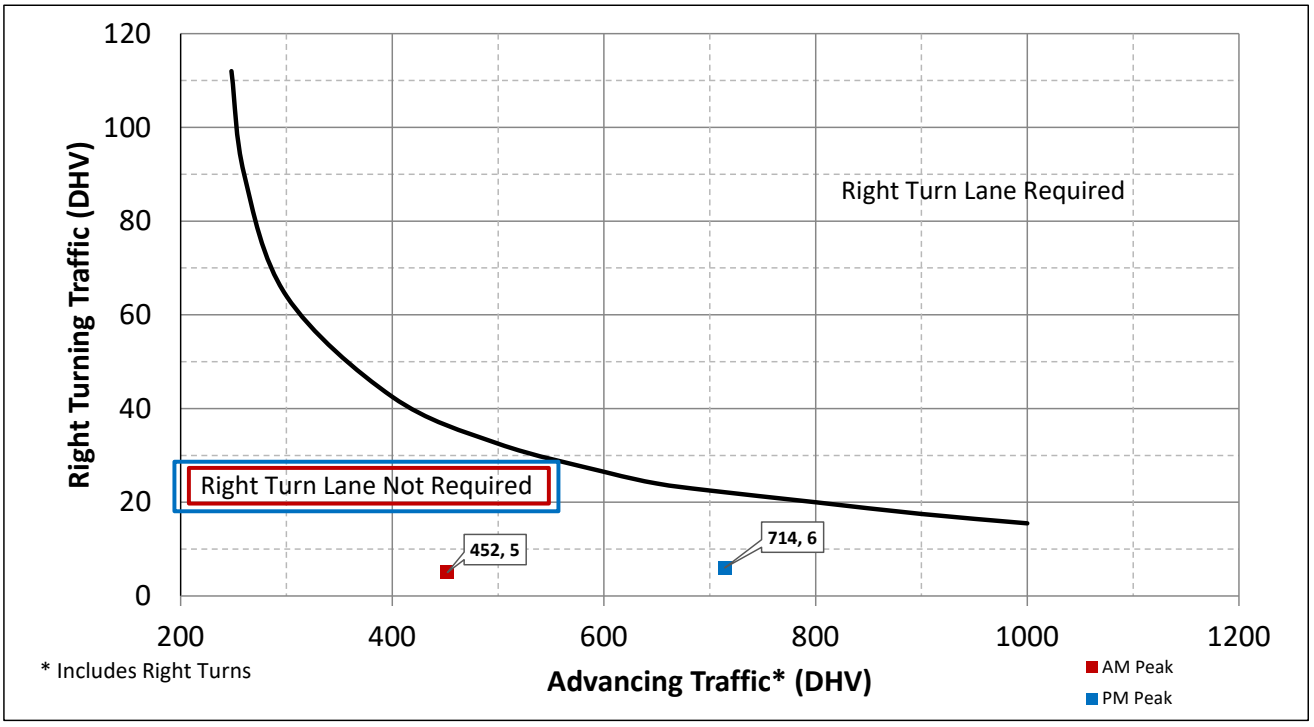


Turn Lane Length Calculations

AM Peak	Design Speed	45	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	20	VPH	
	Advancing Traffic	404	VPH	
	Opposing Volume	561	VPH	
	Left Turn Percentage	5%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	175		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	405		
PM Peak	Design Speed	45	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	31	VPH	
	Advancing Traffic	638	VPH	
	Opposing Volume	512	VPH	
	Left Turn Percentage	5%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	175		* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12		
	Approach Taper	405		
Is Left Turn Warrant Met		Yes	**See Above**	

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)

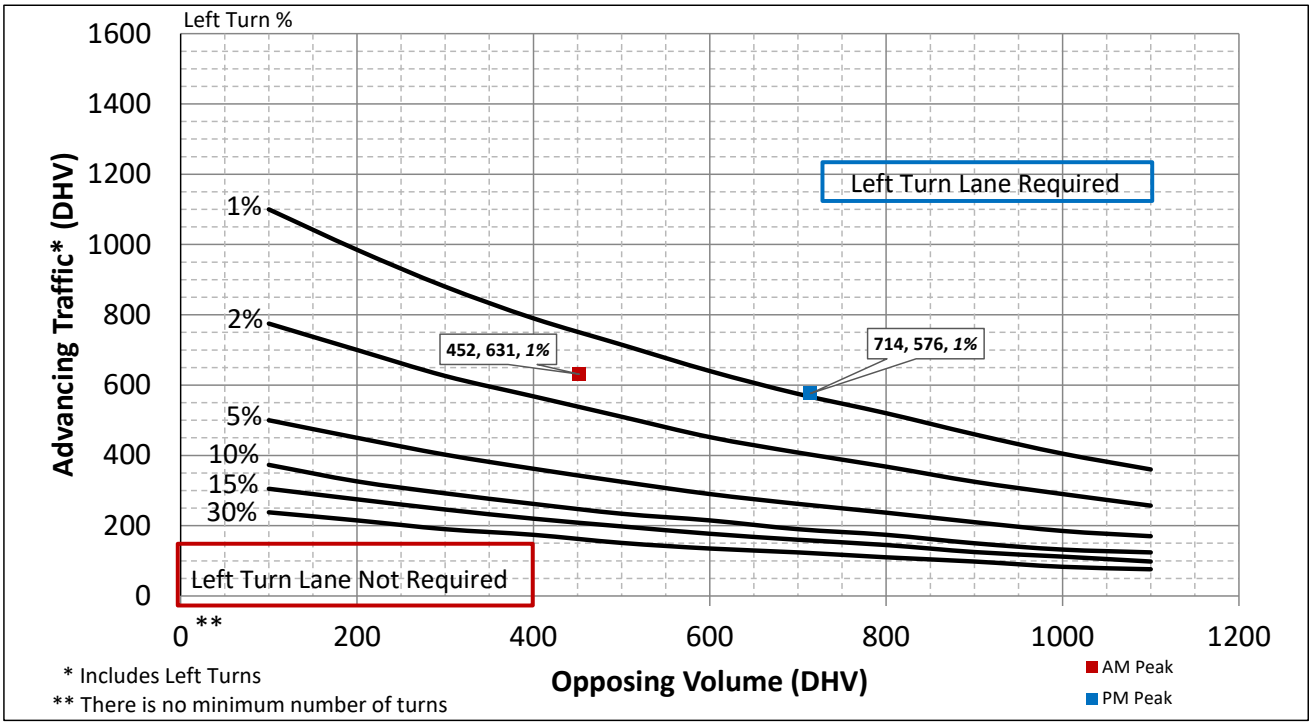


Turn Lane Length Calculations

AM Peak	Design Speed	45	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	5	VPH	
	Advancing Traffic	452	VPH	
	Right Turn Percentage	1%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	175		* Turn Lane Length includes 50 ft diverging taper
PM Peak	Design Speed	45	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	6	VPH	
	Advancing Traffic	714	VPH	
	Right Turn Percentage	1%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	175		* Turn Lane Length includes 50 ft diverging taper
Is Right Turn Warrant Met		No	No Right Turn Lane Required	

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)

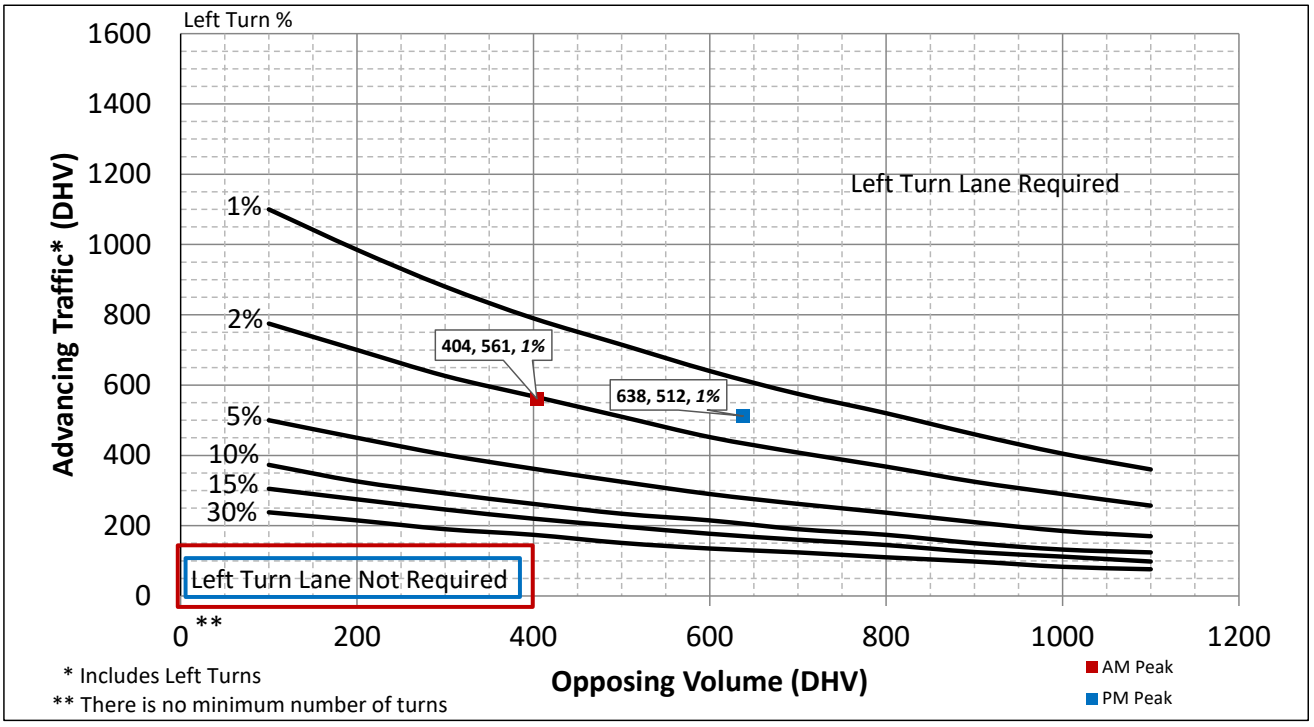


Turn Lane Length Calculations

AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	5	VPH
	Advancing Traffic	631	VPH
	Opposing Volume	452	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	405	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	6	VPH
	Advancing Traffic	576	VPH
	Opposing Volume	714	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	405	
Is Left Turn Warrant Met		Yes	**See Above**

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)

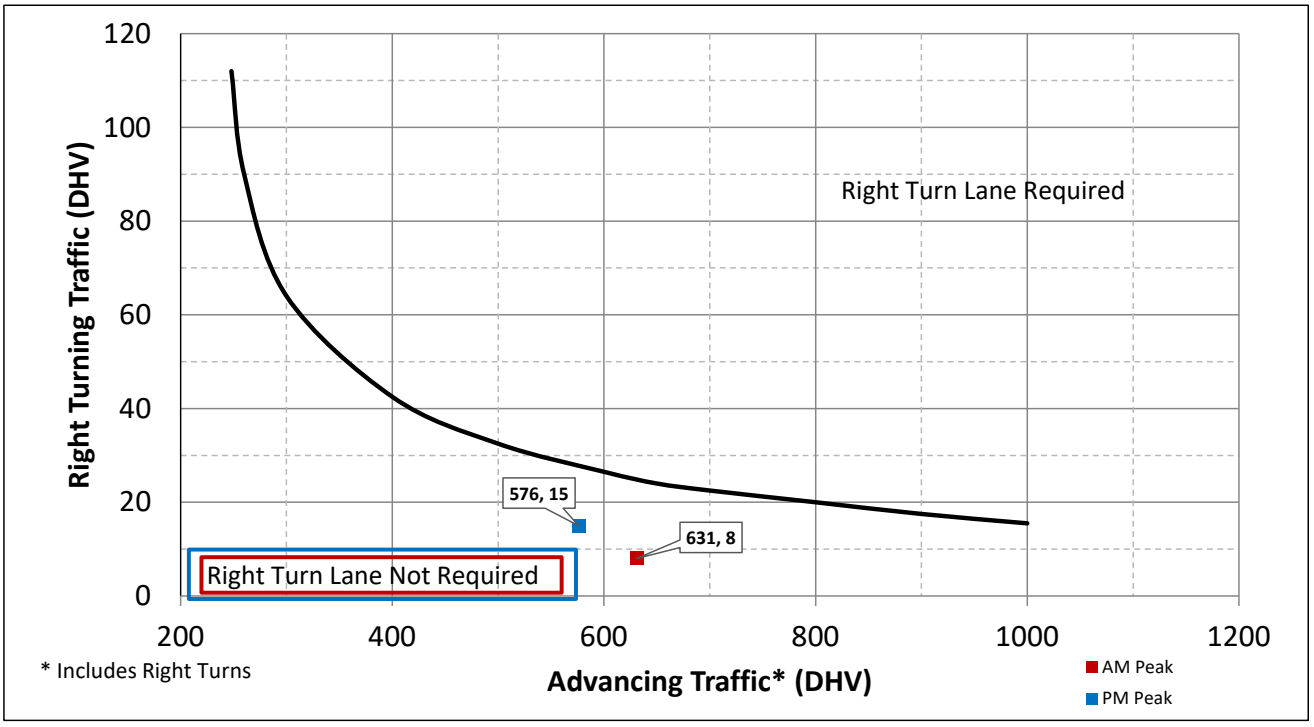


Turn Lane Length Calculations

AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	5	VPH
	Advancing Traffic	561	VPH
	Opposing Volume	404	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	405	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	6	VPH
	Advancing Traffic	512	VPH
	Opposing Volume	638	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	405	
Is Left Turn Warrant Met		**No**	**No Left Turn Lane Required**

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

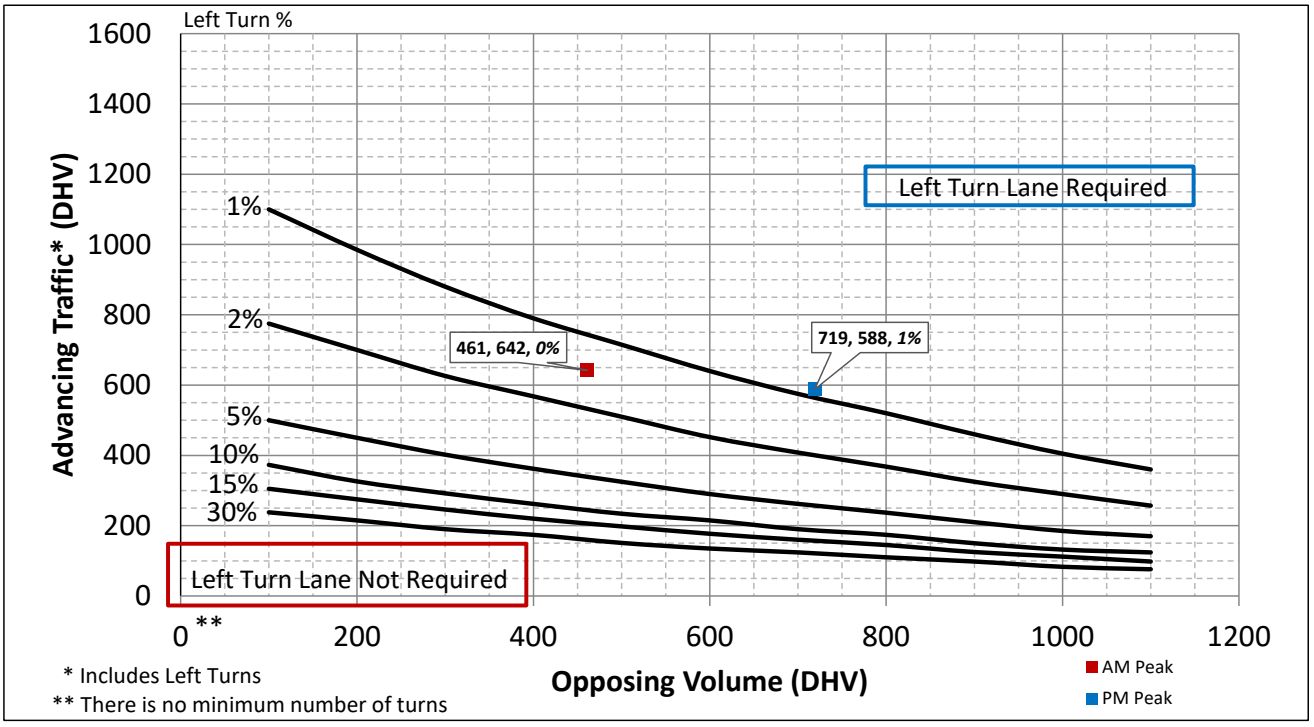
AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	8	VPH
	Advancing Traffic	631	VPH
	Right Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	15	VPH
	Advancing Traffic	576	VPH
	Right Turn Percentage	3%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
Is Right Turn Warrant Met		No	**No Right Turn Lane Required**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

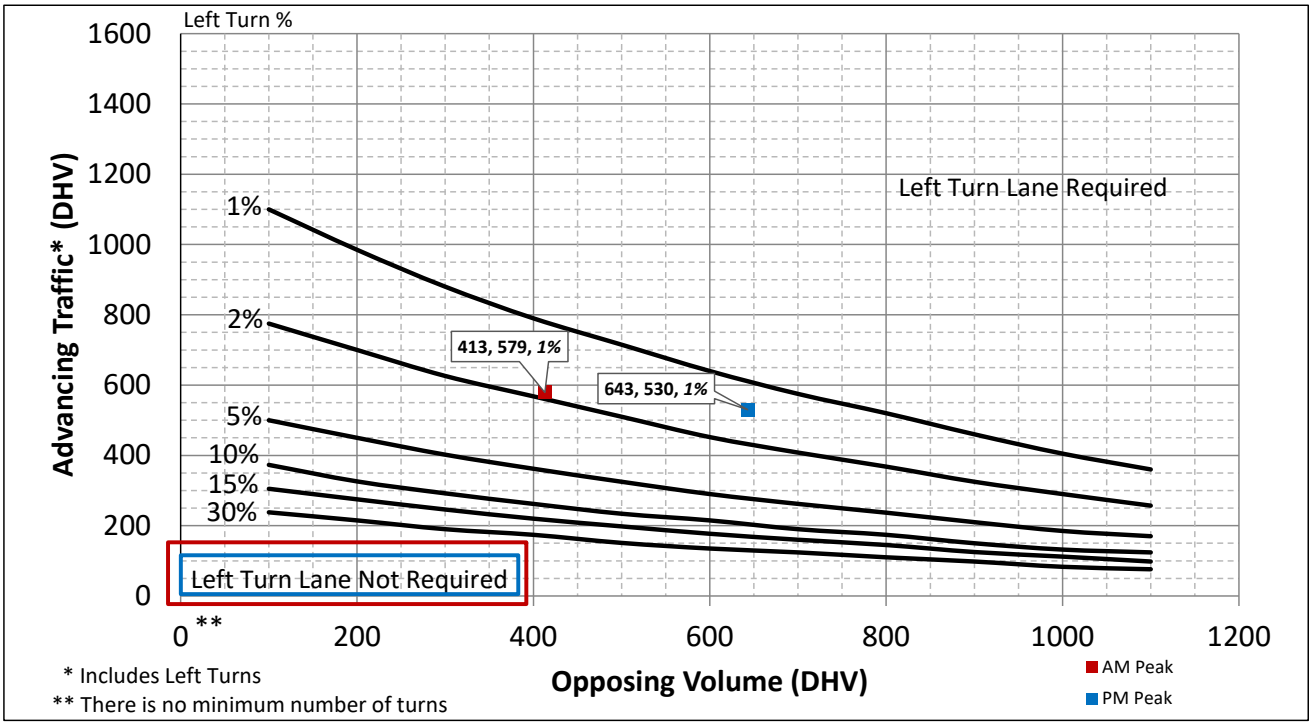
AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	3	VPH
	Advancing Traffic	642	VPH
	Opposing Volume	461	VPH
	Left Turn Percentage	0%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	3	VPH
	Advancing Traffic	588	VPH
	Opposing Volume	719	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
Is Left Turn Warrant Met		Yes	**See Above**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

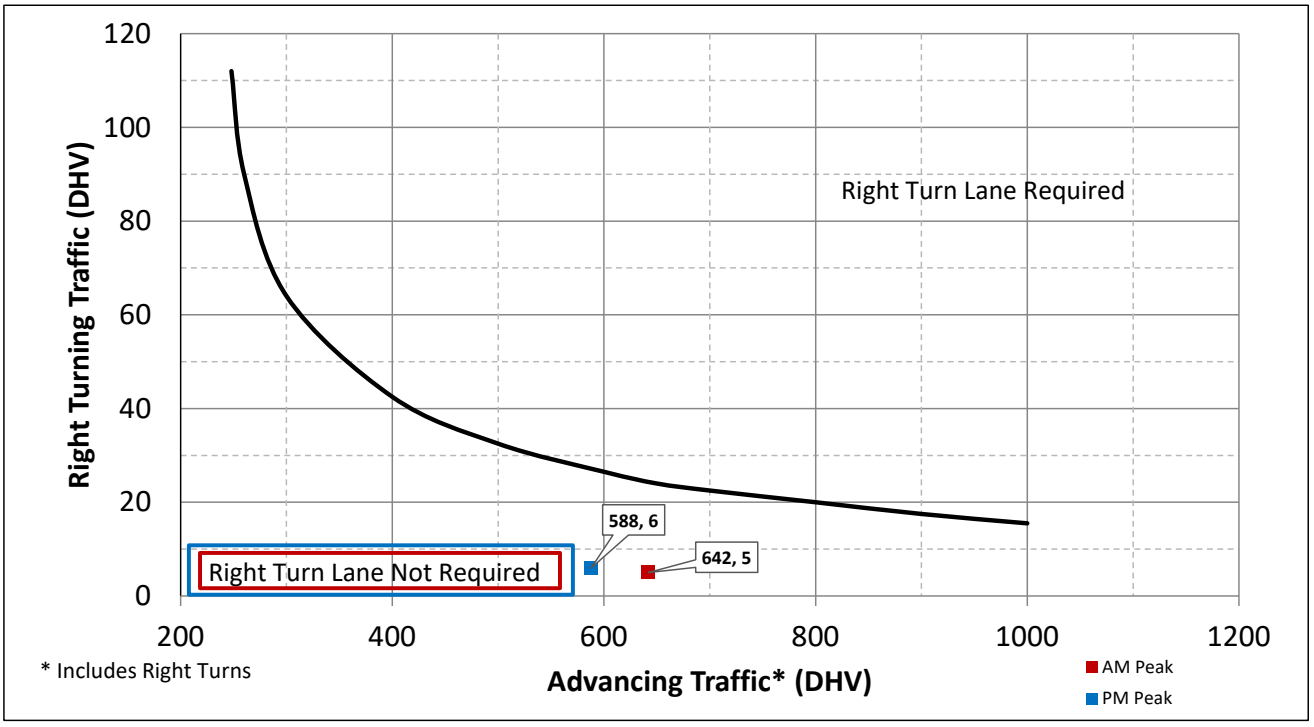
AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	3	VPH
	Advancing Traffic	579	VPH
	Opposing Volume	413	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	3	VPH
	Advancing Traffic	530	VPH
	Opposing Volume	643	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
Is Left Turn Warrant Met		**No**	**No Left Turn Lane Required**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

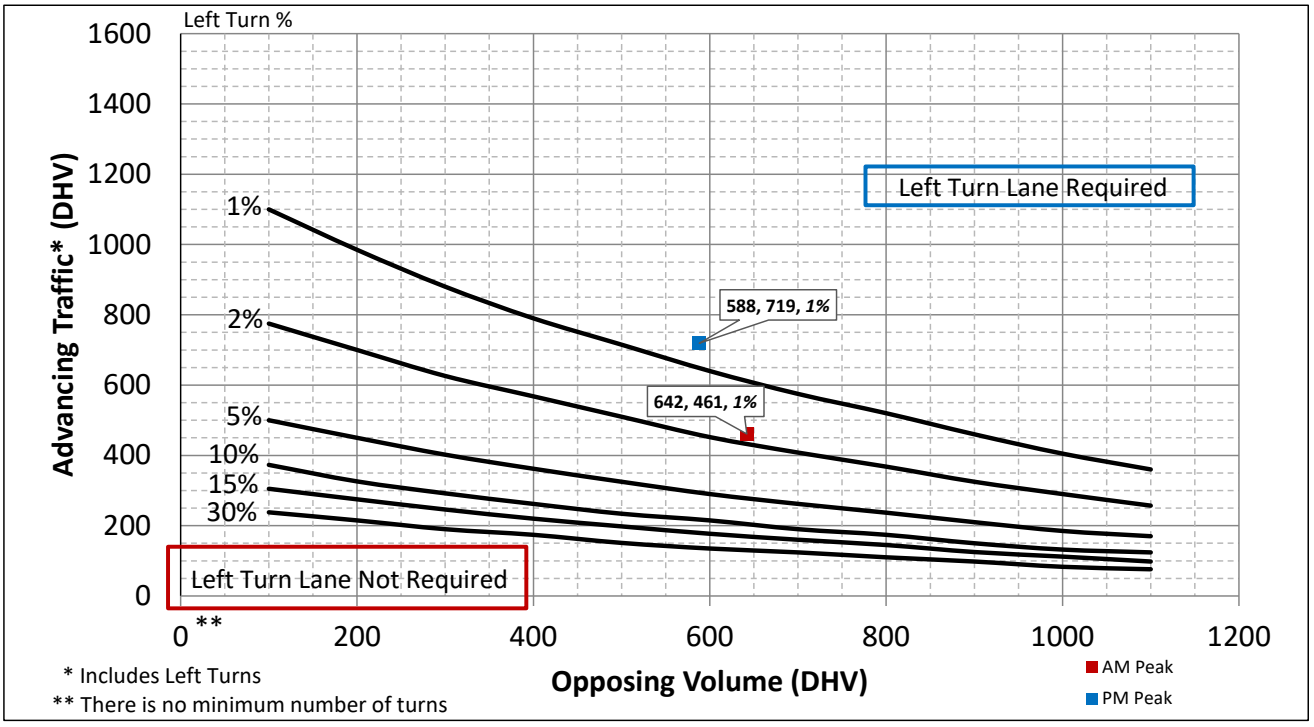
AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	5	VPH
	Advancing Traffic	642	VPH
	Right Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	6	VPH
	Advancing Traffic	588	VPH
	Right Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
Is Right Turn Warrant Met		No	No Right Turn Lane Required

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

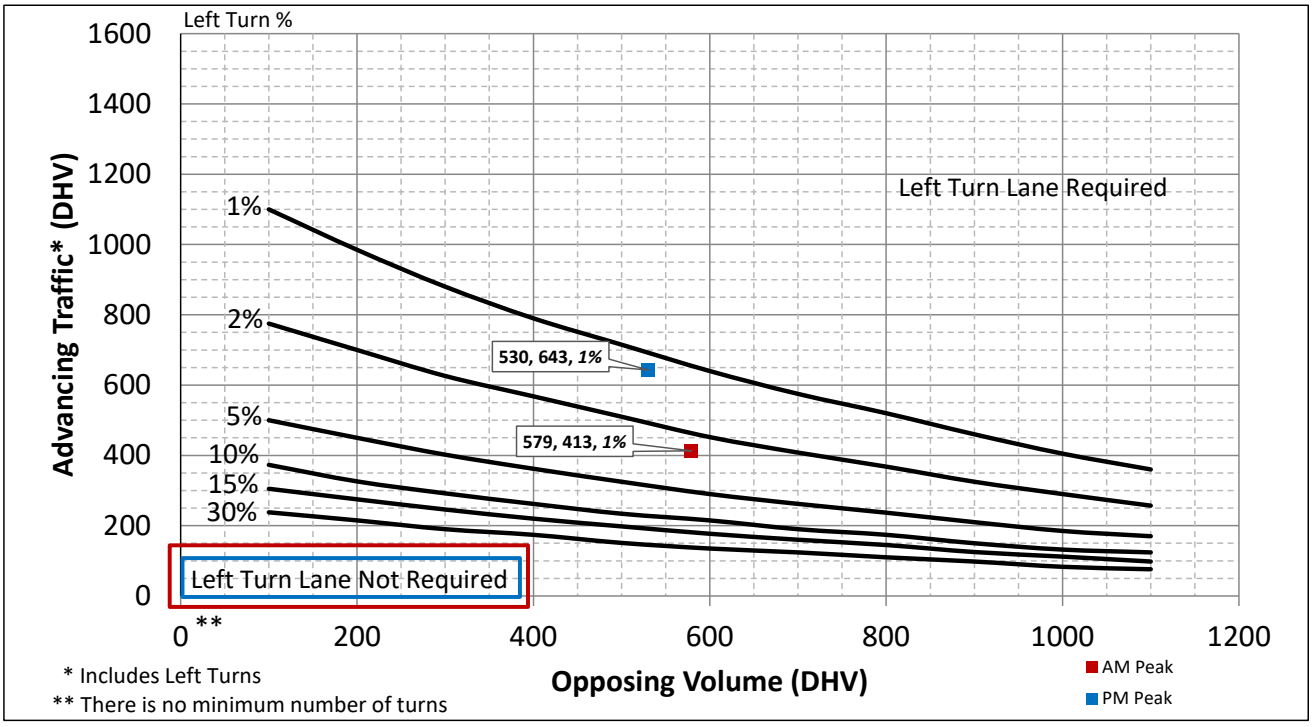
AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	5	VPH
	Advancing Traffic	461	VPH
	Opposing Volume	642	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	6	VPH
	Advancing Traffic	719	VPH
	Opposing Volume	588	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
Is Left Turn Warrant Met		Yes	**See Above**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

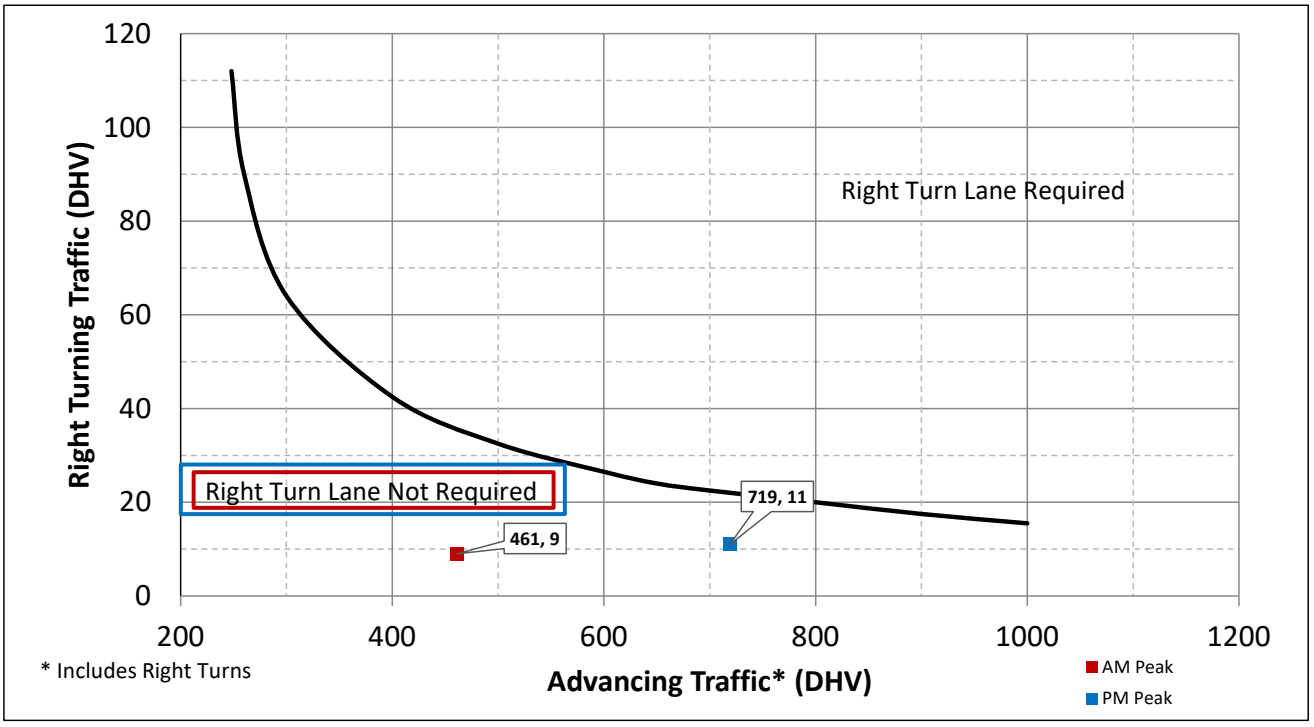
AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	5	VPH
	Advancing Traffic	413	VPH
	Opposing Volume	579	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	6	VPH
	Advancing Traffic	643	VPH
	Opposing Volume	530	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
	Offset Width	12	
	Approach Taper	405	
Is Left Turn Warrant Met		No	No Left Turn Lane Required

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	9	VPH
	Advancing Traffic	461	VPH
	Right Turn Percentage	2%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
PM Peak	Design Speed	45	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	11	VPH
	Advancing Traffic	719	VPH
	Right Turn Percentage	2%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	175	
Is Right Turn Warrant Met		No	No Right Turn Lane Required

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

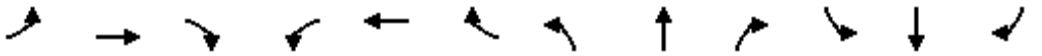
Appendix F
Capacity Analysis

CARPENTER MARTY transportation

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

Splits and Phases: 3: New Albany-Condit Road & Central College Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	127	103	146	207	27	83	210	78	44	296	23
Future Volume (veh/h)	19	127	103	146	207	27	83	210	78	44	296	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	138	112	159	225	29	90	228	85	48	322	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	335	450	422	791	101	515	508	189	508	686	654
Arrive On Green	0.05	0.18	0.18	0.12	0.25	0.25	0.10	0.39	0.39	0.08	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	3171	404	1781	1299	484	1781	1870	1585
Grp Volume(v), veh/h	21	138	112	159	125	129	90	0	313	48	322	25
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1798	1781	0	1783	1781	1870	1585
Q Serve(g_s), s	0.8	5.5	4.6	5.6	4.8	4.9	2.4	0.0	10.9	1.3	11.0	0.8
Cycle Q Clear(g_c), s	0.8	5.5	4.6	5.6	4.8	4.9	2.4	0.0	10.9	1.3	11.0	0.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	370	335	450	422	443	449	515	0	697	508	686	654
V/C Ratio(X)	0.06	0.41	0.25	0.38	0.28	0.29	0.17	0.00	0.45	0.09	0.47	0.04
Avail Cap(c_a), veh/h	513	424	526	440	443	449	546	0	697	582	686	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	30.4	23.1	21.7	25.4	25.4	13.1	0.0	18.8	13.6	20.3	14.7
Incr Delay (d2), s/veh	0.1	0.8	0.3	0.6	0.3	0.4	0.2	0.0	2.1	0.1	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	1.7	2.2	1.9	2.0	0.8	0.0	4.4	0.5	4.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	31.3	23.4	22.2	25.7	25.8	13.3	0.0	20.9	13.7	22.6	14.8
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h		271			413			403			395	
Approach Delay, s/veh		27.6			24.4			19.2			21.0	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	36.4	8.3	25.5	11.5	38.4	14.2	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0
Max Q Clear Time (g_c+I1), s	4.4	13.0	2.8	6.9	3.3	12.9	7.6	7.5
Green Ext Time (p_c), s	0.1	1.6	0.0	0.9	0.0	1.6	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

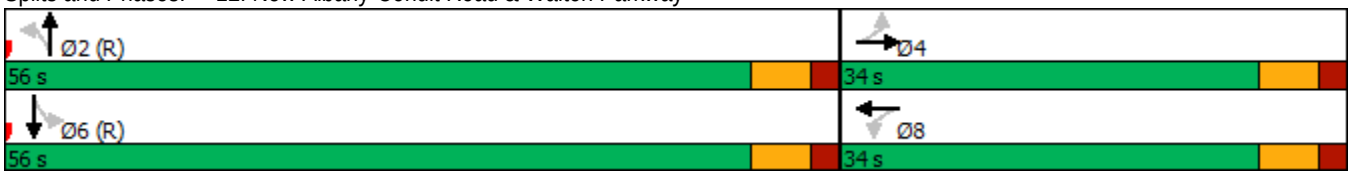
Notes

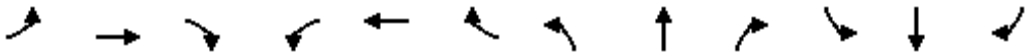
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	56	34	56	34
Maximum Split (%)	62.2%	37.8%	62.2%	37.8%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	56
End Time (s)	56	0	56	0
Yield/Force Off (s)	50	84	50	84
Yield/Force Off 170(s)	50	84	50	84
Local Start Time (s)	0	56	0	56
Local Yield (s)	50	84	50	84
Local Yield 170(s)	50	84	50	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	126	111	25	65	72	118	284	50	104	428	26
Future Volume (veh/h)	6	126	111	25	65	72	118	284	50	104	428	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	137	121	27	71	78	128	309	54	113	465	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	178	157	139	158	174	580	1043	182	682	1174	71
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1239	916	809	1121	814	895	904	1551	271	1019	1746	105
Grp Volume(v), veh/h	7	0	258	27	0	149	128	0	363	113	0	493
Grp Sat Flow(s),veh/h/ln	1239	0	1725	1121	0	1709	904	0	1822	1019	0	1851
Q Serve(g_s), s	0.5	0.0	12.8	2.1	0.0	6.9	6.6	0.0	7.3	4.6	0.0	10.7
Cycle Q Clear(g_c), s	7.4	0.0	12.8	14.9	0.0	6.9	17.3	0.0	7.3	11.9	0.0	10.7
Prop In Lane	1.00		0.47	1.00		0.52	1.00		0.15	1.00		0.06
Lane Grp Cap(c), veh/h	225	0	335	139	0	332	580	0	1225	682	0	1245
V/C Ratio(X)	0.03	0.00	0.77	0.19	0.00	0.45	0.22	0.00	0.30	0.17	0.00	0.40
Avail Cap(c_a), veh/h	370	0	537	270	0	532	580	0	1225	682	0	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	34.4	41.4	0.0	32.0	10.4	0.0	6.0	8.5	0.0	6.6
Incr Delay (d2), s/veh	0.1	0.0	3.8	0.7	0.0	1.0	0.9	0.0	0.6	0.5	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.5	0.6	0.0	2.9	1.3	0.0	2.5	0.9	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	38.1	42.1	0.0	33.0	11.3	0.0	6.6	9.0	0.0	7.5
LnGrp LOS	D	A	D	D	A	C	B	A	A	A	A	A
Approach Vol, veh/h		265			176			491			606	
Approach Delay, s/veh		38.0			34.4			7.9			7.8	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.5		23.5		66.5		23.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		28.0		50.0		28.0				
Max Q Clear Time (g_c+I1), s		19.3		14.8		13.9		16.9				
Green Ext Time (p_c), s		3.1		1.2		3.6		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

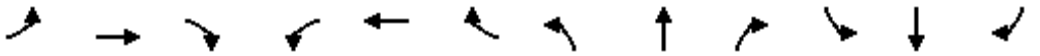
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	1	374	9	3	538
Future Vol, veh/h	22	1	374	9	3	538
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	1	407	10	3	585

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1003	412	0	0	417	0
Stage 1	412	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	268	640	-	-	1142	-
Stage 1	669	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	267	640	-	-	1142	-
Mov Cap-2 Maneuver	267	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	551	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0
HCM LOS	C		

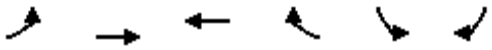
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	274	1142	-
HCM Lane V/C Ratio	-	-	0.091	0.003	-
HCM Control Delay (s)	-	-	19.5	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	0	0	4	2	349	5	0	558	7
Future Volume (Veh/h)	0	0	7	0	0	4	2	349	5	0	558	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	8	0	0	4	2	379	5	0	607	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	714	999	308	697	1000	97	615			384		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	714	999	308	697	1000	97	615			384		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	317	242	688	323	241	940	961			1171		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	8	4	65	126	126	68	405	210
Volume Left	0	0	2	0	0	0	0	0
Volume Right	8	4	0	0	0	5	0	8
cSH	688	940	961	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.00	0.07	0.07	0.04	0.24	0.12
Queue Length 95th (ft)	1	0	0	0	0	0	0	0
Control Delay (s)	10.3	8.8	0.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	10.3	8.8	0.0				0.0	
Approach LOS	B	A						

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	25.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	212	276	37	6	6
Future Volume (Veh/h)	37	212	276	37	6	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	230	300	40	7	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			679			
pX, platoon unblocked	0.98				0.98	0.98
vC, conflicting volume	340				515	170
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	282				461	109
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				99	99
cM capacity (veh/h)	1250				501	905

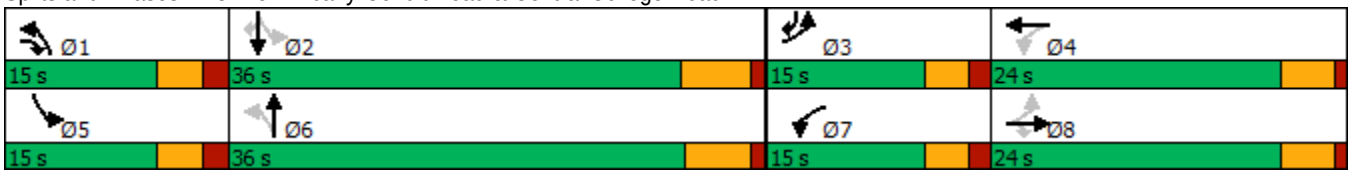
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	20	20	115	115	200	140	7	4	4
Volume Left	20	20	0	0	0	0	7	0	0
Volume Right	0	0	0	0	0	40	0	4	4
cSH	1250	1250	1700	1700	1700	1700	501	905	905
Volume to Capacity	0.03	0.03	0.07	0.07	0.12	0.08	0.01	0.00	0.00
Queue Length 95th (ft)	2	2	0	0	0	0	1	0	0
Control Delay (s)	8.0	8.0	0.0	0.0	0.0	0.0	12.3	9.0	9.0
Lane LOS	A	A					B	A	A
Approach Delay (s)	1.2				0.0		10.6		
Approach LOS							B		

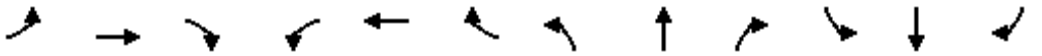
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	25.5%	ICU Level of Service		A
Analysis Period (min)	15			

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36	15	24	15	36	15	24
Maximum Split (%)	16.7%	40.0%	16.7%	26.7%	16.7%	40.0%	16.7%	26.7%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51	66	0	15	51	66
End Time (s)	15	51	66	0	15	51	66	0
Yield/Force Off (s)	10.2	45.3	61.6	85.4	10.2	45.6	61.6	85.4
Yield/Force Off 170(s)	10.2	45.3	61.6	74.4	10.2	34.6	61.6	85.4
Local Start Time (s)	75	0	36	51	75	0	36	51
Local Yield (s)	85.2	30.3	46.6	70.4	85.2	30.6	46.6	70.4
Local Yield 170(s)	85.2	30.3	46.6	59.4	85.2	19.6	46.6	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

Splits and Phases: 3: New Albany-Condit Road & Central College Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	136	103	156	215	27	83	219	89	44	304	30
Future Volume (veh/h)	27	136	103	156	215	27	83	219	89	44	304	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	148	112	170	234	29	90	238	97	48	330	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	389	337	452	418	761	93	505	490	200	487	680	669
Arrive On Green	0.06	0.18	0.18	0.12	0.24	0.24	0.11	0.39	0.39	0.08	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	3186	390	1781	1263	515	1781	1870	1585
Grp Volume(v), veh/h	29	148	112	170	129	134	90	0	335	48	330	33
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1800	1781	0	1778	1781	1870	1585
Q Serve(g_s), s	1.1	5.9	4.5	6.0	5.0	5.1	2.4	0.0	11.8	1.3	11.4	1.0
Cycle Q Clear(g_c), s	1.1	5.9	4.5	6.0	5.0	5.1	2.4	0.0	11.8	1.3	11.4	1.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	389	337	452	418	424	430	505	0	690	487	680	669
V/C Ratio(X)	0.07	0.44	0.25	0.41	0.30	0.31	0.18	0.00	0.49	0.10	0.49	0.05
Avail Cap(c_a), veh/h	511	435	535	435	424	430	536	0	690	561	680	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	30.4	22.9	21.6	26.0	26.1	13.3	0.0	19.2	13.8	20.5	14.2
Incr Delay (d2), s/veh	0.1	0.9	0.3	0.6	0.4	0.4	0.2	0.0	2.4	0.1	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	1.7	2.4	2.0	2.1	0.9	0.0	4.8	0.5	4.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	31.3	23.2	22.3	26.4	26.5	13.4	0.0	21.7	13.9	23.0	14.4
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h		289			433			425			411	
Approach Delay, s/veh		27.5			24.8			19.9			21.2	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	36.0	9.3	24.5	11.5	38.0	14.2	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.3	* 11	19.4	* 10	* 31	* 11	19.4
Max Q Clear Time (g_c+I1), s	4.4	13.4	3.1	7.1	3.3	13.8	8.0	7.9
Green Ext Time (p_c), s	0.1	1.6	0.0	1.0	0.0	1.6	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	27	6	0	6	20	379	5	3	548	8
Future Vol, veh/h	8	0	27	6	0	6	20	379	5	3	548	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	29	7	0	7	22	412	5	3	596	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1069	1068	601	1080	1070	415	605	0	0	417	0	0
Stage 1	607	607	-	459	459	-	-	-	-	-	-	-
Stage 2	462	461	-	621	611	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	199	222	500	196	221	637	973	-	-	1142	-	-
Stage 1	483	486	-	582	566	-	-	-	-	-	-	-
Stage 2	580	565	-	475	484	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	216	500	181	215	637	973	-	-	1142	-	-
Mov Cap-2 Maneuver	193	216	-	181	215	-	-	-	-	-	-	-
Stage 1	472	485	-	569	553	-	-	-	-	-	-	-
Stage 2	561	552	-	446	483	-	-	-	-	-	-	-

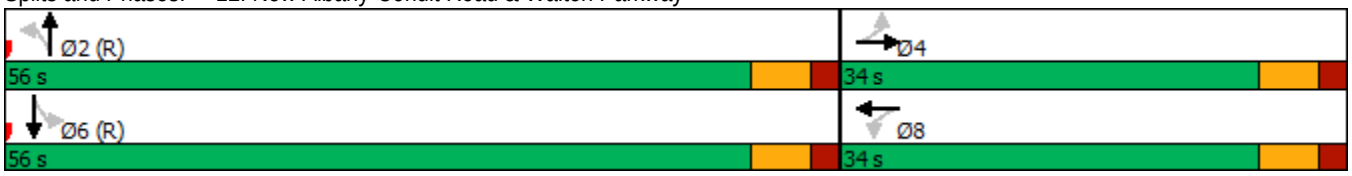
Approach	EB	WB	NB	SB
HCM Control Delay, s	15.9	18.4	0.4	0
HCM LOS	C	C		

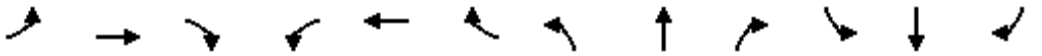
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	973	-	-	367	282	1142	-	-
HCM Lane V/C Ratio	0.022	-	-	0.104	0.046	0.003	-	-
HCM Control Delay (s)	8.8	-	-	15.9	18.4	8.2	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0	-	-

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	56	34	56	34
Maximum Split (%)	62.2%	37.8%	62.2%	37.8%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	56
End Time (s)	56	0	56	0
Yield/Force Off (s)	50	84	50	84
Yield/Force Off 170(s)	50	84	50	84
Local Start Time (s)	0	56	0	56
Local Yield (s)	50	84	50	84
Local Yield 170(s)	50	84	50	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	126	111	25	65	79	118	307	50	112	453	32
Future Volume (veh/h)	6	126	111	25	65	79	118	307	50	112	453	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	137	121	27	71	86	128	334	54	122	492	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	178	157	139	150	181	554	1056	171	661	1160	83
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1230	916	809	1121	770	933	876	1571	254	996	1726	123
Grp Volume(v), veh/h	7	0	258	27	0	157	128	0	388	122	0	527
Grp Sat Flow(s),veh/h/ln	1230	0	1725	1121	0	1702	876	0	1825	996	0	1848
Q Serve(g_s), s	0.5	0.0	12.8	2.1	0.0	7.4	7.1	0.0	8.0	5.2	0.0	11.8
Cycle Q Clear(g_c), s	7.8	0.0	12.8	14.9	0.0	7.4	18.8	0.0	8.0	13.2	0.0	11.8
Prop In Lane	1.00		0.47	1.00		0.55	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	219	0	336	139	0	331	554	0	1226	661	0	1242
V/C Ratio(X)	0.03	0.00	0.77	0.19	0.00	0.47	0.23	0.00	0.32	0.18	0.00	0.42
Avail Cap(c_a), veh/h	362	0	537	270	0	530	554	0	1226	661	0	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	34.3	41.4	0.0	32.2	11.1	0.0	6.1	8.9	0.0	6.8
Incr Delay (d2), s/veh	0.1	0.0	3.7	0.7	0.0	1.1	1.0	0.0	0.7	0.6	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.5	0.6	0.0	3.0	1.4	0.0	2.7	1.1	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	38.1	42.0	0.0	33.2	12.1	0.0	6.8	9.5	0.0	7.8
LnGrp LOS	D	A	D	D	A	C	B	A	A	A	A	A
Approach Vol, veh/h		265			184			516			649	
Approach Delay, s/veh		38.0			34.5			8.1			8.1	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.5		23.5		66.5		23.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		28.0		50.0		28.0				
Max Q Clear Time (g_c+I1), s		20.8		14.8		15.2		16.9				
Green Ext Time (p_c), s		3.3		1.2		4.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

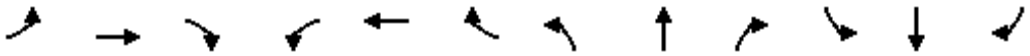
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	6	22	0	1	5	399	9	3	571	5
Future Vol, veh/h	6	0	6	22	0	1	5	399	9	3	571	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	24	0	1	5	434	10	3	621	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1080	1084	624	1082	1081	439	626	0	0	444	0	0
Stage 1	630	630	-	449	449	-	-	-	-	-	-	-
Stage 2	450	454	-	633	632	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	196	217	485	195	218	618	956	-	-	1116	-	-
Stage 1	470	475	-	589	572	-	-	-	-	-	-	-
Stage 2	589	569	-	468	474	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	194	215	485	191	216	618	956	-	-	1116	-	-
Mov Cap-2 Maneuver	194	215	-	191	216	-	-	-	-	-	-	-
Stage 1	468	474	-	586	569	-	-	-	-	-	-	-
Stage 2	585	566	-	460	473	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.6	25.9	0.1	0
HCM LOS	C	D		

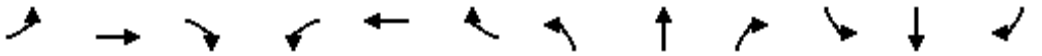
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	956	-	-	277	197	1116	-	-
HCM Lane V/C Ratio	0.006	-	-	0.047	0.127	0.003	-	-
HCM Control Delay (s)	8.8	-	-	18.6	25.9	8.2	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	0	0	10	2	349	25	0	576	7
Future Volume (Veh/h)	0	0	7	0	0	10	2	349	25	0	576	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	8	0	0	11	2	379	27	0	626	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	740	1040	317	718	1030	108	634			406		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	740	1040	317	718	1030	108	634			406		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	99	100			100		
cM capacity (veh/h)	301	228	679	312	231	925	945			1149		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	8	11	65	126	126	90	417	217
Volume Left	0	0	2	0	0	0	0	0
Volume Right	8	11	0	0	0	27	0	8
cSH	679	925	945	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.01	0.00	0.07	0.07	0.05	0.25	0.13
Queue Length 95th (ft)	1	1	0	0	0	0	0	0
Control Delay (s)	10.4	8.9	0.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	10.4	8.9	0.0				0.0	
Approach LOS	B	A						

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	26.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	212	13	15	276	37	26	3	17	6	3	6
Future Volume (Veh/h)	37	212	13	15	276	37	26	3	17	6	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	230	14	16	300	40	28	3	18	7	3	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					679							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	340			244			508	689	122	566	676	170
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	291			244			462	647	122	522	633	118
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			94	99	98	98	99	99
cM capacity (veh/h)	1245			1319			452	365	906	405	371	895

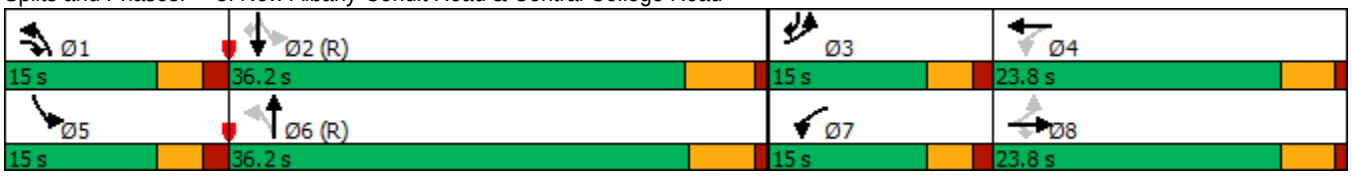
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2	SB 3	
Volume Total	20	20	153	91	16	200	140	49	7	5	5	
Volume Left	20	20	0	0	16	0	0	28	7	0	0	
Volume Right	0	0	0	14	0	0	40	18	0	2	5	
cSH	1245	1245	1700	1700	1319	1700	1700	544	405	499	895	
Volume to Capacity	0.03	0.03	0.09	0.05	0.01	0.12	0.08	0.09	0.02	0.01	0.01	
Queue Length 95th (ft)	2	2	0	0	1	0	0	7	1	1	0	
Control Delay (s)	8.0	8.0	0.0	0.0	7.8	0.0	0.0	12.3	14.1	12.3	9.0	
Lane LOS	A	A			A			B	B	B	A	
Approach Delay (s)	1.1				0.3			12.3	12.1			
Approach LOS								B	B			

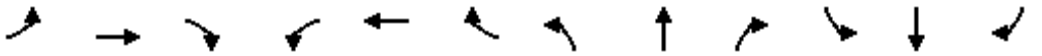
Intersection Summary					
Average Delay	1.8				
Intersection Capacity Utilization	31.4%	ICU Level of Service		A	
Analysis Period (min)	15				

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	15	36.2	15	23.8	15	36.2	15	23.8
Maximum Split (%)	16.7%	40.2%	16.7%	26.4%	16.7%	40.2%	16.7%	26.4%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.2	66.2	0	15	51.2	66.2
End Time (s)	15	51.2	66.2	0	15	51.2	66.2	0
Yield/Force Off (s)	10.2	45.5	61.8	85.4	10.2	45.8	61.8	85.4
Yield/Force Off 170(s)	10.2	45.5	61.8	74.4	10.2	34.8	61.8	85.4
Local Start Time (s)	75	0	36.2	51.2	75	0	36.2	51.2
Local Yield (s)	85.2	30.5	46.8	70.4	85.2	30.8	46.8	70.4
Local Yield 170(s)	85.2	30.5	46.8	59.4	85.2	19.8	46.8	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	85
Offset: 15 (17%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 3: New Albany-Condit Road & Central College Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	216	120	117	204	53	124	395	86	25	256	32
Future Volume (veh/h)	53	216	120	117	204	53	124	395	86	25	256	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	235	130	127	222	58	135	429	93	27	278	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	312	434	317	527	135	590	679	147	525	754	773
Arrive On Green	0.09	0.17	0.17	0.11	0.19	0.19	0.21	0.91	0.91	0.05	0.40	0.40
Sat Flow, veh/h	1781	1870	1585	1781	2802	716	1781	1489	323	1781	1870	1585
Grp Volume(v), veh/h	58	235	130	127	139	141	135	0	522	27	278	35
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1741	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	2.3	10.8	5.8	5.0	6.2	6.4	3.3	0.0	5.4	0.8	9.4	1.0
Cycle Q Clear(g_c), s	2.3	10.8	5.8	5.0	6.2	6.4	3.3	0.0	5.4	0.8	9.4	1.0
Prop In Lane	1.00		1.00	1.00		0.41	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	360	312	434	317	334	328	590	0	826	525	754	773
V/C Ratio(X)	0.16	0.75	0.30	0.40	0.42	0.43	0.23	0.00	0.63	0.05	0.37	0.05
Avail Cap(c_a), veh/h	418	399	508	338	379	372	600	0	826	630	754	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	35.7	25.8	26.3	32.2	32.3	10.1	0.0	2.4	13.5	18.8	12.1
Incr Delay (d2), s/veh	0.2	6.0	0.4	0.8	0.8	0.9	0.2	0.0	3.7	0.0	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.3	2.2	2.1	2.6	2.6	1.1	0.0	1.7	0.3	3.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	41.7	26.2	27.2	33.0	33.2	10.3	0.0	6.1	13.5	20.2	12.2
LnGrp LOS	C	D	C	C	C	C	B	A	A	B	C	B
Approach Vol, veh/h		423			407			657			340	
Approach Delay, s/veh		34.8			31.2			6.9			18.9	
Approach LOS		C			C			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	42.0	12.1	21.5	9.7	46.7	14.0	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.5	* 11	19.2	* 10	* 31	* 11	19.2
Max Q Clear Time (g_c+I1), s	5.3	11.4	4.3	8.4	2.8	7.4	7.0	12.8
Green Ext Time (p_c), s	0.1	1.4	0.0	1.0	0.0	3.1	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

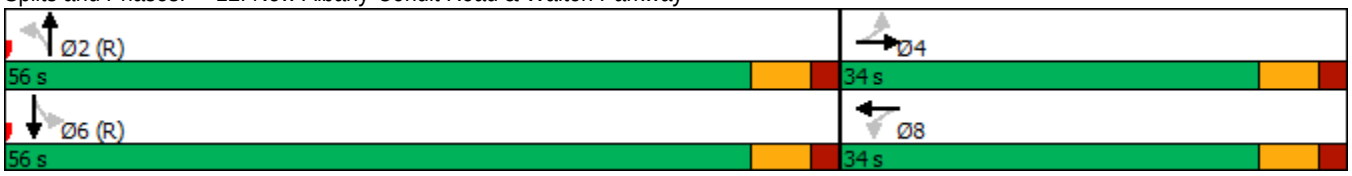
Notes

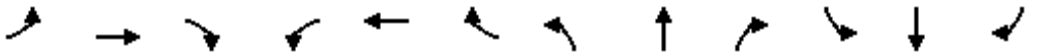
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	56	34	56	34
Maximum Split (%)	62.2%	37.8%	62.2%	37.8%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	56
End Time (s)	56	0	56	0
Yield/Force Off (s)	50	84	50	84
Yield/Force Off 170(s)	50	84	50	84
Local Start Time (s)	0	56	0	56
Local Yield (s)	50	84	50	84
Local Yield 170(s)	50	84	50	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	48	120	58	114	114	65	451	21	35	446	13
Future Volume (veh/h)	23	48	120	58	114	114	65	451	21	35	446	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	52	130	63	124	124	71	490	23	38	485	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	90	224	188	163	163	689	1200	56	571	1225	35
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.68	0.68	0.68	1.00	1.00	1.00
Sat Flow, veh/h	1132	474	1184	1202	858	858	899	1772	83	887	1809	52
Grp Volume(v), veh/h	25	0	182	63	0	248	71	0	513	38	0	499
Grp Sat Flow(s),veh/h/ln	1132	0	1657	1202	0	1716	899	0	1855	887	0	1861
Q Serve(g_s), s	1.9	0.0	9.0	4.5	0.0	12.3	2.5	0.0	11.1	0.7	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	9.0	13.5	0.0	12.3	2.5	0.0	11.1	11.9	0.0	0.0
Prop In Lane	1.00		0.71	1.00		0.50	1.00		0.04	1.00		0.03
Lane Grp Cap(c), veh/h	140	0	314	188	0	325	689	0	1256	571	0	1260
V/C Ratio(X)	0.18	0.00	0.58	0.34	0.00	0.76	0.10	0.00	0.41	0.07	0.00	0.40
Avail Cap(c_a), veh/h	277	0	516	334	0	534	689	0	1256	571	0	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	33.2	39.4	0.0	34.6	5.1	0.0	6.5	1.1	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.7	1.0	0.0	3.7	0.3	0.0	1.0	0.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.7	1.4	0.0	5.3	0.4	0.0	3.9	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	34.9	40.4	0.0	38.3	5.4	0.0	7.5	1.3	0.0	0.9
LnGrp LOS	D	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		207			311			584			537	
Approach Delay, s/veh		35.7			38.7			7.2			1.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.9		23.1		66.9		23.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		28.0		50.0		28.0				
Max Q Clear Time (g_c+I1), s		13.1		16.2		13.9		15.5				
Green Ext Time (p_c), s		4.0		0.8		3.3		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			14.7									
HCM 6th LOS			B									

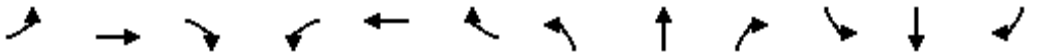
Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	3	597	11	3	486
Future Vol, veh/h	13	3	597	11	3	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	3	649	12	3	528

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1189	655	0	0	661	0
Stage 1	655	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	208	466	-	-	927	-
Stage 1	517	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	207	466	-	-	927	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	0.1
HCM LOS	C		

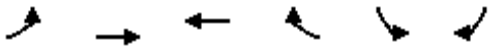
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	231	927	-
HCM Lane V/C Ratio	-	-	0.075	0.004	-
HCM Control Delay (s)	-	-	21.8	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	31	0	0	19	23	564	27	0	396	25
Future Volume (Veh/h)	0	0	31	0	0	19	23	564	27	0	396	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	34	0	0	21	25	613	29	0	430	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	668	1136	228	926	1134	168	457			642		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	668	1136	228	926	1134	168	457			642		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	100	100	98	98			100		
cM capacity (veh/h)	330	196	774	210	197	847	1100			939		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	34	21	127	204	204	131	287	170
Volume Left	0	0	25	0	0	0	0	0
Volume Right	34	21	0	0	0	29	0	27
cSH	774	847	1100	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.02	0.02	0.12	0.12	0.08	0.17	0.10
Queue Length 95th (ft)	3	2	2	0	0	0	0	0
Control Delay (s)	9.9	9.4	1.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A	A					
Approach Delay (s)	9.9	9.4	0.3				0.0	
Approach LOS	A	A						

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	27.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	352	323	7	38	38
Future Volume (Veh/h)	7	352	323	7	38	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	383	351	8	41	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			679			
pX, platoon unblocked						
vC, conflicting volume	359				562	180
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	359				562	180
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				91	95
cM capacity (veh/h)	1196				454	832

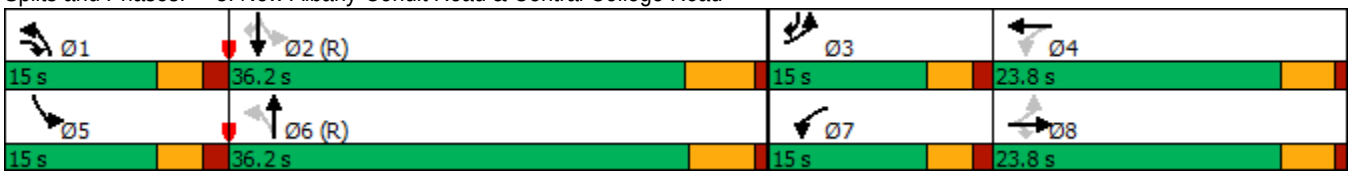
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	4	4	192	192	234	125	41	20	20
Volume Left	4	4	0	0	0	0	41	0	0
Volume Right	0	0	0	0	0	8	0	20	20
cSH	1196	1196	1700	1700	1700	1700	454	832	832
Volume to Capacity	0.01	0.01	0.11	0.11	0.14	0.07	0.09	0.02	0.02
Queue Length 95th (ft)	1	1	0	0	0	0	7	2	2
Control Delay (s)	8.0	8.0	0.0	0.0	0.0	0.0	13.7	9.4	9.4
Lane LOS	A	A					B	A	A
Approach Delay (s)	0.2				0.0		11.6		
Approach LOS							B		

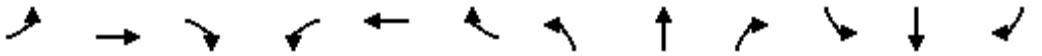
Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	19.7%	ICU Level of Service		A
Analysis Period (min)	15			

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	15	36.2	15	23.8	15	36.2	15	23.8
Maximum Split (%)	16.7%	40.2%	16.7%	26.4%	16.7%	40.2%	16.7%	26.4%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.2	66.2	0	15	51.2	66.2
End Time (s)	15	51.2	66.2	0	15	51.2	66.2	0
Yield/Force Off (s)	10.2	45.5	61.8	85.4	10.2	45.8	61.8	85.4
Yield/Force Off 170(s)	10.2	45.5	61.8	74.4	10.2	34.8	61.8	85.4
Local Start Time (s)	75	0	36.2	51.2	75	0	36.2	51.2
Local Yield (s)	85.2	30.5	46.8	70.4	85.2	30.8	46.8	70.4
Local Yield 170(s)	85.2	30.5	46.8	59.4	85.2	19.8	46.8	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	85
Offset: 15 (17%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 3: New Albany-Condit Road & Central College Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	225	120	129	213	53	124	404	98	25	265	40
Future Volume (veh/h)	62	225	120	129	213	53	124	404	98	25	265	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	245	130	140	232	58	135	439	107	27	288	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	312	434	313	521	128	578	660	161	508	751	780
Arrive On Green	0.09	0.17	0.17	0.11	0.18	0.18	0.21	0.91	0.91	0.05	0.40	0.40
Sat Flow, veh/h	1781	1870	1585	1781	2830	693	1781	1453	354	1781	1870	1585
Grp Volume(v), veh/h	67	245	130	140	144	146	135	0	546	27	288	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1746	1781	0	1807	1781	1870	1585
Q Serve(g_s), s	2.6	11.3	5.8	5.6	6.5	6.7	3.3	0.0	6.3	0.8	9.8	1.3
Cycle Q Clear(g_c), s	2.6	11.3	5.8	5.6	6.5	6.7	3.3	0.0	6.3	0.8	9.8	1.3
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	360	312	434	313	327	321	578	0	821	508	751	780
V/C Ratio(X)	0.19	0.79	0.30	0.45	0.44	0.45	0.23	0.00	0.67	0.05	0.38	0.06
Avail Cap(c_a), veh/h	409	399	508	331	379	372	589	0	821	613	751	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	36.0	25.8	26.5	32.6	32.7	10.2	0.0	2.5	13.5	19.0	11.9
Incr Delay (d2), s/veh	0.2	7.7	0.4	1.0	0.9	1.0	0.2	0.0	4.2	0.0	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.7	2.2	2.3	2.7	2.8	1.1	0.0	1.9	0.3	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	43.7	26.2	27.5	33.5	33.7	10.4	0.0	6.8	13.6	20.5	12.1
LnGrp LOS	C	D	C	C	C	C	B	A	A	B	C	B
Approach Vol, veh/h		442			430			681			358	
Approach Delay, s/veh		35.9			31.6			7.5			19.0	
Approach LOS		D			C			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	41.8	12.5	21.2	9.7	46.6	14.1	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.5	* 11	19.2	* 10	* 31	* 11	19.2
Max Q Clear Time (g_c+I1), s	5.3	11.8	4.6	8.7	2.8	8.3	7.6	13.3
Green Ext Time (p_c), s	0.1	1.4	0.1	1.0	0.0	3.3	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	35	6	0	6	31	601	6	6	491	15
Future Vol, veh/h	17	0	35	6	0	6	31	601	6	6	491	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	38	7	0	7	34	653	7	7	534	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1284	1284	542	1300	1289	657	550	0	0	660	0	0
Stage 1	556	556	-	725	725	-	-	-	-	-	-	-
Stage 2	728	728	-	575	564	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	142	165	540	138	164	465	1020	-	-	928	-	-
Stage 1	515	513	-	416	430	-	-	-	-	-	-	-
Stage 2	415	429	-	503	508	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	136	158	540	124	157	465	1020	-	-	928	-	-
Mov Cap-2 Maneuver	136	158	-	124	157	-	-	-	-	-	-	-
Stage 1	498	509	-	402	416	-	-	-	-	-	-	-
Stage 2	396	415	-	464	504	-	-	-	-	-	-	-

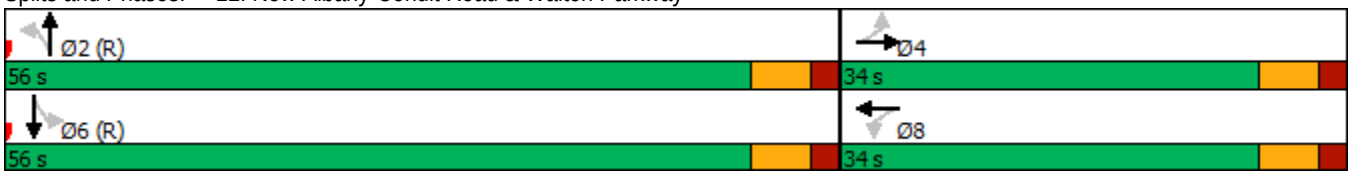
Approach	EB	WB	NB	SB
HCM Control Delay, s	21.5	24.7	0.4	0.1
HCM LOS	C	C		

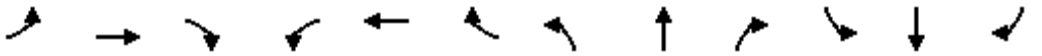
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1020	-	-	274	196	928	-	-
HCM Lane V/C Ratio	0.033	-	-	0.206	0.067	0.007	-	-
HCM Control Delay (s)	8.7	-	-	21.5	24.7	8.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.2	0	-	-

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	56	34	56	34
Maximum Split (%)	62.2%	37.8%	62.2%	37.8%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	56
End Time (s)	56	0	56	0
Yield/Force Off (s)	50	84	50	84
Yield/Force Off 170(s)	50	84	50	84
Local Start Time (s)	0	56	0	56
Local Yield (s)	50	84	50	84
Local Yield 170(s)	50	84	50	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	48	120	58	114	122	65	478	21	43	473	19
Future Volume (veh/h)	23	48	120	58	114	122	65	478	21	43	473	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	52	130	63	124	133	71	520	23	47	514	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	92	231	195	161	173	664	1194	53	543	1199	49
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.67	0.67	0.67	1.00	1.00	1.00
Sat Flow, veh/h	1123	474	1184	1202	826	885	870	1778	79	863	1784	73
Grp Volume(v), veh/h	25	0	182	63	0	257	71	0	543	47	0	535
Grp Sat Flow(s),veh/h/ln	1123	0	1657	1202	0	1711	870	0	1856	863	0	1857
Q Serve(g_s), s	1.9	0.0	8.9	4.5	0.0	12.8	2.6	0.0	12.2	1.1	0.0	0.0
Cycle Q Clear(g_c), s	14.8	0.0	8.9	13.4	0.0	12.8	2.6	0.0	12.2	13.3	0.0	0.0
Prop In Lane	1.00		0.71	1.00		0.52	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	139	0	323	195	0	333	664	0	1247	543	0	1248
V/C Ratio(X)	0.18	0.00	0.56	0.32	0.00	0.77	0.11	0.00	0.44	0.09	0.00	0.43
Avail Cap(c_a), veh/h	269	0	516	335	0	532	664	0	1247	543	0	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	32.8	38.8	0.0	34.3	5.3	0.0	6.9	1.3	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.5	1.0	0.0	3.8	0.3	0.0	1.1	0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.6	1.3	0.0	5.5	0.5	0.0	4.3	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	34.3	39.8	0.0	38.1	5.6	0.0	8.0	1.7	0.0	1.1
LnGrp LOS	D	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		207			320			614			582	
Approach Delay, s/veh		35.2			38.4			7.7			1.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.5		23.5		66.5		23.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		28.0		50.0		28.0				
Max Q Clear Time (g_c+I1), s		14.2		16.8		15.3		15.4				
Green Ext Time (p_c), s		4.3		0.8		3.7		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

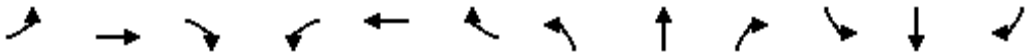
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	6	13	0	3	6	626	11	3	521	6
Future Vol, veh/h	6	0	6	13	0	3	6	626	11	3	521	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	14	0	3	7	680	12	3	566	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1278	1282	570	1279	1279	686	573	0	0	692	0	0
Stage 1	576	576	-	700	700	-	-	-	-	-	-	-
Stage 2	702	706	-	579	579	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	143	165	521	143	166	447	1000	-	-	903	-	-
Stage 1	503	502	-	430	441	-	-	-	-	-	-	-
Stage 2	429	439	-	501	501	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	141	163	521	140	164	447	1000	-	-	903	-	-
Mov Cap-2 Maneuver	141	163	-	140	164	-	-	-	-	-	-	-
Stage 1	499	500	-	427	438	-	-	-	-	-	-	-
Stage 2	423	436	-	493	499	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	30.1	0.1	0.1
HCM LOS	C	D		

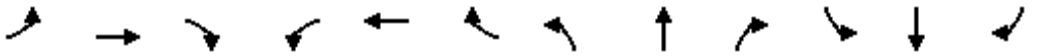
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	222	161	903	-	-
HCM Lane V/C Ratio	0.007	-	-	0.059	0.108	0.004	-	-
HCM Control Delay (s)	8.6	-	-	22.2	30.1	9	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	31	0	0	25	23	564	50	0	415	25
Future Volume (Veh/h)	0	0	31	0	0	25	23	564	50	0	415	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	34	0	0	27	25	613	54	0	451	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	695	1182	239	950	1168	180	478			667		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	695	1182	239	950	1168	180	478			667		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	100	100	97	98			100		
cM capacity (veh/h)	313	184	762	202	188	831	1081			919		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	34	27	127	204	204	156	301	177
Volume Left	0	0	25	0	0	0	0	0
Volume Right	34	27	0	0	0	54	0	27
cSH	762	831	1081	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.03	0.02	0.12	0.12	0.09	0.18	0.10
Queue Length 95th (ft)	3	3	2	0	0	0	0	0
Control Delay (s)	9.9	9.5	1.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A	A					
Approach Delay (s)	9.9	9.5	0.3				0.0	
Approach LOS	A	A						

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	28.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	347	21	22	318	7	33	4	23	38	3	38
Future Volume (Veh/h)	7	347	21	22	318	7	33	4	23	38	3	38
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	377	23	24	346	8	36	4	25	41	3	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					679							
pX, platoon unblocked												
vC, conflicting volume	354			400			668	806	200	630	814	177
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	354			400			668	806	200	630	814	177
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			89	99	97	88	99	95
cM capacity (veh/h)	1201			1155			318	305	808	344	302	835

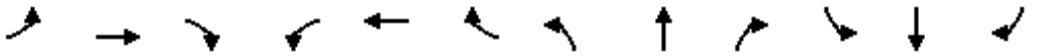
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2	SB 3
Volume Total	4	4	251	149	24	231	123	65	41	17	27
Volume Left	4	4	0	0	24	0	0	36	41	0	0
Volume Right	0	0	0	23	0	0	8	25	0	14	27
cSH	1201	1201	1700	1700	1155	1700	1700	413	344	634	835
Volume to Capacity	0.01	0.01	0.15	0.09	0.02	0.14	0.07	0.16	0.12	0.03	0.03
Queue Length 95th (ft)	1	1	0	0	2	0	0	14	10	2	3
Control Delay (s)	8.0	8.0	0.0	0.0	8.2	0.0	0.0	15.3	16.9	10.8	9.5
Lane LOS	A	A			A			C	C	B	A
Approach Delay (s)	0.2				0.5			15.3	13.3		
Approach LOS								C	B		

Intersection Summary					
Average Delay	2.6				
Intersection Capacity Utilization	33.7%	ICU Level of Service		A	
Analysis Period (min)	15				

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

Splits and Phases: 3: New Albany-Condit Road & Central College Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	140	114	164	234	30	94	237	88	52	344	26
Future Volume (veh/h)	22	140	114	164	234	30	94	237	88	52	344	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	152	124	178	254	33	102	258	96	57	374	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	334	454	411	774	99	481	501	186	481	683	659
Arrive On Green	0.05	0.18	0.18	0.12	0.24	0.24	0.11	0.39	0.39	0.09	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	3167	407	1781	1300	484	1781	1870	1585
Grp Volume(v), veh/h	24	152	124	178	141	146	102	0	354	57	374	28
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1797	1781	0	1783	1781	1870	1585
Q Serve(g_s), s	0.9	6.1	5.1	6.4	5.5	5.6	2.7	0.0	12.8	1.5	13.4	0.9
Cycle Q Clear(g_c), s	0.9	6.1	5.1	6.4	5.5	5.6	2.7	0.0	12.8	1.5	13.4	0.9
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	370	334	454	411	434	439	481	0	687	481	683	659
V/C Ratio(X)	0.06	0.46	0.27	0.43	0.33	0.33	0.21	0.00	0.52	0.12	0.55	0.04
Avail Cap(c_a), veh/h	504	422	529	427	434	439	504	0	687	541	683	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	30.9	23.2	22.1	26.1	26.1	13.6	0.0	19.8	13.8	21.2	14.6
Incr Delay (d2), s/veh	0.1	1.0	0.3	0.7	0.4	0.4	0.2	0.0	2.7	0.1	3.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.8	1.9	2.5	2.2	2.3	1.0	0.0	5.3	0.5	5.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	31.9	23.6	22.9	26.5	26.6	13.8	0.0	22.6	13.9	24.3	14.7
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h		300			465			456			459	
Approach Delay, s/veh		27.9			25.1			20.6			22.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	36.4	8.7	25.2	12.2	38.1	14.2	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0
Max Q Clear Time (g_c+I1), s	4.7	15.4	2.9	7.6	3.5	14.8	8.4	8.1
Green Ext Time (p_c), s	0.1	1.8	0.0	1.1	0.0	1.7	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

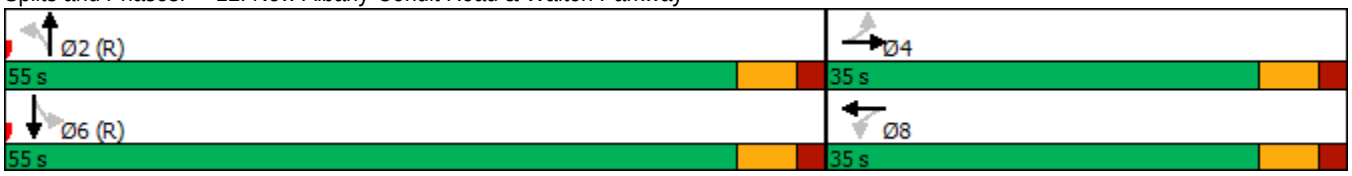
Notes

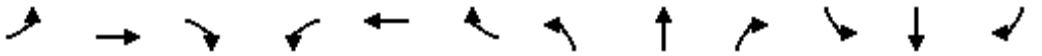
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	55	35	55	35
Maximum Split (%)	61.1%	38.9%	61.1%	38.9%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	55	0	55
End Time (s)	55	0	55	0
Yield/Force Off (s)	49	84	49	84
Yield/Force Off 170(s)	49	84	49	84
Local Start Time (s)	0	55	0	55
Local Yield (s)	49	84	49	84
Local Yield 170(s)	49	84	49	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	162	143	33	83	92	138	332	58	117	479	29
Future Volume (veh/h)	8	162	143	33	83	92	138	332	58	117	479	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	176	155	36	90	100	150	361	63	127	521	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	223	196	146	197	218	476	967	169	571	1088	67
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1193	917	808	1049	809	899	855	1551	271	963	1744	107
Grp Volume(v), veh/h	9	0	331	36	0	190	150	0	424	127	0	553
Grp Sat Flow(s),veh/h/ln	1193	0	1725	1049	0	1709	855	0	1822	963	0	1851
Q Serve(g_s), s	0.6	0.0	16.2	3.0	0.0	8.5	10.3	0.0	10.3	6.7	0.0	14.4
Cycle Q Clear(g_c), s	9.1	0.0	16.2	19.2	0.0	8.5	24.7	0.0	10.3	17.0	0.0	14.4
Prop In Lane	1.00		0.47	1.00		0.53	1.00		0.15	1.00		0.06
Lane Grp Cap(c), veh/h	257	0	419	146	0	415	476	0	1136	571	0	1155
V/C Ratio(X)	0.04	0.00	0.79	0.25	0.00	0.46	0.31	0.00	0.37	0.22	0.00	0.48
Avail Cap(c_a), veh/h	351	0	556	229	0	551	476	0	1136	571	0	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	31.9	40.9	0.0	29.0	15.7	0.0	8.3	12.5	0.0	9.1
Incr Delay (d2), s/veh	0.1	0.0	5.6	0.9	0.0	0.8	1.7	0.0	0.9	0.9	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	7.1	0.8	0.0	3.5	2.1	0.0	3.8	1.4	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	37.5	41.8	0.0	29.8	17.4	0.0	9.2	13.4	0.0	10.5
LnGrp LOS	C	A	D	D	A	C	B	A	A	B	A	B
Approach Vol, veh/h		340			226			574			680	
Approach Delay, s/veh		37.4			31.7			11.4			11.0	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.1		27.9		62.1		27.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		49.0		29.0		49.0		29.0				
Max Q Clear Time (g_c+I1), s		26.7		18.2		19.0		21.2				
Green Ext Time (p_c), s		3.6		1.5		4.2		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									

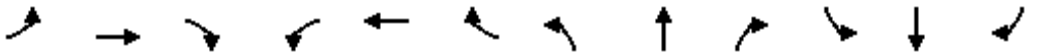
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	1	422	9	3	601
Future Vol, veh/h	22	1	422	9	3	601
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	1	459	10	3	653

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1123	464	0	0	469	0
Stage 1	464	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	227	598	-	-	1093	-
Stage 1	633	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	226	598	-	-	1093	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.4	0	0
HCM LOS	C		

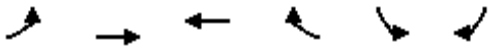
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	232	1093	-
HCM Lane V/C Ratio	-	-	0.108	0.003	-
HCM Control Delay (s)	-	-	22.4	8.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	0	0	4	2	393	5	0	629	7
Future Volume (Veh/h)	0	0	7	0	0	4	2	393	5	0	629	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	8	0	0	4	2	427	5	0	684	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	803	1124	346	784	1126	109	692			432		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	803	1124	346	784	1126	109	692			432		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	273	204	650	280	203	923	899			1124		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	8	4	73	142	142	76	456	236
Volume Left	0	0	2	0	0	0	0	0
Volume Right	8	4	0	0	0	5	0	8
cSH	650	923	899	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.00	0.08	0.08	0.04	0.27	0.14
Queue Length 95th (ft)	1	0	0	0	0	0	0	0
Control Delay (s)	10.6	8.9	0.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	10.6	8.9	0.0				0.0	
Approach LOS	B	A						

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	27.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	239	317	37	6	6
Future Volume (Veh/h)	37	239	317	37	6	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	260	345	40	7	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			679			
pX, platoon unblocked	0.97				0.97	0.97
vC, conflicting volume	385				575	192
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	297				494	98
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				99	99
cM capacity (veh/h)	1220				472	908

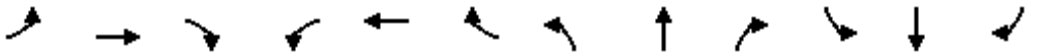
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	20	20	130	130	230	155	7	4	4
Volume Left	20	20	0	0	0	0	7	0	0
Volume Right	0	0	0	0	0	40	0	4	4
cSH	1220	1220	1700	1700	1700	1700	472	908	908
Volume to Capacity	0.03	0.03	0.08	0.08	0.14	0.09	0.01	0.00	0.00
Queue Length 95th (ft)	3	3	0	0	0	0	1	0	0
Control Delay (s)	8.1	8.1	0.0	0.0	0.0	0.0	12.7	9.0	9.0
Lane LOS	A	A					B	A	A
Approach Delay (s)	1.1				0.0		10.9		
Approach LOS							B		

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	25.8%	ICU Level of Service		A
Analysis Period (min)	15			

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

Splits and Phases: 3: New Albany-Condit Road & Central College Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	149	114	174	242	30	94	246	99	52	352	33
Future Volume (veh/h)	30	149	114	174	242	30	94	246	99	52	352	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	162	124	189	263	33	102	267	108	57	383	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	333	454	404	737	92	472	488	197	464	682	679
Arrive On Green	0.06	0.18	0.18	0.12	0.23	0.23	0.11	0.39	0.39	0.09	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	3181	395	1781	1266	512	1781	1870	1585
Grp Volume(v), veh/h	33	162	124	189	146	150	102	0	375	57	383	36
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1799	1781	0	1778	1781	1870	1585
Q Serve(g_s), s	1.2	6.6	5.1	6.8	5.8	5.9	2.7	0.0	13.8	1.5	13.8	1.1
Cycle Q Clear(g_c), s	1.2	6.6	5.1	6.8	5.8	5.9	2.7	0.0	13.8	1.5	13.8	1.1
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	375	333	454	404	412	417	472	0	685	464	682	679
V/C Ratio(X)	0.09	0.49	0.27	0.47	0.35	0.36	0.22	0.00	0.55	0.12	0.56	0.05
Avail Cap(c_a), veh/h	485	422	529	420	412	417	496	0	685	524	682	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	31.1	23.3	22.3	27.1	27.1	13.7	0.0	20.2	14.0	21.4	14.1
Incr Delay (d2), s/veh	0.1	1.1	0.3	0.8	0.5	0.5	0.2	0.0	3.1	0.1	3.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.0	1.9	2.7	2.3	2.4	1.0	0.0	5.7	0.5	5.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	32.2	23.6	23.2	27.6	27.6	13.9	0.0	23.3	14.1	24.7	14.2
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h		319			485			477			476	
Approach Delay, s/veh		28.1			25.9			21.3			22.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	36.4	9.8	24.1	12.2	38.1	14.3	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0
Max Q Clear Time (g_c+I1), s	4.7	15.8	3.2	7.9	3.5	15.8	8.8	8.6
Green Ext Time (p_c), s	0.1	1.8	0.0	1.1	0.0	1.8	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	27	6	0	6	20	427	5	5	618	8
Future Vol, veh/h	8	0	27	6	0	6	20	427	5	5	618	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	29	7	0	7	22	464	5	5	672	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1201	1200	677	1212	1202	467	681	0	0	469	0	0
Stage 1	687	687	-	511	511	-	-	-	-	-	-	-
Stage 2	514	513	-	701	691	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	162	185	453	159	185	596	912	-	-	1093	-	-
Stage 1	437	447	-	545	537	-	-	-	-	-	-	-
Stage 2	543	536	-	429	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	180	453	145	180	596	912	-	-	1093	-	-
Mov Cap-2 Maneuver	157	180	-	145	180	-	-	-	-	-	-	-
Stage 1	427	445	-	532	524	-	-	-	-	-	-	-
Stage 2	524	523	-	399	444	-	-	-	-	-	-	-

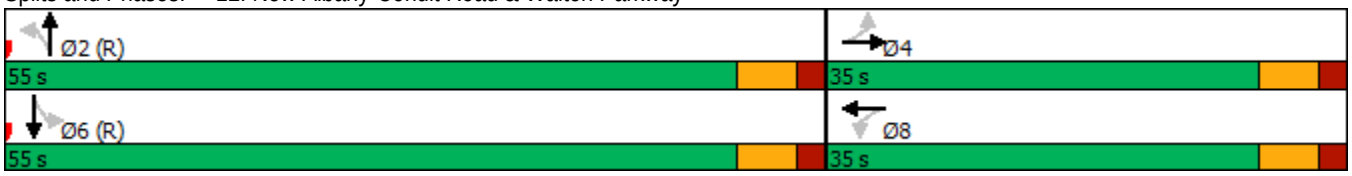
Approach	EB	WB	NB	SB
HCM Control Delay, s	17.9	21.4	0.4	0.1
HCM LOS	C	C		

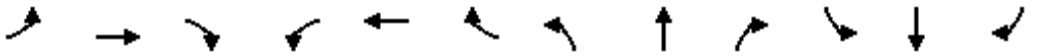
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	912	-	-	317	233	1093	-	-
HCM Lane V/C Ratio	0.024	-	-	0.12	0.056	0.005	-	-
HCM Control Delay (s)	9	-	-	17.9	21.4	8.3	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.2	0	-	-

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	55	35	55	35
Maximum Split (%)	61.1%	38.9%	61.1%	38.9%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	55	0	55
End Time (s)	55	0	55	0
Yield/Force Off (s)	49	84	49	84
Yield/Force Off 170(s)	49	84	49	84
Local Start Time (s)	0	55	0	55
Local Yield (s)	49	84	49	84
Local Yield 170(s)	49	84	49	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	162	143	33	83	99	138	355	58	125	504	35
Future Volume (veh/h)	8	162	143	33	83	99	138	355	58	125	504	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	176	155	36	90	108	150	386	63	136	548	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	223	196	147	188	226	452	978	160	551	1078	75
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1185	917	808	1049	774	929	829	1568	256	941	1729	120
Grp Volume(v), veh/h	9	0	331	36	0	198	150	0	449	136	0	586
Grp Sat Flow(s),veh/h/ln	1185	0	1725	1049	0	1703	829	0	1824	941	0	1849
Q Serve(g_s), s	0.6	0.0	16.2	3.0	0.0	9.0	11.0	0.0	11.1	7.6	0.0	15.7
Cycle Q Clear(g_c), s	9.6	0.0	16.2	19.2	0.0	9.0	26.7	0.0	11.1	18.7	0.0	15.7
Prop In Lane	1.00		0.47	1.00		0.55	1.00		0.14	1.00		0.06
Lane Grp Cap(c), veh/h	250	0	419	147	0	414	452	0	1137	551	0	1153
V/C Ratio(X)	0.04	0.00	0.79	0.25	0.00	0.48	0.33	0.00	0.39	0.25	0.00	0.51
Avail Cap(c_a), veh/h	344	0	556	230	0	549	452	0	1137	551	0	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	31.9	40.9	0.0	29.2	16.7	0.0	8.5	13.1	0.0	9.3
Incr Delay (d2), s/veh	0.1	0.0	5.5	0.9	0.0	0.9	2.0	0.0	1.0	1.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	7.1	0.8	0.0	3.6	2.2	0.0	4.1	1.6	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	0.0	37.4	41.7	0.0	30.0	18.7	0.0	9.5	14.2	0.0	10.9
LnGrp LOS	C	A	D	D	A	C	B	A	A	B	A	B
Approach Vol, veh/h		340			234			599			722	
Approach Delay, s/veh		37.3			31.8			11.8			11.6	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.1		27.9		62.1		27.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		49.0		29.0		49.0		29.0				
Max Q Clear Time (g_c+I1), s		28.7		18.2		20.7		21.2				
Green Ext Time (p_c), s		3.7		1.5		4.6		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									

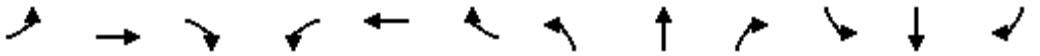
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	6	22	0	1	5	447	9	3	634	5
Future Vol, veh/h	6	0	6	22	0	1	5	447	9	3	634	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	24	0	1	5	486	10	3	689	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1200	1204	692	1202	1201	491	694	0	0	496	0	0
Stage 1	698	698	-	501	501	-	-	-	-	-	-	-
Stage 2	502	506	-	701	700	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	162	184	444	161	185	578	901	-	-	1068	-	-
Stage 1	431	442	-	552	543	-	-	-	-	-	-	-
Stage 2	552	540	-	429	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	161	182	444	158	183	578	901	-	-	1068	-	-
Mov Cap-2 Maneuver	161	182	-	158	183	-	-	-	-	-	-	-
Stage 1	428	441	-	549	540	-	-	-	-	-	-	-
Stage 2	548	537	-	422	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.1	31	0.1	0
HCM LOS	C	D		

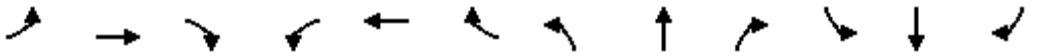
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	236	163	1068	-	-
HCM Lane V/C Ratio	0.006	-	-	0.055	0.153	0.003	-	-
HCM Control Delay (s)	9	-	-	21.1	31	8.4	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	0	0	10	2	393	25	0	647	7
Future Volume (Veh/h)	0	0	7	0	0	10	2	393	25	0	647	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	8	0	0	11	2	427	27	0	703	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	829	1165	356	804	1156	120	711			454		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	829	1165	356	804	1156	120	711			454		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	99	100			100		
cM capacity (veh/h)	259	192	641	270	195	909	884			1103		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	8	11	73	142	142	98	469	242
Volume Left	0	0	2	0	0	0	0	0
Volume Right	8	11	0	0	0	27	0	8
cSH	641	909	884	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.01	0.00	0.08	0.08	0.06	0.28	0.14
Queue Length 95th (ft)	1	1	0	0	0	0	0	0
Control Delay (s)	10.7	9.0	0.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	10.7	9.0	0.0				0.0	
Approach LOS	B	A						

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	28.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	239	13	15	317	37	26	3	17	6	3	6
Future Volume (Veh/h)	37	239	13	15	317	37	26	3	17	6	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	260	14	16	345	40	28	3	18	7	3	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					679							
pX, platoon unblocked	0.97						0.97	0.97		0.97	0.97	0.97
vC, conflicting volume	385			274			560	764	137	626	751	192
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	303			274			483	694	137	552	680	104
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			93	99	98	98	99	99
cM capacity (veh/h)	1217			1286			430	338	886	380	344	902

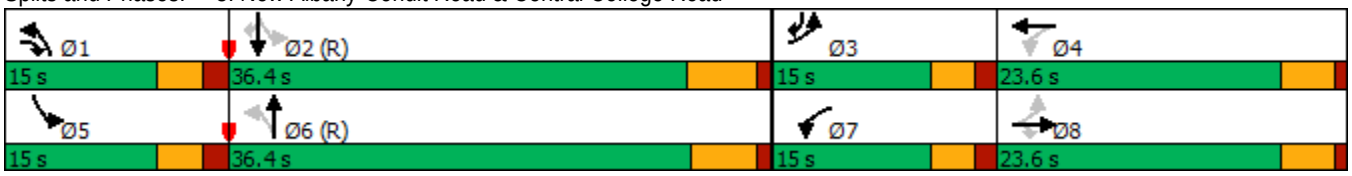
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2	SB 3
Volume Total	20	20	173	101	16	230	155	49	7	5	5
Volume Left	20	20	0	0	16	0	0	28	7	0	0
Volume Right	0	0	0	14	0	0	40	18	0	2	5
cSH	1217	1217	1700	1700	1286	1700	1700	520	380	472	902
Volume to Capacity	0.03	0.03	0.10	0.06	0.01	0.14	0.09	0.09	0.02	0.01	0.01
Queue Length 95th (ft)	3	3	0	0	1	0	0	8	1	1	0
Control Delay (s)	8.1	8.1	0.0	0.0	7.8	0.0	0.0	12.6	14.7	12.7	9.0
Lane LOS	A	A			A			B	B	B	A
Approach Delay (s)	1.0				0.3			12.6	12.5		
Approach LOS								B	B		

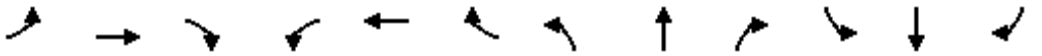
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	31.8%	ICU Level of Service		A
Analysis Period (min)	15			

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	85
Offset: 15 (17%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 3: New Albany-Condit Road & Central College Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	239	132	132	230	60	140	445	97	29	299	37
Future Volume (veh/h)	59	239	132	132	230	60	140	445	97	29	299	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	260	143	143	250	65	152	484	105	32	325	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	312	436	304	522	133	552	666	145	478	748	775
Arrive On Green	0.09	0.17	0.17	0.11	0.19	0.19	0.22	0.89	0.89	0.06	0.40	0.40
Sat Flow, veh/h	1781	1870	1585	1781	2804	715	1781	1489	323	1781	1870	1585
Grp Volume(v), veh/h	64	260	143	143	157	158	152	0	589	32	325	40
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1742	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	2.5	12.1	6.5	5.7	7.1	7.3	3.9	0.0	8.8	0.9	11.4	1.2
Cycle Q Clear(g_c), s	2.5	12.1	6.5	5.7	7.1	7.3	3.9	0.0	8.8	0.9	11.4	1.2
Prop In Lane	1.00		1.00	1.00		0.41	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	349	312	436	304	330	324	552	0	811	478	748	775
V/C Ratio(X)	0.18	0.83	0.33	0.47	0.47	0.49	0.28	0.00	0.73	0.07	0.43	0.05
Avail Cap(c_a), veh/h	401	395	507	321	375	368	560	0	811	571	748	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	36.3	26.0	26.7	32.7	32.8	10.6	0.0	3.1	13.4	19.6	12.1
Incr Delay (d2), s/veh	0.2	11.7	0.4	1.1	1.1	1.1	0.3	0.0	5.6	0.1	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.4	2.4	2.4	3.0	3.0	1.2	0.0	2.5	0.3	4.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	48.0	26.4	27.8	33.8	33.9	10.9	0.0	8.7	13.5	21.4	12.2
LnGrp LOS	C	D	C	C	C	C	B	A	A	B	C	B
Approach Vol, veh/h		467			458			741			397	
Approach Delay, s/veh		38.4			32.0			9.2			19.9	
Approach LOS		D			C			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	41.7	12.4	21.3	10.3	46.0	14.1	19.6
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0
Max Q Clear Time (g_c+I1), s	5.9	13.4	4.5	9.3	2.9	10.8	7.7	14.1
Green Ext Time (p_c), s	0.1	1.6	0.0	1.1	0.0	3.5	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

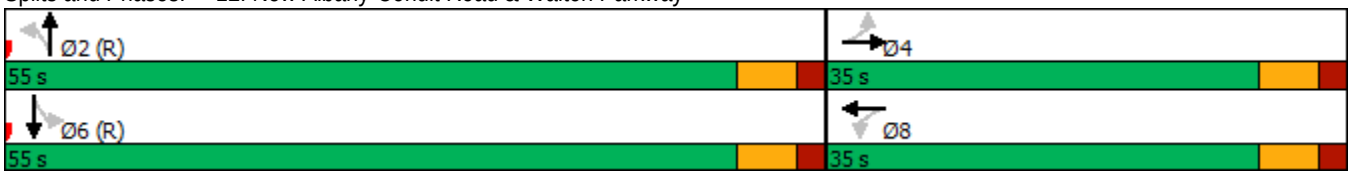
Notes

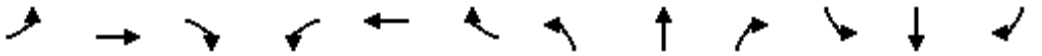
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	55	35	55	35
Maximum Split (%)	61.1%	38.9%	61.1%	38.9%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	55	0	55
End Time (s)	55	0	55	0
Yield/Force Off (s)	49	84	49	84
Yield/Force Off 170(s)	49	84	49	84
Local Start Time (s)	0	55	0	55
Local Yield (s)	49	84	49	84
Local Yield 170(s)	49	84	49	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	61	154	75	147	147	76	528	24	39	498	15
Future Volume (veh/h)	30	61	154	75	147	147	76	528	24	39	498	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	66	167	82	160	160	83	574	26	42	541	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	111	282	209	204	204	616	1117	51	450	1137	34
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.63	0.63	0.63	1.00	1.00	1.00
Sat Flow, veh/h	1060	469	1187	1147	858	858	852	1775	80	819	1807	53
Grp Volume(v), veh/h	33	0	233	82	0	320	83	0	600	42	0	557
Grp Sat Flow(s),veh/h/ln	1060	0	1657	1147	0	1716	852	0	1856	819	0	1861
Q Serve(g_s), s	2.7	0.0	11.2	6.1	0.0	15.7	3.6	0.0	15.9	1.4	0.0	0.0
Cycle Q Clear(g_c), s	18.4	0.0	11.2	17.4	0.0	15.7	3.6	0.0	15.9	17.4	0.0	0.0
Prop In Lane	1.00		0.72	1.00		0.50	1.00		0.04	1.00		0.03
Lane Grp Cap(c), veh/h	146	0	393	209	0	407	616	0	1168	450	0	1171
V/C Ratio(X)	0.23	0.00	0.59	0.39	0.00	0.79	0.13	0.00	0.51	0.09	0.00	0.48
Avail Cap(c_a), veh/h	236	0	534	307	0	553	616	0	1168	450	0	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	30.5	38.2	0.0	32.2	6.9	0.0	9.1	2.4	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	1.4	1.2	0.0	5.2	0.5	0.0	1.6	0.4	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.5	1.8	0.0	6.9	0.6	0.0	6.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	0.0	31.9	39.4	0.0	37.4	7.3	0.0	10.8	2.9	0.0	1.4
LnGrp LOS	D	A	C	D	A	D	A	A	B	A	A	A
Approach Vol, veh/h		266			402			683			599	
Approach Delay, s/veh		33.1			37.8			10.3			1.5	
Approach LOS		C			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.6		27.4		62.6		27.4				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		49.0		29.0		49.0		29.0				
Max Q Clear Time (g_c+I1), s		17.9		20.4		19.4		19.4				
Green Ext Time (p_c), s		4.9		0.9		3.8		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

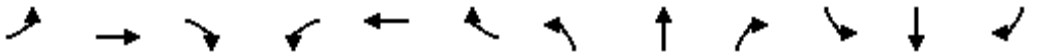
Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	3	673	11	3	544
Future Vol, veh/h	13	3	673	11	3	544
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	3	732	12	3	591

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1335	738	0	0	744	0
Stage 1	738	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	169	418	-	-	864	-
Stage 1	473	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	168	418	-	-	864	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	547	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26	0	0.1
HCM LOS	D		

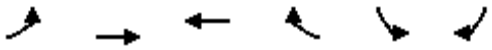
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	189	864	-
HCM Lane V/C Ratio	-	-	0.092	0.004	-
HCM Control Delay (s)	-	-	26	9.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	31	0	0	19	23	636	27	0	446	25
Future Volume (Veh/h)	0	0	31	0	0	19	23	636	27	0	446	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	34	0	0	21	25	691	29	0	485	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	742	1268	256	1032	1268	187	512			720		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	742	1268	256	1032	1268	187	512			720		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	95	100	100	97	98			100		
cM capacity (veh/h)	291	163	743	175	163	823	1050			877		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	34	21	140	230	230	144	323	189
Volume Left	0	0	25	0	0	0	0	0
Volume Right	34	21	0	0	0	29	0	27
cSH	743	823	1050	1700	1700	1700	1700	1700
Volume to Capacity	0.05	0.03	0.02	0.14	0.14	0.08	0.19	0.11
Queue Length 95th (ft)	4	2	2	0	0	0	0	0
Control Delay (s)	10.1	9.5	1.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	10.1	9.5	0.3				0.0	
Approach LOS	B	A						

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	29.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	393	370	7	38	38
Future Volume (Veh/h)	7	393	370	7	38	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	427	402	8	41	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			679			
pX, platoon unblocked	0.99				0.99	0.99
vC, conflicting volume	410				636	205
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	375				603	167
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				90	95
cM capacity (veh/h)	1165				422	837

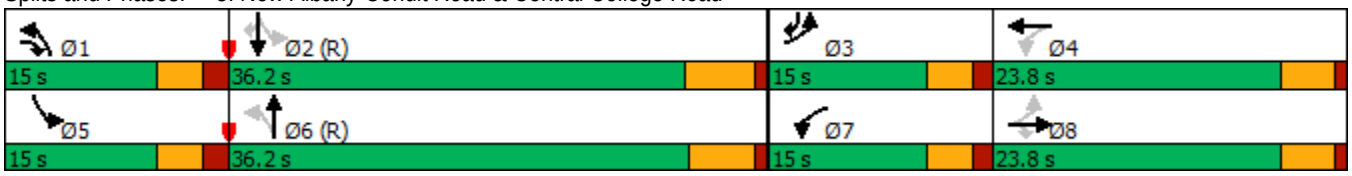
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	4	4	214	214	268	142	41	20	20
Volume Left	4	4	0	0	0	0	41	0	0
Volume Right	0	0	0	0	0	8	0	20	20
cSH	1165	1165	1700	1700	1700	1700	422	837	837
Volume to Capacity	0.01	0.01	0.13	0.13	0.16	0.08	0.10	0.02	0.02
Queue Length 95th (ft)	1	1	0	0	0	0	8	2	2
Control Delay (s)	8.1	8.1	0.0	0.0	0.0	0.0	14.5	9.4	9.4
Lane LOS	A	A					B	A	A
Approach Delay (s)	0.1				0.0		11.9		
Approach LOS							B		

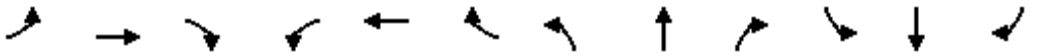
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	20.9%	ICU Level of Service		A
Analysis Period (min)	15			

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	15	36.2	15	23.8	15	36.2	15	23.8
Maximum Split (%)	16.7%	40.2%	16.7%	26.4%	16.7%	40.2%	16.7%	26.4%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.2	66.2	0	15	51.2	66.2
End Time (s)	15	51.2	66.2	0	15	51.2	66.2	0
Yield/Force Off (s)	10.2	45.5	61.8	85.4	10.2	45.8	61.8	85.4
Yield/Force Off 170(s)	10.2	45.5	61.8	74.4	10.2	34.8	61.8	85.4
Local Start Time (s)	75	0	36.2	51.2	75	0	36.2	51.2
Local Yield (s)	85.2	30.5	46.8	70.4	85.2	30.8	46.8	70.4
Local Yield 170(s)	85.2	30.5	46.8	59.4	85.2	19.8	46.8	70.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	85
Offset: 15 (17%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 3: New Albany-Condit Road & Central College Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	248	132	144	239	60	140	454	109	29	308	45
Future Volume (veh/h)	68	248	132	144	239	60	140	454	109	29	308	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	270	143	157	260	65	152	493	118	32	335	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	321	444	305	528	130	536	644	154	449	738	774
Arrive On Green	0.09	0.17	0.17	0.11	0.19	0.19	0.22	0.88	0.88	0.06	0.39	0.39
Sat Flow, veh/h	1781	1870	1585	1781	2828	694	1781	1458	349	1781	1870	1585
Grp Volume(v), veh/h	74	270	143	157	162	163	152	0	611	32	335	49
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1745	1781	0	1808	1781	1870	1585
Q Serve(g_s), s	2.9	12.6	6.4	6.3	7.3	7.6	3.9	0.0	10.9	0.9	11.9	1.5
Cycle Q Clear(g_c), s	2.9	12.6	6.4	6.3	7.3	7.6	3.9	0.0	10.9	0.9	11.9	1.5
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	355	321	444	305	332	326	536	0	799	449	738	774
V/C Ratio(X)	0.21	0.84	0.32	0.52	0.49	0.50	0.28	0.00	0.77	0.07	0.45	0.06
Avail Cap(c_a), veh/h	398	399	510	321	379	372	544	0	799	542	738	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	36.1	25.6	26.6	32.7	32.8	11.0	0.0	3.6	13.8	20.1	12.2
Incr Delay (d2), s/veh	0.3	12.5	0.4	1.3	1.1	1.2	0.3	0.0	6.9	0.1	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.7	2.4	2.6	3.1	3.1	1.3	0.0	3.0	0.3	5.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	48.7	26.1	28.0	33.8	34.0	11.2	0.0	10.5	13.9	22.1	12.3
LnGrp LOS	C	D	C	C	C	C	B	A	B	B	C	B
Approach Vol, veh/h		487			482			763			416	
Approach Delay, s/veh		38.6			32.0			10.6			20.3	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	41.2	12.8	21.4	10.3	45.5	14.2	20.0
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6
Max Green Setting (Gmax), s	* 10	30.5	* 11	19.2	* 10	* 31	* 11	19.2
Max Q Clear Time (g_c+I1), s	5.9	13.9	4.9	9.6	2.9	12.9	8.3	14.6
Green Ext Time (p_c), s	0.1	1.7	0.1	1.1	0.0	3.5	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	35	6	0	6	31	677	6	6	555	15
Future Vol, veh/h	17	0	35	6	0	6	31	677	6	6	555	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	38	7	0	7	34	736	7	7	603	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1436	1436	611	1452	1441	740	619	0	0	743	0	0
Stage 1	625	625	-	808	808	-	-	-	-	-	-	-
Stage 2	811	811	-	644	633	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	133	494	108	133	417	961	-	-	864	-	-
Stage 1	473	477	-	375	394	-	-	-	-	-	-	-
Stage 2	373	393	-	461	473	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	127	494	96	127	417	961	-	-	864	-	-
Mov Cap-2 Maneuver	106	127	-	96	127	-	-	-	-	-	-	-
Stage 1	456	473	-	362	380	-	-	-	-	-	-	-
Stage 2	354	379	-	422	469	-	-	-	-	-	-	-

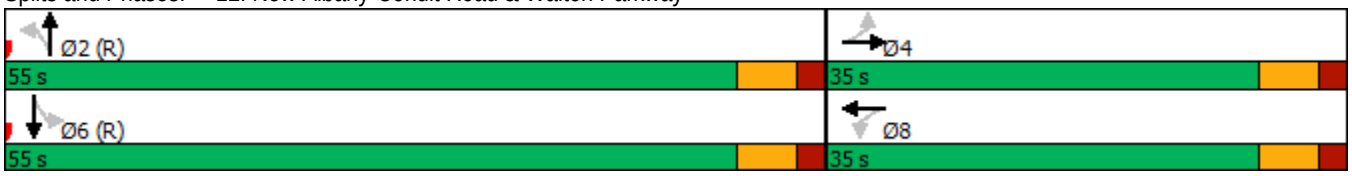
Approach	EB	WB	NB	SB
HCM Control Delay, s	26.3	30.2	0.4	0.1
HCM LOS	D	D		

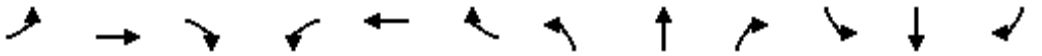
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	961	-	-	225	156	864	-	-
HCM Lane V/C Ratio	0.035	-	-	0.251	0.084	0.008	-	-
HCM Control Delay (s)	8.9	-	-	26.3	30.2	9.2	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0.3	0	-	-

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	55	35	55	35
Maximum Split (%)	61.1%	38.9%	61.1%	38.9%
Minimum Split (s)	26	16	26	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	20	10	20	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	55	0	55
End Time (s)	55	0	55	0
Yield/Force Off (s)	49	84	49	84
Yield/Force Off 170(s)	49	84	49	84
Local Start Time (s)	0	55	0	55
Local Yield (s)	49	84	49	84
Local Yield 170(s)	49	84	49	84

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	61	154	75	147	155	76	555	24	47	525	21
Future Volume (veh/h)	30	61	154	75	147	155	76	555	24	47	525	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	66	167	82	160	168	83	603	26	51	571	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	114	287	215	202	212	594	1112	48	425	1115	45
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.62	0.62	0.62	1.00	1.00	1.00
Sat Flow, veh/h	1052	469	1187	1147	835	877	823	1780	77	797	1785	72
Grp Volume(v), veh/h	33	0	233	82	0	328	83	0	629	51	0	594
Grp Sat Flow(s),veh/h/ln	1052	0	1657	1147	0	1712	823	0	1857	797	0	1857
Q Serve(g_s), s	2.7	0.0	11.2	6.1	0.0	16.2	3.8	0.0	17.3	2.0	0.0	0.0
Cycle Q Clear(g_c), s	18.9	0.0	11.2	17.3	0.0	16.2	3.8	0.0	17.3	19.3	0.0	0.0
Prop In Lane	1.00		0.72	1.00		0.51	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	146	0	401	215	0	415	594	0	1160	425	0	1160
V/C Ratio(X)	0.23	0.00	0.58	0.38	0.00	0.79	0.14	0.00	0.54	0.12	0.00	0.51
Avail Cap(c_a), veh/h	230	0	534	307	0	552	594	0	1160	425	0	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	30.1	37.7	0.0	32.0	7.1	0.0	9.6	3.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	1.3	1.1	0.0	5.7	0.5	0.0	1.8	0.6	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.4	1.7	0.0	7.1	0.7	0.0	6.5	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	0.0	31.4	38.8	0.0	37.6	7.5	0.0	11.4	3.5	0.0	1.6
LnGrp LOS	D	A	C	D	A	D	A	A	B	A	A	A
Approach Vol, veh/h		266			410			712			645	
Approach Delay, s/veh		32.7			37.9			11.0			1.8	
Approach LOS		C			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.2		27.8		62.2		27.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		49.0		29.0		49.0		29.0				
Max Q Clear Time (g_c+I1), s		19.3		20.9		21.3		19.3				
Green Ext Time (p_c), s		5.2		0.9		4.2		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

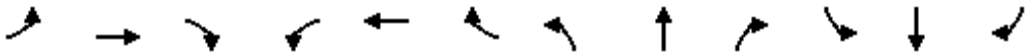
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	6	0	6	13	0	3	6	702	11	3	579	6
Future Vol, veh/h	6	0	6	13	0	3	6	702	11	3	579	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	14	0	3	7	763	12	3	629	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1424	1428	633	1425	1425	769	636	0	0	775	0	0
Stage 1	639	639	-	783	783	-	-	-	-	-	-	-
Stage 2	785	789	-	642	642	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	113	135	480	113	136	401	947	-	-	841	-	-
Stage 1	464	470	-	387	404	-	-	-	-	-	-	-
Stage 2	386	402	-	463	469	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	111	134	480	111	135	401	947	-	-	841	-	-
Mov Cap-2 Maneuver	111	134	-	111	135	-	-	-	-	-	-	-
Stage 1	461	468	-	384	401	-	-	-	-	-	-	-
Stage 2	380	399	-	455	467	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.6	37.5	0.1	0
HCM LOS	D	E		

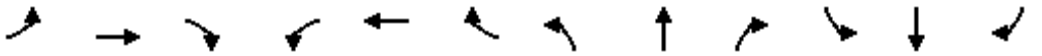
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	947	-	-	180	128	841	-	-
HCM Lane V/C Ratio	0.007	-	-	0.072	0.136	0.004	-	-
HCM Control Delay (s)	8.8	-	-	26.6	37.5	9.3	-	-
HCM Lane LOS	A	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	31	0	0	25	23	636	50	0	465	25
Future Volume (Veh/h)	0	0	31	0	0	25	23	636	50	0	465	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	34	0	0	27	25	691	54	0	505	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	768	1314	266	1054	1300	200	532			745		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	768	1314	266	1054	1300	200	532			745		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	95	100	100	97	98			100		
cM capacity (veh/h)	276	153	732	169	156	808	1032			859		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	34	27	140	230	230	169	337	195
Volume Left	0	0	25	0	0	0	0	0
Volume Right	34	27	0	0	0	54	0	27
cSH	732	808	1032	1700	1700	1700	1700	1700
Volume to Capacity	0.05	0.03	0.02	0.14	0.14	0.10	0.20	0.11
Queue Length 95th (ft)	4	3	2	0	0	0	0	0
Control Delay (s)	10.2	9.6	1.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	10.2	9.6	0.3				0.0	
Approach LOS	B	A						

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	30.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	388	21	22	365	7	33	4	23	38	3	38
Future Volume (Veh/h)	7	388	21	22	365	7	33	4	23	38	3	38
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	422	23	24	397	8	36	4	25	41	3	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					679							
pX, platoon unblocked	0.99						0.99	0.99		0.99	0.99	0.99
vC, conflicting volume	405			445			738	902	222	703	910	202
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	389			445			725	890	222	689	897	186
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			87	99	97	87	99	95
cM capacity (veh/h)	1159			1112			287	271	781	309	268	820

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2	SB 3
Volume Total	4	4	281	164	24	265	140	65	41	17	27
Volume Left	4	4	0	0	24	0	0	36	41	0	0
Volume Right	0	0	0	23	0	0	8	25	0	14	27
cSH	1159	1159	1700	1700	1112	1700	1700	377	309	598	820
Volume to Capacity	0.01	0.01	0.17	0.10	0.02	0.16	0.08	0.17	0.13	0.03	0.03
Queue Length 95th (ft)	1	1	0	0	2	0	0	15	11	2	3
Control Delay (s)	8.1	8.1	0.0	0.0	8.3	0.0	0.0	16.5	18.4	11.2	9.5
Lane LOS	A	A			A			C	C	B	A
Approach Delay (s)	0.1				0.5			16.5	14.2		
Approach LOS								C	B		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	34.8%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	6	22	0	1	5	447	9	3	634	5
Future Vol, veh/h	6	0	6	22	0	1	5	447	9	3	634	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	24	0	1	5	486	10	3	689	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1200	1204	692	1202	-	491	694	0	0	496	0	0
Stage 1	698	698	-	501	-	-	-	-	-	-	-	-
Stage 2	502	506	-	701	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	162	184	444	161	0	578	901	-	-	1068	-	-
Stage 1	431	442	-	552	0	-	-	-	-	-	-	-
Stage 2	552	540	-	429	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	161	182	444	158	-	578	901	-	-	1068	-	-
Mov Cap-2 Maneuver	161	182	-	158	-	-	-	-	-	-	-	-
Stage 1	428	441	-	549	-	-	-	-	-	-	-	-
Stage 2	548	537	-	422	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.1	30.9	0.1	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	236	158	578	1068	-	-
HCM Lane V/C Ratio	0.006	-	-	0.055	0.151	0.002	0.003	-	-
HCM Control Delay (s)	9	-	-	21.1	31.8	11.2	8.4	-	-
HCM Lane LOS	A	-	-	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	0	-	-