September 2020

TRAFFIC STUDY

Proposed Delivery Station Building

107 Eastern Boulevard

Glastonbury, CT

PREPARED BY:
BL Companies
355 Research Parkway
Meriden, CT 06450

Architecture
Engineering
Environmental
Land Surveying

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EXECUTIVE SUMMARY

This traffic study has been prepared for a new tenant and change of use of an existing building at 107 Eastern Boulevard in Glastonbury, CT. The study area is primarily business parks with residential neighborhoods to the north and west. The site will serve as a package delivery station which will provide “last mile” package delivery services to residences and businesses with an approximate 60-minute driving time radius of the site.

This study investigated the potential traffic impacts of the proposed development during the weekday morning, afternoon and evening traffic periods. To asses existing traffic conditions in the vicinity of the site, peak hour manual turning movement traffic volumes, vehicle classification and pedestrian counts were recorded at key intersections within the study area.

The level of traffic likely generated by the proposed development has been estimated by the tenant to determine the potential traffic impact on the study intersections. The tenant completed a detailed analysis determining the number and time of site traffic arrivals and departures at the site, which is a function of the delivery area population and business density. The proposed distribution station is projected to generate 1 (0 enter, 1 exit) vehicle trips, trucks only, during the weekday morning peak hour, 56 (8 enter, 48 exit) vehicle trips during the mid-day peak hour and 53 (38 enter, 15 exit) during the weekday evening peak hour.

A detailed traffic analysis was also conducted at key intersections and roadways in the general vicinity of the site in accordance with methodologies outlined in the Highway Capacity Manual 2010, published by the Transportation Research Board.

All intersections in the AM Peak Hour are projected to perform adequately. Any movements performing at undesirable Levels of Service are at that level in the Existing scenario. It should be noted that these movements perform at a Level of Service (LOS) E in the Existing scenario and any notable deterioration is primarily between the Existing and No Build scenarios. Deterioration between the No Build and Build scenarios are negligible.

During the Mid-Day Peak Hour, traffic operations for the overall intersection LOS are projected to remain the same between the Existing, No Build and Build scenarios and perform adequately. Most movements performing at undesirable LOS are at that level in the Existing scenario. It should be noted that these movements perform at a LOS E in the Existing scenario and any notable deterioration is primarily between the Existing and No Build scenarios. At the intersection of Oak Street at CT Route 2 WB Exit 8 Off Ramp and Private Drive, the Oak Street NB left/thru movement deteriorates from a LOS D to LOS E between the Existing and No Build scenarios. Any deterioration between the No Build and Build scenarios are negligible.

During the PM Peak Hour, traffic operations for the overall intersection LOS are projected to remain the same between the Existing, No Build and Build scenarios and perform adequately. Most movements performing at undesirable LOS are at that level in the Existing scenario. It should be noted that these movements perform at a LOS E in the Existing scenario and any notable deterioration is primarily between the Existing and No Build scenarios. At the intersection of CT Route 94 (Hebron Avenue) at Oak Street and Western Boulevard, the Western Boulevard SB Thru movement deteriorates from a LOS D to LOS E between the Existing and No Build scenarios. At the intersection of Oak Street at CT Route 2 WB Exit 8 Off Ramp and Private Drive, the Exit 8 Off Ramp WB left/thru/right movement deteriorates from a LOS D to LOS E between the Existing and No Build scenarios. There is negligible deterioration between the No Build and Build scenarios.

The following is a summary of the results/recommendations for this site:

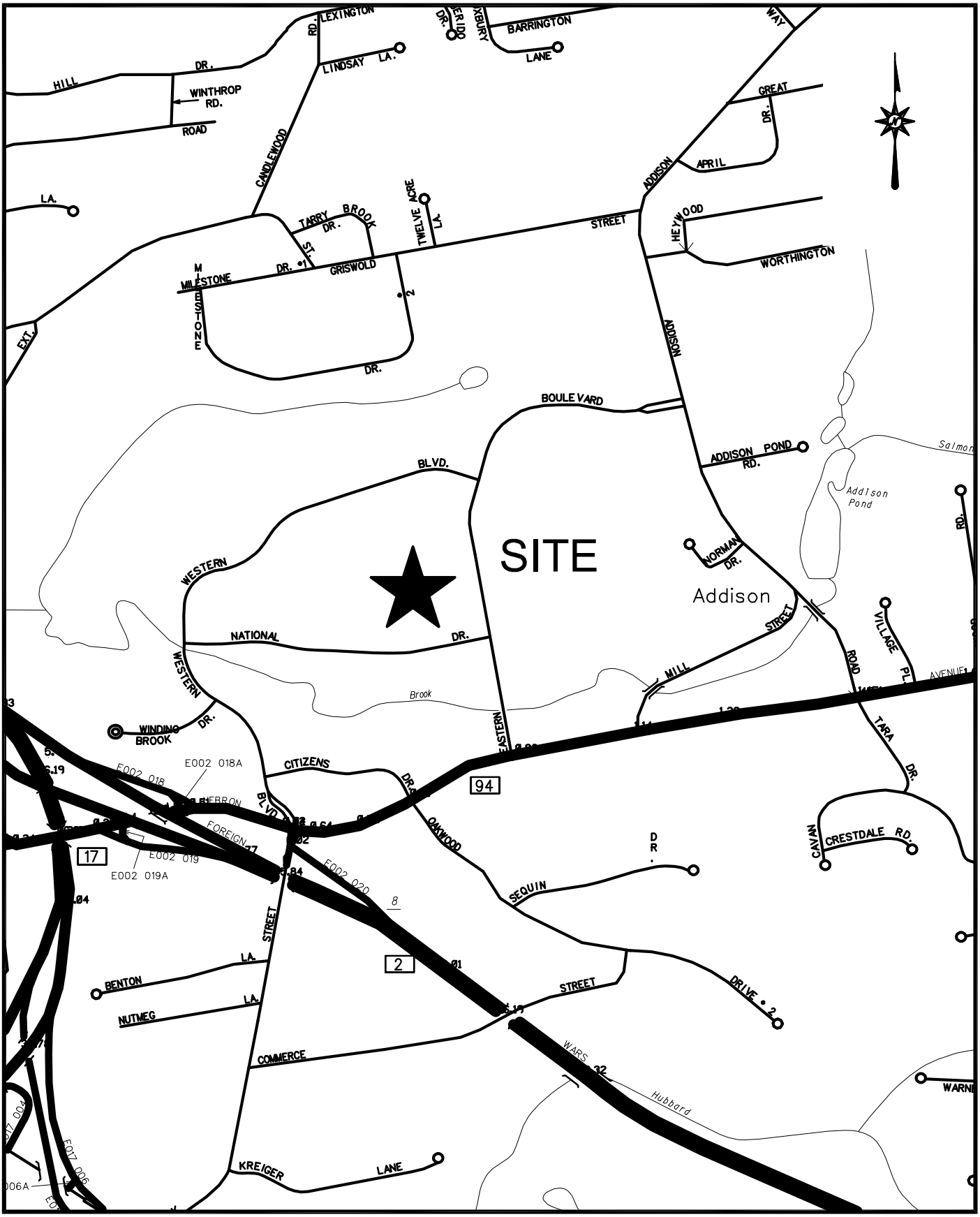
- Capacity analyses indicate that all analyzed intersections, overall, are projected to perform at an acceptable Level of Service between the Existing, No Build and Build Scenarios during the AM, Mid-Day, and PM Peak Hours.
- Any notable deterioration for movements performing at undesirable Levels of Service are either at the undesirable Level of Service in the Existing scenarios or deteriorate between the Existing and No Build scenarios.
- Any deterioration between the No Build and Build scenarios are negligible.
- Install “Stop” sign and stop bar at the site drive’s egress as noted on Site Plans.

I. INTRODUCTION

This traffic study has been prepared for a new tenant and change of use of an existing building at 107 Eastern Boulevard in Glastonbury, CT. The focus of this study was to evaluate the traffic flows and operating conditions on the roadways and intersections projected to be used by motorists traveling to and from the proposed development and to quantify the potential traffic impacts on these roadways and intersections. The study area is heavily developed in the with a mix of commercial and industrial establishments. The Site is located in the Town of Glastonbury's Planned Employment Zone. See **Figure 1** for a location map.

The site will serve as a package delivery station which will provide "last mile" package delivery services to residences and businesses with an approximate 60-minute driving time radius of the site. The project will include retrofitting the existing ±105,487 SF warehouse building and will include 351 parking spaces. Access to the site will be via two existing curb cuts and one proposed curb cut on National Drive and one existing and one proposed curb cut on Eastern Boulevard.

The study investigated the potential traffic impacts associated with the development in the weekday morning, mid-day, and evening peak periods. Three existing curb cuts are to remain, and two curb cuts are proposed in the redevelopment of the site. The greatest cumulative impacts of project related traffic are likely to occur during the weekday morning, mid-day, and evening peak hours, when traffic consists mostly of commuters. As such, traffic operating conditions at the study intersections were analyzed during these peak periods.



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LOCATION MAP

PROPOSED DEVELOPMENT
107 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT
NOT TO SCALE

FIGURE 1

II. EXISTING CONDITIONS

An investigation of the existing traffic conditions on the adjacent roadway network formed the basis for assessing any traffic issues associated with the proposed development. This investigation included a field reconnaissance, traffic counting, and research of pertinent planning and traffic data available with Connecticut Department of Transportation (CTDOT) and the Town of Glastonbury.

Access Network

The project study area consists of signalized intersections at the following locations:

- CT Route 94 (Hebron Avenue) at Addison Road and Tara Drive
- CT Route 94 (Hebron Avenue) at Eastern Boulevard
- CT Route 94 (Hebron Avenue) at Citizen Drive and Oakwood Drive
- CT Route 94 (Hebron Avenue) at Western Boulevard and Oak Street and Route 2 Off Ramp

The project study area also consists of unsignalized intersections at the following locations:

- Western Boulevard at National Drive
- National Drive at Eastern Boulevard
- National Drive at Site Drives
- Eastern Boulevard at Site Drives

Major roadways in the vicinity of the project include Eastern Boulevard, National Drive, Western Boulevard, and CT Route 94 (Hebron Avenue).

Eastern Boulevard is an urban local roadway, traveling in the north/south direction within the study area. There is one through lane in each direction, separated by a double yellow centerline and an auxiliary right turn lane at its intersection with CT Route 94. The posted speed limit is 35 mph and there exists only one roadway luminaire, approximately 300’ north of the CT Route 94 at Eastern Boulevard intersection. There is sidewalk north of Western Boulevard on the southbound side of the roadway.

National Boulevard is an urban local roadway, traveling in the east/west direction within the study area. There is one through lane in each direction, separated by a double yellow centerline and there exists shoulder delineation. There is no observed roadway illumination or sidewalks along National Drive.

Western Boulevard is an urban local roadway, traveling in the north/south direction within the study area. There is one through lane in each direction, separated by a double yellow centerline and there exists shoulder delineation. Western Boulevard southbound opens to auxiliary left and right turn lanes at its intersection with CT Route 94. Western Boulevard northbound has two through lanes between its intersection with CT Route 94 and the American Eagle Admin building Drive. Roadway illumination is sporadic along Western Boulevard within the study area. The speed limit, according to CTDOT, is 25 mph. There is sidewalk along the eastbound side between National Drive and Eastern Boulevard.

CT Route 94 (Hebron Avenue) is an urban principal arterial, traveling in the east/west direction within the study area. There are two through lanes in each direction and auxiliary turn lanes at key intersections within the study area. Roadway illumination is sporadic along CT Route 94 within the study area. The posted speed limit is 35 mph. The ADT, provided by CTDOT, is 22,100 immediately west of the intersection of CT Route 94 at Western Boulevard.

Intersection Characteristics

Several key intersections were reviewed in this study to determine if they would be impacted by the expected site traffic volumes. They are as follows:

- **CT Route 94 (Hebron Avenue) at Addison Road and Tara Drive –** At this semi-actuated, 2-phase signalized intersection, there is an exclusive left turn lane and one through lane on both approaches of Hebron Avenue. Addison Road and Tara Drive each have one lane approaching the intersection. There are pedestrian ramps on the northeast and southeast corners of this intersection, but no marked crosswalks at this intersection. This intersection is not part of a coordinated system and there is no emergency pre-emption for any approach of this intersection.

- **CT Route 94 (Hebron Avenue) at Eastern Boulevard and Private Drive–** At this semi-actuated, 5-phased signalized intersection, the left turns of CT Route 94 are permitted/protected movements. There is an auxiliary right turn lane on CT Route 94 WB and both approaches of CT Route 94 have exclusive left turn lanes. The approaches of Eastern Boulevard and Private Drive have mirrored lane arrangements, a shared left/through lane and exclusive right turn lane. There are no pedestrian accommodations nor emergency pre-emption at this intersection. This signal is part of a closed-loop coordination system with cycle lengths of 80", 70", and 75" for the AM, Mid-Day, and PM peak hours, respectively. There is right turn overlap from Eastern Boulevard SB to Hebron Avenue WB during the Hebron Avenue EB protected left turn phase.

- **CT Route 94 (Hebron Avenue) at Citizen Drive and Oakwood Drive –** At this semi-actuated, 5-phased signalized intersection, the left turns of CT Route 94 are permitted/protected movements. Both approaches of CT Route 94 have exclusive left turn lanes in addition to their two through lanes. The Citizen Drive approach has no delineation of lane arrangement. The Oakwood Drive approach has signage noting the right lane must turn right. There are no pedestrian accommodations nor emergency pre-emption at this intersection. This signal is part of a closed-loop coordination system with cycle lengths of 80", 70", and 75" for the AM, Mid-Day, and PM peak hours, respectively.

- **CT Route 94 (Hebron Avenue) at Western Boulevard and Oak Street and Oak Street at Route 2 WB Off Ramp and Private Drive –** At this fully actuated, 7-phased signalized intersection, the two intersections are on a single controller. There exists dual left turn lanes from CT Route 94 eastbound onto Western Boulevard and a single left turn lane from CT Route 94 westbound onto Oak Street. The left turns of both CT Route 94 approaches are protected movements. The approaches of Oak Street and Western Boulevard at CT Route 94 have split phasing. There is right turn overlap on Oak Street NB onto Hebron Avenue during the Hebron Avenue WB protected left turn phase. There are no pedestrian accommodations at this intersection and emergency pre-emption is on the CT Route 94 eastbound approach at this intersection. A No Turn On Red sign is

present for the Western Avenue SB approach. The Route 2 Off Ramp approach at its intersection with Oak Street has two lanes entering the intersection, a shared left/right and a right turn lane. Oak Street NB has two lanes entering the intersection and Oak Street SB has one lane entering the intersection. The Private Drive approach of this intersection, a Shell Gas Station, is not signalized. This signal is part of a closed-loop coordination system but runs free operation during all peak periods.

- **Western Boulevard at National Drive –** At this unsignalized intersection, each approach has one lane entering the intersection. The approaches of Western Boulevard have free movements and the approach of National Drive is stop-controlled. There is one pedestrian ramp on the NE corner of this intersection. There are no marked pedestrian crosswalks at this intersection.

- **National Drive at Eastern Boulevard –** At this unsignalized intersection, each approach has one lane entering the intersection. The approaches of Eastern Boulevard have free movements and the approach of National Drive is stop-controlled. There are no pedestrian accommodations nor marked pedestrian crosswalks at this intersection.

- **National Drive at Site Drives –** The Site Drives are split into two approaches separated by a central island on the site property. National Drive has one lane in each direction intersecting with the Site Drives. There is no stop control for National Drive at the Site Drives. There are no pedestrian accommodations nor marked pedestrian crosswalks at this intersection.

- **Eastern Boulevard at Site Drives –** There is one lane in each direction for Eastern Boulevard at its intersection with the Site Drive. There is no stop control for Eastern Boulevard. There are no pedestrian accommodations nor marked pedestrian crosswalks at this intersection.

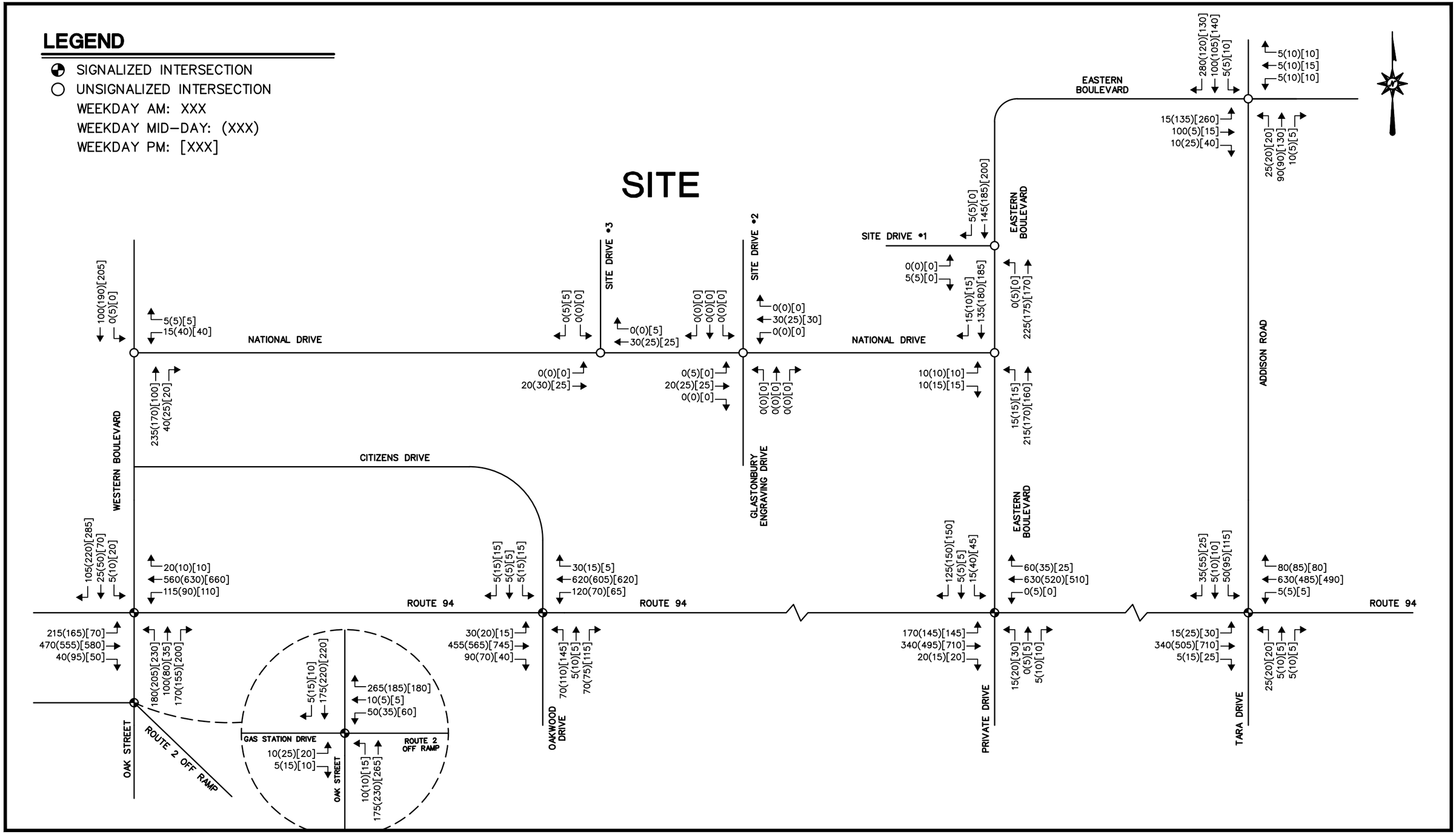
Existing Traffic Volumes

To asses existing traffic conditions in the vicinity of the site, peak hour manual turning movement traffic volumes, vehicle classification and pedestrian counts were recorded at the intersections above. The counts were recorded during typical weekday morning (7am-9am), evening (4pm-6pm) and mid-day (11am-1pm) peak traffic periods in July of 2020. It should be noted that due to the ongoing Coronavirus pandemic, existing traffic volumes were adjusted by CTDOT Bureau of Policy and Planning. The current peak hour traffic volumes for the intersections are illustrated in **Figure 2**.

LEGEND

- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

WEEKDAY AM: XXX
WEEKDAY MID-DAY: (XXX)
WEEKDAY PM: [XXX]



9/9/2020, DGEHRING, G:\JOBS20\06\20006691\DWG\TFLO20006691.DWG,FIGURE 2.

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EXISTING (2020) TRAFFIC VOLUMES
PROPOSED DEVELOPMENT
107 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT

SCHEMATIC, NOT TO SCALE

SEPTEMBER 2020

FIGURE 2

Public Transit

There is a CT Transit bus stop, Bus #95, immediately west of the National Drive at Eastern Boulevard intersection, on both sides of the roadway and immediately east of the National Drive at Western Boulevard intersection. There is a Bus #95 stop along Western Boulevard adjacent to the Western Boulevard at Citizen Drive intersection.

Crash Data Analysis

As part of the existing conditions analysis, crash data for the most recent three-year period, January 1st, 2017 through December 31st, 2019, was obtained from the Connecticut Crash Data Repository.

Fifty-nine (59) crashes in the study area were reviewed, the most common crashes were the front to rear at fifty-three percent (53%). Majority of crashes resulted in "No Apparent Injury" at eighty percent (80%). There were no fatalities or crashes associated with "Suspected Serious Injury," but there were four (4) crashes associated with Suspected Minor Injury" in the corridor for the three-year period.

According to the crash records mentioned above, the intersection of CT Route 94 (Hebron Avenue) at Western Boulevard and Oak Street had the most crashes with thirty (30) crashes. Below in **Table 1** summarizes the crash data.

Table 1 – Crash Data Summary

Proposed Delivery Station, Glastonbury, CT									
	Eastern Boulevard at Addison Road	CT Route 94 (Hebron Avenue) at Addison Road and Tara Drive	National Drive at Eastern Boulevard	CT Route 94 (Hebron Avenue) at Eastern Boulevard	CT Route 94 (Hebron Avenue) at Citizens Drive and Oakwood Drive	CT Route 94 (Hebron Avenue) at Western Boulevard and Oak Street	Eastern Boulevard at Site Drive	National Drive at Site Drive #3	National Drive at Site Drive and Glastonbury Engraving Drive
Year									
2017	1	1	0	0	4	10	0	0	0
2018	0	2	1	2	2	13	0	1	0
2019	1	5	1	4	4	7	0	0	0
2020	0	0	0	0	0	0	0	0	0
Total	2	8	2	6	10	30	0	1	0
Crash Type									
Angle	0	1	2	3	5	3	0	1	0
Front to Front	0	0	0	0	0	1	0	0	0
Front to Rear	1	6	0	3	5	16	0	0	0
Not Applicable	1	0	0	0	0	1	0	0	0
Other	0	0	0	0	0	0	0	0	0
Rear to Rear	0	0	0	0	0	0	0	0	0
Rear to Side	0	0	0	0	0	0	0	0	0
Sideswipe, Opposite Direction	0	0	0	0	0	0	0	0	0
Sideswipe, Same Direction	0	1	0	0	0	9	0	0	0
Total	2	8	2	6	10	30	0	1	0
Severity									
Fatal Injury (K)	0	0	0	0	0	0	0	0	0
Suspected Serious Injury (A)	0	0	0	0	0	0	0	0	0
Suspected Minor Injury (B)	0	1	0	2	1	0	0	0	0
Possible Injury (C)	1	1	1	1	1	3	0	0	0
No Apparent Injury (O)	1	6	1	3	8	27	0	1	0
Unknown	0	0	0	0	0	0	0	0	0
Total	2	8	2	6	10	30	0	1	0
Note: Data collected from the Connecticut Crash Data Repository									

III. PROJECTED TRAFFIC CONDITIONS

In order to evaluate traffic conditions when the proposed development is completed in 2021, future traffic volumes networks for forecast under the 2021 No Build Conditions (without the proposed distribution station development) and under 2021 Build Conditions (with the proposed distribution station development). The projected traffic volumes on the roadway network under 2021 No Build conditions were assumed to include all existing traffic and new traffic resulting from background sources of traffic growth, independent of the proposed development. The projected traffic volumes on the roadway network under 2021 Build conditions were assumed to include the anticipated project site-generated traffic volumes in addition to the assumed background traffic growth.

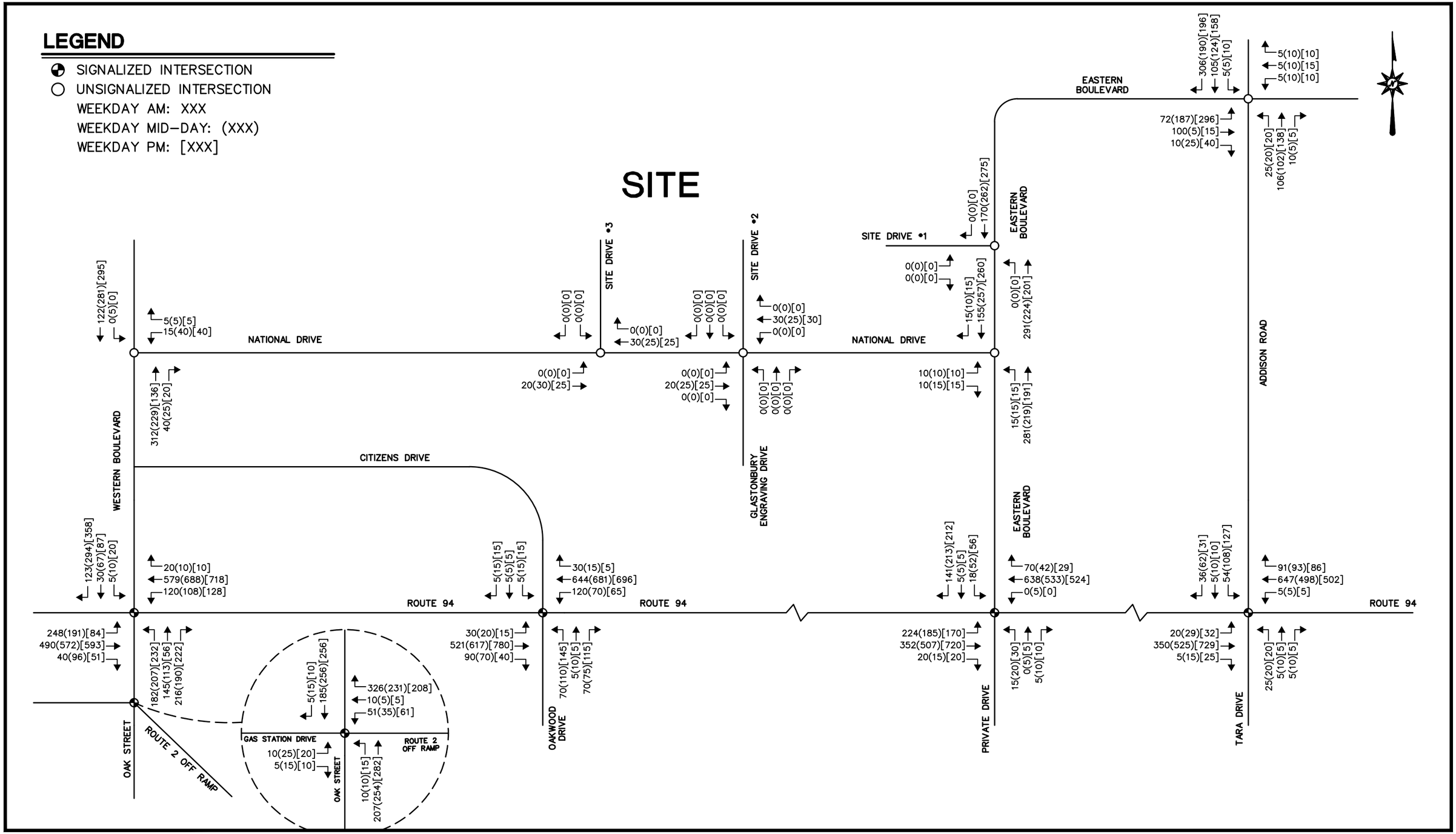
No Build Traffic Volumes

A 1.0% annual growth rate was applied to the existing traffic volumes to develop the 2021 No Build traffic volumes. In addition to applying this growth rate, any approved or pending developments in the area that may add substantial traffic volume to the study intersections were considered. In discussions with the Town of Glastonbury Department of Community and Development, there are two planned developments (medical office buildings at 219 Addison Road and 290 Western Boulevard) in the vicinity of this study. The traffic volumes from the two mentioned developments have been included in the 2021 No Build volumes. The annual growth volumes were added to the Existing Traffic Volumes in addition to the traffic volumes from the mentioned developments to determine the 2021 No Build Traffic Volumes and are graphically illustrated in **Figure 3**.

LEGEND

- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

WEEKDAY AM: XXX
WEEKDAY MID-DAY: (XXX)
WEEKDAY PM: [XXX]



9/9/2020, DGEHRING, G:\JOBS20\06\2000669\DWG\TFLO200066901.DWG,FIGURE 3.

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NO BUILD (2021) TRAFFIC VOLUMES
PROPOSED DEVELOPMENT
107 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT
SCHEMATIC, NOT TO SCALE

SEPTEMBER 2020

FIGURE 3

Trip Generation and On-Site Circulation

The level of traffic likely generated by the proposed delivery station has been estimated by the tenant to determine the potential traffic impact on the study intersections. The tenant completed a detailed analysis determining the number and time of site traffic arrivals and departures at the site, which is a function of the delivery area population and business density.

The Tenant anticipates that this facility will employ approximately 85 associates/managers on-site over various shifts during the course of the day. All associates/managers will utilize two existing drives, one on Eastern Boulevard and one on National drive. Both drives are located closest to the intersection of National Drive at Eastern Boulevard.

Delivery stations operate 24/7, with most of the sortation activity done early in the morning when the line haul trucks arrive with customer packages. At the proposed Plainfield, CT facility, the Client anticipates approximately 7 tractor trailers to deliver packages to the delivery station each day, primarily between the hours of 10:00 PM to 8:00 AM. Packages are sorted and staged for delivery, approximately 45 associates perform this operation and the shift structure is designed between 2:00 AM and 12:30 PM to avoid the rush hour period. Additionally, there will be approximately 14 managers and dispatchers supervising the delivery operations arriving at 6:00 AM and departing at 2:30 pm followed by another shift of dispatchers arriving at 1:30 pm and departing at 10:00 PM.

The delivery associates arrive at a delivery station at 9:45 AM. Starting at 10:10 AM and ending at 11:30 AM, 108 delivery vans will load and depart from the delivery station at a rate of 24 vans every 20 minutes to facilitate a regulated traffic flow into the surrounding area. The departure window is designed to avoid the rush hour traffic between 7:00 AM and 8:30 AM in the morning and between 4:30 PM and 5:30 PM in the evening. Approximately 8-10 hours after dispatch, delivery vans return to the station between 7:30 PM and 9:30 PM. After proper checkout and release, the drivers park the delivery van onsite and leave using a personal vehicle or public transport.

The Client also uses FLEX driver to deliver packages. FLEX is a new innovation from the Client that allows individuals to be use their own vehicles to deliver packages to customers. The Client anticipates approximately 38 traditional passenger vehicles entering the facility staggered between 4:30 PM and 6:00 PM. FLEX vehicles will load and depart every 15 minutes.

Approximately 2 associates will work in the delivery station between 12:00 PM and 10:30 PM to support the FLEX and Return to Station operations.

After the check out and release of all delivery vehicles by 10:30 PM, delivery station associates prepare the delivery station for the next day's packages.

The delivery station is anticipated to generate a total of approximately 692 trips per day. The majority of which are off-peak hours.

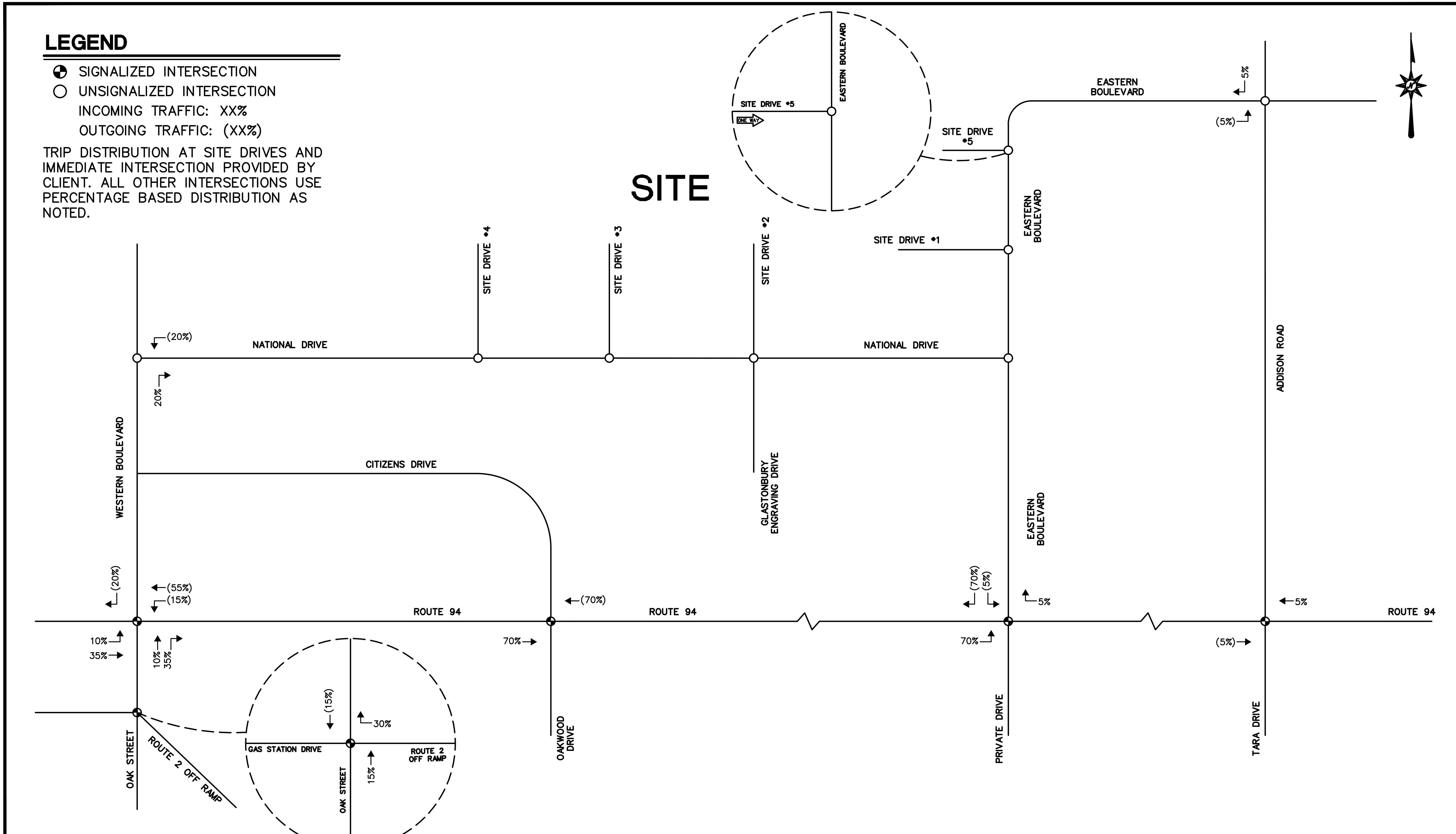
A summary of the trip generation projections for the proposed distribution station is presented in **Table 2**. As indicated in this table, the proposed delivery station is projected to generate 1 (0 enter, 1 exit) vehicle trips, trucks only, during the weekday morning peak hour, 56 (8 enter, 48 exit) vehicle trips during the mid-day peak hour and 53 (38 enter, 15 exit) during the weekday evening peak hour.

Table 2 – Peak Hour Trip Generation

Trips By	**Trips**								
	AM Peak Hour Adjacent Street Traffic			Mid-day Peak Hour Adjacent Street Traffic			PM Peak Hour Adjacent Street Traffic		
	Total	In	Out	Total	In	Out	Total	In	Out
Associates/Managers	0	0	0	8	8	0	0	0	0
DSP	0	0	0	48	0	48	0	0	0
Flex Drivers	0	0	0	0	0	0	53	38	15
Trucks	1	0	1	0	0	0	0	0	0
New Trips	**1**	**0**	**1**	**56**	**8**	**48**	**53**	**38**	**15**

Trip Distribution

The directional distribution of traffic is typically a function of population densities, competing opportunities, existing travel patterns adjacent to the site, and the efficiency and limitations of the existing roadway system. Based upon the site's close proximity to CT Route 2, CT Route 3, and Interstate 91, it is anticipated that the majority of employees/delivery vehicles will utilize these roadways for access and egress from the site. The distribution of the anticipated traffic volumes was based on arrival/departure patterns shown in **Figure 4**.



9/9/2020, DGEHRING, G:\JOBS20\06\2000669\DWG\TFLO2000669O1.DWG.FIGURE 4.

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TRIP DISTRIBUTION

PROPOSED DEVELOPMENT
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SEPTEMBER 2020

FIGURE 4

Assigned Site Generated Traffic Volumes

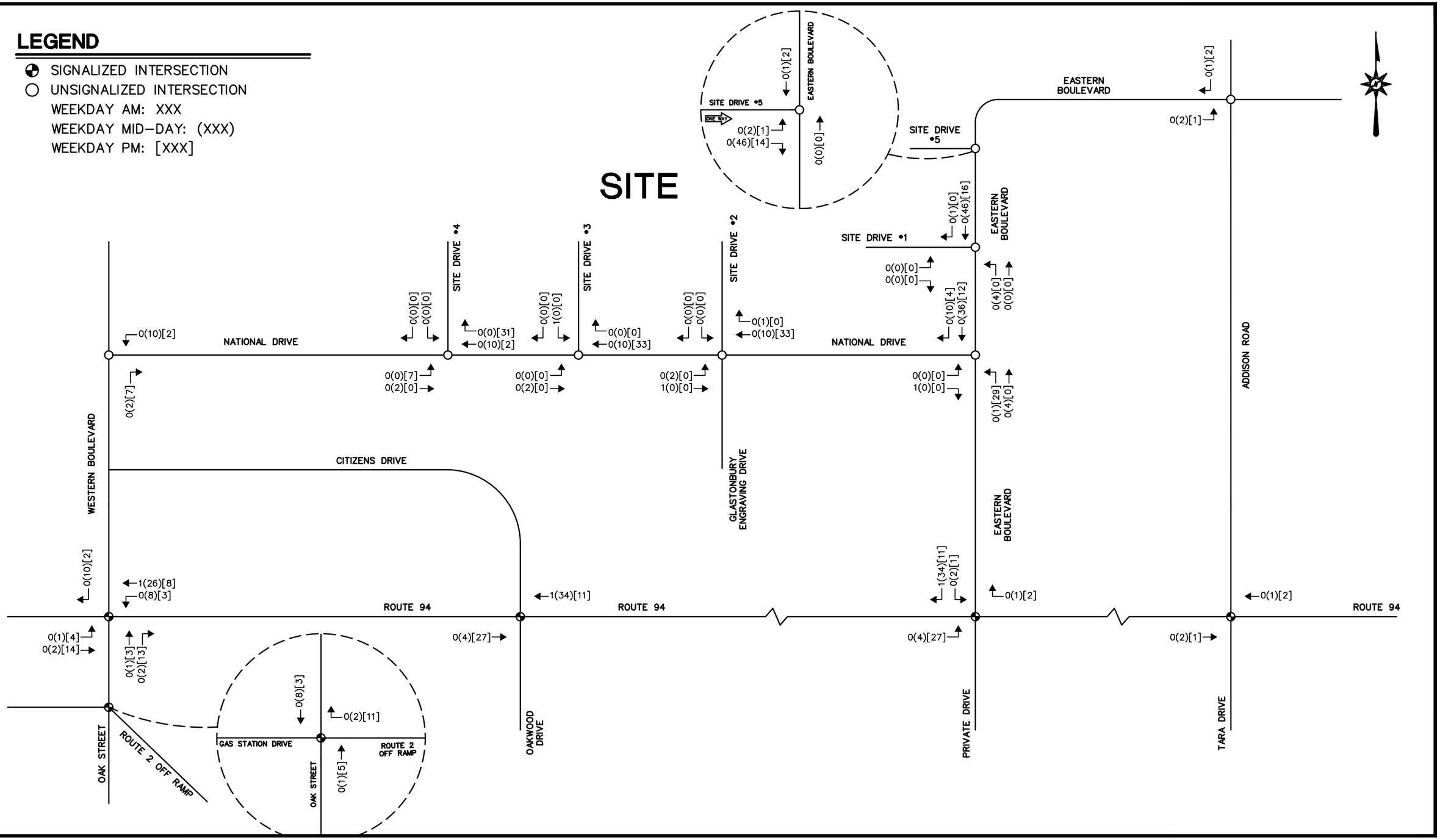
The generated trips are multiplied by the corresponding proportions to ascertain the site-generated traffic volumes.

Figure 5 shows the site generated peak hour traffic generated by the site assigned to the nearby roadway network.

LEGEND

- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

WEEKDAY AM: XXX
WEEKDAY MID–DAY: (XXX)
WEEKDAY PM: [XXX]



9/9/2020, DGEHRING, G:\JOBS20\06\2000669\DWG\TFLO200066901.DWG,FIGURE 5.

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SITE GENERATED TRAFFIC VOLUMES
PROPOSED DEVELOPMENT
107 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT
SCHEMATIC, NOT TO SCALE

SEPTEMBER 2020

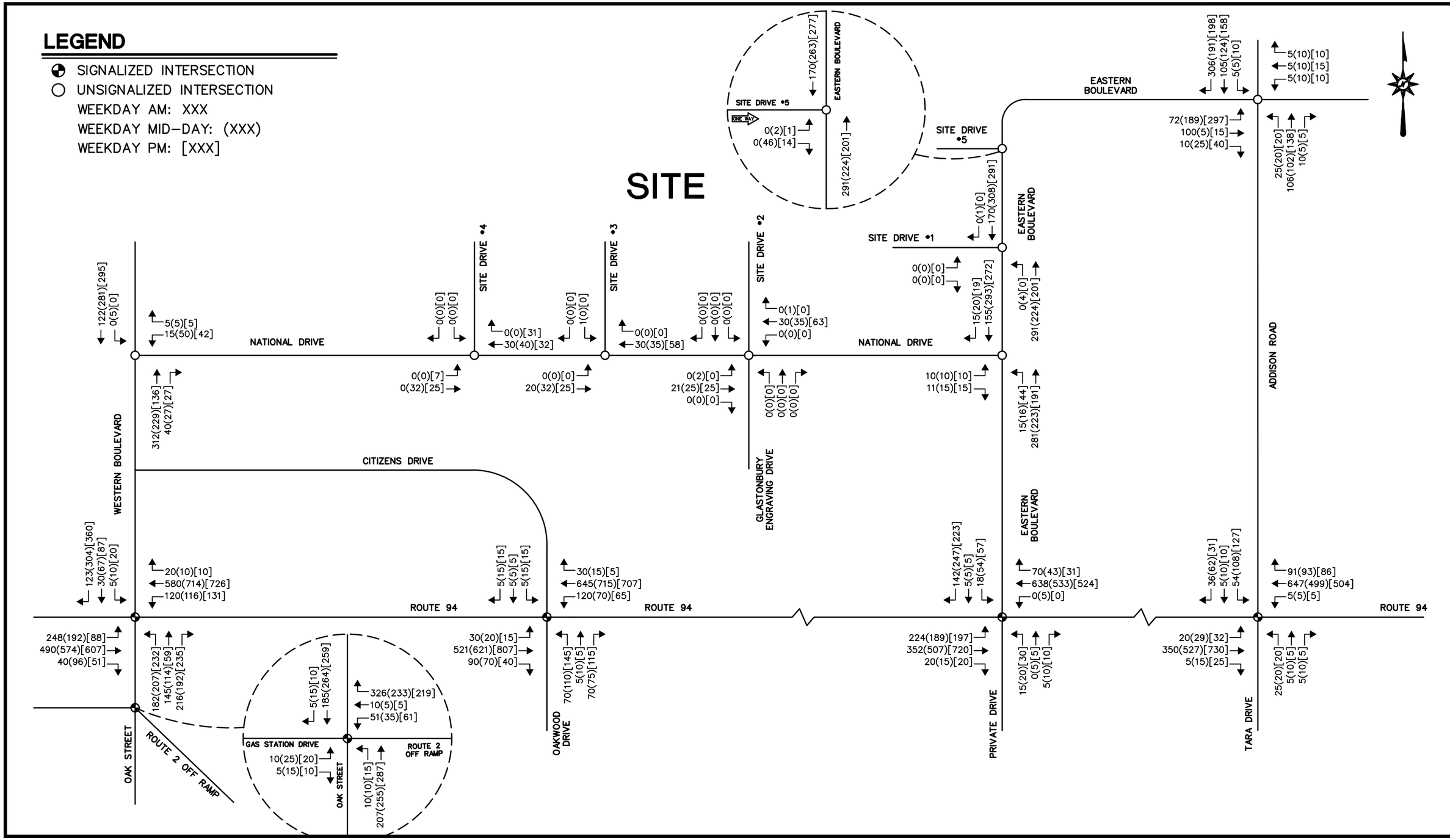
FIGURE 5

Build Traffic Volumes

The assigned site-generated traffic volumes were superimposed onto the 2021 No Build Traffic volumes to establish the future 2021 Build Traffic volumes, as illustrated in **Figure 6**.

LEGEND

- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION
- WEEKDAY AM: XXX
- WEEKDAY MID-DAY: (XXX)
- WEEKDAY PM: [XXX]



9/9/2020, DGEHRING, G:\JOBS20\06\2000669\DWG\TFLO200066901.DWG,FIGURE 6.

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BUILD (2021) TRAFFIC VOLUMES
PROPOSED DEVELOPMENT
107 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT
SCHEMATIC, NOT TO SCALE

SEPTEMBER 2020

FIGURE 6

IV. ROADWAY ADEQUACY

The intersection capacity analyses were prepared using the methodology described in the Highway Capacity Manual (HCM), published by the Transportation Research Board (TRB) for the existing and build traffic volume scenarios to simulate the traffic impact of a proposed Delivery Station on the adjacent roadway network. As documented in the HCM, intersection performance is influenced by a number of factors, including: traffic demand; lane configurations; lane widths; turning restrictions; roadway grades; and signal phasing. The existing physical roadway characteristics and signal phasing and timing settings were determined by observing conditions in the field and reviewing the current traffic control signal plans provided by the Connecticut Department of Transportation.

Synchro™ software (Version 10) was used to model the study intersections based on the parameters mentioned above. The Synchro software is widely utilized by the traffic engineering industry and is consistent with the procedures in the HCM.

Signalized Intersections

Signalized intersections are analyzed in terms of vehicle capacity and motorist delay. Capacity is the maximum rate of vehicle flow through an intersection given typical operating conditions. The number of vehicles traveling through an intersection is divided by the capacity of the intersection to determine an overall volume to capacity ratio (v/c). A v/c value under 1.00 indicates that the number of vehicles traveling through an intersection is less than capacity.

As stated in the HCM, level of service for signalized intersections is defined in terms of control delay. Control delay measures the increase in delay a motorist experiences while encountering a traffic control signal. These factors include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. This delay is measured per vehicle for a 15-minute analysis period and is associated with the levels of service, which are summarized in **Table 3** below:

Table 3 – Signalized Intersection – Level of Service

Level of Service[1]	Average Control Delay (seconds per vehicle)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

[1]If volume-to-capacity ratio is over 1.0 for a lane group, LOS F. Intersection and approach-based LOS is based solely on control delay.

Level of service A represents the optimum level where most motorists arrive at the subject intersection during the green phase and thus experience virtually no delay. Conversely, level of service F indicates that motorists are delayed over 80 seconds while traveling through the intersection, and can often imply a complete breakdown of that location. Level of service D is generally considered the limit of acceptable motorist delay.

Unsignalized Intersections

Unsignalized intersections are generally evaluated in terms of average side street delay, as well as the capacity of the roadway approach. This analysis is based on the random arrival of vehicles and the associated gaps generated by this random arrival within the traffic stream. There is no overall level of service for unsignalized intersections. The relationship between levels of service and average side street delay are summarized in **Table 4** below:

Table 4 – Unsignalized Intersection – Level of Service

Level of Service[1]	Average Control Delay (seconds per vehicle)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

[1]If volume-to-capacity ratio is over 1.0 for a lane group, LOS F. Intersection and approach-based LOS is based solely on control delay.

It should be noted that unsignalized levels of service do not correspond to those for signalized intersections, nor do they constitute warrants for the installation of traffic control signals. It is also recognized that the methodology is overly conservative and that computations can indicate operations at poor levels of service (E or F) with even very low side street volumes, although they often function without serious problems in the real world.

Table 5 shows the levels of service (LOS) at the subject intersections. A more detailed table is included in the Appendix.

Table 5 – Peak Hour Levels of Service

	AM			Mid-Day			PM		
	Existing	No Build	Build	Existing	No Build	Build	Existing	No Build	Build
Eastern Boulevard at Site Drive #1[2]	-	-	-	-	-	-	-	-	-
Eastern Blvd NB Left/Thru	-	-	-	-	-	-	-	-	-
Eastern Blvd SB Thru/Right	-	-	-	-	-	-	-	-	-
Site Drive EB Left/Right	A/0.01/25	A/0.00/25	A/0.00/25	A/0.01/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25
Eastern Boulevard at National Drive[2]	-	-	-	-	-	-	-	-	-
Eastern Blvd NB Left/Thru	-	-	-	-	-	-	-	-	-
Eastern Blvd SB Thru/Right	-	-	-	-	-	-	-	-	-
National Drive EB Left/Right	B/0.03/25	B/0.03/25	B/0.04/25	B/0.04/25	B/0.04/25	B/0.05/25	B/0.04/25	B/0.04/25	B/0.05/25
National Drive at Site Drive #2 and Glastonbury Engraving Drive[2]	-	-	-	-	-	-	-	-	-
Glstnbry Eng Dr NB Left/Thru/Right	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25
National Blvd EB Left/Thru/Right	-	-	-	-	-	-	-	-	-
National Blvd WB Left/Thru/Right	-	-	-	-	-	-	-	-	-
Site Drive SB Left/Thru/Right	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25	A/0.00/25

Overall Intersection – X/XX.X - Level of Service/Intersection Signal Delay in sec
Approaches - X/X.XX/XXX – Level of Service/Volume to Capacity Ratio/95% Queue Length in ft
[1] – Signalized Intersection
[2] – Unsignalized intersection. Analysis of stop-controlled approach
[3] – Proposed Drive for development. No analysis for Existing or No Build scenarios.

	AM			Mid-Day			PM		
	Existing	No Build	Build	Existing	No Build	Build	Existing	No Build	Build
National Drive at Site Drive #3[2]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
National Drive EB Left/Thru	-	-	-	-	-	-	-	-	-
National Drive WB Left/Thru	-	-	-	-	-	-	-	-	-
Site Drive SB Left/Right	A/0.00/25	A/0.00/25	A/0.01/25	A/0.01/25	A/0.00/25	A/0.00/25	A/0.01/25	A/0.00/25	A/0.00/25
Western Boulevard at National Drive[2]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Western Blvd NB Thru/Right	-	-	-	-	-	-	-	-	-
National Drive WB Left/Right	B/0.03/25	B/0.04/25	B/0.04/25	B/0.08/25	B/0.10/25	B/0.12/25	B/0.07/25	B/0.09/25	B/0.09/25
Western Blvd SB Left/Thru	-	-	-	-	-	-	-	-	-
Addison Road at Eastern Boulevard and Smith Middle School Drive[2]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Addison Road NB Left/Thru/Right	A/0.18/25	A/0.22/25	A/0.22/25	A/0.17/25	A/0.20/25	A/0.20/25	A/0.21/25	B/0.29/30	B/0.29/30
Eastern Blvd EB Left/Thru/Right	A/0.19/25	B/0.30/30	B/0.30/30	A/0.24/25	B/0.34/40	B/0.35/40	B/0.50/70	C/0.60/100	C/0.60/100
Middle School Dr WB	A/0.02/25	A/0.03/25	A/0.03/25	A/0.05/25	A/0.05/25	A/0.05/25	A/0.06/2	A/0.07/25	A/0.07/25
Addison Road SB Left/Thru/Right	B/0.47/65	B/0.54/80	B/0.54/80	A/0.03/35	B/0.43/55	B/0.44/55	B/0.42/55	B/0.57/90	B/0.57/90

Overall Intersection – X/XX.X - Level of Service/Intersection Signal Delay in sec
Approaches - X/X.XX/XXX – Level of Service/Volume to Capacity Ratio/95% Queue Length in ft
[1] – Signalized Intersection
[2] – Unsignalized intersection. Analysis of stop-controlled approach
[3] – Proposed Drive for development. No analysis for Existing or No Build scenarios.

	AM			Mid-Day			PM		
	Existing	No Build	Build	Existing	No Build	Build	Existing	No Build	Build
Oak Street at CT Route 2 WB Exit 8 Off Ramp and Private Drive[1]	**C/27.5**	**C/27.9**	**C/29.7**	**C/25.3**	**C/28.1**	**C/28.5**	**C/27.2**	**C/28.5**	**C/29.0**
Private Drive EB Left/Thru/Right	A/0.05/25	A/0.05/25	A/0.05/25	A/0.15/25	A/0.16/25	A/0.17/25	A/0.11/25	A/0.12/25	A/0.12/25
Exit 8 Off Ramp WB Left/Thru/Right	D/0.69/220	D/0.74/285	D/0.74/285	D/0.59/140	D/0.65/165	D/0.66/170	D/0.68/165	E/0.75/190	E/0.78/195
Exit 8 Off Ramp WB Right	B/0.46/75	B/0.50/80	B/0.50/80	A/0.38/30	B/0.46/60	B/0.47/60	B/0.42/55	B/0.46/60	B/0.47/60
Oak Street NB Left/Thru	D/0.41/125	D/0.48/150	D/0.48/150	D/0.52/170	E/0.59/195	E/0.60/200	D/0.57/125	D/0.60/135	D/0.60/140
Oak Street SB Thru/Right	A/0.18/25	A/0.20/25	A/0.19/25	A/0.23/25	A/0.25/25	A/0.26/25	B/0.23/115	B/0.26/135	B/0.26/135
CT Route 94 (Hebron Avenue) at Oak Street and Western Boulevard[1]	**D/39.6**	**D/40.7**	**D/40.7**	**D/38.9**	**D/40.3**	**D/40.8**	**D/37.9**	**D/41.0**	**D/41.4**
CT Route 94 EB Left	E/0.63/145	E/0.69/165	E/0.69/165	E/0.50/125	E/0.54/145	E/0.54/150	D/0.23/60	D/0.24/70	D/0.26/75
CT Route 94 EB Thru/Right	D/0.69/285	D/0.69/300	D/0.68/300	D/0.75/380	D/0.72/400	D/0.71/400	D/0.72/355	D/0.73/370	D/0.73/385
CT Route 94 WB Left	E/0.64/170	E/0.67/180	E/0.67/180	E/0.58/150	E/0.64/180	E/0.67/195	E/0.58/165	E/0.65/195	E/0.67/205
CT Route 94 WB Thru/Right	D/0.78/325	D/0.80/340	D/0.80/345	D/0.77/375	D/0.79/425	D/0.80/445	D/0.72/355	D/0.80/415	D/0.80/425
Oak Street NB Left	B/0.31/55	B/0.36/65	B/0.36/65	B/0.36/50	B/0.41/60	B/0.41/60	D/0.38/185	D/0.44/200	D/0.45/205
Oak Street NB Left/Thru	B/0.27/55	B/0.29/70	B/0.29/70	B/0.33/55	B/0.36/65	B/0.37/65	D/0.38/185	D/0.43/210	D/0.43/210
Oak Street NB Right	A/0.20/25	A/0.24/25	A/0.24/25	A/0.20/25	A/0.24/25	A/0.24/25	A/0.25/50	A/0.28/50	A/0.29/50
Western Blvd SB Left	E/0.08/25	E/0.08/25	E/0.08/25	E/0.17/35	E/0.19/35	E/0.19/35	E/0.26/45	E/0.34/50	E/0.34/50
Western Blvd SB Thru	E/0.19/55	E/0.25/65	E/0.25/65	E/0.33/95	E/0.46/125	E/0.47/125	D/0.35/115	E/0.45/140	E/0.46/140
Western Blvd SB Right	C/0.22/45	C/0.25/50	C/0.25/50	C/0.44/80	C/0.58/105	C/0.60/110	C/0.57/95	C/0.63/115	C/0.64/120

Overall Intersection – X/XX.X - Level of Service/Intersection Signal Delay in sec
Approaches - X/X.XX/XXX – Level of Service/Volume to Capacity Ratio/95% Queue Length in ft
[1] – Signalized Intersection
[2] – Unsignalized intersection. Analysis of stop-controlled approach
[3] – Proposed Drive for development. No analysis for Existing or No Build scenarios.

	AM			Mid-Day			PM		
	Existing	No Build	Build	Existing	No Build	Build	Existing	No Build	Build
CT Route 94 (Hebron Avenue) at Oakwood Drive and Citizens Drive[1]	**A/7.3**	**A/7.5**	**A/7.5**	**A/9.6**	**A/9.8**	**A/9.9**	**B/11.6**	**B/11.5**	**B/11.5**
CT Route 94 EB Left	A/0.06/25	A/0.06/25	A/0.06/25	A/0.04/25	A/0.04/25	A/0.04/25	A/0.03/25	A/0.03/25	A/0.03/25
CT Route 94 EB Thru/Right	A/0.27/110	A/0.30/125	A/0.30/125	B/0.33/150	B/0.36/165	B/0.36/170	B/0.43/175	B/0.45/185	B/0.46/190
CT Route 94 WB Left	A/0.20/25	A/0.21/25	A/0.21/25	A/0.13/25	A/0.14/25	A/0.14/25	A/0.16/25	A/0.16/25	A/0.17/25
CT Route 94 WB Thru/Right	A/0.29/65	A/0.30/65	A/0.30/65	A/0.29/65	A/0.33/85	A/0.34/95	A/0.30/75	A/0.33/90	A/0.34/90
Citizens Drive NB Left/Thru	D/0.42/75	D/0.42/75	D/0.42/75	C/0.54/95	C/0.54/95	C/0.54/95	D/0.70/145	D/0.70/145	D/0.70/145
Citizens Drive NB Right	A/0.24/25	A/0.24/25	A/0.24/25	A/0.22/25	A/0.22/25	A/0.22/25	A/0.33/45	A/0.33/45	A/0.33/45
Oakwood Drive SB Left/Thru	C/0.04/25	C/0.04/25	C/0.04/25	C/0.08/25	C/0.08/25	C/0.08/25	C/0.09/30	C/0.09/30	C/0.09/30
Oakwood Drive SB Right	A/0.02/25	A/0.02/25	A/0.02/25	A/0.04/25	A/0.04/25	A/0.04/25	A/0.04/25	A/0.04/25	A/0.04/25
CT Route 94 (Hebron Avenue) at Private Drive and Eastern Boulevard[1]	**A/6.4**	**A/7.0**	**A/7.0**	**A/9.8**	**B/11.3**	**B/11.6**	**A/7.9**	**A/8.0**	**A/8.0**
CT Route 94 EB Left	A/0.33/25	A/0.42/45	A/0.42/45	A/0.32/45	A/0.40/70	A/0.40/75	A/0.26/25	A/0.30/30	A/0.35/35
CT Route 94 EB Thru/Right	A/0.21/35	A/0.21/30	A/0.21/30	B/0.42/65	B/0.43/70	B/0.43/70	A/0.42/65	A/0.42/65	A/0.42/65
CT Route 94 WB Left	A/0.00/25	A/0.00/25	A/0.00/25	A/0.01/25	A/0.01/25	A/0.01/25	A/0.00/25	A/0.00/25	A/0.00/25
CT Route 94 WB Thru	A/0.30/120	A/0.30/135	A/0.30/135	A/0.25/105	B/0.29/120	B/0.29/125	A/0.26/105	A/0.27/110	A/0.27/110
CT Route 94 WB Right	A/0.06/25	A/0.07/25	A/0.07/25	A/0.04/25	A/0.05/25	A/0.05/25	A/0.03/25	A/0.03/25	A/0.03/25
Private Drive NB Left/Thru/Right	A/0.08/25	A/0.08/25	A/0.08/25	C/0.19/35	C/0.18/35	C/0.18/35	C/0.26/45	C/0.25/45	C/0.25/45
Eastern Blvd SB Left/Thru	C/0.12/30	C/0.15/35	C/0.15/35	C/0.27/50	C/0.33/60	C/0.34/60	C/0.31/55	D/0.37/65	D/0.37/65
Eastern Blvd SB Right	A/0.30/40	A/0.32/40	A/0.32/40	A/0.35/50	B/0.42/75	B/0.48/90	A/0.30/40	A/0.39/45	A/0.40/45

Overall Intersection – X/XX.X - Level of Service/Intersection Signal Delay in sec
Approaches - X/X.XX/XXX – Level of Service/Volume to Capacity Ratio/95% Queue Length in ft
[1] – Signalized Intersection
[2] – Unsignalized intersection. Analysis of stop-controlled approach
[3] – Proposed Drive for development. No analysis for Existing or No Build scenarios.

	AM			Mid-Day			PM		
	Existing	No Build	Build	Existing	No Build	Build	Existing	No Build	Build
CT Route 94 (Hebron Avenue) at Tara Drive and Addison Road[1]	**A/8.3**	**A/8.7**	**A/8.7**	**B/10.7**	**B/12.4**	**B/12.4**	**B/13.0**	**B/14.1**	**B/14.2**
CT Route 94 EB Left	A/0.04/25	A/0.05/25	A/0.05/25	A/0.05/25	A/0.08/25	A/0.08/25	A/0.07/25	A/0.08/25	A/0.08/25
CT Route 94 EB Thru/Right	A/0.27/95	A/0.28/105	A/0.28/105	A/0.45/200	A/0.52/210	A/0.52/210	B/0.66/330	B/0.68/350	B/0.68/350
CT Route 94 WB Left	A/0.01/25	A/0.01/25	A/0.01/25	A/0.01/25	A/0.01/25	A/0.01/25	A/0.02/25	A/0.02/25	A/0.02/25
CT Route 94 WB Thru/Right	A/0.56/265	A/0.59/295	A/0.59/295	A/0.50/225	B/0.58/235	B/0.58/235	A/0.52/215	A/0.54/225	A/0.54/225
Tara Drive NB Left/Thru/Right	C/0.20/35	C/0.20/35	C/0.20/35	B/0.16/35	B/0.15/35	B/0.15/35	C/0.13/35	C/0.12/35	C/0.12/35
Addison Road SB Left/Thru/Right	C/0.46/65	C/0.48/70	C/0.48/70	C/0.62/95	C/0.67/110	C/0.67/110	D/0.68/120	D/0.73/140	D/0.73/140
Eastern Boulevard at Site Drive #5[2,3]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Eastern Blvd NB Thru	-	-	-	-	-	-	-	-	-
Site Drive EB Left	-	-	A/0.00/25	-	-	B/0.01/25	-	-	B/0.01/25
Site Drive EB Right	-	-	A/0.00/25	-	-	B/0.07/25	-	-	B/0.02/25
Eastern Blvd SB Thru	-	-	-	-	-		-	-	-
National Drive at Site Drive #4[2,3]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
National Drive EB Left/Thru	-	-	-	-	-	-	-	-	-
National Drive WB Thru/Right	-	-	-	-	-	-	-	-	-
Site Drive SB Left/Right	-	-	A/0.00/25	-	-	A/0.00/25	-	-	A/0.00/25

Overall Intersection – X/XX.X - Level of Service/Intersection Signal Delay in sec
Approaches - X/X.XX/XXX – Level of Service/Volume to Capacity Ratio/95% Queue Length in ft
[1] – Signalized Intersection
[2] – Unsignalized intersection. Analysis of stop-controlled approach
[3] – Proposed Drive for development. No analysis for Existing or No Build scenarios.

As illustrated in **Table 5**, traffic operations for the overall intersection LOS during the AM Peak Hour are projected to remain the same between the Existing, No Build and Build scenarios. All intersection Levels of Service are projected to perform adequately. The following movements at the intersection of CT Route 94 (Hebron Avenue) at Oak Street and Western Boulevard that are projected to perform at undesirable levels of service:

- CT Route 94 EB Left
- CT Route 94 WB Left
- Western Boulevard SB Left and thru

It should be noted that these movements perform at a Level of Service E in the Existing scenario and any notable deterioration is primarily between the Existing and No Build scenarios. The proposed development is projected to have no significant impact to the intersection during the AM Peak Hour.

During the Mid-Day Peak Hour, traffic operations for the overall intersection LOS are projected to remain the same between the Existing, No Build and Build scenarios. All intersection Levels of Service are projected to perform adequately. The following movements at the intersection of CT Route 94 (Hebron Avenue) at Oak Street and Western Boulevard that are projected to perform at undesirable levels of service:

- CT Route 94 EB Left
- CT Route 94 WB Left
- Western Boulevard SB Left and thru

It should be noted that these movements perform at a Level of Service E in the Existing scenario and any notable deterioration is primarily between the Existing and No Build scenarios. At the intersection of Oak Street at CT Route 2 WB Exit 8 Off Ramp and Private Drive, the Oak Street NB left/thru movement deteriorates from a D to E LOS between the Existing and No Build scenarios. After further analysis, the control delay increases from 52” to 58” for the Existing to No Build scenarios. There is negligible deterioration between the No Build and Build scenarios.

During the PM Peak Hour, traffic operations for the overall intersection LOS are projected to remain the same between the Existing, No Build and Build scenarios. All intersection Levels of Service are projected to perform adequately. The following movements at the intersection of CT

Route 94 (Hebron Avenue) at Oak Street and Western Boulevard that are projected to perform at undesirable levels of service:

- CT Route 94 WB Left
- Western Boulevard SB Left

It should be noted that these movements perform at a Level of Service E in the Existing scenario and any notable deterioration is primarily between the Existing and No Build scenarios. The Western Boulevard SB Thru movement at this intersection deteriorates from a D to E Level of Service between the Existing and No Build scenarios. After further analysis, the control delay increases from 54” to 58” for the Existing to No Build scenarios. There is negligible deterioration between the No Build and Build scenarios. At the intersection of Oak Street at CT Route 2 WB Exit 8 Off Ramp and Private Drive, the Exit 8 Off Ramp WB left/thru/right movement deteriorates from a D to E LOS between the Existing and No Build scenarios. After further analysis, the control delay increases from 51” to 57” for the Existing to No Build scenarios. There is negligible deterioration between the No Build and Build scenarios.

V. CONCLUSIONS AND RECOMMENDATIONS

This traffic study has been prepared for a new tenant and change of use of an existing building at 107 Eastern Boulevard in Glastonbury, CT. The focus of this study was to evaluate the traffic flows and operating conditions on the roadways and intersections projected to be used by motorists traveling to and from the proposed development and to quantify the potential traffic impacts on these roadways and intersections. After analyses of the Existing, No Build and Build Scenarios of the AM, Mid-Day and PM Peak Hours, it should be noted that any notable deterioration is from the other proposed developments in the vicinity of this development where those traffic volumes have been included in the No Build scenarios.

All intersections in the AM Peak Hour are projected to perform adequately. During the Mid-Day and PM Peak Hours, traffic operations for the overall intersection LOS are projected to remain the same between the Existing, No Build and Build scenarios and perform adequately. There is negligible deterioration between the No Build and Build scenarios.

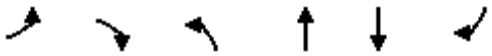
The following is a summary of the results/recommendations for this site:

- Capacity analyses indicate that all analyzed intersections, overall, are projected to perform at an acceptable Level of Service between the Existing, No Build and Build Scenarios during the AM, Mid-Day, and PM Peak Hours.
- Any notable deterioration for movements performing at undesirable Levels of Service are either at the undesirable Level of Service in the Existing scenarios or deteriorate between the Existing and No Build scenarios.
- Any deterioration between the No Build and Build scenarios are negligible.
- Install “Stop” sign and stop bar at the site drive’s egress as noted on Site Plans.

APPENDIX

CAPACITY ANALYSES

EXISTING



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	0	225	145	5
Future Volume (vph)	0	5	0	225	145	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.996	
Flt Protected						
Satd. Flow (prot)	1611	0	0	1863	1855	0
Flt Permitted						
Satd. Flow (perm)	1611	0	0	1863	1855	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	5	0	245	158	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	245	163	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.8%		ICU Level of Service A	
Analysis Period (min) 15			

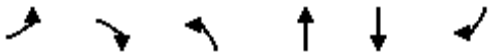
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	0	225	145	5
Future Vol, veh/h	0	5	0	225	145	5
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	0	5	0	245	158	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	406	161	163	0	-	0
Stage 1	161	-	-	-	-	-
Stage 2	245	-	-	-	-	-
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	601	884	1416	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	601	884	1416	-	-	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1416	-	884	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	10	15	215	135	15
Future Volume (vph)	10	10	15	215	135	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.987	
Flt Protected	0.976			0.997		
Satd. Flow (prot)	1694	0	0	1857	1839	0
Flt Permitted	0.976			0.997		
Satd. Flow (perm)	1694	0	0	1857	1839	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	16	234	147	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	250	163	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.5%		ICU Level of Service A	
Analysis Period (min) 15			

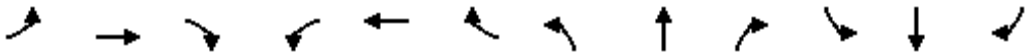
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	215	135	15
Future Vol, veh/h	10	10	15	215	135	15
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	11	11	16	234	147	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	421	155	163	0	-	0
Stage 1	155	-	-	-	-	-
Stage 2	266	-	-	-	-	-
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	589	891	1416	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	581	891	1416	-	-	-
Mov Cap-2 Maneuver	581	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1416	-	703	-	-
HCM Lane V/C Ratio	0.012	-	0.031	-	-
HCM Control Delay (s)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	20	0	0	30	0	0	0	0	0	0	0
Future Volume (vph)	0	20	0	0	30	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	0	22	0	0	33	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	33	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

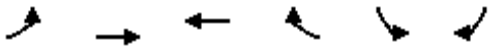
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	20	0	0	30	0	0	0	0	0	0	0
Future Vol, veh/h	0	20	0	0	30	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	0	22	0	0	33	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	22	0	0	55	55	22	55	55	33
Stage 1	-	-	-	-	-	-	22	22	-	33	33	-
Stage 2	-	-	-	-	-	-	33	33	-	22	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1579	-	-	1593	-	-	943	836	1055	943	836	1041
Stage 1	-	-	-	-	-	-	996	877	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	996	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1593	-	-	943	836	1055	943	836	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	943	836	-	943	836	-
Stage 1	-	-	-	-	-	-	996	877	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	996	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1579	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	20	30	0	0	0
Future Volume (vph)	0	20	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1716	232		109	
Travel Time (s)		46.8	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	22	33	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	30	0	0	0
Future Vol, veh/h	0	20	30	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	22	33	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	55	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	22	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	953	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	5	235	40	0	100
Future Volume (vph)	15	5	235	40	0	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968		0.981			
Flt Protected	0.963					
Satd. Flow (prot)	1736	0	1827	0	0	1863
Flt Permitted	0.963					
Satd. Flow (perm)	1736	0	1827	0	0	1863
Link Speed (mph)	25		25			30
Link Distance (ft)	1716		1158			362
Travel Time (s)	46.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	5	255	43	0	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	298	0	0	109
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

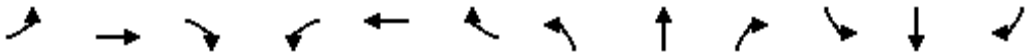
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	235	40	0	100
Future Vol, veh/h	15	5	235	40	0	100
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	16	5	255	43	0	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	386	277	0	0	298	0
Stage 1	277	-	-	-	-	-
Stage 2	109	-	-	-	-	-
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	617	762	-	-	1263	-
Stage 1	770	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	617	762	-	-	1263	-
Mov Cap-2 Maneuver	617	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	648	1263	-
HCM Lane V/C Ratio	-	-	0.034	-	-
HCM Control Delay (s)	-	-	10.7	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	100	10	5	5	5	25	90	10	5	100	280
Future Volume (vph)	15	100	10	5	5	5	25	90	10	5	100	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.955			0.989			0.902	
Flt Protected		0.994			0.984			0.990			0.999	
Satd. Flow (prot)	0	1831	0	0	1750	0	0	1824	0	0	1679	0
Flt Permitted		0.994			0.984			0.990			0.999	
Satd. Flow (perm)	0	1831	0	0	1750	0	0	1824	0	0	1679	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	16	109	11	5	5	5	27	98	11	5	109	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	136	0	0	15	0	0	136	0	0	418	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

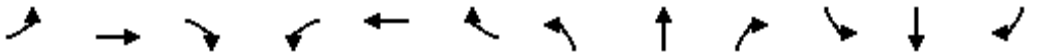
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	100	10	5	5	5	25	90	10	5	100	280
Future Vol, veh/h	15	100	10	5	5	5	25	90	10	5	100	280
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	109	11	5	5	5	27	98	11	5	109	304
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.4	8.8	10.7
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	12%	33%	1%
Vol Thru, %	72%	80%	33%	26%
Vol Right, %	8%	8%	33%	73%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	125	15	385
LT Vol	25	15	5	5
Through Vol	90	100	5	100
RT Vol	10	10	5	280
Lane Flow Rate	136	136	16	418
Geometry Grp	1	1	1	1
Degree of Util (X)	0.179	0.192	0.023	0.471
Departure Headway (Hd)	4.742	5.1	5.179	4.055
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	701	687	887
Service Time	2.783	3.153	3.245	2.083
HCM Lane V/C Ratio	0.18	0.194	0.023	0.471
HCM Control Delay	8.8	9.4	8.4	10.7
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	0.7	0.1	2.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	5	50	10	265	10	175	0	0	175	5
Future Volume (vph)	10	0	5	50	10	265	10	175	0	0	175	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.955			0.904	0.850					0.996	
Flt Protected		0.968			0.985			0.997				
Satd. Flow (prot)	0	1722	0	0	1576	1454	0	3411	0	0	1979	0
Flt Permitted		0.761			0.893			0.929				
Satd. Flow (perm)	0	1354	0	0	1429	1454	0	3178	0	0	1979	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			45	166					2	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	0	5	52	10	276	10	182	0	0	182	5
Shared Lane Traffic (%)						40%						
Lane Group Flow (vph)	0	15	0	0	172	166	0	192	0	0	187	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	14.3	14.3		14.3	14.3	14.3	19.3	19.3				
Total Split (s)	27.3	27.3		27.3	27.3	27.3	27.3	27.3				
Total Split (%)	16.9%	16.9%		16.9%	16.9%	16.9%	16.9%	16.9%				
Maximum Green (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0				
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7				
All-Red Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		7.3			7.3	7.3		7.3				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

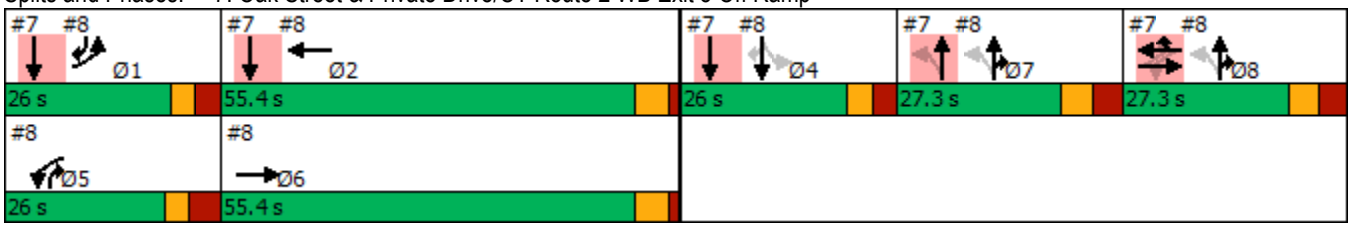
Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	1	2	4	5	6
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	5.0	18.0	7.0	5.0	18.0
Minimum Split (s)	11.0	24.3	13.0	11.8	24.3
Total Split (s)	26.0	55.4	26.0	26.0	55.4
Total Split (%)	16%	34%	16%	16%	34%
Maximum Green (s)	20.0	50.0	20.0	19.2	50.0
Yellow Time (s)	3.0	4.1	3.3	3.0	4.1
All-Red Time (s)	3.0	1.3	2.7	3.8	1.3
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	1.5	2.5	1.0	1.5	2.5
Recall Mode	None	Min	None	None	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		16.5			16.5	16.5		16.3			57.2	
Actuated g/C Ratio		0.15			0.15	0.15		0.15			0.51	
v/c Ratio		0.05			0.69	0.46		0.41			0.18	
Control Delay		0.3			50.1	12.0		48.6			0.6	
Queue Delay		0.0			0.0	0.0		0.0			0.3	
Total Delay		0.3			50.1	12.0		48.6			0.9	
LOS		A			D	B		D			A	
Approach Delay		0.3			31.4			48.6			0.9	
Approach LOS		A			C			D			A	
Queue Length 50th (ft)		0			89	0		66			1	
Queue Length 95th (ft)		0			#216	71		123			1	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		374			300	404		587			1277	
Starvation Cap Reductn		0			0	0		0			674	
Spillback Cap Reductn		0			0	1		6			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.04			0.57	0.41		0.33			0.31	

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 111.1
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 27.5 — Intersection LOS: C
Intersection Capacity Utilization 45.0% — ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	470	40	115	560	20	180	100	170	5	25	105
Future Volume (vph)	215	470	40	115	560	20	180	100	170	5	25	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.988			0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.985		0.950		
Satd. Flow (prot)	3319	3497	0	1770	3404	0	1625	1685	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.740	0.908		0.506		
Satd. Flow (perm)	3319	3497	0	1770	3404	0	1266	1553	1531	911	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		6			2				179			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	226	495	42	121	589	21	189	105	179	5	26	111
Shared Lane Traffic (%)							24%					
Lane Group Flow (vph)	226	537	0	121	610	0	144	150	179	5	26	111
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

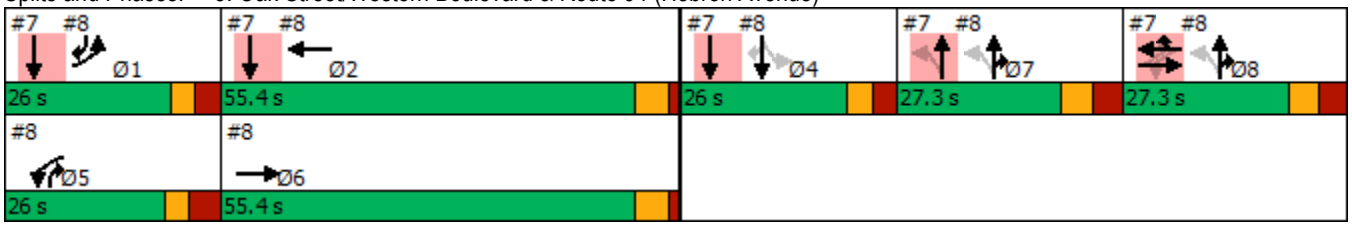
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	11.9	24.8		12.0	25.6		40.3	40.3	59.7	7.9	7.9	19.8
Actuated g/C Ratio	0.11	0.22		0.11	0.23		0.36	0.36	0.54	0.07	0.07	0.18
v/c Ratio	0.63	0.69		0.64	0.78		0.31	0.27	0.20	0.08	0.19	0.22
Control Delay	58.4	45.3		65.8	48.3		12.7	11.9	0.5	59.0	58.5	22.7
Queue Delay	0.0	0.0		0.0	0.0		1.5	1.4	0.8	0.0	0.0	0.0
Total Delay	58.4	45.3		65.8	48.3		14.2	13.3	1.2	59.0	58.5	22.7
LOS	E	D		E	D		B	B	A	E	E	C
Approach Delay		49.2			51.2			9.0			30.5	
Approach LOS		D			D			A			C	
Queue Length 50th (ft)	81	187		85	220		31	32	0	4	18	23
Queue Length 95th (ft)	143	283		169	322		51	52	0	19	53	41
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	613	1620		314	1575		494	607	971	168	356	713
Starvation Cap Reductn	0	0		0	0		209	301	540	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.33		0.39	0.39		0.51	0.49	0.42	0.03	0.07	0.16

Intersection Summary

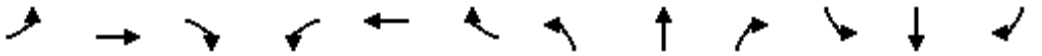
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 111.1
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 39.6 — Intersection LOS: D
Intersection Capacity Utilization 52.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

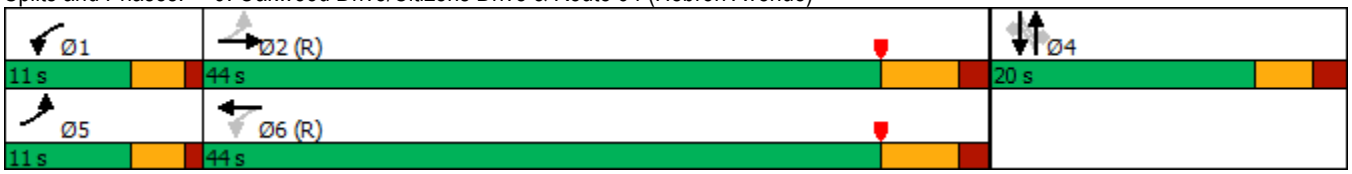


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	455	90	120	620	30	70	5	70	5	5	5
Future Volume (vph)	30	455	90	120	620	30	70	5	70	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.993				0.850			0.850
Flt Protected	0.950			0.950				0.955			0.976	
Satd. Flow (prot)	1770	3451	0	1770	3514	0	0	1779	1583	0	1818	1583
Flt Permitted	0.383			0.398				0.732			0.846	
Satd. Flow (perm)	713	3451	0	741	3514	0	0	1364	1583	0	1576	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			9				103			103
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	33	495	98	130	674	33	76	5	76	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	593	0	130	707	0	0	81	76	0	10	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	11.0	44.0		11.0	44.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%		26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
Maximum Green (s)	7.0	37.9		7.0	37.9		14.8	14.8	14.8	14.8	14.8	14.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	53.8	48.0		56.9	52.9			10.7	10.7		10.7	10.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.72	0.64		0.76	0.71			0.14	0.14		0.14	0.14
v/c Ratio	0.06	0.27		0.20	0.29			0.42	0.24		0.04	0.02
Control Delay	3.6	8.1		3.0	4.3			35.5	5.5		26.8	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	3.6	8.1		3.0	4.3			35.5	5.5		26.8	0.0
LOS	A	A		A	A			D	A		C	A
Approach Delay		7.9			4.1			21.0			17.9	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)	3	62		10	34			35	0		4	0
Queue Length 95th (ft)	11	107		22	61			72	22		16	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	617	2226		662	2480			269	395		310	395
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.05	0.27		0.20	0.29			0.30	0.19		0.03	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 46.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)

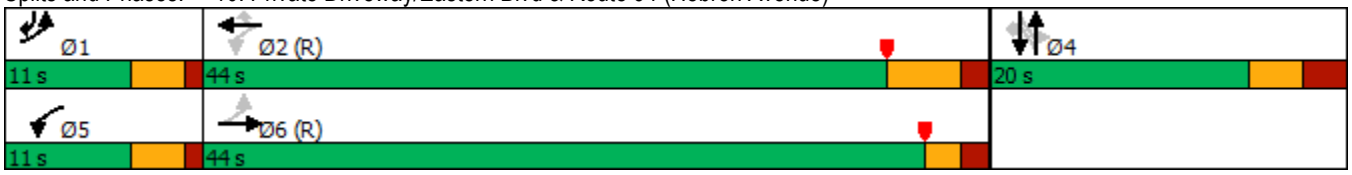


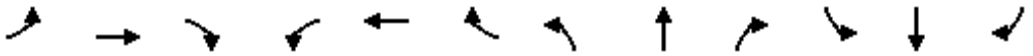
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	340	20	0	630	60	15	0	5	15	5	125
Future Volume (vph)	170	340	20	0	630	60	15	0	5	15	5	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992				0.850		0.968				0.850
Flt Protected	0.950							0.963			0.963	
Satd. Flow (prot)	1770	3511	0	1863	3539	1583	0	1736	0	0	1794	1583
Flt Permitted	0.391							0.764			0.764	
Satd. Flow (perm)	728	3511	0	1863	3539	1583	0	1378	0	0	1423	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				96		99				136
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	185	370	22	0	685	65	16	0	5	16	5	136
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	392	0	0	685	65	0	21	0	0	21	136
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	11.0	44.0		11.0	44.0	44.0	20.0	20.0		20.0	20.0	11.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%	58.7%	26.7%	26.7%		26.7%	26.7%	14.7%
Maximum Green (s)	7.0	40.3		7.0	38.2	38.2	14.4	14.4		14.4	14.4	7.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	47.4	40.3			49.0	49.0		9.0			9.0	16.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.63	0.54			0.65	0.65		0.12			0.12	0.22
v/c Ratio	0.33	0.21			0.30	0.06		0.08			0.12	0.30
Control Delay	4.8	5.6			7.5	1.1		0.6			31.5	5.7
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	4.8	5.6			7.5	1.1		0.6			31.5	5.7
LOS	A	A			A	A		A			C	A
Approach Delay		5.3			6.9			0.6			9.2	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	15	19			81	0		0			9	0
Queue Length 95th (ft)	23	31			120	9		0			29	36
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559					150						215
Base Capacity (vph)	574	1892			2313	1067		344			273	457
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.32	0.21			0.30	0.06		0.06			0.08	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)



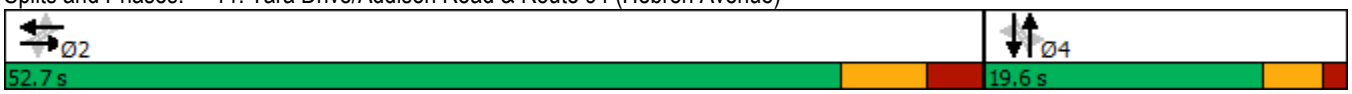


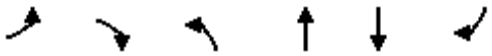
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	340	5	5	630	80	25	5	5	50	5	35
Future Volume (vph)	15	340	5	5	630	80	25	5	5	50	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.983			0.982			0.947	
Flt Protected	0.950			0.950				0.965			0.973	
Satd. Flow (prot)	1770	1859	0	1770	1831	0	0	1765	0	0	1716	0
Flt Permitted	0.321			0.539				0.794			0.807	
Satd. Flow (perm)	598	1859	0	1004	1831	0	0	1452	0	0	1424	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			17			5			38	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	16	370	5	5	685	87	27	5	5	54	5	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	375	0	5	772	0	0	37	0	0	97	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	52.7	52.7		52.7	52.7		19.6	19.6		19.6	19.6	
Total Split (%)	72.9%	72.9%		72.9%	72.9%		27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	45.0	45.0		45.0	45.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	49.5	49.5		49.5	49.5			8.3			8.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.13			0.13	
v/c Ratio	0.04	0.27		0.01	0.56			0.20			0.46	
Control Delay	4.1	4.5		3.8	7.3			25.6			25.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.1	4.5		3.8	7.3			25.6			25.1	
LOS	A	A		A	A			C			C	
Approach Delay		4.5			7.3			25.6			25.1	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	2	43		1	121			12			22	
Queue Length 95th (ft)	8	95		4	263			35			62	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	446	1388		749	1371			332			352	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.04	0.27		0.01	0.56			0.11			0.28	

Intersection Summary			
Area Type:	Other		
Cycle Length: 72.3			
Actuated Cycle Length: 66.3			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	5	175	185	5
Future Volume (vph)	0	5	5	175	185	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.997	
Flt Protected				0.999		
Satd. Flow (prot)	1611	0	0	1861	1857	0
Flt Permitted				0.999		
Satd. Flow (perm)	1611	0	0	1861	1857	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	5	5	190	201	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	195	206	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.2%		ICU Level of Service A	
Analysis Period (min) 15			

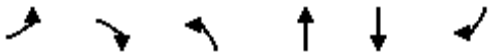
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	5	175	185	5
Future Vol, veh/h	0	5	5	175	185	5
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	0	5	5	190	201	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	404	204	206	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	200	-	-	-	-	-
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	603	837	1365	-	-	-
Stage 1	830	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	601	837	1365	-	-	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	834	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1365	-	837	-	-
HCM Lane V/C Ratio	0.004	-	0.006	-	-
HCM Control Delay (s)	7.6	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	15	15	170	180	10
Future Volume (vph)	10	15	15	170	180	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.993	
Flt Protected	0.980			0.996		
Satd. Flow (prot)	1679	0	0	1855	1850	0
Flt Permitted	0.980			0.996		
Satd. Flow (perm)	1679	0	0	1855	1850	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	16	185	196	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	201	207	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			

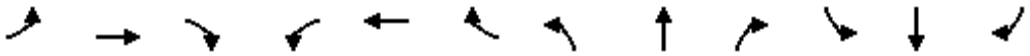
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	15	170	180	10
Future Vol, veh/h	10	15	15	170	180	10
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	11	16	16	185	196	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	419	202	207	0	-	0
Stage 1	202	-	-	-	-	-
Stage 2	217	-	-	-	-	-
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	591	839	1364	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	583	839	1364	-	-	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	819	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1364	-	714	-	-
HCM Lane V/C Ratio	0.012	-	0.038	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	25	0	0	25	0	0	0	0	0	0	0
Future Volume (vph)	5	25	0	0	25	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected		0.992										
Satd. Flow (prot)	0	1848	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted		0.992										
Satd. Flow (perm)	0	1848	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	5	27	0	0	27	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	27	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.9%		ICU Level of Service A	
Analysis Period (min) 15			

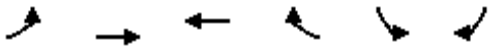
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	25	0	0	25	0	0	0	0	0	0	0
Future Vol, veh/h	5	25	0	0	25	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	5	27	0	0	27	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	27	0	0	64	64	27	64	64	27
Stage 1	-	-	-	-	-	-	37	37	-	27	27	-
Stage 2	-	-	-	-	-	-	27	27	-	37	37	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1587	-	-	1587	-	-	930	827	1048	930	827	1048
Stage 1	-	-	-	-	-	-	978	864	-	990	873	-
Stage 2	-	-	-	-	-	-	990	873	-	978	864	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1587	-	-	1587	-	-	928	825	1048	928	825	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	928	825	-	928	825	-
Stage 1	-	-	-	-	-	-	975	861	-	987	873	-
Stage 2	-	-	-	-	-	-	990	873	-	975	861	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1587	-	-	1587	-	-	-
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	-
HCM Control Delay (s)	0	7.3	0	-	0	-	-	0
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	30	25	0	0	5
Future Volume (vph)	0	30	25	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1611	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1716	232		109	
Travel Time (s)		46.8	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	33	27	0	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	27	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	25	0	0	5
Future Vol, veh/h	0	30	25	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	33	27	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	60	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1587	-	-	-	947	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1587	-	-	-	947	1048
Mov Cap-2 Maneuver	-	-	-	-	947	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1048
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	5	170	25	5	190
Future Volume (vph)	40	5	170	25	5	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.983			
Flt Protected	0.957					0.999
Satd. Flow (prot)	1758	0	1831	0	0	1861
Flt Permitted	0.957					0.999
Satd. Flow (perm)	1758	0	1831	0	0	1861
Link Speed (mph)	25		25			30
Link Distance (ft)	1716		1158			362
Travel Time (s)	46.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	5	185	27	5	207
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	212	0	0	212
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			

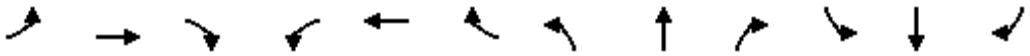
Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	5	170	25	5	190
Future Vol, veh/h	40	5	170	25	5	190
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	43	5	185	27	5	207

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	416	199	0	0	212	0
Stage 1	199	-	-	-	-	-
Stage 2	217	-	-	-	-	-
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	593	842	-	-	1358	-
Stage 1	835	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	591	842	-	-	1358	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	816	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	611	1358	-
HCM Lane V/C Ratio	-	-	0.08	0.004	-
HCM Control Delay (s)	-	-	11.4	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	5	25	10	10	10	20	90	5	5	105	120
Future Volume (vph)	135	5	25	10	10	10	20	90	5	5	105	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.955			0.995			0.930	
Flt Protected		0.961			0.984			0.991			0.999	
Satd. Flow (prot)	0	1754	0	0	1750	0	0	1837	0	0	1731	0
Flt Permitted		0.961			0.984			0.991			0.999	
Satd. Flow (perm)	0	1754	0	0	1750	0	0	1837	0	0	1731	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	147	5	27	11	11	11	22	98	5	5	114	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	33	0	0	125	0	0	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

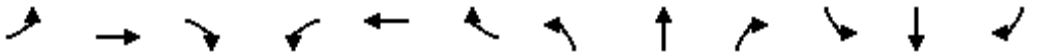
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	135	5	25	10	10	10	20	90	5	5	105	120
Future Vol, veh/h	135	5	25	10	10	10	20	90	5	5	105	120
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	147	5	27	11	11	11	22	98	5	5	114	130
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	8.2	8.7	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	82%	33%	2%
Vol Thru, %	78%	3%	33%	46%
Vol Right, %	4%	15%	33%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	165	30	230
LT Vol	20	135	10	5
Through Vol	90	5	10	105
RT Vol	5	25	10	120
Lane Flow Rate	125	179	33	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.165	0.243	0.044	0.299
Departure Headway (Hd)	4.748	4.886	4.882	4.307
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	734	729	833
Service Time	2.788	2.931	2.938	2.338
HCM Lane V/C Ratio	0.166	0.244	0.045	0.3
HCM Control Delay	8.7	9.5	8.2	9.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.9	0.1	1.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	15	35	5	185	10	230	0	0	220	15
Future Volume (vph)	25	0	15	35	5	185	10	230	0	0	220	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.949			0.901	0.850					0.991	
Flt Protected		0.970			0.985			0.998				
Satd. Flow (prot)	0	1715	0	0	1571	1454	0	3414	0	0	1969	0
Flt Permitted		0.726			0.884			0.932				
Satd. Flow (perm)	0	1283	0	0	1409	1454	0	3189	0	0	1969	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			49	152					4	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	26	0	16	36	5	193	10	240	0	0	229	16
Shared Lane Traffic (%)						41%						
Lane Group Flow (vph)	0	42	0	0	120	114	0	250	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	14.3	14.3		14.3	14.3	14.3	19.3	19.3				
Total Split (s)	27.3	27.3		27.3	27.3	27.3	27.3	27.3				
Total Split (%)	16.9%	16.9%		16.9%	16.9%	16.9%	16.9%	16.9%				
Maximum Green (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0				
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7				
All-Red Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		7.3			7.3	7.3		7.3				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

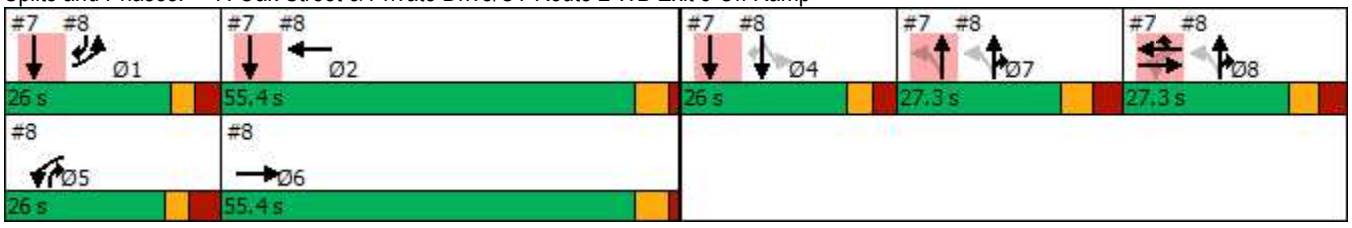
Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	1	2	4	5	6
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	5.0	18.0	7.0	5.0	18.0
Minimum Split (s)	11.0	24.3	13.0	11.8	24.3
Total Split (s)	26.0	55.4	26.0	26.0	55.4
Total Split (%)	16%	34%	16%	16%	34%
Maximum Green (s)	20.0	50.0	20.0	19.2	50.0
Yellow Time (s)	3.0	4.1	3.3	3.0	4.1
All-Red Time (s)	3.0	1.3	2.7	3.8	1.3
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	1.5	2.5	1.0	1.5	2.5
Recall Mode	None	Min	None	None	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		12.8			12.8	12.8		17.2			62.3	
Actuated g/C Ratio		0.11			0.11	0.11		0.15			0.55	
v/c Ratio		0.15			0.59	0.38		0.52			0.23	
Control Delay		1.1			44.7	6.8		51.9			0.9	
Queue Delay		0.0			0.0	0.0		0.0			0.5	
Total Delay		1.1			44.7	6.8		51.9			1.3	
LOS		A			D	A		D			A	
Approach Delay		1.1			26.2			51.9			1.3	
Approach LOS		A			C			D			A	
Queue Length 50th (ft)		0			51	0		86			1	
Queue Length 95th (ft)		0			138	26		168			0	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		358			297	389		582			1298	
Starvation Cap Reductn		0			0	0		0			669	
Spillback Cap Reductn		0			0	0		6			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.12			0.40	0.29		0.43			0.39	

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 113.8
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 25.3 — Intersection LOS: C
Intersection Capacity Utilization 41.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	555	95	90	630	10	205	80	155	10	50	220
Future Volume (vph)	165	555	95	90	630	10	205	80	155	10	50	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.978			0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.978		0.950		
Satd. Flow (prot)	3319	3461	0	1770	3414	0	1625	1673	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.722	0.835		0.426		
Satd. Flow (perm)	3319	3461	0	1770	3414	0	1235	1428	1531	767	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		12			1				163			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	584	100	95	663	11	216	84	163	11	53	232
Shared Lane Traffic (%)							33%					
Lane Group Flow (vph)	174	684	0	95	674	0	145	155	163	11	53	232
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

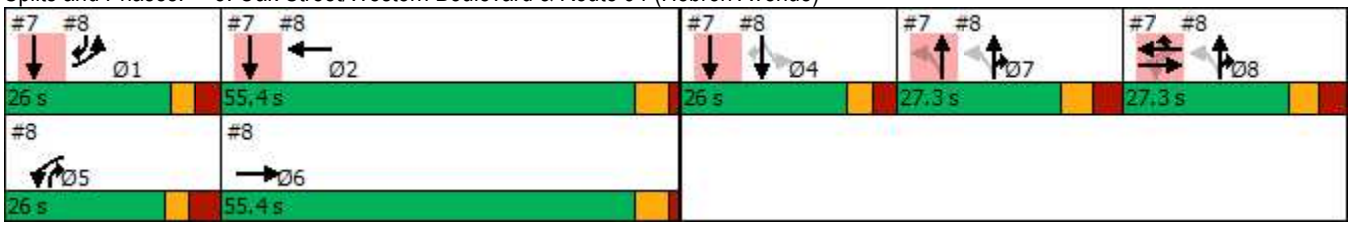
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	12.1	29.6		10.6	29.0		37.7	37.7	55.9	9.4	9.4	21.4
Actuated g/C Ratio	0.11	0.26		0.09	0.25		0.33	0.33	0.49	0.08	0.08	0.19
v/c Ratio	0.50	0.75		0.58	0.77		0.36	0.33	0.20	0.17	0.33	0.44
Control Delay	56.7	45.0		68.2	46.9		13.4	12.5	0.5	63.1	60.9	24.5
Queue Delay	0.0	0.0		0.0	0.0		0.9	0.8	0.6	0.0	0.0	0.0
Total Delay	56.7	45.0		68.2	46.9		14.3	13.3	1.1	63.1	60.9	24.5
LOS	E	D		E	D		B	B	A	E	E	C
Approach Delay		47.4			49.6			9.3			32.5	
Approach LOS		D			D			A			C	
Queue Length 50th (ft)	61	233		67	236		28	30	0	8	38	46
Queue Length 95th (ft)	122	377		149	374		50	53	0	31	92	77
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	606	1587		310	1560		475	550	919	140	351	739
Starvation Cap Reductn	0	0		0	0		155	200	490	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.43		0.31	0.43		0.45	0.44	0.38	0.08	0.15	0.31

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 113.8
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 38.9 — Intersection LOS: D
Intersection Capacity Utilization 54.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

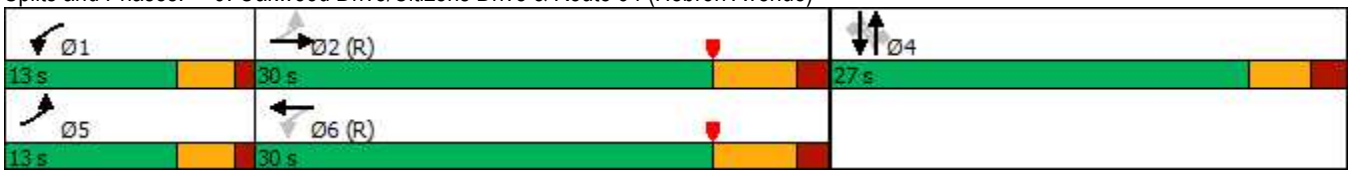
Intersection Summary

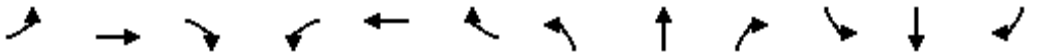
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	565	70	70	605	15	110	10	75	15	5	15
Future Volume (vph)	20	565	70	70	605	15	110	10	75	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.996				0.850			0.850
Flt Protected	0.950			0.950				0.956			0.963	
Satd. Flow (prot)	1770	3479	0	1770	3525	0	0	1781	1583	0	1794	1583
Flt Permitted	0.395			0.344				0.729			0.747	
Satd. Flow (perm)	736	3479	0	641	3525	0	0	1358	1583	0	1391	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			4				111			111
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	22	614	76	76	658	16	120	11	82	16	5	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	690	0	76	674	0	0	131	82	0	21	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	13.0	30.0		13.0	30.0		27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	18.6%	42.9%		18.6%	42.9%		38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Maximum Green (s)	9.0	23.9		9.0	23.9		21.8	21.8	21.8	21.8	21.8	21.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	47.2	41.5		50.0	46.1			12.5	12.5		12.5	12.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.67	0.59		0.71	0.66			0.18	0.18		0.18	0.18
v/c Ratio	0.04	0.33		0.13	0.29			0.54	0.22		0.08	0.04
Control Delay	4.8	10.8		3.4	5.0			33.8	4.3		22.7	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	4.8	10.8		3.4	5.0			33.8	4.3		22.7	0.2
LOS	A	B		A	A			C	A		C	A
Approach Delay		10.6			4.8			22.4			13.0	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	2	84		6	32			52	0		8	0
Queue Length 95th (ft)	10	150		16	62			94	20		23	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	653	2070		608	2321			422	569		433	569
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.03	0.33		0.13	0.29			0.31	0.14		0.05	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 49 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 47.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	495	15	5	520	35	20	5	10	40	5	150
Future Volume (vph)	145	495	15	5	520	35	20	5	10	40	5	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.961				0.850
Flt Protected	0.950			0.950				0.972			0.957	
Satd. Flow (prot)	1770	3525	0	1770	3539	1583	0	1740	0	0	1783	1583
Flt Permitted	0.440			0.287				0.794			0.721	
Satd. Flow (perm)	820	3525	0	535	3539	1583	0	1421	0	0	1343	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				103		11				126
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	158	538	16	5	565	38	22	5	11	43	5	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	554	0	5	565	38	0	38	0	0	48	163
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	13.0	30.0		13.0	30.0	30.0	27.0	27.0		27.0	27.0	13.0
Total Split (%)	18.6%	42.9%		18.6%	42.9%	42.9%	38.6%	38.6%		38.6%	38.6%	18.6%
Maximum Green (s)	9.0	26.3		9.0	24.2	24.2	21.4	21.4		21.4	21.4	9.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	33.2	26.3		56.9	43.9	43.9		9.4			9.4	16.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.47	0.38		0.81	0.63	0.63		0.13			0.13	0.23
v/c Ratio	0.32	0.42		0.01	0.25	0.04		0.19			0.27	0.35
Control Delay	6.1	11.4		2.8	7.9	0.1		23.4			31.2	7.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	6.1	11.4		2.8	7.9	0.1		23.4			31.2	7.6
LOS	A	B		A	A	A		C			C	A
Approach Delay		10.2			7.4			23.4			12.9	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	15	40		1	63	0		11			19	11
Queue Length 95th (ft)	41	61		3	104	0		35			47	46
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559			150		150						215
Base Capacity (vph)	533	1327		908	2217	1030		442			410	504
Starvation Cap Reductn	0	0		0	0	0		0			0	0
Spillback Cap Reductn	0	0		0	0	0		0			0	0
Storage Cap Reductn	0	0		0	0	0		0			0	0
Reduced v/c Ratio	0.30	0.42		0.01	0.25	0.04		0.09			0.12	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 44 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 50.5%		ICU Level of Service A	
Analysis Period (min) 15			

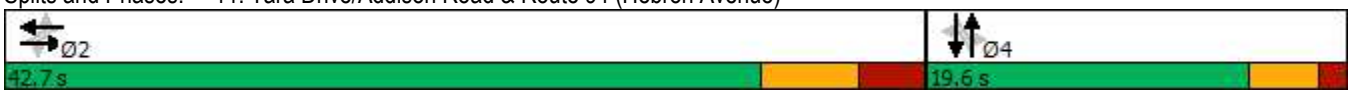
Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)

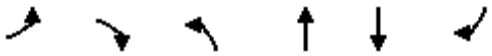
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	505	15	5	485	85	20	10	10	95	10	55
Future Volume (vph)	25	505	15	5	485	85	20	10	10	95	10	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.978			0.966			0.953	
Flt Protected	0.950			0.950				0.976			0.971	
Satd. Flow (prot)	1770	1855	0	1770	1822	0	0	1756	0	0	1724	0
Flt Permitted	0.392			0.428				0.822			0.793	
Satd. Flow (perm)	730	1855	0	797	1822	0	0	1479	0	0	1408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			23			11			40	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	27	549	16	5	527	92	22	11	11	103	11	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	565	0	5	619	0	0	44	0	0	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	42.7	42.7		42.7	42.7		19.6	19.6		19.6	19.6	
Total Split (%)	68.5%	68.5%		68.5%	68.5%		31.5%	31.5%		31.5%	31.5%	
Maximum Green (s)	35.0	35.0		35.0	35.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	39.7	39.7		39.7	39.7			10.3			10.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.18			0.18	
v/c Ratio	0.05	0.45		0.01	0.50			0.16			0.62	
Control Delay	6.0	8.0		5.8	8.4			17.2			26.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.0	8.0		5.8	8.4			17.2			26.6	
LOS	A	A		A	A			B			C	
Approach Delay		7.9			8.4			17.2			26.6	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)	3	91		1	101			10			43	
Queue Length 95th (ft)	14	196		5	221			32			95	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	495	1260		541	1244			388			392	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.05	0.45		0.01	0.50			0.11			0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 62.3			
Actuated Cycle Length: 58.4			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	170	200	0
Future Volume (vph)	0	0	0	170	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	185	217	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	185	217	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.9%		ICU Level of Service A	
Analysis Period (min) 15			

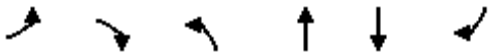
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	170	200	0
Future Vol, veh/h	0	0	0	170	200	0
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	0	0	0	185	217	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	402	217	217	0	-	0
Stage 1	217	-	-	-	-	-
Stage 2	185	-	-	-	-	-
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	604	823	1353	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	604	823	1353	-	-	-
Mov Cap-2 Maneuver	604	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	847	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1353	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	15	15	160	185	15
Future Volume (vph)	10	15	15	160	185	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.990	
Flt Protected	0.980			0.996		
Satd. Flow (prot)	1679	0	0	1855	1844	0
Flt Permitted	0.980			0.996		
Satd. Flow (perm)	1679	0	0	1855	1844	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	16	174	201	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	190	217	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.9%		ICU Level of Service A	
Analysis Period (min) 15			

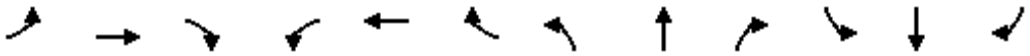
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	15	160	185	15
Future Vol, veh/h	10	15	15	160	185	15
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	11	16	16	174	201	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	415	209	217	0	-	0
Stage 1	209	-	-	-	-	-
Stage 2	206	-	-	-	-	-
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	594	831	1353	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	586	831	1353	-	-	-
Mov Cap-2 Maneuver	586	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	829	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1353	-	712	-	-
HCM Lane V/C Ratio	0.012	-	0.038	-	-
HCM Control Delay (s)	7.7	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	25	0	0	30	0	0	0	0	0	0	0
Future Volume (vph)	0	25	0	0	30	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	0	27	0	0	33	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	33	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

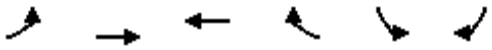
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	25	0	0	30	0	0	0	0	0	0	0
Future Vol, veh/h	0	25	0	0	30	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	0	27	0	0	33	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	27	0	0	60	60	27	60	60	33
Stage 1	-	-	-	-	-	-	27	27	-	33	33	-
Stage 2	-	-	-	-	-	-	33	33	-	27	27	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1579	-	-	1587	-	-	936	831	1048	936	831	1041
Stage 1	-	-	-	-	-	-	990	873	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	990	873	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1587	-	-	936	831	1048	936	831	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	936	831	-	936	831	-
Stage 1	-	-	-	-	-	-	990	873	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	990	873	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1579	-	-	1587	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	25	25	5	0	5
Future Volume (vph)	0	25	25	5	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.979		0.865	
Flt Protected						
Satd. Flow (prot)	0	1863	1824	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1824	0	1611	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1716	232		109	
Travel Time (s)		46.8	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	27	5	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	32	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	25	25	5	0	5
Future Vol, veh/h	0	25	25	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	27	27	5	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	57	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1580	-	-	-	950	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1580	-	-	-	950	1044
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1580	-	-	-	1044
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	5	100	20	0	205
Future Volume (vph)	40	5	100	20	0	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.977			
Flt Protected	0.957					
Satd. Flow (prot)	1758	0	1820	0	0	1863
Flt Permitted	0.957					
Satd. Flow (perm)	1758	0	1820	0	0	1863
Link Speed (mph)	25		25			30
Link Distance (ft)	1716		1158			362
Travel Time (s)	46.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	5	109	22	0	223
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	131	0	0	223
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			

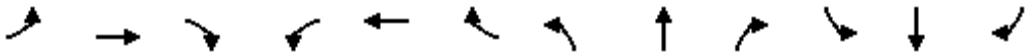
Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	5	100	20	0	205
Future Vol, veh/h	40	5	100	20	0	205
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	43	5	109	22	0	223

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	343	120	0	0	131	0
Stage 1	120	-	-	-	-	-
Stage 2	223	-	-	-	-	-
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	653	931	-	-	1454	-
Stage 1	905	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	653	931	-	-	1454	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	675	1454	-
HCM Lane V/C Ratio	-	-	0.072	-	-
HCM Control Delay (s)	-	-	10.8	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	15	40	10	15	10	20	105	5	10	140	130
Future Volume (vph)	260	15	40	10	15	10	20	105	5	10	140	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.961			0.995			0.937	
Flt Protected		0.960			0.986			0.992			0.998	
Satd. Flow (prot)	0	1758	0	0	1765	0	0	1839	0	0	1742	0
Flt Permitted		0.960			0.986			0.992			0.998	
Satd. Flow (perm)	0	1758	0	0	1765	0	0	1839	0	0	1742	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	283	16	43	11	16	11	22	114	5	11	152	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	342	0	0	38	0	0	141	0	0	304	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	260	15	40	10	15	10	20	105	5	10	140	130
Future Vol, veh/h	260	15	40	10	15	10	20	105	5	10	140	130
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	283	16	43	11	16	11	22	114	5	11	152	141
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.4	8.9	10	11.5
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	83%	29%	4%
Vol Thru, %	81%	5%	43%	50%
Vol Right, %	4%	13%	29%	46%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	315	35	280
LT Vol	20	260	10	10
Through Vol	105	15	15	140
RT Vol	5	40	10	130
Lane Flow Rate	141	342	38	304
Geometry Grp	1	1	1	1
Degree of Util (X)	0.214	0.499	0.059	0.42
Departure Headway (Hd)	5.443	5.246	5.552	4.969
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	658	688	644	730
Service Time	3.48	3.275	3.596	2.969
HCM Lane V/C Ratio	0.214	0.497	0.059	0.416
HCM Control Delay	10	13.4	8.9	11.5
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.8	2.8	0.2	2.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	10	60	5	180	15	265	0	0	220	10
Future Volume (vph)	20	0	10	60	5	180	15	265	0	0	220	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.956			0.927	0.850					0.994	
Flt Protected		0.967			0.977			0.997				
Satd. Flow (prot)	0	1722	0	0	1603	1454	0	3411	0	0	1975	0
Flt Permitted		0.743			0.832			0.927				
Satd. Flow (perm)	0	1323	0	0	1365	1454	0	3171	0	0	1975	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		128			23	128					3	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	0	10	63	5	188	16	276	0	0	229	10
Shared Lane Traffic (%)						34%						
Lane Group Flow (vph)	0	31	0	0	132	124	0	292	0	0	239	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	12.0	12.0		12.0	12.0	12.0	17.0	17.0				
Total Split (s)	16.0	16.0		16.0	16.0	16.0	27.0	27.0				
Total Split (%)	10.2%	10.2%		10.2%	10.2%	10.2%	17.2%	17.2%				
Maximum Green (s)	11.0	11.0		11.0	11.0	11.0	22.0	22.0				
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.0			5.0	5.0		5.0				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	18.0	7.0
Minimum Split (s)	10.2	24.3	12.0
Total Split (s)	23.0	60.3	31.0
Total Split (%)	15%	38%	20%
Maximum Green (s)	17.8	54.0	26.0
Yellow Time (s)	3.0	4.3	3.0
All-Red Time (s)	2.2	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?			
Vehicle Extension (s)	1.5	2.5	1.0
Recall Mode	None	Min	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		11.0			11.0	11.0		14.0			46.6	
Actuated g/C Ratio		0.13			0.13	0.13		0.16			0.54	
v/c Ratio		0.11			0.68	0.42		0.57			0.23	
Control Delay		0.8			50.5	11.6		38.8			11.3	
Queue Delay		0.0			0.0	0.0		0.0			0.3	
Total Delay		0.8			50.5	11.6		38.8			11.6	
LOS		A			D	B		D			B	
Approach Delay		0.8			31.7			38.8			11.6	
Approach LOS		A			C			D			B	
Queue Length 50th (ft)		0			60	0		78			63	
Queue Length 95th (ft)		0			#162	51		124			112	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		279			193	296		805			1603	
Starvation Cap Reductn		0			0	0		0			842	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.11			0.68	0.42		0.36			0.31	

Intersection Summary

Area Type: Other
Cycle Length: 157.3
Actuated Cycle Length: 86.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 27.2 — Intersection LOS: C
Intersection Capacity Utilization 35.8% — ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp

Lane Group	Ø1	Ø2	Ø4
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	580	50	110	660	10	230	35	200	20	70	285
Future Volume (vph)	70	580	50	110	660	10	230	35	200	20	70	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.988			0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.964		0.950		
Satd. Flow (prot)	3319	3497	0	1770	3414	0	1625	1649	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.709	0.735		0.412		
Satd. Flow (perm)	3319	3497	0	1770	3414	0	1213	1257	1531	742	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		6			1				211			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	611	53	116	695	11	242	37	211	21	74	300
Shared Lane Traffic (%)							43%					
Lane Group Flow (vph)	74	664	0	116	706	0	138	141	211	21	74	300
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

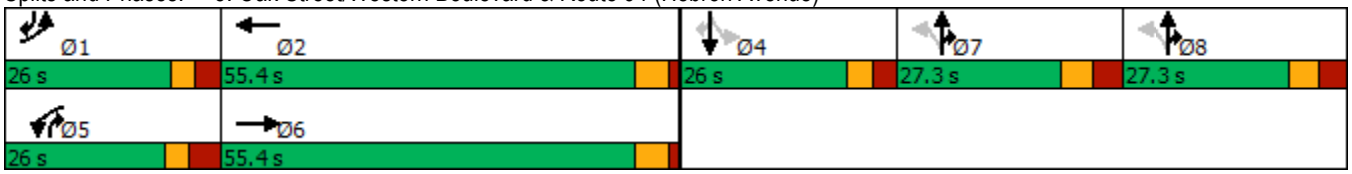
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	10.6	28.2		12.1	30.5		31.6	31.6	51.4	11.9	11.9	20.3
Actuated g/C Ratio	0.10	0.26		0.11	0.29		0.30	0.30	0.48	0.11	0.11	0.19
v/c Ratio	0.23	0.72		0.58	0.72		0.38	0.38	0.25	0.26	0.35	0.57
Control Delay	53.1	41.9		62.1	40.1		39.5	39.1	3.6	57.9	53.7	26.0
Queue Delay	0.0	0.0		0.0	0.0		1.7	1.6	1.3	0.0	0.0	0.0
Total Delay	53.1	41.9		62.1	40.1		41.2	40.7	4.9	57.9	53.7	26.0
LOS	D	D		E	D		D	D	A	E	D	C
Approach Delay		43.0			43.2			25.4			32.9	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	24	217		78	231		82	83	0	14	49	50
Queue Length 95th (ft)	58	351		164	355		182	185	47	45	111	93
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	658	1737		337	1693		504	522	942	147	381	806
Starvation Cap Reductn	0	0		0	0		234	245	535	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.38		0.34	0.42		0.51	0.51	0.52	0.14	0.19	0.37

Intersection Summary

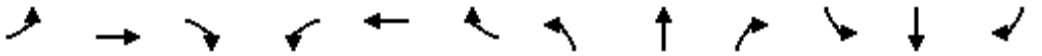
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 106.8
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 37.9 — Intersection LOS: D
Intersection Capacity Utilization 54.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

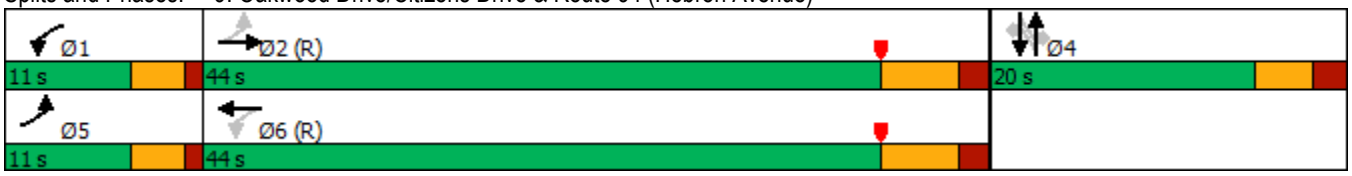


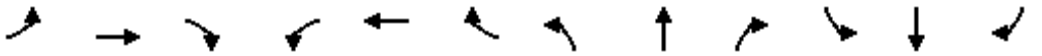
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	745	40	65	620	5	145	5	115	15	5	15
Future Volume (vph)	15	745	40	65	620	5	145	5	115	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.999				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.963	
Satd. Flow (prot)	1770	3511	0	1770	3536	0	0	1777	1583	0	1794	1583
Flt Permitted	0.393			0.265				0.717			0.756	
Satd. Flow (perm)	732	3511	0	494	3536	0	0	1336	1583	0	1408	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1				125			103
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	16	810	43	71	674	5	158	5	125	16	5	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	853	0	71	679	0	0	163	125	0	21	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	11.0	44.0		11.0	44.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%		26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
Maximum Green (s)	7.0	37.9		7.0	37.9		14.8	14.8	14.8	14.8	14.8	14.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	49.0	42.2		52.1	48.6			13.0	13.0		13.0	13.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.65	0.56		0.69	0.65			0.17	0.17		0.17	0.17
v/c Ratio	0.03	0.43		0.16	0.30			0.70	0.33		0.09	0.04
Control Delay	4.1	11.3		3.9	5.0			45.9	8.1		25.7	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	4.1	11.3		3.9	5.0			45.9	8.1		25.7	0.2
LOS	A	B		A	A			D	A		C	A
Approach Delay		11.2			4.9			29.5			14.7	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	2	123		7	41			70	0		8	0
Queue Length 95th (ft)	7	172		16	73			#144	41		26	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	583	1978		462	2291			263	412		277	395
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.03	0.43		0.15	0.30			0.62	0.30		0.08	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)



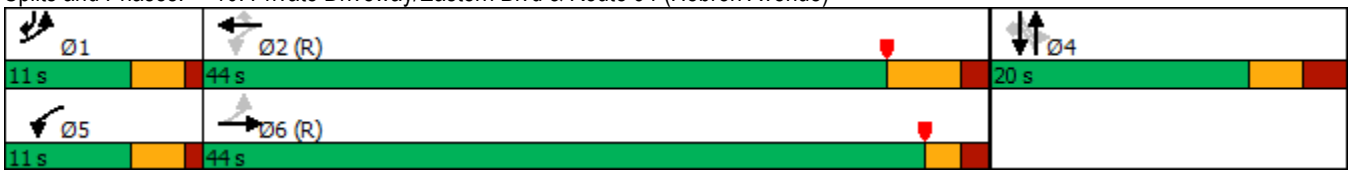


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	710	20	0	510	25	30	5	10	45	5	150
Future Volume (vph)	145	710	20	0	510	25	30	5	10	45	5	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.970				0.850
Flt Protected	0.950							0.967			0.957	
Satd. Flow (prot)	1770	3525	0	1863	3539	1583	0	1747	0	0	1783	1583
Flt Permitted	0.445							0.765			0.710	
Satd. Flow (perm)	829	3525	0	1863	3539	1583	0	1382	0	0	1323	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				96		11				163
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	158	772	22	0	554	27	33	5	11	49	5	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	794	0	0	554	27	0	49	0	0	54	163
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	11.0	44.0		11.0	44.0	44.0	20.0	20.0		20.0	20.0	11.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%	58.7%	26.7%	26.7%		26.7%	26.7%	14.7%
Maximum Green (s)	7.0	40.3		7.0	38.2	38.2	14.4	14.4		14.4	14.4	7.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	47.5	40.3			45.3	45.3		9.8			9.8	19.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.63	0.54			0.60	0.60		0.13			0.13	0.27
v/c Ratio	0.26	0.42			0.26	0.03		0.26			0.31	0.30
Control Delay	3.2	6.2			8.6	0.0		27.4			34.4	4.8
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	3.2	6.2			8.6	0.0		27.4			34.4	4.8
LOS	A	A			A	A		C			C	A
Approach Delay		5.7			8.2			27.4			12.1	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)	12	41			62	0		16			24	0
Queue Length 95th (ft)	21	62			105	0		45			54	36
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559					150						215
Base Capacity (vph)	625	1896			2135	993		274			254	546
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.25	0.42			0.26	0.03		0.18			0.21	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.9		Intersection LOS: A	
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)

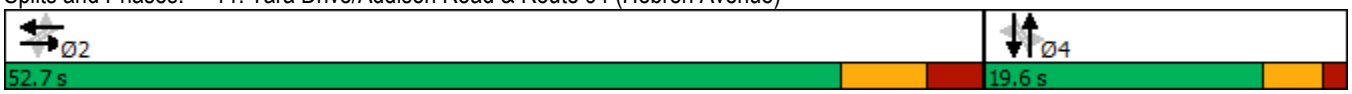


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	710	25	5	490	80	20	5	5	115	10	25
Future Volume (vph)	30	710	25	5	490	80	20	5	5	115	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.979			0.979			0.978	
Flt Protected	0.950			0.950				0.967			0.963	
Satd. Flow (prot)	1770	1853	0	1770	1824	0	0	1763	0	0	1754	0
Flt Permitted	0.384			0.273				0.812			0.755	
Satd. Flow (perm)	715	1853	0	509	1824	0	0	1481	0	0	1375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			22			5			12	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	33	772	27	5	533	87	22	5	5	125	11	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	799	0	5	620	0	0	32	0	0	163	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	52.7	52.7		52.7	52.7		19.6	19.6		19.6	19.6	
Total Split (%)	72.9%	72.9%		72.9%	72.9%		27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	45.0	45.0		45.0	45.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.4	45.4		45.4	45.4			11.5			11.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.66	0.66		0.66	0.66			0.17			0.17	
v/c Ratio	0.07	0.66		0.02	0.52			0.13			0.68	
Control Delay	5.6	11.1		5.2	8.4			22.2			39.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.6	11.1		5.2	8.4			22.2			39.9	
LOS	A	B		A	A			C			D	
Approach Delay		10.9			8.4			22.2			39.9	
Approach LOS		B			A			C			D	
Queue Length 50th (ft)	4	178		1	114			10			61	
Queue Length 95th (ft)	15	330		4	213			31			119	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	468	1216		333	1203			325			307	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.07	0.66		0.02	0.52			0.10			0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 72.3			
Actuated Cycle Length: 69.2			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 59.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)



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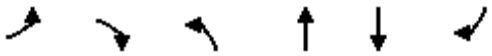


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	291	170	0
Future Volume (vph)	0	0	0	291	170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	316	185	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	316	185	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

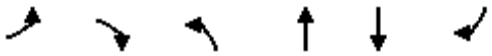
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	291	170	0
Future Vol, veh/h	0	0	0	291	170	0
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	0	0	0	316	185	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	501	185	185	0	-	0
Stage 1	185	-	-	-	-	-
Stage 2	316	-	-	-	-	-
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	530	857	1390	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	530	857	1390	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1390	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	10	15	281	155	15
Future Volume (vph)	10	10	15	281	155	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.988	
Flt Protected	0.976			0.998		
Satd. Flow (prot)	1694	0	0	1859	1840	0
Flt Permitted	0.976			0.998		
Satd. Flow (perm)	1694	0	0	1859	1840	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	16	305	168	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	321	184	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

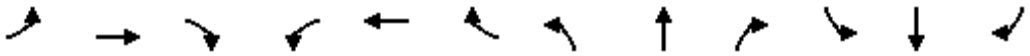
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	281	155	15
Future Vol, veh/h	10	10	15	281	155	15
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	11	11	16	305	168	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	513	176	184	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	337	-	-	-	-	-
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	521	867	1391	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	514	867	1391	-	-	-
Mov Cap-2 Maneuver	514	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1391	-	645	-	-
HCM Lane V/C Ratio	0.012	-	0.034	-	-
HCM Control Delay (s)	7.6	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	20	0	0	30	0	0	0	0	0	0	0
Future Volume (vph)	0	20	0	0	30	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	0	22	0	0	33	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	33	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

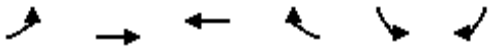
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	20	0	0	30	0	0	0	0	0	0	0
Future Vol, veh/h	0	20	0	0	30	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	0	22	0	0	33	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	22	0	0	55	55	22	55	55	33
Stage 1	-	-	-	-	-	-	22	22	-	33	33	-
Stage 2	-	-	-	-	-	-	33	33	-	22	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1579	-	-	1593	-	-	943	836	1055	943	836	1041
Stage 1	-	-	-	-	-	-	996	877	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	996	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1593	-	-	943	836	1055	943	836	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	943	836	-	943	836	-
Stage 1	-	-	-	-	-	-	996	877	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	996	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1579	-	-	1593	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	20	30	0	0	0
Future Volume (vph)	0	20	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1716	232		109	
Travel Time (s)		46.8	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	22	33	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	30	0	0	0
Future Vol, veh/h	0	20	30	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	22	33	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	55	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	22	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	953	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	5	312	40	0	122
Future Volume (vph)	15	5	312	40	0	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968		0.985			
Flt Protected	0.963					
Satd. Flow (prot)	1736	0	1835	0	0	1863
Flt Permitted	0.963					
Satd. Flow (perm)	1736	0	1835	0	0	1863
Link Speed (mph)	25		25			30
Link Distance (ft)	1716		1158			362
Travel Time (s)	46.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	5	339	43	0	133
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	382	0	0	133
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.8%		ICU Level of Service A	
Analysis Period (min) 15			

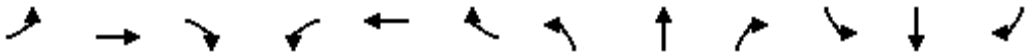
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	312	40	0	122
Future Vol, veh/h	15	5	312	40	0	122
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	16	5	339	43	0	133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	494	361	0	0	382	0
Stage 1	361	-	-	-	-	-
Stage 2	133	-	-	-	-	-
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	535	684	-	-	1176	-
Stage 1	705	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	535	684	-	-	1176	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	566	1176	-
HCM Lane V/C Ratio	-	-	0.038	-	-
HCM Control Delay (s)	-	-	11.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	100	10	5	5	5	25	106	10	5	105	306
Future Volume (vph)	72	100	10	5	5	5	25	106	10	5	105	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.955			0.990			0.901	
Flt Protected		0.981			0.984			0.991			0.999	
Satd. Flow (prot)	0	1813	0	0	1750	0	0	1828	0	0	1677	0
Flt Permitted		0.981			0.984			0.991			0.999	
Satd. Flow (perm)	0	1813	0	0	1750	0	0	1828	0	0	1677	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	78	109	11	5	5	5	27	115	11	5	114	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	0	0	15	0	0	153	0	0	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

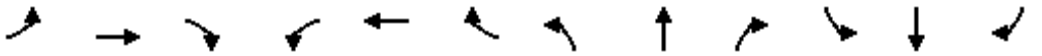
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	100	10	5	5	5	25	106	10	5	105	306
Future Vol, veh/h	72	100	10	5	5	5	25	106	10	5	105	306
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	109	11	5	5	5	27	115	11	5	114	333
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	8.7	9.4	12.2
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	40%	33%	1%
Vol Thru, %	75%	55%	33%	25%
Vol Right, %	7%	5%	33%	74%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	182	15	416
LT Vol	25	72	5	5
Through Vol	106	100	5	105
RT Vol	10	10	5	306
Lane Flow Rate	153	198	16	452
Geometry Grp	1	1	1	1
Degree of Util (X)	0.213	0.292	0.025	0.536
Departure Headway (Hd)	4.992	5.313	5.559	4.265
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	669	648	841
Service Time	3.068	3.402	3.559	2.316
HCM Lane V/C Ratio	0.215	0.296	0.025	0.537
HCM Control Delay	9.4	10.6	8.7	12.2
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.8	1.2	0.1	3.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	5	51	10	326	10	207	0	0	185	5
Future Volume (vph)	10	0	5	51	10	326	10	207	0	0	185	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.955			0.896	0.850					0.997	
Flt Protected		0.968			0.987			0.998				
Satd. Flow (prot)	0	1722	0	0	1565	1454	0	3414	0	0	1981	0
Flt Permitted		0.720			0.907			0.933				
Satd. Flow (perm)	0	1281	0	0	1438	1454	0	3192	0	0	1981	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			58	197					2	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	0	5	53	10	340	10	216	0	0	193	5
Shared Lane Traffic (%)						42%						
Lane Group Flow (vph)	0	15	0	0	206	197	0	226	0	0	198	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	14.3	14.3		14.3	14.3	14.3	19.3	19.3				
Total Split (s)	27.3	27.3		27.3	27.3	27.3	27.3	27.3				
Total Split (%)	16.9%	16.9%		16.9%	16.9%	16.9%	16.9%	16.9%				
Maximum Green (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0				
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7				
All-Red Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		7.3			7.3	7.3		7.3				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

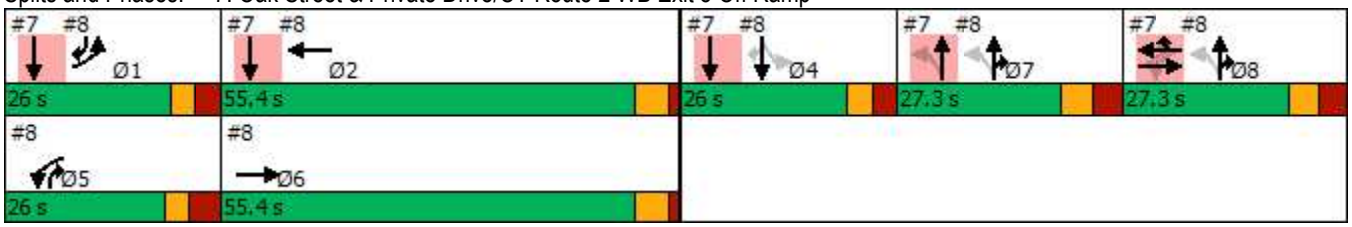
Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	1	2	4	5	6
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	5.0	18.0	7.0	5.0	18.0
Minimum Split (s)	11.0	24.3	13.0	11.8	24.3
Total Split (s)	26.0	55.4	26.0	26.0	55.4
Total Split (%)	16%	34%	16%	16%	34%
Maximum Green (s)	20.0	50.0	20.0	19.2	50.0
Yellow Time (s)	3.0	4.1	3.3	3.0	4.1
All-Red Time (s)	3.0	1.3	2.7	3.8	1.3
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	1.5	2.5	1.0	1.5	2.5
Recall Mode	None	Min	None	None	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		18.8			18.8	18.8		17.5			60.1	
Actuated g/C Ratio		0.16			0.16	0.16		0.15			0.51	
v/c Ratio		0.05			0.74	0.50		0.48			0.20	
Control Delay		0.3			52.4	11.5		51.6			0.7	
Queue Delay		0.0			0.1	0.0		0.0			0.4	
Total Delay		0.3			52.5	11.6		51.6			1.1	
LOS		A			D	B		D			A	
Approach Delay		0.3			32.5			51.6			1.1	
Approach LOS		A			C			D			A	
Queue Length 50th (ft)		0			114	0		83			1	
Queue Length 95th (ft)		0			#281	78		146			1	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		348			298	415		555			1235	
Starvation Cap Reductn		0			0	0		0			677	
Spillback Cap Reductn		3			1	4		11			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.04			0.69	0.48		0.42			0.35	

Intersection Summary

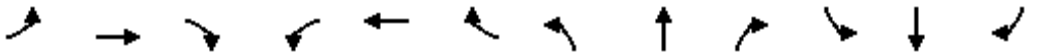
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 117.4
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 29.7 — Intersection LOS: C
Intersection Capacity Utilization 47.5% — ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	490	40	120	579	20	182	145	216	5	30	123
Future Volume (vph)	248	490	40	120	579	20	182	145	216	5	30	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.989			0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.993		0.950		
Satd. Flow (prot)	3319	3500	0	1770	3404	0	1625	1699	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.736	0.961		0.506		
Satd. Flow (perm)	3319	3500	0	1770	3404	0	1259	1644	1531	911	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		5			2				227			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	261	516	42	126	609	21	192	153	227	5	32	129
Shared Lane Traffic (%)							13%					
Lane Group Flow (vph)	261	558	0	126	630	0	167	178	227	5	32	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

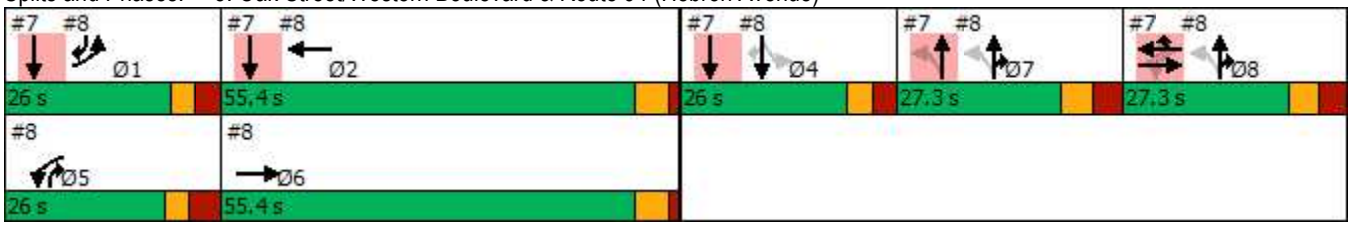
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	13.5	27.2		12.6	27.1		43.7	43.7	63.7	7.9	7.9	21.4
Actuated g/C Ratio	0.11	0.23		0.11	0.23		0.37	0.37	0.54	0.07	0.07	0.18
v/c Ratio	0.69	0.69		0.67	0.80		0.36	0.29	0.24	0.08	0.25	0.25
Control Delay	61.5	46.3		70.3	51.6		13.8	12.5	0.5	61.2	62.3	23.6
Queue Delay	0.0	0.0		0.0	0.0		2.0	1.9	0.7	0.0	0.0	0.0
Total Delay	61.5	46.3		70.3	51.6		15.7	14.4	1.2	61.2	62.3	23.6
LOS	E	D		E	D		B	B	A	E	E	C
Approach Delay		51.2			54.8			9.6			32.1	
Approach LOS		D			D			A			C	
Queue Length 50th (ft)	101	207		95	243		38	41	0	4	24	28
Queue Length 95th (ft)	164	296		178	340		m63	m66	0	19	63	47
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	577	1524		295	1481		479	625	1005	158	334	672
Starvation Cap Reductn	0	0		0	0		192	312	493	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.37		0.43	0.43		0.58	0.57	0.44	0.03	0.10	0.19

Intersection Summary

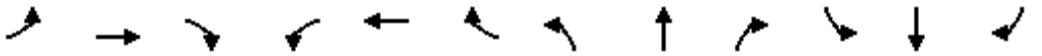
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 117.4
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 40.7 — Intersection LOS: D
Intersection Capacity Utilization 54.8% — ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

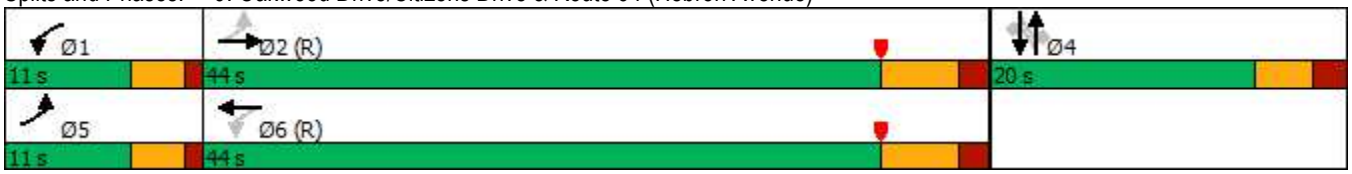


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	521	90	120	644	30	70	5	70	5	5	5
Future Volume (vph)	30	521	90	120	644	30	70	5	70	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.993				0.850			0.850
Flt Protected	0.950			0.950				0.955			0.976	
Satd. Flow (prot)	1770	3461	0	1770	3514	0	0	1779	1583	0	1818	1583
Flt Permitted	0.373			0.363				0.732			0.846	
Satd. Flow (perm)	695	3461	0	676	3514	0	0	1364	1583	0	1576	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			9				103			103
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	33	566	98	130	700	33	76	5	76	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	664	0	130	733	0	0	81	76	0	10	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	11.0	44.0		11.0	44.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%		26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
Maximum Green (s)	7.0	37.9		7.0	37.9		14.8	14.8	14.8	14.8	14.8	14.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	53.8	48.0		56.9	52.9			10.7	10.7		10.7	10.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.72	0.64		0.76	0.71			0.14	0.14		0.14	0.14
v/c Ratio	0.06	0.30		0.21	0.30			0.42	0.24		0.04	0.02
Control Delay	3.6	8.5		3.2	4.3			35.5	5.5		26.8	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	3.6	8.5		3.2	4.3			35.5	5.5		26.8	0.0
LOS	A	A		A	A			D	A		C	A
Approach Delay		8.3			4.2			21.0			17.9	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)	3	73		10	35			35	0		4	0
Queue Length 95th (ft)	11	123		22	64			72	22		16	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	605	2230		619	2480			269	395		310	395
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.05	0.30		0.21	0.30			0.30	0.19		0.03	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 47.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)

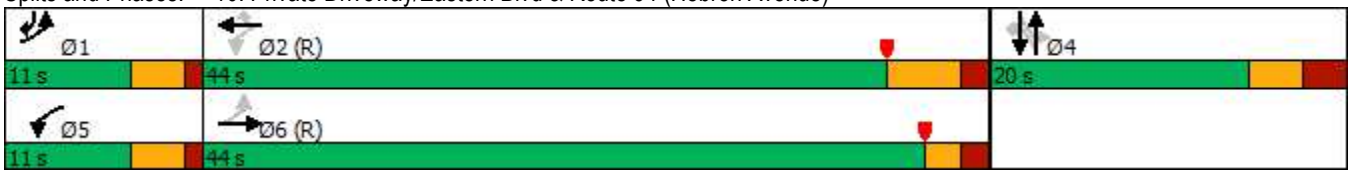


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	352	20	0	638	70	15	0	5	18	5	141
Future Volume (vph)	224	352	20	0	638	70	15	0	5	18	5	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992				0.850		0.968				0.850
Flt Protected	0.950							0.963			0.962	
Satd. Flow (prot)	1770	3511	0	1863	3539	1583	0	1736	0	0	1792	1583
Flt Permitted	0.388							0.761			0.755	
Satd. Flow (perm)	723	3511	0	1863	3539	1583	0	1372	0	0	1406	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				96		99				153
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	243	383	22	0	693	76	16	0	5	20	5	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	243	405	0	0	693	76	0	21	0	0	25	153
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	11.0	44.0		11.0	44.0	44.0	20.0	20.0		20.0	20.0	11.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%	58.7%	26.7%	26.7%		26.7%	26.7%	14.7%
Maximum Green (s)	7.0	40.3		7.0	38.2	38.2	14.4	14.4		14.4	14.4	7.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	48.3	40.3			48.2	48.2		9.0			9.0	17.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.64	0.54			0.64	0.64		0.12			0.12	0.23
v/c Ratio	0.42	0.21			0.30	0.07		0.08			0.15	0.32
Control Delay	7.0	5.5			8.1	1.7		0.6			32.0	5.3
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	7.0	5.5			8.1	1.7		0.6			32.0	5.3
LOS	A	A			A	A		A			C	A
Approach Delay		6.0			7.5			0.6			9.0	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	19	19			84	0		0			11	0
Queue Length 95th (ft)	42	30			132	14		0			33	36
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559					150						215
Base Capacity (vph)	590	1892			2273	1051		343			269	485
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.41	0.21			0.30	0.07		0.06			0.09	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)

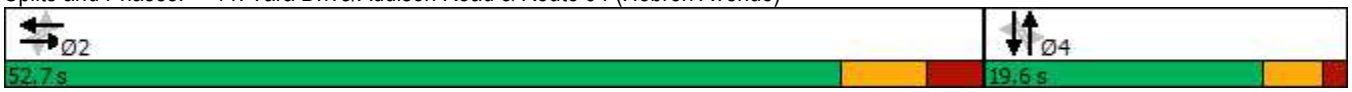


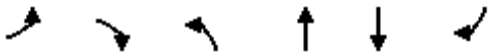
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	350	5	5	647	91	25	5	5	54	5	36
Future Volume (vph)	20	350	5	5	647	91	25	5	5	54	5	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.981			0.982			0.949	
Flt Protected	0.950			0.950				0.965			0.972	
Satd. Flow (prot)	1770	1859	0	1770	1827	0	0	1765	0	0	1718	0
Flt Permitted	0.303			0.534				0.781			0.802	
Satd. Flow (perm)	564	1859	0	995	1827	0	0	1429	0	0	1418	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			19			5			38	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	22	380	5	5	703	99	27	5	5	59	5	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	385	0	5	802	0	0	37	0	0	103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	52.7	52.7		52.7	52.7		19.6	19.6		19.6	19.6	
Total Split (%)	72.9%	72.9%		72.9%	72.9%		27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	45.0	45.0		45.0	45.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	49.5	49.5		49.5	49.5			8.5			8.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.13			0.13	
v/c Ratio	0.05	0.28		0.01	0.59			0.20			0.48	
Control Delay	4.4	4.7		4.0	7.9			25.3			25.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.4	4.7		4.0	7.9			25.3			25.9	
LOS	A	A		A	A			C			C	
Approach Delay		4.7			7.8			25.3			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	2	46		1	132			12			24	
Queue Length 95th (ft)	10	101		4	292			35			66	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	419	1383		740	1364			326			349	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.05	0.28		0.01	0.59			0.11			0.30	

Intersection Summary			
Area Type:	Other		
Cycle Length: 72.3			
Actuated Cycle Length: 66.5			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	224	262	0
Future Volume (vph)	0	0	0	224	262	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	243	285	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	243	285	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.1%		ICU Level of Service A	
Analysis Period (min) 15			

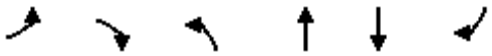
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	224	262	0
Future Vol, veh/h	0	0	0	224	262	0
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	0	0	0	243	285	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	528	285	285	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	243	-	-	-	-	-
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	511	754	1277	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	511	754	1277	-	-	-
Mov Cap-2 Maneuver	511	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1277	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	15	15	219	257	10
Future Volume (vph)	10	15	15	219	257	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.995	
Flt Protected	0.980			0.997		
Satd. Flow (prot)	1679	0	0	1857	1853	0
Flt Permitted	0.980			0.997		
Satd. Flow (perm)	1679	0	0	1857	1853	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	16	238	279	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	254	290	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.8%		ICU Level of Service A	
Analysis Period (min) 15			

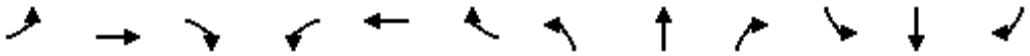
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	15	219	257	10
Future Vol, veh/h	10	15	15	219	257	10
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	11	16	16	238	279	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	555	285	290	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	270	-	-	-	-	-
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	493	754	1272	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	486	754	1272	-	-	-
Mov Cap-2 Maneuver	486	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1272	-	618	-	-
HCM Lane V/C Ratio	0.013	-	0.044	-	-
HCM Control Delay (s)	7.9	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	25	0	0	25	0	0	0	0	0	0	0
Future Volume (vph)	5	25	0	0	25	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected		0.992										
Satd. Flow (prot)	0	1848	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted		0.992										
Satd. Flow (perm)	0	1848	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	5	27	0	0	27	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	27	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.9%		ICU Level of Service A	
Analysis Period (min) 15			

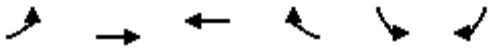
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	25	0	0	25	0	0	0	0	0	0	0
Future Vol, veh/h	5	25	0	0	25	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	5	27	0	0	27	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	27	0	0	64	64	27	64	64	27
Stage 1	-	-	-	-	-	-	37	37	-	27	27	-
Stage 2	-	-	-	-	-	-	27	27	-	37	37	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1587	-	-	1587	-	-	930	827	1048	930	827	1048
Stage 1	-	-	-	-	-	-	978	864	-	990	873	-
Stage 2	-	-	-	-	-	-	990	873	-	978	864	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1587	-	-	1587	-	-	928	825	1048	928	825	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	928	825	-	928	825	-
Stage 1	-	-	-	-	-	-	975	861	-	987	873	-
Stage 2	-	-	-	-	-	-	990	873	-	975	861	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1587	-	-	1587	-	-	-
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	-
HCM Control Delay (s)	0	7.3	0	-	0	-	-	0
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	30	25	0	0	0
Future Volume (vph)	0	30	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1716	232		109	
Travel Time (s)		46.8	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	33	27	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	27	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	25	0	0	0
Future Vol, veh/h	0	30	25	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	33	27	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	60	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1587	-	-	-	947	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1587	-	-	-	947	1048
Mov Cap-2 Maneuver	-	-	-	-	947	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	5	229	25	5	281
Future Volume (vph)	40	5	229	25	5	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.987			
Flt Protected	0.957					0.999
Satd. Flow (prot)	1758	0	1839	0	0	1861
Flt Permitted	0.957					0.999
Satd. Flow (perm)	1758	0	1839	0	0	1861
Link Speed (mph)	25		25			30
Link Distance (ft)	1716		1158			362
Travel Time (s)	46.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	5	249	27	5	305
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	276	0	0	310
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	5	229	25	5	281
Future Vol, veh/h	40	5	229	25	5	281
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	43	5	249	27	5	305

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	578	263	0	0	276	0
Stage 1	263	-	-	-	-	-
Stage 2	315	-	-	-	-	-
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	478	776	-	-	1287	-
Stage 1	781	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	476	776	-	-	1287	-
Mov Cap-2 Maneuver	476	-	-	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	497	1287	-
HCM Lane V/C Ratio	-	-	0.098	0.004	-
HCM Control Delay (s)	-	-	13	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	5	25	10	10	10	20	102	5	5	124	190
Future Volume (vph)	187	5	25	10	10	10	20	102	5	5	124	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.955			0.995			0.919	
Flt Protected		0.959			0.984			0.992			0.999	
Satd. Flow (prot)	0	1758	0	0	1750	0	0	1839	0	0	1710	0
Flt Permitted		0.959			0.984			0.992			0.999	
Satd. Flow (perm)	0	1758	0	0	1750	0	0	1839	0	0	1710	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	203	5	27	11	11	11	22	111	5	5	135	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	33	0	0	138	0	0	347	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	187	5	25	10	10	10	20	102	5	5	124	190
Future Vol, veh/h	187	5	25	10	10	10	20	102	5	5	124	190
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	203	5	27	11	11	11	22	111	5	5	135	207
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	8.6	9.4	10.9
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	86%	33%	2%
Vol Thru, %	80%	2%	33%	39%
Vol Right, %	4%	12%	33%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	217	30	319
LT Vol	20	187	10	5
Through Vol	102	5	10	124
RT Vol	5	25	10	190
Lane Flow Rate	138	236	33	347
Geometry Grp	1	1	1	1
Degree of Util (X)	0.194	0.339	0.049	0.43
Departure Headway (Hd)	5.048	5.177	5.366	4.462
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	689	671	801
Service Time	3.129	3.262	3.366	2.523
HCM Lane V/C Ratio	0.196	0.343	0.049	0.433
HCM Control Delay	9.4	10.9	8.6	10.9
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.7	1.5	0.2	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	15	35	5	231	10	254	0	0	256	15
Future Volume (vph)	25	0	15	35	5	231	10	254	0	0	256	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.949			0.893	0.850					0.992	
Flt Protected		0.970			0.987			0.998				
Satd. Flow (prot)	0	1715	0	0	1560	1454	0	3414	0	0	1971	0
Flt Permitted		0.604			0.900			0.932				
Satd. Flow (perm)	0	1068	0	0	1422	1454	0	3189	0	0	1971	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			62	152					4	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	26	0	16	36	5	241	10	265	0	0	267	16
Shared Lane Traffic (%)						42%						
Lane Group Flow (vph)	0	42	0	0	142	140	0	275	0	0	283	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	14.3	14.3		14.3	14.3	14.3	19.3	19.3				
Total Split (s)	27.3	27.3		27.3	27.3	27.3	27.3	27.3				
Total Split (%)	16.9%	16.9%		16.9%	16.9%	16.9%	16.9%	16.9%				
Maximum Green (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0				
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7				
All-Red Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		7.3			7.3	7.3		7.3				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

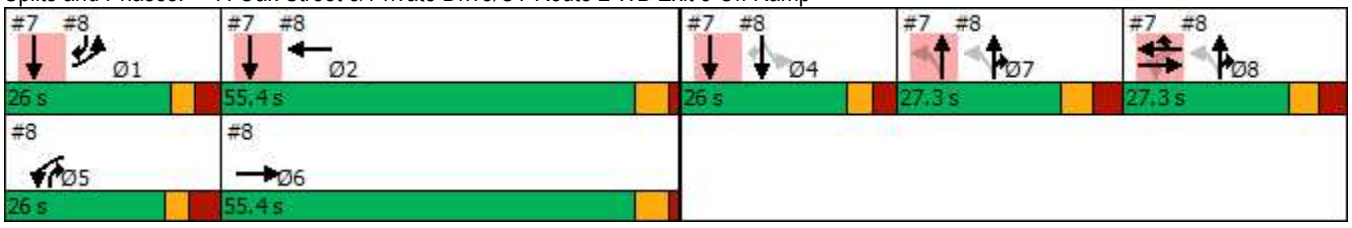
Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	1	2	4	5	6
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	5.0	18.0	7.0	5.0	18.0
Minimum Split (s)	11.0	24.3	13.0	11.8	24.3
Total Split (s)	26.0	55.4	26.0	26.0	55.4
Total Split (%)	16%	34%	16%	16%	34%
Maximum Green (s)	20.0	50.0	20.0	19.2	50.0
Yellow Time (s)	3.0	4.1	3.3	3.0	4.1
All-Red Time (s)	3.0	1.3	2.7	3.8	1.3
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	1.5	2.5	1.0	1.5	2.5
Recall Mode	None	Min	None	None	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		14.2			14.2	14.2		17.9			68.7	
Actuated g/C Ratio		0.12			0.12	0.12		0.15			0.56	
v/c Ratio		0.16			0.65	0.46		0.59			0.25	
Control Delay		1.4			46.6	12.1		57.8			1.0	
Queue Delay		0.0			0.0	0.0		0.1			0.6	
Total Delay		1.4			46.6	12.2		57.9			1.7	
LOS		A			D	B		E			A	
Approach Delay		1.4			29.5			57.9			1.7	
Approach LOS		A			C			E			A	
Queue Length 50th (ft)		0			63	0		106			0	
Queue Length 95th (ft)		0			163	57		194			0	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		307			293	373		542			1275	
Starvation Cap Reductn		0			0	0		0			662	
Spillback Cap Reductn		2			1	2		9			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.14			0.49	0.38		0.52			0.46	

Intersection Summary

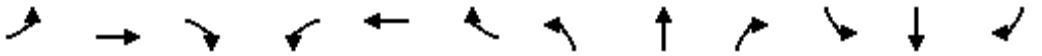
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 122.2
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 28.1 — Intersection LOS: C
Intersection Capacity Utilization 43.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	572	96	108	688	10	207	113	190	10	67	294
Future Volume (vph)	191	572	96	108	688	10	207	113	190	10	67	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.978			0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.984		0.950		
Satd. Flow (prot)	3319	3461	0	1770	3414	0	1625	1683	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.711	0.877		0.408		
Satd. Flow (perm)	3319	3461	0	1770	3414	0	1216	1500	1531	735	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		12			1				200			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	201	602	101	114	724	11	218	119	200	11	71	309
Shared Lane Traffic (%)							26%					
Lane Group Flow (vph)	201	703	0	114	735	0	161	176	200	11	71	309
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

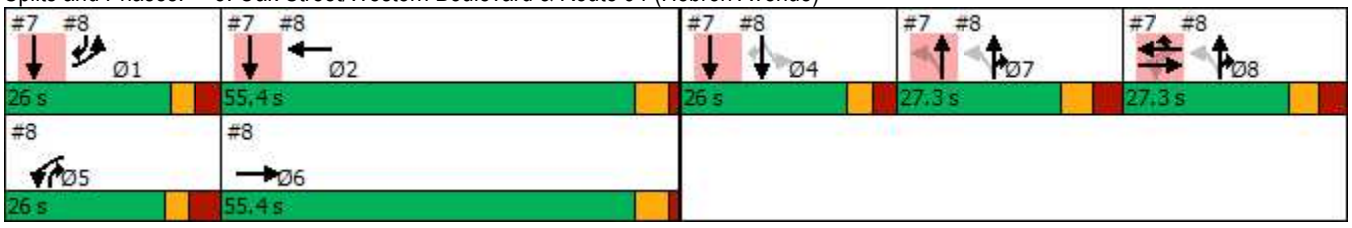
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	13.8	34.0		12.3	33.3		39.7	39.7	59.5	9.8	9.8	23.5
Actuated g/C Ratio	0.11	0.28		0.10	0.27		0.32	0.32	0.49	0.08	0.08	0.19
v/c Ratio	0.54	0.72		0.64	0.79		0.41	0.36	0.24	0.19	0.46	0.58
Control Delay	60.4	45.2		74.0	48.9		15.2	13.8	0.6	68.0	69.5	28.1
Queue Delay	0.0	0.0		0.0	0.0		1.2	1.1	0.7	0.0	0.0	0.0
Total Delay	60.4	45.2		74.0	48.9		16.4	14.8	1.3	68.0	69.5	28.1
LOS	E	D		E	D		B	B	A	E	E	C
Approach Delay		48.6			52.2			10.3			36.7	
Approach LOS		D			D			B			D	
Queue Length 50th (ft)	78	261		89	285		36	42	0	8	56	68
Queue Length 95th (ft)	144	399		180	422		57	61	0	32	122	101
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	564	1478		288	1452		451	556	919	124	327	697
Starvation Cap Reductn	0	0		0	0		139	205	461	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.48		0.40	0.51		0.52	0.50	0.44	0.09	0.22	0.44

Intersection Summary

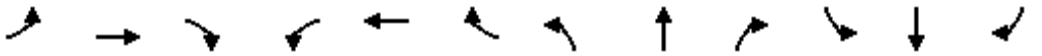
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 122.2
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 40.3 — Intersection LOS: D
Intersection Capacity Utilization 56.5% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

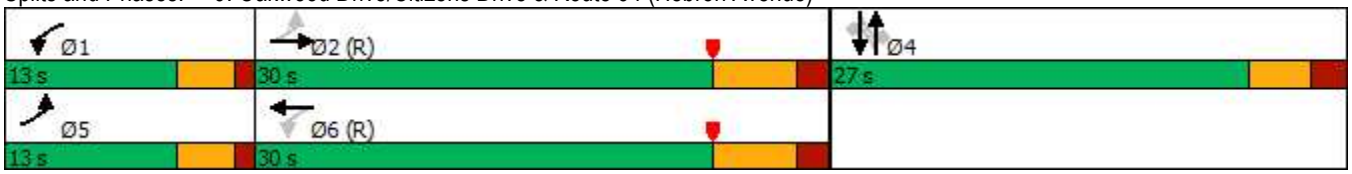


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	617	70	70	681	15	110	10	75	15	5	15
Future Volume (vph)	20	617	70	70	681	15	110	10	75	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.997				0.850			0.850
Flt Protected	0.950			0.950				0.956			0.963	
Satd. Flow (prot)	1770	3486	0	1770	3529	0	0	1781	1583	0	1794	1583
Flt Permitted	0.365			0.317				0.729			0.747	
Satd. Flow (perm)	680	3486	0	590	3529	0	0	1358	1583	0	1391	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			3				111			111
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	22	671	76	76	740	16	120	11	82	16	5	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	747	0	76	756	0	0	131	82	0	21	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	13.0	30.0		13.0	30.0		27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	18.6%	42.9%		18.6%	42.9%		38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Maximum Green (s)	9.0	23.9		9.0	23.9		21.8	21.8	21.8	21.8	21.8	21.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	47.2	41.5		50.0	46.1			12.5	12.5		12.5	12.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.67	0.59		0.71	0.66			0.18	0.18		0.18	0.18
v/c Ratio	0.04	0.36		0.14	0.33			0.54	0.22		0.08	0.04
Control Delay	4.8	11.1		3.7	5.5			33.8	4.3		22.7	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	4.8	11.1		3.7	5.5			33.8	4.3		22.7	0.2
LOS	A	B		A	A			C	A		C	A
Approach Delay		10.9			5.4			22.4			13.0	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	2	94		8	46			52	0		8	0
Queue Length 95th (ft)	10	165		19	82			94	20		23	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	621	2073		578	2324			422	569		433	569
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.04	0.36		0.13	0.33			0.31	0.14		0.05	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 49 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)

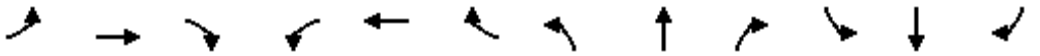


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	507	15	5	533	42	20	5	10	52	5	213
Future Volume (vph)	185	507	15	5	533	42	20	5	10	52	5	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.961				0.850
Flt Protected	0.950			0.950				0.972			0.956	
Satd. Flow (prot)	1770	3525	0	1770	3539	1583	0	1740	0	0	1781	1583
Flt Permitted	0.434			0.290				0.786			0.716	
Satd. Flow (perm)	808	3525	0	540	3539	1583	0	1407	0	0	1334	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				103		11				119
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	201	551	16	5	579	46	22	5	11	57	5	232
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	567	0	5	579	46	0	38	0	0	62	232
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	13.0	30.0		13.0	30.0	30.0	27.0	27.0		27.0	27.0	13.0
Total Split (%)	18.6%	42.9%		18.6%	42.9%	42.9%	38.6%	38.6%		38.6%	38.6%	18.6%
Maximum Green (s)	9.0	26.3		9.0	24.2	24.2	21.4	21.4		21.4	21.4	9.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	34.2	26.3		53.5	39.5	39.5		9.8			9.8	20.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.49	0.38		0.76	0.56	0.56		0.14			0.14	0.30
v/c Ratio	0.40	0.43		0.01	0.29	0.05		0.18			0.33	0.42
Control Delay	8.1	11.9		3.2	10.0	0.3		22.6			32.0	10.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	8.1	11.9		3.2	10.0	0.3		22.6			32.0	10.5
LOS	A	B		A	B	A		C			C	B
Approach Delay		10.9			9.2			22.6			15.0	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	20	40		1	66	0		11			25	35
Queue Length 95th (ft)	69	70		3	119	2		34			57	74
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559			150		150						215
Base Capacity (vph)	540	1327		826	1997	938		437			407	578
Starvation Cap Reductn	0	0		0	0	0		0			0	0
Spillback Cap Reductn	0	0		0	0	0		0			0	0
Storage Cap Reductn	0	0		0	0	0		0			0	0
Reduced v/c Ratio	0.37	0.43		0.01	0.29	0.05		0.09			0.15	0.40

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 44 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)

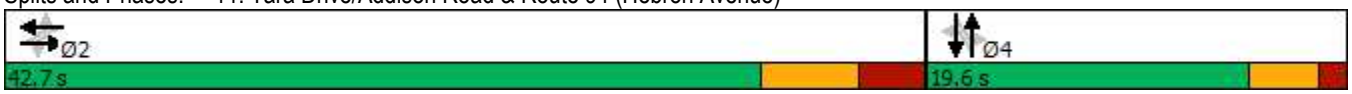


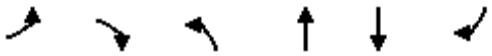
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	525	15	5	498	93	20	10	10	108	10	62
Future Volume (vph)	29	525	15	5	498	93	20	10	10	108	10	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.976			0.966			0.954	
Flt Protected	0.950			0.950				0.976			0.971	
Satd. Flow (prot)	1770	1855	0	1770	1818	0	0	1756	0	0	1726	0
Flt Permitted	0.360			0.399				0.842			0.791	
Satd. Flow (perm)	671	1855	0	743	1818	0	0	1515	0	0	1406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			25			11			40	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	32	571	16	5	541	101	22	11	11	117	11	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	587	0	5	642	0	0	44	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	42.7	42.7		42.7	42.7		19.6	19.6		19.6	19.6	
Total Split (%)	68.5%	68.5%		68.5%	68.5%		31.5%	31.5%		31.5%	31.5%	
Maximum Green (s)	35.0	35.0		35.0	35.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	35.5	35.5		35.5	35.5			10.9			10.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.19			0.19	
v/c Ratio	0.08	0.52		0.01	0.58			0.15			0.67	
Control Delay	6.5	9.4		5.8	10.1			16.9			28.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.5	9.4		5.8	10.1			16.9			28.9	
LOS	A	A		A	B			B			C	
Approach Delay		9.3			10.0			16.9			28.9	
Approach LOS		A			B			B			C	
Queue Length 50th (ft)	4	102		1	113			10			50	
Queue Length 95th (ft)	16	208		5	234			32			108	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	405	1123		449	1109			396			389	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.08	0.52		0.01	0.58			0.11			0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 62.3			
Actuated Cycle Length: 58.7			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 56.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	201	275	0
Future Volume (vph)	0	0	0	201	275	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	218	299	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	218	299	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.8%		ICU Level of Service A	
Analysis Period (min) 15			

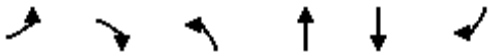
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	201	275	0
Future Vol, veh/h	0	0	0	201	275	0
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	0	0	0	218	299	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	517	299	299	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	218	-	-	-	-	-
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	518	741	1262	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	518	741	1262	-	-	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1262	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	15	15	191	260	15
Future Volume (vph)	10	15	15	191	260	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.993	
Flt Protected	0.980			0.996		
Satd. Flow (prot)	1679	0	0	1855	1850	0
Flt Permitted	0.980			0.996		
Satd. Flow (perm)	1679	0	0	1855	1850	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	16	208	283	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	224	299	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.4%		ICU Level of Service A	
Analysis Period (min) 15			

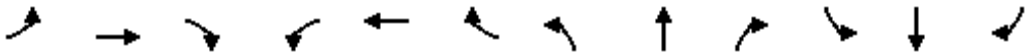
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	15	191	260	15
Future Vol, veh/h	10	15	15	191	260	15
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	11	16	16	208	283	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	531	291	299	0	-	0
Stage 1	291	-	-	-	-	-
Stage 2	240	-	-	-	-	-
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	509	748	1262	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	502	748	1262	-	-	-
Mov Cap-2 Maneuver	502	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	800	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1262	-	625	-	-
HCM Lane V/C Ratio	0.013	-	0.043	-	-
HCM Control Delay (s)	7.9	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	25	0	0	30	0	0	0	0	0	0	0
Future Volume (vph)	0	25	0	0	30	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	0	27	0	0	33	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	33	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

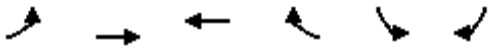
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	25	0	0	30	0	0	0	0	0	0	0
Future Vol, veh/h	0	25	0	0	30	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	0	27	0	0	33	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	27	0	0	60	60	27	60	60	33
Stage 1	-	-	-	-	-	-	27	27	-	33	33	-
Stage 2	-	-	-	-	-	-	33	33	-	27	27	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1579	-	-	1587	-	-	936	831	1048	936	831	1041
Stage 1	-	-	-	-	-	-	990	873	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	990	873	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1587	-	-	936	831	1048	936	831	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	936	831	-	936	831	-
Stage 1	-	-	-	-	-	-	990	873	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	990	873	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1579	-	-	1587	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	25	25	0	0	0
Future Volume (vph)	0	25	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1716	232		109	
Travel Time (s)		46.8	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	27	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	27	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	25	25	0	0	0
Future Vol, veh/h	0	25	25	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	27	27	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	54	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1587	-	-	-	954	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	954	1048
Mov Cap-2 Maneuver	-	-	-	-	954	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	5	136	20	0	295
Future Volume (vph)	40	5	136	20	0	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.983			
Flt Protected	0.957					
Satd. Flow (prot)	1758	0	1831	0	0	1863
Flt Permitted	0.957					
Satd. Flow (perm)	1758	0	1831	0	0	1863
Link Speed (mph)	25		25			30
Link Distance (ft)	1716		1158			362
Travel Time (s)	46.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	5	148	22	0	321
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	170	0	0	321
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

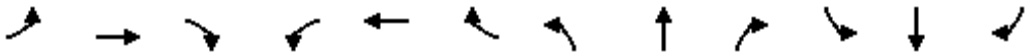
Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	5	136	20	0	295
Future Vol, veh/h	40	5	136	20	0	295
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	43	5	148	22	0	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	480	159	0	0	170	0
Stage 1	159	-	-	-	-	-
Stage 2	321	-	-	-	-	-
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	545	886	-	-	1407	-
Stage 1	870	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	545	886	-	-	1407	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	569	1407	-
HCM Lane V/C Ratio	-	-	0.086	-	-
HCM Control Delay (s)	-	-	11.9	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	296	15	40	10	15	10	20	138	5	10	158	196
Future Volume (vph)	296	15	40	10	15	10	20	138	5	10	158	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.961			0.996			0.927	
Flt Protected		0.959			0.986			0.994			0.999	
Satd. Flow (prot)	0	1760	0	0	1765	0	0	1844	0	0	1725	0
Flt Permitted		0.959			0.986			0.994			0.999	
Satd. Flow (perm)	0	1760	0	0	1765	0	0	1844	0	0	1725	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	322	16	43	11	16	11	22	150	5	11	172	213
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	381	0	0	38	0	0	177	0	0	396	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

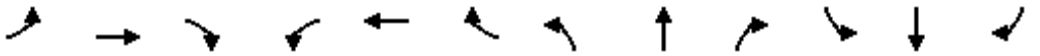
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	14.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	296	15	40	10	15	10	20	138	5	10	158	196
Future Vol, veh/h	296	15	40	10	15	10	20	138	5	10	158	196
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	322	16	43	11	16	11	22	150	5	11	172	213
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.8	9.6	11.2	14.8
HCM LOS	C	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	84%	29%	3%
Vol Thru, %	85%	4%	43%	43%
Vol Right, %	3%	11%	29%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	351	35	364
LT Vol	20	296	10	10
Through Vol	138	15	15	158
RT Vol	5	40	10	196
Lane Flow Rate	177	382	38	396
Geometry Grp	1	1	1	1
Degree of Util (X)	0.286	0.598	0.065	0.568
Departure Headway (Hd)	5.808	5.639	6.115	5.164
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	617	637	582	696
Service Time	3.872	3.687	4.194	3.216
HCM Lane V/C Ratio	0.287	0.6	0.065	0.569
HCM Control Delay	11.2	16.8	9.6	14.8
HCM Lane LOS	B	C	A	B
HCM 95th-tile Q	1.2	4	0.2	3.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	10	61	5	208	15	282	0	0	256	10
Future Volume (vph)	20	0	10	61	5	208	15	282	0	0	256	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.956			0.920	0.850					0.995	
Flt Protected		0.967			0.979			0.997				
Satd. Flow (prot)	0	1722	0	0	1594	1454	0	3411	0	0	1977	0
Flt Permitted		0.669			0.845			0.926				
Satd. Flow (perm)	0	1191	0	0	1376	1454	0	3168	0	0	1977	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		128			28	139					3	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	0	10	64	5	217	16	294	0	0	267	10
Shared Lane Traffic (%)						36%						
Lane Group Flow (vph)	0	31	0	0	147	139	0	310	0	0	277	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	12.0	12.0		12.0	12.0	12.0	17.0	17.0				
Total Split (s)	16.0	16.0		16.0	16.0	16.0	27.0	27.0				
Total Split (%)	10.2%	10.2%		10.2%	10.2%	10.2%	17.2%	17.2%				
Maximum Green (s)	11.0	11.0		11.0	11.0	11.0	22.0	22.0				
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.0			5.0	5.0		5.0				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

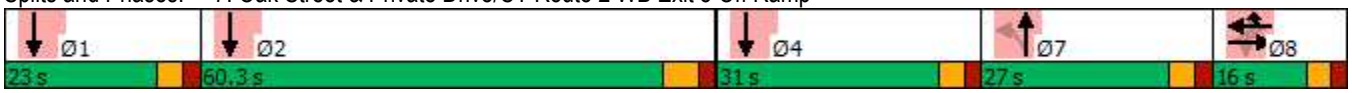
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	18.0	7.0
Minimum Split (s)	10.2	24.3	12.0
Total Split (s)	23.0	60.3	31.0
Total Split (%)	15%	38%	20%
Maximum Green (s)	17.8	54.0	26.0
Yellow Time (s)	3.0	4.3	3.0
All-Red Time (s)	2.2	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?			
Vehicle Extension (s)	1.5	2.5	1.0
Recall Mode	None	Min	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		11.0			11.0	11.0		14.6			47.9	
Actuated g/C Ratio		0.12			0.12	0.12		0.16			0.54	
v/c Ratio		0.12			0.75	0.46		0.60			0.26	
Control Delay		0.9			56.5	12.5		39.8			11.8	
Queue Delay		0.0			0.0	0.0		0.0			0.3	
Total Delay		0.9			56.5	12.5		39.8			12.2	
LOS		A			E	B		D			B	
Approach Delay		0.9			35.1			39.8			12.2	
Approach LOS		A			D			D			B	
Queue Length 50th (ft)		0			68	0		85			76	
Queue Length 95th (ft)		0			#187	57		133			133	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		260			195	302		788			1590	
Starvation Cap Reductn		0			0	0		0			828	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.12			0.75	0.46		0.39			0.36	

Intersection Summary

Area Type: Other
Cycle Length: 157.3
Actuated Cycle Length: 88.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 28.5 Intersection LOS: C
Intersection Capacity Utilization 36.9% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	593	51	128	718	10	232	56	222	20	87	358
Future Volume (vph)	84	593	51	128	718	10	232	56	222	20	87	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.988			0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.970		0.950		
Satd. Flow (prot)	3319	3497	0	1770	3414	0	1625	1659	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.697	0.756		0.331		
Satd. Flow (perm)	3319	3497	0	1770	3414	0	1192	1293	1531	596	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		6			1				234			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	624	54	135	756	11	244	59	234	21	92	377
Shared Lane Traffic (%)							40%					
Lane Group Flow (vph)	88	678	0	135	767	0	146	157	234	21	92	377
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

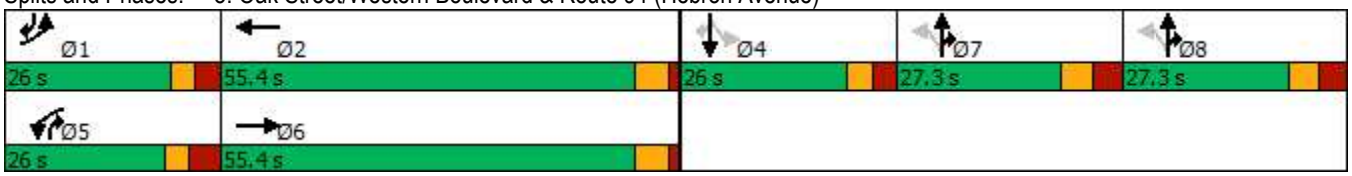
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	12.5	30.3		13.4	32.0		32.1	32.1	53.0	12.0	12.0	24.5
Actuated g/C Ratio	0.11	0.27		0.12	0.28		0.28	0.28	0.46	0.11	0.11	0.21
v/c Ratio	0.24	0.73		0.65	0.80		0.44	0.43	0.28	0.34	0.45	0.63
Control Delay	53.2	44.1		66.9	45.9		42.1	41.5	3.6	67.5	58.8	26.1
Queue Delay	0.0	0.0		0.0	0.0		3.8	3.7	2.4	0.0	0.0	0.0
Total Delay	53.2	44.1		66.9	45.9		45.9	45.2	5.9	67.5	58.8	26.1
LOS	D	D		E	D		D	D	A	E	E	C
Approach Delay		45.1			49.0			28.3			34.0	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	30	234		96	272		93	101	0	15	65	67
Queue Length 95th (ft)	68	370		194	414		196	207	48	48	138	115
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	601	1586		307	1546		455	494	899	107	348	798
Starvation Cap Reductn	0	0		0	0		231	255	533	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.43		0.44	0.50		0.65	0.66	0.64	0.20	0.26	0.47

Intersection Summary

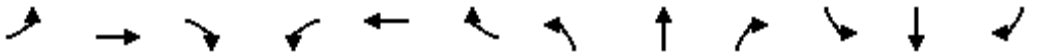
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 114.2
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 41.0 — Intersection LOS: D
Intersection Capacity Utilization 58.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

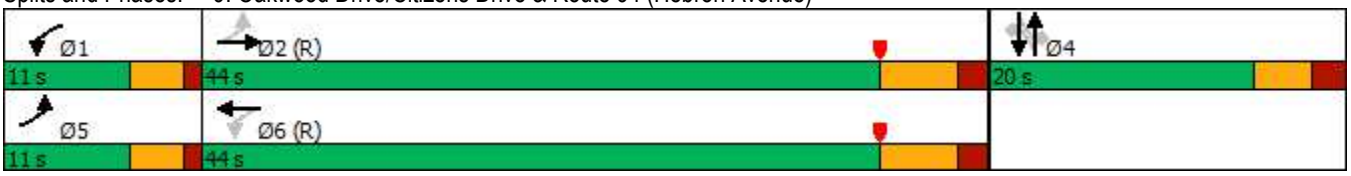


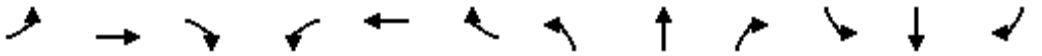
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	780	40	65	696	5	145	5	115	15	5	15
Future Volume (vph)	15	780	40	65	696	5	145	5	115	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.999				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.963	
Satd. Flow (prot)	1770	3514	0	1770	3536	0	0	1777	1583	0	1794	1583
Flt Permitted	0.363			0.251				0.717			0.756	
Satd. Flow (perm)	676	3514	0	468	3536	0	0	1336	1583	0	1408	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1				125			103
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	16	848	43	71	757	5	158	5	125	16	5	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	891	0	71	762	0	0	163	125	0	21	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	11.0	44.0		11.0	44.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%		26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
Maximum Green (s)	7.0	37.9		7.0	37.9		14.8	14.8	14.8	14.8	14.8	14.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	49.0	42.2		52.1	48.6			13.0	13.0		13.0	13.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.65	0.56		0.69	0.65			0.17	0.17		0.17	0.17
v/c Ratio	0.03	0.45		0.16	0.33			0.70	0.33		0.09	0.04
Control Delay	4.2	11.5		4.0	5.3			45.9	8.1		25.7	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	4.2	11.5		4.0	5.3			45.9	8.1		25.7	0.2
LOS	A	B		A	A			D	A		C	A
Approach Delay		11.4			5.2			29.5			14.7	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	2	130		7	48			70	0		8	0
Queue Length 95th (ft)	7	182		16	87			#144	41		26	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	551	1979		446	2291			263	412		277	395
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.03	0.45		0.16	0.33			0.62	0.30		0.08	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)



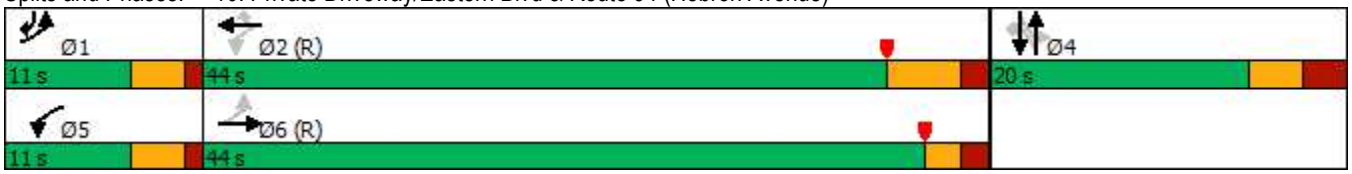


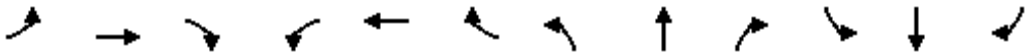
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	720	20	0	524	29	30	5	10	56	5	212
Future Volume (vph)	170	720	20	0	524	29	30	5	10	56	5	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.970				0.850
Flt Protected	0.950							0.967			0.956	
Satd. Flow (prot)	1770	3525	0	1863	3539	1583	0	1747	0	0	1781	1583
Flt Permitted	0.438							0.757			0.707	
Satd. Flow (perm)	816	3525	0	1863	3539	1583	0	1368	0	0	1317	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				96		11				230
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	185	783	22	0	570	32	33	5	11	61	5	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	805	0	0	570	32	0	49	0	0	66	230
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	11.0	44.0		11.0	44.0	44.0	20.0	20.0		20.0	20.0	11.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%	58.7%	26.7%	26.7%		26.7%	26.7%	14.7%
Maximum Green (s)	7.0	40.3		7.0	38.2	38.2	14.4	14.4		14.4	14.4	7.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	47.5	40.3			44.8	44.8		10.2			10.2	20.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.63	0.54			0.60	0.60		0.14			0.14	0.27
v/c Ratio	0.30	0.42			0.27	0.03		0.25			0.37	0.39
Control Delay	3.6	6.2			9.0	0.1		26.6			35.1	4.7
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	3.6	6.2			9.0	0.1		26.6			35.1	4.7
LOS	A	A			A	A		C			D	A
Approach Delay		5.7			8.5			26.6			11.5	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)	14	41			65	0		16			29	0
Queue Length 95th (ft)	28	61			108	0		44			62	42
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559					150						215
Base Capacity (vph)	618	1896			2113	984		271			252	602
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.30	0.42			0.27	0.03		0.18			0.26	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)



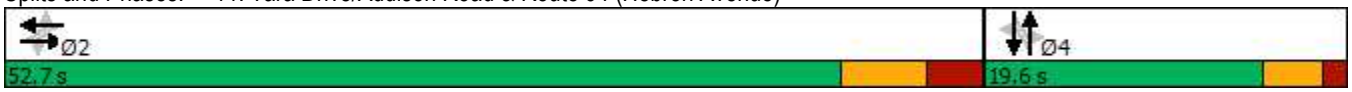


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	729	25	5	502	85	20	5	5	127	10	31
Future Volume (vph)	32	729	25	5	502	85	20	5	5	127	10	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.978			0.979			0.975	
Flt Protected	0.950			0.950				0.967			0.964	
Satd. Flow (prot)	1770	1853	0	1770	1822	0	0	1763	0	0	1751	0
Flt Permitted	0.370			0.257				0.809			0.758	
Satd. Flow (perm)	689	1853	0	479	1822	0	0	1475	0	0	1377	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			22			5			14	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	35	792	27	5	546	92	22	5	5	138	11	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	819	0	5	638	0	0	32	0	0	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	52.7	52.7		52.7	52.7		19.6	19.6		19.6	19.6	
Total Split (%)	72.9%	72.9%		72.9%	72.9%		27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	45.0	45.0		45.0	45.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1			12.0			12.0	

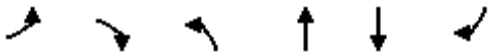
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.17			0.17	
v/c Ratio	0.08	0.68		0.02	0.54			0.12			0.73	
Control Delay	5.8	11.9		5.4	8.9			22.1			43.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.8	11.9		5.4	8.9			22.1			43.0	
LOS	A	B		A	A			C			D	
Approach Delay		11.7			8.8			22.1			43.0	
Approach LOS		B			A			C			D	
Queue Length 50th (ft)	5	198		1	127			10			69	
Queue Length 95th (ft)	16	346		4	223			31			#139	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	447	1205		311	1191			322			308	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.08	0.68		0.02	0.54			0.10			0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 72.3			
Actuated Cycle Length: 69.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 61.6%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)



BUILD



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	291	170	0
Future Volume (vph)	0	0	0	291	170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	316	185	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	316	185	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

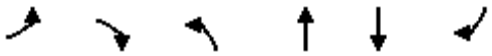
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	291	170	0
Future Vol, veh/h	0	0	0	291	170	0
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	0	0	0	316	185	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	501	185	185	0	-	0
Stage 1	185	-	-	-	-	-
Stage 2	316	-	-	-	-	-
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	530	857	1390	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	530	857	1390	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1390	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	11	15	281	155	15
Future Volume (vph)	10	11	15	281	155	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.930				0.988	
Flt Protected	0.977			0.998		
Satd. Flow (prot)	1693	0	0	1859	1840	0
Flt Permitted	0.977			0.998		
Satd. Flow (perm)	1693	0	0	1859	1840	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	12	16	305	168	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	321	184	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

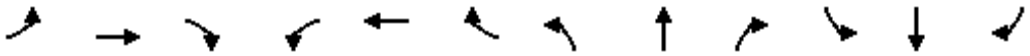
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	11	15	281	155	15
Future Vol, veh/h	10	11	15	281	155	15
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	11	12	16	305	168	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	513	176	184	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	337	-	-	-	-	-
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	521	867	1391	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	514	867	1391	-	-	-
Mov Cap-2 Maneuver	514	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1391	-	653	-	-
HCM Lane V/C Ratio	0.012	-	0.035	-	-
HCM Control Delay (s)	7.6	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	21	0	0	30	0	0	0	0	0	0	0
Future Volume (vph)	0	21	0	0	30	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	0	23	0	0	33	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	33	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

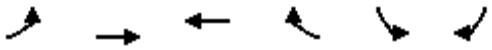
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	21	0	0	30	0	0	0	0	0	0	0
Future Vol, veh/h	0	21	0	0	30	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	0	23	0	0	33	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	23	0	0	56	56	23	56	56	33
Stage 1	-	-	-	-	-	-	23	23	-	33	33	-
Stage 2	-	-	-	-	-	-	33	33	-	23	23	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1579	-	-	1592	-	-	941	835	1054	941	835	1041
Stage 1	-	-	-	-	-	-	995	876	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	995	876	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1592	-	-	941	835	1054	941	835	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	941	835	-	941	835	-
Stage 1	-	-	-	-	-	-	995	876	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	995	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1579	-	-	1592	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	20	30	0	1	0
Future Volume (vph)	0	20	30	0	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1863	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1863	0	1770	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		221	232		109	
Travel Time (s)		6.0	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	22	33	0	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	33	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	30	0	1	0
Future Vol, veh/h	0	20	30	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	22	33	0	1	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	55	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	22	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	953	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	953
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	5	312	40	0	122
Future Volume (vph)	15	5	312	40	0	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968		0.985			
Flt Protected	0.963					
Satd. Flow (prot)	1736	0	1835	0	0	1863
Flt Permitted	0.963					
Satd. Flow (perm)	1736	0	1835	0	0	1863
Link Speed (mph)	25		25			30
Link Distance (ft)	1497		1158			362
Travel Time (s)	40.8		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	5	339	43	0	133
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	382	0	0	133
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.8%		ICU Level of Service A	
Analysis Period (min) 15			

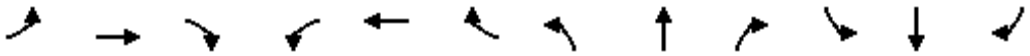
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	312	40	0	122
Future Vol, veh/h	15	5	312	40	0	122
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	16	5	339	43	0	133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	494	361	0	0	382	0
Stage 1	361	-	-	-	-	-
Stage 2	133	-	-	-	-	-
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	535	684	-	-	1176	-
Stage 1	705	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	535	684	-	-	1176	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	566	1176	-
HCM Lane V/C Ratio	-	-	0.038	-	-
HCM Control Delay (s)	-	-	11.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	100	10	5	5	5	25	106	10	5	105	306
Future Volume (vph)	72	100	10	5	5	5	25	106	10	5	105	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.955			0.990			0.901	
Flt Protected		0.981			0.984			0.991			0.999	
Satd. Flow (prot)	0	1813	0	0	1750	0	0	1828	0	0	1677	0
Flt Permitted		0.981			0.984			0.991			0.999	
Satd. Flow (perm)	0	1813	0	0	1750	0	0	1828	0	0	1677	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	78	109	11	5	5	5	27	115	11	5	114	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	0	0	15	0	0	153	0	0	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	100	10	5	5	5	25	106	10	5	105	306
Future Vol, veh/h	72	100	10	5	5	5	25	106	10	5	105	306
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	109	11	5	5	5	27	115	11	5	114	333
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	8.7	9.4	12.2
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	40%	33%	1%
Vol Thru, %	75%	55%	33%	25%
Vol Right, %	7%	5%	33%	74%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	182	15	416
LT Vol	25	72	5	5
Through Vol	106	100	5	105
RT Vol	10	10	5	306
Lane Flow Rate	153	198	16	452
Geometry Grp	1	1	1	1
Degree of Util (X)	0.213	0.292	0.025	0.536
Departure Headway (Hd)	4.992	5.313	5.559	4.265
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	669	648	841
Service Time	3.068	3.402	3.559	2.316
HCM Lane V/C Ratio	0.215	0.296	0.025	0.537
HCM Control Delay	9.4	10.6	8.7	12.2
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.8	1.2	0.1	3.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	5	51	10	326	10	207	0	0	185	5
Future Volume (vph)	10	0	5	51	10	326	10	207	0	0	185	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.955			0.896	0.850					0.997	
Flt Protected		0.968			0.987			0.998				
Satd. Flow (prot)	0	1722	0	0	1565	1454	0	3414	0	0	1981	0
Flt Permitted		0.720			0.907			0.933				
Satd. Flow (perm)	0	1281	0	0	1438	1454	0	3192	0	0	1981	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			58	197					2	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	0	5	53	10	340	10	216	0	0	193	5
Shared Lane Traffic (%)						42%						
Lane Group Flow (vph)	0	15	0	0	206	197	0	226	0	0	198	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	14.3	14.3		14.3	14.3	14.3	19.3	19.3				
Total Split (s)	27.3	27.3		27.3	27.3	27.3	27.3	27.3				
Total Split (%)	16.9%	16.9%		16.9%	16.9%	16.9%	16.9%	16.9%				
Maximum Green (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0				
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7				
All-Red Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		7.3			7.3	7.3		7.3				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

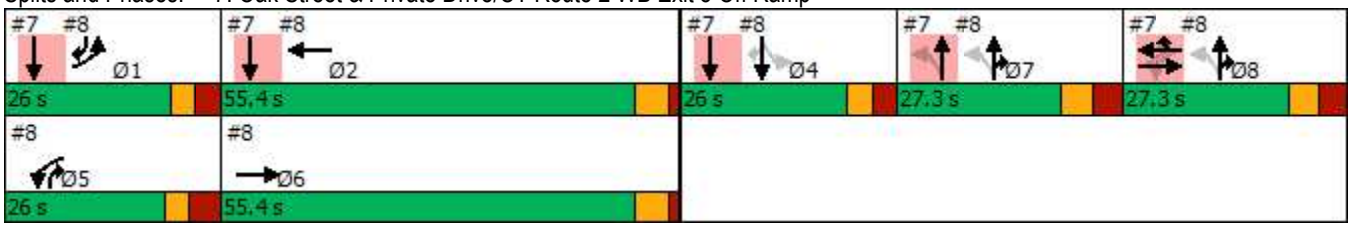
Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	1	2	4	5	6
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	5.0	18.0	7.0	5.0	18.0
Minimum Split (s)	11.0	24.3	13.0	11.8	24.3
Total Split (s)	26.0	55.4	26.0	26.0	55.4
Total Split (%)	16%	34%	16%	16%	34%
Maximum Green (s)	20.0	50.0	20.0	19.2	50.0
Yellow Time (s)	3.0	4.1	3.3	3.0	4.1
All-Red Time (s)	3.0	1.3	2.7	3.8	1.3
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	1.5	2.5	1.0	1.5	2.5
Recall Mode	None	Min	None	None	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		18.8			18.8	18.8		17.5			60.2	
Actuated g/C Ratio		0.16			0.16	0.16		0.15			0.51	
v/c Ratio		0.05			0.74	0.50		0.48			0.19	
Control Delay		0.3			52.5	11.6		51.6			0.7	
Queue Delay		0.0			0.1	0.0		0.0			0.5	
Total Delay		0.3			52.6	11.6		51.7			1.1	
LOS		A			D	B		D			A	
Approach Delay		0.3			32.5			51.7			1.1	
Approach LOS		A			C			D			A	
Queue Length 50th (ft)		0			114	0		83			1	
Queue Length 95th (ft)		0			#281	78		146			1	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		348			298	415		554			1235	
Starvation Cap Reductn		0			0	0		0			678	
Spillback Cap Reductn		3			1	4		11			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.04			0.69	0.48		0.42			0.36	

Intersection Summary

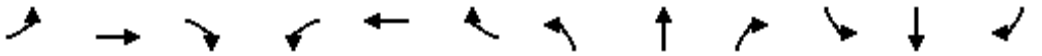
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 117.5
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 29.7 — Intersection LOS: C
Intersection Capacity Utilization 47.5% — ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

Intersection Summary



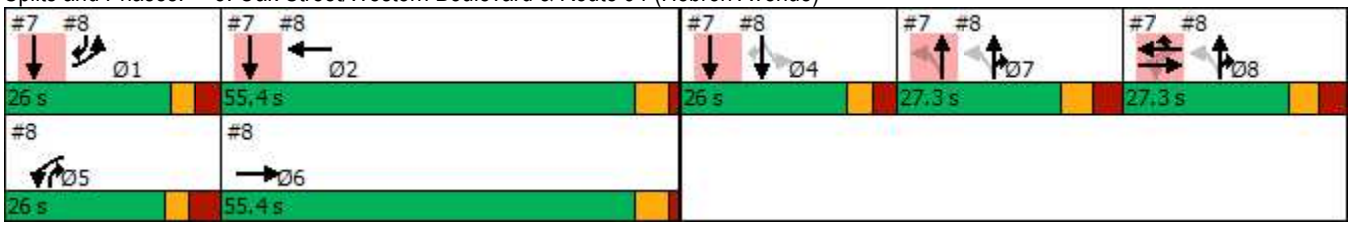
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	490	40	120	580	20	182	145	216	5	30	123
Future Volume (vph)	248	490	40	120	580	20	182	145	216	5	30	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.989			0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.993		0.950		
Satd. Flow (prot)	3319	3500	0	1770	3404	0	1625	1699	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.736	0.961		0.506		
Satd. Flow (perm)	3319	3500	0	1770	3404	0	1259	1644	1531	911	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		5			2				227			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	261	516	42	126	611	21	192	153	227	5	32	129
Shared Lane Traffic (%)							13%					
Lane Group Flow (vph)	261	558	0	126	632	0	167	178	227	5	32	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	13.5	27.3		12.6	27.1		43.7	43.7	63.7	7.9	7.9	21.4
Actuated g/C Ratio	0.11	0.23		0.11	0.23		0.37	0.37	0.54	0.07	0.07	0.18
v/c Ratio	0.69	0.68		0.67	0.80		0.36	0.29	0.24	0.08	0.25	0.25
Control Delay	61.5	46.3		70.4	51.7		13.8	12.6	0.5	61.2	62.3	23.6
Queue Delay	0.0	0.0		0.0	0.0		2.0	1.9	0.7	0.0	0.0	0.0
Total Delay	61.5	46.3		70.4	51.7		15.8	14.5	1.2	61.2	62.3	23.6
LOS	E	D		E	D		B	B	A	E	E	C
Approach Delay		51.1			54.8			9.6			32.2	
Approach LOS		D			D			A			C	
Queue Length 50th (ft)	101	207		95	244		38	41	0	4	24	28
Queue Length 95th (ft)	164	296		178	341		m63	m66	0	19	63	47
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	577	1523		295	1480		478	625	1004	158	334	672
Starvation Cap Reductn	0	0		0	0		191	312	493	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.37		0.43	0.43		0.58	0.57	0.44	0.03	0.10	0.19

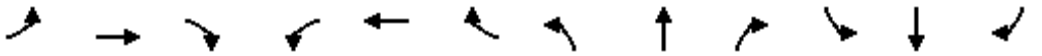
Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 117.5			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 40.7		Intersection LOS: D	
Intersection Capacity Utilization 54.8%		ICU Level of Service A	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

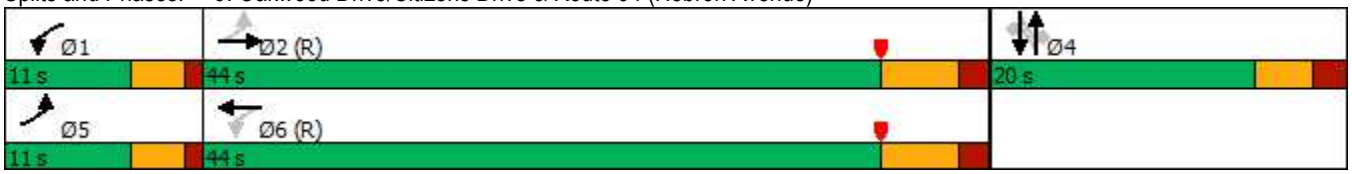


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	521	90	120	645	30	70	5	70	5	5	5
Future Volume (vph)	30	521	90	120	645	30	70	5	70	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.993				0.850			0.850
Flt Protected	0.950			0.950				0.955			0.976	
Satd. Flow (prot)	1770	3461	0	1770	3514	0	0	1779	1583	0	1818	1583
Flt Permitted	0.373			0.363				0.732			0.846	
Satd. Flow (perm)	695	3461	0	676	3514	0	0	1364	1583	0	1576	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			9				103			103
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	33	566	98	130	701	33	76	5	76	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	664	0	130	734	0	0	81	76	0	10	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	11.0	44.0		11.0	44.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%		26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
Maximum Green (s)	7.0	37.9		7.0	37.9		14.8	14.8	14.8	14.8	14.8	14.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	53.8	48.0		56.9	52.9			10.7	10.7		10.7	10.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.72	0.64		0.76	0.71			0.14	0.14		0.14	0.14
v/c Ratio	0.06	0.30		0.21	0.30			0.42	0.24		0.04	0.02
Control Delay	3.6	8.5		3.2	4.3			35.5	5.5		26.8	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	3.6	8.5		3.2	4.3			35.5	5.5		26.8	0.0
LOS	A	A		A	A			D	A		C	A
Approach Delay		8.3			4.2			21.0			17.9	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)	3	73		10	35			35	0		4	0
Queue Length 95th (ft)	11	123		22	64			72	22		16	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	605	2230		619	2480			269	395		310	395
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.05	0.30		0.21	0.30			0.30	0.19		0.03	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 47.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)

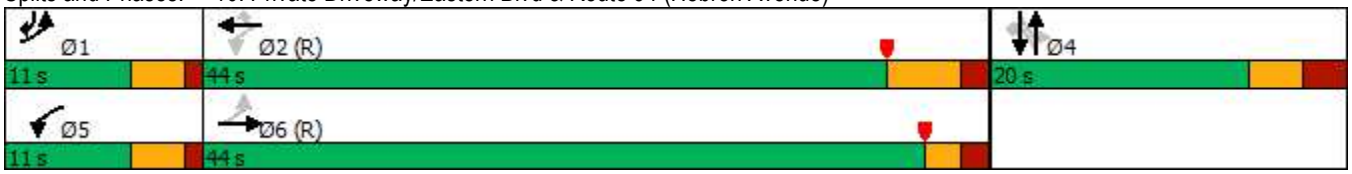


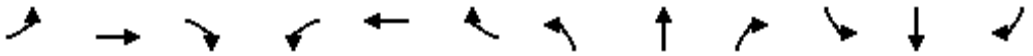
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	352	20	0	638	70	15	0	5	18	5	142
Future Volume (vph)	224	352	20	0	638	70	15	0	5	18	5	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992				0.850		0.968				0.850
Flt Protected	0.950							0.963			0.962	
Satd. Flow (prot)	1770	3511	0	1863	3539	1583	0	1736	0	0	1792	1583
Flt Permitted	0.388							0.761			0.755	
Satd. Flow (perm)	723	3511	0	1863	3539	1583	0	1372	0	0	1406	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				96		99				154
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	243	383	22	0	693	76	16	0	5	20	5	154
Shared Lane Traffic (%)												
Lane Group Flow (vph)	243	405	0	0	693	76	0	21	0	0	25	154
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	11.0	44.0		11.0	44.0	44.0	20.0	20.0		20.0	20.0	11.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%	58.7%	26.7%	26.7%		26.7%	26.7%	14.7%
Maximum Green (s)	7.0	40.3		7.0	38.2	38.2	14.4	14.4		14.4	14.4	7.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	48.3	40.3			48.2	48.2		9.0			9.0	17.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.64	0.54			0.64	0.64		0.12			0.12	0.23
v/c Ratio	0.42	0.21			0.30	0.07		0.08			0.15	0.32
Control Delay	7.0	5.5			8.1	1.7		0.6			32.0	5.3
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	7.0	5.5			8.1	1.7		0.6			32.0	5.3
LOS	A	A			A	A		A			C	A
Approach Delay		6.0			7.5			0.6			9.0	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	19	19			84	0		0			11	0
Queue Length 95th (ft)	42	30			132	14		0			33	36
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559					150						215
Base Capacity (vph)	590	1892			2273	1051		343			269	486
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.41	0.21			0.30	0.07		0.06			0.09	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)



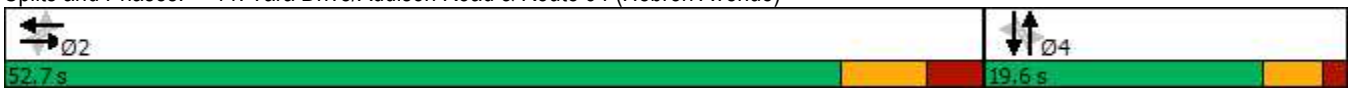


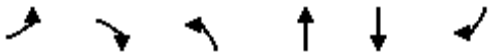
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	350	5	5	647	91	25	5	5	54	5	36
Future Volume (vph)	20	350	5	5	647	91	25	5	5	54	5	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.981			0.982			0.949	
Flt Protected	0.950			0.950				0.965			0.972	
Satd. Flow (prot)	1770	1859	0	1770	1827	0	0	1765	0	0	1718	0
Flt Permitted	0.303			0.534				0.781			0.802	
Satd. Flow (perm)	564	1859	0	995	1827	0	0	1429	0	0	1418	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			19			5			38	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	22	380	5	5	703	99	27	5	5	59	5	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	385	0	5	802	0	0	37	0	0	103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	52.7	52.7		52.7	52.7		19.6	19.6		19.6	19.6	
Total Split (%)	72.9%	72.9%		72.9%	72.9%		27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	45.0	45.0		45.0	45.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	49.5	49.5		49.5	49.5			8.5			8.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.13			0.13	
v/c Ratio	0.05	0.28		0.01	0.59			0.20			0.48	
Control Delay	4.4	4.7		4.0	7.9			25.3			25.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.4	4.7		4.0	7.9			25.3			25.9	
LOS	A	A		A	A			C			C	
Approach Delay		4.7			7.8			25.3			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	2	46		1	132			12			24	
Queue Length 95th (ft)	10	101		4	292			35			66	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	419	1383		740	1364			326			349	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.05	0.28		0.01	0.59			0.11			0.30	

Intersection Summary			
Area Type:	Other		
Cycle Length: 72.3			
Actuated Cycle Length: 66.5			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	291	170	0
Future Volume (vph)	0	0	0	291	170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	1863	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	1863	0	1863	1863	0
Link Speed (mph)	30			35	30	
Link Distance (ft)	392			256	284	
Travel Time (s)	8.9			5.0	6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	316	185	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	316	185	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

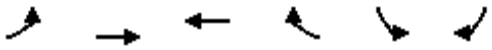
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	291	170	0
Future Vol, veh/h	0	0	0	291	170	0
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	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	0	0	0	316	185	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	501	185	-	0	-	0
Stage 1	185	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	530	857	0	-	-	0
Stage 1	847	-	0	-	-	0
Stage 2	739	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	530	857	-	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	0	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	20	30	0	0	0
Future Volume (vph)	0	20	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1497	221		257	
Travel Time (s)		40.8	6.0		5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	22	33	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

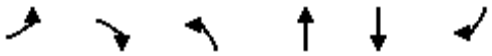
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	30	0	0	0
Future Vol, veh/h	0	20	30	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	22	33	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	55	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	22	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	953	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	4	224	308	1
Future Volume (vph)	0	0	4	224	308	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected				0.999		
Satd. Flow (prot)	1863	0	0	1861	1863	0
Flt Permitted				0.999		
Satd. Flow (perm)	1863	0	0	1861	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	4	243	335	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	247	336	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

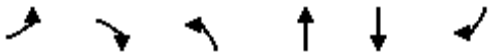
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	4	224	308	1
Future Vol, veh/h	0	0	4	224	308	1
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	0	0	4	243	335	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	587	336	336	0	-	0
Stage 1	336	-	-	-	-	-
Stage 2	251	-	-	-	-	-
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	472	706	1223	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	470	706	1223	-	-	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1223	-	-	-	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	15	16	223	293	20
Future Volume (vph)	10	15	16	223	293	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.991	
Flt Protected	0.980			0.997		
Satd. Flow (prot)	1679	0	0	1857	1846	0
Flt Permitted	0.980			0.997		
Satd. Flow (perm)	1679	0	0	1857	1846	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	17	242	318	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	259	340	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.9%		ICU Level of Service A	
Analysis Period (min) 15			

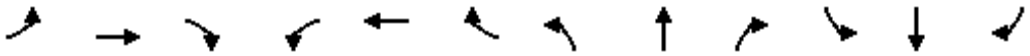
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	16	223	293	20
Future Vol, veh/h	10	15	16	223	293	20
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	11	16	17	242	318	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	605	329	340	0	-	0
Stage 1	329	-	-	-	-	-
Stage 2	276	-	-	-	-	-
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	461	712	1219	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	454	712	1219	-	-	-
Mov Cap-2 Maneuver	454	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1219	-	580	-	-
HCM Lane V/C Ratio	0.014	-	0.047	-	-
HCM Control Delay (s)	8	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	25	0	0	35	1	0	0	0	0	0	0
Future Volume (vph)	2	25	0	0	35	1	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							
Flt Protected		0.997										
Satd. Flow (prot)	0	1857	0	0	1857	0	0	1863	0	0	1863	0
Flt Permitted		0.997										
Satd. Flow (perm)	0	1857	0	0	1857	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	2	27	0	0	38	1	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	39	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

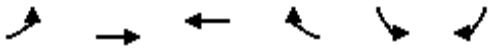
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	25	0	0	35	1	0	0	0	0	0	0
Future Vol, veh/h	2	25	0	0	35	1	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	2	27	0	0	38	1	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	27	0	0	70	70	27	70	70	39
Stage 1	-	-	-	-	-	-	31	31	-	39	39	-
Stage 2	-	-	-	-	-	-	39	39	-	31	31	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1571	-	-	1587	-	-	922	821	1048	922	821	1033
Stage 1	-	-	-	-	-	-	986	869	-	976	862	-
Stage 2	-	-	-	-	-	-	976	862	-	986	869	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1571	-	-	1587	-	-	921	820	1048	921	820	1033
Mov Cap-2 Maneuver	-	-	-	-	-	-	921	820	-	921	820	-
Stage 1	-	-	-	-	-	-	985	868	-	975	862	-
Stage 2	-	-	-	-	-	-	976	862	-	985	868	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1571	-	-	1587	-	-	-
HCM Lane V/C Ratio	-	0.001	-	-	-	-	-	-
HCM Control Delay (s)	0	7.3	0	-	0	-	-	0
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	32	35	0	0	0
Future Volume (vph)	0	32	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		201	232		109	
Travel Time (s)		5.5	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	35	38	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	35	38	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	32	35	0	0	0
Future Vol, veh/h	0	32	35	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	35	38	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	73	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1572	-	-	-	931	1034
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1572	-	-	-	931	1034
Mov Cap-2 Maneuver	-	-	-	-	931	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1572	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	5	229	27	5	281
Future Volume (vph)	50	5	229	27	5	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989		0.986			
Flt Protected	0.956					0.999
Satd. Flow (prot)	1761	0	1837	0	0	1861
Flt Permitted	0.956					0.999
Satd. Flow (perm)	1761	0	1837	0	0	1861
Link Speed (mph)	25		25			30
Link Distance (ft)	1514		1158			362
Travel Time (s)	41.3		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	5	249	29	5	305
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	278	0	0	310
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	5	229	27	5	281
Future Vol, veh/h	50	5	229	27	5	281
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	54	5	249	29	5	305

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	579	264	0	0	278	0
Stage 1	264	-	-	-	-	-
Stage 2	315	-	-	-	-	-
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	477	775	-	-	1285	-
Stage 1	780	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	475	775	-	-	1285	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	492	1285	-
HCM Lane V/C Ratio	-	-	0.122	0.004	-
HCM Control Delay (s)	-	-	13.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	5	25	10	10	10	20	102	5	5	124	191
Future Volume (vph)	189	5	25	10	10	10	20	102	5	5	124	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.955			0.995			0.919	
Flt Protected		0.959			0.984			0.992			0.999	
Satd. Flow (prot)	0	1760	0	0	1750	0	0	1839	0	0	1710	0
Flt Permitted		0.959			0.984			0.992			0.999	
Satd. Flow (perm)	0	1760	0	0	1750	0	0	1839	0	0	1710	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	205	5	27	11	11	11	22	111	5	5	135	208
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	237	0	0	33	0	0	138	0	0	348	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

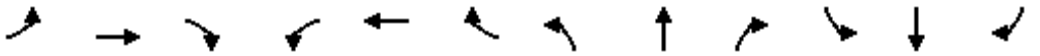
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	189	5	25	10	10	10	20	102	5	5	124	191
Future Vol, veh/h	189	5	25	10	10	10	20	102	5	5	124	191
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	205	5	27	11	11	11	22	111	5	5	135	208
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	8.7	9.4	10.9
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	86%	33%	2%
Vol Thru, %	80%	2%	33%	39%
Vol Right, %	4%	11%	33%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	219	30	320
LT Vol	20	189	10	5
Through Vol	102	5	10	124
RT Vol	5	25	10	191
Lane Flow Rate	138	238	33	348
Geometry Grp	1	1	1	1
Degree of Util (X)	0.194	0.343	0.049	0.432
Departure Headway (Hd)	5.056	5.181	5.375	4.467
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	688	670	800
Service Time	3.14	3.267	3.375	2.531
HCM Lane V/C Ratio	0.196	0.346	0.049	0.435
HCM Control Delay	9.4	11	8.7	10.9
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.7	1.5	0.2	2.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	15	35	5	233	10	255	0	0	264	15
Future Volume (vph)	25	0	15	35	5	233	10	255	0	0	264	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.949			0.893	0.850					0.993	
Flt Protected		0.970			0.988			0.998				
Satd. Flow (prot)	0	1715	0	0	1561	1454	0	3414	0	0	1973	0
Flt Permitted		0.591			0.901			0.932				
Satd. Flow (perm)	0	1045	0	0	1424	1454	0	3189	0	0	1973	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			63	152					3	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	26	0	16	36	5	243	10	266	0	0	275	16
Shared Lane Traffic (%)						42%						
Lane Group Flow (vph)	0	42	0	0	143	141	0	276	0	0	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	14.3	14.3		14.3	14.3	14.3	19.3	19.3				
Total Split (s)	27.3	27.3		27.3	27.3	27.3	27.3	27.3				
Total Split (%)	16.9%	16.9%		16.9%	16.9%	16.9%	16.9%	16.9%				
Maximum Green (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0				
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7				
All-Red Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		7.3			7.3	7.3		7.3				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

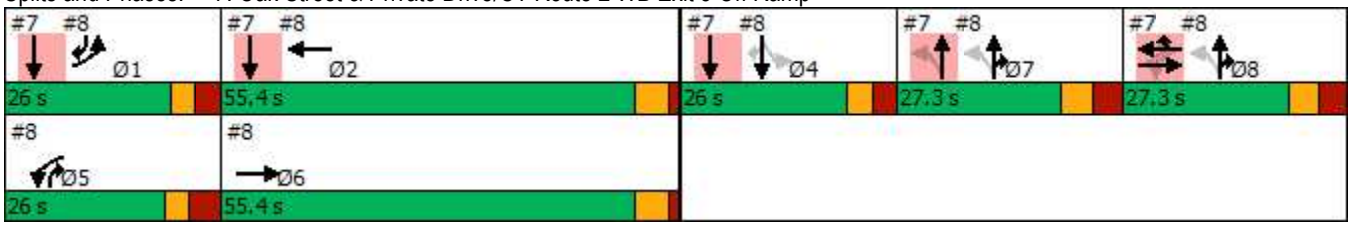
Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Turn Type					
Protected Phases	1	2	4	5	6
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	5.0	18.0	7.0	5.0	18.0
Minimum Split (s)	11.0	24.3	13.0	11.8	24.3
Total Split (s)	26.0	55.4	26.0	26.0	55.4
Total Split (%)	16%	34%	16%	16%	34%
Maximum Green (s)	20.0	50.0	20.0	19.2	50.0
Yellow Time (s)	3.0	4.1	3.3	3.0	4.1
All-Red Time (s)	3.0	1.3	2.7	3.8	1.3
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	1.5	2.5	1.0	1.5	2.5
Recall Mode	None	Min	None	None	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		14.2			14.2	14.2		18.0			70.6	
Actuated g/C Ratio		0.11			0.11	0.11		0.14			0.57	
v/c Ratio		0.17			0.66	0.47		0.60			0.26	
Control Delay		1.4			47.4	12.6		59.1			1.1	
Queue Delay		0.0			0.0	0.0		0.1			0.7	
Total Delay		1.4			47.4	12.6		59.2			1.7	
LOS		A			D	B		E			A	
Approach Delay		1.4			30.2			59.2			1.7	
Approach LOS		A			C			E			A	
Queue Length 50th (ft)		0			64	0		108			0	
Queue Length 95th (ft)		0			167	58		198			0	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		301			290	369		534			1286	
Starvation Cap Reductn		0			0	0		0			668	
Spillback Cap Reductn		2			1	2		10			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.14			0.49	0.38		0.53			0.47	

Intersection Summary

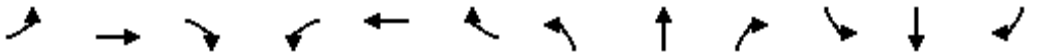
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 124.2
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 28.5 — Intersection LOS: C
Intersection Capacity Utilization 43.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4	Ø5	Ø6
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	574	96	116	714	10	207	114	192	10	67	305
Future Volume (vph)	192	574	96	116	714	10	207	114	192	10	67	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.979			0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.984		0.950		
Satd. Flow (prot)	3319	3465	0	1770	3414	0	1625	1683	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.711	0.877		0.408		
Satd. Flow (perm)	3319	3465	0	1770	3414	0	1216	1500	1531	735	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		12			1				202			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	202	604	101	122	752	11	218	120	202	11	71	321
Shared Lane Traffic (%)							26%					
Lane Group Flow (vph)	202	705	0	122	763	0	161	177	202	11	71	321
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

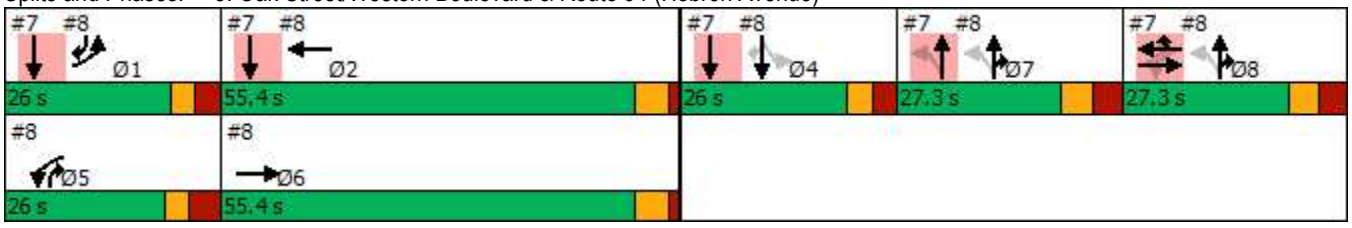
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	14.1	35.2		12.8	34.8		39.8	39.8	60.2	9.8	9.8	23.9
Actuated g/C Ratio	0.11	0.28		0.10	0.28		0.32	0.32	0.48	0.08	0.08	0.19
v/c Ratio	0.54	0.71		0.67	0.80		0.41	0.37	0.24	0.19	0.47	0.60
Control Delay	61.1	44.8		75.9	49.2		15.6	14.2	0.6	69.2	70.8	28.9
Queue Delay	0.0	0.0		0.0	0.0		1.2	1.1	0.8	0.0	0.0	0.0
Total Delay	61.1	44.8		75.9	49.2		16.8	15.4	1.4	69.2	70.8	28.9
LOS	E	D		E	D		B	B	A	E	E	C
Approach Delay		48.4			52.9			10.6			37.4	
Approach LOS		D			D			B			D	
Queue Length 50th (ft)	80	265		96	301		37	43	0	9	57	71
Queue Length 95th (ft)	147	400		194	442		58	63	0	32	123	106
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	555	1457		284	1429		445	548	909	123	322	687
Starvation Cap Reductn	0	0		0	0		137	201	458	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.48		0.43	0.53		0.52	0.51	0.45	0.09	0.22	0.47

Intersection Summary

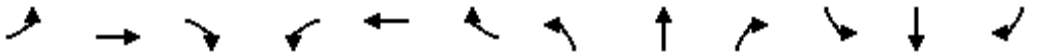
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 124.2
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 40.8 — Intersection LOS: D
Intersection Capacity Utilization 57.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

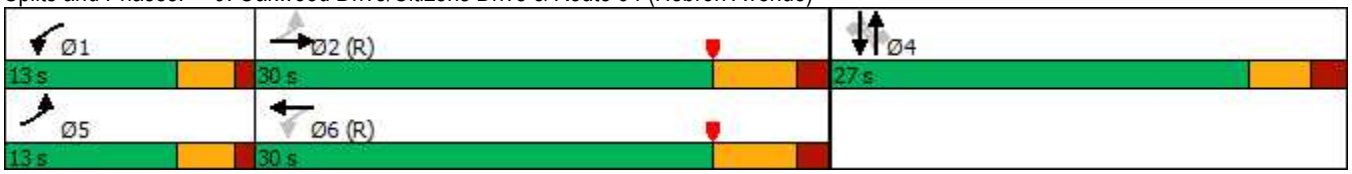


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	621	70	70	715	15	110	10	75	15	5	15
Future Volume (vph)	20	621	70	70	715	15	110	10	75	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.997				0.850			0.850
Flt Protected	0.950			0.950				0.956			0.963	
Satd. Flow (prot)	1770	3486	0	1770	3529	0	0	1781	1583	0	1794	1583
Flt Permitted	0.352			0.316				0.729			0.747	
Satd. Flow (perm)	656	3486	0	589	3529	0	0	1358	1583	0	1391	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			3				111			111
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	22	675	76	76	777	16	120	11	82	16	5	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	751	0	76	793	0	0	131	82	0	21	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	13.0	30.0		13.0	30.0		27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	18.6%	42.9%		18.6%	42.9%		38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Maximum Green (s)	9.0	23.9		9.0	23.9		21.8	21.8	21.8	21.8	21.8	21.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	47.2	41.5		50.0	46.1			12.5	12.5		12.5	12.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.67	0.59		0.71	0.66			0.18	0.18		0.18	0.18
v/c Ratio	0.04	0.36		0.14	0.34			0.54	0.22		0.08	0.04
Control Delay	4.8	11.1		3.8	5.9			33.8	4.3		22.7	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	4.8	11.1		3.8	5.9			33.8	4.3		22.7	0.2
LOS	A	B		A	A			C	A		C	A
Approach Delay		10.9			5.7			22.4			13.0	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	2	94		8	54			52	0		8	0
Queue Length 95th (ft)	10	166		21	92			94	20		23	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	607	2073		577	2324			422	569		433	569
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.04	0.36		0.13	0.34			0.31	0.14		0.05	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 49 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)

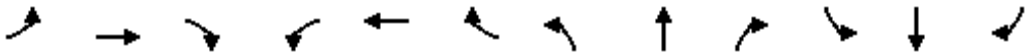


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	507	15	5	533	43	20	5	10	54	5	247
Future Volume (vph)	189	507	15	5	533	43	20	5	10	54	5	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.961				0.850
Flt Protected	0.950			0.950				0.972			0.956	
Satd. Flow (prot)	1770	3525	0	1770	3539	1583	0	1740	0	0	1781	1583
Flt Permitted	0.434			0.290				0.785			0.715	
Satd. Flow (perm)	808	3525	0	540	3539	1583	0	1405	0	0	1332	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				103		11				119
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			6.4			19.0	
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
Adj. Flow (vph)	205	551	16	5	579	47	22	5	11	59	5	268
Shared Lane Traffic (%)												
Lane Group Flow (vph)	205	567	0	5	579	47	0	38	0	0	64	268
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	13.0	30.0		13.0	30.0	30.0	27.0	27.0		27.0	27.0	13.0
Total Split (%)	18.6%	42.9%		18.6%	42.9%	42.9%	38.6%	38.6%		38.6%	38.6%	18.6%
Maximum Green (s)	9.0	26.3		9.0	24.2	24.2	21.4	21.4		21.4	21.4	9.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	34.3	26.3		53.4	39.3	39.3		9.9			9.9	20.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.49	0.38		0.76	0.56	0.56		0.14			0.14	0.30
v/c Ratio	0.40	0.43		0.01	0.29	0.05		0.18			0.34	0.48
Control Delay	8.3	11.9		3.2	10.2	0.4		22.5			32.0	12.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	8.3	11.9		3.2	10.2	0.4		22.5			32.0	12.1
LOS	A	B		A	B	A		C			C	B
Approach Delay		11.0			9.4			22.5			15.9	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	20	40		1	66	0		11			26	47
Queue Length 95th (ft)	72	70		3	121	3		34			57	89
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559			150		150						215
Base Capacity (vph)	541	1327		824	1987	934		437			407	581
Starvation Cap Reductn	0	0		0	0	0		0			0	0
Spillback Cap Reductn	0	0		0	0	0		0			0	0
Storage Cap Reductn	0	0		0	0	0		0			0	0
Reduced v/c Ratio	0.38	0.43		0.01	0.29	0.05		0.09			0.16	0.46

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 44 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 56.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Private Driveway/Eastern Blvd & Route 94 (Hebron Avenue)

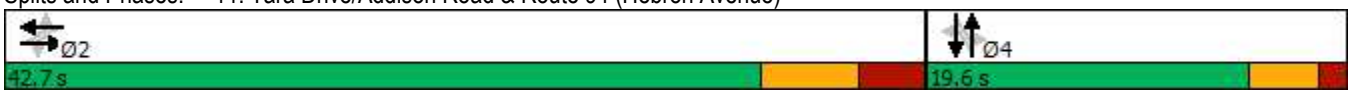


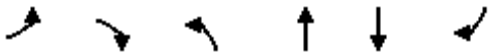
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	527	15	5	499	93	20	10	10	108	10	62
Future Volume (vph)	29	527	15	5	499	93	20	10	10	108	10	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.976			0.966			0.954	
Flt Protected	0.950			0.950				0.976			0.971	
Satd. Flow (prot)	1770	1855	0	1770	1818	0	0	1756	0	0	1726	0
Flt Permitted	0.359			0.398				0.842			0.791	
Satd. Flow (perm)	669	1855	0	741	1818	0	0	1515	0	0	1406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			25			11			40	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	32	573	16	5	542	101	22	11	11	117	11	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	589	0	5	643	0	0	44	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	42.7	42.7		42.7	42.7		19.6	19.6		19.6	19.6	
Total Split (%)	68.5%	68.5%		68.5%	68.5%		31.5%	31.5%		31.5%	31.5%	
Maximum Green (s)	35.0	35.0		35.0	35.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	35.5	35.5		35.5	35.5			10.9			10.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.19			0.19	
v/c Ratio	0.08	0.52		0.01	0.58			0.15			0.67	
Control Delay	6.5	9.5		5.8	10.1			16.9			28.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.5	9.5		5.8	10.1			16.9			28.9	
LOS	A	A		A	B			B			C	
Approach Delay		9.3			10.1			16.9			28.9	
Approach LOS		A			B			B			C	
Queue Length 50th (ft)	4	103		1	113			10			50	
Queue Length 95th (ft)	16	209		5	235			32			108	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	404	1123		447	1109			396			389	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.08	0.52		0.01	0.58			0.11			0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 62.3			
Actuated Cycle Length: 58.7			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 56.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	46	0	224	263	0
Future Volume (vph)	2	46	0	224	263	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	0	1863	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	0	1863	1863	0
Link Speed (mph)	30			35	30	
Link Distance (ft)	376			256	186	
Travel Time (s)	8.5			5.0	4.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	50	0	243	286	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	50	0	243	286	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

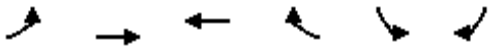
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	46	0	224	263	0
Future Vol, veh/h	2	46	0	224	263	0
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	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	2	50	0	243	286	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	529	286	-	0	-	0
Stage 1	286	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	510	753	0	-	-	0
Stage 1	763	-	0	-	-	0
Stage 2	797	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	510	753	-	-	-	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	-	510	753	-
HCM Lane V/C Ratio	-	0.004	0.066	-
HCM Control Delay (s)	-	12.1	10.1	-
HCM Lane LOS	-	B	B	-
HCM 95th %tile Q(veh)	-	0	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	32	40	0	0	0
Future Volume (vph)	0	32	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1514	201		290	
Travel Time (s)		41.3	5.5		6.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	35	43	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	35	43	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

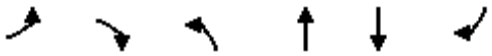
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	32	40	0	0	0
Future Vol, veh/h	0	32	40	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	35	43	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	43	0	-	0	78	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1566	-	-	-	925	1027
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1566	-	-	-	925	1027
Mov Cap-2 Maneuver	-	-	-	-	925	-
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1566	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	201	291	0
Future Volume (vph)	0	0	0	201	291	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	105			238	256	
Travel Time (s)	2.4			4.6	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	218	316	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	218	316	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

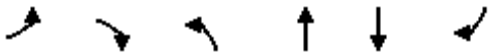
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	201	291	0
Future Vol, veh/h	0	0	0	201	291	0
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	0	0	0	218	316	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	534	316	316	0	-	0
Stage 1	316	-	-	-	-	-
Stage 2	218	-	-	-	-	-
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	507	724	1244	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	507	724	1244	-	-	-
Mov Cap-2 Maneuver	507	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1244	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	15	44	191	272	19
Future Volume (vph)	10	15	44	191	272	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.991	
Flt Protected	0.980			0.991		
Satd. Flow (prot)	1679	0	0	1846	1846	0
Flt Permitted	0.980			0.991		
Satd. Flow (perm)	1679	0	0	1846	1846	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	326			977	238	
Travel Time (s)	8.9			19.0	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	48	208	296	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	256	317	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

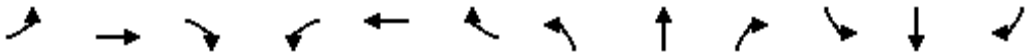
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	44	191	272	19
Future Vol, veh/h	10	15	44	191	272	19
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	11	16	48	208	296	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	611	307	317	0	-	0
Stage 1	307	-	-	-	-	-
Stage 2	304	-	-	-	-	-
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	457	733	1243	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	437	733	1243	-	-	-
Mov Cap-2 Maneuver	437	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1243	-	577	-	-
HCM Lane V/C Ratio	0.038	-	0.047	-	-
HCM Control Delay (s)	8	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	25	0	0	63	0	0	0	0	0	0	0
Future Volume (vph)	0	25	0	0	63	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		232			326			147			103	
Travel Time (s)		6.3			8.9			3.3			2.3	
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
Adj. Flow (vph)	0	27	0	0	68	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	68	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

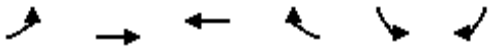
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	25	0	0	63	0	0	0	0	0	0	0
Future Vol, veh/h	0	25	0	0	63	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	0	27	0	0	68	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	27	0	0	95	95	27	95	95	68
Stage 1	-	-	-	-	-	-	27	27	-	68	68	-
Stage 2	-	-	-	-	-	-	68	68	-	27	27	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1533	-	-	1587	-	-	888	795	1048	888	795	995
Stage 1	-	-	-	-	-	-	990	873	-	942	838	-
Stage 2	-	-	-	-	-	-	942	838	-	990	873	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1587	-	-	888	795	1048	888	795	995
Mov Cap-2 Maneuver	-	-	-	-	-	-	888	795	-	888	795	-
Stage 1	-	-	-	-	-	-	990	873	-	942	838	-
Stage 2	-	-	-	-	-	-	942	838	-	990	873	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1533	-	-	1587	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	25	58	0	0	0
Future Volume (vph)	0	25	58	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1863	1863	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		193	232		109	
Travel Time (s)		5.3	6.3		2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	63	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	63	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	25	58	0	0	0
Future Vol, veh/h	0	25	58	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	0	27	63	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	63	0	-	0	90	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1540	-	-	-	910	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1540	-	-	-	910	1002
Mov Cap-2 Maneuver	-	-	-	-	910	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1540	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	42	5	136	27	0	295
Future Volume (vph)	42	5	136	27	0	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987		0.978			
Flt Protected	0.957					
Satd. Flow (prot)	1759	0	1822	0	0	1863
Flt Permitted	0.957					
Satd. Flow (perm)	1759	0	1822	0	0	1863
Link Speed (mph)	25		25			30
Link Distance (ft)	1518		1158			362
Travel Time (s)	41.4		31.6			8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	5	148	29	0	321
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	177	0	0	321
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	5	136	27	0	295
Future Vol, veh/h	42	5	136	27	0	295
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	46	5	148	29	0	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	484	163	0	0	177	0
Stage 1	163	-	-	-	-	-
Stage 2	321	-	-	-	-	-
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	542	882	-	-	1399	-
Stage 1	866	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	542	882	-	-	1399	-
Mov Cap-2 Maneuver	542	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	565	1399	-
HCM Lane V/C Ratio	-	-	0.09	-	-
HCM Control Delay (s)	-	-	12	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	297	15	40	10	15	10	20	138	5	10	158	198
Future Volume (vph)	297	15	40	10	15	10	20	138	5	10	158	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.961			0.996			0.927	
Flt Protected		0.959			0.986			0.994			0.999	
Satd. Flow (prot)	0	1760	0	0	1765	0	0	1844	0	0	1725	0
Flt Permitted		0.959			0.986			0.994			0.999	
Satd. Flow (perm)	0	1760	0	0	1765	0	0	1844	0	0	1725	0
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		364			300			539			597	
Travel Time (s)		7.1			6.8			12.3			13.6	
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
Adj. Flow (vph)	323	16	43	11	16	11	22	150	5	11	172	215
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	382	0	0	38	0	0	177	0	0	398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

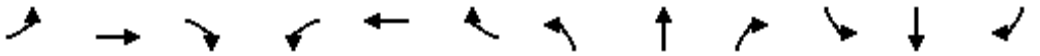
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	297	15	40	10	15	10	20	138	5	10	158	198
Future Vol, veh/h	297	15	40	10	15	10	20	138	5	10	158	198
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	323	16	43	11	16	11	22	150	5	11	172	215
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.9	9.6	11.2	14.9
HCM LOS	C	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	84%	29%	3%
Vol Thru, %	85%	4%	43%	43%
Vol Right, %	3%	11%	29%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	352	35	366
LT Vol	20	297	10	10
Through Vol	138	15	15	158
RT Vol	5	40	10	198
Lane Flow Rate	177	383	38	398
Geometry Grp	1	1	1	1
Degree of Util (X)	0.286	0.6	0.065	0.571
Departure Headway (Hd)	5.816	5.644	6.124	5.166
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	615	639	581	696
Service Time	3.88	3.692	4.203	3.219
HCM Lane V/C Ratio	0.288	0.599	0.065	0.572
HCM Control Delay	11.2	16.9	9.6	14.9
HCM Lane LOS	B	C	A	B
HCM 95th-tile Q	1.2	4	0.2	3.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	10	61	5	219	15	287	0	0	259	10
Future Volume (vph)	20	0	10	61	5	219	15	287	0	0	259	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	11	12	12	14	12
Storage Length (ft)	0		0	0		485	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.956			0.918	0.850					0.995	
Flt Protected		0.967			0.980			0.997				
Satd. Flow (prot)	0	1722	0	0	1592	1454	0	3411	0	0	1977	0
Flt Permitted		0.643			0.850			0.927				
Satd. Flow (perm)	0	1145	0	0	1381	1454	0	3171	0	0	1977	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		128			30	144					3	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		92			816			242			146	
Travel Time (s)		2.1			22.3			5.5			3.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	0	10	64	5	228	16	299	0	0	270	10
Shared Lane Traffic (%)						37%						
Lane Group Flow (vph)	0	31	0	0	153	144	0	315	0	0	280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Prot	Perm	NA			NA	
Protected Phases		8			8	8		7			1 2 4	
Permitted Phases	8			8			7	7			1 2 4	
Detector Phase	8	8		8	8	8	7	7			1 2 4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0				
Minimum Split (s)	12.0	12.0		12.0	12.0	12.0	17.0	17.0				
Total Split (s)	16.0	16.0		16.0	16.0	16.0	27.0	27.0				
Total Split (%)	10.2%	10.2%		10.2%	10.2%	10.2%	17.2%	17.2%				
Maximum Green (s)	11.0	11.0		11.0	11.0	11.0	22.0	22.0				
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.0			5.0	5.0		5.0				
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.5	3.5				
Recall Mode	None	None		None	None	None	None	None				

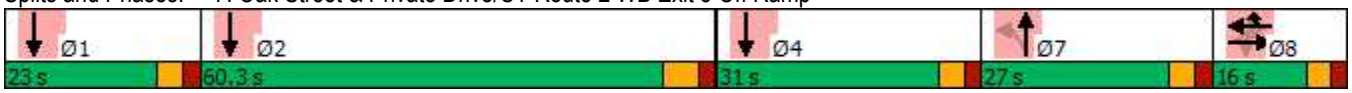
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	18.0	7.0
Minimum Split (s)	10.2	24.3	12.0
Total Split (s)	23.0	60.3	31.0
Total Split (%)	15%	38%	20%
Maximum Green (s)	17.8	54.0	26.0
Yellow Time (s)	3.0	4.3	3.0
All-Red Time (s)	2.2	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?			
Vehicle Extension (s)	1.5	2.5	1.0
Recall Mode	None	Min	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		11.0			11.0	11.0		14.7			47.9	
Actuated g/C Ratio		0.12			0.12	0.12		0.17			0.54	
v/c Ratio		0.12			0.78	0.47		0.60			0.26	
Control Delay		1.0			58.5	12.5		39.9			11.9	
Queue Delay		0.0			0.0	0.0		0.0			0.3	
Total Delay		1.0			58.5	12.5		39.9			12.3	
LOS		A			E	B		D			B	
Approach Delay		1.0			36.2			39.9			12.3	
Approach LOS		A			D			D			B	
Queue Length 50th (ft)		0			71	0		87			78	
Queue Length 95th (ft)		0			#194	58		136			135	
Internal Link Dist (ft)		12			736			162			66	
Turn Bay Length (ft)						485						
Base Capacity (vph)		254			197	306		786			1587	
Starvation Cap Reductn		0			0	0		0			826	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.12			0.78	0.47		0.40			0.37	

Intersection Summary

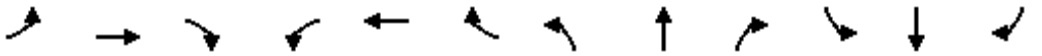
Area Type: Other
Cycle Length: 157.3
Actuated Cycle Length: 88.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 29.0 — Intersection LOS: C
Intersection Capacity Utilization 37.4% — ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Oak Street & Private Drive/CT Route 2 WB Exit 8 Off Ramp



Lane Group	Ø1	Ø2	Ø4
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	607	51	131	726	10	232	59	235	20	87	360
Future Volume (vph)	88	607	51	131	726	10	232	59	235	20	87	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	11	11	11	11	11	11	13	12
Storage Length (ft)	675		0	631		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	1		2
Taper Length (ft)	240			88			25			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.88
Frt		0.988			0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.971		0.950		
Satd. Flow (prot)	3319	3497	0	1770	3414	0	1625	1661	1531	1711	1925	2787
Flt Permitted	0.950			0.950			0.697	0.762		0.331		
Satd. Flow (perm)	3319	3497	0	1770	3414	0	1192	1303	1531	596	1925	2787
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		6			1				247			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		705			912			146			531	
Travel Time (s)		10.7			13.8			3.3			14.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	639	54	138	764	11	244	62	247	21	92	379
Shared Lane Traffic (%)							39%					
Lane Group Flow (vph)	93	693	0	138	775	0	149	157	247	21	92	379
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		32			29			22			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pm+ov
Protected Phases	1	6		5	2			7 8	5 7 8		4	1
Permitted Phases		6			2		7 8			4	4	4
Detector Phase	1	6		5	2		7 8	7 8	5 7 8	4	4	1
Switch Phase												
Minimum Initial (s)	5.0	18.0		5.0	18.0					7.0	7.0	5.0
Minimum Split (s)	11.0	24.3		11.8	24.3					13.0	13.0	11.0
Total Split (s)	26.0	55.4		26.0	55.4					26.0	26.0	26.0
Total Split (%)	16.0%	34.2%		16.0%	34.2%					16.0%	16.0%	16.0%
Maximum Green (s)	20.0	50.0		19.2	50.0					20.0	20.0	20.0
Yellow Time (s)	3.0	4.1		3.0	4.1					3.3	3.3	3.0
All-Red Time (s)	3.0	1.3		3.8	1.3					2.7	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)	6.0	5.4		6.8	5.4					6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	2.5		1.5	2.5					1.0	1.0	1.5
Recall Mode	None	Min		None	Min					None	None	None

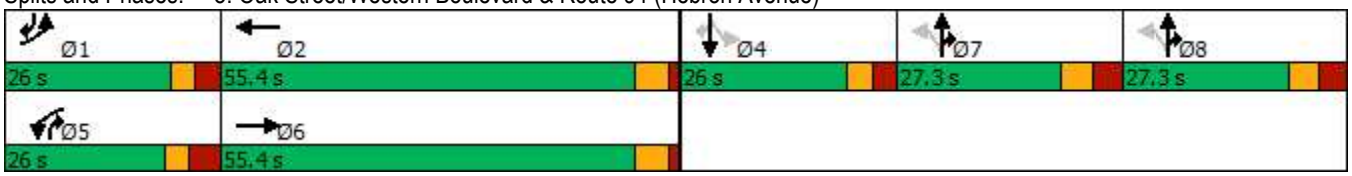
Lane Group	Ø7	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Turn Type		
Protected Phases	7	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	12.0	7.0
Minimum Split (s)	19.3	14.3
Total Split (s)	27.3	27.3
Total Split (%)	17%	17%
Maximum Green (s)	20.0	20.0
Yellow Time (s)	3.7	3.7
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.5	2.5
Recall Mode	None	None

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	12.6	31.1		13.6	32.9		32.4	32.4	53.6	12.1	12.1	24.7
Actuated g/C Ratio	0.11	0.27		0.12	0.28		0.28	0.28	0.46	0.10	0.10	0.21
v/c Ratio	0.26	0.73		0.67	0.80		0.45	0.43	0.29	0.34	0.46	0.64
Control Delay	53.9	44.5		68.2	45.7		42.8	41.8	3.6	68.3	59.7	26.5
Queue Delay	0.0	0.0		0.0	0.0		4.6	4.2	2.6	0.0	0.0	0.0
Total Delay	53.9	44.5		68.2	45.7		47.3	46.0	6.2	68.3	59.7	26.5
LOS	D	D		E	D		D	D	A	E	E	C
Approach Delay		45.6			49.1			28.6			34.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	32	243		99	277		96	101	0	15	66	68
Queue Length 95th (ft)	72	382		202	423		202	208	50	48	139	118
Internal Link Dist (ft)		625			832			66			451	
Turn Bay Length (ft)	675			631								
Base Capacity (vph)	594	1568		304	1528		450	492	899	106	344	790
Starvation Cap Reductn	0	0		0	0		232	260	529	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.44		0.45	0.51		0.68	0.68	0.67	0.20	0.27	0.48

Intersection Summary

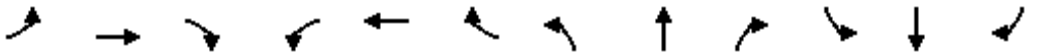
Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 115.6
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 41.4 — Intersection LOS: D
Intersection Capacity Utilization 58.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Oak Street/Western Boulevard & Route 94 (Hebron Avenue)



Lane Group	Ø7	Ø8
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

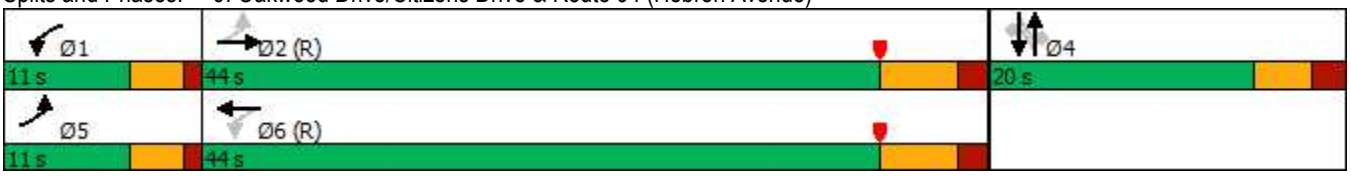


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	807	40	65	707	5	145	5	115	15	5	15
Future Volume (vph)	15	807	40	65	707	5	145	5	115	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	85		0	0		225	0		60
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	88			88			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.999				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.963	
Satd. Flow (prot)	1770	3514	0	1770	3536	0	0	1777	1583	0	1794	1583
Flt Permitted	0.359			0.240				0.717			0.756	
Satd. Flow (perm)	669	3514	0	447	3536	0	0	1336	1583	0	1408	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			1				125			103
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		912			820			348			223	
Travel Time (s)		13.8			12.4			9.5			6.1	
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
Adj. Flow (vph)	16	877	43	71	768	5	158	5	125	16	5	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	920	0	71	773	0	0	163	125	0	21	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases	2			6			4		4	4		4
Detector Phase	5	2		1	6		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	15.0		4.0	15.0		9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	8.0	21.1		8.0	21.1		14.2	14.2	14.2	14.2	14.2	14.2
Total Split (s)	11.0	44.0		11.0	44.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%		26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
Maximum Green (s)	7.0	37.9		7.0	37.9		14.8	14.8	14.8	14.8	14.8	14.8
Yellow Time (s)	3.0	4.3		3.0	4.3		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.1		4.0	6.1			5.2	5.2		5.2	5.2
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	49.0	42.2		52.1	48.6			13.0	13.0		13.0	13.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.65	0.56		0.69	0.65			0.17	0.17		0.17	0.17
v/c Ratio	0.03	0.46		0.17	0.34			0.70	0.33		0.09	0.04
Control Delay	4.2	11.7		4.1	5.4			45.9	8.1		25.7	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	4.2	11.7		4.1	5.4			45.9	8.1		25.7	0.2
LOS	A	B		A	A			D	A		C	A
Approach Delay		11.6			5.2			29.5			14.7	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)	2	136		7	49			70	0		8	0
Queue Length 95th (ft)	7	190		16	89			#144	41		26	0
Internal Link Dist (ft)		832			740			268			143	
Turn Bay Length (ft)	105			85					225			60
Base Capacity (vph)	547	1979		434	2291			263	412		277	395
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.03	0.46		0.16	0.34			0.62	0.30		0.08	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 9: Oakwood Drive/Citizens Drive & Route 94 (Hebron Avenue)

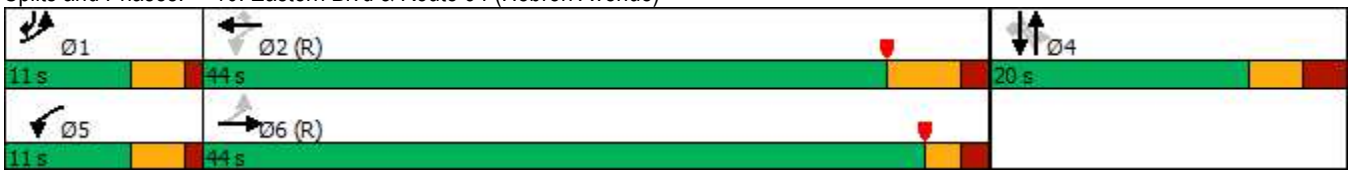


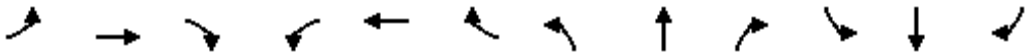
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	720	20	0	524	31	30	5	10	57	5	223
Future Volume (vph)	197	720	20	0	524	31	30	5	10	57	5	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	559		0	150		150	0		0	0		215
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	88			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.970				0.850
Flt Protected	0.950							0.967			0.956	
Satd. Flow (prot)	1770	3525	0	1863	3539	1583	0	1747	0	0	1781	1583
Flt Permitted	0.438							0.757			0.706	
Satd. Flow (perm)	816	3525	0	1863	3539	1583	0	1368	0	0	1315	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				96		11				242
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		820			953			234			977	
Travel Time (s)		12.4			14.4			4.6			19.0	
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
Adj. Flow (vph)	214	783	22	0	570	34	33	5	11	62	5	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	214	805	0	0	570	34	0	49	0	0	67	242
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			4	1
Permitted Phases	6			2		2	4			4		4
Detector Phase	1	6		5	2	2	4	4		4	4	1
Switch Phase												
Minimum Initial (s)	4.0	25.0		4.0	25.0	25.0	9.0	9.0		9.0	9.0	4.0
Minimum Split (s)	8.0	28.7		8.0	30.8	30.8	14.6	14.6		14.6	14.6	8.0
Total Split (s)	11.0	44.0		11.0	44.0	44.0	20.0	20.0		20.0	20.0	11.0
Total Split (%)	14.7%	58.7%		14.7%	58.7%	58.7%	26.7%	26.7%		26.7%	26.7%	14.7%
Maximum Green (s)	7.0	40.3		7.0	38.2	38.2	14.4	14.4		14.4	14.4	7.0
Yellow Time (s)	3.0	2.0		3.0	4.1	4.1	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.7		1.0	1.7	1.7	2.6	2.6		2.6	2.6	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	3.7		4.0	5.8	5.8		5.6			5.6	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	47.7	40.3			44.5	44.5		10.3			10.3	20.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.64	0.54			0.59	0.59		0.14			0.14	0.28
v/c Ratio	0.35	0.42			0.27	0.03		0.25			0.37	0.40
Control Delay	4.1	6.1			9.1	0.1		26.5			35.2	4.7
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	4.1	6.1			9.1	0.1		26.5			35.2	4.7
LOS	A	A			A	A		C			D	A
Approach Delay		5.7			8.6			26.5			11.3	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)	16	41			66	0		16			29	0
Queue Length 95th (ft)	33	61			108	0		44			63	43
Internal Link Dist (ft)		740			873			154			897	
Turn Bay Length (ft)	559					150						215
Base Capacity (vph)	623	1896			2101	979		271			252	616
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.34	0.42			0.27	0.03		0.18			0.27	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 55 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 55.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: Eastern Blvd & Route 94 (Hebron Avenue)



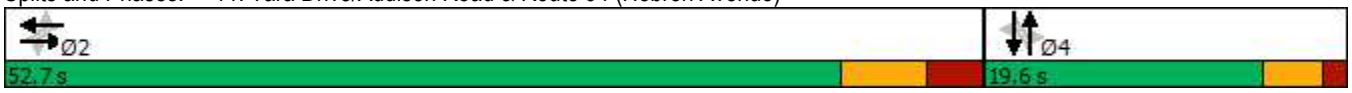


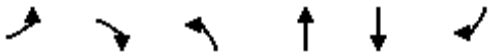
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	730	25	5	504	86	20	5	5	127	10	31
Future Volume (vph)	32	730	25	5	504	86	20	5	5	127	10	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	80			81			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.978			0.979			0.975	
Flt Protected	0.950			0.950				0.967			0.964	
Satd. Flow (prot)	1770	1853	0	1770	1822	0	0	1763	0	0	1751	0
Flt Permitted	0.368			0.257				0.809			0.758	
Satd. Flow (perm)	685	1853	0	479	1822	0	0	1475	0	0	1377	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			22			5			14	
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		1611			485			340			520	
Travel Time (s)		24.4			7.3			9.3			11.8	
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
Adj. Flow (vph)	35	793	27	5	548	93	22	5	5	138	11	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	820	0	5	641	0	0	32	0	0	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		11.6	11.6		11.6	11.6	
Total Split (s)	52.7	52.7		52.7	52.7		19.6	19.6		19.6	19.6	
Total Split (%)	72.9%	72.9%		72.9%	72.9%		27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	45.0	45.0		45.0	45.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.2	3.2		3.2	3.2	
All-Red Time (s)	3.1	3.1		3.1	3.1		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	7.7	7.7		7.7	7.7			4.6			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1			12.0			12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.17			0.17	
v/c Ratio	0.08	0.68		0.02	0.54			0.12			0.73	
Control Delay	5.8	11.9		5.4	8.9			22.1			43.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.8	11.9		5.4	8.9			22.1			43.0	
LOS	A	B		A	A			C			D	
Approach Delay		11.7			8.9			22.1			43.0	
Approach LOS		B			A			C			D	
Queue Length 50th (ft)	5	198		1	128			10			69	
Queue Length 95th (ft)	16	347		4	224			31			#139	
Internal Link Dist (ft)		1531			405			260			440	
Turn Bay Length (ft)	80			80								
Base Capacity (vph)	445	1205		311	1191			322			308	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.08	0.68		0.02	0.54			0.10			0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 72.3			
Actuated Cycle Length: 69.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.2		Intersection LOS: B	
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 11: Tara Drive/Addison Road & Route 94 (Hebron Avenue)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	14	0	201	277	0
Future Volume (vph)	1	14	0	201	277	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	0	1863	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	353			256	205	
Travel Time (s)	8.0			5.0	4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	15	0	218	301	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	15	0	218	301	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.6%		ICU Level of Service A	
Analysis Period (min) 15			

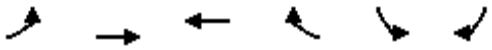
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	14	0	201	277	0
Future Vol, veh/h	1	14	0	201	277	0
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	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	1	15	0	218	301	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	519	301	-	0	-	0
Stage 1	301	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	517	739	0	-	-	0
Stage 1	751	-	0	-	-	0
Stage 2	818	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	517	739	-	-	-	-
Mov Cap-2 Maneuver	517	-	-	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	-	517	739	-
HCM Lane V/C Ratio	-	0.002	0.021	-
HCM Control Delay (s)	-	12	10	-
HCM Lane LOS	-	B	B	-
HCM 95th %tile Q(veh)	-	0	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	25	32	31	0	0
Future Volume (vph)	7	25	32	31	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.933			
Flt Protected		0.989				
Satd. Flow (prot)	0	1842	1738	0	1863	0
Flt Permitted		0.989				
Satd. Flow (perm)	0	1842	1738	0	1863	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		1518	193		288	
Travel Time (s)		41.4	5.3		6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	27	35	34	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	35	69	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 10.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	25	32	31	0	0
Future Vol, veh/h	7	25	32	31	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	8	27	35	34	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	69	0	-	0	95	52
Stage 1	-	-	-	-	52	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1532	-	-	-	905	1016
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	900	1016
Mov Cap-2 Maneuver	-	-	-	-	900	-
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	7.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-