

**DEVELOPMENT OF REGIONAL IMPACT
(DRI #3755)**

**TRAFFIC STUDY
FOR
THE LOGAN MIXED-USE DEVELOPMENT
AT 5200 CHEROKEE STREET**

CITY OF ACWORTH, GEORGIA



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EXECUTIVE SUMMARY

Traffic impacts were evaluated for the proposed The Logan mixed-use development that will be located at 5200 Cherokee Street in Acworth, Georgia. The development will consist of:

- Medical Office: 208,980 sf
- Hotel: 180 rooms
- Multifamily Housing: 500 units
- Restaurant: 15,188 sf
- Retail: 11,312 sf

The development proposes to use two existing full access and one new right-in/right-out driveways on Cherokee Street, one existing full access driveway on SR 92, one existing and one new full access driveways on Ross Road and two new full access driveways on Ross Road extension and one existing and one new full access driveways on Old Cherokee Street.

Existing and future operations during the AM peak hour (7:00 AM – 9:00 AM) and PM peak hour (4:00 PM – 6:00 PM) before and after completion of the project were analyzed at the following intersections:

1. Cherokee Street / Glade Road @ I-75 Northbound Ramps
2. Cherokee Street @ I-75 Southbound Ramps
3. Cherokee Street @ Liberty Square Drive / Old Cherokee Street
4. Cherokee Street @ Ingles Market Southern (Signalized) Driveway
5. Cherokee Street @ Cherokee Pointe
6. Cherokee Street @ SR 92
7. SR 92 @ Existing Driveway / Dollar Tree Driveway
8. SR 92 @ Ross Road
9. Ross Road @ Truist Bank Northern Driveway
10. Ross Road @ Magnolia Cottage Way
11. Old Cherokee Street @ Red Roof Inn Driveway
12. Old Cherokee Street @ Waffle House Driveway

Traffic Operations Summary

Table E1 below provides a summary of traffic operations for failing approaches in the “No-Build” and “Build” conditions for the year 2028 with and without system/site improvements. As per GRTA requirements, all approaches that do not meet the level-of-service (LOS) standard (considered failing) are highlighted in Table E1. Intersection 8 (SR 92 and Ross Road) was improved to achieve the LOS standard after implementation of the identified site improvements. However, at Intersection 3 (Cherokee Street and Liberty Square Drive/Old Cherokee Street), there are a few approaches where there are no feasible improvements for these approaches to meet the LOS standard. Table E-1 also includes the project’s total added trip and the respective percentage of overall total “Build” condition approach traffic volume for all failing LOS approaches after all improvements are completed.

TABLE E 1 — FUTURE INTERSECTION OPERATIONS AT FAILING APPROACHES

Intersection		No-Build Condition: LOS (Delay)				Build Condition: LOS (Delay)							
		NO IMPROVEMENTS		SYSTEM IMPROVEMENTS		NO IMPROVEMENTS		SYSTEM / SITE IMPROVEMENTS		SITE VOLUMES AT FAILING APPROACH BUILD WITH IMPROVEMENTS		PERCENT SITE TRIPS OF TOTAL APPROACH TRIPS AT FAILING APPROACHES	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
3	<u>Cherokee Street @ Liberty Square Drive / Old Cherokee Street</u>												
	-Eastbound Approach	E (49.1)	F (53.2)	E (49.1)	F (53.2)	F (*)	F (*)	F (*)	F (*)	10	10	19%	33%
	-Westbound Approach	F (51.2)	F (60.8)	E (37.1)	F (54.1)	F (*)	F (*)	F (253.3)	F (*)	65	159	37%	74%
	-Northbound Left	A (9.8)	B (11.5)	A (9.8)	B (11.5)	B (11.0)	B (13.0)	B (11.0)	B (13.0)	-	-	-	-
	-Southbound Left	B (10.1)	A (9.7)	B (10.1)	A (9.7)	B (12.3)	B (14.0)	B (12.3)	B (14.0)	-	-	-	-
8	<u>SR 92 @ Ross Road</u>												
	-Eastbound Left	A (8.0)	A (8.4)	A (8.0)	A (8.4)	A (8.2)	A (8.7)	A (8.2)	A (8.7)	No failing approaches	No failing approaches	No failing approaches	No failing approaches
	-Southbound Approach	C (22.0)	C (18.9)	C (22.0)	C (18.9)	D (32.6)	E (40.0)	D (30.8)	D (33.3)				

* Delay exceeds 300 seconds

The results of future traffic operations show that the following intersections will have LOS “E” or “F” for one or more approaches:

- Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street
- Intersection 8: SR 92 @ Ross Road

The table E-2 below includes Synchro reported HCM 6, 95th percentile queue lengths for failing level-of-service approaches for the build condition with improvements that had site generated traffic. Queue length reports are included in the Appendix.

TABLE E2 — FUTURE 95 TH PERCENTILE QUEUES (FT) FOR FAILING APPROACHES				
Intersection		Available Storage	Queue in feet	
			BUILD with Improvements	
			AM Peak	PM Peak
3	<u>Cherokee Street @ Liberty Square Drive / Old Cherokee Street</u>			
	-Eastbound Approach	-	155'	135'
	-Westbound Left/Through	-	160'	253'
	-Westbound Right	100'	28'	43'

The westbound through/left turn queues at Cherokee Street and Liberty Square Drive / Old Cherokee Street intersection will extend to 43 feet during the PM peak hour. See site mitigation improvements at intersection 3 below for summary of improvement recommendations.

Recommended Site Mitigation Improvements

Improvements that are identified as “Site Mitigation Improvements” address impacts that are a result of the proposed development’s added traffic. Following are the recommended site improvements:

Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street

- Addition of a channelized, yield control westbound right turn lane on Old Cherokee Street
- Addition of northbound right turn lane on Cherokee Street

After the recommended improvement is implemented, the intersection of Cherokee Street and Liberty Square Drive / Old Cherokee Street will operate at LOS “E” in the AM peak hour and at LOS “F” in the PM peak hour for the side streets. The side-streets will experience delays during the peak periods waiting to turn left onto the mainline which is not uncommon for stop-controlled side-streets on arterial roadways. Signal warrants are not met; therefore, no further recommendations can improve operations at this intersection

Intersection 8: SR 92 @ Ross Road

- Addition of a channelized, yield control southbound right turn lane on Ross Road

After the recommended site improvement is implemented, the intersection of SR 92 and Ross Road will operate at LOS “D” or better in both the AM and PM peak hours.

Recommendation for Site Access Configuration

The following access configuration is recommended for the site driveway intersections. Adequate sight distance is recommended to be provided at all the site driveways per AASHTO standards.

- Site Driveway 1: Proposed right-in/right-out driveway on Cherokee Street
 - Driveway approach to consist of one entering and one right turn exiting lanes and to be stop-sign controlled
- Site Driveway 2: Existing full access driveway on Cherokee Street, aligning with Ingles Market Southern (Signalized) Driveway
 - Driveway approach to consist of one entering and one exiting lanes
 - Intersection to continue to operate with a traffic signal
- Site Driveway 3: Existing full access driveway on Cherokee Street, aligning with Cherokee Pointe
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 4: Existing full access driveway on SR 92, aligning with Dollar Tree Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 5: Existing full access driveway on Ross Road
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
 - Addition of westbound right turn lane
- Site Driveway 6: Proposed full access driveway on Ross Road, aligning with Truist Bank Northern Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 7: Proposed southern full access driveway on Ross Road Extension
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 8: Proposed northern full access driveway on Ross Road Extension
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 9: Existing full access driveway on Old Cherokee Street, aligning with Red Roof Inn Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled

- Site Driveway 10: Proposed full access driveway on Old Cherokee Street, aligning with Waffle House Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Ross Road and SR 92
 - Addition of westbound right turn lane on SR 92

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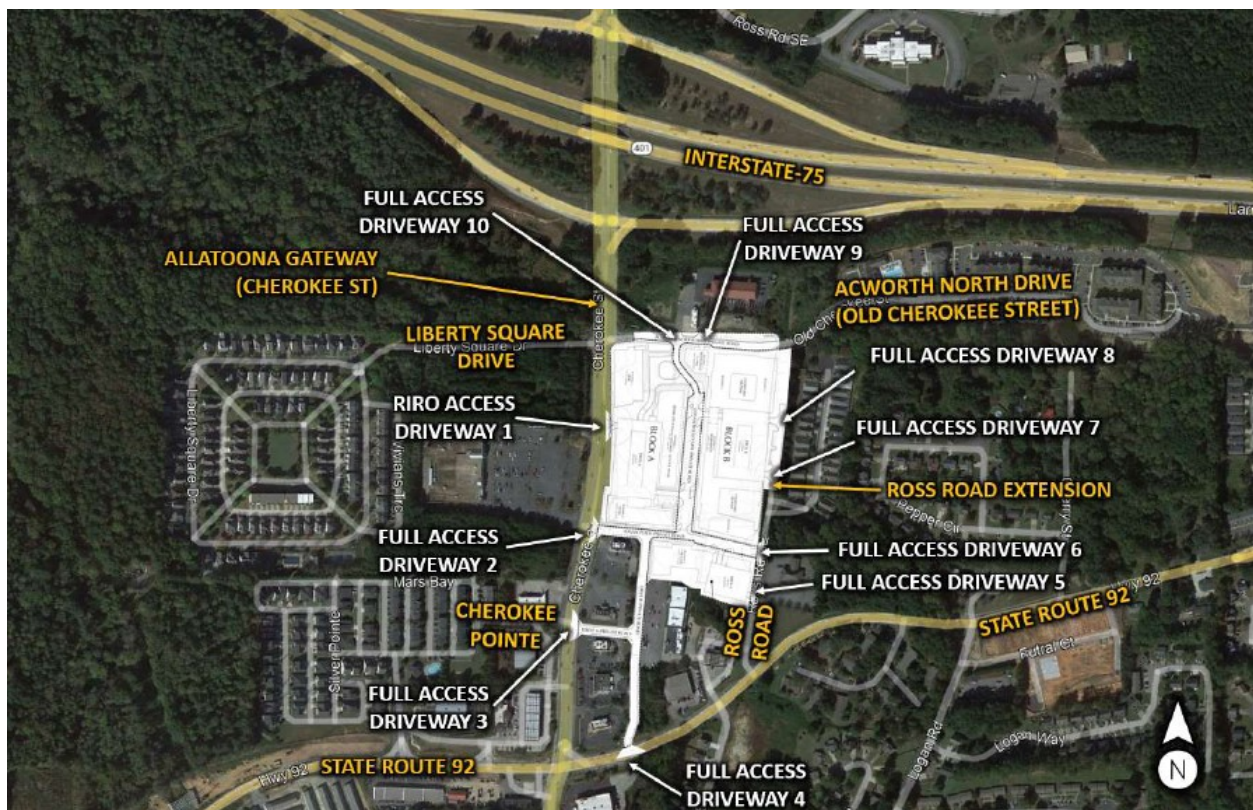
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INTRODUCTION

The purpose of this study is to determine the traffic impact from the proposed The Logan mixed-use development that will be located at 5200 Cherokee Street in Acworth, Georgia. The traffic analysis evaluates the current operations and the future conditions with the traffic generated by the development. The development will consist of:

- Medical Office: 208,980 sf
- Hotel: 180 rooms
- Multifamily Housing: 500 units
- Restaurant: 15,188 sf
- Retail: 11,312 sf



The development will have access at the following locations:

- Site Driveway 1: Proposed right-in/right-out driveway on Cherokee Street
- Site Driveway 2: Existing full access driveway on Cherokee Street, aligning with Ingles Market Southern (Signalized) Driveway
- Site Driveway 3: Existing full access driveway on Cherokee Street, aligning with Cherokee Pointe
- Site Driveway 4: Existing full access driveway on SR 92, aligning with Dollar Tree Driveway

- Site Driveway 5: Existing full access driveway on Ross Road
- Site Driveway 6: Proposed full access driveway on Ross Road, aligning with Truist Bank Northern Driveway
- Site Driveway 7: Proposed southern full access driveway on Ross Road Extension
- Site Driveway 8: Proposed northern full access driveway on Ross Road Extension
- Site Driveway 9: Existing full access driveway on Old Cherokee Street, aligning with Red Roof Inn Driveway
- Site Driveway 10: Proposed full access driveway on Old Cherokee Street, aligning with Waffle House Driveway

The AM and PM peak hours have been analyzed in this study. In addition to the site access points, this study includes the evaluation of traffic operations at the intersections of:

1. Cherokee Street / Glade Road @ I-75 Northbound Ramps
2. Cherokee Street @ I-75 Southbound Ramps
3. Cherokee Street @ Liberty Square Drive / Old Cherokee Street
4. Cherokee Street @ Ingles Market Southern (Signalized) Driveway
5. Cherokee Street @ Cherokee Pointe
6. Cherokee Street @ SR 92
7. SR 92 @ Existing Driveway / Dollar Tree Driveway
8. SR 92 @ Ross Road
9. Ross Road @ Truist Bank Northern Driveway
10. Ross Road @ Magnolia Cottage Way
11. Old Cherokee Street @ Red Roof Inn Driveway
12. Old Cherokee Street @ Waffle House Driveway

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report.

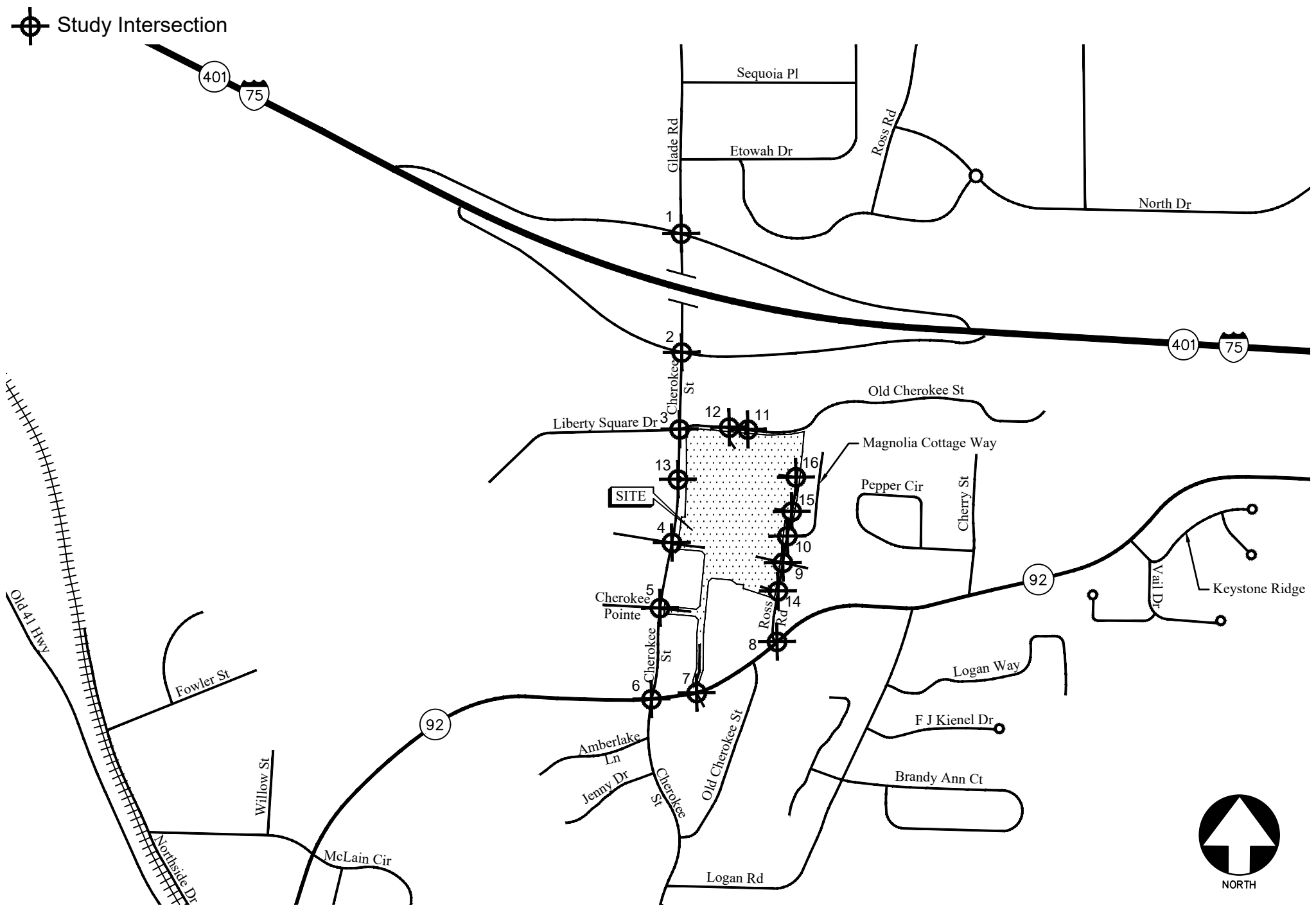
STUDY NETWORK DETERMINATION

The study network was determined by evaluating the amount of traffic that the proposed development will add to each roadway segment in the area. According to GRTA requirements, a roadway segment carries a “significant” amount of traffic if the project contributes 7% or more trips to the two-way daily service volumes of the roadway at the appropriate level of service standard. Upon agreement with GRTA a level of service standard of “D” was used for determining the study area network.

The traffic generated by the proposed project was then assigned to the area roadways using the trip distribution to determine the site-generated traffic on each roadway segment. The boundaries of the study network extend to the most distant intersections where at least 7% of the service volumes on the segment are attributed to project traffic. The following study intersections fell within the 7% rule and/or have been selected as being suitable for evaluation in discussions with ARC, GRTA, GDOT and City of Acworth:

1. Cherokee Street / Glade Road @ I-75 Northbound Ramps
2. Cherokee Street @ I-75 Southbound Ramps
3. Cherokee Street @ Liberty Square Drive / Old Cherokee Street
4. Cherokee Street @ Ingles Market Southern (Signalized) Driveway
5. Cherokee Street @ Cherokee Pointe
6. Cherokee Street @ SR 92
7. SR 92 @ Existing Driveway / Dollar Tree Driveway
8. SR 92 @ Ross Road
9. Ross Road @ Truist Bank Northern Driveway
10. Ross Road @ Magnolia Cottage Way
11. Old Cherokee Street @ Red Roof Inn Driveway
12. Old Cherokee Street @ Waffle House Driveway

The location of the development and the surrounding study network is shown in Figure 1. Other intersections within this corridor, such as unsignalized side streets, right-in / right-out driveways or private driveways have not been included in the study network.



LOCATION MAP AND STUDY INTERSECTIONS

FIGURE 1
A&R Engineering Inc.

EXISTING ROADWAY FACILITIES

The following is a brief description of each of the roadway facilities located in proximity to the site:

Interstate 75 (I-75)

Interstate 75 (I-75) is an east-west, six-lane, median-divided roadway with a posted speed limit of 70 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID's 015-0267 & 015-0265) indicate that the daily traffic volume on I-75 in 2019 was 95,800 vehicles per day west of Cherokee Street and 109,000 vehicles per day east of Cherokee Street.

Cherokee Street

Cherokee Street is a north-south, four-lane roadway with a posted speed limit of 35 mph in the vicinity of the site. Cherokee Street has a median to the north of Ingles Market Southern (signalized) Driveway and a two-way left turn lane to the south of Ingles Market Southern (signalized) Driveway. To the south of SR 92, Cherokee Street is a two-lane, undivided roadway with a posted speed limit of 25 mph. GDOT traffic counts (Station ID 067-0971) indicate that the daily traffic volume on Cherokee Street was 19,200 vehicles per day north of Ingles Market Southern (signalized) Driveway. GDOT classifies Cherokee Street as an Urban Minor Arterial roadway.

Glade Road

Glade Road is a north-south, two-lane, undivided roadway with a posted speed limit of 35 mph in the vicinity of the site. GDOT traffic counts (Station ID 015-0321) indicate that the daily traffic volume on Glade Road in 2019 was 4,760 vehicles per day north of Kings Camp Road / New Hope Church Road. GDOT classifies Glade Road as an Urban Minor Arterial roadway.

Liberty Square Drive

Liberty Square Drive is an east-west, two-lane, undivided roadway without any posted speed limit.

Old Cherokee Street

Old Cherokee Street is an east-west, two-lane, undivided roadway without any posted speed limit.

Ross Road

Ross Road is a north-south, two-lane, undivided roadway without any posted speed limit.

Magnolia Cottage Way

Magnolia Cottage Way is a north-south, two-lane, undivided, residential roadway.

State Route 92 (SR 92)

State Route 92 (SR 92) is an east-west, two-lane, undivided roadway with a posted speed limit of 40 mph in the vicinity of the site. GDOT traffic counts (Station ID's 067-0407 & 067-0409) indicate that the daily traffic volume on SR 92 in 2019 was 25,700 vehicles per day west of Cherokee Street and 12,600 vehicles per day east of Cherokee Street. GDOT classifies SR 92 as an Urban Minor Arterial roadway.

Existing Bicycle and Pedestrian Facilities

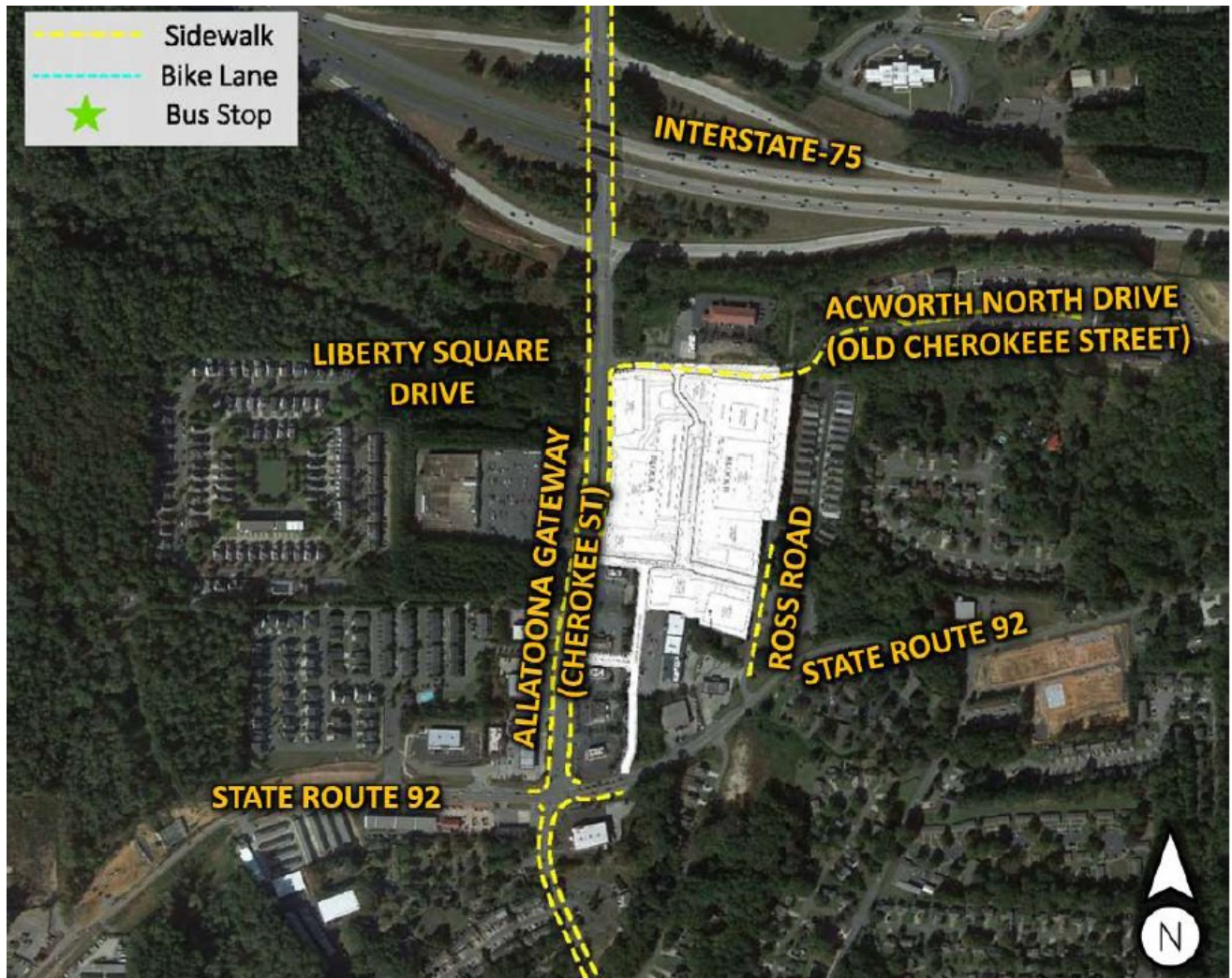
- Sidewalks are present on both sides of Cherokee Street
- Sidewalk is not present on Cherokee Street on the east side between I-75 southbound ramp and Old Cherokee Street
- Sidewalk is present on at least one side of Old Cherokee Street
- Sidewalk is present on the north side of Liberty Square Drive
- Sidewalk is not present on SR 92
- Sidewalk is present on east side of Ross Road from 105 feet north of SR 92 to Magnolia Cottage Way
- Crosswalks are present on both Cherokee Street and I-75 ramps at the signalized ramp intersections on Cherokee Street and Glade Road
- Crosswalk is present on the westbound approach at the intersection of Cherokee Street and Ingles Market's signalized driveway
- Crosswalks are present on all approaches at the intersection of SR 92 and Cherokee Street
- Bike paths are not present in the study network

Alternative Modes of Access

- Existing transit routes were not identified in the study network.
- No high-capacity transit stations were identified in the vicinity of the proposed development.

The graphic on the next page includes the location of existing sidewalks in the study network.

Existing Alternative Transportation Map



STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

Unsignalized Intersections

For unsignalized intersections controlled by a stop sign on minor streets, the level-of-service (LOS) for motor vehicles with controlled movements is determined by the computed control delay according to the thresholds stated in Table 1 below. LOS is determined for each minor street movement (or shared movement), as well as major street left turns. LOS is not defined for the intersection as a whole or for major street approaches. The LOS of any controlled movement which experiences a volume to capacity ratio greater than 1 is designed as "F" regardless of the control delay.

Control delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Several factors affect the control delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from "A" through "F". Level-of-service "A" indicates excellent operations with little delay to motorists, while level-of-service "F" exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross the main road without experiencing long total delays.

TABLE 1 — LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS		
Control Delay (sec/vehicle)	LOS by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

*The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection.

Source: Highway Capacity Manual, 6th edition, Exhibit 20-2 *LOS Criteria: Motorized Vehicle Mode*

Signalized Intersections

According to HCM procedures, LOS can be calculated for the entire intersection, each intersection approach, and each lane group. HCM uses control delay alone to characterize LOS for the entire intersection or an approach. Control delay per vehicle is composed of initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Both control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. A volume-to-capacity ratio greater than 1.0 for a lane group indicates failure from capacity perspective. Therefore, such a lane group is assigned LOS F regardless of the amount of control delay.

Table 2 below summarizes the LOS criteria from HCM for motorized vehicles at signalized intersections.

TABLE 2 — LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS		
Control Delay (sec/vehicle)*	LOS for Lane Group by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

*For approach-based and intersection wide assessments, LOS is defined solely by control delay

Source: Highway Capacity Manual, 6th edition, Exhibit 19-8 *LOS Criteria: Motorized Vehicle Mode*

LOS A is typically assigned when the volume-to-capacity (v/c) ratio is low and either progression is exceptionally favorable, or the cycle length is very short. LOS B is typically assigned when the v/c ratio is low and either progression is highly favorable, or the cycle length is short. However, more vehicles are stopped than with LOS A. LOS C is typically assigned when progression is favorable, or the cycle length is moderate. Individual cycle failures (one or more queued vehicles are not able to depart because of insufficient capacity during the cycle) may begin to appear at this level. Many vehicles still pass through the intersection without stopping, but the number of vehicles stopping is significant. LOS D is typically assigned when the v/c ratio is high and either progression is ineffective, or the cycle length is long. There are many vehicle-stops and individual cycle failures are noticeable. LOS E is typically assigned when the v/c ratio is high, progression is very poor, the cycle length is long, and individual cycle failures are frequent. LOS F is typically assigned when the v/c ratio is very high, progression is very poor, the cycle length is long, and most cycles fail to clear the queue.

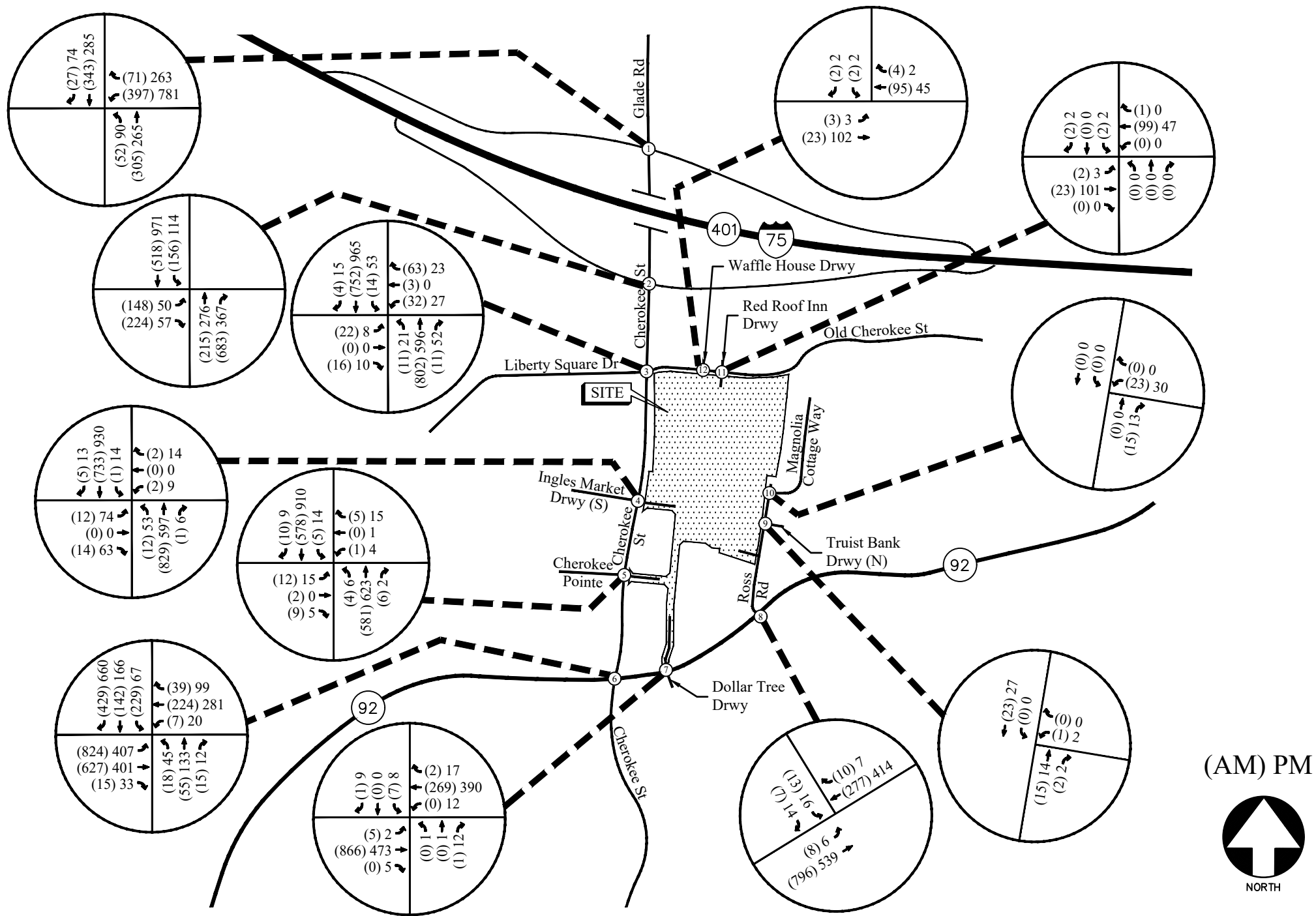
EXISTING 2022 TRAFFIC ANALYSIS

Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

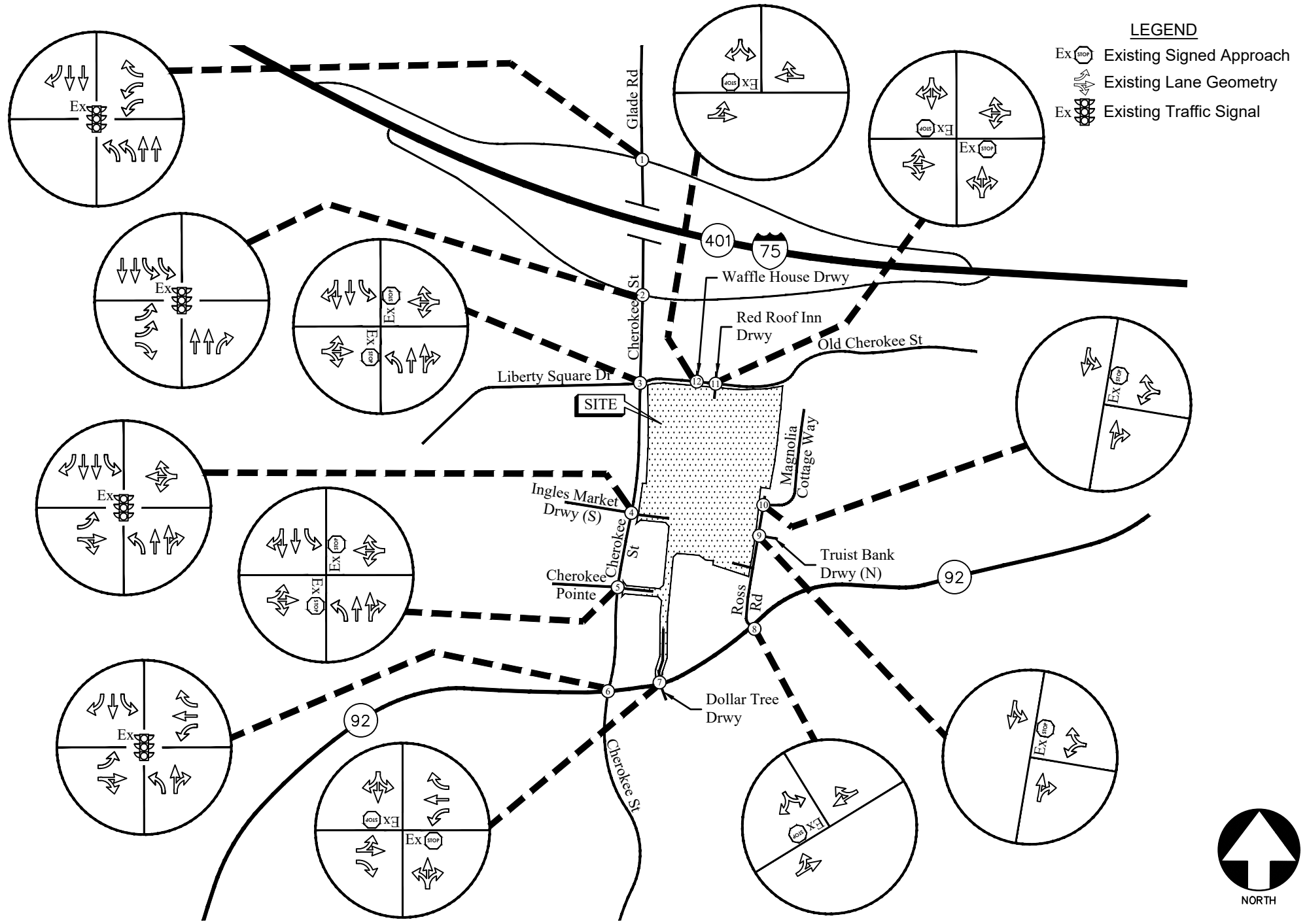
1. Cherokee Street / Glade Road @ I-75 Northbound Ramps
2. Cherokee Street @ I-75 Southbound Ramps
3. Cherokee Street @ Liberty Square Drive / Old Cherokee Street
4. Cherokee Street @ Ingles Market Southern (Signalized) Driveway
5. Cherokee Street @ Cherokee Pointe
6. Cherokee Street @ SR 92
7. SR 92 @ Existing Driveway / Dollar Tree Driveway
8. SR 92 @ Ross Road
9. Ross Road @ Truist Bank Northern Driveway
10. Ross Road @ Magnolia Cottage Way
11. Old Cherokee Street @ Red Roof Inn Driveway
12. Old Cherokee Street @ Waffle House Driveway

Turning movement counts were collected on Wednesday, August 17, 2022. All turning movement counts were recorded during the AM and PM peak hours between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes for the intersections counted and are shown in Figure 2. The existing traffic control and lane geometry for the intersections are shown in Figure 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2
A&R Engineering Inc.



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 3
A&R Engineering Inc.

Existing Traffic Operations

Existing 2022 traffic operations were analyzed at the study intersections in accordance with the HCM methodology. The results of the analyses are shown in Table 3.

TABLE 3 — EXISTING INTERSECTION OPERATIONS					
Intersection		Traffic Control	AM Peak	PM Peak	LOS Standard
1	<u>Cherokee Street / Glade Road @ I-75 Northbound Ramps</u>	Signalized	<u>B (18.5)</u>	<u>C (24.3)</u>	<u>D/D</u>
	-Westbound Approach		D (38.3)	C (34.4)	D/D
	-Northbound Approach		A (6.2)	B (10.8)	D/D
	-Southbound Approach		A (8.3)	B (13.6)	D/D
2	<u>Cherokee Street @ I-75 Southbound Ramps</u>	Signalized	<u>B (18.0)</u>	<u>A (7.5)</u>	<u>D/D</u>
	-Eastbound Approach		D (38.1)	D (45.2)	D/D
	-Northbound Approach		A (9.0)	A (4.4)	D/D
	-Southbound Approach		A (9.7)	A (4.6)	D/D
3	<u>Cherokee Street @ Liberty Square Drive / Old Cherokee Street</u>	Stop Controlled on EB and WB Approaches			
	-Eastbound Approach		D (33.6)	E (37.0)	D/D
	-Westbound Approach		D (31.6)	E (39.3)	D/D
	-Northbound Left		A (9.4)	B (10.7)	D/D
	-Southbound Left		A (9.7)	A (9.3)	D/D
4	<u>Cherokee Street @ Ingles Market Southern (Signalized) Driveway</u>	Signalized	<u>A (3.3)</u>	<u>A (7.4)</u>	<u>D/D</u>
	-Eastbound Approach		D (48.7)	D (47.3)	D/D
	-Westbound Approach		D (48.1)	D (44.3)	D/D
	-Northbound Approach		A (2.8)	A (4.2)	D/D
	-Southbound Approach		A (2.9)	A (5.6)	D/D
5	<u>Cherokee Street @ Cherokee Pointe</u>	Stop Controlled on EB and WB Approaches			
	-Eastbound Approach		B (14.2)	C (22.1)	D/D
	-Westbound Approach		B (11.2)	B (13.2)	D/D
	-Northbound Left		A (8.8)	B (10.3)	D/D
	-Southbound Left		A (8.8)	A (9.0)	D/D
6	<u>Cherokee Street @ SR 92</u>	Signalized	<u>D (45.5)</u>	<u>D (36.7)</u>	<u>D/D</u>
	-Eastbound Approach		D (52.8)	C (30.0)	D/D
	-Westbound Approach		D (37.4)	D (35.5)	D/D
	-Northbound Approach		D (47.8)	C (29.8)	D/D
	-Southbound Approach		C (34.7)	D (45.1)	D/D
7	<u>SR 92 @ Existing Driveway / Dollar Tree Driveway</u>	Stop Controlled on NB and SB Approaches			
	-Eastbound Left		A (7.8)	A (8.3)	D/D
	-Westbound Left		A (0.0)	A (8.6)	D/D
	-Northbound Approach		C (16.0)	B (13.4)	D/D
	-Southbound Approach		D (26.9)	C (17.3)	D/D
8	<u>SR 92 @ Ross Road</u>	Stop Controlled on SB Approach			
	-Eastbound Left		A (7.9)	A (8.3)	D/D
	-Southbound Approach		C (18.9)	C (16.6)	D/D

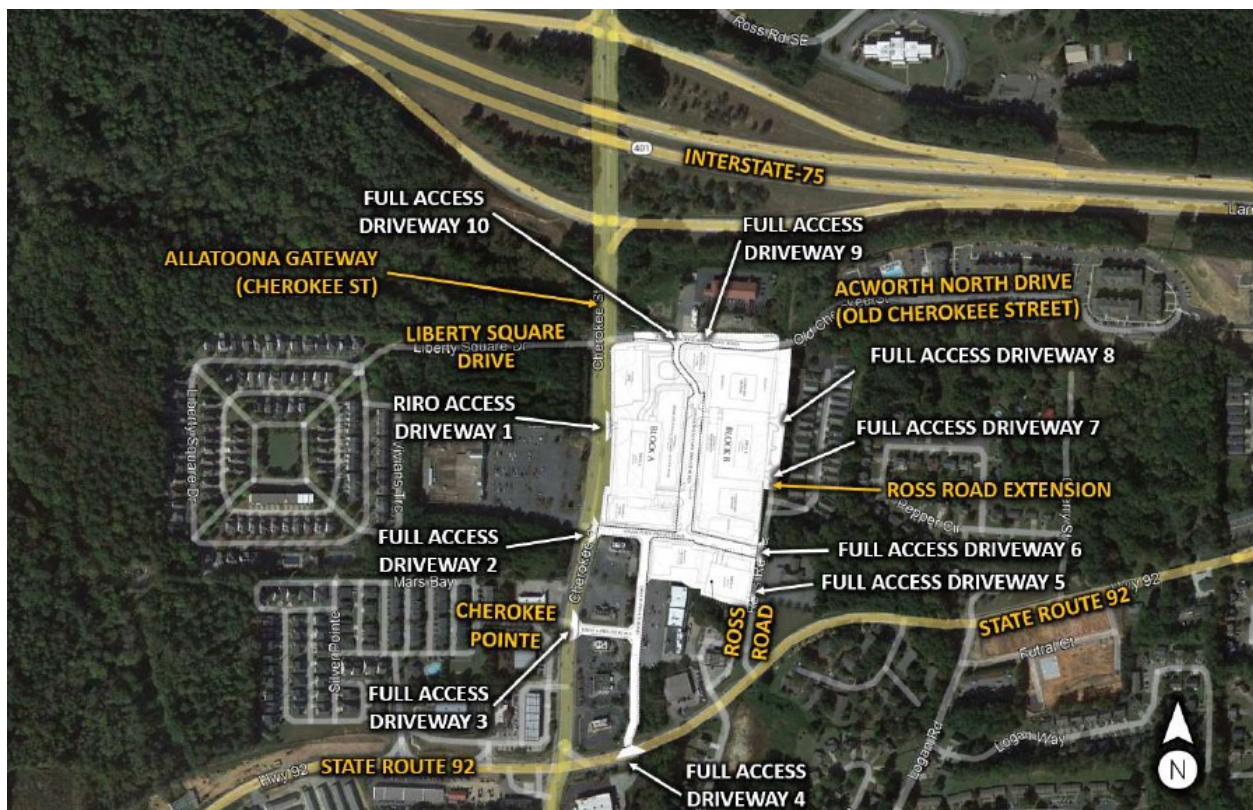
9	<u>Ross Road @ Truist Bank Northern Driveway</u> -Westbound Approach	Stop Controlled on WB Approach	A (8.8)	A (8.8)	D/D
10	<u>Ross Road @ Magnolia Cottage Way</u> -Westbound Approach	Stop Controlled on WB Approach	A (8.7)	A (8.7)	D/D
11	<u>Old Cherokee Street @ Red Roof Inn Driveway</u> -Eastbound Left -Southbound Approach	Stop Controlled on SB Approach	A (7.4) A (9.0)	A (7.3) A (9.1)	D/D D/D
12	<u>Old Cherokee Street @ Waffle House Driveway</u> -Eastbound Left -Southbound Approach	Stop Controlled on SB Approach	A (7.4) A (9.0)	A (7.3) A (9.1)	D/D D/D

The results of existing traffic operations analysis indicate that all the study intersections (signalized and un-signalized) are operating at level-of-service “D” or better in both the AM and PM peak hours except the intersection of Cherokee Street @ Liberty Square Drive / Old Cherokee Street whose stop-controlled side-streets (Liberty Square Drive and Old Cherokee Street) are operating at level-of-service “E” in the PM peak hour. These areas are addressed in the future traffic operations sections.

PROJECT DESCRIPTION

The proposed The Logan mixed-use development will be located at 5200 Cherokee Street in Acworth, Georgia. In general, the development will be located to the south of I-75. The development will consist of:

- Medical Office: 208,980 sf
- Hotel: 180 rooms
- Multifamily Housing: 500 units
- Restaurant: 15,188 sf
- Retail: 11,312 sf



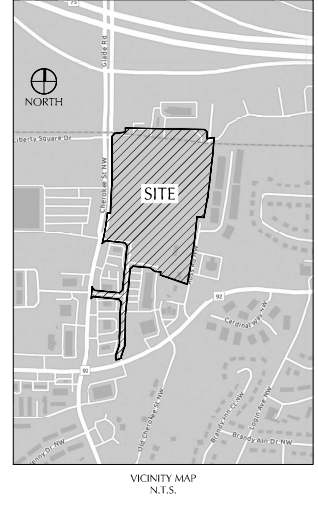
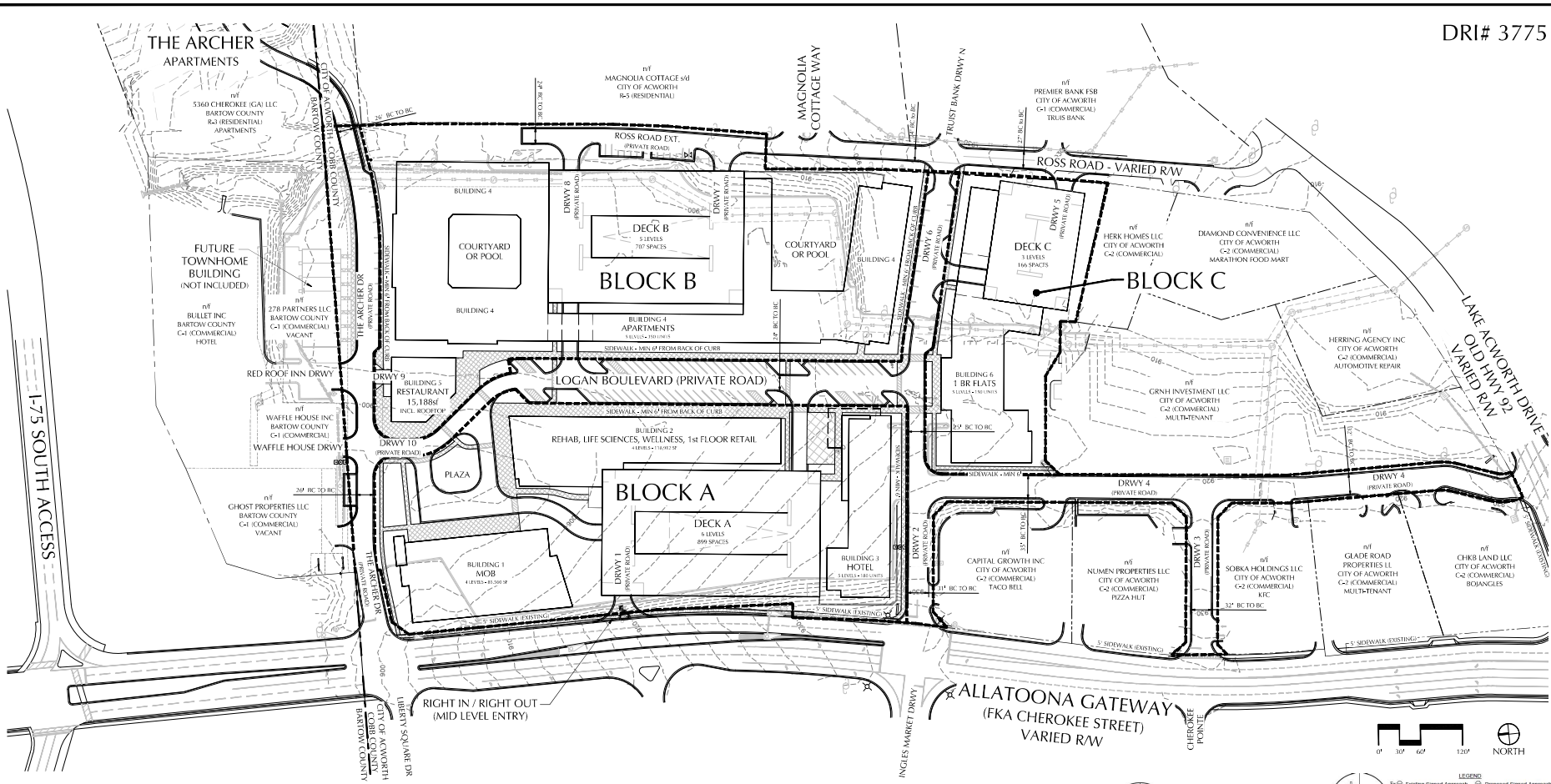
The development will have access at the following locations:

- Site Driveway 1: Proposed right-in/right-out driveway on Cherokee Street
- Site Driveway 2: Existing full access driveway on Cherokee Street, aligning with Ingles Market Southern (Signalized) Driveway
- Site Driveway 3: Existing full access driveway on Cherokee Street, aligning with Cherokee Point
- Site Driveway 4: Existing full access driveway on SR 92, aligning with Dollar Tree Driveway
- Site Driveway 5: Existing full access driveway on Ross Road
- Site Driveway 6: Proposed full access driveway on Ross Road, aligning with Truist Bank Northern Driveway

- Site Driveway 7: Proposed southern full access driveway on Ross Road Extension
- Site Driveway 8: Proposed northern full access driveway on Ross Road Extension
- Site Driveway 9: Existing full access driveway on Old Cherokee Street, aligning with Red Roof Inn Driveway
- Site Driveway 10: Proposed full access driveway on Old Cherokee Street, aligning with Waffle House Driveway

Site Plan

A site plan is shown in Figure 4.



SITE DATA

TOTAL SITE AREA	16.21 ACRES
EXISTING ZONING	C-2
PROPOSED ZONING	MU
MIN OPEN SPACE	0%
MIN MAX BLDG HEIGHT	1/8 LEVELS
MAX BUILDING/LOT COVERAGE	80%
USE SUMMARY	
MEDICAL	208,980 SF
HOTEL	180 KEYS
MULTIFAMILY	500 UNITS
RESTAURANT	15,188 SF
RETAIL	11,312 SF
DENSITY	
FAR (BLDGS. 1, 2, 3 & 5)	0.46
CROSS RES. DENSITY	30.85 U/AC
BLOCK ACRES	
BLOCK A	5.1 AC (31% OF SITE)
BLOCK B	6.0 AC (37% OF SITE)
BLOCK C	1.8 AC (11% OF SITE)
BALANCE WITH PRIVATE DRIVE FAIRWAYS AND FUTURE DEVELOPMENT	
PARKING SUMMARY	
DECK A - 6 LEVELS	899
DECK B - 5 LEVELS	707
DECK C - 3 LEVELS	166
SURFACE	95
TOTAL PARKING SPACES	1,867
DECK SPACES BASED ON 1/375th	
SETBACK SUMMARY	
CHEROKEE STREET	5 FEET FROM R/W
LOGAN BOULEVARD	15 FEET FROM BACK OF CURB
LOGAN PLACE	15 FEET FROM BACK OF CURB
ACWORTH NORTH DRIVE	15 FEET FROM BACK OF CURB
DRIVE B	15 FEET FROM BACK OF CURB
ROSS ROAD	5 FEET FROM R/W
NORTHERN PROPERTY LINE	5 FEET
WESTERN PROPERTY LINE	5 FEET
SOUTHERN PROPERTY LINE	5 FEET

SUMMARY TABLE - BLOCK A

BUILDING	USE	STORIES	SF	UNITS / ROOMS	PARKING RATIO	PARKING REQUIRED	PARKING REQUIRED WITH 15% MU REDUCTION	PARKING PROVIDED
1	MOB	4	101,380		5/1000sf	507	431	459
2	REHAB		60,000		1.5/1000sf	90	77	81
	LIFE SCIENCES	4	40,000		3.25/1000sf	130	111	118
	WELLNESS		7600		5.25/1000sf	40	34	36
	RETAIL		11,312		5/1000sf	57	48	51
3	HOTEL	5	88,120	180	1/ROOM + EMPLOYEES ASSEMBLY	200	170	181
			308,412			1024	870	926

SUMMARY TABLE - BLOCK B

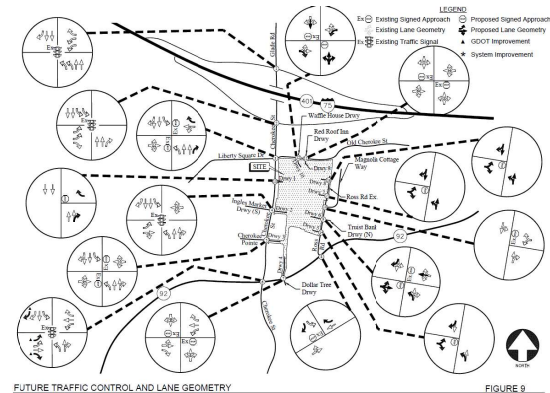
BUILDING	USE	STORIES	SF	UNITS / ROOMS	PARKING RATIO	PARKING REQUIRED	PARKING REQUIRED WITH 15% MU REDUCTION	PARKING PROVIDED
4	APARTMENTS	5	452,475	350	1/BEDROOM	525	446	596
5	RESTAURANT	1 w/ ROOFTOP	15,188		10/1000sf	152	129	173
			467,663			677	575	769

SUMMARY TABLE - BLOCK C

BUILDING	USE	STORIES	SF	UNITS / ROOMS	PARKING RATIO	PARKING REQUIRED	PARKING REQUIRED WITH 15% MU REDUCTION	PARKING PROVIDED
6	1 BR FLATS	5	147,740	150	1/BEDROOM	150	128	172

PARKING SUMMARY

PARKING REQUIRED	PARKING REQUIRED WITH 15% MU REDUCTION	PARKING PROVIDED
1865	1586	1867



OWNER:
278 PARTNERS, LLC
CONTACT: FRED SNELL
PHONE: (404) 992-3343
EMAIL: FRED@TERRABUILDUSA.COM

LAND PLANNING CONSULTANT:
TERRABUILD, LLC
CONTACT: TREV SCHWARTZ
PHONE: (404) 992-3343
EMAIL: TREV@TERRABUILDUSA.COM

TRAFFIC CONSULTANT:
A&R ENGINEERING, INC.
CONTACT: ABDUL AMER
PHONE: (770) 694-9255
EMAIL: AMER@AARENG.COM

CIVIL ENGINEER:
TERRABUILD, LLC
CONTACT: JACK HAMILTON
PHONE: (770) 694-9255
EMAIL: JACK@TERRABUILDUSA.COM

FIGURE 9
A&R Engineering Inc.

STUDIO 3
PLANNING • DESIGN • ARCHITECTURE
100 East Cobb Drive, Suite 100
Marietta, Georgia 30066
Phone: (770) 426-1111
Email: info@studio3ga.com

REVISIONS		
NO.	DATE	NOTE

DRI# 3775

THE LOGAN
CITY OF ACWORTH, GEORGIA
278 PARTNERS, LLC
COBB COUNTY, GEORGIA

TITLE
ZONING & DRI EXHIBIT

DATE: 9/6/22
JOB NO.: 17005
DWG FILE: 170052W1
DRAWN BY: TS
CHECKED: TS
SCALE: 1"=60'
SHEET: Z-1
1 of 1

NOT RELEASED FOR CONSTRUCTION

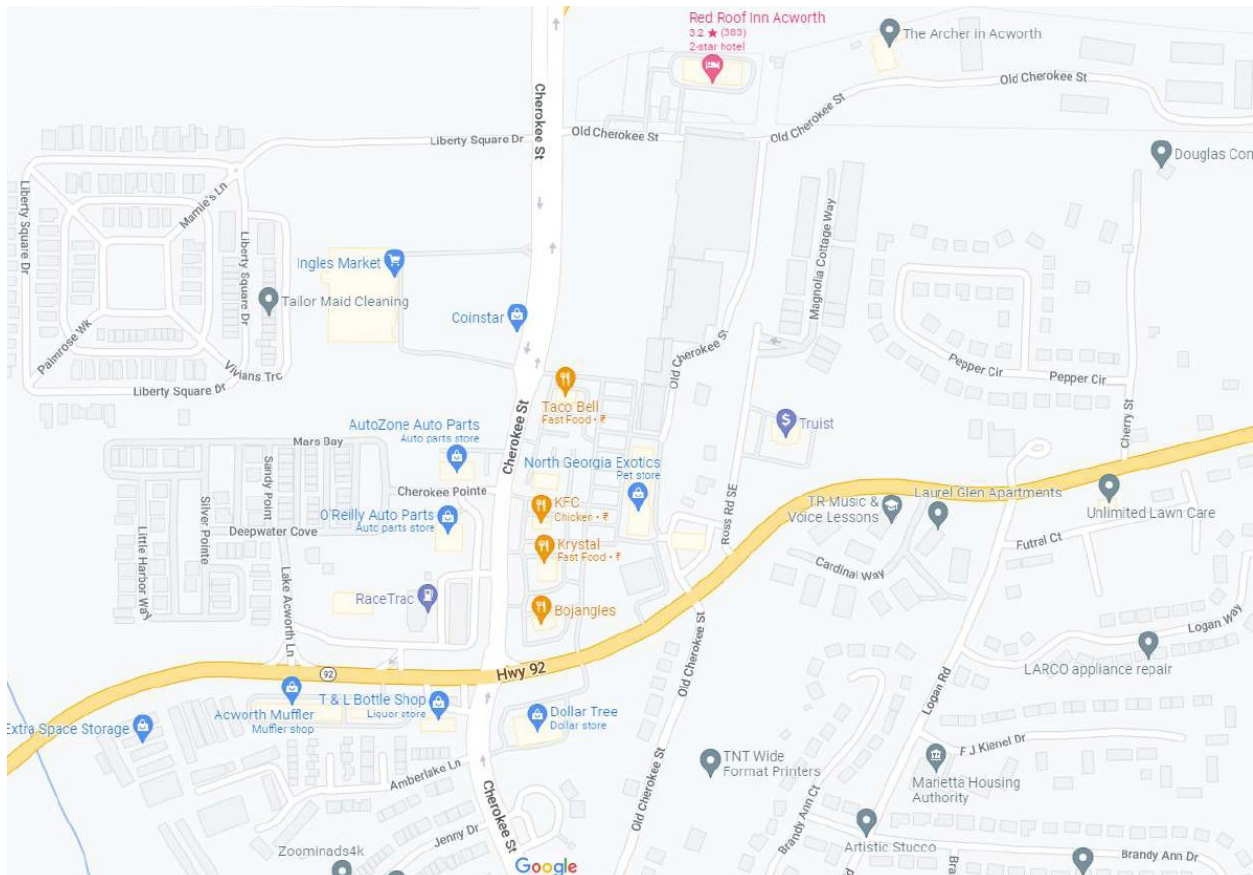
Figure 4 – Site Plan

Planned Bicycle and Pedestrian Facilities

Pedestrian sidewalks are proposed along Cherokee Street and throughout the internal roadway network inside the development.

Potential Pedestrian and Bicycle Destinations

Potential pedestrian and bicycle destinations in the vicinity of the proposed development include Ingles Market, Taco Bell, KFC, Krystal, Bojangles, Red Roof Inn and RaceTrac. Additional potential destinations are shown in the aerial below.



Planned Transit Facilities

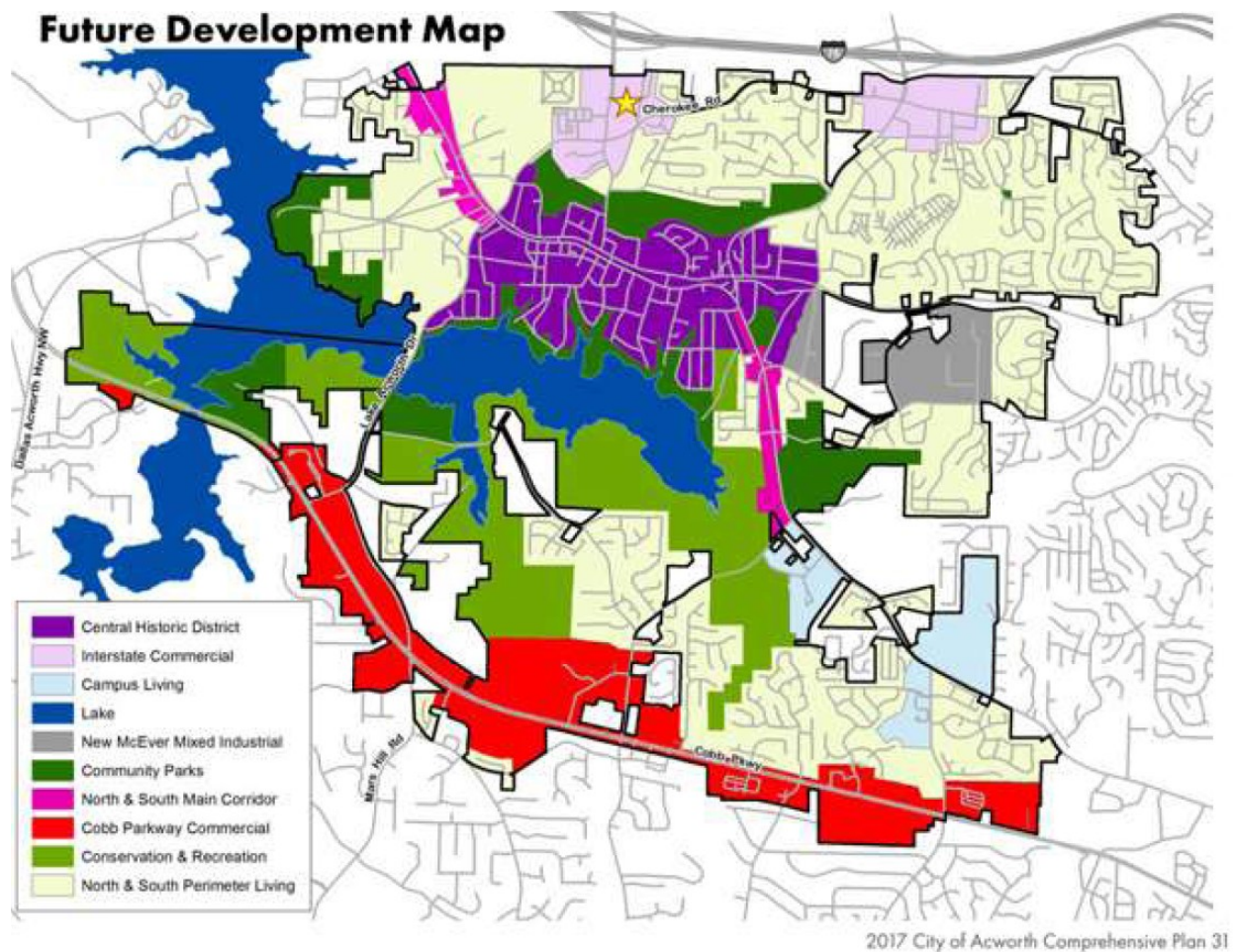
There is no existing or planned public transit service near the proposed development. An alternate mode of transportation reduction of 3% was considered in the trip generation analysis based on discussions with ARC/GRTA and local reviewing agencies based on the proximity of pedestrian destinations near the site.

Consistency with Adopted Comprehensive Plan

The proposed development will include multifamily apartments, medical office building, retail, restaurant, and a hotel. The property includes 16.21 acres of land. The site is currently zoned as Community Retail Commercial (C-2) and is requesting a rezoning to Mixed Use (MU).

Land Use and Zoning

Future Land Use Map Zoning	Interstate Commercial
Relation to Existing Land Use Plans	The proposed The Logan mixed-use development is consistent with land uses that would serve a community with adjacent access to the interstate.



Project Phasing

This project has been evaluated for the complete build-out of the development in 2028.

Trip Generation

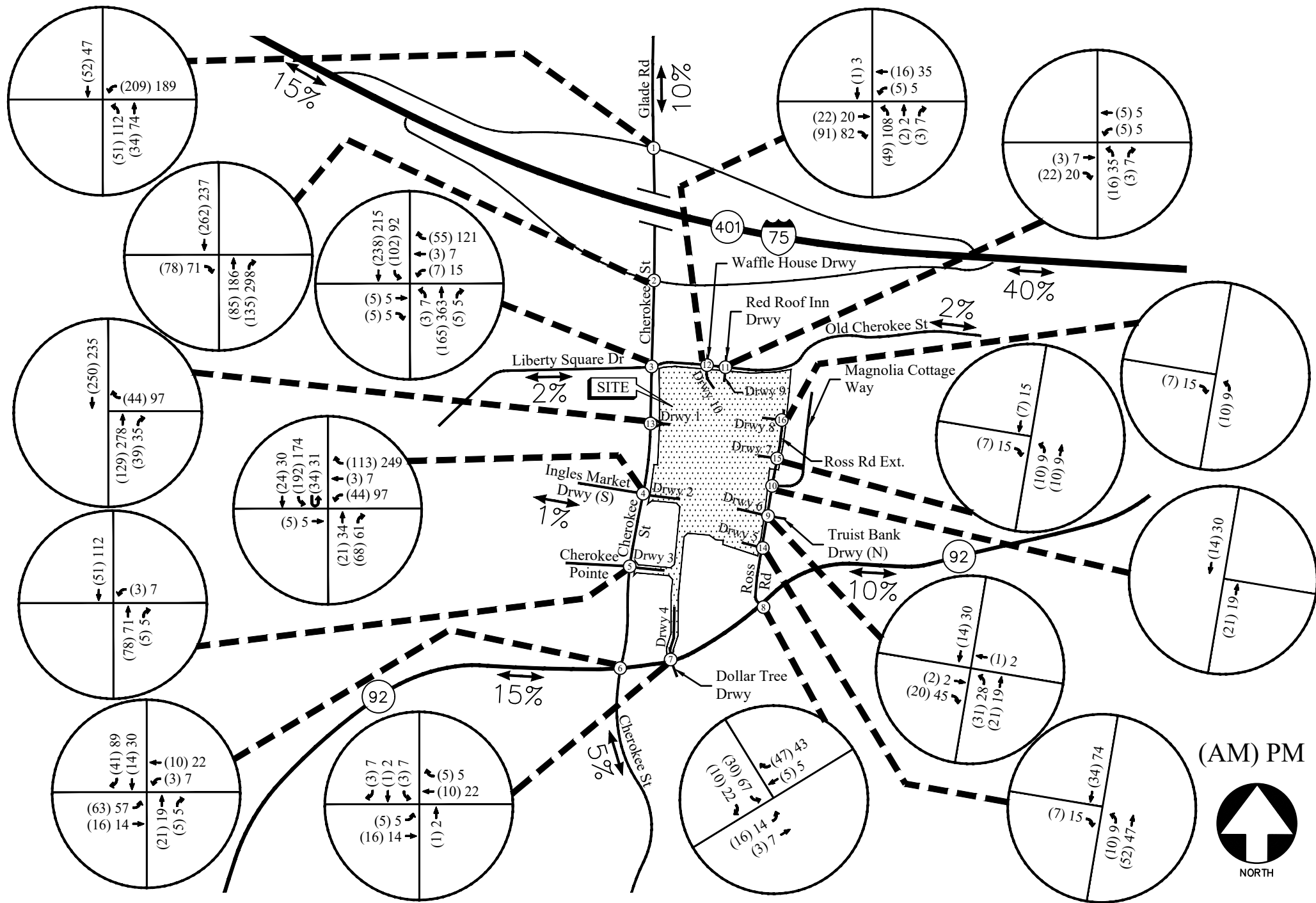
Trip generation estimates for the project were based on the rates and equations published in the 11th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Uses: 310 – Hotel, 221 – Multifamily Housing (Mid-Rise) - Not Close to Rail Transit, 720 – Medical-Dental Office Building - Stand-Alone, 822 – Strip Retail Plaza (<40k) and 932 – High-Turnover (Sit-Down) Restaurant. Due to the nature of the development, mixed-use and pass-by reductions have been applied per ITE standards. A 3% alternate mode reduction was also applied. The calculated total trip generation for the proposed development is shown in Table 4.

TABLE 4 – TRIP GENERATION								
Land Use	Size	AM Peak Hour			PM Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	2-way
ITE 310 – Hotel	180 rooms	46	37	83	53	52	105	1,528
Mixed-Use Reduction		-4	-4	-8	-6	-4	-10	-115
ITE 221 – Multifamily Housing (Mid-Rise) - Not Close to Rail Transit	500 units	48	160	208	119	76	195	2,339
Mixed-Use Reduction		-7	-5	-12	-9	-7	-16	-176
ITE 720 – Medical-Dental Office Building - Stand-Alone	208,980 sf	370	98	468	254	593	847	8,872
Mixed-Use Reduction		-2	-4	-6	-3	-6	-9	-140
ITE 822 – Strip Retail Plaza (<40k)	11,312 sf	19	12	31	42	43	85	707
Mixed-Use Reduction		-3	-3	-6	-4	-5	-9	-95
ITE 932 – High-Turnover (Sit-Down) Restaurant	15,188 sf	80	65	145	83	54	137	1,628
Mixed-Use Reduction		-8	-8	-16	-10	-10	-20	-220
Pass-by Trips (0%) 43%		0	0	0	-30	-18	-48	-480
Alternate Mode of Reduction (3%)		-16	-10	-26	-16	-24	-40	-430
Total Site Trips (without Reductions)		563	372	935	551	818	1,369	15,074
New External Site Trips (with Reductions)		523	338	861	473	744	1,217	13,418

* Daily pass-by volume reduction estimated to be the lesser of the PM peak hour pass-by rate determined volume or ten times the PM pass-by volume

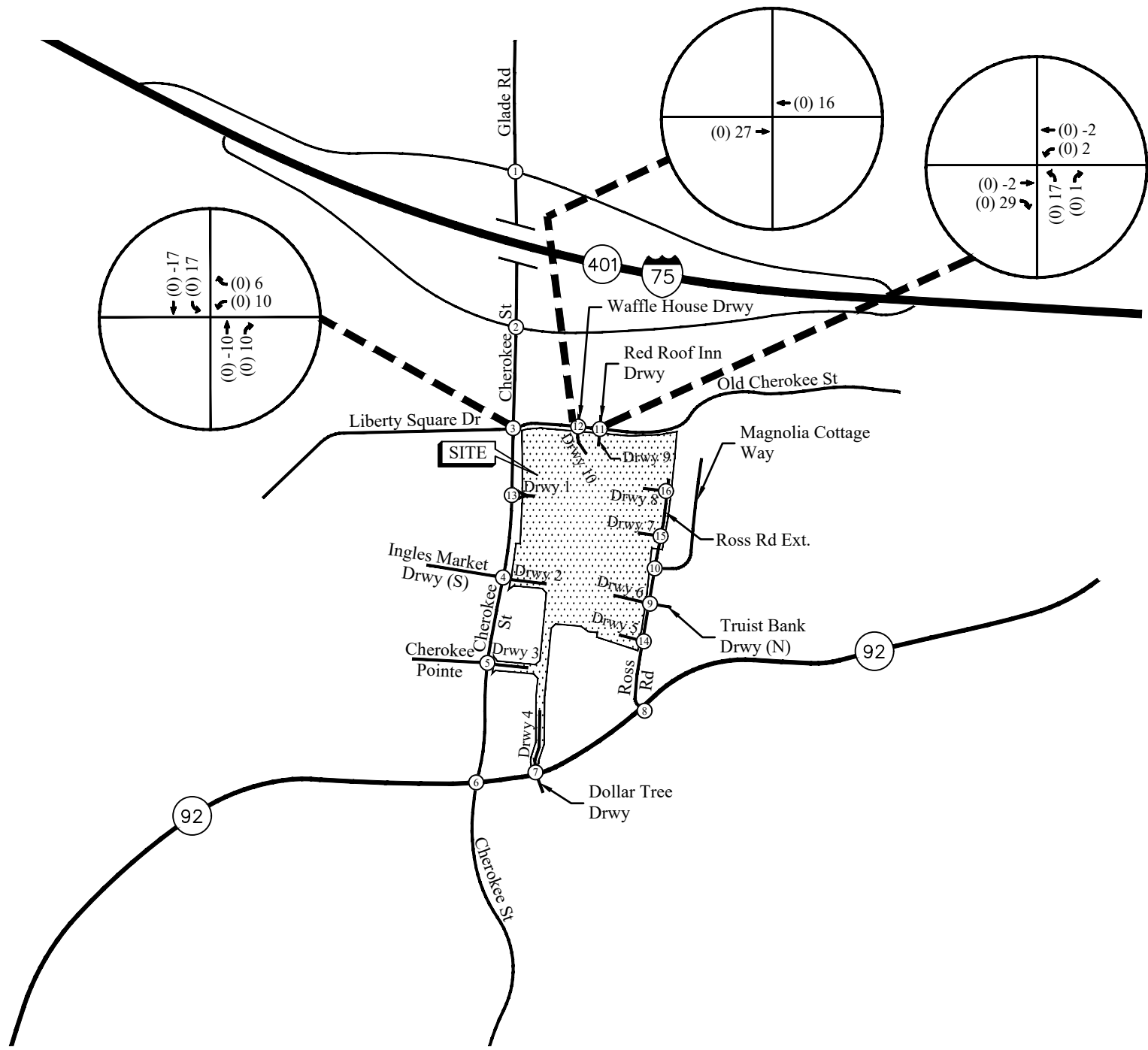
Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of GDOT ADT volumes and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 5. Pass-by volumes have also been distributed based on existing travel patterns and are shown in Figure 6.



TRIP DISTRIBUTION AND NEW SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES

FIGURE 5
A&R Engineering Inc.



(AM) PM



SITE PEAK HOUR PASS-BY VOLUMES

FIGURE 6
A&R Engineering Inc.

FUTURE 2028 TRAFFIC ANALYSIS

The future 2028 traffic operations are analyzed for the “Build” and “No-Build” conditions. This provides a basis of reference for determining both the contribution of the site to overall traffic conditions and the additional improvements needed to provide sufficient site access and capacity for passing traffic. Note that survey and construction drawings would be needed to verify the feasibility and extent of additional right-of-way required for any recommended improvements.

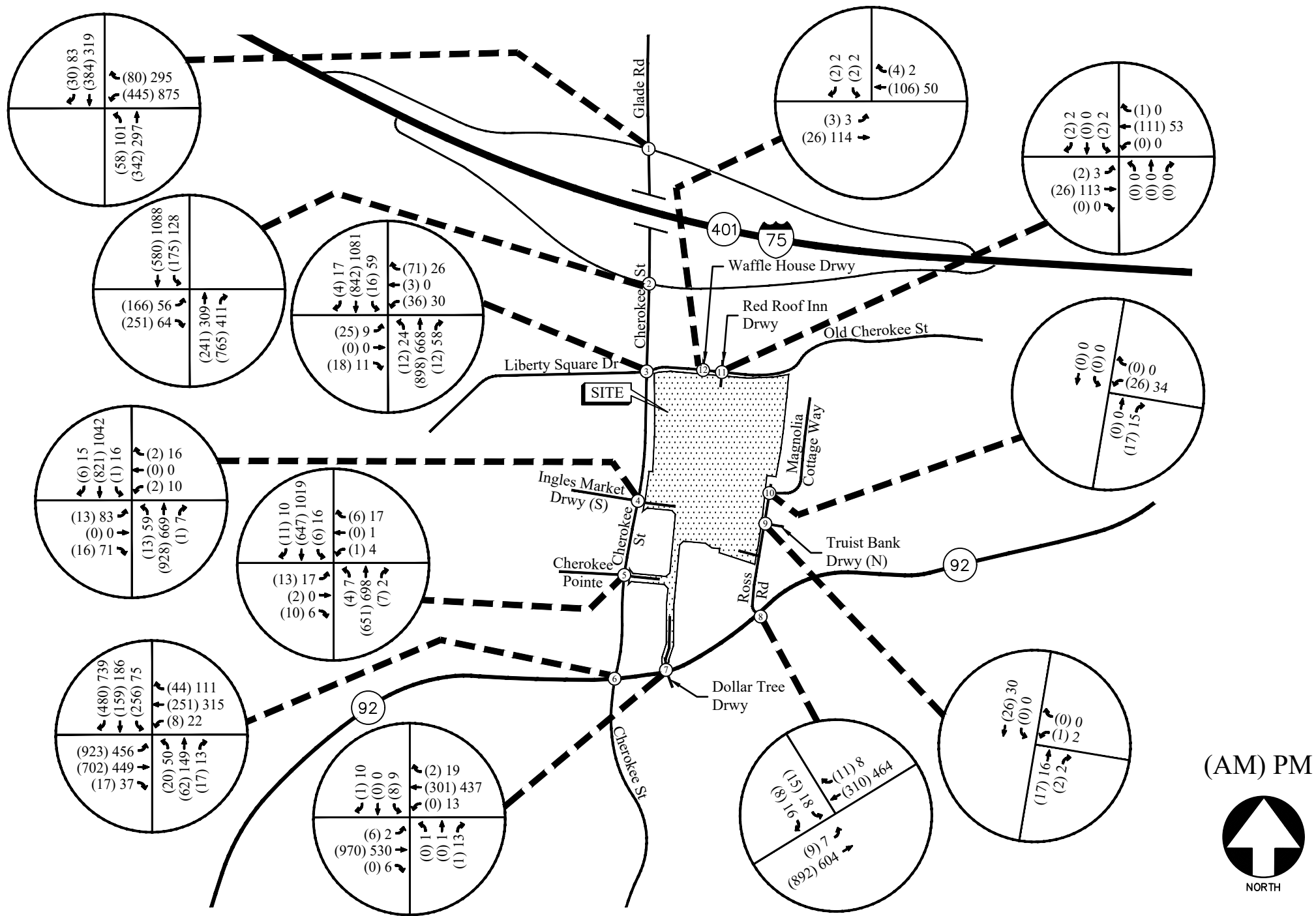
Improvements that are identified as “System Improvements” address deficiencies that are found within the existing road network prior to any impacts from the proposed development’s added traffic. Improvements that are identified as “Site Mitigation Improvements” address further impacts that are a result of the proposed development’s added traffic.

Future “No-Build” Conditions

The “No-Build” (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future “No-Build” volumes consist of the existing traffic volumes (Figure 2) plus increases for annual growth of traffic.

Annual Traffic Growth

In order to evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last three (2017-2019) years revealed growth of approximately 2% in the area. This growth factor was applied to the existing traffic volumes to estimate the future year traffic volumes prior to the addition of site-generated traffic. The resulting Future “No-Build” volumes on the roadway are shown in Figure 7.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 7

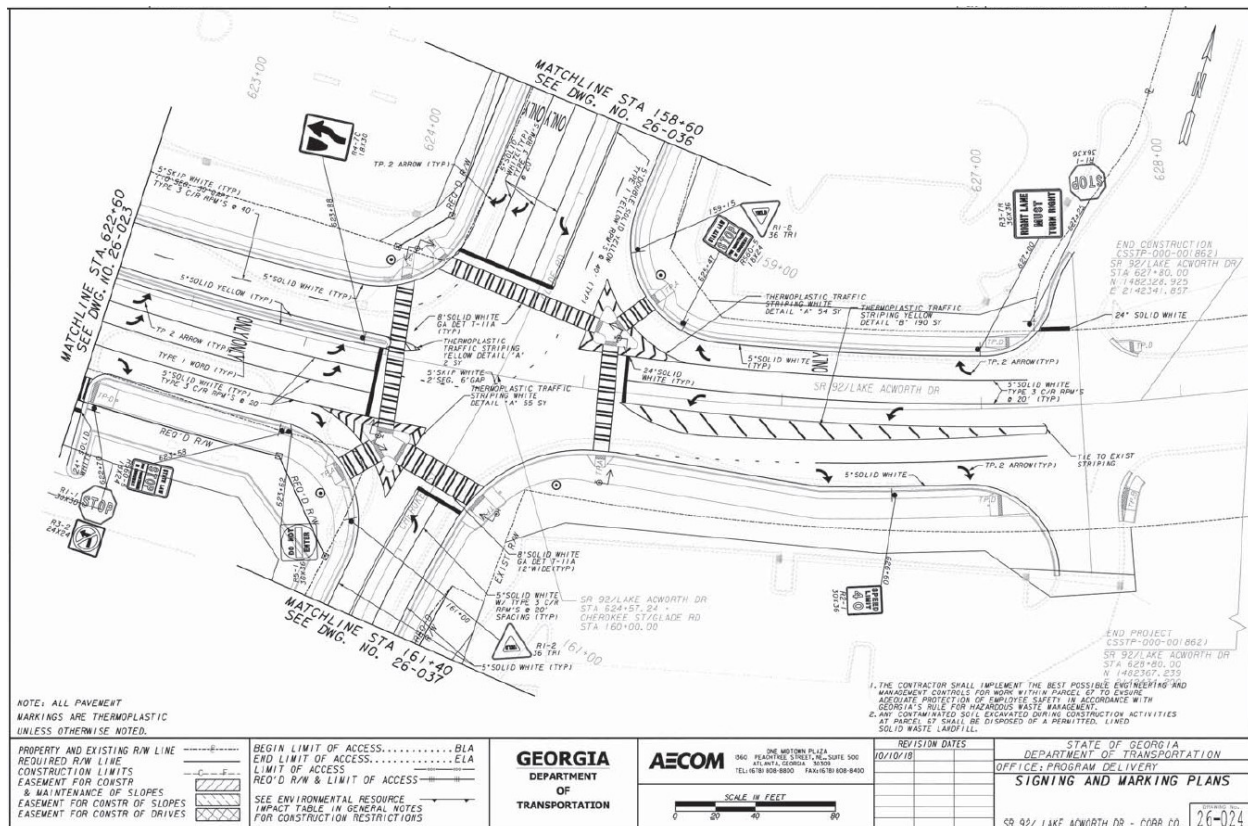
Planned and Programmed Improvements in Study Area

The following improvements have been identified in the Regional Transportation Plan (Plan 2040), GDOT GeoPi, and/or the local comprehensive transportation plan. These improvements are within the vicinity of the proposed development.

TABLE 5 — PLANNED AND PROGRAMMED IMPROVEMENTS

Item #	Project Name	From / To Points	Sponsor	GDOT PI #	ARC ID #	Design FY	ROW / UTL FY	CST FY
1	SR 92 Widening	Intersection of SR 92 at Cherokee ST	GDOT	CSSTP-000-001862	-	2018	2020	2022

CSSTP-000-001862:



SR 92 is being widened from two lanes to four lanes in the vicinity of Cherokee Street. Construction is in progress and is projected to be complete by the end of 2022. As part of the project, following improvements are proposed at the intersection of SR 92 and Cherokee Street:

- Addition of an eastbound left turn lane on SR 92 creating dual left turn lanes
- Addition of a second eastbound through lane on SR 92

- Addition of a median on the eastbound approach on SR 92
- Addition of an eastbound right turn lane on SR 92
- Addition of a southbound right turn lane creating dual right turn lanes on Cherokee Street

Since the GDOT project will be completed before 2028, the above improvements were incorporated in both the “No-Build” and “Build” traffic operations analyses as a system improvement.

Future “No-Build” Traffic Operations

The future “No-Build” traffic operations were analyzed using the volumes in Figure 7 and the results are shown in Table 6.

TABLE 6 — FUTURE “NO-BUILD” INTERSECTION OPERATIONS					
Intersection		LOS (Delay)			
		NO IMPROVEMENTS		SYSTEM IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	<u>Cherokee Street / Glade Road @ I-75 Northbound Ramps</u>	<u>B (18.5)</u>	<u>C (24.7)</u>	<u>B (18.5)</u>	<u>C (24.7)</u>
	-Westbound Approach	D (37.4)	C (34.3)	D (37.4)	C (34.3)
	-Northbound Approach	A (6.2)	B (11.0)	A (6.2)	B (11.0)
	-Southbound Approach	A (9.4)	B (15.4)	A (9.4)	B (15.4)
2	<u>Cherokee Street @ I-75 Southbound Ramps</u>	<u>B (17.9)</u>	<u>A (7.6)</u>	<u>B (17.9)</u>	<u>A (7.6)</u>
	-Eastbound Approach	D (37.6)	D (44.7)	D (37.6)	D (44.7)
	-Northbound Approach	B (10.1)	A (4.8)	B (10.1)	A (4.8)
	-Southbound Approach	A (9.6)	A (4.6)	A (9.6)	A (4.6)
3	<u>Cherokee Street @ Liberty Square Drive / Old Cherokee Street</u>				
	-Eastbound Approach	E (49.1)	F (53.2)	E (49.1)	F (53.2)
	-Westbound Approach	F (51.2)	F (60.8)	E (37.1)	F (54.1)
	-Northbound Left	A (9.8)	B (11.5)	A (9.8)	B (11.5)
	-Southbound Left	B (10.1)	A (9.7)	B (10.1)	A (9.7)
4	<u>Cherokee Street @ Ingles Market Southern (Signalized) Driveway</u>	<u>A (3.5)</u>	<u>A (7.9)</u>	<u>A (3.5)</u>	<u>A (7.9)</u>
	-Eastbound Approach	D (48.7)	D (46.9)	D (48.7)	D (46.9)
	-Westbound Approach	D (48.0)	D (43.7)	D (48.0)	D (43.7)
	-Northbound Approach	A (3.1)	A (4.7)	A (3.1)	A (4.7)
	-Southbound Approach	A (3.0)	A (6.3)	A (3.0)	A (6.3)
5	<u>Cherokee Street @ Cherokee Pointe</u>				
	-Eastbound Approach	C (15.3)	D (25.9)	C (15.3)	D (25.9)
	-Westbound Approach	B (11.5)	B (13.9)	B (11.5)	B (13.9)
	-Northbound Left	A (9.0)	B (10.9)	A (9.0)	B (10.9)
	-Southbound Left	A (9.0)	A (9.3)	A (9.0)	A (9.3)
6	<u>Cherokee Street @ SR 92</u>	<u>D (50.1)</u>	<u>D (42.4)</u>	<u>D (50.1)</u>	<u>D (42.4)</u>
	-Eastbound Approach	D (49.6)	D (43.2)	D (49.6)	D (43.2)
	-Westbound Approach	D (38.4)	D (40.9)	D (38.4)	D (40.9)
	-Northbound Approach	D (53.9)	C (28.5)	D (53.9)	C (28.5)
	-Southbound Approach	D (53.9)	D (45.1)	D (53.9)	D (45.1)
7	<u>SR 92 @ Existing Driveway / Dollar Tree</u>				

	<u>Driveway</u> -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	A (7.9) A (0.0) C (17.8) D (33.2)	A (8.5) A (8.8) B (14.4) C (19.9)	A (7.9) A (0.0) C (17.8) D (33.2)	A (8.5) A (8.8) B (14.4) C (19.9)
8	<u>SR 92 @ Ross Road</u> -Eastbound Left -Southbound Approach	A (8.0) C (22.0)	A (8.4) C (18.9)	A (8.0) C (22.0)	A (8.4) C (18.9)
9	<u>Ross Road @ Truist Bank Northern Driveway</u> -Westbound Approach	A (8.8)	A (8.9)	A (8.8)	A (8.9)
10	<u>Ross Road @ Magnolia Cottage Way</u> -Westbound Approach	A (8.7)	A (8.7)	A (8.7)	A (8.7)
11	<u>Old Cherokee Street @ Red Roof Inn Driveway</u> -Eastbound Left -Southbound Approach	A (7.5) A (9.1)	A (7.3) A (9.2)	A (7.5) A (9.1)	A (7.3) A (9.2)
12	<u>Old Cherokee Street @ Waffle House Driveway</u> -Eastbound Left -Southbound Approach	A (7.5) A (9.1)	A (7.3) A (9.1)	A (7.5) A (9.1)	A (7.3) A (9.1)

The results of future “No-Build” traffic operations show that the following intersection has LOS “E” or “F” for its stop-controlled side-streets in the AM and/or PM peak hour:

- Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street

Future “Build” Conditions

The “Build” or development conditions include the estimated background traffic from the “No-Build” conditions plus the added traffic from the proposed development. To evaluate future traffic operations in this area, the additional traffic volumes from the site (Figures 5) and pass-by volumes (Figure 6) were added to base traffic volumes (Figure 7) to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 8.

Auxiliary Lane Analysis

Included below is the analysis for a left-turn lane for the site driveway on SR 92 per GDOT standards. The analysis below is based off the trip distribution included in the "Trip Distribution" section. According to the trip distribution, the total 24-hour two-way volume entering and exiting the site is 15,074 vehicles. Since a westbound right turn lane is already existing on SR 92, a deceleration lane analysis was not done.

Left Turn Lane Analysis

For two lane roadways with AADT's greater than 6,000 vehicles and a posted speed limit of 40 mph, the daily site generated traffic left-turn movements threshold to warrant a left-turn lane is 175 left-turning vehicles a day. The projected left-turn volumes per day for the site driveway on SR 92 is included in Table 7.

TABLE 7 — GDOT REQUIREMENTS FOR LEFT TURN LANES					
Intersection	Left turn traffic (% total entering)	Left-turn Volume (vehicles/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicles/ day)	Warrants met?
SR 92 @ Dollar Tree Driveway / Site Driveway 4	1% (Eastbound)	69 $(\text{total trips}) \div 2 \times 0.01 =$ $(13,898^*) \div 2 \times 0.01 = 69$	40 mph / 2-Lane / > 6,000	175	No

** Mixed use and alternate mode reductions not included*

Per GDOT standards, a left turn lane is not warranted at Site Driveway 4 on SR 92.

Future “Build” Traffic Operations

The future “Build” traffic operations were analyzed using the volumes in Figure 8. The results of the future “Build” traffic operations analysis are shown in Table 8.

TABLE 8 — FUTURE “BUILD” INTERSECTION OPERATIONS					
Intersection		LOS (Delay)			
		NO IMPROVEMENTS		SYSTEM AND SITE IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	<u>Cherokee Street / Glade Road @ I-75 Northbound Ramps</u>	<u>C (21.7)</u>	<u>C (30.7)</u>	<u>C (21.7)</u>	<u>C (30.7)</u>
	-Westbound Approach	D (35.7)	C (33.0)	D (35.7)	C (33.0)
	-Northbound Approach	A (9.7)	C (31.8)	A (9.7)	C (31.8)
	-Southbound Approach	B (14.0)	C (22.0)	B (14.0)	C (22.0)
2	<u>Cherokee Street @ I-75 Southbound Ramps</u>	<u>B (17.1)</u>	<u>B (10.9)</u>	<u>B (17.1)</u>	<u>B (10.9)</u>
	-Eastbound Approach	D (40.1)	D (43.0)	D (40.1)	D (43.0)
	-Northbound Approach	B (12.9)	A (6.9)	B (12.9)	A (6.9)
	-Southbound Approach	A (7.3)	A (8.0)	A (7.3)	A (8.0)
3	<u>Cherokee Street @ Liberty Square Drive / Old Cherokee Street</u>				
	-Eastbound Approach	F (*)	F (*)	F (*)	F (*)
	-Westbound Approach	F (*)	F (*)	F (253.3)	F (*)
	-Northbound Left	B (11.0)	B (13.0)	B (11.0)	B (13.0)
4	<u>Cherokee Street @ Ingles Market Southern (Signalized) Driveway / Site Driveway 2</u>	<u>B (12.2)</u>	<u>C (21.8)</u>	<u>B (12.2)</u>	<u>C (21.8)</u>
	-Eastbound Approach	D (46.2)	C (32.3)	D (46.2)	C (32.3)
	-Westbound Approach	D (54.8)	D (42.9)	D (54.8)	D (42.9)
	-Northbound Approach	B (10.3)	B (18.7)	B (10.3)	B (18.7)
5	<u>Cherokee Street @ Cherokee Pointe / Site Driveway 3</u>				
	-Eastbound Approach	C (16.8)	D (31.8)	C (16.8)	D (31.8)
	-Westbound Approach	B (12.8)	C (15.8)	B (12.8)	C (15.8)
	-Northbound Left	A (9.2)	B (11.6)	A (9.2)	B (11.6)
6	<u>Cherokee Street @ SR 92</u>	<u>D (52.2)</u>	<u>D (47.3)</u>	<u>D (52.2)</u>	<u>D (47.3)</u>
	-Eastbound Approach	D (52.3)	D (50.6)	D (52.3)	D (50.6)
	-Westbound Approach	D (42.7)	D (54.3)	D (42.7)	D (54.3)
	-Northbound Approach	D (54.7)	C (26.6)	D (54.7)	C (26.6)
7	<u>SR 92 @ Site Driveway 4 / Dollar Tree Driveway</u>				
	-Eastbound Left	A (8.0)	A (8.6)	A (8.0)	A (8.6)
	-Westbound Left	A (0.0)	A (8.8)	A (0.0)	A (8.8)
	-Northbound Approach	D (25.1)	C (16.5)	D (25.1)	C (16.5)
8	<u>SR 92 @ Ross Road</u>				
	-Eastbound Left	A (8.2)	A (8.7)	A (8.2)	A (8.7)
	-Southbound Approach	D (32.6)	E (40.0)	D (30.8)	D (33.3)

9	<u>Ross Road @ Truist Bank Northern Driveway / Site Driveway 6</u> -Eastbound Approach -Westbound Approach -Northbound Left	A (8.8) B (10.1) A (7.4)	A (9.1) B (10.6) A (7.4)	A (8.8) B (10.1) A (7.4)	A (9.1) B (10.6) A (7.4)
10	<u>Ross Road @ Magnolia Cottage Way</u> -Westbound Approach	A (8.9)	A (9.1)	A (8.9)	A (9.1)
11	<u>Old Cherokee Street @ Red Roof Inn Driveway / Site Driveway 9</u> -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	A (7.5) A (7.3) A (9.6) A (9.3)	A (7.4) A (7.7) B (10.8) A (9.6)	A (7.5) A (7.3) A (9.6) A (9.3)	A (7.4) A (7.7) B (10.8) A (9.6)
12	<u>Old Cherokee Street @ Waffle House Driveway / Site Driveway 10</u> -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	A (7.5) A (7.5) B (10.6) A (9.9)	A (7.5) A (7.9) B (13.6) B (11.1)	A (7.5) A (7.5) B (10.6) A (9.9)	A (7.5) A (7.9) B (13.6) B (11.1)
13	<u>Cherokee Street @ Site Driveway 1 (RIRO)</u> -Westbound Approach	B (13.7)	B (14.8)	B (13.7)	B (14.8)
14	<u>Ross Road @ Site Driveway 5</u> -Eastbound Approach -Northbound Left	A (8.6) A (7.4)	A (8.9) A (7.5)	A (8.6) A (7.4)	A (8.9) A (7.5)
15	<u>Ross Road Extension @ Site Driveway 7</u> -Eastbound Approach -Northbound Left	A (8.4) A (7.2)	A (8.4) A (7.3)	A (8.4) A (7.2)	A (8.4) A (7.3)
16	<u>Ross Road Extension @ Site Driveway 8</u> -Eastbound Approach -Northbound Left	A (8.3) A (7.2)	A (8.4) A (7.2)	A (8.3) A (7.2)	A (8.4) A (7.2)

* Delay exceeds 300 seconds

The results of future “Build” traffic operations show that after the addition of site traffic the following intersections will have LOS “E” or “F” for one or more approaches:

- Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street
- Intersection 8: SR 92 @ Ross Road

The intersection of Cherokee Street and Liberty Square Drive / Old Cherokee Street will operate at LOS “F” for the side streets in both the AM and PM peak hours, with or without the recommended system improvement of addition of a westbound channelized right turn lane. The side-streets will experience delays during the peak periods waiting to turn left onto the mainline which is not uncommon for stop-controlled side-streets on arterial roadways. Signal warrants are not met; therefore, no further recommendations can improve operations at this intersection.

Recommended Site Mitigation Improvements

The following are the recommended site improvements:

Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street

- Addition of a channelized, yield control westbound right turn lane on Old Cherokee Street
- Addition of northbound right turn lane on Cherokee Street

After the recommended improvement is implemented, the intersection of Cherokee Street and Liberty Square Drive / Old Cherokee Street will operate at LOS “E” in the AM peak hour and at LOS “F” in the PM peak hour for the side streets. The side-streets will experience delays during the peak periods waiting to turn left onto the mainline which is not uncommon for stop-controlled side-streets on arterial roadways. Signal warrants are not met; therefore, no further recommendations can improve operations at this intersection

Site Driveway 4: Existing full access driveway on SR 92, aligning with Dollar Tree Driveway

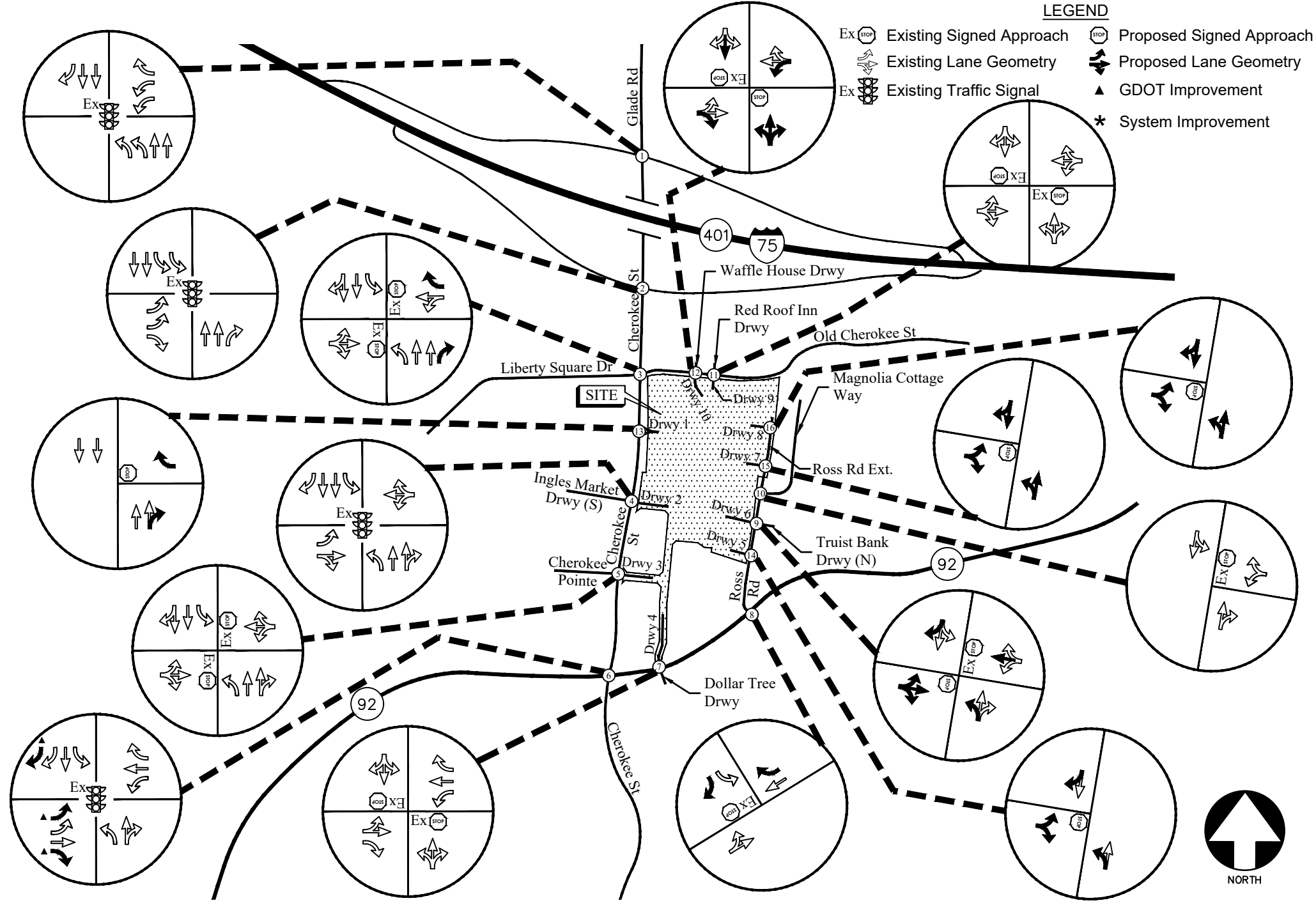
- Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled

Intersection 8: SR 92 @ Ross Road

- Addition of a channelized, yield control southbound right turn lane on Ross Road

After the recommended site improvement is implemented, the intersection of SR 92 and Ross Road will operate at LOS “D” or better in both the AM and PM peak hours.

Recommendations for future traffic control and lane geometry are shown in Figure 9.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 9
A&R Engineering Inc.

CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the proposed The Logan mixed-use development located at 5200 Cherokee Street in Acworth, Georgia.

The development proposes to use two existing full access and one new right-in/right-out driveways on Cherokee Street, one existing full access driveway on SR 92, one existing and one new full access driveways on Ross Road and two new full access driveways on Ross Road extension and one existing and one new full access driveways on Old Cherokee Street.

The AM and PM peak hours have been analyzed in this study. In addition to the site access points, this study included the evaluation of traffic operations at the intersections of:

1. Cherokee Street / Glade Road @ I-75 Northbound Ramps
2. Cherokee Street @ I-75 Southbound Ramps
3. Cherokee Street @ Liberty Square Drive / Old Cherokee Street
4. Cherokee Street @ Ingles Market Southern (Signalized) Driveway
5. Cherokee Street @ Cherokee Pointe
6. Cherokee Street @ SR 92
7. SR 92 @ Existing Driveway / Dollar Tree Driveway
8. SR 92 @ Ross Road
9. Ross Road @ Truist Bank Northern Driveway
10. Ross Road @ Magnolia Cottage Way
11. Old Cherokee Street @ Red Roof Inn Driveway
12. Old Cherokee Street @ Waffle House Driveway

The analysis included the evaluation of Future operations for “No-Build” and “Build” conditions, both of which account for increases in annual growth of through traffic. The results of future “No-Build” traffic operations show that the following intersection has LOS “E” or “F” for its stop-controlled side-streets in the AM and/or PM peak hour:

- Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street

Recommended Site Mitigation Improvements

Improvements that are identified as “Site Mitigation Improvements” address impacts that are a result of the proposed development’s added traffic. Following are the recommended site improvements:

Intersection 3: Cherokee Street @ Liberty Square Drive / Old Cherokee Street

- Addition of a channelized, yield control westbound right turn lane on Old Cherokee Street
- Addition of northbound right turn lane on Cherokee Street

After the recommended improvement is implemented, the intersection of Cherokee Street and Liberty Square Drive / Old Cherokee Street will operate at LOS “E” in the AM peak hour and at LOS “F” in the PM

peak hour for the side streets. The side-streets will experience delays during the peak periods waiting to turn left onto the mainline which is not uncommon for stop-controlled side-streets on arterial roadways. Signal warrants are not met; therefore, no further recommendations can improve operations at this intersection

Intersection 8: SR 92 @ Ross Road

- Addition of a channelized, yield control southbound right turn lane on Ross Road

After the recommended site improvement is implemented, the intersection of SR 92 and Ross Road will operate at LOS “D” or better in both the AM and PM peak hours.

Recommendation for Site Access Configuration

The following access configuration is recommended for the site driveway intersections. Adequate sight distance is recommended to be provided at all the site driveways per AASHTO standards.

- Site Driveway 1: Proposed right-in/right-out driveway on Cherokee Street
 - Driveway approach to consist of one entering and one right turn exiting lanes and to be stop-sign controlled
- Site Driveway 2: Existing full access driveway on Cherokee Street, aligning with Ingles Market Southern (Signalized) Driveway
 - Driveway approach to consist of one entering and one exiting lanes
 - Intersection to continue to operate with a traffic signal
- Site Driveway 3: Existing full access driveway on Cherokee Street, aligning with Cherokee Pointe
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 4: Existing full access driveway on SR 92, aligning with Dollar Tree Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 5: Existing full access driveway on Ross Road
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
 - Addition of westbound right turn lane
- Site Driveway 6: Proposed full access driveway on Ross Road, aligning with Truist Bank Northern Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled

- Site Driveway 7: Proposed southern full access driveway on Ross Road Extension
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 8: Proposed northern full access driveway on Ross Road Extension
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 9: Existing full access driveway on Old Cherokee Street, aligning with Red Roof Inn Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Site Driveway 10: Proposed full access driveway on Old Cherokee Street, aligning with Waffle House Driveway
 - Driveway approach to consist of one entering and one exiting lanes and to be stop-sign controlled
- Ross Road and SR 92
 - Addition of westbound right turn lane on SR 92

Appendix

Existing Intersection Traffic Counts
Linear Regression of Daily Traffic.....
Fact Sheets for Planned and Programmed Improvements.....
Existing Intersection Analysis.....
Future “No-Build” Intersection Analysis
Future “No-Build” Intersection Analysis with Improvements
Future “Build” Intersections Analysis
Future “Build” Intersections Analysis with Improvements.....
Traffic Volume Worksheets

Existing Intersection Traffic Counts

A & R Engineering, Inc.

2160 Kinston Court Suite 'o'
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TMC DATA

Ross Rd @ Magnolia Cottage Way

7-9 am | 4-6 pm

File Name : 20220372

Site Code : 20220372

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

	Ross Rd Northbound				Ross Rd Southbound				Eastbound				Magnolia Cottage Way Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	3	3	0	0	0	0	0	0	0	0	4	0	0	4	7
07:15 AM	0	0	3	3	0	0	0	0	0	0	0	0	6	0	0	6	9
07:30 AM	0	0	3	3	0	0	0	0	0	0	0	0	5	0	0	5	8
07:45 AM	0	0	7	7	0	0	0	0	0	0	0	0	5	0	0	5	12
Total	0	0	16	16	0	0	0	0	0	0	0	0	20	0	0	20	36
08:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	7	0	0	7	9
08:15 AM	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
08:30 AM	0	0	4	4	0	0	0	0	0	0	0	0	6	0	0	6	10
08:45 AM	0	0	5	5	0	0	0	0	0	0	0	0	6	0	0	6	11
Total	0	0	14	14	0	0	0	0	0	0	0	0	20	0	0	20	34
*** BREAK ***																	
04:00 PM	0	0	5	5	0	0	0	0	0	0	0	0	9	0	0	9	14
04:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	5	0	0	5	9
04:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	4	0	0	4	6
04:45 PM	0	0	3	3	0	0	0	0	0	0	0	0	9	0	0	9	12
Total	0	0	14	14	0	0	0	0	0	0	0	0	27	0	0	27	41
05:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	11	0	0	11	13
05:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	5	0	0	5	9
05:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	5	0	0	5	7
05:45 PM	0	0	5	5	0	0	0	0	0	0	0	0	9	0	0	9	14
Total	0	0	13	13	0	0	0	0	0	0	0	0	30	0	0	30	43
Grand Total	0	0	57	57	0	0	0	0	0	0	0	0	97	0	0	97	154
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	37	37	0	0	0	0	0	0	0	0	63	0	0	63	

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TMC DATA

Ross Rd @ Magnolia Cottage Way
7-9 am | 4-6 pm

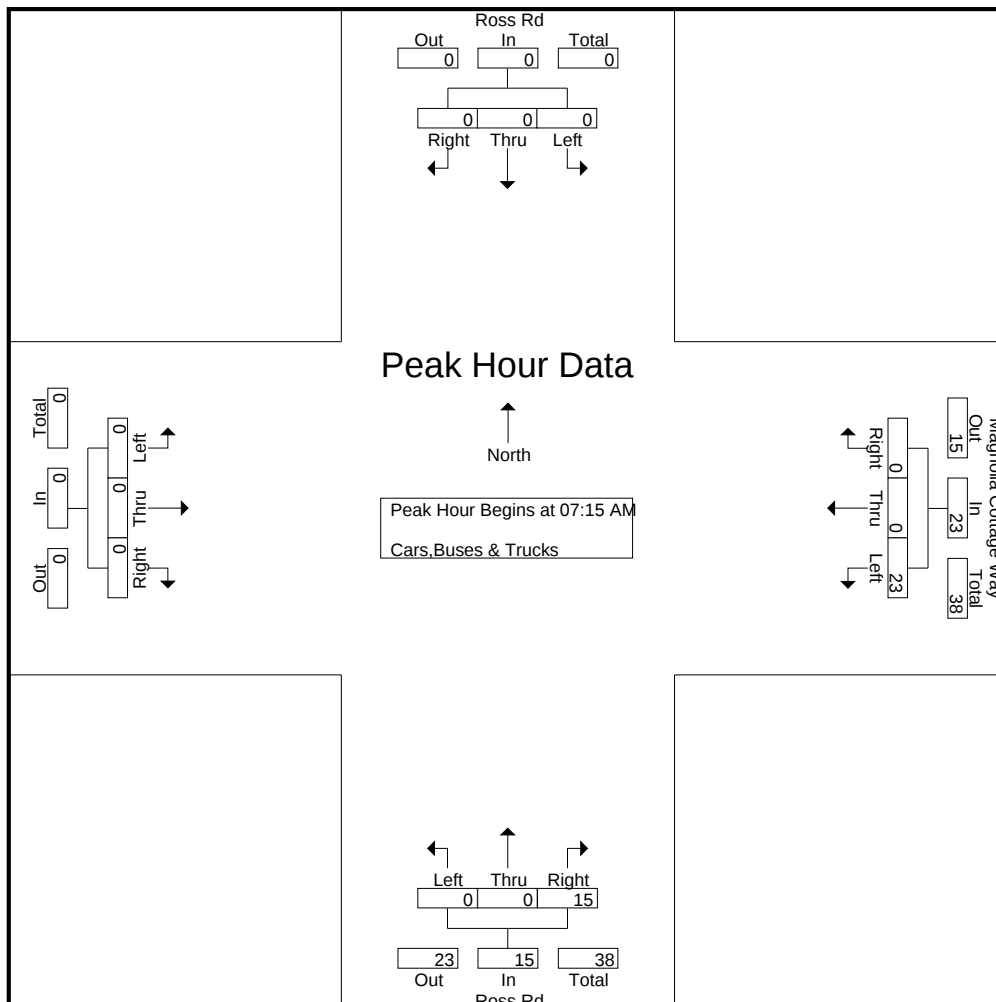
File Name : 20220372

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Start Date : 8/17/2022

Page No : 2

	Ross Rd Northbound				Ross Rd Southbound				Eastbound				Magnolia Cottage Way Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	3	3	0	0	0	0	0	0	0	0	6	0	0	6	9
07:30 AM	0	0	3	3	0	0	0	0	0	0	0	0	5	0	0	5	8
07:45 AM	0	0	7	7	0	0	0	0	0	0	0	0	5	0	0	5	12
08:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	7	0	0	7	9
Total Volume	0	0	15	15	0	0	0	0	0	0	0	0	23	0	0	23	38
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.536	.536	.000	.000	.000	.000	.000	.000	.000	.000	.821	.000	.000	.821	.792



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Ross Rd @ Magnolia Cottage Way
7-9 am | 4-6 pm

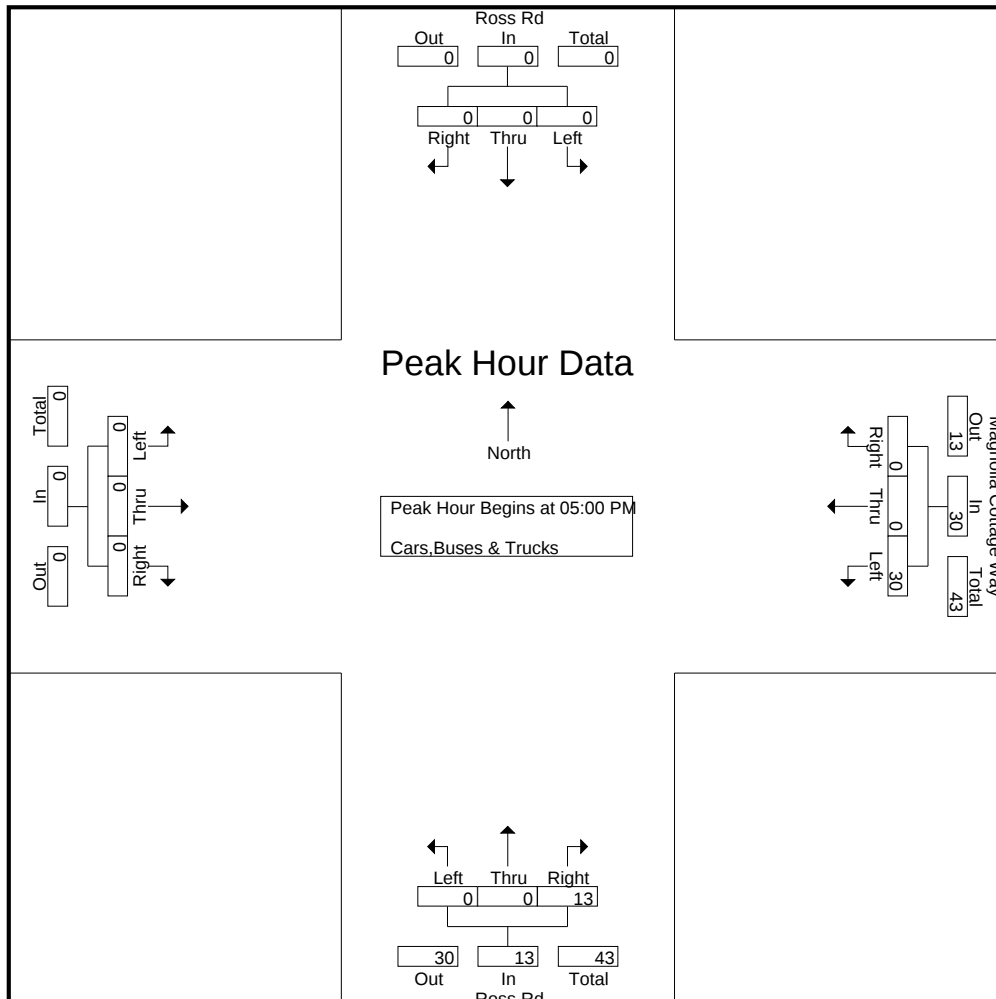
File Name : 20220372

Site Code : 20220372

Start Date : 8/17/2022

Page No : 3

	Ross Rd Northbound				Ross Rd Southbound				Eastbound				Magnolia Cottage Way Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	11	0	0	11	13
05:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	5	0	0	5	9
05:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	5	0	0	5	7
05:45 PM	0	0	5	5	0	0	0	0	0	0	0	0	9	0	0	9	14
Total Volume	0	0	13	13	0	0	0	0	0	0	0	0	30	0	0	30	43
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.650	.650	.000	.000	.000	.000	.000	.000	.000	.000	.682	.000	.000	.682	.768



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TMC DATA

Old Cherokee St @ Waffel House Drwy
7-9 am | 4-6 pm

File Name : 20220373

Site Code : 20220373

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

Start Time	Northbound				Waffel House Drwy Southbound				Old Cherokee St Eastbound				Old Cherokee St Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	13	0	13	17
07:15 AM	0	0	0	0	0	0	0	0	1	5	0	6	0	14	1	15	21
07:30 AM	0	0	0	0	0	0	1	1	0	4	0	4	0	16	0	16	21
07:45 AM	0	0	0	0	1	0	0	1	1	7	0	8	0	23	1	24	33
Total	0	0	0	0	1	0	1	2	2	20	0	22	0	66	2	68	92
08:00 AM	0	0	0	0	0	0	0	0	1	6	0	7	0	26	2	28	35
08:15 AM	0	0	0	0	0	0	1	1	0	6	0	6	0	25	0	25	32
08:30 AM	0	0	0	0	1	0	1	2	1	4	0	5	0	21	1	22	29
08:45 AM	0	0	0	0	0	0	0	0	0	5	0	5	0	24	0	24	29
Total	0	0	0	0	1	0	2	3	2	21	0	23	0	96	3	99	125
*** BREAK ***																	
04:00 PM	0	0	0	0	1	0	1	2	0	14	0	14	0	11	0	11	27
04:15 PM	0	0	0	0	0	0	0	0	1	15	0	16	0	6	0	6	22
04:30 PM	0	0	0	0	1	0	0	1	0	13	0	13	0	11	1	12	26
04:45 PM	0	0	0	0	0	0	1	1	2	22	0	24	0	12	0	12	37
Total	0	0	0	0	2	0	2	4	3	64	0	67	0	40	1	41	112
05:00 PM	0	0	0	0	0	0	0	0	1	22	0	23	0	10	1	11	34
05:15 PM	0	0	0	0	0	0	0	0	0	22	0	22	0	10	0	10	32
05:30 PM	0	0	0	0	1	0	1	2	1	31	0	32	0	13	1	14	48
05:45 PM	0	0	0	0	1	0	1	2	1	27	0	28	0	12	0	12	42
Total	0	0	0	0	2	0	2	4	3	102	0	105	0	45	2	47	156
Grand Total	0	0	0	0	6	0	7	13	10	207	0	217	0	247	8	255	485
Apprch %	0	0	0	0	46.2	0	53.8		4.6	95.4	0		0	96.9	3.1		
Total %	0	0	0	0	1.2	0	1.4	2.7	2.1	42.7	0	44.7	0	50.9	1.6	52.6	

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Old Cherokee St @ Waffel House Drwy
7-9 am | 4-6 pm

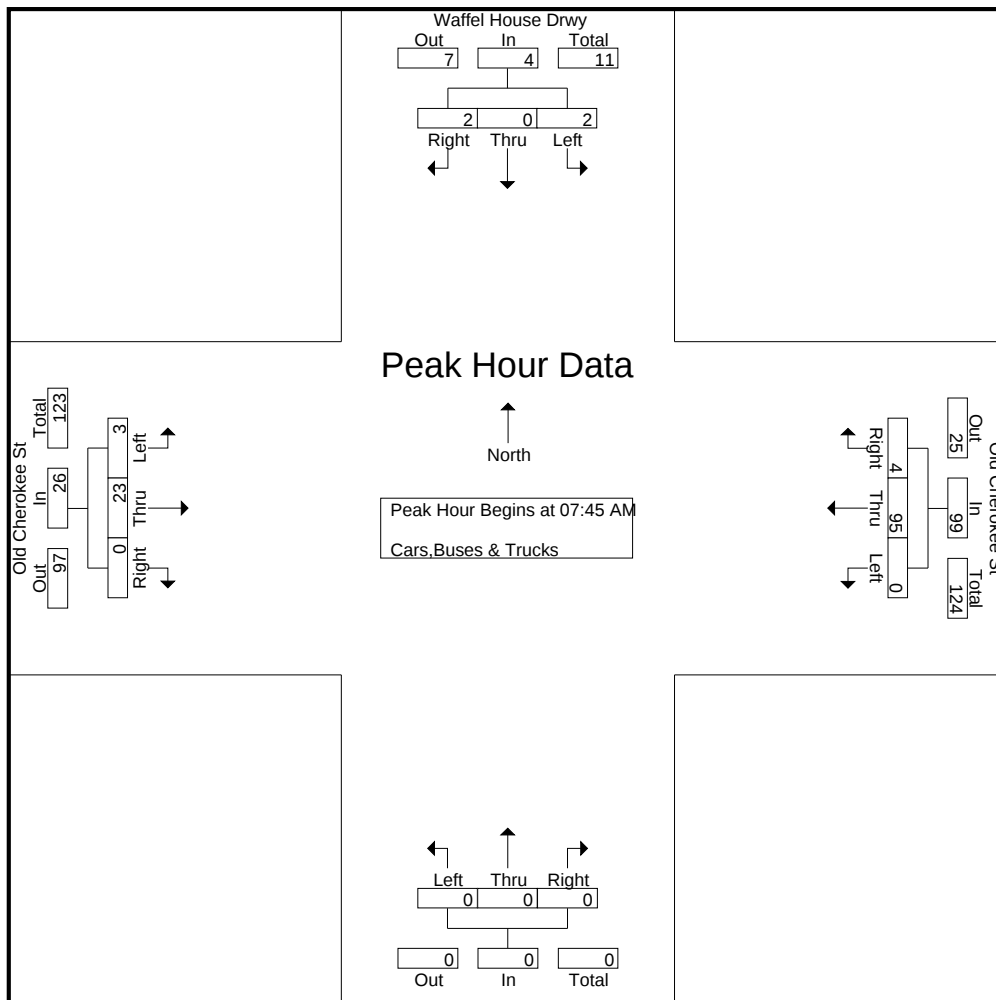
File Name : 20220373

Site Code : 20220373

Start Date : 8/17/2022

Page No : 2

	Northbound				Waffel House Drwy Southbound				Old Cherokee St Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	1	0	0	1	1	7	0	8	0	23	1	24	33
08:00 AM	0	0	0	0	0	0	0	0	1	6	0	7	0	26	2	28	35
08:15 AM	0	0	0	0	0	0	1	1	0	6	0	6	0	25	0	25	32
08:30 AM	0	0	0	0	1	0	1	2	1	4	0	5	0	21	1	22	29
Total Volume	0	0	0	0	2	0	2	4	3	23	0	26	0	95	4	99	129
% App. Total	0	0	0	0	50	0	50		11.5	88.5	0		0	96	4		
PHF	.000	.000	.000	.000	.500	.000	.500	.500	.750	.821	.000	.813	.000	.913	.500	.884	.921



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Old Cherokee St @ Waffel House Drwy
7-9 am | 4-6 pm

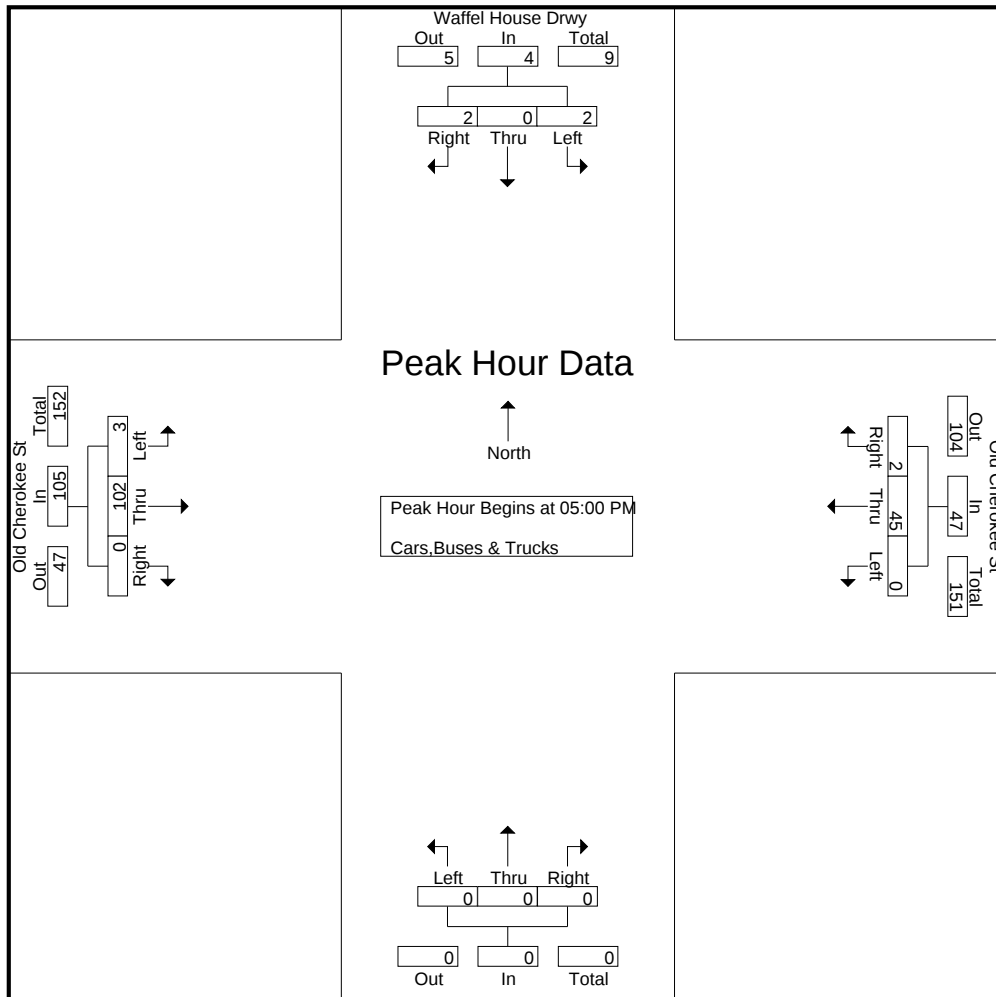
File Name : 20220373

Site Code : 20220373

Start Date : 8/17/2022

Page No : 3

	Northbound				Waffel House Drwy Southbound				Old Cherokee St Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	1	22	0	23	0	10	1	11	34
05:15 PM	0	0	0	0	0	0	0	0	0	22	0	22	0	10	0	10	32
05:30 PM	0	0	0	0	1	0	1	2	1	31	0	32	0	13	1	14	48
05:45 PM	0	0	0	0	1	0	1	2	1	27	0	28	0	12	0	12	42
Total Volume	0	0	0	0	2	0	2	4	3	102	0	105	0	45	2	47	156
% App. Total	0	0	0		50	0	50		2.9	97.1	0		0	95.7	4.3		
PHF	.000	.000	.000	.000	.500	.000	.500	.500	.750	.823	.000	.820	.000	.865	.500	.839	.813



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TMC DATA

Old Cherokee St @ Red Roof In Drwy
7-9 am | 4-6 pm

File Name : 20220374

Site Code : 20220374

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

Start Time	Northbound				Red Roof In Drwy Southbound				Old Cherokee St Eastbound				Old Cherokee St Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	13	0	13	17
07:15 AM	0	0	0	0	1	0	0	1	0	5	0	5	0	15	0	15	21
07:30 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	16	0	16	20
07:45 AM	0	0	0	0	1	0	1	2	1	7	0	8	0	24	1	25	35
Total	0	0	0	0	2	0	1	3	1	20	0	21	0	68	1	69	93
08:00 AM	0	0	0	0	0	0	1	1	0	6	0	6	0	28	0	28	35
08:15 AM	0	0	0	0	0	0	0	0	1	5	0	6	0	25	0	25	31
08:30 AM	0	0	0	0	1	0	0	1	0	5	0	5	0	22	0	22	28
08:45 AM	0	0	0	0	1	0	1	2	0	5	0	5	0	23	1	24	31
Total	0	0	0	0	2	0	2	4	1	21	0	22	0	98	1	99	125
*** BREAK ***																	
04:00 PM	0	0	0	0	1	0	0	1	0	15	0	15	0	11	0	11	27
04:15 PM	0	0	0	0	0	0	1	1	0	15	0	15	0	6	1	7	23
04:30 PM	0	0	0	0	1	0	0	1	0	14	0	14	0	12	0	12	27
04:45 PM	0	0	0	0	0	0	0	0	2	20	0	22	0	12	0	12	34
Total	0	0	0	0	2	0	1	3	2	64	0	66	0	41	1	42	111
05:00 PM	0	0	0	0	1	0	0	1	1	21	0	22	0	11	0	11	34
05:15 PM	0	0	0	0	0	0	1	1	0	22	0	22	0	10	0	10	33
05:30 PM	0	0	0	0	1	0	1	2	0	32	0	32	0	14	0	14	48
05:45 PM	0	0	0	0	0	0	0	0	2	26	0	28	0	12	0	12	40
Total	0	0	0	0	2	0	2	4	3	101	0	104	0	47	0	47	155
Grand Total	0	0	0	0	8	0	6	14	7	206	0	213	0	254	3	257	484
Apprch %	0	0	0	0	57.1	0	42.9		3.3	96.7	0		0	98.8	1.2		
Total %	0	0	0	0	1.7	0	1.2	2.9	1.4	42.6	0	44	0	52.5	0.6	53.1	

A & R Engineering, Inc.

2160 Kinston Court Suite 'o'
Marietta, GA 30067

TMC DATA

Old Cherokee St @ Red Roof In Drwy
7-9 am | 4-6 pm

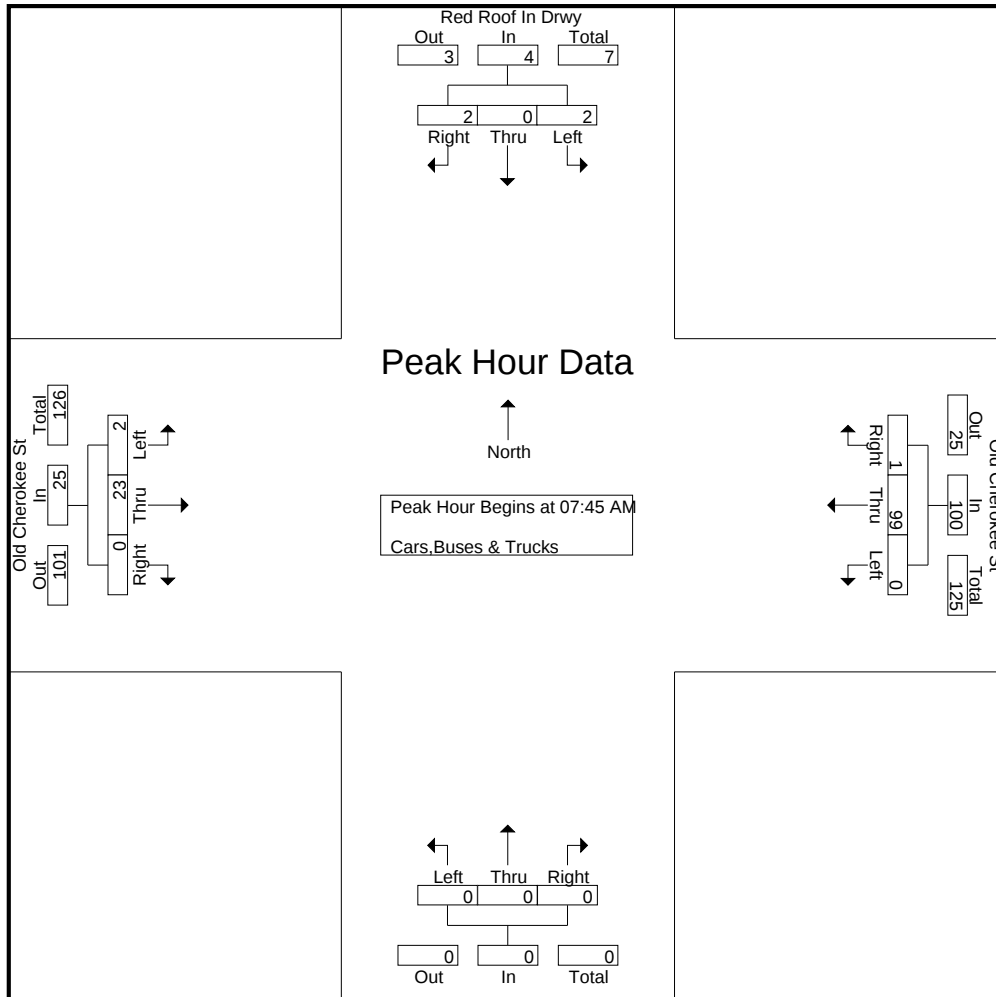
File Name : 20220374

Site Code : 20220374

Start Date : 8/17/2022

Page No : 2

	Northbound				Red Roof In Drwy Southbound				Old Cherokee St Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	1	0	1	2	1	7	0	8	0	24	1	25	35
08:00 AM	0	0	0	0	0	0	1	1	0	6	0	6	0	28	0	28	35
08:15 AM	0	0	0	0	0	0	0	0	1	5	0	6	0	25	0	25	31
08:30 AM	0	0	0	0	1	0	0	1	0	5	0	5	0	22	0	22	28
Total Volume	0	0	0	0	2	0	2	4	2	23	0	25	0	99	1	100	129
% App. Total	0	0	0	0	50	0	50		8	92	0		0	99	1		
PHF	.000	.000	.000	.000	.500	.000	.500	.500	.500	.821	.000	.781	.000	.884	.250	.893	.921



A & R Engineering, Inc.

2160 Kinston Court Suite 'o'
Marietta, GA 30067

TMC DATA

Old Cherokee St @ Red Roof In Drwy
7-9 am | 4-6 pm

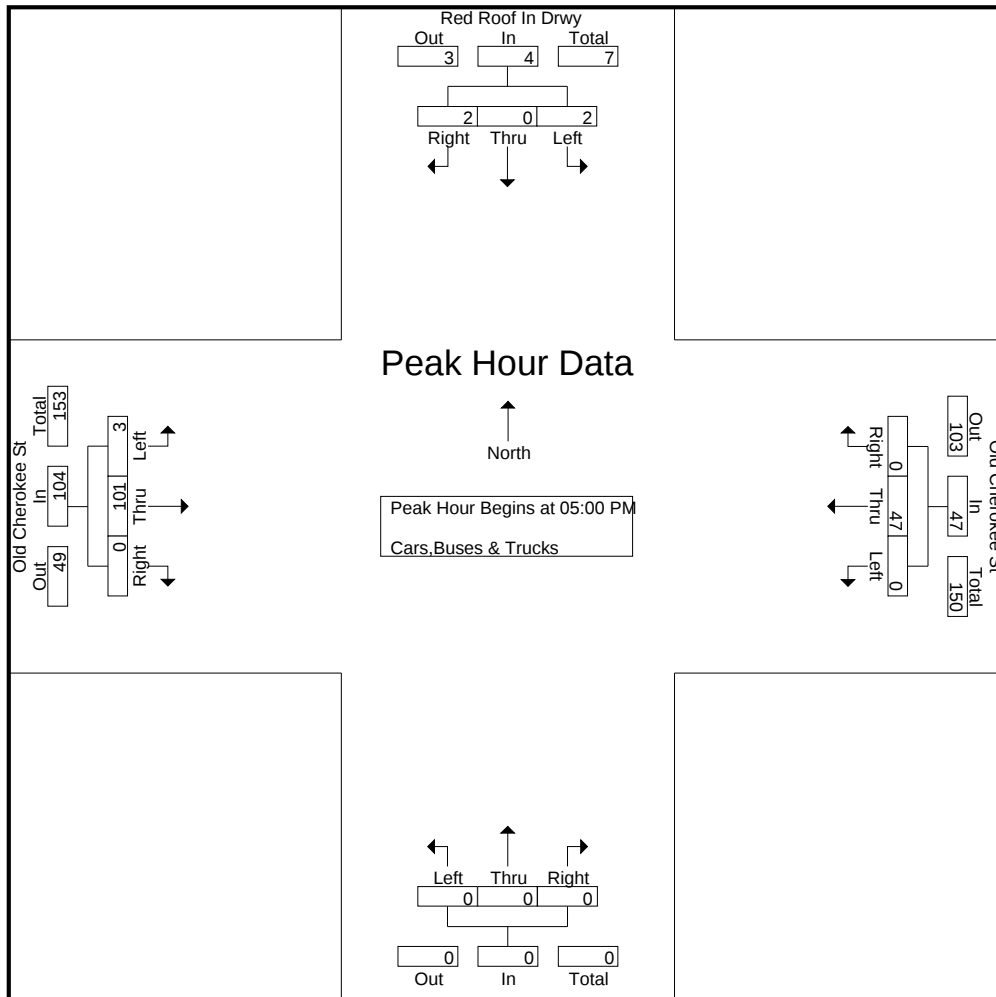
File Name : 20220374

Site Code : 20220374

Start Date : 8/17/2022

Page No : 3

	Northbound				Red Roof In Drwy Southbound				Old Cherokee St Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	1	0	0	1	1	21	0	22	0	11	0	11	34
05:15 PM	0	0	0	0	0	0	1	1	0	22	0	22	0	10	0	10	33
05:30 PM	0	0	0	0	1	0	1	2	0	32	0	32	0	14	0	14	48
05:45 PM	0	0	0	0	0	0	0	0	2	26	0	28	0	12	0	12	40
Total Volume	0	0	0	0	2	0	2	4	3	101	0	104	0	47	0	47	155
% App. Total	0	0	0	0	50	0	50		2.9	97.1	0		0	100	0		
PHF	.000	.000	.000	.000	.500	.000	.500	.500	.375	.789	.000	.813	.000	.839	.000	.839	.807



A & R Engineering, Inc.

2160 Kinston Court Suite 'o'
Marietta, GA 30067

TMC DATA

Ross Rd @ Truist Bank Northern Drwy
7-9 am | 4-6 pm

File Name : 20220375

Site Code : 20220375

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

	Ross Rd Northbound				Ross Rd Southbound				Eastbound				Truist Bank Northern Drwy Westbond				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	0	4	0	4	0	0	0	0	0	0	0	0	7
07:15 AM	0	3	1	4	0	6	0	6	0	0	0	0	0	0	0	0	10
07:30 AM	0	3	0	3	0	5	0	5	0	0	0	0	1	0	0	1	9
07:45 AM	0	7	1	8	0	5	0	5	0	0	0	0	0	0	0	0	13
Total	0	16	2	18	0	20	0	20	0	0	0	0	1	0	0	1	39
08:00 AM	0	2	0	2	0	7	0	7	0	0	0	0	0	0	0	0	9
08:15 AM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
08:30 AM	0	4	1	5	0	6	0	6	0	0	0	0	0	0	0	0	11
08:45 AM	0	5	0	5	0	6	0	6	0	0	0	0	1	0	0	1	12
Total	0	14	1	15	0	20	0	20	0	0	0	0	1	0	0	1	36
*** BREAK ***																	
04:00 PM	0	5	1	6	0	9	0	9	0	0	0	0	1	0	0	1	16
04:15 PM	0	4	1	5	0	5	0	5	0	0	0	0	1	0	0	1	11
04:30 PM	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0	6
04:45 PM	0	3	0	3	0	9	0	9	0	0	0	0	0	0	0	0	12
Total	0	14	2	16	0	27	0	27	0	0	0	0	2	0	0	2	45
05:00 PM	0	2	0	2	0	11	0	11	0	0	0	0	0	0	0	0	13
05:15 PM	0	4	1	5	0	5	0	5	0	0	0	0	1	0	0	1	11
05:30 PM	0	2	0	2	0	5	0	5	0	0	0	0	0	0	0	0	7
05:45 PM	0	5	0	5	0	9	0	9	0	0	0	0	0	0	0	0	14
Total	0	13	1	14	0	30	0	30	0	0	0	0	1	0	0	1	45
Grand Total	0	57	6	63	0	97	0	97	0	0	0	0	5	0	0	5	165
Apprch %	0	90.5	9.5		0	100	0		0	0	0		100	0	0		
Total %	0	34.5	3.6	38.2	0	58.8	0	58.8	0	0	0	0	3	0	0	3	

A & R Engineering, Inc.

2160 Kinston Court Suite 'o'
Marietta, GA 30067

TMC DATA

Ross Rd @ Truist Bank Northern Drwy
7-9 am | 4-6 pm

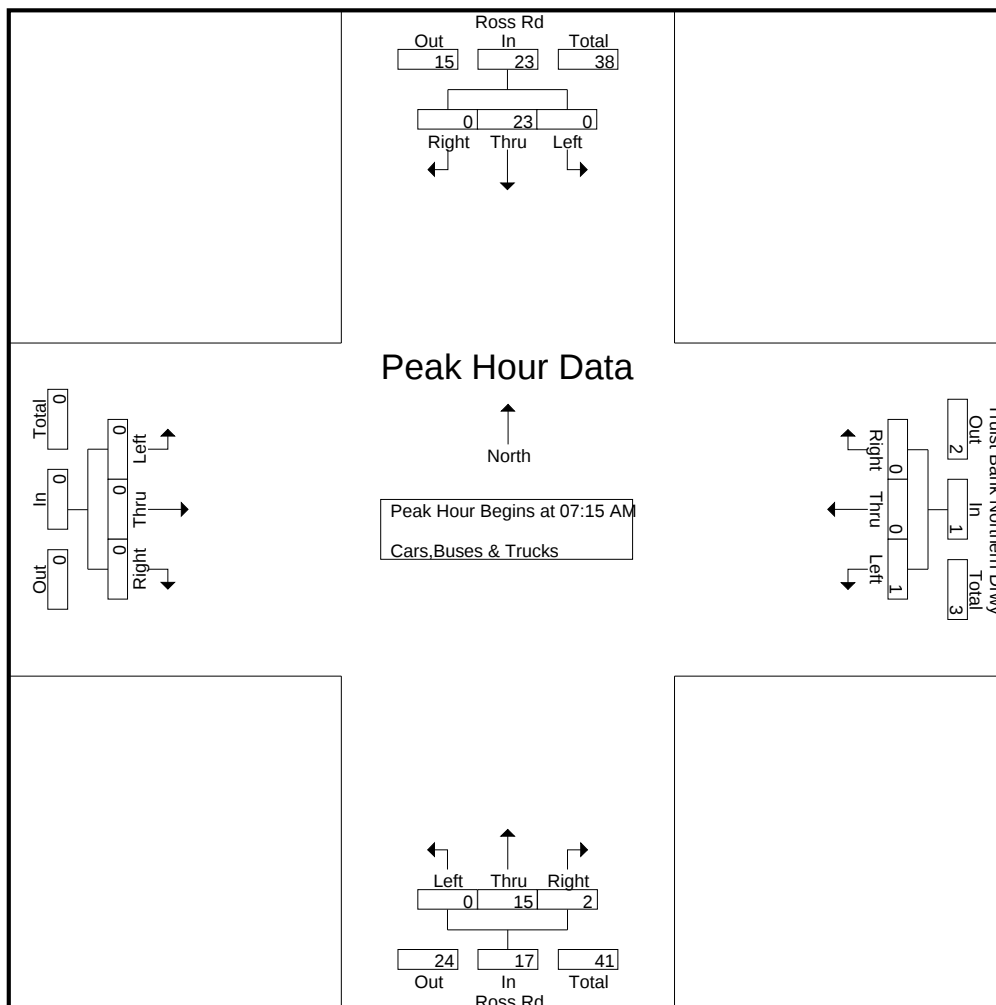
File Name : 20220375

Site Code : 20220375

Start Date : 8/17/2022

Page No : 2

	Ross Rd Northbound				Ross Rd Southbound				Eastbound				Truist Bank Northern Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	1	4	0	6	0	6	0	0	0	0	0	0	0	0	10
07:30 AM	0	3	0	3	0	5	0	5	0	0	0	0	1	0	0	1	9
07:45 AM	0	7	1	8	0	5	0	5	0	0	0	0	0	0	0	0	13
08:00 AM	0	2	0	2	0	7	0	7	0	0	0	0	0	0	0	0	9
Total Volume	0	15	2	17	0	23	0	23	0	0	0	0	1	0	0	1	41
% App. Total	0	88.2	11.8		0	100	0		0	0	0		100	0	0		
PHF	.000	.536	.500	.531	.000	.821	.000	.821	.000	.000	.000	.000	.250	.000	.000	.250	.788



A & R Engineering, Inc.

2160 Kinston Court Suite 'o'
Marietta, GA 30067

TMC DATA

Ross Rd @ Truist Bank Northern Drwy
7-9 am | 4-6 pm

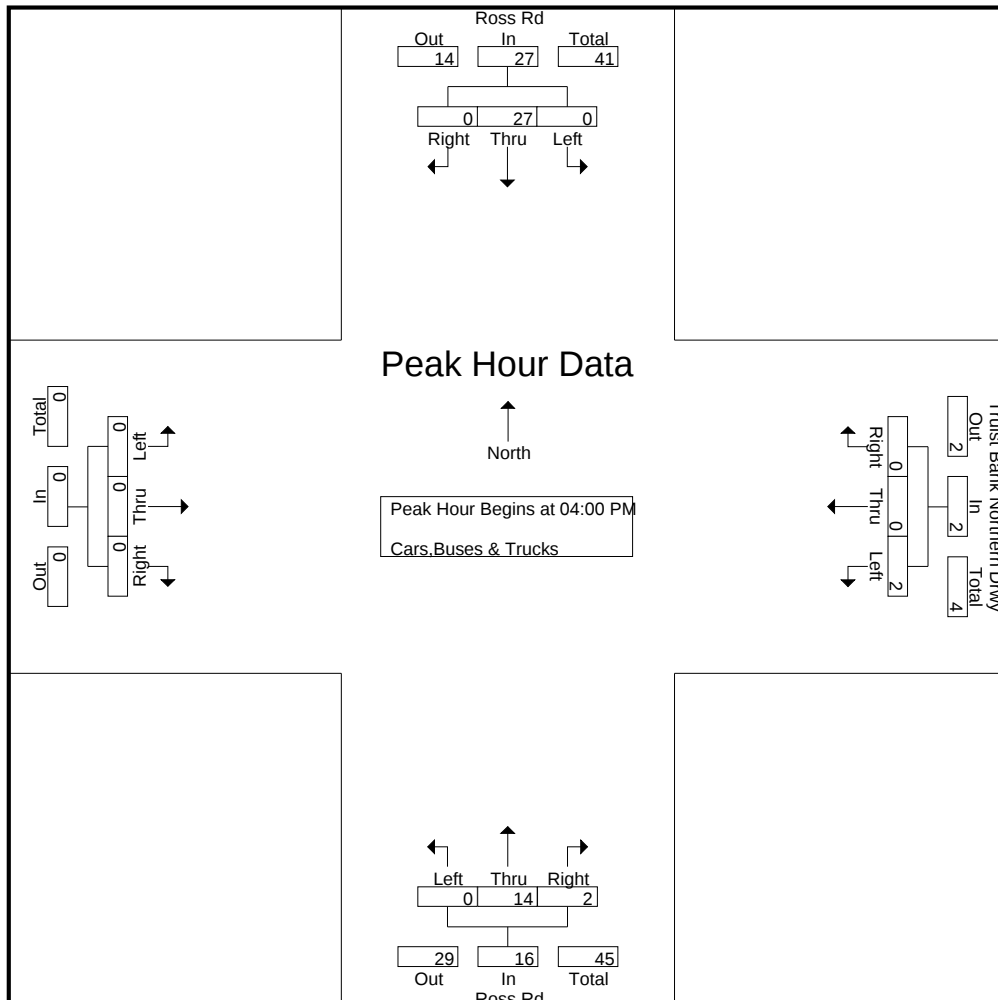
File Name : 20220375

Site Code : 20220375

Start Date : 8/17/2022

Page No : 3

	Ross Rd Northbound				Ross Rd Southbound				Eastbound				Truist Bank Northern Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	5	1	6	0	9	0	9	0	0	0	0	1	0	0	1	16
04:15 PM	0	4	1	5	0	5	0	5	0	0	0	0	1	0	0	1	11
04:30 PM	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0	6
04:45 PM	0	3	0	3	0	9	0	9	0	0	0	0	0	0	0	0	12
Total Volume	0	14	2	16	0	27	0	27	0	0	0	0	2	0	0	2	45
% App. Total	0	87.5	12.5		0	100	0		0	0	0		100	0	0		
PHF	.000	.700	.500	.667	.000	.750	.000	.750	.000	.000	.000	.000	.500	.000	.000	.500	.703



A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC Data
Cherokee St @ Cherokee Point
7-9 am | 4-6 pm

File Name : 20220376
Site Code : 20220376
Start Date : 08-17-2022
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Cherokee St Northbound				Cherokee St Southbound				Cherokee Point Eastbound				KFC Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	136	0	136	2	120	0	122	1	0	2	3	0	0	1	1	262
07:15 AM	1	132	0	133	1	135	1	137	1	0	1	2	0	0	0	0	272
07:30 AM	1	149	2	152	1	148	3	152	1	0	2	3	0	0	3	3	310
07:45 AM	1	158	1	160	2	127	3	132	4	0	2	6	0	0	1	1	299
Total	3	575	3	581	6	530	7	543	7	0	7	14	0	0	5	5	1143
08:00 AM	1	127	1	129	1	147	3	151	4	0	3	7	1	0	0	1	288
08:15 AM	1	147	2	150	1	156	1	158	3	2	2	7	0	0	1	1	316
08:30 AM	1	140	1	142	2	149	2	153	2	0	3	5	1	0	1	2	302
08:45 AM	1	139	2	142	1	150	1	152	2	0	2	4	1	0	2	3	301
Total	4	553	6	563	5	602	7	614	11	2	10	23	3	0	4	7	1207
*** BREAK ***																	
04:00 PM	0	162	0	162	2	257	2	261	4	0	0	4	2	0	5	7	434
04:15 PM	2	158	1	161	3	222	3	228	4	0	1	5	0	0	0	0	394
04:30 PM	2	158	1	161	2	203	3	208	4	0	4	8	1	0	5	6	383
04:45 PM	2	145	0	147	7	228	1	236	3	0	0	3	1	1	5	7	393
Total	6	623	2	631	14	910	9	933	15	0	5	20	4	1	15	20	1604
05:00 PM	2	125	1	128	4	216	2	222	2	0	1	3	3	0	2	5	358
05:15 PM	2	152	0	154	3	193	7	203	4	0	1	5	1	0	7	8	370
05:30 PM	2	138	0	140	3	162	1	166	2	0	1	3	1	0	2	3	312
05:45 PM	0	102	0	102	3	224	2	229	2	0	2	4	1	0	5	6	341
Total	6	517	1	524	13	795	12	820	10	0	5	15	6	0	16	22	1381
Grand Total	19	2268	12	2299	38	2837	35	2910	43	2	27	72	13	1	40	54	5335
Apprch %	0.8	98.7	0.5		1.3	97.5	1.2		59.7	2.8	37.5		24.1	1.9	74.1		
Total %	0.4	42.5	0.2	43.1	0.7	53.2	0.7	54.5	0.8	0	0.5	1.3	0.2	0	0.7	1	

A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC Data

Cherokee St @ Cherokee Point

7-9 am | 4-6 pm

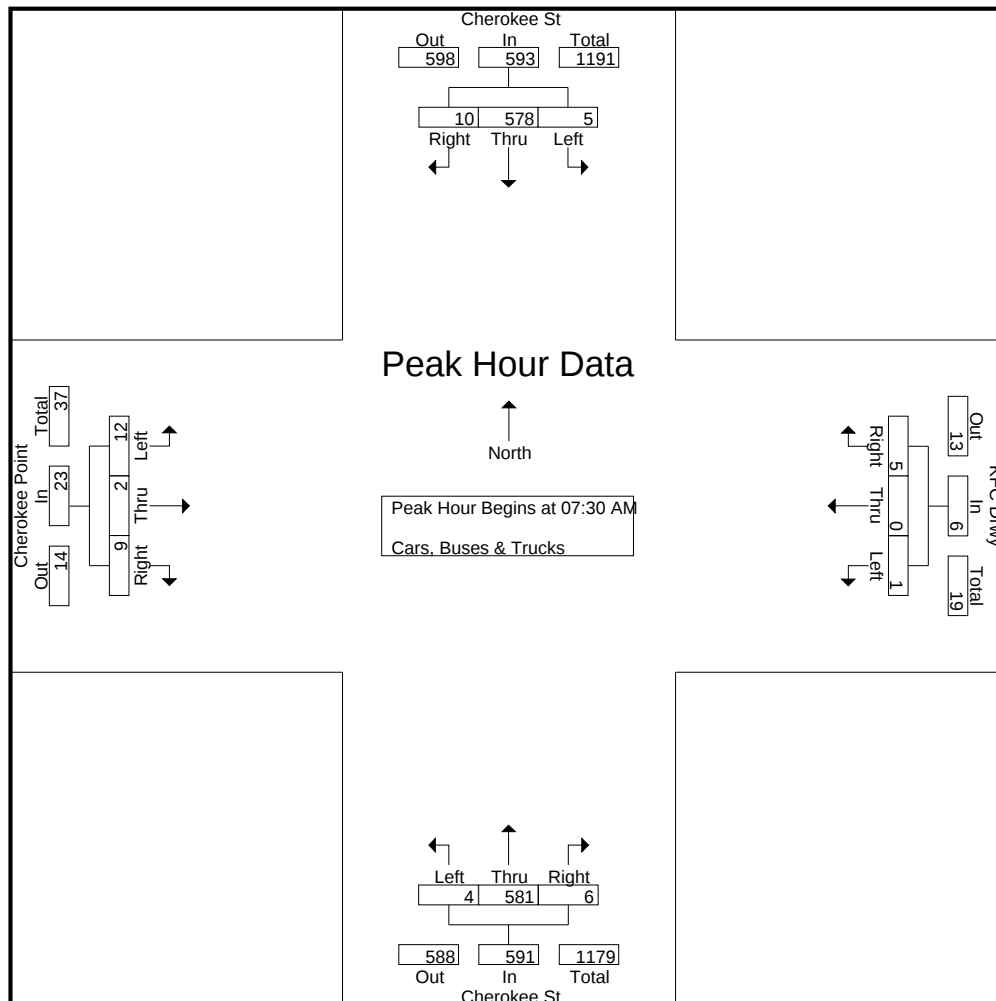
File Name : 20220376

Site Code : 20220376

Start Date : 08-17-2022

Page No : 2

	Cherokee St Northbound				Cherokee St Southbound				Cherokee Point Eastbound				KFC Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	149	2	152	1	148	3	152	1	0	2	3	0	0	3	3	310
07:45 AM	1	158	1	160	2	127	3	132	4	0	2	6	0	0	1	1	299
08:00 AM	1	127	1	129	1	147	3	151	4	0	3	7	1	0	0	1	288
08:15 AM	1	147	2	150	1	156	1	158	3	2	2	7	0	0	1	1	316
Total Volume	4	581	6	591	5	578	10	593	12	2	9	23	1	0	5	6	1213
% App. Total	0.7	98.3	1		0.8	97.5	1.7		52.2	8.7	39.1		16.7	0	83.3		
PHF	1.00	.919	.750	.923	.625	.926	.833	.938	.750	.250	.750	.821	.250	.000	.417	.500	.960



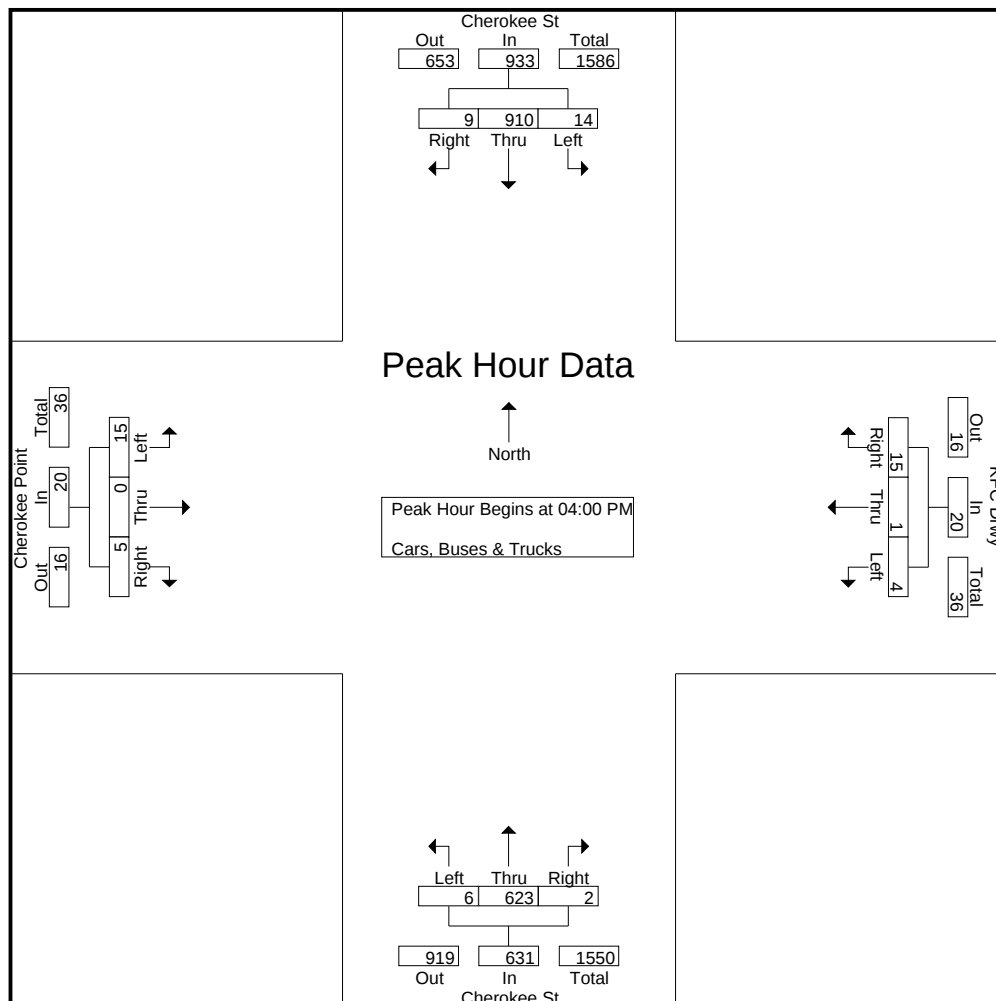
A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC Data
Cherokee St @ Cherokee Point
7-9 am | 4-6 pm

File Name : 20220376
Site Code : 20220376
Start Date : 08-17-2022
Page No : 3

	Cherokee St Northbound				Cherokee St Southbound				Cherokee Point Eastbound				KFC Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	162	0	162	2	257	2	261	4	0	0	4	2	0	5	7	434
04:15 PM	2	158	1	161	3	222	3	228	4	0	1	5	0	0	0	0	394
04:30 PM	2	158	1	161	2	203	3	208	4	0	4	8	1	0	5	6	383
04:45 PM	2	145	0	147	7	228	1	236	3	0	0	3	1	1	5	7	393
Total Volume	6	623	2	631	14	910	9	933	15	0	5	20	4	1	15	20	1604
% App. Total	1	98.7	0.3		1.5	97.5	1		75	0	25		20	5	75		
PHF	.750	.961	.500	.974	.500	.885	.750	.894	.938	.000	.313	.625	.500	.250	.750	.714	.924



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ I-75 SB Ramps
7-9 am | 4-6 pm

File Name : 20220377

Site Code : 20220377

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

	Cherokee St Northbound				Cherokee St Southbound				I-75 SB Ramps Eastbound				I-75 SB Ramps Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	57	174	231	33	129	0	162	14	1	11	26	0	0	0	0	419
07:15 AM	0	58	182	240	54	118	0	172	28	2	44	74	0	0	0	0	486
07:30 AM	0	65	175	240	48	128	0	176	27	2	68	97	0	0	0	0	513
07:45 AM	0	67	164	231	23	139	0	162	35	3	63	101	0	0	0	0	494
Total	0	247	695	942	158	514	0	672	104	8	186	298	0	0	0	0	1912
08:00 AM	0	25	162	187	31	133	0	164	49	2	49	100	0	0	0	0	451
08:15 AM	0	55	156	211	37	150	0	187	24	3	40	67	0	0	0	0	465
08:30 AM	0	75	162	237	69	157	0	226	27	1	37	65	0	0	0	0	528
08:45 AM	0	55	124	179	34	135	0	169	30	1	38	69	0	0	0	0	417
Total	0	210	604	814	171	575	0	746	130	7	164	301	0	0	0	0	1861
*** BREAK ***																	
04:00 PM	0	67	108	175	28	248	0	276	12	1	15	28	0	0	0	0	479
04:15 PM	0	75	86	161	23	259	0	282	7	0	10	17	0	0	0	0	460
04:30 PM	0	63	86	149	32	241	0	273	15	0	20	35	0	0	0	0	457
04:45 PM	0	71	87	158	31	223	0	254	13	2	12	27	0	0	0	0	439
Total	0	276	367	643	114	971	0	1085	47	3	57	107	0	0	0	0	1835
05:00 PM	0	82	79	161	28	249	0	277	10	0	15	25	0	0	0	0	463
05:15 PM	0	66	89	155	19	228	0	247	17	1	18	36	0	0	0	0	438
05:30 PM	0	85	85	170	24	263	0	287	11	0	23	34	0	0	0	0	491
05:45 PM	0	65	97	162	27	214	0	241	6	1	23	30	0	0	0	0	433
Total	0	298	350	648	98	954	0	1052	44	2	79	125	0	0	0	0	1825
Grand Total	0	1031	2016	3047	541	3014	0	3555	325	20	486	831	0	0	0	0	7433
Apprch %	0	33.8	66.2		15.2	84.8	0		39.1	2.4	58.5		0	0	0		
Total %	0	13.9	27.1	41	7.3	40.5	0	47.8	4.4	0.3	6.5	11.2	0	0	0	0	

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ I-75 SB Ramps

7-9 am | 4-6 pm

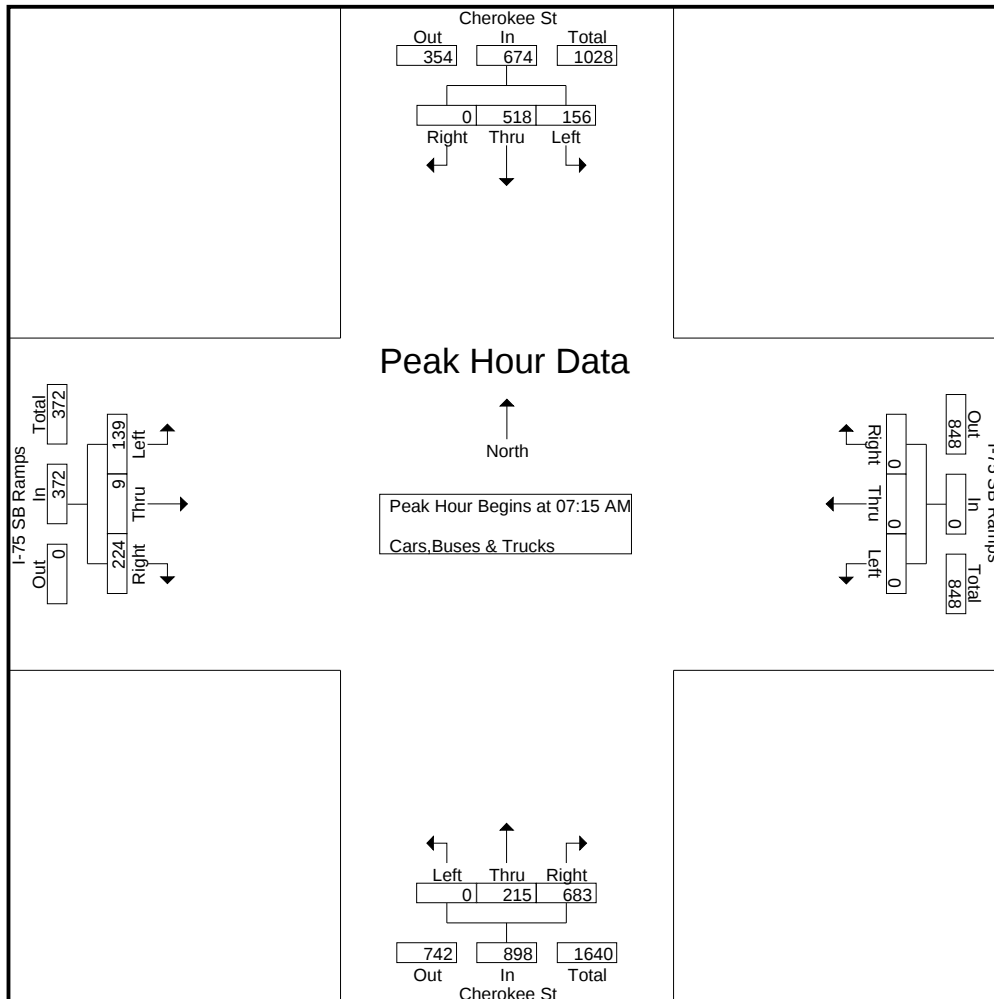
File Name : 20220377

Site Code : 20220377

Start Date : 8/17/2022

Page No : 2

	Cherokee St Northbound				Cherokee St Southbound				I-75 SB Ramps Eastbound				I-75 SB Ramps Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	58	182	240	54	118	0	172	28	2	44	74	0	0	0	0	486
07:30 AM	0	65	175	240	48	128	0	176	27	2	68	97	0	0	0	0	513
07:45 AM	0	67	164	231	23	139	0	162	35	3	63	101	0	0	0	0	494
08:00 AM	0	25	162	187	31	133	0	164	49	2	49	100	0	0	0	0	451
Total Volume	0	215	683	898	156	518	0	674	139	9	224	372	0	0	0	0	1944
% App. Total	0	23.9	76.1		23.1	76.9	0		37.4	2.4	60.2		0	0	0		
PHF	.000	.802	.938	.935	.722	.932	.000	.957	.709	.750	.824	.921	.000	.000	.000	.000	.947



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ I-75 SB Ramps

7-9 am | 4-6 pm

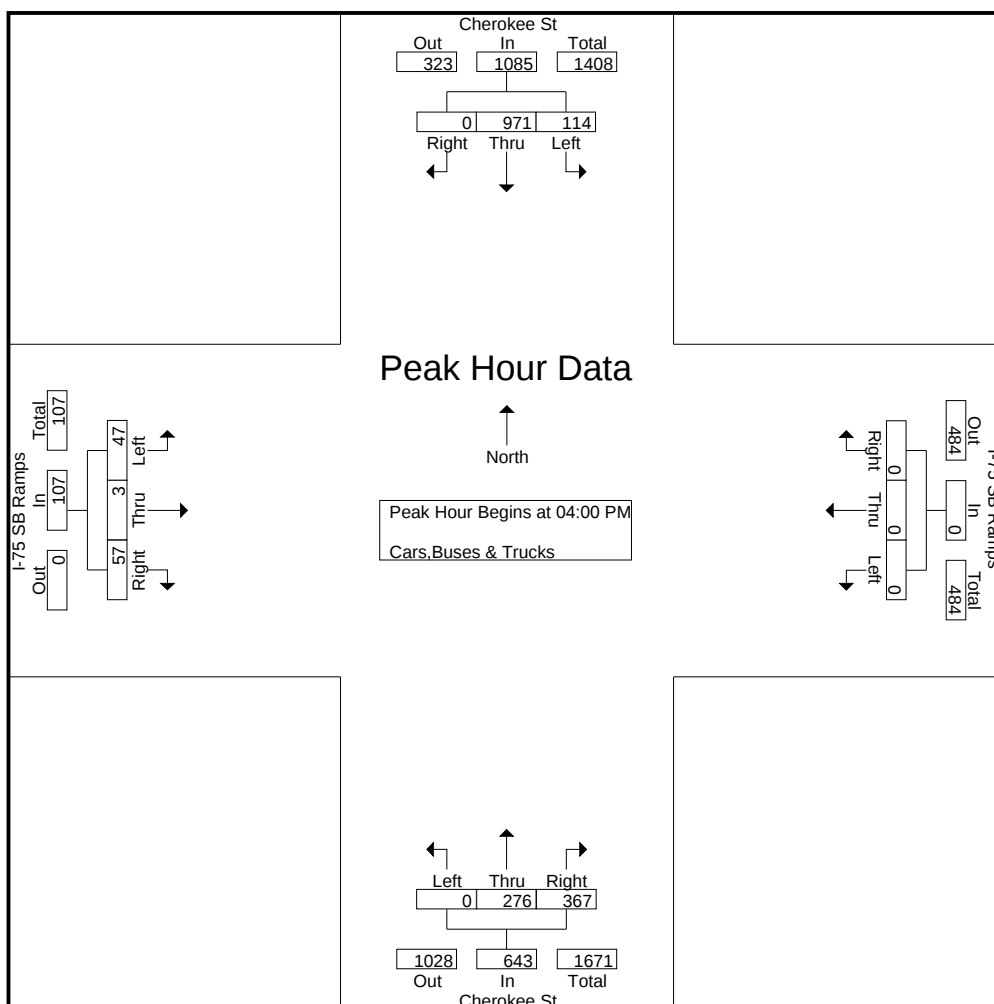
File Name : 20220377

Site Code : 20220377

Start Date : 8/17/2022

Page No : 3

	Cherokee St Northbound				Cherokee St Southbound				I-75 SB Ramps Eastbound				I-75 SB Ramps Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	67	108	175	28	248	0	276	12	1	15	28	0	0	0	0	479
04:15 PM	0	75	86	161	23	259	0	282	7	0	10	17	0	0	0	0	460
04:30 PM	0	63	86	149	32	241	0	273	15	0	20	35	0	0	0	0	457
04:45 PM	0	71	87	158	31	223	0	254	13	2	12	27	0	0	0	0	439
Total Volume	0	276	367	643	114	971	0	1085	47	3	57	107	0	0	0	0	1835
% App. Total	0	42.9	57.1		10.5	89.5	0		43.9	2.8	53.3		0	0	0		
PHF	.000	.920	.850	.919	.891	.937	.000	.962	.783	.375	.713	.764	.000	.000	.000	.000	.958



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Cherokee St @ I-75 NB Ramps
7-9 am | 4-6 pm

File Name : 20220378
Site Code : 20220378
Start Date : 8/17/2022
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Cherokee St Northbound				Cherokee St Southbound				I-75 NB Ramps Eastbound				I-75 NB Ramps Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	60	0	71	0	91	6	97	0	0	0	0	71	2	21	94	262
07:15 AM	11	75	0	86	0	90	9	99	0	0	0	0	82	1	21	104	289
07:30 AM	13	79	0	92	0	87	13	100	0	0	0	0	89	0	13	102	294
07:45 AM	15	87	0	102	0	61	11	72	0	0	0	0	101	0	18	119	293
Total	50	301	0	351	0	329	39	368	0	0	0	0	343	3	73	419	1138
08:00 AM	10	64	0	74	0	88	5	93	0	0	0	0	76	0	10	86	253
08:15 AM	16	63	0	79	0	96	3	99	0	0	0	0	91	1	21	113	291
08:30 AM	11	91	0	102	0	98	8	106	0	0	0	0	128	0	22	150	358
08:45 AM	18	67	0	85	0	68	8	76	0	0	0	0	101	0	28	129	290
Total	55	285	0	340	0	350	24	374	0	0	0	0	396	1	81	478	1192
*** BREAK ***																	
04:00 PM	15	64	0	79	0	78	24	102	0	0	0	0	198	0	44	242	423
04:15 PM	11	71	0	82	0	81	15	96	0	0	0	0	201	2	66	269	447
04:30 PM	10	68	0	78	0	83	10	93	0	0	0	0	190	2	75	267	438
04:45 PM	22	62	0	84	0	72	14	86	0	0	0	0	182	0	57	239	409
Total	58	265	0	323	0	314	63	377	0	0	0	0	771	4	242	1017	1717
05:00 PM	29	63	0	92	0	70	21	91	0	0	0	0	207	1	62	270	453
05:15 PM	18	65	0	83	0	64	18	82	0	0	0	0	183	0	70	253	418
05:30 PM	21	75	0	96	0	79	21	100	0	0	0	0	208	0	74	282	478
05:45 PM	16	55	0	71	0	57	10	67	0	0	0	0	184	1	67	252	390
Total	84	258	0	342	0	270	70	340	0	0	0	0	782	2	273	1057	1739
Grand Total	247	1109	0	1356	0	1263	196	1459	0	0	0	0	2292	10	669	2971	5786
Apprch %	18.2	81.8	0		0	86.6	13.4		0	0	0		77.1	0.3	22.5		
Total %	4.3	19.2	0	23.4	0	21.8	3.4	25.2	0	0	0	0	39.6	0.2	11.6	51.3	

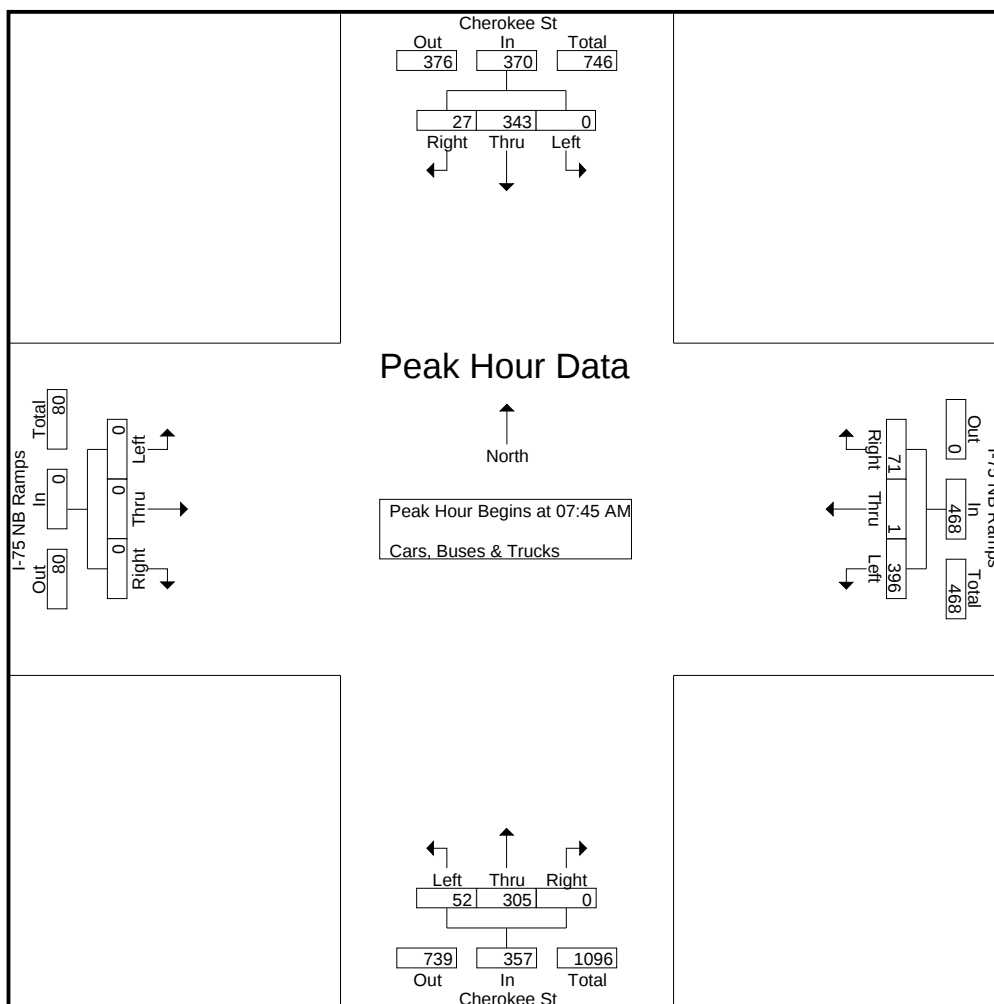
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Cherokee St @ I-75 NB Ramps
7-9 am | 4-6 pm

File Name : 20220378
Site Code : 20220378
Start Date : 8/17/2022
Page No : 2

	Cherokee St Northbound				Cherokee St Southbound				I-75 NB Ramps Eastbound				I-75 NB Ramps Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	87	0	102	0	61	11	72	0	0	0	0	101	0	18	119	293
08:00 AM	10	64	0	74	0	88	5	93	0	0	0	0	76	0	10	86	253
08:15 AM	16	63	0	79	0	96	3	99	0	0	0	0	91	1	21	113	291
08:30 AM	11	91	0	102	0	98	8	106	0	0	0	0	128	0	22	150	358
Total Volume	52	305	0	357	0	343	27	370	0	0	0	0	396	1	71	468	1195
% App. Total	14.6	85.4	0		0	92.7	7.3		0	0	0		84.6	0.2	15.2		
PHF	.813	.838	.000	.875	.000	.875	.614	.873	.000	.000	.000	.000	.773	.250	.807	.780	.834



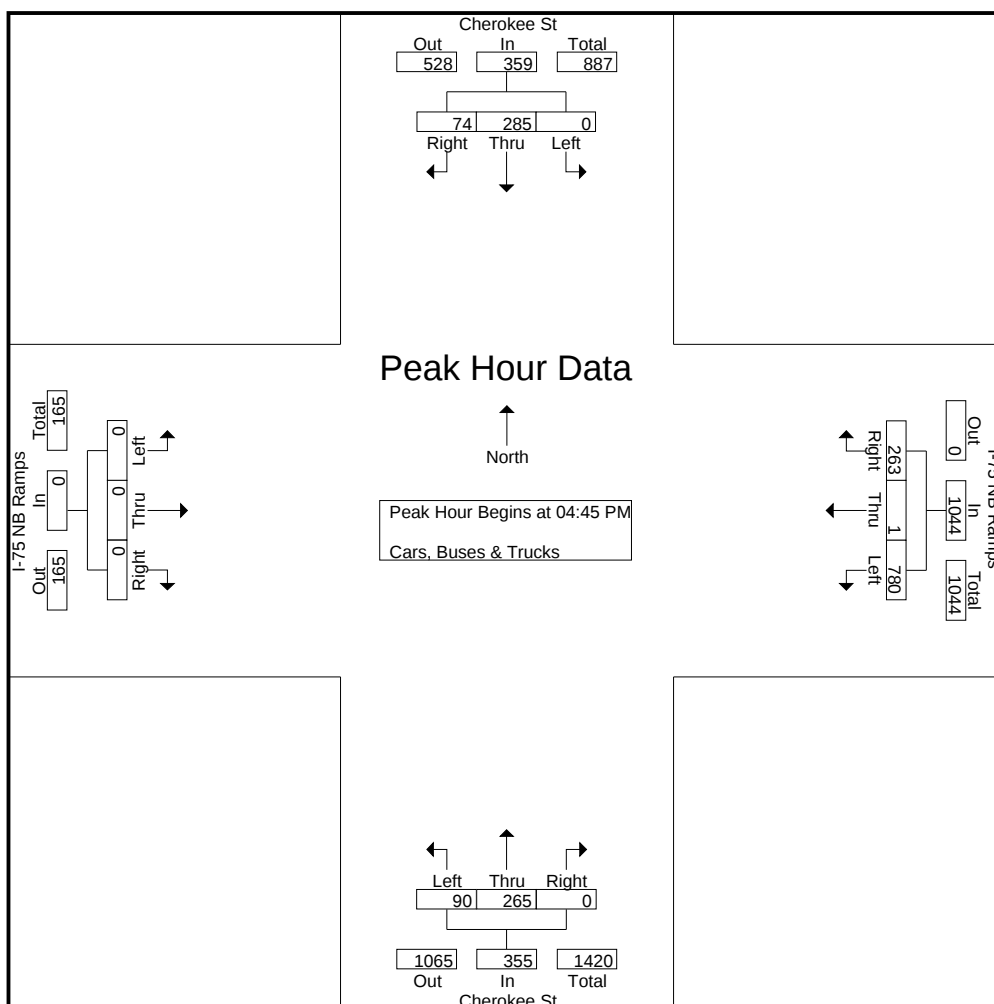
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Cherokee St @ I-75 NB Ramps
7-9 am | 4-6 pm

File Name : 20220378
Site Code : 20220378
Start Date : 8/17/2022
Page No : 3

	Cherokee St Northbound				Cherokee St Southbound				I-75 NB Ramps Eastbound				I-75 NB Ramps Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	22	62	0	84	0	72	14	86	0	0	0	0	182	0	57	239	409
05:00 PM	29	63	0	92	0	70	21	91	0	0	0	0	207	1	62	270	453
05:15 PM	18	65	0	83	0	64	18	82	0	0	0	0	183	0	70	253	418
05:30 PM	21	75	0	96	0	79	21	100	0	0	0	0	208	0	74	282	478
Total Volume	90	265	0	355	0	285	74	359	0	0	0	0	780	1	263	1044	1758
% App. Total	25.4	74.6	0		0	79.4	20.6		0	0	0		74.7	0.1	25.2		
PHF	.776	.883	.000	.924	.000	.902	.881	.898	.000	.000	.000	.000	.938	.250	.889	.926	.919



A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC DATA
Cherokee St @ SR 92
7-9 am | 4-6 pm

File Name : 20220379
Site Code : 20220379
Start Date : 08-17-2022
Page No : 1

Groups Printed- Cars,Buses & Trucks

Start Time	Cherokee St Northbound				Cherokee St Southbound				SR 92 Eastbound				SR 92 Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	4	13	1	18	64	34	80	178	164	145	21	330	1	47	13	61	587
07:15 AM	5	16	3	24	68	41	122	231	206	167	2	375	2	59	7	68	698
07:30 AM	4	10	4	18	55	44	122	221	217	148	2	367	3	56	5	64	670
07:45 AM	4	16	5	25	54	29	98	181	164	150	8	322	1	41	14	56	584
Total	17	55	13	85	241	148	422	811	751	610	33	1394	7	203	39	249	2539
08:00 AM	5	13	3	21	52	28	87	167	237	162	3	402	1	68	13	82	672
08:15 AM	8	23	2	33	52	40	109	201	175	123	2	300	3	55	10	68	602
08:30 AM	7	20	3	30	48	36	96	180	185	118	4	307	4	52	9	65	582
08:45 AM	6	18	2	26	50	42	89	181	178	125	3	306	3	53	8	64	577
Total	26	74	10	110	202	146	381	729	775	528	12	1315	11	228	40	279	2433
*** BREAK ***																	
04:00 PM	11	24	4	39	19	24	155	198	92	83	17	192	4	70	32	106	535
04:15 PM	12	28	7	47	25	27	180	232	90	79	11	180	3	76	19	98	557
04:30 PM	6	28	1	35	22	36	174	232	124	95	8	227	5	67	24	96	590
04:45 PM	9	24	3	36	26	30	186	242	106	75	3	184	1	51	28	80	542
Total	38	104	15	157	92	117	695	904	412	332	39	783	13	264	103	380	2224
05:00 PM	12	26	5	43	13	40	160	213	107	99	16	222	8	65	27	100	578
05:15 PM	16	26	1	43	13	42	163	218	98	88	5	191	3	79	17	99	551
05:30 PM	10	36	1	47	20	46	162	228	83	93	4	180	1	67	23	91	546
05:45 PM	7	45	5	57	21	38	175	234	119	121	8	248	8	70	32	110	649
Total	45	133	12	190	67	166	660	893	407	401	33	841	20	281	99	400	2324
Grand Total	126	366	50	542	602	577	2158	3337	2345	1871	117	4333	51	976	281	1308	9520
Apprch %	23.2	67.5	9.2		18	17.3	64.7		54.1	43.2	2.7		3.9	74.6	21.5		
Total %	1.3	3.8	0.5	5.7	6.3	6.1	22.7	35.1	24.6	19.7	1.2	45.5	0.5	10.3	3	13.7	

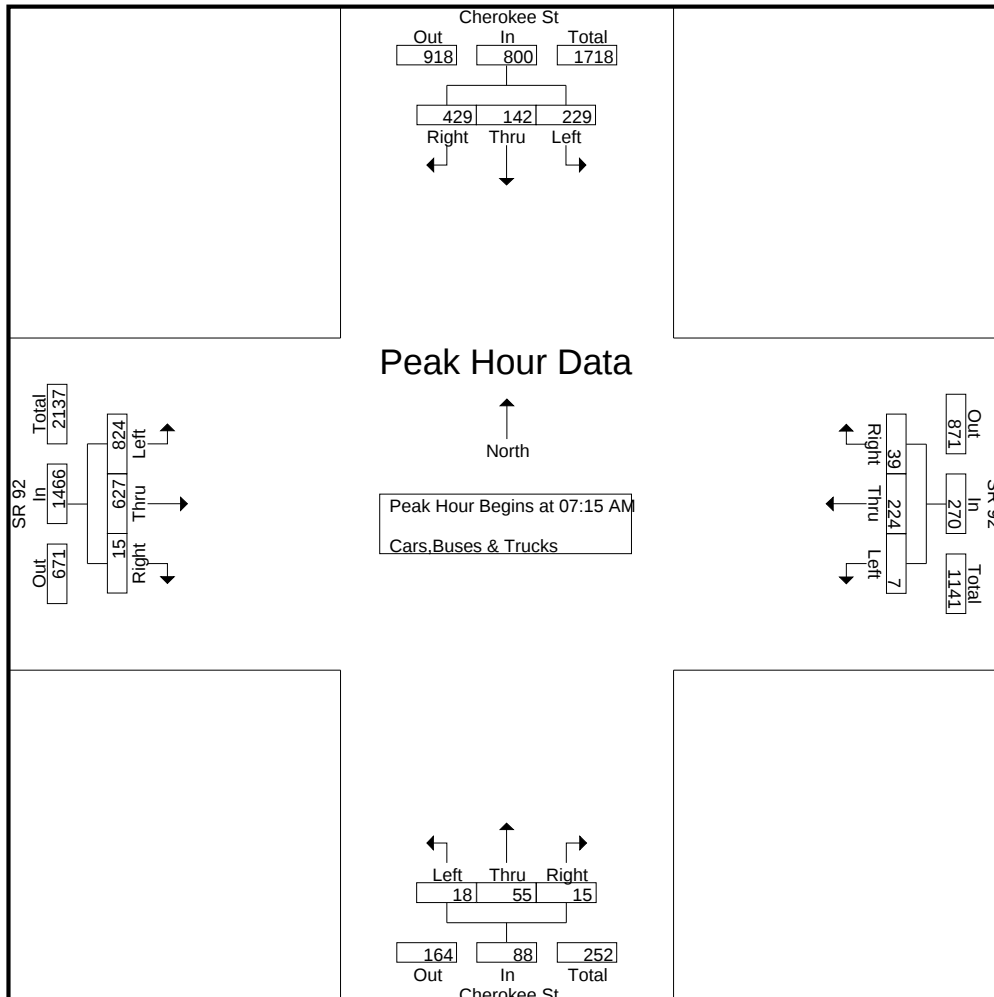
A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC DATA
Cherokee St @ SR 92
7-9 am | 4-6 pm

File Name : 20220379
Site Code : 20220379
Start Date : 08-17-2022
Page No : 2

	Cherokee St Northbound				Cherokee St Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	16	3	24	68	41	122	231	206	167	2	375	2	59	7	68	698
07:30 AM	4	10	4	18	55	44	122	221	217	148	2	367	3	56	5	64	670
07:45 AM	4	16	5	25	54	29	98	181	164	150	8	322	1	41	14	56	584
08:00 AM	5	13	3	21	52	28	87	167	237	162	3	402	1	68	13	82	672
Total Volume	18	55	15	88	229	142	429	800	824	627	15	1466	7	224	39	270	2624
% App. Total	20.5	62.5	17		28.6	17.8	53.6		56.2	42.8	1		2.6	83	14.4		
PHF	.900	.859	.750	.880	.842	.807	.879	.866	.869	.939	.469	.912	.583	.824	.696	.823	.940



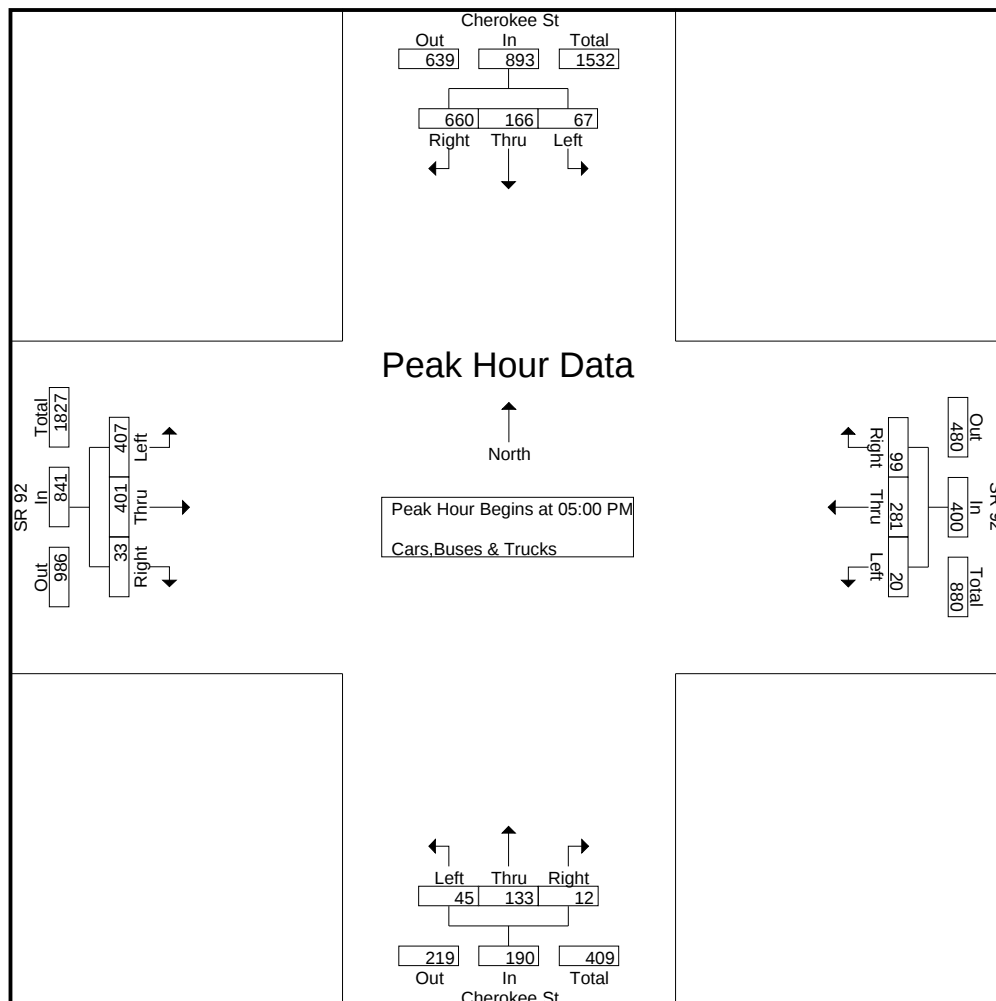
A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC DATA
Cherokee St @ SR 92
7-9 am | 4-6 pm

File Name : 20220379
Site Code : 20220379
Start Date : 08-17-2022
Page No : 3

	Cherokee St Northbound				Cherokee St Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	26	5	43	13	40	160	213	107	99	16	222	8	65	27	100	578
05:15 PM	16	26	1	43	13	42	163	218	98	88	5	191	3	79	17	99	551
05:30 PM	10	36	1	47	20	46	162	228	83	93	4	180	1	67	23	91	546
05:45 PM	7	45	5	57	21	38	175	234	119	121	8	248	8	70	32	110	649
Total Volume	45	133	12	190	67	166	660	893	407	401	33	841	20	281	99	400	2324
% App. Total	23.7	70	6.3		7.5	18.6	73.9		48.4	47.7	3.9		5	70.2	24.8		
PHF	.703	.739	.600	.833	.798	.902	.943	.954	.855	.829	.516	.848	.625	.889	.773	.909	.895



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ Liberty Square Dr -
Old Cherokee St
7-9 am | 4-6 pm

File Name : 20220380

Site Code : 20220380

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

	Cherokee St Northbound				Cherokee St Southbound				Liberty Square Dr Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	220	2	223	2	137	1	140	3	0	2	5	5	0	8	13	381
07:15 AM	2	229	3	234	3	158	1	162	2	2	2	6	6	0	9	15	417
07:30 AM	1	222	2	225	2	192	2	196	5	0	3	8	4	2	13	19	448
07:45 AM	3	211	4	218	4	197	1	202	4	0	2	6	9	0	15	24	450
Total	7	882	11	900	11	684	5	700	14	2	9	25	24	2	45	71	1696
08:00 AM	3	186	2	191	5	177	0	182	4	0	5	9	12	0	16	28	410
08:15 AM	4	183	3	190	3	186	1	190	9	0	6	15	7	1	19	27	422
08:30 AM	2	214	1	217	4	188	2	194	6	2	5	13	6	0	17	23	447
08:45 AM	3	155	3	161	2	168	3	173	5	0	3	8	5	0	19	24	366
Total	12	738	9	759	14	719	6	739	24	2	19	45	30	1	71	102	1645
*** BREAK ***																	
04:00 PM	0	168	7	175	7	255	1	263	2	0	1	3	2	0	10	12	453
04:15 PM	5	152	9	166	7	261	1	269	0	0	2	2	2	0	4	6	443
04:30 PM	9	144	5	158	8	251	2	261	1	0	8	9	4	0	8	12	440
04:45 PM	2	143	15	160	9	224	2	235	2	0	4	6	4	0	9	13	414
Total	16	607	36	659	31	991	6	1028	5	0	15	20	12	0	31	43	1750
05:00 PM	4	149	12	165	11	250	3	264	2	0	4	6	7	0	4	11	446
05:15 PM	6	146	9	161	13	229	4	246	1	0	2	3	5	0	5	10	420
05:30 PM	5	157	13	175	19	265	2	286	2	0	2	4	10	0	5	15	480
05:45 PM	6	144	18	168	10	221	6	237	3	0	2	5	5	0	9	14	424
Total	21	596	52	669	53	965	15	1033	8	0	10	18	27	0	23	50	1770
Grand Total	56	2823	108	2987	109	3359	32	3500	51	4	53	108	93	3	170	266	6861
Apprch %	1.9	94.5	3.6		3.1	96	0.9		47.2	3.7	49.1		35	1.1	63.9		
Total %	0.8	41.1	1.6	43.5	1.6	49	0.5	51	0.7	0.1	0.8	1.6	1.4	0	2.5	3.9	

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ Liberty Square Dr -

Old Cherokee St

7-9 am | 4-6 pm

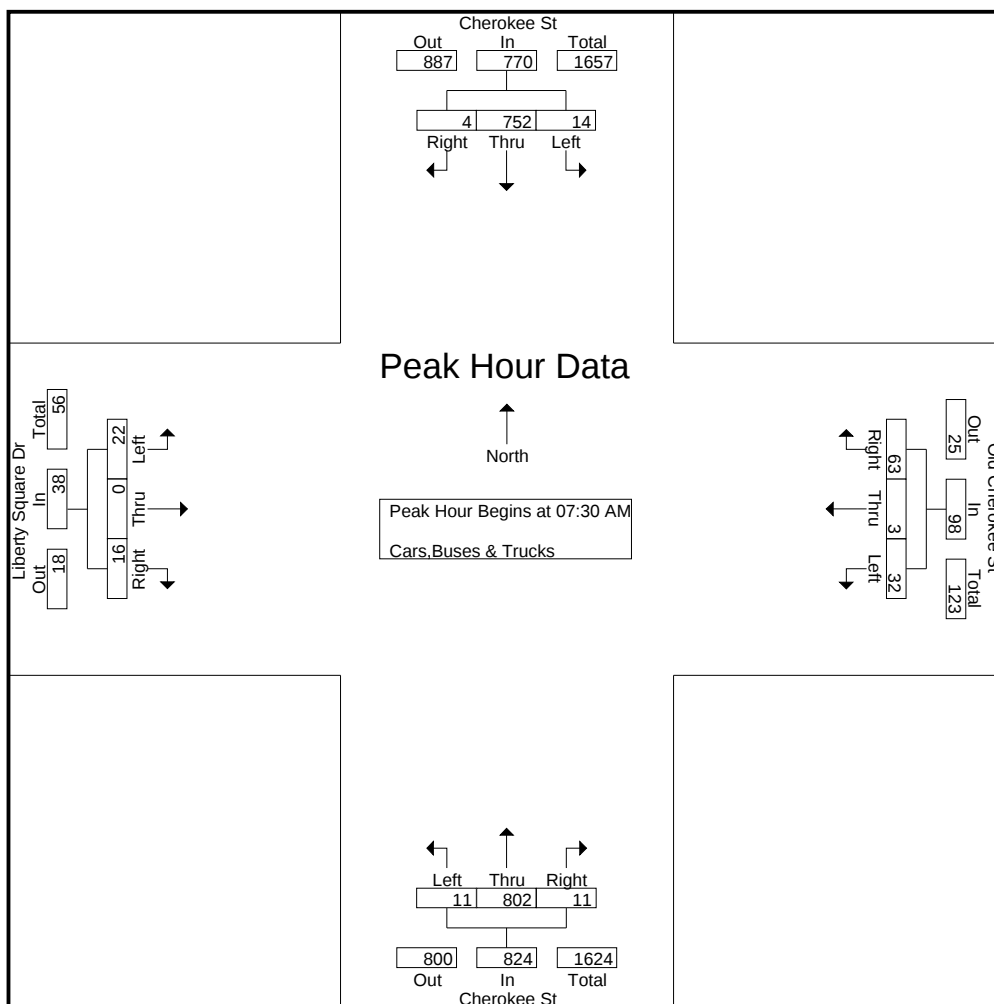
File Name : 20220380

Site Code : 20220380

Start Date : 8/17/2022

Page No : 2

	Cherokee St Northbound				Cherokee St Southbound				Liberty Square Dr Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	222	2	225	2	192	2	196	5	0	3	8	4	2	13	19	448
07:45 AM	3	211	4	218	4	197	1	202	4	0	2	6	9	0	15	24	450
08:00 AM	3	186	2	191	5	177	0	182	4	0	5	9	12	0	16	28	410
08:15 AM	4	183	3	190	3	186	1	190	9	0	6	15	7	1	19	27	422
Total Volume	11	802	11	824	14	752	4	770	22	0	16	38	32	3	63	98	1730
% App. Total	1.3	97.3	1.3		1.8	97.7	0.5		57.9	0	42.1		32.7	3.1	64.3		
PHF	.688	.903	.688	.916	.700	.954	.500	.953	.611	.000	.667	.633	.667	.375	.829	.875	.961



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ Liberty Square Dr -

Old Cherokee St

7-9 am | 4-6 pm

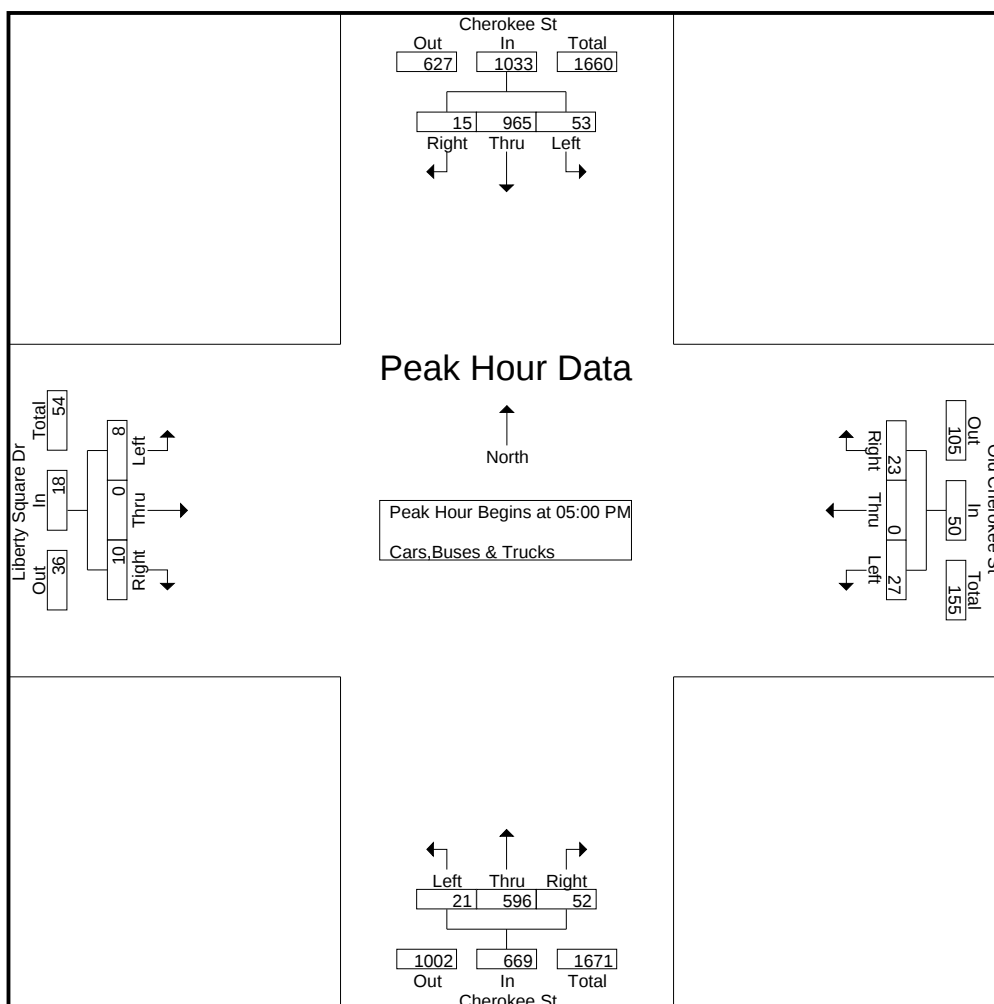
File Name : 20220380

Site Code : 20220380

Start Date : 8/17/2022

Page No : 3

	Cherokee St Northbound				Cherokee St Southbound				Liberty Square Dr Eastbound				Old Cherokee St Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	149	12	165	11	250	3	264	2	0	4	6	7	0	4	11	446
05:15 PM	6	146	9	161	13	229	4	246	1	0	2	3	5	0	5	10	420
05:30 PM	5	157	13	175	19	265	2	286	2	0	2	4	10	0	5	15	480
05:45 PM	6	144	18	168	10	221	6	237	3	0	2	5	5	0	9	14	424
Total Volume	21	596	52	669	53	965	15	1033	8	0	10	18	27	0	23	50	1770
% App. Total	3.1	89.1	7.8		5.1	93.4	1.5		44.4	0	55.6		54	0	46		
PHF	.875	.949	.722	.956	.697	.910	.625	.903	.667	.000	.625	.750	.675	.000	.639	.833	.922



A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC Data
SR 92 @ Ross Rd
7-9 am | 4-6 pm

File Name : 20220381
Site Code : 20220381
Start Date : 08-17-2022
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Northbound				Ross Rd Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	3	4	0	213	0	213	0	69	3	72	289
07:15 AM	0	0	0	0	4	0	2	6	1	192	0	193	0	62	3	65	264
07:30 AM	0	0	0	0	3	0	2	5	2	222	0	224	0	65	1	66	295
07:45 AM	0	0	0	0	5	0	0	5	5	169	0	174	0	81	3	84	263
Total	0	0	0	0	13	0	7	20	8	796	0	804	0	277	10	287	1111
08:00 AM	0	0	0	0	3	0	4	7	1	188	0	189	0	63	1	64	260
08:15 AM	0	0	0	0	1	0	0	1	1	166	0	167	0	73	2	75	243
08:30 AM	0	0	0	0	3	0	3	6	3	147	0	150	0	75	2	77	233
08:45 AM	0	0	0	0	2	0	4	6	3	129	0	132	0	71	2	73	211
Total	0	0	0	0	9	0	11	20	8	630	0	638	0	282	7	289	947
*** BREAK ***																	
04:00 PM	0	0	0	0	3	0	6	9	3	102	0	105	0	93	3	96	210
04:15 PM	0	0	0	0	3	0	2	5	1	123	0	124	0	105	3	108	237
04:30 PM	0	0	0	0	2	0	2	4	1	122	0	123	0	99	1	100	227
04:45 PM	0	0	0	0	8	0	1	9	1	125	0	126	0	100	2	102	237
Total	0	0	0	0	16	0	11	27	6	472	0	478	0	397	9	406	911
05:00 PM	0	0	0	0	6	0	5	11	0	115	0	115	0	110	2	112	238
05:15 PM	0	0	0	0	1	0	4	5	2	127	0	129	0	98	2	100	234
05:30 PM	0	0	0	0	3	0	2	5	2	145	0	147	0	119	0	119	271
05:45 PM	0	0	0	0	6	0	3	9	2	152	0	154	0	87	3	90	253
Total	0	0	0	0	16	0	14	30	6	539	0	545	0	414	7	421	996
Grand Total	0	0	0	0	54	0	43	97	28	2437	0	2465	0	1370	33	1403	3965
Apprch %	0	0	0		55.7	0	44.3		1.1	98.9	0		0	97.6	2.4		
Total %	0	0	0	0	1.4	0	1.1	2.4	0.7	61.5	0	62.2	0	34.6	0.8	35.4	

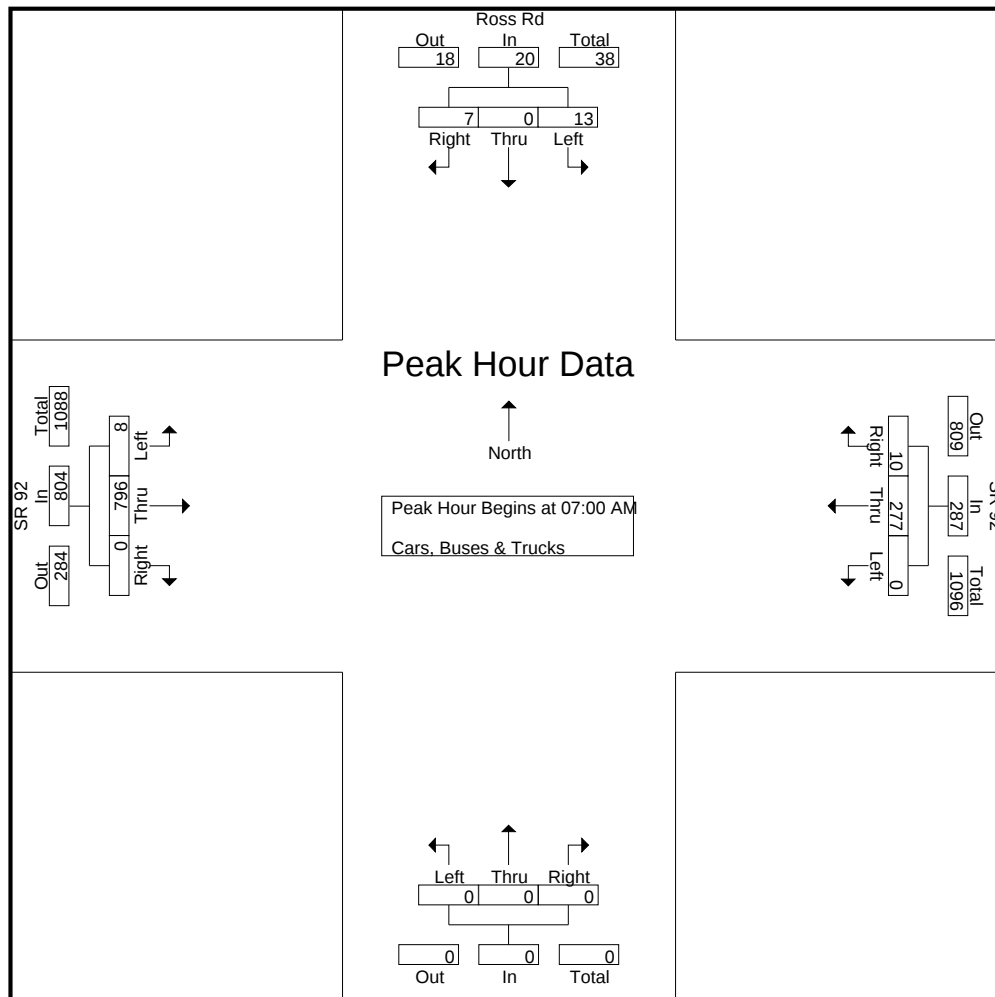
A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC Data
SR 92 @ Ross Rd
7-9 am | 4-6 pm

File Name : 20220381
Site Code : 20220381
Start Date : 08-17-2022
Page No : 2

	Northbound				Ross Rd Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	1	0	3	4	0	213	0	213	0	69	3	72	289
07:15 AM	0	0	0	0	4	0	2	6	1	192	0	193	0	62	3	65	264
07:30 AM	0	0	0	0	3	0	2	5	2	222	0	224	0	65	1	66	295
07:45 AM	0	0	0	0	5	0	0	5	5	169	0	174	0	81	3	84	263
Total Volume	0	0	0	0	13	0	7	20	8	796	0	804	0	277	10	287	1111
% App. Total	0	0	0	0	65	0	35		1	99	0		0	96.5	3.5		
PHF	.000	.000	.000	.000	.650	.000	.583	.833	.400	.896	.000	.897	.000	.855	.833	.854	.942



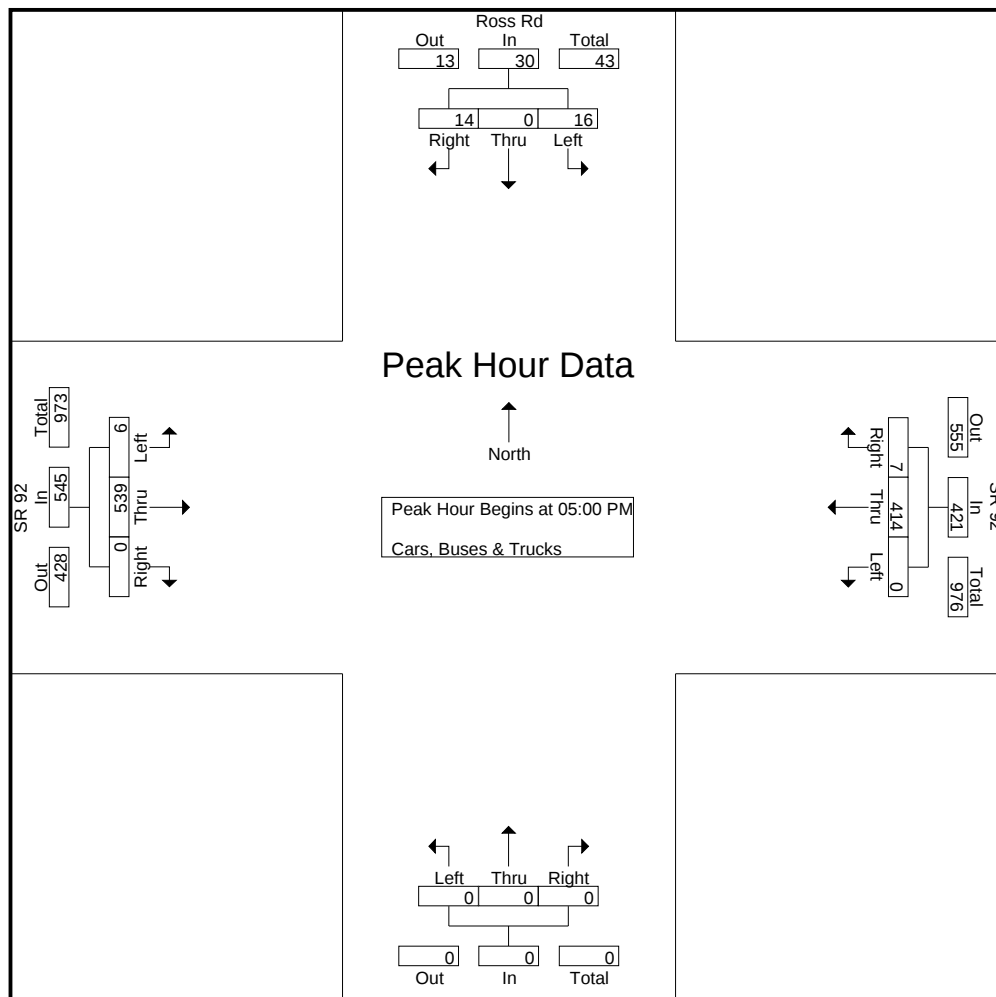
A & R Engineering, Inc.

2160 Kinston court Suite 'O'
Marietta,GA 30067

TMC Data
SR 92 @ Ross Rd
7-9 am | 4-6 pm

File Name : 20220381
Site Code : 20220381
Start Date : 08-17-2022
Page No : 3

	Northbound				Ross Rd Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	6	0	5	11	0	115	0	115	0	110	2	112	238
05:15 PM	0	0	0	0	1	0	4	5	2	127	0	129	0	98	2	100	234
05:30 PM	0	0	0	0	3	0	2	5	2	145	0	147	0	119	0	119	271
05:45 PM	0	0	0	0	6	0	3	9	2	152	0	154	0	87	3	90	253
Total Volume	0	0	0	0	16	0	14	30	6	539	0	545	0	414	7	421	996
% App. Total	0	0	0		53.3	0	46.7		1.1	98.9	0		0	98.3	1.7		
PHF	.000	.000	.000	.000	.667	.000	.700	.682	.750	.887	.000	.885	.000	.870	.583	.884	.919



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ Ingles' Market Southern

Drwy

7-9 am | 4-6 pm

File Name : 20220382

Site Code : 20220382

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

	Cherokee St Northbound				Cherokee St Southbound				Ingles' Market Southern Drwy Eastbound				Taco Bell Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	185	1	188	0	159	2	161	3	0	2	5	0	0	1	1	355
07:15 AM	4	230	0	234	1	183	1	185	1	0	4	5	0	0	0	0	424
07:30 AM	2	187	0	189	0	210	1	211	4	0	4	8	1	0	1	2	410
07:45 AM	4	227	0	231	0	181	1	182	4	0	4	8	1	0	0	1	422
Total	12	829	1	842	1	733	5	739	12	0	14	26	2	0	2	4	1611
08:00 AM	1	187	0	188	0	160	1	161	0	0	1	1	1	0	0	1	351
08:15 AM	5	196	0	201	4	185	0	189	2	0	4	6	0	0	1	1	397
08:30 AM	7	182	2	191	0	199	1	200	5	0	3	8	0	0	0	0	399
08:45 AM	5	130	1	136	2	151	1	154	6	0	2	8	1	0	0	1	299
Total	18	695	3	716	6	695	3	704	13	0	10	23	2	0	1	3	1446
*** BREAK ***																	
04:00 PM	20	141	1	162	3	214	3	220	20	0	16	36	0	0	1	1	419
04:15 PM	10	141	0	151	1	245	3	249	20	0	13	33	1	0	3	4	437
04:30 PM	15	154	1	170	1	257	2	260	21	0	12	33	1	0	4	5	468
04:45 PM	17	139	2	158	4	229	4	237	19	0	13	32	1	0	5	6	433
Total	62	575	4	641	9	945	12	966	80	0	54	134	3	0	13	16	1757
05:00 PM	7	145	1	153	3	219	5	227	15	0	26	41	2	0	3	5	426
05:15 PM	14	159	2	175	6	225	2	233	19	0	12	31	5	0	2	7	446
05:30 PM	14	134	1	149	4	251	0	255	23	0	19	42	1	0	5	6	452
05:45 PM	15	162	0	177	8	219	3	230	21	0	4	25	0	0	4	4	436
Total	50	600	4	654	21	914	10	945	78	0	61	139	8	0	14	22	1760
Grand Total	142	2699	12	2853	37	3287	30	3354	183	0	139	322	15	0	30	45	6574
Apprch %	5	94.6	0.4		1.1	98	0.9		56.8	0	43.2		33.3	0	66.7		
Total %	2.2	41.1	0.2	43.4	0.6	50	0.5	51	2.8	0	2.1	4.9	0.2	0	0.5	0.7	

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ Ingles' Market Southern

Drwy

7-9 am | 4-6 pm

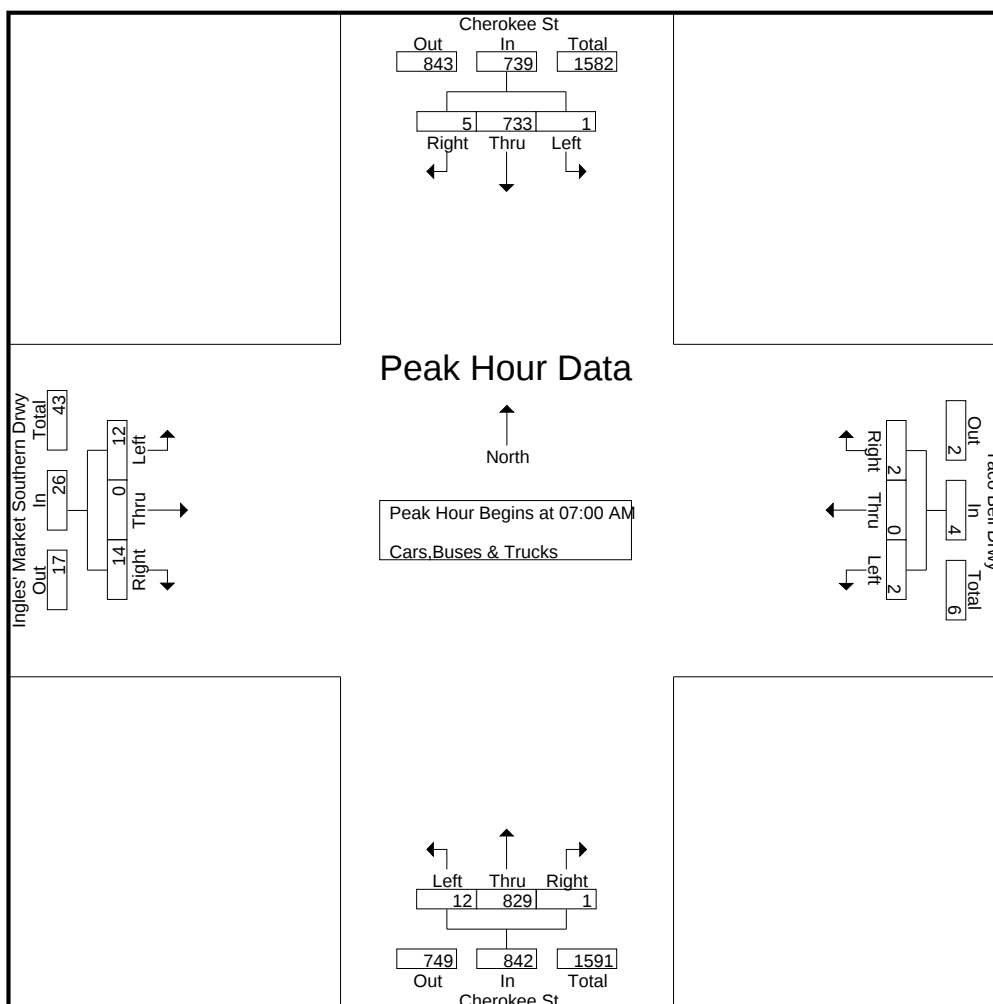
File Name : 20220382

Site Code : 20220382

Start Date : 8/17/2022

Page No : 2

	Cherokee St Northbound				Cherokee St Southbound				Ingles' Market Southern Drwy Eastbound				Taco Bell Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	185	1	188	0	159	2	161	3	0	2	5	0	0	1	1	355
07:15 AM	4	230	0	234	1	183	1	185	1	0	4	5	0	0	0	0	424
07:30 AM	2	187	0	189	0	210	1	211	4	0	4	8	1	0	1	2	410
07:45 AM	4	227	0	231	0	181	1	182	4	0	4	8	1	0	0	1	422
Total Volume	12	829	1	842	1	733	5	739	12	0	14	26	2	0	2	4	1611
% App. Total	1.4	98.5	0.1		0.1	99.2	0.7		46.2	0	53.8		50	0	50		
PHF	.750	.901	.250	.900	.250	.873	.625	.876	.750	.000	.875	.813	.500	.000	.500	.500	.950



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Cherokee St @ Ingles' Market Southern

Drwy

7-9 am | 4-6 pm

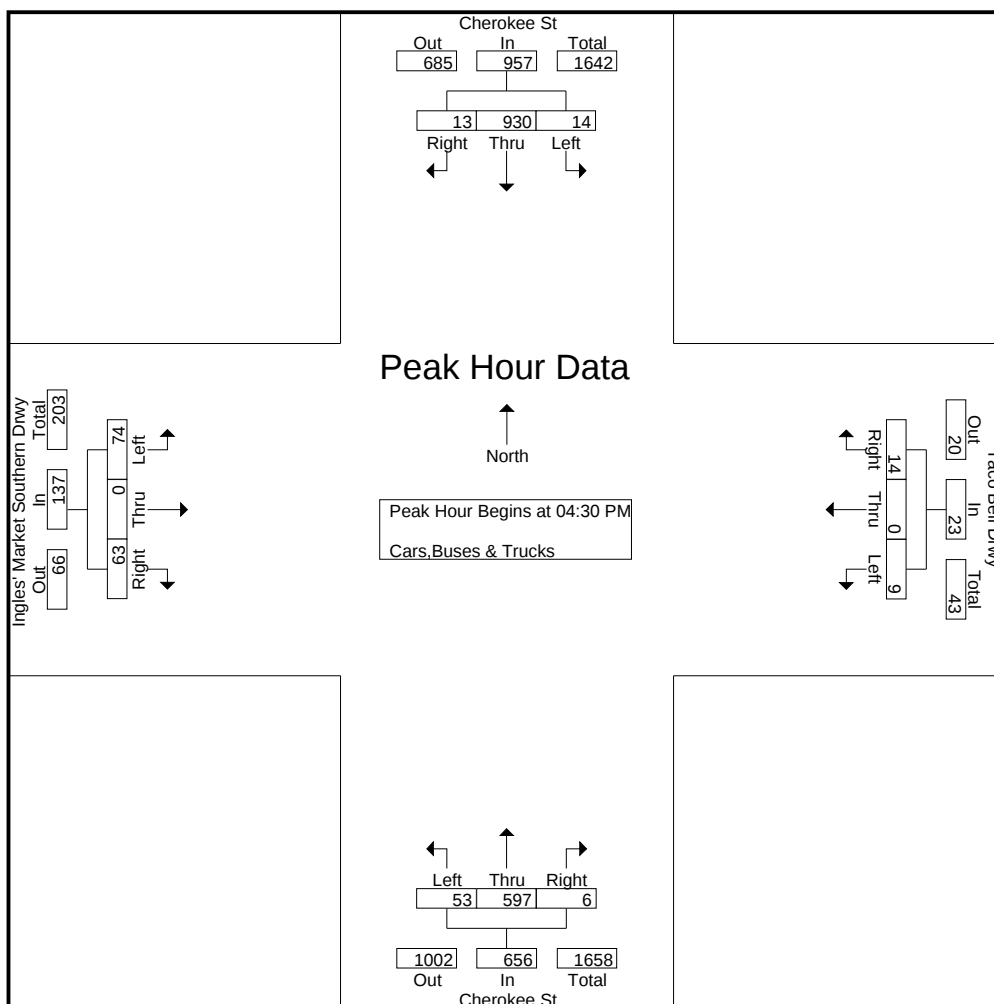
File Name : 20220382

Site Code : 20220382

Start Date : 8/17/2022

Page No : 3

	Cherokee St Northbound				Cherokee St Southbound				Ingles' Market Southern Drwy Eastbound				Taco Bell Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	154	1	170	1	257	2	260	21	0	12	33	1	0	4	5	468
04:45 PM	17	139	2	158	4	229	4	237	19	0	13	32	1	0	5	6	433
05:00 PM	7	145	1	153	3	219	5	227	15	0	26	41	2	0	3	5	426
05:15 PM	14	159	2	175	6	225	2	233	19	0	12	31	5	0	2	7	446
Total Volume	53	597	6	656	14	930	13	957	74	0	63	137	9	0	14	23	1773
% App. Total	8.1	91	0.9		1.5	97.2	1.4		54	0	46		39.1	0	60.9		
PHF	.779	.939	.750	.937	.583	.905	.650	.920	.881	.000	.606	.835	.450	.000	.700	.821	.947



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

SR 92 @ Dollar Tree Drwy

7-9 am | 4-6 pm

File Name : 20220397

Site Code : 20220397

Start Date : 8/17/2022

Page No : 1

Groups Printed- Cars,Buses & Trucks

	Dollar Tree Drwy Northbound				Bojangles Drwy Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	0	1	1	2	208	0	210	0	60	5	65	277
07:15 AM	0	0	0	0	0	0	0	0	1	237	0	238	0	68	1	69	307
07:30 AM	0	0	1	1	3	0	0	3	1	206	0	207	0	64	0	64	275
07:45 AM	0	0	0	0	0	0	1	1	2	207	0	209	0	55	1	56	266
Total	0	0	2	2	3	0	2	5	6	858	0	864	0	247	7	254	1125
08:00 AM	0	0	0	0	4	0	0	4	1	216	0	217	0	82	0	82	303
08:15 AM	0	0	0	0	0	0	1	1	1	176	0	177	1	67	0	68	246
08:30 AM	0	0	2	2	0	0	1	1	4	165	0	169	0	64	3	67	239
08:45 AM	0	0	0	0	2	0	4	6	2	175	0	177	2	60	1	63	246
Total	0	0	2	2	6	0	6	12	8	732	0	740	3	273	4	280	1034
*** BREAK ***																	
04:00 PM	0	0	3	3	1	0	0	1	1	103	2	106	2	106	2	110	220
04:15 PM	0	1	2	3	0	0	3	3	3	108	0	111	3	95	4	102	219
04:30 PM	0	0	3	3	1	0	3	4	0	115	3	118	1	93	2	96	221
04:45 PM	0	0	1	1	1	0	4	5	1	103	0	104	3	76	1	80	190
Total	0	1	9	10	3	0	10	13	5	429	5	439	9	370	9	388	850
05:00 PM	1	0	3	4	3	0	0	3	1	114	2	117	4	99	1	104	228
05:15 PM	0	1	4	5	2	0	2	4	1	101	0	102	4	97	2	103	214
05:30 PM	0	0	3	3	2	0	4	6	0	113	1	114	2	87	8	97	220
05:45 PM	0	0	2	2	1	0	3	4	0	145	2	147	2	107	6	115	268
Total	1	1	12	14	8	0	9	17	2	473	5	480	12	390	17	419	930
Grand Total	1	2	25	28	20	0	27	47	21	2492	10	2523	24	1280	37	1341	3939
Apprch %	3.6	7.1	89.3		42.6	0	57.4		0.8	98.8	0.4		1.8	95.5	2.8		
Total %	0	0.1	0.6	0.7	0.5	0	0.7	1.2	0.5	63.3	0.3	64.1	0.6	32.5	0.9	34	

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

SR 92 @ Dollar Tree Drwy

7-9 am | 4-6 pm

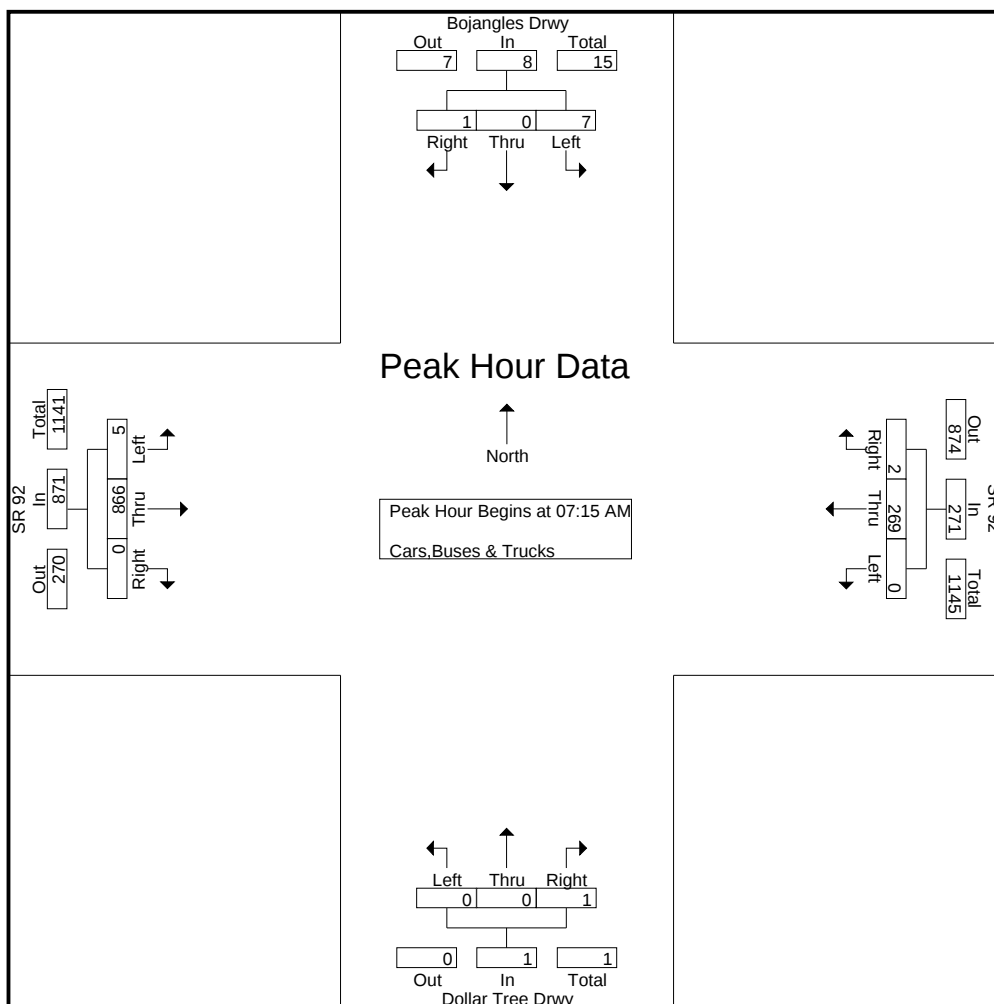
File Name : 20220397

Site Code : 20220397

Start Date : 8/17/2022

Page No : 2

	Dollar Tree Drwy Northbound				Bojangles Drwy Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	1	237	0	238	0	68	1	69	307
07:30 AM	0	0	1	1	3	0	0	3	1	206	0	207	0	64	0	64	275
07:45 AM	0	0	0	0	0	0	1	1	2	207	0	209	0	55	1	56	266
08:00 AM	0	0	0	0	4	0	0	4	1	216	0	217	0	82	0	82	303
Total Volume	0	0	1	1	7	0	1	8	5	866	0	871	0	269	2	271	1151
% App. Total	0	0	100		87.5	0	12.5		0.6	99.4	0		0	99.3	0.7		
PHF	.000	.000	.250	.250	.438	.000	.250	.500	.625	.914	.000	.915	.000	.820	.500	.826	.937



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TMC DATA

SR 92 @ Dollar Tree Drwy

7-9 am | 4-6 pm

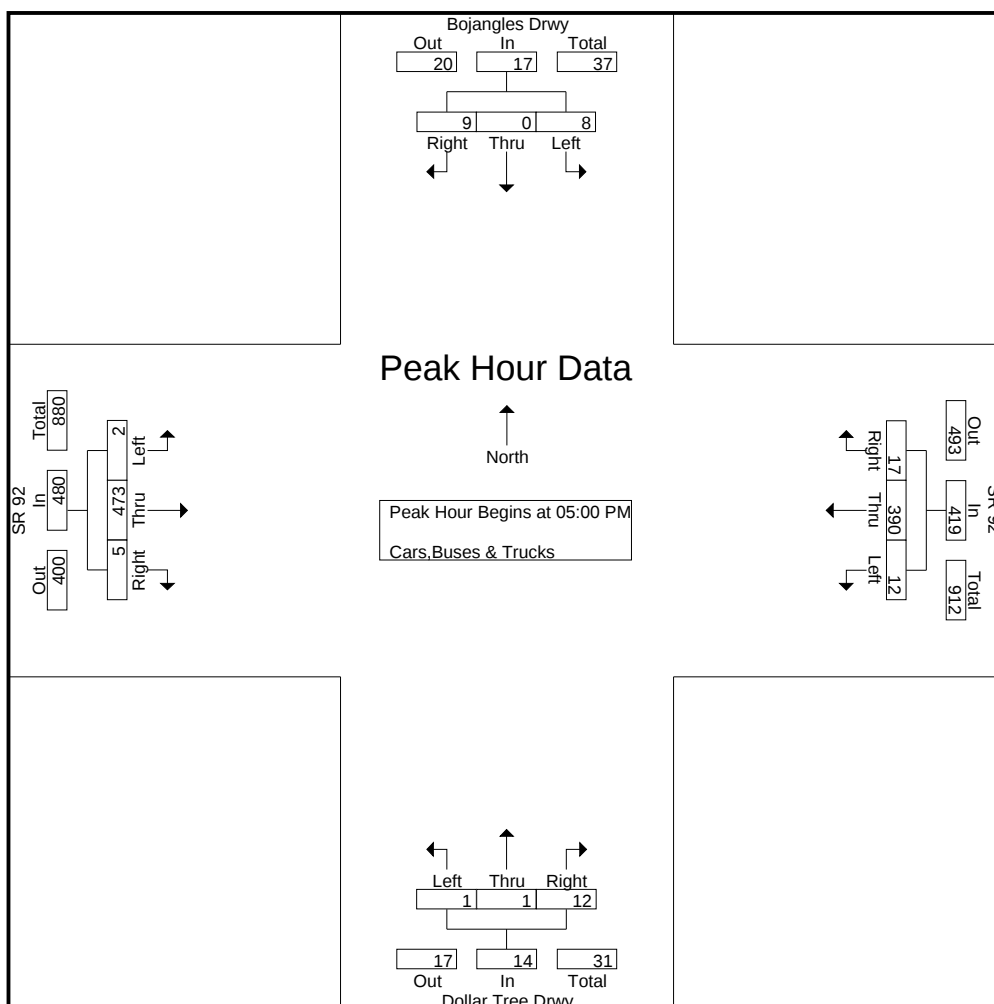
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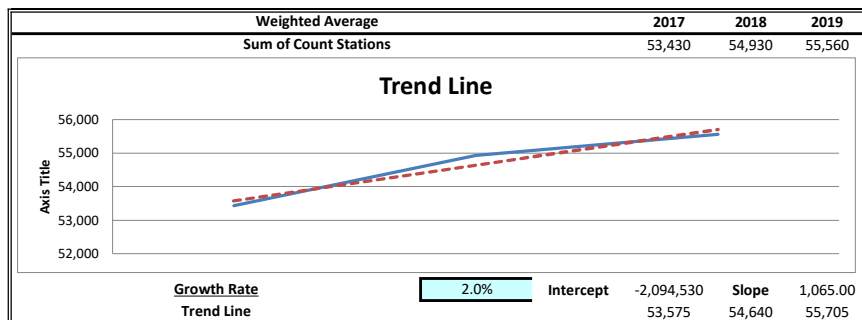
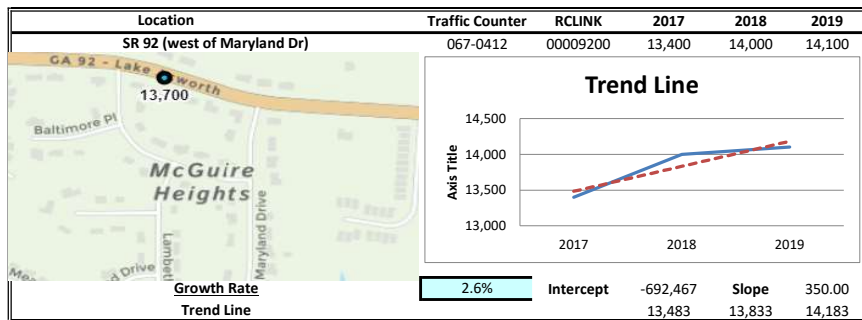
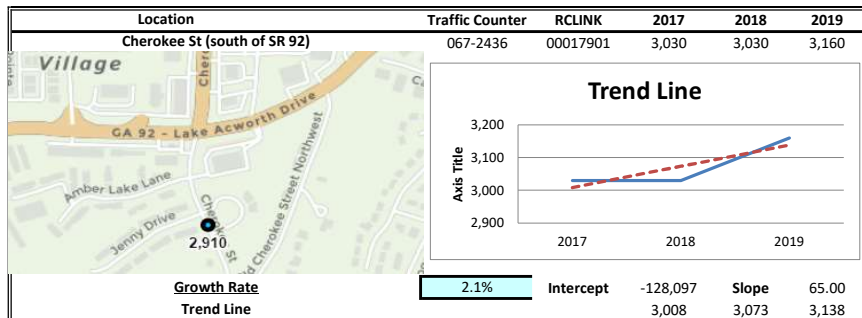
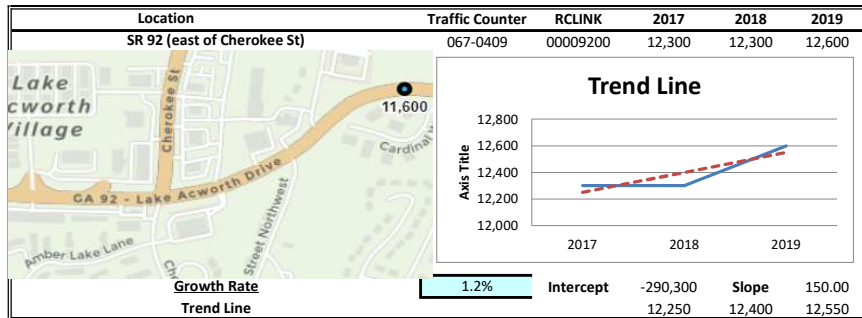
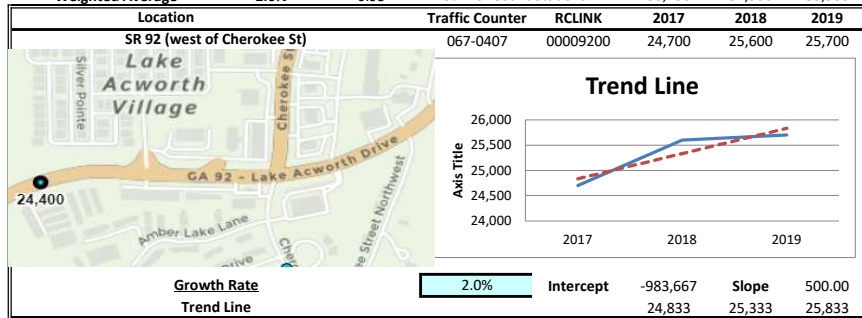
	Dollar Tree Drwy Northbound				Bojangles Drwy Southbound				SR 92 Eastbound				SR 92 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	3	4	3	0	0	3	1	114	2	117	4	99	1	104	228
05:15 PM	0	1	4	5	2	0	2	4	1	101	0	102	4	97	2	103	214
05:30 PM	0	0	3	3	2	0	4	6	0	113	1	114	2	87	8	97	220
05:45 PM	0	0	2	2	1	0	3	4	0	145	2	147	2	107	6	115	268
Total Volume	1	1	12	14	8	0	9	17	2	473	5	480	12	390	17	419	930
% App. Total	7.1	7.1	85.7		47.1	0	52.9		0.4	98.5	1		2.9	93.1	4.1		
PHF	.250	.250	.750	.700	.667	.000	.563	.708	.500	.816	.625	.816	.750	.911	.531	.911	.868



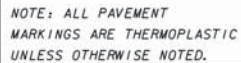
Linear Regression of Daily Traffic

Location	Growth Rate	R Squared	Station ID	Route	2017	2018	2019
SR 92 (west of Cherokee St)	2.0%	0.82	067-0407	00009200	24,700	25,600	25,700
SR 92 (east of Cherokee St)	1.2%	0.75	067-0409	00009200	12,300	12,300	12,600
Cherokee St (south of SR 92)	2.1%	0.75	067-2436	00017901	3,030	3,030	3,160
SR 92 (west of Maryland Dr)	2.6%	0.85	067-0412	00009200	13,400	14,000	14,100

Weighted Average **2.0%** 0.95 Sum of Count Stations = 53,430 54,930 55,560



**Fact Sheets for Planned and Programmed
Improvements**



GEORGIA
DEPARTMENT
OF
TRANSPORTATION

SCALE IN FEET

0 20 40 80

STATE OF GEORGIA	
DEPARTMENT OF TRANSPORTATION	
OFFICE: PROGRAM DELIVERY	
SIGNING AND MARKING PLANS	
CHEROKEE ST	DRAWING NO.
SR 92/ LAKE ACWORTH DR - CORR CD	26-037

Existing Intersection Analysis

Timings

1: Cherokee St & I-75 NB Ramps

1a. Existing 2022 AM
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	397	71	52	305	343	27
Future Volume (vph)	397	71	52	305	343	27
Lane Group Flow (vph)	478	86	63	367	413	33
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	38.0	38.0	19.0	52.0	33.0	33.0
Total Split (%)	42.2%	42.2%	21.1%	57.8%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.70	0.22	0.23	0.15	0.21	0.04
Control Delay	38.9	6.5	31.4	4.6	11.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	6.5	31.4	4.6	11.5	0.1
Queue Length 50th (ft)	130	0	12	19	60	0
Queue Length 95th (ft)	155	24	29	72	92	0
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1239	633	514	2400	1992	933
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.14	0.12	0.15	0.21	0.04

Intersection Summary

Cycle Length: 90

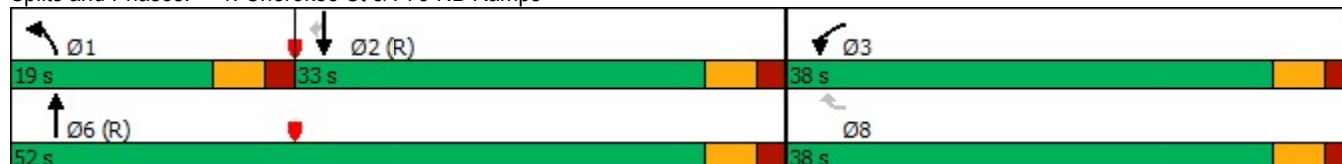
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps

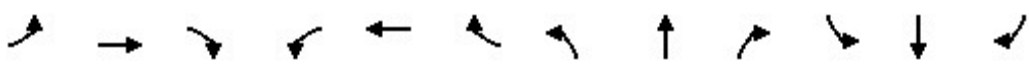


HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

1a. Existing 2022 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰↱		↰	↰↱	↰↱			↰↱	↰
Traffic Volume (veh/h)	0	0	0	397	0	71	52	305	0	0	343	27
Future Volume (veh/h)	0	0	0	397	0	71	52	305	0	0	343	27
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				478	0	0	63	367	0	0	413	0
Peak Hour Factor				0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				596	0		152	2507	0	0	2133	
Arrive On Green				0.17	0.00	0.00	0.09	1.00	0.00	0.00	0.60	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				478	0	0	63	367	0	0	413	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				12.0	0.0	0.0	1.6	0.0	0.0	0.0	4.7	0.0
Cycle Q Clear(g_c), s				12.0	0.0	0.0	1.6	0.0	0.0	0.0	4.7	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				596	0		152	2507	0	0	2133	
V/C Ratio(X)				0.80	0.00		0.41	0.15	0.00	0.00	0.19	
Avail Cap(c_a), veh/h				1248	0		518	2507	0	0	2133	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				35.8	0.0	0.0	39.9	0.0	0.0	0.0	8.1	0.0
Incr Delay (d2), s/veh				2.6	0.0	0.0	1.8	0.1	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.0	0.0	0.0	0.7	0.0	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.3	0.0	0.0	41.7	0.1	0.0	0.0	8.3	0.0
LnGrp LOS				D	A		D	A	A	A	A	
Approach Vol, veh/h					478			430			413	
Approach Delay, s/veh					38.3			6.2			8.3	
Approach LOS					D			A			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	9.5	59.5				69.0		21.0				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	13.5	27.5				46.5		32.5				
Max Q Clear Time (g_c+I1), s	3.6	6.7				2.0		14.0				
Green Ext Time (p_c), s	0.1	4.6				5.0		1.6				

Intersection Summary

HCM 6th Ctrl Delay 18.5

HCM 6th LOS B

Notes

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

Timings 2: Cherokee St & I-75 SB Ramps

1a. Existing 2022 AM
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	148	224	215	683	156	518
Future Volume (vph)	148	224	215	683	156	518
Lane Group Flow (vph)	156	236	226	719	164	545
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.6	34.6	40.4	40.4	15.0	55.4
Total Split (%)	38.4%	38.4%	44.9%	44.9%	16.7%	61.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.42	0.62	0.11	0.58	0.45	0.20
Control Delay	40.3	12.7	8.6	3.0	29.6	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	12.7	8.6	3.0	29.6	4.1
Queue Length 50th (ft)	43	0	26	0	34	44
Queue Length 95th (ft)	70	63	50	51	71	117
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1110	671	2128	1238	393	2721
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.35	0.11	0.58	0.42	0.20

Intersection Summary

Cycle Length: 90

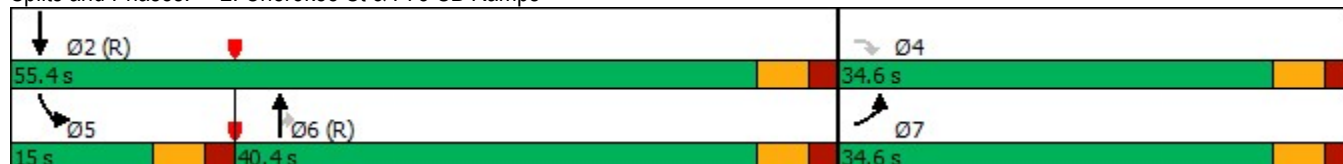
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary

2: Cherokee St & I-75 SB Ramps

1a. Existing 2022 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	0	224	0	0	0	0	215	683	156	518	0
Future Volume (veh/h)	148	0	224	0	0	0	0	215	683	156	518	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	156	0	236				0	226	0	164	545	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	616	0	283				0	2027		235	2486	0
Arrive On Green	0.18	0.00	0.18				0.00	0.57	0.00	0.14	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	156	0	236				0	226	0	164	545	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	3.5	0.0	12.9				0.0	2.6	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	12.9				0.0	2.6	0.0	4.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	616	0	283				0	2027		235	2486	0
V/C Ratio(X)	0.25	0.00	0.84				0.00	0.11		0.70	0.22	0.00
Avail Cap(c_a), veh/h	1117	0	512				0	2027		365	2486	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	31.8	0.0	35.7				0.0	8.9	0.0	38.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	6.4				0.0	0.1	0.0	3.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	11.2				0.0	1.0	0.0	1.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	0.0	42.1				0.0	9.0	0.0	41.3	0.2	0.0
LnGrp LOS	C	A	D				A	A		D	A	A
Approach Vol, veh/h	392						226			709		
Approach Delay, s/veh	38.1						9.0			9.7		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	68.5			21.5			11.6			56.8		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	49.9			29.1			9.5			34.9		
Max Q Clear Time (g_c+I1), s	2.0			14.9			6.1			4.6		
Green Ext Time (p_c), s	8.1			1.1			0.1			2.7		
Intersection Summary												
HCM 6th Ctrl Delay	18.0											
HCM 6th LOS	B											
Notes												

HCM 6th TWSC
3: Cherokee St & Liberty Square Dr/Old Cherokee St

1a. Existing 2022 AM
09/05/2022

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	0	16	32	3	63	11	802	11	14	752	4
Future Vol, veh/h	22	0	16	32	3	63	11	802	11	14	752	4
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	-	-	-	-	-	-	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	17	33	3	66	11	835	11	15	783	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1256	1683	394	1285	1680	423	787	0	0	846	0	0
Stage 1	815	815	-	863	863	-	-	-	-	-	-	-
Stage 2	441	868	-	422	817	-	-	-	-	-	-	-
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	128	93	605	122	94	579	828	-	-	787	-	-
Stage 1	338	389	-	316	370	-	-	-	-	-	-	-
Stage 2	565	368	-	580	388	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	108	90	605	116	91	579	828	-	-	787	-	-
Mov Cap-2 Maneuver	108	90	-	116	91	-	-	-	-	-	-	-
Stage 1	334	382	-	312	365	-	-	-	-	-	-	-
Stage 2	490	363	-	553	381	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	33.6		31.6		0.1		0.2					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	828	-	-	165	235	787	-	-				
HCM Lane V/C Ratio	0.014	-	-	0.24	0.434	0.019	-	-				
HCM Control Delay (s)	9.4	-	-	33.6	31.6	9.7	-	-				
HCM Lane LOS	A	-	-	D	D	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.9	2.1	0.1	-	-				

Timings
4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

1a. Existing 2022 AM

09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	12	0	14	2	0	12	829	1	733	5
Future Volume (vph)	12	0	14	2	0	12	829	1	733	5
Lane Group Flow (vph)	0	13	15	0	4	13	874	1	772	5
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	29.5	29.5	29.5	29.5	29.5	17.0	54.5	16.0	53.5	53.5
Total Split (%)	29.5%	29.5%	29.5%	29.5%	29.5%	17.0%	54.5%	16.0%	53.5%	53.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.11	0.08		0.02	0.02	0.28	0.00	0.25	0.00
Control Delay		45.4	0.9		0.2	1.8	2.8	2.0	2.8	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.4	0.9		0.2	1.8	2.8	2.0	2.8	0.0
Queue Length 50th (ft)		8	0		0	1	47	0	41	0
Queue Length 95th (ft)		27	0		0	4	132	1	117	0
Internal Link Dist (ft)		358			232		352		656	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		415	446		414	700	3074	634	3068	1384
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.03	0.03		0.01	0.02	0.28	0.00	0.25	0.00

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy



HCM 6th Signalized Intersection Summary 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

1a. Existing 2022 AM
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	14	2	0	2	12	829	1	1	733	5
Future Volume (veh/h)	12	0	14	2	0	2	12	829	1	1	733	5
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	13	0	0	2	0	2	13	873	1	1	772	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	0		72	0	18	616	2954	3	551	2833	
Arrive On Green	0.02	0.00	0.00	0.02	0.00	0.02	0.02	0.81	0.81	0.00	0.80	0.00
Sat Flow, veh/h	1450	0	1585	810	0	810	1781	3642	4	1781	3554	1585
Grp Volume(v), veh/h	13	0	0	4	0	0	13	426	448	1	772	0
Grp Sat Flow(s),veh/h/ln	1450	0	1585	1620	0	0	1781	1777	1870	1781	1777	1585
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	0.1	6.0	6.0	0.0	5.6	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.2	0.0	0.0	0.1	6.0	6.0	0.0	5.6	0.0
Prop In Lane	1.00		1.00	0.50		0.50	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0		91	0	0	616	1441	1516	551	2833	
V/C Ratio(X)	0.12	0.00		0.04	0.00	0.00	0.02	0.30	0.30	0.00	0.27	
Avail Cap(c_a), veh/h	412	0		416	0	0	794	1441	1516	736	2833	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.2	0.0	0.0	47.9	0.0	0.0	1.9	2.3	2.3	2.1	2.6	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.5	0.0	0.2	0.0
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	0.3	0.0	0.0	0.1	0.0	0.0	0.0	1.4	1.5	0.0	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	0.0	0.0	48.1	0.0	0.0	1.9	2.9	2.8	2.1	2.9	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	
Approach Vol, veh/h	13			4			887			773		
Approach Delay, s/veh	48.7			48.1			2.8			2.9		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	85.2		7.8	5.6	86.6		7.8				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	11.5	48.0		24.0	10.5	49.0		24.0				
Max Q Clear Time (g_c+I1), s	2.1	7.6		2.9	2.0	8.0		2.2				
Green Ext Time (p_c), s	0.0	12.0		0.0	0.0	13.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				3.3								
HCM 6th LOS				A								

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	12	2	9	1	0	5	4	581	6	5	578	10
Future Vol, veh/h	12	2	9	1	0	5	4	581	6	5	578	10
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	2	9	1	0	5	4	605	6	5	602	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	928	1236	306	928	1238	306	612	0	0	611	0	0
Stage 1	617	617	-	616	616	-	-	-	-	-	-	-
Stage 2	311	619	-	312	622	-	-	-	-	-	-	-
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	223	175	690	223	174	690	963	-	-	964	-	-
Stage 1	444	479	-	445	480	-	-	-	-	-	-	-
Stage 2	674	478	-	673	477	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	220	173	690	217	172	690	963	-	-	964	-	-
Mov Cap-2 Maneuver	336	295	-	334	295	-	-	-	-	-	-	-
Stage 1	442	477	-	443	478	-	-	-	-	-	-	-
Stage 2	666	476	-	658	475	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.2		11.2		0.1		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	963	-	-	414 586	964	-	-
HCM Lane V/C Ratio	0.004	-	-	0.058 0.011	0.005	-	-
HCM Control Delay (s)	8.8	-	-	14.2 11.2	8.8	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0	0	-	-

Timings

6: Cherokee St & SR 92

1a. Existing 2022 AM
09/05/2022



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	824	627	7	224	39	18	55	229	142	429
Future Volume (vph)	824	627	7	224	39	18	55	229	142	429
Lane Group Flow (vph)	877	683	7	238	41	19	75	244	151	456
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	1	6	5	2	7	3	8	7	4	1
Permitted Phases	6		2		2	8		4		4
Detector Phase	1	6	5	2	7	3	8	7	4	1
Switch Phase										
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	5.0	6.0	5.0	6.0	5.0
Minimum Split (s)	15.0	30.5	15.0	35.5	15.0	15.0	33.5	15.0	30.5	15.0
Total Split (s)	45.0	66.5	15.0	36.5	15.0	15.0	33.5	15.0	33.5	45.0
Total Split (%)	34.6%	51.2%	11.5%	28.1%	11.5%	11.5%	25.8%	11.5%	25.8%	34.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	0.92	0.52	0.03	0.54	0.06	0.10	0.43	1.06	0.54	0.39
Control Delay	35.8	13.1	17.3	48.4	0.2	39.5	53.6	124.3	57.9	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	13.1	17.3	48.4	0.2	39.5	53.6	124.3	57.9	2.1
Queue Length 50th (ft)	502	226	3	176	0	13	53	~197	113	0
Queue Length 95th (ft)	#926	525	8	264	0	32	97	#321	188	45
Internal Link Dist (ft)		1023		210			518		515	
Turn Bay Length (ft)	800		115			85		295		
Base Capacity (vph)	952	1309	309	444	634	232	396	230	401	1172
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.52	0.02	0.54	0.06	0.08	0.19	1.06	0.38	0.39

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

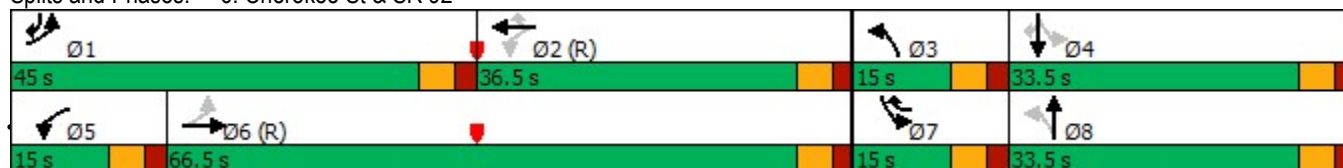
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



The Logan Acworth Mixed-Use Dev (DRI #3755)

HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

1a. Existing 2022 AM
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	824	627	15	7	224	39	18	55	15	229	142	429
Future Volume (veh/h)	824	627	15	7	224	39	18	55	15	229	142	429
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	877	667	16	7	238	41	19	59	16	244	151	456
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	809	1075	26	295	553	584	206	224	61	347	397	818
Arrive On Green	0.30	0.59	0.59	0.01	0.30	0.30	0.02	0.16	0.16	0.07	0.21	0.21
Sat Flow, veh/h	1781	1819	44	1781	1870	1585	1781	1417	384	1781	1870	1585
Grp Volume(v), veh/h	877	0	683	7	238	41	19	0	75	244	151	456
Grp Sat Flow(s),veh/h/ln	1781	0	1863	1781	1870	1585	1781	0	1801	1781	1870	1585
Q Serve(g_s), s	39.5	0.0	30.8	0.4	13.4	2.2	1.2	0.0	4.8	9.5	9.0	25.4
Cycle Q Clear(g_c), s	39.5	0.0	30.8	0.4	13.4	2.2	1.2	0.0	4.8	9.5	9.0	25.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	809	0	1100	295	553	584	206	0	285	347	397	818
V/C Ratio(X)	1.08	0.00	0.62	0.02	0.43	0.07	0.09	0.00	0.26	0.70	0.38	0.56
Avail Cap(c_a), veh/h	809	0	1100	410	553	584	302	0	388	347	403	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	0.0	17.2	31.6	37.0	26.6	44.5	0.0	48.1	45.7	43.9	21.4
Incr Delay (d2), s/veh	57.0	0.0	2.6	0.0	2.4	0.2	0.2	0.0	0.5	6.3	0.6	0.8
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	28.4	0.0	13.1	0.2	6.4	0.9	0.5	0.0	2.2	3.4	4.2	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.4	0.0	19.8	31.6	39.4	26.8	44.7	0.0	48.5	52.0	44.5	22.2
LnGrp LOS	F	A	B	C	D	C	D	A	D	D	D	C
Approach Vol, veh/h	1560		286				94		851			
Approach Delay, s/veh	52.8		37.4				47.8		34.7			
Approach LOS	D		D				D		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	45.0	43.9	8.0	33.1	6.6	82.3	15.0	26.1				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	39.5	31.0	9.5	28.0	9.5	61.0	9.5	28.0				
Max Q Clear Time (g_c+l1), s	41.5	15.4	3.2	27.4	2.4	32.8	11.5	6.8				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.2	0.0	9.5	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			45.5									
HCM 6th LOS			D									
Notes												

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	5	866	0	0	269	2	0	0	1	7	0	1
Future Vol, veh/h	5	866	0	0	269	2	0	0	1	7	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	921	0	0	286	2	0	0	1	7	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	288	0	0	921	0	0	1219	1219	921	1218	1217	286
Stage 1	-	-	-	-	-	-	931	931	-	286	286	-
Stage 2	-	-	-	-	-	-	288	288	-	932	931	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1274	-	-	741	-	-	157	180	328	157	181	753
Stage 1	-	-	-	-	-	-	320	346	-	721	675	-
Stage 2	-	-	-	-	-	-	720	674	-	320	346	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1274	-	-	741	-	-	156	179	328	156	180	753
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	179	-	156	180	-
Stage 1	-	-	-	-	-	-	317	343	-	715	675	-
Stage 2	-	-	-	-	-	-	719	674	-	316	343	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			16			26.9		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	328	1274	-	-	741	-	-	173				
HCM Lane V/C Ratio	0.003	0.004	-	-	-	-	-	0.049				
HCM Control Delay (s)	16	7.8	0	-	0	-	-	26.9				
HCM Lane LOS	C	A	A	-	A	-	-	D				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2				

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	796	277	10	13	7
Future Vol, veh/h	8	796	277	10	13	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	847	295	11	14	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	306	0	-	0	1166	301
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	865	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1255	-	-	-	214	739
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1255	-	-	-	211	739
Mov Cap-2 Maneuver	-	-	-	-	211	-
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	412	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		18.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1255	-	-	-	281	
HCM Lane V/C Ratio	0.007	-	-	-	0.076	
HCM Control Delay (s)	7.9	0	-	-	18.9	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	15	2	0	23
Future Vol, veh/h	1	0	15	2	0	23
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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	19	3	0	29
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	50	21	0	0	22	0
Stage 1	21	-	-	-	-	-
Stage 2	29	-	-	-	-	-
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	959	1056	-	-	1593	-
Stage 1	1002	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	959	1056	-	-	1593	-
Mov Cap-2 Maneuver	959	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.8	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	959	1593	-	
HCM Lane V/C Ratio	-	-	0.001	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	0	0	15	0	0
Future Vol, veh/h	23	0	0	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	0	0	19	0	0
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	11	10	0	0	19	0
Stage 1	10	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1009	1071	-	-	1597	-
Stage 1	1013	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1009	1071	-	-	1597	-
Mov Cap-2 Maneuver	1009	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1009		1597	-	
HCM Lane V/C Ratio	-	- 0.029		-	-	
HCM Control Delay (s)	-	- 8.7		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	23	99	1	2	2
Future Vol, veh/h	2	23	99	1	2	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	-
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	25	108	1	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	109	0	-	0	138	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1481	-	-	-	855	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1481	-	-	-	854	945
Mov Cap-2 Maneuver	-	-	-	-	854	-
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	994	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1481	-	-	-	897	
HCM Lane V/C Ratio	0.001	-	-	-	0.005	
HCM Control Delay (s)	7.4	0	-	-	9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	23	95	4	2	2
Future Vol, veh/h	3	23	95	4	2	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	-
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	3	25	103	4	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	107	0	-	0	136	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1484	-	-	-	857	949
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	992	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1484	-	-	-	855	949
Mov Cap-2 Maneuver	-	-	-	-	855	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	992	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1484	-	-	-	900	
HCM Lane V/C Ratio	0.002	-	-	-	0.005	
HCM Control Delay (s)	7.4	0	-	-	9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Timings 1: Cherokee St & I-75 NB Ramps

1b. Existing 2022 PM
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	781	263	90	265	285	74
Future Volume (vph)	781	263	90	265	285	74
Lane Group Flow (vph)	849	286	98	288	310	80
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	42.0	42.0	15.0	48.0	33.0	33.0
Total Split (%)	46.7%	46.7%	16.7%	53.3%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.79	0.41	0.32	0.14	0.20	0.11
Control Delay	33.4	4.4	54.9	8.9	18.4	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	4.4	54.9	8.9	18.4	3.9
Queue Length 50th (ft)	223	0	30	33	58	0
Queue Length 95th (ft)	261	48	56	49	102	24
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1392	812	366	1992	1553	749
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.35	0.27	0.14	0.20	0.11

Intersection Summary

Cycle Length: 90

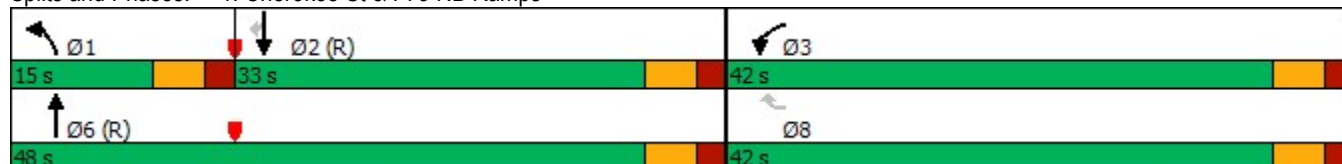
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

1b. Existing 2022 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	781	0	263	90	265	0	0	285	74
Future Volume (veh/h)	0	0	0	781	0	263	90	265	0	0	285	74
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				849	0	0	98	288	0	0	310	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				988	0		175	2104	0	0	1706	
Arrive On Green				0.29	0.00	0.00	0.10	1.00	0.00	0.00	0.48	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				849	0	0	98	288	0	0	310	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				20.9	0.0	0.0	2.4	0.0	0.0	0.0	4.5	0.0
Cycle Q Clear(g_c), s				20.9	0.0	0.0	2.4	0.0	0.0	0.0	4.5	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				988	0		175	2104	0	0	1706	
V/C Ratio(X)				0.86	0.00		0.56	0.14	0.00	0.00	0.18	
Avail Cap(c_a), veh/h				1401	0		365	2104	0	0	1706	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.4	0.0	0.0	39.5	0.0	0.0	0.0	13.3	0.0
Incr Delay (d2), s/veh				4.0	0.0	0.0	2.8	0.1	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.6	0.0	0.0	1.1	0.0	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.4	0.0	0.0	42.2	0.1	0.0	0.0	13.6	0.0
LnGrp LOS				C	A		D	A	A	A	B	
Approach Vol, veh/h					849			386			310	
Approach Delay, s/veh					34.4			10.8			13.6	
Approach LOS					C			B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.1	48.7				58.8		31.2				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	9.5	27.5				42.5		36.5				
Max Q Clear Time (g_c+l1), s	4.4	6.5				2.0		22.9				
Green Ext Time (p_c), s	0.1	3.3				3.8		2.8				
Intersection Summary												
HCM 6th Ctrl Delay				24.3								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 2: Cherokee St & I-75 SB Ramps

1b. Existing 2022 PM

09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	57	276	367	114	971
Future Volume (vph)	50	57	276	367	114	971
Lane Group Flow (vph)	52	59	288	382	119	1011
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	35.0	35.0	38.0	38.0	17.0	55.0
Total Split (%)	38.9%	38.9%	42.2%	42.2%	18.9%	61.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.20	0.28	0.12	0.32	0.37	0.34
Control Delay	40.4	6.3	6.4	1.6	39.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	6.3	6.4	1.6	39.6	1.7
Queue Length 50th (ft)	14	0	29	0	24	10
Queue Length 95th (ft)	31	15	51	33	m42	11
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1125	584	2375	1188	438	2969
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.10	0.12	0.32	0.27	0.34

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

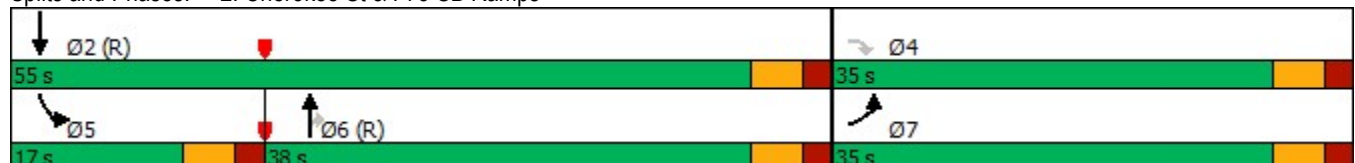
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

1b. Existing 2022 PM
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							 		 	 	
Traffic Volume (veh/h)	50	0	57	0	0	0	0	276	367	114	971	0
Future Volume (veh/h)	50	0	57	0	0	0	0	276	367	114	971	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	52	0	59				0	288	0	119	1011	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	201	0	92				0	2504		187	2913	0
Arrive On Green	0.06	0.00	0.06				0.00	0.70	0.00	0.11	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	52	0	59				0	288	0	119	1011	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	1.3	0.0	3.3				0.0	2.3	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	3.3				0.0	2.3	0.0	3.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	201	0	92				0	2504		187	2913	0
V/C Ratio(X)	0.26	0.00	0.64				0.00	0.12		0.64	0.35	0.00
Avail Cap(c_a), veh/h	1133	0	520				0	2504		442	2913	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.74	0.74	0.00
Uniform Delay (d), s/veh	40.5	0.0	41.5				0.0	4.3	0.0	39.3	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	7.2				0.0	0.1	0.0	2.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.0				0.0	0.7	0.0	1.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	0.0	48.7				0.0	4.4	0.0	42.0	0.2	0.0
LnGrp LOS	D	A	D				A	A		D	A	A
Approach Vol, veh/h	111						288			1130		
Approach Delay, s/veh	45.2						4.4			4.6		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	79.3			10.7			10.4			68.9		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	49.5			29.5			11.5			32.5		
Max Q Clear Time (g_c+I1), s	2.0			5.3			5.0			4.3		
Green Ext Time (p_c), s	18.2			0.3			0.2			3.4		
Intersection Summary												
HCM 6th Ctrl Delay	7.5											
HCM 6th LOS	A											

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	8	0	10	27	0	23	21	596	52	53	965	15
Future Vol, veh/h	8	0	10	27	0	23	21	596	52	53	965	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	11	29	0	25	23	648	57	58	1049	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1543	1924	533	1364	1904	353	1065	0	0	705	0	0
Stage 1	1173	1173	-	723	723	-	-	-	-	-	-	-
Stage 2	370	751	-	641	1181	-	-	-	-	-	-	-
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	78	66	491	106	68	643	650	-	-	889	-	-
Stage 1	204	264	-	384	429	-	-	-	-	-	-	-
Stage 2	622	416	-	430	262	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	69	60	491	96	61	643	650	-	-	889	-	-
Mov Cap-2 Maneuver	69	60	-	96	61	-	-	-	-	-	-	-
Stage 1	197	247	-	371	414	-	-	-	-	-	-	-
Stage 2	577	401	-	393	245	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37	39.3	0.3	0.5
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	650	-	-	132 158	889	-	-
HCM Lane V/C Ratio	0.035	-	-	0.148 0.344	0.065	-	-
HCM Control Delay (s)	10.7	-	-	37 39.3	9.3	-	-
HCM Lane LOS	B	-	-	E E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5 1.4	0.2	-	-

Timings
4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

1b. Existing 2022 PM

09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	74	0	63	9	0	53	597	14	930	13
Future Volume (vph)	74	0	63	9	0	53	597	14	930	13
Lane Group Flow (vph)	0	78	66	0	24	56	634	15	979	14
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	16.0	55.0	15.0	54.0	54.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	16.0%	55.0%	15.0%	54.0%	54.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.51	0.26		0.10	0.12	0.23	0.02	0.39	0.01
Control Delay		52.9	7.6		0.8	3.8	5.5	3.5	8.4	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		52.9	7.6		0.8	3.8	5.5	3.5	8.4	0.0
Queue Length 50th (ft)		48	0		0	6	45	2	140	0
Queue Length 95th (ft)		91	25		0	18	121	7	212	0
Internal Link Dist (ft)		358			232		352		656	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		338	453		427	509	2718	692	2529	1156
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.23	0.15		0.06	0.11	0.23	0.02	0.39	0.01

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy



HCM 6th Signalized Intersection Summary
4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

1b. Existing 2022 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	0	63	9	0	14	53	597	6	14	930	13
Future Volume (veh/h)	74	0	63	9	0	14	53	597	6	14	930	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	0	0	9	0	15	56	628	6	15	979	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	0		77	17	74	499	2699	26	654	2580	
Arrive On Green	0.07	0.00	0.00	0.07	0.00	0.07	0.04	0.75	0.75	0.02	0.73	0.00
Sat Flow, veh/h	1472	0	1585	391	243	1057	1781	3607	34	1781	3554	1585
Grp Volume(v), veh/h	78	0	0	24	0	0	56	309	325	15	979	0
Grp Sat Flow(s),veh/h/ln	1472	0	1585	1691	0	0	1781	1777	1864	1781	1777	1585
Q Serve(g_s), s	3.8	0.0	0.0	0.0	0.0	0.0	0.8	5.3	5.3	0.2	10.4	0.0
Cycle Q Clear(g_c), s	5.1	0.0	0.0	1.3	0.0	0.0	0.8	5.3	5.3	0.2	10.4	0.0
Prop In Lane	1.00		1.00	0.37		0.62	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	175	0		167	0	0	499	1330	1395	654	2580	
V/C Ratio(X)	0.45	0.00		0.14	0.00	0.00	0.11	0.23	0.23	0.02	0.38	
Avail Cap(c_a), veh/h	420	0		433	0	0	616	1330	1395	793	2580	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.5	0.0	0.0	43.9	0.0	0.0	3.4	3.8	3.8	3.4	5.2	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.4	0.0	0.0	0.1	0.4	0.4	0.0	0.4	0.0
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	2.0	0.0	0.0	0.6	0.0	0.0	0.2	1.6	1.7	0.1	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	0.0	0.0	44.3	0.0	0.0	3.5	4.2	4.2	3.4	5.6	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	
Approach Vol, veh/h	78			24			690			994		
Approach Delay, s/veh	47.3			44.3			4.2			5.6		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	78.1		12.5	7.2	80.3		12.5				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	10.5	48.5		24.5	9.5	49.5		24.5				
Max Q Clear Time (g_c+I1), s	2.8	12.4		7.1	2.2	7.3		3.3				
Green Ext Time (p_c), s	0.0	15.6		0.3	0.0	8.7		0.1				

Intersection Summary

HCM 6th Ctrl Delay 7.4

HCM 6th LOS A

Notes

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

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	15	0	5	4	1	15	6	623	2	14	910	9
Future Vol, veh/h	15	0	5	4	1	15	6	623	2	14	910	9
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	5	4	1	16	7	677	2	15	989	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1377	1717	500	1217	1721	340	999	0	0	679	0	0
Stage 1	1024	1024	-	692	692	-	-	-	-	-	-	-
Stage 2	353	693	-	525	1029	-	-	-	-	-	-	-
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	104	89	516	137	88	656	689	-	-	909	-	-
Stage 1	252	311	-	400	443	-	-	-	-	-	-	-
Stage 2	637	443	-	504	309	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	99	87	516	133	86	656	689	-	-	909	-	-
Mov Cap-2 Maneuver	196	201	-	258	199	-	-	-	-	-	-	-
Stage 1	249	306	-	396	439	-	-	-	-	-	-	-
Stage 2	613	439	-	490	304	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	22.1		13.2		0.1		0.1	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	689	-	-	232 461	909	-	-
HCM Lane V/C Ratio	0.009	-	-	0.094 0.047	0.017	-	-
HCM Control Delay (s)	10.3	-	-	22.1 13.2	9	-	-
HCM Lane LOS	B	-	-	C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3 0.1	0.1	-	-

Timings
6: Cherokee St & SR 92

1b. Existing 2022 PM
09/05/2022

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	407	401	20	281	99	45	133	67	166	660
Future Volume (vph)	407	401	20	281	99	45	133	67	166	660
Lane Group Flow (vph)	452	483	22	312	110	50	161	74	184	733
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	1	6	5	2	7	3	8	7	4	1
Permitted Phases	6		2		2	8		4		4
Detector Phase	1	6	5	2	7	3	8	7	4	1
Switch Phase										
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	5.0	6.0	5.0	6.0	5.0
Minimum Split (s)	15.0	30.5	15.0	35.5	15.0	15.0	33.5	15.0	30.5	15.0
Total Split (s)	26.0	42.0	15.0	31.0	19.5	15.0	33.5	19.5	38.0	26.0
Total Split (%)	23.6%	38.2%	13.6%	28.2%	17.7%	13.6%	30.5%	17.7%	34.5%	23.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	0.64	0.44	0.06	0.53	0.14	0.19	0.64	0.27	0.59	0.77
Control Delay	15.8	16.8	13.8	37.0	2.7	29.9	54.7	31.4	50.8	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	16.8	13.8	37.0	2.7	29.9	54.7	31.4	50.8	17.3
Queue Length 50th (ft)	146	156	5	180	0	27	106	40	125	230
Queue Length 95th (ft)	258	354	18	305	24	52	167	70	188	348
Internal Link Dist (ft)		1023		210			518		515	
Turn Bay Length (ft)	800		115			85		295		
Base Capacity (vph)	702	1086	441	592	851	288	471	337	550	949
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.44	0.05	0.53	0.13	0.17	0.34	0.22	0.33	0.77

Intersection Summary

Cycle Length: 110

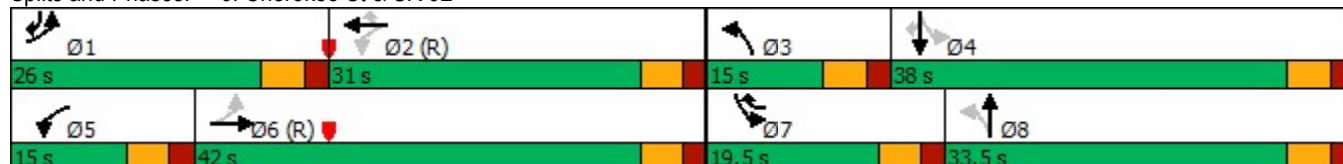
Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

1b. Existing 2022 PM
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	407	401	33	20	281	99	45	133	12	67	166	660
Future Volume (veh/h)	407	401	33	20	281	99	45	133	12	67	166	660
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	452	446	37	22	312	110	50	148	13	74	184	733
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	532	761	63	334	529	516	262	488	43	411	553	764
Arrive On Green	0.19	0.45	0.45	0.02	0.28	0.28	0.04	0.29	0.29	0.04	0.30	0.30
Sat Flow, veh/h	1781	1704	141	1781	1870	1585	1781	1695	149	1781	1870	1585
Grp Volume(v), veh/h	452	0	483	22	312	110	50	0	161	74	184	733
Grp Sat Flow(s),veh/h/ln	1781	0	1845	1781	1870	1585	1781	0	1844	1781	1870	1585
Q Serve(g_s), s	19.2	0.0	21.6	1.0	15.8	5.5	2.1	0.0	7.5	3.2	8.5	32.5
Cycle Q Clear(g_c), s	19.2	0.0	21.6	1.0	15.8	5.5	2.1	0.0	7.5	3.2	8.5	32.5
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	532	0	824	334	529	516	262	0	531	411	553	764
V/C Ratio(X)	0.85	0.00	0.59	0.07	0.59	0.21	0.19	0.00	0.30	0.18	0.33	0.96
Avail Cap(c_a), veh/h	532	0	824	448	529	516	352	0	531	562	553	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	0.0	22.8	27.0	34.0	26.9	26.2	0.0	30.5	26.0	30.3	27.5
Incr Delay (d2), s/veh	12.4	0.0	3.0	0.1	4.8	0.9	0.3	0.0	0.3	0.2	0.4	23.1
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	9.3	0.0	9.6	0.4	7.7	0.1	0.9	0.0	3.4	1.4	3.8	22.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	0.0	25.9	27.1	38.8	27.8	26.5	0.0	30.9	26.2	30.6	50.6
LnGrp LOS	C	A	C	C	D	C	C	A	C	C	C	D
Approach Vol, veh/h	935			444			211			991		
Approach Delay, s/veh	30.0			35.5			29.8			45.1		
Approach LOS	C			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	36.6	9.4	38.0	7.9	54.6	10.2	37.2				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	20.5	25.5	9.5	32.5	9.5	36.5	14.0	28.0				
Max Q Clear Time (g_c+I1), s	21.2	17.8	4.1	34.5	3.0	23.6	5.2	9.5				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.0	0.0	4.1	0.1	0.8				
Intersection Summary												
HCM 6th Ctrl Delay	36.7											
HCM 6th LOS	D											

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗		↕			↕	
Traffic Vol, veh/h	2	473	5	12	390	17	1	1	12	8	0	9
Future Vol, veh/h	2	473	5	12	390	17	1	1	12	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	544	6	14	448	20	1	1	14	9	0	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	468	0	0	550	0	0	1039	1044	544	1035	1030	448
Stage 1	-	-	-	-	-	-	548	548	-	476	476	-
Stage 2	-	-	-	-	-	-	491	496	-	559	554	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1094	-	-	1020	-	-	209	229	539	210	233	611
Stage 1	-	-	-	-	-	-	521	517	-	570	557	-
Stage 2	-	-	-	-	-	-	559	545	-	513	514	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1094	-	-	1020	-	-	203	225	539	201	229	611
Mov Cap-2 Maneuver	-	-	-	-	-	-	203	225	-	201	229	-
Stage 1	-	-	-	-	-	-	519	515	-	568	549	-
Stage 2	-	-	-	-	-	-	542	537	-	497	512	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			13.4			17.3		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	443	1094	-	-	1020	-	-	312				
HCM Lane V/C Ratio	0.036	0.002	-	-	0.014	-	-	0.063				
HCM Control Delay (s)	13.4	8.3	0	-	8.6	-	-	17.3				
HCM Lane LOS	B	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	539	414	7	16	14
Future Vol, veh/h	6	539	414	7	16	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	586	450	8	17	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	458	0	-	0	1054	454
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1103	-	-	-	250	606
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	548	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1103	-	-	-	248	606
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	548	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		16.6		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1103	-	-	-	342	
HCM Lane V/C Ratio	0.006	-	-	-	0.095	
HCM Control Delay (s)	8.3	0	-	-	16.6	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	14	2	0	27
Future Vol, veh/h	2	0	14	2	0	27
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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	20	3	0	39
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	61	22	0	0	23	0
Stage 1	22	-	-	-	-	-
Stage 2	39	-	-	-	-	-
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	945	1055	-	-	1592	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	945	1055	-	-	1592	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	945	1592	-	
HCM Lane V/C Ratio	-	-	0.003	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	5.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	0	0	13	0	0
Future Vol, veh/h	30	0	0	13	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	0	0	17	0	0
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	10	9	0	0	17	0
Stage 1	9	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1073	-	-	1600	-
Stage 1	1014	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1010	1073	-	-	1600	-
Mov Cap-2 Maneuver	1010	-	-	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1010		1600	-	
HCM Lane V/C Ratio	-	- 0.039		-	-	
HCM Control Delay (s)	-	- 8.7		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	101	47	0	2	2
Future Vol, veh/h	3	101	47	0	2	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	125	58	0	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	58	0	-	0	191	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1546	-	-	-	798	1008
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	893	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1546	-	-	-	796	1008
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	893	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1546	-	-	-	890	
HCM Lane V/C Ratio	0.002	-	-	-	0.006	
HCM Control Delay (s)	7.3	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	102	45	2	2	2
Future Vol, veh/h	3	102	45	2	2	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	126	56	2	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	58	0	-	0	191	57
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	134	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1546	-	-	-	798	1009
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1546	-	-	-	796	1009
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	892	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1546	-	-	-	890	
HCM Lane V/C Ratio	0.002	-	-	-	0.006	
HCM Control Delay (s)	7.3	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Future “No-Build” Intersection Analysis

Timings
1: Cherokee St & I-75 NB Ramps

2a. No-Build 2028 AM
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	445	80	58	342	384	30
Future Volume (vph)	445	80	58	342	384	30
Lane Group Flow (vph)	536	96	70	412	463	36
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	38.0	38.0	18.0	52.0	34.0	34.0
Total Split (%)	42.2%	42.2%	20.0%	57.8%	37.8%	37.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.72	0.23	0.25	0.18	0.24	0.04
Control Delay	38.3	7.2	36.9	6.7	12.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	7.2	36.9	6.7	12.7	0.1
Queue Length 50th (ft)	146	0	20	66	72	0
Queue Length 95th (ft)	169	29	40	85	108	0
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1239	633	476	2340	1926	906
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.15	0.15	0.18	0.24	0.04

Intersection Summary

Cycle Length: 90

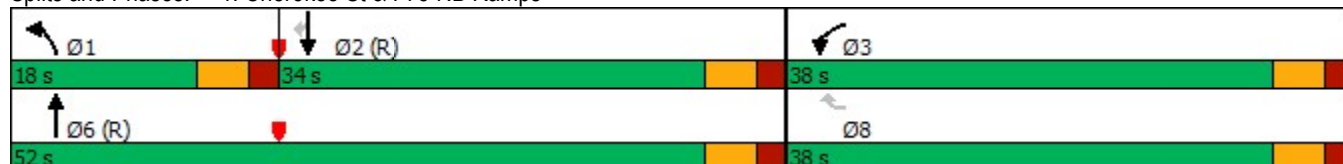
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

2a. No-Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↔↔		↔	↔↔	↕↕			↕↕	↔
Traffic Volume (veh/h)	0	0	0	445	0	80	58	342	0	0	384	30
Future Volume (veh/h)	0	0	0	445	0	80	58	342	0	0	384	30
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				536	0	0	70	412	0	0	463	0
Peak Hour Factor				0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				658	0		159	2443	0	0	2063	
Arrive On Green				0.19	0.00	0.00	0.09	1.00	0.00	0.00	0.58	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				536	0	0	70	412	0	0	463	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				13.4	0.0	0.0	1.7	0.0	0.0	0.0	5.7	0.0
Cycle Q Clear(g_c), s				13.4	0.0	0.0	1.7	0.0	0.0	0.0	5.7	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				658	0		159	2443	0	0	2063	
V/C Ratio(X)				0.82	0.00		0.44	0.17	0.00	0.00	0.22	
Avail Cap(c_a), veh/h				1248	0		480	2443	0	0	2063	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.9	0.0	0.0	39.8	0.0	0.0	0.0	9.1	0.0
Incr Delay (d2), s/veh				2.5	0.0	0.0	1.9	0.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	0.0	0.7	0.0	0.0	0.0	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				37.4	0.0	0.0	41.7	0.1	0.0	0.0	9.4	0.0
LnGrp LOS				D	A		D	A	A	A	A	
Approach Vol, veh/h					536			482			463	
Approach Delay, s/veh					37.4			6.2			9.4	
Approach LOS					D			A			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	9.6	57.7				67.4		22.6				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	12.5	28.5				46.5		32.5				
Max Q Clear Time (g_c+I1), s	3.7	7.7				2.0		15.4				
Green Ext Time (p_c), s	0.1	5.2				5.7		1.8				
Intersection Summary												
HCM 6th Ctrl Delay				18.5								
HCM 6th LOS				B								

Notes

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

Timings 2: Cherokee St & I-75 SB Ramps

2a. No-Build 2028 AM

09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	166	251	241	765	175	580
Future Volume (vph)	166	251	241	765	175	580
Lane Group Flow (vph)	175	264	254	805	184	611
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.5	34.5	40.5	40.5	15.0	55.5
Total Split (%)	38.3%	38.3%	45.0%	45.0%	16.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.45	0.64	0.12	0.64	0.48	0.23
Control Delay	40.2	12.8	9.2	3.6	28.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	12.8	9.2	3.6	28.3	2.4
Queue Length 50th (ft)	48	2	30	0	29	13
Queue Length 95th (ft)	76	69	58	55	64	66
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1106	686	2087	1263	406	2700
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.38	0.12	0.64	0.45	0.23

Intersection Summary

Cycle Length: 90

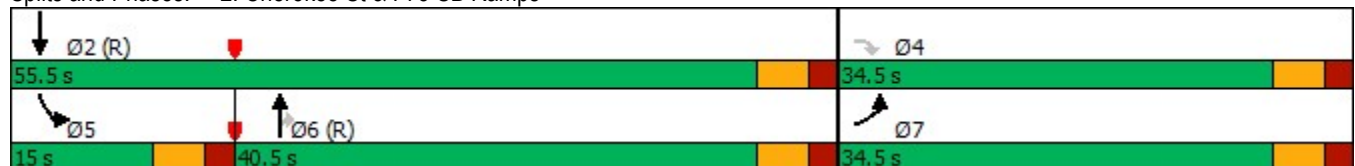
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

2a. No-Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	0	251	0	0	0	0	241	765	175	580	0
Future Volume (veh/h)	166	0	251	0	0	0	0	241	765	175	580	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	175	0	264				0	254	0	184	611	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	678	0	311				0	1942		256	2422	0
Arrive On Green	0.20	0.00	0.20				0.00	0.55	0.00	0.15	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	175	0	264				0	254	0	184	611	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	3.9	0.0	14.5				0.0	3.1	0.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	14.5				0.0	3.1	0.0	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	678	0	311				0	1942		256	2422	0
V/C Ratio(X)	0.26	0.00	0.85				0.00	0.13		0.72	0.25	0.00
Avail Cap(c_a), veh/h	1114	0	511				0	1942		365	2422	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	30.6	0.0	34.9				0.0	10.0	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	7.1				0.0	0.1	0.0	3.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	12.5				0.0	1.2	0.0	1.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	42.0				0.0	10.1	0.0	40.8	0.2	0.0
LnGrp LOS	C	A	D				A	B		D	A	A
Approach Vol, veh/h	439						254			795		
Approach Delay, s/veh	37.6						10.1			9.6		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	66.8			23.2			12.2			54.7		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	50.0			29.0			9.5			35.0		
Max Q Clear Time (g_c+I1), s	2.0			16.5			6.6			5.1		
Green Ext Time (p_c), s	9.3			1.2			0.2			3.0		
Intersection Summary												
HCM 6th Ctrl Delay	17.9											
HCM 6th LOS	B											
Notes												

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	0	18	36	3	71	12	898	12	16	842	4
Future Vol, veh/h	25	0	18	36	3	71	12	898	12	16	842	4
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	-	-	-	-	-	-	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	19	38	3	74	13	935	13	17	877	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1408	1887	441	1441	1883	474	881	0	0	948	0	0
Stage 1	913	913	-	968	968	-	-	-	-	-	-	-
Stage 2	495	974	-	473	915	-	-	-	-	-	-	-
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	99	70	564	93	70	537	763	-	-	720	-	-
Stage 1	294	350	-	273	330	-	-	-	-	-	-	-
Stage 2	525	328	-	541	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	80	67	564	87	67	537	763	-	-	720	-	-
Mov Cap-2 Maneuver	80	67	-	87	67	-	-	-	-	-	-	-
Stage 1	289	342	-	268	324	-	-	-	-	-	-	-
Stage 2	441	322	-	511	342	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	49.1		51.2		0.1		0.2					
HCM LOS	E		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	763	-	-	125	186	720	-	-				
HCM Lane V/C Ratio	0.016	-	-	0.358	0.616	0.023	-	-				
HCM Control Delay (s)	9.8	-	-	49.1	51.2	10.1	-	-				
HCM Lane LOS	A	-	-	E	F	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.5	3.5	0.1	-	-				

Timings 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2a. No-Build 2028 AM

09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	0	16	2	0	13	928	1	821	6
Future Volume (vph)	13	0	16	2	0	13	928	1	821	6
Lane Group Flow (vph)	0	14	17	0	4	14	978	1	864	6
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	29.5	29.5	29.5	29.5	29.5	15.0	55.5	15.0	55.5	55.5
Total Split (%)	29.5%	29.5%	29.5%	29.5%	29.5%	15.0%	55.5%	15.0%	55.5%	55.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.12	0.09		0.02	0.02	0.32	0.00	0.28	0.00
Control Delay		45.5	0.9		0.2	1.8	3.0	2.0	2.9	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.5	0.9		0.2	1.8	3.0	2.0	2.9	0.0
Queue Length 50th (ft)		9	0		0	1	56	0	47	0
Queue Length 95th (ft)		28	0		0	4	153	1	135	0
Internal Link Dist (ft)		358			232		352		656	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		406	446		414	625	3071	569	3066	1383
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.03	0.04		0.01	0.02	0.32	0.00	0.28	0.00

Intersection Summary

Cycle Length: 100

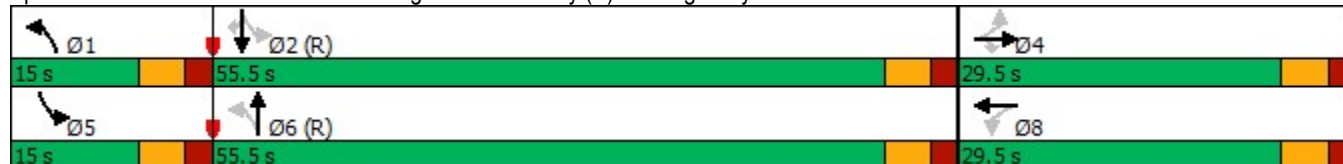
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy



HCM 6th Signalized Intersection Summary

4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2a. No-Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	16	2	0	2	13	928	1	1	821	6
Future Volume (veh/h)	13	0	16	2	0	2	13	928	1	1	821	6
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	14	0	0	2	0	2	14	977	1	1	864	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	0		73	0	19	568	2951	3	500	2826	
Arrive On Green	0.02	0.00	0.00	0.02	0.00	0.02	0.02	0.81	0.81	0.00	0.80	0.00
Sat Flow, veh/h	1449	0	1585	792	19	811	1781	3643	4	1781	3554	1585
Grp Volume(v), veh/h	14	0	0	4	0	0	14	477	501	1	864	0
Grp Sat Flow(s),veh/h/ln	1449	0	1585	1622	0	0	1781	1777	1870	1781	1777	1585
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.1	7.0	7.0	0.0	6.6	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.2	0.0	0.0	0.1	7.0	7.0	0.0	6.6	0.0
Prop In Lane	1.00		1.00	0.50		0.50	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	0		92	0	0	568	1439	1514	500	2826	
V/C Ratio(X)	0.13	0.00		0.04	0.00	0.00	0.02	0.33	0.33	0.00	0.31	
Avail Cap(c_a), veh/h	412	0		416	0	0	708	1439	1514	667	2826	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.1	0.0	0.0	47.8	0.0	0.0	2.0	2.5	2.5	2.2	2.8	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.2	0.0	0.0	0.0	0.6	0.6	0.0	0.3	0.0
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	0.4	0.0	0.0	0.1	0.0	0.0	0.0	1.7	1.7	0.0	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	0.0	0.0	48.0	0.0	0.0	2.0	3.1	3.1	2.2	3.0	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	
Approach Vol, veh/h	14			4			992			865		
Approach Delay, s/veh	48.7			48.0			3.1			3.0		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	85.0		7.9	5.6	86.5		7.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	50.0		24.0	9.5	50.0		24.0				
Max Q Clear Time (g_c+I1), s	2.1	8.6		2.9	2.0	9.0		2.2				
Green Ext Time (p_c), s	0.0	14.0		0.0	0.0	15.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, SBR] 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	13	2	10	1	0	6	4	651	7	6	647	11
Future Vol, veh/h	13	2	10	1	0	6	4	651	7	6	647	11
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	2	10	1	0	6	4	678	7	6	674	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1039	1385	343	1040	1387	343	685	0	0	685	0	0
Stage 1	692	692	-	690	690	-	-	-	-	-	-	-
Stage 2	347	693	-	350	697	-	-	-	-	-	-	-
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	185	142	653	185	142	653	904	-	-	904	-	-
Stage 1	400	443	-	401	444	-	-	-	-	-	-	-
Stage 2	642	443	-	639	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	182	140	653	179	140	653	904	-	-	904	-	-
Mov Cap-2 Maneuver	299	264	-	297	264	-	-	-	-	-	-	-
Stage 1	398	440	-	399	442	-	-	-	-	-	-	-
Stage 2	633	441	-	622	438	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.3		11.5		0.1		0.1	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	904	-	-	377 558	904	-	-
HCM Lane V/C Ratio	0.005	-	-	0.069 0.013	0.007	-	-
HCM Control Delay (s)	9	-	-	15.3 11.5	9	-	-
HCM Lane LOS	A	-	-	C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0	0	-	-

Timings
6: Cherokee St & SR 92

2a. No-Build 2028 AM
09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	923	702	17	8	251	44	20	62	256	159	480
Future Volume (vph)	923	702	17	8	251	44	20	62	256	159	480
Lane Group Flow (vph)	982	747	18	9	267	47	21	84	272	169	511
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	43.0	57.0	57.0	15.0	29.0	29.0	15.0	37.0	21.0	43.0	43.0
Total Split (%)	33.1%	43.8%	43.8%	11.5%	22.3%	22.3%	11.5%	28.5%	16.2%	33.1%	33.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.83	0.62	0.02	0.03	0.52	0.08	0.11	0.50	0.82	0.48	0.54
Control Delay	45.4	18.4	0.0	17.9	46.2	0.3	36.5	58.4	63.3	52.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	18.4	0.0	17.9	46.2	0.3	36.5	58.4	63.3	52.5	6.0
Queue Length 50th (ft)	390	318	0	2	188	0	14	61	206	135	0
Queue Length 95th (ft)	446	663	0	10	#341	0	33	109	278	201	50
Internal Link Dist (ft)		728			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	1190	1204	1079	325	513	585	237	444	332	537	1167
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.62	0.02	0.03	0.52	0.08	0.09	0.19	0.82	0.31	0.44

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary

6: Cherokee St & SR 92

2a. No-Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	923	702	17	8	251	44	20	62	17	256	159	480
Future Volume (veh/h)	923	702	17	8	251	44	20	62	17	256	159	480
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	982	747	0	9	267	0	21	66	18	272	169	511
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	997	1100		296	580		178	160	44	359	396	591
Arrive On Green	0.29	0.59	0.00	0.01	0.31	0.00	0.02	0.11	0.11	0.12	0.21	0.21
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1415	386	1781	1870	2790
Grp Volume(v), veh/h	982	747	0	9	267	0	21	0	84	272	169	511
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1801	1781	1870	1395
Q Serve(g_s), s	36.7	35.6	0.0	0.4	14.9	0.0	1.3	0.0	5.6	15.5	10.2	23.0
Cycle Q Clear(g_c), s	36.7	35.6	0.0	0.4	14.9	0.0	1.3	0.0	5.6	15.5	10.2	23.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	997	1100		296	580		178	0	203	359	396	591
V/C Ratio(X)	0.99	0.68		0.03	0.46		0.12	0.00	0.41	0.76	0.43	0.87
Avail Cap(c_a), veh/h	997	1100		407	580		271	0	436	359	540	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	18.4	0.0	30.1	36.1	0.0	49.4	0.0	53.6	44.6	44.4	49.4
Incr Delay (d2), s/veh	24.8	3.4	0.0	0.0	2.6	0.0	0.3	0.0	1.3	9.0	0.7	7.4
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	18.8	15.4	0.0	0.2	7.1	0.0	0.6	0.0	2.7	1.7	4.8	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.8	21.8	0.0	30.2	38.7	0.0	49.7	0.0	55.0	53.6	45.1	56.9
LnGrp LOS	E	C		C	D		D	A	D	D	D	E
Approach Vol, veh/h	1729			276			105			952		
Approach Delay, s/veh	49.6			38.4			53.9			53.9		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	43.0	45.8	8.2	33.0	6.9	81.9	21.0	20.2				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	37.5	23.5	9.5	37.5	9.5	51.5	15.5	31.5				
Max Q Clear Time (g_c+l1), s	38.7	16.9	3.3	25.0	2.4	37.6	17.5	7.6				
Green Ext Time (p_c), s	0.0	1.2	0.0	2.5	0.0	7.1	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay 50.1

HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

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	6	970	0	0	301	2	0	0	1	8	0	1
Future Vol, veh/h	6	970	0	0	301	2	0	0	1	8	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1032	0	0	320	2	0	0	1	9	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	322	0	0	1032	0	0	1366	1366	1032	1365	1364	320
Stage 1	-	-	-	-	-	-	1044	1044	-	320	320	-
Stage 2	-	-	-	-	-	-	322	322	-	1045	1044	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1238	-	-	673	-	-	124	147	283	125	148	721
Stage 1	-	-	-	-	-	-	277	306	-	692	652	-
Stage 2	-	-	-	-	-	-	690	651	-	276	306	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1238	-	-	673	-	-	123	145	283	124	146	721
Mov Cap-2 Maneuver	-	-	-	-	-	-	123	145	-	124	146	-
Stage 1	-	-	-	-	-	-	274	303	-	684	652	-
Stage 2	-	-	-	-	-	-	689	651	-	272	303	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			17.8			33.2		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	283	1238	-	-	673	-	-	137
HCM Lane V/C Ratio	0.004	0.005	-	-	-	-	-	0.07
HCM Control Delay (s)	17.8	7.9	0	-	0	-	-	33.2
HCM Lane LOS	C	A	A	-	A	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	892	310	11	15	8
Future Vol, veh/h	9	892	310	11	15	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	949	330	12	16	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	342	0	-	0	1305	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	969	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1217	-	-	-	177	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	368	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1217	-	-	-	174	706
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	368	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		22		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1217	-	-	-	236	
HCM Lane V/C Ratio	0.008	-	-	-	0.104	
HCM Control Delay (s)	8	0	-	-	22	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	17	2	0	26
Future Vol, veh/h	1	0	17	2	0	26
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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	22	3	0	33
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	57	24	0	0	25	0
Stage 1	24	-	-	-	-	-
Stage 2	33	-	-	-	-	-
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	950	1052	-	-	1589	-
Stage 1	999	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	950	1052	-	-	1589	-
Mov Cap-2 Maneuver	950	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	950	1589	-	-
HCM Lane V/C Ratio	-	-	0.001	-	-	-
HCM Control Delay (s)	-	-	8.8	0	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0	-	-

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	0	0	17	0	0
Future Vol, veh/h	26	0	0	17	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	0	0	22	0	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	12	11	0	0	22	0
Stage 1	11	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1008	1070	-	-	1593	-
Stage 1	1012	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1008	1070	-	-	1593	-
Mov Cap-2 Maneuver	1008	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1008	1593	-		
HCM Lane V/C Ratio	-	- 0.033	-	-		
HCM Control Delay (s)	-	- 8.7	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	26	111	1	2	2
Future Vol, veh/h	2	26	111	1	2	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	-
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	28	121	1	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	122	0	-	0	154	122
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1465	-	-	-	838	929
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1465	-	-	-	837	929
Mov Cap-2 Maneuver	-	-	-	-	837	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	991	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		9.1		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1465	-	-	-	881	
HCM Lane V/C Ratio	0.001	-	-	-	0.005	
HCM Control Delay (s)	7.5	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	26	106	4	2	2
Future Vol, veh/h	3	26	106	4	2	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	-
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	3	28	115	4	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	119	0	-	0	151	117
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1469	-	-	-	841	935
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1469	-	-	-	839	935
Mov Cap-2 Maneuver	-	-	-	-	839	-
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	988	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		9.1		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1469	-	-	-	884	
HCM Lane V/C Ratio	0.002	-	-	-	0.005	
HCM Control Delay (s)	7.5	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Timings 1: Cherokee St & I-75 NB Ramps

2b. No-Build 2028 PM
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	875	295	101	297	319	83
Future Volume (vph)	875	295	101	297	319	83
Lane Group Flow (vph)	951	321	110	323	347	90
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	42.0	42.0	15.0	48.0	33.0	33.0
Total Split (%)	46.7%	46.7%	16.7%	53.3%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.81	0.43	0.36	0.17	0.24	0.13
Control Delay	32.4	4.0	55.5	9.9	20.3	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	4.0	55.5	9.9	20.3	5.0
Queue Length 50th (ft)	248	0	35	37	70	0
Queue Length 95th (ft)	292	49	59	54	116	30
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1392	832	362	1890	1448	705
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.39	0.30	0.17	0.24	0.13

Intersection Summary

Cycle Length: 90

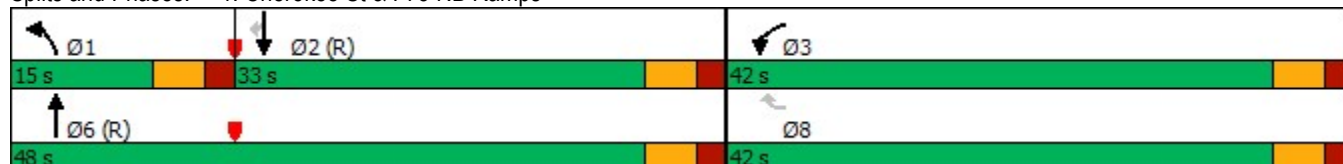
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

2b. No-Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	875	0	295	101	297	0	0	319	83
Future Volume (veh/h)	0	0	0	875	0	295	101	297	0	0	319	83
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				951	0	0	110	323	0	0	347	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				1088	0		180	2000	0	0	1598	
Arrive On Green				0.31	0.00	0.00	0.10	1.00	0.00	0.00	0.45	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				951	0	0	110	323	0	0	347	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				23.4	0.0	0.0	2.7	0.0	0.0	0.0	5.4	0.0
Cycle Q Clear(g_c), s				23.4	0.0	0.0	2.7	0.0	0.0	0.0	5.4	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1088	0		180	2000	0	0	1598	
V/C Ratio(X)				0.87	0.00		0.61	0.16	0.00	0.00	0.22	
Avail Cap(c_a), veh/h				1401	0		365	2000	0	0	1598	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.99	0.99	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				29.1	0.0	0.0	39.5	0.0	0.0	0.0	15.1	0.0
Incr Delay (d2), s/veh				5.2	0.0	0.0	3.3	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.7	0.0	0.0	1.2	0.0	0.0	0.0	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.3	0.0	0.0	42.8	0.2	0.0	0.0	15.4	0.0
LnGrp LOS				C	A		D	A	A	A	B	
Approach Vol, veh/h					951			433			347	
Approach Delay, s/veh					34.3			11.0			15.4	
Approach LOS					C			B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.2	46.0				56.2		33.8				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	9.5	27.5				42.5		36.5				
Max Q Clear Time (g_c+l1), s	4.7	7.4				2.0		25.4				
Green Ext Time (p_c), s	0.1	3.7				4.3		2.9				
Intersection Summary												
HCM 6th Ctrl Delay				24.7								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 2: Cherokee St & I-75 SB Ramps

2b. No-Build 2028 PM

09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	64	309	411	128	1088
Future Volume (vph)	56	64	309	411	128	1088
Lane Group Flow (vph)	58	67	322	428	133	1133
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	35.0	35.0	38.0	38.0	17.0	55.0
Total Split (%)	38.9%	38.9%	42.2%	42.2%	18.9%	61.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.22	0.31	0.14	0.36	0.40	0.38
Control Delay	40.5	7.9	6.6	1.7	40.2	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	7.9	6.6	1.7	40.2	1.8
Queue Length 50th (ft)	16	0	34	0	28	11
Queue Length 95th (ft)	34	22	57	35	m45	13
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1125	584	2355	1196	438	2962
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.11	0.14	0.36	0.30	0.38

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

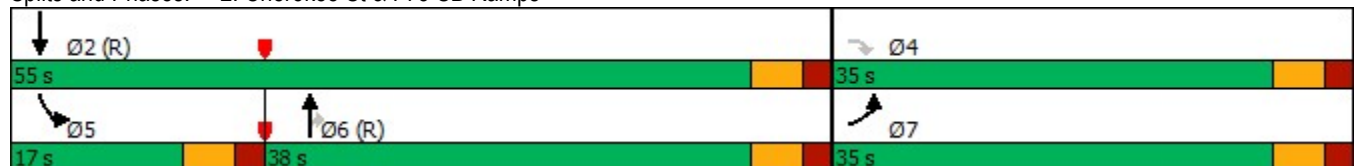
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

2b. No-Build 2028 PM
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	0	64	0	0	0	0	309	411	128	1088	0
Future Volume (veh/h)	56	0	64	0	0	0	0	309	411	128	1088	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	58	0	67				0	322	0	133	1133	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	222	0	102				0	2465		203	2891	0
Arrive On Green	0.06	0.00	0.06				0.00	0.69	0.00	0.12	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	58	0	67				0	322	0	133	1133	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	1.4	0.0	3.7				0.0	2.7	0.0	3.3	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	3.7				0.0	2.7	0.0	3.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	222	0	102				0	2465		203	2891	0
V/C Ratio(X)	0.26	0.00	0.66				0.00	0.13		0.65	0.39	0.00
Avail Cap(c_a), veh/h	1133	0	520				0	2465		442	2891	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	40.1	0.0	41.1				0.0	4.6	0.0	38.8	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	7.0				0.0	0.1	0.0	2.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	3.4				0.0	0.8	0.0	1.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	48.1				0.0	4.8	0.0	41.4	0.3	0.0
LnGrp LOS	D	A	D				A	A		D	A	A
Approach Vol, veh/h	125						322			1266		
Approach Delay, s/veh	44.7						4.8			4.6		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	78.7			11.3			10.8			67.9		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	49.5			29.5			11.5			32.5		
Max Q Clear Time (g_c+I1), s	2.0			5.7			5.3			4.7		
Green Ext Time (p_c), s	21.4			0.3			0.2			3.9		
Intersection Summary												
HCM 6th Ctrl Delay	7.6											
HCM 6th LOS	A											

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	9	0	11	30	0	26	24	668	58	59	1081	17
Future Vol, veh/h	9	0	11	30	0	26	24	668	58	59	1081	17
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	-	-	-	-	-	-	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	12	33	0	28	26	726	63	64	1175	18

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1727	2153	597	1526	2131	395	1193	0	0	789	0	0
Stage 1	1312	1312	-	810	810	-	-	-	-	-	-	-
Stage 2	415	841	-	716	1321	-	-	-	-	-	-	-
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	57	47	446	81	49	604	581	-	-	827	-	-
Stage 1	167	227	-	340	391	-	-	-	-	-	-	-
Stage 2	585	379	-	387	224	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	49	41	446	72	43	604	581	-	-	827	-	-
Mov Cap-2 Maneuver	49	41	-	72	43	-	-	-	-	-	-	-
Stage 1	159	210	-	325	373	-	-	-	-	-	-	-
Stage 2	533	362	-	347	207	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	53.2		60.8		0.4		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	581	-	-	96	122	827	-
HCM Lane V/C Ratio	0.045	-	-	0.226	0.499	0.078	-
HCM Control Delay (s)	11.5	-	-	53.2	60.8	9.7	-
HCM Lane LOS	B	-	-	F	F	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	2.3	0.3	-

Timings
4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2b. No-Build 2028 PM

09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	83	0	71	10	0	59	669	16	1042	15
Future Volume (vph)	83	0	71	10	0	59	669	16	1042	15
Lane Group Flow (vph)	0	87	75	0	28	62	711	17	1097	16
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	29.5	29.5	29.5	29.5	29.5	15.0	55.5	15.0	55.5	55.5
Total Split (%)	29.5%	29.5%	29.5%	29.5%	29.5%	15.0%	55.5%	15.0%	55.5%	55.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.54	0.29		0.11	0.15	0.26	0.03	0.44	0.01
Control Delay		53.3	9.5		0.9	4.2	5.9	3.8	9.3	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		53.3	9.5		0.9	4.2	5.9	3.8	9.3	0.0
Queue Length 50th (ft)		53	0		0	7	53	2	168	0
Queue Length 95th (ft)		98	32		0	21	143	8	255	0
Internal Link Dist (ft)		358			232		352		656	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		330	446		417	443	2696	650	2509	1147
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.26	0.17		0.07	0.14	0.26	0.03	0.44	0.01

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy



HCM 6th Signalized Intersection Summary

4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2b. No-Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	0	71	10	0	16	59	669	7	16	1042	15
Future Volume (veh/h)	83	0	71	10	0	16	59	669	7	16	1042	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	0	0	11	0	17	62	704	7	17	1097	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	0		84	17	79	449	2665	26	605	2548	
Arrive On Green	0.08	0.00	0.00	0.08	0.00	0.08	0.04	0.74	0.74	0.02	0.72	0.00
Sat Flow, veh/h	1474	0	1585	441	227	1032	1781	3605	36	1781	3554	1585
Grp Volume(v), veh/h	87	0	0	28	0	0	62	347	364	17	1097	0
Grp Sat Flow(s),veh/h/ln	1474	0	1585	1700	0	0	1781	1777	1864	1781	1777	1585
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	0.9	6.3	6.3	0.3	12.6	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	1.6	0.0	0.0	0.9	6.3	6.3	0.3	12.6	0.0
Prop In Lane	1.00		1.00	0.39		0.61	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	185	0		181	0	0	449	1314	1378	605	2548	
V/C Ratio(X)	0.47	0.00		0.15	0.00	0.00	0.14	0.26	0.26	0.03	0.43	
Avail Cap(c_a), veh/h	413	0		428	0	0	545	1314	1378	741	2548	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.1	0.0	0.0	43.3	0.0	0.0	3.9	4.2	4.2	3.6	5.8	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.4	0.0	0.0	0.1	0.5	0.5	0.0	0.5	0.0
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	2.2	0.0	0.0	0.7	0.0	0.0	0.2	2.0	2.1	0.1	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	0.0	0.0	43.7	0.0	0.0	4.1	4.7	4.7	3.6	6.3	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	
Approach Vol, veh/h	87			28			773			1114		
Approach Delay, s/veh	46.9			43.7			4.7			6.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	77.2		13.2	7.4	79.4		13.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	50.0		24.0	9.5	50.0		24.0				
Max Q Clear Time (g_c+I1), s	2.9	14.6		7.7	2.3	8.3		3.6				
Green Ext Time (p_c), s	0.0	17.8		0.3	0.0	10.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

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

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	17	0	6	4	1	17	7	698	2	16	1019	10
Future Vol, veh/h	17	0	6	4	1	17	7	698	2	16	1019	10
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	7	4	1	18	8	759	2	17	1108	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1544	1925	560	1364	1929	381	1119	0	0	761	0	0
Stage 1	1148	1148	-	776	776	-	-	-	-	-	-	-
Stage 2	396	777	-	588	1153	-	-	-	-	-	-	-
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	78	66	472	106	66	617	620	-	-	847	-	-
Stage 1	211	272	-	356	406	-	-	-	-	-	-	-
Stage 2	601	405	-	462	270	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	73	64	472	102	64	617	620	-	-	847	-	-
Mov Cap-2 Maneuver	163	172	-	224	170	-	-	-	-	-	-	-
Stage 1	208	267	-	351	401	-	-	-	-	-	-	-
Stage 2	574	400	-	446	265	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25.9		13.9		0.1		0.1	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	620	-	-	197	429	847	-
HCM Lane V/C Ratio	0.012	-	-	0.127	0.056	0.021	-
HCM Control Delay (s)	10.9	-	-	25.9	13.9	9.3	-
HCM Lane LOS	B	-	-	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0.1	-

Timings
6: Cherokee St & SR 92

2b. No-Build 2028 PM
09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	456	449	37	22	315	111	50	149	75	186	739
Future Volume (vph)	456	449	37	22	315	111	50	149	75	186	739
Lane Group Flow (vph)	507	499	41	24	350	123	56	180	83	207	821
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	26.0	38.0	38.0	15.0	27.0	27.0	15.0	35.5	21.5	42.0	42.0
Total Split (%)	23.6%	34.5%	34.5%	13.6%	24.5%	24.5%	13.6%	32.3%	19.5%	38.2%	38.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.76	0.50	0.04	0.06	0.52	0.17	0.20	0.53	0.27	0.58	0.68
Control Delay	49.5	22.5	0.1	15.0	35.5	0.5	25.8	44.5	27.5	45.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	22.5	0.1	15.0	35.5	0.5	25.8	44.5	27.5	45.7	5.6
Queue Length 50th (ft)	175	242	0	7	199	0	28	114	42	134	0
Queue Length 95th (ft)	222	421	0	23	#412	0	50	169	69	191	50
Internal Link Dist (ft)		728			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	699	1005	940	477	674	727	299	504	393	618	1473
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.50	0.04	0.05	0.52	0.17	0.19	0.36	0.21	0.33	0.56

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

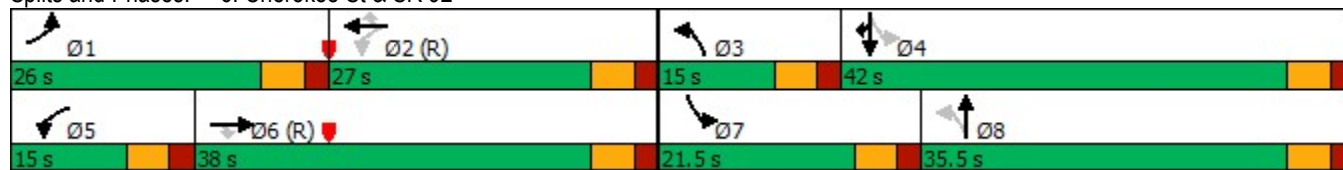
Natural Cycle: 105

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

2b. No-Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	456	449	37	22	315	111	50	149	13	75	186	739
Future Volume (veh/h)	456	449	37	22	315	111	50	149	13	75	186	739
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	507	499	0	24	350	0	56	166	14	83	207	821
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	576	789		298	522		259	523	44	429	593	884
Arrive On Green	0.17	0.42	0.00	0.02	0.28	0.00	0.04	0.31	0.31	0.05	0.32	0.32
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1701	143	1781	1870	2790
Grp Volume(v), veh/h	507	499	0	24	350	0	56	0	180	83	207	821
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1845	1781	1870	1395
Q Serve(g_s), s	15.8	23.1	0.0	1.0	18.3	0.0	2.3	0.0	8.2	3.5	9.3	31.3
Cycle Q Clear(g_c), s	15.8	23.1	0.0	1.0	18.3	0.0	2.3	0.0	8.2	3.5	9.3	31.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	576	789		298	522		259	0	567	429	593	884
V/C Ratio(X)	0.88	0.63		0.08	0.67		0.22	0.00	0.32	0.19	0.35	0.93
Avail Cap(c_a), veh/h	644	789		410	522		347	0	567	605	621	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	25.1	0.0	27.4	35.2	0.0	24.7	0.0	29.2	24.4	28.8	36.4
Incr Delay (d2), s/veh	12.5	3.8	0.0	0.1	6.7	0.0	0.4	0.0	0.3	0.2	0.4	14.8
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	7.6	10.6	0.0	0.4	9.0	0.0	1.0	0.0	3.7	1.5	4.2	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	28.9	0.0	27.5	41.9	0.0	25.1	0.0	29.5	24.6	29.2	51.2
LnGrp LOS	E	C		C	D		C	A	C	C	C	D
Approach Vol, veh/h	1006			374			236			1111		
Approach Delay, s/veh	43.2			40.9			28.5			45.1		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.8	36.2	9.6	40.4	8.1	51.9	10.6	39.3				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	20.5	21.5	9.5	36.5	9.5	32.5	16.0	30.0				
Max Q Clear Time (g_c+I1), s	17.8	20.3	4.3	33.3	3.0	25.1	5.5	10.2				
Green Ext Time (p_c), s	0.6	0.4	0.0	1.5	0.0	2.8	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay 42.4

HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗		↕			↕	
Traffic Vol, veh/h	2	530	6	13	437	19	1	1	13	9	0	10
Future Vol, veh/h	2	530	6	13	437	19	1	1	13	9	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	609	7	15	502	22	1	1	15	10	0	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	616	0	0	1162	1167	609	1157	1152	502
Stage 1	-	-	-	-	-	-	613	613	-	532	532	-
Stage 2	-	-	-	-	-	-	549	554	-	625	620	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1043	-	-	964	-	-	172	194	495	173	198	569
Stage 1	-	-	-	-	-	-	480	483	-	531	526	-
Stage 2	-	-	-	-	-	-	520	514	-	473	480	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1043	-	-	964	-	-	166	190	495	165	194	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	190	-	165	194	-
Stage 1	-	-	-	-	-	-	479	482	-	529	518	-
Stage 2	-	-	-	-	-	-	502	506	-	456	479	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			14.4			19.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	399	1043	-	-	964	-	-	263				
HCM Lane V/C Ratio	0.043	0.002	-	-	0.016	-	-	0.083				
HCM Control Delay (s)	14.4	8.5	0	-	8.8	-	-	19.9				
HCM Lane LOS	B	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	604	464	8	18	16
Future Vol, veh/h	7	604	464	8	18	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	657	504	9	20	17
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	513	0	-	0	1182	509
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	673	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1052	-	-	-	210	564
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	507	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1052	-	-	-	207	564
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	507	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		18.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1052	-	-	-	295	
HCM Lane V/C Ratio	0.007	-	-	-	0.125	
HCM Control Delay (s)	8.4	0	-	-	18.9	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	16	2	0	30
Future Vol, veh/h	2	0	16	2	0	30
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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	23	3	0	43
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	68	25	0	0	26	0
Stage 1	25	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	937	1051	-	-	1588	-
Stage 1	998	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	937	1051	-	-	1588	-
Mov Cap-2 Maneuver	937	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	937	1588	-	
HCM Lane V/C Ratio	-	-	0.003	-	-	
HCM Control Delay (s)	-	-	8.9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	5.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	0	0	15	0	0
Future Vol, veh/h	34	0	0	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	0	19	0	0
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	11	10	0	0	19	0
Stage 1	10	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1009	1071	-	-	1597	-
Stage 1	1013	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1009	1071	-	-	1597	-
Mov Cap-2 Maneuver	1009	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1009		1597	-	
HCM Lane V/C Ratio	-	- 0.044		-	-	
HCM Control Delay (s)	-	- 8.7		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	113	53	0	2	2
Future Vol, veh/h	3	113	53	0	2	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	140	65	0	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	65	0	-	0	213	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1537	-	-	-	775	999
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1537	-	-	-	773	999
Mov Cap-2 Maneuver	-	-	-	-	773	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	880	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.2		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1537	-	-	-	872	
HCM Lane V/C Ratio	0.002	-	-	-	0.006	
HCM Control Delay (s)	7.3	0	-	-	9.2	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	114	50	2	2	2
Future Vol, veh/h	3	114	50	2	2	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	141	62	2	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	64	0	-	0	212	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1538	-	-	-	776	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	879	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1538	-	-	-	774	1002
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	879	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1538	-	-	-	873	
HCM Lane V/C Ratio	0.002	-	-	-	0.006	
HCM Control Delay (s)	7.3	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Future “No-Build” Intersection Analysis with Improvements

Timings 1: Cherokee St & I-75 NB Ramps

2c. No-Build 2028 AM - Improved
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	445	80	58	342	384	30
Future Volume (vph)	445	80	58	342	384	30
Lane Group Flow (vph)	536	96	70	412	463	36
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	38.0	38.0	18.0	52.0	34.0	34.0
Total Split (%)	42.2%	42.2%	20.0%	57.8%	37.8%	37.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.72	0.23	0.25	0.18	0.24	0.04
Control Delay	38.3	7.2	36.9	6.7	12.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	7.2	36.9	6.7	12.7	0.1
Queue Length 50th (ft)	146	0	20	66	72	0
Queue Length 95th (ft)	169	29	40	85	108	0
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1239	633	476	2340	1926	906
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.15	0.15	0.18	0.24	0.04

Intersection Summary

Cycle Length: 90

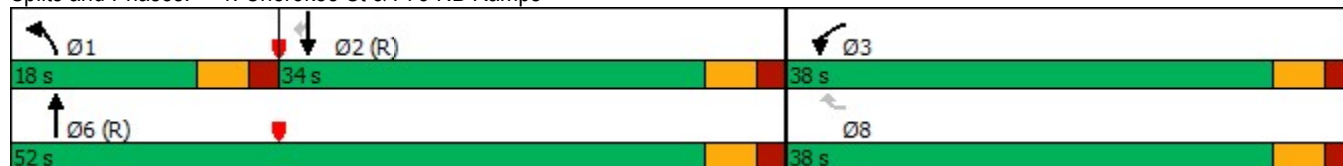
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

2c. No-Build 2028 AM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	445	0	80	58	342	0	0	384	30
Future Volume (veh/h)	0	0	0	445	0	80	58	342	0	0	384	30
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				536	0	0	70	412	0	0	463	0
Peak Hour Factor				0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				658	0		159	2443	0	0	2063	
Arrive On Green				0.19	0.00	0.00	0.09	1.00	0.00	0.00	0.58	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				536	0	0	70	412	0	0	463	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				13.4	0.0	0.0	1.7	0.0	0.0	0.0	5.7	0.0
Cycle Q Clear(g_c), s				13.4	0.0	0.0	1.7	0.0	0.0	0.0	5.7	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				658	0		159	2443	0	0	2063	
V/C Ratio(X)				0.82	0.00		0.44	0.17	0.00	0.00	0.22	
Avail Cap(c_a), veh/h				1248	0		480	2443	0	0	2063	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.9	0.0	0.0	39.8	0.0	0.0	0.0	9.1	0.0
Incr Delay (d2), s/veh				2.5	0.0	0.0	1.9	0.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	0.0	0.7	0.0	0.0	0.0	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				37.4	0.0	0.0	41.7	0.1	0.0	0.0	9.4	0.0
LnGrp LOS				D	A		D	A	A	A	A	
Approach Vol, veh/h					536			482			463	
Approach Delay, s/veh					37.4			6.2			9.4	
Approach LOS					D			A			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	9.6	57.7				67.4		22.6				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	12.5	28.5				46.5		32.5				
Max Q Clear Time (g_c+I1), s	3.7	7.7				2.0		15.4				
Green Ext Time (p_c), s	0.1	5.2				5.7		1.8				

Intersection Summary

HCM 6th Ctrl Delay 18.5

HCM 6th LOS B

Notes

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

Timings 2: Cherokee St & I-75 SB Ramps

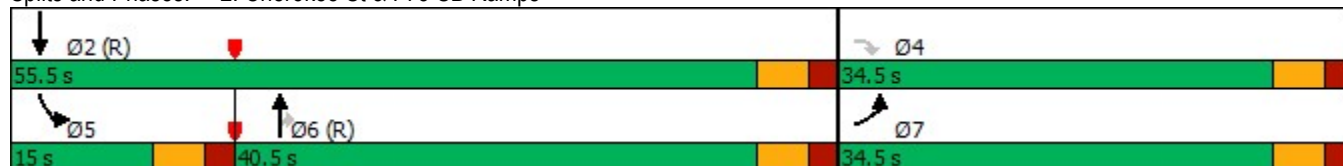
2c. No-Build 2028 AM - Improved
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	166	251	241	765	175	580
Future Volume (vph)	166	251	241	765	175	580
Lane Group Flow (vph)	175	264	254	805	184	611
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.5	34.5	40.5	40.5	15.0	55.5
Total Split (%)	38.3%	38.3%	45.0%	45.0%	16.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.45	0.64	0.12	0.64	0.48	0.23
Control Delay	40.2	12.8	9.2	3.6	28.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	12.8	9.2	3.6	28.3	2.4
Queue Length 50th (ft)	48	2	30	0	29	13
Queue Length 95th (ft)	76	69	58	55	64	66
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1106	686	2087	1263	406	2700
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.38	0.12	0.64	0.45	0.23

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

2c. No-Build 2028 AM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	0	251	0	0	0	0	241	765	175	580	0
Future Volume (veh/h)	166	0	251	0	0	0	0	241	765	175	580	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	175	0	264				0	254	0	184	611	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	678	0	311				0	1942		256	2422	0
Arrive On Green	0.20	0.00	0.20				0.00	0.55	0.00	0.15	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	175	0	264				0	254	0	184	611	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	3.9	0.0	14.5				0.0	3.1	0.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	14.5				0.0	3.1	0.0	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	678	0	311				0	1942		256	2422	0
V/C Ratio(X)	0.26	0.00	0.85				0.00	0.13		0.72	0.25	0.00
Avail Cap(c_a), veh/h	1114	0	511				0	1942		365	2422	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	30.6	0.0	34.9				0.0	10.0	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	7.1				0.0	0.1	0.0	3.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	12.5				0.0	1.2	0.0	1.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	42.0				0.0	10.1	0.0	40.8	0.2	0.0
LnGrp LOS	C	A	D				A	B		D	A	A
Approach Vol, veh/h	439						254			795		
Approach Delay, s/veh	37.6						10.1			9.6		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	66.8			23.2			12.2			54.7		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	50.0			29.0			9.5			35.0		
Max Q Clear Time (g_c+l1), s	2.0			16.5			6.6			5.1		
Green Ext Time (p_c), s	9.3			1.2			0.2			3.0		

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	25	0	18	36	3	71	12	898	12	16	842	4
Future Vol, veh/h	25	0	18	36	3	71	12	898	12	16	842	4
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	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	100	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	19	38	3	74	13	935	13	17	877	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1408	1887	441	1441	1883	474	881	0	0	948	0	0
Stage 1	913	913	-	968	968	-	-	-	-	-	-	-
Stage 2	495	974	-	473	915	-	-	-	-	-	-	-
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	99	70	564	93	70	537	763	-	-	720	-	-
Stage 1	294	350	-	273	330	-	-	-	-	-	-	-
Stage 2	525	328	-	541	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	80	67	564	87	67	537	763	-	-	720	-	-
Mov Cap-2 Maneuver	80	67	-	87	67	-	-	-	-	-	-	-
Stage 1	289	342	-	268	324	-	-	-	-	-	-	-
Stage 2	441	322	-	511	342	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	49.1		37.1		0.1		0.2	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	763	-	-	125 85 537 720	-	-	-
HCM Lane V/C Ratio	0.016	-	-	0.358 0.478 0.138 0.023	-	-	-
HCM Control Delay (s)	9.8	-	-	49.1 81.2 12.8 10.1	-	-	-
HCM Lane LOS	A	-	-	E F B B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5 2 0.5 0.1	-	-	-

Timings 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2c. No-Build 2028 AM - Improved
09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	0	16	2	0	13	928	1	821	6
Future Volume (vph)	13	0	16	2	0	13	928	1	821	6
Lane Group Flow (vph)	0	14	17	0	4	14	978	1	864	6
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	29.5	29.5	29.5	29.5	29.5	15.0	55.5	15.0	55.5	55.5
Total Split (%)	29.5%	29.5%	29.5%	29.5%	29.5%	15.0%	55.5%	15.0%	55.5%	55.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.12	0.09		0.02	0.02	0.32	0.00	0.28	0.00
Control Delay		45.5	0.9		0.2	1.8	3.0	2.0	2.9	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.5	0.9		0.2	1.8	3.0	2.0	2.9	0.0
Queue Length 50th (ft)		9	0		0	1	56	0	47	0
Queue Length 95th (ft)		28	0		0	4	153	1	135	0
Internal Link Dist (ft)		358			232		352		656	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		406	446		414	625	3071	569	3066	1383
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.03	0.04		0.01	0.02	0.32	0.00	0.28	0.00

Intersection Summary

Cycle Length: 100

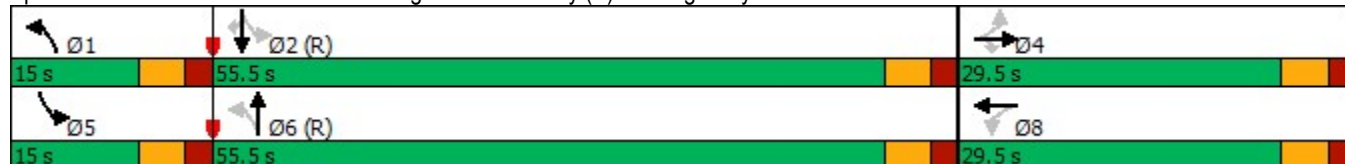
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy



HCM 6th Signalized Intersection Summary 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2c. No-Build 2028 AM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	16	2	0	2	13	928	1	1	821	6
Future Volume (veh/h)	13	0	16	2	0	2	13	928	1	1	821	6
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	14	0	0	2	0	2	14	977	1	1	864	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	0		73	0	19	568	2951	3	500	2826	
Arrive On Green	0.02	0.00	0.00	0.02	0.00	0.02	0.02	0.81	0.81	0.00	0.80	0.00
Sat Flow, veh/h	1449	0	1585	792	19	811	1781	3643	4	1781	3554	1585
Grp Volume(v), veh/h	14	0	0	4	0	0	14	477	501	1	864	0
Grp Sat Flow(s),veh/h/ln	1449	0	1585	1622	0	0	1781	1777	1870	1781	1777	1585
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.1	7.0	7.0	0.0	6.6	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.2	0.0	0.0	0.1	7.0	7.0	0.0	6.6	0.0
Prop In Lane	1.00		1.00	0.50		0.50	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	0		92	0	0	568	1439	1514	500	2826	
V/C Ratio(X)	0.13	0.00		0.04	0.00	0.00	0.02	0.33	0.33	0.00	0.31	
Avail Cap(c_a), veh/h	412	0		416	0	0	708	1439	1514	667	2826	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.1	0.0	0.0	47.8	0.0	0.0	2.0	2.5	2.5	2.2	2.8	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.2	0.0	0.0	0.0	0.6	0.6	0.0	0.3	0.0
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	0.4	0.0	0.0	0.1	0.0	0.0	0.0	1.7	1.7	0.0	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	0.0	0.0	48.0	0.0	0.0	2.0	3.1	3.1	2.2	3.0	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	
Approach Vol, veh/h	14			4			992			865		
Approach Delay, s/veh	48.7			48.0			3.1			3.0		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	85.0		7.9	5.6	86.5		7.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	50.0		24.0	9.5	50.0		24.0				
Max Q Clear Time (g_c+I1), s	2.1	8.6		2.9	2.0	9.0		2.2				
Green Ext Time (p_c), s	0.0	14.0		0.0	0.0	15.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, SBR] 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	13	2	10	1	0	6	4	651	7	6	647	11
Future Vol, veh/h	13	2	10	1	0	6	4	651	7	6	647	11
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	2	10	1	0	6	4	678	7	6	674	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1039	1385	343	1040	1387	343	685	0	0	685	0	0
Stage 1	692	692	-	690	690	-	-	-	-	-	-	-
Stage 2	347	693	-	350	697	-	-	-	-	-	-	-
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	185	142	653	185	142	653	904	-	-	904	-	-
Stage 1	400	443	-	401	444	-	-	-	-	-	-	-
Stage 2	642	443	-	639	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	182	140	653	179	140	653	904	-	-	904	-	-
Mov Cap-2 Maneuver	299	264	-	297	264	-	-	-	-	-	-	-
Stage 1	398	440	-	399	442	-	-	-	-	-	-	-
Stage 2	633	441	-	622	438	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.3		11.5		0.1		0.1	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	904	-	-	377 558	904	-	-
HCM Lane V/C Ratio	0.005	-	-	0.069 0.013	0.007	-	-
HCM Control Delay (s)	9	-	-	15.3 11.5	9	-	-
HCM Lane LOS	A	-	-	C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0	0	-	-

Timings
6: Cherokee St & SR 92

2c. No-Build 2028 AM - Improved

09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	923	702	17	8	251	44	20	62	256	159	480
Future Volume (vph)	923	702	17	8	251	44	20	62	256	159	480
Lane Group Flow (vph)	982	747	18	9	267	47	21	84	272	169	511
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	43.0	57.0	57.0	15.0	29.0	29.0	15.0	37.0	21.0	43.0	43.0
Total Split (%)	33.1%	43.8%	43.8%	11.5%	22.3%	22.3%	11.5%	28.5%	16.2%	33.1%	33.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.83	0.62	0.02	0.03	0.52	0.08	0.11	0.50	0.82	0.48	0.54
Control Delay	45.4	18.4	0.0	17.9	46.2	0.3	36.5	58.4	63.3	52.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	18.4	0.0	17.9	46.2	0.3	36.5	58.4	63.3	52.5	6.0
Queue Length 50th (ft)	390	318	0	2	188	0	14	61	206	135	0
Queue Length 95th (ft)	446	663	0	10	#341	0	33	109	278	201	50
Internal Link Dist (ft)		728			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	1190	1204	1079	325	513	585	237	444	332	537	1167
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.62	0.02	0.03	0.52	0.08	0.09	0.19	0.82	0.31	0.44

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

2c. No-Build 2028 AM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							 				 
Traffic Volume (veh/h)	923	702	17	8	251	44	20	62	17	256	159	480
Future Volume (veh/h)	923	702	17	8	251	44	20	62	17	256	159	480
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	982	747	0	9	267	0	21	66	18	272	169	511
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	997	1100		296	580		178	160	44	359	396	591
Arrive On Green	0.29	0.59	0.00	0.01	0.31	0.00	0.02	0.11	0.11	0.12	0.21	0.21
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1415	386	1781	1870	2790
Grp Volume(v), veh/h	982	747	0	9	267	0	21	0	84	272	169	511
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1801	1781	1870	1395
Q Serve(g_s), s	36.7	35.6	0.0	0.4	14.9	0.0	1.3	0.0	5.6	15.5	10.2	23.0
Cycle Q Clear(g_c), s	36.7	35.6	0.0	0.4	14.9	0.0	1.3	0.0	5.6	15.5	10.2	23.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	997	1100		296	580		178	0	203	359	396	591
V/C Ratio(X)	0.99	0.68		0.03	0.46		0.12	0.00	0.41	0.76	0.43	0.87
Avail Cap(c_a), veh/h	997	1100		407	580		271	0	436	359	540	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	18.4	0.0	30.1	36.1	0.0	49.4	0.0	53.6	44.6	44.4	49.4
Incr Delay (d2), s/veh	24.8	3.4	0.0	0.0	2.6	0.0	0.3	0.0	1.3	9.0	0.7	7.4
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	18.8	15.4	0.0	0.2	7.1	0.0	0.6	0.0	2.7	1.7	4.8	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.8	21.8	0.0	30.2	38.7	0.0	49.7	0.0	55.0	53.6	45.1	56.9
LnGrp LOS	E	C		C	D		D	A	D	D	D	E
Approach Vol, veh/h	1729			276			105			952		
Approach Delay, s/veh	49.6			38.4			53.9			53.9		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	43.0	45.8	8.2	33.0	6.9	81.9	21.0	20.2				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	37.5	23.5	9.5	37.5	9.5	51.5	15.5	31.5				
Max Q Clear Time (g_c+I1), s	38.7	16.9	3.3	25.0	2.4	37.6	17.5	7.6				
Green Ext Time (p_c), s	0.0	1.2	0.0	2.5	0.0	7.1	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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	6	970	0	0	301	2	0	0	1	8	0	1
Future Vol, veh/h	6	970	0	0	301	2	0	0	1	8	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1032	0	0	320	2	0	0	1	9	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	322	0	0	1032	0	0	1366	1366	1032	1365	1364	320
Stage 1	-	-	-	-	-	-	1044	1044	-	320	320	-
Stage 2	-	-	-	-	-	-	322	322	-	1045	1044	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1238	-	-	673	-	-	124	147	283	125	148	721
Stage 1	-	-	-	-	-	-	277	306	-	692	652	-
Stage 2	-	-	-	-	-	-	690	651	-	276	306	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1238	-	-	673	-	-	123	145	283	124	146	721
Mov Cap-2 Maneuver	-	-	-	-	-	-	123	145	-	124	146	-
Stage 1	-	-	-	-	-	-	274	303	-	684	652	-
Stage 2	-	-	-	-	-	-	689	651	-	272	303	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			17.8			33.2		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	283	1238	-	-	673	-	-	137				
HCM Lane V/C Ratio	0.004	0.005	-	-	-	-	-	0.07				
HCM Control Delay (s)	17.8	7.9	0	-	0	-	-	33.2				
HCM Lane LOS	C	A	A	-	A	-	-	D				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2				

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	892	310	11	15	8
Future Vol, veh/h	9	892	310	11	15	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	949	330	12	16	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	342	0	-	0	1305	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	969	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1217	-	-	-	177	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	368	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1217	-	-	-	174	706
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	368	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		22		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1217	-	-	-	236	
HCM Lane V/C Ratio	0.008	-	-	-	0.104	
HCM Control Delay (s)	8	0	-	-	22	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	17	2	0	26
Future Vol, veh/h	1	0	17	2	0	26
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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	22	3	0	33
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	57	24	0	0	25	0
Stage 1	24	-	-	-	-	-
Stage 2	33	-	-	-	-	-
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	950	1052	-	-	1589	-
Stage 1	999	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	950	1052	-	-	1589	-
Mov Cap-2 Maneuver	950	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	950	1589	-	
HCM Lane V/C Ratio	-	-	0.001	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	0	0	17	0	0
Future Vol, veh/h	26	0	0	17	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	0	0	22	0	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	12	11	0	0	22	0
Stage 1	11	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1008	1070	-	-	1593	-
Stage 1	1012	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1008	1070	-	-	1593	-
Mov Cap-2 Maneuver	1008	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1008	1593	-		
HCM Lane V/C Ratio	-	- 0.033	-	-		
HCM Control Delay (s)	-	- 8.7	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	26	111	1	2	2
Future Vol, veh/h	2	26	111	1	2	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	-
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	28	121	1	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	122	0	-	0	154	122
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1465	-	-	-	838	929
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1465	-	-	-	837	929
Mov Cap-2 Maneuver	-	-	-	-	837	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	991	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1465	-	-	-	881	
HCM Lane V/C Ratio	0.001	-	-	-	0.005	
HCM Control Delay (s)	7.5	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	26	106	4	2	2
Future Vol, veh/h	3	26	106	4	2	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	-
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	3	28	115	4	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	119	0	-	0	151	117
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1469	-	-	-	841	935
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1469	-	-	-	839	935
Mov Cap-2 Maneuver	-	-	-	-	839	-
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	988	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		9.1		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1469	-	-	-	884	
HCM Lane V/C Ratio	0.002	-	-	-	0.005	
HCM Control Delay (s)	7.5	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Timings 1: Cherokee St & I-75 NB Ramps

2d. No-Build 2028 PM - Improved
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	875	295	101	297	319	83
Future Volume (vph)	875	295	101	297	319	83
Lane Group Flow (vph)	951	321	110	323	347	90
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	42.0	42.0	15.0	48.0	33.0	33.0
Total Split (%)	46.7%	46.7%	16.7%	53.3%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.81	0.43	0.36	0.17	0.24	0.13
Control Delay	32.4	4.0	55.5	9.9	20.3	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	4.0	55.5	9.9	20.3	5.0
Queue Length 50th (ft)	248	0	35	37	70	0
Queue Length 95th (ft)	292	49	59	54	116	30
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1392	832	362	1890	1448	705
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.39	0.30	0.17	0.24	0.13

Intersection Summary

Cycle Length: 90

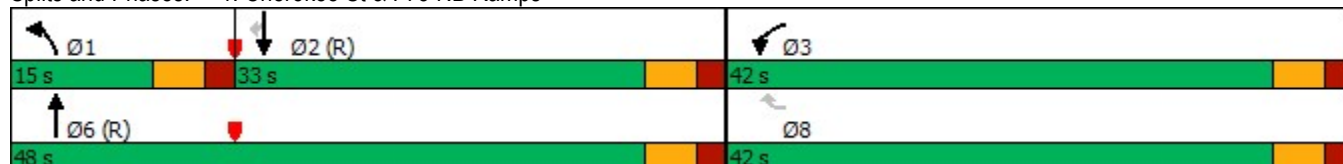
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

2d. No-Build 2028 PM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	875	0	295	101	297	0	0	319	83
Future Volume (veh/h)	0	0	0	875	0	295	101	297	0	0	319	83
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				951	0	0	110	323	0	0	347	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				1088	0		180	2000	0	0	1598	
Arrive On Green				0.31	0.00	0.00	0.10	1.00	0.00	0.00	0.45	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				951	0	0	110	323	0	0	347	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				23.4	0.0	0.0	2.7	0.0	0.0	0.0	5.4	0.0
Cycle Q Clear(g_c), s				23.4	0.0	0.0	2.7	0.0	0.0	0.0	5.4	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1088	0		180	2000	0	0	1598	
V/C Ratio(X)				0.87	0.00		0.61	0.16	0.00	0.00	0.22	
Avail Cap(c_a), veh/h				1401	0		365	2000	0	0	1598	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.99	0.99	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				29.1	0.0	0.0	39.5	0.0	0.0	0.0	15.1	0.0
Incr Delay (d2), s/veh				5.2	0.0	0.0	3.3	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.7	0.0	0.0	1.2	0.0	0.0	0.0	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.3	0.0	0.0	42.8	0.2	0.0	0.0	15.4	0.0
LnGrp LOS				C	A		D	A	A	A	B	
Approach Vol, veh/h					951			433			347	
Approach Delay, s/veh					34.3			11.0			15.4	
Approach LOS					C			B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.2	46.0				56.2		33.8				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	9.5	27.5				42.5		36.5				
Max Q Clear Time (g_c+l1), s	4.7	7.4				2.0		25.4				
Green Ext Time (p_c), s	0.1	3.7				4.3		2.9				
Intersection Summary												
HCM 6th Ctrl Delay				24.7								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 2: Cherokee St & I-75 SB Ramps

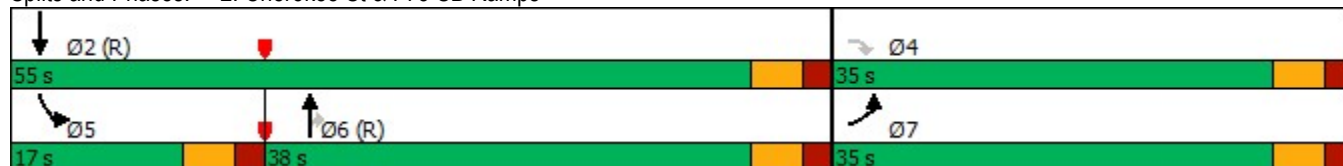
2d. No-Build 2028 PM - Improved
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	64	309	411	128	1088
Future Volume (vph)	56	64	309	411	128	1088
Lane Group Flow (vph)	58	67	322	428	133	1133
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	35.0	35.0	38.0	38.0	17.0	55.0
Total Split (%)	38.9%	38.9%	42.2%	42.2%	18.9%	61.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.22	0.31	0.14	0.36	0.40	0.38
Control Delay	40.5	7.9	6.6	1.7	40.2	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	7.9	6.6	1.7	40.2	1.8
Queue Length 50th (ft)	16	0	34	0	28	11
Queue Length 95th (ft)	34	22	57	35	m45	13
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1125	584	2355	1196	438	2962
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.11	0.14	0.36	0.30	0.38

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

2d. No-Build 2028 PM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	0	64	0	0	0	0	309	411	128	1088	0
Future Volume (veh/h)	56	0	64	0	0	0	0	309	411	128	1088	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	58	0	67				0	322	0	133	1133	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	222	0	102				0	2465		203	2891	0
Arrive On Green	0.06	0.00	0.06				0.00	0.69	0.00	0.12	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	58	0	67				0	322	0	133	1133	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	1.4	0.0	3.7				0.0	2.7	0.0	3.3	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	3.7				0.0	2.7	0.0	3.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	222	0	102				0	2465		203	2891	0
V/C Ratio(X)	0.26	0.00	0.66				0.00	0.13		0.65	0.39	0.00
Avail Cap(c_a), veh/h	1133	0	520				0	2465		442	2891	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	40.1	0.0	41.1				0.0	4.6	0.0	38.8	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	7.0				0.0	0.1	0.0	2.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	3.4				0.0	0.8	0.0	1.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	48.1				0.0	4.8	0.0	41.4	0.3	0.0
LnGrp LOS	D	A	D				A	A		D	A	A
Approach Vol, veh/h	125						322			1266		
Approach Delay, s/veh	44.7						4.8			4.6		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	78.7			11.3			10.8			67.9		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	49.5			29.5			11.5			32.5		
Max Q Clear Time (g_c+I1), s	2.0			5.7			5.3			4.7		
Green Ext Time (p_c), s	21.4			0.3			0.2			3.9		
Intersection Summary												
HCM 6th Ctrl Delay	7.6											
HCM 6th LOS	A											

Notes

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

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	9	0	11	30	0	26	24	668	58	59	1081	17
Future Vol, veh/h	9	0	11	30	0	26	24	668	58	59	1081	17
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	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	100	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	12	33	0	28	26	726	63	64	1175	18

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1727	2153	597	1526	2131	395	1193	0	0	789	0	0
Stage 1	1312	1312	-	810	810	-	-	-	-	-	-	-
Stage 2	415	841	-	716	1321	-	-	-	-	-	-	-
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	57	47	446	81	49	604	581	-	-	827	-	-
Stage 1	167	227	-	340	391	-	-	-	-	-	-	-
Stage 2	585	379	-	387	224	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	49	41	446	72	43	604	581	-	-	827	-	-
Mov Cap-2 Maneuver	49	41	-	72	43	-	-	-	-	-	-	-
Stage 1	159	210	-	325	373	-	-	-	-	-	-	-
Stage 2	533	362	-	347	207	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	53.2		54.1		0.4		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	581	-	-	96 72 604	827	-	-
HCM Lane V/C Ratio	0.045	-	-	0.226 0.453 0.047	0.078	-	-
HCM Control Delay (s)	11.5	-	-	53.2 91.1 11.3	9.7	-	-
HCM Lane LOS	B	-	-	F F B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8 1.8 0.1	0.3	-	-

Timings
4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2d. No-Build 2028 PM - Improved

09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	83	0	71	10	0	59	669	16	1042	15
Future Volume (vph)	83	0	71	10	0	59	669	16	1042	15
Lane Group Flow (vph)	0	87	75	0	28	62	711	17	1097	16
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	29.5	29.5	29.5	29.5	29.5	15.0	55.5	15.0	55.5	55.5
Total Split (%)	29.5%	29.5%	29.5%	29.5%	29.5%	15.0%	55.5%	15.0%	55.5%	55.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.54	0.29		0.11	0.15	0.26	0.03	0.44	0.01
Control Delay		53.3	9.5		0.9	4.2	5.9	3.8	9.3	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		53.3	9.5		0.9	4.2	5.9	3.8	9.3	0.0
Queue Length 50th (ft)		53	0		0	7	53	2	168	0
Queue Length 95th (ft)		98	32		0	21	143	8	255	0
Internal Link Dist (ft)		358			232		352		656	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		330	446		417	443	2696	650	2509	1147
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.26	0.17		0.07	0.14	0.26	0.03	0.44	0.01

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy



HCM 6th Signalized Intersection Summary
4: Cherokee St & Ingles Market Drwy (S)/Existing Drwy

2d. No-Build 2028 PM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	0	71	10	0	16	59	669	7	16	1042	15
Future Volume (veh/h)	83	0	71	10	0	16	59	669	7	16	1042	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	0	0	11	0	17	62	704	7	17	1097	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	0		84	17	79	449	2665	26	605	2548	
Arrive On Green	0.08	0.00	0.00	0.08	0.00	0.08	0.04	0.74	0.74	0.02	0.72	0.00
Sat Flow, veh/h	1474	0	1585	441	227	1032	1781	3605	36	1781	3554	1585
Grp Volume(v), veh/h	87	0	0	28	0	0	62	347	364	17	1097	0
Grp Sat Flow(s),veh/h/ln	1474	0	1585	1700	0	0	1781	1777	1864	1781	1777	1585
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	0.9	6.3	6.3	0.3	12.6	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	1.6	0.0	0.0	0.9	6.3	6.3	0.3	12.6	0.0
Prop In Lane	1.00		1.00	0.39		0.61	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	185	0		181	0	0	449	1314	1378	605	2548	
V/C Ratio(X)	0.47	0.00		0.15	0.00	0.00	0.14	0.26	0.26	0.03	0.43	
Avail Cap(c_a), veh/h	413	0		428	0	0	545	1314	1378	741	2548	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.1	0.0	0.0	43.3	0.0	0.0	3.9	4.2	4.2	3.6	5.8	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.4	0.0	0.0	0.1	0.5	0.5	0.0	0.5	0.0
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	2.2	0.0	0.0	0.7	0.0	0.0	0.2	2.0	2.1	0.1	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	0.0	0.0	43.7	0.0	0.0	4.1	4.7	4.7	3.6	6.3	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	
Approach Vol, veh/h	87			28			773			1114		
Approach Delay, s/veh	46.9			43.7			4.7			6.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	77.2		13.2	7.4	79.4		13.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	50.0		24.0	9.5	50.0		24.0				
Max Q Clear Time (g_c+I1), s	2.9	14.6		7.7	2.3	8.3		3.6				
Green Ext Time (p_c), s	0.0	17.8		0.3	0.0	10.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

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

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	6	4	1	17	7	698	2	16	1019	10
Future Vol, veh/h	17	0	6	4	1	17	7	698	2	16	1019	10
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	7	4	1	18	8	759	2	17	1108	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1544	1925	560	1364	1929	381	1119	0	0	761	0	0
Stage 1	1148	1148	-	776	776	-	-	-	-	-	-	-
Stage 2	396	777	-	588	1153	-	-	-	-	-	-	-
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	78	66	472	106	66	617	620	-	-	847	-	-
Stage 1	211	272	-	356	406	-	-	-	-	-	-	-
Stage 2	601	405	-	462	270	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	73	64	472	102	64	617	620	-	-	847	-	-
Mov Cap-2 Maneuver	163	172	-	224	170	-	-	-	-	-	-	-
Stage 1	208	267	-	351	401	-	-	-	-	-	-	-
Stage 2	574	400	-	446	265	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	25.9		13.9		0.1		0.1					
HCM LOS	D		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	620	-	-	197	429	847	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.127	0.056	0.021	-	-				
HCM Control Delay (s)	10.9	-	-	25.9	13.9	9.3	-	-				
HCM Lane LOS	B	-	-	D	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0.1	-	-				

Timings
6: Cherokee St & SR 92

2d. No-Build 2028 PM - Improved

09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	456	449	37	22	315	111	50	149	75	186	739
Future Volume (vph)	456	449	37	22	315	111	50	149	75	186	739
Lane Group Flow (vph)	507	499	41	24	350	123	56	180	83	207	821
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	26.0	38.0	38.0	15.0	27.0	27.0	15.0	35.5	21.5	42.0	42.0
Total Split (%)	23.6%	34.5%	34.5%	13.6%	24.5%	24.5%	13.6%	32.3%	19.5%	38.2%	38.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.76	0.50	0.04	0.06	0.52	0.17	0.20	0.53	0.27	0.58	0.68
Control Delay	49.5	22.5	0.1	15.0	35.5	0.5	25.8	44.5	27.5	45.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	22.5	0.1	15.0	35.5	0.5	25.8	44.5	27.5	45.7	5.6
Queue Length 50th (ft)	175	242	0	7	199	0	28	114	42	134	0
Queue Length 95th (ft)	222	421	0	23	#412	0	50	169	69	191	50
Internal Link Dist (ft)		728			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	699	1005	940	477	674	727	299	504	393	618	1473
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.50	0.04	0.05	0.52	0.17	0.19	0.36	0.21	0.33	0.56

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

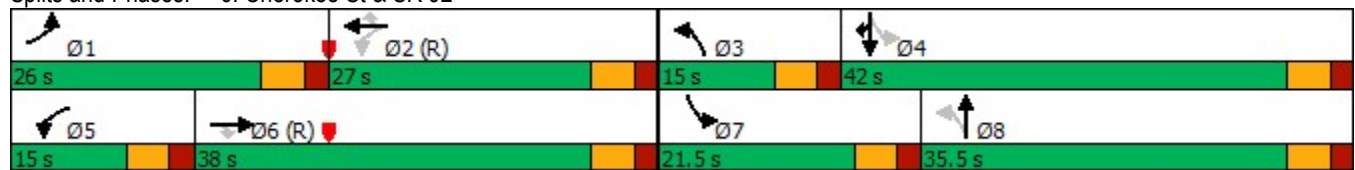
Natural Cycle: 105

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

2d. No-Build 2028 PM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	456	449	37	22	315	111	50	149	13	75	186	739
Future Volume (veh/h)	456	449	37	22	315	111	50	149	13	75	186	739
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	507	499	0	24	350	0	56	166	14	83	207	821
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	576	789		298	522		259	523	44	429	593	884
Arrive On Green	0.17	0.42	0.00	0.02	0.28	0.00	0.04	0.31	0.31	0.05	0.32	0.32
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1701	143	1781	1870	2790
Grp Volume(v), veh/h	507	499	0	24	350	0	56	0	180	83	207	821
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1845	1781	1870	1395
Q Serve(g_s), s	15.8	23.1	0.0	1.0	18.3	0.0	2.3	0.0	8.2	3.5	9.3	31.3
Cycle Q Clear(g_c), s	15.8	23.1	0.0	1.0	18.3	0.0	2.3	0.0	8.2	3.5	9.3	31.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	576	789		298	522		259	0	567	429	593	884
V/C Ratio(X)	0.88	0.63		0.08	0.67		0.22	0.00	0.32	0.19	0.35	0.93
Avail Cap(c_a), veh/h	644	789		410	522		347	0	567	605	621	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	25.1	0.0	27.4	35.2	0.0	24.7	0.0	29.2	24.4	28.8	36.4
Incr Delay (d2), s/veh	12.5	3.8	0.0	0.1	6.7	0.0	0.4	0.0	0.3	0.2	0.4	14.8
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	7.6	10.6	0.0	0.4	9.0	0.0	1.0	0.0	3.7	1.5	4.2	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	28.9	0.0	27.5	41.9	0.0	25.1	0.0	29.5	24.6	29.2	51.2
LnGrp LOS	E	C		C	D		C	A	C	C	C	D
Approach Vol, veh/h		1006			374			236			1111	
Approach Delay, s/veh		43.2			40.9			28.5			45.1	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.8	36.2	9.6	40.4	8.1	51.9	10.6	39.3				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	20.5	21.5	9.5	36.5	9.5	32.5	16.0	30.0				
Max Q Clear Time (g_c+I1), s	17.8	20.3	4.3	33.3	3.0	25.1	5.5	10.2				
Green Ext Time (p_c), s	0.6	0.4	0.0	1.5	0.0	2.8	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay 42.4
HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	530	6	13	437	19	1	1	13	9	0	10
Future Vol, veh/h	2	530	6	13	437	19	1	1	13	9	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	609	7	15	502	22	1	1	15	10	0	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	616	0	0	1162	1167	609	1157	1152	502
Stage 1	-	-	-	-	-	-	613	613	-	532	532	-
Stage 2	-	-	-	-	-	-	549	554	-	625	620	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1043	-	-	964	-	-	172	194	495	173	198	569
Stage 1	-	-	-	-	-	-	480	483	-	531	526	-
Stage 2	-	-	-	-	-	-	520	514	-	473	480	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1043	-	-	964	-	-	166	190	495	165	194	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	190	-	165	194	-
Stage 1	-	-	-	-	-	-	479	482	-	529	518	-
Stage 2	-	-	-	-	-	-	502	506	-	456	479	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			14.4			19.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	399	1043	-	-	964	-	-	263				
HCM Lane V/C Ratio	0.043	0.002	-	-	0.016	-	-	0.083				
HCM Control Delay (s)	14.4	8.5	0	-	8.8	-	-	19.9				
HCM Lane LOS	B	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	604	464	8	18	16
Future Vol, veh/h	7	604	464	8	18	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	657	504	9	20	17
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	513	0	-	0	1182	509
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	673	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1052	-	-	-	210	564
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	507	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1052	-	-	-	207	564
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	507	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		18.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1052	-	-	-	295	
HCM Lane V/C Ratio	0.007	-	-	-	0.125	
HCM Control Delay (s)	8.4	0	-	-	18.9	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	16	2	0	30
Future Vol, veh/h	2	0	16	2	0	30
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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	23	3	0	43
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	68	25	0	0	26	0
Stage 1	25	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	937	1051	-	-	1588	-
Stage 1	998	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	937	1051	-	-	1588	-
Mov Cap-2 Maneuver	937	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	937	1588	-
HCM Lane V/C Ratio		-	-	0.003	-	-
HCM Control Delay (s)		-	-	8.9	0	-
HCM Lane LOS		-	-	A	A	-
HCM 95th %tile Q(veh)		-	-	0	0	-

Intersection						
Int Delay, s/veh	5.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	0	0	15	0	0
Future Vol, veh/h	34	0	0	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	0	19	0	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	11	10	0	0	19	0
Stage 1	10	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1009	1071	-	-	1597	-
Stage 1	1013	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1009	1071	-	-	1597	-
Mov Cap-2 Maneuver	1009	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1009	1597	-		
HCM Lane V/C Ratio	-	- 0.044	-	-		
HCM Control Delay (s)	-	- 8.7	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	113	53	0	2	2
Future Vol, veh/h	3	113	53	0	2	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	140	65	0	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	65	0	-	0	213	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1537	-	-	-	775	999
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1537	-	-	-	773	999
Mov Cap-2 Maneuver	-	-	-	-	773	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	880	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.2		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1537	-	-	-	872	
HCM Lane V/C Ratio	0.002	-	-	-	0.006	
HCM Control Delay (s)	7.3	0	-	-	9.2	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	114	50	2	2	2
Future Vol, veh/h	3	114	50	2	2	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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	141	62	2	2	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	64	0	-	0	212	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1538	-	-	-	776	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	879	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1538	-	-	-	774	1002
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	879	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1538	-	-	-	873	
HCM Lane V/C Ratio	0.002	-	-	-	0.006	
HCM Control Delay (s)	7.3	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Future “Build” Intersections Analysis

Timings

1: Cherokee St & I-75 NB Ramps

3a. Build 2028 AM
09/05/2022

						
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	 		 	 	 	
Traffic Volume (vph)	654	80	109	376	436	30
Future Volume (vph)	654	80	109	376	436	30
Lane Group Flow (vph)	788	96	131	453	525	36
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	39.0	39.0	17.0	51.0	34.0	34.0
Total Split (%)	43.3%	43.3%	18.9%	56.7%	37.8%	37.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.78	0.18	0.39	0.22	0.35	0.05
Control Delay	34.7	5.3	40.3	8.9	19.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	5.3	40.3	8.9	19.6	0.1
Queue Length 50th (ft)	208	0	40	68	104	0
Queue Length 95th (ft)	224	25	63	84	151	0
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1277	650	438	2066	1506	729
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.15	0.30	0.22	0.35	0.05

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

3a. Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	654	0	80	109	376	0	0	436	30
Future Volume (veh/h)	0	0	0	654	0	80	109	376	0	0	436	30
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				788	0	0	131	453	0	0	525	0
Peak Hour Factor				0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				920	0		201	2174	0	0	1750	
Arrive On Green				0.27	0.00	0.00	0.12	1.00	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				788	0	0	131	453	0	0	525	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				19.5	0.0	0.0	3.3	0.0	0.0	0.0	7.9	0.0
Cycle Q Clear(g_c), s				19.5	0.0	0.0	3.3	0.0	0.0	0.0	7.9	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0		201	2174	0	0	1750	
V/C Ratio(X)				0.86	0.00		0.65	0.21	0.00	0.00	0.30	
Avail Cap(c_a), veh/h				1286	0		442	2174	0	0	1750	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.99	0.99	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.4	0.0	0.0	38.9	0.0	0.0	0.0	13.6	0.0
Incr Delay (d2), s/veh				4.3	0.0	0.0	3.5	0.2	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.1	0.0	0.0	1.4	0.1	0.0	0.0	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.7	0.0	0.0	42.4	0.2	0.0	0.0	14.0	0.0
LnGrp LOS				D	A		D	A	A	A	B	
Approach Vol, veh/h					788			584			525	
Approach Delay, s/veh					35.7			9.7			14.0	
Approach LOS					D			A			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.7	49.8				60.6		29.4				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	11.5	28.5				45.5		33.5				
Max Q Clear Time (g_c+l1), s	5.3	9.9				2.0		21.5				
Green Ext Time (p_c), s	0.2	5.6				6.4		2.4				
Intersection Summary												
HCM 6th Ctrl Delay				21.7								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 2: Cherokee St & I-75 SB Ramps

3a. Build 2028 AM
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	166	329	326	900	175	842
Future Volume (vph)	166	329	326	900	175	842
Lane Group Flow (vph)	175	346	343	947	184	886
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.5	34.5	40.5	40.5	15.0	55.5
Total Split (%)	38.3%	38.3%	45.0%	45.0%	16.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.25	0.80	0.19	0.78	0.50	0.37
Control Delay	29.0	34.4	14.4	8.5	31.4	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	34.4	14.4	8.5	31.4	9.6
Queue Length 50th (ft)	43	117	54	29	47	179
Queue Length 95th (ft)	62	192	100	#244	90	225
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1106	600	1782	1217	391	2380
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.58	0.19	0.78	0.47	0.37

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

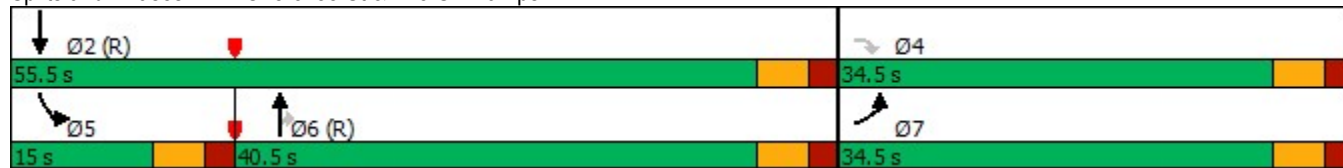
Natural Cycle: 90

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

3a. Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	0	329	0	0	0	0	326	900	175	842	0
Future Volume (veh/h)	166	0	329	0	0	0	0	326	900	175	842	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	175	0	346				0	343	0	184	886	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	850	0	390				0	1765		256	2245	0
Arrive On Green	0.25	0.00	0.25				0.00	0.50	0.00	0.15	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	175	0	346				0	343	0	184	886	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	3.6	0.0	18.9				0.0	4.8	0.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	18.9				0.0	4.8	0.0	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	850	0	390				0	1765		256	2245	0
V/C Ratio(X)	0.21	0.00	0.89				0.00	0.19		0.72	0.39	0.00
Avail Cap(c_a), veh/h	1114	0	511				0	1765		365	2245	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.76	0.76	0.00
Uniform Delay (d), s/veh	26.9	0.0	32.7				0.0	12.6	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	14.0				0.0	0.2	0.0	3.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	16.7				0.0	1.9	0.0	1.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	46.8				0.0	12.9	0.0	40.5	0.4	0.0
LnGrp LOS	C	A	D				A	B		D	A	A
Approach Vol, veh/h	521						343			1070		
Approach Delay, s/veh	40.1						12.9			7.3		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	62.4			27.6			12.2			50.2		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	50.0			29.0			9.5			35.0		
Max Q Clear Time (g_c+I1), s	2.0			20.9			6.6			6.8		
Green Ext Time (p_c), s	15.2			1.2			0.2			4.2		
Intersection Summary												
HCM 6th Ctrl Delay	17.1											
HCM 6th LOS	B											

Notes

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

Intersection												
Int Delay, s/veh	67											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	5	23	43	6	126	15	1063	17	118	1080	4
Future Vol, veh/h	25	5	23	43	6	126	15	1063	17	118	1080	4
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	-	-	-	-	-	-	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	5	24	45	6	131	16	1107	18	123	1125	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1962	2530	565	1959	2523	563	1129	0	0	1125	0	0
Stage 1	1373	1373	-	1148	1148	-	-	-	-	-	-	-
Stage 2	589	1157	-	811	1375	-	-	-	-	-	-	-
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	38	27	468	~ 38	27	470	615	-	-	617	-	-
Stage 1	153	212	-	211	272	-	-	-	-	-	-	-
Stage 2	461	269	-	339	211	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 18	21	468	~ 24	21	470	615	-	-	617	-	-
Mov Cap-2 Maneuver	~ 18	21	-	~ 24	21	-	-	-	-	-	-	-
Stage 1	149	170	-	206	265	-	-	-	-	-	-	-
Stage 2	316	262	-	250	169	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	618.3		\$ 770		0.2		1.2					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	615	-	-	32	75	617	-	-				
HCM Lane V/C Ratio	0.025	-	-	1.725	2.431	0.199	-	-				
HCM Control Delay (s)	11	-	-	\$ 618.3	\$ 770	12.3	-	-				
HCM Lane LOS	B	-	-	F	F	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	6.2	17.4	0.7	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Timings 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3a. Build 2028 AM
09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	5	16	46	3	13	949	227	845	6
Future Volume (vph)	13	5	16	46	3	13	949	227	845	6
Lane Group Flow (vph)	0	19	17	0	172	14	1072	239	889	6
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	32.0	32.0	32.0	32.0	32.0	15.0	60.0	28.0	73.0	73.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	12.5%	50.0%	23.3%	60.8%	60.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.19	0.06		0.73	0.03	0.46	0.54	0.33	0.00
Control Delay		50.4	0.4		41.5	4.3	11.5	8.0	6.0	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		50.4	0.4		41.5	4.3	11.5	8.0	6.0	0.0
Queue Length 50th (ft)		14	0		61	2	177	33	74	0
Queue Length 95th (ft)		36	0		130	8	331	72	195	0
Internal Link Dist (ft)		358			235		352		311	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		220	445		405	538	2346	573	2712	1230
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.04		0.42	0.03	0.46	0.42	0.33	0.00

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

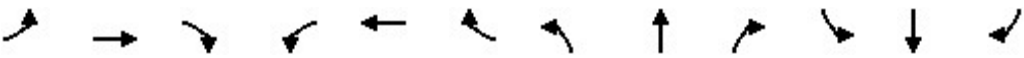
Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2



HCM 6th Signalized Intersection Summary 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3a. Build 2028 AM
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↕		↖	↕	↗
Traffic Volume (veh/h)	13	5	16	46	3	115	13	949	69	227	845	6
Future Volume (veh/h)	13	5	16	46	3	115	13	949	69	227	845	6
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	14	5	0	48	3	121	14	999	73	239	889	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	44		84	15	143	477	2256	165	448	2548	
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.02	0.67	0.67	0.06	0.72	0.00
Sat Flow, veh/h	707	338	1585	349	114	1097	1781	3358	245	1781	3554	1585
Grp Volume(v), veh/h	19	0	0	172	0	0	14	529	543	239	889	0
Grp Sat Flow(s),veh/h/ln	1045	0	1585	1559	0	0	1781	1777	1826	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.0	0.0	0.0	0.3	16.7	16.7	4.7	11.3	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	12.9	0.0	0.0	0.3	16.7	16.7	4.7	11.3	0.0
Prop In Lane	0.74		1.00	0.28		0.70	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	188	0		241	0	0	477	1194	1227	448	2548	
V/C Ratio(X)	0.10	0.00		0.71	0.00	0.00	0.03	0.44	0.44	0.53	0.35	
Avail Cap(c_a), veh/h	314	0		381	0	0	590	1194	1227	675	2548	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.9	0.0	0.0	50.9	0.0	0.0	6.1	9.2	9.2	7.0	6.4	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.9	0.0	0.0	0.0	1.2	1.2	1.0	0.4	0.0
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	0.5	0.0	0.0	5.4	0.0	0.0	0.1	6.3	6.4	1.6	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	0.0	0.0	54.8	0.0	0.0	6.1	10.4	10.4	8.0	6.8	0.0
LnGrp LOS	D	A		D	A	A	A	B	B	A	A	
Approach Vol, veh/h	19			172			1086			1128		
Approach Delay, s/veh	46.2			54.8			10.3			7.0		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	91.5		21.1	12.8	86.1		21.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	67.5		26.5	22.5	54.5		26.5				
Max Q Clear Time (g_c+I1), s	2.3	13.3		3.4	6.7	18.7		14.9				
Green Ext Time (p_c), s	0.0	15.8		0.0	0.6	16.6		0.7				

Intersection Summary

HCM 6th Ctrl Delay 12.2
HCM 6th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	2	10	4	0	17	4	729	12	23	698	11
Future Vol, veh/h	13	2	10	4	0	17	4	729	12	23	698	11
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	2	10	4	0	18	4	759	13	24	727	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1169	1561	369	1187	1560	386	738	0	0	772	0	0
Stage 1	781	781	-	774	774	-	-	-	-	-	-	-
Stage 2	388	780	-	413	786	-	-	-	-	-	-	-
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	148	111	628	144	111	612	864	-	-	839	-	-
Stage 1	354	403	-	357	406	-	-	-	-	-	-	-
Stage 2	607	404	-	587	401	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	140	107	628	137	107	612	864	-	-	839	-	-
Mov Cap-2 Maneuver	257	224	-	256	229	-	-	-	-	-	-	-
Stage 1	352	391	-	355	404	-	-	-	-	-	-	-
Stage 2	587	402	-	558	389	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.8		12.8		0		0.3	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	331	484	839	-
HCM Lane V/C Ratio	0.005	-	-	0.079	0.045	0.029	-
HCM Control Delay (s)	9.2	-	-	16.8	12.8	9.4	-
HCM Lane LOS	A	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	-

Timings
6: Cherokee St & SR 92

3a. Build 2028 AM
09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	986	718	17	11	261	44	20	83	256	173	521
Future Volume (vph)	986	718	17	11	261	44	20	83	256	173	521
Lane Group Flow (vph)	1049	764	18	12	278	47	21	111	272	184	554
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	45.0	59.0	59.0	15.0	29.0	29.0	15.0	34.0	22.0	41.0	41.0
Total Split (%)	34.6%	45.4%	45.4%	11.5%	22.3%	22.3%	11.5%	26.2%	16.9%	31.5%	31.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.84	0.67	0.02	0.05	0.63	0.09	0.10	0.59	0.80	0.47	0.54
Control Delay	44.7	22.9	0.1	19.2	53.0	0.3	34.9	63.0	58.9	50.2	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	22.9	0.1	19.2	53.0	0.3	34.9	63.0	58.9	50.2	5.6
Queue Length 50th (ft)	412	357	0	3	211	0	13	84	199	144	0
Queue Length 95th (ft)	496	713	0	13	#370	0	33	139	271	212	51
Internal Link Dist (ft)		665			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	1254	1135	1026	295	443	533	249	402	340	508	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.67	0.02	0.04	0.63	0.09	0.08	0.28	0.80	0.36	0.48

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

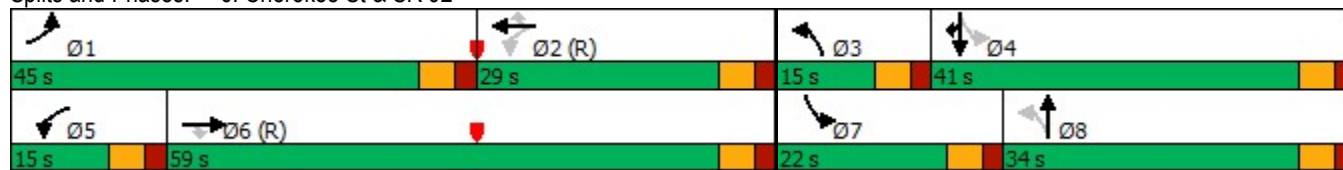
Natural Cycle: 125

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary

6: Cherokee St & SR 92

3a. Build 2028 AM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							 				 
Traffic Volume (veh/h)	986	718	17	11	261	44	20	83	22	256	173	521
Future Volume (veh/h)	986	718	17	11	261	44	20	83	22	256	173	521
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	1049	764	0	12	278	0	21	88	23	272	184	554
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1050	1069		274	526		177	169	44	359	421	628
Arrive On Green	0.30	0.57	0.00	0.01	0.28	0.00	0.02	0.12	0.12	0.13	0.23	0.23
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1429	374	1781	1870	2790
Grp Volume(v), veh/h	1049	764	0	12	278	0	21	0	111	272	184	554
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1803	1781	1870	1395
Q Serve(g_s), s	39.4	38.4	0.0	0.6	16.3	0.0	1.3	0.0	7.5	16.5	11.0	25.0
Cycle Q Clear(g_c), s	39.4	38.4	0.0	0.6	16.3	0.0	1.3	0.0	7.5	16.5	11.0	25.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	1050	1069		274	526		177	0	214	359	421	628
V/C Ratio(X)	1.00	0.71		0.04	0.53		0.12	0.00	0.52	0.76	0.44	0.88
Avail Cap(c_a), veh/h	1050	1069		380	526		271	0	395	359	511	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	20.2	0.0	32.5	39.4	0.0	48.8	0.0	53.8	42.8	43.3	48.7
Incr Delay (d2), s/veh	27.5	4.1	0.0	0.1	3.8	0.0	0.3	0.0	1.9	8.9	0.7	10.3
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	20.4	16.9	0.0	0.3	7.9	0.0	0.6	0.0	3.6	8.4	5.2	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	24.2	0.0	32.6	43.2	0.0	49.1	0.0	55.8	51.7	44.0	59.0
LnGrp LOS	E	C		C	D		D	A	E	D	D	E
Approach Vol, veh/h	1813			290			132			1010		
Approach Delay, s/veh	52.3			42.7			54.7			54.3		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	45.0	42.1	8.2	34.8	7.3	79.8	22.0	20.9				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	39.5	23.5	9.5	35.5	9.5	53.5	16.5	28.5				
Max Q Clear Time (g_c+I1), s	41.4	18.3	3.3	27.0	2.6	40.4	18.5	9.5				
Green Ext Time (p_c), s	0.0	1.1	0.0	2.3	0.0	6.9	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	52.2											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔		↔			↔	
Traffic Vol, veh/h	11	986	0	0	311	7	0	1	1	11	1	4
Future Vol, veh/h	11	986	0	0	311	7	0	1	1	11	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1049	0	0	331	7	0	1	1	12	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	1049	0	0	1410	1411	1049	1405	1404	331
Stage 1	-	-	-	-	-	-	1073	1073	-	331	331	-
Stage 2	-	-	-	-	-	-	337	338	-	1074	1073	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1221	-	-	663	-	-	116	138	276	117	140	711
Stage 1	-	-	-	-	-	-	267	297	-	682	645	-
Stage 2	-	-	-	-	-	-	677	641	-	266	297	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1221	-	-	663	-	-	113	135	276	114	137	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	135	-	114	137	-
Stage 1	-	-	-	-	-	-	261	290	-	666	645	-
Stage 2	-	-	-	-	-	-	672	641	-	258	290	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	25.1	32.9
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	181	1221	-	-	663	-	-	146
HCM Lane V/C Ratio	0.012	0.01	-	-	-	-	-	0.117
HCM Control Delay (s)	25.1	8	0	-	0	-	-	32.9
HCM Lane LOS	D	A	A	-	A	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	895	315	58	45	18
Future Vol, veh/h	25	895	315	58	45	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	952	335	62	48	19
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	397	0	-	0	1372	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	1006	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1162	-	-	-	161	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	353	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1162	-	-	-	153	679
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	353	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		32.6		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1162	-	-	-	196	
HCM Lane V/C Ratio	0.023	-	-	-	0.342	
HCM Control Delay (s)	8.2	0	-	-	32.6	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	20	1	1	0	31	38	2	0	40	0
Future Vol, veh/h	0	2	20	1	1	0	31	38	2	0	40	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	25	1	1	0	39	48	3	0	51	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	179	180	51	193	179	50	51	0	0	51	0	0
Stage 1	51	51	-	128	128	-	-	-	-	-	-	-
Stage 2	128	129	-	65	51	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	783	714	1017	767	715	1018	1555	-	-	1555	-	-
Stage 1	962	852	-	876	790	-	-	-	-	-	-	-
Stage 2	876	789	-	946	852	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	767	695	1017	731	696	1018	1555	-	-	1555	-	-
Mov Cap-2 Maneuver	767	695	-	731	696	-	-	-	-	-	-	-
Stage 1	937	852	-	853	769	-	-	-	-	-	-	-
Stage 2	852	768	-	920	852	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.8		10.1			3.2			0			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1555	-	-	976	713	1555	-	-				
HCM Lane V/C Ratio	0.025	-	-	0.029	0.004	-	-	-				
HCM Control Delay (s)	7.4	0	-	8.8	10.1	0	-	-				
HCM Lane LOS	A	A	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-	-				

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	0	21	17	0	14
Future Vol, veh/h	26	0	21	17	0	14
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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	0	27	22	0	18
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	56	38	0	0	49	0
Stage 1	38	-	-	-	-	-
Stage 2	18	-	-	-	-	-
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	952	1034	-	-	1558	-
Stage 1	984	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	952	1034	-	-	1558	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 952		1558	-	
HCM Lane V/C Ratio	-	- 0.035		-	-	
HCM Control Delay (s)	-	- 8.9		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	29	22	5	116	1	16	0	3	2	0	2
Future Vol, veh/h	2	29	22	5	116	1	16	0	3	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	32	24	5	126	1	17	0	3	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	127	0	0	56	0	0	186	185	44	187	197	127
Stage 1	-	-	-	-	-	-	48	48	-	137	137	-
Stage 2	-	-	-	-	-	-	138	137	-	50	60	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1459	-	-	1549	-	-	775	709	1026	774	699	923
Stage 1	-	-	-	-	-	-	965	855	-	866	783	-
Stage 2	-	-	-	-	-	-	865	783	-	963	845	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1549	-	-	771	706	1026	769	696	923
Mov Cap-2 Maneuver	-	-	-	-	-	-	771	706	-	769	696	-
Stage 1	-	-	-	-	-	-	964	854	-	865	781	-
Stage 2	-	-	-	-	-	-	860	781	-	959	844	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.3			9.6			9.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	802	1459	-	-	1549	-	-	839				
HCM Lane V/C Ratio	0.026	0.001	-	-	0.004	-	-	0.005				
HCM Control Delay (s)	9.6	7.5	0	-	7.3	0	-	9.3				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

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	3	48	91	5	122	4	49	2	3	2	1	2
Future Vol, veh/h	3	48	91	5	122	4	49	2	3	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	52	99	5	133	4	53	2	3	2	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	137	0	0	151	0	0	255	255	102	255	302	135
Stage 1	-	-	-	-	-	-	108	108	-	145	145	-
Stage 2	-	-	-	-	-	-	147	147	-	110	157	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1447	-	-	1430	-	-	698	649	953	698	611	914
Stage 1	-	-	-	-	-	-	897	806	-	858	777	-
Stage 2	-	-	-	-	-	-	856	775	-	895	768	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1447	-	-	1430	-	-	692	645	953	690	607	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	692	645	-	690	607	-
Stage 1	-	-	-	-	-	-	895	804	-	856	774	-
Stage 2	-	-	-	-	-	-	849	772	-	888	766	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.3			10.6			9.9		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	701	1447	-	-	1430	-	-	742				
HCM Lane V/C Ratio	0.084	0.002	-	-	0.004	-	-	0.007				
HCM Control Delay (s)	10.6	7.5	0	-	7.5	0	-	9.9				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	44	1052	39	0	1146
Future Vol, veh/h	0	44	1052	39	0	1146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	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	48	1143	42	0	1246

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	572	0
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	463	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	463	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 463	-
HCM Lane V/C Ratio	- 0.103	-
HCM Control Delay (s)	- 13.7	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.3	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	10	71	61	0
Future Vol, veh/h	0	7	10	71	61	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	11	77	66	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	165	66	66	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	99	-	-	-	-	-
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	826	998	1536	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	820	998	1536	-	-	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1536	-	998	-	-	
HCM Lane V/C Ratio	0.007	-	0.008	-	-	
HCM Control Delay (s)	7.4	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	10	10	7	0
Future Vol, veh/h	0	7	10	10	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	11	11	8	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	41	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	33	-	-	-	-	-
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	970	1074	1612	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	963	1074	1612	-	-	-
Mov Cap-2 Maneuver	963	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1612	-	1074	-	-	
HCM Lane V/C Ratio	0.007	-	0.007	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	7.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	10	0	0	0
Future Vol, veh/h	0	7	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	11	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	22	-	-	-	-	-
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	993	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	986	1084	1622	-	-	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.3	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.007	-	0.007	-	-	
HCM Control Delay (s)	7.2	0	8.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Timings
1: Cherokee St & I-75 NB Ramps

3b. Build 2028 PM
09/05/2022

	↖	↗	↖	↑	↓	↖
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖	↖↖	↑↑	↑↑	↖
Traffic Volume (vph)	1064	295	213	371	366	83
Future Volume (vph)	1064	295	213	371	366	83
Lane Group Flow (vph)	1157	321	232	403	398	90
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	45.0	45.0	16.0	45.0	29.0	29.0
Total Split (%)	50.0%	50.0%	17.8%	50.0%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.85	0.39	0.60	0.24	0.37	0.16
Control Delay	31.0	3.4	39.4	14.3	26.9	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	3.4	39.4	14.3	26.9	6.0
Queue Length 50th (ft)	293	0	65	80	96	0
Queue Length 95th (ft)	359	46	104	122	142	32
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1506	874	409	1695	1079	550
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.37	0.57	0.24	0.37	0.16

Intersection Summary

Cycle Length: 90

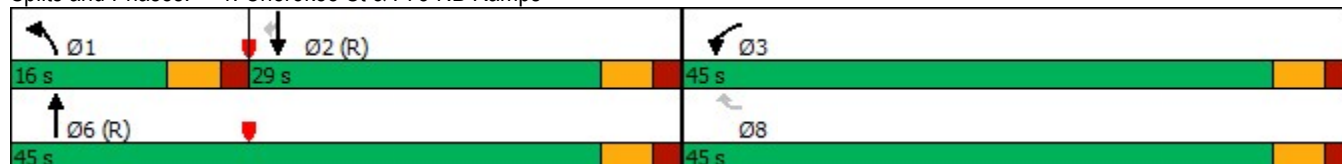
Actuated Cycle Length: 90

Offset: 40 (44%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

3b. Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1064	0	295	213	371	0	0	366	83
Future Volume (veh/h)	0	0	0	1064	0	295	213	371	0	0	366	83
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1157	0	0	232	403	0	0	398	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				1293	0		313	1790	0	0	1250	
Arrive On Green				0.37	0.00	0.00	0.03	0.17	0.00	0.00	0.35	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				1157	0	0	232	403	0	0	398	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				28.3	0.0	0.0	6.0	8.8	0.0	0.0	7.4	0.0
Cycle Q Clear(g_c), s				28.3	0.0	0.0	6.0	8.8	0.0	0.0	7.4	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1293	0		313	1790	0	0	1250	
V/C Ratio(X)				0.89	0.00		0.74	0.23	0.00	0.00	0.32	
Avail Cap(c_a), veh/h				1517	0		403	1790	0	0	1250	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				26.5	0.0	0.0	42.6	22.3	0.0	0.0	21.3	0.0
Incr Delay (d2), s/veh				6.5	0.0	0.0	5.2	0.3	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.7	0.0	0.0	2.8	4.0	0.0	0.0	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.0	0.0	0.0	47.8	22.6	0.0	0.0	22.0	0.0
LnGrp LOS				C	A		D	C	A	A	C	
Approach Vol, veh/h					1157			635			398	
Approach Delay, s/veh					33.0			31.8			22.0	
Approach LOS					C			C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.7	37.2				50.8		39.2				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	10.5	23.5				39.5		39.5				
Max Q Clear Time (g_c+I1), s	8.0	9.4				10.8		30.3				
Green Ext Time (p_c), s	0.2	3.6				5.0		3.3				
Intersection Summary												
HCM 6th Ctrl Delay				30.7								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 2: Cherokee St & I-75 SB Ramps

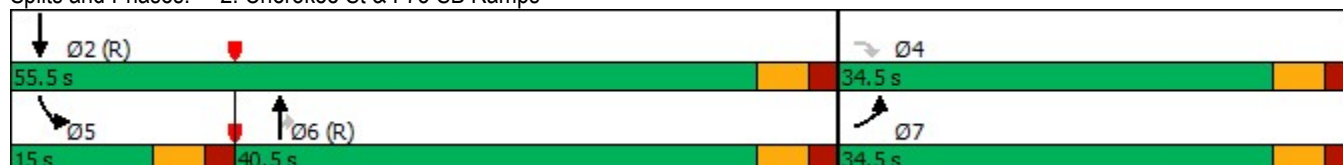
3b. Build 2028 PM
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	135	495	709	128	1325
Future Volume (vph)	56	135	495	709	128	1325
Lane Group Flow (vph)	58	141	516	739	133	1380
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.5	34.5	40.5	40.5	15.0	55.5
Total Split (%)	38.3%	38.3%	45.0%	45.0%	16.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.17	0.58	0.24	0.59	0.40	0.50
Control Delay	36.8	23.8	8.7	3.0	41.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	23.8	8.7	3.0	41.2	1.1
Queue Length 50th (ft)	15	24	60	0	34	0
Queue Length 95th (ft)	31	77	108	50	m48	0
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1106	575	2193	1261	377	2756
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.25	0.24	0.59	0.35	0.50

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary 2: Cherokee St & I-75 SB Ramps

3b. Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	0	135	0	0	0	0	495	709	128	1325	0
Future Volume (veh/h)	56	0	135	0	0	0	0	495	709	128	1325	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	58	0	141				0	516	0	133	1380	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	394	0	181				0	2287		204	2714	0
Arrive On Green	0.11	0.00	0.11				0.00	0.64	0.00	0.06	0.76	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	58	0	141				0	516	0	133	1380	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	1.4	0.0	7.8				0.0	5.4	0.0	3.4	13.5	0.0
Cycle Q Clear(g_c), s	1.4	0.0	7.8				0.0	5.4	0.0	3.4	13.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	394	0	181				0	2287		204	2714	0
V/C Ratio(X)	0.15	0.00	0.78				0.00	0.23		0.65	0.51	0.00
Avail Cap(c_a), veh/h	1114	0	511				0	2287		365	2714	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	35.9	0.0	38.8				0.0	6.7	0.0	41.4	4.1	0.0
Incr Delay (d2), s/veh	0.2	0.0	7.1				0.0	0.2	0.0	2.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	7.0				0.0	1.8	0.0	1.5	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	45.9				0.0	6.9	0.0	43.6	4.5	0.0
LnGrp LOS	D	A	D				A	A		D	A	A
Approach Vol, veh/h	199						516			1513		
Approach Delay, s/veh	43.0						6.9			8.0		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	74.2			15.8			10.8			63.4		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	50.0			29.0			9.5			35.0		
Max Q Clear Time (g_c+I1), s	15.5			9.8			5.4			7.4		
Green Ext Time (p_c), s	22.7			0.5			0.1			6.6		
Intersection Summary												
HCM 6th Ctrl Delay	10.9											
HCM 6th LOS	B											

Intersection												
Int Delay, s/veh	347.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	9	5	16	55	7	153	31	1021	73	168	1279	17
Future Vol, veh/h	9	5	16	55	7	153	31	1021	73	168	1279	17
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	-	-	-	-	-	-	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	5	17	60	8	166	34	1110	79	183	1390	18
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	2392	3022	704	2282	2992	595	1408	0	0	1189	0	0
Stage 1	1765	1765	-	1218	1218	-	-	-	-	-	-	-
Stage 2	627	1257	-	1064	1774	-	-	-	-	-	-	-
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	18	13	379	~ 21	14	447	481	-	-	583	-	-
Stage 1	87	136	-	191	251	-	-	-	-	-	-	-
Stage 2	438	241	-	238	134	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 3	8	379	~ 7	9	447	481	-	-	583	-	-
Mov Cap-2 Maneuver	~ 3	8	-	~ 7	9	-	-	-	-	-	-	-
Stage 1	81	93	-	177	233	-	-	-	-	-	-	-
Stage 2	247	224	-	147	92	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, \$	2289.2		4247.4			0.4			1.6			
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	481	-	-	8	24	583	-	-				
HCM Lane V/C Ratio	0.07	-	-	4.076	9.737	0.313	-	-				
HCM Control Delay (s)	13	-	-	\$ 2289.2	4247.4	14	-	-				
HCM Lane LOS	B	-	-	F	F	B	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	5.4	29.2	1.3	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Timings
4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3b. Build 2028 PM
09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	83	5	71	107	7	59	703	221	1072	15
Future Volume (vph)	83	5	71	107	7	59	703	221	1072	15
Lane Group Flow (vph)	0	92	75	0	399	62	812	233	1128	16
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	38.0	38.0	38.0	38.0	38.0	15.0	42.0	20.0	47.0	47.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	38.0%	15.0%	42.0%	20.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.54	0.16		0.87	0.22	0.49	0.54	0.59	0.02
Control Delay		42.7	5.2		43.4	11.1	20.9	13.7	19.8	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		42.7	5.2		43.4	11.1	20.9	13.7	19.8	0.1
Queue Length 50th (ft)		50	0		172	14	179	57	260	0
Queue Length 95th (ft)		95	25		269	35	284	112	394	0
Internal Link Dist (ft)		358			235		352		311	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		223	573		562	332	1668	479	1905	892
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.41	0.13		0.71	0.19	0.49	0.49	0.59	0.02

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2



HCM 6th Signalized Intersection Summary

4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3b. Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	5	71	107	7	265	59	703	68	221	1072	15
Future Volume (veh/h)	83	5	71	107	7	265	59	703	68	221	1072	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	5	0	113	7	279	62	740	72	233	1128	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	12		159	20	308	300	1582	154	449	1880	
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.04	0.48	0.48	0.09	0.53	0.00
Sat Flow, veh/h	653	46	1585	425	74	1161	1781	3272	318	1781	3554	1585
Grp Volume(v), veh/h	92	0	0	399	0	0	62	402	410	233	1128	0
Grp Sat Flow(s),veh/h/ln	699	0	1585	1661	0	0	1781	1777	1813	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.5	0.0	0.0	1.7	15.1	15.1	6.3	21.9	0.0
Cycle Q Clear(g_c), s	12.4	0.0	0.0	22.9	0.0	0.0	1.7	15.1	15.1	6.3	21.9	0.0
Prop In Lane	0.95		1.00	0.28		0.70	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	255	0		486	0	0	300	859	877	449	1880	
V/C Ratio(X)	0.36	0.00		0.82	0.00	0.00	0.21	0.47	0.47	0.52	0.60	
Avail Cap(c_a), veh/h	322	0		579	0	0	396	859	877	554	1880	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.5	0.0	0.0	35.0	0.0	0.0	13.4	17.2	17.2	12.1	16.3	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	7.9	0.0	0.0	0.3	1.8	1.8	0.9	1.4	0.0
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	2.0	0.0	0.0	10.3	0.0	0.0	0.7	6.3	6.4	2.4	8.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	0.0	42.9	0.0	0.0	13.8	19.1	19.0	13.1	17.7	0.0
LnGrp LOS	C	A		D	A	A	B	B	B	B	B	
Approach Vol, veh/h	92			399			874			1361		
Approach Delay, s/veh	32.3			42.9			18.7			16.9		
Approach LOS	C			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	58.4		32.0	14.1	53.9		32.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	41.5		32.5	14.5	36.5		32.5				
Max Q Clear Time (g_c+I1), s	3.7	23.9		14.4	8.3	17.1		24.9				
Green Ext Time (p_c), s	0.0	11.6		0.5	0.3	8.7		1.6				

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

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

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	6	11	1	41	7	769	7	31	1131	10
Future Vol, veh/h	17	0	6	11	1	41	7	769	7	31	1131	10
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	7	12	1	45	8	836	8	34	1229	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1738	2163	620	1539	2164	422	1240	0	0	844	0	0
Stage 1	1303	1303	-	856	856	-	-	-	-	-	-	-
Stage 2	435	860	-	683	1308	-	-	-	-	-	-	-
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	56	47	431	79	47	580	557	-	-	788	-	-
Stage 1	170	229	-	319	373	-	-	-	-	-	-	-
Stage 2	570	371	-	405	228	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	49	44	431	74	44	580	557	-	-	788	-	-
Mov Cap-2 Maneuver	130	140	-	190	140	-	-	-	-	-	-	-
Stage 1	168	219	-	315	368	-	-	-	-	-	-	-
Stage 2	517	366	-	382	218	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	31.8		15.8		0.1		0.3					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	557	-	-	159	390	788	-	-				
HCM Lane V/C Ratio	0.014	-	-	0.157	0.148	0.043	-	-				
HCM Control Delay (s)	11.6	-	-	31.8	15.8	9.8	-	-				
HCM Lane LOS	B	-	-	D	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.5	0.1	-	-				

Timings
6: Cherokee St & SR 92

3b. Build 2028 PM
09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	 										 
Traffic Volume (vph)	513	463	37	29	337	111	50	168	75	216	828
Future Volume (vph)	513	463	37	29	337	111	50	168	75	216	828
Lane Group Flow (vph)	570	514	41	32	374	123	56	207	83	240	920
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	25.0	36.0	36.0	15.0	26.0	26.0	15.0	35.0	24.0	44.0	44.0
Total Split (%)	22.7%	32.7%	32.7%	13.6%	23.6%	23.6%	13.6%	31.8%	21.8%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.78	0.54	0.05	0.08	0.64	0.18	0.20	0.53	0.26	0.59	0.69
Control Delay	48.7	26.0	0.1	17.1	42.4	0.6	23.4	41.2	25.0	43.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	26.0	0.1	17.1	42.4	0.6	23.4	41.2	25.0	43.0	5.0
Queue Length 50th (ft)	193	267	0	10	236	0	27	128	40	153	0
Queue Length 95th (ft)	259	#509	0	30	#481	0	46	181	63	207	48
Internal Link Dist (ft)		665			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	735	951	900	430	586	665	310	506	432	652	1573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.54	0.05	0.07	0.64	0.18	0.18	0.41	0.19	0.37	0.58

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

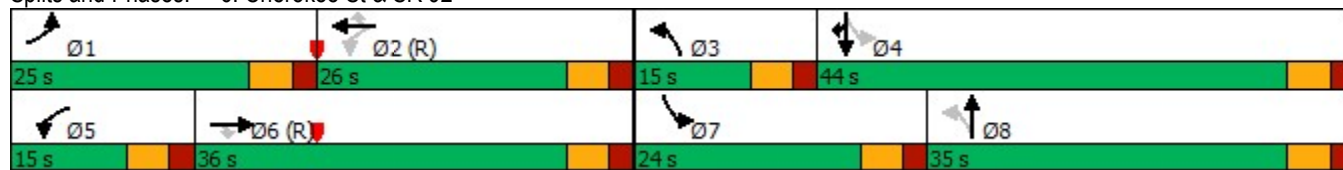
Natural Cycle: 105

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

3b. Build 2028 PM

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	513	463	37	29	337	111	50	168	18	75	216	828
Future Volume (veh/h)	513	463	37	29	337	111	50	168	18	75	216	828
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	570	514	0	32	374	0	56	187	20	83	240	920
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	613	726		255	448		253	561	60	445	647	965
Arrive On Green	0.18	0.39	0.00	0.03	0.24	0.00	0.04	0.34	0.34	0.05	0.35	0.35
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1661	178	1781	1870	2790
Grp Volume(v), veh/h	570	514	0	32	374	0	56	0	207	83	240	920
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1838	1781	1870	1395
Q Serve(g_s), s	17.9	25.5	0.0	1.5	20.9	0.0	2.2	0.0	9.2	3.3	10.6	35.4
Cycle Q Clear(g_c), s	17.9	25.5	0.0	1.5	20.9	0.0	2.2	0.0	9.2	3.3	10.6	35.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	613	726		255	448		253	0	621	445	647	965
V/C Ratio(X)	0.93	0.71		0.13	0.83		0.22	0.00	0.33	0.19	0.37	0.95
Avail Cap(c_a), veh/h	613	726		358	448		340	0	621	663	655	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	28.4	0.0	30.4	39.8	0.0	22.7	0.0	27.2	22.4	27.0	35.1
Incr Delay (d2), s/veh	21.0	5.7	0.0	0.2	16.6	0.0	0.4	0.0	0.3	0.2	0.4	18.4
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	9.2	12.0	0.0	0.6	11.4	0.0	1.0	0.0	4.2	1.4	4.7	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.6	34.1	0.0	30.6	56.4	0.0	23.1	0.0	27.5	22.6	27.3	53.5
LnGrp LOS	E	C		C	E		C	A	C	C	C	D
Approach Vol, veh/h	1084			406			263			1243		
Approach Delay, s/veh	50.6			54.3			26.6			46.4		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	31.8	9.6	43.6	8.6	48.2	10.5	42.6				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	19.5	20.5	9.5	38.5	9.5	30.5	18.5	29.5				
Max Q Clear Time (g_c+I1), s	19.9	22.9	4.2	37.4	3.5	27.5	5.3	11.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	1.4	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay 47.3

HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗		↕			↕	
Traffic Vol, veh/h	7	544	6	13	459	24	1	3	13	16	2	17
Future Vol, veh/h	7	544	6	13	459	24	1	3	13	16	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	625	7	15	528	28	1	3	15	18	2	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	556	0	0	632	0	0	1224	1227	625	1212	1206	528
Stage 1	-	-	-	-	-	-	641	641	-	558	558	-
Stage 2	-	-	-	-	-	-	583	586	-	654	648	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1015	-	-	951	-	-	156	178	485	159	184	550
Stage 1	-	-	-	-	-	-	463	469	-	514	512	-
Stage 2	-	-	-	-	-	-	498	497	-	456	466	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1015	-	-	951	-	-	146	173	485	149	179	550
Mov Cap-2 Maneuver	-	-	-	-	-	-	146	173	-	149	179	-
Stage 1	-	-	-	-	-	-	457	463	-	508	504	-
Stage 2	-	-	-	-	-	-	471	489	-	433	460	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			16.5			23.6		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	333	1015	-	-	951	-	-	234				
HCM Lane V/C Ratio	0.059	0.008	-	-	0.016	-	-	0.172				
HCM Control Delay (s)	16.5	8.6	0	-	8.8	-	-	23.6				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.6				

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	611	469	51	85	38
Future Vol, veh/h	21	611	469	51	85	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	664	510	55	92	41
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	565	0	-	0	1248	538
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	710	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1007	-	-	-	191	543
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	487	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1007	-	-	-	184	543
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	487	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		40		
HCM LOS				E		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1007	-	-	-	231	
HCM Lane V/C Ratio	0.023	-	-	-	0.579	
HCM Control Delay (s)	8.7	0	-	-	40	
HCM Lane LOS	A	A	-	-	E	
HCM 95th %tile Q(veh)	0.1	-	-	-	3.3	

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	45	2	2	0	28	35	2	0	60	0
Future Vol, veh/h	0	2	45	2	2	0	28	35	2	0	60	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	64	3	3	0	40	50	3	0	86	0

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	219	219	86	252	218	52	86	0
Stage 1	86	86	-	132	132	-	-	-
Stage 2	133	133	-	120	86	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	737	679	973	701	680	1016	1510	-
Stage 1	922	824	-	871	787	-	-	-
Stage 2	870	786	-	884	824	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	719	661	973	639	662	1016	1510	-
Mov Cap-2 Maneuver	719	661	-	639	662	-	-	-
Stage 1	897	824	-	847	766	-	-	-
Stage 2	843	765	-	823	824	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	10.6	3.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1510	-	-	954 650	1553	-	-
HCM Lane V/C Ratio	0.026	-	-	0.07 0.009	-	-	-
HCM Control Delay (s)	7.4	0	-	9.1 10.6	0	-	-
HCM Lane LOS	A	A	-	A B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2 0	0	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	0	19	15	0	30
Future Vol, veh/h	34	0	19	15	0	30
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	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	25	19	0	39
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	74	35	0	0	44	0
Stage 1	35	-	-	-	-	-
Stage 2	39	-	-	-	-	-
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	930	1038	-	-	1564	-
Stage 1	987	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	930	1038	-	-	1564	-
Mov Cap-2 Maneuver	930	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.1	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 930		1564	-	
HCM Lane V/C Ratio	-	- 0.047		-	-	
HCM Control Delay (s)	-	- 9.1		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	118	49	7	56	0	52	0	8	2	0	2
Future Vol, veh/h	3	118	49	7	56	0	52	0	8	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	146	60	9	69	0	64	0	10	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	69	0	0	206	0	0	272	271	176	276	301	69
Stage 1	-	-	-	-	-	-	184	184	-	87	87	-
Stage 2	-	-	-	-	-	-	88	87	-	189	214	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1532	-	-	1365	-	-	680	636	867	676	612	994
Stage 1	-	-	-	-	-	-	818	747	-	921	823	-
Stage 2	-	-	-	-	-	-	920	823	-	813	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1532	-	-	1365	-	-	673	630	867	663	606	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	673	630	-	663	606	-
Stage 1	-	-	-	-	-	-	816	745	-	918	817	-
Stage 2	-	-	-	-	-	-	911	817	-	801	723	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			10.8			9.6		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	694	1532	-	-	1365	-	-	795				
HCM Lane V/C Ratio	0.107	0.002	-	-	0.006	-	-	0.006				
HCM Control Delay (s)	10.8	7.4	0	-	7.7	0	-	9.6				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	161	82	5	101	2	108	2	7	2	3	2
Future Vol, veh/h	3	161	82	5	101	2	108	2	7	2	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	199	101	6	125	2	133	2	9	2	4	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	127	0	0	300	0	0	399	397	250	401	446	126
Stage 1	-	-	-	-	-	-	258	258	-	138	138	-
Stage 2	-	-	-	-	-	-	141	139	-	263	308	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1459	-	-	1261	-	-	561	540	789	560	507	924
Stage 1	-	-	-	-	-	-	747	694	-	865	782	-
Stage 2	-	-	-	-	-	-	862	782	-	742	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1261	-	-	553	536	789	549	503	924
Mov Cap-2 Maneuver	-	-	-	-	-	-	553	536	-	549	503	-
Stage 1	-	-	-	-	-	-	745	692	-	862	778	-
Stage 2	-	-	-	-	-	-	851	778	-	729	658	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			13.6			11.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	563	1459	-	-	1261	-	-	595				
HCM Lane V/C Ratio	0.257	0.003	-	-	0.005	-	-	0.015				
HCM Control Delay (s)	13.6	7.5	0	-	7.9	0	-	11.1				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	97	1027	35	0	1357
Future Vol, veh/h	0	97	1027	35	0	1357
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	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	105	1116	38	0	1475
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	558	0	-	-	-
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	473	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	473	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 473		-			
HCM Lane V/C Ratio	- 0.223		-			
HCM Control Delay (s)	- 14.8		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.8		-			

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	9	65	106	0
Future Vol, veh/h	0	15	9	65	106	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	10	71	115	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	206	115	115	0	-	0
Stage 1	115	-	-	-	-	-
Stage 2	91	-	-	-	-	-
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	782	937	1474	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	777	937	1474	-	-	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1474	-	937	-	-	
HCM Lane V/C Ratio	0.007	-	0.017	-	-	
HCM Control Delay (s)	7.5	0	8.9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	9	9	15	0
Future Vol, veh/h	0	15	9	9	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	10	10	16	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	46	16	16	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	30	-	-	-	-	-
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	964	1063	1602	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	958	1063	1602	-	-	-
Mov Cap-2 Maneuver	958	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1602	-	1063	-	-	
HCM Lane V/C Ratio	0.006	-	0.015	-	-	
HCM Control Delay (s)	7.3	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	9	0	0	0
Future Vol, veh/h	0	15	9	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	10	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	21	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	20	-	-	-	-	-
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	996	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1084	1622	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1016	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.006	-	0.015	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Future “Build” Intersections Analysis with Improvements

Timings
1: Cherokee St & I-75 NB Ramps

3c. Build 2028 AM - Improved

09/05/2022

						
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	 		 	 	 	
Traffic Volume (vph)	654	80	109	376	436	30
Future Volume (vph)	654	80	109	376	436	30
Lane Group Flow (vph)	788	96	131	453	525	36
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	39.0	39.0	17.0	51.0	34.0	34.0
Total Split (%)	43.3%	43.3%	18.9%	56.7%	37.8%	37.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.78	0.18	0.39	0.22	0.35	0.05
Control Delay	34.7	5.3	40.3	8.9	19.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	5.3	40.3	8.9	19.6	0.1
Queue Length 50th (ft)	208	0	40	68	104	0
Queue Length 95th (ft)	224	25	63	84	151	0
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1277	650	438	2066	1506	729
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.15	0.30	0.22	0.35	0.05

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

3c. Build 2028 AM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	654	0	80	109	376	0	0	436	30
Future Volume (veh/h)	0	0	0	654	0	80	109	376	0	0	436	30
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				788	0	0	131	453	0	0	525	0
Peak Hour Factor				0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				920	0		201	2174	0	0	1750	
Arrive On Green				0.27	0.00	0.00	0.12	1.00	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				788	0	0	131	453	0	0	525	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				19.5	0.0	0.0	3.3	0.0	0.0	0.0	7.9	0.0
Cycle Q Clear(g_c), s				19.5	0.0	0.0	3.3	0.0	0.0	0.0	7.9	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0		201	2174	0	0	1750	
V/C Ratio(X)				0.86	0.00		0.65	0.21	0.00	0.00	0.30	
Avail Cap(c_a), veh/h				1286	0		442	2174	0	0	1750	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.99	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.4	0.0	0.0	38.9	0.0	0.0	0.0	13.6	0.0
Incr Delay (d2), s/veh				4.3	0.0	0.0	3.5	0.2	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.1	0.0	0.0	1.4	0.1	0.0	0.0	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.7	0.0	0.0	42.4	0.2	0.0	0.0	14.0	0.0
LnGrp LOS				D	A		D	A	A	A	B	
Approach Vol, veh/h					788			584			525	
Approach Delay, s/veh					35.7			9.7			14.0	
Approach LOS					D			A			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.7	49.8				60.6		29.4				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	11.5	28.5				45.5		33.5				
Max Q Clear Time (g_c+I1), s	5.3	9.9				2.0		21.5				
Green Ext Time (p_c), s	0.2	5.6				6.4		2.4				
Intersection Summary												
HCM 6th Ctrl Delay				21.7								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 2: Cherokee St & I-75 SB Ramps

3c. Build 2028 AM - Improved
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	166	329	326	900	175	842
Future Volume (vph)	166	329	326	900	175	842
Lane Group Flow (vph)	175	346	343	947	184	886
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.5	34.5	40.5	40.5	15.0	55.5
Total Split (%)	38.3%	38.3%	45.0%	45.0%	16.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.25	0.80	0.19	0.78	0.50	0.37
Control Delay	29.0	34.4	14.4	8.5	31.4	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	34.4	14.4	8.5	31.4	9.6
Queue Length 50th (ft)	43	117	54	29	47	179
Queue Length 95th (ft)	62	192	100	#244	90	225
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1106	600	1782	1217	391	2380
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.58	0.19	0.78	0.47	0.37

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green

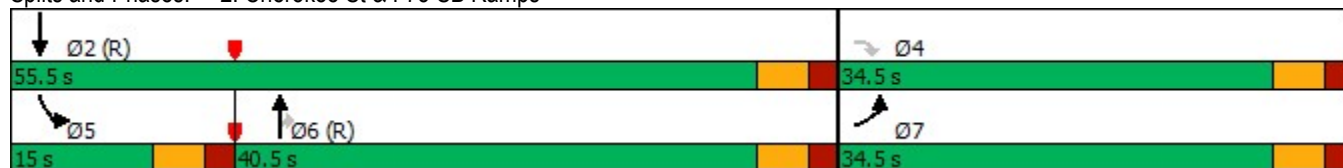
Natural Cycle: 90

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary

2: Cherokee St & I-75 SB Ramps

3c. Build 2028 AM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	0	329	0	0	0	0	326	900	175	842	0
Future Volume (veh/h)	166	0	329	0	0	0	0	326	900	175	842	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	175	0	346				0	343	0	184	886	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	850	0	390				0	1765		256	2245	0
Arrive On Green	0.25	0.00	0.25				0.00	0.50	0.00	0.15	1.00	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	175	0	346				0	343	0	184	886	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	3.6	0.0	18.9				0.0	4.8	0.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	18.9				0.0	4.8	0.0	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	850	0	390				0	1765		256	2245	0
V/C Ratio(X)	0.21	0.00	0.89				0.00	0.19		0.72	0.39	0.00
Avail Cap(c_a), veh/h	1114	0	511				0	1765		365	2245	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.76	0.76	0.00
Uniform Delay (d), s/veh	26.9	0.0	32.7				0.0	12.6	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	14.0				0.0	0.2	0.0	3.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	16.7				0.0	1.9	0.0	1.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	46.8				0.0	12.9	0.0	40.5	0.4	0.0
LnGrp LOS	C	A	D				A	B		D	A	A
Approach Vol, veh/h	521						343			1070		
Approach Delay, s/veh	40.1						12.9			7.3		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	62.4			27.6			12.2			50.2		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	50.0			29.0			9.5			35.0		
Max Q Clear Time (g_c+I1), s	2.0			20.9			6.6			6.8		
Green Ext Time (p_c), s	15.2			1.2			0.2			4.2		
Intersection Summary												
HCM 6th Ctrl Delay	17.1											
HCM 6th LOS	B											
Notes												

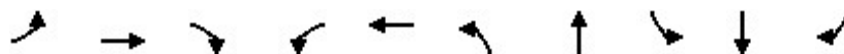
Intersection												
Int Delay, s/veh	31.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	5	23	43	6	126	15	1063	17	118	1080	4
Future Vol, veh/h	25	5	23	43	6	126	15	1063	17	118	1080	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	100	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	5	24	45	6	131	16	1107	18	123	1125	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1962	2530	565	1959	2523	563	1129	0	0	1125	0	0
Stage 1	1373	1373	-	1148	1148	-	-	-	-	-	-	-
Stage 2	589	1157	-	811	1375	-	-	-	-	-	-	-
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	38	27	468	~ 38	27	470	615	-	-	617	-	-
Stage 1	153	212	-	211	272	-	-	-	-	-	-	-
Stage 2	461	269	-	339	211	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 18	21	468	~ 24	21	470	615	-	-	617	-	-
Mov Cap-2 Maneuver	~ 18	21	-	~ 24	21	-	-	-	-	-	-	-
Stage 1	149	170	-	206	265	-	-	-	-	-	-	-
Stage 2	316	262	-	250	169	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	618.3		253.3		0.2		1.2					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	615	-	-	32 24 470	617	-	-					
HCM Lane V/C Ratio	0.025	-	-	1.725 2.127 0.279	0.199	-	-					
HCM Control Delay (s)	11	-	-	\$ 618.3\$ 864.4 15.6	12.3	-	-					
HCM Lane LOS	B	-	-	F F C	B	-	-					
HCM 95th %tile Q(veh)	0.1	-	-	6.2 6.4 1.1	0.7	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Timings

3c. Build 2028 AM - Improved

4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

09/05/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	13	5	16	46	3	13	949	227	845	6
Future Volume (vph)	13	5	16	46	3	13	949	227	845	6
Lane Group Flow (vph)	0	19	17	0	172	14	1072	239	889	6
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	32.0	32.0	32.0	32.0	32.0	15.0	60.0	28.0	73.0	73.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	12.5%	50.0%	23.3%	60.8%	60.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.19	0.06		0.73	0.03	0.46	0.54	0.33	0.00
Control Delay		50.4	0.4		41.5	4.3	11.5	8.0	6.0	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		50.4	0.4		41.5	4.3	11.5	8.0	6.0	0.0
Queue Length 50th (ft)		14	0		61	2	177	33	74	0
Queue Length 95th (ft)		36	0		130	8	331	72	195	0
Internal Link Dist (ft)		358			235		352		311	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		220	445		405	538	2346	573	2712	1230
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.04		0.42	0.03	0.46	0.42	0.33	0.00

Intersection Summary

Cycle Length: 120

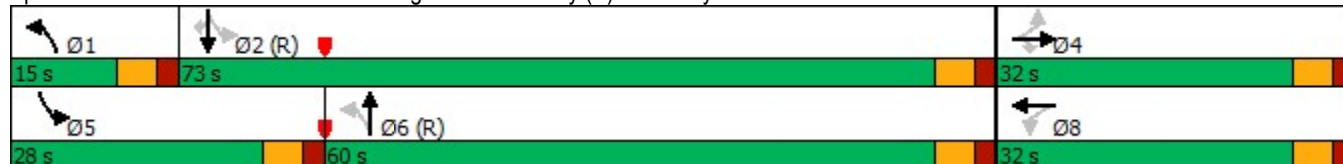
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

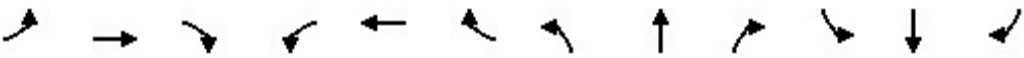
Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2



HCM 6th Signalized Intersection Summary 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3c. Build 2028 AM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖		↗	↖		↗	↖	↗
Traffic Volume (veh/h)	13	5	16	46	3	115	13	949	69	227	845	6
Future Volume (veh/h)	13	5	16	46	3	115	13	949	69	227	845	6
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	14	5	0	48	3	121	14	999	73	239	889	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	44		84	15	143	477	2256	165	448	2548	
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.02	0.67	0.67	0.06	0.72	0.00
Sat Flow, veh/h	707	338	1585	349	114	1097	1781	3358	245	1781	3554	1585
Grp Volume(v), veh/h	19	0	0	172	0	0	14	529	543	239	889	0
Grp Sat Flow(s),veh/h/ln	1045	0	1585	1559	0	0	1781	1777	1826	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.0	0.0	0.0	0.3	16.7	16.7	4.7	11.3	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	12.9	0.0	0.0	0.3	16.7	16.7	4.7	11.3	0.0
Prop In Lane	0.74		1.00	0.28		0.70	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	188	0		241	0	0	477	1194	1227	448	2548	
V/C Ratio(X)	0.10	0.00		0.71	0.00	0.00	0.03	0.44	0.44	0.53	0.35	
Avail Cap(c_a), veh/h	314	0		381	0	0	590	1194	1227	675	2548	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.9	0.0	0.0	50.9	0.0	0.0	6.1	9.2	9.2	7.0	6.4	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.9	0.0	0.0	0.0	1.2	1.2	1.0	0.4	0.0
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	0.5	0.0	0.0	5.4	0.0	0.0	0.1	6.3	6.4	1.6	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	0.0	0.0	54.8	0.0	0.0	6.1	10.4	10.4	8.0	6.8	0.0
LnGrp LOS	D	A		D	A	A	A	B	B	A	A	
Approach Vol, veh/h		19			172			1086			1128	
Approach Delay, s/veh		46.2			54.8			10.3			7.0	
Approach LOS		D			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	91.5		21.1	12.8	86.1		21.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	67.5		26.5	22.5	54.5		26.5				
Max Q Clear Time (g_c+I1), s	2.3	13.3		3.4	6.7	18.7		14.9				
Green Ext Time (p_c), s	0.0	15.8		0.0	0.6	16.6		0.7				

Intersection Summary

HCM 6th Ctrl Delay 12.2

HCM 6th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	2	10	4	0	17	4	729	12	23	698	11
Future Vol, veh/h	13	2	10	4	0	17	4	729	12	23	698	11
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	2	10	4	0	18	4	759	13	24	727	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1169	1561	369	1187	1560	386	738	0	0	772	0	0
Stage 1	781	781	-	774	774	-	-	-	-	-	-	-
Stage 2	388	780	-	413	786	-	-	-	-	-	-	-
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	148	111	628	144	111	612	864	-	-	839	-	-
Stage 1	354	403	-	357	406	-	-	-	-	-	-	-
Stage 2	607	404	-	587	401	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	140	107	628	137	107	612	864	-	-	839	-	-
Mov Cap-2 Maneuver	257	224	-	256	229	-	-	-	-	-	-	-
Stage 1	352	391	-	355	404	-	-	-	-	-	-	-
Stage 2	587	402	-	558	389	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.8		12.8		0		0.3	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	331	484	839	-
HCM Lane V/C Ratio	0.005	-	-	0.079	0.045	0.029	-
HCM Control Delay (s)	9.2	-	-	16.8	12.8	9.4	-
HCM Lane LOS	A	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	-

Timings
6: Cherokee St & SR 92

3c. Build 2028 AM - Improved

09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	986	718	17	11	261	44	20	83	256	173	521
Future Volume (vph)	986	718	17	11	261	44	20	83	256	173	521
Lane Group Flow (vph)	1049	764	18	12	278	47	21	111	272	184	554
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	45.0	59.0	59.0	15.0	29.0	29.0	15.0	34.0	22.0	41.0	41.0
Total Split (%)	34.6%	45.4%	45.4%	11.5%	22.3%	22.3%	11.5%	26.2%	16.9%	31.5%	31.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.84	0.67	0.02	0.05	0.63	0.09	0.10	0.59	0.80	0.47	0.54
Control Delay	44.7	22.9	0.1	19.2	53.0	0.3	34.9	63.0	58.9	50.2	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	22.9	0.1	19.2	53.0	0.3	34.9	63.0	58.9	50.2	5.6
Queue Length 50th (ft)	412	357	0	3	211	0	13	84	199	144	0
Queue Length 95th (ft)	496	713	0	13	#370	0	33	139	271	212	51
Internal Link Dist (ft)		665			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	1254	1135	1026	295	443	533	249	402	340	508	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.67	0.02	0.04	0.63	0.09	0.08	0.28	0.80	0.36	0.48

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

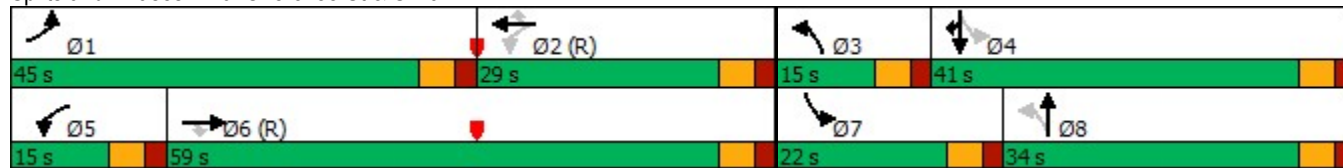
Natural Cycle: 125

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

3c. Build 2028 AM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	986	718	17	11	261	44	20	83	22	256	173	521
Future Volume (veh/h)	986	718	17	11	261	44	20	83	22	256	173	521
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	1049	764	0	12	278	0	21	88	23	272	184	554
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1050	1069		274	526		177	169	44	359	421	628
Arrive On Green	0.30	0.57	0.00	0.01	0.28	0.00	0.02	0.12	0.12	0.13	0.23	0.23
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1429	374	1781	1870	2790
Grp Volume(v), veh/h	1049	764	0	12	278	0	21	0	111	272	184	554
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1803	1781	1870	1395
Q Serve(g_s), s	39.4	38.4	0.0	0.6	16.3	0.0	1.3	0.0	7.5	16.5	11.0	25.0
Cycle Q Clear(g_c), s	39.4	38.4	0.0	0.6	16.3	0.0	1.3	0.0	7.5	16.5	11.0	25.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	1050	1069		274	526		177	0	214	359	421	628
V/C Ratio(X)	1.00	0.71		0.04	0.53		0.12	0.00	0.52	0.76	0.44	0.88
Avail Cap(c_a), veh/h	1050	1069		380	526		271	0	395	359	511	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	20.2	0.0	32.5	39.4	0.0	48.8	0.0	53.8	42.8	43.3	48.7
Incr Delay (d2), s/veh	27.5	4.1	0.0	0.1	3.8	0.0	0.3	0.0	1.9	8.9	0.7	10.3
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	20.4	16.9	0.0	0.3	7.9	0.0	0.6	0.0	3.6	8.4	5.2	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	24.2	0.0	32.6	43.2	0.0	49.1	0.0	55.8	51.7	44.0	59.0
LnGrp LOS	E	C		C	D		D	A	E	D	D	E
Approach Vol, veh/h	1813			290			132			1010		
Approach Delay, s/veh	52.3			42.7			54.7			54.3		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	45.0	42.1	8.2	34.8	7.3	79.8	22.0	20.9				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	39.5	23.5	9.5	35.5	9.5	53.5	16.5	28.5				
Max Q Clear Time (g_c+I1), s	41.4	18.3	3.3	27.0	2.6	40.4	18.5	9.5				
Green Ext Time (p_c), s	0.0	1.1	0.0	2.3	0.0	6.9	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔		↔			↔	
Traffic Vol, veh/h	11	986	0	0	311	7	0	1	1	11	1	4
Future Vol, veh/h	11	986	0	0	311	7	0	1	1	11	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1049	0	0	331	7	0	1	1	12	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	1049	0	0	1410	1411	1049	1405	1404	331
Stage 1	-	-	-	-	-	-	1073	1073	-	331	331	-
Stage 2	-	-	-	-	-	-	337	338	-	1074	1073	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1221	-	-	663	-	-	116	138	276	117	140	711
Stage 1	-	-	-	-	-	-	267	297	-	682	645	-
Stage 2	-	-	-	-	-	-	677	641	-	266	297	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1221	-	-	663	-	-	113	135	276	114	137	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	135	-	114	137	-
Stage 1	-	-	-	-	-	-	261	290	-	666	645	-
Stage 2	-	-	-	-	-	-	672	641	-	258	290	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	25.1	32.9
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	181	1221	-	-	663	-	-	146
HCM Lane V/C Ratio	0.012	0.01	-	-	-	-	-	0.117
HCM Control Delay (s)	25.1	8	0	-	0	-	-	32.9
HCM Lane LOS	D	A	A	-	A	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	895	315	58	45	18
Future Vol, veh/h	25	895	315	58	45	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	952	335	62	48	19
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	397	0	-	0	1372	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	1006	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1162	-	-	-	161	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	353	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1162	-	-	-	153	679
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	353	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		30.8		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1162	-	-	-	153	679
HCM Lane V/C Ratio	0.023	-	-	-	0.313	0.028
HCM Control Delay (s)	8.2	0	-	-	38.9	10.5
HCM Lane LOS	A	A	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2	0.1

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	20	1	1	0	31	38	2	0	40	0
Future Vol, veh/h	0	2	20	1	1	0	31	38	2	0	40	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	25	1	1	0	39	48	3	0	51	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	179	180	51	193	179	50	51	0	0	51	0	0
Stage 1	51	51	-	128	128	-	-	-	-	-	-	-
Stage 2	128	129	-	65	51	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	783	714	1017	767	715	1018	1555	-	-	1555	-	-
Stage 1	962	852	-	876	790	-	-	-	-	-	-	-
Stage 2	876	789	-	946	852	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	767	695	1017	731	696	1018	1555	-	-	1555	-	-
Mov Cap-2 Maneuver	767	695	-	731	696	-	-	-	-	-	-	-
Stage 1	937	852	-	853	769	-	-	-	-	-	-	-
Stage 2	852	768	-	920	852	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.8		10.1			3.2			0			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1555	-	-	976	713	1555	-	-				
HCM Lane V/C Ratio	0.025	-	-	0.029	0.004	-	-	-				
HCM Control Delay (s)	7.4	0	-	8.8	10.1	0	-	-				
HCM Lane LOS	A	A	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-	-				

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	0	21	17	0	14
Future Vol, veh/h	26	0	21	17	0	14
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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	0	27	22	0	18
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	56	38	0	0	49	0
Stage 1	38	-	-	-	-	-
Stage 2	18	-	-	-	-	-
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	952	1034	-	-	1558	-
Stage 1	984	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	952	1034	-	-	1558	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 952		1558	-	
HCM Lane V/C Ratio	-	- 0.035		-	-	
HCM Control Delay (s)	-	- 8.9		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	29	22	5	116	1	16	0	3	2	0	2
Future Vol, veh/h	2	29	22	5	116	1	16	0	3	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	32	24	5	126	1	17	0	3	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	127	0	0	56	0	0	186	185	44	187	197	127
Stage 1	-	-	-	-	-	-	48	48	-	137	137	-
Stage 2	-	-	-	-	-	-	138	137	-	50	60	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1459	-	-	1549	-	-	775	709	1026	774	699	923
Stage 1	-	-	-	-	-	-	965	855	-	866	783	-
Stage 2	-	-	-	-	-	-	865	783	-	963	845	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1549	-	-	771	706	1026	769	696	923
Mov Cap-2 Maneuver	-	-	-	-	-	-	771	706	-	769	696	-
Stage 1	-	-	-	-	-	-	964	854	-	865	781	-
Stage 2	-	-	-	-	-	-	860	781	-	959	844	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.3			9.6			9.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	802	1459	-	-	1549	-	-	839				
HCM Lane V/C Ratio	0.026	0.001	-	-	0.004	-	-	0.005				
HCM Control Delay (s)	9.6	7.5	0	-	7.3	0	-	9.3				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

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	3	48	91	5	122	4	49	2	3	2	1	2
Future Vol, veh/h	3	48	91	5	122	4	49	2	3	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	52	99	5	133	4	53	2	3	2	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	137	0	0	151	0	0	255	255	102	255	302	135
Stage 1	-	-	-	-	-	-	108	108	-	145	145	-
Stage 2	-	-	-	-	-	-	147	147	-	110	157	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1447	-	-	1430	-	-	698	649	953	698	611	914
Stage 1	-	-	-	-	-	-	897	806	-	858	777	-
Stage 2	-	-	-	-	-	-	856	775	-	895	768	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1447	-	-	1430	-	-	692	645	953	690	607	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	692	645	-	690	607	-
Stage 1	-	-	-	-	-	-	895	804	-	856	774	-
Stage 2	-	-	-	-	-	-	849	772	-	888	766	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.3			10.6			9.9		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	701	1447	-	-	1430	-	-	742				
HCM Lane V/C Ratio	0.084	0.002	-	-	0.004	-	-	0.007				
HCM Control Delay (s)	10.6	7.5	0	-	7.5	0	-	9.9				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	44	1052	39	0	1146
Future Vol, veh/h	0	44	1052	39	0	1146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	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	48	1143	42	0	1246
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	572	0	-	-	-
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	463	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	463	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.7	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 463		-			
HCM Lane V/C Ratio	- 0.103		-			
HCM Control Delay (s)	- 13.7		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.3		-			

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	10	71	61	0
Future Vol, veh/h	0	7	10	71	61	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	11	77	66	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	165	66	66	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	99	-	-	-	-	-
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	826	998	1536	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	820	998	1536	-	-	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1536	-	998	-	-	
HCM Lane V/C Ratio	0.007	-	0.008	-	-	
HCM Control Delay (s)	7.4	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	10	10	7	0
Future Vol, veh/h	0	7	10	10	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	11	11	8	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	41	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	33	-	-	-	-	-
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	970	1074	1612	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	963	1074	1612	-	-	-
Mov Cap-2 Maneuver	963	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1612	-	1074	-	-	
HCM Lane V/C Ratio	0.007	-	0.007	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	7.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	10	0	0	0
Future Vol, veh/h	0	7	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	11	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	22	-	-	-	-	-
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	993	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	986	1084	1622	-	-	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.3	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.007	-	0.007	-	-	
HCM Control Delay (s)	7.2	0	8.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Timings

1: Cherokee St & I-75 NB Ramps

3d. Build 2028 PM - Improved
09/05/2022

						
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	 		 	 	 	
Traffic Volume (vph)	1064	295	213	371	366	83
Future Volume (vph)	1064	295	213	371	366	83
Lane Group Flow (vph)	1157	321	232	403	398	90
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		8				2
Detector Phase	3	8	1	6	2	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.0	35.5	15.0	28.5	27.5	27.5
Total Split (s)	45.0	45.0	16.0	45.0	29.0	29.0
Total Split (%)	50.0%	50.0%	17.8%	50.0%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.85	0.39	0.60	0.24	0.37	0.16
Control Delay	31.0	3.4	39.4	14.3	26.9	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	3.4	39.4	14.3	26.9	6.0
Queue Length 50th (ft)	293	0	65	80	96	0
Queue Length 95th (ft)	359	46	104	122	142	32
Internal Link Dist (ft)				686	466	
Turn Bay Length (ft)	495	590	110			235
Base Capacity (vph)	1506	874	409	1695	1079	550
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.37	0.57	0.24	0.37	0.16

Intersection Summary

Cycle Length: 90

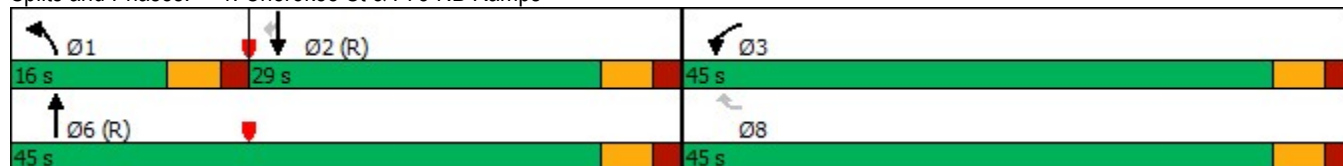
Actuated Cycle Length: 90

Offset: 40 (44%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherokee St & I-75 NB Ramps



HCM 6th Signalized Intersection Summary

1: Cherokee St & I-75 NB Ramps

3d. Build 2028 PM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1064	0	295	213	371	0	0	366	83
Future Volume (veh/h)	0	0	0	1064	0	295	213	371	0	0	366	83
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1157	0	0	232	403	0	0	398	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				1293	0		313	1790	0	0	1250	
Arrive On Green				0.37	0.00	0.00	0.03	0.17	0.00	0.00	0.35	0.00
Sat Flow, veh/h				3456	0	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				1157	0	0	232	403	0	0	398	0
Grp Sat Flow(s),veh/h/ln				1728	0	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				28.3	0.0	0.0	6.0	8.8	0.0	0.0	7.4	0.0
Cycle Q Clear(g_c), s				28.3	0.0	0.0	6.0	8.8	0.0	0.0	7.4	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1293	0		313	1790	0	0	1250	
V/C Ratio(X)				0.89	0.00		0.74	0.23	0.00	0.00	0.32	
Avail Cap(c_a), veh/h				1517	0		403	1790	0	0	1250	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				26.5	0.0	0.0	42.6	22.3	0.0	0.0	21.3	0.0
Incr Delay (d2), s/veh				6.5	0.0	0.0	5.2	0.3	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.7	0.0	0.0	2.8	4.0	0.0	0.0	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.0	0.0	0.0	47.8	22.6	0.0	0.0	22.0	0.0
LnGrp LOS				C	A		D	C	A	A	C	
Approach Vol, veh/h					1157			635			398	
Approach Delay, s/veh					33.0			31.8			22.0	
Approach LOS					C			C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.7	37.2				50.8		39.2				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	10.5	23.5				39.5		39.5				
Max Q Clear Time (g_c+I1), s	8.0	9.4				10.8		30.3				
Green Ext Time (p_c), s	0.2	3.6				5.0		3.3				

Intersection Summary

HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

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

Timings 2: Cherokee St & I-75 SB Ramps

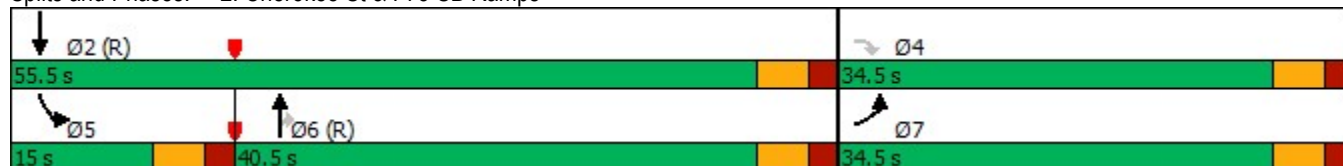
3d. Build 2028 PM - Improved
09/05/2022

						
Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	135	495	709	128	1325
Future Volume (vph)	56	135	495	709	128	1325
Lane Group Flow (vph)	58	141	516	739	133	1380
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	7		6		5	2
Permitted Phases		4		6		
Detector Phase	7	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	6.0	15.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	28.5	28.5	15.0	30.5
Total Split (s)	34.5	34.5	40.5	40.5	15.0	55.5
Total Split (%)	38.3%	38.3%	45.0%	45.0%	16.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.17	0.58	0.24	0.59	0.40	0.50
Control Delay	36.8	23.8	8.7	3.0	41.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	23.8	8.7	3.0	41.2	1.1
Queue Length 50th (ft)	15	24	60	0	34	0
Queue Length 95th (ft)	31	77	108	50	m48	0
Internal Link Dist (ft)			399			686
Turn Bay Length (ft)	525				140	
Base Capacity (vph)	1106	575	2193	1261	377	2756
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.25	0.24	0.59	0.35	0.50

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cherokee St & I-75 SB Ramps



HCM 6th Signalized Intersection Summary

2: Cherokee St & I-75 SB Ramps

3d. Build 2028 PM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	0	135	0	0	0	0	495	709	128	1325	0
Future Volume (veh/h)	56	0	135	0	0	0	0	495	709	128	1325	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	58	0	141				0	516	0	133	1380	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	394	0	181				0	2287		204	2714	0
Arrive On Green	0.11	0.00	0.11				0.00	0.64	0.00	0.06	0.76	0.00
Sat Flow, veh/h	3456	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	58	0	141				0	516	0	133	1380	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	1.4	0.0	7.8				0.0	5.4	0.0	3.4	13.5	0.0
Cycle Q Clear(g_c), s	1.4	0.0	7.8				0.0	5.4	0.0	3.4	13.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	394	0	181				0	2287		204	2714	0
V/C Ratio(X)	0.15	0.00	0.78				0.00	0.23		0.65	0.51	0.00
Avail Cap(c_a), veh/h	1114	0	511				0	2287		365	2714	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	35.9	0.0	38.8				0.0	6.7	0.0	41.4	4.1	0.0
Incr Delay (d2), s/veh	0.2	0.0	7.1				0.0	0.2	0.0	2.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	7.0				0.0	1.8	0.0	1.5	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	45.9				0.0	6.9	0.0	43.6	4.5	0.0
LnGrp LOS	D	A	D				A	A		D	A	A
Approach Vol, veh/h	199						516			1513		
Approach Delay, s/veh	43.0						6.9			8.0		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	74.2			15.8			10.8			63.4		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	50.0			29.0			9.5			35.0		
Max Q Clear Time (g_c+I1), s	15.5			9.8			5.4			7.4		
Green Ext Time (p_c), s	22.7			0.5			0.1			6.6		

Intersection Summary

HCM 6th Ctrl Delay 10.9

HCM 6th LOS B

Notes

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

Intersection												
Int Delay, s/veh	133.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	5	16	55	7	153	31	1021	73	168	1279	17
Future Vol, veh/h	9	5	16	55	7	153	31	1021	73	168	1279	17
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	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	100	102	-	-	160	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	5	17	60	8	166	34	1110	79	183	1390	18
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2392	3022	704	2282	2992	595	1408	0	0	1189	0	0
Stage 1	1765	1765	-	1218	1218	-	-	-	-	-	-	-
Stage 2	627	1257	-	1064	1774	-	-	-	-	-	-	-
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	18	13	379	~ 21	14	447	481	-	-	583	-	-
Stage 1	87	136	-	191	251	-	-	-	-	-	-	-
Stage 2	438	241	-	238	134	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 3	8	379	~ 7	9	447	481	-	-	583	-	-
Mov Cap-2 Maneuver	~ 3	8	-	~ 7	9	-	-	-	-	-	-	-
Stage 1	81	93	-	177	233	-	-	-	-	-	-	-
Stage 2	247	224	-	147	92	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, \$	2289.2		1428.2		0.4		1.6					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	481	-	-	8 7 447	583	-	-					
HCM Lane V/C Ratio	0.07	-	-	4.076 9.627 0.372	0.313	-	-					
HCM Control Delay (s)	13	-	-	\$ 2289.2 \$ 4909.1 17.7	14	-	-					
HCM Lane LOS	B	-	-	F F C	B	-	-					
HCM 95th %tile Q(veh)	0.2	-	-	5.4 10.1 1.7	1.3	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Timings
4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3d. Build 2028 PM - Improved

09/05/2022

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	83	5	71	107	7	59	703	221	1072	15
Future Volume (vph)	83	5	71	107	7	59	703	221	1072	15
Lane Group Flow (vph)	0	92	75	0	399	62	812	233	1128	16
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	4	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	27.5	29.5	29.5	15.0	29.5	15.0	27.5	27.5
Total Split (s)	38.0	38.0	38.0	38.0	38.0	15.0	42.0	20.0	47.0	47.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	38.0%	15.0%	42.0%	20.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio		0.54	0.16		0.87	0.22	0.49	0.54	0.59	0.02
Control Delay		42.7	5.2		43.4	11.1	20.9	13.7	19.8	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		42.7	5.2		43.4	11.1	20.9	13.7	19.8	0.1
Queue Length 50th (ft)		50	0		172	14	179	57	260	0
Queue Length 95th (ft)		95	25		269	35	284	112	394	0
Internal Link Dist (ft)		358			235		352		311	
Turn Bay Length (ft)			150			205		100		200
Base Capacity (vph)		223	573		562	332	1668	479	1905	892
Starvation Cap Reductn		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.41	0.13		0.71	0.19	0.49	0.49	0.59	0.02

Intersection Summary

Cycle Length: 100

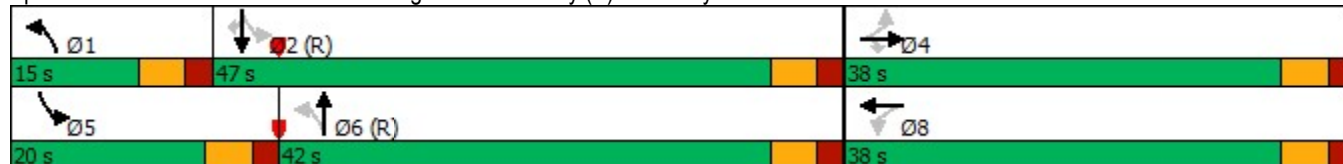
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2



HCM 6th Signalized Intersection Summary

4: Cherokee St & Ingles Market Drwy (S)/Site Drwy 2

3d. Build 2028 PM - Improved

09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	5	71	107	7	265	59	703	68	221	1072	15
Future Volume (veh/h)	83	5	71	107	7	265	59	703	68	221	1072	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	5	0	113	7	279	62	740	72	233	1128	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	12		159	20	308	300	1582	154	449	1880	
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.04	0.48	0.48	0.09	0.53	0.00
Sat Flow, veh/h	653	46	1585	425	74	1161	1781	3272	318	1781	3554	1585
Grp Volume(v), veh/h	92	0	0	399	0	0	62	402	410	233	1128	0
Grp Sat Flow(s),veh/h/ln	699	0	1585	1661	0	0	1781	1777	1813	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.5	0.0	0.0	1.7	15.1	15.1	6.3	21.9	0.0
Cycle Q Clear(g_c), s	12.4	0.0	0.0	22.9	0.0	0.0	1.7	15.1	15.1	6.3	21.9	0.0
Prop In Lane	0.95		1.00	0.28		0.70	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	255	0		486	0	0	300	859	877	449	1880	
V/C Ratio(X)	0.36	0.00		0.82	0.00	0.00	0.21	0.47	0.47	0.52	0.60	
Avail Cap(c_a), veh/h	322	0		579	0	0	396	859	877	554	1880	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.5	0.0	0.0	35.0	0.0	0.0	13.4	17.2	17.2	12.1	16.3	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	7.9	0.0	0.0	0.3	1.8	1.8	0.9	1.4	0.0
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	2.0	0.0	0.0	10.3	0.0	0.0	0.7	6.3	6.4	2.4	8.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	0.0	42.9	0.0	0.0	13.8	19.1	19.0	13.1	17.7	0.0
LnGrp LOS	C	A		D	A	A	B	B	B	B	B	
Approach Vol, veh/h	92			399			874			1361		
Approach Delay, s/veh	32.3			42.9			18.7			16.9		
Approach LOS	C			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	58.4		32.0	14.1	53.9		32.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	41.5		32.5	14.5	36.5		32.5				
Max Q Clear Time (g_c+l1), s	3.7	23.9		14.4	8.3	17.1		24.9				
Green Ext Time (p_c), s	0.0	11.6		0.5	0.3	8.7		1.6				

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

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

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	17	0	6	11	1	41	7	769	7	31	1131	10
Future Vol, veh/h	17	0	6	11	1	41	7	769	7	31	1131	10
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	-	-	-	-	-	-	25	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	7	12	1	45	8	836	8	34	1229	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1738	2163	620	1539	2164	422	1240	0	0	844	0	0
Stage 1	1303	1303	-	856	856	-	-	-	-	-	-	-
Stage 2	435	860	-	683	1308	-	-	-	-	-	-	-
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	56	47	431	79	47	580	557	-	-	788	-	-
Stage 1	170	229	-	319	373	-	-	-	-	-	-	-
Stage 2	570	371	-	405	228	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	49	44	431	74	44	580	557	-	-	788	-	-
Mov Cap-2 Maneuver	130	140	-	190	140	-	-	-	-	-	-	-
Stage 1	168	219	-	315	368	-	-	-	-	-	-	-
Stage 2	517	366	-	382	218	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31.8		15.8		0.1		0.3	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	557	-	-	159 390	788	-	-
HCM Lane V/C Ratio	0.014	-	-	0.157 0.148	0.043	-	-
HCM Control Delay (s)	11.6	-	-	31.8 15.8	9.8	-	-
HCM Lane LOS	B	-	-	D C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5 0.5	0.1	-	-

Timings
6: Cherokee St & SR 92

3d. Build 2028 PM - Improved
09/05/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	 										 
Traffic Volume (vph)	513	463	37	29	337	111	50	168	75	216	828
Future Volume (vph)	513	463	37	29	337	111	50	168	75	216	828
Lane Group Flow (vph)	570	514	41	32	374	123	56	207	83	240	920
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Prot
Protected Phases	1	6		5	2		3	8	7	4	4
Permitted Phases			6	2		2	8		4		
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	30.5	30.5	15.0	35.5	35.5	15.0	33.5	15.0	35.5	35.5
Total Split (s)	25.0	36.0	36.0	15.0	26.0	26.0	15.0	35.0	24.0	44.0	44.0
Total Split (%)	22.7%	32.7%	32.7%	13.6%	23.6%	23.6%	13.6%	31.8%	21.8%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.78	0.54	0.05	0.08	0.64	0.18	0.20	0.53	0.26	0.59	0.69
Control Delay	48.7	26.0	0.1	17.1	42.4	0.6	23.4	41.2	25.0	43.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	26.0	0.1	17.1	42.4	0.6	23.4	41.2	25.0	43.0	5.0
Queue Length 50th (ft)	193	267	0	10	236	0	27	128	40	153	0
Queue Length 95th (ft)	259	#509	0	30	#481	0	46	181	63	207	48
Internal Link Dist (ft)		665			210			518		515	
Turn Bay Length (ft)	250		200				85		295		165
Base Capacity (vph)	735	951	900	430	586	665	310	506	432	652	1573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.54	0.05	0.07	0.64	0.18	0.18	0.41	0.19	0.37	0.58

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

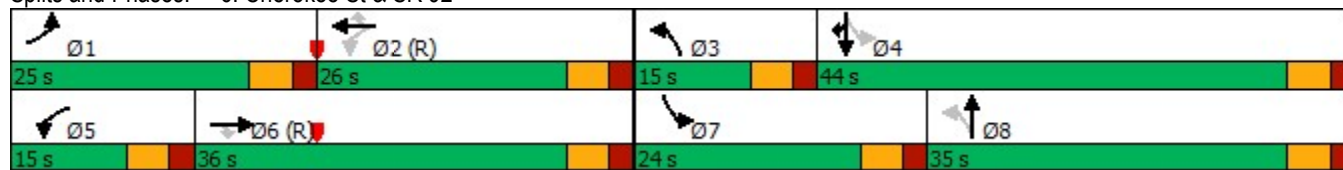
Natural Cycle: 105

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cherokee St & SR 92



HCM 6th Signalized Intersection Summary 6: Cherokee St & SR 92

3d. Build 2028 PM - Improved
09/05/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	513	463	37	29	337	111	50	168	18	75	216	828
Future Volume (veh/h)	513	463	37	29	337	111	50	168	18	75	216	828
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	570	514	0	32	374	0	56	187	20	83	240	920
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	613	726		255	448		253	561	60	445	647	965
Arrive On Green	0.18	0.39	0.00	0.03	0.24	0.00	0.04	0.34	0.34	0.05	0.35	0.35
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	1781	1661	178	1781	1870	2790
Grp Volume(v), veh/h	570	514	0	32	374	0	56	0	207	83	240	920
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1781	0	1838	1781	1870	1395
Q Serve(g_s), s	17.9	25.5	0.0	1.5	20.9	0.0	2.2	0.0	9.2	3.3	10.6	35.4
Cycle Q Clear(g_c), s	17.9	25.5	0.0	1.5	20.9	0.0	2.2	0.0	9.2	3.3	10.6	35.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	613	726		255	448		253	0	621	445	647	965
V/C Ratio(X)	0.93	0.71		0.13	0.83		0.22	0.00	0.33	0.19	0.37	0.95
Avail Cap(c_a), veh/h	613	726		358	448		340	0	621	663	655	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	28.4	0.0	30.4	39.8	0.0	22.7	0.0	27.2	22.4	27.0	35.1
Incr Delay (d2), s/veh	21.0	5.7	0.0	0.2	16.6	0.0	0.4	0.0	0.3	0.2	0.4	18.4
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	9.2	12.0	0.0	0.6	11.4	0.0	1.0	0.0	4.2	1.4	4.7	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.6	34.1	0.0	30.6	56.4	0.0	23.1	0.0	27.5	22.6	27.3	53.5
LnGrp LOS	E	C		C	E		C	A	C	C	C	D
Approach Vol, veh/h	1084			406			263			1243		
Approach Delay, s/veh	50.6			54.3			26.6			46.4		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	31.8	9.6	43.6	8.6	48.2	10.5	42.6				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	19.5	20.5	9.5	38.5	9.5	30.5	18.5	29.5				
Max Q Clear Time (g_c+l1), s	19.9	22.9	4.2	37.4	3.5	27.5	5.3	11.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	1.4	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay 47.3
HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗		↕			↕	
Traffic Vol, veh/h	7	544	6	13	459	24	1	3	13	16	2	17
Future Vol, veh/h	7	544	6	13	459	24	1	3	13	16	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	105	25	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	625	7	15	528	28	1	3	15	18	2	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	556	0	0	632	0	0	1224	1227	625	1212	1206	528
Stage 1	-	-	-	-	-	-	641	641	-	558	558	-
Stage 2	-	-	-	-	-	-	583	586	-	654	648	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1015	-	-	951	-	-	156	178	485	159	184	550
Stage 1	-	-	-	-	-	-	463	469	-	514	512	-
Stage 2	-	-	-	-	-	-	498	497	-	456	466	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1015	-	-	951	-	-	146	173	485	149	179	550
Mov Cap-2 Maneuver	-	-	-	-	-	-	146	173	-	149	179	-
Stage 1	-	-	-	-	-	-	457	463	-	508	504	-
Stage 2	-	-	-	-	-	-	471	489	-	433	460	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			16.5			23.6		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	333	1015	-	-	951	-	-	234				
HCM Lane V/C Ratio	0.059	0.008	-	-	0.016	-	-	0.172				
HCM Control Delay (s)	16.5	8.6	0	-	8.8	-	-	23.6				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.6				

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	611	469	51	85	38
Future Vol, veh/h	21	611	469	51	85	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	-	0	50
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	23	664	510	55	92	41
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	565	0	-	0	1248	538
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	710	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1007	-	-	-	191	543
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	487	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1007	-	-	-	184	543
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	487	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		33.3		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1007	-	-	-	184	543
HCM Lane V/C Ratio	0.023	-	-	-	0.502	0.076
HCM Control Delay (s)	8.7	0	-	-	42.8	12.2
HCM Lane LOS	A	A	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	-	2.5	0.2

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	45	2	2	0	28	35	2	0	60	0
Future Vol, veh/h	0	2	45	2	2	0	28	35	2	0	60	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	64	3	3	0	40	50	3	0	86	0

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	219	219	86	252	218	52	86	0
Stage 1	86	86	-	132	132	-	-	-
Stage 2	133	133	-	120	86	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	737	679	973	701	680	1016	1510	-
Stage 1	922	824	-	871	787	-	-	-
Stage 2	870	786	-	884	824	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	719	661	973	639	662	1016	1510	-
Mov Cap-2 Maneuver	719	661	-	639	662	-	-	-
Stage 1	897	824	-	847	766	-	-	-
Stage 2	843	765	-	823	824	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	10.6	3.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1510	-	-	954 650	1553	-	-
HCM Lane V/C Ratio	0.026	-	-	0.07 0.009	-	-	-
HCM Control Delay (s)	7.4	0	-	9.1 10.6	0	-	-
HCM Lane LOS	A	A	-	A B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2 0	0	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	0	19	15	0	30
Future Vol, veh/h	34	0	19	15	0	30
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	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	25	19	0	39
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	74	35	0	0	44	0
Stage 1	35	-	-	-	-	-
Stage 2	39	-	-	-	-	-
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	930	1038	-	-	1564	-
Stage 1	987	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	930	1038	-	-	1564	-
Mov Cap-2 Maneuver	930	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.1	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	930	1564	-	
HCM Lane V/C Ratio	-	-	0.047	-	-	
HCM Control Delay (s)	-	-	9.1	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	118	49	7	56	0	52	0	8	2	0	2
Future Vol, veh/h	3	118	49	7	56	0	52	0	8	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	146	60	9	69	0	64	0	10	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	69	0	0	206	0	0	272	271	176	276	301	69
Stage 1	-	-	-	-	-	-	184	184	-	87	87	-
Stage 2	-	-	-	-	-	-	88	87	-	189	214	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1532	-	-	1365	-	-	680	636	867	676	612	994
Stage 1	-	-	-	-	-	-	818	747	-	921	823	-
Stage 2	-	-	-	-	-	-	920	823	-	813	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1532	-	-	1365	-	-	673	630	867	663	606	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	673	630	-	663	606	-
Stage 1	-	-	-	-	-	-	816	745	-	918	817	-
Stage 2	-	-	-	-	-	-	911	817	-	801	723	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			10.8			9.6		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	694	1532	-	-	1365	-	-	795				
HCM Lane V/C Ratio	0.107	0.002	-	-	0.006	-	-	0.006				
HCM Control Delay (s)	10.8	7.4	0	-	7.7	0	-	9.6				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	161	82	5	101	2	108	2	7	2	3	2
Future Vol, veh/h	3	161	82	5	101	2	108	2	7	2	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	199	101	6	125	2	133	2	9	2	4	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	127	0	0	300	0	0	399	397	250	401	446	126
Stage 1	-	-	-	-	-	-	258	258	-	138	138	-
Stage 2	-	-	-	-	-	-	141	139	-	263	308	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1459	-	-	1261	-	-	561	540	789	560	507	924
Stage 1	-	-	-	-	-	-	747	694	-	865	782	-
Stage 2	-	-	-	-	-	-	862	782	-	742	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1261	-	-	553	536	789	549	503	924
Mov Cap-2 Maneuver	-	-	-	-	-	-	553	536	-	549	503	-
Stage 1	-	-	-	-	-	-	745	692	-	862	778	-
Stage 2	-	-	-	-	-	-	851	778	-	729	658	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			13.6			11.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	563	1459	-	-	1261	-	-	595				
HCM Lane V/C Ratio	0.257	0.003	-	-	0.005	-	-	0.015				
HCM Control Delay (s)	13.6	7.5	0	-	7.9	0	-	11.1				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	97	1027	35	0	1357
Future Vol, veh/h	0	97	1027	35	0	1357
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	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	105	1116	38	0	1475
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	558	0	-	-	-
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	473	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	473	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 473		-			
HCM Lane V/C Ratio	- 0.223		-			
HCM Control Delay (s)	- 14.8		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.8		-			

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	9	65	106	0
Future Vol, veh/h	0	15	9	65	106	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	10	71	115	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	206	115	115	0	-	0
Stage 1	115	-	-	-	-	-
Stage 2	91	-	-	-	-	-
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	782	937	1474	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	777	937	1474	-	-	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1474	-	937	-	-	
HCM Lane V/C Ratio	0.007	-	0.017	-	-	
HCM Control Delay (s)	7.5	0	8.9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	9	9	15	0
Future Vol, veh/h	0	15	9	9	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	10	10	16	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	46	16	16	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	30	-	-	-	-	-
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	964	1063	1602	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	958	1063	1602	-	-	-
Mov Cap-2 Maneuver	958	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1602	-	1063	-	-	
HCM Lane V/C Ratio	0.006	-	0.015	-	-	
HCM Control Delay (s)	7.3	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	9	0	0	0
Future Vol, veh/h	0	15	9	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	10	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	21	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	20	-	-	-	-	-
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	996	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1084	1622	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1016	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.006	-	0.015	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Traffic Volume Worksheets

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

1. Glade Rd @ I-75 NB Ramps

A.M. Peak Hour

Condition	Cherokee Street					Glade Road					I-75 Northbound On-Ramp					I-75 Northbound Off-Ramp				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	52	305	0	357	0	0	343	27	370	0	0	0	0	0	0	397	0	71	468
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	58	342	0	400	0	0	384	30	414	0	0	0	0	0	0	445	0	80	525
Total New Trips:	0	51	34	0	85	0	0	52	0	52	0	0	0	0	0	0	209	0	0	209
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	109	376	0	485	0	0	436	30	466	0	0	0	0	0	0	654	0	80	734

P.M. Peak Hour

Condition	Cherokee Street					Glade Road					I-75 Northbound On-Ramp					I-75 Northbound Off-Ramp				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	90	265	0	355	0	0	285	74	359	0	0	0	0	0	0	781	0	263	1044
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	101	297	0	398	0	0	319	83	402	0	0	0	0	0	0	875	0	295	1170
Total New Trips:	0	112	74	0	186	0	0	47	0	47	0	0	0	0	0	0	189	0	0	189
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	213	371	0	584	0	0	366	83	449	0	0	0	0	0	0	1064	0	295	1359

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

2. Cherokee St @ I-75 SB Ramps

A.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					I-75 Southbound Off-Ramp					I-75 Southbound On-Ramp				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	215	683	898	0	156	518	0	674	0	148	0	224	372	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	241	765	1006	0	175	580	0	755	0	166	0	251	417	0	0	0	0	0
Total New Trips:	0	0	85	135	220	0	0	262	0	262	0	0	0	78	78	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	326	900	1226	0	175	842	0	1017	0	166	0	329	495	0	0	0	0	0

P.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					I-75 Southbound Off-Ramp					I-75 Southbound On-Ramp				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	276	367	643	0	114	971	0	1085	0	50	0	57	107	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	309	411	720	0	128	1088	0	1216	0	56	0	64	120	0	0	0	0	0
Total New Trips:	0	0	186	298	484	0	0	237	0	237	0	0	0	71	71	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	495	709	1204	0	128	1325	0	1453	0	56	0	135	191	0	0	0	0	0

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

3. Cherokee @ Old Cherokee St

A.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					Liberty Square Drive					Old Cherokee Street				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	11	802	11	824	0	14	752	4	770	0	22	0	16	38	0	32	3	63	98
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	12	898	12	922	0	16	842	4	862	0	25	0	18	43	0	36	3	71	110
Total New Trips:	0	3	165	5	173	0	102	238	0	340	0	0	5	5	10	0	7	3	55	65
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	15	1063	17	1095	0	118	1080	4	1202	0	25	5	23	53	0	43	6	126	175

P.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					Liberty Square Drive					Old Cherokee Street				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	21	596	52	669	0	53	965	15	1033	0	8	0	10	18	0	27	0	23	50
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	24	668	58	750	0	59	1081	17	1157	0	9	0	11	20	0	30	0	26	56
Total New Trips:	0	7	363	5	375	0	92	215	0	307	0	0	5	5	10	0	15	7	121	143
Pass-by Trips:	0	0	-10	10	0	0	17	-17	0	0	0	0	0	0	0	0	10	0	6	16
Future 2028 Traffic Volumes:	0	31	1021	73	1125	0	168	1279	17	1464	0	9	5	16	30	0	55	7	153	215

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

4. Cherokee @ Ingles S-Drwy 2

A.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					Ingles Market Driveway (Southern)					Site Driveway 2 (Existing)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	12	829	1	842	0	1	733	5	739	0	12	0	14	26	0	2	0	2	4
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	13	928	1	942	0	1	821	6	828	0	13	0	16	29	0	2	0	2	4
Total New Trips:	0	0	21	68	89	34	192	24	0	250	0	0	5	0	5	0	44	3	113	160
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	13	949	69	1031	34	193	845	6	1078	0	13	5	16	34	0	46	3	115	164

P.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					Ingles Market Driveway (Southern)					Site Driveway 2 (Existing)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	53	597	6	656	0	14	930	13	957	0	74	0	63	137	0	9	0	14	23
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	59	669	7	735	0	16	1042	15	1073	0	83	0	71	154	0	10	0	16	26
Total New Trips:	0	0	34	61	95	31	174	30	0	235	0	0	5	0	5	0	97	7	249	353
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	59	703	68	830	31	190	1072	15	1308	0	83	5	71	159	0	107	7	265	379

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

5. Cherokee @ Cherokee Pnte-Dr3

A.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					Cherokee Pointe					Site Driveway 3 (Existing)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	4	581	6	591	0	5	578	10	593	0	12	2	9	23	0	1	0	5	6
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	4	651	7	662	0	6	647	11	664	0	13	2	10	25	0	1	0	6	7
Total New Trips:	0	0	78	5	83	0	17	51	0	68	0	0	0	0	0	0	3	0	11	14
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	4	729	12	745	0	23	698	11	732	0	13	2	10	25	0	4	0	17	21

P.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					Cherokee Pointe					Site Driveway 3 (Existing)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	6	623	2	631	0	14	910	9	933	0	15	0	5	20	0	4	1	15	20
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	7	698	2	707	0	16	1019	10	1045	0	17	0	6	23	0	4	1	17	22
Total New Trips:	0	0	71	5	76	0	15	112	0	127	0	0	0	0	0	0	7	0	24	31
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	7	769	7	783	0	31	1131	10	1172	0	17	0	6	23	0	11	1	41	53

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

6. Cherokee @ SR 92

A.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					SR 92					SR 92				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	18	55	15	88	0	229	142	429	800	0	824	627	15	1466	0	7	224	39	270
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	20	62	17	99	0	256	159	480	895	0	923	702	17	1642	0	8	251	44	303
Total New Trips:	0	0	21	5	26	0	0	14	41	55	0	63	16	0	79	0	3	10	0	13
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	20	83	22	125	0	256	173	521	950	0	986	718	17	1721	0	11	261	44	316

P.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					SR 92					SR 92				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	45	133	12	190	0	67	166	660	893	0	407	401	33	841	0	20	281	99	400
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	50	149	13	212	0	75	186	739	1000	0	456	449	37	942	0	22	315	111	448
Total New Trips:	0	0	19	5	24	0	0	30	89	119	0	57	14	0	71	0	7	22	0	29
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	50	168	18	236	0	75	216	828	1119	0	513	463	37	1013	0	29	337	111	477

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

7. SR 92 @ Dollar Tree-Drwy 4

A.M. Peak Hour

Condition	Dollar Tree Driveway					Site Driveway 4 (Existing)					SR 92					SR 92				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	1	1	0	7	0	1	8	0	5	866	0	871	0	0	269	2	271
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	1	1	0	8	0	1	9	0	6	970	0	976	0	0	301	2	303
Total New Trips:	0	0	1	0	1	0	3	1	3	7	0	5	16	0	21	0	0	10	5	15
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	1	1	2	0	11	1	4	16	0	11	986	0	997	0	0	311	7	318

P.M. Peak Hour

Condition	Dollar Tree Driveway					Site Driveway 4 (Existing)					SR 92					SR 92				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	1	1	12	14	0	8	0	9	17	0	2	473	5	480	0	12	390	17	419
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	1	1	13	15	0	9	0	10	19	0	2	530	6	538	0	13	437	19	469
Total New Trips:	0	0	2	0	2	0	7	2	7	16	0	5	14	0	19	0	0	22	5	27
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	1	3	13	17	0	16	2	17	35	0	7	544	6	557	0	13	459	24	496

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

8. SR 92 @ Ross Rd

A.M. Peak Hour

Condition	-					Ross Road					SR 92					SR 92				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	13	0	7	20	0	8	796	0	804	0	0	277	10	287
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	15	0	8	23	0	9	892	0	901	0	0	310	11	321
Total New Trips:	0	0	0	0	0	0	30	0	10	40	0	16	3	0	19	0	0	5	47	52
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	0	0	0	0	45	0	18	63	0	25	895	0	920	0	0	315	58	373

P.M. Peak Hour

Condition	-					Ross Road					SR 92					SR 92				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	16	0	14	30	0	6	539	0	545	0	0	414	7	421
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	18	0	16	34	0	7	604	0	611	0	0	464	8	472
Total New Trips:	0	0	0	0	0	0	67	0	22	89	0	14	7	0	21	0	0	5	43	48
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	0	0	0	0	85	0	38	123	0	21	611	0	632	0	0	469	51	520

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

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Traffic Volumes

A&R Engineering
September 2022

9. Ross Rd @ Truist-Drwy 6N

A.M. Peak Hour

Condition	Ross Road					Ross Road					Site Driveway 6 (Northern)					Truist Bank Driveway (Northern)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	15	2	17	0	0	23	0	23	0	0	0	0	0	0	1	0	0	1
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	17	2	19	0	0	26	0	26	0	0	0	0	0	0	1	0	0	1
Total New Trips:	0	31	21	0	52	0	0	14	0	14	0	0	2	20	22	0	0	1	0	1
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	31	38	2	71	0	0	40	0	40	0	0	2	20	22	0	1	1	0	2

P.M. Peak Hour

Condition	Ross Road					Ross Road					Site Driveway 6 (Northern)					Truist Bank Driveway (Northern)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	14	2	16	0	0	27	0	27	0	0	0	0	0	0	2	0	0	2
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	16	2	18	0	0	30	0	30	0	0	0	0	0	0	2	0	0	2
Total New Trips:	0	28	19	0	47	0	0	30	0	30	0	0	2	45	47	0	0	2	0	2
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	28	35	2	65	0	0	60	0	60	0	0	2	45	47	0	2	2	0	4

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

10. Ross Rd @ Magnolia Cottage

A.M. Peak Hour

Condition	Ross Road Northbound					Ross Road Southbound					- Eastbound					Magnolia Cottage Way Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	23	0	0	23
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26
Total New Trips:	0	0	21	0	21	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	21	17	38	0	0	14	0	14	0	0	0	0	0	0	26	0	0	26

P.M. Peak Hour

Condition	Ross Road Northbound					Ross Road Southbound					- Eastbound					Magnolia Cottage Way Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	30	0	0	30
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	34	0	0	34
Total New Trips:	0	0	19	0	19	0	0	30	0	30	0	0	0	0	0	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	19	15	34	0	0	30	0	30	0	0	0	0	0	0	34	0	0	34

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

11. Old Cherokee @ Red Roof Inn

A.M. Peak Hour

Condition	Site Driveway 9					Red Roof Inn Driveway					Old Cherokee Street					Old Cherokee Street				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	2	0	2	4	0	2	23	0	25	0	0	99	1	100
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	2	0	2	4	0	2	26	0	28	0	0	111	1	112
Total New Trips:	0	16	0	3	19	0	0	0	0	0	0	0	3	22	25	0	5	5	0	10
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	16	0	3	19	0	2	0	2	4	0	2	29	22	53	0	5	116	1	122

P.M. Peak Hour

Condition	Site Driveway 9					Red Roof Inn Driveway					Old Cherokee Street					Old Cherokee Street				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	2	0	2	4	0	3	101	0	104	0	0	47	0	47
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	2	0	2	4	0	3	113	0	116	0	0	53	0	53
Total New Trips:	0	35	0	7	42	0	0	0	0	0	0	0	7	20	27	0	5	5	0	10
Pass-by Trips:	0	17	0	1	18	0	0	0	0	0	0	0	-2	29	27	0	2	-2	0	0
Future 2028 Traffic Volumes:	0	52	0	8	60	0	2	0	2	4	0	3	118	49	170	0	7	56	0	63

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

22-147 The Logan Mixed-Use Development - Acworth, GA
Traffic Volumes

A&R Engineering
September 2022

12. Old Cherokee @ Waffle House

A.M. Peak Hour

Condition	Site Driveway 10					Waffle House Driveway					Old Cherokee Street					Old Cherokee Street				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	2	0	2	4	0	3	23	0	26	0	0	95	4	99
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	2	0	2	4	0	3	26	0	29	0	0	106	4	110
Total New Trips:	0	49	2	3	54	0	0	1	0	1	0	0	22	91	113	0	5	16	0	21
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	49	2	3	54	0	2	1	2	5	0	3	48	91	142	0	5	122	4	131

P.M. Peak Hour

Condition	Site Driveway 10					Waffle House Driveway					Old Cherokee Street					Old Cherokee Street				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	2	0	2	4	0	3	102	0	105	0	0	45	2	47
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	2	0	2	4	0	3	114	0	117	0	0	50	2	52
Total New Trips:	0	108	2	7	117	0	0	3	0	3	0	0	20	82	102	0	5	35	0	40
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	27	0	27	0	0	16	0	16
Future 2028 Traffic Volumes:	0	108	2	7	117	0	2	3	2	7	0	3	161	82	246	0	5	101	2	108

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

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Traffic Volumes

A&R Engineering
September 2022

13. Cherokee @ Drwy 1 (RIRO)

A.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					-					Site Driveway 1 (Right-In/Right-Out)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	824	0	824	0	0	800	0	800	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	923	0	923	0	0	896	0	896	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	129	39	168	0	0	250	0	250	0	0	0	0	0	0	0	0	44	44
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	1052	39	1091	0	0	1146	0	1146	0	0	0	0	0	0	0	0	44	44

P.M. Peak Hour

Condition	Cherokee Street					Cherokee Street					-					Site Driveway 1 (Right-In/Right-Out)				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	669	0	669	0	0	1002	0	1002	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	749	0	749	0	0	1122	0	1122	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	278	35	313	0	0	235	0	235	0	0	0	0	0	0	0	0	97	97
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	0	1027	35	1062	0	0	1357	0	1357	0	0	0	0	0	0	0	0	97	97

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2

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Traffic Volumes

A&R Engineering
September 2022

14. Ross Rd @ Drwy 5S

A.M. Peak Hour

Condition	Ross Road					Ross Road					Site Driveway 5 (Southern)					-				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	17	0	17	0	0	24	0	24	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	19	0	19	0	0	27	0	27	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	10	52	0	62	0	0	34	0	34	0	0	0	7	7	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	10	71	0	81	0	0	61	0	61	0	0	0	7	7	0	0	0	0	0

P.M. Peak Hour

Condition	Ross Road					Ross Road					Site Driveway 5 (Southern)					-				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	16	0	16	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	18	0	18	0	0	32	0	32	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	9	47	0	56	0	0	74	0	74	0	0	0	15	15	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	9	65	0	74	0	0	106	0	106	0	0	0	15	15	0	0	0	0	0

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

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Traffic Volumes

A&R Engineering
September 2022

15. Ross Rd Ext. @ Drwy 7S

A.M. Peak Hour

Condition	Ross Road Extension					Ross Road Extension					Site Driveway 7 (Southern)					-				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	10	10	0	20	0	0	7	0	7	0	0	0	7	7	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	10	10	0	20	0	0	7	0	7	0	0	0	7	7	0	0	0	0	0

P.M. Peak Hour

Condition	Ross Road Extension					Ross Road Extension					Site Driveway 7 (Southern)					-				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	9	9	0	18	0	0	15	0	15	0	0	0	15	15	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	9	9	0	18	0	0	15	0	15	0	0	0	15	15	0	0	0	0	0

Number of Years = 6 (2022 to 2028)
Growth Factor (%) = 2

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Traffic Volumes

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September 2022

16. Ross Rd Ext. @ Drwy 8N

A.M. Peak Hour

Condition	Ross Road Extension					Ross Road Extension					Site Driveway 8 (Northern)					-				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	10	0	0	10	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	10	0	0	10	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0

P.M. Peak Hour

Condition	Ross Road Extension					Ross Road Extension					Site Driveway 8 (Northern)					-				
	Northbound					Southbound					Eastbound					Westbound				
	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2028 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	9	0	0	9	0	0	0	0	0	0	0	0	15	15	0	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2028 Traffic Volumes:	0	9	0	0	9	0	0	0	0	0	0	0	0	15	15	0	0	0	0	0

Number of Years = 6 (2022 to 2028)
 Growth Factor (%) = 2