TRAFFIC IMPACT ANALYSIS FOR

Multi-Family Residential Development on Henry Clower Blvd

Snellville, GA

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1. Introduction

The *Snellville Towne Center Flats* project is a residential project planned to be a multifamily apartment development in downtown Snellville, Georgia. The development is planned to be built out in one phase and is expected to be completed by the year 2027.

The purpose of this traffic study is to identify the traffic impacts associated with the proposed development on the surrounding roadway network. In addition to the proposed residential development, background traffic growth is being analyzed in the form of a background growth rate. Figure 1 shows the proposed site location in the vicinity of the Snellville, Georgia. The site location is shown on an aerial image in Figure 2. A copy of the proposed site plan is provided in Appendix A.

This report has been prepared for submittal to the City of Snellville and the Gwinnett County Department of Transportation to evaluate the traffic conditions at the site. This report summarizes the data collected, proposed access points, projected traffic at the study intersections, analysis of traffic impacts including level of service (LOS), and conclusions from the analysis.

Figure 1: Vicinity Map

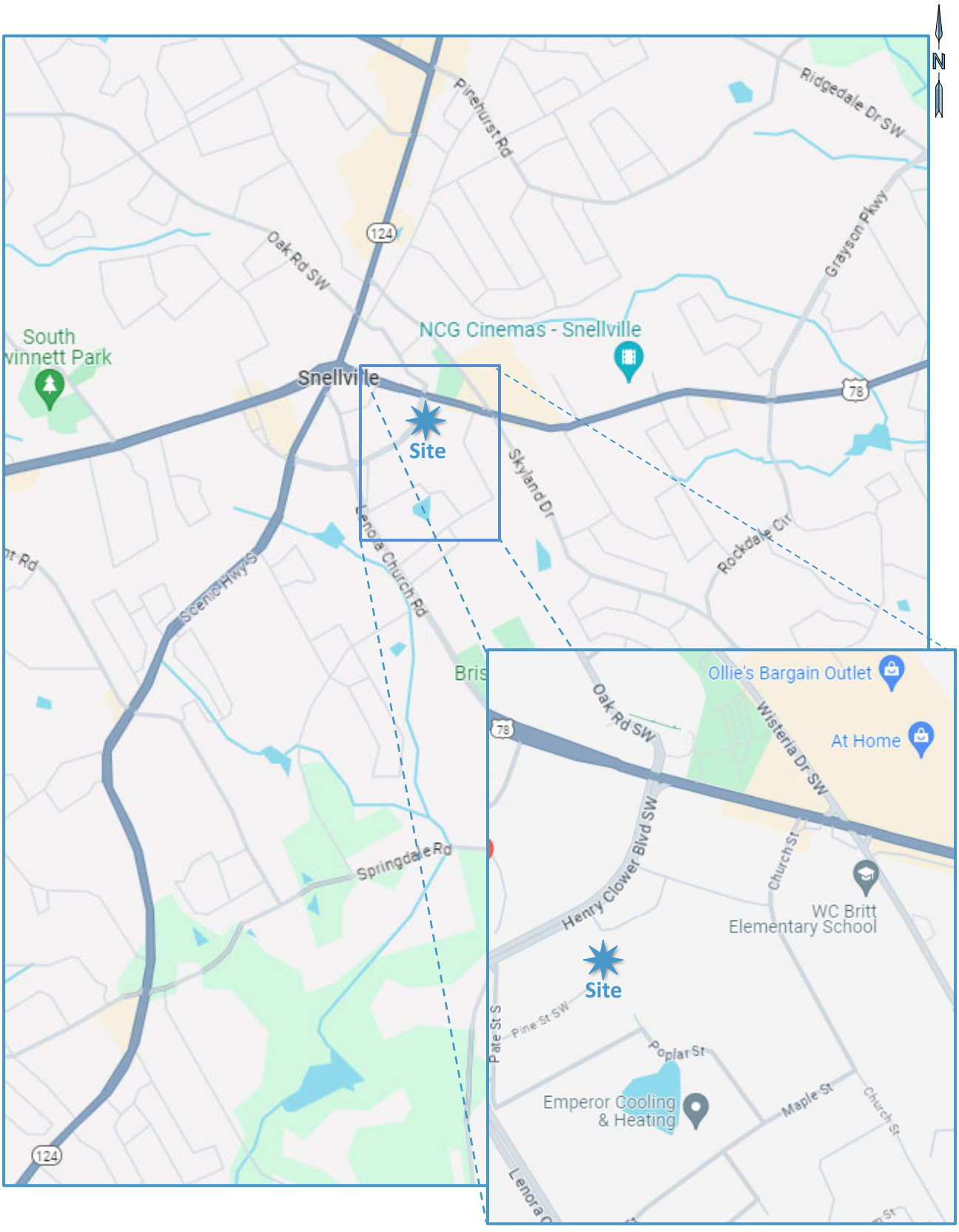
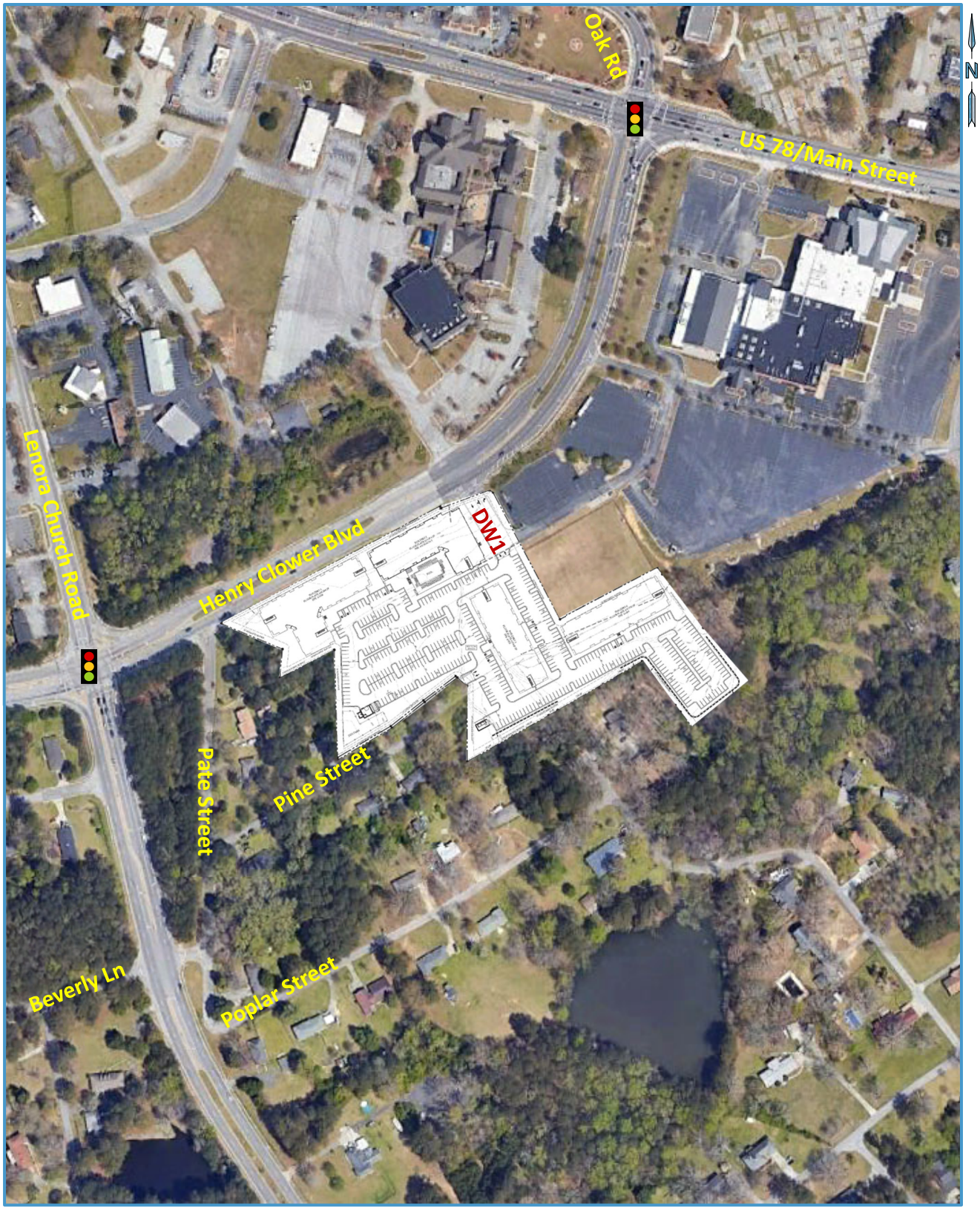


Figure 2: Site Location Aerial



2. Existing and Proposed Development Description

The site is planned to occupy the currently undeveloped land southwest of the Church on Main, on the southeast side of Henry Clower Blvd and to the east of Lenora Church Road. The site is located adjacent to a large parking lot that is part of the Snellville Park & Ride that also shared access with the Church on Main. The development, at full build-out, will consist of a residential development with 300 multifamily units. The development will be built in one phase through the year 2027. The *Snellville Towne Center Flats* is proposed to share access with the adjacent Snellville Park & Ride and Church on Main development. This site will also have additional connectivity with local residential roads Pine Street, Pate Street and Poplar Street with connectivity to both Henry Clower Blvd and Lenora Church Road. A copy of the proposed site plan is attached in Appendix A. The land use with ITE Trip Generation code is provided below:

Build-out complete by 2027:

- Multifamily Housing (Mid-Rise) (ITE code 221) – 300 Dwelling Units

The proposed *Snellville Towne Center Flats* development will have two shared (existing) access locations to the external road network located on Henry Clower Blvd and one shared (existing) access to Lenora Church Road via Pine Street and Pate Street.

3. Existing Conditions

3.1. Transportation Facilities

This traffic impact study examines the existing (2024), background (2027) and full build (2027) operations of the intersections listed in Table 1. There are two main roadways being analyzed in this report with roadway characteristics summarized in Table 2. The existing lane configuration is shown in Figure 3.

Table 1: Study Intersections

#	Intersections	Traffic Control
1	US 78/Main Street at Henry Clower Blvd/Oak Road	Signal Control
2	Henry Clower Blvd at Church Driveway/DW1	Side-Street Stop Control
3	Henry Clower Blvd at Pate Street (RIRO)	Side-Street Stop Control
4	Henry Clower Blvd at Lenora Church Road	Signal Control
5	Lenora Church Road at Poplar Street	Side-Street Stop Control
6	Poplar Street at Pate Street	Side-Street Stop Control
7	Pate Street at Pine Street	Side-Street Stop Control

US 78/Main Street is a five-lane undivided roadway in this section, that runs primarily east to west from Stone Mountain through Snellville in Gwinnett County. In this section of roadway, the functional classification is Principal Arterial and has a posted speed limit of 35 mph in the project area.

Henry Clower Blvd is a four-lane median divided roadway in this section, that loops east to west from US 78 to the west of SR 124 to US 78 to the east of SR 124. Henry Clower Blvd serves as an alternate route downtown Snellville for drivers looking to potentially avoid the intersection of US 78 at SR 124. The functional classification is a Major Collector and has a posted speed limit of 35 mph in the project area. **Oak Road** is a Major arterial that serves as the northern leg of the intersection at US 78 and Henry Clower Blvd. Oak Road continues to the northwest towards Five Forks Trickum Road and Lawrenceville. The posted speed limit on Oak Road in downtown Snellville is 30 mph.

Lenora Church Road is a four-lane median divided roadway in this section that connects to SR 124 to the north and intersections Henry Clower Blvd. The functional classification is a Minor Arterial. Lenora Church Road and has a posted speed limit of 35 mph north of Henry Clower Blvd and 45 mph south of Henry Clower Blvd.

Pate Street, Pine Steet and Poplar Street are all two-lane roadways serving the residential single-family homes located between Henry Clower Blvd, Lenora Church Road, and Church Street in the project area. These Local Residential Roads have a posted speed limit of 25 mph.

Table 2: Roadway Characteristics

Roadway	# of Lanes	Posted Speed Limit (MPH)	Functional Classification
US 78/Main Street	5	35	Principal Arterial
Henry Clower Blvd	4	35	Major Collector
Oak Road	2	30	Major Arterial
Lenora Church Road	4	35/45	Minor Arterial
Pate Street	2	25	Local (Residential)
Poplar Street	2	25	Local (Residential)
Pine Street	2	25	Local (Residential)

3.2. Traffic Count Data

Traffic count data for this project was collected on Tuesday January 9, 2024. Peak hour turning movement counts were collected at the seven intersections listed above in Table 1. Also, on Tuesday January 9, 2024, 24-HR Bi-directional counts were collected on Henry Clower Blvd between US 78 and on Lenora Church Road. Henry Clower Blvd was shown to have an ADT of 11,694 vpd. The full traffic counts are provided in Appendix B.

Figure 3: Existing Lane Geometry

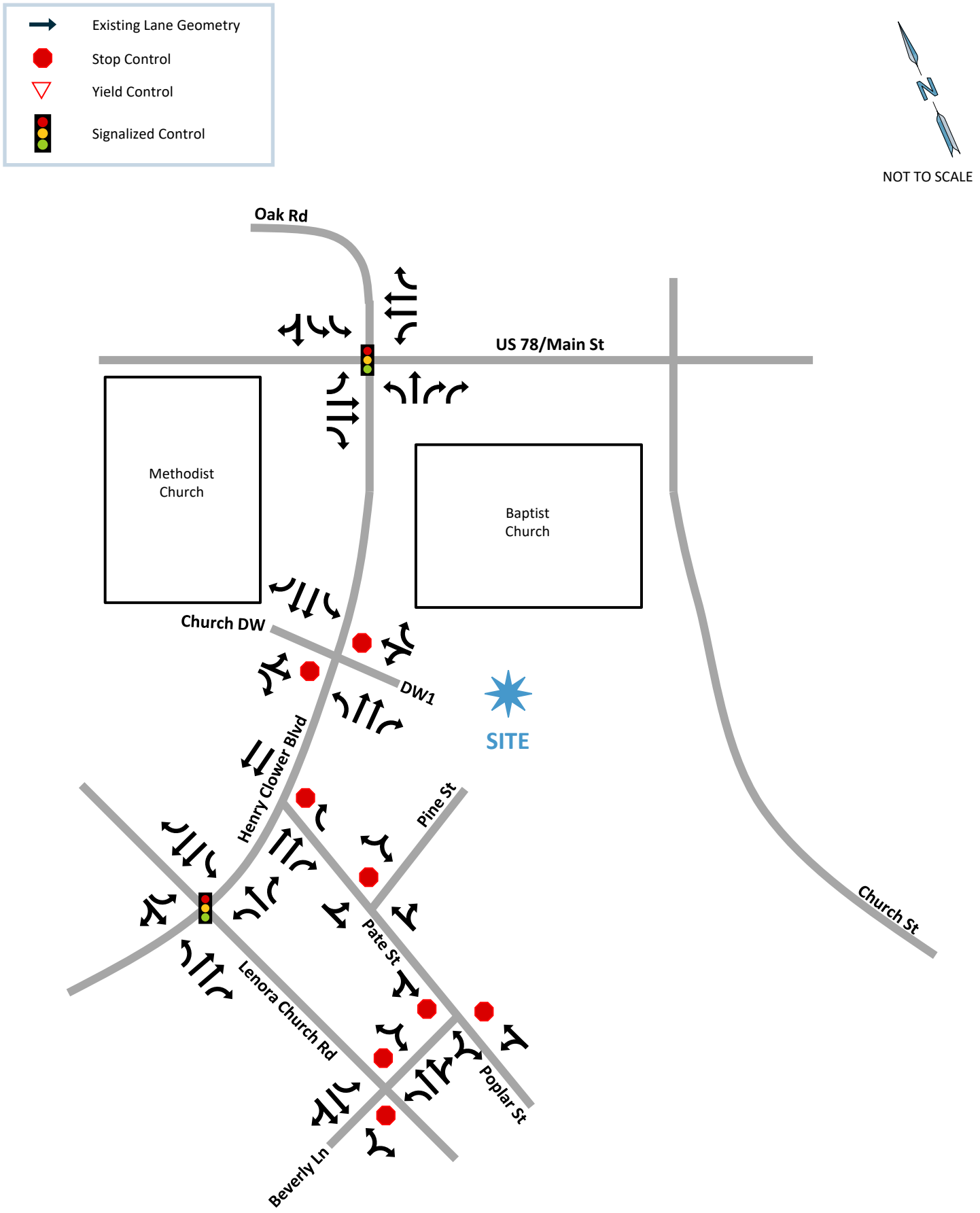
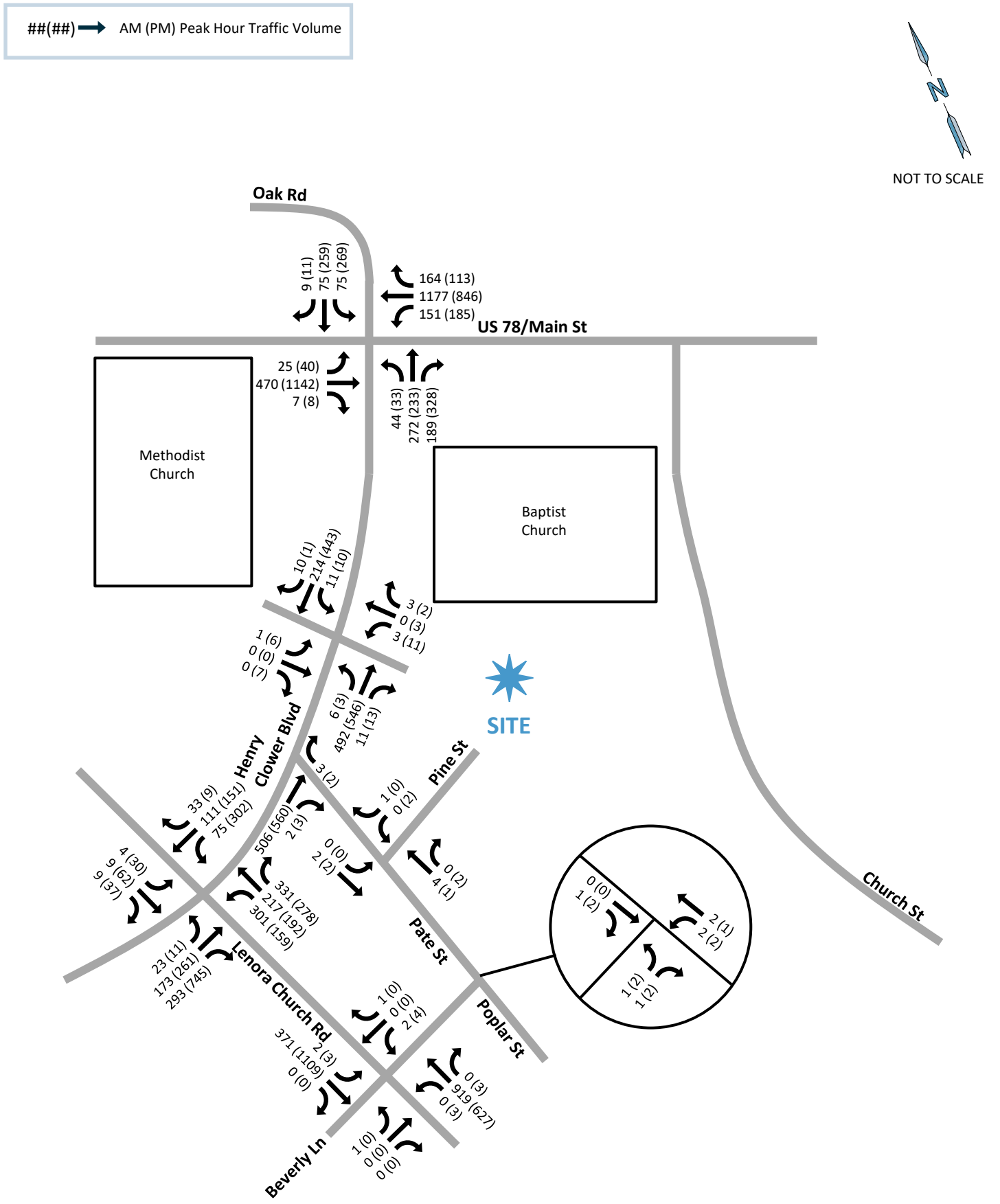


Figure 4: Existing (2024) Traffic Volumes



3.3. Existing Conditions Capacity Analysis

Existing traffic volumes were entered into a *Synchro 11* model to perform capacity analysis of existing conditions for the weekday AM and PM peak periods. The results of the capacity analysis are shown by lane group movement in Table 3. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 6th Edition are presented, and 95th percentile queues from *SimTraffic 11* are shown. Full *Synchro* output reports are included Appendix C.

Note: In a miscommunication with Gwinnett County Department of Transportation the signal timing for US 78 at Henry Clower Blvd at a second signal location was provided. At the time of this analysis the timings for US 78 at Henry Clower Blvd at Oak Road has been estimated and optimized based on the provided information for the coordinated system.

Table 3: Existing Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
US 78/Main Street at Henry Clower Blvd/Oak Rd	Signal Control	EBL	24.0	C	91	16.3	B	120
		EBT	26.0	C	246	25.4	C	546
		EBR	21.7	C	40	9.3	A	41
		WBL	18.8	B	150	24.3	C	176
		WBT	27.6	C	512	18.7	B	294
		WBR	19.7	B	201	6.4	A	146
		NBL	47.0	D	159	83.5	**F**	148
		NBT	42.4	D	361	81.4	**F**	365
		NBR	29.5	C	60	35.8	D	126
		SBL	49.9	D	22	104.5	**F**	294
		SBT/R	55.5	**E**	121	95.3	A	366
		Intersection	29.7	C	-	39.7	D	-
Henry Clower Blvd at Church Driveway/DW1	Side-Street Stop Control	EBL	7.9	A	6	8.3	A	-
		EBT	-	-	-	-	-	-
		EBR	-	-	3	-	-	-
		WBL	8.9	A	20	8.8	A	10
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		NBT/L	15.0	C	11	16.1	C	29
		NBR	10.2	B	-	10.1	B	-
		SBT/L	12.8	B	4	14.7	B	18
		SBR	-	-	-	9.8	A	
		Intersection	-	-	-	-	-	-
Henry Clower Blvd at Pate Street (RIRO)	Side-Street Stop Control	EBT	-	-	-	-	-	
		EBR	-	-	-	-	-	
		WB	-	-	-	-	-	-
		NBR	10.0	B	9	10.2	B	5
		Intersection	-	-	-	-	-	-

Table 3: Existing Conditions Capacity Analysis (continued)

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Henry Clower Blvd at Lenora Chruch Road	Signal Control	EBL	34.8	C	41	34.5	C	36
		EBT	37.0	D	103	38.5	D	196
		EBR	-	-	30	-	-	260
		WBL	31.3	C	89	122.5	**F**	229
		WBT	30.4	C	74	20.0	B	193
		WBR	-	-	-	-	-	-
		NBL	12.8	B	157	12.1	B	96
		NBT	9.7	A	107	9.9	A	105
		NBR	11.9	B	83	11.2	B	85
		SBL	16.0	B	15	16.9	B	43
		SBT/R	16.3	B	35	17.6	B	85
		Intersection	19.7	B	-	39.2	D	-
Lenora Chruch Road at Poplar Street	Side-Street Stop Control	EB	15.3	C	10	-	-	-
		WB	17.9	C	11	19.8	C	15
		NBL	-	-	-	11.0	B	10
		NBT/R	-	-	-	-	-	-
		SBL	10.1	B	6	9.0	A	7
		SBT/R	-	-	-	-	-	-
		Intersection	-	-	-	-	-	-
Poplar Street at Pate Street	Side-Street Stop Control	EB	6.8	A	10	6.8	A	13
		NB	7.1	A	20	7.1	A	16
		SB	6.3	A	-	6.4	A	10
		Intersection	6.9	A	-	6.8	A	-
Pate Street at Pine St	Side-Street Stop Control	WB	8.3	A	11	8.5	A	9
		NB	-	-	-	-	-	
		SB	-	-	-	-	-	
		Intersection	-	-	-	-	-	-

US 78/Main Street at Henry Clower Blvd/Oak Road

During the existing conditions the signalized intersection operates at LOS C in the AM peak period with 29.7 seconds of intersection delay and LOS D in the PM peak period with 39.7 seconds of intersection delay.

Henry Clower Blvd at Driveway 1/Church Driveway

During the existing conditions the stop-controlled NBL approach operates at LOS C in both the AM and PM peak periods.

Henry Clower Blvd at Pate Street (RIRO)

During the existing conditions the stop-controlled NB approach operates at LOS B in both the AM and PM peak periods.

Henry Clower Blvd at Lenora Church Road

During the existing conditions the signalized intersection operates at LOS B in the AM peak period with 19.7 seconds of intersection delay and LOS D in the PM peak period with 39.2 seconds of intersection delay.

Lenora Church Road at Poplar Street

During the existing conditions the stop-controlled WB approach from Poplar Street operates at LOS C in both the AM and PM peak periods.

Poplar Street at Pate Street

HCM 6th edition does not recognize a three-approach intersection in which one approach is not controlled. This intersection was analyzed as an all-way stop for the purposes of this analysis. During the existing conditions, when analyzed as an all-way stop controlled intersection, the intersection operates at LOS A in both peak periods with less than 7.0 seconds of intersection delay.

Pate Street at Pine Street

During the existing conditions the stop-controlled WB approach from Pine Street operates at LOS A in both the AM and PM peak periods.

4. Background Growth

4.1. Growth Rate

Background traffic growth is an analysis method used to estimate the growth of traffic that will contribute to the traffic of the roadway network in and around the study area. The background traffic does not include trips generated by the proposed project that is being studied. The proposed multifamily development is expected to be built-out by 2027. A conservative growth rate of 2.0% was used in this analysis. The growth rate was applied to the existing volumes.

4.2. Background Conditions Capacity Analysis

Background conditions include a 2.0% growth rate per year applied to existing traffic volumes grown to the full build year by 2027. Background 2027 traffic volumes are shown graphically in Figure 5. The background traffic volumes were entered into a *Synchro 11* model which uses the same lane geometry as existing conditions. The results of the capacity analysis are shown by lane group movement in Table 4. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 6th Edition are presented, and 95th percentile queues from *SimTraffic 11* are shown. Full *Synchro* output reports are included Appendix C.

Figure 5: Background (2027) Traffic Volumes

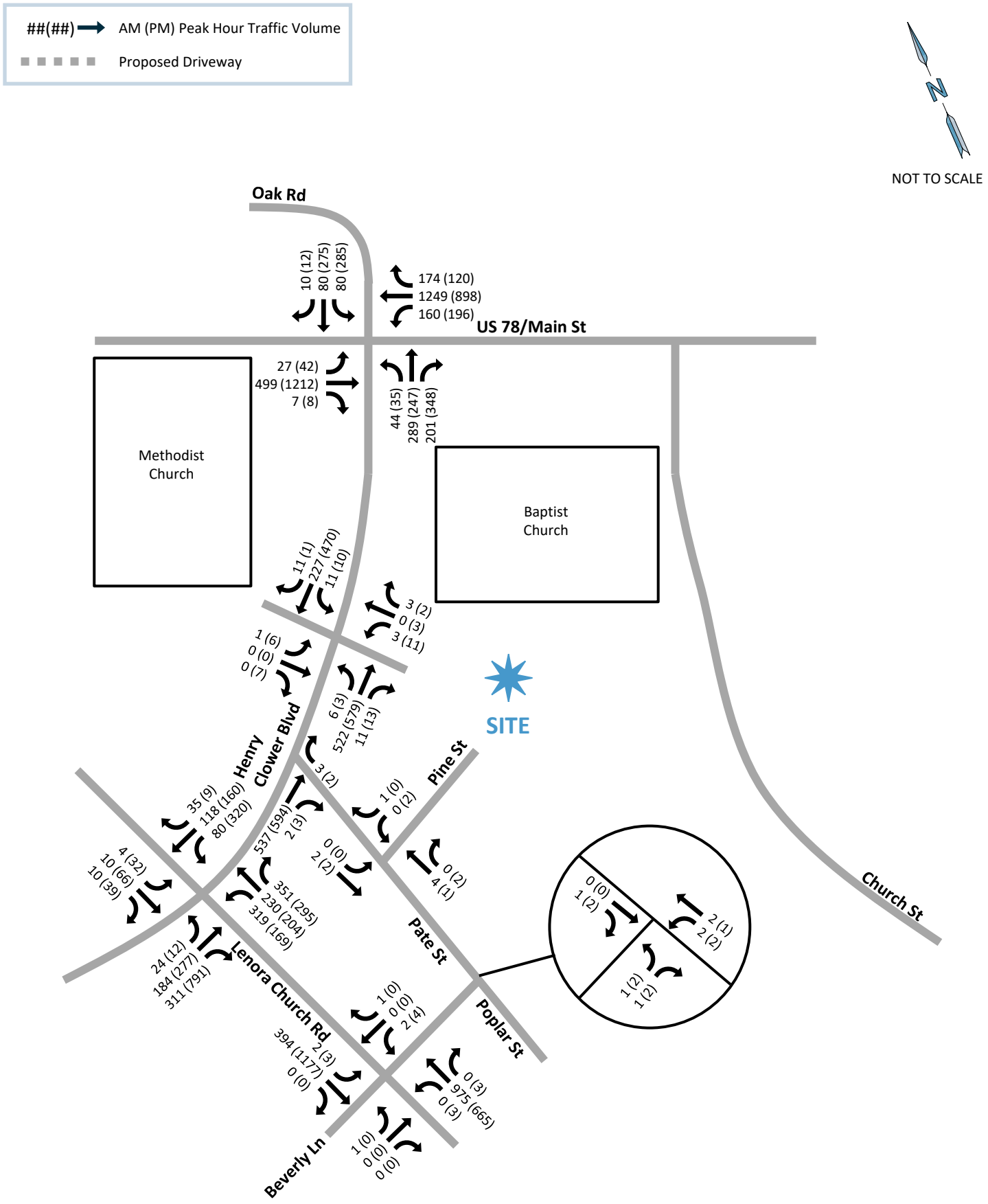


Table 4: Background (2027) Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
US 78/Main Street at Henry Clower Blvd/Oak Rd	Signal Control	EBL	25.4	C	97	17.9	B	128
		EBT	26.9	C	256	28.5	C	642
		EBR	22.1	C	35	10.2	B	25
		WBL	19.4	B	175	32.1	C	177
		WBT	28.8	C	570	20.5	B	393
		WBR	19.9	B	197	6.9	A	164
		NBL	47.0	D	166	83.2	**F**	168
		NBT	44.4	D	381	82.1	**F**	374
		NBR	29.5	C	62	34.1	C	163
		SBL	50.1	D	47	109.8	**F**	288
		SBT/R	55.8	**E**	125	96.6	A	403
		Intersection	30.6	C	-	42.0	D	-
Henry Clower Blvd at Church Driveway/DW1	Side-Street Stop Control	EBL	7.9	A	12	8.4	A	12
		EBT	-	-	-	-	-	-
		EBR	-	-	-	-	-	-
		WBL	9.0	A	20	8.9	A	17
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		NBT/L	15.6	C	11	16.6	C	31
		NBR	10.4	B	-	10.3	B	-
		SBT/L	13.1	B	4	15.1	C	13
		SBR	-	-	-	9.9	A	
		Intersection	-	-	-	-	-	-
Henry Clower Blvd at Pate Street (RIRO)	Side-Street Stop Control	EBT	-	-	-	-	-	
		EBR	-	-	-	-	-	
		WB	-	-	-	-	-	-
		NBR	10.1	B	8	10.4	B	7
		Intersection	-	-	-	-	-	-
Henry Clower Blvd at Lenora Chruch Road	Signal Control	EBL	34.9	C	52	34.6	C	37
		EBT	37.3	D	115	39.2	D	325
		EBR	-	-	23	-	-	299
		WBL	31.3	C	84	158.5	**F**	253
		WBT	30.3	C	86	20.0	B	299
		WBR	-	-	-	-	-	-
		NBL	13.4	B	167	12.2	B	117
		NBT	10.1	A	110	10.1	B	113
		NBR	12.5	B	89	11.4	B	96
		SBL	16.3	B	14	17.1	B	55
		SBT/R	16.6	B	36	17.9	B	83
		Intersection	20.1	B	-	46.3	D	-

Table 4: Background (2027) Conditions Capacity Analysis (continued)

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Lenora Chruch Road at Poplar Street	Side-Street Stop Control	EB	15.9	C	9	-	-	-
		WB	19.0	C	13	20.9	C	17
		NBL	-	-	-	11.4	B	11
		NBT/R	-	-	-	-	-	-
		SBL	10.4	B	8	9.1	A	8
		SBT/R	-	-	-	-	-	-
		Intersection	-	-	-	-	-	-
Poplar Street at Pate Street	Side-Street Stop Control	EB	6.8	A	9	6.8	A	17
		NB	7.1	A	18	7.1	A	20
		SB	6.3	A	9	6.4	A	9
		Intersection	6.9	A	-	6.8	A	-
Pate Street at Pine St	Side-Street Stop Control	WB	8.3	A	11	8.5	A	12
		NB	-	-	-	-	-	
		SB	-	-	-	-	-	
		Intersection	-	-	-	-	-	-

US 78/Main Street at Henry Clower Blvd/Oak Road

During the background conditions the signalized intersection continues to operate at LOS C in the AM peak period with 30.6 seconds of intersection delay and LOS D in the PM period with 42.0 seconds of intersection delay.

Henry Clower Blvd at Driveway 1/Church Driveway

During the background conditions the stop-controlled NBL approach continues to operate at LOS C in both the AM and PM peak periods.

Henry Clower Blvd at Pate Street (RIRO)

During the background conditions the stop-controlled NB approach continues to operate at LOS B in both the AM and PM peak periods.

Henry Clower Blvd at Lenora Church Road

During the background conditions the signalized intersection continues to operate at LOS B in the AM peak period with 20.1 seconds of intersection delay and LOS D in the PM peak period with 46.3 seconds of intersection delay.

Lenora Church Road at Poplar Street

During the background conditions the stop-controlled WB approach from Poplar Street continues to operate at LOS C in both the AM and PM peak periods.

Poplar Street at Pate Street

During the background conditions, when analyzed as an all-way stop controlled intersection, the intersection continues to operate at LOS A in both peak periods with less than 7.0 seconds of intersection delay.

Pate Street at Pine Street

During the background conditions the stop-controlled WB approach from Pine Street continues to operate at LOS A in both the AM and PM peak periods.

5. Future Conditions

5.1. Trip Generation

The *Snellville Towne Center Flats* project is a multifamily residential development that will include 300 apartment units. The development is planned to be built out in one phase and is expected to be completed by the year 2027.The proposed land use is listed below:

Build-out complete by 2027:

- Multifamily Housing (Mid-Rise) (ITE code 221) – 300 Dwelling Units

Project trips for the residential development were estimated using the equations presented in the *Institute of Transportation Engineers' (ITE) latest Trip Generation Manual, 11th Ed., 2021* for the ITE land use codes listed above. Table 5 summarizes the trip generation for full build-out of the proposed development through 2027 for the appropriate land use code. The full trip generation worksheets are presented in Appendix D.

Table 5: Project Trip Generation – Full Build (2027)

Project Land Use	Density	ITE LUC	Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
Multifamily Housing (Mid-Rise)	300 D.U.	221	1,385	693	692	120	28	92	117	71	46
Total Trips			1,385	693	692	120	28	92	117	71	46
Reductions for Internal Capture			0	0	0	0	0	0	0	0	0
Reductions for Modal Split			0	0	0	0	0	0	0	0	0
Reductions for Pass-By Trips			0	0	0	0	0	0	0	0	0
Total Net New Project Trips			1,385	693	692	120	28	92	117	71	46

For future conditions year 2027 of the project, the multifamily residential apartment development is anticipated to generate 1,385 net new daily trips (693 inbound and 692 outbound). The highest peak hour volume, for the driveway access locations, is expected during the AM peak hour with 120 total peak hour vehicle trips (28 inbound and 92outbound). The PM peak hour expects to have 117 total peak hour vehicle trips (71 inbound, 46 outbound).

5.2. Distribution

The assignment and directional distribution of new project trips were based on existing traffic patterns, adjacent major roadways, and trip destination densities (residential areas, job centers, recreational facilities, and retail developments) in the surrounding area. The directional distribution for new trips for the multifamily residential development are shown in Figure 6

This project has the benefit of multiple existing connectivity options for the future residents of this apartment complex. This additional connectivity and multiple access points will provide potential alternate routes for residents that may elect to avoid some of the larger and busier intersections in the central Snellville area.

5.3. Future Traffic Volumes

Project trips estimated for future build conditions (2027) in the trip generation and distributed to the roadway network are shown graphically in Figure 7. Future traffic volumes including the proposed development and background traffic growth are shown in Figure 8 for the future build conditions (2027).

5.4. Turn Lanes

There are left turn and right turn deceleration lanes provided at all the existing access locations that this future project will also share access to. The exception to this is that there is no right turn deceleration lane located on Lenora Church Road northbound at the Poplar Street intersection and connection to Pate Street. Due to geometry of Pate Street, and the short connection of Poplar Street, a right turn lane does not appear to be feasible at this location.

Figure 6: Trip Distribution

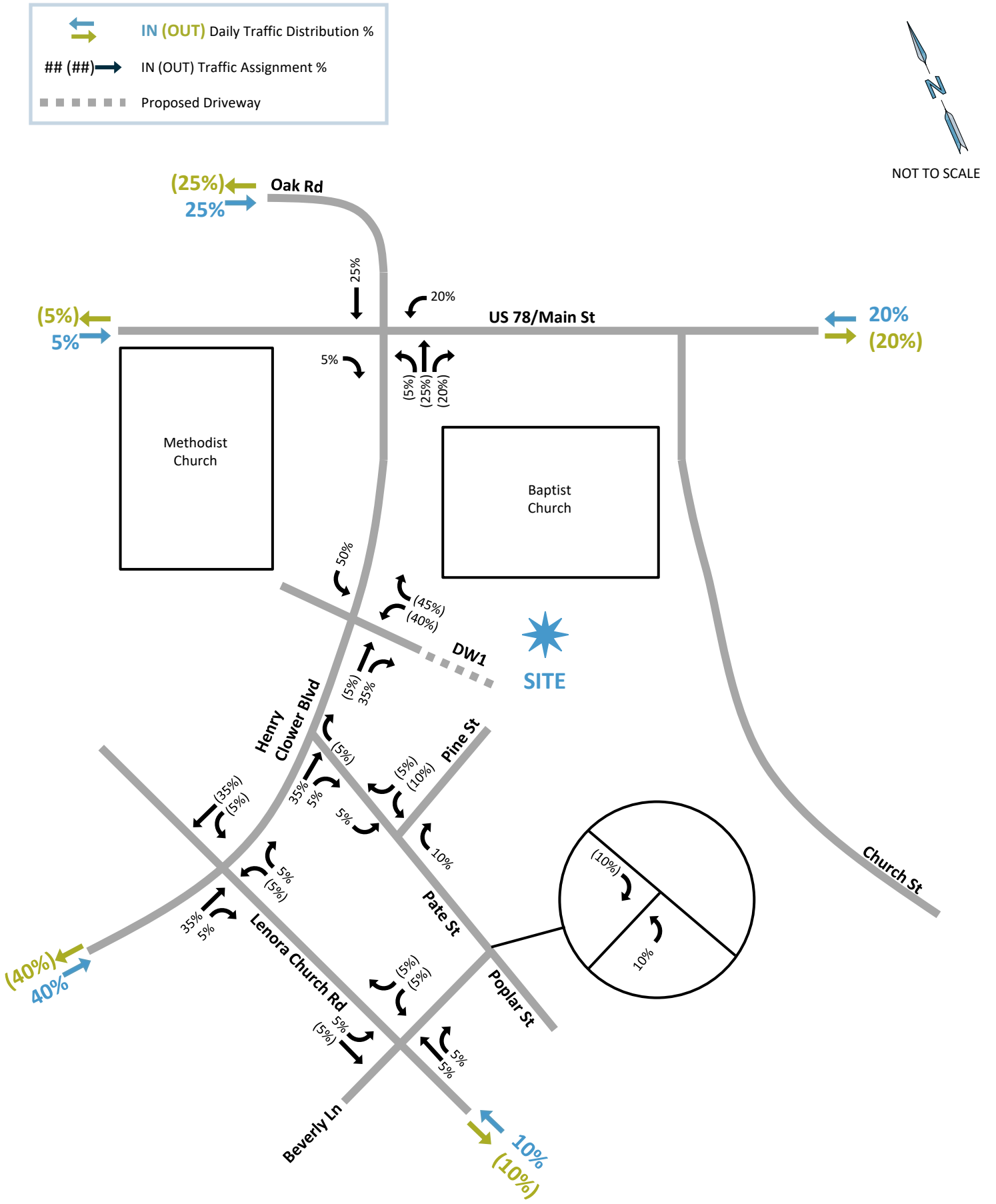


Figure 7: Project Trips

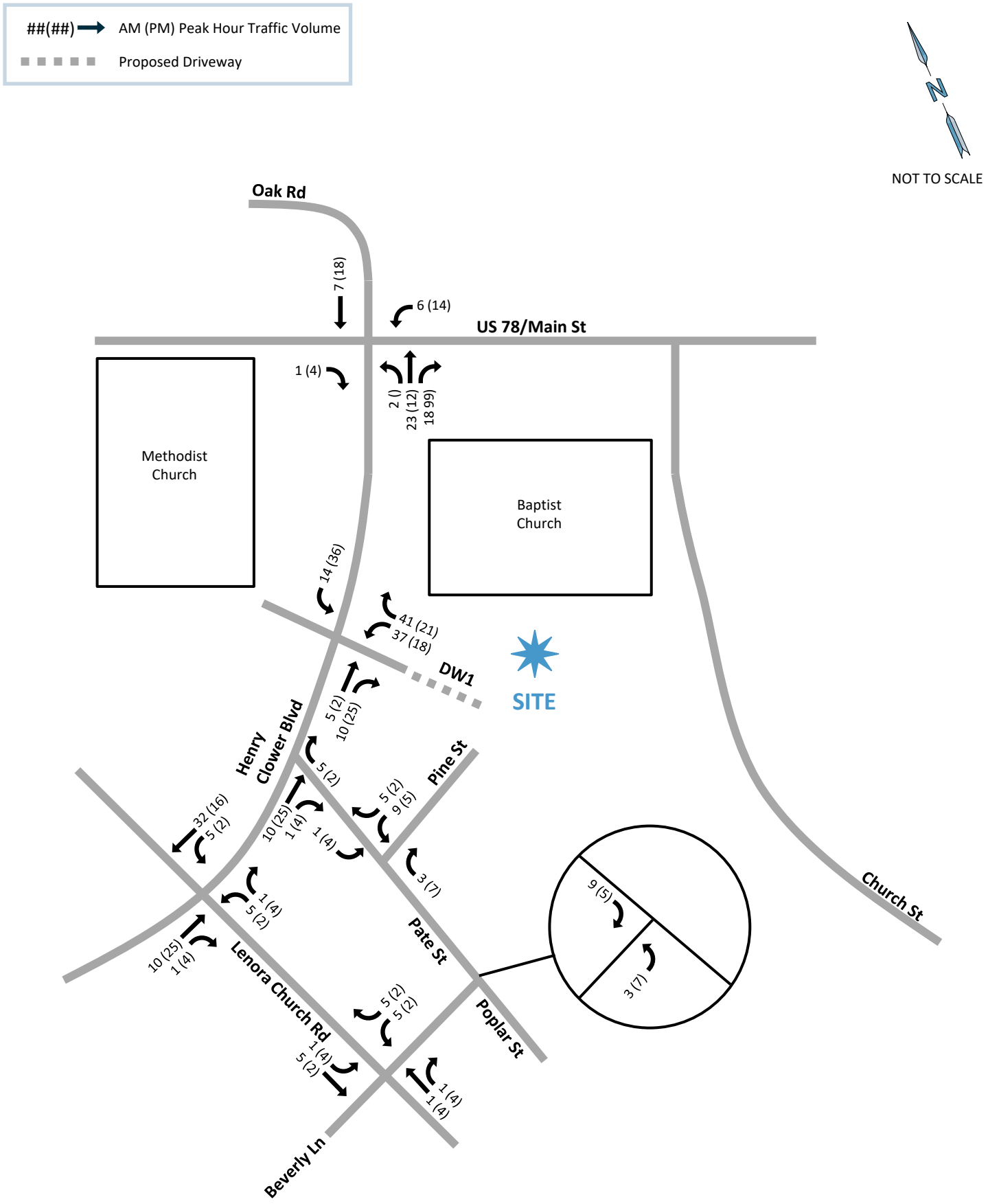
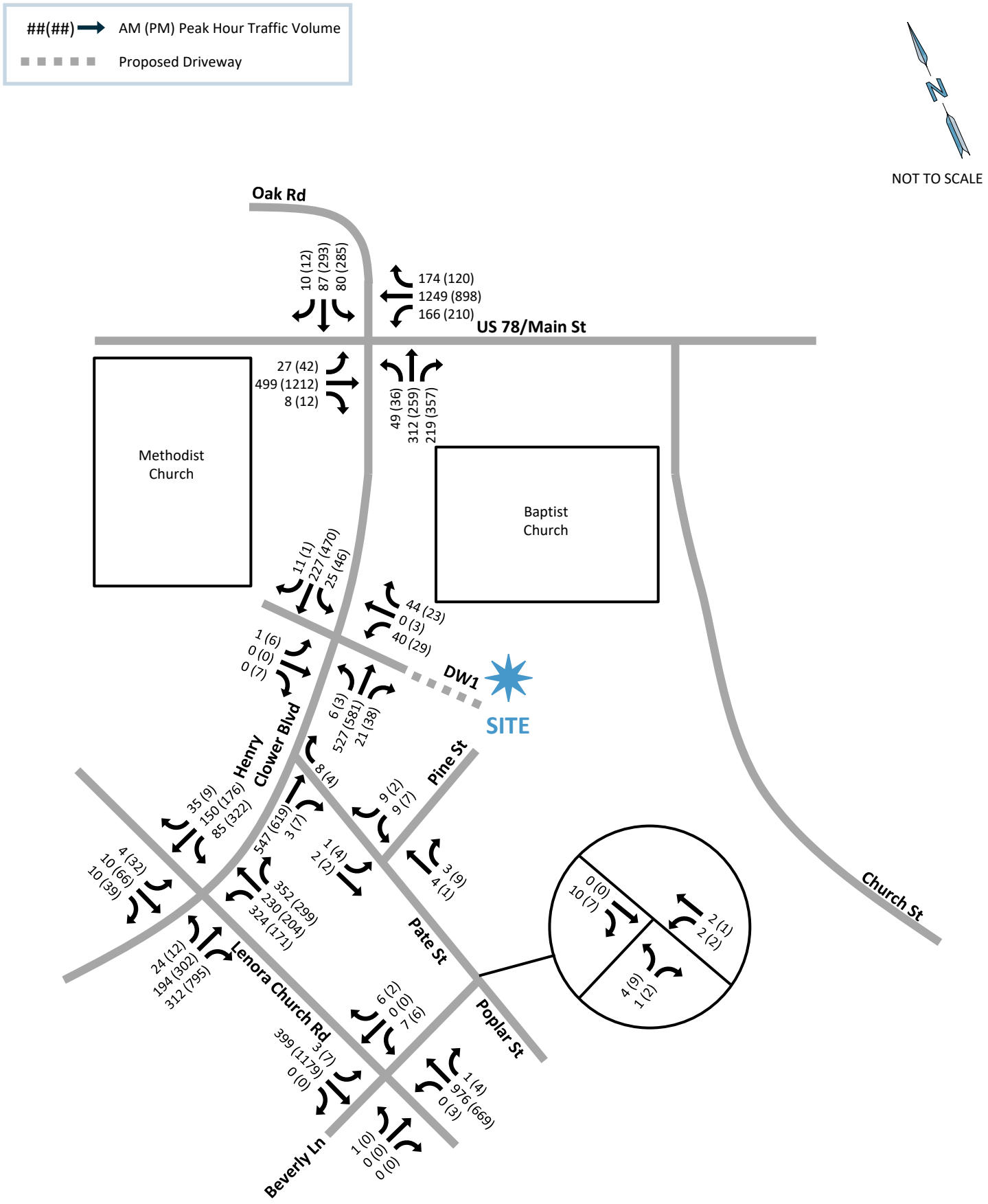


Figure 8: Future (2027) Traffic Volumes



5.5. Future Conditions Capacity Analysis

The future Build traffic volumes were entered into a *Synchro 11* model. The results of the capacity analysis are shown by lane group movement in Table 6. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 6th Edition are presented, and 95th percentile queues from *SimTraffic 11* are shown. Full Synchro output reports are included Appendix C. Future build conditions capacity analysis results are described below.

Table 6: Build (2027) Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
US 78/Main Street at Henry Clower Blvd/Oak Rd	Signal Control	EBL	25.9	C	88	18.8	B	147
		EBT	27.5	C	259	30.3	C	601
		EBR	22.7	C	38	10.2	B	52
		WBL	19.8	B	168	38.8	D	180
		WBT	29.2	C	535	21.3	C	358
		WBR	20.2	C	195	7.3	A	176
		NBL	46.8	D	182	84.3	**F**	155
		NBT	46.0	D	435	83.0	**F**	389
		NBR	29.0	C	66	32.5	C	146
		SBL	50.5	D	44	113.6	**F**	320
		SBT/R	56.2	**E**	127	98.1	A	458
		Intersection	31.3	C	-	43.8	D	-
Henry Clower Blvd at Church Driveway/DW1	Side-Street Stop Control	EBL	7.9	A	11	8.4	A	12
		EBT	-	-	-	-	-	2
		EBR	-	-	-	-	-	5
		WBL	9.2	A	25	9.4	A	38
		WBT	-	-	-	-	-	-
		WBR	-	-	-	-	-	-
		NBT/L	18.8	C	43	19.9	C	52
		NBR	10.9	B	-	10.8	B	-
		SBT/L	14.3	B	5	18.4	C	15
		SBR	-	-	-	9.9	A	
		Intersection	-	-	-	-	-	-
Henry Clower Blvd at Pate Street (RIRO)	Side-Street Stop Control	EBT	-	-	-	-	-	
		EBR	-	-	-	-	-	
		WB	-	-	-	-	-	-
		NBR	10.2	B	12	10.5	B	9
		Intersection	-	-	-	-	-	-

Table 6: Build (2027) Capacity Analysis (continued)

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Henry Clower Blvd at Lenora Chruch Road	Signal Control	EBL	34.9	C	47	34.6	C	39
		EBT	37.5	D	117	41.4	D	367
		EBR	-	-	30	-	-	290
		WBL	31.8	C	91	178.7	**F**	258
		WBT	30.6	C	85	20.1	C	306
		WBR	-	-	-	-	-	-
		NBL	13.7	B	164	12.3	B	108
		NBT	10.2	A	114	10.1	B	107
		NBR	12.7	B	88	11.4	B	98
		SBL	16.4	B	17	17.2	B	55
		SBT/R	16.7	B	34	17.9	B	96
		Intersection	20.7	B	-	50.1	D	-
Lenora Chruch Road at Poplar Street	Side-Street Stop Control	EB	16.3	C	10	-	-	-
		WB	18.7	C	33	20.0	C	26
		NBL	-	-	-	11.4	B	9
		NBT/R	-	-	-	-	-	-
		SBL	10.4	B	10	9.2	A	15
		SBT/R	-	-	-	-	-	-
		Intersection	-	-	-	-	-	-
Poplar Street at Pate Street	Side-Street Stop Control	EB	7.0	A	19	7.1	A	24
		NB	7.1	A	19	7.1	A	20
		SB	6.4	A	30	6.4	A	6
		Intersection	6.7	A	-	7.0	A	-
Pate Street at Pine St	Side-Street Stop Control	WB	8.5	A	31	8.5	A	16
		NB	-	-	-	-	-	
		SB	7.2	A	-	7.2	-	
		Intersection	-	-	-	-	-	-

US 78/Main Street at Henry Clower Blvd/Oak Road

During the build conditions the signalized intersection continues to operate at LOS C in the AM peak period with 31.3 seconds of intersection delay and LOS D in the PM period with 43.8 seconds of intersection delay.

Henry Clower Blvd at Driveway 1/Church Driveway

During the build conditions the stop-controlled NBL approach continues to operate at LOS C in both the AM and PM peak periods.

Henry Clower Blvd at Pate Street (RIRO)

During the build conditions the stop-controlled NB approach continues to operate at LOS B in both the AM and PM peak periods.

Henry Clower Blvd at Lenora Church Road

During the build conditions the signalized intersection continues to operate at LOS B in the AM peak period with 20.7 seconds of intersection delay and LOS D in the PM peak period with 50.1 seconds of intersection delay.

Lenora Church Road at Poplar Street

During the build conditions the stop-controlled WB approach from Poplar Street continues to operate at LOS C in both the AM and PM peak periods.

Poplar Street at Pate Street

During the background conditions, when analyzed as an all-way stop controlled intersection, the intersection continues to operate at LOS A in both peak periods with 7.0 seconds, or less, of intersection delay.

Pate Street at Pine Street

During the background conditions the stop-controlled WB approach from Pine Street continues to operate at LOS A in both the AM and PM peak periods.

6. Conclusions and Recommendations

The *Snellville Towne Center Flats* project is a residential project planned to be a multifamily apartment development in downtown Snellville, Georgia. The development is planned to be built out in one phase and is expected to be completed by the year 2027. The *Snellville Towne Center Flats* project is proposed to share access with the adjacent Snellville Park & Ride and Church on Main development. This site will also have additional connectivity with local residential roads Pine Street, Pate Street and Poplar Street, with connectivity to both Henry Clower Blvd and Lenora Church Road.

The conclusions and recommendations for the impacts to the surrounding transportation network are described below:

In general, the project has demonstrated minor impacts to the surrounding roadway network. There are increases in delay at the intersections analyzed resulting from the traffic expected to be generated by the site, but they are relatively minor when compared to the general growth in background traffic.

All the intersections analyzed continue to operate at acceptable levels-of-service and within the same LOS observed in the existing and background conditions. The availability of several road networks and travel routes in the area help to dissipate the traffic in the area, lessening the impacts at each location throughout the network. This project has the benefit of multiple existing connectivity options for the future residents of this apartment complex via the local residential roads – Pate Street, Pine Street and Poplar Street. This additional connectivity and multiple access points will provide potential alternate routes for residents that may elect to avoid some of the larger and busier intersections in the central Snellville area.

The existing intersections and shared driveway locations associated with this project all have the necessary, and required, deceleration turn lanes, where feasible. No additional turn lane improvements are expected to be required as part of this development project.

Overall, there are expected to be very minor impacts associated with the traffic from this project. The existing road network, signalized intersections and other stop-controlled intersections are expected to handle the additional traffic without too much strain on the existing network. There is not expected to be a need for traffic mitigation for additional traffic in this area.

Appendix A: Site Plan

SITE NOTES:

1) PRELIMINARY LOCATIONS OF ENVIRONMENTAL CONDITIONS HAVE BEEN LABELED ON THIS PLAN. NO , WETLANDS, RIVERS, OR FLOODPLAINS EXIST ON SUBJECT PROPERTY. THIS SITE IS NOT WITHIN A WATERSHED PROTECTION DISTRICT.

2) EXISTING TOPOGRAPHY IS DISPLAYED IN THIS PLAN PER THE REQUIREMENTS OF THE CITY OF SNELLVILLE.

VARIANCES:

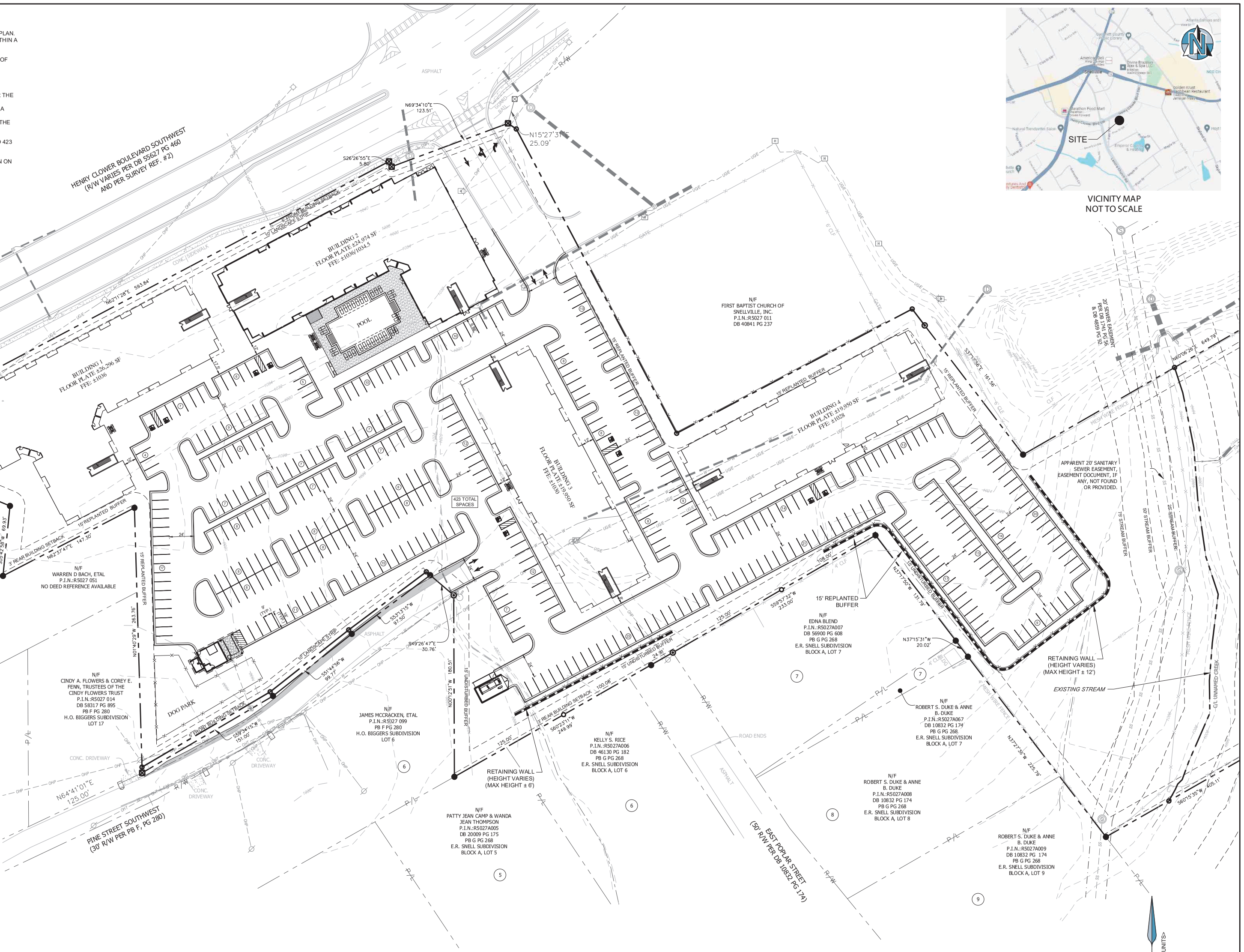
1) VARIANCE WILL BE REQUIRED IF COMMERCIAL FLOOR AREA IS NOT PROVIDED ONSITE. FOR THE USE OF TOWNE CENTER FLATS, WHERE THERE ARE MORE THAN 30 DWELLING UNITS, EACH ADDITIONAL 30 UNITS WILL REQUIRE AT LEAST 5,000 SF OF COMMERCIAL FLOOR AREA, ONSITE. A VARIANCE WILL ONLY BE CONSIDERED IF THE FLATS ARE WITHIN 1,000 LF OF AN EXISTING COMMERCIAL AREA OF 15,000 SF OR GREATER. AS THE SUBJECT SITE IS WITHIN 1,000 LF FROM THE SNELLVILLE FIRST BAPTIST CHURCH, A VARIANCE CAN BE GRANTED TO OMIT THIS AREA.

2) VARIANCE TO REDUCE THE NUMBER OF REQUIRED PARKING SPACES FROM 600 SPACES TO 423 SPACES.

3) VARIANCE TO REDUCE OR MODIFY 15' BUFFERS AGAINST RESIDENTIAL ZONINGS AS SHOWN ON PLAN. BUFFERS NOT IDENTIFIED AS UNDISTURBED SHALL BE RE-PLANTED BUFFERS.

4) VARIANCE TO REDUCE PARKING LOT LANDSCAPE ISLANDS AS SHOWN ON PLAN.

5) VARIANCE TO PROVIDE RETAINING WALLS IN THE 15' BUFFERS AS SHOWN ON PLAN



SITE DATA

ZONING:	RS-30 (SINGLE-FAMILY RESIDENTIAL)
OVERLAY DISTRICT:	TCO (TOWNE CENTER OVERLAY)
PARCEL IDENTIFICATION NUMBER:	2400 R5027 011
FUTURE LAND USE DESIGNATION:	TC (TOWNE CENTER)
PROPOSED ZONING:	TC-R (TOWNE CENTER RESIDENTIAL)
PROPOSED USE:	TOWNE CENTER FLATS (EST 310 DWELLING UNITS)
TOTAL SITE AREA:	16.96 AC. (738,778 SF)
TOWNE CENTER FLATS AREA:	9.866 AC. (429,750 SF)
REQUIRED CIVIC SPACE (10% OF TOTAL FLATS AREA):	42,975 SF REQUIRED
PROVIDED CIVIC SPACE AREA:	43,310 SF
REQUIRED AMENITY SPACE (5% OF TOTAL FLATS AREA):	21,488 SF REQUIRED
PROVIDED AMENITY SPACE AREA:	29,400 SF
DISTURBED AREA:	7.7 AC.
IMPERVIOUS SURFACE AREA MAXIMUM (%)	9.866 AC. (100.0%)
IMPERVIOUS SURFACE AREA PROPOSED (%):	3.588 AC. (47.1%)
FEMA FLOOD CLASSIFICATION:	ZONE X (PANEL# 13135C0129F; EFF 9/29/2006)
LANDSCAPE STRIP - FRONT:	10' FT
SIDE (STREET):	10' FT
SIDE (INTERIOR):	5' FT
REAR:	5' FT
BUILDING SETBACK - FRONT:	5' FT
SIDE (STREET):	5' FT
SIDE (INTERIOR):	0' FT
REAR:	3' FT
LANDSCAPE BUFFER - SIDE:	15' FT
REAR:	15' FT
BUILDING HEIGHT:	63'3"
BUILDING HEIGHT (MAX.):	75' OR 5 STORIES (WHICHEVER IS LESS)
PARKING RATIO REQUIRED - OCCUPANCY:	2 SPACES / DWELLING UNIT
PARKING REQUIRED:	620 SPACES
PARKING PROVIDED:	423 SPACES
ACCESSIBLE PARKING REQUIRED (2% OF TOTAL PARKING SPACES):	13 SPACES
ACCESSIBLE PARKING PROVIDED:	10 SPACES
BICYCLE PARKING REQUIRED:	30 SPACES
BICYCLE PARKING PROVIDED:	30 SPACES

SITE LEGEND

EXISTING TRAFFIC SIGNAL	STANDARD DUTY ASPHALT PAVING
NUMBER OF PARKING SPACES	HEAVY DUTY ASPHALT PAVING
ACCESSIBLE PARKING SPACES	5' CONCRETE SIDEWALK
TRANSFORMER BOX ON PAD	TREE GROUP

DEVELOPER
ARRIS HOLDINGS
2700 APPLE VALLEY ROAD, SUITE 50
BROOKHAVEN, GA 30319

OWNER
FIRST BAPTIST CHURCH OF SNELLVILLE
P.O. BOX 647
SNELLVILLE, GA 30078
(770)-978-7000

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FORESITE group
Foresite Group, LLC
3740 Davinci Ct.
Suite 100
Peachtree Corners, GA 30092
o | 770.368.1399
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DEVELOPER:
ARRIS
2700 APPLE VALLEY ROAD
SUITE 50
BROOKHAVEN, GA 30319
OFFICE: 770.547.2358
CONTACT: MR. LEIGH FARR

PROJECT:
SNELLVILLE TOWNE CENTER FLATS
HENRY CLOWER BLVD SW & PATE ST S
SNELLVILLE, GWINNETT COUNTY, GA 30078

SEAL:
GEORGIA REGISTERED No. PE037629 PROFESSIONAL ENGINEER DAVID M. STONECIPHER
04/01/24

REVISIONS	DATE

PROJECT MANAGER:	DMS
DRAWING BY:	JRH
JURISDICTION:	SNELLVILLE, GA
DATE:	2024-04-01

TITLE:
REZONING PLAN

SHEET NUMBER:
1 OF 1

COMMENTS: NOT RELEASED FOR CONSTRUCTION

JOB/FILE NUMBER: 038.205

Appendix B: Traffic Counts

National Data & Surveying Services Intersection Turning Movement Count

Location: Henry Clower Blvd & US-78
City: Snellville
Control: Signalized

Project ID: 24-180006-001
Date: 1/9/2024

Data - Total

NS/EW Streets:	Henry Clower Blvd				Henry Clower Blvd				US-78				US-78				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	2	0	0	1	2	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	5	35	104	0	9	8	1	0	2	87	0	0	24	327	19	0	621
6:45 AM	7	33	82	0	7	6	1	0	1	93	1	0	63	305	26	0	625
7:00 AM	13	58	44	0	6	14	2	0	4	76	1	0	79	304	32	0	633
7:15 AM	6	64	28	0	15	16	1	0	6	107	0	0	49	294	37	0	623
7:30 AM	6	65	47	0	14	14	3	0	6	97	1	0	58	292	41	0	644
7:45 AM	14	75	50	1	24	21	1	0	9	106	3	0	22	292	34	0	652
8:00 AM	11	66	41	0	22	23	3	0	3	125	2	0	36	313	43	0	688
8:15 AM	11	66	51	1	15	17	2	0	7	142	1	0	35	280	46	0	674
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	73	462	447	2	112	119	14	0	38	833	9	0	366	2407	278	0	5160
APPROACH %'s :	7.42%	46.95%	45.43%	0.20%	45.71%	48.57%	5.71%	0.00%	4.32%	94.66%	1.02%	0.00%	12.00%	78.89%	9.11%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	42	272	189	2	75	75	9	0	25	470	7	0	151	1177	164	0	2658
PEAK HR FACTOR :	0.750	0.907	0.926	0.500	0.781	0.815	0.750	0.000	0.694	0.827	0.583	0.000	0.651	0.940	0.891	0.000	0.966
	0.902				0.828				0.837				0.952				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	2	0	0	1	2	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	10	50	62	0	62	61	9	0	12	291	2	1	43	176	26	0	805
4:15 PM	10	40	72	0	69	67	5	0	10	252	4	0	41	195	36	0	801
4:30 PM	10	59	82	0	49	46	5	0	5	264	3	0	53	182	33	0	791
4:45 PM	8	65	77	2	75	70	3	0	10	279	1	0	40	180	32	0	842
5:00 PM	8	52	81	0	65	47	1	0	5	291	4	0	59	220	30	0	863
5:15 PM	5	52	96	0	68	73	2	0	11	274	2	0	36	195	27	0	841
5:30 PM	10	64	74	0	61	69	5	0	14	298	1	0	50	251	24	0	921
5:45 PM	7	42	62	0	51	63	5	0	10	271	2	0	58	221	37	0	829
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	68	424	606	2	500	496	35	0	77	2220	19	1	380	1620	245	0	6693
APPROACH %'s :	6.18%	38.55%	55.09%	0.18%	48.50%	48.11%	3.39%	0.00%	3.32%	95.81%	0.82%	0.04%	16.93%	72.16%	10.91%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	31	233	328	2	269	259	11	0	40	1142	8	0	185	846	113	0	3467
PEAK HR FACTOR :	0.775	0.896	0.854	0.250	0.897	0.887	0.550	0.000	0.714	0.958	0.500	0.000	0.784	0.843	0.883	0.000	0.941
	0.971				0.910				0.950				0.880				

National Data & Surveying Services Intersection Turning Movement Count

Location: Henry Clower Blvd SW & Leonora Church Rd
City: Snellville
Control: Signalized

Project ID: 24-180006-003
Date: 1/9/2024

Data - Total

NS/EW Streets:	Henry Clower Blvd SW				Henry Clower Blvd SW				Leonora Church Rd				Leonora Church Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	2	52	43	0	10	19	1	0	3	1	2	0	60	64	94	0	351
6:45 AM	0	41	45	0	33	37	1	0	0	0	0	0	72	62	105	0	396
7:00 AM	3	27	55	0	50	48	3	0	0	0	0	0	84	74	66	0	410
7:15 AM	3	25	81	0	16	28	12	1	1	0	0	0	77	71	79	0	394
7:30 AM	5	34	70	1	18	42	10	0	0	1	2	0	74	65	90	0	412
7:45 AM	5	44	89	0	17	21	8	0	2	2	4	0	75	53	82	0	402
8:00 AM	7	44	66	0	26	23	8	0	2	4	3	0	81	57	82	0	403
8:15 AM	6	51	68	0	14	25	7	0	0	2	0	0	71	42	77	0	363
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	31	318	517	1	184	243	50	1	8	10	11	0	594	488	675	0	3131
APPROACH %'s :	3.58%	36.68%	59.63%	0.12%	38.49%	50.84%	10.46%	0.21%	27.59%	34.48%	37.93%	0.00%	33.81%	27.77%	38.42%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	16	130	295	1	101	139	33	1	3	3	6	0	310	263	317	0	1618
PEAK HR FACTOR :	0.800	0.739	0.829	0.250	0.505	0.724	0.688	0.250	0.375	0.375	0.375	0.000	0.923	0.889	0.881	0.000	0.982
	0.801				0.678				0.375				0.972				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	5	56	138	0	66	45	2	1	7	10	8	0	39	52	68	0	497
4:15 PM	5	71	152	0	62	35	3	0	4	16	7	0	39	31	57	0	482
4:30 PM	1	63	169	0	73	41	4	0	6	16	8	0	34	50	87	0	552
4:45 PM	4	64	173	1	69	32	1	0	7	11	7	0	50	40	66	0	525
5:00 PM	3	64	182	0	86	41	3	0	12	25	12	0	35	47	67	0	577
5:15 PM	1	77	202	1	65	30	2	0	3	14	13	0	33	57	73	0	571
5:30 PM	1	56	188	0	82	48	3	0	8	12	5	0	41	48	72	0	564
5:45 PM	4	63	161	0	62	47	1	0	7	12	6	0	35	45	56	0	499
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	24	514	1365	2	565	319	19	1	54	116	66	0	306	370	546	0	4267
APPROACH %'s :	1.26%	26.98%	71.65%	0.10%	62.50%	35.29%	2.10%	0.11%	22.88%	49.15%	27.97%	0.00%	25.04%	30.28%	44.68%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	9	261	745	2	302	151	9	0	30	62	37	0	159	192	278	0	2237
PEAK HR FACTOR :	0.563	0.847	0.922	0.500	0.878	0.786	0.750	0.000	0.625	0.620	0.712	0.000	0.795	0.842	0.952	0.000	0.969
	0.905				0.868				0.658				0.965				

National Data & Surveying Services Intersection Turning Movement Count

Location: Henry Clower Blvd SW & Methodist Dwy/Baptist Church S Dwy
City: Snellville
Control: 2-Way Stop (NB/SB)

Project ID: 24-180006-004
Date: 1/9/2024

Data - Total

NS/EW Streets:	Henry Clower Blvd SW				Henry Clower Blvd SW				Methodist Dwy/Baptist Church S Dwy				Methodist Dwy/Baptist Church S Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	0.5	0.5	1	0	0.5	0.5	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	143	3	0	0	31	1	0	0	0	1	0	1	0	1	0	181
6:45 AM	0	141	9	0	2	65	0	0	0	0	0	0	5	0	1	0	223
7:00 AM	0	90	4	0	1	93	1	0	0	0	0	0	6	0	0	0	195
7:15 AM	0	104	2	1	3	61	2	0	0	1	0	0	3	0	2	0	179
7:30 AM	0	119	4	1	4	66	3	1	0	0	0	0	0	0	2	0	200
7:45 AM	2	124	1	0	2	41	3	0	0	0	0	0	0	0	0	0	173
8:00 AM	1	126	1	0	1	57	3	1	0	0	0	0	0	0	0	0	190
8:15 AM	2	123	5	0	0	50	1	2	0	0	0	0	3	0	1	0	187
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	970	29	2	13	464	14	4	0	1	1	0	18	0	7	0	1528
APPROACH %'s :	0.50%	96.42%	2.88%	0.20%	2.63%	93.74%	2.83%	0.81%	0.00%	50.00%	50.00%	0.00%	72.00%	0.00%	28.00%	0.00%	
PEAK HR :	06:45 AM - 07:45 AM																TOTAL
PEAK HR VOL :	0	454	19	2	10	285	6	1	0	1	0	0	14	0	5	0	797
PEAK HR FACTOR :	0.000	0.805	0.528	0.500	0.625	0.766	0.500	0.250	0.000	0.250	0.000	0.000	0.583	0.000	0.625	0.000	0.893
	0.792				0.795				0.250				0.792				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	0.5	0.5	1	0	0.5	0.5	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	128	3	1	1	109	0	1	0	0	0	0	4	0	0	0	247
4:15 PM	0	130	4	0	0	103	0	0	3	0	2	0	2	2	0	0	246
4:30 PM	2	151	4	0	2	107	2	0	4	0	1	0	3	3	5	0	284
4:45 PM	2	133	1	0	0	109	0	1	2	0	1	0	2	2	0	0	253
5:00 PM	0	137	5	0	1	112	0	0	3	0	5	0	3	0	1	0	267
5:15 PM	1	146	2	0	3	105	1	0	1	0	0	0	2	1	1	0	263
5:30 PM	0	130	5	1	3	117	0	2	0	0	1	0	4	0	0	0	263
5:45 PM	1	122	5	0	11	108	2	1	0	0	0	0	1	0	0	0	251
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	1077	29	2	21	870	5	5	13	0	10	0	21	8	7	0	2074
APPROACH %'s :	0.54%	96.68%	2.60%	0.18%	2.33%	96.56%	0.55%	0.55%	56.52%	0.00%	43.48%	0.00%	58.33%	22.22%	19.44%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	5	567	12	0	6	433	3	1	10	0	7	0	10	6	7	0	1067
PEAK HR FACTOR :	0.625	0.939	0.600	0.000	0.500	0.967	0.375	0.250	0.625	0.000	0.350	0.000	0.833	0.500	0.350	0.000	0.939
	0.930				0.980				0.531				0.523				

National Data & Surveying Services Intersection Turning Movement Count

Location: Leona Church & Beverly Ln SW
City: Snellville
Control: 2-Way Stop (EB/WB)

Project ID: 24-180006-005
Date: 1/9/2024

Data - Total

NS/EW Streets:	Leona Church				Leona Church				Beverly Ln SW				Beverly Ln SW				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	213	0	0	0	54	0	0	0	0	0	0	0	0	1	0	268
6:45 AM	0	234	0	0	0	75	0	0	1	0	0	0	0	0	0	0	310
7:00 AM	0	217	0	0	1	107	0	1	0	0	0	0	0	0	2	0	328
7:15 AM	0	228	0	0	2	96	0	0	0	0	0	0	0	0	1	0	327
7:30 AM	0	240	0	0	0	87	0	0	1	0	0	0	1	0	0	0	329
7:45 AM	0	193	0	0	0	109	0	0	1	0	0	0	0	0	0	0	303
8:00 AM	0	236	0	0	0	94	0	0	0	0	1	0	0	0	0	0	331
8:15 AM	1	172	0	0	2	81	0	1	0	0	0	0	0	0	0	0	257
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	1733	0	0	5	703	0	2	3	0	1	0	1	0	4	0	2453
APPROACH %'s :	0.06%	99.94%	0.00%	0.00%	0.70%	99.01%	0.00%	0.28%	75.00%	0.00%	25.00%	0.00%	20.00%	0.00%	80.00%	0.00%	
PEAK HR :	06:45 AM - 07:45 AM																TOTAL
PEAK HR VOL :	0	919	0	0	3	365	0	1	2	0	0	0	1	0	3	0	1294
PEAK HR FACTOR :	0.000	0.957	0.000	0.000	0.375	0.853	0.000	0.250	0.500	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.983
	0.957				0.846				0.500				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	147	0	0	2	212	1	3	1	0	0	0	1	0	2	0	369
4:15 PM	0	127	0	0	1	230	0	0	0	0	0	0	0	0	1	0	359
4:30 PM	0	170	1	0	1	255	1	0	0	0	0	0	0	0	2	0	430
4:45 PM	0	152	0	0	1	259	0	0	1	0	0	0	0	0	0	0	413
5:00 PM	1	151	0	0	0	286	2	0	2	0	0	0	0	0	0	0	442
5:15 PM	0	157	0	0	0	286	1	1	0	0	0	0	0	0	0	0	445
5:30 PM	0	167	0	0	1	278	0	0	1	0	0	0	0	0	0	0	447
5:45 PM	0	130	1	0	2	231	0	0	1	0	0	0	0	0	1	0	366
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	1201	2	0	8	2037	5	4	6	0	0	0	1	0	6	0	3271
APPROACH %'s :	0.08%	99.75%	0.17%	0.00%	0.39%	99.17%	0.24%	0.19%	100.00%	0.00%	0.00%	0.00%	14.29%	0.00%	85.71%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	1	627	0	0	2	1109	3	1	4	0	0	0	0	0	0	0	1747
PEAK HR FACTOR :	0.250	0.939	0.000	0.000	0.500	0.969	0.375	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.977
	0.940				0.968				0.500								

National Data & Surveying Services Intersection Turning Movement Count

Location: Beverly Ln SW & Pate St S
City: Snellville
Control: 2-Way Stop (NB/SB)

Project ID: 24-180006-006
Date: 1/9/2024

Data - Total

NS/EW Streets:	Beverly Ln SW				Beverly Ln SW				Pate St S				Pate St S				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:00 AM	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3
7:15 AM	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	2	0	0	0	0	0	0	2	1	0	4	4	0	0	16
APPROACH %'s :	60.00%	0.00%	40.00%	0.00%					0.00%	66.67%	33.33%	0.00%	50.00%	50.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	0	1	0	0	0	0	0	0	2	1	0	3	1	0	0	10
PEAK HR FACTOR :	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.750	0.250	0.000	0.000	0.625
	0.375								0.750				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	5
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
4:30 PM	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	4
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	1	2	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	7	0	0	0	0	0	0	1	4	0	3	2	0	0	20
APPROACH %'s :	30.00%	0.00%	70.00%	0.00%					0.00%	20.00%	80.00%	0.00%	60.00%	40.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	3	0	3	0	0	0	0	0	0	0	4	0	2	0	0	0	12
PEAK HR FACTOR :	0.375	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.500	0.000	0.000	0.000	0.600
	0.750								0.333				0.500				

National Data & Surveying Services Intersection Turning Movement Count

Location: Pine St SW & Pate St S
City: Snellville
Control: 1-Way Stop (WB)

Project ID: 24-180006-007
Date: 1/9/2024

Data - Total

NS/EW Streets:	Pine St SW				Pine St SW				Pate St S				Pate St S				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	3	0	0	0	7	0	0	11
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	06:45 AM - 07:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	2	0	0	0	4	0	0	7
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.000	1.000	0.000	0.000	0.875
					0.250				0.500				1.000				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	0	0	0	3	0	0	0	3	2	0	10
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	60.00%	40.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	2	0	0	0	1	2	0	7
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500	0.000	0.438
					0.500				0.250				0.375				

Prepared by National Data & Surveying Services

VOLUME

Henry Clower Blvd SW E/O Leona Church Rd

Day: Tuesday
Date: 1/9/2024

City: Snellville
Project #: GA24_180007_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,818	4,876	11,694

15-Minutes Interval

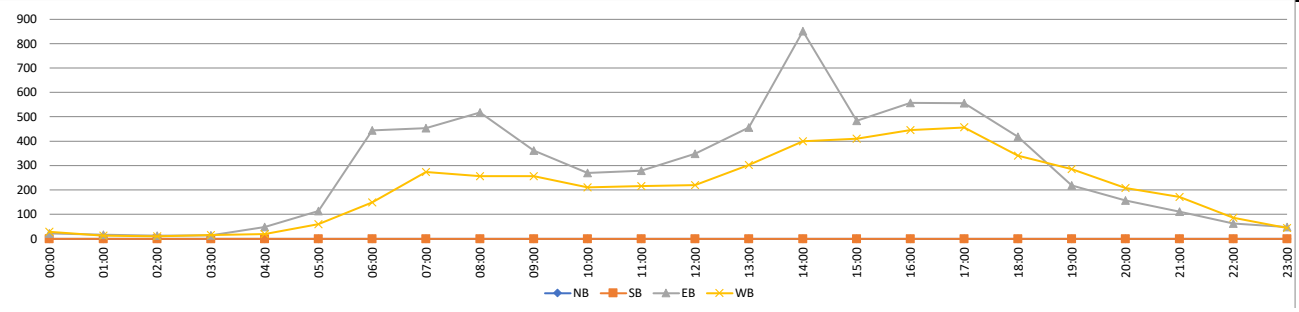
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			5	13	18	12:00			88	43	131
0:15			8	7	15	12:15			90	49	139
0:30			5	5	10	12:30			84	69	153
0:45			4	4	8	12:45			87	59	146
1:00			4	1	5	13:00			89	67	156
1:15			1	6	7	13:15			96	73	169
1:30			8	3	11	13:30			106	75	181
1:45			4	2	6	13:45			165	88	253
2:00			2	4	6	14:00			229	80	309
2:15			2	3	5	14:15			228	109	337
2:30			5	1	6	14:30			214	105	319
2:45			4	2	6	14:45			180	105	285
3:00			1	0	1	15:00			128	92	220
3:15			3	7	10	15:15			116	100	216
3:30			4	3	7	15:30			118	106	224
3:45			6	5	11	15:45			121	112	233
4:00			7	6	13	16:00			124	113	237
4:15			5	2	7	16:15			139	106	245
4:30			16	4	20	16:30			154	112	266
4:45			20	7	27	16:45			140	114	254
5:00			19	10	29	17:00			135	118	253
5:15			21	13	34	17:15			155	108	263
5:30			28	22	50	17:30			138	121	259
5:45			45	15	60	17:45			127	110	237
6:00			60	31	91	18:00			104	93	197
6:15			85	19	104	18:15			118	73	191
6:30			148	33	181	18:30			96	101	197
6:45			151	66	217	18:45			100	73	173
7:00			96	101	197	19:00			60	80	140
7:15			106	62	168	19:15			59	77	136
7:30			123	66	189	19:30			52	75	127
7:45			128	45	173	19:45			47	53	100
8:00			130	56	186	20:00			45	51	96
8:15			128	49	177	20:15			40	66	106
8:30			121	76	197	20:30			35	48	83
8:45			138	75	213	20:45			37	43	80
9:00			85	56	141	21:00			33	41	74
9:15			104	68	172	21:15			30	56	86
9:30			79	74	153	21:30			26	48	74
9:45			94	59	153	21:45			22	26	48
10:00			73	56	129	22:00			28	24	52
10:15			61	59	120	22:15			14	28	42
10:30			67	49	116	22:30			11	15	26
10:45			69	47	116	22:45			10	19	29
11:00			62	46	108	23:00			14	16	30
11:15			69	68	137	23:15			13	4	17
11:30			75	52	127	23:30			8	15	23
11:45			73	50	123	23:45			13	9	22
TOTALS	0	0	2552	1508	4060	TOTALS	0	0	4266	3368	7634
SPLIT %	0%	0%	63%	37%	35%	SPLIT %	0%	0%	56%	44%	65%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			22	29	51
01:00	02:00			17	12	29
02:00	03:00			13	10	23
03:00	04:00			14	15	29
04:00	05:00			48	19	67
05:00	06:00			113	60	173
06:00	07:00			444	149	593
07:00	08:00			453	274	727
08:00	09:00			517	256	773
09:00	10:00			362	257	619
10:00	11:00			270	211	481
11:00	12:00			279	216	495
12:00	13:00			349	220	569
13:00	14:00			456	303	759
14:00	15:00			851	399	1250
15:00	16:00			483	410	893
16:00	17:00			557	445	1002
17:00	18:00			555	457	1012
18:00	19:00			418	340	758
19:00	20:00			218	285	503
20:00	21:00			157	208	365
21:00	22:00			111	171	282
22:00	23:00			63	86	149
23:00	00:00			48	44	92

STATISTICS

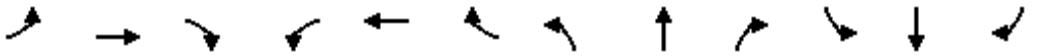
	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			2552	1508	4060
Peak Hour			8:00	6:45	8:00
Peak Volume			517	295	773
Peak Hour Factor			0.937	0.730	0.907
Peak Period	12:00	to	00:00		
Volume			4266	3368	7634
Peak Hour			14:00	16:45	14:00
Peak Volume			851	461	1250
Peak Hour Factor			0.929	0.952	0.927
Peak Period	07:00	to	09:00		
Volume			970	530	1500
Peak Hour			8:00	7:00	8:00
Peak Volume			517	274	773
Peak Hour Factor			0.937	0.678	0.907
Peak Period	16:00	to	18:00		
Volume			1112	902	2014
Peak Hour			16:30	16:45	16:30
Peak Volume			584	461	1036
Peak Hour Factor			0.942	0.952	0.974



Appendix C: Synchro Capacity Analysis and Queueing Analysis Reports

HCM 6th Signalized Intersection Summary
1: Henry Clower Blvd/Oak Rd & US 78

04/11/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	470	7	151	1177	164	44	272	189	75	75	9
Future Volume (veh/h)	25	470	7	151	1177	164	44	272	189	75	75	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	566	12	232	1252	184	59	296	205	96	91	12
Peak Hour Factor	0.69	0.83	0.58	0.65	0.94	0.89	0.75	0.92	0.92	0.78	0.82	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	1816	810	521	2013	898	360	463	897	418	397	52
Arrive On Green	0.02	0.51	0.51	0.07	0.57	0.57	0.07	0.50	0.50	0.03	0.25	0.25
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	2790	3456	1619	213
Grp Volume(v), veh/h	36	566	12	232	1252	184	59	296	205	96	0	103
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1395	1728	0	1832
Q Serve(g_s), s	1.7	16.7	0.7	10.9	42.5	10.3	4.4	21.0	7.1	3.7	0.0	8.1
Cycle Q Clear(g_c), s	1.7	16.7	0.7	10.9	42.5	10.3	4.4	21.0	7.1	3.7	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	196	1816	810	521	2013	898	360	463	897	418	0	450
V/C Ratio(X)	0.18	0.31	0.01	0.45	0.62	0.20	0.16	0.64	0.23	0.23	0.00	0.23
Avail Cap(c_a), veh/h	255	1816	810	600	2013	898	388	463	897	481	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	25.6	21.7	18.2	26.1	19.1	46.8	39.5	29.4	49.6	0.0	54.3
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.6	1.5	0.5	0.2	2.9	0.1	0.3	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.3	0.3	4.6	18.4	4.0	2.0	8.6	2.2	1.7	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	26.0	21.7	18.8	27.6	19.7	47.0	42.4	29.5	49.9	0.0	55.5
LnGrp LOS	C	C	C	B	C	B	D	D	C	D	A	E
Approach Vol, veh/h		614			1668			560			199	
Approach Delay, s/veh		25.8			25.5			38.2			52.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	107.8	12.1	51.0	19.0	97.9	11.7	51.4
Change Period (Y+Rc), s	* 5.7	* 5.9	6.0	* 6.8	* 5.7	* 5.9	6.0	* 6.8
Max Green Setting (Gmax), s	* 9.3	* 93	9.0	* 44	* 21	* 81	9.0	* 44
Max Q Clear Time (g_c+I1), s	3.7	44.5	6.4	10.1	12.9	18.7	5.7	23.0
Green Ext Time (p_c), s	0.0	13.7	0.0	0.6	0.4	4.3	0.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	492	11	11	214	10	3	0	3	1	0	0
Future Vol, veh/h	6	492	11	11	214	10	3	0	3	1	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	-	-	Yield	-	-	Yield
Storage Length	135	-	150	135	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	81	53	63	77	50	58	92	63	50	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	607	21	17	278	20	5	0	5	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	628	0	0	794	953	304	630	954	139
Stage 1	-	-	-	-	-	-	621	621	-	312	312	-
Stage 2	-	-	-	-	-	-	173	332	-	318	642	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1260	-	-	950	-	-	279	258	692	366	257	884
Stage 1	-	-	-	-	-	-	442	477	-	673	656	-
Stage 2	-	-	-	-	-	-	812	643	-	668	467	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1260	-	-	950	-	-	274	252	692	357	251	884
Mov Cap-2 Maneuver	-	-	-	-	-	-	364	357	-	462	348	-
Stage 1	-	-	-	-	-	-	439	474	-	669	644	-
Stage 2	-	-	-	-	-	-	797	631	-	660	464	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	12.7	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	364	692	1260	-	-	950	-	-	462	-
HCM Lane V/C Ratio	0.014	0.007	0.005	-	-	0.018	-	-	0.004	-
HCM Control Delay (s)	15	10.2	7.9	-	-	8.9	-	-	12.8	0
HCM Lane LOS	C	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0.1	-	-	0	-

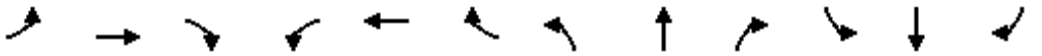
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	506	2	0	217	0	3
Future Vol, veh/h	506	2	0	217	0	3
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	-	-	-	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	550	2	0	236	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	275
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	722
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	722
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	722	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	10	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	173	293	75	111	33	301	217	331	4	9	9
Future Volume (veh/h)	23	173	293	75	111	33	301	217	331	4	9	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	234	0	147	152	0	327	244	376	11	24	24
Peak Hour Factor	0.80	0.74	0.83	0.51	0.73	0.69	0.92	0.89	0.88	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	474		320	1041		788	1079	915	410	352	352
Arrive On Green	0.13	0.13	0.00	0.03	0.10	0.00	0.10	0.58	0.58	0.41	0.41	0.41
Sat Flow, veh/h	1235	3554	1585	1781	3554	1585	1781	1870	1585	804	858	858
Grp Volume(v), veh/h	29	234	0	147	152	0	327	244	376	11	0	48
Grp Sat Flow(s),veh/h/ln	1235	1777	1585	1781	1777	1585	1781	1870	1585	804	0	1716
Q Serve(g_s), s	1.9	5.5	0.0	6.1	3.5	0.0	8.8	5.7	11.8	0.7	0.0	1.5
Cycle Q Clear(g_c), s	1.9	5.5	0.0	6.1	3.5	0.0	8.8	5.7	11.8	0.7	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	245	474		320	1041		788	1079	915	410	0	704
V/C Ratio(X)	0.12	0.49		0.46	0.15		0.41	0.23	0.41	0.03	0.00	0.07
Avail Cap(c_a), veh/h	435	1023		333	1615		788	1079	915	410	0	704
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	36.2	0.0	30.3	30.3	0.0	12.4	9.3	10.5	15.9	0.0	16.1
Incr Delay (d2), s/veh	0.2	0.8	0.0	1.0	0.1	0.0	0.3	0.5	1.4	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	0.0	2.8	1.5	0.0	3.3	2.1	3.8	0.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	37.0	0.0	31.3	30.4	0.0	12.8	9.7	11.9	16.0	0.0	16.3
LnGrp LOS	C	D		C	C		B	A	B	B	A	B
Approach Vol, veh/h		263			299			947			59	
Approach Delay, s/veh		36.7			30.8			11.6			16.2	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	14.4	18.1	15.0	42.5		32.5		57.5				
Change Period (Y+Rc), s	6.4	6.1	* 6.2	5.6		6.1		5.6				
Max Green Setting (Gmax), s	8.6	25.9	* 8.8	22.4		40.9		37.4				
Max Q Clear Time (g_c+I1), s	8.1	7.5	10.8	3.5		5.5		13.8				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.2		0.9		2.6				

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	2	0	1	0	919	0	2	371	0
Future Vol, veh/h	1	0	0	2	0	1	0	919	0	2	371	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	140	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	92	50	50	50	92	96	92	38	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	4	0	2	0	957	0	5	436	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	925	1403	218	1185	1403	479	436	0	0	957	0	0
Stage 1	446	446	-	957	957	-	-	-	-	-	-	-
Stage 2	479	957	-	228	446	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	224	139	786	144	139	533	1120	-	-	714	-	-
Stage 1	561	572	-	277	334	-	-	-	-	-	-	-
Stage 2	537	334	-	754	572	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	222	138	786	143	138	533	1120	-	-	714	-	-
Mov Cap-2 Maneuver	350	247	-	231	249	-	-	-	-	-	-	-
Stage 1	561	568	-	277	334	-	-	-	-	-	-	-
Stage 2	535	334	-	749	568	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.3	17.9	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1120	-	-	350	285	714	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.021	0.007	-	-
HCM Control Delay (s)	0	-	-	15.3	17.9	10.1	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	2	2	0	1
Future Vol, veh/h	1	1	2	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	2	2	0	1
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.8	7.1	6.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	50%	50%	0%
Vol Thru, %	50%	0%	0%
Vol Right, %	0%	50%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	4	2	1
LT Vol	2	1	0
Through Vol	2	0	0
RT Vol	0	1	1
Lane Flow Rate	4	2	1
Geometry Grp	1	1	1
Degree of Util (X)	0.005	0.002	0.001
Departure Headway (Hd)	4.039	3.744	3.341
Convergence, Y/N	Yes	Yes	Yes
Cap	891	961	1077
Service Time	2.039	1.746	1.342
HCM Lane V/C Ratio	0.004	0.002	0.001
HCM Control Delay	7.1	6.8	6.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	4	0	0	2
Future Vol, veh/h	0	1	4	0	0	2
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	1	4	0	0	2

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	6	4	0	0	4	0
Stage 1	4	-	-	-	-	-
Stage 2	2	-	-	-	-	-
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	1015	1080	-	-	1618	-
Stage 1	1019	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1015	1080	-	-	1618	-
Mov Cap-2 Maneuver	1015	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1618	-
HCM Lane V/C Ratio	-	-	0.001	-	-
HCM Control Delay (s)	-	-	8.3	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.2	0.1	3.5	1.4	0.3	1.3	0.0	0.0	0.0	0.2	0.2	0.1
Total Delay (hr)	0.2	3.1	0.0	1.3	9.0	0.7	0.6	4.7	0.2	1.1	1.1	0.1
Total Del/Veh (s)	31.2	23.7	3.3	32.1	26.9	16.1	48.4	61.4	4.9	51.4	48.3	43.3
Stop Delay (hr)	0.2	2.5	0.0	1.0	6.1	0.4	0.5	4.1	0.2	1.0	1.0	0.1
Stop Del/Veh (s)	27.1	19.3	1.7	23.6	18.3	9.8	43.5	54.3	4.6	48.2	44.4	41.8

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	22.1
Total Del/Veh (s)	29.7
Stop Delay (hr)	17.2
Stop Del/Veh (s)	23.1

2: DW1/Church DW & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1		0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	2.3	0.3	0.1	4.6	1.3	1.0	8.4	0.4		0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.0	0.0	2.4	0.2	0.4	6.8	0.0		0.1

3: Pate St & Henry Clower Blvd Performance by movement

Movement	EBT	EBR	WBT	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	1.2	0.7	0.3	0.1	3.6	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.3	0.0	0.0	4.2	0.2

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.4	0.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.1	0.1
Total Delay (hr)	0.2	1.6	0.3	0.6	0.8	0.0	0.9	0.5	0.3	0.0	0.0	0.0
Total Del/Veh (s)	41.4	35.6	3.0	30.6	23.9	1.7	10.7	6.1	3.2	20.3	17.2	2.7
Stop Delay (hr)	0.2	1.4	0.0	0.6	0.7	0.0	0.6	0.3	0.2	0.0	0.0	0.0
Stop Del/Veh (s)	38.3	30.6	0.0	28.6	20.7	0.0	7.5	3.4	1.8	18.4	14.6	2.4

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.7
Total Delay (hr)	5.2
Total Del/Veh (s)	11.4
Stop Delay (hr)	3.9
Stop Del/Veh (s)	8.6

5: Lenora Church Rd & Beverly Ln/Poplar St Performance by movement

Movement	EBL	WBL	WBR	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.0	0.3	0.0	0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.4	0.6
Total Del/Veh (s)	12.6	17.6	2.1	0.6	9.9	4.1	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	10.5	16.9	1.8	0.0	4.0	0.4	0.1

6: Poplar St & Pate St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.1	0.1	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		3.4	2.8	4.6	0.0	2.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		3.4	1.8	2.1	0.0	1.5

7: Pate St & Pine St Performance by movement

Movement	WBR	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.6	1.7	0.1	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.8	0.2	0.0	0.5

Total Network Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	0.7
Total Delay (hr)	30.1
Total Del/Veh (s)	29.5
Stop Delay (hr)	21.4
Stop Del/Veh (s)	21.0

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	R
Maximum Queue (ft)	153	271	239	73	150	560	567	165	234	394	53	74
Average Queue (ft)	27	149	105	6	74	305	306	77	49	214	27	31
95th Queue (ft)	91	246	213	40	150	506	512	201	159	361	45	60
Link Distance (ft)		632	632			2154	2154			908	908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	125			95	125			115	135			315
Storage Blk Time (%)		15	6		1	24	26	0		35		
Queuing Penalty (veh)		4	0		4	37	43	0		16		

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	44	113	148
Average Queue (ft)	3	51	58
95th Queue (ft)	22	99	121
Link Distance (ft)		417	417
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	0	1	
Queuing Penalty (veh)	0	0	

Intersection: 2: DW1/Church DW & Henry Clower Blvd

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LT	LT
Maximum Queue (ft)	11	4	28	18	8
Average Queue (ft)	0	0	5	2	0
95th Queue (ft)	6	3	20	11	4
Link Distance (ft)				165	327
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	135	150	135		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Pate St & Henry Clower Blvd

Movement	NB
Directions Served	R
Maximum Queue (ft)	16
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	406
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Lenora Church Rd & Henry Clower Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	R	L	TR
Maximum Queue (ft)	41	126	95	50	103	86	89	208	135	104	32	47
Average Queue (ft)	16	60	44	5	45	33	38	85	50	46	2	11
95th Queue (ft)	41	103	84	30	89	67	74	157	107	83	15	35
Link Distance (ft)		1045	1045			227	227		625	625		819
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			180	150			335			150	
Storage Blk Time (%)		0			0							
Queuing Penalty (veh)		0			0							

Intersection: 5: Lenora Church Rd & Beverly Ln/Poplar St

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	30	24	12
Average Queue (ft)	1	1	1
95th Queue (ft)	10	11	6
Link Distance (ft)	364	85	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			130
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Poplar St & Pate St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	20	30
Average Queue (ft)	1	4
95th Queue (ft)	10	20
Link Distance (ft)	85	148
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Pate St & Pine St

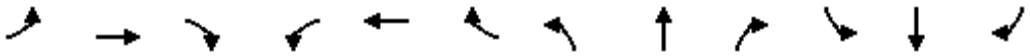
Movement	WB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	2
95th Queue (ft)	11
Link Distance (ft)	771
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 104

HCM 6th Signalized Intersection Summary
1: Henry Clower Blvd/Oak Rd & US 78

04/11/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1142	8	185	846	113	33	233	328	269	259	11
Future Volume (veh/h)	40	1142	8	185	846	113	33	233	328	269	259	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	1190	16	234	1007	128	42	259	386	299	291	20
Peak Hour Factor	0.72	0.96	0.50	0.79	0.84	0.88	0.78	0.90	0.85	0.90	0.89	0.56
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	2052	915	328	2208	985	107	294	625	336	316	22
Arrive On Green	0.02	0.58	0.58	0.07	0.62	0.62	0.06	0.26	0.26	0.06	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	2790	3456	1730	119
Grp Volume(v), veh/h	56	1190	16	234	1007	128	42	259	386	299	0	311
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1395	1728	0	1849
Q Serve(g_s), s	2.3	38.3	0.6	9.4	27.0	3.9	0.0	23.9	17.3	9.3	0.0	29.7
Cycle Q Clear(g_c), s	2.3	38.3	0.6	9.4	27.0	3.9	0.0	23.9	17.3	9.3	0.0	29.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	314	2052	915	328	2208	985	107	294	625	336	0	338
V/C Ratio(X)	0.18	0.58	0.02	0.71	0.46	0.13	0.39	0.88	0.62	0.89	0.00	0.92
Avail Cap(c_a), veh/h	366	2052	915	519	2208	985	129	387	763	348	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.0	24.2	9.2	21.4	18.0	6.1	81.1	64.7	34.8	81.2	0.0	72.3
Incr Delay (d2), s/veh	0.3	1.2	0.0	2.9	0.7	0.3	2.3	16.6	1.0	23.2	0.0	23.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	16.5	0.3	4.1	11.3	2.2	1.9	12.0	5.5	8.0	0.0	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	25.4	9.3	24.3	18.7	6.4	83.5	81.4	35.8	104.5	0.0	95.3
LnGrp LOS	B	C	A	C	B	A	F	F	D	F	A	F
Approach Vol, veh/h		1262			1369			687			610	
Approach Delay, s/veh		24.8			18.5			55.9			99.8	
Approach LOS		C			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	117.7	12.8	39.7	17.7	109.8	17.4	35.1
Change Period (Y+Rc), s	* 5.7	* 5.9	* 6	6.8	* 5.7	* 5.9	* 6	6.8
Max Green Setting (Gmax), s	* 9.3	* 97	* 9	40.2	* 31	* 75	* 12	37.2
Max Q Clear Time (g_c+I1), s	4.3	29.0	2.0	31.7	11.4	40.3	11.3	25.9
Green Ext Time (p_c), s	0.0	9.8	0.0	1.1	0.6	10.8	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	546	13	10	443	1	11	3	2	6	0	7
Future Vol, veh/h	3	546	13	10	443	1	11	3	2	6	0	7
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	-	-	Yield	-	-	Yield
Storage Length	135	-	150	135	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	94	60	50	97	38	83	50	35	62	92	35
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	581	22	20	457	3	13	6	6	10	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	460	0	0	603	0	0	860	1091	291	801	1110	229
Stage 1	-	-	-	-	-	-	591	591	-	497	497	-
Stage 2	-	-	-	-	-	-	269	500	-	304	613	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1097	-	-	971	-	-	250	213	706	276	208	774
Stage 1	-	-	-	-	-	-	460	493	-	523	543	-
Stage 2	-	-	-	-	-	-	713	541	-	681	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1097	-	-	971	-	-	239	207	706	265	203	774
Mov Cap-2 Maneuver	-	-	-	-	-	-	351	326	-	381	317	-
Stage 1	-	-	-	-	-	-	458	491	-	520	532	-
Stage 2	-	-	-	-	-	-	680	530	-	664	479	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	14.7	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	343	706	1097	-	-	971	-	-	381	774
HCM Lane V/C Ratio	0.056	0.008	0.004	-	-	0.021	-	-	0.025	0.026
HCM Control Delay (s)	16.1	10.1	8.3	-	-	8.8	-	-	14.7	9.8
HCM Lane LOS	C	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0.1	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	560	3	0	461	0	2
Future Vol, veh/h	560	3	0	461	0	2
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	-	-	-	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	609	3	0	501	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	305
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	691
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	691
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	691	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-
HCM Control Delay (s)	10.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	261	745	302	151	9	159	192	278	30	62	37
Future Volume (veh/h)	11	261	745	302	151	9	159	192	278	30	62	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	307	0	343	191	0	199	229	293	48	100	52
Peak Hour Factor	0.56	0.85	0.92	0.88	0.79	0.75	0.80	0.84	0.95	0.63	0.62	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	474		305	1066		679	1066	903	443	479	249
Arrive On Green	0.13	0.13	0.00	0.13	0.40	0.00	0.09	0.57	0.57	0.41	0.41	0.41
Sat Flow, veh/h	1192	3554	1585	1781	3554	1585	1781	1870	1585	880	1159	603
Grp Volume(v), veh/h	20	307	0	343	191	0	199	229	293	48	0	152
Grp Sat Flow(s),veh/h/ln	1192	1777	1585	1781	1777	1585	1781	1870	1585	880	0	1762
Q Serve(g_s), s	1.3	7.4	0.0	8.6	3.1	0.0	5.4	5.4	8.8	3.0	0.0	5.0
Cycle Q Clear(g_c), s	1.3	7.4	0.0	8.6	3.1	0.0	5.4	5.4	8.8	3.0	0.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	239	474		305	1066		679	1066	903	443	0	727
V/C Ratio(X)	0.08	0.65		1.12	0.18		0.29	0.21	0.32	0.11	0.00	0.21
Avail Cap(c_a), veh/h	291	628		305	1220		854	1066	903	443	0	727
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	37.0	0.0	33.4	19.9	0.0	11.8	9.5	10.2	16.4	0.0	17.0
Incr Delay (d2), s/veh	0.1	1.5	0.0	89.0	0.1	0.0	0.2	0.5	1.0	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	0.0	10.0	1.3	0.0	1.9	2.0	2.8	0.6	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	38.5	0.0	122.5	20.0	0.0	12.1	9.9	11.2	16.9	0.0	17.6
LnGrp LOS	C	D		F	B		B	A	B	B	A	B
Approach Vol, veh/h		327			534			721			200	
Approach Delay, s/veh		38.2			85.8			11.0			17.5	
Approach LOS		D			F			B			B	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	15.0	18.1	14.1	42.8		33.1		56.9				
Change Period (Y+Rc), s	6.4	6.1	* 6.2	5.6		6.1		5.6				
Max Green Setting (Gmax), s	8.6	15.9	* 17	24.4		30.9		47.4				
Max Q Clear Time (g_c+I1), s	10.6	9.4	7.4	7.0		5.1		10.8				
Green Ext Time (p_c), s	0.0	1.0	0.3	0.9		1.1		2.3				

Intersection Summary	
HCM 6th Ctrl Delay	39.2
HCM 6th LOS	D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	4	0	0	3	627	3	3	1109	0
Future Vol, veh/h	0	0	0	4	0	0	3	627	3	3	1109	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	140	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	50	50	92	50	94	92	50	97	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	0	0	6	667	3	6	1143	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1501	1837	572	1265	1836	335	1143	0	0	670	0	0
Stage 1	1155	1155	-	681	681	-	-	-	-	-	-	-
Stage 2	346	682	-	584	1155	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	84	75	463	126	75	661	607	-	-	916	-	-
Stage 1	209	269	-	407	448	-	-	-	-	-	-	-
Stage 2	643	448	-	465	269	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	74	463	124	74	661	607	-	-	916	-	-
Mov Cap-2 Maneuver	168	183	-	252	181	-	-	-	-	-	-	-
Stage 1	207	267	-	403	444	-	-	-	-	-	-	-
Stage 2	637	444	-	462	267	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	19.8	0.1	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	607	-	-	-	252	916	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.032	0.007	-	-
HCM Control Delay (s)	11	-	-	0	19.8	9	-	-
HCM Lane LOS	B	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	1	0	2
Future Vol, veh/h	2	2	2	1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	2	1	0	2
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.8	7.1	6.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	67%	50%	0%
Vol Thru, %	33%	0%	0%
Vol Right, %	0%	50%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	3	4	2
LT Vol	2	2	0
Through Vol	1	0	0
RT Vol	0	2	2
Lane Flow Rate	3	4	2
Geometry Grp	1	1	1
Degree of Util (X)	0.004	0.005	0.002
Departure Headway (Hd)	4.077	3.744	3.344
Convergence, Y/N	Yes	Yes	Yes
Cap	883	961	1076
Service Time	2.079	1.746	1.347
HCM Lane V/C Ratio	0.003	0.004	0.002
HCM Control Delay	7.1	6.8	6.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	1	2	0	2
Future Vol, veh/h	2	0	1	2	0	2
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	2	0	1	2	0	2

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4	2	0	0	3	0
Stage 1	2	-	-	-	-	-
Stage 2	2	-	-	-	-	-
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	1018	1082	-	-	1619	-
Stage 1	1021	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1018	1082	-	-	1619	-
Mov Cap-2 Maneuver	1018	-	-	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1018	1619	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	8.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.4	0.2	2.3	1.5	0.2	1.3	0.3	0.1	0.0	0.4	0.4	0.4
Total Delay (hr)	0.3	10.2	0.0	2.7	4.5	0.3	0.6	5.2	1.8	7.0	5.1	0.1
Total Del/Veh (s)	34.4	32.3	12.6	53.4	19.4	8.0	65.5	74.4	19.6	85.9	66.9	47.3
Stop Delay (hr)	0.3	7.7	0.0	2.4	3.2	0.2	0.6	4.6	1.7	6.6	4.5	0.1
Stop Del/Veh (s)	27.4	24.3	8.8	47.5	13.6	4.9	59.9	66.7	18.5	80.4	60.2	42.6

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	37.8
Total Del/Veh (s)	38.8
Stop Delay (hr)	31.8
Stop Del/Veh (s)	32.7

2: DW1/Church DW & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	1.9	0.5	0.4	4.1	2.0	1.9	13.4	22.6	0.4	13.9	0.6	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.0	0.0	0.0	1.2	0.1	0.1	12.1	18.7	0.0	12.6	0.0	0.4

3: Pate St & Henry Clower Blvd Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.3	0.0	0.2	0.0	0.5
Total Del/Veh (s)	1.7	0.6	1.5	5.0	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.2	0.2	0.3	5.5	0.3

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.7	0.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.2	0.2
Total Delay (hr)	0.1	2.9	2.3	3.5	0.6	0.0	0.5	0.5	0.3	0.1	0.3	0.1
Total Del/Veh (s)	35.3	39.0	10.9	42.4	14.4	1.7	10.9	10.2	3.4	17.7	17.6	6.3
Stop Delay (hr)	0.1	2.4	0.7	3.2	0.5	0.0	0.4	0.3	0.2	0.1	0.2	0.1
Stop Del/Veh (s)	32.4	32.3	3.6	39.0	11.7	0.0	8.8	6.8	2.2	15.3	14.0	5.6

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.1
Total Delay (hr)	11.2
Total Del/Veh (s)	18.0
Stop Delay (hr)	8.3
Stop Del/Veh (s)	13.4

5: Lenora Church Rd & Beverly Ln/Poplar St Performance by movement

Movement	WBL	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	2.4	0.2	0.2	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	1.8	1.9
Total Del/Veh (s)	20.3	13.2	0.3	0.3	9.0	5.8	3.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.7	0.7
Stop Del/Veh (s)	19.4	12.3	0.0	0.0	5.7	2.2	1.5

6: Poplar St & Pate St Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	0.1	2.0	4.3	6.1	0.3	2.8	2.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.6	0.0	2.2	2.7	2.7	0.1	2.5	1.4

7: Pate St & Pine St Performance by movement

Movement	WBL	NBR	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.2	1.3	0.1	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.9	0.2	0.0	0.5

Total Network Performance

Denied Delay (hr)	1.1
Denied Del/Veh (s)	0.8
Total Delay (hr)	55.2
Total Del/Veh (s)	41.3
Stop Delay (hr)	41.1
Stop Del/Veh (s)	30.7

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	R
Maximum Queue (ft)	174	622	510	75	150	327	332	164	234	427	139	148
Average Queue (ft)	35	356	300	5	112	180	180	42	47	219	64	74
95th Queue (ft)	120	546	482	41	176	293	294	146	148	365	112	126
Link Distance (ft)		632	632			2154	2154			908	908	
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)	125			95	125			115	135			315
Storage Blk Time (%)		34	31		12	12	15		0	39		
Queuing Penalty (veh)		14	3		51	22	17		0	13		

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	236	314	389
Average Queue (ft)	158	205	231
95th Queue (ft)	255	294	366
Link Distance (ft)		417	417
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	17	62	
Queuing Penalty (veh)	22	83	

Intersection: 2: DW1/Church DW & Henry Clower Blvd

Movement	WB	NB	SB
Directions Served	L	LT	LT
Maximum Queue (ft)	23	36	24
Average Queue (ft)	1	10	4
95th Queue (ft)	10	29	18
Link Distance (ft)		165	327
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	135		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Pate St & Henry Clower Blvd

Movement	WB	NB
Directions Served	T	R
Maximum Queue (ft)	59	10
Average Queue (ft)	6	1
95th Queue (ft)	39	5
Link Distance (ft)	577	406
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Lenora Church Rd & Henry Clower Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	R	L	TR
Maximum Queue (ft)	51	187	270	264	224	264	126	133	134	113	51	111
Average Queue (ft)	10	83	89	137	146	58	36	50	53	45	17	40
95th Queue (ft)	36	145	196	260	229	193	85	96	105	85	43	85
Link Distance (ft)		1045	1045			227	227		625	625		819
Upstream Blk Time (%)					3	3						
Queuing Penalty (veh)					0	7						
Storage Bay Dist (ft)	135			180	150			335			150	
Storage Blk Time (%)		1	0	5	22	0						0
Queuing Penalty (veh)		0	0	7	16	1						0

Intersection: 5: Lenora Church Rd & Beverly Ln/Poplar St

Movement	WB	NB	SB
Directions Served	LTR	L	L
Maximum Queue (ft)	30	21	17
Average Queue (ft)	2	2	1
95th Queue (ft)	15	10	7
Link Distance (ft)	85		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		140	130
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Poplar St & Pate St

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	26	30	18
Average Queue (ft)	2	3	1
95th Queue (ft)	13	16	10
Link Distance (ft)	85	148	198
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Pate St & Pine St

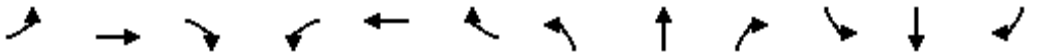
Movement	WB
Directions Served	LR
Maximum Queue (ft)	16
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	771
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 256

HCM 6th Signalized Intersection Summary
1: Henry Clower Blvd/Oak Rd & US 78

04/11/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	499	7	160	1249	174	44	289	201	80	80	10
Future Volume (veh/h)	27	499	7	160	1249	174	44	289	201	80	80	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	601	12	246	1329	196	59	314	218	103	98	13
Peak Hour Factor	0.69	0.83	0.58	0.65	0.94	0.89	0.75	0.92	0.92	0.78	0.82	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	1801	803	508	2011	897	353	460	905	395	397	53
Arrive On Green	0.02	0.51	0.51	0.08	0.57	0.57	0.07	0.49	0.49	0.03	0.25	0.25
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	2790	3456	1617	215
Grp Volume(v), veh/h	39	601	12	246	1329	196	59	314	218	103	0	111
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1395	1728	0	1832
Q Serve(g_s), s	1.9	18.1	0.7	11.7	46.7	11.0	4.4	23.1	7.6	4.0	0.0	8.8
Cycle Q Clear(g_c), s	1.9	18.1	0.7	11.7	46.7	11.0	4.4	23.1	7.6	4.0	0.0	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	179	1801	803	508	2011	897	353	460	905	395	0	450
V/C Ratio(X)	0.22	0.33	0.01	0.48	0.66	0.22	0.17	0.68	0.24	0.26	0.00	0.25
Avail Cap(c_a), veh/h	237	1801	803	579	2011	897	381	460	905	452	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	26.4	22.1	18.7	27.1	19.4	46.8	40.3	29.4	49.8	0.0	54.5
Incr Delay (d2), s/veh	0.6	0.5	0.0	0.7	1.7	0.6	0.2	4.1	0.1	0.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.9	0.3	5.0	20.2	4.3	2.0	9.6	2.4	1.8	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	26.9	22.1	19.4	28.8	19.9	47.0	44.4	29.5	50.1	0.0	55.8
LnGrp LOS	C	C	C	B	C	B	D	D	C	D	A	E
Approach Vol, veh/h		652			1771			591			214	
Approach Delay, s/veh		26.7			26.5			39.2			53.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	107.7	12.1	51.0	19.8	97.1	12.0	51.1
Change Period (Y+Rc), s	* 5.7	* 5.9	6.0	* 6.8	* 5.7	* 5.9	6.0	* 6.8
Max Green Setting (Gmax), s	* 9.3	* 93	9.0	* 44	* 21	* 81	9.0	* 44
Max Q Clear Time (g_c+I1), s	3.9	48.7	6.4	10.8	13.7	20.1	6.0	25.1
Green Ext Time (p_c), s	0.0	14.8	0.0	0.6	0.4	4.6	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	522	11	11	227	11	3	0	3	1	0	0
Future Vol, veh/h	6	522	11	11	227	11	3	0	3	1	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	-	-	Yield	-	-	Yield
Storage Length	135	-	150	135	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	81	53	63	77	50	58	92	63	50	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	644	21	17	295	22	5	0	5	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	317	0	0	665	0	0	840	1009	322	665	1008	148
Stage 1	-	-	-	-	-	-	658	658	-	329	329	-
Stage 2	-	-	-	-	-	-	182	351	-	336	679	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1240	-	-	920	-	-	258	239	674	345	239	872
Stage 1	-	-	-	-	-	-	420	459	-	658	645	-
Stage 2	-	-	-	-	-	-	802	631	-	652	449	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1240	-	-	920	-	-	253	233	674	336	233	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	345	341	-	445	333	-
Stage 1	-	-	-	-	-	-	417	456	-	654	633	-
Stage 2	-	-	-	-	-	-	787	620	-	644	446	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	13.1	13.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	345	674	1240	-	-	920	-	-	445	-
HCM Lane V/C Ratio	0.015	0.007	0.005	-	-	0.019	-	-	0.004	-
HCM Control Delay (s)	15.6	10.4	7.9	-	-	9	-	-	13.1	0
HCM Lane LOS	C	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0.1	-	-	0	-

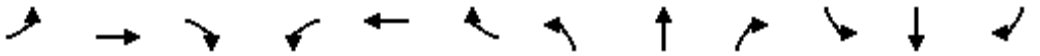
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	537	2	0	230	0	3
Future Vol, veh/h	537	2	0	230	0	3
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	-	-	-	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	584	2	0	250	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	292
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	704
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	704
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	704	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	10.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	184	311	80	118	35	319	230	351	4	10	10
Future Volume (veh/h)	24	184	311	80	118	35	319	230	351	4	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	249	0	157	162	0	347	258	399	11	26	26
Peak Hour Factor	0.80	0.74	0.83	0.51	0.73	0.69	0.92	0.89	0.88	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	474		323	1058		778	1070	907	395	348	348
Arrive On Green	0.13	0.13	0.00	0.03	0.10	0.00	0.10	0.57	0.57	0.41	0.41	0.41
Sat Flow, veh/h	1224	3554	1585	1781	3554	1585	1781	1870	1585	777	858	858
Grp Volume(v), veh/h	30	249	0	157	162	0	347	258	399	11	0	52
Grp Sat Flow(s),veh/h/ln	1224	1777	1585	1781	1777	1585	1781	1870	1585	777	0	1716
Q Serve(g_s), s	2.0	5.9	0.0	6.6	3.8	0.0	8.8	6.2	12.9	0.8	0.0	1.7
Cycle Q Clear(g_c), s	2.0	5.9	0.0	6.6	3.8	0.0	8.8	6.2	12.9	0.8	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	243	474		323	1058		778	1070	907	395	0	696
V/C Ratio(X)	0.12	0.53		0.49	0.15		0.45	0.24	0.44	0.03	0.00	0.07
Avail Cap(c_a), veh/h	432	1023		327	1615		778	1070	907	395	0	696
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	36.3	0.0	30.2	30.2	0.0	13.0	9.5	11.0	16.1	0.0	16.4
Incr Delay (d2), s/veh	0.2	0.9	0.0	1.1	0.1	0.0	0.4	0.5	1.5	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	0.0	3.0	1.6	0.0	3.6	2.3	4.2	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	37.3	0.0	31.3	30.3	0.0	13.4	10.1	12.5	16.3	0.0	16.6
LnGrp LOS	C	D		C	C		B	B	B	B	A	B
Approach Vol, veh/h		279			319			1004			63	
Approach Delay, s/veh		37.0			30.8			12.2			16.5	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	14.8	18.1	15.0	42.1		32.9		57.1				
Change Period (Y+Rc), s	6.4	6.1	* 6.2	5.6		6.1		5.6				
Max Green Setting (Gmax), s	8.6	25.9	* 8.8	22.4		40.9		37.4				
Max Q Clear Time (g_c+I1), s	8.6	7.9	10.8	3.7		5.8		14.9				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.2		1.0		2.7				

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	2	0	1	0	975	0	2	394	0
Future Vol, veh/h	1	0	0	2	0	1	0	975	0	2	394	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	140	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	92	50	50	50	92	96	92	38	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	4	0	2	0	1016	0	5	464	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	982	1490	232	1258	1490	508	464	0	0	1016	0	0
Stage 1	474	474	-	1016	1016	-	-	-	-	-	-	-
Stage 2	508	1016	-	242	474	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	203	123	770	128	123	510	1094	-	-	678	-	-
Stage 1	540	556	-	255	314	-	-	-	-	-	-	-
Stage 2	516	314	-	740	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	201	122	770	127	122	510	1094	-	-	678	-	-
Mov Cap-2 Maneuver	331	230	-	212	233	-	-	-	-	-	-	-
Stage 1	540	552	-	255	314	-	-	-	-	-	-	-
Stage 2	514	314	-	735	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.9	19	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1094	-	-	331	263	678	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.023	0.008	-	-
HCM Control Delay (s)	0	-	-	15.9	19	10.4	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	2	2	0	1
Future Vol, veh/h	1	1	2	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	2	2	0	1
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.8	7.1	6.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	50%	50%	0%
Vol Thru, %	50%	0%	0%
Vol Right, %	0%	50%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	4	2	1
LT Vol	2	1	0
Through Vol	2	0	0
RT Vol	0	1	1
Lane Flow Rate	4	2	1
Geometry Grp	1	1	1
Degree of Util (X)	0.005	0.002	0.001
Departure Headway (Hd)	4.039	3.744	3.341
Convergence, Y/N	Yes	Yes	Yes
Cap	891	961	1077
Service Time	2.039	1.746	1.342
HCM Lane V/C Ratio	0.004	0.002	0.001
HCM Control Delay	7.1	6.8	6.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	4	0	0	2
Future Vol, veh/h	0	1	4	0	0	2
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	1	4	0	0	2

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	6	4	0	0	4	0
Stage 1	4	-	-	-	-	-
Stage 2	2	-	-	-	-	-
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	1015	1080	-	-	1618	-
Stage 1	1019	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1015	1080	-	-	1618	-
Mov Cap-2 Maneuver	1015	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1618	-
HCM Lane V/C Ratio	-	-	0.001	-	-
HCM Control Delay (s)	-	-	8.3	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.2	0.1	3.5	1.5	0.4	1.3	0.0	0.0	0.0	0.2	0.2	0.1
Total Delay (hr)	0.3	3.5	0.0	1.5	10.3	0.8	0.7	5.0	0.3	1.2	1.0	0.1
Total Del/Veh (s)	33.6	25.6	2.7	34.2	29.6	17.8	55.7	62.6	5.3	51.1	49.2	40.2
Stop Delay (hr)	0.2	2.9	0.0	1.1	6.9	0.5	0.7	4.4	0.3	1.1	1.0	0.1
Stop Del/Veh (s)	29.9	21.0	1.5	25.0	19.7	10.7	50.4	55.4	4.8	47.8	45.3	38.4

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	24.7
Total Del/Veh (s)	31.7
Stop Delay (hr)	19.1
Stop Del/Veh (s)	24.4

2: DW1/Church DW & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1		0.0
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	3.1	0.4	0.2	5.5	1.2	1.1	14.5	0.4		0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.6	0.0	0.0	3.1	0.3	0.2	13.1	0.0		0.2

3: Pate St & Henry Clower Blvd Performance by movement

Movement	EBT	EBR	WBT	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	1.3	0.4	0.3	0.1	2.8	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.1	0.0	0.1	3.7	0.2

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.4	0.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.1	0.1
Total Delay (hr)	0.2	1.7	0.3	0.6	0.8	0.0	1.1	0.6	0.3	0.0	0.1	0.0
Total Del/Veh (s)	38.4	33.2	3.1	28.0	24.3	1.7	12.0	6.5	3.5	17.3	16.9	3.8
Stop Delay (hr)	0.2	1.5	0.0	0.5	0.7	0.0	0.8	0.3	0.2	0.0	0.0	0.0
Stop Del/Veh (s)	35.3	28.2	0.0	26.0	21.2	0.0	8.4	3.6	1.8	15.5	13.9	3.5

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.7
Total Delay (hr)	5.7
Total Del/Veh (s)	11.7
Stop Delay (hr)	4.2
Stop Del/Veh (s)	8.7

5: Lenora Church Rd & Beverly Ln/Poplar St Performance by movement

Movement	EBL	WBL	WBR	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.0	0.3	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.4	0.6
Total Del/Veh (s)	11.6	10.7	3.6	0.7	11.7	4.0	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	10.1	10.0	3.4	0.0	7.2	0.4	0.1

6: Poplar St & Pate St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		2.9	3.0	4.3	0.0	1.9	2.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		3.0	1.8	2.0	0.0	1.8	1.4

7: Pate St & Pine St Performance by movement

Movement	WBR	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.9	1.5	0.1	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.1	0.1	0.0	0.5

Total Network Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	0.7
Total Delay (hr)	33.4
Total Del/Veh (s)	31.1
Stop Delay (hr)	23.6
Stop Del/Veh (s)	22.0

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	R
Maximum Queue (ft)	149	298	256	75	150	585	614	165	234	413	51	78
Average Queue (ft)	28	163	117	5	86	344	357	73	57	225	28	34
95th Queue (ft)	97	256	230	35	175	569	570	197	166	381	49	62
Link Distance (ft)		632	632			2154	2154			908	908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	125			95	125			115	135			315
Storage Blk Time (%)		17	10		1	26	28	0	0	38		
Queuing Penalty (veh)		5	1		7	42	49	0	1	17		

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	102	128	173
Average Queue (ft)	7	58	56
95th Queue (ft)	47	112	125
Link Distance (ft)		417	417
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	0	3	
Queuing Penalty (veh)	0	1	

Intersection: 2: DW1/Church DW & Henry Clower Blvd

Movement	EB	WB	NB	SB
Directions Served	L	L	LT	LT
Maximum Queue (ft)	22	32	22	8
Average Queue (ft)	2	4	2	0
95th Queue (ft)	12	20	11	4
Link Distance (ft)			165	327
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	135	135		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Pate St & Henry Clower Blvd

Movement	NB
Directions Served	R
Maximum Queue (ft)	16
Average Queue (ft)	1
95th Queue (ft)	8
Link Distance (ft)	406
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Lenora Church Rd & Henry Clower Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	R	L	TR
Maximum Queue (ft)	70	135	110	44	103	90	108	188	127	112	23	40
Average Queue (ft)	19	65	47	3	45	30	42	94	53	48	2	11
95th Queue (ft)	52	115	90	23	84	66	86	167	110	89	14	36
Link Distance (ft)		1045	1045			227	227		625	625		819
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			180	150			335			150	
Storage Blk Time (%)		0	0		0							
Queuing Penalty (veh)		0	0		0							

Intersection: 5: Lenora Church Rd & Beverly Ln/Poplar St

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	18	24	17
Average Queue (ft)	1	2	1
95th Queue (ft)	9	13	8
Link Distance (ft)	364	85	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			130
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Poplar St & Pate St

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	21	30	18
Average Queue (ft)	1	3	1
95th Queue (ft)	9	18	9
Link Distance (ft)	85	148	198
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Pate St & Pine St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	771
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 122

HCM 6th Signalized Intersection Summary
1: Henry Clower Blvd/Oak Rd & US 78

04/11/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1212	8	196	898	120	35	247	348	285	275	12
Future Volume (veh/h)	42	1212	8	196	898	120	35	247	348	285	275	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	1262	16	248	1069	136	45	274	409	317	309	21
Peak Hour Factor	0.72	0.96	0.50	0.79	0.84	0.88	0.78	0.90	0.85	0.90	0.89	0.56
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	1992	888	307	2164	965	110	308	662	345	333	23
Arrive On Green	0.02	0.56	0.56	0.07	0.61	0.61	0.07	0.28	0.28	0.07	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	2790	3456	1732	118
Grp Volume(v), veh/h	58	1262	16	248	1069	136	45	274	409	317	0	330
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1395	1728	0	1849
Q Serve(g_s), s	2.5	43.6	0.6	10.4	30.3	4.4	0.2	25.3	18.0	10.4	0.0	31.6
Cycle Q Clear(g_c), s	2.5	43.6	0.6	10.4	30.3	4.4	0.2	25.3	18.0	10.4	0.0	31.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	287	1992	888	307	2164	965	110	308	662	345	0	356
V/C Ratio(X)	0.20	0.63	0.02	0.81	0.49	0.14	0.41	0.89	0.62	0.92	0.00	0.93
Avail Cap(c_a), veh/h	337	1992	888	488	2164	965	129	387	778	345	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	27.0	10.1	26.7	19.7	6.6	80.8	63.6	33.0	81.1	0.0	71.5
Incr Delay (d2), s/veh	0.3	1.5	0.0	5.4	0.8	0.3	2.4	18.4	1.1	28.7	0.0	25.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	18.9	0.3	6.0	12.8	2.4	2.0	12.8	5.7	8.7	0.0	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	28.5	10.2	32.1	20.5	6.9	83.2	82.1	34.1	109.8	0.0	96.6
LnGrp LOS	B	C	B	C	C	A	F	F	C	F	A	F
Approach Vol, veh/h		1336			1453			728			647	
Approach Delay, s/veh		27.8			21.2			55.2			103.1	
Approach LOS		C			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	115.5	13.1	41.4	18.7	106.8	18.0	36.5
Change Period (Y+Rc), s	* 5.7	* 5.9	* 6	6.8	* 5.7	* 5.9	* 6	6.8
Max Green Setting (Gmax), s	* 9.3	* 97	* 9	40.2	* 31	* 75	* 12	37.2
Max Q Clear Time (g_c+I1), s	4.5	32.3	2.2	33.6	12.4	45.6	12.4	27.3
Green Ext Time (p_c), s	0.0	10.8	0.0	1.0	0.7	11.1	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	579	13	10	470	1	11	2	2	6	0	7
Future Vol, veh/h	3	579	13	10	470	1	11	2	2	6	0	7
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	-	-	Yield	-	-	Yield
Storage Length	135	-	150	135	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	94	60	50	97	38	83	50	35	62	92	35
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	616	22	20	485	3	13	4	6	10	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	488	0	0	638	0	0	909	1154	308	845	1173	243
Stage 1	-	-	-	-	-	-	626	626	-	525	525	-
Stage 2	-	-	-	-	-	-	283	528	-	320	648	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1071	-	-	942	-	-	230	196	688	256	191	758
Stage 1	-	-	-	-	-	-	439	475	-	504	528	-
Stage 2	-	-	-	-	-	-	700	526	-	666	464	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	942	-	-	219	191	688	247	186	758
Mov Cap-2 Maneuver	-	-	-	-	-	-	333	311	-	365	302	-
Stage 1	-	-	-	-	-	-	437	473	-	501	517	-
Stage 2	-	-	-	-	-	-	667	515	-	652	462	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	15	11.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	328	688	1071	-	-	942	-	-	365	758
HCM Lane V/C Ratio	0.053	0.008	0.004	-	-	0.021	-	-	0.027	0.026
HCM Control Delay (s)	16.6	10.3	8.4	-	-	8.9	-	-	15.1	9.9
HCM Lane LOS	C	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0.1	-	-	0.1	0.1

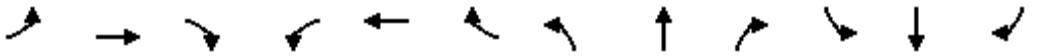
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	594	3	0	489	0	2
Future Vol, veh/h	594	3	0	489	0	2
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	-	-	-	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	646	3	0	532	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	323
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	673
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	673
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	673	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-
HCM Control Delay (s)	10.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	277	791	320	160	9	169	204	295	32	66	39
Future Volume (veh/h)	12	277	791	320	160	9	169	204	295	32	66	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	326	0	364	203	0	211	243	311	51	106	55
Peak Hour Factor	0.56	0.85	0.92	0.88	0.79	0.75	0.80	0.84	0.95	0.63	0.62	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	474		298	1066		671	1066	903	431	477	248
Arrive On Green	0.13	0.13	0.00	0.13	0.40	0.00	0.09	0.57	0.57	0.41	0.41	0.41
Sat Flow, veh/h	1179	3554	1585	1781	3554	1585	1781	1870	1585	854	1160	602
Grp Volume(v), veh/h	21	326	0	364	203	0	211	243	311	51	0	161
Grp Sat Flow(s),veh/h/ln	1179	1777	1585	1781	1777	1585	1781	1870	1585	854	0	1762
Q Serve(g_s), s	1.4	7.9	0.0	8.6	3.3	0.0	5.8	5.8	9.4	3.4	0.0	5.3
Cycle Q Clear(g_c), s	1.4	7.9	0.0	8.6	3.3	0.0	5.8	5.8	9.4	3.4	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	237	474		298	1066		671	1066	903	431	0	725
V/C Ratio(X)	0.09	0.69		1.22	0.19		0.31	0.23	0.34	0.12	0.00	0.22
Avail Cap(c_a), veh/h	288	628		298	1220		844	1066	903	431	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	37.2	0.0	33.3	19.9	0.0	12.0	9.6	10.4	16.6	0.0	17.2
Incr Delay (d2), s/veh	0.2	2.0	0.0	125.2	0.1	0.0	0.3	0.5	1.0	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.5	0.0	12.7	1.3	0.0	2.0	2.2	3.0	0.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	39.2	0.0	158.5	20.0	0.0	12.2	10.1	11.4	17.1	0.0	17.9
LnGrp LOS	C	D		F	C		B	B	B	B	A	B
Approach Vol, veh/h		347			567			765			212	
Approach Delay, s/veh		39.0			108.9			11.2			17.7	
Approach LOS		D			F			B			B	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	15.0	18.1	14.3	42.6		33.1		56.9				
Change Period (Y+Rc), s	6.4	6.1	* 6.2	5.6		6.1		5.6				
Max Green Setting (Gmax), s	8.6	15.9	* 17	24.4		30.9		47.4				
Max Q Clear Time (g_c+I1), s	10.6	9.9	7.8	7.3		5.3		11.4				
Green Ext Time (p_c), s	0.0	1.0	0.4	1.0		1.2		2.4				

Intersection Summary			
HCM 6th Ctrl Delay		46.3	
HCM 6th LOS		D	

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	4	0	0	3	665	3	3	1177	0
Future Vol, veh/h	0	0	0	4	0	0	3	665	3	3	1177	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	140	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	50	50	92	50	94	92	50	97	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	0	0	6	707	3	6	1213	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1591	1947	607	1340	1946	355	1213	0	0	710	0	0
Stage 1	1225	1225	-	721	721	-	-	-	-	-	-	-
Stage 2	366	722	-	619	1225	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	72	64	439	111	64	641	571	-	-	885	-	-
Stage 1	190	249	-	385	430	-	-	-	-	-	-	-
Stage 2	626	429	-	443	249	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	71	63	439	110	63	641	571	-	-	885	-	-
Mov Cap-2 Maneuver	153	168	-	235	166	-	-	-	-	-	-	-
Stage 1	188	247	-	381	425	-	-	-	-	-	-	-
Stage 2	619	424	-	440	247	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20.9	0.1	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	571	-	-	-	235	885	-	-
HCM Lane V/C Ratio	0.011	-	-	-	0.034	0.007	-	-
HCM Control Delay (s)	11.4	-	-	0	20.9	9.1	-	-
HCM Lane LOS	B	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	1	0	2
Future Vol, veh/h	2	2	2	1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	2	1	0	2
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.8	7.1	6.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	67%	50%	0%
Vol Thru, %	33%	0%	0%
Vol Right, %	0%	50%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	3	4	2
LT Vol	2	2	0
Through Vol	1	0	0
RT Vol	0	2	2
Lane Flow Rate	3	4	2
Geometry Grp	1	1	1
Degree of Util (X)	0.004	0.005	0.002
Departure Headway (Hd)	4.077	3.744	3.344
Convergence, Y/N	Yes	Yes	Yes
Cap	883	961	1076
Service Time	2.079	1.746	1.347
HCM Lane V/C Ratio	0.003	0.004	0.002
HCM Control Delay	7.1	6.8	6.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	1	2	0	2
Future Vol, veh/h	2	0	1	2	0	2
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	2	0	1	2	0	2

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4	2	0	0	3	0
Stage 1	2	-	-	-	-	-
Stage 2	2	-	-	-	-	-
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	1018	1082	-	-	1619	-
Stage 1	1021	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1018	1082	-	-	1619	-
Mov Cap-2 Maneuver	1018	-	-	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1018	1619	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	8.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.4	0.3	2.6	1.4	0.3	1.4	0.1	0.0	0.0	0.4	0.4	0.3
Total Delay (hr)	0.5	12.8	0.0	3.9	5.9	0.4	0.7	5.1	2.5	6.5	5.4	0.2
Total Del/Veh (s)	41.7	38.1	21.5	67.4	22.9	10.6	67.2	71.8	24.9	83.7	67.0	64.3
Stop Delay (hr)	0.4	9.7	0.0	3.5	4.1	0.2	0.7	4.6	2.4	6.1	4.8	0.2
Stop Del/Veh (s)	33.3	28.7	14.2	60.0	15.8	6.5	61.8	64.1	23.6	78.3	59.7	59.7

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.4
Total Delay (hr)	44.1
Total Del/Veh (s)	42.2
Stop Delay (hr)	36.6
Stop Del/Veh (s)	35.0

2: DW1/Church DW & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.0
Total Delay (hr)	0.0	0.1	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.5
Total Del/Veh (s)	5.9	0.5	0.4	5.1	2.1	1.7	13.9	13.0	0.3	19.9	0.8	1.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	3.9	0.0	0.0	2.1	0.1	0.1	12.5	10.6	0.0	18.3	0.0	0.3

3: Pate St & Henry Clower Blvd Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.3	0.0	0.4	0.0	0.8
Total Del/Veh (s)	1.8	1.2	3.2	4.3	2.4
Stop Delay (hr)	0.0	0.0	0.2	0.0	0.3
Stop Del/Veh (s)	0.2	0.4	1.5	4.9	0.8

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.9	0.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.3	0.3
Total Delay (hr)	0.1	3.4	3.2	5.4	0.6	0.0	0.6	0.6	0.3	0.2	0.3	0.1
Total Del/Veh (s)	37.3	41.9	14.7	57.1	13.3	1.8	12.7	10.4	4.1	23.8	16.9	6.0
Stop Delay (hr)	0.1	2.8	1.3	5.1	0.4	0.0	0.5	0.4	0.2	0.2	0.2	0.1
Stop Del/Veh (s)	34.0	34.2	6.1	53.6	10.3	0.0	10.2	6.6	2.8	21.4	13.5	4.8

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.1
Total Delay (hr)	14.8
Total Del/Veh (s)	22.2
Stop Delay (hr)	11.3
Stop Del/Veh (s)	16.9

5: Lenora Church Rd & Beverly Ln/Poplar St Performance by movement

Movement	WBL	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	2.4	0.3	0.3	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	2.0	2.1
Total Del/Veh (s)	15.4	17.4	0.4	0.1	12.6	6.1	4.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.8	0.8
Stop Del/Veh (s)	14.4	17.0	0.0	0.0	7.8	2.5	1.6

6: Poplar St & Pate St Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.0	0.1	2.3	3.9	3.9	0.4	2.5	2.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.4	0.0	2.4	2.5	1.8	0.2	2.1	1.5

7: Pate St & Pine St Performance by movement

Movement	WBL	NBT	NBR	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.7	1.1	0.9	0.1	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.9	0.1	0.2	0.0	0.8

Total Network Performance

Denied Delay (hr)	1.2
Denied Del/Veh (s)	0.8
Total Delay (hr)	66.1
Total Del/Veh (s)	46.0
Stop Delay (hr)	49.3
Stop Del/Veh (s)	34.3

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	R
Maximum Queue (ft)	162	641	600	52	150	432	432	165	234	450	174	185
Average Queue (ft)	41	431	373	3	127	238	231	51	57	226	80	90
95th Queue (ft)	128	642	585	25	177	393	378	164	168	374	146	163
Link Distance (ft)		632	632			2154	2154			908	908	
Upstream Blk Time (%)		1	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	125			95	125			115	135			315
Storage Blk Time (%)	0	39	36		26	14	20	0	0	39		
Queuing Penalty (veh)	0	16	3		118	27	24	0	0	14		

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	244	356	432
Average Queue (ft)	148	197	262
95th Queue (ft)	241	288	403
Link Distance (ft)		417	417
Upstream Blk Time (%)		0	1
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	14	59	
Queuing Penalty (veh)	19	84	

Intersection: 2: DW1/Church DW & Henry Clower Blvd

Movement	EB	WB	NB	SB
Directions Served	L	L	LT	LT
Maximum Queue (ft)	23	28	44	19
Average Queue (ft)	1	3	9	3
95th Queue (ft)	12	17	31	13
Link Distance (ft)			165	327
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	135	135		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Pate St & Henry Clower Blvd

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	182	17	13
Average Queue (ft)	21	1	1
95th Queue (ft)	97	12	7
Link Distance (ft)	577	577	406
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Lenora Church Rd & Henry Clower Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	R	L	TR
Maximum Queue (ft)	45	364	465	280	225	277	124	148	129	109	77	112
Average Queue (ft)	10	98	128	177	180	117	40	58	57	55	20	40
95th Queue (ft)	37	239	325	299	253	299	87	117	113	96	55	83
Link Distance (ft)		1045	1045			227	227		625	625		819
Upstream Blk Time (%)					8	10						
Queuing Penalty (veh)					0	24						
Storage Bay Dist (ft)	135			180	150			335			150	
Storage Blk Time (%)		2	0	11	42	0						0
Queuing Penalty (veh)		0	2	15	33	1						0

Intersection: 5: Lenora Church Rd & Beverly Ln/Poplar St

Movement	WB	NB	SB
Directions Served	LTR	L	L
Maximum Queue (ft)	30	18	13
Average Queue (ft)	3	2	1
95th Queue (ft)	17	11	8
Link Distance (ft)	85		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		140	130
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Poplar St & Pate St

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	27	30	19
Average Queue (ft)	3	4	1
95th Queue (ft)	17	20	9
Link Distance (ft)	85	148	198
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Pate St & Pine St

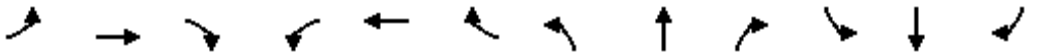
Movement	WB
Directions Served	LR
Maximum Queue (ft)	26
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	771
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 382

HCM 6th Signalized Intersection Summary
1: Henry Clower Blvd/Oak Rd & US 78

04/11/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	499	8	166	1249	174	49	312	219	80	87	10
Future Volume (veh/h)	27	499	8	166	1249	174	49	312	219	80	87	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	601	14	255	1329	196	65	339	238	103	106	13
Peak Hour Factor	0.69	0.83	0.58	0.65	0.94	0.89	0.75	0.92	0.92	0.78	0.82	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	1779	793	507	2000	892	352	466	922	368	401	49
Arrive On Green	0.02	0.50	0.50	0.08	0.56	0.56	0.07	0.50	0.50	0.03	0.25	0.25
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	2790	3456	1634	200
Grp Volume(v), veh/h	39	601	14	255	1329	196	65	339	238	103	0	119
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1395	1728	0	1834
Q Serve(g_s), s	1.9	18.3	0.8	12.2	47.0	11.1	4.9	25.7	8.3	4.0	0.0	9.4
Cycle Q Clear(g_c), s	1.9	18.3	0.8	12.2	47.0	11.1	4.9	25.7	8.3	4.0	0.0	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	177	1779	793	507	2000	892	352	466	922	368	0	450
V/C Ratio(X)	0.22	0.34	0.02	0.50	0.66	0.22	0.18	0.73	0.26	0.28	0.00	0.26
Avail Cap(c_a), veh/h	235	1779	793	573	2000	892	375	466	922	425	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.2	27.0	22.6	19.1	27.5	19.6	46.5	40.4	28.8	50.1	0.0	54.8
Incr Delay (d2), s/veh	0.6	0.5	0.0	0.8	1.8	0.6	0.3	5.7	0.1	0.4	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.0	0.3	5.2	20.4	4.3	2.1	10.8	2.6	1.8	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	27.5	22.7	19.8	29.2	20.2	46.8	46.0	29.0	50.5	0.0	56.2
LnGrp LOS	C	C	C	B	C	C	D	D	C	D	A	E
Approach Vol, veh/h		654			1780			642			222	
Approach Delay, s/veh		27.3			26.9			39.8			53.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	107.2	12.6	51.0	20.4	96.0	12.0	51.6
Change Period (Y+Rc), s	* 5.7	* 5.9	6.0	* 6.8	* 5.7	* 5.9	6.0	* 6.8
Max Green Setting (Gmax), s	* 9.3	* 93	9.0	* 44	* 21	* 81	9.0	* 44
Max Q Clear Time (g_c+I1), s	3.9	49.0	6.9	11.4	14.2	20.3	6.0	27.7
Green Ext Time (p_c), s	0.0	14.8	0.0	0.7	0.4	4.6	0.1	2.7

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	527	21	25	227	11	40	0	40	1	0	0
Future Vol, veh/h	6	527	21	25	227	11	40	0	40	1	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	-	-	Yield	-	-	Yield
Storage Length	135	-	150	135	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	81	53	63	77	50	58	92	63	50	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	651	40	40	295	22	69	0	63	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	317	0	0	691	0	0	893	1062	326	715	1080	148
Stage 1	-	-	-	-	-	-	665	665	-	375	375	-
Stage 2	-	-	-	-	-	-	228	397	-	340	705	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1240	-	-	900	-	-	236	222	670	318	217	872
Stage 1	-	-	-	-	-	-	416	456	-	618	615	-
Stage 2	-	-	-	-	-	-	754	602	-	648	437	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1240	-	-	900	-	-	227	211	670	277	206	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	330	324	-	389	303	-
Stage 1	-	-	-	-	-	-	414	453	-	614	588	-
Stage 2	-	-	-	-	-	-	720	576	-	583	434	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	15	14.3
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	330	670	1240	-	-	900	-	-	389	-
HCM Lane V/C Ratio	0.209	0.095	0.005	-	-	0.044	-	-	0.005	-
HCM Control Delay (s)	18.8	10.9	7.9	-	-	9.2	-	-	14.3	0
HCM Lane LOS	C	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.8	0.3	0	-	-	0.1	-	-	0	-

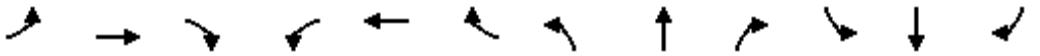
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	547	3	0	230	0	8
Future Vol, veh/h	547	3	0	230	0	8
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	-	-	-	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	595	3	0	250	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	298
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	698
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	698
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	698	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s)	10.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	194	312	85	150	35	324	230	352	4	10	10
Future Volume (veh/h)	24	194	312	85	150	35	324	230	352	4	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	262	0	167	205	0	352	258	400	11	26	26
Peak Hour Factor	0.80	0.74	0.83	0.51	0.73	0.69	0.92	0.89	0.88	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	474		322	1066		774	1066	903	393	346	346
Arrive On Green	0.13	0.13	0.00	0.03	0.10	0.00	0.10	0.57	0.57	0.40	0.40	0.40
Sat Flow, veh/h	1177	3554	1585	1781	3554	1585	1781	1870	1585	776	858	858
Grp Volume(v), veh/h	30	262	0	167	205	0	352	258	400	11	0	52
Grp Sat Flow(s),veh/h/ln	1177	1777	1585	1781	1777	1585	1781	1870	1585	776	0	1716
Q Serve(g_s), s	2.0	6.2	0.0	7.0	4.8	0.0	8.8	6.2	13.1	0.8	0.0	1.7
Cycle Q Clear(g_c), s	2.0	6.2	0.0	7.0	4.8	0.0	8.8	6.2	13.1	0.8	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	237	474		322	1066		774	1066	903	393	0	692
V/C Ratio(X)	0.13	0.55		0.52	0.19		0.45	0.24	0.44	0.03	0.00	0.08
Avail Cap(c_a), veh/h	419	1023		322	1615		774	1066	903	393	0	692
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	36.5	0.0	30.3	30.5	0.0	13.3	9.7	11.1	16.3	0.0	16.5
Incr Delay (d2), s/veh	0.2	1.0	0.0	1.5	0.1	0.0	0.4	0.5	1.6	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.7	0.0	3.2	2.1	0.0	3.7	2.3	4.2	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	37.5	0.0	31.8	30.6	0.0	13.7	10.2	12.7	16.4	0.0	16.7
LnGrp LOS	C	D		C	C		B	B	B	B	A	B
Approach Vol, veh/h		292			372			1010			63	
Approach Delay, s/veh		37.2			31.1			12.4			16.7	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	15.0	18.1	15.0	41.9		33.1		56.9				
Change Period (Y+Rc), s	6.4	6.1	* 6.2	5.6		6.1		5.6				
Max Green Setting (Gmax), s	8.6	25.9	* 8.8	22.4		40.9		37.4				
Max Q Clear Time (g_c+I1), s	9.0	8.2	10.8	3.7		6.8		15.1				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.2		1.3		2.7				

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	7	0	6	0	976	1	3	399	0
Future Vol, veh/h	1	0	0	7	0	6	0	976	1	3	399	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	140	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	92	50	50	50	92	96	92	38	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	14	0	12	0	1017	1	8	469	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	994	1503	235	1269	1503	509	469	0	0	1018	0	0
Stage 1	485	485	-	1018	1018	-	-	-	-	-	-	-
Stage 2	509	1018	-	251	485	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	199	120	767	125	120	509	1089	-	-	677	-	-
Stage 1	532	550	-	254	313	-	-	-	-	-	-	-
Stage 2	515	313	-	731	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	119	767	124	119	509	1089	-	-	677	-	-
Mov Cap-2 Maneuver	322	227	-	211	230	-	-	-	-	-	-	-
Stage 1	532	543	-	254	313	-	-	-	-	-	-	-
Stage 2	503	313	-	722	543	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.3	18.7	0	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1089	-	-	322	289	677	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.09	0.012	-	-
HCM Control Delay (s)	0	-	-	16.3	18.7	10.4	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1	2	2	0	10
Future Vol, veh/h	4	1	2	2	0	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	1	2	2	0	11
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7	7.1	6.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	50%	80%	0%
Vol Thru, %	50%	0%	0%
Vol Right, %	0%	20%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	4	5	10
LT Vol	2	4	0
Through Vol	2	0	0
RT Vol	0	1	10
Lane Flow Rate	4	5	11
Geometry Grp	1	1	1
Degree of Util (X)	0.005	0.006	0.01
Departure Headway (Hd)	4.052	4.001	3.347
Convergence, Y/N	Yes	Yes	Yes
Cap	888	899	1075
Service Time	2.054	2.003	1.35
HCM Lane V/C Ratio	0.005	0.006	0.01
HCM Control Delay	7.1	7	6.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	9	4	3	1	2
Future Vol, veh/h	9	9	4	3	1	2
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	10	10	4	3	1	2

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	10	6	0	0	7	0
Stage 1	6	-	-	-	-	-
Stage 2	4	-	-	-	-	-
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	1010	1077	-	-	1614	-
Stage 1	1017	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1009	1077	-	-	1614	-
Mov Cap-2 Maneuver	1009	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1042	1614	-
HCM Lane V/C Ratio	-	-	0.019	0.001	-
HCM Control Delay (s)	-	-	8.5	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.3	0.1	3.4	1.4	0.4	1.2	0.1	0.0	0.0	0.2	0.2	0.1
Total Delay (hr)	0.3	3.4	0.0	1.7	9.7	1.0	0.8	5.4	0.3	1.4	1.2	0.1
Total Del/Veh (s)	37.3	25.2	3.0	36.1	27.5	18.5	53.1	63.8	5.8	57.5	50.4	34.6
Stop Delay (hr)	0.2	2.8	0.0	1.2	6.4	0.6	0.7	4.7	0.3	1.4	1.1	0.1
Stop Del/Veh (s)	33.5	20.5	1.6	26.8	18.1	11.2	47.0	55.6	5.1	54.2	46.3	32.6

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	25.3
Total Del/Veh (s)	31.3
Stop Delay (hr)	19.5
Stop Del/Veh (s)	24.1

2: DW1/Church DW & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.3
Total Del/Veh (s)	2.6	0.4	0.2	5.1	1.3	1.2	9.0	0.5	7.8	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Stop Del/Veh (s)	0.7	0.0	0.0	2.5	0.3	0.3	7.5	0.0	7.1	0.5

3: Pate St & Henry Clower Blvd Performance by movement

Movement	EBT	EBR	WBT	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	1.3	0.5	0.4	0.2	3.9	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.2	0.2	0.1	0.1	4.4	0.2

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.4	0.4	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.1	0.1
Total Delay (hr)	0.2	1.8	0.3	0.6	1.0	0.0	1.0	0.6	0.3	0.0	0.0	0.0
Total Del/Veh (s)	38.9	34.0	3.2	26.3	23.6	1.6	11.4	6.6	3.5	14.4	14.0	2.9
Stop Delay (hr)	0.2	1.6	0.0	0.5	0.9	0.0	0.7	0.3	0.2	0.0	0.0	0.0
Stop Del/Veh (s)	35.5	29.0	0.0	24.2	20.5	0.0	8.0	3.7	1.9	12.9	11.6	3.0

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.7
Total Delay (hr)	5.9
Total Del/Veh (s)	11.8
Stop Delay (hr)	4.5
Stop Del/Veh (s)	8.9

5: Lenora Church Rd & Beverly Ln/Poplar St Performance by movement

Movement	EBL	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.0	0.5	0.7
Total Del/Veh (s)	24.4	10.6	5.0	0.7	0.3	7.4	4.1	1.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	22.4	10.0	5.2	0.0	0.0	3.8	0.5	0.2

6: Poplar St & Pate St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.4	2.5	3.5	4.7	0.7	3.0	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.6	2.7	2.3	2.1	0.2	2.6	2.3

7: Pate St & Pine St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	2.3	1.6	0.7	1.3	0.1	2.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.3	2.3	0.2	0.1	0.0	0.0	1.6

Total Network Performance

Denied Delay (hr)	0.8
Denied Del/Veh (s)	0.7
Total Delay (hr)	34.5
Total Del/Veh (s)	30.5
Stop Delay (hr)	24.4
Stop Del/Veh (s)	21.5

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	R
Maximum Queue (ft)	149	280	234	72	150	559	560	165	235	458	66	81
Average Queue (ft)	28	167	118	7	87	313	331	72	61	253	30	34
95th Queue (ft)	88	259	224	38	168	535	543	195	182	435	52	66
Link Distance (ft)		632	632			2154	2154			908	908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	125			95	125			115	135			315
Storage Blk Time (%)	0	18	8		1	25	27	0		40		
Queuing Penalty (veh)	0	5	1		9	42	47	0		19		

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	108	137	171
Average Queue (ft)	6	64	60
95th Queue (ft)	44	119	127
Link Distance (ft)		417	417
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	0	6	
Queuing Penalty (veh)	0	2	

Intersection: 2: DW1/Church DW & Henry Clower Blvd

Movement	EB	WB	NB	SB
Directions Served	L	L	LT	LT
Maximum Queue (ft)	26	36	62	12
Average Queue (ft)	1	6	18	0
95th Queue (ft)	11	25	43	5
Link Distance (ft)			165	327
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	135	135		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Pate St & Henry Clower Blvd

Movement	NB
Directions Served	R
Maximum Queue (ft)	16
Average Queue (ft)	3
95th Queue (ft)	12
Link Distance (ft)	406
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Lenora Church Rd & Henry Clower Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	R	L	TR
Maximum Queue (ft)	70	138	119	45	102	90	99	193	135	104	33	44
Average Queue (ft)	15	65	50	5	48	42	43	92	56	49	3	11
95th Queue (ft)	47	117	96	30	91	80	85	164	114	88	17	34
Link Distance (ft)		1045	1045			227	227		625	625		819
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			180	150			335			150	
Storage Blk Time (%)		1										
Queuing Penalty (veh)		0										

Intersection: 5: Lenora Church Rd & Beverly Ln/Poplar St

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	23	38	22
Average Queue (ft)	1	10	1
95th Queue (ft)	10	33	10
Link Distance (ft)	364	85	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			130
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Poplar St & Pate St

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	27	30	31
Average Queue (ft)	4	4	8
95th Queue (ft)	19	19	30
Link Distance (ft)	85	148	198
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Pate St & Pine St

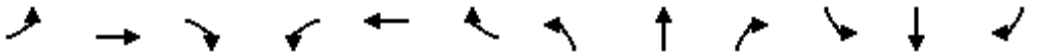
Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	10
95th Queue (ft)	31
Link Distance (ft)	771
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 126

HCM 6th Signalized Intersection Summary
1: Henry Clower Blvd/Oak Rd & US 78

04/11/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1212	12	210	898	120	36	259	357	285	293	12
Future Volume (veh/h)	42	1212	12	210	898	120	36	259	357	285	293	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	1262	24	266	1069	136	46	288	420	317	329	21
Peak Hour Factor	0.72	0.96	0.50	0.79	0.84	0.88	0.78	0.90	0.85	0.90	0.89	0.56
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	283	1945	868	308	2138	954	105	321	699	339	351	22
Arrive On Green	0.02	0.55	0.55	0.08	0.60	0.60	0.06	0.29	0.29	0.07	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	2790	3456	1739	111
Grp Volume(v), veh/h	58	1262	24	266	1069	136	46	288	420	317	0	350
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1395	1728	0	1850
Q Serve(g_s), s	2.6	44.9	1.0	11.5	30.8	4.5	0.3	26.6	18.1	10.7	0.0	33.5
Cycle Q Clear(g_c), s	2.6	44.9	1.0	11.5	30.8	4.5	0.3	26.6	18.1	10.7	0.0	33.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	283	1945	868	308	2138	954	105	321	699	339	0	374
V/C Ratio(X)	0.20	0.65	0.03	0.86	0.50	0.14	0.44	0.90	0.60	0.93	0.00	0.94
Avail Cap(c_a), veh/h	332	1945	868	478	2138	954	129	387	796	339	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.5	28.6	11.2	29.1	20.4	6.9	81.5	62.7	31.5	81.4	0.0	70.7
Incr Delay (d2), s/veh	0.4	1.7	0.1	9.7	0.8	0.3	2.9	20.3	1.0	32.2	0.0	27.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	19.6	0.5	7.4	13.1	2.5	2.1	13.6	5.6	8.9	0.0	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	30.3	11.3	38.8	21.3	7.3	84.3	83.0	32.5	113.6	0.0	98.1
LnGrp LOS	B	C	B	D	C	A	F	F	C	F	A	F
Approach Vol, veh/h		1344			1471			754			667	
Approach Delay, s/veh		29.4			23.1			54.9			105.5	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	114.2	12.5	43.2	19.9	104.4	18.0	37.7
Change Period (Y+Rc), s	* 5.7	* 5.9	* 6	6.8	* 5.7	* 5.9	* 6	6.8
Max Green Setting (Gmax), s	* 9.3	* 97	* 9	40.2	* 31	* 75	* 12	37.2
Max Q Clear Time (g_c+I1), s	4.6	32.8	2.3	35.5	13.5	46.9	12.7	28.6
Green Ext Time (p_c), s	0.0	10.8	0.0	0.9	0.7	11.0	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	581	38	46	470	1	29	3	23	6	0	7
Future Vol, veh/h	3	581	38	46	470	1	29	3	23	6	0	7
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	-	-	Yield	-	-	Yield
Storage Length	135	-	150	135	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	94	60	50	97	38	83	50	35	62	92	35
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	618	63	92	485	3	35	6	66	10	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	488	0	0	681	0	0	1055	1300	309	991	1360	243
Stage 1	-	-	-	-	-	-	628	628	-	669	669	-
Stage 2	-	-	-	-	-	-	427	672	-	322	691	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1071	-	-	907	-	-	180	160	687	200	147	758
Stage 1	-	-	-	-	-	-	437	474	-	413	454	-
Stage 2	-	-	-	-	-	-	576	453	-	664	444	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	907	-	-	161	143	687	163	132	758
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	263	-	279	232	-
Stage 1	-	-	-	-	-	-	435	472	-	411	408	-
Stage 2	-	-	-	-	-	-	504	407	-	590	442	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.5	14.3	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	282	687	1071	-	-	907	-	-	279	758
HCM Lane V/C Ratio	0.145	0.096	0.004	-	-	0.101	-	-	0.035	0.026
HCM Control Delay (s)	19.9	10.8	8.4	-	-	9.4	-	-	18.4	9.9
HCM Lane LOS	C	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.5	0.3	0	-	-	0.3	-	-	0.1	0.1

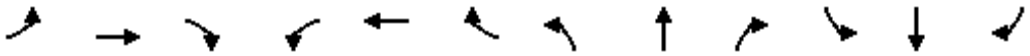
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	619	7	0	489	0	4
Future Vol, veh/h	619	7	0	489	0	4
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	-	-	-	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	673	8	0	532	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	337
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	659
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	659
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	659	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	10.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	302	795	322	176	9	171	204	299	32	66	39
Future Volume (veh/h)	12	302	795	322	176	9	171	204	299	32	66	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	355	0	366	223	0	214	243	315	51	106	55
Peak Hour Factor	0.56	0.85	0.92	0.88	0.79	0.75	0.80	0.84	0.95	0.63	0.62	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	474		288	1066		672	1066	903	429	476	247
Arrive On Green	0.13	0.13	0.00	0.13	0.40	0.00	0.09	0.57	0.57	0.41	0.41	0.41
Sat Flow, veh/h	1158	3554	1585	1781	3554	1585	1781	1870	1585	851	1160	602
Grp Volume(v), veh/h	21	355	0	366	223	0	214	243	315	51	0	161
Grp Sat Flow(s),veh/h/ln	1158	1777	1585	1781	1777	1585	1781	1870	1585	851	0	1762
Q Serve(g_s), s	1.4	8.7	0.0	8.6	3.7	0.0	5.9	5.8	9.6	3.4	0.0	5.3
Cycle Q Clear(g_c), s	1.4	8.7	0.0	8.6	3.7	0.0	5.9	5.8	9.6	3.4	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	234	474		288	1066		672	1066	903	429	0	723
V/C Ratio(X)	0.09	0.75		1.27	0.21		0.32	0.23	0.35	0.12	0.00	0.22
Avail Cap(c_a), veh/h	285	628		288	1220		842	1066	903	429	0	723
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	37.6	0.0	33.0	20.0	0.0	12.0	9.6	10.4	16.7	0.0	17.2
Incr Delay (d2), s/veh	0.2	3.5	0.0	145.7	0.1	0.0	0.3	0.5	1.1	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.9	0.0	13.8	1.5	0.0	2.1	2.2	0.3	0.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	41.1	0.0	178.7	20.1	0.0	12.3	10.1	11.4	17.2	0.0	17.9
LnGrp LOS	C	D		F	C		B	B	B	B	A	B
Approach Vol, veh/h		376			589			772			212	
Approach Delay, s/veh		40.7			118.7			11.2			17.8	
Approach LOS		D			F			B			B	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	15.0	18.1	14.4	42.5		33.1		56.9				
Change Period (Y+Rc), s	6.4	6.1	* 6.2	5.6		6.1		5.6				
Max Green Setting (Gmax), s	8.6	15.9	* 17	24.4		30.9		47.4				
Max Q Clear Time (g_c+I1), s	10.6	10.7	7.9	7.3		5.7		11.6				
Green Ext Time (p_c), s	0.0	1.0	0.4	1.0		1.3		2.4				

Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

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	0	0	0	6	0	2	3	669	4	7	1179	0
Future Vol, veh/h	0	0	0	6	0	2	3	669	4	7	1179	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	140	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	50	50	92	50	94	92	50	97	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	12	0	2	6	712	4	14	1215	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1611	1971	608	1362	1969	358	1215	0	0	716	0	0
Stage 1	1243	1243	-	726	726	-	-	-	-	-	-	-
Stage 2	368	728	-	636	1243	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	70	62	439	107	62	638	570	-	-	880	-	-
Stage 1	185	245	-	382	428	-	-	-	-	-	-	-
Stage 2	624	427	-	433	245	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	68	60	439	105	60	638	570	-	-	880	-	-
Mov Cap-2 Maneuver	148	163	-	229	163	-	-	-	-	-	-	-
Stage 1	183	241	-	378	423	-	-	-	-	-	-	-
Stage 2	615	422	-	426	241	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20	0.1	0.1
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	570	-	-	-	254	880	-	-
HCM Lane V/C Ratio	0.011	-	-	-	0.056	0.016	-	-
HCM Control Delay (s)	11.4	-	-	0	20	9.2	-	-
HCM Lane LOS	B	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	2	2	1	0	2
Future Vol, veh/h	9	2	2	1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	2	2	1	0	2
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	7.1	6.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	67%	82%	0%
Vol Thru, %	33%	0%	0%
Vol Right, %	0%	18%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	3	11	2
LT Vol	2	9	0
Through Vol	1	0	0
RT Vol	0	2	2
Lane Flow Rate	3	12	2
Geometry Grp	1	1	1
Degree of Util (X)	0.004	0.013	0.002
Departure Headway (Hd)	4.091	3.998	3.358
Convergence, Y/N	Yes	Yes	Yes
Cap	879	900	1070
Service Time	2.095	2	1.363
HCM Lane V/C Ratio	0.003	0.013	0.002
HCM Control Delay	7.1	7.1	6.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	1	9	4	2
Future Vol, veh/h	2	2	1	9	4	2
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	2	2	1	10	4	2

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	16	6	0	0	11	0
Stage 1	6	-	-	-	-	-
Stage 2	10	-	-	-	-	-
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	1002	1077	-	-	1608	-
Stage 1	1017	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1000	1077	-	-	1608	-
Mov Cap-2 Maneuver	1000	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	1011	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	4.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1037	1608	-
HCM Lane V/C Ratio	-	-	0.004	0.003	-
HCM Control Delay (s)	-	-	8.5	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Denied Del/Veh (s)	2.2	0.3	2.5	1.4	0.3	1.3	0.3	0.0	0.0	2.2	2.8	3.4
Total Delay (hr)	0.5	12.6	0.1	3.7	5.6	0.4	0.8	5.6	2.4	7.2	6.7	0.2
Total Del/Veh (s)	40.5	37.8	21.4	61.2	22.0	11.0	72.4	74.9	23.4	88.4	74.2	70.6
Stop Delay (hr)	0.4	9.5	0.0	3.2	3.8	0.2	0.7	5.0	2.3	6.7	6.0	0.2
Stop Del/Veh (s)	31.6	28.5	15.7	54.1	15.2	6.5	66.8	66.7	22.1	82.9	66.5	65.7

1: Henry Clower Blvd/Oak Rd & US 78 Performance by movement

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	0.7
Total Delay (hr)	45.6
Total Del/Veh (s)	43.1
Stop Delay (hr)	38.1
Stop Del/Veh (s)	36.0

2: DW1/Church DW & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.7
Total Del/Veh (s)	5.3	0.6	0.6	6.8	2.1	1.2	16.1	17.0	0.5	22.4	0.7	1.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	3.1	0.0	0.0	3.3	0.1	0.0	14.7	13.9	0.0	20.8	0.0	0.6

3: Pate St & Henry Clower Blvd Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.7	0.0	1.1
Total Del/Veh (s)	1.8	0.9	5.0	4.0	3.2
Stop Delay (hr)	0.0	0.0	0.5	0.0	0.5
Stop Del/Veh (s)	0.2	0.2	3.2	4.6	1.6

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.9	0.9	2.9	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.2	0.3
Total Delay (hr)	0.1	3.5	3.4	5.6	0.6	0.0	0.6	0.6	0.4	0.2	0.3	0.1
Total Del/Veh (s)	35.0	41.0	15.2	59.7	13.3	1.7	12.6	10.5	4.2	24.5	17.8	7.6
Stop Delay (hr)	0.1	2.8	1.4	5.3	0.5	0.0	0.5	0.4	0.2	0.2	0.3	0.1
Stop Del/Veh (s)	31.4	33.5	6.0	56.2	10.5	0.0	10.2	6.9	2.7	22.2	13.9	6.5

4: Lenora Church Rd & Henry Clower Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	1.2
Total Delay (hr)	15.4
Total Del/Veh (s)	22.5
Stop Delay (hr)	11.7
Stop Del/Veh (s)	17.1

5: Lenora Church Rd & Beverly Ln/Poplar St Performance by movement

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	2.7	0.3	0.3	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	2.1	2.2
Total Del/Veh (s)	16.9	4.8	17.8	0.4	0.1	7.8	6.2	4.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9
Stop Del/Veh (s)	16.5	4.8	16.6	0.0	0.0	4.9	2.5	1.7

6: Poplar St & Pate St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	2.4	3.6	6.8	0.2	2.6	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.5	2.6	2.3	3.2	0.1	2.4	2.2

7: Pate St & Pine St Performance by movement

Movement	WBL	WBR	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.3	1.8	0.8	1.7	0.1	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.4	2.0	0.2	0.0	0.0	0.5

Total Network Performance

Denied Delay (hr)	1.6
Denied Del/Veh (s)	1.1
Total Delay (hr)	68.9
Total Del/Veh (s)	46.8
Stop Delay (hr)	51.5
Stop Del/Veh (s)	35.0

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	R
Maximum Queue (ft)	174	614	558	80	150	402	397	165	234	474	148	160
Average Queue (ft)	49	424	365	7	130	219	216	59	53	239	77	87
95th Queue (ft)	147	601	546	52	180	358	350	176	155	389	133	146
Link Distance (ft)		632	632			2154	2154			908	908	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	125			95	125			115	135			315
Storage Blk Time (%)		39	36		21	13	19	0	0	42		
Queuing Penalty (veh)		16	4		95	27	23	0	1	15		

Intersection: 1: Henry Clower Blvd/Oak Rd & US 78

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	236	359	446
Average Queue (ft)	159	212	299
95th Queue (ft)	247	320	458
Link Distance (ft)		417	417
Upstream Blk Time (%)		1	6
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)	100		
Storage Blk Time (%)	17	63	
Queuing Penalty (veh)	24	89	

Intersection: 2: DW1/Church DW & Henry Clower Blvd

Movement	EB	EB	EB	WB	NB	SB
Directions Served	L	T	R	L	LT	LT
Maximum Queue (ft)	28	3	14	50	73	24
Average Queue (ft)	1	0	0	15	21	3
95th Queue (ft)	12	2	5	38	52	15
Link Distance (ft)		577			165	327
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	135		150	135		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Pate St & Henry Clower Blvd

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	209	25	16
Average Queue (ft)	34	1	2
95th Queue (ft)	152	18	9
Link Distance (ft)	577	577	406
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Lenora Church Rd & Henry Clower Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	R	L	TR
Maximum Queue (ft)	62	266	552	279	225	276	131	130	126	120	59	122
Average Queue (ft)	11	96	135	177	182	127	47	55	58	53	22	44
95th Queue (ft)	39	186	367	290	258	306	98	108	107	98	55	96
Link Distance (ft)		1045	1045			227	227		625	625		819
Upstream Blk Time (%)			0		11	13						
Queuing Penalty (veh)			0		0	31						
Storage Bay Dist (ft)	135			180	150			335			150	
Storage Blk Time (%)		2	0	11	44	1						0
Queuing Penalty (veh)		0	3	16	38	3						0

Intersection: 5: Lenora Church Rd & Beverly Ln/Poplar St

Movement	WB	NB	SB	SB
Directions Served	LTR	L	L	TR
Maximum Queue (ft)	33	18	26	2
Average Queue (ft)	6	1	3	0
95th Queue (ft)	26	9	15	1
Link Distance (ft)	85			625
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		140	130	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Poplar St & Pate St

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	27	30	18
Average Queue (ft)	6	4	0
95th Queue (ft)	24	20	6
Link Distance (ft)	85	148	198
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Pate St & Pine St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	25
Average Queue (ft)	3
95th Queue (ft)	16
Link Distance (ft)	771
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 386

Appendix D: Trip Generation Calculation

Trip Generation

Calculation of Anticipated Project Trips

Based upon methodology from ITE's *Trip Generation Manual*, 11th Edition (2021)

Project Land Use	Project Density	Project Trips Total	Project Trips Inbound	Project Trips Outbound	ITE Code	Variable	Equation Used[1]	In/Out Distribution
Multifamily Housing (Mid-Rise)	300 D.U.				221	Dwelling Unit		
Daily		**1,385**	693	692			T=4.77(X) - 46.46	50% / 50%
AM Peak Hour		**120**	28	92			T=0.44(X) - 11.61	23% / 77%
PM Peak Hour		**117**	71	46			T=0.39(X) + 0.34	61% / 39%
Reductions for Internal Capture								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**1,385**	693	692				
AM Peak Hour		**120**	28	92				
PM Peak Hour		**117**	71	46				