

**DEVELOPMENT OF REGIONAL IMPACT
(DRI #3178)
TRAFFIC STUDY
FOR
HERITAGE ON THE LAKE DEVELOPMENT
CITY OF TUCKER AND GWINNETT COUNTY, GEORGIA**



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EXECUTIVE SUMMARY

Traffic impacts were evaluated for the traffic from the proposed Heritage on the Lake, a mixed-use development, located in the southwest and southeast corners of the intersection of Britt Road at Old Norcross Tucker Road. The site is located in both unincorporated Gwinnet County and City of Tucker, Georgia.

The portion of the development west of Old Norcross Tucker Road will consist of:

- Single-family homes: 334 Units
- Townhomes: 104 Units

The portion of the development east of Old Norcross Tucker Road will consist of:

- Retail space: 10,000 sf
- Multifamily homes: 290 Units
- Townhomes: 150 Units

Site Access Configuration

Given the existing lake and stream along the middle of the western and eastern side of the properties, multiple access points are required. The development proposes seven site access points (two for the western and five for the eastern portions of the site) at the following locations:

- Site Driveway 1: Full-access driveway on Britt Road for the western single-family homes
- Site Driveway 2: Full-access driveway on Britt Road for the western single-family and townhomes, at the existing driveway location
- Site Driveway 3: Right-in/right-out driveway on Britt Road for the eastern retail portion
- Site Driveway 4: Full-access driveway on Britt Road for the eastern multifamily homes
- Site Driveway 5: Full-access driveway on Old Norcross Tucker Road for the eastern retail portion
- Site Driveway 6: Full-access driveway on Old Norcross Tucker Road, aligned with Rocky Shoals Court, for the eastern multifamily homes
- Site Driveway 7: Full-access driveway on Old Norcross Tucker Road for the eastern townhomes

Study Intersections

Existing and future operations after completion of the project were analyzed at the intersections of:

- Britt Road at Old Norcross Tucker Road
- Old Norcross Tucker Road at Rocky Shoals Court
- Old Norcross Tucker Road at Cherokee Drive
- SR 8 (Lawrenceville Highway) at Old Norcross Road
- Jimmy Carter Boulevard at Britt Road/Williams Road
- S. Norcross Tucker Road at Old Norcross Tucker Road
- Pleasantdale Road at Tucker Norcross Road
- Tucker Norcross Road at Britt Road
- Chamblee Tucker Road at Tucker Norcross Road

Planned Improvement Projects

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.

PLANNED AND PROGRAMMED IMPROVEMENTS				
Project ID	Project	Type of Improvement	Program Year	Source
0017180	OFF-SYSTEM SAFETY IMPROVEMENTS @ 4 LOCS IN TUCKER	Safety	-	GDOT GeoPi
M005808	SR 8 FROM FULTON COUNTY LINE TO GWINNETT COUNTY LINE	Maintenance	2021	GDOT GeoPi
0008268	FLAT SHOALS RD; HENDERSON RD & SALEM RD - SIDEWALKS	Enhancement	-	GDOT GeoPi
M006178	SR 8 FROM DEKALB COUNTY LINE TO CR 7238/RONALD REAGAN PKWY	Maintenance	-	GDOT GeoPi

None of the listed improvements will have an impact to the study area at full build-out of the proposed development.

Analysis Results

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 the analysis indicate that after the Heritage on the Lake project is completed, all study intersections will operate at the level-of-service standard “D” or better after implementing recommendations at the intersections listed in the System Improvements and Site Mitigation Improvement sections below.

Recommended System 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.

- Intersection 7: Pleasantdale Road and Tucker Norcross Road
 - Remove “YIELD” sign at the northbound channelized right turn lane and replace with “KEEP MOVING” sign to create a free flow movement since a receiving lane exists
 - Restripe the middle westbound lane from a left turn lane to be a shared through / left turn lane (current striping does not accommodate westbound through movements)
- Intersection 8: Tucker Norcross Road and Britt Road
 - Optimize signal timing to accommodate projected traffic growth (regardless of build condition)
 - Restripe the existing westbound right turn lane to be a shared through / right turn lane (current striping does not accommodate through movements)
- Intersection 9: Chamblee Tucker Road and Tucker Norcross Road

- Restripe the middle eastbound lane from a left turn lane to be a shared through / left turn lane (current striping does not accommodate through movements)

Recommended Site Mitigation Improvements

Improvements that are identified as “Site Mitigation Improvements” address further impacts that are a result of the proposed development’s added traffic.

- Improvement #1, Intersection 1: Britt Road and Old Norcross Tucker Road
 - Extend existing northbound left turn to 180 feet to accommodate projected northbound left turn movements to the extent feasible within the existing right of way
 - Modify traffic signal to add a northbound protected, permissive left turn phase
- Improvement #2, Site driveway 1: provide a left turn lane and deceleration lane on Britt Road
- Improvement #3, Site driveway 2: provide a deceleration lane south and construct a left turn lane on Britt Road
- Improvement #4, Site driveways 3 and 4: construct a deceleration lane on Britt Road
- Improvement #5, Site Driveways 6 and 7: construct a deceleration lane and left turn lane on Old Norcross Tucker Road
- Improvement #6, All site driveways are recommended to consist of one entering lane and one exiting lane and to be stop-controlled on the driveway approach

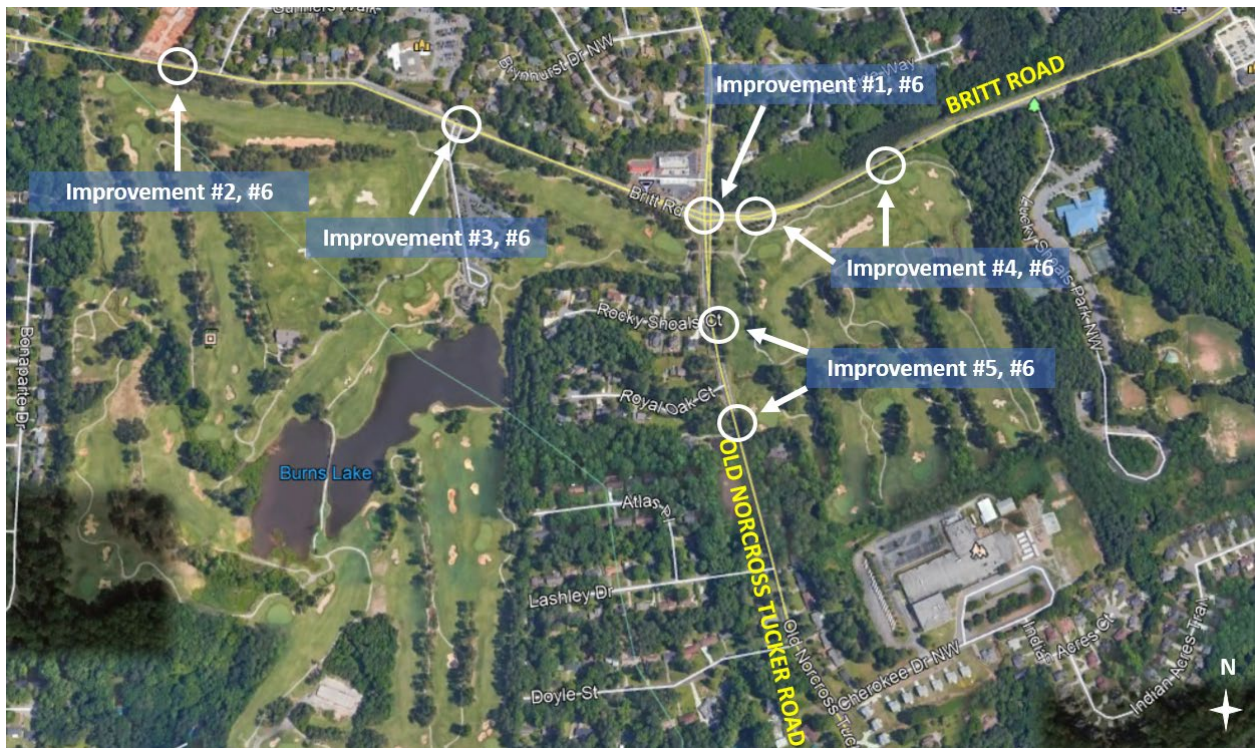


TABLE OF CONTENTS

Item	Page
Executive Summary	2
Site Access Configuration.....	2
Study Intersections	2
Planned Improvement Projects	3
Analysis Results.....	3
Recommended System Improvements.....	3
Recommended Site Mitigation Improvements.....	4
Introduction	1
Study Network Determination	3
Existing Roadway Facilities	3
Britt Road	3
Old Norcross Tucker Road.....	3
Rocky Shoals Court.....	4
Cherokee Drive.....	4
Old Norcross Road	4
SR 8 (Lawrenceville Highway)	4
Jimmy Carter Boulevard.....	4
Williams Road	4
S. Norcross Tucker Road	4
Pleasantdale Road.....	4
Tucker Norcross Road	5
Chamblee Tucker Road	5
Existing Bicycle and Pedestrian Facilities.....	5
Nearby local or regional trails.....	5
Bicycle paths or sidewalks.....	5
Existing Public Transit Facilities.....	6
Study Methodology	8
Unsignalized Intersections.....	8
Signalized Intersections	8
Existing 2021 Traffic Analysis	10
Existing and Historical Traffic Volumes.....	10
Adjusted / Projected 2021 Traffic Volumes.....	11
Existing Traffic Operations.....	15
Project Description	17
Site Plan	17
Planned Bicycle and Pedestrian Facilities	17
Planned Transit Facilities	18
Consistency with Adopted Comprehensive Plan	18
Project Phasing.....	18

Trip Generation.....	19
Trip Distribution	20
Future 2025 Traffic Analysis	24
Future “No-Build” Conditions	24
Annual Traffic Growth.....	24
Planned and Programmed Improvements in Study Area	25
Future “Build” Conditions	25
Site Access Configuration.....	28
Auxiliary Lane Analysis	28
Left Turn Lane Analysis	28
Deceleration Turn Lane Analysis.....	29
Future “No-Build” and “Build” Traffic Operations	30
Tuckersham Lane Connection Evaluation	33
Conclusions and Recommendations.....	35
Site Access Configuration.....	35
Study Intersections	35
Analysis Results.....	36
Recommended System Improvements.....	36
Recommended Site Mitigation Improvements.....	36
Appendix	

LIST OF TABLES

Item	Page
Planned and Programmed Improvements.....	3
Table 1 – Level-of-service Criteria for Unsignalized Intersections.....	8
Table 2 – Level-of-service Criteria for Signalized Intersections	9
Table 3 – Trip Generation (Nesbit Elementary School)	11
Table 4a – Existing Intersection Operations	15
Table 4b – Existing Intersection Operations	16
Table 5a– Trip Generation (West Side of Proposed Site)	19
Table 5b – Trip Generation (East Side of Proposed Site)	19
Table 6 – Planned and Programmed Improvements	25
Table 8a - GDOT Requirements for Left Turn Lanes	28
Table 8b - GDOT Requirements for Deceleration Lanes.....	29
Table 8a – Future Intersection Operations	30
Table 8b – Future Intersection Operations during School PM Peak Hour	32

LIST OF FIGURES

Item	Page
Figure 1 – Location Map and Study Intersections.....	7
Figure 2 – Historic and 2020 Weekday Peak Hour Volumes.....	12
Figure 3 – Adjusted / Projected 2021 Weekday Peak Hour Volumes.....	13
Figure 4 – Existing Traffic Control and Lane Geometry	14
Figure 5 – Site Plan.....	21
Figure 6 – Outer Leg Trip Distribution and Site Generated Peak Hour Volumes.....	22
Figure 7 – Site Peak Hour Pass-by Volumes.....	23
Figure 8 – Future (No-Build) Peak Hour Volumes	26
Figure 9 – Future (Build) Peak Hour Volumes.....	27
Figure 10 – Future Traffic Control and Lane Geometry	34

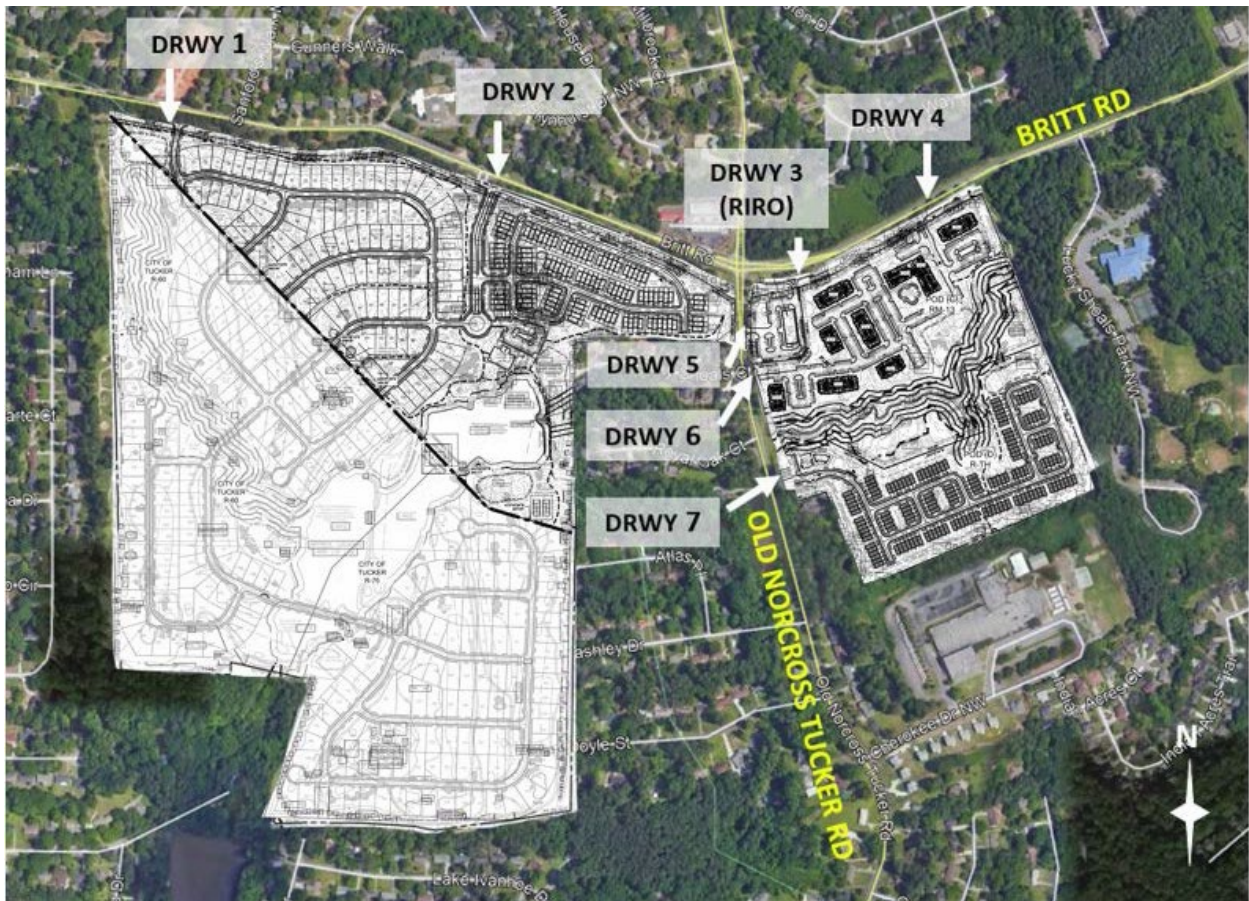
INTRODUCTION

The purpose of this study is to determine the traffic impact that may result from the proposed Heritage on the Lake mixed use development that will be located in the southwest and southeast corners of the intersection of Britt Road at Old Norcross Tucker Road. The site is located in both unincorporated Gwinnett County and City of Tucker, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. The portion of the development west of Old Norcross Tucker Road will consist of:

- Single-family homes: 334 Units
- Townhomes: 104 Units

The portion of the development east of Old Norcross Tucker Road will consist of:

- Retail space: 10,000 sf
- Multifamily homes: 290 Units
- Townhomes: 150 Units



Given the existing lake and stream along the middle of the western and eastern side of the properties, multiple access points are required. The development proposes seven site accesses (two for the western and five for the eastern portions of the site) at the following locations:

- Site Driveway 1: Full-access driveway on Britt Road for the western single-family homes
- Site Driveway 2: Full-access driveway on Britt Road for the western single-family and townhomes, at the existing driveway location
- Site Driveway 3: Right-in/right-out driveway on Britt Road for the eastern retail portion
- Site Driveway 4: Full-access driveway on Britt Road for the eastern multifamily homes
- Site Driveway 5: Full-access driveway on Old Norcross Tucker Road for the eastern retail portion
- Site Driveway 6: Full-access driveway on Old Norcross Tucker Road, aligned with Rocky Shoals Court, for the eastern multifamily homes
- Site Driveway 7: Full-access driveway on Old Norcross Tucker Road for the eastern townhomes

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. Britt Road at Old Norcross Tucker Road
2. Old Norcross Tucker Road at Rocky Shoals Court
3. Old Norcross Tucker Road at Cherokee Drive
4. SR 8 (Lawrenceville Highway) at Old Norcross Road
5. Jimmy Carter Boulevard at Britt Road/Williams Road
6. S. Norcross Tucker Road at Old Norcross Tucker Road
7. Pleasantdale Road at Tucker Norcross Road
8. Tucker Norcross Road at Britt Road
9. Chamblee Tucker Road at Tucker Norcross Road

In addition to the AM and PM peak hour periods, the Nesbit Elementary School peak hour (2:15 PM to 3:15 PM) will be analyzed at the following intersections:

- Old Norcross Tucker Road and Cherokee Drive
- Britt Road and Tucker Norcross Road

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 may 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. The level-of-service standard for the roadways and intersections in the study area is level-of-service “D”. Roadways that are found to currently operate at level-of-service “E” or “F” will be evaluated for the level-of-service standard “E”.

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 GRTA, GDOT, City of Tucker, Gwinnett County, and Gwinnet County Public Schools:

1. Britt Road at Old Norcross Tucker Road
2. Old Norcross Tucker Road at Rocky Shoals Court
3. Old Norcross Tucker Road at Cherokee Drive
4. SR 8 (Lawrenceville Highway) at Old Norcross Road
5. Jimmy Carter Boulevard at Britt Road/Williams Road
6. S. Norcross Tucker Road at Old Norcross Tucker Road
7. Pleasantdale Road at Tucker Norcross Road
8. Tucker Norcross Road at Britt Road
9. Chamblee Tucker Road at Tucker Norcross Road

The location of the development and the surrounding study network is shown in Figure 1 (Page 7). 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.

Existing Roadway Facilities

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

Britt Road

Britt Road is an east-west, two-lane, undivided roadway with a posted speed limit of 35 mph to the west of Old Norcross Tucker Road and 40 mph to the east of Old Norcross Tucker Road.

Old Norcross Tucker Road

Old Norcross Tucker 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 135-6707) indicate that the daily traffic volume on Old Norcross Tucker Road in 2019 (i.e. pre-COVID-19) was 8,540 vehicles per day north of Britt Road. GDOT classifies Old Norcross Tucker Road as an Urban Minor Collector roadway.

Rocky Shoals Court

Rocky Shoals Court is an east-west, two-lane, residential roadway with a posted speed limit of 25 mph.

Cherokee Drive

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

Old Norcross Road

Old Norcross 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 089-4009) indicate that the daily traffic volume on Old Norcross Road in 2019 (i.e. pre-COVID-19) was 6,930 vehicles per day south of Leonora Drive. GDOT classifies Old Norcross Road as an Urban Minor Collector roadway.

SR 8 (Lawrenceville Highway)

SR 8 (Lawrenceville Highway) is an east-west, five-lane roadway with a two-way left-turn lane and posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID's 089-3027 & 089-3029) indicate that the daily traffic volume on SR 8 (Lawrenceville Highway) in 2019 (i.e. pre-COVID-19) was 25,300 vehicles per day southwest of Lavista Road and 24,600 vehicles per day northeast of Oswood Drive. GDOT classifies SR 8 (Lawrenceville Highway) as an Urban Principal Arterial roadway.

Jimmy Carter Boulevard

Jimmy Carter Boulevard is a north-south, five-lane roadway with a two-way left-turn lane and posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 135-6314) indicate that the daily traffic volume on Jimmy Carter Boulevard in 2019 (i.e. pre-COVID-19) was 31,200 vehicles per day south of Britt Road/Williams Road. GDOT classifies Jimmy Carter Boulevard as an Urban Principal Arterial roadway.

Williams Road

Williams Road is an east-west, two-lane, undivided roadway with a posted speed limit of 30 mph in the vicinity of the site.

S. Norcross Tucker Road

S. Norcross Tucker Road is a north-south, five-lane roadway with a two-way left-turn lane and posted speed limit of 40 mph in the vicinity of the site. GDOT traffic counts (Station ID 135-6321) indicate that the daily traffic volume on S. Norcross Tucker Road in 2019 (i.e. pre-COVID-19) was 18,300 vehicles per day north of Old Norcross Tucker Road. GDOT classifies S. Norcross Tucker Road as an Urban Minor Arterial roadway.

Pleasantdale Road

Pleasantdale Road is a north-south, five-lane roadway with a two-way left-turn lane and posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 089-3638) indicate that the

daily traffic volume on Pleasantdale Road in 2019 (i.e. pre-COVID-19) was 25,100 vehicles per day northwest of Lynray Drive. GDOT classifies Pleasantdale Road as an Urban Minor Arterial roadway.

Tucker Norcross Road

Tucker Norcross Road is a five-lane roadway with a two-way left-turn lane. To the east of Pleasantdale Road, Tucker Norcross Road is posted with a speed limit of 35 mph.

Chamblee Tucker Road

Chamblee Tucker Road is a four-lane, undivided roadway with a posted speed limit of 40 mph in the vicinity of the site. GDOT traffic counts (Station ID's 089-3641 & 089-3654) indicate that the daily traffic volume on Chamblee Tucker Road in 2019 (i.e. pre-COVID-19) was 21,400 vehicles per day north of Castle Pines Court and 19,900 vehicles per day west of Terramar Drive. GDOT classifies Chamblee Tucker Road as an Urban Minor Arterial roadway.

Existing Bicycle and Pedestrian Facilities

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

Nearby local or regional trails

- Lake Erin Trails is located to the west of the study network, west of north-south Chamblee Tucker Road
- Henderson Park is located to the west of the study network, west of north-south Chamblee Tucker Road

Bicycle paths or sidewalks

Sidewalks and pedestrian facilities are present along the following roadways in the study network:

- Britt Road: south side of the road, between Old Norcross Tucker Road and Jimmy Carter Boulevard
- Williams Road: both sides of the road near Jimmy Carter Boulevard; south/east side of the road, between Emerald Court and Rockbridge Road
- Old Norcross Tucker Road: both sides of the road between S. Norcross Road and Britt Road; east side of the road between Britt Road and Cherokee Drive
- Cherokee Drive: north side of the road between Old Norcross Tucker Road and Nesbit Elementary School
- SR 8 (Lawrenceville Highway): both sides of the road
- Jimmy Carter Boulevard: both sides of the road north of Britt Road/Williams Road; west side of the road south of Britt Road/Williams Road
- S. Norcross Tucker Road: both sides of the road
- Pleasantdale Road: both sides of the road
- Tucker Norcross Road: both sides of the road
- Chamblee Tucker Road: both sides of the road

Bike paths are not present in the study network.

Existing Public Transit Facilities

MARTA Route 124 - Pleasantdale Road

This route operates East/West from Doraville station to Lawrenceville Highway along Buford Highway, Oakcliff Road, Pleasantdale Road, Chamblee Tucker Road, Fellowship Road, Lawrenceville Highway, and Lavista Road. Points of Interest: Tucker Square, Tucker Station, Cofer Crossing.

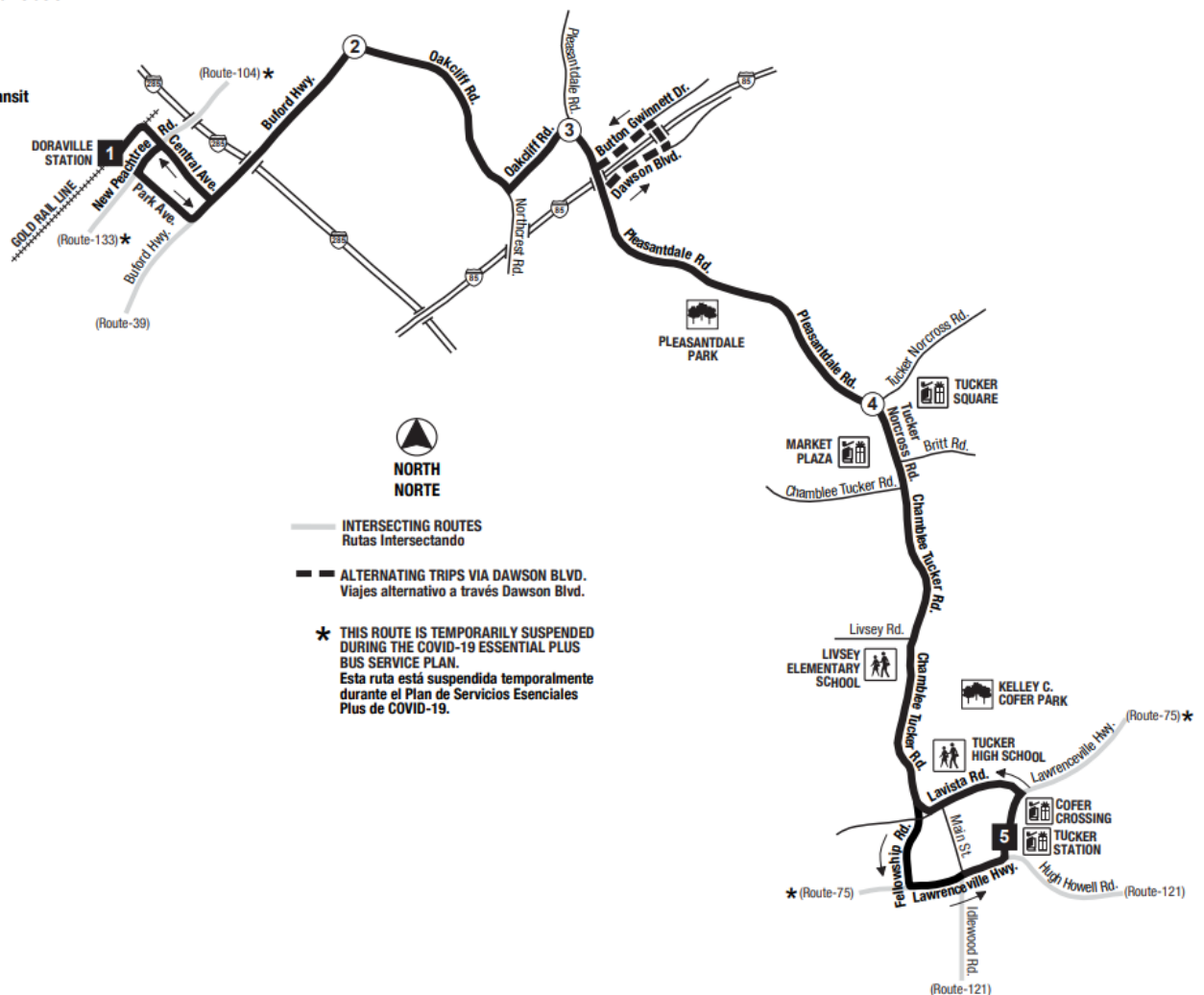
The following bus stops are included in the study network:

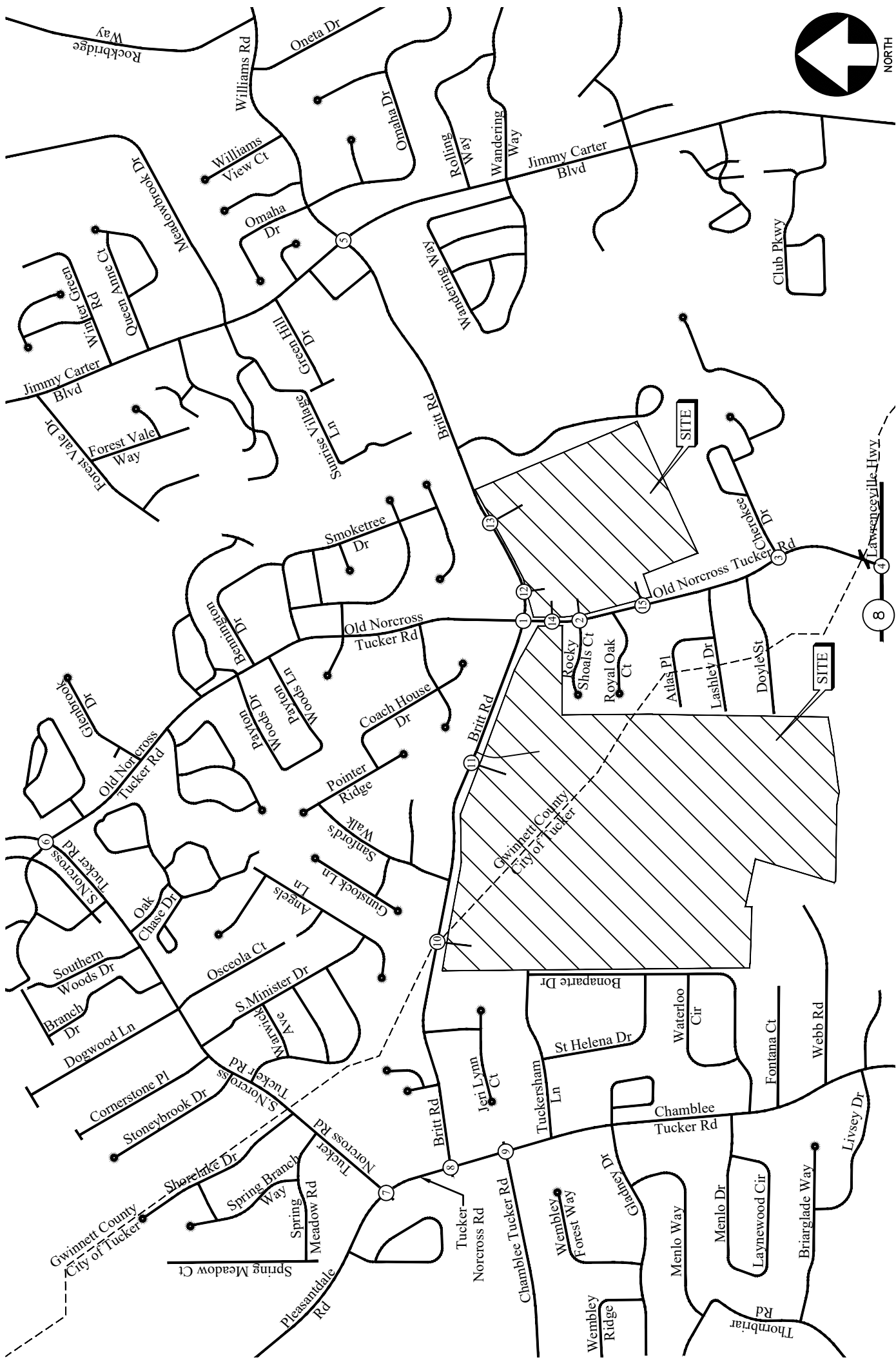
1. Pleasantdale road and Tucker Norcross Road
2. Tucker Norcross Road and Britt Road
3. Chamblee Tucker Road and Tucker Norcross Road
4. Lawrenceville Highway and Old Norcross Road

The bus map for MARTA Route 124 is included below.

Routes intersecting at Doraville Station:
Rutas intersectando en la Estación
Doraville:

39-Buford Highway
124-Pleasantdale Road
-Gwinnett County Transit





LOCATION MAP AND STUDY INTERSECTIONS FIGURE 1
A&R Engineering Inc.

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 at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level-of-service (LOS) for the turning movements at the intersection and the level-of-service for the overall intersection. Level-of-service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled 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 safely, resulting in extremely long total delays and long queues. The level-of-service criteria for two-way stop-controlled and all-way stop-controlled (unsignalized) intersections are given in Table 1.

Level-of-service	Average Delay (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual

Signalized Intersections

For signalized intersections, it is necessary to evaluate both capacity and level-of-service in order to evaluate the overall operation of the intersection. The capacity analysis of an intersection is performed by comparing the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This results in a volume/capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available, resulting in a temporary excess of demand. Although the capacity of the entire intersection is not defined, a composite v/c ratio for the sum of the critical lane groups within the intersection is computed. This composite v/c ratio is an indication of the overall intersection sufficiency.

Level-of-service for a signalized intersection is defined in terms of average controlled delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for signalized intersections, based on average controlled delay, are shown in Table 2. Level-of-service “A” indicates operations with very low controlled delay, while level-of-service “F” describes operations with extremely high average controlled delay. Level-of-service “E” is typically considered to be the limit of acceptable delay, and level-of-service “F” is considered unacceptable by most drivers.

TABLE 2 – LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
Level-of-service	Average Control Delay (sec)
A	≤ 10
B	$> 10 \text{ and } \leq 20$
C	$> 20 \text{ and } \leq 35$
D	$> 35 \text{ and } \leq 55$
E	$> 55 \text{ and } \leq 80$
F	> 80

Source: Highway Capacity Manual

EXISTING 2021 TRAFFIC ANALYSIS

Existing and Historical Traffic Volumes

Traffic counts were obtained at the following study intersections:

1. Britt Road at Old Norcross Tucker Road
2. Old Norcross Tucker Road at Rocky Shoals Court
3. Old Norcross Tucker Road at Cherokee Drive
4. SR 8 (Lawrenceville Highway) at Old Norcross Road
5. Jimmy Carter Boulevard at Britt Road/Williams Road
6. S. Norcross Tucker Road at Old Norcross Tucker Road
7. Pleasantdale Road at Tucker Norcross Road
8. Tucker Norcross Road at Britt Road
9. Chamblee Tucker Road at Tucker Norcross Road

Gwinnet County provided historical turning movement counts, which include the AM and PM peak hours, from Tuesday, May 21, 2019 (i.e. pre-COVID-19) at the following intersections:

- Britt Road at Old Norcross Tucker Road
- Jimmy Carter Boulevard at Britt Road/Williams Road

City of Tucker provided historical turning movement counts, which include the AM and PM peak hours, from March 30, 2017 at the following intersection:

- SR 8 (Lawrenceville Highway) at Old Norcross Road

We collected AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hour turning movement counts on Tuesday, November 17, 2020 at the following intersections:

- Old Norcross Tucker Road at Rocky Shoals Court
- Old Norcross Tucker Road at Cherokee Drive
- S. Norcross Tucker Road at Old Norcross Tucker Road
- Pleasantdale Road at Tucker Norcross Road
- Tucker Norcross Road at Britt Road
- Chamblee Tucker Road at Tucker Norcross Road

Similarly, school dismissal peak hour turning movement counts were collected at the following intersections:

- Britt Road at Old Norcross Tucker Road
- Old Norcross Tucker Road at Cherokee Drive

The school dismissal peak hour counts for the intersection of Britt Road at Old Norcross Tucker Road were collected on Tuesday, November 17, 2020 for the intersection of Old Norcross Tucker Road at Cherokee Drive.

The AM, school dismissal (for two intersections only) and PM peak hour counts at all the study intersections are shown in Figure 2 (Page 12).

Adjusted / Projected 2021 Traffic Volumes

Historic counts from Gwinnett County and City of Tucker were increased at an annual growth rate of 1% to obtain the projected 2021 peak hour volumes. These volumes are shown in Figure 3 (Page 13).

Since traffic patterns are abnormal due to school closures and increased number of people working from home to minimize the spread of COVID-19, the adjustment factor was based on an established GDOT ADT count (Station ID 135-6321 on S. Norcross Tucker Road, north of Old Norcross Tucker Road) in the study area. Based on the 2020 projected GDOT counts and the recent counts (November 2020) during the COVID-19 pandemic at the intersection of S. Norcross Tucker Road at Old Norcross Tucker Road, AM and PM adjustment factors are 7% and 5%, respectively. These adjustment factors were used to increase the 2020 AM and PM peak hour data at all intersections that 2020 data is being used to reflect normal traffic conditions.

Based on traffic volumes, it appears that Nesbit Elementary School on Cherokee Drive was not operating as usual; therefore, the trips from the school have been estimated using the 10th edition of the Transportation Engineers (ITE) Trip Generation report for land use 520 - Elementary School. The calculated total trip generation from the school is shown in Table 3 below.

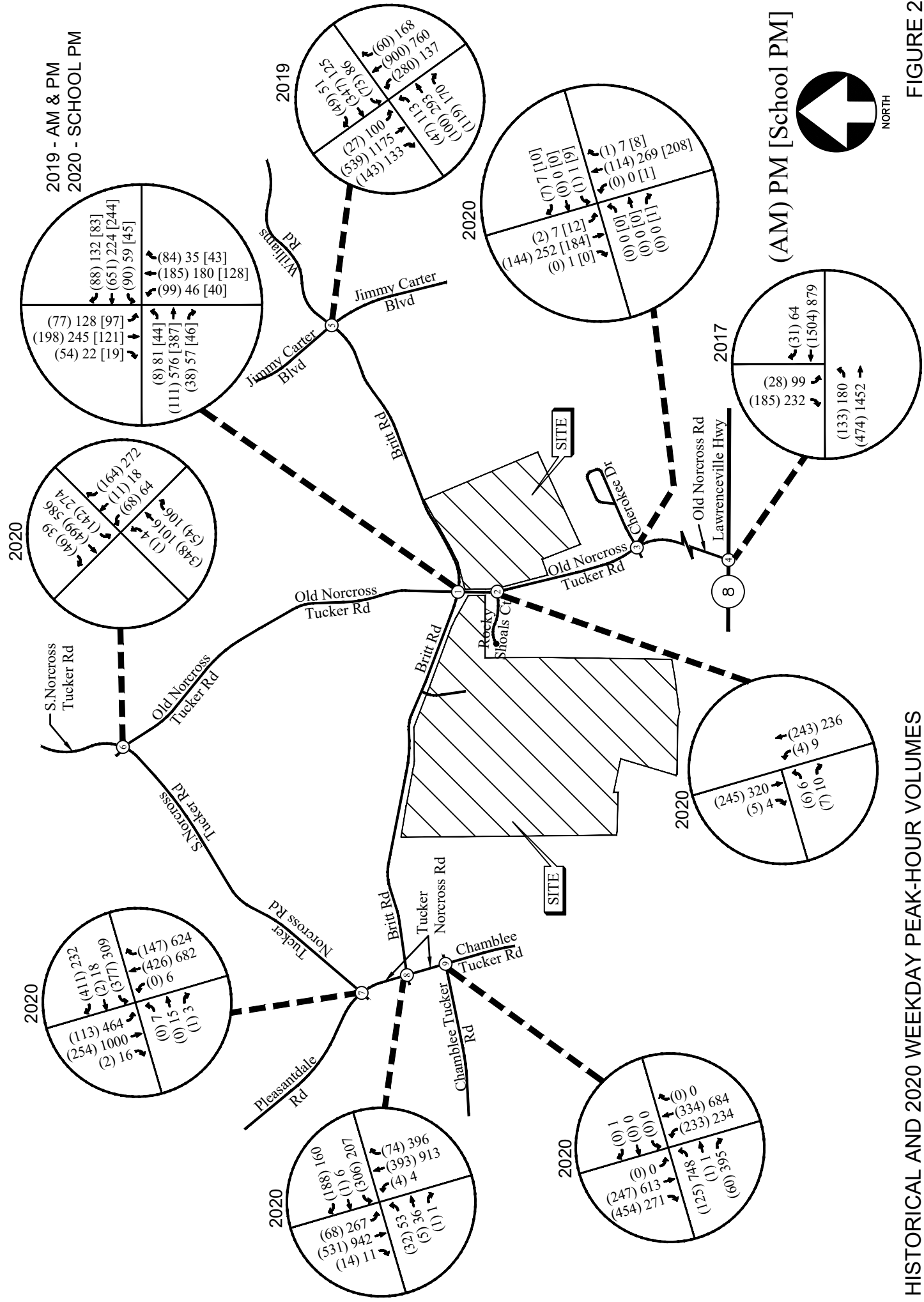
TABLE 3 – TRIP GENERATION (NESBIT ELEMENTARY SCHOOL)											
Land Use	Size	AM Peak Hour			PM Peak Hour			School Dismissal Peak Hour			24 Hr
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-way
Elementary School	1,000 Students	351	299	650	82	88	170	153	187	340	1,946

The following outer leg trip distribution has been used to distribute the school trips to the intersections on Old Norcross Tucker Road at Britt Road and Cherokee Drive:

- 35% of the new trips will travel to/from the west on Britt Road
- 20% of the new trips will travel to/from the east on Britt Road
- 25% of the new trips will travel to/from the north on Old Norcross Tucker Road
- 20% of the new trips will travel to/from the south on Old Norcross Tucker Road

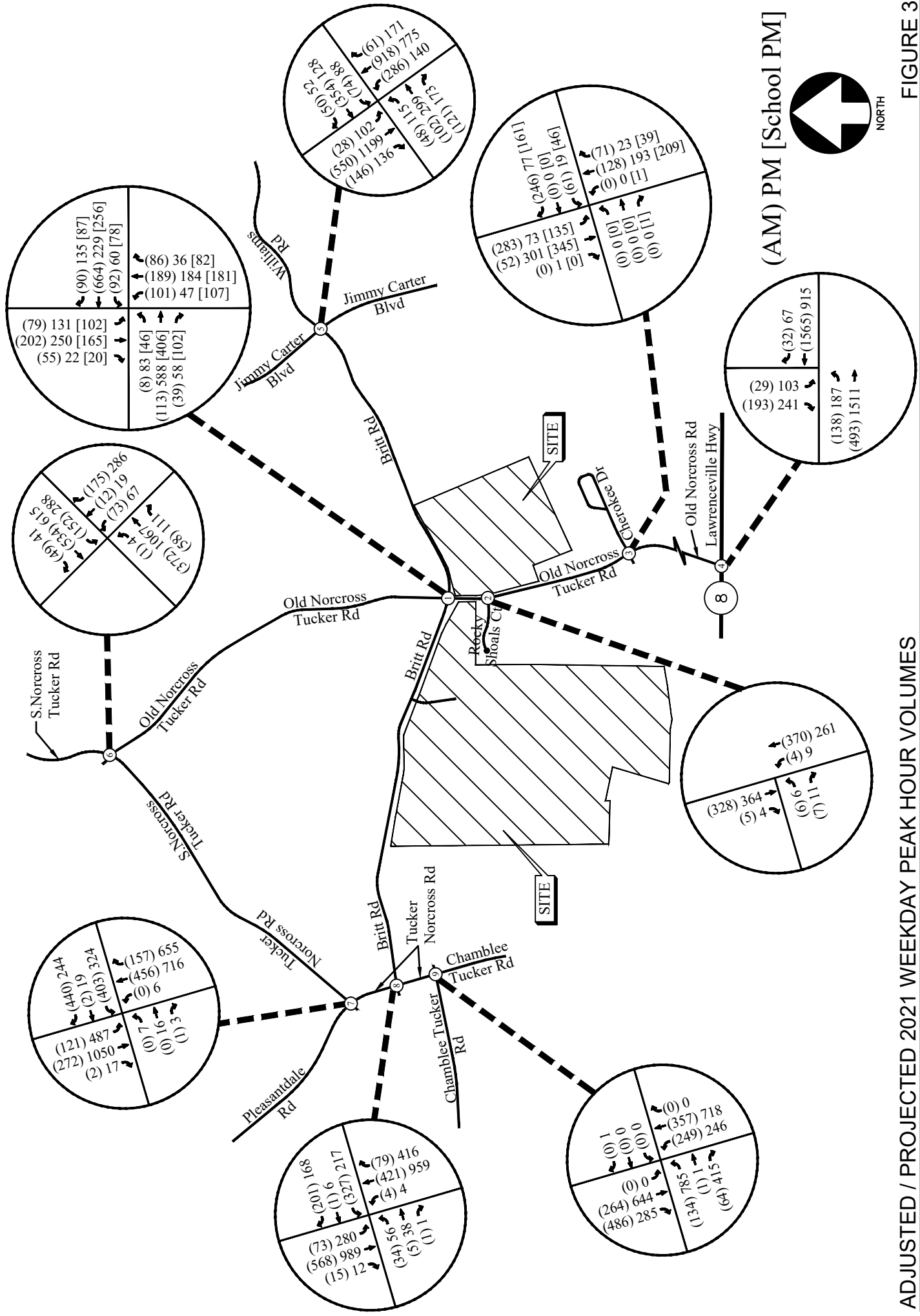
These trips from Table 3 were added to the adjusted 2020 peak hour volumes at the two intersections. The AM and PM Nesbit Elementary School trips were not added at the Britt Road at Old Norcross Tucker Road intersection as the AM and PM peak hour counts at that intersection were obtained in 2019 and already have the school trips accounted for. All the resulting adjusted/projected 2021 peak hour volumes are shown in Figure 3.

The existing traffic control and lane geometry for the intersections are shown in Figure 4 (Page 14).



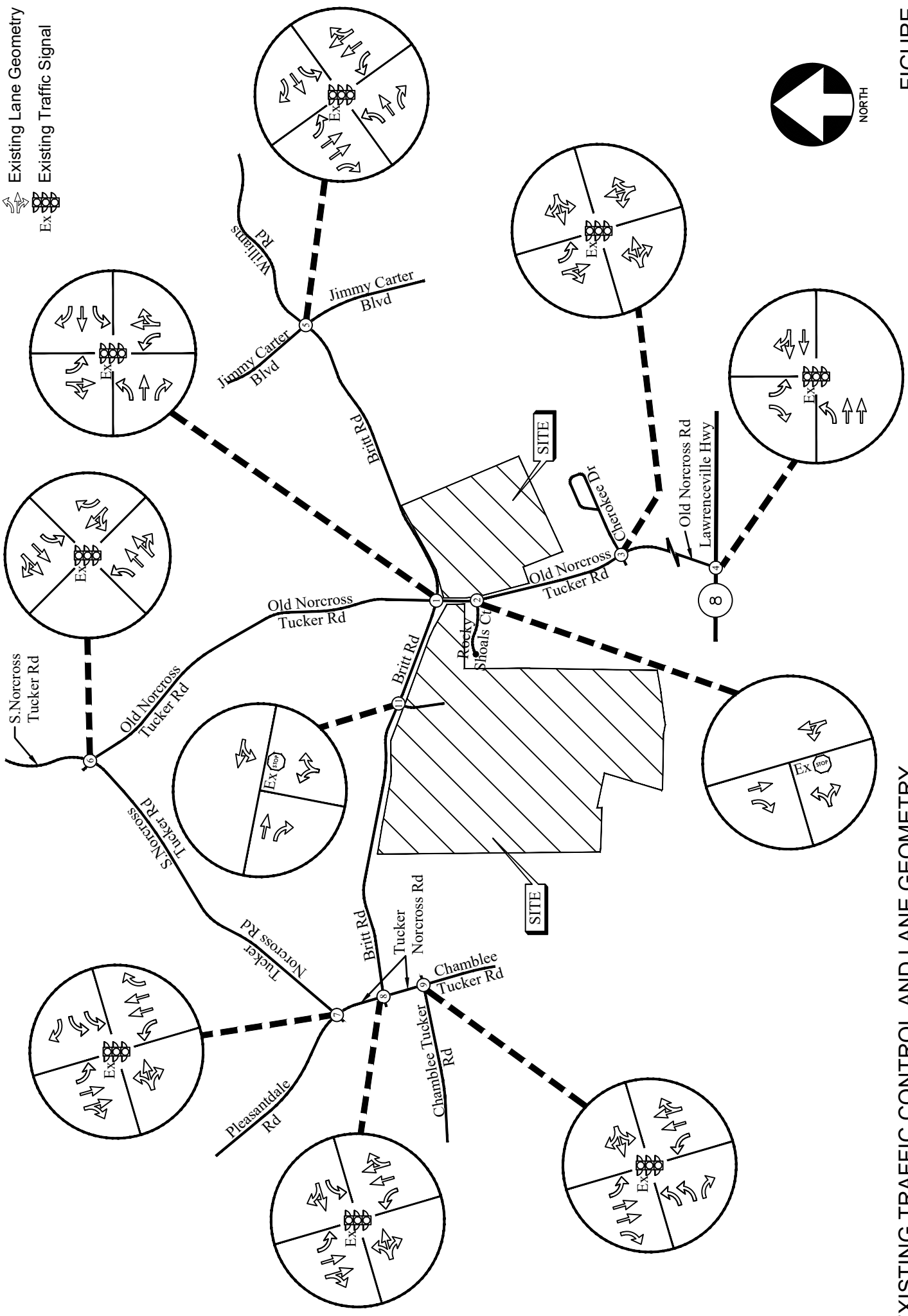
HISTORICAL AND 2020 WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2



LEGEND

- Ex (with signal icon) Existing Signed Approach
- Ex (with arrow icon) Existing Lane Geometry
- Ex (with signal icon) Existing Traffic Signal



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 4

Existing Traffic Operations

Existing 2021 traffic operations were analyzed at the study intersections in accordance with the HCM methodology using the volumes in Figure 3. The results of the AM and PM peak analyses are shown in Table 4A and school PM peak hour analysis is shown in Table 4B.

TABLE 4A – EXISTING INTERSECTION OPERATIONS					
	Intersection	Traffic Control	AM Peak Hour	PM Peak Hour	LOS Standard
1	<u>Britt Rd @ Old Norcross Tucker Rd</u> -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	<u>C (25.7)</u> A (9.3) B (14.4) D (43.4) D (42.3)	<u>C (22.8)</u> B (12.1) B (10.2) D (40.4) D (44.0)	<u>D / D</u> - - - -
2	<u>Old Norcross Tucker Rd @ Rocky Shoals Ct</u> -Eastbound Approach -Northbound Left	Stop Controlled on EB Approach	B (12.8) A (8.1)	B (11.8) A (8.1)	D / D D / D
3	<u>Old Norcross Tucker Rd @ Cherokee Dr</u> -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	<u>B (11.2)</u> B (13.8) A (7.2) B (11.3)	<u>A (5.9)</u> B (10.7) A (4.8) A (5.4)	<u>D / D</u> - - -
4	<u>SR 8 (Lawrenceville Hwy) @ Old Norcross Rd</u> -Eastbound Approach -Westbound Approach -Southbound Approach	Signalized	<u>B (15.3)</u> A (6.5) B (14.1) D (49.2)	<u>B (14.6)</u> A (9.1) B (13.1) D (45.9)	<u>D / D</u> - - -
5	<u>Jimmy Carter Blvd @ Britt Rd/Williams Rd</u> -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	<u>D (35.5)</u> D (40.3) E (57.2) C (30.1) C (29.9)	<u>D (36.3)</u> D (53.8) D (43.2) C (34.4) C (31.2)	<u>D / D</u> - - - -
6	<u>S. Norcross Tucker Rd @ Old Norcross Tucker Rd</u> -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	<u>B (13.0)</u> D (48.7) A (7.0) A (4.1)	<u>C (20.4)</u> D (40.6) B (19.8) B (13.2)	<u>D / D</u> - - -
7	<u>Pleasantdale Rd @ Tucker Norcross Rd</u> -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	<u>D (50.2)</u> F (133.8) E (76.3) C (33.7) B (13.2)	<u>D (45.6)</u> F (82.6) E (69.4) D (38.8) D (39.2)	<u>D / D</u> - - - -
8	<u>Tucker Norcross Rd @ Britt Rd</u> -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	<u>B (19.1)</u> D (43.2) D (42.3) A (0.8) B (12.9)	<u>C (25.1)</u> D (48.6) D (50.1) C (21.3) B (19.8)	<u>D / D</u> - - - -
9	<u>Chamblee Tucker Rd @ Tucker Norcross Rd</u> -Eastbound Approach -Westbound Approach	Signalized	<u>B (15.2)</u> E (55.7) A (0.0)	<u>C (24.7)</u> D (43.9) F (133.8)	<u>D / D</u> - -

-Northbound Approach		A (2.2)	B (14.0)	-
-Southbound Approach		B (14.3)	A (4.8)	-

TABLE 4B – EXISTING INTERSECTION OPERATIONS

Intersection		Traffic Control	School Dismissal Peak Hour	LOS Standard
1	<u>Britt Rd @ Old Norcross Tucker Rd</u>	Signalized	<u>C (23.0)</u>	<u>D / D</u>
	-Eastbound Approach		A (9.7)	-
	-Westbound Approach		A (9.6)	-
	-Northbound Approach		D (42.3)	-
	-Southbound Approach		D (43.3)	-
3	<u>Old Norcross Tucker Rd @ Cherokee Dr</u>	Signalized	<u>A (7.5)</u>	<u>D / D</u>
	-Eastbound Approach		B (10.2)	-
	-Westbound Approach		B (12.2)	-
	-Northbound Approach		A (5.7)	-
	-Southbound Approach		A (6.3)	-

The results of existing traffic operations analysis indicate that all the study intersections are operating at an acceptable level-of-service (“D” or better by local standards) in the studied peak hours.

PROJECT DESCRIPTION

The proposed Heritage on the Lake, a mixed development, will be located in the southwest and southeast corners of the intersection of Britt Road at Old Norcross Tucker Road.

The portion of the development west of Old Norcross Tucker Road will consist of:

- Single-family homes: 334 Units
- Townhomes: 104 Units

The portion of the development east of Old Norcross Tucker Road will consist of:

- Retail space: 10,000 sf
- Multifamily homes: 290 Units
- Townhomes: 150 Units

There is a lake and stream along the middle of the western and eastern side of the properties, requiring multiple access points. The development proposes seven site accesses (two for the western and five for the eastern portions of the site) at the following locations:

- Site Driveway 1: Full-access driveway on Britt Road for the western single-family homes
- Site Driveway 2: Full-access driveway on Britt Road for the western single-family and townhomes, at the existing driveway location
- Site Driveway 3: Right-in/right-out driveway on Britt Road for the eastern retail portion
- Site Driveway 4: Full-access driveway on Britt Road for the eastern multifamily homes
- Site Driveway 5: Full-access driveway on Old Norcross Tucker Road for the eastern retail portion
- Site Driveway 6: Full-access driveway on Old Norcross Tucker Road, aligned with Rocky Shoals Court, for the eastern multifamily homes
- Site Driveway 7: Full-access driveway on Old Norcross Tucker Road for the eastern townhomes

Site Plan

A site plan is shown in Figure 5. A digital copy of the site plan will be provided with this report.

Planned Bicycle and Pedestrian Facilities

The on and/or off-site provisions for non-motorized travel included in the planned construction of the proposed development are as follows:

- The proposed development will consist of residential and retail uses. Pedestrian connections are proposed between the mixed-uses on the site where feasible.
- The development plan includes several design elements that enhance the character and quality the site by incorporating building orientation, parking locations, bicycle and pedestrian facilities, a mix of land uses.

Planned Transit Facilities

There is no additional planned public transit service near the site.

Consistency with Adopted Comprehensive Plan

The following is an explanation as to how the proposed DRI relates to the local government's Comprehensive Plan in particular the transportation and capital improvements element, and any transportation improvements listed in the Short-Term Work Program(s) within the vicinity of the DRI.

The proposed development, which includes a majority of residential land use and some retail space, supports the City of Tucker's Comprehensive Plan of having high density neighborhood centers, including multifamily housing adjacent to a mix of retail space that serve's resident's day-to-day needs. The development has planned connections and access points to public roads where feasible to promote interconnectivity of the planned community as encouraged by City of Tucker's theme of promoting connectivity. The planned residential area will also support the local retail center's economic success. Gwinnet County's Comprehensive Transportation Plan includes improving the safety and mobility for all people across all modes of transportation. System Improvements and Site Mitigation Improvements that are included in the Conclusions and Recommendations section of this report include improvements at several study intersections that would improve safety of intersections.

Project Phasing

This project has been evaluated for the complete build-out of the development in 2025.

Trip Generation

Trip generation estimates for the project were based on the rates and equations published in the 10th edition of the Institute of Transportation Engineers (ITE) Trip Generation report for the daily, AM and PM peak hours. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Uses: 210 – *Single-Family Detached Housing*, 220 – *Multifamily Housing (Low-Rise)*, 221 – *Multifamily Housing (Mid-Rise)* and 820 – *Shopping Center*. Pass-by reductions have been applied for the retail portion of the site per ITE standards. Since ITE does not have equations/rates for school dismissal peak hour, ITE hourly distribution of entering and exiting trips by land use (2:00 PM to 3:00 PM) were used during the school peak hour analysis. Due to the availability of public transit in the vicinity of the proposed site, an alternate mode reduction of 2% (based on ARC/GRTA concurrence) was used for the AM and PM peak hours. The calculated total trip generation for the proposed development is shown in Table 5A (western portion) and Table 5B (eastern portion).

TABLE 5A— TRIP GENERATION (WEST SIDE OF PROPOSED SITE)

Land Use	Size	AM Peak Hour			PM Peak Hour			School Dismissal Peak Hour			24 Hr
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-way
Single-Family Detached Housing	334 Units	60	182	242	203	120	323	110	98	208	3,153
Multifamily Housing (Low-Rise)	104 Units	11	39	50	39	22	61	22	22	44	745
Alternate Mode Reduction (2%)		-1	-4	-5	-5	-3	-8	0	0	0	-78
Total Site Trips without Reductions		71	221	292	242	142	384	132	120	252	3,898
Total Site Trips with Reductions		70	217	287	237	139	376	132	120	252	3,820

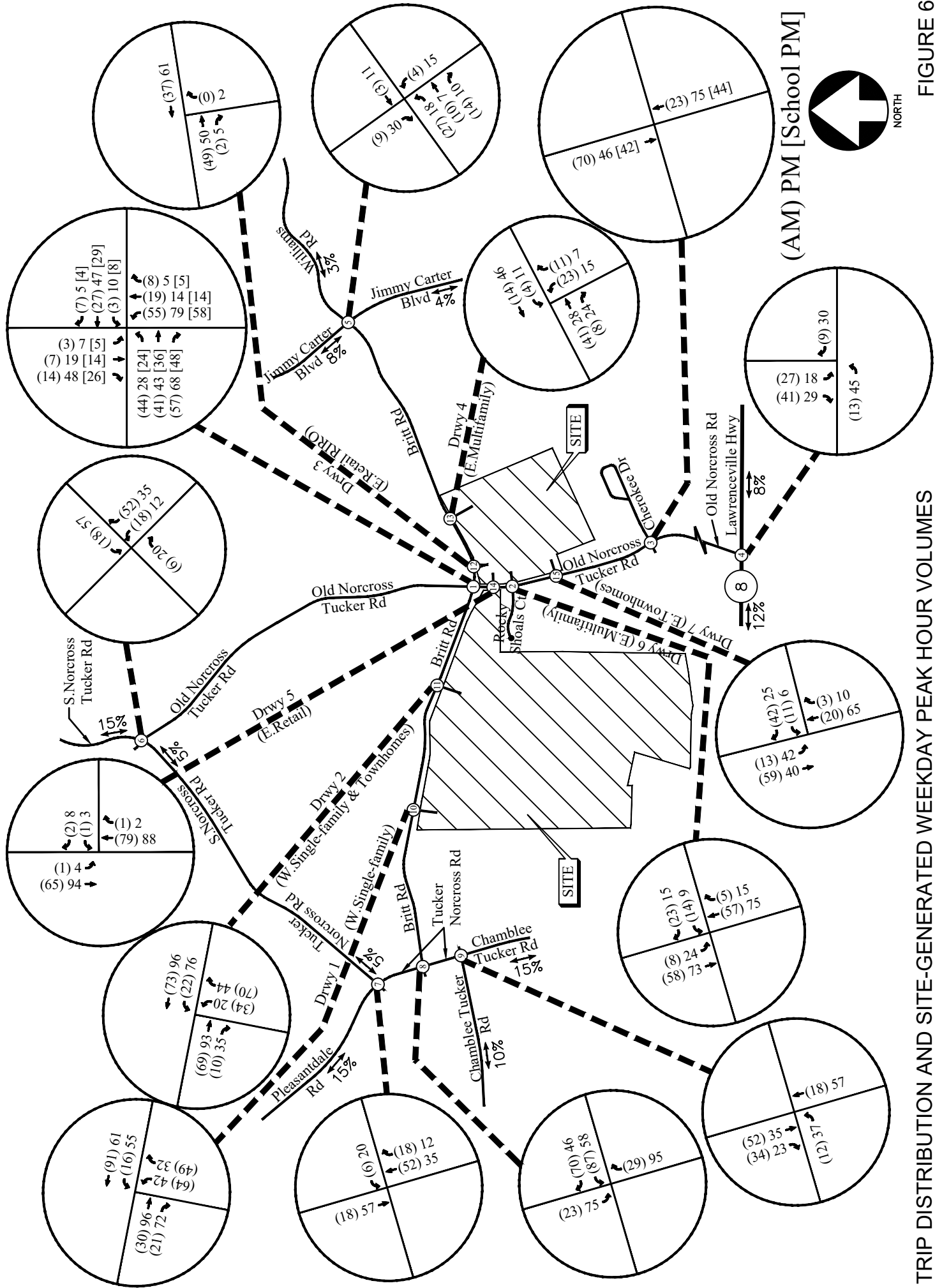
TABLE 5B — TRIP GENERATION (EAST SIDE OF PROPOSED SITE)

Land Use	Size	AM Peak Hour			PM Peak Hour			School Dismissal Peak Hour			24 Hr
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-way
Multifamily Housing (Low-Rise)	150 Units	16	54	70	53	32	85	32	33	65	1,093
Multifamily Housing (Mid-Rise)	290 Units	25	72	97	75	48	123	46	39	85	1,579
Shopping Center	10,000 sf	5	4	9	18	20	38	17	17	34	378
Pass-by Trips (0%) [34%] 0%		0	0	0	-6	-7	-13	0	0	0	-129
Alternate Mode Reduction (2%)		-1	-3	-4	-3	-2	-5	0	0	0	-58
Total Site Trips without Reductions		46	130	176	146	100	246	95	89	184	3,050
Total Site Trips with Reductions		45	127	172	143	98	241	95	89	184	2,992

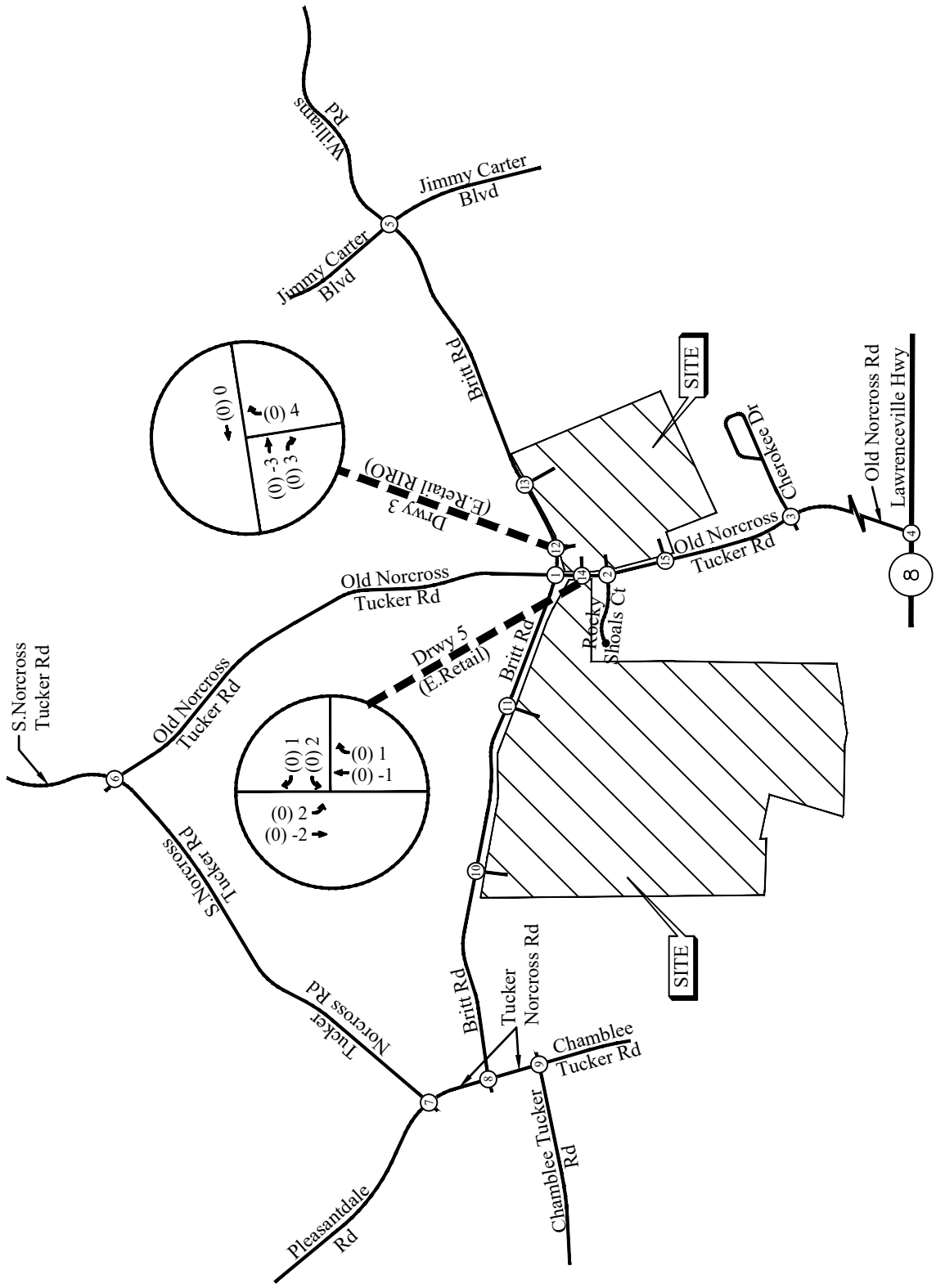
*pass-by trips (AM) [PM] School Dismissal; Daily pass-by reduction estimated to be least of the applied PM peak hour pass-by rate or ten times the PM pass-by volume

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 Tables 5A and 5B, 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 6 (Page 22). Pass-by volumes have also been distributed based on existing travel patterns and are shown in Figure 7 (Page 23).



TRIP DISTRIBUTION AND SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES FIGURE 6



(AM) PM



FIGURE 7

A&R Engineering Inc.

SITE PEAK HOUR PASS-BY VOLUMES

FUTURE 2025 TRAFFIC ANALYSIS

The future 2025 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 adjusted/projected 2021 traffic volumes (Figure 3; Page 13) plus increases for annual growth of through 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 years revealed no consistent positive growth of through traffic; therefore, a growth rate of 1% (based on ARC/GRTA concurrence) was used in the analysis. This growth factor was applied to the existing traffic volumes between collector and arterial roadways in order 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 8 (Page 26).

Planned and Programmed Improvements in Study Area

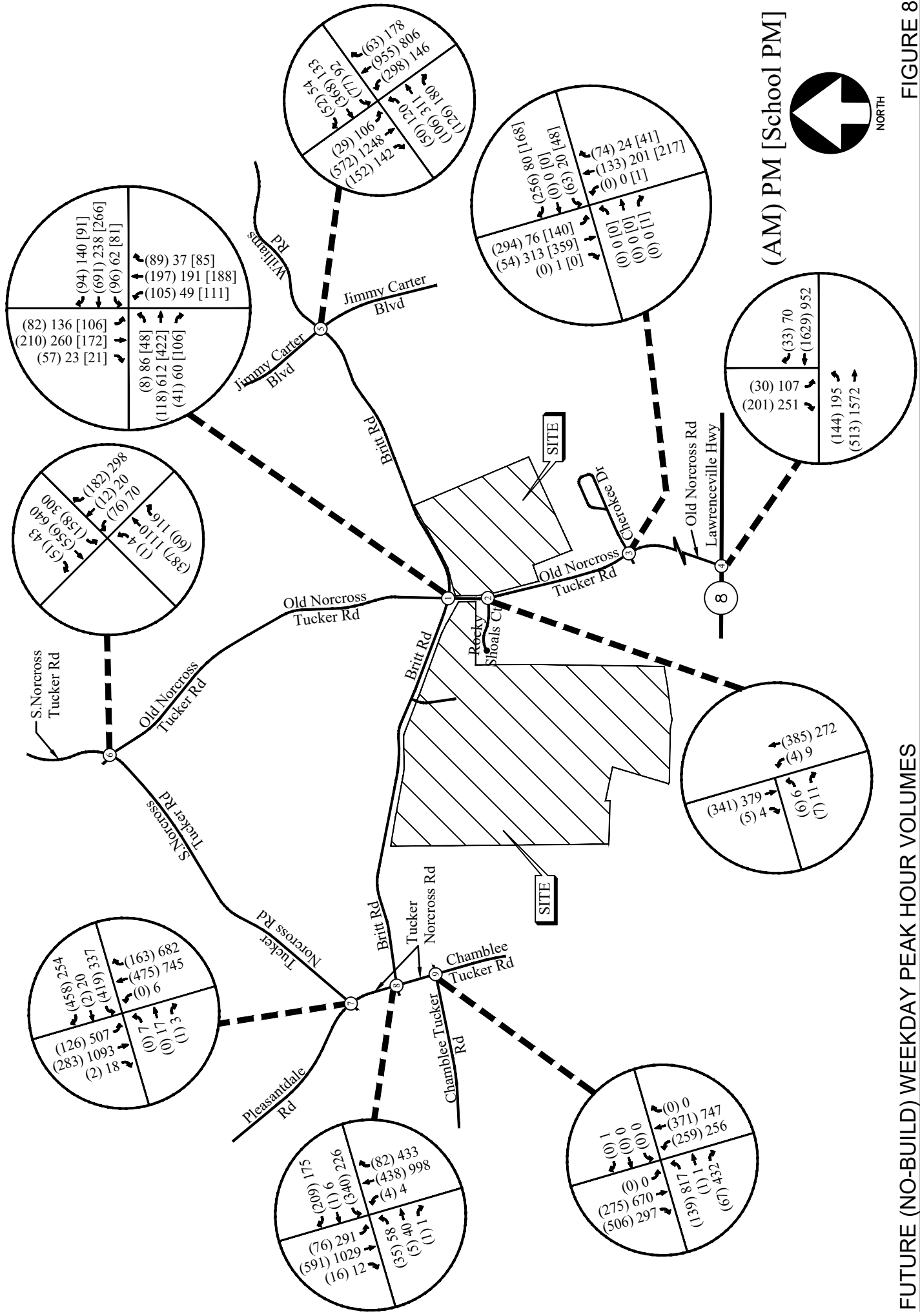
The following improvements have been identified in the Regional Transportation Plan (Plan 2040), GDOT GeoPi, and/or the local comprehensive transportation plan. These improvements are within the vicinity of the proposed development.

TABLE 6 – PLANNED AND PROGRAMMED IMPROVEMENTS				
Project ID	Project	Type of Improvement	Program Year	Source
0017180	OFF-SYSTEM SAFETY IMPROVEMENTS @ 4 LOCS IN TUCKER	Safety	-	GDOT GeoPi
M005808	SR 8 FROM FULTON COUNTY LINE TO GWINNETT COUNTY LINE	Maintenance	2021	GDOT GeoPi
0008268	FLAT SHOALS RD; HENDERSON RD & SALEM RD - SIDEWALKS	Enhancement	-	GDOT GeoPi
M006178	SR 8 FROM DEKALB COUNTY LINE TO CR 7238/RONALD REAGAN PKWY	Maintenance	-	GDOT GeoPi

None of the listed improvements will have an impact to the study area at full build-out of the proposed development.

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. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 6; Page 22) and pass-by volumes (Figure 7; Page 23) were added to base traffic volumes (Figure 8; Page 26) to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 9 (Page 27).

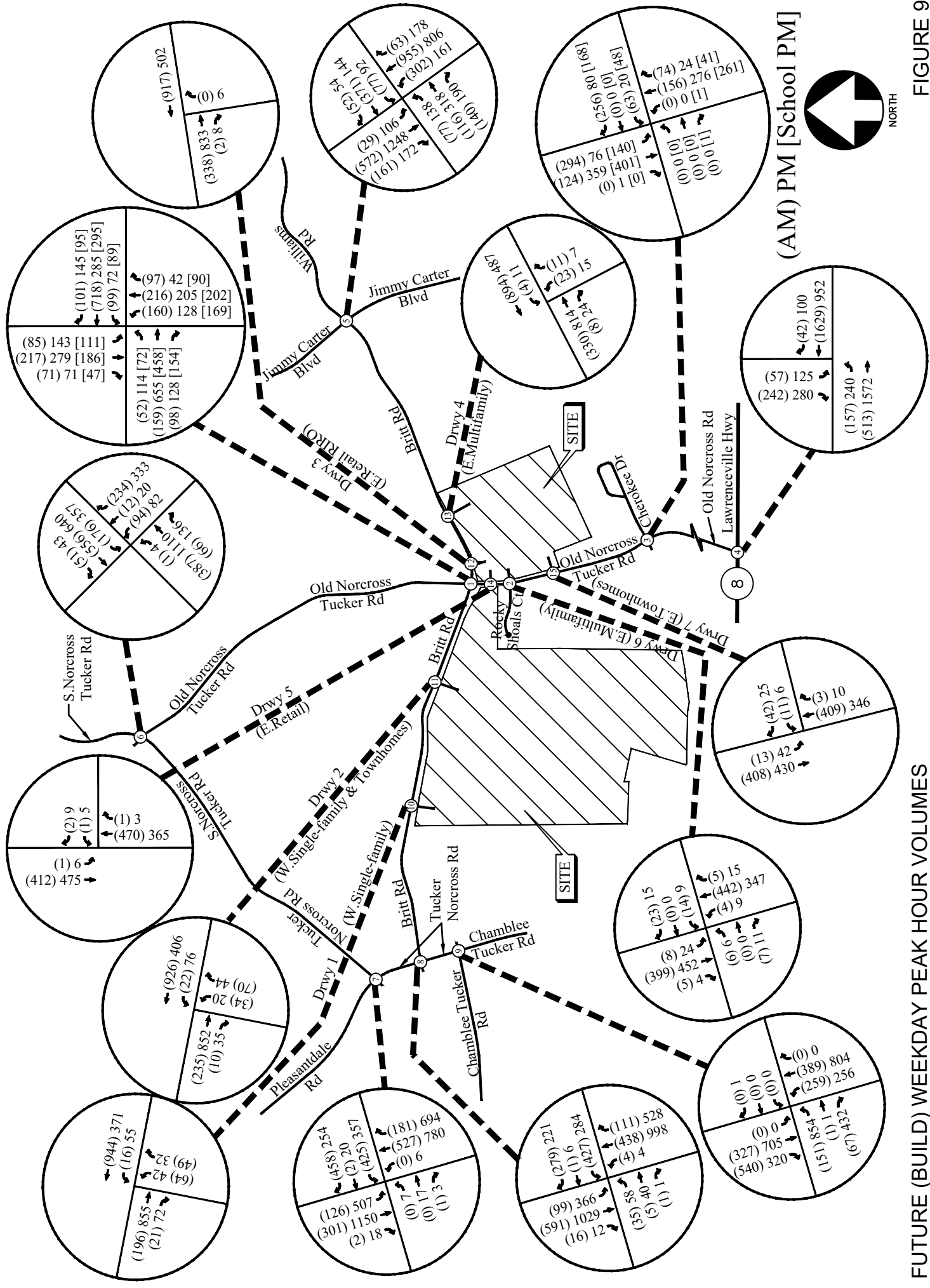


(AM) PM [School PM]



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 8



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 9

Site Access Configuration

The following access configuration was utilized when modeling the proposed site driveway intersections:

- Site Driveway 1: Full-access driveway on Britt Road for the western single-family homes
- Site Driveway 2: Full-access driveway on Britt Road for the western single-family and townhomes
- Site Driveway 3: Right-in/right-out driveway on Britt Road for the eastern retail portion
- Site Driveway 4: Full-access driveway on Britt Road for the eastern multifamily homes
- Site Driveway 5: Full-access driveway on Old Norcross Tucker Road for the eastern retail portion
- Site Driveway 6: Full-access driveway on Old Norcross Tucker Road, aligned with Rocky Shoals Court, for the eastern multifamily homes
- Site Driveway 7: Full-access driveway on Old Norcross Tucker Road for the eastern townhomes

Auxiliary Lane Analysis

Included below are analyses for left-turn lanes and deceleration lanes for all site driveways per GDOT standards. The analysis is based off the assumption that the average annual daily traffic (ADT) count on Britt Road is assumed to be greater than 6,000 vehicles per day based on the surrounding roadway ADT's. The analyses below are based off the trip distribution included in the "Trip Distribution" section.

Left Turn Lane Analysis

For two lane roadways with AADT's greater than 6,000 vehicles, the daily site generated traffic left-turn movements threshold to warrant a left-turn lane is 200 left-turning vehicles a day for a posted speed limit of 35 mph and 175 left-turning vehicles a day for a posted speed limit of 40 mph. The projected left-turn volumes per day for each driveway is included in Table 8A.

TABLE 8A - GDOT REQUIREMENTS FOR LEFT TURN LANES

Intersection	Left-turn traffic (% total entering)	Left-turn Volume (veh/day)	Roadway Speed/ # lanes	GDOT Threshold (veh/day)
Britt Rd @ Site Drwy 1 (W. Single-Family)	27.5% W.Single-family	425* (W.Single-family total trips – 2% alternate mode reduction) ÷2 × 0.275 = left turning vehicles (3153-63) ÷2 × 0.275 = 425	35 mph / 2 lane	200
Britt Rd @ Site Drwy 2 (W. Single-Family & Townhomes)	27.5% W.Single-family + 55% W.Townhomes	626* [(W.Single-family total trips – 2% alternate mode reduction) ÷2 × 0.275] + [(W.Townhomes total trips – 2% alternate mode reduction) ÷2 × 0.55] = left turning vehicles [(3153-63) ÷2 × 0.275] + [(745-15) ÷2 × 0.55] = 626	35 mph / 2 lane	200
Britt Rd @ Site Drwy 4 (E. Multifamily)	15% E.Multifamily	116* (E. Multifamily total trips – 2% alternate mode reduction) ÷2× 0.15 = left turning vehicles (1579-32) ÷2 × 0.15 = 116	40 mph / 2-Lane	175

Old Norcross Tucker Rd @ Site Drwy 5 (E. Retail)	35% E.Retail	65* (E. Retail total trips – 2% alternate mode reduction) ÷2 × 0.35 = left turning vehicles (378-8) ÷2 × 0.35 = 65	35 mph / 2 lane	200
Old Norcross Tucker Rd @ Rocky Shoals Ct / Site Drwy 6 (E. Multifamily)	32.5% E.Multifamily	251* (E. Multifamily total trips – 2% alternate mode reduction) ÷2 × 0.325 = left turning vehicles (1579-32) ÷2 × 0.325 = 251	35 mph / 2 lane	200
Old Norcross Tucker Rd @ Site Drwy 7 (E. Townhomes)	80% E.Townhomes	428* (E. Townhomes total trips – 2% alternate mode reduction) ÷2 × 0.80 = left turning vehicles (1093-22) ÷2 × 0.80 = 428	35 mph / 2 lane	200

*Alternate mode reductions included

Since the projected number of left-turning vehicles exceeds the threshold of 200 left turning vehicles, a left-turn lane is warranted at Site Driveway 1, Site Driveway 2, Site Driveway 6 and Site Driveway 7 per GDOT standards.

Deceleration Turn Lane Analysis

For two lane roadways with AADT's greater than 6,000 vehicles, the daily site generated traffic right-turn movements threshold to warrant a deceleration lane is 100 right turning vehicles a day for a posted speed limit of 35 mph and 75 right turning vehicles a day for a posted speed limit of 40 mph. The projected right-turn volumes per day for each driveway is included in Table 8B.

TABLE 8B - GDOT REQUIREMENTS FOR DECELERATION LANES

Intersection	Right-turn traffic (% total entering)	Right-turn Volume (veh/day)	Roadway Speed/ # lanes	GDOT Threshold (veh/day)
Britt Rd @ Site Drwy 1	36% W.Single-family	556* (W.Single-family total trips – 2% alternate mode reduction) ÷2 × 0.36 = right turning vehicles (3153-63) ÷2 × 0.36 = 556	35 mph / 2-Lane	100
Britt Rd @ Site Drwy 2	9% W. Single-Family + 45% W. Townhomes	303* ((W. Single Family trips – 2% alternate mode reduction) ÷2 × 0.09) + ((W. Townhomes Trips – 2% alternate mode reduction) ÷2 × 0.45 = right turning vehicles 139 + 164 = 303	35 mph / 2-Lane	100
Britt Rd @ Site Drwy 3	45% E.Retail	83* (E. Retail total trips – 2% alternate mode reduction) ÷2 × 0.45 = right turning vehicles (378-8) ÷2 × 0.45 = 83	40 mph / 2-Lane	75
Britt Rd @ Site Drwy 4	32.5% E.Multifamily	251* (E. Multifamily total trips – 2% alternate mode reduction) ÷2 × 0.325 = right turning vehicles (1579-32) ÷2 × 0.325 = 251	40 mph / 2-Lane	75
Old Norcross Tucker Rd @ Site Drwy 5	20% E.Retail	37* (E. Retail total trips – 2% alternate mode reduction) ÷2 × 0.20 = right turning vehicles (378-8) ÷2 × 0.20 = 37	35 mph / 2-Lane	100

Old Norcross Tucker Rd @ Rocky Shoals Ct / Site Drwy 6	20% E.Multifamily	155* (E. Multifamily total trips – 2% alternate mode reduction) ÷2 × 0.20 = right turning vehicles (1579-32) ÷2 × 0.20 = 155	35 mph / 2-Lane	100
Old Norcross Tucker Rd @ Site Drwy 7	20% E.Townhomes	107* (E. Townhomes total trips – 2% alternate mode reduction) ÷2 × 0.20 = right turning vehicles (1093-22) ÷2 × 0.20 = 107	35 mph / 2-Lane	100

*Alternate mode reductions included

Since the projected number of right turning vehicles exceeds the threshold of right turning vehicles, a deceleration lane is warranted at all the proposed site driveways except at Site Driveway 5 per GDOT standards.

Future “No-Build” and “Build” Traffic Operations

The future 2025 “No-Build” and “Build” traffic operations were analyzed using the volumes in Figure 8 (Page 26) and Figure 9 (Page 27), respectively, and the results are shown in Tables 8A and 8B. The “Build” scenario includes recommended site mitigation and system improvements. The results of the analyses, including the recommended improvements, are discussed in detail in the next section.

TABLE 8A – FUTURE INTERSECTION OPERATIONS					
Intersection		Future Condition: LOS (Delay)			
		NO-BUILD With System Improvements		BUILD With Site Mitigation Improvements	
		AM Peak	PM Peak	AM Peak	PM Peak
1	<u>Britt Rd @ Old Norcross Tucker Rd</u>	<u>C (26.1)</u>	<u>C (23.2)</u>	<u>C (28.1)</u>	<u>C (31.0)</u>
	-Eastbound Approach	A (9.8)	B (13.1)	B (17.3)	C (21.1)
	-Westbound Approach	B (15.7)	B (10.9)	C (22.3)	B (18.2)
	-Northbound Approach	D (42.7)	D (39.7)	D (40.3)	D (37.6)
	-Southbound Approach	D (41.6)	D (43.4)	C (35.8)	E (57.1)
2	<u>Old Norcross Tucker Rd @ Rocky Shoals Ct / Site Drwy 6 (E. Multifamily)</u>				
	-Eastbound Approach	B (13.0)	B (12.1)	C (16.5)	B (14.9)
	-Westbound Approach	-	-	C (16.3)	B (14.6)
	-Northbound Left	A (8.1)	A (8.2)	A (8.3)	A (8.4)
	-Southbound Left	-	-	A (8.4)	A (8.1)
3	<u>Old Norcross Tucker Rd @ Cherokee Dr</u>	<u>B (11.8)</u>	<u>A (6.0)</u>	<u>B (12.0)</u>	<u>A (6.0)</u>
	-Westbound Approach	B (14.6)	B (11.0)	B (16.0)	B (12.2)
	-Northbound Approach	A (7.4)	A (4.8)	A (7.4)	A (4.9)
	-Southbound Approach	B (12.0)	A (5.4)	B (11.4)	A (5.4)
4	<u>SR 8 (Lawrenceville Hwy) @ Old Norcross Rd</u>	<u>B (16.4)</u>	<u>B (15.3)</u>	<u>B (19.8)</u>	<u>B (17.0)</u>
	-Eastbound Approach	A (7.5)	A (9.9)	A (9.8)	B (11.3)
	-Westbound Approach	B (15.4)	B (13.9)	B (18.6)	B (16.5)
	-Southbound Approach	D (49.3)	D (45.8)	D (48.7)	D (44.3)
5	<u>Jimmy Carter Blvd @ Britt Rd/Williams Rd</u>	<u>D (36.7)</u>	<u>D (38.3)</u>	<u>D (37.6)</u>	<u>D (39.6)</u>
	-Eastbound Approach	D (39.8)	D (54.1)	D (38.5)	D (53.9)

	-Westbound Approach -Northbound Approach -Southbound Approach	E (57.7) C (31.5) C (31.4)	D (42.7) D (37.3) C (33.3)	E (57.7) C (32.8) C (33.0)	D (43.3) D (38.6) C (34.9)
6	<u>S. Norcross Tucker Rd @ Old Norcross Tucker Rd</u>	<u>B (13.2)</u>	<u>C (22.4)</u>	<u>B (15.1)</u>	<u>C (28.8)</u>
	-Westbound Approach	D (48.2)	D (39.6)	D (45.4)	C (34.0)
	-Northbound Approach	A (7.3)	C (22.0)	A (9.2)	C (31.5)
	-Southbound Approach	A (4.3)	B (16.3)	A (5.5)	C (23.4)
7	<u>Pleasantdale Rd @ Tucker Norcross Rd</u>	<u>D (51.2)</u>	<u>D (47.8)</u>	<u>D (53.7)</u>	<u>D (49.9)</u>
	-Eastbound Approach	F (133.8)	E (64.7)	F (133.8)	E (64.7)
	-Westbound Approach	E (77.6)	D (49.3)	F (84.3)	D (49.1)
	-Northbound Approach	C (34.8)	A (3.9)	D (35.0)	A (1.7)
	-Southbound Approach	B (13.8)	E (67.3)	B (13.5)	E (72.3)
8	<u>Tucker Norcross Rd @ Britt Rd</u>	<u>C (27.8)</u>	<u>C (31.7)</u>	<u>D (36.8)</u>	<u>D (52.3)</u>
	-Eastbound Approach	D (42.7)	D (48.9)	D (53.7)	D (49.5)
	-Westbound Approach	D (41.7)	D (51.5)	F (89.3)	E (61.0)
	-Northbound Approach	C (30.2)	C (32.7)	A (0.8)	E (56.6)
	-Southbound Approach	B (13.8)	C (23.2)	B (11.5)	D (44.8)
9	<u>Chamblee Tucker Rd @ Tucker Norcross Rd</u>	<u>B (11.5)</u>	<u>C (25.4)</u>	<u>B (15.7)</u>	<u>C (26.4)</u>
	-Eastbound Approach	E (55.4)	D (44.3)	E (55.5)	D (46.8)
	-Westbound Approach	A (0.0)	F (133.8)	A (0.0)	F (133.8)
	-Northbound Approach	A (2.1)	B (14.7)	A (2.5)	B (15.0)
	-Southbound Approach	A (0.1)	A (5.8)	B (15.4)	A (5.9)
10	<u>Britt Rd @ Site Drwy 1 (W. Single-Family)</u>				
	-Westbound Left -Northbound Approach	- -	- -	A (7.7) D (28.1)	B (10.7) E (41.6)
11	<u>Britt Rd @ Site Drwy 2 (W. Single-Family & Townhomes)</u>				
	-Westbound Left -Northbound Approach	- -	- -	A (7.8) C (19.4)	B (10.7) D (31.3)
12	<u>Britt Rd @ Site Drwy 3 (E. Retail RIRO)</u>				
	-Northbound Approach	-	-	A (0.0)	C (16.0)
13	<u>Britt Rd @ Site Drwy 4 (E. Multifamily)</u>				
	-Westbound Left -Northbound Approach	- -	- -	A (8.0) C (24.5)	A (9.9) D (28.5)
14	<u>Old Norcross Tucker Rd @ Site Drwy 5 (E. Retail)</u>				
	-Westbound Approach -Southbound Left	- -	- -	B (13.6) A (8.4)	B (13.2) A (8.1)
15	<u>Old Norcross Tucker Rd @ Site Drwy 7 (E. Townhomes)</u>				
	-Westbound Approach -Southbound Left	- -	- -	B (13.1) A (8.3)	B (12.3) A (8.2)

Overall, with the exception of one intersection (Tucker Norcross Road and Britt Road), the study intersections have the same level-of-service in the existing condition as the build condition. After the addition of general background traffic growth (“No-Build”), traffic operations at the study intersections remain within the same level-of-service at all study intersections, except for the intersection of Tucker Norcross Road and Britt Road. In the existing condition during the AM peak hour, the intersection of Tucker Norcross Road and Britt Road is operating at level-of-service “B”. In the “No-Build” condition, this

intersection is operating at level-of-service “C”. In the “Build” condition, this intersection is projected to operate at level-of-service “D” in the AM and PM peak hour after improvements were made. The recommended improvements system improvements and site mitigation improvements are listed in the Conclusions and Recommendations section of the report. Recommendations on traffic control and lane geometry are shown graphically in Figure 10 (Page 34).

TABLE 8B – FUTURE INTERSECTION OPERATIONS DURING SCHOOL PM PEAK HOUR			
Intersection		School Dismissal Peak Hour: LOS (Delay)	
		NO-BUILD	BUILD (With Improvements)
1	<u>Britt Rd @ Old Norcross Tucker Rd</u>	<u>C (23.1)</u>	<u>C (24.1)</u>
	-Eastbound Approach	B (10.4)	B (12.4)
	-Westbound Approach	B (10.2)	B (12.3)
	-Northbound Approach	D (41.7)	D (41.9)
	-Southbound Approach	D (42.7)	D (40.3)
3	<u>Old Norcross Tucker Rd @ Cherokee Dr</u>	<u>A (7.7)</u>	<u>A (7.9)</u>
	-Eastbound Approach	B (10.5)	B (11.3)
	-Westbound Approach	B (12.6)	B (13.6)
	-Northbound Approach	A (5.9)	A (6.0)
	-Southbound Approach	A (6.5)	A (6.6)

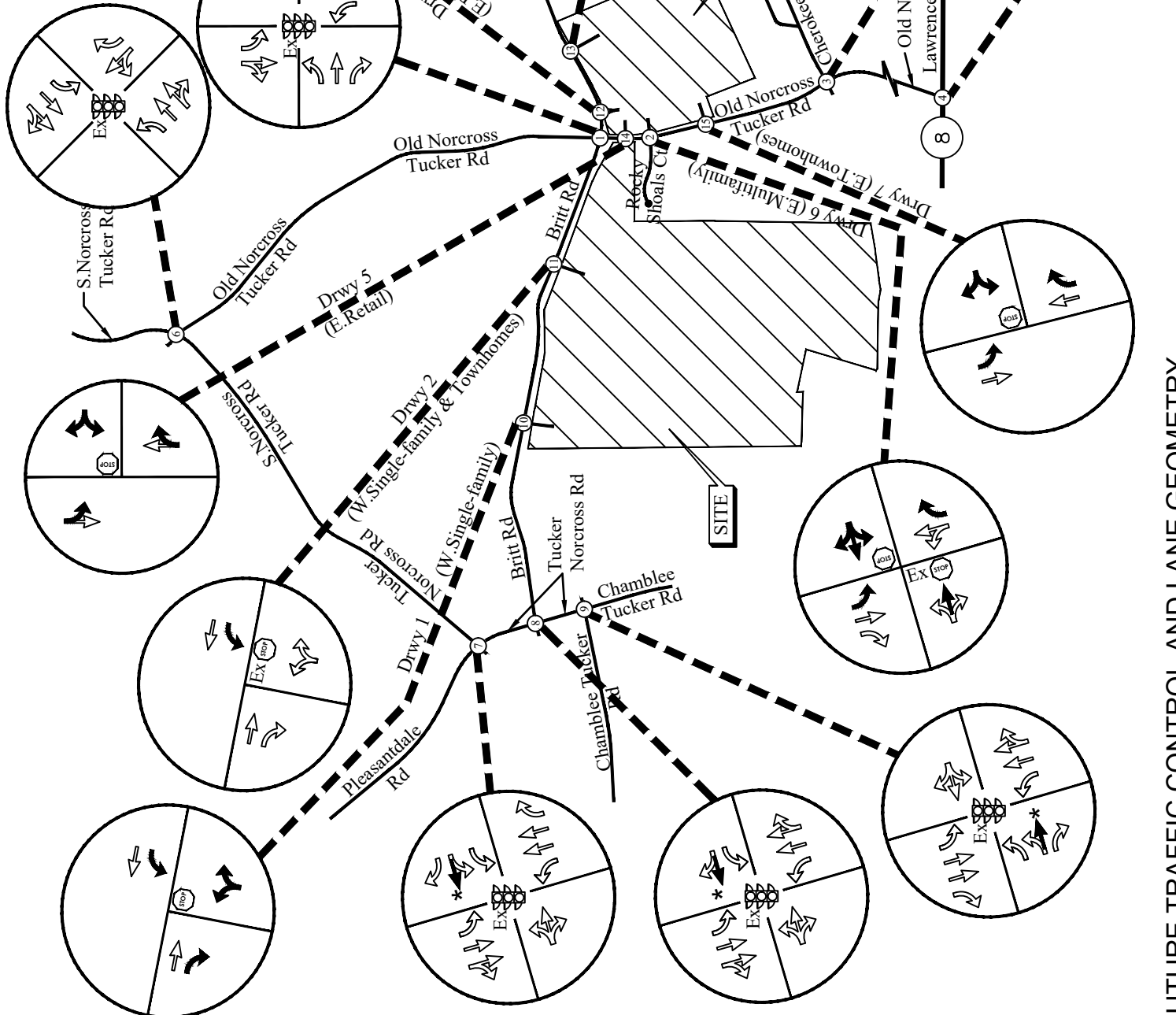
The school peak PM hour (2:15 and 3:15), traffic operations analysis indicates that the changes in traffic operations between the existing condition, “No-Build”, and “Build” conditions are insignificant.

Tuckersham Lane Connection Evaluation

For local government decision making purposes, we considered how much of the proposed development traffic would be distributed to Tuckersham Lane if a connection is established in the future. Note that at this time, there is no proposed connection between the planned development and Tuckersham Lane. The segment of the development that would have access to this connection at Tuckersham Lane consists of 334 single family detached homes and 104 multifamily (low rise) townhomes. The trip generation based on ITE data is shown in Table 5A. Of this projected traffic, it is estimated that 669 vehicles per day will use the connection if it is established. This traffic can access Chamblee Tucker Road via Tuckersham Lane or via Bonaparte Drive as shown below.



- LEGEND**
- Existing Signed Approach
 - Existing Lane Geometry
 - Existing Traffic Signal
 - Proposed Signed Approach
 - Proposed Lane Geometry
 - System Improvement



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 10

CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the traffic from the proposed Heritage on the Lake, a mixed-use development, located in the southwest and southeast corners of the intersection of Britt Road at Old Norcross Tucker Road. The site is located in both unincorporated Gwinnet County and City of Tucker, Georgia.

The portion of the development west of Old Norcross Tucker Road will consist of:

- Single-family homes: 334 Units
- Townhomes: 104 Units

The portion of the development east of Old Norcross Tucker Road will consist of:

- Retail space: 10,000 sf
- Multifamily homes: 290 Units
- Townhomes: 150 Units

Site Access Configuration

Given the existing lake and stream along the middle of the western and eastern side of the properties, multiple access points are required. The development proposes seven site access points (two for the western and five for the eastern portions of the site) at the following locations:

- Site Driveway 1: Full-access driveway on Britt Road for the western single-family homes
- Site Driveway 2: Full-access driveway on Britt Road for the western single-family and townhomes, at the existing driveway location
- Site Driveway 3: Right-in/right-out driveway on Britt Road for the eastern retail portion
- Site Driveway 4: Full-access driveway on Britt Road for the eastern multifamily homes
- Site Driveway 5: Full-access driveway on Old Norcross Tucker Road for the eastern retail portion
- Site Driveway 6: Full-access driveway on Old Norcross Tucker Road, aligned with Rocky Shoals Court, for the eastern multifamily homes
- Site Driveway 7: Full-access driveway on Old Norcross Tucker Road for the eastern townhomes

Study Intersections

Existing and future operations after completion of the project were analyzed at the intersections of:

- Britt Road at Old Norcross Tucker Road
- Old Norcross Tucker Road at Rocky Shoals Court
- Old Norcross Tucker Road at Cherokee Drive
- SR 8 (Lawrenceville Highway) at Old Norcross Road
- Jimmy Carter Boulevard at Britt Road/Williams Road
- S. Norcross Tucker Road at Old Norcross Tucker Road
- Pleasantdale Road at Tucker Norcross Road
- Tucker Norcross Road at Britt Road
- Chamblee Tucker Road at Tucker Norcross Road

Analysis Results

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 the analysis indicate that after the Heritage on the Lake project is completed, all study intersections will operate at the level-of-service standard “D” or better after implementing recommendations at the intersections listed in the System Improvements and Site Mitigation Improvement sections below.

Recommended System 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.

- Intersection 7: Pleasantdale Road and Tucker Norcross Road
 - Remove “YIELD” sign at the northbound channelized right turn lane and replace with “KEEP MOVING” sign to create a free flow movement since a receiving lane exists
 - Restripe the middle westbound lane from a left turn lane to be a shared through / left turn lane (current striping does not accommodate westbound through movements)
- Intersection 8: Tucker Norcross Road and Britt Road
 - Optimize signal timing to accommodate projected traffic growth (regardless of build condition)
 - Restripe the existing westbound right turn lane to be a shared through / right turn lane (current striping does not accommodate through movements)
- Intersection 9: Chamblee Tucker Road and Tucker Norcross Road
 - Restripe the middle eastbound lane from a left turn lane to be a shared through / left turn lane (current striping does not accommodate through movements)

Recommended Site Mitigation Improvements

Improvements that are identified as “Site Mitigation Improvements” address further impacts that are a result of the proposed development’s added traffic.

- Improvement #1, Intersection 1: Britt Road and Old Norcross Tucker Road
 - Extend existing northbound left turn to 180 feet to accommodate projected northbound left turn movements to the extent feasible within the existing right of way
 - Modify traffic signal to add a northbound protected, permissive left turn phase
- Improvement #2, Site driveway 1: provide a left turn lane and deceleration lane on Britt Road
- Improvement #3, Site driveway 2: provide a deceleration lane south and construct a left turn lane on Britt Road
- Improvement #4, Site driveways 3 and 4: construct a deceleration lane on Britt Road
- Improvement #5, Site Driveways 6 and 7: construct a deceleration lane and left turn lane on Old Norcross Tucker Road
- Improvement #6, All site driveways are recommended to consist of one entering lane and one exiting lane and to be stop-controlled on the driveway approach



Appendix

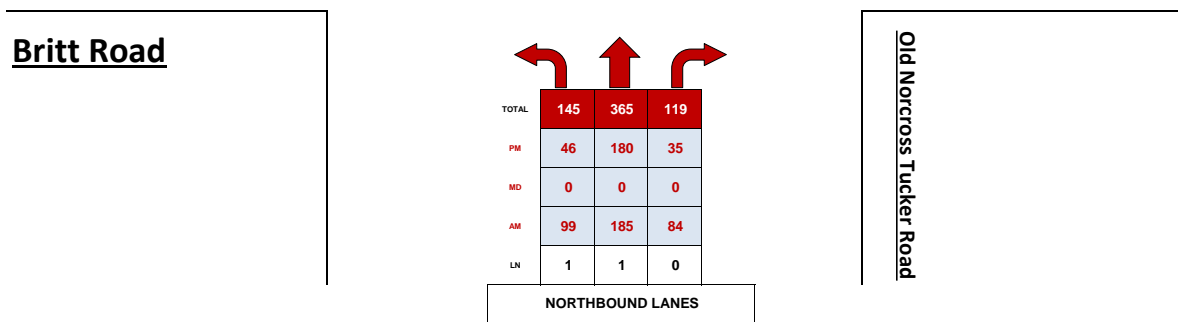
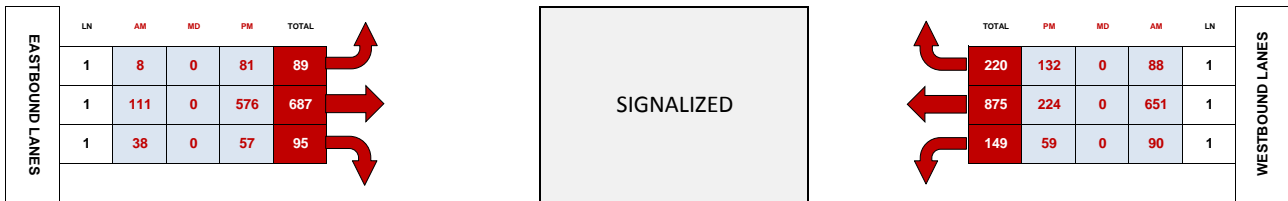
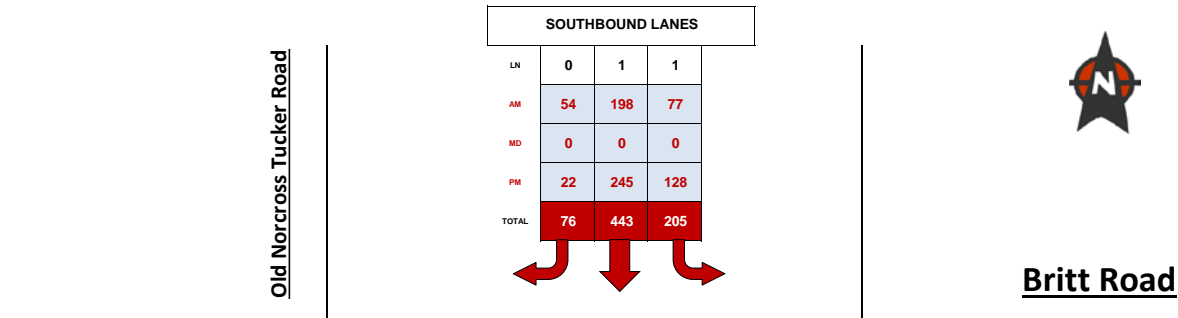
Existing Intersection Traffic Counts	2
GRTA Letter of Understanding.....	3
Linear Regression of Daily Traffic.....	4
Fact Sheets for Planned and Programmed Improvements.....	5
Existing Intersection Analysis.....	6
Future “No-Build” Intersection Analysis	7
Future “Build” Intersections Analysis	8
Traffic Volume Worksheets	9

Existing Intersection Traffic Counts

PEAK HOUR ITM SUMMARY

#001 Old Norcross Tucker Road & Britt Road

LOCATION#:	001	QTD PROJ#:	2019176	AM PEAK:	715 AM
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019	MD PEAK:	
EAST / WEST:	Britt Road	VICINITY:	GA	PM PEAK:	445 PM



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

AM COUNT	6:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	7:00 PM

VEHICLE TURNING MOVEMENT COUNT

#001 Old Norcross Tucker Road & Britt Road - AM PEAK

LOCATION#:	001	QTD PROJ#:	2019176
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	0	1	1	0	1	1	1	1	1	1	
6:00 AM	12	20	0	12	24	9	1	12	2	3	60	14	169
6:15 AM	4	13	1	14	8	15	1	11	1	2	104	11	185
6:30 AM	10	15	3	14	16	12	2	20	2	5	112	15	226
6:45 AM	16	17	5	13	23	13	1	15	8	9	154	16	290
7:00 AM	16	31	4	20	34	26	2	26	7	11	148	17	342
7:15 AM	15	23	8	20	35	13	3	24	14	20	183	29	387
7:30 AM	25	58	16	17	61	18	1	30	7	28	161	27	449
7:45 AM	32	62	41	18	66	12	2	30	11	25	158	15	472
8:00 AM	27	42	19	22	36	11	2	27	6	17	149	17	375
8:15 AM	28	47	14	9	39	12	2	27	6	14	152	11	361
8:30 AM	18	24	10	17	22	14	1	41	5	13	129	16	310
8:45 AM	13	21	7	19	29	13	2	34	7	8	120	16	289

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	216	373	128	195	393	168	20	297	76	155	1630	204	3855
P.H.V: ₁	99	185	84	77	198	54	8	111	38	90	651	88	1683
P.H.F: ₂	0.681			0.857			0.913			0.893			0.891

(1) Peak Hour Volume (Peak Hour Begins At 7:15 AM)

(2) Peak Hour Factor (directional aggregate)



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VEHICLE TURNING MOVEMENT COUNT

#001 Old Norcross Tucker Road & Britt Road - PM PEAK

LOCATION#:	001	QTD PROJ#:	2019176
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	0	1	1	0	1	1	1	1	1	1	
4:00 PM	16	33	7	22	47	6	11	146	15	8	62	29	402
4:15 PM	8	34	4	28	51	4	9	161	25	10	41	27	402
4:30 PM	11	48	13	34	37	3	8	144	20	9	52	24	403
4:45 PM	10	35	6	32	75	2	11	164	14	16	63	30	458
5:00 PM	16	51	7	23	47	10	18	152	20	20	71	38	473
5:15 PM	12	51	11	37	60	2	39	137	6	9	50	34	448
5:30 PM	8	43	11	36	63	8	13	123	17	14	40	30	406
5:45 PM	12	46	3	29	52	10	18	121	17	16	54	33	411
6:00 PM	14	46	10	35	52	11	15	170	18	12	64	33	480
6:15 PM	15	34	11	28	49	5	17	154	18	9	47	35	422
6:30 PM	17	44	10	42	38	4	15	150	14	4	60	32	430
6:45 PM	9	38	14	36	36	11	6	139	20	17	55	23	404

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	148	503	107	382	607	76	180	1761	204	144	659	368	5139
P.H.V: ₁	46	180	35	128	245	22	81	576	57	59	224	132	1785
P.H.F: ₂		0.882			0.906			0.939			0.804		0.943

(1) Peak Hour Volume (Peak Hour Begins At 4:45 PM)

(2) Peak Hour Factor (directional aggregate)



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PEDESTRIAN CROSSWALK COUNTS

#001 Old Norcross Tucker Road & Britt Road - AM PEAK

LOCATION#:	001	QTD PROJ#:	2019176
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Britt Road	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
6:00 AM	0	0	0	0	
6:15 AM	0	0	0	0	
6:30 AM	0	0	0	0	
6:45 AM	0	0	0	0	
7:00 AM	0	0	0	0	
7:15 AM	0	0	0	0	
7:30 AM	0	0	0	0	
7:45 AM	0	0	0	0	
8:00 AM	0	0	0	0	
8:15 AM	0	0	1	0	1
8:30 AM	0	0	3	0	3
8:45 AM	0	1	0	1	2

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
TOTAL:	0	1	4	1	6
P.H.V: ₁	0	1	4	1	6
P.H.F: ₂	0.000	0.250	0.333	0.250	0.500

(1) Peak Hour Volume (Peak hour begins at: 815 AM)

(2) Peak Hour Factor



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PEDESTRIAN CROSSWALK COUNTS

#001 Old Norcross Tucker Road & Britt Road - PM PEAK

LOCATION#:	001	QTD PROJ#:	2019176
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Britt Road	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
4:00 PM	0	0	0	0	
4:15 PM	0	0	0	0	
4:30 PM	0	0	0	0	
4:45 PM	0	0	0	0	
5:00 PM	0	0	0	0	
5:15 PM	0	0	0	0	
5:30 PM	0	0	0	0	
5:45 PM	0	0	0	1	1
6:00 PM	0	0	0	0	
6:15 PM	0	0	0	1	1
6:30 PM	0	0	1	0	1
6:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
TOTAL:	0	0	1	2	3
P.H.V: ₁	0	0	1	2	3
P.H.F: ₂	0.000	0.000	0.250	0.500	0.750

(1) Peak Hour Volume (Peak hour begins at: 545 PM)

(2) Peak Hour Factor



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Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

BICYCLE TURNING MOVEMENT COUNT

#001 Old Norcross Tucker Road & Britt Road - AM PEAK

LOCATION#:	001	QTD PROJ#:	2019176
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	0	1	1	0	1	1	1	1	1	1	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	0	0	0	0	1	0	0	0	0	0	0	0	1
P.H.V: ₁	0	0	0	0	1	0	0	0	0	0	0	0	1
P.H.F: ₂	0.000			0.250			0.000			0.000			0.250

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)

(2) Peak Hour Factor (directional aggregate)



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BICYCLE TURNING MOVEMENT COUNT

#001 Old Norcross Tucker Road & Britt Road - PM PEAK

LOCATION#:	001	QTD PROJ#:	2019176
NORTH / SOUTH:	Old Norcross Tucker Road	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	0	1	1	0	1	1	1	1	1	1	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	0	0	0	1	0	1	0	0	1	0	0	0	3
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	0	1	0	1	0	1	0	0	1	0	0	0	4
P.H.V: ₁	0	1	0	1	0	1	0	0	1	0	0	0	4
P.H.F: ₂		0.250			0.250			0.250			0.000		0.333

(1) Peak Hour Volume (Peak Hour Begins At 5:45 PM)

(2) Peak Hour Factor (directional aggregate)



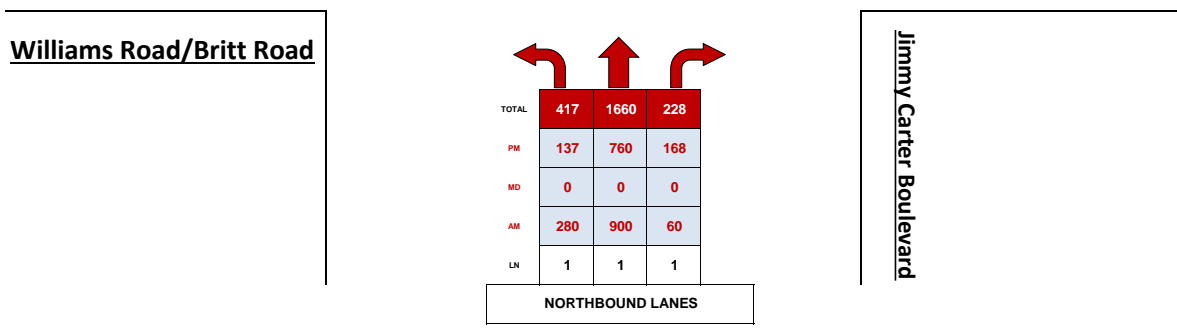
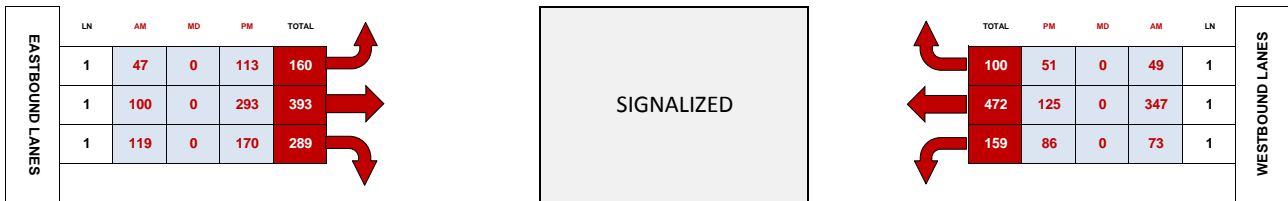
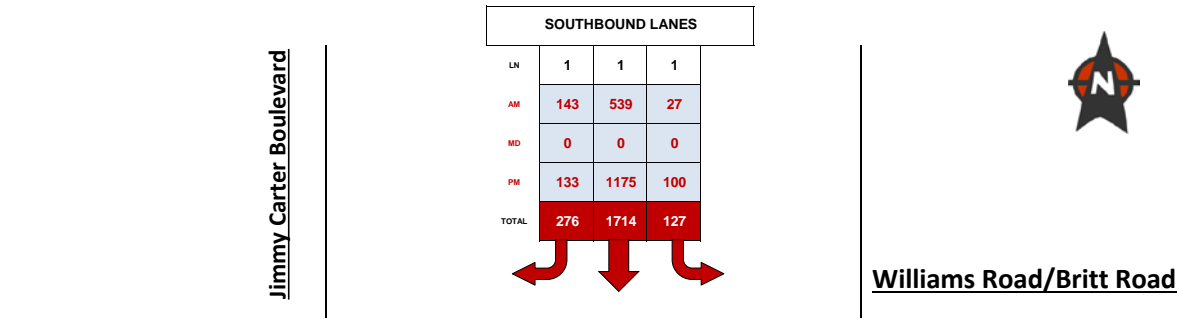
QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

PEAK HOUR ITM SUMMARY

#002 Jimmy Carter Boulevard & Williams Road/Britt Road

LOCATION#:	002	QTD PROJ#:	2019176	AM PEAK:	715 AM
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019	MD PEAK:	
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA	PM PEAK:	530 PM



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

AM COUNT	6:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	7:00 PM

VEHICLE TURNING MOVEMENT COUNT

#002 Jimmy Carter Boulevard & Williams Road/Britt Road - AM PEAK

LOCATION#:	002	QTD PROJ#:	2019176
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	1	1	1	1	1	1	1	1	
6:00 AM	16	178	6	6	75	12	5	6	8	12	28	11	363
6:15 AM	31	170	16	4	92	29	0	12	17	18	49	21	459
6:30 AM	38	212	10	7	116	26	3	10	19	10	71	14	536
6:45 AM	49	278	13	2	124	32	8	9	16	22	75	14	642
7:00 AM	62	229	10	5	112	32	9	17	28	13	100	11	628
7:15 AM	58	213	13	11	134	41	14	18	23	19	92	16	652
7:30 AM	83	227	21	6	120	33	7	29	24	16	96	10	672
7:45 AM	70	217	12	4	148	32	14	33	35	17	89	12	683
8:00 AM	69	243	14	6	137	37	12	20	37	21	70	11	677
8:15 AM	59	200	12	7	140	14	12	17	30	31	80	16	618
8:30 AM	47	220	7	7	119	22	9	29	27	26	74	11	598
8:45 AM	44	175	11	6	143	29	12	23	28	28	82	21	602

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	626	2562	145	71	1460	339	105	223	292	233	906	168	7130
P.H.V: ₁	280	900	60	27	539	143	47	100	119	73	347	49	2684
P.H.F: ₂	_____	0.937 _____	_____	_____	0.953 _____	_____	_____	0.811 _____	_____	_____	0.923 _____	_____	0.982

(1) Peak Hour Volume (Peak Hour Begins At 7:15 AM)

(2) Peak Hour Factor (directional aggregate)



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VEHICLE TURNING MOVEMENT COUNT

#002 Jimmy Carter Boulevard & Williams Road/Britt Road - PM PEAK

LOCATION#:	002	QTD PROJ#:	2019176
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	1	1	1	1	1	1	1	1	
4:00 PM	24	214	30	12	226	42	34	96	45	24	33	14	794
4:15 PM	31	224	24	13	298	17	36	79	62	19	32	6	841
4:30 PM	43	197	39	19	223	28	38	90	60	22	33	12	804
4:45 PM	42	201	44	24	261	42	38	63	50	19	28	11	823
5:00 PM	41	203	34	18	283	39	32	76	42	17	42	8	835
5:15 PM	39	210	30	20	247	33	39	86	48	23	35	6	816
5:30 PM	32	195	47	27	350	29	21	47	29	18	23	8	826
5:45 PM	33	186	34	25	305	28	26	73	33	23	35	14	815
6:00 PM	38	188	40	17	243	44	40	87	44	24	28	13	806
6:15 PM	34	191	47	31	277	32	26	86	64	21	39	16	864
6:30 PM	38	164	37	21	247	25	45	92	63	23	37	11	803
6:45 PM	31	172	27	18	264	39	38	87	60	15	28	7	786

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	426	2345	433	245	3224	398	413	962	600	248	393	126	9813
P.H.V: ₁	137	760	168	100	1175	133	113	293	170	86	125	51	3311
P.H.F: ₂		0.972			0.867			0.818			0.862		0.958

(1) Peak Hour Volume (Peak Hour Begins At 5:30 PM)

(2) Peak Hour Factor (directional aggregate)



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

PEDESTRIAN CROSSWALK COUNTS

#002 Jimmy Carter Boulevard & Williams Road/Britt Road - AM PEAK

LOCATION#:	002	QTD PROJ#:	2019176
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
6:00 AM	0	0	0	0	
6:15 AM	0	0	0	0	
6:30 AM	0	0	0	0	
6:45 AM	1	0	0	0	1
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	0	
8:00 AM	1	0	1	0	2
8:15 AM	0	0	0	0	
8:30 AM	0	0	0	0	
8:45 AM	0	0	0	1	1

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
TOTAL:	2	0	2	2	6
P.H.V: ₁	1	0	1	1	3
P.H.F: ₂	0.250	0.000	0.250	0.250	0.375

(1) Peak Hour Volume (Peak hour begins at: 800 AM)

(2) Peak Hour Factor



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

PEDESTRIAN CROSSWALK COUNTS

#002 Jimmy Carter Boulevard & Williams Road/Britt Road - PM PEAK

LOCATION#:	002	QTD PROJ#:	2019176
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
4:00 PM	1	0	0	0	1
4:15 PM	0	1	0	3	4
4:30 PM	2	1	0	1	4
4:45 PM	1	0	0	3	4
5:00 PM	1	0	0	1	2
5:15 PM	0	0	0	2	2
5:30 PM	0	0	0	2	2
5:45 PM	0	1	0	5	6
6:00 PM	1	1	0	2	4
6:15 PM	1	0	0	3	4
6:30 PM	0	1	1	2	4
6:45 PM	0	0	0	1	1

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
TOTAL:	7	5	1	25	38
P.H.V: ₁	2	3	1	12	18
P.H.F: ₂	0.500	0.750	0.250	0.600	0.750

(1) Peak Hour Volume (Peak hour begins at: 545 PM)

(2) Peak Hour Factor



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

BICYCLE TURNING MOVEMENT COUNT

#002 Jimmy Carter Boulevard & Williams Road/Britt Road - AM PEAK

LOCATION#:	002	QTD PROJ#:	2019176
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	1	1	1	1	1	1	1	1	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: ₁	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: ₂	0.000			0.000			0.000			0.000			0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)

(2) Peak Hour Factor (directional aggregate)



QUALITY TRAFFIC DATA, LLC

Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

BICYCLE TURNING MOVEMENT COUNT

#002 Jimmy Carter Boulevard & Williams Road/Britt Road - PM PEAK

LOCATION#:	002	QTD PROJ#:	2019176
NORTH / SOUTH:	Jimmy Carter Boulevard	DATE:	Tuesday, May 21, 2019
EAST / WEST:	Williams Road/Britt Road	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	1	1	1	1	1	1	1	1	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
TOTAL:	0	1	1	0	0	0	0	0	0	0	0	0	2
P.H.V: ₁	0	1	1	0	0	0	0	0	0	0	0	0	2
P.H.F: ₂		0.500	1		0.000	1		0.000	1		0.000	1	0.500

(1) Peak Hour Volume (Peak Hour Begins At 545 PM)

(2) Peak Hour Factor (directional aggregate)



QUALITY TRAFFIC DATA, LLC

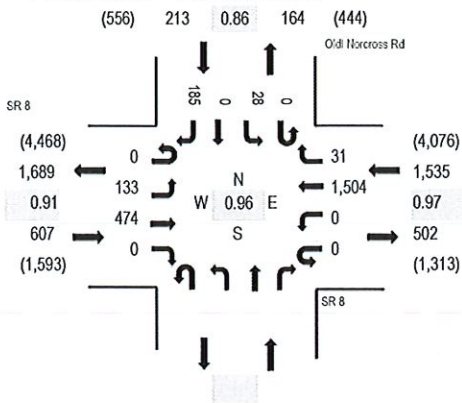
Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com



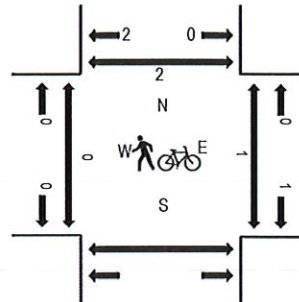
(303) 216-2439
www.alltrafficdata.net

Location: 5 Old Norcross Rd & SR 8 AM
Date and Start Time: Thursday, March 30, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SR 8 Eastbound				SR 8 Westbound				Old Norcross Rd Northbound				Old Norcross Rd Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	10	45	0	0	0	165	1	0	1	0	21	243	1,627	0	0	0	0				
6:15 AM	0	15	64	0	0	0	269	5	0	1	0	27	381	1,953	0	0	0	0				
6:30 AM	0	17	69	0	0	0	347	7	0	1	0	29	470	2,131	0	0	0	0				
6:45 AM	0	19	68	0	0	0	394	9	0	7	0	36	533	2,275	0	0	0	0				
7:00 AM	0	23	91	0	0	0	392	6	0	8	0	49	569	2,355	0	0	0	0				
7:15 AM	0	40	97	0	0	0	356	11	0	5	0	50	559	2,328	0	0	0	0				
7:30 AM	0	33	132	0	0	0	398	7	0	8	0	36	614	2,331	0	1	0	0				
7:45 AM	0	37	154	0	0	0	358	7	0	7	0	50	613	2,263	0	0	0	2				
8:00 AM	0	42	109	0	0	0	321	11	0	6	0	53	542	2,243	0	0	0	1				
8:15 AM	0	41	149	0	0	0	317	12	0	6	0	37	562		0	0	0	0				
8:30 AM	0	35	132	0	0	0	302	12	0	7	0	58	546		1	0	0	1				
8:45 AM	0	33	138	0	0	0	358	11	0	8	0	45	593		1	0	0	2				
9:00 AM																						
9:15 AM																						
9:30 AM																						

Peak Rolling Hour Flow Rates

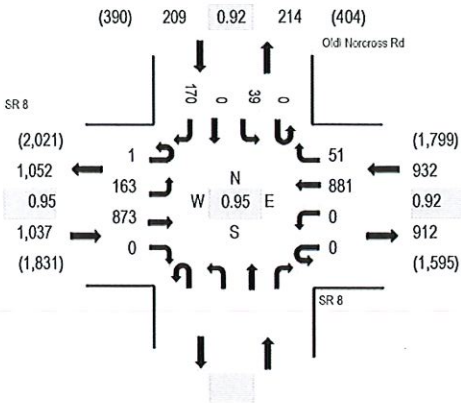
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	0	13	0	0	0	0	0	0	0	0	0	16
Lights	0	132	457	0	0	0	1,450	31	0	28	0	182	2,280				
Mediums	0	1	14	0	0	0	41	0	0	0	0	3	59				
Total	0	133	474	0	0	0	1,504	31	0	28	0	185	2,355				



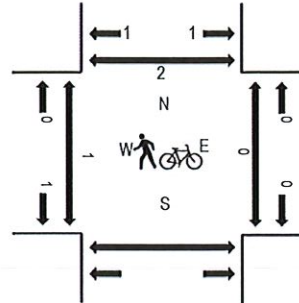
(303) 216-2439
www.alltrafficdata.net

Location: 5 Old Norcross Rd & SR 8 Noon
Date and Start Time: Thursday, March 30, 2017
Peak Hour: 12:00 PM - 01:00 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SR 8 Eastbound				SR 8 Westbound				Northbound			Old Norcross Rd Southbound			Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left			Thru	Right	West	East	South
11:00 AM	0	38	144	0	0	0	205	8					0	7	0	34	436	1,842	0	0	0
11:15 AM	0	36	159	0	0	0	195	12					0	11	0	31	444	1,936	0	0	0
11:30 AM	2	34	183	0	0	0	212	11					0	9	0	36	487	2,066	0	0	0
11:45 AM	0	44	154	0	0	0	217	7					0	16	0	37	475	2,115	1	0	0
12:00 PM	1	44	198	0	0	0	231	10					0	5	0	41	530	2,178	0	0	0
12:15 PM	0	38	222	0	0	0	239	18					0	13	0	44	574		1	0	0
12:30 PM	0	34	227	0	0	0	212	12					0	7	0	44	536		0	0	1
12:45 PM	0	47	226	0	0	0	199	11					0	14	0	41	538		0	0	1

Peak Rolling Hour Flow Rates

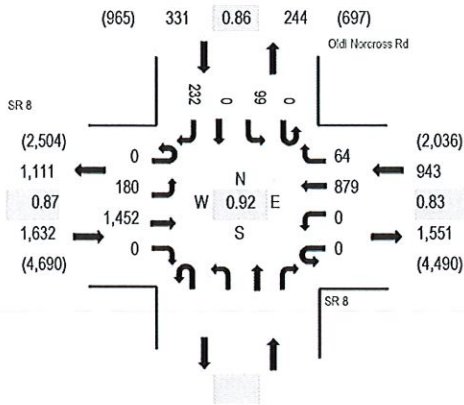
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	9	0	0	0	12	0					0	0	0	0	22
Lights	1	159	834	0	0	0	838	49					0	38	0	166	2,085
Mediums	0	3	30	0	0	0	31	2					0	1	0	4	71
Total	1	163	873	0	0	0	881	51					0	39	0	170	2,178



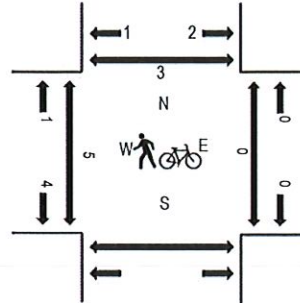
(303) 216-2439
www.alltrafficdata.net

Location: 5 Old Norcross Rd & SR 8 PM
Date and Start Time: Thursday, March 30, 2017
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SR 8 Eastbound				SR 8 Westbound				Old Norcross Rd Northbound				Old Norcross Rd Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	49	321	0	0	0	262	22	0	16	0	51	721	2,906	0	0	0	0	0			
4:15 PM	0	43	372	0	0	0	254	14	0	30	0	79	792	2,872	3	0	1	1				
4:30 PM	0	46	349	0	0	0	195	14	0	26	0	51	681	2,613	0	0	2	2				
4:45 PM	0	42	410	0	0	0	168	14	0	27	0	51	712	2,456	2	0	0	0				
5:00 PM	0	45	462	0	0	0	96	11	0	16	0	57	687	2,308	0	0	2	2				
5:15 PM	0	42	305	0	0	0	104	10	0	22	0	50	533	2,209	0	0	0	0				
5:30 PM	0	56	351	0	0	0	53	3	0	35	0	26	524	2,329	0	0	1	1				
5:45 PM	0	38	259	0	0	0	160	21	0	28	0	58	564	2,447	0	0	1	1				
6:00 PM	0	40	290	0	0	0	155	18	0	40	0	45	588	2,477	0	0	0	0				
6:15 PM	0	48	345	0	0	0	141	15	0	33	0	71	653		0	0	1	1				
6:30 PM	0	36	331	0	0	0	177	14	0	35	0	49	642		0	0	1	1				
6:45 PM	0	44	366	0	0	0	103	12	0	21	0	48	594		0	0	1	1				

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	10	0	0	0	7	0	0	0	0	0	0	0	0	0	17
Lights	0	179	1,410	0	0	0	849	63	0	97	0	230	2,828				
Mediums	0	1	32	0	0	0	23	1	0	2	0	2	61				
Total	0	180	1,452	0	0	0	879	64	0	99	0	232	2,906				

A & R Engineering. Inc.

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

TMC DATA

Tucker Norcross Rd @ Britt Rd
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200219
Site Code : 20200219
Start Date : 11/17/2020
Page No : 1

Groups Printed- Cars, Buses & Trucks

Start Time	Tucker Norcross Rd Northbound				Tucker Norcross Rd Southbound				Britt Rd Eastbound				Britt Rd 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	82	8	90	20	116	3	139	5	1	0	6	61	0	32	93	328
07:15 AM	0	78	15	93	22	119	1	142	3	0	0	3	57	4	45	106	344
07:30 AM	1	99	17	117	18	150	5	173	11	0	0	11	103	1	48	152	453
07:45 AM	1	104	24	129	27	139	2	168	11	4	0	15	71	0	48	119	431
Total	2	363	64	429	87	524	11	622	30	5	0	35	292	5	173	470	1556
08:00 AM	1	86	21	108	9	138	4	151	5	0	0	5	65	0	49	114	378
08:15 AM	1	104	12	117	14	104	3	121	5	1	1	7	67	0	43	110	355
08:30 AM	0	87	16	103	24	110	3	137	5	3	0	8	59	3	40	102	350
08:45 AM	1	99	20	120	20	130	2	152	5	3	0	8	60	0	36	96	376
Total	3	376	69	448	67	482	12	561	20	7	1	28	251	3	168	422	1459
*** BREAK ***																	
02:15 PM	0	138	52	190	43	121	0	164	7	2	2	11	46	0	29	75	440
02:30 PM	1	139	76	216	52	140	1	193	8	1	1	10	44	1	23	68	487
02:45 PM	0	145	60	205	50	150	2	202	6	2	0	8	60	2	30	92	507
Total	1	422	188	611	145	411	3	559	21	5	3	29	150	3	82	235	1434
03:00 PM	0	145	61	206	44	116	0	160	5	1	0	6	46	1	34	81	453
03:15 PM	1	149	73	223	48	172	2	222	10	7	0	17	59	1	28	88	550
03:30 PM	0	186	75	261	56	187	3	246	7	6	0	13	40	0	21	61	581
03:45 PM	0	177	55	232	52	209	1	262	10	4	1	15	53	3	30	86	595
Total	1	657	264	922	200	684	6	890	32	18	1	51	198	5	113	316	2179
04:00 PM	0	190	81	271	55	183	3	241	16	5	0	21	39	0	29	68	601
04:15 PM	0	203	78	281	61	240	5	306	11	5	0	16	33	0	30	63	666
04:30 PM	0	200	99	299	63	205	2	270	10	8	0	18	51	0	36	87	674
04:45 PM	0	190	88	278	58	240	1	299	12	9	2	23	52	0	36	88	688
Total	0	783	346	1129	237	868	11	1116	49	27	2	78	175	0	131	306	2629
05:00 PM	0	222	96	318	56	222	4	282	12	4	0	16	43	1	33	77	693
05:15 PM	0	205	110	315	59	235	1	295	15	7	0	22	46	1	38	85	717
05:30 PM	0	240	92	332	72	237	4	313	11	9	0	20	56	2	41	99	764
05:45 PM	0	246	98	344	80	248	2	330	15	16	1	32	62	2	48	112	818
Total	0	913	396	1309	267	942	11	1220	53	36	1	90	207	6	160	373	2992
Grand Total	7	3514	1327	4848	1003	3911	54	4968	205	98	8	311	1273	22	827	2122	12249
Apprch %	0.1	72.5	27.4		20.2	78.7	1.1		65.9	31.5	2.6		60	1	39		
Total %	0.1	28.7	10.8	39.6	8.2	31.9	0.4	40.6	1.7	0.8	0.1	2.5	10.4	0.2	6.8	17.3	

A & R Engineering. Inc.

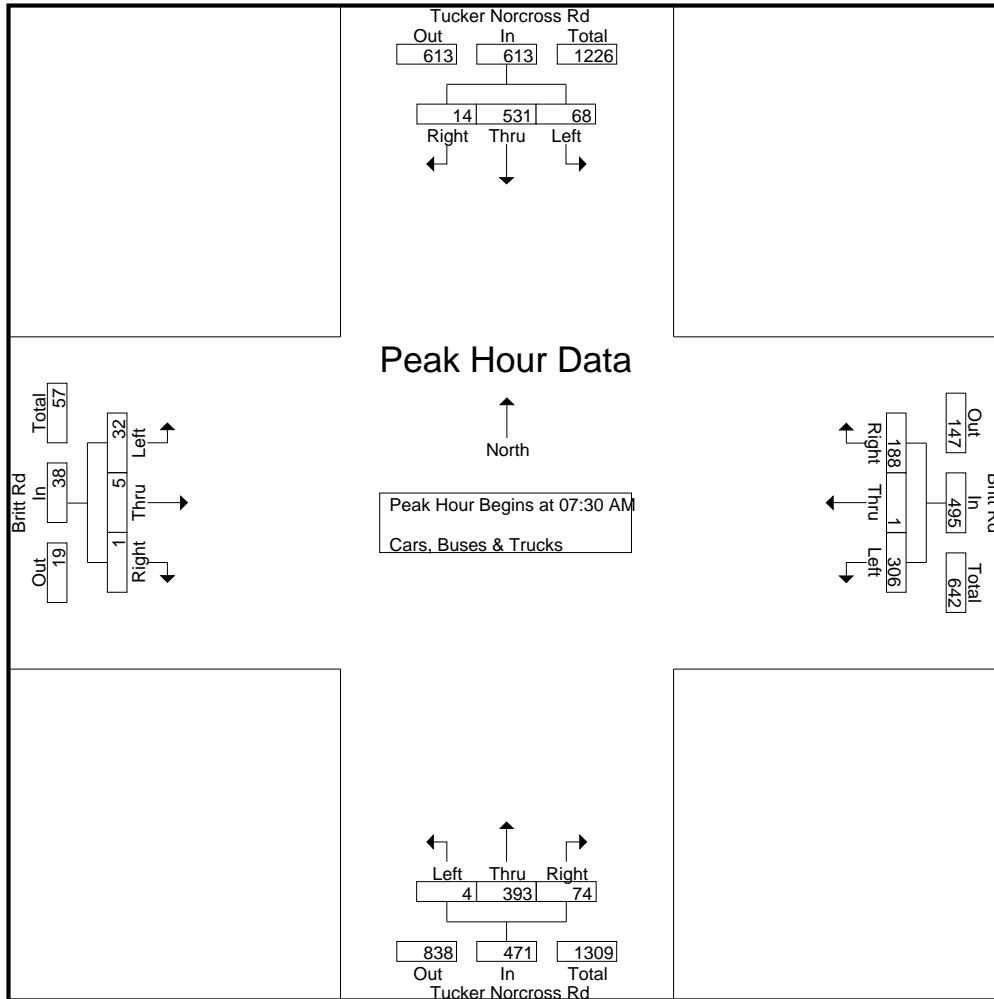
2160 Kingston Court, suite 'O'
Marietta, GA 30067

TMC DATA

Tucker Norcross Rd @ Britt Rd
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200219
Site Code : 20200219
Start Date : 11/17/2020
Page No : 2

Start Time	Tucker Norcross Rd Northbound				Tucker Norcross Rd Southbound				Britt Rd Eastbound				Britt Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	99	17	117	18	150	5	173	11	0	0	11	103	1	48	152	453
07:45 AM	1	104	24	129	27	139	2	168	11	4	0	15	71	0	48	119	431
08:00 AM	1	86	21	108	9	138	4	151	5	0	0	5	65	0	49	114	378
08:15 AM	1	104	12	117	14	104	3	121	5	1	1	7	67	0	43	110	355
Total Volume	4	393	74	471	68	531	14	613	32	5	1	38	306	1	188	495	1617
% App. Total	0.8	83.4	15.7		11.1	86.6	2.3		84.2	13.2	2.6		61.8	0.2	38		
PHF	1.00	.945	.771	.913	.630	.885	.700	.886	.727	.313	.250	.633	.743	.250	.959	.814	.892



A & R Engineering. Inc.

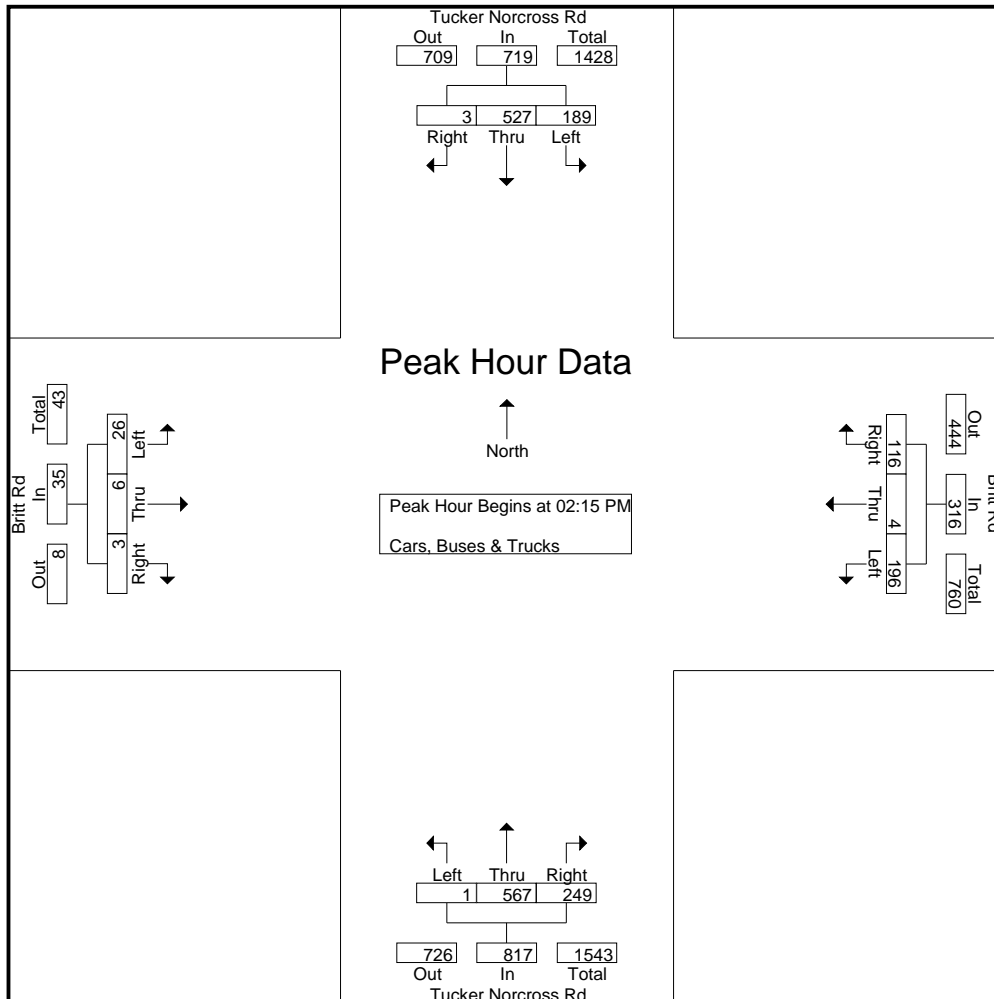
2160 Kingston Court, suite 'O'
Marietta, GA 30067

TMC DATA

Tucker Norcross Rd @ Britt Rd
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200219
Site Code : 20200219
Start Date : 11/17/2020
Page No : 3

Start Time	Tucker Norcross Rd Northbound				Tucker Norcross Rd Southbound				Britt Rd Eastbound				Britt Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	138	52	190	43	121	0	164	7	2	2	11	46	0	29	75	440
02:30 PM	1	139	76	216	52	140	1	193	8	1	1	10	44	1	23	68	487
02:45 PM	0	145	60	205	50	150	2	202	6	2	0	8	60	2	30	92	507
03:00 PM	0	145	61	206	44	116	0	160	5	1	0	6	46	1	34	81	453
Total Volume	1	567	249	817	189	527	3	719	26	6	3	35	196	4	116	316	1887
% App. Total	0.1	69.4	30.5		26.3	73.3	0.4		74.3	17.1	8.6		62	1.3	36.7		
PHF	.250	.978	.819	.946	.909	.878	.375	.890	.813	.750	.375	.795	.817	.500	.853	.859	.930



A & R Engineering. Inc.

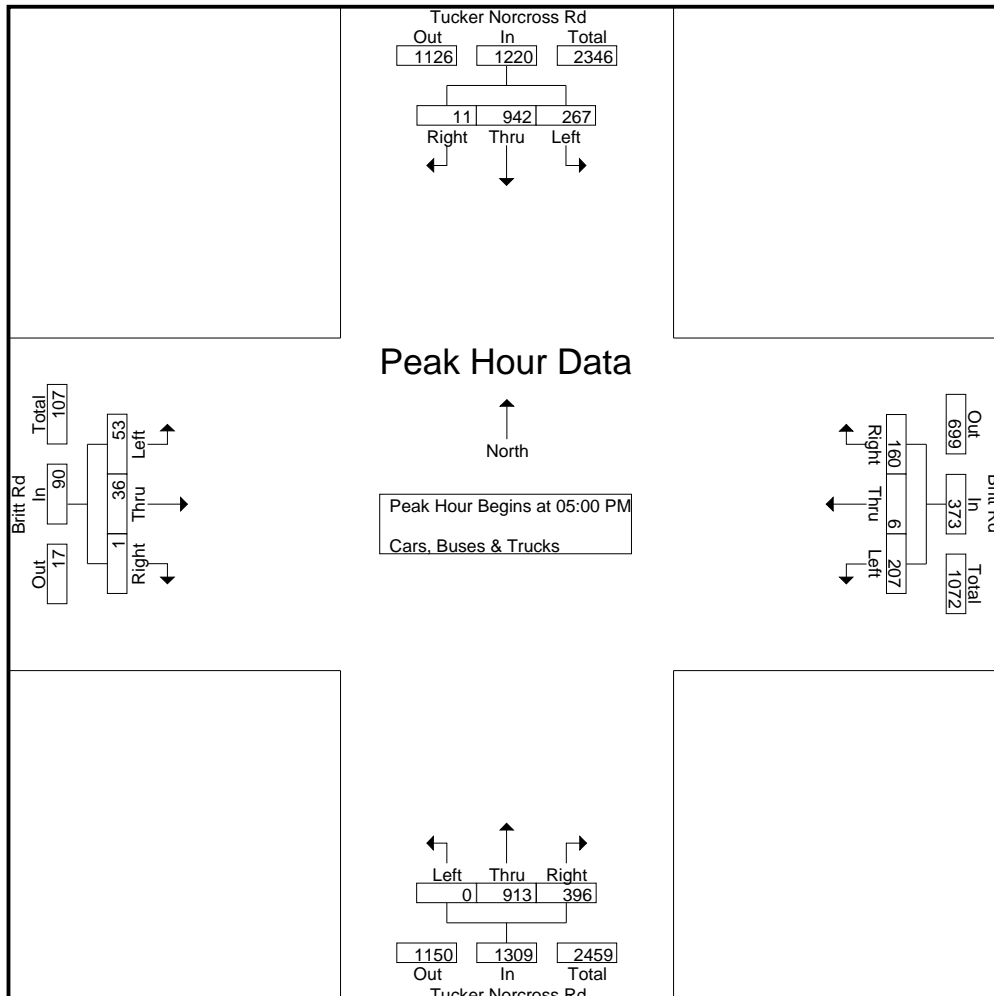
2160 Kingston Court, suite 'O'
Marietta, GA 30067

TMC DATA

Tucker Norcross Rd @ Britt Rd
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200219
Site Code : 20200219
Start Date : 11/17/2020
Page No : 4

Start Time	Tucker Norcross Rd Northbound				Tucker Norcross Rd Southbound				Britt Rd Eastbound				Britt Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	222	96	318	56	222	4	282	12	4	0	16	43	1	33	77	693
05:15 PM	0	205	110	315	59	235	1	295	15	7	0	22	46	1	38	85	717
05:30 PM	0	240	92	332	72	237	4	313	11	9	0	20	56	2	41	99	764
05:45 PM	0	246	98	344	80	248	2	330	15	16	1	32	62	2	48	112	818
Total Volume	0	913	396	1309	267	942	11	1220	53	36	1	90	207	6	160	373	2992
% App. Total	0	69.7	30.3		21.9	77.2	0.9		58.9	40	1.1		55.5	1.6	42.9		
PHF	.000	.928	.900	.951	.834	.950	.688	.924	.883	.563	.250	.703	.835	.750	.833	.833	.914



A & R Engineering, Inc.

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

TMC DATA
Chamblee Tucker Road @ Tucker
Norcross Road
7-9 am | 4-6 pm

File Name : 20200220
Site Code : 20200220
Start Date : 11/17/2020
Page No : 1

Groups Printed- Cars, Buses & Trucks

Start Time	Chamblee Tucker Rd Northbound				Tucker Norcross Rd Southbound				Chamblee Tucker Rd Eastbound				Randie's Drwy 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	58	81	0	139	0	53	104	157	30	1	10	41	0	0	0	0	337
07:15 AM	56	73	0	129	0	48	130	178	28	0	10	38	0	0	0	0	345
07:30 AM	63	94	0	157	0	62	112	174	38	0	22	60	0	0	0	0	391
07:45 AM	56	86	0	142	0	84	108	192	29	0	18	47	0	0	0	0	381
Total	233	334	0	567	0	247	454	701	125	1	60	186	0	0	0	0	1454
08:00 AM	40	81	0	121	0	58	86	144	36	0	29	65	0	0	0	0	330
08:15 AM	56	81	0	137	0	59	87	146	28	0	29	57	0	0	0	0	340
08:30 AM	43	69	2	114	0	73	105	178	40	0	24	64	0	0	0	0	356
08:45 AM	62	62	0	124	0	68	70	138	34	0	24	58	1	0	0	1	321
Total	201	293	2	496	0	258	348	606	138	0	106	244	1	0	0	1	1347
*** BREAK ***																	
04:00 PM	37	124	0	161	0	175	43	218	178	2	80	260	0	0	1	1	640
04:15 PM	43	141	1	185	0	136	61	197	151	0	93	244	0	1	2	3	629
04:30 PM	47	147	0	194	0	161	66	227	169	0	95	264	0	0	1	1	686
04:45 PM	43	139	0	182	0	173	65	238	158	0	103	261	0	0	0	0	681
Total	170	551	1	722	0	645	235	880	656	2	371	1029	0	1	4	5	2636
05:00 PM	47	153	0	200	0	156	64	220	198	0	116	314	0	0	1	1	735
05:15 PM	65	155	0	220	0	152	68	220	187	0	102	289	0	0	0	0	729
05:30 PM	67	192	0	259	0	162	64	226	197	0	103	300	0	0	0	0	785
05:45 PM	55	184	0	239	0	143	75	218	166	1	74	241	0	0	0	0	698
Total	234	684	0	918	0	613	271	884	748	1	395	1144	0	0	1	1	2947
Grand Total	838	1862	3	2703	0	1763	1308	3071	1667	4	932	2603	1	1	5	7	8384
Apprch %	31	68.9	0.1		0	57.4	42.6		64	0.2	35.8		14.3	14.3	71.4		
Total %	10	22.2	0	32.2	0	21	15.6	36.6	19.9	0	11.1	31	0	0	0.1	0.1	

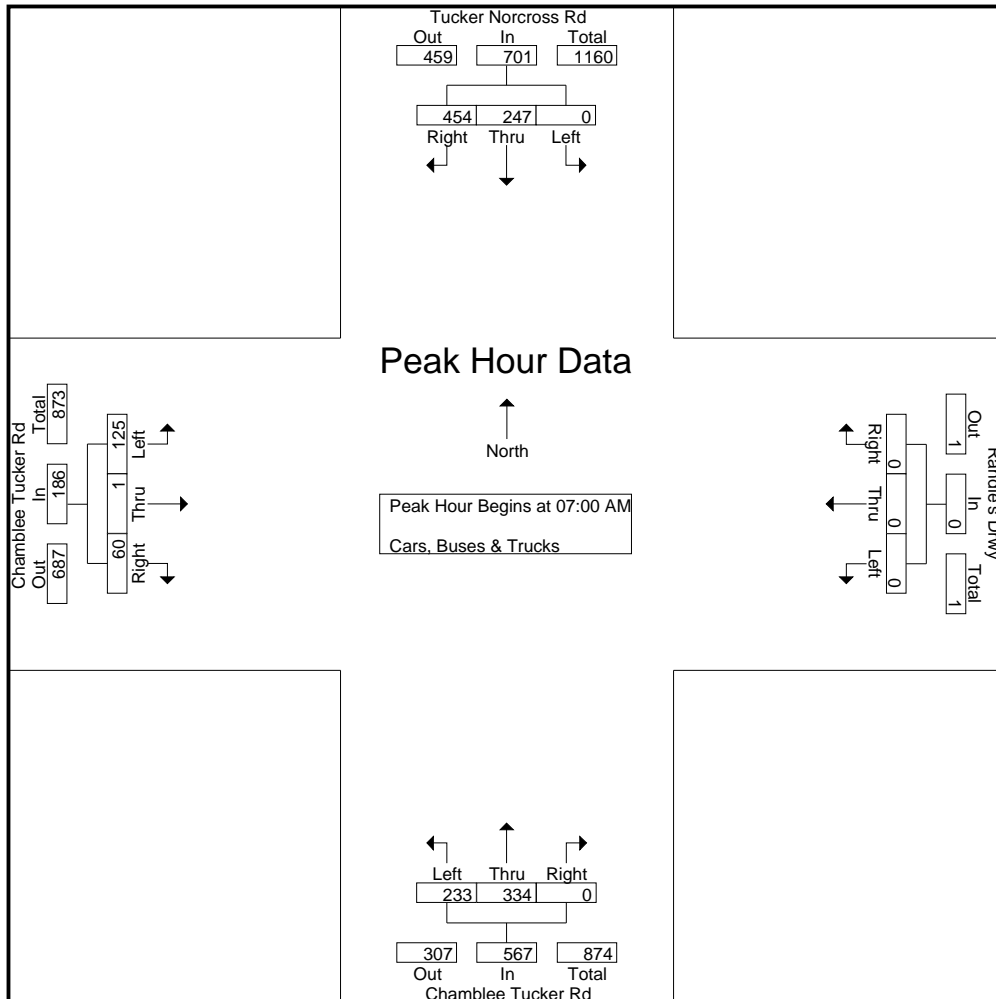
A & R Engineering, Inc.

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

TMC DATA
Chamblee Tucker Road @ Tucker
Norcross Road
7-9 am | 4-6 pm

File Name : 20200220
Site Code : 20200220
Start Date : 11/17/2020
Page No : 2

Start Time	Chamblee Tucker Rd Northbound				Tucker Norcross Rd Southbound				Chamblee Tucker Rd Eastbound				Randie's Drwy Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	58	81	0	139	0	53	104	157	30	1	10	41	0	0	0	0	337
07:15 AM	56	73	0	129	0	48	130	178	28	0	10	38	0	0	0	0	345
07:30 AM	63	94	0	157	0	62	112	174	38	0	22	60	0	0	0	0	391
07:45 AM	56	86	0	142	0	84	108	192	29	0	18	47	0	0	0	0	381
Total Volume	233	334	0	567	0	247	454	701	125	1	60	186	0	0	0	0	1454
% App. Total	41.1	58.9	0		0	35.2	64.8		67.2	0.5	32.3		0	0	0		
PHF	.925	.888	.000	.903	.000	.735	.873	.913	.822	.250	.682	.775	.000	.000	.000	.000	.930



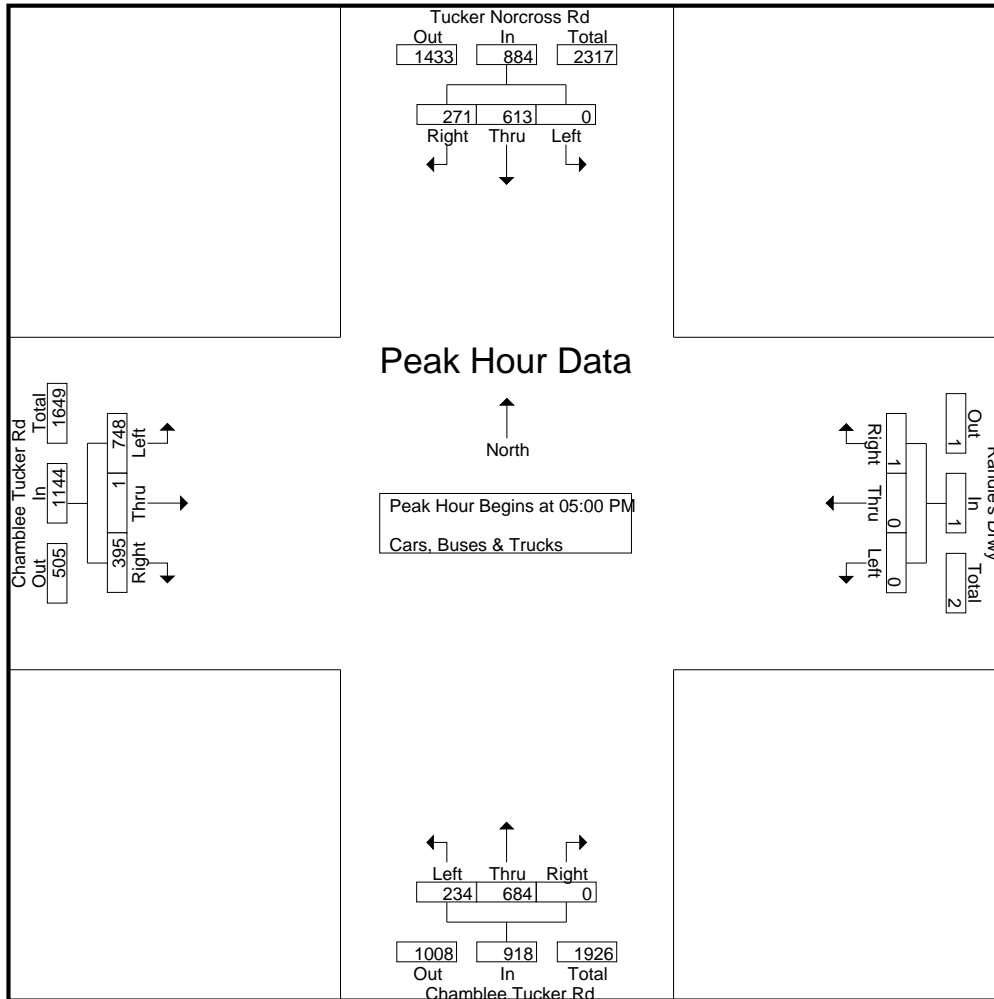
A & R Engineering, Inc.

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

TMC DATA
Chamblee Tucker Road @ Tucker
Norcross Road
7-9 am | 4-6 pm

File Name : 20200220
Site Code : 20200220
Start Date : 11/17/2020
Page No : 3

Start Time	Chamblee Tucker Rd Northbound				Tucker Norcross Rd Southbound				Chamblee Tucker Rd Eastbound				Randie's Drwy Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	47	153	0	200	0	156	64	220	198	0	116	314	0	0	1	1	735
05:15 PM	65	155	0	220	0	152	68	220	187	0	102	289	0	0	0	0	729
05:30 PM	67	192	0	259	0	162	64	226	197	0	103	300	0	0	0	0	785
05:45 PM	55	184	0	239	0	143	75	218	166	1	74	241	0	0	0	0	698
Total Volume	234	684	0	918	0	613	271	884	748	1	395	1144	0	0	1	1	2947
% App. Total	25.5	74.5	0		0	69.3	30.7		65.4	0.1	34.5		0	0	100		
PHF	.873	.891	.000	.886	.000	.946	.903	.978	.944	.250	.851	.911	.000	.000	.250	.250	.939



A & R Engineering, Inc.

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

TMC DATA
Pleasantdale Rd @ Tucker Norcross Rd
7-9 am | 4-6 pm

File Name : 20200221
Site Code : 20200221
Start Date : 11/17/2020
Page No : 1

Groups Printed- Cars, Buses & Trucks

Start Time	Pleasantdale Rd Northbound				Pleasantdale Rd Southbound				Pawn & Jewelry Drwy Eastbound				Tucker Norcross Rd 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	93	45	138	31	52	0	83	0	0	0	0	87	2	77	166	387
07:15 AM	0	93	27	120	28	56	2	86	0	0	0	0	109	0	118	227	433
07:30 AM	0	128	48	176	26	76	0	102	0	0	1	1	89	0	125	214	493
07:45 AM	0	112	27	139	28	70	0	98	0	0	0	0	92	0	91	183	420
Total	0	426	147	573	113	254	2	369	0	0	1	1	377	2	411	790	1733
08:00 AM	0	108	44	152	22	66	0	88	1	0	0	1	85	0	52	137	378
08:15 AM	0	133	24	157	34	60	0	94	0	0	0	0	68	0	71	139	390
08:30 AM	0	115	25	140	27	83	1	111	0	0	0	0	73	0	46	119	370
08:45 AM	1	92	32	125	28	78	0	106	0	0	0	0	59	2	53	114	345
Total	1	448	125	574	111	287	1	399	1	0	0	1	285	2	222	509	1483
*** BREAK ***																	
04:00 PM	0	123	116	239	105	254	1	360	0	2	0	2	76	4	40	120	721
04:15 PM	2	133	107	242	83	211	4	298	2	4	1	7	67	1	46	114	661
04:30 PM	3	258	234	495	110	250	3	363	3	0	0	3	82	13	89	184	1045
04:45 PM	1	141	113	255	122	262	2	386	1	6	2	9	81	0	37	118	768
Total	6	655	570	1231	420	977	10	1407	6	12	3	21	306	18	212	536	3195
05:00 PM	0	144	127	271	100	234	5	339	2	5	0	7	81	3	54	138	755
05:15 PM	2	139	150	291	132	254	6	392	1	4	1	6	65	2	52	119	808
05:30 PM	3	141	157	301	120	227	3	350	5	4	3	12	84	3	31	118	781
05:45 PM	4	124	153	281	132	231	5	368	3	7	1	11	70	3	58	131	791
Total	9	548	587	1144	484	946	19	1449	11	20	5	36	300	11	195	506	3135
Grand Total	16	2077	1429	3522	1128	2464	32	3624	18	32	9	59	1268	33	1040	2341	9546
Apprch %	0.5	59	40.6		31.1	68	0.9		30.5	54.2	15.3		54.2	1.4	44.4		
Total %	0.2	21.8	15	36.9	11.8	25.8	0.3	38	0.2	0.3	0.1	0.6	13.3	0.3	10.9	24.5	

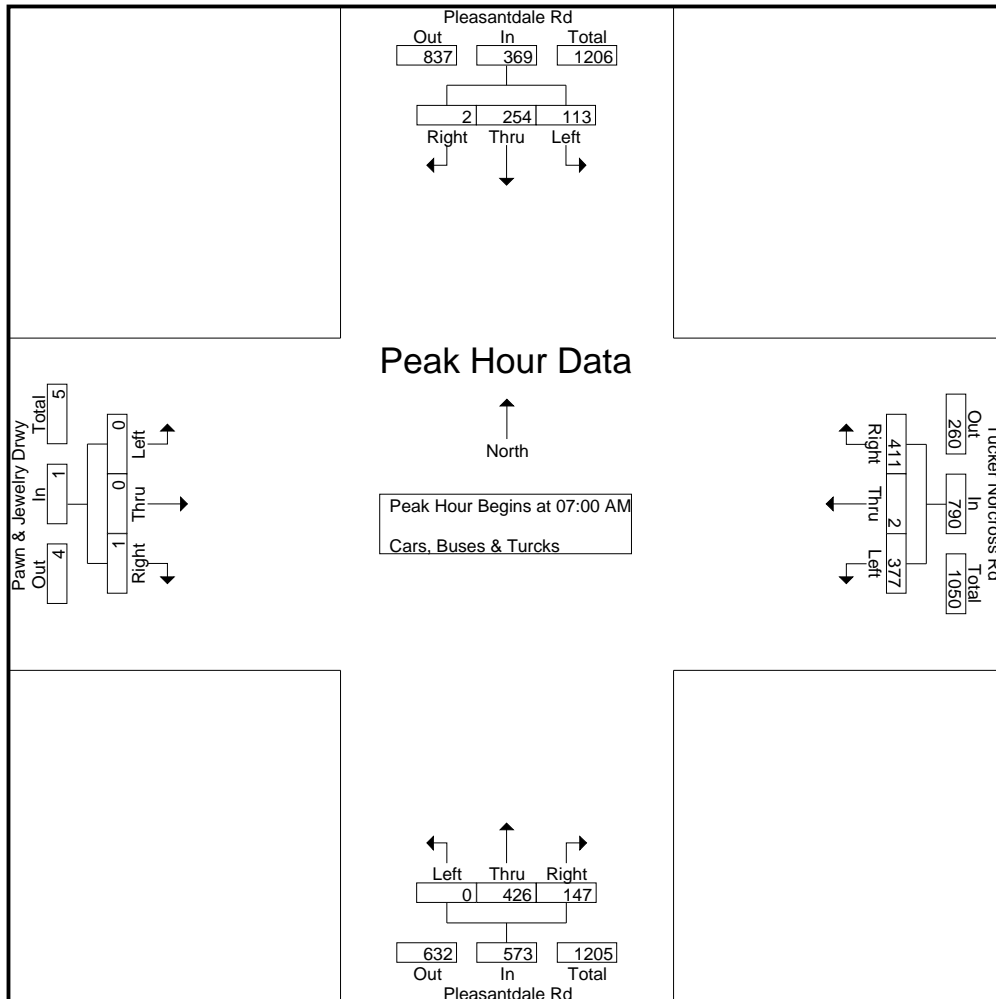
A & R Engineering, Inc.

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

TMC DATA
Pleasantdale Rd @ Tucker Norcross Rd
7-9 am | 4-6 pm

File Name : 20200221
Site Code : 20200221
Start Date : 11/17/2020
Page No : 2

Start Time	Pleasantdale Rd Northbound				Pleasantdale Rd Southbound				Pawn & Jewelry Drwy Eastbound				Tucker Norcross Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	93	45	138	31	52	0	83	0	0	0	0	87	2	77	166	387
07:15 AM	0	93	27	120	28	56	2	86	0	0	0	0	109	0	118	227	433
07:30 AM	0	128	48	176	26	76	0	102	0	0	1	1	89	0	125	214	493
07:45 AM	0	112	27	139	28	70	0	98	0	0	0	0	92	0	91	183	420
Total Volume	0	426	147	573	113	254	2	369	0	0	1	1	377	2	411	790	1733
% App. Total	0	74.3	25.7		30.6	68.8	0.5		0	0	100		47.7	0.3	52		
PHF	.000	.832	.766	.814	.911	.836	.250	.904	.000	.000	.250	.250	.865	.250	.822	.870	.879



A & R Engineering, Inc.

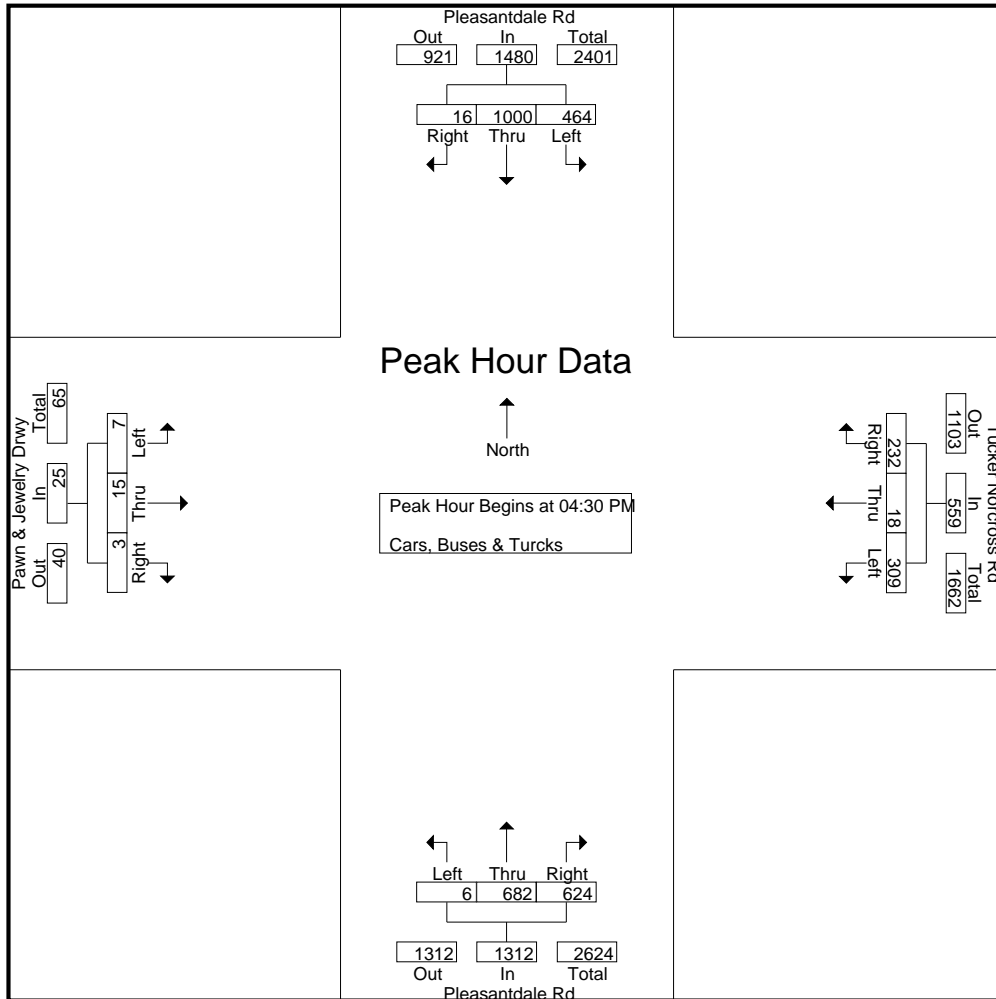
2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Pleasantdale Rd @ Tucker Norcross Rd
7-9 am | 4-6 pm

File Name : 20200221
Site Code : 20200221
Start Date : 11/17/2020
Page No : 3

Start Time	Pleasantdale Rd Northbound				Pleasantdale Rd Southbound				Pawn & Jewelry Drwy Eastbound				Tucker Norcross Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	3	258	234	495	110	250	3	363	3	0	0	3	82	13	89	184	1045
04:45 PM	1	141	113	255	122	262	2	386	1	6	2	9	81	0	37	118	768
05:00 PM	0	144	127	271	100	234	5	339	2	5	0	7	81	3	54	138	755
05:15 PM	2	139	150	291	132	254	6	392	1	4	1	6	65	2	52	119	808
Total Volume	6	682	624	1312	464	1000	16	1480	7	15	3	25	309	18	232	559	3376
% App. Total	0.5	52	47.6		31.4	67.6	1.1		28	60	12		55.3	3.2	41.5		
PHF	.500	.661	.667	.663	.879	.954	.667	.944	.583	.625	.375	.694	.942	.346	.652	.760	.808



A & R Engineering. Inc.

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

TMC DATA
Old Norcross Tucker Rd @
Rocky Shoals Ct
7-9 am | 4-6 pm

File Name : 20200224
Site Code : 20200224
Start Date : 11/17/2020
Page No : 1

Groups Printed- Cars, Buses & Turcks

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Rocky Shoals Ct Eastbound				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	1	44	0	45	0	49	1	50	2	0	2	4	0	0	0	0	99
07:15 AM	0	49	0	49	0	79	1	80	2	0	2	4	0	0	0	0	133
07:30 AM	2	75	0	77	0	73	2	75	1	0	1	2	0	0	0	0	154
07:45 AM	1	75	0	76	0	44	1	45	1	0	2	3	0	0	0	0	124
Total	4	243	0	247	0	245	5	250	6	0	7	13	0	0	0	0	510
08:00 AM	1	37	0	38	0	40	1	41	2	0	2	4	0	0	0	0	83
08:15 AM	2	52	0	54	0	38	2	40	2	0	1	3	0	0	0	0	97
08:30 AM	1	30	0	31	0	39	1	40	1	0	2	3	0	0	0	0	74
08:45 AM	1	28	0	29	0	29	1	30	2	0	2	4	0	0	0	0	63
Total	5	147	0	152	0	146	5	151	7	0	7	14	0	0	0	0	317
*** BREAK ***																	
04:00 PM	1	51	0	52	0	60	2	62	1	0	2	3	0	0	0	0	117
04:15 PM	2	69	0	71	0	68	1	69	2	0	2	4	0	0	0	0	144
04:30 PM	2	61	0	63	0	77	1	78	2	0	3	5	0	0	0	0	146
04:45 PM	3	59	0	62	0	84	0	84	1	0	2	3	0	0	0	0	149
Total	8	240	0	248	0	289	4	293	6	0	9	15	0	0	0	0	556
05:00 PM	2	47	0	49	0	91	2	93	1	0	3	4	0	0	0	0	146
05:15 PM	1	48	0	49	0	64	3	67	2	0	2	4	0	0	0	0	120
05:30 PM	2	78	0	80	0	59	2	61	3	0	1	4	0	0	0	0	145
05:45 PM	2	84	0	86	0	69	1	70	2	0	2	4	0	0	0	0	160
Total	7	257	0	264	0	283	8	291	8	0	8	16	0	0	0	0	571
Grand Total	24	887	0	911	0	963	22	985	27	0	31	58	0	0	0	0	1954
Apprch %	2.6	97.4	0		0	97.8	2.2		46.6	0	53.4		0	0	0		
Total %	1.2	45.4	0	46.6	0	49.3	1.1	50.4	1.4	0	1.6	3	0	0	0	0	

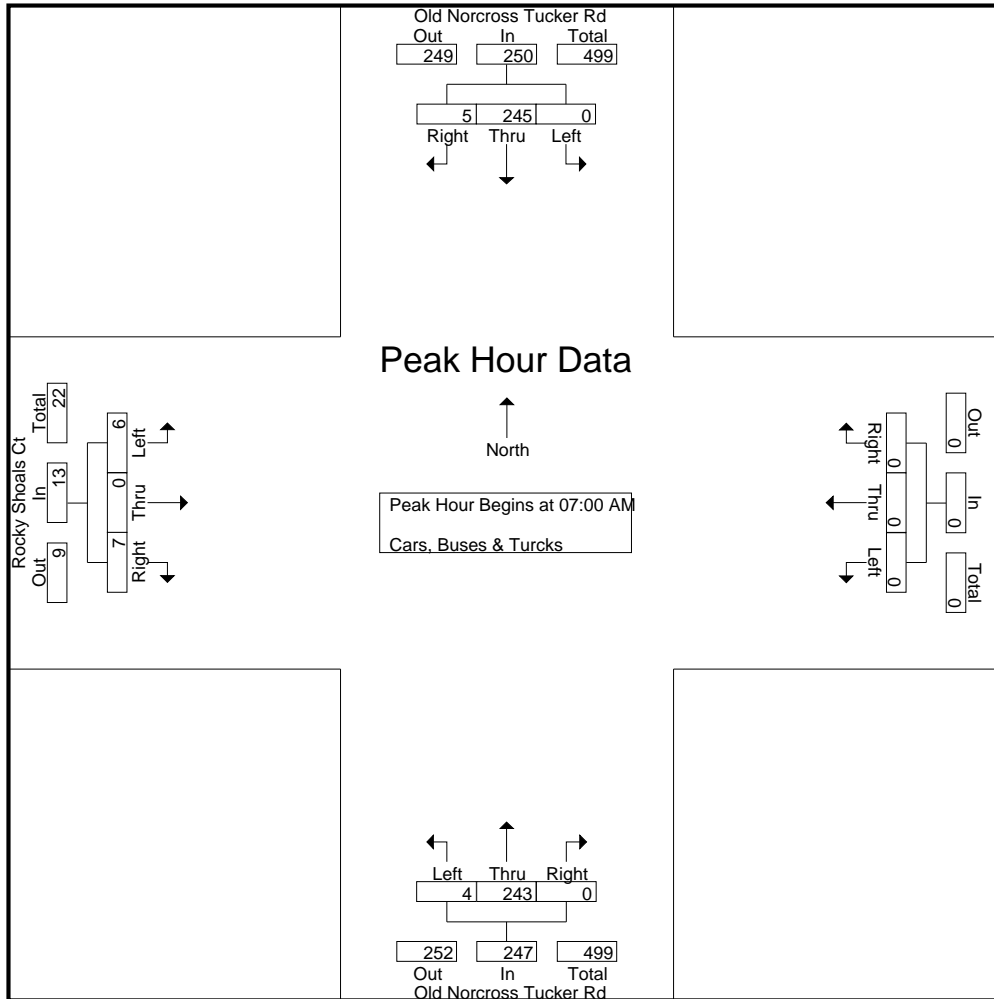
A & R Engineering. Inc.

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

TMC DATA
Old Norcross Tucker Rd @
Rocky Shoals Ct
7-9 am | 4-6 pm

File Name : 20200224
Site Code : 20200224
Start Date : 11/17/2020
Page No : 2

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Rocky Shoals Ct Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	1	44	0	45	0	49	1	50	2	0	2	4	0	0	0	0	99
07:15 AM	0	49	0	49	0	79	1	80	2	0	2	4	0	0	0	0	133
07:30 AM	2	75	0	77	0	73	2	75	1	0	1	2	0	0	0	0	154
07:45 AM	1	75	0	76	0	44	1	45	1	0	2	3	0	0	0	0	124
Total Volume	4	243	0	247	0	245	5	250	6	0	7	13	0	0	0	0	510
% App. Total	1.6	98.4	0		0	98	2		46.2	0	53.8		0	0	0		
PHF	.500	.810	.000	.802	.000	.775	.625	.781	.750	.000	.875	.813	.000	.000	.000	.000	.828



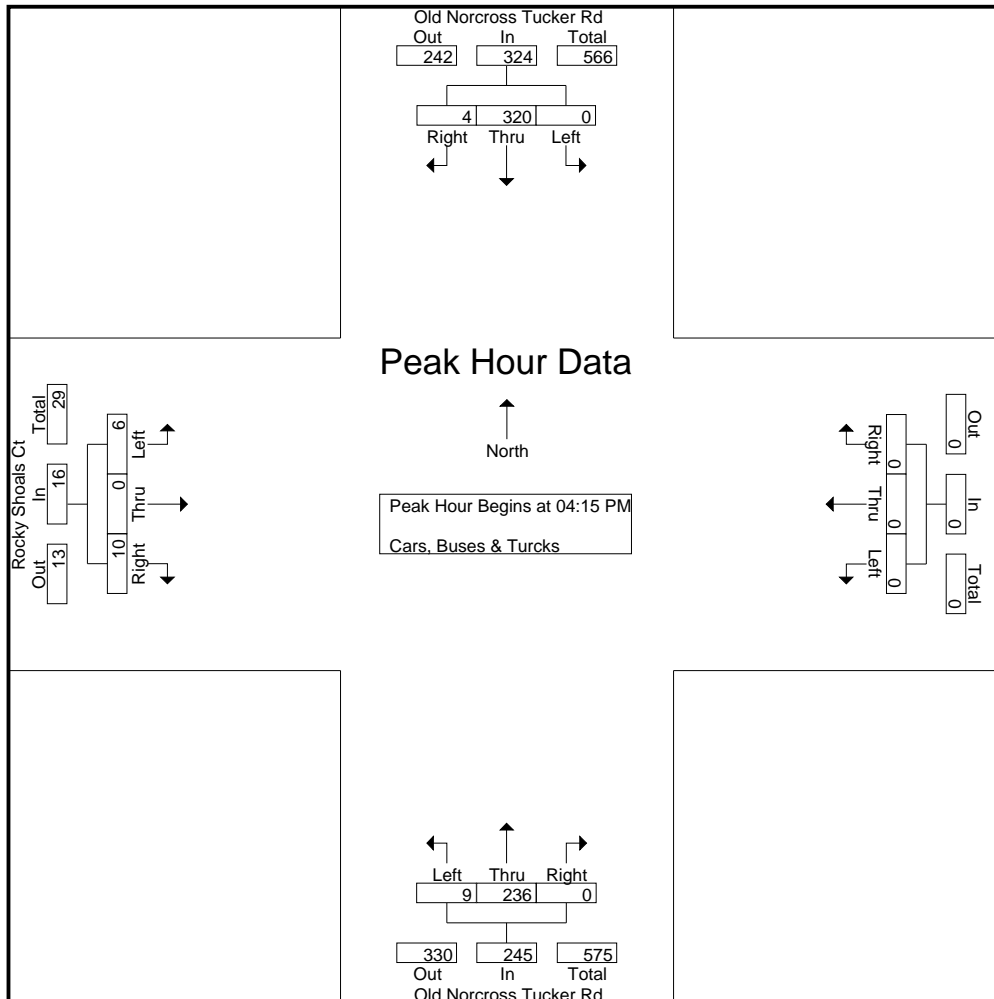
A & R Engineering. Inc.

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

TMC DATA
Old Norcross Tucker Rd @
Rocky Shoals Ct
7-9 am | 4-6 pm

File Name : 20200224
Site Code : 20200224
Start Date : 11/17/2020
Page No : 3

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Rocky Shoals Ct Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	2	69	0	71	0	68	1	69	2	0	2	4	0	0	0	0	144
04:30 PM	2	61	0	63	0	77	1	78	2	0	3	5	0	0	0	0	146
04:45 PM	3	59	0	62	0	84	0	84	1	0	2	3	0	0	0	0	149
05:00 PM	2	47	0	49	0	91	2	93	1	0	3	4	0	0	0	0	146
Total Volume	9	236	0	245	0	320	4	324	6	0	10	16	0	0	0	0	585
% App. Total	3.7	96.3	0		0	98.8	1.2		37.5	0	62.5		0	0	0		
PHF	.750	.855	.000	.863	.000	.879	.500	.871	.750	.000	.833	.800	.000	.000	.000	.000	.982



A & R Engineering, Inc.

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Marietta, GA 30067

TMC DATA
Old Norcross Tucker Rd @ S Norcross
Tucker Rd
7-9 am | 4-6 pm

File Name : 20200225
Site Code : 20200225
Start Date : 11/17/2020
Page No : 1

Groups Printed- Cars, Buses & Trucks

Start Time	S Norcross Tucker Rd Northbound				S Norcross Tucker Rd Southbound				Old Norcross Tucker Rd Eastbound				Old Norcross Tucker Rd 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	86	15	101	39	133	14	186	0	0	0	0	14	2	38	54	341
07:15 AM	0	91	12	103	42	117	11	170	0	0	0	0	19	5	45	69	342
07:30 AM	0	88	13	101	35	130	10	175	0	0	0	0	22	2	44	68	344
07:45 AM	1	83	14	98	26	119	11	156	0	0	0	0	13	2	37	52	306
Total	1	348	54	403	142	499	46	687	0	0	0	0	68	11	164	243	1333
08:00 AM	0	77	11	88	36	106	4	146	0	0	0	0	24	1	47	72	306
08:15 AM	0	64	14	78	30	123	5	158	0	0	0	0	12	1	42	55	291
08:30 AM	0	76	12	88	45	95	3	143	0	0	0	0	15	0	42	57	288
08:45 AM	0	84	9	93	30	103	2	135	0	0	0	0	9	0	33	42	270
Total	0	301	46	347	141	427	14	582	0	0	0	0	60	2	164	226	1155
*** BREAK ***																	
04:00 PM	2	175	29	206	59	128	4	191	0	0	1	1	10	4	55	69	467
04:15 PM	2	182	27	211	69	105	6	180	0	0	0	0	13	10	82	105	496
04:30 PM	0	179	25	204	61	140	9	210	0	0	1	1	22	2	57	81	496
04:45 PM	2	226	17	245	77	140	9	226	0	0	0	0	15	0	59	74	545
Total	6	762	98	866	266	513	28	807	0	0	2	2	60	16	253	329	2004
05:00 PM	1	226	22	249	65	134	11	210	0	0	0	0	20	6	58	84	543
05:15 PM	1	247	26	274	69	151	8	228	0	0	0	0	11	3	57	71	573
05:30 PM	0	295	26	321	70	159	11	240	0	0	0	0	11	0	75	86	647
05:45 PM	2	248	32	282	70	142	9	221	0	0	0	0	22	9	82	113	616
Total	4	1016	106	1126	274	586	39	899	0	0	0	0	64	18	272	354	2379
Grand Total	11	2427	304	2742	823	2025	127	2975	0	0	2	2	252	47	853	1152	6871
Apprch %	0.4	88.5	11.1		27.7	68.1	4.3		0	0	100		21.9	4.1	74		
Total %	0.2	35.3	4.4	39.9	12	29.5	1.8	43.3	0	0	0	0	3.7	0.7	12.4	16.8	

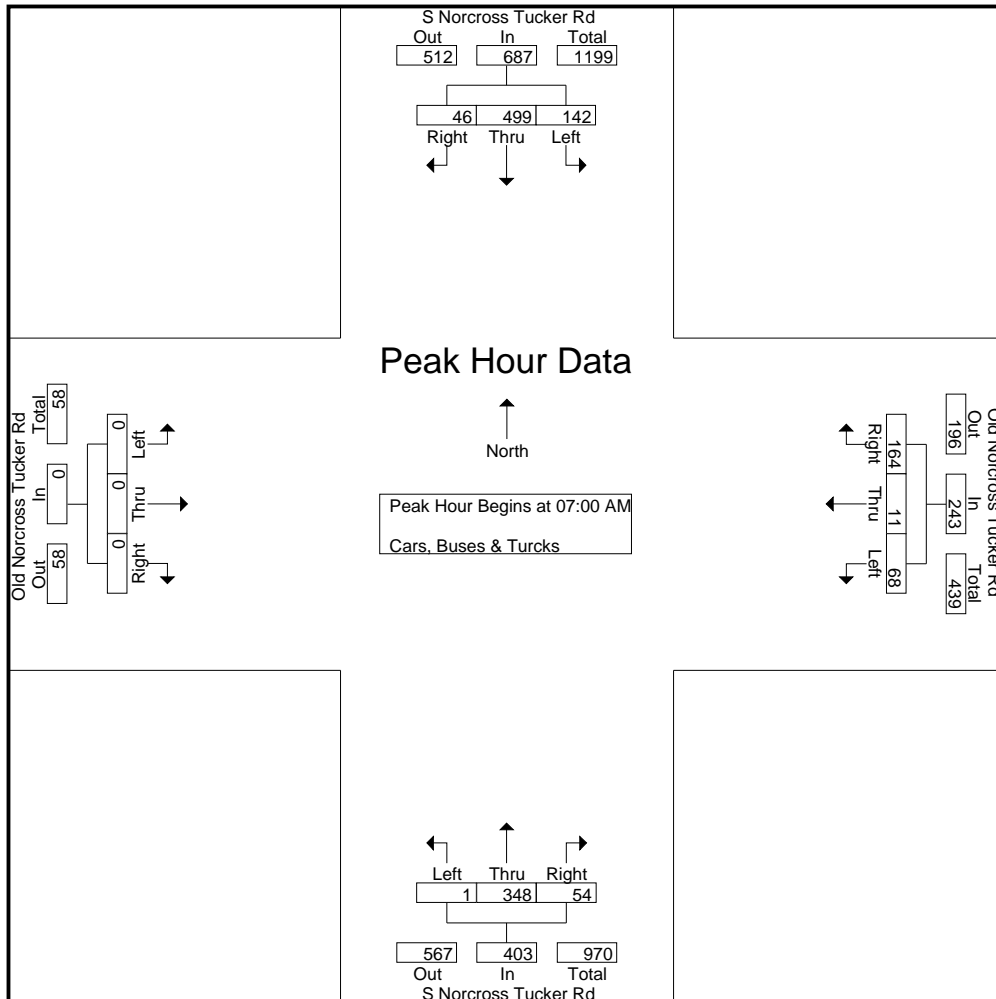
A & R Engineering, Inc.

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

TMC DATA
Old Norcross Tucker Rd @ S Norcross
Tucker Rd
7-9 am | 4-6 pm

File Name : 20200225
Site Code : 20200225
Start Date : 11/17/2020
Page No : 2

Start Time	S Norcross Tucker Rd Northbound				S Norcross Tucker Rd Southbound				Old Norcross Tucker Rd Eastbound				Old Norcross Tucker Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	86	15	101	39	133	14	186	0	0	0	0	14	2	38	54	341
07:15 AM	0	91	12	103	42	117	11	170	0	0	0	0	19	5	45	69	342
07:30 AM	0	88	13	101	35	130	10	175	0	0	0	0	22	2	44	68	344
07:45 AM	1	83	14	98	26	119	11	156	0	0	0	0	13	2	37	52	306
Total Volume	1	348	54	403	142	499	46	687	0	0	0	0	68	11	164	243	1333
% App. Total	0.2	86.4	13.4		20.7	72.6	6.7		0	0	0		28	4.5	67.5		
PHF	.250	.956	.900	.978	.845	.938	.821	.923	.000	.000	.000	.000	.773	.550	.911	.880	.969



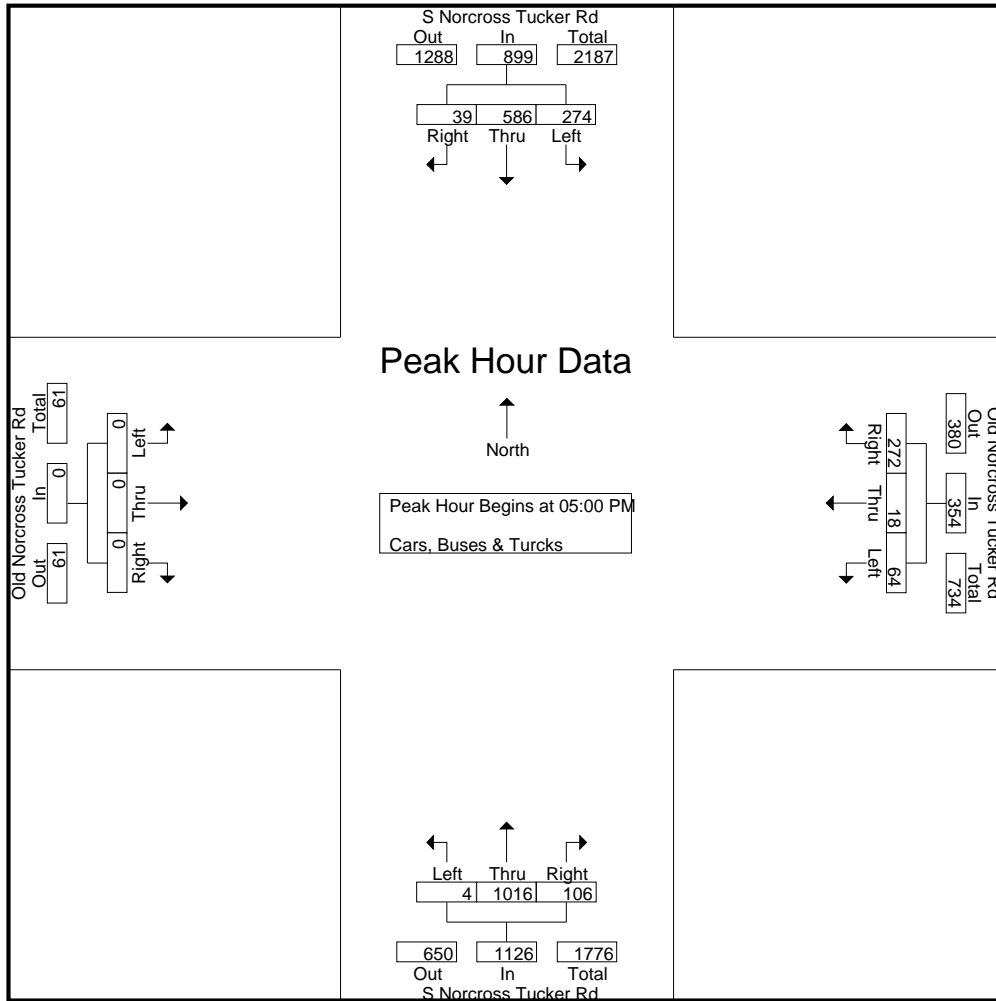
A & R Engineering, Inc.

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

TMC DATA
Old Norcross Tucker Rd @ S Norcross
Tucker Rd
7-9 am | 4-6 pm

File Name : 20200225
Site Code : 20200225
Start Date : 11/17/2020
Page No : 3

Start Time	S Norcross Tucker Rd Northbound				S Norcross Tucker Rd Southbound				Old Norcross Tucker Rd Eastbound				Old Norcross Tucker Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	226	22	249	65	134	11	210	0	0	0	0	20	6	58	84	543
05:15 PM	1	247	26	274	69	151	8	228	0	0	0	0	11	3	57	71	573
05:30 PM	0	295	26	321	70	159	11	240	0	0	0	0	11	0	75	86	647
05:45 PM	2	248	32	282	70	142	9	221	0	0	0	0	22	9	82	113	616
Total Volume	4	1016	106	1126	274	586	39	899	0	0	0	0	64	18	272	354	2379
% App. Total	0.4	90.2	9.4		30.5	65.2	4.3		0	0	0		18.1	5.1	76.8		
PHF	.500	.861	.828	.877	.979	.921	.886	.936	.000	.000	.000	.000	.727	.500	.829	.783	.919



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Marietta, GA 30067

TMC DATA
Old Norcross Tucker Rd @
Cherokee Dr
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200226
Site Code : 20200226
Start Date : 11/17/2020
Page No : 1

Groups Printed- Cars,Buses & Trucks

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Private Dr Eastbound				Cherokee Dr 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	17	0	17	0	25	0	25	0	0	1	1	0	0	0	0	43
07:15 AM	0	27	0	27	0	36	0	36	0	0	0	0	0	0	0	0	63
07:30 AM	0	23	0	23	2	35	0	37	0	0	0	0	0	0	0	0	60
07:45 AM	0	30	1	31	0	18	0	18	0	0	0	0	0	0	0	0	49
Total	0	97	1	98	2	114	0	116	0	0	1	1	0	0	0	0	215
08:00 AM	0	35	1	36	0	34	0	34	0	0	0	0	0	0	3	3	73
08:15 AM	0	30	0	30	1	32	0	33	0	0	0	0	0	0	3	3	66
08:30 AM	0	28	0	28	0	40	0	40	0	0	0	0	1	0	1	2	70
08:45 AM	0	21	0	21	1	38	0	39	0	0	0	0	0	0	0	0	60
Total	0	114	1	115	2	144	0	146	0	0	0	0	1	0	7	8	269
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	3
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	3
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	5	5
*** BREAK ***																	
Total	0	0	0	0	0	0	0	0	0	0	0	0	5	0	6	11	11
*** BREAK ***																	
02:15 PM	0	60	1	61	2	38	0	40	0	0	1	1	1	0	3	4	106
02:30 PM	0	48	1	49	1	44	0	45	0	0	0	0	1	0	2	3	97
02:45 PM	0	44	2	46	4	46	0	50	0	0	0	0	2	0	2	4	100
Total	0	152	4	156	7	128	0	135	0	0	1	1	4	0	7	11	303
03:00 PM	1	56	4	61	5	56	0	61	0	0	0	0	5	0	3	8	130
*** BREAK ***																	
Total	1	56	4	61	5	56	0	61	0	0	0	0	5	0	3	8	130
04:00 PM	1	47	4	52	3	49	0	52	0	0	1	1	2	0	2	4	109
04:15 PM	0	58	3	61	1	76	0	77	0	0	0	0	3	0	1	4	142
04:30 PM	0	58	3	61	5	62	0	67	0	0	1	1	3	0	1	4	133
04:45 PM	1	58	0	59	0	46	0	46	0	0	0	0	0	0	0	0	105
Total	2	221	10	233	9	233	0	242	0	0	2	2	8	0	4	12	489
05:00 PM	0	63	3	66	2	57	0	59	0	0	0	0	0	0	1	1	126
05:15 PM	0	74	2	76	1	65	0	66	0	0	0	0	0	0	5	5	147
05:30 PM	0	64	0	64	4	75	0	79	0	0	0	0	1	0	1	2	145
05:45 PM	0	68	2	70	0	55	1	56	0	0	0	0	0	0	0	0	126
Total	0	269	7	276	7	252	1	260	0	0	0	0	1	0	7	8	544
Grand Total	3	909	27	939	32	927	1	960	0	0	4	4	24	0	34	58	1961
Apprch %	0.3	96.8	2.9		3.3	96.6	0.1		0	0	100		41.4	0	58.6		
Total %	0.2	46.4	1.4	47.9	1.6	47.3	0.1	49	0	0	0.2	0.2	1.2	0	1.7	3	

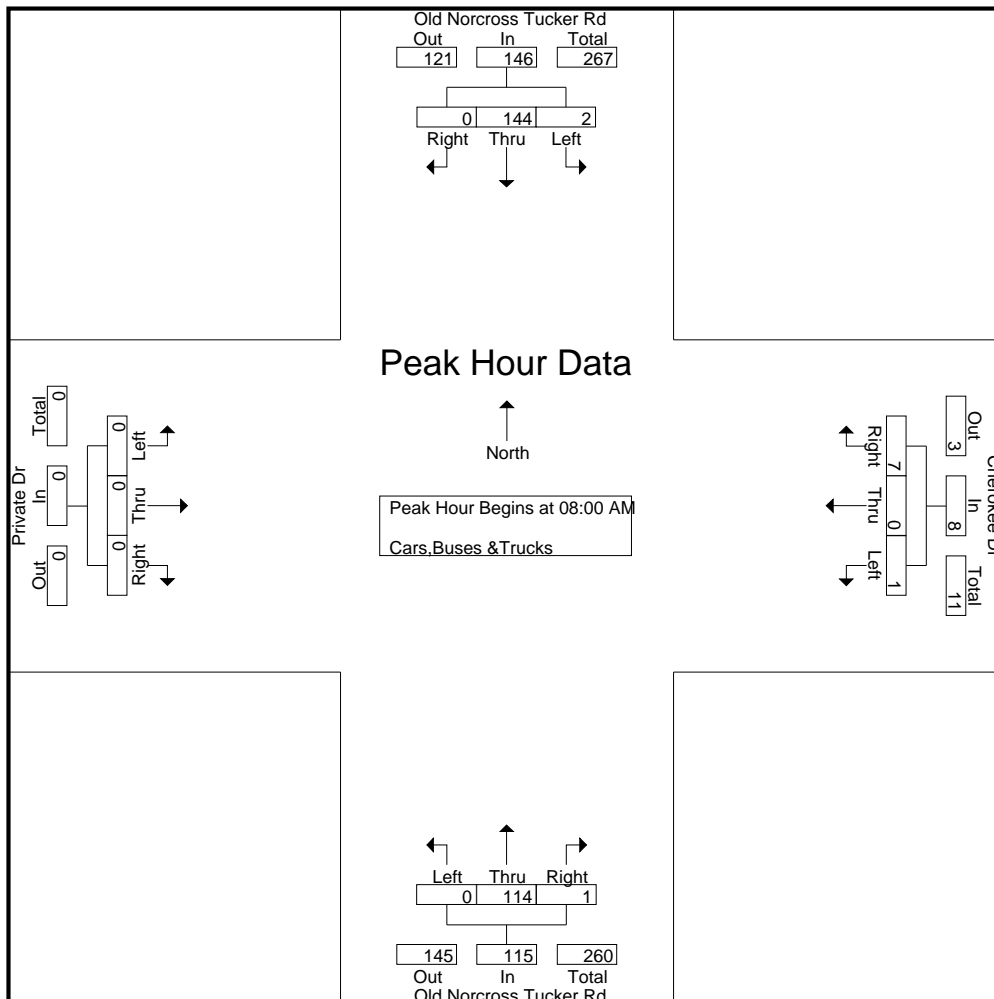
A & R Engineering. Inc.

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

TMC DATA
Old Norcross Tucker Rd @
Cherokee Dr
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200226
Site Code : 20200226
Start Date : 11/17/2020
Page No : 2

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Private Dr Eastbound				Cherokee Dr Westbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 08:00 AM																		
08:00 AM	0	35	1	36	0	34	0	34	0	0	0	0	0	0	0	3	3	73
08:15 AM	0	30	0	30	1	32	0	33	0	0	0	0	0	0	3	3	66	
08:30 AM	0	28	0	28	0	40	0	40	0	0	0	0	1	0	1	2	70	
08:45 AM	0	21	0	21	1	38	0	39	0	0	0	0	0	0	0	0	60	
Total Volume	0	114	1	115	2	144	0	146	0	0	0	0	1	0	7	8	269	
% App. Total	0	99.1	0.9		1.4	98.6	0		0	0	0		12.5	0	87.5			
PHF	.000	.814	.250	.799	.500	.900	.000	.913	.000	.000	.000	.000	.250	.000	.583	.667	.921	



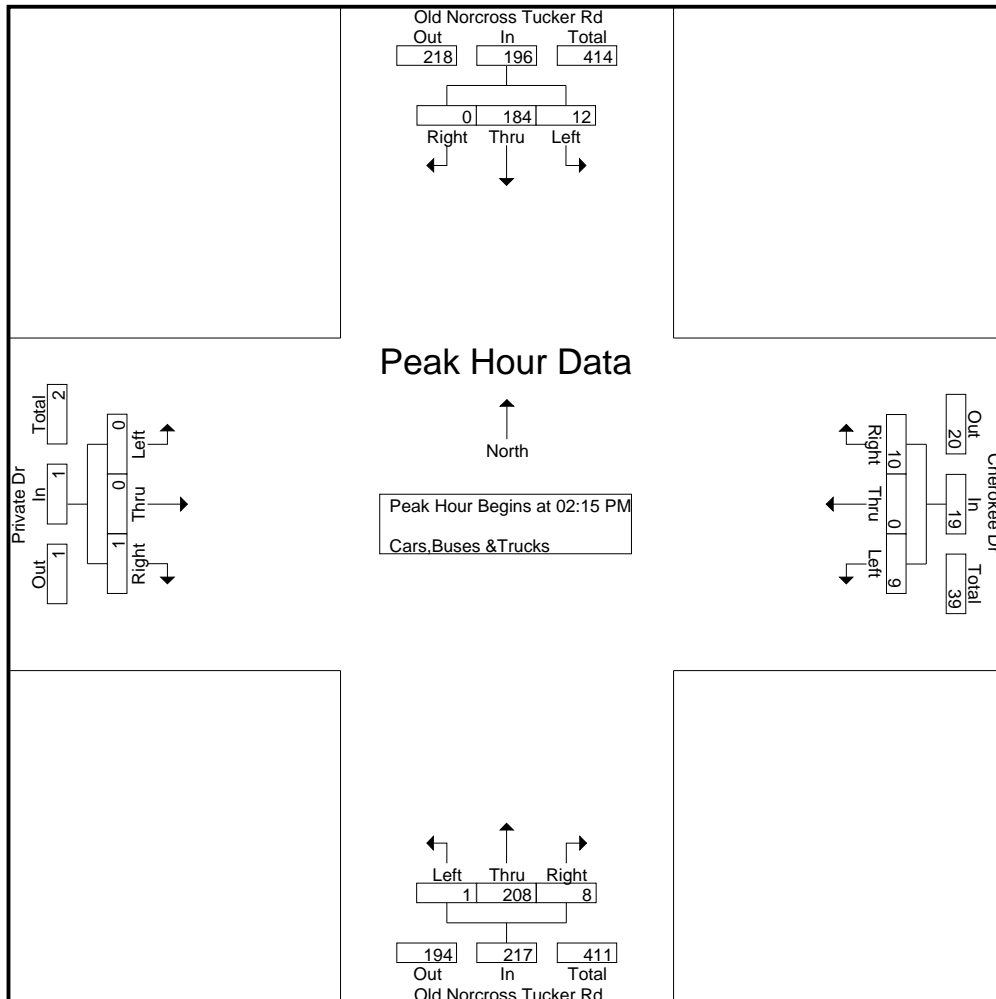
A & R Engineering. Inc.

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

TMC DATA
Old Norcross Tucker Rd @
Cherokee Dr
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200226
Site Code : 20200226
Start Date : 11/17/2020
Page No : 3

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Private Dr Eastbound				Cherokee Dr Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	60	1	61	2	38	0	40	0	0	1	1	1	0	3	4	106
02:30 PM	0	48	1	49	1	44	0	45	0	0	0	0	1	0	2	3	97
02:45 PM	0	44	2	46	4	46	0	50	0	0	0	0	2	0	2	4	100
03:00 PM	1	56	4	61	5	56	0	61	0	0	0	0	5	0	3	8	130
Total Volume	1	208	8	217	12	184	0	196	0	0	1	1	9	0	10	19	433
% App. Total	0.5	95.9	3.7		6.1	93.9	0		0	0	100		47.4	0	52.6		
PHF	.250	.867	.500	.889	.600	.821	.000	.803	.000	.000	.250	.250	.450	.000	.833	.594	.833



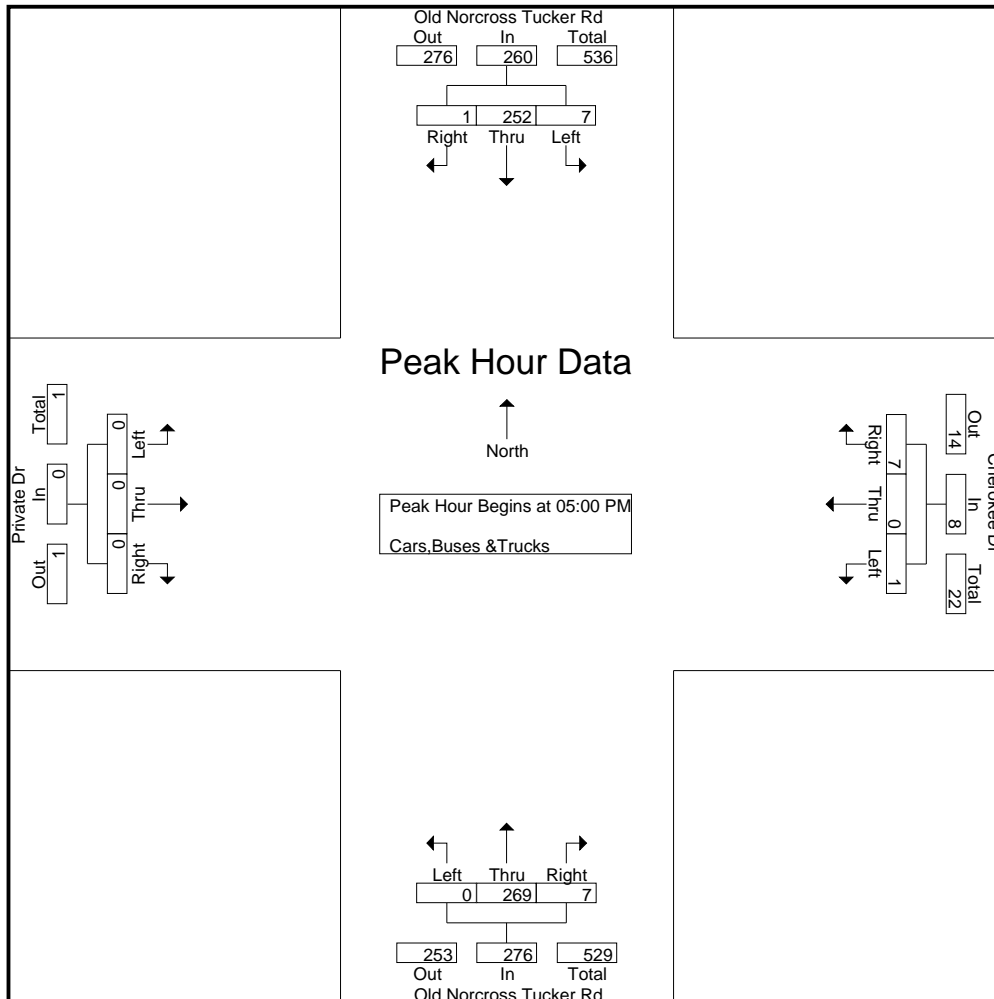
A & R Engineering. Inc.

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

TMC DATA
Old Norcross Tucker Rd @
Cherokee Dr
7-9 am | 2:15-3:15 pm | 4-6 pm

File Name : 20200226
Site Code : 20200226
Start Date : 11/17/2020
Page No : 4

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Private Dr Eastbound				Cherokee Dr Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	63	3	66	2	57	0	59	0	0	0	0	0	0	1	1	126
05:15 PM	0	74	2	76	1	65	0	66	0	0	0	0	0	0	5	5	147
05:30 PM	0	64	0	64	4	75	0	79	0	0	0	0	1	0	1	2	145
05:45 PM	0	68	2	70	0	55	1	56	0	0	0	0	0	0	0	0	126
Total Volume	0	269	7	276	7	252	1	260	0	0	0	0	1	0	7	8	544
% App. Total	0	97.5	2.5		2.7	96.9	0.4		0	0	0		12.5	0	87.5		
PHF	.000	.909	.583	.908	.438	.840	.250	.823	.000	.000	.000	.000	.250	.000	.350	.400	.925



A & R Engineering, In

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

TMC DATA

Britt Rd @ Old Norcross Tucker Rd

2-4 pm

File Name : 20200227

Site Code : 20200227

Start Date : 12/17/2020

Page No : 1

Groups Printed- Cars,Buses & Trucks

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Britt Rd Eastbound				Britt Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
02:00 PM	14	30	9	53	32	25	10	67	10	75	10	95	6	85	23	114	329
02:15 PM	11	35	11	57	30	26	7	63	3	69	11	83	11	61	28	100	303
02:30 PM	14	33	9	56	27	25	6	58	7	116	13	136	10	58	12	80	330
02:45 PM	12	31	16	59	20	39	1	60	10	96	10	116	11	67	21	99	334
Total	51	129	45	225	109	115	24	248	30	356	44	430	38	271	84	393	1296
03:00 PM	8	33	6	47	24	25	2	51	16	87	13	116	17	58	30	105	319
03:15 PM	6	31	12	49	26	32	10	68	11	88	10	109	7	61	20	88	314
03:30 PM	18	35	15	68	20	37	6	63	5	79	11	95	14	76	26	116	342
03:45 PM	14	38	9	61	30	26	8	64	8	114	16	138	6	54	25	85	348
Total	46	137	42	225	100	120	26	246	40	368	50	458	44	249	101	394	1323
Grand Total	97	266	87	450	209	235	50	494	70	724	94	888	82	520	185	787	2619
Apprch %	21.6	59.1	19.3		42.3	47.6	10.1		7.9	81.5	10.6		10.4	66.1	23.5		
Total %	3.7	10.2	3.3	17.2	8	9	1.9	18.9	2.7	27.6	3.6	33.9	3.1	19.9	7.1	30	

A & R Engineering, In

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

TMC DATA

Britt Rd @ Old Norcross Tucker Rd

2-4 pm

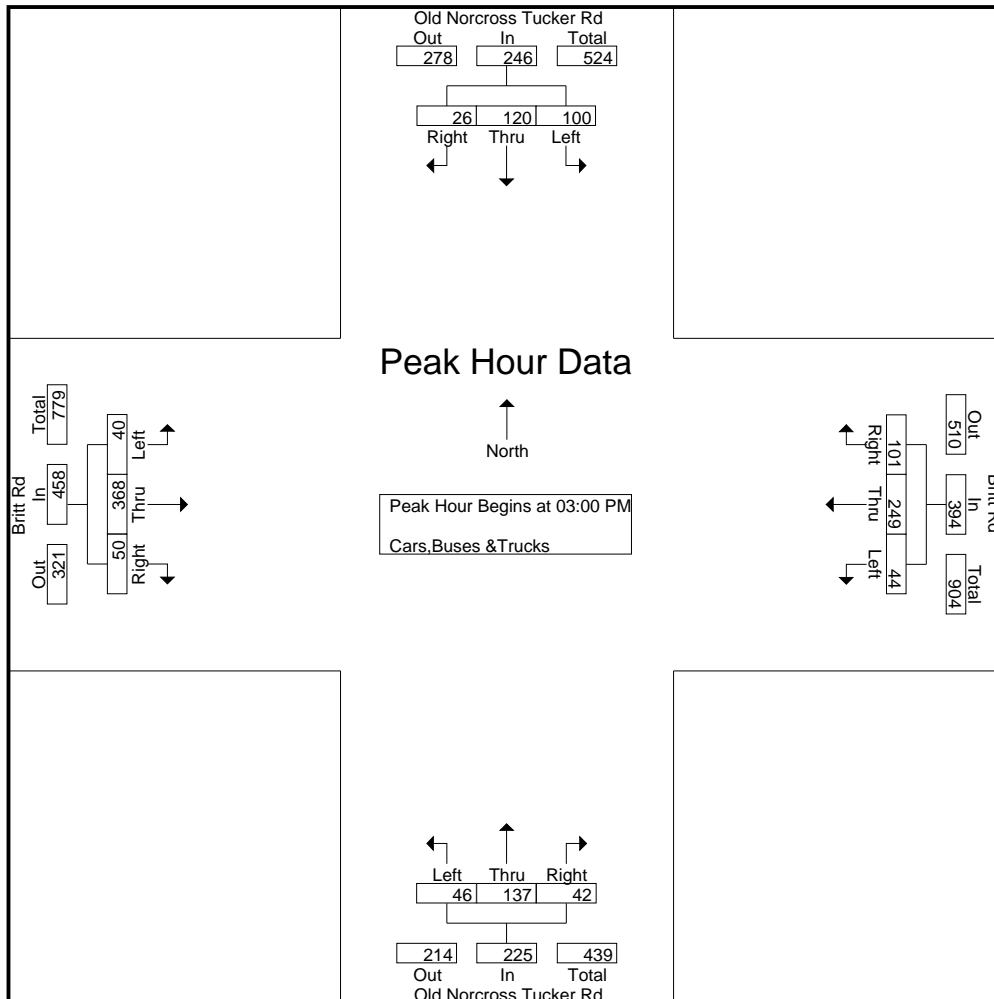
File Name : 20200227

Site Code : 20200227

Start Date : 12/17/2020

Page No : 2

Start Time	Old Norcross Tucker Rd Northbound				Old Norcross Tucker Rd Southbound				Britt Rd Eastbound				Britt Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	8	33	6	47	24	25	2	51	16	87	13	116	17	58	30	105	319
03:15 PM	6	31	12	49	26	32	10	68	11	88	10	109	7	61	20	88	314
03:30 PM	18	35	15	68	20	37	6	63	5	79	11	95	14	76	26	116	342
03:45 PM	14	38	9	61	30	26	8	64	8	114	16	138	6	54	25	85	348
Total Volume	46	137	42	225	100	120	26	246	40	368	50	458	44	249	101	394	1323
% App. Total	20.4	60.9	18.7		40.7	48.8	10.6		8.7	80.3	10.9		11.2	63.2	25.6		
PHF	.639	.901	.700	.827	.833	.811	.650	.904	.625	.807	.781	.830	.647	.819	.842	.849	.950



GRTA Letter of Understanding



LETTER OF UNDERSTANDING

November 10, 2020

Lennar Georgia, Inc
1776 Peachtree St. NW, Ste. 390N
Atlanta, GA 30309

RE: **Heritage on the Lake (DRI#:3178)**

Dear Lennar Georgia, Inc.:

The purpose of this letter is to document the discussions during the Pre-Review and Methodology Meeting held virtually on November 2, 2020 regarding **3178 Heritage on the Lake** development of regional impact. Some of the following items were discussed in this meeting and should assist you and your consultant team in preparing the DRI Review Package.

PROJECT OVERVIEW

- The proposed site is located at 4445 Britt Road, south of Britt Road on both sides of Old Norcross Tucker Road. The project is located on the site of the former Heritage Golf Links. The project is both in the City of Tucker and in unincorporated Gwinnett County, Georgia.
- The DRI trigger for this development is a rezoning.
- The proposed development includes 334 single family homes, 544 multifamily homes, and 10,000 sf of retail space.
- The vehicular trip generation is estimated to be 3,050 gross daily trips based on the *ITE Trip Generation Manual 10th edition*.
- The proposed development includes 7 site accesses along Britt Road and Old Norcross Tucker Road.

The western side of the development proposes the following site access points:

- Driveway 1: Full access driveway on Britt Road for residential trips, to the west of Old Norcross Tucker Road
- Driveway 2: Full access driveway on Britt Road for residential trips, to the west of Old Norcross Tucker Road

The eastern side of the development proposes the following site access points:

- Driveway 3: Right-in/Right-out driveway on Britt Road for retail trips, to the east of Old Norcross Tucker Road
 - Driveway 4: Full access driveway on Britt Road for residential trips, to the east of Old Norcross Tucker Road
 - Driveway 5: Full access driveway on Old Norcross Tucker road for retail trips, to the south of Britt Road
 - Driveway 6: Full access driveway on Old Norcross Tucker for residential trips, to the south of Britt Road
 - Driveway 7: Full access driveway on Old Norcross Tucker road for residential trips to the south of Britt Road
- The projected build-out is one phase to be completed by 2025.

- The applicant is applying for approval under GRTA's non-expedited review process.

STUDY NETWORK

1. Britt Road and Old Norcross Tucker Road
2. Britt Road and Tucker Norcross Road
3. Britt Road and Jimmy Carter Boulevard
4. Old Norcross Tucker Road and S Norcross Tucker Road
5. Old Norcross Tucker Road and Lawrenceville Highway
6. Chamblee Tucker Road and Tucker Norcross Road
7. Pleasantdale Road and Tucker Norcross Road
8. Old Norcross Tucker Road and Cherokee Drive NW

TRAFFIC COUNTS

Existing traffic count and turning movement data shall be applied to the Transportation Study as follows:

Use 2019 count data from Gwinnett County DOT:

- Britt Road and Old Norcross Tucker Road
- Britt Road and Jimmy Carter Boulevard

Use 2017 count data from City of Tucker:

- Old Norcross Tucker Road and Lawrenceville Highway

Collect new counts and extrapolate growth using control counts:

- Britt Road and Tucker Norcross Road
- Old Norcross Tucker Road and S Norcross Tucker Road
- Chamblee Tucker Road and Tucker Norcross Road
- Pleasantdale Road and Tucker Norcross Road
- Old Norcross Tucker Road and Cherokee Drive NW

Note: A&R Engineering shall submit the proposed extrapolation rates to GRTA, the City of Tucker, Gwinnett DOT and GDOT Division 1 for review before proceeding with the Transportation Study.

METHODOLOGY

- All intersections identified as within the study network shall be analyzed during the AM and PM peak hours for (1) existing conditions, (2) future "no-build" conditions [may not be applicable for the site driveways, and (3) future "build" conditions. This DRI shall be reviewed in one phase to be completed by 2025.
- Capacity analysis shall be based on turning movement counts collected not more than 12-months prior to the date of the actual DRI submittal to GRTA, unless specified otherwise. As appropriate, pedestrian counts and heavy vehicle counts shall be collected with vehicle counts and considered within the capacity analysis. Turning movement counts shall be collected while local schools are in session and ordinarily not between the week of Thanksgiving and the second week of January or any week of a major holiday.
- A 1.0% annual background traffic growth rate shall be used for all roadways. During the COVID19 response, capacity analysis shall be based on turning movement counts approved by the local government and Georgia Department of Transportation. All counts, if older than a year old, shall be grown by the background growth traffic rate annually unless otherwise specified.
- The Level of Service (LOS) standard for all analysis shall be LOS D unless an existing intersection LOS is F in which case the LOS standard may be LOS E.
- Mixed-use and pass-by reductions are allowed for this site given the pedestrian connections to the retail space. Additionally, an Alternative Mode Reduction of 2% shall be included for the Project.
- Default values should not be assumed in the traffic modeling. Existing conditions shall be taken into account.

- The applicant shall research TIP, STIP, RTP, and GDOT's construction work program, as well as any local government plans (SPLOST, CIP, etc.), to determine the open-to-traffic date, sponsor, cost of the project, funding source(s), for future roadway projects in the project vicinity. This information shall be included within the traffic analysis.
- The transportation study shall also estimate the number of trips expected to utilize a potential connection to Tuckersham Lane, as agreed upon at the Methodology Meeting.

ADDITIONAL INFORMATION

Every roadway segment and intersection listed above will be analyzed for "required improvements." If the existing LOS for the segment or intersection is below the applicable level of service for a particular time period (e.g., A.M. peak period, P.M. peak period, etc.), then the measured LOS service for that segment and time periods is the standard by which the "base" and "future" traffic conditions will be designed. For example, if the County's LOS standard is LOS D, but an intersection or segment currently operates at LOS E for a certain peak period, then the LOS standard for that intersection or segment for "base" and "future" conditions becomes LOS E (only for that intersection and only for that peak period). The "base" is the phase year traffic without the development traffic (also called future "no-build" conditions) and the "future" is the phase year with the development traffic (also called future "build" conditions). As required in the technical guidelines, specific "required improvements" will be identified to bring the "base" LOS and "future" LOS for every roadway segment and intersection up to the applicable LOS standard. If the existing LOS for the segment or intersection is LOS F, then the future "no-build" and future "build" LOS standard will be LOS E. The improvements required to achieve the desired LOS standard will be provided in a table and graphic within the study. The traffic study should indicate the existing roadway laneage at each studied intersection as well as the laneage required (to meet the LOS standard) for future "no-build" and future "build" conditions. The improvements may include both programmed improvements and improvements identified in the study.

The planned and programmed improvement should indicate the project sponsor, the anticipated funding by source (federal, state, city/county, developer, CID, etc.), the year open-to-traffic, and estimate of the total project cost. All other required improvements identified in the study should, to the extent known, identify the cost, sponsor, funding, and timing. If any of these elements are not known, please state as "unknown."

The future "no-build" and the future "build" analyses should NOT automatically include/assume the additional lanes/capacity associated with planned and programmed improvement projects unless those roadway projects are currently under construction. Instead, the traffic consultant should recommend the additional laneage required to satisfy the level of service standard.

DRI REVIEW PACKAGE CHECKLIST

Please use the DRI Review Package Checklist to help you prepare your GRTA DRI Review Package for expedited review of your application. The Checklist reflects the understandings set forth in this letter, and is incorporated into this letter by reference.

The site plan shall be prepared in accordance with Section 4-104 of the DRI Review Package Technical Guidelines and it shall be dated, and shall be at a scale of 1"= 200' or larger (showing more detail). The site plan shall be consistent with GRTA's Site Plan Information Guidelines, which represents the minimum required information on site plans.

The applicant shall indicate on the site plans all adjacent land uses, current zoning, and future land use as indicated on the future land use map. Additionally, all existing and proposed sidewalks, existing and proposed pedestrian trails, and existing and proposed roadway laneage should be indicated on the site plan.

DRI REVIEW PACKAGE SUBMITTAL

At the time you are ready to submit your DRI Review Package to GRTA, please submit the Transportation Study electronically to all individuals on the CC list of this Letter of Understanding. Additionally, electronically submit all GRTA DRI Review Package information (Site Plan, Transportation Study, Transportation Study's traffic analysis data) to those listed in the table below. The DRI Review Package submittal to the staff in the table below shall include the following:

- Provide a PDF of each document
- Provide the native format for each document

- .dwg is the preferred CAD format (AutoCAD)
- .doc is the preferred word processing format (Word)
- .xls is the preferred spreadsheet format (Excel)
- .sy8, .sy9, sy10 are the preferred capacity analysis format (Synchro)

GRTA	ATLANTA REGIONAL COMMISSION	CITY OF TUCKER	GWINNETT COUNTY	GWINNETT COUNTY DOT	GDOT DISTRICT 1
Andrew Spiliotis 245 Peachtree Center Ave. Suite 2200 Atlanta, GA 30303	Greg Giuffrida International Tower 229 Peachtree Street NE Suite 100 Atlanta, GA 30303	Courtney Smith 1975 Lakeside Parkway, Suite 350 Tucker, GA 30084	Ashley Nichols One Justice Square 446 West Crogan Street Lawrenceville, GA 30046	Tom Sever Gwinnett County DOT 75 Langley Drive Lawrenceville, GA 30046	Jason Dykes 1475 Jesse Jewell Pkwy Suite 100 Gainesville, GA 30851

If you have any questions, please feel free to contact me directly at 404-893-6171 or aspiliotis@srta.ga.gov.

Sincerely,

Andrew Spiliotis
Transportation Planner

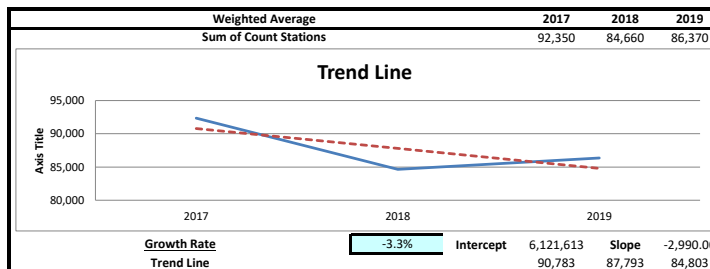
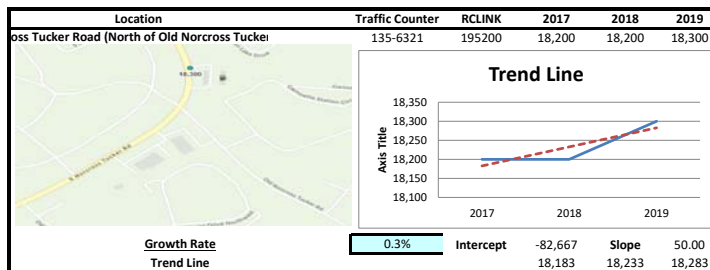
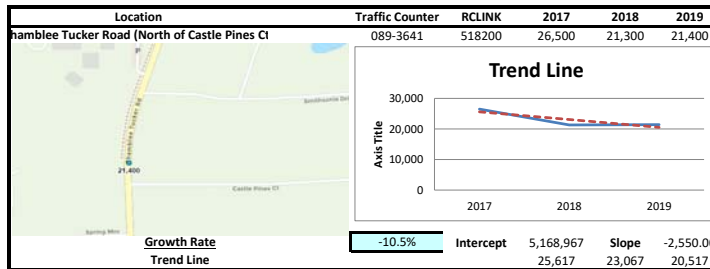
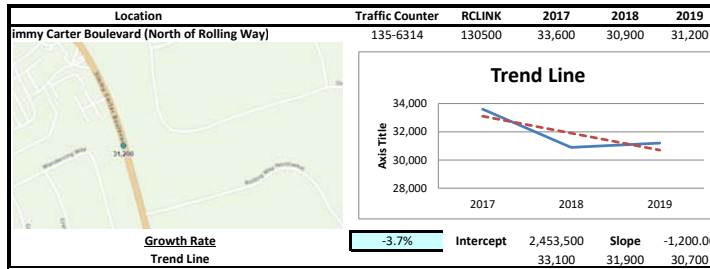
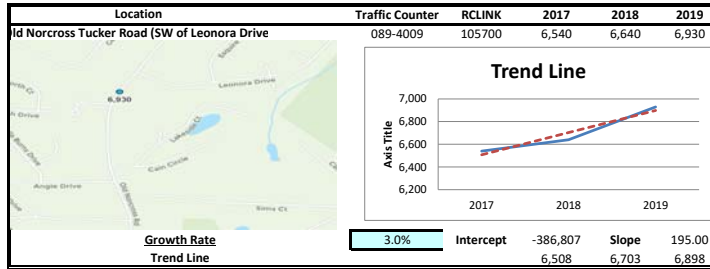
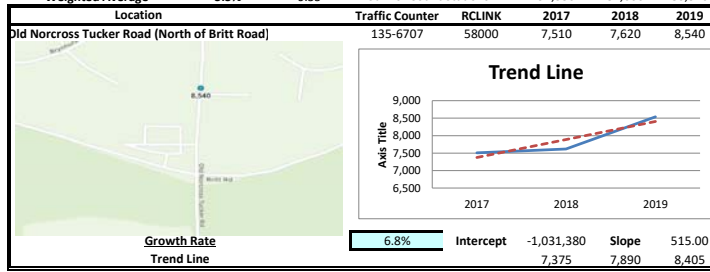
Cc:

Jon West, DCA
Andrew Smith, ARC
Greg Giuffrida, ARC
Aries Little, ARC
Marquitrice Mangum, ARC
Annie Gillespie, GRTA
Parker Martin, GRTA
Cain Williamson, GRTA
Tom Sever, Gwinnett DOT
Alex Hofelich, Gwinnett DOT
Michael Johnson, Gwinnett DOT
Ashley Nichols, Gwinnett County Planning
Alicia McElhenny, Gwinnett County Planning
Courtney Smith, City of Tucker
Tim Lampkin, City of Tucker
Ken Hildabrandt, City of Tucker
John McHenry, City of Tucker
Sylvia Smith, Dekalb County

Ted Hicks, GDOT Planning
Benjamin Kane, GDOT Planning
Jason Dykes, GDOT D1
Shane Giles, GDOT D1
Jonathan Peevy, GDOT D1
Paul DeNard, GDOT D7
Justin Hatch, GDOT D7
Josh Montefusco, GDOT D7
Megan Wilson, GDOT D7
Daniel Parker, GDOT D7
Kenneth Wood, PEC
Abdul Amer, A&R Engineering
Naila Amer, A&R Engineering
Morgan Walvern, A&R Engineering
Doug Dillard, Dillard Sellars
Jeff Haymore, Dillard Sellars
Baxter Russell, Dillard Sellars
Jim Bowersox, Lennar Georgia, Inc.

Linear Regression of Daily Traffic

Location	Growth Rate	R Squared	Station ID	Route	2017	2018	2019
Old Norcross Tucker Road (North of Britt Road)	6.8%	0.83	135-6707	58000	7,510	7,620	8,540
Old Norcross Tucker Road (SW of Leonora Drive)	3.0%	0.93	089-4009	105700	6,540	6,640	6,930
Jimmy Carter Boulevard (North of Rolling Way)	-3.7%	0.66	135-6314	130500	33,600	30,900	31,200
Chamblee Tucker Road (North of Castle Pines Ct)	-10.5%	0.74	089-3641	518200	26,500	21,300	21,400
Old Norcross Tucker Road (North of Old Norcross Tucker)	0.3%	0.75	135-6321	195200	18,200	18,200	18,300
Weighted Average	-3.3%	0.55	Sum of Count Stations =		92,350	84,660	86,370



**Fact Sheets for Planned and Programmed
Improvements**

OFF-SYSTEM SAFETY IMPROVEMENTS @ 4 LOCS IN TUCKER

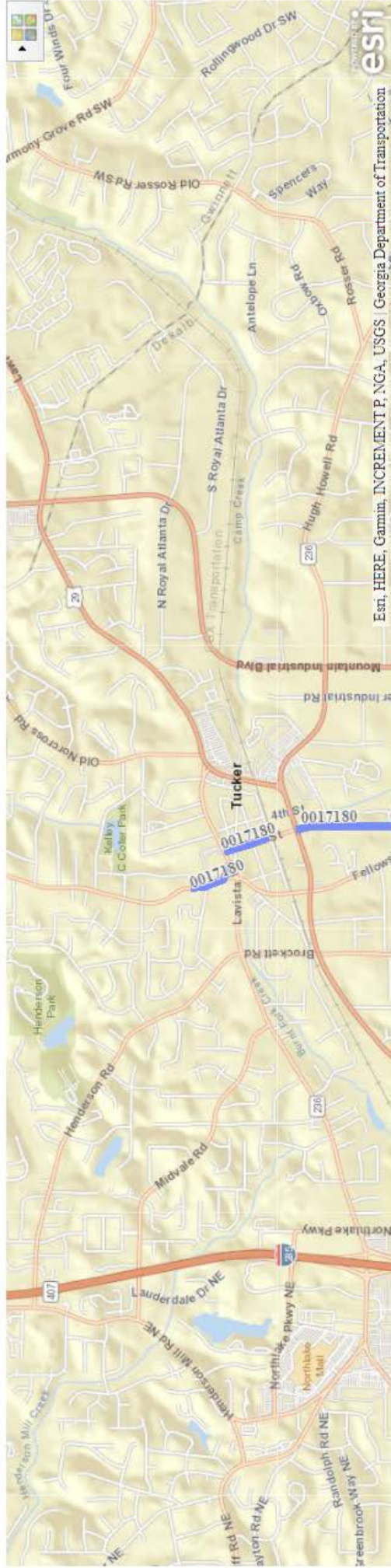
Project ID: 0017180
 Project Manager: Charity L. Belford
 Office: Local Grants Office
 County: DeKalb
 Congressional District: 004, 006
 State Senate District: 040, 041
 State House District: 081, 087, 088
 Project Type: Safety
 Project Status: Construction Work Program
 Right of Way Authorization:

Notice to Proceed Date: %
 Construction Percent Complete: %
 Current Completion Date:
 Work Completion Date:
 Construction Contract Amount:
 Construction Contractor:
 Preconstruction Status Report
 Construction Status Report
 Contact Us

Project Description:

Off-system safety project includes the installation of enhanced pedestrian crossings known as Rectangular Rapid Flash Beacons (RRFB) along 2 routes in DeKalb County. In addition, school zone flashers will be installed along 2 routes in DeKalb County. 1. Idlewood Road 2. Chamblee Tucker Road 3. Idlewood Rd @ Elm Dale Dr 4. Main St @ Lynburn Dr

Activity	Program Year	Cost Estimate	Date of Last Estimate
CST (Construction)	2021	\$64,000.00	
PE (Preliminary Engineering)		\$8,000.00	



Project Documents

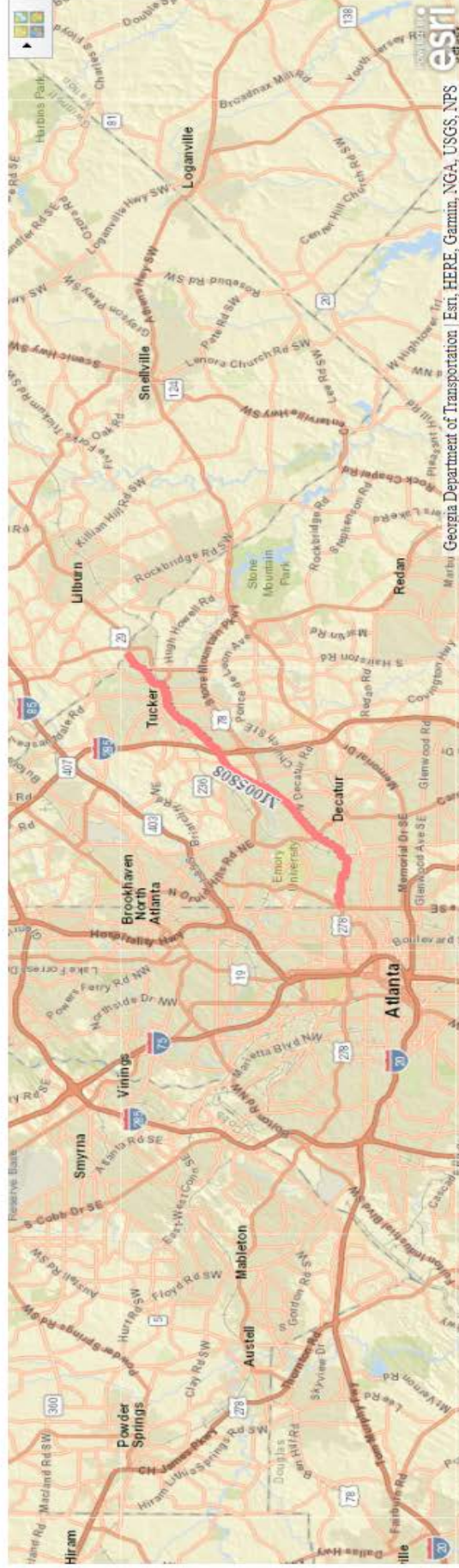
There are no items to show in this view.

SR 8 FROM FULTON COUNTY LINE TO GWINNETT COUNTY LINE

Project ID: M005808
 Project Manager: Arthur McKinley Wilson II
 Office: Maintenance
 County: DeKalb
 Congressional District: 004, 005, 006
 State Senate District: 041, 042
 State House District: 082, 083, 084, 085, 086, 087, 088, 089
 Project Type: Maintenance
 Project Status: Under Construction
 Right of Way Authorization: Contact Us
 Notice to Proceed Date: 3/17/2020
 Construction Percent Complete: 50.29%
 Current Completion Date: 1/31/2021
 Construction Contractor: PITTMAN CONSTRUCTION COMPANY
 Preconstruction Status Report
 Construction Status Report

Project Description:
 This project, selected by the District Maintenance Office, is the resurfacing of SR 8 to improve the roadways current PACES rating of 63.

Activity	Program Year	Cost Estimate	Date of Last Estimate
MCST (Maintenance Construction)	2020	\$6,766,234.49	6/20/2019



Project Documents
 There are no items to show in this view.

FLAT SHOALS RD; HENDERSON RD & SALEM RD - SIDEWALKS

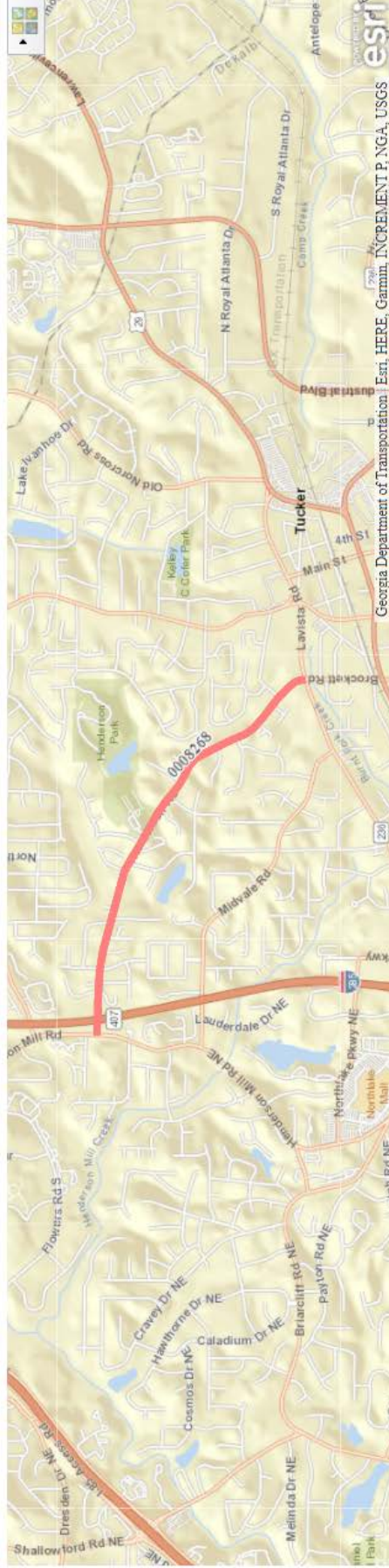
Project ID: 0008268
 Project Manager: Obi Ezenekwe
 Office: Program Delivery
 County: Dekalb
 Congressional District: 004, 005, 006
 State Senate District: 10, 40, 41, 43, 44
 State House District: 81, 83, 84, 87, 89, 90
 Project Type: Enhancement
 Project Status: Under Construction
 Right of Way Authorization: 11/5/2010

Notice to Proceed Date: %
 Construction Percent Complete: %
 Current Completion Date:
 Work Completion Date:
 Construction Contract Amount:
 Construction Contractor:
Preconstruction Status Report
Construction Status Report
 Contact Us

Project Description:

The proposed project would construct 5-foot sidewalks with 2-foot grass strips, along with curb and gutter to fill in the voids between the existing segments of sidewalks to provide connectivity along Bouldercrest Road from the intersection of Clifton Church Road to Eastland Road at Atlanta City limits, Flat Shoals Road from the intersection of Second Avenue to the intersection of Candler Road, Frazier Road from the intersection of Lawrenceville Highway to the intersection of La Vista Road, Henderson Road, from the intersection of La Vista Road, McAfee Road, from the intersection of Second Avenue to the intersection of Candler Road and at Salem Road from the intersection of Panola Road to Fannin Drive.

Activity	Program Year	Cost Estimate	Date of Last Estimate
PE (Preliminary Engineering)		\$0.00	
ROW (Right of Way)	2015	\$3,110,000.00	4/24/2015



Project Documents

- Approved Concept Reports
- 0006885_0008268_0008267_0008268_CR_APR2006.pdf
- 0006885_0008268_0008267_0008268_CR_APR2006.pdf
- 0008268_REV_JUL2008.pdf
- 0008268_REV_JUL2008.pdf

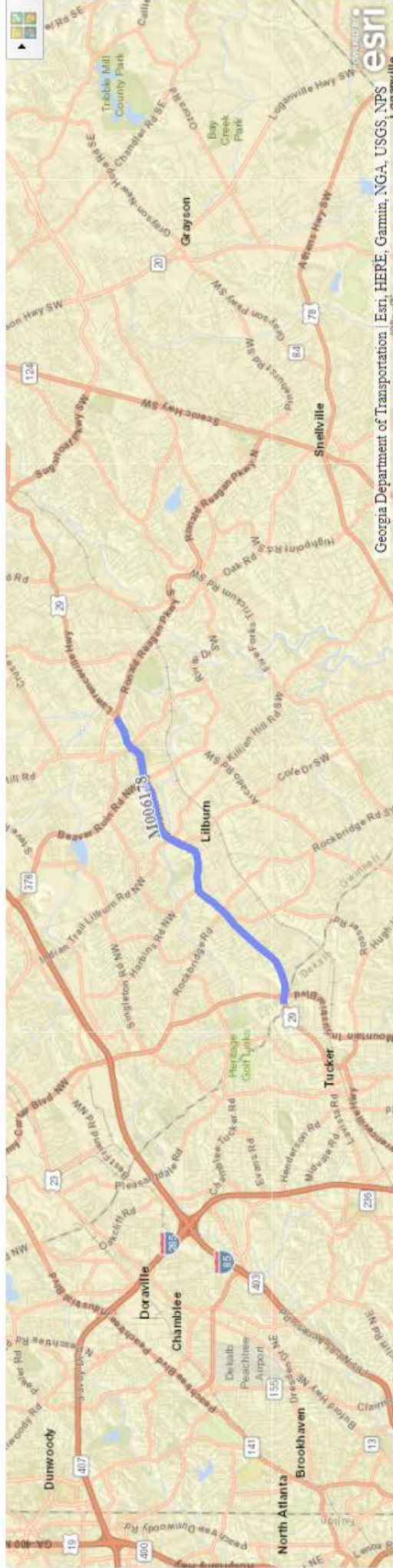
SR 8 FROM DEKALB COUNTY LINE TO CR 7238/RONALD REAGAN PKWY

Project ID: M006178
Project Manager: Arthur McKinley Wilson II
Office: Maintenance
County: Gwinnett
Congressional District: 004, 007
State Senate District: 041
State House District: 099, 100, 108
Project Type: Maintenance
Project Status: Construction Work Program
Right of Way Authorization:

Notice to Proceed Date: %
Construction Percent Complete: %
Current Completion Date:
Work Completion Date:
Construction Contract Amount:
Construction Contractor:
Preconstruction Status Report
Construction Status Report
Contact Us

Project Description:

Activity	Program Year	Cost Estimate	Date of Last Estimate
MCST (Maintenance Construction)		\$5,274,630.60	



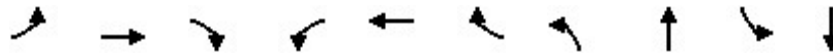
Project Documents

There are no items to show in this view.

Existing Intersection Analysis

Timings
1: Old Norcross Tucker Rd & Britt Rd

1a. Existing AM
01/26/2021

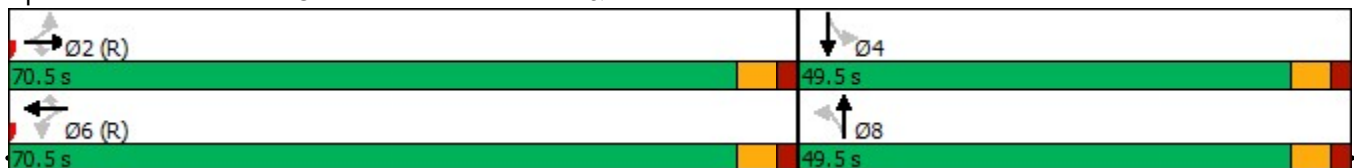


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↗	↘	↗
Traffic Volume (vph)	8	113	39	92	664	90	101	189	79	202
Future Volume (vph)	8	113	39	92	664	90	101	189	79	202
Lane Group Flow (vph)	9	127	44	103	746	101	113	309	89	289
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	70.5	70.5	70.5	70.5	70.5	70.5	49.5	49.5	49.5	49.5
Total Split (%)	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	41.3%	41.3%	41.3%	41.3%
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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
v/c Ratio	0.02	0.10	0.04	0.12	0.58	0.09	0.97	0.78	0.88	0.74
Control Delay	1.0	1.2	0.4	3.0	4.4	1.0	122.8	54.9	112.0	56.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.0	1.2	0.4	3.0	4.4	1.0	122.8	54.9	112.0	56.9
Queue Length 50th (ft)	1	10	0	7	56	0	88	213	62	191
Queue Length 95th (ft)	m1	3	0	m19	120	m7	#172	283	#141	246
Internal Link Dist (ft)		1206			839			425		685
Turn Bay Length (ft)	150		100	100		90	90		80	
Base Capacity (vph)	374	1296	1115	876	1296	1114	201	664	174	669
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	0.02	0.10	0.04	0.12	0.58	0.09	0.56	0.47	0.51	0.43

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings
1: Old Norcross Tucker Rd & Britt Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	70.5	70.5	70.5	70.5	70.5	70.5	49.5	49.5	49.5	49.5
Total Split (%)	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	41.3%	41.3%	41.3%	41.3%
Maximum Green (s)	65.0	65.0	65.0	65.0	65.0	65.0	44.0	44.0	44.0	44.0
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	74.4	74.4	74.4	74.4	74.4	74.4	34.6	34.6	34.6	34.6
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	80.1	80.1	80.1	80.1	80.1	80.1	28.9	28.9	28.9	28.9
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	83.6	83.6	83.6	83.6	83.6	83.6	25.4	25.4	25.4	25.4
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	87.2	87.2	87.2	87.2	87.2	87.2	21.8	21.8	21.8	21.8
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
10th %ile Green (s)	92.3	92.3	92.3	92.3	92.3	92.3	16.7	16.7	16.7	16.7
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 7 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
1: Old Norcross Tucker Rd & Britt Rd

1a. Existing AM
01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	113	39	92	664	90	101	189	86	79	202	55
Future Volume (veh/h)	8	113	39	92	664	90	101	189	86	79	202	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	127	44	103	746	101	113	212	97	89	227	62
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	1190	1009	800	1190	1009	205	330	151	186	385	105
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	650	1870	1585	1214	1870	1585	1090	1215	556	1070	1414	386
Grp Volume(v), veh/h	9	127	44	103	746	101	113	0	309	89	0	289
Grp Sat Flow(s),veh/h/ln	650	1870	1585	1214	1870	1585	1090	0	1770	1070	0	1801
Q Serve(g_s), s	1.0	3.2	1.2	4.3	28.9	3.0	12.0	0.0	18.5	9.6	0.0	16.7
Cycle Q Clear(g_c), s	30.0	3.2	1.2	7.5	28.9	3.0	28.7	0.0	18.5	28.1	0.0	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.21
Lane Grp Cap(c), veh/h	317	1190	1009	800	1190	1009	205	0	481	186	0	490
V/C Ratio(X)	0.03	0.11	0.04	0.13	0.63	0.10	0.55	0.00	0.64	0.48	0.00	0.59
Avail Cap(c_a), veh/h	317	1190	1009	800	1190	1009	308	0	649	288	0	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.3	8.5	8.2	10.0	13.2	8.5	50.3	0.0	38.5	50.9	0.0	37.9
Incr Delay (d2), s/veh	0.2	0.2	0.1	0.3	2.5	0.2	2.3	0.0	1.4	1.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.3	0.4	1.2	11.7	1.0	3.4	0.0	8.1	2.6	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	8.7	8.2	10.3	15.7	8.7	52.7	0.0	40.0	52.8	0.0	39.0
LnGrp LOS	C	A	A	B	B	A	D	A	D	D	A	D
Approach Vol, veh/h	180			950			422			378		
Approach Delay, s/veh	9.3			14.4			43.4			42.3		
Approach LOS	A			B			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	81.9			38.1			81.9			38.1		
Change Period (Y+Rc), s	5.5			5.5			5.5			5.5		
Max Green Setting (Gmax), s	65.0			44.0			65.0			44.0		
Max Q Clear Time (g_c+l1), s	32.0			30.1			30.9			30.7		
Green Ext Time (p_c), s	1.8			1.7			13.7			1.9		
Intersection Summary												
HCM 6th Ctrl Delay	25.7											
HCM 6th LOS	C											

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	WT			WT	WT	WT
Traffic Vol, veh/h	6	7	4	370	328	5
Future Vol, veh/h	6	7	4	370	328	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	190
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	8	4	416	369	6

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	793	369	375	0	-	0
Stage 1	369	-	-	-	-	-
Stage 2	424	-	-	-	-	-
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 Maneuve	858	677	1183	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuve	857	677	1183	-	-	-
Mov Cap-2 Maneuve	857	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	660	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1183	-	479	-	-
HCM Lane V/C Ratio	0.004	-	0.03	-	-
HCM Control Delay (s)	8.1	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Timings
3: Old Norcross Tucker Rd & Cherokee Dr

1a. Existing AM
01/26/2021

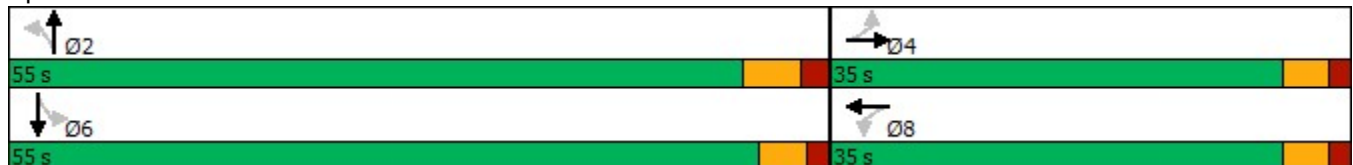


Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Lane Configurations		↕	↕	↗	↘	
Traffic Volume (vph)	61	0	128	283	52	
Future Volume (vph)	61	0	128	283	52	
Lane Group Flow (vph)	0	333	216	308	57	
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Detector Phase	8	8	2	6	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	35.0	35.0	55.0	55.0	55.0	35.0
Total Split (%)	38.9%	38.9%	61.1%	61.1%	61.1%	39%
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.7	5.8	4.8	4.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	None
v/c Ratio		0.61	0.25	0.53	0.06	
Control Delay		10.3	5.5	10.6	5.3	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		10.3	5.5	10.6	5.3	
Queue Length 50th (ft)		13	15	31	4	
Queue Length 95th (ft)		82	55	111	20	
Internal Link Dist (ft)		795	578		427	
Turn Bay Length (ft)				90		
Base Capacity (vph)		1335	1734	1138	1827	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.25	0.12	0.27	0.03	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 37.5
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr






















Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	35.0	35.0	55.0	55.0	55.0	35.0
Total Split (%)	38.9%	38.9%	61.1%	61.1%	61.1%	39%
Maximum Green (s)	30.3	30.3	49.2	50.2	50.2	30.3
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	Min	Min	None
Walk Time (s)						7.0
Flash Dont Walk (s)						10.0
Pedestrian Calls (#/hr)						0
90th %ile Green (s)	15.5	15.5	29.5	30.5	30.5	15.5
90th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
70th %ile Green (s)	9.8	9.8	20.7	21.7	21.7	9.8
70th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
50th %ile Green (s)	7.1	7.1	16.0	17.0	17.0	7.1
50th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
30th %ile Green (s)	6.0	6.0	12.4	13.4	13.4	6.0
30th %ile Term Code	Min	Min	Hold	Gap	Gap	Hold
10th %ile Green (s)	6.0	6.0	12.0	13.0	13.0	6.0
10th %ile Term Code	Min	Min	Min	Hold	Hold	Hold

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 37.5
 Control Type: Actuated-Uncoordinated
 90th %ile Actuated Cycle: 55.5
 70th %ile Actuated Cycle: 41
 50th %ile Actuated Cycle: 33.6
 30th %ile Actuated Cycle: 28.9
 10th %ile Actuated Cycle: 28.5

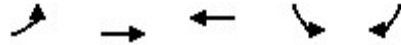
HCM 6th Signalized Intersection Summary
 3: Old Norcross Tucker Rd & Cherokee Dr

1a. Existing AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	61	0	246	0	128	71	283	52	0
Future Volume (veh/h)	0	0	0	61	0	246	0	128	71	283	52	0
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	0	0	0	66	0	267	0	139	77	308	57	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	511	0	165	27	345	0	526	292	634	870	0
Arrive On Green	0.00	0.00	0.00	0.27	0.00	0.27	0.00	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	0	1870	0	212	100	1263	0	1131	627	1165	1870	0
Grp Volume(v), veh/h	0	0	0	333	0	0	0	0	216	308	57	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1575	0	0	0	0	1758	1165	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	3.0	8.8	0.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	3.0	11.8	0.7	0.0
Prop In Lane	0.00		0.00	0.20		0.80	0.00		0.36	1.00		0.00
Lane Grp Cap(c), veh/h	0	511	0	538	0	0	0	0	818	634	870	0
V/C Ratio(X)	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.26	0.49	0.07	0.00
Avail Cap(c_a), veh/h	0	1410	0	1282	0	0	0	0	2151	1547	2336	0
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(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	6.6	10.2	5.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.6	2.1	0.1	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	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.8	1.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	7.2	12.2	6.0	0.0
LnGrp LOS	A	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		0			333			216			365	
Approach Delay, s/veh		0.0			13.8			7.2			11.3	
Approach LOS					B			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.5		15.7		24.5		15.7				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 49		* 30		* 50		* 30				
Max Q Clear Time (g_c+l1), s		5.0		0.0		13.8		9.8				
Green Ext Time (p_c), s		3.5		0.0		4.9		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				11.2								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings
4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

1a. Existing AM
01/26/2021

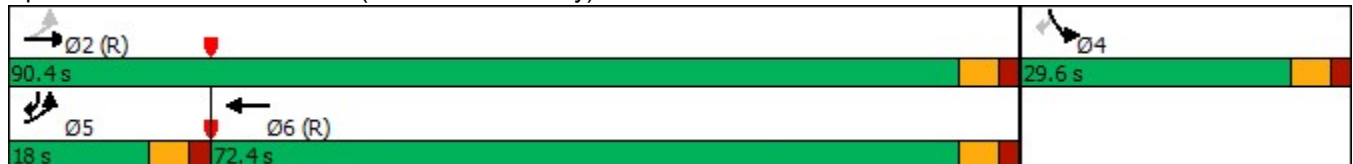


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↗	↑↑	↑↑	↖	↗
Traffic Volume (vph)	138	493	1565	29	193
Future Volume (vph)	138	493	1565	29	193
Lane Group Flow (vph)	144	514	1663	30	201
Turn Type	pm+pt	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	18.0	90.4	72.4	29.6	18.0
Total Split (%)	15.0%	75.3%	60.3%	24.7%	15.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	C-Min	C-Min	None	None
v/c Ratio	0.44	0.16	0.65	0.27	0.66
Control Delay	9.5	1.5	11.4	58.7	50.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	1.5	11.4	58.7	50.2
Queue Length 50th (ft)	14	27	341	23	128
Queue Length 95th (ft)	63	43	513	53	192
Internal Link Dist (ft)		1517	1496	1354	
Turn Bay Length (ft)	50				95
Base Capacity (vph)	333	3191	2565	355	307
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.16	0.65	0.08	0.65

Intersection Summary

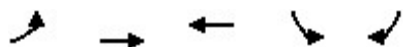
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd



Phasings
4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	18.0	90.4	72.4	29.6	18.0
Total Split (%)	15.0%	75.3%	60.3%	24.7%	15.0%
Maximum Green (s)	12.5	84.9	66.9	24.1	12.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	None
Walk Time (s)			7.0	7.0	
Flash Dont Walk (s)			17.0	17.0	
Pedestrian Calls (#/hr)			0	0	
90th %ile Green (s)	16.6	99.0	76.9	10.0	16.6
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap
70th %ile Green (s)	13.8	100.5	81.2	8.5	13.8
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap
50th %ile Green (s)	11.8	101.6	84.3	7.4	11.8
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap
30th %ile Green (s)	12.5	114.5	96.5	0.0	12.5
30th %ile Term Code	Max	Coord	Coord	Skip	Max
10th %ile Green (s)	11.8	114.5	97.2	0.0	11.8
10th %ile Term Code	Gap	Coord	Coord	Skip	Gap

Intersection Summary

Cycle Length: 120

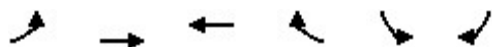
Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

1a. Existing AM
 01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	↘
Traffic Volume (veh/h)	138	493	1565	32	29	193
Future Volume (veh/h)	138	493	1565	32	29	193
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	514	1630	33	30	201
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	257	2733	2429	49	248	286
Arrive On Green	0.04	0.77	0.68	0.68	0.14	0.14
Sat Flow, veh/h	1781	3647	3656	72	1781	1585
Grp Volume(v), veh/h	144	514	812	851	30	201
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1857	1781	1585
Q Serve(g_s), s	2.7	4.7	32.1	32.3	1.8	14.3
Cycle Q Clear(g_c), s	2.7	4.7	32.1	32.3	1.8	14.3
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	257	2733	1212	1267	248	286
V/C Ratio(X)	0.56	0.19	0.67	0.67	0.12	0.70
Avail Cap(c_a), veh/h	369	2733	1212	1267	358	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	3.7	11.2	11.2	45.2	46.1
Incr Delay (d2), s/veh	1.9	0.2	3.0	2.9	0.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.3	11.5	12.0	0.8	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.8	3.9	14.1	14.1	45.4	49.8
LnGrp LOS	B	A	B	B	D	D
Approach Vol, veh/h		658	1663		231	
Approach Delay, s/veh		6.5	14.1		49.2	
Approach LOS		A	B		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.8		22.2	10.5	87.3
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		84.9		24.1	12.5	66.9
Max Q Clear Time (g_c+l1), s		6.7		16.3	4.7	34.3
Green Ext Time (p_c), s		7.3		0.4	0.2	25.1
Intersection Summary						
HCM 6th Ctrl Delay			15.3			
HCM 6th LOS			B			

Timings
5: Jimmy Carter Blvd & Britt Rd/Williams Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	48	102	121	74	354	50	286	918	28	550	146
Future Volume (vph)	48	102	121	74	354	50	286	918	28	550	146
Lane Group Flow (vph)	49	104	123	76	361	51	292	999	29	561	149
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	38.0	38.0	15.0	38.0	38.0	34.0	52.0	15.0	33.0	33.0
Total Split (%)	12.5%	31.7%	31.7%	12.5%	31.7%	31.7%	28.3%	43.3%	12.5%	27.5%	27.5%
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	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.25	0.25	0.25	0.19	0.84	0.10	0.82	0.55	0.27	0.47	0.23
Control Delay	14.9	24.3	8.3	26.8	61.5	0.4	64.8	24.6	59.1	36.1	4.4
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	14.9	24.3	8.3	26.8	61.5	0.4	64.8	24.6	59.1	36.1	4.4
Queue Length 50th (ft)	22	63	31	40	266	0	216	303	22	188	0
Queue Length 95th (ft)	m38	105	56	70	365	0	308	423	53	274	38
Internal Link Dist (ft)		975			378			344		1167	
Turn Bay Length (ft)	175		75	80		85	150		135		565
Base Capacity (vph)	219	504	554	410	504	554	420	1809	140	1198	650
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	0.22	0.21	0.22	0.19	0.72	0.09	0.70	0.55	0.21	0.47	0.23

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

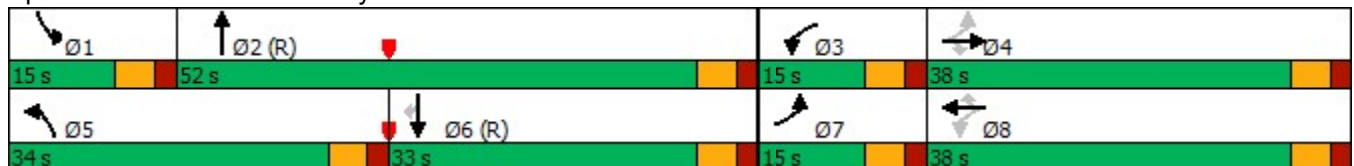
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

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

Splits and Phases: 5: Jimmy Carter Blvd & Britt Rd/Williams Rd



Phasings
5: Jimmy Carter Blvd & Britt Rd/Williams Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	38.0	38.0	15.0	38.0	38.0	34.0	52.0	15.0	33.0	33.0
Total Split (%)	12.5%	31.7%	31.7%	12.5%	31.7%	31.7%	28.3%	43.3%	12.5%	27.5%	27.5%
Maximum Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	28.5	46.5	9.5	27.5	27.5
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
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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		25.0	25.0		21.0	21.0		17.0		13.0	13.0
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0
90th %ile Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	28.5	46.5	9.5	27.5	27.5
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Max	Coord	Coord
70th %ile Green (s)	9.2	32.1	32.1	9.5	32.4	32.4	28.0	48.0	8.4	28.4	28.4
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Gap	Coord	Coord
50th %ile Green (s)	8.1	27.5	27.5	9.0	28.4	28.4	24.9	54.1	7.4	36.6	36.6
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Gap	Coord	Coord
30th %ile Green (s)	7.1	24.1	24.1	8.0	25.0	25.0	21.7	71.4	0.0	44.2	44.2
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Skip	Coord	Coord
10th %ile Green (s)	0.0	20.0	20.0	0.0	20.0	20.0	17.0	89.0	0.0	66.5	66.5
10th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Gap	Coord	Skip	Coord	Coord

Intersection Summary

Cycle Length: 120

























Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 5: Jimmy Carter Blvd & Britt Rd/Williams Rd

1a. Existing AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	102	121	74	354	50	286	918	61	28	550	146
Future Volume (veh/h)	48	102	121	74	354	50	286	918	61	28	550	146
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	49	104	0	76	361	0	292	937	62	29	561	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	378		343	403		323	1834	121	46	1374	
Arrive On Green	0.03	0.20	0.00	0.05	0.22	0.00	0.18	0.54	0.54	0.03	0.39	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3383	224	1781	3554	1585
Grp Volume(v), veh/h	49	104	0	76	361	0	292	492	507	29	561	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1830	1781	1777	1585
Q Serve(g_s), s	2.6	5.6	0.0	4.0	22.5	0.0	19.3	21.1	21.1	1.9	13.8	0.0
Cycle Q Clear(g_c), s	2.6	5.6	0.0	4.0	22.5	0.0	19.3	21.1	21.1	1.9	13.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	148	378		343	403		323	963	992	46	1374	
V/C Ratio(X)	0.33	0.27		0.22	0.90		0.90	0.51	0.51	0.63	0.41	
Avail Cap(c_a), veh/h	229	507		402	507		423	963	992	141	1374	
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(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.9	40.4	0.0	35.5	45.8	0.0	48.1	17.4	17.4	57.9	26.8	0.0
Incr Delay (d2), s/veh	1.3	0.4	0.0	0.3	15.9	0.0	18.8	1.9	1.9	13.4	0.9	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	1.2	2.6	0.0	1.8	12.2	0.0	10.0	8.5	8.7	1.0	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	40.8	0.0	35.8	61.7	0.0	66.9	19.3	19.3	71.2	27.7	0.0
LnGrp LOS	D	D		D	E		E	B	B	E	C	
Approach Vol, veh/h		153	A		437	A		1291			590	A
Approach Delay, s/veh		40.3			57.2			30.1			29.9	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	70.5	11.1	29.8	27.3	51.9	9.5	31.3				
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	30.5	46.5	9.5	32.5	28.5	27.5	9.5	32.5				
Max Q Clear Time (g_c+l1),s	30.9	23.1	6.0	7.6	21.3	15.8	4.6	24.5				
Green Ext Time (p_c), s	0.0	11.6	0.0	0.5	0.5	4.4	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			35.5									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

1a. Existing AM
01/26/2021

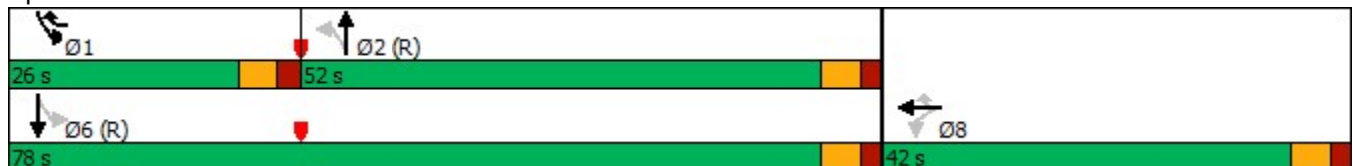


Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↖	↕	↖	↕
Traffic Volume (vph)	12	175	1	372	152	534
Future Volume (vph)	12	175	1	372	152	534
Lane Group Flow (vph)	87	180	1	444	157	602
Turn Type	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Detector Phase	8	1	2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	42.0	26.0	52.0	52.0	26.0	78.0
Total Split (%)	35.0%	21.7%	43.3%	43.3%	21.7%	65.0%
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	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.52	0.36	0.00	0.19	0.20	0.21
Control Delay	54.8	14.6	5.0	6.3	3.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	14.6	5.0	6.3	3.2	2.8
Queue Length 50th (ft)	71	67	0	74	19	42
Queue Length 95th (ft)	124	106	m1	50	40	68
Internal Link Dist (ft)	2006			2013		1374
Turn Bay Length (ft)			75		120	
Base Capacity (vph)	543	614	536	2360	856	2849
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	0.29	0.00	0.19	0.18	0.21

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 43 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd





Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	42.0	26.0	52.0	52.0	26.0	78.0
Total Split (%)	35.0%	21.7%	43.3%	43.3%	21.7%	65.0%
Maximum Green (s)	36.5	20.5	46.5	46.5	20.5	72.5
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
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	23.0		22.0	22.0		17.0
Pedestrian Calls (#/hr)	0		0	0		0
90th %ile Green (s)	15.6	14.3	73.6	73.6	14.3	93.4
90th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
70th %ile Green (s)	13.0	12.1	78.4	78.4	12.1	96.0
70th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
50th %ile Green (s)	11.2	10.7	81.6	81.6	10.7	97.8
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	9.4	9.3	84.8	84.8	9.3	99.6
30th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	6.9	7.5	89.1	89.1	7.5	102.1
10th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120




















Actuated Cycle Length: 120

Offset: 43 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

1a. Existing AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	73	12	175	1	372	58	152	534	49
Future Volume (veh/h)	0	0	0	73	12	175	1	372	58	152	534	49
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	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				75	12	180	1	384	60	157	551	51
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				202	32	276	622	2122	329	746	2557	236
Arrive On Green				0.13	0.13	0.13	0.69	0.69	0.69	0.04	0.78	0.78
Sat Flow, veh/h				1546	247	1585	817	3083	478	1781	3289	304
Grp Volume(v), veh/h				87	0	180	1	220	224	157	297	305
Grp Sat Flow(s),veh/h/ln				1793	0	1585	817	1777	1784	1781	1777	1816
Q Serve(g_s), s				5.3	0.0	12.7	0.0	5.3	5.4	2.9	5.4	5.4
Cycle Q Clear(g_c), s				5.3	0.0	12.7	0.0	5.3	5.4	2.9	5.4	5.4
Prop In Lane				0.86		1.00	1.00		0.27	1.00		0.17
Lane Grp Cap(c), veh/h				234	0	276	622	1223	1228	746	1382	1412
V/C Ratio(X)				0.37	0.00	0.65	0.00	0.18	0.18	0.21	0.22	0.22
Avail Cap(c_a), veh/h				545	0	551	622	1223	1228	973	1382	1412
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				47.6	0.0	46.1	5.8	6.7	6.7	4.4	3.6	3.6
Incr Delay (d2), s/veh				1.0	0.0	2.6	0.0	0.3	0.3	0.1	0.4	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	5.2	0.0	1.9	1.9	0.9	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.6	0.0	48.7	5.8	7.0	7.0	4.6	3.9	3.9
LnGrp LOS				D	A	D	A	A	A	A	A	A
Approach Vol, veh/h					267			445			759	
Approach Delay, s/veh					48.7			7.0			4.1	
Approach LOS					D			A			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.7	88.1				98.8		21.2				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	20.5	46.5				72.5		36.5				
Max Q Clear Time (g_c+l1), s	4.9	7.4				7.4		14.7				
Green Ext Time (p_c), s	0.3	5.5				8.4		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				13.0								
HCM 6th LOS				B								

Timings
7: Tucker Norcross Rd & Pleasantdale Rd

1a. Existing AM
01/26/2021

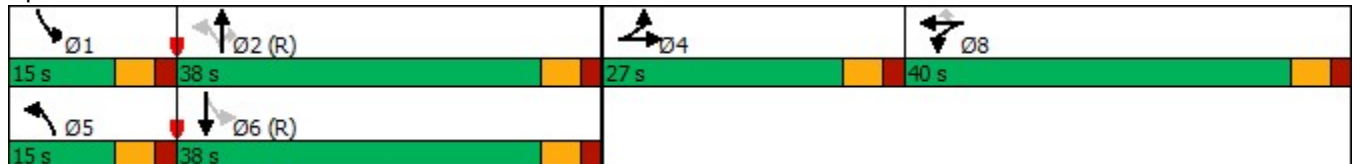


Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	Ø5
Lane Configurations	↕	↙	↘	↗	↕	↗	↙	↕	
Traffic Volume (vph)	0	403	2	440	456	157	121	272	
Future Volume (vph)	0	403	2	440	456	157	121	272	
Lane Group Flow (vph)	1	229	231	500	518	178	138	311	
Turn Type	NA	Split	NA	Perm	NA	Perm	pm+pt	NA	
Protected Phases	4	8	8		2		1	6	5
Permitted Phases				8		2	6		
Detector Phase	4	8	8	8	2	2	1	6	
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	5.0	15.0	5.0
Minimum Split (s)	31.5	37.5	37.5	37.5	31.5	31.5	15.0	26.5	15.0
Total Split (s)	27.0	40.0	40.0	40.0	38.0	38.0	15.0	38.0	15.0
Total Split (%)	22.5%	33.3%	33.3%	33.3%	31.7%	31.7%	12.5%	31.7%	13%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	None
v/c Ratio	0.00	0.66	0.67	0.69	0.26	0.19	0.24	0.13	
Control Delay	0.0	53.2	53.4	11.2	18.7	7.9	9.7	8.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	0.0	53.2	53.4	11.2	18.7	7.9	9.7	8.4	
Queue Length 50th (ft)	0	176	177	0	154	53	30	36	
Queue Length 95th (ft)	0	235	237	105	236	108	87	87	
Internal Link Dist (ft)	26		1146		568			1412	
Turn Bay Length (ft)		180				240	140		
Base Capacity (vph)	534	483	484	811	1968	959	589	2418	
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	0.00	0.47	0.48	0.62	0.26	0.19	0.23	0.13	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 82 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 7: Tucker Norcross Rd & Pleasantdale Rd



Phasings
7: Tucker Norcross Rd & Pleasantdale Rd

1a. Existing AM
01/26/2021



Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	Ø5
Protected Phases	4	8	8		2		1	6	5
Permitted Phases				8		2	6		
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	5.0	15.0	5.0
Minimum Split (s)	31.5	37.5	37.5	37.5	31.5	31.5	15.0	26.5	15.0
Total Split (s)	27.0	40.0	40.0	40.0	38.0	38.0	15.0	38.0	15.0
Total Split (%)	22.5%	33.3%	33.3%	33.3%	31.7%	31.7%	12.5%	31.7%	13%
Maximum Green (s)	21.5	34.5	34.5	34.5	32.5	32.5	9.5	32.5	9.5
Yellow Time (s)	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
Lead/Lag					Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	19.0	25.0	25.0	25.0	19.0	19.0		14.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	
90th %ile Green (s)	6.0	34.5	34.5	34.5	44.0	44.0	13.5	63.0	0.0
90th %ile Term Code	Min	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
70th %ile Green (s)	0.0	28.9	28.9	28.9	63.9	63.9	10.7	80.1	0.0
70th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
50th %ile Green (s)	0.0	24.3	24.3	24.3	69.7	69.7	9.5	84.7	0.0
50th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
30th %ile Green (s)	0.0	20.4	20.4	20.4	74.7	74.7	8.4	88.6	0.0
30th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
10th %ile Green (s)	0.0	15.1	15.1	15.1	81.5	81.5	6.9	93.9	0.0
10th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip

Intersection Summary

Cycle Length: 120























Actuated Cycle Length: 120

Offset: 82 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

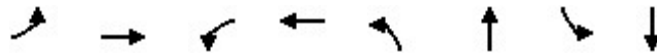
HCM 6th Signalized Intersection Summary
 7: Tucker Norcross Rd & Pleasantdale Rd

1a. Existing AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	1	403	2	440	0	456	157	121	272	2
Future Volume (veh/h)	0	0	1	403	2	440	0	456	157	121	272	2
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	0	0	1	459	0	500	0	518	0	138	309	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	0	3	1024	0	456	566	1679		461	2075	13
Arrive On Green	0.00	0.00	0.00	0.29	0.00	0.29	0.00	0.16	0.00	0.06	0.57	0.57
Sat Flow, veh/h	0	0	1585	3563	0	1585	1781	3554	1585	1781	3620	23
Grp Volume(v), veh/h	0	0	1	459	0	500	0	518	0	138	152	159
Grp Sat Flow(s),veh/h/ln	0	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1866
Q Serve(g_s), s	0.0	0.0	0.1	12.6	0.0	34.5	0.0	15.5	0.0	4.6	4.8	4.8
Cycle Q Clear(g_c), s	0.0	0.0	0.1	12.6	0.0	34.5	0.0	15.5	0.0	4.6	4.8	4.8
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	3	1024	0	456	566	1679		461	1019	1070
V/C Ratio(X)	0.00	0.00	0.38	0.45	0.00	1.10	0.00	0.31		0.30	0.15	0.15
Avail Cap(c_a), veh/h	0	0	284	1024	0	456	706	1679		504	1019	1070
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.95	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	59.8	35.0	0.0	42.8	0.0	33.3	0.0	15.0	11.9	11.9
Incr Delay (d2), s/veh	0.0	0.0	73.9	0.3	0.0	71.2	0.0	0.5	0.0	0.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	5.5	0.0	22.2	0.0	7.5	0.0	1.8	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	133.8	35.3	0.0	113.9	0.0	33.7	0.0	15.4	12.2	12.2
LnGrp LOS	A	A	F	D	A	F	A	C		B	B	B
Approach Vol, veh/h	1			959			518			449		
Approach Delay, s/veh	133.8			76.3			33.7			13.2		
Approach LOS	F			E			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	62.2		5.7	0.0	74.3		40.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	32.5	32.5		21.5	9.5	32.5		34.5				
Max Q Clear Time (g_c+l1),s	17.5	17.5		2.1	0.0	6.8		36.5				
Green Ext Time (p_c), s	0.1	4.8		0.0	0.0	3.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	50.2											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
8: Tucker Norcross Rd & Britt Rd

1a. Existing AM
01/26/2021

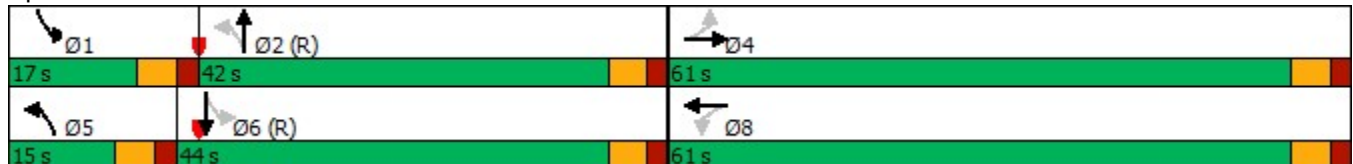


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗	↖	↗	↖	↗	↖
Traffic Volume (vph)	34	5	327	1	4	421	73	568
Future Volume (vph)	34	5	327	1	4	421	73	568
Lane Group Flow (vph)	0	45	367	227	4	562	82	655
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	61.0	61.0	61.0	61.0	15.0	42.0	17.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	50.8%	12.5%	35.0%	14.2%	36.7%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.10	0.82	0.34	0.01	0.34	0.18	0.33
Control Delay		24.2	53.1	7.8	13.5	21.2	7.3	7.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.2	53.1	7.8	13.5	21.2	7.3	7.6
Queue Length 50th (ft)		23	264	26	1	170	11	47
Queue Length 95th (ft)		43	262	48	9	247	29	106
Internal Link Dist (ft)		39		1249		446		568
Turn Bay Length (ft)					120		110	
Base Capacity (vph)		604	627	854	474	1657	483	1964
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.07	0.59	0.27	0.01	0.34	0.17	0.33

Intersection Summary

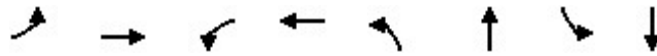
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 32 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 8: Tucker Norcross Rd & Britt Rd



Phasings
8: Tucker Norcross Rd & Britt Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	61.0	61.0	61.0	61.0	15.0	42.0	17.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	50.8%	12.5%	35.0%	14.2%	36.7%
Maximum Green (s)	55.5	55.5	55.5	55.5	9.5	36.5	11.5	38.5
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)			7.0	7.0		7.0		7.0
Flash Dont Walk (s)			19.0	19.0		14.0		11.0
Pedestrian Calls (#/hr)			0	0		0		0
90th %ile Green (s)	51.9	51.9	51.9	51.9	6.1	40.2	11.4	45.5
90th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Gap	Coord
70th %ile Green (s)	45.8	45.8	45.8	45.8	0.0	47.8	9.9	63.2
70th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
50th %ile Green (s)	40.3	40.3	40.3	40.3	0.0	54.5	8.7	68.7
50th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
30th %ile Green (s)	34.4	34.4	34.4	34.4	0.0	61.5	7.6	74.6
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
10th %ile Green (s)	26.8	26.8	26.8	26.8	0.0	82.2	0.0	82.2
10th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Skip	Coord

Intersection Summary

Cycle Length: 120






















Actuated Cycle Length: 120

Offset: 32 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 8: Tucker Norcross Rd & Britt Rd

1a. Existing AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	5	1	327	1	201	4	421	79	73	568	15
Future Volume (veh/h)	34	5	1	327	1	201	4	421	79	73	568	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	38	6	1	367	1	226	4	473	89	82	638	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	30	4	467	2	427	455	1652	309	598	2075	55
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.01	1.00	1.00	0.04	0.59	0.59
Sat Flow, veh/h	568	110	15	1409	7	1579	1781	2988	559	1781	3536	94
Grp Volume(v), veh/h	45	0	0	367	0	227	4	280	282	82	320	335
Grp Sat Flow(s),veh/h/ln	694	0	0	1409	0	1586	1781	1777	1770	1781	1777	1853
Q Serve(g_s), s	3.3	0.0	0.0	10.0	0.0	14.6	0.1	0.0	0.0	2.3	10.9	10.9
Cycle Q Clear(g_c), s	17.9	0.0	0.0	27.9	0.0	14.6	0.1	0.0	0.0	2.3	10.9	10.9
Prop In Lane	0.84		0.02	1.00		1.00	1.00		0.32	1.00		0.05
Lane Grp Cap(c), veh/h	243	0	0	467	0	429	455	983	979	598	1043	1088
V/C Ratio(X)	0.19	0.00	0.00	0.79	0.00	0.53	0.01	0.29	0.29	0.14	0.31	0.31
Avail Cap(c_a), veh/h	478	0	0	737	0	734	587	983	979	700	1043	1088
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.99	0.99	0.94	0.94	0.94
Uniform Delay (d), s/veh	42.9	0.0	0.0	41.8	0.0	37.3	11.9	0.0	0.0	10.2	12.5	12.5
Incr Delay (d2), s/veh	0.4	0.0	0.0	3.0	0.0	1.0	0.0	0.7	0.7	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	10.6	0.0	5.7	0.0	0.2	0.2	0.9	4.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	0.0	0.0	44.7	0.0	38.3	11.9	0.7	0.7	10.3	13.2	13.2
LnGrp LOS	D	A	A	D	A	D	B	A	A	B	B	B
Approach Vol, veh/h		45			594			566			737	
Approach Delay, s/veh		43.2			42.3			0.8			12.9	
Approach LOS		D			D			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	71.9		38.0	6.1	75.9		38.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	36.5			55.5	9.5	38.5		55.5				
Max Q Clear Time (g_c+l1),s	4.5	2.0		19.9	2.1	12.9		29.9				
Green Ext Time (p_c), s	0.1	7.1		0.2	0.0	7.6		2.6				
Intersection Summary												
HCM 6th Ctrl Delay	19.1											
HCM 6th LOS	B											

Timings
9: Chamblee Tucker Rd & Tucker Norcross Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	EBR	NBL	NBT	SBT	SBR	Ø8
Lane Configurations								
Traffic Volume (vph)	134	1	64	249	357	264	486	
Future Volume (vph)	134	1	64	249	357	264	486	
Lane Group Flow (vph)	72	73	69	268	384	284	523	
Turn Type	Split	NA	pt+ov	pm+pt	NA	NA	Perm	
Protected Phases	4	4	4 5	5	2	6		8
Permitted Phases				2			6	
Detector Phase	4	4	4 5	5	2	6	6	
Switch Phase								
Minimum Initial (s)	6.0	6.0		5.0	15.0	15.0	15.0	6.0
Minimum Split (s)	35.5	35.5		15.0	25.5	29.5	29.5	23.5
Total Split (s)	35.5	35.5		18.0	61.0	43.0	43.0	23.5
Total Split (%)	29.6%	29.6%		15.0%	50.8%	35.8%	35.8%	20%
Yellow Time (s)	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
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	None
v/c Ratio	0.49	0.49	0.20	0.30	0.13	0.12	0.42	
Control Delay	62.3	62.6	38.5	3.5	2.5	5.5	2.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
Total Delay	62.3	62.6	38.5	3.5	2.5	5.5	2.5	
Queue Length 50th (ft)	56	57	44	34	24	32	3	
Queue Length 95th (ft)	105	106	80	65	42	33	23	
Internal Link Dist (ft)		1177			1441	446		
Turn Bay Length (ft)	115			155			190	
Base Capacity (vph)	420	421	404	907	2902	2458	1259	
Starvation Cap Reductn	0	0	0	0	0	0	301	
Spillback Cap Reductn	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	0.17	0.17	0.30	0.13	0.12	0.55	

Intersection Summary

Cycle Length: 120

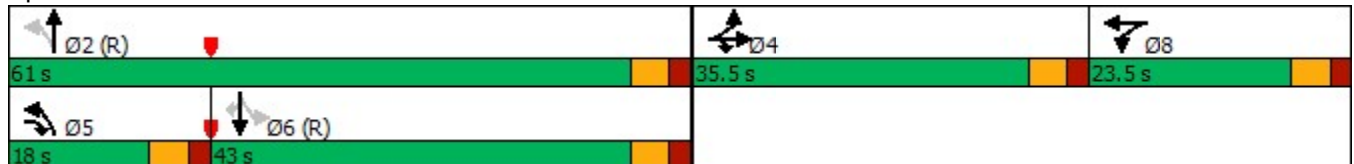
Actuated Cycle Length: 120

Offset: 66 (55%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Chamblee Tucker Rd & Tucker Norcross Rd



Phasings
9: Chamblee Tucker Rd & Tucker Norcross Rd

1a. Existing AM
01/26/2021



Lane Group	EBL	EBT	EBR	NBL	NBT	SBT	SBR	Ø8
Protected Phases	4	4	4 5	5	2	6		8
Permitted Phases				2			6	
Minimum Initial (s)	6.0	6.0		5.0	15.0	15.0	15.0	6.0
Minimum Split (s)	35.5	35.5		15.0	25.5	29.5	29.5	23.5
Total Split (s)	35.5	35.5		18.0	61.0	43.0	43.0	23.5
Total Split (%)	29.6%	29.6%		15.0%	50.8%	35.8%	35.8%	20%
Maximum Green (s)	30.0	30.0		12.5	55.5	37.5	37.5	18.0
Yellow Time (s)	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
Lead/Lag				Lead		Lag	Lag	
Lead-Lag Optimize?				Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	5.0	5.0	5.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None		None	C-Min	C-Min	C-Min	None
Walk Time (s)	7.0	7.0			7.0	7.0	7.0	
Flash Dont Walk (s)	23.0	23.0			13.0	17.0	17.0	
Pedestrian Calls (#/hr)	0	0			0	0	0	
90th %ile Green (s)	14.8	14.8		12.6	94.2	76.1	76.1	0.0
90th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
70th %ile Green (s)	12.3	12.3		10.5	96.7	80.7	80.7	0.0
70th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
50th %ile Green (s)	10.6	10.6		9.3	98.4	83.6	83.6	0.0
50th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
30th %ile Green (s)	8.8	8.8		8.3	100.2	86.4	86.4	0.0
30th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
10th %ile Green (s)	6.4	6.4		7.1	102.6	90.0	90.0	0.0
10th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip

Intersection Summary

Cycle Length: 120























Actuated Cycle Length: 120

Offset: 66 (55%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

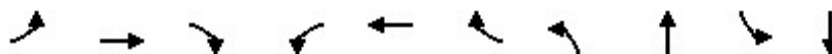
HCM 6th Signalized Intersection Summary
 9: Chamblee Tucker Rd & Tucker Norcross Rd

1a. Existing AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	1	64	0	0	0	249	357	0	0	264	486
Future Volume (veh/h)	134	1	64	0	0	0	249	357	0	0	264	486
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	145	0	69	0	0	0	268	384	0	0	284	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	0	182	0	2	0	905	3006	0	60	2657	
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.05	0.85	0.00	0.00	0.25	0.00
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	999	3554	1585
Grp Volume(v), veh/h	145	0	69	0	0	0	268	384	0	0	284	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	999	1777	1585
Q Serve(g_s), s	4.8	0.0	4.8	0.0	0.0	0.0	3.9	2.2	0.0	0.0	7.4	0.0
Cycle Q Clear(g_c), s	4.8	0.0	4.8	0.0	0.0	0.0	3.9	2.2	0.0	0.0	7.4	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	0	182	0	2	0	905	3006	0	60	2657	
V/C Ratio(X)	0.65	0.00	0.38	0.00	0.00	0.00	0.30	0.13	0.00	0.00	0.11	
Avail Cap(c_a), veh/h	891	0	480	0	281	0	997	3006	0	60	2657	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.85	0.00
Uniform Delay (d), s/veh	55.0	0.0	49.1	0.0	0.0	0.0	2.9	1.6	0.0	0.0	14.2	0.0
Incr Delay (d2), s/veh	3.2	0.0	1.3	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.1	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	2.0	0.0	0.0	0.0	0.9	0.4	0.0	0.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	0.0	50.4	0.0	0.0	0.0	3.0	1.7	0.0	0.0	14.3	0.0
LnGrp LOS	E	A	D	A	A	A	A	A	A	A	B	
Approach Vol, veh/h		214			0			652			284	A
Approach Delay, s/veh		55.7			0.0			2.2			14.3	
Approach LOS		E						A			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		107.0		13.0	11.8	95.2		0.0				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		55.5		30.0	12.5	37.5		18.0				
Max Q Clear Time (g_c+l1), s		4.2		6.8	5.9	9.4		0.0				
Green Ext Time (p_c), s		5.2		0.7	0.4	3.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			15.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
1: Old Norcross Tucker Rd & Britt Rd

1b. Existing PM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↗	↘	↗
Traffic Volume (vph)	83	588	58	60	229	135	47	184	131	250
Future Volume (vph)	83	588	58	60	229	135	47	184	131	250
Lane Group Flow (vph)	88	626	62	64	244	144	50	234	139	289
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	69.0	69.0	69.0	69.0	69.0	69.0	51.0	51.0	51.0	51.0
Total Split (%)	57.5%	57.5%	57.5%	57.5%	57.5%	57.5%	42.5%	42.5%	42.5%	42.5%
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	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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
v/c Ratio	0.11	0.48	0.06	0.14	0.19	0.12	0.46	0.62	0.92	0.76
Control Delay	2.7	4.5	0.6	4.8	4.0	0.6	54.0	47.8	88.6	49.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	4.5	0.6	4.8	4.0	0.6	54.0	47.8	88.6	49.8
Queue Length 50th (ft)	5	31	0	5	20	0	34	160	102	199
Queue Length 95th (ft)	m16	m229	m5	m19	m60	m0	72	224	#191	288
Internal Link Dist (ft)		1206			839			425		685
Turn Bay Length (ft)	150		100	100		90	90		80	
Base Capacity (vph)	794	1309	1121	470	1309	1155	199	694	279	700
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	0.11	0.48	0.06	0.14	0.19	0.12	0.25	0.34	0.50	0.41

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 108 (90%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 95

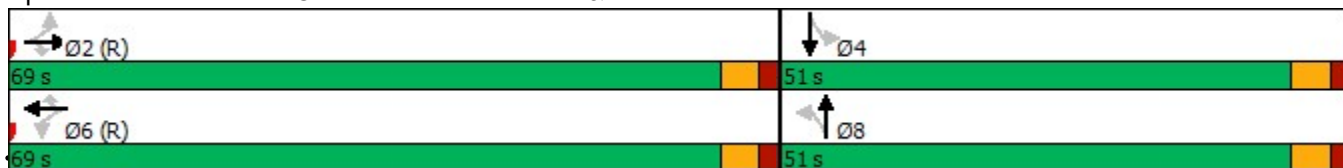
Control Type: Actuated-Coordinated

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings
1: Old Norcross Tucker Rd & Britt Rd

1b. Existing PM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	69.0	69.0	69.0	69.0	69.0	69.0	51.0	51.0	51.0	51.0
Total Split (%)	57.5%	57.5%	57.5%	57.5%	57.5%	57.5%	42.5%	42.5%	42.5%	42.5%
Maximum Green (s)	63.5	63.5	63.5	63.5	63.5	63.5	45.5	45.5	45.5	45.5
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	75.7	75.7	75.7	75.7	75.7	75.7	33.3	33.3	33.3	33.3
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Hold	Hold	Gap	Gap
70th %ile Green (s)	80.6	80.6	80.6	80.6	80.6	80.6	28.4	28.4	28.4	28.4
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	84.6	84.6	84.6	84.6	84.6	84.6	24.4	24.4	24.4	24.4
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	88.0	88.0	88.0	88.0	88.0	88.0	21.0	21.0	21.0	21.0
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	92.7	92.7	92.7	92.7	92.7	92.7	16.3	16.3	16.3	16.3
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Hold	Hold	Gap	Gap

Intersection Summary

Cycle Length: 120

























Actuated Cycle Length: 120

Offset: 108 (90%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 1: Old Norcross Tucker Rd & Britt Rd

1b. Existing PM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	588	58	60	229	135	47	184	36	131	250	22
Future Volume (veh/h)	83	588	58	60	229	135	47	184	36	131	250	22
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	88	626	62	64	244	144	50	196	38	139	266	23
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	653	1213	1028	416	1213	1028	193	395	77	232	441	38
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	996	1870	1585	755	1870	1585	1090	1522	295	1146	1697	147
Grp Volume(v), veh/h	88	626	62	64	244	144	50	0	234	139	0	289
Grp Sat Flow(s),veh/h/ln	996	1870	1585	755	1870	1585	1090	0	1817	1146	0	1844
Q Serve(g_s), s	4.7	21.2	1.7	5.9	6.3	4.2	5.1	0.0	13.1	14.1	0.0	16.5
Cycle Q Clear(g_c), s	11.0	21.2	1.7	27.1	6.3	4.2	21.6	0.0	13.1	27.2	0.0	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.08
Lane Grp Cap(c), veh/h	653	1213	1028	416	1213	1028	193	0	472	232	0	479
V/C Ratio(X)	0.13	0.52	0.06	0.15	0.20	0.14	0.26	0.00	0.50	0.60	0.00	0.60
Avail Cap(c_a), veh/h	653	1213	1028	416	1213	1028	323	0	689	369	0	699
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	11.1	7.7	18.3	8.5	8.1	48.5	0.0	37.7	49.3	0.0	39.0
Incr Delay (d2), s/veh	0.4	1.6	0.1	0.8	0.4	0.3	0.7	0.0	0.8	2.5	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	8.6	0.6	1.1	2.5	1.4	1.4	0.0	5.9	4.1	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	12.7	7.8	19.1	8.9	8.4	49.2	0.0	38.5	51.8	0.0	40.2
LnGrp LOS	B	B	A	B	A	A	D	A	D	D	A	D
Approach Vol, veh/h		776			452			284			428	
Approach Delay, s/veh		12.1			10.2			40.4			44.0	
Approach LOS		B			B			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.3		36.7		83.3		36.7				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		63.5		45.5		63.5		45.5				
Max Q Clear Time (g_c+l1), s		23.2		29.2		29.1		23.6				
Green Ext Time (p_c), s		11.6		2.0		5.0		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				22.8								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	Y
Traffic Vol, veh/h	6	11	9	261	364	4
Future Vol, veh/h	6	11	9	261	364	4
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	-	-	-	-	190
Veh in Median Storage#	-	-	-	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	6	12	10	278	387	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	685	387	391	0	-	0
Stage 1	387	-	-	-	-	-
Stage 2	298	-	-	-	-	-
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	414	661	1168	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	410	661	1168	-	-	-
Mov Cap-2 Maneuver	410	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1168	-	544	-	-
HCM Lane V/C Ratio	0.008	-	0.033	-	-
HCM Control Delay (s)	8.1	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Timings
3: Old Norcross Tucker Rd & Cherokee Dr

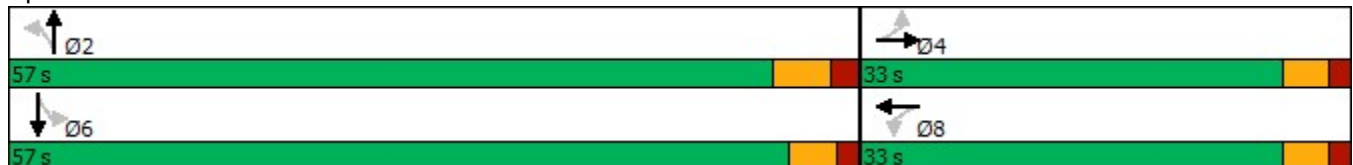
1b. Existing PM
01/26/2021



Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Lane Configurations		↕	↕	↗	↘	
Traffic Volume (vph)	19	0	193	73	301	
Future Volume (vph)	19	0	193	73	301	
Lane Group Flow (vph)	0	105	235	79	328	
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Detector Phase	8	8	2	6	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	33.0	33.0	57.0	57.0	57.0	33.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	37%
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.7	5.8	4.8	4.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	None
v/c Ratio		0.30	0.21	0.11	0.27	
Control Delay		7.5	5.0	4.5	5.0	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		7.5	5.0	4.5	5.0	
Queue Length 50th (ft)		3	19	6	26	
Queue Length 95th (ft)		28	44	18	59	
Internal Link Dist (ft)		795	578		427	
Turn Bay Length (ft)				90		
Base Capacity (vph)		1312	1837	1140	1863	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.08	0.13	0.07	0.18	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 35.3
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr



Phasings
3: Old Norcross Tucker Rd & Cherokee Dr

1b. Existing PM
01/26/2021




















Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	33.0	33.0	57.0	57.0	57.0	33.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	37%
Maximum Green (s)	28.3	28.3	51.2	52.2	52.2	28.3
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	Min	Min	None
Walk Time (s)						7.0
Flash Dont Walk (s)						10.0
Pedestrian Calls (#/hr)						0
90th %ile Green (s)	7.3	7.3	18.7	19.7	19.7	7.3
90th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
70th %ile Green (s)	6.0	6.0	14.4	15.4	15.4	6.0
70th %ile Term Code	Min	Min	Hold	Gap	Gap	Hold
50th %ile Green (s)	6.0	6.0	16.5	17.5	17.5	6.0
50th %ile Term Code	Min	Min	Dwell	Dwell	Dwell	Hold
30th %ile Green (s)	6.0	6.0	27.0	28.0	28.0	6.0
30th %ile Term Code	Min	Min	Dwell	Dwell	Dwell	Hold
10th %ile Green (s)	0.0	0.0	27.0	28.0	28.0	0.0
10th %ile Term Code	Skip	Skip	Dwell	Dwell	Dwell	Skip

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 36.5
70th %ile Actuated Cycle: 30.9
50th %ile Actuated Cycle: 33
30th %ile Actuated Cycle: 43.5
10th %ile Actuated Cycle: 32.8

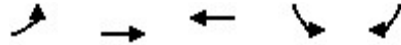
HCM 6th Signalized Intersection Summary
 3: Old Norcross Tucker Rd & Cherokee Dr

1b. Existing PM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	19	0	77	0	193	23	73	301	1
Future Volume (veh/h)	0	0	0	19	0	77	0	193	23	73	301	1
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	0	0	0	21	0	84	0	210	25	79	327	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	230	0	201	6	154	0	767	91	727	871	3
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	0	1870	0	267	45	1248	0	1640	195	1145	1864	6
Grp Volume(v), veh/h	0	0	0	105	0	0	0	0	235	79	0	328
Grp Sat Flow(s),veh/h/ln	0	1870	0	1560	0	0	0	0	1835	1145	0	1869
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	2.0	1.2	0.0	2.9
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	2.0	3.2	0.0	2.9
Prop In Lane	0.00		0.00	0.20		0.80	0.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	230	0	361	0	0	0	0	858	727	0	874
V/C Ratio(X)	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.27	0.11	0.00	0.38
Avail Cap(c_a), veh/h	0	2063	0	1877	0	0	0	0	3662	2521	0	3803
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(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0	4.2	5.1	0.0	4.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.6	0.2	0.0	1.0
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	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	10.7	0.0	0.0	0.0	0.0	4.8	5.4	0.0	5.4
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		0			105			235			407	
Approach Delay, s/veh		0.0			10.7			4.8			5.4	
Approach LOS					B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.8		7.9		17.8		7.9				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 51		* 28		* 52		* 28				
Max Q Clear Time (g_c+l1), s		4.0		0.0		5.2		3.6				
Green Ext Time (p_c), s		3.9		0.0		6.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				5.9								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings
4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

1b. Existing PM
01/26/2021

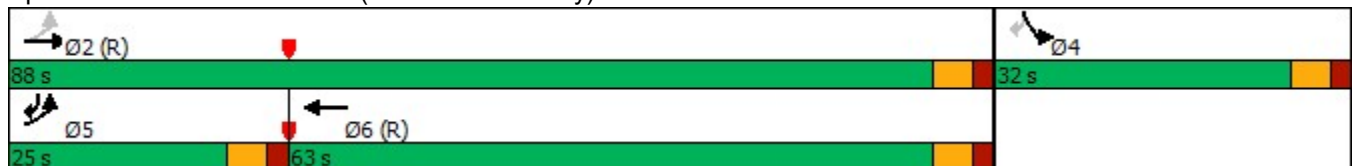


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↗	↑↑	↑↑	↖	↗
Traffic Volume (vph)	187	1511	915	103	241
Future Volume (vph)	187	1511	915	103	241
Lane Group Flow (vph)	203	1642	1068	112	262
Turn Type	pm+pt	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	25.0	88.0	63.0	32.0	25.0
Total Split (%)	20.8%	73.3%	52.5%	26.7%	20.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	C-Min	C-Min	None	None
v/c Ratio	0.48	0.58	0.45	0.59	0.63
Control Delay	6.9	5.8	10.2	62.9	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.8	10.2	62.9	36.7
Queue Length 50th (ft)	29	200	177	84	137
Queue Length 95th (ft)	57	309	283	139	206
Internal Link Dist (ft)		1517	1496	1354	
Turn Bay Length (ft)	50				95
Base Capacity (vph)	542	2833	2382	390	546
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.58	0.45	0.29	0.48

Intersection Summary

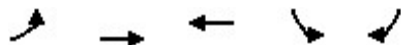
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd



Phasings
4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

1b. Existing PM
01/26/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	25.0	88.0	63.0	32.0	25.0
Total Split (%)	20.8%	73.3%	52.5%	26.7%	20.8%
Maximum Green (s)	19.5	82.5	57.5	26.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	None
Walk Time (s)			7.0	7.0	
Flash Dont Walk (s)			17.0	17.0	
Pedestrian Calls (#/hr)			0	0	
90th %ile Green (s)	13.0	91.1	72.6	17.9	13.0
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap
70th %ile Green (s)	9.6	94.1	79.0	14.9	9.6
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap
50th %ile Green (s)	8.5	96.1	82.1	12.9	8.5
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap
30th %ile Green (s)	7.7	98.1	84.9	10.9	7.7
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap
10th %ile Green (s)	6.6	101.0	88.9	8.0	6.6
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

1b. Existing PM
 01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗	↑	↙	↘
Traffic Volume (veh/h)	187	1511	915	67	103	241
Future Volume (veh/h)	187	1511	915	67	103	241
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1642	995	73	112	262
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	414	2608	2115	155	310	368
Arrive On Green	0.06	0.73	0.63	0.63	0.17	0.17
Sat Flow, veh/h	1781	3647	3450	246	1781	1585
Grp Volume(v), veh/h	203	1642	527	541	112	262
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1826	1781	1585
Q Serve(g_s), s	4.6	27.4	18.7	18.7	6.6	18.2
Cycle Q Clear(g_c), s	4.6	27.4	18.7	18.7	6.6	18.2
Prop In Lane	1.00			0.13	1.00	1.00
Lane Grp Cap(c), veh/h	414	2608	1120	1151	310	368
V/C Ratio(X)	0.49	0.63	0.47	0.47	0.36	0.71
Avail Cap(c_a), veh/h	600	2608	1120	1151	393	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.8	7.9	11.7	11.7	43.7	42.4
Incr Delay (d2), s/veh	0.9	1.2	1.4	1.4	0.7	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.5	7.0	7.2	3.0	15.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.7	9.1	13.1	13.0	44.4	46.6
LnGrp LOS	A	A	B	B	D	D
Approach Vol, veh/h		1845	1068		374	
Approach Delay, s/veh		9.1	13.1		45.9	
Approach LOS		A	B		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.6		26.4	12.5	81.1
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		82.5		26.5	19.5	57.5
Max Q Clear Time (g_c+l1), s		29.4		20.2	6.6	20.7
Green Ext Time (p_c), s		35.6		0.7	0.4	15.8
Intersection Summary						
HCM 6th Ctrl Delay			14.6			
HCM 6th LOS			B			

Timings
5: Jimmy Carter Blvd & Britt Rd/Williams Rd

1b. Existing PM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	115	299	173	88	128	52	140	775	102	1199	136
Future Volume (vph)	115	299	173	88	128	52	140	775	102	1199	136
Lane Group Flow (vph)	120	311	180	92	133	54	146	985	106	1249	142
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	37.5	37.5	15.0	37.5	37.5	16.0	51.5	16.0	51.5	51.5
Total Split (%)	12.5%	31.3%	31.3%	12.5%	31.3%	31.3%	13.3%	42.9%	13.3%	42.9%	42.9%
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	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.32	0.80	0.42	0.41	0.35	0.13	0.71	0.64	0.65	0.85	0.19
Control Delay	25.2	52.8	12.0	32.3	41.6	0.6	70.5	29.3	70.9	39.3	4.6
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	25.2	52.8	12.0	32.3	41.6	0.6	70.5	29.3	70.9	39.3	4.6
Queue Length 50th (ft)	54	227	33	50	88	0	107	312	79	480	0
Queue Length 95th (ft)	76	312	58	82	137	0	#246	413	#164	#620	41
Internal Link Dist (ft)		975			378			344		1167	
Turn Bay Length (ft)	175		75	80		85	150		135		565
Base Capacity (vph)	377	496	512	236	496	512	206	1531	171	1473	742
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	0.32	0.63	0.35	0.39	0.27	0.11	0.71	0.64	0.62	0.85	0.19

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 106 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 5: Jimmy Carter Blvd & Britt Rd/Williams Rd



Phasings
5: Jimmy Carter Blvd & Britt Rd/Williams Rd

1b. Existing PM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	37.5	37.5	15.0	37.5	37.5	16.0	51.5	16.0	51.5	51.5
Total Split (%)	12.5%	31.3%	31.3%	12.5%	31.3%	31.3%	13.3%	42.9%	13.3%	42.9%	42.9%
Maximum Green (s)	9.5	32.0	32.0	9.5	32.0	32.0	10.5	46.0	10.5	46.0	46.0
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
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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		25.0	25.0		21.0	21.0		17.0		13.0	13.0
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0
90th %ile Green (s)	9.5	32.0	32.0	9.5	32.0	32.0	10.5	46.0	10.5	46.0	46.0
90th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Max	Coord	Max	Coord	Coord
70th %ile Green (s)	9.5	29.2	29.2	9.5	29.2	29.2	13.3	46.0	13.3	46.0	46.0
70th %ile Term Code	Max	Gap	Gap	Max	Hold	Hold	Max	Coord	Max	Coord	Coord
50th %ile Green (s)	9.5	25.3	25.3	9.5	25.3	25.3	17.2	50.3	12.9	46.0	46.0
50th %ile Term Code	Max	Gap	Gap	Max	Hold	Hold	Max	Coord	Gap	Coord	Coord
30th %ile Green (s)	9.5	22.1	22.1	8.7	21.3	21.3	16.0	56.3	10.9	51.2	51.2
30th %ile Term Code	Max	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Gap	Coord	Coord
10th %ile Green (s)	7.7	17.4	17.4	6.8	16.5	16.5	13.1	65.7	8.1	60.7	60.7
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Gap	Coord	Coord

Intersection Summary

Cycle Length: 120

























Actuated Cycle Length: 120

Offset: 106 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
5: Jimmy Carter Blvd & Britt Rd/Williams Rd

1b. Existing PM
01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	299	173	88	128	52	140	775	171	102	1199	136
Future Volume (veh/h)	115	299	173	88	128	52	140	775	171	102	1199	136
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	120	311	0	92	133	0	146	807	178	106	1249	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	352		188	326		156	1443	318	131	1722	
Arrive On Green	0.07	0.19	0.00	0.06	0.17	0.00	0.09	0.50	0.50	0.07	0.48	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	2894	638	1781	3554	1585
Grp Volume(v), veh/h	120	311	0	92	133	0	146	495	490	106	1249	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1755	1781	1777	1585
Q Serve(g_s), s	6.5	19.4	0.0	5.0	7.6	0.0	9.8	23.3	23.3	7.0	33.5	0.0
Cycle Q Clear(g_c), s	6.5	19.4	0.0	5.0	7.6	0.0	9.8	23.3	23.3	7.0	33.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	325	352		188	326		156	886	875	131	1722	
V/C Ratio(X)	0.37	0.88		0.49	0.41		0.94	0.56	0.56	0.81	0.73	
Avail Cap(c_a), veh/h	341	499		229	499		156	886	875	156	1722	
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(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.0	47.4	0.0	38.9	44.0	0.0	54.4	20.9	20.9	54.8	24.6	0.0
Incr Delay (d2), s/veh	0.7	12.7	0.0	2.0	0.8	0.0	53.5	2.5	2.6	23.2	2.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	10.1	0.0	2.3	3.6	0.0	6.6	9.7	9.5	3.9	13.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	60.1	0.0	40.8	44.8	0.0	107.9	23.5	23.5	78.0	27.3	0.0
LnGrp LOS	D	E		D	D		F	C	C	E	C	
Approach Vol, veh/h		431	A		225	A		1131			1355	A
Approach Delay, s/veh		53.8			43.2			34.4			31.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	65.3	12.2	28.1	16.0	63.6	13.9	26.4				
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	46.0	46.0	9.5	32.0	10.5	46.0	9.5	32.0				
Max Q Clear Time (g_c+l1),s	25.3	25.3	7.0	21.4	11.8	35.5	8.5	9.6				
Green Ext Time (p_c), s	0.0	10.7	0.0	1.2	0.0	8.0	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			36.3									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

1b. Existing PM
01/26/2021

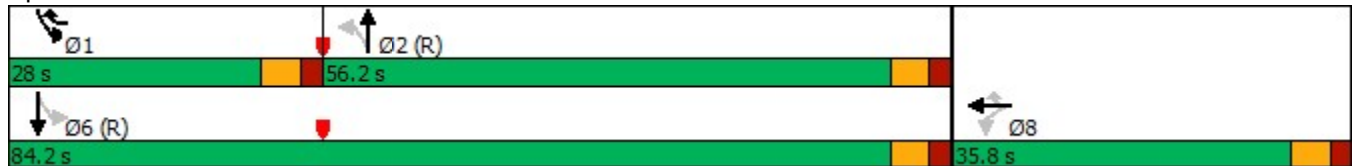


Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	19	286	4	1067	288	615
Future Volume (vph)	19	286	4	1067	288	615
Lane Group Flow (vph)	94	311	4	1281	313	713
Turn Type	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Detector Phase	8	1	2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	35.8	28.0	56.2	56.2	28.0	84.2
Total Split (%)	29.8%	23.3%	46.8%	46.8%	23.3%	70.2%
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	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.54	0.59	0.01	0.63	0.66	0.25
Control Delay	44.9	26.6	14.8	19.6	20.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	26.6	14.8	19.6	20.2	3.1
Queue Length 50th (ft)	50	213	1	316	88	53
Queue Length 95th (ft)	94	284	8	504	186	86
Internal Link Dist (ft)	2006			2013		1374
Turn Bay Length (ft)			75		120	
Base Capacity (vph)	452	565	414	2042	508	2846
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	0.21	0.55	0.01	0.63	0.62	0.25

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 104 (87%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd
























Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	35.8	28.0	56.2	56.2	28.0	84.2
Total Split (%)	29.8%	23.3%	46.8%	46.8%	23.3%	70.2%
Maximum Green (s)	30.3	22.5	50.7	50.7	22.5	78.7
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
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	23.0		22.0	22.0		17.0
Pedestrian Calls (#/hr)	0		0	0		0
90th %ile Green (s)	16.2	29.9	57.4	57.4	29.9	92.8
90th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
70th %ile Green (s)	13.5	24.8	65.2	65.2	24.8	95.5
70th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
50th %ile Green (s)	11.6	21.1	70.8	70.8	21.1	97.4
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	9.8	18.5	75.2	75.2	18.5	99.2
30th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	7.2	14.6	81.7	81.7	14.6	101.8
10th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 104 (87%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

1b. Existing PM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	67	19	286	4	1067	111	288	615	41
Future Volume (veh/h)	0	0	0	67	19	286	4	1067	111	288	615	41
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	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				73	21	311	4	1160	121	313	668	45
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	2	2	2	2	2	2	2	2
Cap, veh/h				277	80	458	483	1862	194	367	2399	161
Arrive On Green				0.20	0.20	0.20	0.57	0.57	0.57	0.09	0.71	0.71
Sat Flow, veh/h				1398	402	1585	737	3248	338	1781	3379	227
Grp Volume(v), veh/h				94	0	311	4	634	647	313	351	362
Grp Sat Flow(s),veh/h/ln				1800	0	1585	737	1777	1809	1781	1777	1829
Q Serve(g_s), s				5.3	0.0	20.8	0.3	28.4	28.5	8.2	8.6	8.6
Cycle Q Clear(g_c), s				5.3	0.0	20.8	0.3	28.4	28.5	8.2	8.6	8.6
Prop In Lane				0.78		1.00	1.00		0.19	1.00		0.12
Lane Grp Cap(c), veh/h				357	0	458	483	1019	1037	367	1262	1299
V/C Ratio(X)				0.26	0.00	0.68	0.01	0.62	0.62	0.85	0.28	0.28
Avail Cap(c_a), veh/h				455	0	544	483	1019	1037	539	1262	1299
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				40.7	0.0	37.7	11.0	17.0	17.0	19.0	6.3	6.3
Incr Delay (d2), s/veh				0.4	0.0	2.7	0.0	2.9	2.8	8.7	0.5	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	8.3	0.0	11.5	11.8	6.0	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.1	0.0	40.4	11.0	19.8	19.8	27.7	6.8	6.8
LnGrp LOS				D	A	D	B	B	B	C	A	A
Approach Vol, veh/h					405			1285			1026	
Approach Delay, s/veh					40.6			19.8			13.2	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	16.4	74.3				90.7		29.3				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	22.5	50.7				78.7		30.3				
Max Q Clear Time (g_c+I1), s	10.2	30.5				10.6		22.8				
Green Ext Time (p_c), s	0.7	13.9				10.6		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								

Timings
7: Tucker Norcross Rd & Pleasantdale Rd

1b. Existing PM
01/26/2021

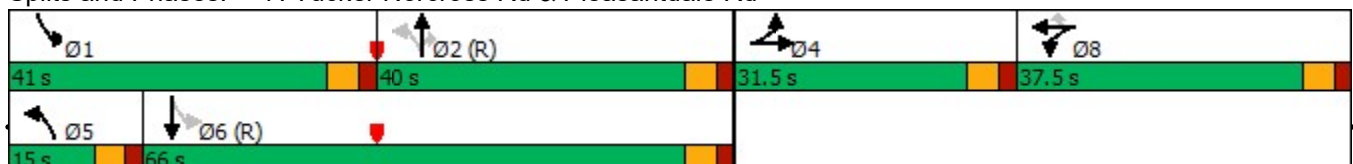


Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↖	↗	↗	↖	↕	↗	↖	↕
Traffic Volume (vph)	16	324	19	244	6	716	655	487	1050
Future Volume (vph)	16	324	19	244	6	716	655	487	1050
Lane Group Flow (vph)	33	212	211	301	7	884	809	601	1317
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	4	8	8		5	2		1	6
Permitted Phases				8	2		2	6	
Detector Phase	4	8	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	31.5	37.5	37.5	37.5	15.0	31.5	31.5	15.0	26.5
Total Split (s)	31.5	37.5	37.5	37.5	15.0	40.0	40.0	41.0	66.0
Total Split (%)	21.0%	25.0%	25.0%	25.0%	10.0%	26.7%	26.7%	27.3%	44.0%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.33	0.74	0.73	0.58	0.04	1.09	1.00	0.77	0.56
Control Delay	69.9	73.1	72.4	9.6	21.2	110.9	49.0	39.8	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	73.1	72.4	9.6	21.2	110.9	49.0	39.8	17.4
Queue Length 50th (ft)	28	209	208	0	3	~509	~320	452	339
Queue Length 95th (ft)	57	251	251	44	9	#536	#427	#638	514
Internal Link Dist (ft)	26		1146			568			1412
Turn Bay Length (ft)		180			185		240	140	
Base Capacity (vph)	316	365	368	579	201	813	806	782	2346
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.58	0.57	0.52	0.03	1.09	1.00	0.77	0.56

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, 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: 7: Tucker Norcross Rd & Pleasantdale Rd



Phasings
7: Tucker Norcross Rd & Pleasantdale Rd

1b. Existing PM
01/26/2021



Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	4	8	8		5	2		1	6
Permitted Phases				8	2		2	6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	31.5	37.5	37.5	37.5	15.0	31.5	31.5	15.0	26.5
Total Split (s)	31.5	37.5	37.5	37.5	15.0	40.0	40.0	41.0	66.0
Total Split (%)	21.0%	25.0%	25.0%	25.0%	10.0%	26.7%	26.7%	27.3%	44.0%
Maximum Green (s)	26.0	32.0	32.0	32.0	9.5	34.5	34.5	35.5	60.5
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	19.0	25.0	25.0	25.0		19.0	19.0		14.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0
90th %ile Green (s)	10.8	35.1	35.1	35.1	6.3	34.5	34.5	47.6	75.8
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Max	Coord
70th %ile Green (s)	9.0	29.9	29.9	29.9	0.0	34.5	34.5	54.6	94.6
70th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
50th %ile Green (s)	7.8	25.9	25.9	25.9	0.0	34.5	34.5	59.8	99.8
50th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
30th %ile Green (s)	6.6	21.8	21.8	21.8	0.0	34.5	34.5	65.1	105.1
30th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
10th %ile Green (s)	0.0	16.1	16.1	16.1	0.0	34.5	34.5	82.9	122.9
10th %ile Term Code	Skip	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord

Intersection Summary

Cycle Length: 150























Actuated Cycle Length: 150

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

Control Type: Actuated-Coordinated

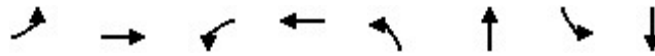
HCM 6th Signalized Intersection Summary
 7: Tucker Norcross Rd & Pleasantdale Rd

1b. Existing PM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	16	3	324	19	244	6	716	655	487	1050	17
Future Volume (veh/h)	7	16	3	324	19	244	6	716	655	487	1050	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	20	4	416	0	301	7	884	0	601	1296	21
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	33	7	727	0	324	223	1360		582	2186	35
Arrive On Green	0.03	0.03	0.03	0.20	0.00	0.20	0.01	0.38	0.00	0.24	0.61	0.61
Sat Flow, veh/h	493	1095	219	3563	0	1585	1781	3554	1585	1781	3579	58
Grp Volume(v), veh/h	33	0	0	416	0	301	7	884	0	601	643	674
Grp Sat Flow(s),veh/h/ln	1806	0	0	1781	0	1585	1781	1777	1585	1781	1777	1860
Q Serve(g_s), s	2.7	0.0	0.0	15.8	0.0	28.0	0.4	30.7	0.0	35.5	33.1	33.2
Cycle Q Clear(g_c), s	2.7	0.0	0.0	15.8	0.0	28.0	0.4	30.7	0.0	35.5	33.1	33.2
Prop In Lane	0.27		0.12	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	54	0	0	727	0	324	223	1360		582	1085	1136
V/C Ratio(X)	0.61	0.00	0.00	0.57	0.00	0.93	0.03	0.65		1.03	0.59	0.59
Avail Cap(c_a), veh/h	313	0	0	760	0	338	320	1360		582	1085	1136
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(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.36	0.36	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.9	0.0	0.0	53.8	0.0	58.6	27.9	38.0	0.0	34.6	17.8	17.8
Incr Delay (d2), s/veh	10.7	0.0	0.0	1.0	0.0	30.9	0.0	0.9	0.0	46.2	2.4	2.3
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	1.4	0.0	0.0	7.2	0.0	13.9	0.2	13.3	0.0	28.6	13.5	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.6	0.0	0.0	54.7	0.0	89.6	27.9	38.9	0.0	80.8	20.2	20.1
LnGrp LOS	F	A	A	D	A	F	C	D		F	C	C
Approach Vol, veh/h		33			717			891	A		1918	
Approach Delay, s/veh		82.6			69.4			38.8			39.2	
Approach LOS		F			E			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.0	62.9		10.0	6.8	97.1		36.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	35.5	34.5		26.0	9.5	60.5		32.0				
Max Q Clear Time (g_c+I),s	17.5	32.7		4.7	2.4	35.2		30.0				
Green Ext Time (p_c), s	0.0	1.3		0.1	0.0	16.4		0.6				
Intersection Summary												
HCM 6th Ctrl Delay	45.6											
HCM 6th LOS	D											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
8: Tucker Norcross Rd & Britt Rd

1b. Existing PM
01/26/2021

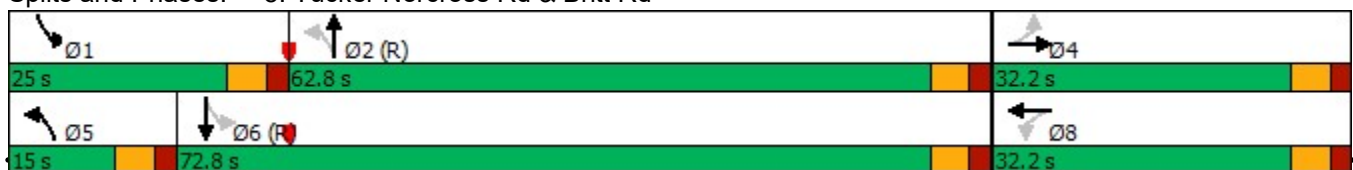


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗	↖	↗	↖	↗	↖
Traffic Volume (vph)	56	38	217	6	4	959	280	989
Future Volume (vph)	56	38	217	6	4	959	280	989
Lane Group Flow (vph)	0	105	238	192	4	1511	308	1100
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	32.2	32.2	32.2	32.2	15.0	62.8	25.0	72.8
Total Split (%)	26.8%	26.8%	26.8%	26.8%	12.5%	52.3%	20.8%	60.7%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.47	0.90	0.40	0.01	0.88	0.91	0.46
Control Delay		48.8	88.2	14.7	8.8	28.1	64.4	10.3
Queue Delay		0.0	0.0	0.0	0.0	1.0	0.0	0.3
Total Delay		48.8	88.2	14.7	8.8	29.1	64.4	10.7
Queue Length 50th (ft)		71	190	16	1	343	185	184
Queue Length 95th (ft)		128	#323	75	m1	#458	#348	306
Internal Link Dist (ft)		39		1249		446		568
Turn Bay Length (ft)					120		110	
Base Capacity (vph)		240	285	498	380	1722	350	2410
Starvation Cap Reductn		0	0	0	0	65	0	666
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.44	0.84	0.39	0.01	0.91	0.88	0.63

Intersection Summary

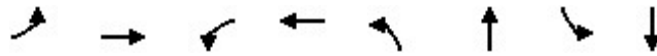
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Tucker Norcross Rd & Britt Rd



Phasings
8: Tucker Norcross Rd & Britt Rd

1b. Existing PM
01/26/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	32.2	32.2	32.2	32.2	15.0	62.8	25.0	72.8
Total Split (%)	26.8%	26.8%	26.8%	26.8%	12.5%	52.3%	20.8%	60.7%
Maximum Green (s)	26.7	26.7	26.7	26.7	9.5	57.3	19.5	67.3
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)			7.0	7.0		7.0		7.0
Flash Dont Walk (s)			19.0	19.0		14.0		11.0
Pedestrian Calls (#/hr)			0	0		0		0
90th %ile Green (s)	26.7	26.7	26.7	26.7	5.8	57.3	19.5	71.0
90th %ile Term Code	Hold	Hold	Max	Max	Gap	Coord	Max	Coord
70th %ile Green (s)	26.7	26.7	26.7	26.7	0.0	57.3	19.5	82.3
70th %ile Term Code	Hold	Hold	Max	Max	Skip	Coord	Max	Coord
50th %ile Green (s)	26.7	26.7	26.7	26.7	0.0	57.3	19.5	82.3
50th %ile Term Code	Hold	Hold	Max	Max	Skip	Coord	Max	Coord
30th %ile Green (s)	25.0	25.0	25.0	25.0	0.0	58.4	20.1	84.0
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
10th %ile Green (s)	19.2	19.2	19.2	19.2	0.0	68.6	15.7	89.8
10th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120





















Actuated Cycle Length: 120

Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

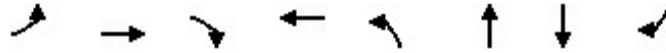
HCM 6th Signalized Intersection Summary
 8: Tucker Norcross Rd & Britt Rd

1b. Existing PM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	38	1	217	6	168	4	959	416	280	989	12
Future Volume (veh/h)	56	38	1	217	6	168	4	959	416	280	989	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	42	1	238	7	185	4	1054	457	308	1087	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	84	2	318	13	336	316	1281	543	338	2296	27
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.01	0.70	0.70	0.12	0.64	0.64
Sat Flow, veh/h	422	384	8	1364	58	1536	1781	2431	1031	1781	3596	43
Grp Volume(v), veh/h	105	0	0	238	0	192	4	764	747	308	537	563
Grp Sat Flow(s),veh/h/ln	813	0	0	1364	0	1594	1781	1777	1685	1781	1777	1863
Q Serve(g_s), s	6.7	0.0	0.0	4.7	0.0	12.8	0.1	36.1	38.8	11.5	18.8	18.8
Cycle Q Clear(g_c), s	19.5	0.0	0.0	24.2	0.0	12.8	0.1	36.1	38.8	11.5	18.8	18.8
Prop In Lane	0.59		0.01	1.00		0.96	1.00		0.61	1.00		0.02
Lane Grp Cap(c), veh/h	226	0	0	318	0	349	316	936	888	338	1134	1189
V/C Ratio(X)	0.47	0.00	0.00	0.75	0.00	0.55	0.01	0.82	0.84	0.91	0.47	0.47
Avail Cap(c_a), veh/h	231	0	0	323	0	355	448	936	888	420	1134	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.82	0.82	0.82	0.78	0.78	0.78
Uniform Delay (d), s/veh	47.1	0.0	0.0	46.4	0.0	41.6	13.3	13.9	14.3	29.4	11.2	11.2
Incr Delay (d2), s/veh	1.5	0.0	0.0	9.2	0.0	1.8	0.0	6.5	8.0	17.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	7.7	0.0	5.2	0.0	11.6	12.0	10.4	7.1	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	0.0	0.0	55.6	0.0	43.4	13.3	20.4	22.3	46.6	12.4	12.3
LnGrp LOS	D	A	A	E	A	D	B	C	C	D	B	B
Approach Vol, veh/h		105			430			1515			1408	
Approach Delay, s/veh		48.6			50.1			21.3			19.8	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	68.7		31.8	6.1	82.1		31.8				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	9.5	57.3		26.7	9.5	67.3		26.7				
Max Q Clear Time (g_c+l1),s	13.5	40.8		21.5	2.1	20.8		26.2				
Green Ext Time (p_c), s	0.5	13.5		0.2	0.0	18.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				25.1								
HCM 6th LOS				C								

Timings
9: Chamblee Tucker Rd & Tucker Norcross Rd

1b. Existing PM
01/26/2021

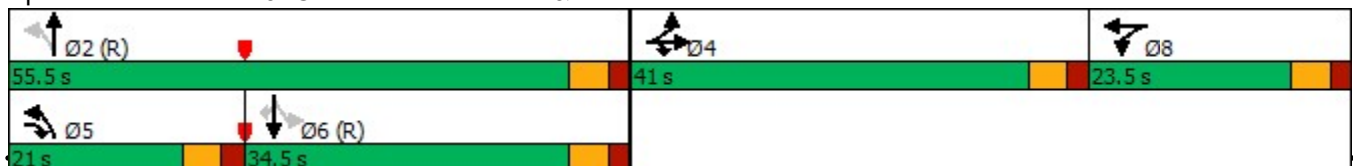


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	785	1	415	0	246	718	644	285
Future Volume (vph)	785	1	415	0	246	718	644	285
Lane Group Flow (vph)	417	419	441	1	262	764	685	303
Turn Type	Split	NA	pt+ov	NA	pm+pt	NA	NA	Perm
Protected Phases	4	4	4 5	8	5	2	6	
Permitted Phases					2			6
Detector Phase	4	4	4 5	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0		6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	35.5	35.5		23.5	15.0	25.5	29.5	29.5
Total Split (s)	41.0	41.0		23.5	21.0	55.5	34.5	34.5
Total Split (%)	34.2%	34.2%		19.6%	17.5%	46.3%	28.8%	28.8%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None		None	None	C-Min	C-Min	C-Min
v/c Ratio	0.88	0.88	0.60	0.01	0.56	0.36	0.47	0.37
Control Delay	61.8	62.2	24.6	0.0	16.9	13.2	23.6	3.9
Queue Delay	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	63.6	24.6	0.0	16.9	13.3	23.6	3.9
Queue Length 50th (ft)	317	320	240	0	87	144	147	1
Queue Length 95th (ft)	#495	#497	220	0	167	233	m246	m41
Internal Link Dist (ft)		1177		104		1441	446	
Turn Bay Length (ft)	115				155			190
Base Capacity (vph)	497	498	737	346	484	2149	1473	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	17	17	0	0	0	99	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.87	0.60	0.00	0.54	0.37	0.47	0.37

Intersection Summary

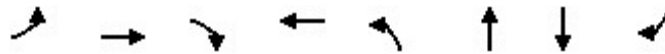
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Chamblee Tucker Rd & Tucker Norcross Rd



Phasings
 9: Chamblee Tucker Rd & Tucker Norcross Rd

1b. Existing PM
 01/26/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Protected Phases	4	4	4 5	8	5	2	6	
Permitted Phases					2			6
Minimum Initial (s)	6.0	6.0		6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	35.5	35.5		23.5	15.0	25.5	29.5	29.5
Total Split (s)	41.0	41.0		23.5	21.0	55.5	34.5	34.5
Total Split (%)	34.2%	34.2%		19.6%	17.5%	46.3%	28.8%	28.8%
Maximum Green (s)	35.5	35.5		18.0	15.5	50.0	29.0	29.0
Yellow Time (s)	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
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	5.0	5.0	5.0
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None		None	None	C-Min	C-Min	C-Min
Walk Time (s)	7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)	23.0	23.0				13.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0				0	0	0
90th %ile Green (s)	35.5	35.5		6.0	25.6	62.0	30.9	30.9
90th %ile Term Code	Max	Max		Min	Gap	Coord	Coord	Coord
70th %ile Green (s)	35.5	35.5		0.0	20.1	73.5	47.9	47.9
70th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
50th %ile Green (s)	35.5	35.5		0.0	16.4	73.5	51.6	51.6
50th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
30th %ile Green (s)	34.8	34.8		0.0	14.0	74.2	54.7	54.7
30th %ile Term Code	Gap	Gap		Skip	Gap	Coord	Coord	Coord
10th %ile Green (s)	27.7	27.7		0.0	11.1	81.3	64.7	64.7
10th %ile Term Code	Gap	Gap		Skip	Gap	Coord	Coord	Coord

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 9: Chamblee Tucker Rd & Tucker Norcross Rd

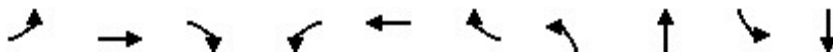
1b. Existing PM
 01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	785	1	415	0	0	1	246	718	0	0	644	285
Future Volume (veh/h)	785	1	415	0	0	1	246	718	0	0	644	285
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	836	0	441	0	0	1	262	764	0	0	685	0
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	986	0	590	0	0	3	538	2076	0	60	1572	
Arrive On Green	0.28	0.00	0.28	0.00	0.00	0.00	0.10	0.58	0.00	0.00	0.88	0.00
Sat Flow, veh/h	3563	0	1585	0	0	1585	1781	3647	0	703	3554	1585
Grp Volume(v), veh/h	836	0	441	0	0	1	262	764	0	0	685	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	1777	0	703	1777	1585
Q Serve(g_s), s	26.6	0.0	29.0	0.0	0.0	0.1	9.2	13.7	0.0	0.0	4.3	0.0
Cycle Q Clear(g_c), s	26.6	0.0	29.0	0.0	0.0	0.1	9.2	13.7	0.0	0.0	4.3	0.0
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	986	0	590	0	0	3	538	2076	0	60	1572	
V/C Ratio(X)	0.85	0.00	0.75	0.00	0.00	0.38	0.49	0.37	0.00	0.00	0.44	
Avail Cap(c_a), veh/h	1054	0	621	0	0	238	598	2076	0	60	1572	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.83	0.00
Uniform Delay (d), s/veh	41.0	0.0	32.7	0.0	0.0	59.8	14.2	13.2	0.0	0.0	4.1	0.0
Incr Delay (d2), s/veh	6.3	0.0	4.7	0.0	0.0	73.9	0.7	0.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	11.9	0.0	0.0	0.1	3.6	5.3	0.0	0.0	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	0.0	37.4	0.0	0.0	133.8	14.9	13.7	0.0	0.0	4.8	0.0
LnGrp LOS	D	A	D	A	A	F	B	B	A	A	A	
Approach Vol, veh/h		1277			1			1026			685	A
Approach Delay, s/veh		43.9			133.8			14.0			4.8	
Approach LOS		D			F			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		75.6		38.7	17.0	58.6		5.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		50.0		35.5	15.5	29.0		18.0				
Max Q Clear Time (g_c+l1), s		15.7		31.0	11.2	6.3		2.1				
Green Ext Time (p_c), s		10.9		2.2	0.3	8.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	24.7	
HCM 6th LOS	C	

Notes
 User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Old Norcross Tucker Rd & Britt Rd

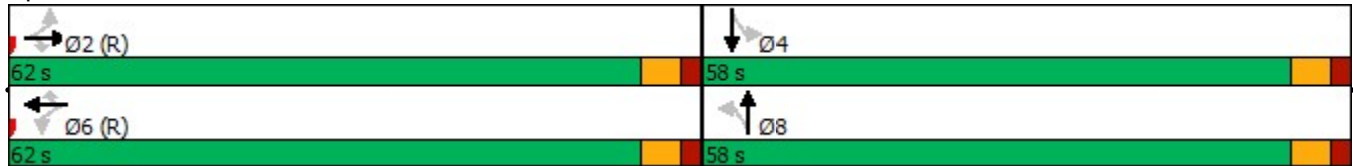


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↗	↘	↗
Traffic Volume (vph)	46	406	102	78	256	87	107	181	102	165
Future Volume (vph)	46	406	102	78	256	87	107	181	102	165
Lane Group Flow (vph)	47	419	105	80	264	90	110	272	105	191
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	62.0	62.0	62.0	62.0	62.0	62.0	58.0	58.0	58.0	58.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	48.3%	48.3%	48.3%	48.3%
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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
v/c Ratio	0.06	0.31	0.09	0.12	0.20	0.08	0.65	0.76	1.01	0.54
Control Delay	8.9	11.7	4.8	3.1	2.8	0.2	61.6	54.4	124.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	11.7	4.8	3.1	2.8	0.2	61.6	54.4	124.1	39.4
Queue Length 50th (ft)	10	123	8	6	19	0	80	184	~81	120
Queue Length 95th (ft)	m22	m316	m19	m16	44	m0	132	256	m#153	184
Internal Link Dist (ft)		1206			839			425		685
Turn Bay Length (ft)	150		100	100		90	90		80	
Base Capacity (vph)	791	1334	1153	650	1334	1158	384	790	237	805
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	0.06	0.31	0.09	0.12	0.20	0.08	0.29	0.34	0.44	0.24

Intersection Summary

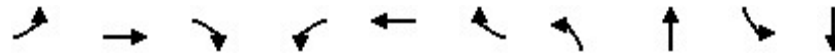
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings
1: Old Norcross Tucker Rd & Britt Rd

1c. Existing School Dismissal
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	62.0	62.0	62.0	62.0	62.0	62.0	58.0	58.0	58.0	58.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	48.3%	48.3%	48.3%	48.3%
Maximum Green (s)	56.5	56.5	56.5	56.5	56.5	56.5	52.5	52.5	52.5	52.5
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	76.9	76.9	76.9	76.9	76.9	76.9	32.1	32.1	32.1	32.1
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	82.7	82.7	82.7	82.7	82.7	82.7	26.3	26.3	26.3	26.3
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	86.1	86.1	86.1	86.1	86.1	86.1	22.9	22.9	22.9	22.9
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	89.5	89.5	89.5	89.5	89.5	89.5	19.5	19.5	19.5	19.5
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
10th %ile Green (s)	94.5	94.5	94.5	94.5	94.5	94.5	14.5	14.5	14.5	14.5
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	406	102	78	256	87	107	181	82	102	165	20
Future Volume (veh/h)	46	406	102	78	256	87	107	181	82	102	165	20
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	47	419	105	80	264	90	110	187	85	105	170	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	672	1220	1034	545	1220	1034	262	311	142	194	418	52
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1027	1870	1585	878	1870	1585	1192	1217	553	1107	1632	202
Grp Volume(v), veh/h	47	419	105	80	264	90	110	0	272	105	0	191
Grp Sat Flow(s),veh/h/ln	1027	1870	1585	878	1870	1585	1192	0	1771	1107	0	1834
Q Serve(g_s), s	2.3	12.0	3.0	5.4	6.9	2.5	10.1	0.0	16.2	11.1	0.0	10.4
Cycle Q Clear(g_c), s	9.2	12.0	3.0	17.4	6.9	2.5	20.5	0.0	16.2	27.3	0.0	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.11
Lane Grp Cap(c), veh/h	672	1220	1034	545	1220	1034	262	0	453	194	0	469
V/C Ratio(X)	0.07	0.34	0.10	0.15	0.22	0.09	0.42	0.00	0.60	0.54	0.00	0.41
Avail Cap(c_a), veh/h	672	1220	1034	545	1220	1034	478	0	775	395	0	802
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	9.3	7.8	13.2	8.4	7.7	45.6	0.0	39.3	51.2	0.0	37.1
Incr Delay (d2), s/veh	0.2	0.8	0.2	0.6	0.4	0.2	1.1	0.0	1.3	2.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.8	1.0	1.1	2.7	0.8	3.1	0.0	7.1	3.2	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	10.1	8.0	13.8	8.8	7.8	46.7	0.0	40.5	53.6	0.0	37.7
LnGrp LOS	B	B	A	B	A	A	D	A	D	D	A	D
Approach Vol, veh/h		571			434			382			296	
Approach Delay, s/veh		9.7			9.6			42.3			43.3	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2			4			6			8	
Phs Duration (G+Y+Rc), s		83.8			36.2			83.8			36.2	
Change Period (Y+Rc), s		5.5			5.5			5.5			5.5	
Max Green Setting (Gmax), s		56.5			52.5			56.5			52.5	
Max Q Clear Time (g_c+l1), s		14.0			29.3			19.4			22.5	
Green Ext Time (p_c), s		7.3			1.4			4.9			2.1	
Intersection Summary												
HCM 6th Ctrl Delay			23.0									
HCM 6th LOS			C									

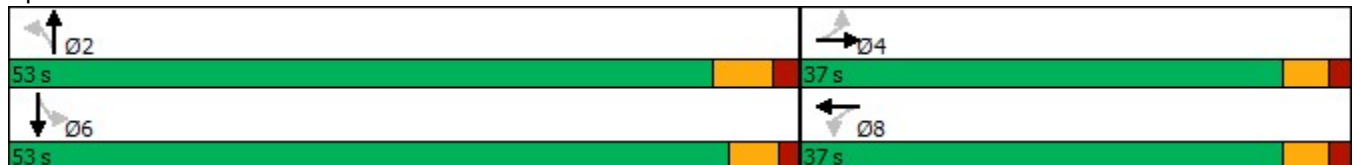
Timings
3: Old Norcross Tucker Rd & Cherokee Dr



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↕		↕		↕	↗	↘
Traffic Volume (vph)	0	46	0	1	209	135	345
Future Volume (vph)	0	46	0	1	209	135	345
Lane Group Flow (vph)	1	0	225	0	270	147	375
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6
Permitted Phases		8		2		6	
Detector Phase	4	8	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.1	23.1	23.1	23.9	23.9	23.3	23.3
Total Split (s)	37.0	37.0	37.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%	41.1%	58.9%	58.9%	58.9%	58.9%
Yellow Time (s)	3.1	3.1	3.1	3.9	3.9	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.9	1.9	1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.7		4.7		5.8	4.8	4.8
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	Min	Min	Min	Min
v/c Ratio	0.00		0.50		0.30	0.26	0.39
Control Delay	0.0		8.9		6.2	6.3	6.6
Queue Delay	0.0		0.0		0.0	0.0	0.0
Total Delay	0.0		8.9		6.2	6.3	6.6
Queue Length 50th (ft)	0		7		22	11	31
Queue Length 95th (ft)	0		53		62	39	86
Internal Link Dist (ft)	38		795		578		427
Turn Bay Length (ft)						90	
Base Capacity (vph)	1512		1424		1822	1105	1863
Starvation Cap Reductn	0		0		0	0	0
Spillback Cap Reductn	0		0		0	0	0
Storage Cap Reductn	0		0		0	0	0
Reduced v/c Ratio	0.00		0.16		0.15	0.13	0.20

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 35.2
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr



Phasings
3: Old Norcross Tucker Rd & Cherokee Dr




















Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	4		8		2		6
Permitted Phases		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.1	23.1	23.1	23.9	23.9	23.3	23.3
Total Split (s)	37.0	37.0	37.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%	41.1%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	32.3	32.3	32.3	47.2	47.2	48.2	48.2
Yellow Time (s)	3.1	3.1	3.1	3.9	3.9	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.9	1.9	1.5	1.5
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	6.0	6.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	Min	Min
Walk Time (s)	7.0						
Flash Dont Walk (s)	10.0						
Pedestrian Calls (#/hr)	0						
90th %ile Green (s)	10.8	10.8	10.8	24.4	24.4	25.4	25.4
90th %ile Term Code	Hold	Gap	Gap	Hold	Hold	Gap	Gap
70th %ile Green (s)	7.4	7.4	7.4	18.0	18.0	19.0	19.0
70th %ile Term Code	Hold	Gap	Gap	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.0	6.0	6.0	15.2	15.2	16.2	16.2
50th %ile Term Code	Hold	Min	Min	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.0	6.0	6.0	13.1	13.1	14.1	14.1
30th %ile Term Code	Hold	Min	Min	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.0	6.0	6.0	16.7	16.7	17.7	17.7
10th %ile Term Code	Hold	Min	Min	Dwell	Dwell	Dwell	Dwell

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 45.7
70th %ile Actuated Cycle: 35.9
50th %ile Actuated Cycle: 31.7
30th %ile Actuated Cycle: 29.6
10th %ile Actuated Cycle: 33.2

HCM 6th Signalized Intersection Summary
 3: Old Norcross Tucker Rd & Cherokee Dr

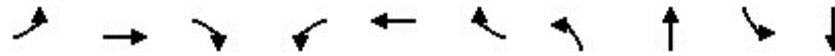
1c. Existing School Dismissal
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	1	46	0	161	1	209	39	135	345	0
Future Volume (veh/h)	0	0	1	46	0	161	1	209	39	135	345	0
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	0	0	1	50	0	175	1	227	42	147	375	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	0	312	188	20	240	115	724	134	813	883	0
Arrive On Green	0.00	0.00	0.20	0.20	0.00	0.20	0.47	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	0	0	1585	248	101	1222	1	1534	283	1110	1870	0
Grp Volume(v), veh/h	0	0	1	225	0	0	270	0	0	147	375	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1571	0	0	1818	0	0	1110	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.2	0.0	0.0	2.9	0.0	0.0	1.5	4.2	0.0
Prop In Lane	0.00		1.00	0.22		0.78	0.00		0.16	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	312	448	0	0	972	0	0	813	883	0
V/C Ratio(X)	0.00	0.00	0.00	0.50	0.00	0.00	0.28	0.00	0.00	0.18	0.42	0.00
Avail Cap(c_a), veh/h	0	0	1616	1718	0	0	2818	0	0	1978	2845	0
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(l)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	10.2	11.9	0.0	0.0	5.2	0.0	0.0	4.8	5.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0	0.0	0.4	1.2	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	0.0	0.0	0.0	1.2	0.0	0.0	0.6	0.0	0.0	0.3	1.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.2	12.2	0.0	0.0	5.7	0.0	0.0	5.2	6.7	0.0
LnGrp LOS	A	A	B	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		1			225			270			522	
Approach Delay, s/veh		10.2			12.2			5.7			6.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.8		10.9		20.8		10.9				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 47		* 32		* 48		* 32				
Max Q Clear Time (g_c+l1), s		4.9		2.0		6.2		6.2				
Green Ext Time (p_c), s		4.5		0.0		8.8		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				7.5								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Future “No-Build” Intersection Analysis

Timings
1: Old Norcross Tucker Rd & Britt Rd

2a. No-Build AM
01/26/2021

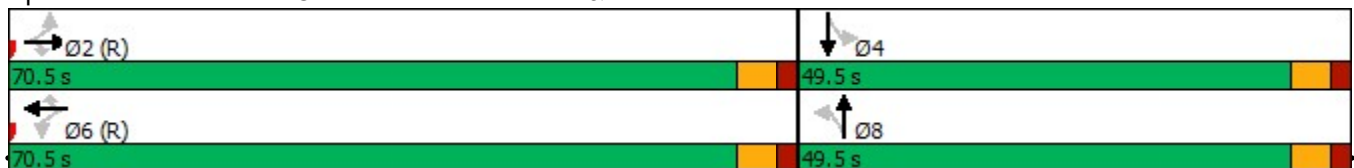


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↗	↘	↗
Traffic Volume (vph)	8	118	41	96	691	94	105	197	82	210
Future Volume (vph)	8	118	41	96	691	94	105	197	82	210
Lane Group Flow (vph)	9	133	46	108	776	106	118	321	92	300
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	70.5	70.5	70.5	70.5	70.5	70.5	49.5	49.5	49.5	49.5
Total Split (%)	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	41.3%	41.3%	41.3%	41.3%
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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
v/c Ratio	0.03	0.10	0.04	0.13	0.61	0.10	0.99	0.79	0.90	0.74
Control Delay	1.2	1.7	0.7	3.3	4.9	1.2	127.0	54.3	114.4	56.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.2	1.7	0.7	3.3	4.9	1.2	127.0	54.3	114.4	56.4
Queue Length 50th (ft)	0	2	0	8	61	0	92	222	71	197
Queue Length 95th (ft)	m1	4	0	m20	135	m8	#180	292	#144	253
Internal Link Dist (ft)		1206			839			425		685
Turn Bay Length (ft)	150		100	100		90	90		80	
Base Capacity (vph)	343	1280	1102	860	1280	1101	198	664	170	669
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	0.03	0.10	0.04	0.13	0.61	0.10	0.60	0.48	0.54	0.45

Intersection Summary

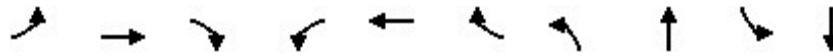
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 115 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings
1: Old Norcross Tucker Rd & Britt Rd

2a. No-Build AM
01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	70.5	70.5	70.5	70.5	70.5	70.5	49.5	49.5	49.5	49.5
Total Split (%)	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	41.3%	41.3%	41.3%	41.3%
Maximum Green (s)	65.0	65.0	65.0	65.0	65.0	65.0	44.0	44.0	44.0	44.0
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	73.4	73.4	73.4	73.4	73.4	73.4	35.6	35.6	35.6	35.6
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	78.4	78.4	78.4	78.4	78.4	78.4	30.6	30.6	30.6	30.6
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	82.7	82.7	82.7	82.7	82.7	82.7	26.3	26.3	26.3	26.3
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	86.4	86.4	86.4	86.4	86.4	86.4	22.6	22.6	22.6	22.6
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
10th %ile Green (s)	91.6	91.6	91.6	91.6	91.6	91.6	17.4	17.4	17.4	17.4
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold

Intersection Summary

Cycle Length: 120

























Actuated Cycle Length: 120

Offset: 115 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 1: Old Norcross Tucker Rd & Britt Rd

2a. No-Build AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	118	41	96	691	94	105	197	89	82	210	57
Future Volume (veh/h)	8	118	41	96	691	94	105	197	89	82	210	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	133	46	108	776	106	118	221	100	92	236	64
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	1172	993	781	1172	993	209	344	155	190	399	108
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	629	1870	1585	1205	1870	1585	1079	1219	552	1059	1417	384
Grp Volume(v), veh/h	9	133	46	108	776	106	118	0	321	92	0	300
Grp Sat Flow(s),veh/h/ln	629	1870	1585	1205	1870	1585	1079	0	1771	1059	0	1801
Q Serve(g_s), s	1.1	3.4	1.3	4.7	31.8	3.2	12.7	0.0	19.1	10.0	0.0	17.2
Cycle Q Clear(g_c), s	32.9	3.4	1.3	8.2	31.8	3.2	29.9	0.0	19.1	29.1	0.0	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.21
Lane Grp Cap(c), veh/h	288	1172	993	781	1172	993	209	0	499	190	0	508
V/C Ratio(X)	0.03	0.11	0.05	0.14	0.66	0.11	0.56	0.00	0.64	0.48	0.00	0.59
Avail Cap(c_a), veh/h	288	1172	993	781	1172	993	301	0	649	280	0	660
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	9.0	8.6	10.7	14.3	9.0	50.0	0.0	37.8	50.6	0.0	37.1
Incr Delay (d2), s/veh	0.2	0.2	0.1	0.4	3.0	0.2	2.4	0.0	1.4	1.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	0.5	1.3	13.1	1.1	3.5	0.0	8.4	2.7	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	9.2	8.7	11.0	17.3	9.2	52.4	0.0	39.2	52.5	0.0	38.2
LnGrp LOS	C	A	A	B	B	A	D	A	D	D	A	D
Approach Vol, veh/h		188			990			439			392	
Approach Delay, s/veh		9.8			15.7			42.7			41.6	
Approach LOS		A			B			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.7		39.3		80.7		39.3				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		65.0		44.0		65.0		44.0				
Max Q Clear Time (g_c+l1), s		34.9		31.1		33.8		31.9				
Green Ext Time (p_c), s		1.9		1.7		14.0		1.9				
Intersection Summary												
HCM 6th Ctrl Delay				26.1								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↔	↔
Traffic Vol, veh/h	6	7	4	385	341	5
Future Vol, veh/h	6	7	4	385	341	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	190
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	8	4	433	383	6

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	824	383	389	0	-	0
Stage 1	383	-	-	-	-	-
Stage 2	441	-	-	-	-	-
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 Maneuve	843	664	1170	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuve	841	664	1170	-	-	-
Mov Cap-2 Maneuve	841	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	648	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1170	-	462	-	-
HCM Lane V/C Ratio	0.004	-	0.032	-	-
HCM Control Delay (s)	8.1	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Timings
3: Old Norcross Tucker Rd & Cherokee Dr

2a. No-Build AM
01/26/2021

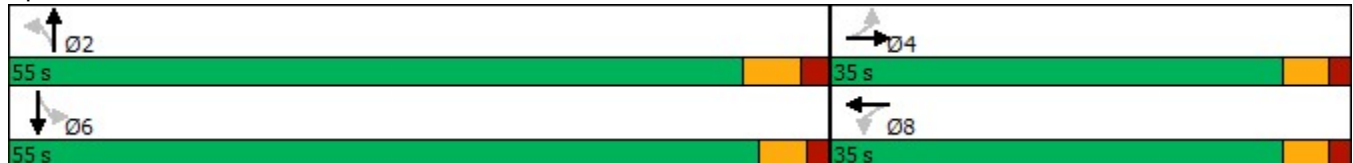


Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Lane Configurations		↕	↕	↗	↘	
Traffic Volume (vph)	63	0	133	294	54	
Future Volume (vph)	63	0	133	294	54	
Lane Group Flow (vph)	0	346	225	320	59	
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Detector Phase	8	8	2	6	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	35.0	35.0	55.0	55.0	55.0	35.0
Total Split (%)	38.9%	38.9%	61.1%	61.1%	61.1%	39%
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.7	5.8	4.8	4.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	None
v/c Ratio		0.63	0.26	0.55	0.06	
Control Delay		11.1	5.7	11.1	5.4	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		11.1	5.7	11.1	5.4	
Queue Length 50th (ft)		16	16	34	5	
Queue Length 95th (ft)		93	59	122	22	
Internal Link Dist (ft)		795	578		427	
Turn Bay Length (ft)				90		
Base Capacity (vph)		1309	1711	1114	1803	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.26	0.13	0.29	0.03	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 39
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr






















Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	35.0	35.0	55.0	55.0	55.0	35.0
Total Split (%)	38.9%	38.9%	61.1%	61.1%	61.1%	39%
Maximum Green (s)	30.3	30.3	49.2	50.2	50.2	30.3
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	Min	Min	None
Walk Time (s)						7.0
Flash Dont Walk (s)						10.0
Pedestrian Calls (#/hr)						0
90th %ile Green (s)	16.9	16.9	32.5	33.5	33.5	16.9
90th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
70th %ile Green (s)	10.5	10.5	21.8	22.8	22.8	10.5
70th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
50th %ile Green (s)	7.5	7.5	16.7	17.7	17.7	7.5
50th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
30th %ile Green (s)	6.0	6.0	12.8	13.8	13.8	6.0
30th %ile Term Code	Min	Min	Hold	Gap	Gap	Hold
10th %ile Green (s)	6.0	6.0	12.0	13.0	13.0	6.0
10th %ile Term Code	Min	Min	Min	Hold	Hold	Hold

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 39
 Control Type: Actuated-Uncoordinated
 90th %ile Actuated Cycle: 59.9
 70th %ile Actuated Cycle: 42.8
 50th %ile Actuated Cycle: 34.7
 30th %ile Actuated Cycle: 29.3
 10th %ile Actuated Cycle: 28.5

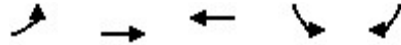
HCM 6th Signalized Intersection Summary
 3: Old Norcross Tucker Rd & Cherokee Dr

2a. No-Build AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	63	0	256	0	133	74	294	54	0
Future Volume (veh/h)	0	0	0	63	0	256	0	133	74	294	54	0
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	0	0	0	68	0	278	0	145	80	320	59	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	523	0	160	27	354	0	537	296	628	887	0
Arrive On Green	0.00	0.00	0.00	0.28	0.00	0.28	0.00	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	0	1870	0	212	98	1265	0	1133	625	1156	1870	0
Grp Volume(v), veh/h	0	0	0	346	0	0	0	0	225	320	59	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1575	0	0	0	0	1758	1156	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	3.3	9.9	0.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	3.3	13.1	0.7	0.0
Prop In Lane	0.00		0.00	0.20		0.80	0.00		0.36	1.00		0.00
Lane Grp Cap(c), veh/h	0	523	0	542	0	0	0	0	834	628	887	0
V/C Ratio(X)	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.27	0.51	0.07	0.00
Avail Cap(c_a), veh/h	0	1327	0	1208	0	0	0	0	2026	1439	2199	0
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(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0	6.8	10.7	6.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.6	2.3	0.1	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	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	1.0	2.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0	7.4	13.1	6.2	0.0
LnGrp LOS	A	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		0			346			225			379	
Approach Delay, s/veh		0.0			14.6			7.4			12.0	
Approach LOS					B			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		16.6		26.0		16.6				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 49		* 30		* 50		* 30				
Max Q Clear Time (g_c+l1), s		5.3		0.0		15.1		10.6				
Green Ext Time (p_c), s		3.7		0.0		5.1		1.6				
Intersection Summary												
HCM 6th Ctrl Delay				11.8								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings
 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

2a. No-Build AM
 01/26/2021

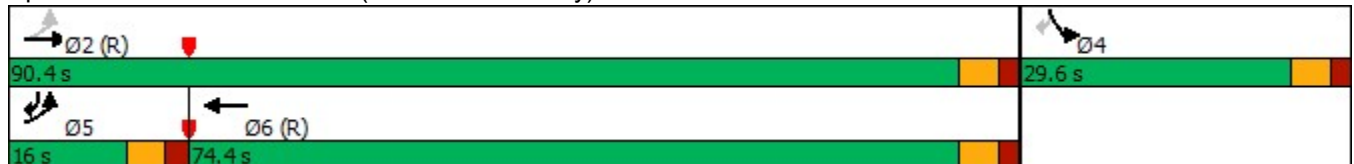


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↘	↗
Traffic Volume (vph)	144	513	1629	30	201
Future Volume (vph)	144	513	1629	30	201
Lane Group Flow (vph)	150	534	1731	31	209
Turn Type	pm+pt	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	16.0	90.4	74.4	29.6	16.0
Total Split (%)	13.3%	75.3%	62.0%	24.7%	13.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	C-Min	C-Min	None	None
v/c Ratio	0.48	0.17	0.67	0.27	0.70
Control Delay	13.6	1.5	12.0	58.9	52.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	1.5	12.0	58.9	52.8
Queue Length 50th (ft)	14	28	375	23	134
Queue Length 95th (ft)	80	45	565	55	199
Internal Link Dist (ft)		1517	1496	1354	
Turn Bay Length (ft)	50				95
Base Capacity (vph)	311	3189	2574	355	299
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.17	0.67	0.09	0.70

Intersection Summary

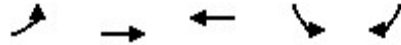
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd



Phasings
4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

2a. No-Build AM
01/26/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	16.0	90.4	74.4	29.6	16.0
Total Split (%)	13.3%	75.3%	62.0%	24.7%	13.3%
Maximum Green (s)	10.5	84.9	68.9	24.1	10.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	None
Walk Time (s)			7.0	7.0	
Flash Dont Walk (s)			17.0	17.0	
Pedestrian Calls (#/hr)			0	0	
90th %ile Green (s)	17.2	98.9	76.2	10.1	17.2
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap
70th %ile Green (s)	14.3	100.4	80.6	8.6	14.3
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap
50th %ile Green (s)	12.3	101.5	83.7	7.5	12.3
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap
30th %ile Green (s)	10.5	114.5	98.5	0.0	10.5
30th %ile Term Code	Max	Coord	Coord	Skip	Max
10th %ile Green (s)	10.5	114.5	98.5	0.0	10.5
10th %ile Term Code	Max	Coord	Coord	Skip	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

2a. No-Build AM
 01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗	↑↑	↑↑		↖	↖
Traffic Volume (veh/h)	144	513	1629	33	30	201
Future Volume (veh/h)	144	513	1629	33	30	201
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	534	1697	34	31	209
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	242	2717	2411	48	256	295
Arrive On Green	0.04	0.76	0.68	0.68	0.14	0.14
Sat Flow, veh/h	1781	3647	3657	71	1781	1585
Grp Volume(v), veh/h	150	534	844	887	31	209
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1858	1781	1585
Q Serve(g_s), s	2.9	5.0	35.2	35.4	1.8	14.8
Cycle Q Clear(g_c), s	2.9	5.0	35.2	35.4	1.8	14.8
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	242	2717	1202	1257	256	295
V/C Ratio(X)	0.62	0.20	0.70	0.71	0.12	0.71
Avail Cap(c_a), veh/h	323	2717	1202	1257	358	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	3.9	12.0	12.0	44.8	45.8
Incr Delay (d2), s/veh	2.6	0.2	3.4	3.3	0.2	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.4	12.8	13.5	0.8	13.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.8	4.1	15.4	15.4	45.0	49.9
LnGrp LOS	B	A	B	B	D	D
Approach Vol, veh/h		684	1731		240	
Approach Delay, s/veh		7.5	15.4		49.3	
Approach LOS		A	B		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.2		22.8	10.5	86.7
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		84.9		24.1	10.5	68.9
Max Q Clear Time (g_c+l1), s		7.0		16.8	4.9	37.4
Green Ext Time (p_c), s		7.7		0.4	0.2	25.3
Intersection Summary						
HCM 6th Ctrl Delay			16.4			
HCM 6th LOS			B			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑↔	↘	↑↑	↗
Traffic Volume (vph)	50	106	126	77	368	52	298	955	29	572	152
Future Volume (vph)	50	106	126	77	368	52	298	955	29	572	152
Lane Group Flow (vph)	51	108	129	79	376	53	304	1038	30	584	155
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	38.0	38.0	15.0	38.0	38.0	33.0	52.0	15.0	34.0	34.0
Total Split (%)	12.5%	31.7%	31.7%	12.5%	31.7%	31.7%	27.5%	43.3%	12.5%	28.3%	28.3%
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	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.26	0.25	0.26	0.20	0.86	0.10	0.85	0.58	0.27	0.50	0.24
Control Delay	17.8	27.4	8.7	26.6	62.6	0.4	67.3	25.5	59.3	37.1	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	17.8	27.4	8.7	26.6	62.6	0.4	67.3	25.5	59.3	37.1	5.0
Queue Length 50th (ft)	25	76	32	41	277	0	224	326	23	203	0
Queue Length 95th (ft)	m42	112	58	72	383	0	#342	444	54	283	42
Internal Link Dist (ft)		975			378			344		1167	
Turn Bay Length (ft)	175		75	80		85	150		135		565
Base Capacity (vph)	214	504	554	413	504	554	405	1789	140	1169	638
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	0.24	0.21	0.23	0.19	0.75	0.10	0.75	0.58	0.21	0.50	0.24

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 100

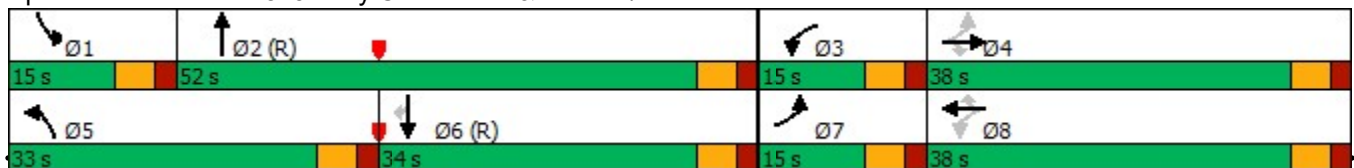
Control Type: Actuated-Coordinated

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 5: Jimmy Carter Blvd & Britt Rd/Williams Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	38.0	38.0	15.0	38.0	38.0	33.0	52.0	15.0	34.0	34.0
Total Split (%)	12.5%	31.7%	31.7%	12.5%	31.7%	31.7%	27.5%	43.3%	12.5%	28.3%	28.3%
Maximum Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	27.5	46.5	9.5	28.5	28.5
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
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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		25.0	25.0		21.0	21.0		17.0		13.0	13.0
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0
90th %ile Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	27.5	46.5	9.5	28.5	28.5
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Max	Coord	Coord
70th %ile Green (s)	9.4	32.5	32.5	9.5	32.6	32.6	27.5	47.5	8.5	28.5	28.5
70th %ile Term Code	Gap	Hold	Hold	Max	Max	Max	Max	Coord	Gap	Coord	Coord
50th %ile Green (s)	8.2	28.5	28.5	9.1	29.4	29.4	26.0	53.0	7.4	34.4	34.4
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Gap	Coord	Coord
30th %ile Green (s)	7.1	25.1	25.1	8.0	26.0	26.0	22.7	70.4	0.0	42.2	42.2
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Skip	Coord	Coord
10th %ile Green (s)	0.0	20.9	20.9	0.0	20.9	20.9	18.0	88.1	0.0	64.6	64.6
10th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Gap	Coord	Skip	Coord	Coord

Intersection Summary

Cycle Length: 120

























Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 5: Jimmy Carter Blvd & Britt Rd/Williams Rd

2a. No-Build AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	106	126	77	368	52	298	955	63	29	572	152
Future Volume (veh/h)	50	106	126	77	368	52	298	955	63	29	572	152
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	51	108	0	79	376	0	304	974	64	30	584	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	391		352	417		334	1806	119	47	1323	
Arrive On Green	0.03	0.21	0.00	0.05	0.22	0.00	0.19	0.53	0.53	0.03	0.37	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3385	222	1781	3554	1585
Grp Volume(v), veh/h	51	108	0	79	376	0	304	511	527	30	584	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1830	1781	1777	1585
Q Serve(g_s), s	2.7	5.8	0.0	4.1	23.5	0.0	20.1	22.6	22.6	2.0	14.8	0.0
Cycle Q Clear(g_c), s	2.7	5.8	0.0	4.1	23.5	0.0	20.1	22.6	22.6	2.0	14.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	148	391		352	417		334	948	976	47	1323	
V/C Ratio(X)	0.34	0.28		0.22	0.90		0.91	0.54	0.54	0.64	0.44	
Avail Cap(c_a), veh/h	228	507		407	507		408	948	976	141	1323	
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(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.5	39.8	0.0	34.8	45.4	0.0	47.8	18.3	18.3	57.9	28.3	0.0
Incr Delay (d2), s/veh	1.4	0.4	0.0	0.3	17.1	0.0	21.5	2.2	2.1	13.6	1.1	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	1.2	2.7	0.0	1.8	12.8	0.0	10.6	9.2	9.4	1.1	6.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	40.2	0.0	35.1	62.5	0.0	69.2	20.5	20.5	71.4	29.4	0.0
LnGrp LOS	D	D		D	E		E	C	C	E	C	
Approach Vol, veh/h		159	A		455	A		1342			614	A
Approach Delay, s/veh		39.8			57.7			31.5			31.4	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	69.5	11.2	30.6	28.0	50.2	9.6	32.2				
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	35	46.5	9.5	32.5	27.5	28.5	9.5	32.5				
Max Q Clear Time (g_c+l1),s	4.0	24.6	6.1	7.8	22.1	16.8	4.7	25.5				
Green Ext Time (p_c), s	0.0	11.6	0.0	0.5	0.4	4.6	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			36.7									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

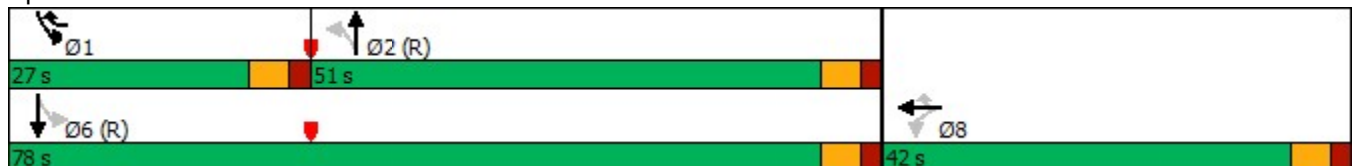


Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↖	↕	↖	↕
Traffic Volume (vph)	12	182	1	387	158	556
Future Volume (vph)	12	182	1	387	158	556
Lane Group Flow (vph)	90	188	1	461	163	626
Turn Type	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Detector Phase	8	1	2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	42.0	27.0	51.0	51.0	27.0	78.0
Total Split (%)	35.0%	22.5%	42.5%	42.5%	22.5%	65.0%
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	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.53	0.37	0.00	0.20	0.21	0.22
Control Delay	54.1	14.1	9.0	8.9	3.3	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	14.1	9.0	8.9	3.3	2.9
Queue Length 50th (ft)	74	70	0	87	20	44
Queue Length 95th (ft)	125	109	m2	99	42	73
Internal Link Dist (ft)	2006			2013		1374
Turn Bay Length (ft)			75		120	
Base Capacity (vph)	542	634	521	2352	852	2843
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	0.17	0.30	0.00	0.20	0.19	0.22

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

























Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	42.0	27.0	51.0	51.0	27.0	78.0
Total Split (%)	35.0%	22.5%	42.5%	42.5%	22.5%	65.0%
Maximum Green (s)	36.5	21.5	45.5	45.5	21.5	72.5
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
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	23.0		22.0	22.0		17.0
Pedestrian Calls (#/hr)	0		0	0		0
90th %ile Green (s)	15.9	14.3	73.3	73.3	14.3	93.1
90th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
70th %ile Green (s)	13.2	12.3	78.0	78.0	12.3	95.8
70th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
50th %ile Green (s)	11.4	10.8	81.3	81.3	10.8	97.6
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	9.6	9.4	84.5	84.5	9.4	99.4
30th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	7.0	7.5	89.0	89.0	7.5	102.0
10th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

2a. No-Build AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	76	12	182	1	387	60	158	556	51
Future Volume (veh/h)	0	0	0	76	12	182	1	387	60	158	556	51
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		No		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				78	12	188	1	399	62	163	573	53
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				211	32	287	605	2103	324	731	2542	235
Arrive On Green				0.14	0.14	0.14	0.68	0.68	0.68	0.05	0.77	0.77
Sat Flow, veh/h				1554	239	1585	799	3086	476	1781	3289	304
Grp Volume(v), veh/h				90	0	188	1	229	232	163	309	317
Grp Sat Flow(s),veh/h/ln				1793	0	1585	799	1777	1785	1781	1777	1816
Q Serve(g_s), s				5.5	0.0	13.2	0.0	5.6	5.7	3.1	5.7	5.8
Cycle Q Clear(g_c), s				5.5	0.0	13.2	0.0	5.6	5.7	3.1	5.7	5.8
Prop In Lane				0.87		1.00	1.00		0.27	1.00		0.17
Lane Grp Cap(c), veh/h				243	0	287	605	1211	1217	731	1373	1403
V/C Ratio(X)				0.37	0.00	0.66	0.00	0.19	0.19	0.22	0.23	0.23
Avail Cap(c_a), veh/h				545	0	554	605	1211	1217	969	1373	1403
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				47.2	0.0	45.7	6.1	7.0	7.0	4.6	3.8	3.8
Incr Delay (d2), s/veh				0.9	0.0	2.5	0.0	0.3	0.3	0.2	0.4	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	5.4	0.0	2.0	2.1	1.0	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.1	0.0	48.2	6.1	7.3	7.3	4.8	4.1	4.1
LnGrp LOS				D	A	D	A	A	A	A	A	A
Approach Vol, veh/h					278			462			789	
Approach Delay, s/veh					48.2			7.3			4.3	
Approach LOS					D			A			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	10.9	87.3				98.2		21.8				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax),s	45.5					72.5		36.5				
Max Q Clear Time (g_c+l1),s	7.7					7.8		15.2				
Green Ext Time (p_c), s	0.4	5.7				8.8		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								

Timings
7: Tucker Norcross Rd & Pleasantdale Rd

2a. No-Build AM
01/26/2021

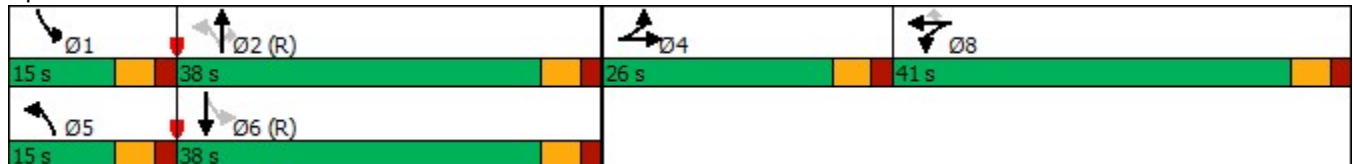


Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	Ø5
Lane Configurations	↕	↙	↕	↗	↕	↗	↙	↕	
Traffic Volume (vph)	0	419	2	458	475	163	126	283	
Future Volume (vph)	0	419	2	458	475	163	126	283	
Lane Group Flow (vph)	1	238	240	520	540	185	143	324	
Turn Type	NA	Split	NA	Perm	NA	Perm	pm+pt	NA	
Protected Phases	4	8	8		2		1	6	5
Permitted Phases				8		2	6		
Detector Phase	4	8	8	8	2	2	1	6	
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	5.0	15.0	5.0
Minimum Split (s)	31.5	37.5	37.5	37.5	31.5	31.5	15.0	26.5	15.0
Total Split (s)	26.0	41.0	41.0	41.0	38.0	38.0	15.0	38.0	15.0
Total Split (%)	21.7%	34.2%	34.2%	34.2%	31.7%	31.7%	12.5%	31.7%	13%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	None
v/c Ratio	0.00	0.66	0.66	0.70	0.28	0.20	0.25	0.14	
Control Delay	0.0	50.7	50.9	9.7	9.9	2.1	10.4	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	0.0	50.7	50.9	9.7	9.9	2.1	10.4	8.9	
Queue Length 50th (ft)	0	182	183	0	44	0	33	40	
Queue Length 95th (ft)	0	241	243	98	247	77	92	93	
Internal Link Dist (ft)	26		1146		568			1412	
Turn Bay Length (ft)		180				240	140		
Base Capacity (vph)	515	498	499	835	1926	946	567	2383	
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	0.00	0.48	0.48	0.62	0.28	0.20	0.25	0.14	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 7: Tucker Norcross Rd & Pleasantdale Rd



Phasings
7: Tucker Norcross Rd & Pleasantdale Rd

2a. No-Build AM
01/26/2021



Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	Ø5
Protected Phases	4	8	8		2		1	6	5
Permitted Phases				8		2	6		
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	5.0	15.0	5.0
Minimum Split (s)	31.5	37.5	37.5	37.5	31.5	31.5	15.0	26.5	15.0
Total Split (s)	26.0	41.0	41.0	41.0	38.0	38.0	15.0	38.0	15.0
Total Split (%)	21.7%	34.2%	34.2%	34.2%	31.7%	31.7%	12.5%	31.7%	13%
Maximum Green (s)	20.5	35.5	35.5	35.5	32.5	32.5	9.5	32.5	9.5
Yellow Time (s)	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
Lead/Lag					Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	19.0	25.0	25.0	25.0	19.0	19.0		14.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	
90th %ile Green (s)	6.0	36.0	36.0	36.0	41.9	41.9	14.1	61.5	0.0
90th %ile Term Code	Min	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
70th %ile Green (s)	0.0	29.7	29.7	29.7	62.9	62.9	10.9	79.3	0.0
70th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
50th %ile Green (s)	0.0	25.8	25.8	25.8	68.0	68.0	9.7	83.2	0.0
50th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
30th %ile Green (s)	0.0	21.9	21.9	21.9	73.0	73.0	8.6	87.1	0.0
30th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip
10th %ile Green (s)	0.0	15.6	15.6	15.6	80.9	80.9	7.0	93.4	0.0
10th %ile Term Code	Skip	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Skip

Intersection Summary

Cycle Length: 120























Actuated Cycle Length: 120

Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

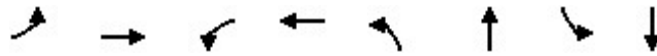
HCM 6th Signalized Intersection Summary
7: Tucker Norcross Rd & Pleasantdale Rd

2a. No-Build AM
01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	1	419	2	458	0	475	163	126	283	2
Future Volume (veh/h)	0	0	1	419	2	458	0	475	163	126	283	2
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	0	0	1	477	0	520	0	540	0	143	322	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	0	3	1054	0	469	549	1641		445	2046	13
Arrive On Green	0.00	0.00	0.00	0.30	0.00	0.30	0.00	0.15	0.00	0.06	0.57	0.57
Sat Flow, veh/h	0	0	1585	3563	0	1585	1781	3554	1585	1781	3621	22
Grp Volume(v), veh/h	0	0	1	477	0	520	0	540	0	143	158	166
Grp Sat Flow(s),veh/h/ln	0	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1866
Q Serve(g_s), s	0.0	0.0	0.1	13.1	0.0	35.5	0.0	16.3	0.0	4.9	5.1	5.1
Cycle Q Clear(g_c), s	0.0	0.0	0.1	13.1	0.0	35.5	0.0	16.3	0.0	4.9	5.1	5.1
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	3	1054	0	469	549	1641		445	1004	1055
V/C Ratio(X)	0.00	0.00	0.38	0.45	0.00	1.11	0.00	0.33		0.32	0.16	0.16
Avail Cap(c_a), veh/h	0	0	271	1054	0	469	689	1641		483	1004	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.94	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	59.8	34.4	0.0	42.3	0.0	34.3	0.0	15.7	12.5	12.5
Incr Delay (d2), s/veh	0.0	0.0	73.9	0.3	0.0	74.7	0.0	0.5	0.0	0.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	5.6	0.0	23.3	0.0	7.8	0.0	1.9	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	133.8	34.7	0.0	116.9	0.0	34.8	0.0	16.1	12.8	12.8
LnGrp LOS	A	A	F	C	A	F	A	C		B	B	B
Approach Vol, veh/h		1			997			540	A		467	
Approach Delay, s/veh		133.8			77.6			34.8			13.8	
Approach LOS		F			E			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	60.9		5.7	0.0	73.3		41.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	30.5	32.5		20.5	9.5	32.5		35.5				
Max Q Clear Time (g_c+l1),s	6.9	18.3		2.1	0.0	7.1		37.5				
Green Ext Time (p_c), s	0.1	4.9		0.0	0.0	3.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	51.2											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Timings
8: Tucker Norcross Rd & Britt Rd

2a. No-Build AM
01/26/2021

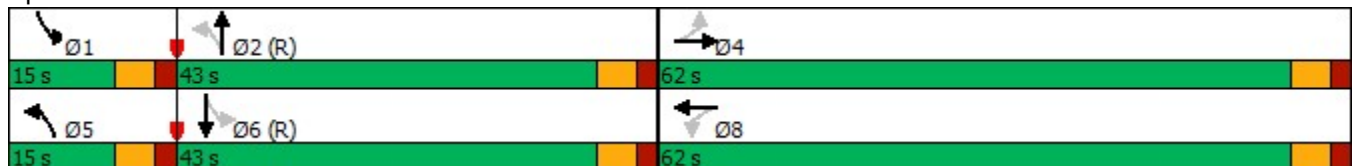


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗	↖	↗	↖	↗	↖
Traffic Volume (vph)	35	5	340	1	4	438	76	591
Future Volume (vph)	35	5	340	1	4	438	76	591
Lane Group Flow (vph)	0	46	382	236	4	584	85	682
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	62.0	62.0	62.0	62.0	15.0	43.0	15.0	43.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	12.5%	35.8%	12.5%	35.8%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.10	0.82	0.34	0.01	0.36	0.20	0.36
Control Delay		23.1	50.1	6.9	19.8	21.9	7.6	11.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		23.1	50.1	6.9	19.8	21.9	7.6	11.5
Queue Length 50th (ft)		23	270	24	1	106	14	206
Queue Length 95th (ft)		42	260	46	9	221	26	256
Internal Link Dist (ft)		39		1249		446		568
Turn Bay Length (ft)					120		110	
Base Capacity (vph)		610	637	870	449	1604	445	1913
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.08	0.60	0.27	0.01	0.36	0.19	0.36

Intersection Summary

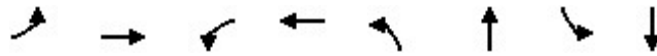
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 8: Tucker Norcross Rd & Britt Rd



Phasings
8: Tucker Norcross Rd & Britt Rd

2a. No-Build AM
01/26/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	62.0	62.0	62.0	62.0	15.0	43.0	15.0	43.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	12.5%	35.8%	12.5%	35.8%
Maximum Green (s)	56.5	56.5	56.5	56.5	9.5	37.5	9.5	37.5
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)			7.0	7.0		7.0		7.0
Flash Dont Walk (s)			19.0	19.0		14.0		11.0
Pedestrian Calls (#/hr)			0	0		0		0
90th %ile Green (s)	53.8	53.8	53.8	53.8	6.1	38.2	11.5	43.6
90th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Gap	Coord
70th %ile Green (s)	47.4	47.4	47.4	47.4	0.0	45.9	10.2	61.6
70th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
50th %ile Green (s)	41.9	41.9	41.9	41.9	0.0	52.7	8.9	67.1
50th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
30th %ile Green (s)	36.6	36.6	36.6	36.6	0.0	59.2	7.7	72.4
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
10th %ile Green (s)	28.1	28.1	28.1	28.1	0.0	80.9	0.0	80.9
10th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Skip	Coord

Intersection Summary

Cycle Length: 120




















Actuated Cycle Length: 120

Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 8: Tucker Norcross Rd & Britt Rd

2a. No-Build AM
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	5	1	340	1	209	4	438	82	76	591	16
Future Volume (veh/h)	35	5	1	340	1	209	4	438	82	76	591	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	6	1	382	1	235	4	492	92	85	664	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	30	4	482	2	443	433	1624	302	462	2040	55
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.00	0.18	0.18	0.04	0.58	0.58
Sat Flow, veh/h	567	107	15	1409	7	1579	1781	2991	556	1781	3534	96
Grp Volume(v), veh/h	46	0	0	382	0	236	4	291	293	85	334	348
Grp Sat Flow(s),veh/h/ln	688	0	0	1409	0	1586	1781	1777	1770	1781	1777	1853
Q Serve(g_s), s	3.4	0.0	0.0	10.4	0.0	15.1	0.1	17.1	17.2	2.5	11.7	11.7
Cycle Q Clear(g_c), s	18.5	0.0	0.0	28.9	0.0	15.1	0.1	17.1	17.2	2.5	11.7	11.7
Prop In Lane	0.85		0.02	1.00		1.00	1.00		0.31	1.00		0.05
Lane Grp Cap(c), veh/h	248	0	0	482	0	444	433	965	961	462	1025	1069
V/C Ratio(X)	0.19	0.00	0.00	0.79	0.00	0.53	0.01	0.30	0.30	0.18	0.33	0.33
Avail Cap(c_a), veh/h	480	0	0	751	0	747	565	965	961	533	1025	1069
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.99	0.99	0.94	0.94	0.94
Uniform Delay (d), s/veh	42.3	0.0	0.0	41.1	0.0	36.5	12.6	29.5	29.6	12.2	13.2	13.2
Incr Delay (d2), s/veh	0.4	0.0	0.0	3.2	0.0	1.0	0.0	0.8	0.8	0.2	0.8	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	1.2	0.0	0.0	11.0	0.0	5.9	0.0	8.3	8.4	0.9	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	0.0	0.0	44.3	0.0	37.5	12.6	30.3	30.4	12.4	14.0	14.0
LnGrp LOS	D	A	A	D	A	D	B	C	C	B	B	B
Approach Vol, veh/h		46			618			588			767	
Approach Delay, s/veh		42.7			41.7			30.2			13.8	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	70.7		39.1	6.1	74.8		39.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	95	37.5		56.5	9.5	37.5		56.5				
Max Q Clear Time (g_c+l1),s	45	19.2		20.5	2.1	13.7		30.9				
Green Ext Time (p_c), s	0.1	5.8		0.3	0.0	7.7		2.7				
Intersection Summary												
HCM 6th Ctrl Delay				27.8								
HCM 6th LOS				C								

Timings
9: Chamblee Tucker Rd & Tucker Norcross Rd

2a. No-Build AM
01/26/2021



Lane Group	EBL	EBT	EBR	NBL	NBT	SBT	SBR	Ø8
Lane Configurations								
Traffic Volume (vph)	139	1	67	259	371	275	506	
Future Volume (vph)	139	1	67	259	371	275	506	
Lane Group Flow (vph)	74	76	72	278	399	296	544	
Turn Type	Split	NA	pt+ov	pm+pt	NA	NA	Perm	
Protected Phases	4	4	4 5	5	2	6		8
Permitted Phases				2			6	
Detector Phase	4	4	4 5	5	2	6	6	
Switch Phase								
Minimum Initial (s)	6.0	6.0		5.0	15.0	15.0	15.0	6.0
Minimum Split (s)	35.5	35.5		15.0	25.5	29.5	29.5	23.5
Total Split (s)	35.5	35.5		20.0	61.0	41.0	41.0	23.5
Total Split (%)	29.6%	29.6%		16.7%	50.8%	34.2%	34.2%	20%
Yellow Time (s)	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
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	None
v/c Ratio	0.49	0.50	0.21	0.32	0.14	0.12	0.43	
Control Delay	62.1	62.7	38.2	3.6	2.5	8.2	5.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
Total Delay	62.1	62.7	38.2	3.6	2.5	8.2	6.3	
Queue Length 50th (ft)	57	60	46	36	25	18	17	
Queue Length 95th (ft)	108	110	81	69	45	110	269	
Internal Link Dist (ft)		1177			1441	446		
Turn Bay Length (ft)	115			155			190	
Base Capacity (vph)	420	421	417	909	2896	2446	1262	
Starvation Cap Reductn	0	0	0	0	0	0	293	
Spillback Cap Reductn	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.18	0.18	0.17	0.31	0.14	0.12	0.56	

Intersection Summary

Cycle Length: 120

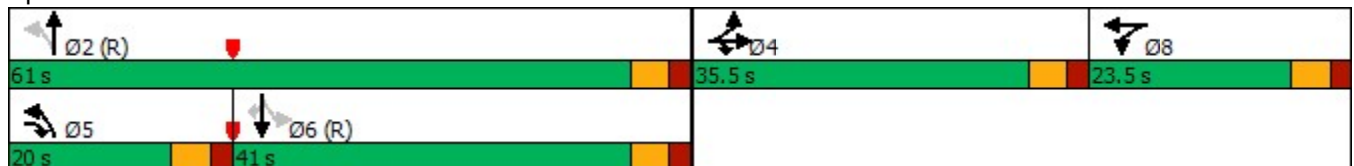
Actuated Cycle Length: 120

Offset: 108 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Chamblee Tucker Rd & Tucker Norcross Rd



Phasings
 9: Chamblee Tucker Rd & Tucker Norcross Rd

2a. No-Build AM
 01/26/2021



Lane Group	EBL	EBT	EBR	NBL	NBT	SBT	SBR	Ø8
Protected Phases	4	4	4 5	5	2	6		8
Permitted Phases				2			6	
Minimum Initial (s)	6.0	6.0		5.0	15.0	15.0	15.0	6.0
Minimum Split (s)	35.5	35.5		15.0	25.5	29.5	29.5	23.5
Total Split (s)	35.5	35.5		20.0	61.0	41.0	41.0	23.5
Total Split (%)	29.6%	29.6%		16.7%	50.8%	34.2%	34.2%	20%
Maximum Green (s)	30.0	30.0		14.5	55.5	35.5	35.5	18.0
Yellow Time (s)	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
Lead/Lag				Lead		Lag	Lag	
Lead-Lag Optimize?				Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	5.0	5.0	5.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None		None	C-Min	C-Min	C-Min	None
Walk Time (s)	7.0	7.0			7.0	7.0	7.0	
Flash Dont Walk (s)	23.0	23.0			13.0	17.0	17.0	
Pedestrian Calls (#/hr)	0	0			0	0	0	
90th %ile Green (s)	15.1	15.1		12.9	93.9	75.5	75.5	0.0
90th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
70th %ile Green (s)	12.5	12.5		10.8	96.5	80.2	80.2	0.0
70th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
50th %ile Green (s)	10.8	10.8		9.5	98.2	83.2	83.2	0.0
50th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
30th %ile Green (s)	9.0	9.0		8.4	100.0	86.1	86.1	0.0
30th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip
10th %ile Green (s)	6.5	6.5		7.2	102.5	89.8	89.8	0.0
10th %ile Term Code	Gap	Gap		Gap	Coord	Coord	Coord	Skip

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 108 (90%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 9: Chamblee Tucker Rd & Tucker Norcross Rd

2a. No-Build AM
 01/26/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	1	67	0	0	0	259	371	0	0	275	506
Future Volume (veh/h)	139	1	67	0	0	0	259	371	0	0	275	506
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	150	0	72	0	0	0	278	399	0	0	296	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	0	189	0	2	0	963	3000	0	60	2641	
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.06	0.84	0.00	0.00	1.00	0.00
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	986	3554	1585
Grp Volume(v), veh/h	150	0	72	0	0	0	278	399	0	0	296	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	986	1777	1585
Q Serve(g_s), s	4.9	0.0	5.0	0.0	0.0	0.0	4.1	2.4	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.9	0.0	5.0	0.0	0.0	0.0	4.1	2.4	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	0	189	0	2	0	963	3000	0	60	2641	
V/C Ratio(X)	0.66	0.00	0.38	0.00	0.00	0.00	0.29	0.13	0.00	0.00	0.11	
Avail Cap(c_a), veh/h	891	0	484	0	281	0	1080	3000	0	60	2641	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.84	0.00
Uniform Delay (d), s/veh	54.9	0.0	48.7	0.0	0.0	0.0	2.5	1.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	1.3	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.1	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	2.3	0.0	2.1	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	0.0	50.0	0.0	0.0	0.0	2.6	1.7	0.0	0.0	0.1	0.0
LnGrp LOS	E	A	D	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		222			0			677			296	A
Approach Delay, s/veh		55.4			0.0			2.1			0.1	
Approach LOS		E						A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		106.8		13.2	12.1	94.7		0.0				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		55.5		30.0	14.5	35.5		18.0				
Max Q Clear Time (g_c+l1), s		4.4		7.0	6.1	2.0		0.0				
Green Ext Time (p_c), s		5.5		0.7	0.5	3.6		0.0				

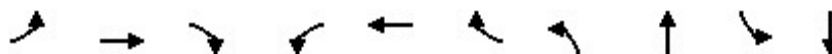
Intersection Summary

HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Old Norcross Tucker Rd & Britt Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↘
Traffic Volume (vph)	48	422	106	81	266	91	111	188	106	172
Future Volume (vph)	48	422	106	81	266	91	111	188	106	172
Lane Group Flow (vph)	49	435	109	84	274	94	114	282	109	199
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	63.0	63.0	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
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	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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
v/c Ratio	0.06	0.33	0.10	0.13	0.21	0.08	0.67	0.76	1.06	0.54
Control Delay	8.9	11.8	5.1	3.9	3.4	0.8	62.7	54.2	132.3	39.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	11.8	5.1	3.9	3.4	0.8	62.7	54.2	132.3	39.0
Queue Length 50th (ft)	13	162	11	6	21	0	83	191	~92	129
Queue Length 95th (ft)	m18	m263	m21	m25	65	m0	136	263	m#149	202
Internal Link Dist (ft)		1206			839			425		685
Turn Bay Length (ft)	150		100	100		90	90		80	
Base Capacity (vph)	775	1323	1145	630	1323	1150	368	775	225	789
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	0.06	0.33	0.10	0.13	0.21	0.08	0.31	0.36	0.48	0.25

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

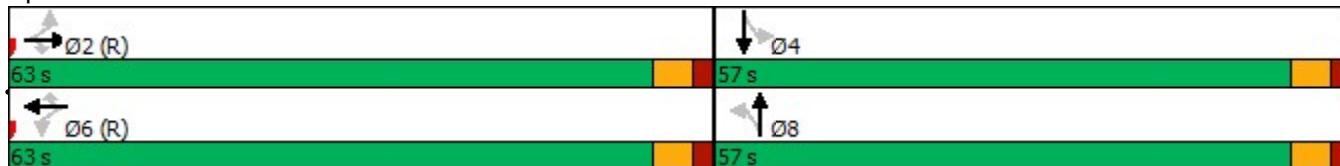
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	63.0	63.0	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Maximum Green (s)	57.5	57.5	57.5	57.5	57.5	57.5	51.5	51.5	51.5	51.5
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	76.1	76.1	76.1	76.1	76.1	76.1	32.9	32.9	32.9	32.9
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	81.9	81.9	81.9	81.9	81.9	81.9	27.1	27.1	27.1	27.1
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	85.4	85.4	85.4	85.4	85.4	85.4	23.6	23.6	23.6	23.6
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	88.9	88.9	88.9	88.9	88.9	88.9	20.1	20.1	20.1	20.1
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
10th %ile Green (s)	93.9	93.9	93.9	93.9	93.9	93.9	15.1	15.1	15.1	15.1
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold

Intersection Summary

Cycle Length: 120

























Actuated Cycle Length: 120

Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 1: Old Norcross Tucker Rd & Britt Rd

2c. No-Build School Dismissal
 01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	422	106	81	266	91	111	188	85	106	172	21
Future Volume (veh/h)	48	422	106	81	266	91	111	188	85	106	172	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	435	109	84	274	94	114	194	88	109	177	22
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	651	1204	1020	522	1204	1020	267	323	146	198	432	54
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1014	1870	1585	862	1870	1585	1183	1218	553	1097	1631	203
Grp Volume(v), veh/h	49	435	109	84	274	94	114	0	282	109	0	199
Grp Sat Flow(s),veh/h/ln	1014	1870	1585	862	1870	1585	1183	0	1771	1097	0	1834
Q Serve(g_s), s	2.5	13.0	3.2	6.0	7.3	2.7	10.5	0.0	16.7	11.6	0.0	10.7
Cycle Q Clear(g_c), s	9.9	13.0	3.2	19.0	7.3	2.7	21.3	0.0	16.7	28.3	0.0	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.11
Lane Grp Cap(c), veh/h	651	1204	1020	522	1204	1020	267	0	469	198	0	485
V/C Ratio(X)	0.08	0.36	0.11	0.16	0.23	0.09	0.43	0.00	0.60	0.55	0.00	0.41
Avail Cap(c_a), veh/h	651	1204	1020	522	1204	1020	462	0	760	378	0	787
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	9.9	8.2	14.3	8.9	8.1	45.2	0.0	38.6	50.9	0.0	36.4
Incr Delay (d2), s/veh	0.2	0.8	0.2	0.7	0.4	0.2	1.1	0.0	1.2	2.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.2	1.1	1.2	2.9	0.9	3.2	0.0	7.3	3.3	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	10.8	8.4	15.0	9.4	8.3	46.2	0.0	39.8	53.3	0.0	36.9
LnGrp LOS	B	B	A	B	A	A	D	A	D	D	A	D
Approach Vol, veh/h		593			452			396			308	
Approach Delay, s/veh		10.4			10.2			41.7			42.7	
Approach LOS		B			B			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		82.7		37.3		82.7		37.3				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		57.5		51.5		57.5		51.5				
Max Q Clear Time (g_c+l1), s		15.0		30.3		21.0		23.3				
Green Ext Time (p_c), s		7.7		1.5		5.2		2.1				
Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

Timings
3: Old Norcross Tucker Rd & Cherokee Dr



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↕		↕		↕	↗	↘
Traffic Volume (vph)	0	48	0	1	217	140	359
Future Volume (vph)	0	48	0	1	217	140	359
Lane Group Flow (vph)	1	0	235	0	282	152	390
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6
Permitted Phases		8		2		6	
Detector Phase	4	8	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.1	23.1	23.1	23.9	23.9	23.3	23.3
Total Split (s)	36.0	36.0	36.0	54.0	54.0	54.0	54.0
Total Split (%)	40.0%	40.0%	40.0%	60.0%	60.0%	60.0%	60.0%
Yellow Time (s)	3.1	3.1	3.1	3.9	3.9	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.9	1.9	1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.7		4.7		5.8	4.8	4.8
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	Min	Min	Min	Min
v/c Ratio	0.00		0.51		0.31	0.27	0.40
Control Delay	0.0		9.0		6.3	6.4	6.8
Queue Delay	0.0		0.0		0.0	0.0	0.0
Total Delay	0.0		9.0		6.3	6.4	6.8
Queue Length 50th (ft)	0		8		23	12	33
Queue Length 95th (ft)	0		55		66	41	91
Internal Link Dist (ft)	38		795		578		427
Turn Bay Length (ft)						90	
Base Capacity (vph)	1494		1404		1820	1093	1863
Starvation Cap Reductn	0		0		0	0	0
Spillback Cap Reductn	0		0		0	0	0
Storage Cap Reductn	0		0		0	0	0
Reduced v/c Ratio	0.00		0.17		0.15	0.14	0.21

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 35.2
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr



Phasings
3: Old Norcross Tucker Rd & Cherokee Dr



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	4		8		2		6
Permitted Phases		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.1	23.1	23.1	23.9	23.9	23.3	23.3
Total Split (s)	36.0	36.0	36.0	54.0	54.0	54.0	54.0
Total Split (%)	40.0%	40.0%	40.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	31.3	31.3	31.3	48.2	48.2	49.2	49.2
Yellow Time (s)	3.1	3.1	3.1	3.9	3.9	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.9	1.9	1.5	1.5
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	6.0	6.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	Min	Min
Walk Time (s)	7.0						
Flash Dont Walk (s)	10.0						
Pedestrian Calls (#/hr)	0						
90th %ile Green (s)	11.1	11.1	11.1	25.1	25.1	26.1	26.1
90th %ile Term Code	Hold	Gap	Gap	Hold	Hold	Gap	Gap
70th %ile Green (s)	7.6	7.6	7.6	18.4	18.4	19.4	19.4
70th %ile Term Code	Hold	Gap	Gap	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.0	6.0	6.0	15.4	15.4	16.4	16.4
50th %ile Term Code	Hold	Min	Min	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.0	6.0	6.0	13.2	13.2	14.2	14.2
30th %ile Term Code	Hold	Min	Min	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.0	6.0	6.0	14.9	14.9	15.9	15.9
10th %ile Term Code	Hold	Min	Min	Dwell	Dwell	Dwell	Dwell

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 46.7
70th %ile Actuated Cycle: 36.5
50th %ile Actuated Cycle: 31.9
30th %ile Actuated Cycle: 29.7
10th %ile Actuated Cycle: 31.4

HCM 6th Signalized Intersection Summary
 3: Old Norcross Tucker Rd & Cherokee Dr

2c. No-Build School Dismissal
 01/26/2021

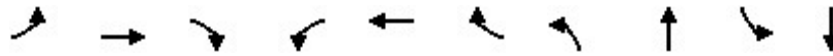
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations																
Traffic Volume (veh/h)	0	0	1	48	0	168	1	217	41	140	359	0				
Future Volume (veh/h)	0	0	1	48	0	168	1	217	41	140	359	0				
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0				
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	0	0	1	52	0	183	1	236	45	152	390	0				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2				
Cap, veh/h	0	0	323	183	21	250	110	729	139	808	894	0				
Arrive On Green	0.00	0.00	0.20	0.20	0.00	0.20	0.48	0.48	0.48	0.48	0.48	0.00				
Sat Flow, veh/h	0	0	1585	244	104	1224	1	1526	290	1098	1870	0				
Grp Volume(v), veh/h	0	0	1	235	0	0	282	0	0	152	390	0				
Grp Sat Flow(s),veh/h/ln	0	0	1585	1572	0	0	1817	0	0	1098	1870	0				
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0				
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.6	0.0	0.0	3.2	0.0	0.0	1.6	4.5	0.0				
Prop In Lane	0.00		1.00	0.22		0.78	0.00		0.16	1.00		0.00				
Lane Grp Cap(c), veh/h	0	0	324	454	0	0	978	0	0	808	894	0				
V/C Ratio(X)	0.00	0.00	0.00	0.52	0.00	0.00	0.29	0.00	0.00	0.19	0.44	0.00				
Avail Cap(c_a), veh/h	0	0	1502	1602	0	0	2757	0	0	1920	2786	0				
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)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00				
Uniform Delay (d), s/veh	0.0	0.0	10.5	12.2	0.0	0.0	5.3	0.0	0.0	4.9	5.7	0.0				
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0	0.0	0.4	1.2	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	0.0	0.0	0.0	1.3	0.0	0.0	0.7	0.0	0.0	0.4	1.1	0.0				
Unsig. Movement Delay, s/veh																
LnGrp Delay(d),s/veh	0.0	0.0	10.5	12.6	0.0	0.0	5.9	0.0	0.0	5.3	6.9	0.0				
LnGrp LOS	A	A	B	B	A	A	A	A	A	A	A	A				
Approach Vol, veh/h																
	1				235				282				542			
Approach Delay, s/veh																
	10.5				12.6				5.9				6.5			
Approach LOS																
	B				B				A				A			
Timer - Assigned Phs																
	2				4				6				8			
Phs Duration (G+Y+Rc), s																
	21.6				11.4				21.6				11.4			
Change Period (Y+Rc), s																
	* 5.8				* 4.7				* 5.8				* 4.7			
Max Green Setting (Gmax), s																
	* 48				* 31				* 49				* 31			
Max Q Clear Time (g_c+l1), s																
	5.2				2.0				6.5				6.6			
Green Ext Time (p_c), s																
	4.7				0.0				9.2				1.0			
Intersection Summary																
HCM 6th Ctrl Delay			7.7													
HCM 6th LOS			A													
Notes																
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.																

Future “Build” Intersections Analysis

Timings

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021

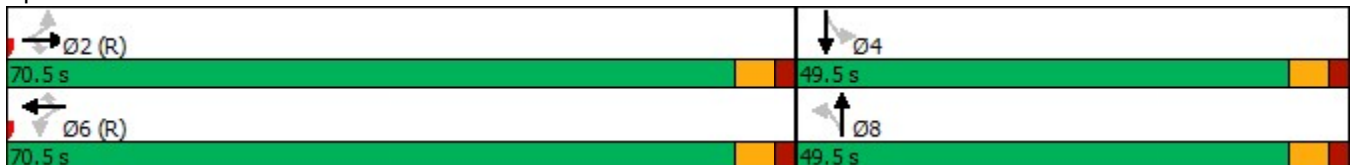


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↗	↘	↗
Traffic Volume (vph)	52	159	98	99	718	101	160	216	85	217
Future Volume (vph)	52	159	98	99	718	101	160	216	85	217
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	70.5	70.5	70.5	70.5	70.5	70.5	49.5	49.5	49.5	49.5
Total Split (%)	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	41.3%	41.3%	41.3%	41.3%
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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	76.2	76.2	76.2	76.2	76.2	76.2	32.8	32.8	32.8	32.8
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64	0.64	0.27	0.27	0.27	0.27
v/c Ratio	0.23	0.15	0.11	0.15	0.68	0.11	1.08	0.70	0.66	0.65
Control Delay	11.7	7.2	1.4	4.6	8.7	1.5	131.5	43.4	62.6	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	7.2	1.4	4.6	8.7	1.5	131.5	43.4	62.6	46.1
LOS	B	A	A	A	A	A	F	D	E	D
Approach Delay		6.1			7.5			73.2		49.8
Approach LOS		A			A			E		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 29.9
 Intersection LOS: C
 Intersection Capacity Utilization 93.2%
 ICU Level of Service F
 Analysis Period (min) 15

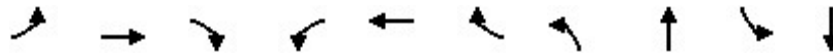
Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	70.5	70.5	70.5	70.5	70.5	70.5	49.5	49.5	49.5	49.5
Total Split (%)	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	41.3%	41.3%	41.3%	41.3%
Maximum Green (s)	65.0	65.0	65.0	65.0	65.0	65.0	44.0	44.0	44.0	44.0
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	65.0	65.0	65.0	65.0	65.0	65.0	44.0	44.0	44.0	44.0
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Max	Max	Hold	Hold
70th %ile Green (s)	69.4	69.4	69.4	69.4	69.4	69.4	39.6	39.6	39.6	39.6
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	74.9	74.9	74.9	74.9	74.9	74.9	34.1	34.1	34.1	34.1
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	81.7	81.7	81.7	81.7	81.7	81.7	27.3	27.3	27.3	27.3
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
10th %ile Green (s)	89.9	89.9	89.9	89.9	89.9	89.9	19.1	19.1	19.1	19.1
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔	↔	↑	↔	↔	↑	↔
Traffic Volume (veh/h)	52	159	98	99	718	101	160	216	97	85	217	71
Future Volume (veh/h)	52	159	98	99	718	101	160	216	97	85	217	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	179	110	111	807	113	180	243	109	96	244	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	1065	903	631	1065	903	264	414	186	240	457	150
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	607	1870	1585	1090	1870	1585	1056	1223	549	1029	1349	442
Grp Volume(v), veh/h	58	179	110	111	807	113	180	0	352	96	0	324
Grp Sat Flow(s),veh/h/ln	607	1870	1585	1090	1870	1585	1056	0	1772	1029	0	1791
Q Serve(g_s), s	9.6	5.5	3.9	6.5	39.2	4.0	19.9	0.0	19.7	10.2	0.0	17.5
Cycle Q Clear(g_c), s	48.8	5.5	3.9	11.9	39.2	4.0	37.4	0.0	19.7	29.9	0.0	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.25
Lane Grp Cap(c), veh/h	207	1065	903	631	1065	903	264	0	600	240	0	607
V/C Ratio(X)	0.28	0.17	0.12	0.18	0.76	0.13	0.68	0.00	0.59	0.40	0.00	0.53
Avail Cap(c_a), veh/h	207	1065	903	631	1065	903	293	0	650	269	0	657
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	12.3	12.0	15.1	19.6	12.0	47.1	0.0	32.7	45.0	0.0	32.0
Incr Delay (d2), s/veh	3.3	0.3	0.3	0.6	5.1	0.3	5.6	0.0	1.2	1.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.3	1.4	1.7	17.1	1.4	5.6	0.0	8.5	2.7	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	12.6	12.2	15.8	24.6	12.3	52.7	0.0	33.9	46.1	0.0	32.7
LnGrp LOS	D	B	B	B	C	B	D	A	C	D	A	C
Approach Vol, veh/h		347			1031			532			420	
Approach Delay, s/veh		17.3			22.3			40.3			35.8	
Approach LOS		B			C			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.8		46.2		73.8		46.2				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		65.0		44.0		65.0		44.0				
Max Q Clear Time (g_c+l1), s		50.8		31.9		41.2		39.4				
Green Ext Time (p_c), s		2.8		1.9		12.7		1.2				
Intersection Summary												
HCM 6th Ctrl Delay				28.1								
HCM 6th LOS				C								

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	6	0	7	14	0	23	4	442	5	8	399	5
Future Vol, veh/h	6	0	7	14	0	23	4	442	5	8	399	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	100	-	0
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	8	16	0	26	4	497	6	9	448	6

Major/Minor	Minor2	Minor1		Major1		Major2						
Conflicting Flow All	987	977	448	978	977	497	454	0	0	503	0	0
Stage 1	466	466	-	505	505	-	-	-	-	-	-	-
Stage 2	521	511	-	473	472	-	-	-	-	-	-	-
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 Maneuve	226	251	611	230	251	573	1107	-	-	1061	-	-
Stage 1	577	562	-	549	540	-	-	-	-	-	-	-
Stage 2	539	537	-	572	559	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuve	214	248	611	225	248	573	1107	-	-	1061	-	-
Mov Cap-2 Maneuve	214	248	-	225	248	-	-	-	-	-	-	-
Stage 1	574	558	-	546	537	-	-	-	-	-	-	-
Stage 2	512	534	-	560	555	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.5	16.3	0.1	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1107	-	-	329	361	1061	-	-
HCM Lane V/C Ratio	0.004	-	-	0.044	0.115	0.008	-	-
HCM Control Delay (s)	8.3	0	-	16.5	16.3	8.4	-	-
HCM Lane LOS	A	A	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Timings

3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021

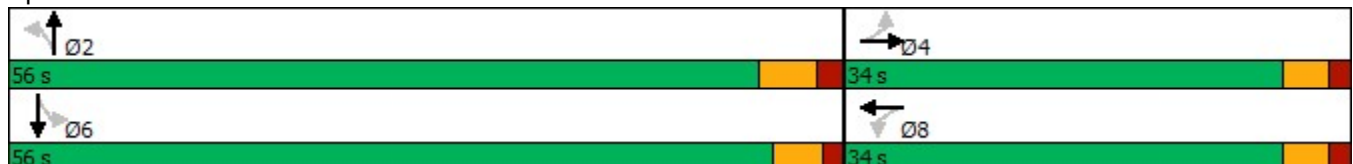


Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Lane Configurations		↕	↕	↗	↘	
Traffic Volume (vph)	63	0	156	294	124	
Future Volume (vph)	63	0	156	294	124	
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Detector Phase	8	8	2	6	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	34.0	34.0	56.0	56.0	56.0	34.0
Total Split (%)	37.8%	37.8%	62.2%	62.2%	62.2%	38%
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.7	5.8	4.8	4.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	None
Act Effct Green (s)		9.3	20.1	21.2	21.2	
Actuated g/C Ratio		0.23	0.49	0.52	0.52	
v/c Ratio		0.64	0.28	0.55	0.14	
Control Delay		11.9	6.0	11.1	5.8	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		11.9	6.0	11.1	5.8	
LOS		B	A	B	A	
Approach Delay		11.9	6.0		9.5	
Approach LOS		B	A		A	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 40.8
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 9.4
 Intersection LOS: A
 Intersection Capacity Utilization 61.0%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr



Phasings

3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021



Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	34.0	34.0	56.0	56.0	56.0	34.0
Total Split (%)	37.8%	37.8%	62.2%	62.2%	62.2%	38%
Maximum Green (s)	29.3	29.3	50.2	51.2	51.2	29.3
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	Min	Min	None
Walk Time (s)						7.0
Flash Dont Walk (s)						10.0
Pedestrian Calls (#/hr)						0
90th %ile Green (s)	17.6	17.6	35.2	36.2	36.2	17.6
90th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
70th %ile Green (s)	10.9	10.9	23.6	24.6	24.6	10.9
70th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
50th %ile Green (s)	7.8	7.8	18.3	19.3	19.3	7.8
50th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
30th %ile Green (s)	6.0	6.0	14.1	15.1	15.1	6.0
30th %ile Term Code	Min	Min	Hold	Gap	Gap	Hold
10th %ile Green (s)	6.0	6.0	12.0	13.0	13.0	6.0
10th %ile Term Code	Min	Min	Min	Hold	Hold	Hold

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 40.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 63.3
70th %ile Actuated Cycle: 45
50th %ile Actuated Cycle: 36.6
30th %ile Actuated Cycle: 30.6
10th %ile Actuated Cycle: 28.5

HCM 6th Signalized Intersection Summary 3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021

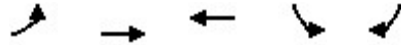


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔	↔	↔
Traffic Volume (veh/h)	0	0	0	63	0	256	0	156	74	294	124	0
Future Volume (veh/h)	0	0	0	63	0	256	0	156	74	294	124	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	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	0	0	0	68	0	278	0	170	80	320	135	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	515	0	152	26	348	0	598	281	624	930	0
Arrive On Green	0.00	0.00	0.00	0.28	0.00	0.28	0.00	0.50	0.50	0.50	0.50	0.00
Sat Flow, veh/h	0	1870	0	214	95	1265	0	1203	566	1130	1870	0
Grp Volume(v), veh/h	0	0	0	346	0	0	0	0	250	320	135	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1574	0	0	0	0	1768	1130	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	3.8	10.7	1.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	3.8	14.5	1.8	0.0
Prop In Lane	0.00		0.00	0.20		0.80	0.00		0.32	1.00		0.00
Lane Grp Cap(c), veh/h	0	515	0	527	0	0	0	0	879	624	930	0
V/C Ratio(X)	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.28	0.51	0.15	0.00
Avail Cap(c_a), veh/h	0	1187	0	1083	0	0	0	0	1923	1315	2074	0
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(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0	6.8	11.0	6.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.6	2.4	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	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	1.1	2.4	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	7.4	13.4	6.5	0.0
LnGrp LOS	A	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		0			346			250			455	
Approach Delay, s/veh		0.0			16.0			7.4			11.4	
Approach LOS					B			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.8		17.4		28.8		17.4				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 50		* 29		* 51		* 29				
Max Q Clear Time (g_c+l1), s		5.8		0.0		16.5		11.4				
Green Ext Time (p_c), s		4.2		0.0		6.4		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				12.0								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Phasings

4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

01/26/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	17.0	90.4	73.4	29.6	17.0
Total Split (%)	14.2%	75.3%	61.2%	24.7%	14.2%
Maximum Green (s)	11.5	84.9	67.9	24.1	11.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	None
Walk Time (s)			7.0	7.0	
Flash Dont Walk (s)			17.0	17.0	
Pedestrian Calls (#/hr)			0	0	
90th %ile Green (s)	18.2	96.0	72.3	13.0	18.2
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap
70th %ile Green (s)	15.8	98.2	76.9	10.8	15.8
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap
50th %ile Green (s)	13.8	99.6	80.3	9.4	13.8
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap
30th %ile Green (s)	11.9	101.1	83.7	7.9	11.9
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap
10th %ile Green (s)	11.5	114.5	97.5	0.0	11.5
10th %ile Term Code	Max	Coord	Coord	Skip	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗	↑↑	↑↑		↗	↗
Traffic Volume (veh/h)	157	513	1629	42	57	242
Future Volume (veh/h)	157	513	1629	42	57	242
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	534	1697	44	59	252
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	233	2630	2289	59	300	342
Arrive On Green	0.05	0.74	0.65	0.65	0.17	0.17
Sat Flow, veh/h	1781	3647	3633	92	1781	1585
Grp Volume(v), veh/h	164	534	850	891	59	252
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1854	1781	1585
Q Serve(g_s), s	3.5	5.5	38.8	39.3	3.4	17.8
Cycle Q Clear(g_c), s	3.5	5.5	38.8	39.3	3.4	17.8
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	233	2630	1149	1199	300	342
V/C Ratio(X)	0.70	0.20	0.74	0.74	0.20	0.74
Avail Cap(c_a), veh/h	319	2630	1149	1199	358	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	4.8	14.3	14.4	42.9	43.9
Incr Delay (d2), s/veh	4.2	0.2	4.3	4.2	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	1.7	14.7	15.5	1.5	15.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.8	4.9	18.6	18.6	43.2	50.0
LnGrp LOS	C	A	B	B	D	D
Approach Vol, veh/h		698	1741		311	
Approach Delay, s/veh		9.8	18.6		48.7	
Approach LOS		A	B		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.3		25.7	11.2	83.1
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		84.9		24.1	11.5	67.9
Max Q Clear Time (g_c+l1), s		7.5		19.8	5.5	41.3
Green Ext Time (p_c), s		7.7		0.4	0.2	22.1
Intersection Summary						
HCM 6th Ctrl Delay			19.8			
HCM 6th LOS			B			

Timings

5: Jimmy Carter Blvd & Britt Rd/Williams Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑	↗	↙	↑	↗	↙	↕	↙	↕	↗
Traffic Volume (vph)	77	116	140	77	371	52	302	955	29	572	161
Future Volume (vph)	77	116	140	77	371	52	302	955	29	572	161
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	38.0	38.0	15.0	38.0	38.0	33.0	52.0	15.0	34.0	34.0
Total Split (%)	12.5%	31.7%	31.7%	12.5%	31.7%	31.7%	27.5%	43.3%	12.5%	28.3%	28.3%
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	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	35.9	28.6	28.6	35.6	28.4	28.4	24.5	60.5	7.5	38.8	38.8
Actuated g/C Ratio	0.30	0.24	0.24	0.30	0.24	0.24	0.20	0.50	0.06	0.32	0.32
v/c Ratio	0.39	0.27	0.28	0.20	0.86	0.10	0.85	0.59	0.27	0.51	0.26
Control Delay	18.7	24.1	6.7	26.3	63.0	0.4	67.6	26.0	59.3	37.8	5.9
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	18.7	24.1	6.7	26.3	63.0	0.4	67.6	26.0	59.3	37.8	5.9
LOS	B	C	A	C	E	A	E	C	E	D	A
Approach Delay		15.5			50.9			35.5		31.9	
Approach LOS		B			D			D		C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 34.9 Intersection LOS: C
 Intersection Capacity Utilization 74.7% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: Jimmy Carter Blvd & Britt Rd/Williams Rd



Phasings

5: Jimmy Carter Blvd & Britt Rd/Williams Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	15.0	38.0	38.0	15.0	38.0	38.0	33.0	52.0	15.0	34.0	34.0
Total Split (%)	12.5%	31.7%	31.7%	12.5%	31.7%	31.7%	27.5%	43.3%	12.5%	28.3%	28.3%
Maximum Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	27.5	46.5	9.5	28.5	28.5
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
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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		25.0	25.0		21.0	21.0		17.0		13.0	13.0
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0
90th %ile Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	27.5	46.5	9.5	28.5	28.5
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Max	Coord	Coord
70th %ile Green (s)	9.5	32.5	32.5	9.5	32.5	32.5	27.5	47.5	8.5	28.5	28.5
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Gap	Coord	Coord
50th %ile Green (s)	9.5	30.1	30.1	9.0	29.6	29.6	26.3	51.5	7.4	32.6	32.6
50th %ile Term Code	Max	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Gap	Coord	Coord
30th %ile Green (s)	8.4	26.6	26.6	8.0	26.2	26.2	23.1	68.9	0.0	40.3	40.3
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Skip	Coord	Coord
10th %ile Green (s)	0.0	21.1	21.1	0.0	21.1	21.1	18.3	87.9	0.0	64.1	64.1
10th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Gap	Coord	Skip	Coord	Coord

Intersection Summary

Cycle Length: 120

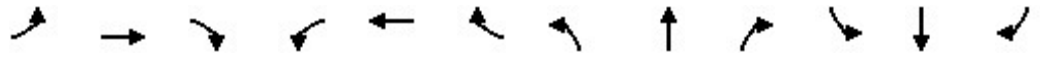
Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
5: Jimmy Carter Blvd & Britt Rd/Williams Rd

01/26/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↔		↖	↑↑	↗
Traffic Volume (veh/h)	77	116	140	77	371	52	302	955	63	29	572	161
Future Volume (veh/h)	77	116	140	77	371	52	302	955	63	29	572	161
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	79	118	0	79	379	0	308	974	64	30	584	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	419		363	419		338	1756	115	47	1264	
Arrive On Green	0.05	0.22	0.00	0.05	0.22	0.00	0.19	0.52	0.52	0.03	0.36	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3385	222	1781	3554	1585
Grp Volume(v), veh/h	79	118	0	79	379	0	308	511	527	30	584	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1830	1781	1777	1585
Q Serve(g_s), s	4.1	6.3	0.0	4.1	23.7	0.0	20.3	23.3	23.3	2.0	15.2	0.0
Cycle Q Clear(g_c), s	4.1	6.3	0.0	4.1	23.7	0.0	20.3	23.3	23.3	2.0	15.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	171	419		363	419		338	922	950	47	1264	
V/C Ratio(X)	0.46	0.28		0.22	0.90		0.91	0.55	0.55	0.64	0.46	
Avail Cap(c_a), veh/h	228	507		420	507		408	922	950	141	1264	
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(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.9	38.5	0.0	33.5	45.3	0.0	47.6	19.5	19.5	57.9	29.8	0.0
Incr Delay (d2), s/veh	1.9	0.4	0.0	0.3	17.4	0.0	21.9	2.4	2.3	13.6	1.2	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	1.8	2.9	0.0	1.8	12.9	0.0	10.8	9.6	9.8	1.1	6.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	38.9	0.0	33.8	62.7	0.0	69.5	21.9	21.8	71.4	31.0	0.0
LnGrp LOS	D	D		C	E		E	C	C	E	C	
Approach Vol, veh/h		197	A		458	A		1346			614	A
Approach Delay, s/veh		38.5			57.7			32.8			33.0	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	67.8	11.2	32.4	28.3	48.2	11.2	32.4				
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	35	46.5	9.5	32.5	27.5	28.5	9.5	32.5				
Max Q Clear Time (g_c+l1),s	4.0	25.3	6.1	8.3	22.3	17.2	6.1	25.7				
Green Ext Time (p_c), s	0.0	11.4	0.0	0.5	0.4	4.4	0.0	1.3				

Intersection Summary												
HCM 6th Ctrl Delay											37.6	
HCM 6th LOS											D	

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

Phasings

6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

01/26/2021



Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	42.0	27.0	51.0	51.0	27.0	78.0
Total Split (%)	35.0%	22.5%	42.5%	42.5%	22.5%	65.0%
Maximum Green (s)	36.5	21.5	45.5	45.5	21.5	72.5
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
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	23.0		22.0	22.0		17.0
Pedestrian Calls (#/hr)	0		0	0		0
90th %ile Green (s)	17.6	15.4	70.5	70.5	15.4	91.4
90th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
70th %ile Green (s)	14.7	13.2	75.6	75.6	13.2	94.3
70th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
50th %ile Green (s)	12.7	11.6	79.2	79.2	11.6	96.3
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	10.7	10.0	82.8	82.8	10.0	98.3
30th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	7.8	8.0	87.7	87.7	8.0	101.2
10th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120

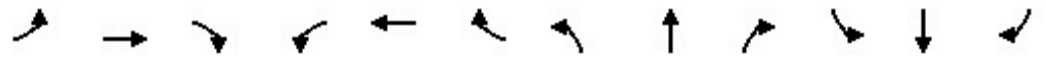
Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

01/26/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↩	↩	↩	↕↕		↩	↕↕	
Traffic Volume (veh/h)	0	0	0	94	12	234	1	387	66	176	556	51
Future Volume (veh/h)	0	0	0	94	12	234	1	387	66	176	556	51
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/l				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				97	12	241	1	399	68	181	573	53
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				267	33	348	574	1954	330	698	2437	225
Arrive On Green				0.17	0.17	0.17	0.64	0.64	0.64	0.05	0.74	0.74
Sat Flow, veh/h				1594	197	1585	799	3041	514	1781	3289	304
Grp Volume(v), veh/h				109	0	241	1	232	235	181	309	317
Grp Sat Flow(s),veh/h/l				1791	0	1585	799	1777	1778	1781	1777	1816
Q Serve(g_s), s				6.5	0.0	16.8	0.1	6.4	6.5	3.9	6.5	6.6
Cycle Q Clear(g_c), s				6.5	0.0	16.8	0.1	6.4	6.5	3.9	6.5	6.6
Prop In Lane				0.89		1.00	1.00		0.29	1.00		0.17
Lane Grp Cap(c), veh/h				300	0	348	574	1142	1143	698	1317	1346
V/C Ratio(X)				0.36	0.00	0.69	0.00	0.20	0.21	0.26	0.23	0.24
Avail Cap(c_a), veh/h				545	0	565	574	1142	1143	924	1317	1346
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				44.3	0.0	43.1	7.7	8.8	8.8	5.9	4.9	4.9
Incr Delay (d2), s/veh				0.7	0.0	2.5	0.0	0.4	0.4	0.2	0.4	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/l				2.9	0.0	6.7	0.0	2.4	2.5	1.3	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				45.0	0.0	45.5	7.7	9.2	9.2	6.1	5.3	5.3
LnGrp LOS				D	A	D	A	A	A	A	A	A
Approach Vol, veh/h					350				468			807
Approach Delay, s/veh					45.4				9.2			5.5
Approach LOS					D				A			A
Timer - Assigned Phs	1	2			6			8				
Phs Duration (G+Y+Rc), s	11.8	82.6			94.4			25.6				
Change Period (Y+Rc), s	5.5	5.5			5.5			5.5				
Max Green Setting (Gmax), s	21.5	45.5			72.5			36.5				
Max Q Clear Time (g_c+l1), s	5.9	8.5			8.6			18.8				
Green Ext Time (p_c), s	0.4	5.8			8.8			1.3				

Intersection Summary

HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Timings

7: Tucker Norcross Rd & Pleasantdale Rd

01/26/2021

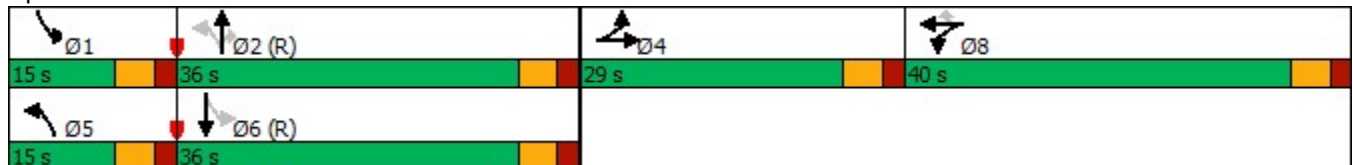


Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↙	↘	↗	↙	↕	↗	↙	↕
Traffic Volume (vph)	17	357	20	254	6	780	694	507	1150
Future Volume (vph)	17	357	20	254	6	780	694	507	1150
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	4	8	8		5	2		1	6
Permitted Phases				8	2		2	6	
Detector Phase	4	8	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	31.5	37.5	37.5	37.5	15.0	31.5	31.5	15.0	26.5
Total Split (s)	29.0	40.0	40.0	40.0	15.0	36.0	36.0	15.0	36.0
Total Split (%)	24.2%	33.3%	33.3%	33.3%	12.5%	30.0%	30.0%	12.5%	30.0%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	7.7	23.8	23.8	23.8	36.3	30.5	30.5	76.7	74.4
Actuated g/C Ratio	0.06	0.20	0.20	0.20	0.30	0.25	0.25	0.64	0.62
v/c Ratio	0.29	0.70	0.69	0.56	0.04	1.02	0.89	0.94	0.63
Control Delay	0.0	56.8	58.5	17.9	0.0	9.6	1.1	2.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	56.8	58.5	17.9	0.0	9.6	1.1	2.7	2.3
LOS	A	E	E	B	A	A	A	A	A
Approach Delay			41.6			5.5			2.4
Approach LOS			D			A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 10.3 Intersection LOS: B
 Intersection Capacity Utilization 89.8% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 7: Tucker Norcross Rd & Pleasantdale Rd



Phasings

7: Tucker Norcross Rd & Pleasantdale Rd

01/26/2021



Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	4	8	8		5	2		1	6
Permitted Phases				8	2		2	6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	31.5	37.5	37.5	37.5	15.0	31.5	31.5	15.0	26.5
Total Split (s)	29.0	40.0	40.0	40.0	15.0	36.0	36.0	15.0	36.0
Total Split (%)	24.2%	33.3%	33.3%	33.3%	12.5%	30.0%	30.0%	12.5%	30.0%
Maximum Green (s)	23.5	34.5	34.5	34.5	9.5	30.5	30.5	9.5	30.5
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	19.0	25.0	25.0	25.0		19.0	19.0		14.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0
90th %ile Green (s)	10.1	33.3	33.3	33.3	6.3	30.5	30.5	24.1	48.3
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Max	Coord
70th %ile Green (s)	8.5	27.6	27.6	27.6	0.0	30.5	30.5	31.4	67.4
70th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
50th %ile Green (s)	7.4	23.8	23.8	23.8	0.0	30.5	30.5	36.3	72.3
50th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
30th %ile Green (s)	0.0	19.8	19.8	19.8	0.0	30.5	30.5	53.2	89.2
30th %ile Term Code	Skip	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
10th %ile Green (s)	0.0	14.4	14.4	14.4	0.0	30.5	30.5	58.6	94.6
10th %ile Term Code	Skip	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary

7: Tucker Norcross Rd & Pleasantdale Rd

01/26/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↖	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (veh/h)	7	17	3	357	20	254	6	780	694	507	1150	18
Future Volume (veh/h)	7	17	3	357	20	254	6	780	694	507	1150	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	21	4	459	0	314	7	918	0	626	1353	22
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.85	0.85	0.81	0.81	0.85	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	38	7	804	0	358	183	1699		478	1963	32
Arrive On Green	0.03	0.03	0.03	0.23	0.00	0.23	0.02	0.96	0.00	0.08	0.55	0.55
Sat Flow, veh/h	479	1117	213	3563	0	1585	1781	3554	1585	1781	3579	58
Grp Volume(v), veh/h	34	0	0	459	0	314	7	918	0	626	671	704
Grp Sat Flow(s),veh/h/ln	1808	0	0	1781	0	1585	1781	1777	1585	1781	1777	1860
Q Serve(g_s), s	2.2	0.0	0.0	13.7	0.0	23.0	0.2	2.8	0.0	9.5	32.9	33.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	13.7	0.0	23.0	0.2	2.8	0.0	9.5	32.9	33.0
Prop In Lane	0.26		0.12	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	61	0	0	804	0	358	183	1699		478	975	1020
V/C Ratio(X)	0.55	0.00	0.00	0.57	0.00	0.88	0.04	0.54		1.31	0.69	0.69
Avail Cap(c_a), veh/h	354	0	0	1024	0	456	309	1699		478	975	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	0.0	0.0	41.3	0.0	44.9	18.3	1.4	0.0	25.3	19.7	19.7
Incr Delay (d2), s/veh	7.6	0.0	0.0	0.6	0.0	14.7	0.0	0.1	0.0	154.2	4.0	3.8
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	1.2	0.0	0.0	6.1	0.0	10.3	0.1	0.6	0.0	30.0	13.5	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	0.0	0.0	41.9	0.0	59.6	18.3	1.5	0.0	179.5	23.6	23.5
LnGrp LOS	E	A	A	D	A	E	B	A		F	C	C
Approach Vol, veh/h		34			773			925	A		2001	
Approach Delay, s/veh		64.7			49.1			1.7			72.3	
Approach LOS		E			D			A			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	62.9		9.6	6.5	71.3		32.6				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	30.5		23.5	9.5	30.5		34.5				
Max Q Clear Time (g_c+l1), s	11.5	4.8		4.2	2.2	35.0		25.0				
Green Ext Time (p_c), s	0.0	11.9		0.1	0.0	0.0		2.1				

Intersection Summary

HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

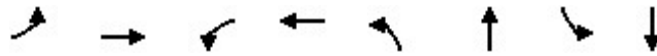
Notes

User approved pedestrian interval to be less than phase max green.
 User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings

8: Tucker Norcross Rd & Britt Rd

01/26/2021

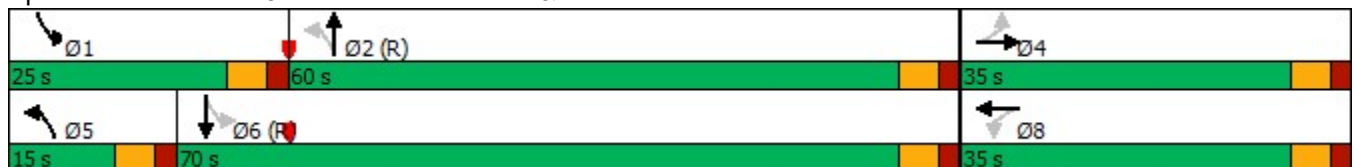


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗	↖	↖	↗	↖	↗
Traffic Volume (vph)	58	40	284	6	4	998	366	1029
Future Volume (vph)	58	40	284	6	4	998	366	1029
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	35.0	35.0	35.0	35.0	15.0	60.0	25.0	70.0
Total Split (%)	29.2%	29.2%	29.2%	29.2%	12.5%	50.0%	20.8%	58.3%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		29.5	29.5	29.5	60.1	54.5	79.5	77.2
Actuated g/C Ratio		0.25	0.25	0.25	0.50	0.45	0.66	0.64
v/c Ratio		0.44	0.99	0.44	0.01	1.06	1.15	0.50
Control Delay		15.9	375.1	14.2	7.2	5.3	1.0	2.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		15.9	375.1	14.2	7.2	5.3	1.0	2.5
LOS		B	F	B	A	A	A	A
Approach Delay		15.9		214.6		5.3		2.1
Approach LOS		B		F		A		A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 34.5 Intersection LOS: C
 Intersection Capacity Utilization 104.2% ICU Level of Service G
 Analysis Period (min) 15

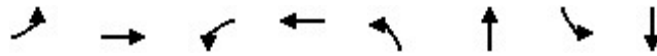
Splits and Phases: 8: Tucker Norcross Rd & Britt Rd



Phasings

8: Tucker Norcross Rd & Britt Rd

01/26/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	35.0	35.0	35.0	35.0	15.0	60.0	25.0	70.0
Total Split (%)	29.2%	29.2%	29.2%	29.2%	12.5%	50.0%	20.8%	58.3%
Maximum Green (s)	29.5	29.5	29.5	29.5	9.5	54.5	19.5	64.5
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)			7.0	7.0		7.0		7.0
Flash Dont Walk (s)			19.0	19.0		14.0		11.0
Pedestrian Calls (#/hr)			0	0		0		0
90th %ile Green (s)	29.5	29.5	29.5	29.5	5.9	54.5	19.5	68.1
90th %ile Term Code	Hold	Hold	Max	Max	Gap	Coord	Max	Coord
70th %ile Green (s)	29.5	29.5	29.5	29.5	0.0	54.5	19.5	79.5
70th %ile Term Code	Hold	Hold	Max	Max	Skip	Coord	Max	Coord
50th %ile Green (s)	29.5	29.5	29.5	29.5	0.0	54.5	19.5	79.5
50th %ile Term Code	Hold	Hold	Max	Max	Skip	Coord	Max	Coord
30th %ile Green (s)	29.5	29.5	29.5	29.5	0.0	54.5	19.5	79.5
30th %ile Term Code	Hold	Hold	Max	Max	Skip	Coord	Max	Coord
10th %ile Green (s)	29.5	29.5	29.5	29.5	0.0	54.5	19.5	79.5
10th %ile Term Code	Hold	Hold	Max	Max	Skip	Coord	Max	Coord

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary

8: Tucker Norcross Rd & Britt Rd

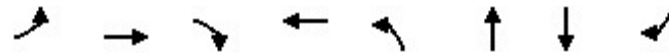
01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	58	40	1	284	6	221	4	998	528	366	1029	12
Future Volume (veh/h)	58	40	1	284	6	221	4	998	528	366	1029	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	44	1	312	7	243	4	1097	580	402	1131	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	79	2	342	11	380	282	1038	524	349	2200	25
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.01	0.91	0.91	0.16	0.61	0.61
Sat Flow, veh/h	339	321	6	1361	45	1547	1781	2286	1154	1781	3598	41
Grp Volume(v), veh/h	109	0	0	312	0	250	4	841	836	402	558	586
Grp Sat Flow(s),veh/h/ln	667	0	0	1361	0	1592	1781	1777	1663	1781	1777	1863
Q Serve(g_s), s	7.3	0.0	0.0	5.3	0.0	16.9	0.1	54.5	54.5	19.5	21.4	21.4
Cycle Q Clear(g_c), s	24.2	0.0	0.0	29.5	0.0	16.9	0.1	54.5	54.5	19.5	21.4	21.4
Prop In Lane	0.59		0.01	1.00		0.97	1.00		0.69	1.00		0.02
Lane Grp Cap(c), veh/h	212	0	0	342	0	391	282	807	755	349	1086	1139
V/C Ratio(X)	0.52	0.00	0.00	0.91	0.00	0.64	0.01	1.04	1.11	1.15	0.51	0.51
Avail Cap(c_a), veh/h	212	0	0	342	0	391	414	807	755	349	1086	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.78	0.78	0.78	0.73	0.73	0.73
Uniform Delay (d), s/veh	47.3	0.0	0.0	47.1	0.0	40.5	17.5	5.5	5.5	41.0	13.2	13.2
Incr Delay (d2), s/veh	2.1	0.0	0.0	27.6	0.0	3.5	0.0	39.7	62.8	89.4	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	12.0	0.0	6.9	0.1	11.1	15.2	18.9	8.2	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	0.0	0.0	74.7	0.0	43.9	17.5	45.2	68.3	130.4	14.5	14.4
LnGrp LOS	D	A	A	E	A	D	B	F	F	F	B	B
Approach Vol, veh/h		109			562			1681			1546	
Approach Delay, s/veh		49.5			61.0			56.6			44.6	
Approach LOS		D			E			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	60.0		35.0	6.1	78.9		35.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	9.5	54.5		29.5	9.5	64.5		29.5				
Max Q Clear Time (g_c+I),s	11.5	56.5		26.2	2.1	23.4		31.5				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	18.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	52.3											
HCM 6th LOS	D											

Timings

9: Chamblee Tucker Rd & Tucker Norcross Rd

01/26/2021

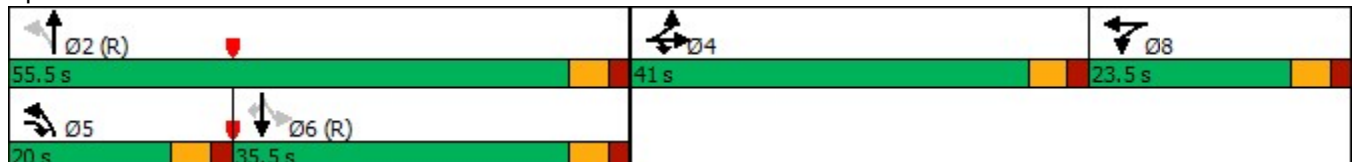


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↗	↕	↖	↕	↕	↗
Traffic Volume (vph)	854	1	432	0	256	804	705	320
Future Volume (vph)	854	1	432	0	256	804	705	320
Turn Type	Split	NA	pt+ov	NA	pm+pt	NA	NA	Perm
Protected Phases	4	4	4 5	8	5	2	6	
Permitted Phases					2			6
Detector Phase	4	4	4 5	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0		6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	35.5	35.5		23.5	15.0	25.5	29.5	29.5
Total Split (s)	41.0	41.0		23.5	20.0	55.5	35.5	35.5
Total Split (%)	34.2%	34.2%		19.6%	16.7%	46.3%	29.6%	29.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None		None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	34.9	34.9	60.3	6.0	71.8	71.8	45.3	45.3
Actuated g/C Ratio	0.29	0.29	0.50	0.05	0.60	0.60	0.38	0.38
v/c Ratio	0.93	0.93	0.58	0.01	0.59	0.40	0.56	0.44
Control Delay	11.0	11.1	5.8	0.0	3.9	1.3	5.4	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay	11.0	11.1	5.8	0.0	3.9	1.3	5.4	11.1
LOS	B	B	A	A	A	A	A	B
Approach Delay		9.3				1.9	7.2	
Approach LOS		A				A	A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 6.3
 Intersection LOS: A
 Intersection Capacity Utilization 78.8%
 ICU Level of Service D
 Analysis Period (min) 15

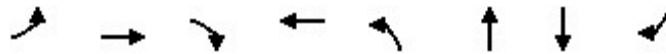
Splits and Phases: 9: Chamblee Tucker Rd & Tucker Norcross Rd



Phasings

9: Chamblee Tucker Rd & Tucker Norcross Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Protected Phases	4	4	4 5	8	5	2	6	
Permitted Phases					2			6
Minimum Initial (s)	6.0	6.0		6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	35.5	35.5		23.5	15.0	25.5	29.5	29.5
Total Split (s)	41.0	41.0		23.5	20.0	55.5	35.5	35.5
Total Split (%)	34.2%	34.2%		19.6%	16.7%	46.3%	29.6%	29.6%
Maximum Green (s)	35.5	35.5		18.0	14.5	50.0	30.0	30.0
Yellow Time (s)	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
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	5.0	5.0	5.0
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None		None	None	C-Min	C-Min	C-Min
Walk Time (s)	7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)	23.0	23.0				13.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0				0	0	0
90th %ile Green (s)	35.5	35.5		6.0	26.5	62.0	30.0	30.0
90th %ile Term Code	Max	Max		Min	Max	Coord	Coord	Coord
70th %ile Green (s)	35.5	35.5		0.0	22.8	73.5	45.2	45.2
70th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
50th %ile Green (s)	35.5	35.5		0.0	20.3	73.5	47.7	47.7
50th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
30th %ile Green (s)	35.5	35.5		0.0	18.6	73.5	49.4	49.4
30th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
10th %ile Green (s)	32.3	32.3		0.0	17.1	76.7	54.1	54.1
10th %ile Term Code	Gap	Gap		Skip	Gap	Coord	Coord	Coord

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
9: Chamblee Tucker Rd & Tucker Norcross Rd

01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↗	↖	↗		↔		↗	↕		↗	↕	↗	
Traffic Volume (veh/h)	854	1	432	0	0	1	256	804	0	0	705	320	
Future Volume (veh/h)	854	1	432	0	0	1	256	804	0	0	705	320	
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	910	0	460	0	0	1	272	855	0	0	750	0	
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	1011	0	608	0	0	3	510	2051	0	60	1533		
Arrive On Green	0.28	0.00	0.28	0.00	0.00	0.00	0.10	0.58	0.00	0.00	0.86	0.00	
Sat Flow, veh/h	3563	0	1585	0	0	1585	1781	3647	0	646	3554	1585	
Grp Volume(v), veh/h	910	0	460	0	0	1	272	855	0	0	750	0	
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	1777	0	646	1777	1585	
Q Serve(g_s), s	29.5	0.0	30.2	0.0	0.0	0.1	9.8	16.1	0.0	0.0	6.0	0.0	
Cycle Q Clear(g_c), s	29.5	0.0	30.2	0.0	0.0	0.1	9.8	16.1	0.0	0.0	6.0	0.0	
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00	
Lane Grp Cap(c), veh/h	1011	0	608	0	0	3	510	2051	0	60	1533		
V/C Ratio(X)	0.90	0.00	0.76	0.00	0.00	0.38	0.53	0.42	0.00	0.00	0.49		
Avail Cap(c_a), veh/h	1054	0	627	0	0	238	547	2051	0	60	1533		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.76	0.00	
Uniform Delay (d), s/veh	41.3	0.0	32.1	0.0	0.0	59.8	14.9	14.1	0.0	0.0	5.1	0.0	
Incr Delay (d2), s/veh	10.3	0.0	5.1	0.0	0.0	73.9	0.9	0.6	0.0	0.0	0.9	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	4.0	0.0	12.4	0.0	0.0	0.1	3.9	6.2	0.0	0.0	1.7	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	51.6	0.0	37.2	0.0	0.0	133.8	15.8	14.8	0.0	0.0	5.9	0.0	
LnGrp LOS	D	A	D	A	A	F	B	B	A	A	A		
Approach Vol, veh/h	1370			1			1127			750			A
Approach Delay, s/veh	46.8			133.8			15.0			5.9			
Approach LOS	D			F			B			A			
Timer - Assigned Phs	2		4		5		6		8				
Phs Duration (G+Y+Rc), s	74.8		39.5		17.5		57.3		5.7				
Change Period (Y+Rc), s	5.5		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	50.0		35.5		14.5		30.0		18.0				
Max Q Clear Time (g_c+l1), s	18.1		32.2		11.8		8.0		2.1				
Green Ext Time (p_c), s	12.2		1.8		0.2		8.8		0.0				

Intersection Summary

HCM 6th Ctrl Delay 26.4
HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	855	72	55	371	42	32
Future Vol, veh/h	855	72	55	371	42	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	100	160	-	0	-
Veh in Median Storage0#	-	-	-	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	929	78	60	403	46	35

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0 1007	0 1452 929
Stage 1	-	-	- 929 -
Stage 2	-	-	- 523 -
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	-	- 688	- 144 324
Stage 1	-	-	- 385 -
Stage 2	-	-	- 595 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	- 688	- 131 324
Mov Cap-2 Maneuver	-	-	- 131 -
Stage 1	-	-	- 385 -
Stage 2	-	-	- 543 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	41.6
HCM LOS			E

Minor Lane/Major MvmNBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	176	-	- 688	-
HCM Lane V/C Ratio	0.457	-	- 0.087	-
HCM Control Delay (s)	41.6	-	- 10.7	-
HCM Lane LOS	E	-	- B	-
HCM 95th %tile Q(veh)	2.1	-	- 0.3	-

Intersection

Int Delay, s/veh 2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	852	35	76	406	20	44
Future Vol, veh/h	852	35	76	406	20	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	120	160	-	0	-
Veh in Median Storage0#	-	-	-	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	926	38	83	441	22	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	964
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-2.218	-3.518
Pot Cap-1 Maneuver	-	-	714
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	714
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	31.3
HCM LOS			D

Minor Lane/Major MvmNBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	205	-	-	714
HCM Lane V/C Ratio	0.339	-	-	0.116
HCM Control Delay (s)	31.3	-	-	10.7
HCM Lane LOS	D	-	-	B
HCM 95th %tile Q(veh)	1.4	-	-	0.4

Intersection

Int Delay, s/veh 0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑		↑
Traffic Vol, veh/h	833	8	0	502	0	6
Future Vol, veh/h	833	8	0	502	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	150	-	-	-	0
Veh in Median Storage0#	-	-	-	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	905	9	0	546	0	7

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

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16
HCM LOS			C

Minor Lane/Major Mvm	NBLn1	EBT	WBT
Capacity (veh/h)	335	-	-
HCM Lane V/C Ratio	0.019	-	-
HCM Control Delay (s)	16	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	814	24	11	487	15	7
Future Vol, veh/h	814	24	11	487	15	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	-	150	-	-	0	-
Veh in Median Storage0#	-	-	-	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	885	26	12	529	16	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	911
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	748
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	748
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	28.5
HCM LOS			D

Minor Lane/Major MvmNBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	177	-	-	748
HCM Lane V/C Ratio	0.135	-	-	0.016
HCM Control Delay (s)	28.5	-	-	9.9
HCM Lane LOS	D	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	0

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	T	R
Traffic Vol, veh/h	5	9	365	3	6	475
Future Vol, veh/h	5	9	365	3	6	475
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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	10	397	3	7	516

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	929	399	0
Stage 1	399	-	-
Stage 2	530	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuve	297	651	-
Stage 1	678	-	-
Stage 2	590	-	-
Platoon blocked, %			
Mov Cap-1 Maneuve	295	651	-
Mov Cap-2 Maneuve	295	-	-
Stage 1	678	-	-
Stage 2	585	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	455	1159	-
HCM Lane V/C Ratio	-	-	0.033	0.006	-
HCM Control Delay (s)	-	-	13.2	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↑	↘	↑
Traffic Vol, veh/h	6	25	346	10	42	430
Future Vol, veh/h	6	25	346	10	42	430
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	-	-	100	160	-
Veh in Median Storage#	-	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	27	376	11	46	467

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	935	376	0
Stage 1	376	-	-
Stage 2	559	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuve	295	670	-
Stage 1	694	-	-
Stage 2	572	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuve	283	670	-
Mov Cap-2 Maneuve	283	-	-
Stage 1	694	-	-
Stage 2	550	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	SBLn1	SBL	SBT
Capacity (veh/h)	-	-	530	1171	-
HCM Lane V/C Ratio	-	-	0.064	0.039	-
HCM Control Delay (s)	-	-	12.3	8.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Timings

1: Old Norcross Tucker Rd & Britt Rd

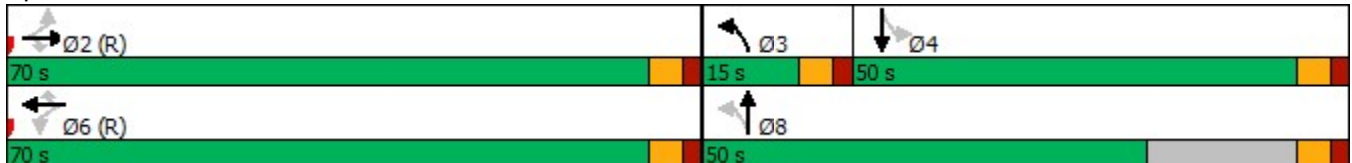
01/26/2021

	↖	→	↘	↙	←	↖	↘	↑	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↘	↖	↑	↘	↖	↘	↖	↘
Traffic Volume (vph)	114	655	128	72	285	145	128	205	143	279
Future Volume (vph)	114	655	128	72	285	145	128	205	143	279
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		2			6		3	8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	3	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	5.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	15.0	34.5	49.5	49.5
Total Split (s)	70.0	70.0	70.0	70.0	70.0	70.0	15.0	50.0	50.0	50.0
Total Split (%)	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%	11.1%	37.0%	37.0%	37.0%
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	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	Lag
Lead-Lag Optimize?							Yes		Yes	Yes
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	75.8	75.8	75.8	75.8	75.8	75.8	48.2	48.2	33.3	33.3
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.56	0.56	0.36	0.36	0.25	0.25
v/c Ratio	0.22	0.67	0.15	0.32	0.29	0.16	0.64	0.40	0.55	0.82
Control Delay	18.0	26.4	9.1	23.0	17.8	5.3	42.5	32.0	51.0	61.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	26.4	9.1	23.0	17.8	5.3	42.5	32.0	51.0	61.4
LOS	B	C	A	C	B	A	D	C	D	E
Approach Delay					15.0					58.4
Approach LOS					B					E

Intersection Summary

Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 116 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 91.4%	ICU Level of Service F
Analysis Period (min) 15	

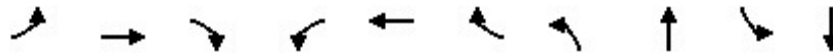
Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6		3	8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	5.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	15.0	34.5	49.5	49.5
Total Split (s)	70.0	70.0	70.0	70.0	70.0	70.0	15.0	50.0	50.0	50.0
Total Split (%)	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%	11.1%	37.0%	37.0%	37.0%
Maximum Green (s)	64.5	64.5	64.5	64.5	64.5	64.5	9.5	44.5	44.5	44.5
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
Lead/Lag							Lead		Lag	Lag
Lead-Lag Optimize?							Yes		Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0		22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0
90th %ile Green (s)	65.8	65.8	65.8	65.8	65.8	65.8	9.5	58.2	43.2	43.2
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Max	Hold	Gap	Gap
70th %ile Green (s)	71.5	71.5	71.5	71.5	71.5	71.5	9.5	52.5	37.5	37.5
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Max	Hold	Gap	Gap
50th %ile Green (s)	75.3	75.3	75.3	75.3	75.3	75.3	9.5	48.7	33.7	33.7
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Max	Hold	Gap	Gap
30th %ile Green (s)	80.0	80.0	80.0	80.0	80.0	80.0	9.5	44.0	29.0	29.0
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Max	Hold	Gap	Gap
10th %ile Green (s)	86.3	86.3	86.3	86.3	86.3	86.3	9.0	37.7	23.2	23.2
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Hold	Gap	Gap

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 116 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	655	128	72	285	145	128	205	42	143	279	71
Future Volume (veh/h)	114	655	128	72	285	145	128	205	42	143	279	71
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	121	697	136	77	303	154	136	218	45	152	297	76
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	513	1073	910	265	1073	910	213	518	107	314	335	86
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.07	0.34	0.34	0.23	0.23	0.23
Sat Flow, veh/h	934	1870	1585	659	1870	1585	1781	1504	310	1116	1437	368
Grp Volume(v), veh/h	121	697	136	77	303	154	136	0	263	152	0	373
Grp Sat Flow(s),veh/h/ln	934	1870	1585	659	1870	1585	1781	0	1814	1116	0	1804
Q Serve(g_s), s	10.2	34.2	5.4	12.1	11.1	6.2	7.6	0.0	15.0	16.3	0.0	27.0
Cycle Q Clear(g_c), s	21.3	34.2	5.4	46.3	11.1	6.2	7.6	0.0	15.0	16.3	0.0	27.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.20
Lane Grp Cap(c), veh/h	513	1073	910	265	1073	910	213	0	625	314	0	421
V/C Ratio(X)	0.24	0.65	0.15	0.29	0.28	0.17	0.64	0.00	0.42	0.48	0.00	0.89
Avail Cap(c_a), veh/h	513	1073	910	265	1073	910	213	0	625	421	0	595
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	19.5	13.4	35.3	14.6	13.6	37.5	0.0	33.9	45.9	0.0	50.0
Incr Delay (d2), s/veh	1.1	3.0	0.3	2.8	0.7	0.4	6.3	0.0	0.5	1.2	0.0	11.3
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	2.4	15.2	2.0	2.1	4.8	2.3	3.7	0.0	6.7	4.6	0.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	22.6	13.8	38.0	15.3	14.0	43.8	0.0	34.4	47.1	0.0	61.2
LnGrp LOS	C	C	B	D	B	B	D	A	C	D	A	E
Approach Vol, veh/h		954			534			399			525	
Approach Delay, s/veh		21.1			18.2			37.6			57.1	
Approach LOS		C			B			D			E	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		83.0	15.0	37.0		83.0		52.0				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		64.5	9.5	44.5		64.5		44.5				
Max Q Clear Time (g_c+l1), s		36.2	9.6	29.0		48.3		17.0				
Green Ext Time (p_c), s		12.7	0.0	2.6		4.7		1.5				
Intersection Summary												
HCM 6th Ctrl Delay			31.0									
HCM 6th LOS			C									

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	6	0	11	9	0	15	9	347	15	24	452	4
Future Vol, veh/h	6	0	11	9	0	15	9	347	15	24	452	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	-	-	-	-	-	-	-	-	100	100	-	0
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	0	12	10	0	16	10	369	16	26	481	4

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	938	938	481	930
Stage 1	533	533	-	389
Stage 2	405	405	-	541
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuve	244	264	585	248
Stage 1	531	525	-	635
Stage 2	622	598	-	525
Platoon blocked, %				
Mov Cap-1 Maneuve	232	255	585	237
Mov Cap-2 Maneuve	232	255	-	237
Stage 1	525	513	-	627
Stage 2	600	591	-	503

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	14.6	0.2	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1078	-	-	381	399	1173	-	-
HCM Lane V/C Ratio	0.009	-	-	0.047	0.064	0.022	-	-
HCM Control Delay (s)	8.4	0	-	14.9	14.6	8.1	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-

Timings

3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021

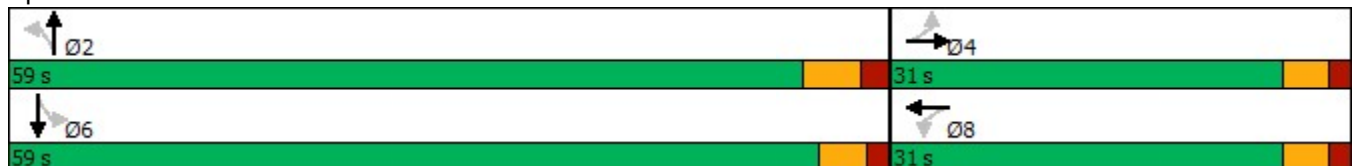


Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Lane Configurations		↕	↕	↗	↘	
Traffic Volume (vph)	20	0	276	76	359	
Future Volume (vph)	20	0	276	76	359	
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Detector Phase	8	8	2	6	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	31.0	31.0	59.0	59.0	59.0	31.0
Total Split (%)	34.4%	34.4%	65.6%	65.6%	65.6%	34%
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.7	5.8	4.8	4.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	None
Act Effct Green (s)		6.4	23.2	24.0	24.0	
Actuated g/C Ratio		0.18	0.64	0.66	0.66	
v/c Ratio		0.32	0.28	0.12	0.32	
Control Delay		8.2	5.3	4.5	5.1	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		8.2	5.3	4.5	5.1	
LOS		A	A	A	A	
Approach Delay		8.3	5.3		5.0	
Approach LOS		A	A		A	

Intersection Summary

Cycle Length: 90	
Actuated Cycle Length: 36.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr



Phasings

3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021



Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4
Protected Phases		8	2		6	4
Permitted Phases	8			6		
Minimum Initial (s)	6.0	6.0	12.0	12.0	12.0	6.0
Minimum Split (s)	23.1	23.1	23.9	23.3	23.3	23.1
Total Split (s)	31.0	31.0	59.0	59.0	59.0	31.0
Total Split (%)	34.4%	34.4%	65.6%	65.6%	65.6%	34%
Maximum Green (s)	26.3	26.3	53.2	54.2	54.2	26.3
Yellow Time (s)	3.1	3.1	3.9	3.3	3.3	3.1
All-Red Time (s)	1.6	1.6	1.9	1.5	1.5	1.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	Min	Min	None
Walk Time (s)						7.0
Flash Dont Walk (s)						10.0
Pedestrian Calls (#/hr)						0
90th %ile Green (s)	7.6	7.6	21.5	22.5	22.5	7.6
90th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Hold
70th %ile Green (s)	6.0	6.0	16.7	17.7	17.7	6.0
70th %ile Term Code	Min	Min	Hold	Gap	Gap	Hold
50th %ile Green (s)	6.0	6.0	17.5	18.5	18.5	6.0
50th %ile Term Code	Min	Min	Dwell	Dwell	Dwell	Hold
30th %ile Green (s)	6.0	6.0	26.4	27.4	27.4	6.0
30th %ile Term Code	Min	Min	Dwell	Dwell	Dwell	Hold
10th %ile Green (s)	0.0	0.0	27.0	28.0	28.0	0.0
10th %ile Term Code	Skip	Skip	Dwell	Dwell	Dwell	Skip

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 36.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 39.6
70th %ile Actuated Cycle: 33.2
50th %ile Actuated Cycle: 34
30th %ile Actuated Cycle: 42.9
10th %ile Actuated Cycle: 32.8

HCM 6th Signalized Intersection Summary
 3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021

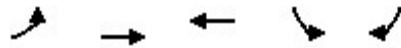


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Volume (veh/h)	0	0	0	20	0	80	0	276	24	76	359	1
Future Volume (veh/h)	0	0	0	20	0	80	0	276	24	76	359	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	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	0	0	0	22	0	87	0	300	26	83	390	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	227	0	181	7	151	0	874	76	682	960	2
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	0	1870	0	257	58	1248	0	1697	147	1054	1865	5
Grp Volume(v), veh/h	0	0	0	109	0	0	0	0	326	83	0	391
Grp Sat Flow(s),veh/h/ln	0	1870	0	1564	0	0	0	0	1844	1054	0	1869
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	3.0	1.5	0.0	3.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	3.0	4.5	0.0	3.7
Prop In Lane	0.00		0.00	0.20		0.80	0.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	227	0	339	0	0	0	0	949	682	0	963
V/C Ratio(X)	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.34	0.12	0.00	0.41
Avail Cap(c_a), veh/h	0	1705	0	1563	0	0	0	0	3400	2120	0	3512
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(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	4.1	5.4	0.0	4.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.8	0.3	0.0	1.0
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	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	12.2	0.0	0.0	0.0	0.0	4.9	5.7	0.0	5.3
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		0			109			326			474	
Approach Delay, s/veh		0.0			12.2			4.9			5.4	
Approach LOS					B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.7		8.2		20.7		8.2				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 53		* 26		* 54		* 26				
Max Q Clear Time (g_c+l1), s		5.0		0.0		6.5		3.9				
Green Ext Time (p_c), s		5.7		0.0		8.4		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				6.0								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

01/26/2021

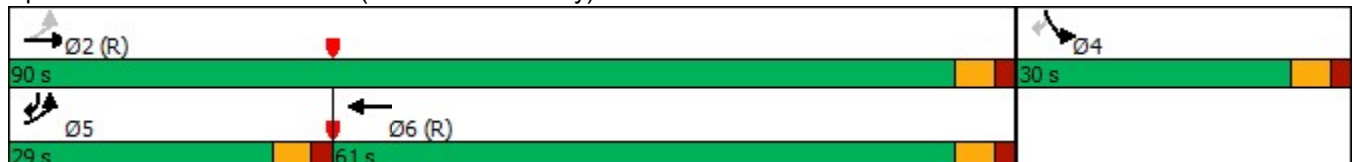


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↘	↗
Traffic Volume (vph)	240	1572	952	125	280
Future Volume (vph)	240	1572	952	125	280
Turn Type	pm+pt	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	29.0	90.0	61.0	30.0	29.0
Total Split (%)	24.2%	75.0%	50.8%	25.0%	24.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	94.5	94.5	75.6	14.5	33.4
Actuated g/C Ratio	0.79	0.79	0.63	0.12	0.28
v/c Ratio	0.62	0.61	0.52	0.64	0.63
Control Delay	11.4	6.9	14.8	63.2	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	6.9	14.8	63.2	35.5
LOS	B	A	B	E	D
Approach Delay		7.5	14.8	44.1	
Approach LOS		A	B	D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 14.3
 Intersection LOS: B
 Intersection Capacity Utilization 63.5%
 ICU Level of Service B
 Analysis Period (min) 15

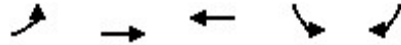
Splits and Phases: 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd



Phasings

4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

01/26/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	5	2	6	4	5
Permitted Phases	2				4
Minimum Initial (s)	5.0	15.0	15.0	6.0	5.0
Minimum Split (s)	15.0	23.5	29.5	29.5	15.0
Total Split (s)	29.0	90.0	61.0	30.0	29.0
Total Split (%)	24.2%	75.0%	50.8%	25.0%	24.2%
Maximum Green (s)	23.5	84.5	55.5	24.5	23.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	None
Walk Time (s)			7.0	7.0	
Flash Dont Walk (s)			17.0	17.0	
Pedestrian Calls (#/hr)			0	0	
90th %ile Green (s)	22.6	89.0	60.9	20.0	22.6
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap
70th %ile Green (s)	16.2	92.2	70.5	16.8	16.2
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap
50th %ile Green (s)	12.4	94.5	76.6	14.5	12.4
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap
30th %ile Green (s)	8.7	96.8	82.6	12.2	8.7
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap
10th %ile Green (s)	7.3	100.0	87.2	9.0	7.3
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap

Intersection Summary

Cycle Length: 120

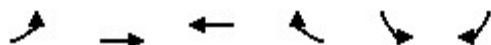
Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 4: SR 8 (Lawrenceville Hwy) & Old Norcross Rd

01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗	↑↑	↑↑		↘	↘
Traffic Volume (veh/h)	240	1572	952	100	125	280
Future Volume (veh/h)	240	1572	952	100	125	280
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	261	1709	1035	109	136	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	393	2543	1928	203	343	425
Arrive On Green	0.08	0.72	0.59	0.59	0.19	0.19
Sat Flow, veh/h	1781	3647	3338	341	1781	1585
Grp Volume(v), veh/h	261	1709	567	577	136	304
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1809	1781	1585
Q Serve(g_s), s	6.5	31.6	22.8	22.8	8.0	20.8
Cycle Q Clear(g_c), s	6.5	31.6	22.8	22.8	8.0	20.8
Prop In Lane	1.00			0.19	1.00	1.00
Lane Grp Cap(c), veh/h	393	2543	1056	1075	343	425
V/C Ratio(X)	0.66	0.67	0.54	0.54	0.40	0.71
Avail Cap(c_a), veh/h	607	2543	1056	1075	364	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	9.3	14.5	14.5	42.3	39.7
Incr Delay (d2), s/veh	1.9	1.4	2.0	1.9	0.7	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	10.3	8.9	9.0	3.6	18.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	10.8	16.5	16.4	43.1	44.9
LnGrp LOS	B	B	B	B	D	D
Approach Vol, veh/h		1970	1144		440	
Approach Delay, s/veh		11.3	16.5		44.3	
Approach LOS		B	B		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.4		28.6	14.6	76.8
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		84.5		24.5	23.5	55.5
Max Q Clear Time (g_c+l1), s		33.6		22.8	8.5	24.8
Green Ext Time (p_c), s		36.3		0.3	0.6	15.8
Intersection Summary						
HCM 6th Ctrl Delay			17.0			
HCM 6th LOS			B			

Timings

5: Jimmy Carter Blvd & Britt Rd/Williams Rd

01/26/2021

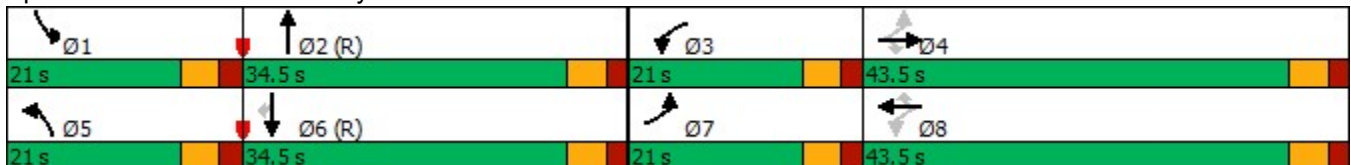


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑	↗	↙	↑	↗	↙	↑↕↓	↙	↑↑	↗
Traffic Volume (vph)	138	318	190	92	144	54	161	806	106	1248	172
Future Volume (vph)	138	318	190	92	144	54	161	806	106	1248	172
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	21.0	43.5	43.5	21.0	43.5	43.5	21.0	34.5	21.0	34.5	34.5
Total Split (%)	17.5%	36.3%	36.3%	17.5%	36.3%	36.3%	17.5%	28.8%	17.5%	28.8%	28.8%
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	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	39.4	27.3	27.3	35.0	25.1	25.1	16.6	48.1	12.7	44.2	44.2
Actuated g/C Ratio	0.33	0.23	0.23	0.29	0.21	0.21	0.14	0.40	0.11	0.37	0.37
v/c Ratio	0.36	0.78	0.44	0.39	0.39	0.13	0.69	0.74	0.59	1.00	0.26
Control Delay	30.7	60.1	18.2	32.4	41.6	0.6	73.1	30.9	73.4	46.9	4.4
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	30.7	60.1	18.2	32.4	41.6	0.6	73.1	30.9	73.4	46.9	4.4
LOS	C	E	B	C	D	A	E	C	E	D	A
Approach Delay		41.5			31.1			36.9		44.0	
Approach LOS		D			C			D		D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 40.2 Intersection LOS: D
 Intersection Capacity Utilization 83.6% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: Jimmy Carter Blvd & Britt Rd/Williams Rd



Phasings

5: Jimmy Carter Blvd & Britt Rd/Williams Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	37.5	37.5	15.0	33.5	33.5	15.0	29.5	15.0	25.5	25.5
Total Split (s)	21.0	43.5	43.5	21.0	43.5	43.5	21.0	34.5	21.0	34.5	34.5
Total Split (%)	17.5%	36.3%	36.3%	17.5%	36.3%	36.3%	17.5%	28.8%	17.5%	28.8%	28.8%
Maximum Green (s)	15.5	38.0	38.0	15.5	38.0	38.0	15.5	29.0	15.5	29.0	29.0
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
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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		25.0	25.0		21.0	21.0		17.0		13.0	13.0
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0
90th %ile Green (s)	15.2	36.0	36.0	12.4	33.2	33.2	20.6	32.0	17.6	29.0	29.0
90th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Max	Coord	Gap	Coord	Coord
70th %ile Green (s)	13.6	30.8	30.8	11.2	28.4	28.4	19.5	41.3	14.7	36.5	36.5
70th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Gap	Coord	Coord
50th %ile Green (s)	12.3	27.6	27.6	10.1	25.4	25.4	17.1	47.6	12.7	43.2	43.2
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Gap	Coord	Coord
30th %ile Green (s)	10.8	23.5	23.5	8.9	21.6	21.6	14.6	54.8	10.8	51.0	51.0
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Gap	Coord	Coord
10th %ile Green (s)	8.6	18.5	18.5	6.9	16.8	16.8	11.1	64.8	7.8	61.5	61.5
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Gap	Coord	Coord

Intersection Summary

Cycle Length: 120

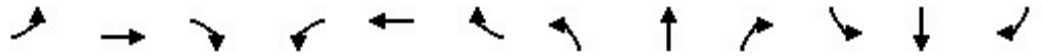
Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 5: Jimmy Carter Blvd & Britt Rd/Williams Rd

01/26/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	318	190	92	144	54	161	806	178	106	1248	172
Future Volume (veh/h)	138	318	190	92	144	54	161	806	178	106	1248	172
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	144	331	0	96	150	0	168	840	185	110	1300	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	377		196	332		195	1390	306	136	1588	
Arrive On Green	0.08	0.20	0.00	0.06	0.18	0.00	0.11	0.48	0.48	0.08	0.45	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	2895	638	1781	3554	1585
Grp Volume(v), veh/h	144	331	0	96	150	0	168	516	509	110	1300	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1756	1781	1777	1585
Q Serve(g_s), s	7.8	20.6	0.0	5.2	8.6	0.0	11.1	25.5	25.5	7.3	38.3	0.0
Cycle Q Clear(g_c), s	7.8	20.6	0.0	5.2	8.6	0.0	11.1	25.5	25.5	7.3	38.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	338	377		196	332		195	853	843	136	1588	
V/C Ratio(X)	0.43	0.88		0.49	0.45		0.86	0.60	0.60	0.81	0.82	
Avail Cap(c_a), veh/h	421	592		321	592		230	853	843	230	1588	
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(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.1	46.5	0.0	38.4	44.1	0.0	52.5	22.8	22.8	54.6	28.9	0.0
Incr Delay (d2), s/veh	0.9	9.1	0.0	1.9	1.0	0.0	23.6	3.2	3.2	10.7	4.8	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	3.4	10.3	0.0	2.4	4.1	0.0	6.1	10.7	10.6	3.6	16.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	55.6	0.0	40.3	45.1	0.0	76.1	26.0	26.0	65.3	33.8	0.0
LnGrp LOS	D	E		D	D		E	C	C	E	C	
Approach Vol, veh/h		475	A		246	A		1193			1410	A
Approach Delay, s/veh		50.0			43.2			33.1			36.2	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	63.1	12.5	29.7	18.7	59.1	15.4	26.8				
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	55	29.0	15.5	38.0	15.5	29.0	15.5	38.0				
Max Q Clear Time (g_c+l1), s	9	27.5	7.2	22.6	13.1	40.3	9.8	10.6				
Green Ext Time (p_c), s	0.1	1.2	0.1	1.6	0.1	0.0	0.2	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			37.6									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings

6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

01/26/2021

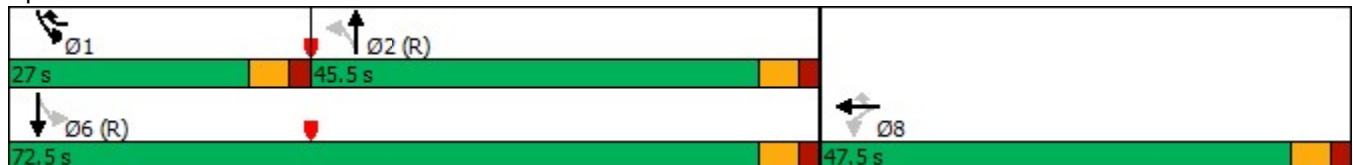


Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↕	↘	↕
Traffic Volume (vph)	20	333	4	1110	357	640
Future Volume (vph)	20	333	4	1110	357	640
Turn Type	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Detector Phase	8	1	2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	47.5	27.0	45.5	45.5	27.0	72.5
Total Split (%)	39.6%	22.5%	37.9%	37.9%	22.5%	60.4%
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	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	12.9	48.8	60.2	60.2	96.1	96.1
Actuated g/C Ratio	0.11	0.41	0.50	0.50	0.80	0.80
v/c Ratio	0.58	0.55	0.01	0.77	0.73	0.26
Control Delay	62.7	28.7	15.5	22.4	35.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	28.7	15.5	22.4	35.0	3.4
LOS	E	C	B	C	C	A
Approach Delay	36.7			22.4		14.3
Approach LOS	D			C		B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 21.6
 Intersection LOS: C
 Intersection Capacity Utilization 74.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd



Phasings

6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

01/26/2021



Lane Group	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	8	1		2	1	6
Permitted Phases		8	2		6	
Minimum Initial (s)	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	35.5	15.0	34.5	34.5	15.0	29.5
Total Split (s)	47.5	27.0	45.5	45.5	27.0	72.5
Total Split (%)	39.6%	22.5%	37.9%	37.9%	22.5%	60.4%
Maximum Green (s)	42.0	21.5	40.0	40.0	21.5	67.0
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
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	23.0		22.0	22.0		17.0
Pedestrian Calls (#/hr)	0		0	0		0
90th %ile Green (s)	17.9	34.9	50.7	50.7	34.9	91.1
90th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
70th %ile Green (s)	14.9	31.5	57.1	57.1	31.5	94.1
70th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
50th %ile Green (s)	12.8	29.9	60.8	60.8	29.9	96.2
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	10.8	28.3	64.4	64.4	28.3	98.2
30th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	7.9	27.4	68.2	68.2	27.4	101.1
10th %ile Term Code	Gap	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120





















Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 6: S. Norcross Tucker Rd & Old Norcross Tucker Rd

01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	82	20	333	4	1110	136	357	640	43
Future Volume (veh/h)	0	0	0	82	20	333	4	1110	136	357	640	43
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	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				89	22	362	4	1207	148	388	696	47
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	2	2	2	2	2	2	2	2
Cap, veh/h				311	77	597	408	1549	189	415	2339	158
Arrive On Green				0.22	0.22	0.22	0.49	0.49	0.49	0.16	0.69	0.69
Sat Flow, veh/h				1442	356	1585	717	3187	390	1781	3378	228
Grp Volume(v), veh/h				111	0	362	4	671	684	388	366	377
Grp Sat Flow(s),veh/h/ln				1798	0	1585	717	1777	1800	1781	1777	1829
Q Serve(g_s), s				6.2	0.0	22.1	0.3	37.4	37.8	17.0	9.6	9.6
Cycle Q Clear(g_c), s				6.2	0.0	22.1	0.3	37.4	37.8	17.0	9.6	9.6
Prop In Lane				0.80		1.00	1.00		0.22	1.00		0.12
Lane Grp Cap(c), veh/h				388	0	597	408	863	875	415	1230	1267
V/C Ratio(X)				0.29	0.00	0.61	0.01	0.78	0.78	0.93	0.30	0.30
Avail Cap(c_a), veh/h				629	0	810	408	863	875	448	1230	1267
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				39.3	0.0	30.2	16.0	25.5	25.6	31.3	7.1	7.1
Incr Delay (d2), s/veh				0.4	0.0	1.0	0.0	6.8	6.9	26.0	0.6	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	8.5	0.1	16.5	16.9	14.0	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.7	0.0	31.2	16.0	32.3	32.5	57.4	7.8	7.7
LnGrp LOS				D	A	C	B	C	C	E	A	A
Approach Vol, veh/h					473			1359			1131	
Approach Delay, s/veh					33.2			32.3			24.8	
Approach LOS					C			C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	24.8	63.8				88.6		31.4				
Change Period (Y+Rc), s	5.5	5.5				5.5		5.5				
Max Green Setting (Gmax), s	41.5	40.0				67.0		42.0				
Max Q Clear Time (g_c+I1), s	19.0	39.8				11.6		24.1				
Green Ext Time (p_c), s	0.3	0.2				11.0		1.8				
Intersection Summary												
HCM 6th Ctrl Delay						29.6						
HCM 6th LOS						C						

Timings

7: Tucker Norcross Rd & Pleasantdale Rd

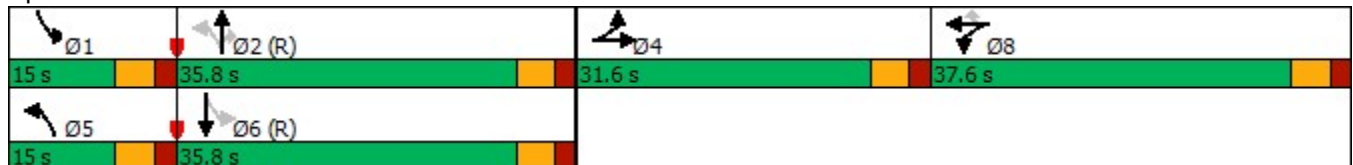
01/26/2021



Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↔	↔	↔	↔	↕	↕	↔	↕
Traffic Volume (vph)	17	357	20	254	6	780	694	507	1150
Future Volume (vph)	17	357	20	254	6	780	694	507	1150
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	4	8	8		5	2		1	6
Permitted Phases				8	2		2	6	
Detector Phase	4	8	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	31.5	37.5	37.5	37.5	15.0	31.5	31.5	15.0	26.5
Total Split (s)	31.6	37.6	37.6	37.6	15.0	35.8	35.8	15.0	35.8
Total Split (%)	26.3%	31.3%	31.3%	31.3%	12.5%	29.8%	29.8%	12.5%	29.8%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	7.7	23.7	23.7	23.7	36.1	30.3	30.3	76.8	74.4
Actuated g/C Ratio	0.06	0.20	0.20	0.20	0.30	0.25	0.25	0.64	0.62
v/c Ratio	0.29	0.71	0.69	0.56	0.04	1.08	0.91	0.93	0.66
Control Delay	54.2	64.1	63.4	16.5	21.7	79.4	21.0	55.3	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0
Total Delay	54.2	64.1	63.4	16.5	21.7	79.4	29.2	55.3	19.8
LOS	D	E	E	B	C	E	C	E	B
Approach Delay	54.2		44.7			55.6			30.5
Approach LOS	D		D			E			C

Intersection Summary
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 42.8
 Intersection LOS: D
 Intersection Capacity Utilization 89.8%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 7: Tucker Norcross Rd & Pleasantdale Rd



Phasings

7: Tucker Norcross Rd & Pleasantdale Rd

01/26/2021



Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	4	8	8		5	2		1	6
Permitted Phases				8	2		2	6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	31.5	37.5	37.5	37.5	15.0	31.5	31.5	15.0	26.5
Total Split (s)	31.6	37.6	37.6	37.6	15.0	35.8	35.8	15.0	35.8
Total Split (%)	26.3%	31.3%	31.3%	31.3%	12.5%	29.8%	29.8%	12.5%	29.8%
Maximum Green (s)	26.1	32.1	32.1	32.1	9.5	30.3	30.3	9.5	30.3
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0
Flash Dont Walk (s)	19.0	25.0	25.0	25.0		19.0	19.0		14.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0
90th %ile Green (s)	10.1	33.1	33.1	33.1	6.3	30.3	30.3	24.5	48.5
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Max	Coord
70th %ile Green (s)	8.5	27.5	27.5	27.5	0.0	30.3	30.3	31.7	67.5
70th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
50th %ile Green (s)	7.4	23.7	23.7	23.7	0.0	30.3	30.3	36.6	72.4
50th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
30th %ile Green (s)	0.0	19.8	19.8	19.8	0.0	30.3	30.3	53.4	89.2
30th %ile Term Code	Skip	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord
10th %ile Green (s)	0.0	14.4	14.4	14.4	0.0	30.3	30.3	58.8	94.6
10th %ile Term Code	Skip	Gap	Gap	Gap	Skip	Coord	Coord	Max	Coord

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 7: Tucker Norcross Rd & Pleasantdale Rd

01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	17	3	357	20	254	6	780	694	507	1150	18
Future Volume (veh/h)	7	17	3	357	20	254	6	780	694	507	1150	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	21	4	459	0	314	7	963	0	626	1420	22
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	38	7	796	0	354	170	1706		467	1972	31
Arrive On Green	0.03	0.03	0.03	0.22	0.00	0.22	0.02	0.96	0.00	0.08	0.55	0.55
Sat Flow, veh/h	479	1117	213	3563	0	1585	1781	3554	1585	1781	3582	55
Grp Volume(v), veh/h	34	0	0	459	0	314	7	963	0	626	704	738
Grp Sat Flow(s),veh/h/ln	1808	0	0	1781	0	1585	1781	1777	1585	1781	1777	1860
Q Serve(g_s), s	2.2	0.0	0.0	13.8	0.0	23.0	0.2	2.8	0.0	9.5	35.4	35.5
Cycle Q Clear(g_c), s	2.2	0.0	0.0	13.8	0.0	23.0	0.2	2.8	0.0	9.5	35.4	35.5
Prop In Lane	0.26		0.12	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	61	0	0	796	0	354	170	1706		467	978	1024
V/C Ratio(X)	0.55	0.00	0.00	0.58	0.00	0.89	0.04	0.56		1.34	0.72	0.72
Avail Cap(c_a), veh/h	393	0	0	953	0	424	295	1706		467	978	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	0.0	0.0	41.5	0.0	45.1	18.7	1.3	0.0	25.0	20.1	20.1
Incr Delay (d2), s/veh	7.6	0.0	0.0	0.7	0.0	17.5	0.0	0.1	0.0	166.6	4.6	4.4
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	1.2	0.0	0.0	6.1	0.0	10.6	0.1	0.6	0.0	30.9	14.6	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	0.0	0.0	42.2	0.0	62.7	18.7	1.4	0.0	191.5	24.6	24.5
LnGrp LOS	E	A	A	D	A	E	B	A		F	C	C
Approach Vol, veh/h		34			773			970	A		2068	
Approach Delay, s/veh		64.7			50.5			1.5			75.1	
Approach LOS		E			D			A			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	63.1		9.6	6.5	71.6		32.3				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax),s	30.5	30.3		26.1	9.5	30.3		32.1				
Max Q Clear Time (g_c+l1),s	11.5	4.8		4.2	2.2	37.5		25.0				
Green Ext Time (p_c), s	0.0	12.5		0.1	0.0	0.0		1.8				

Intersection Summary

HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

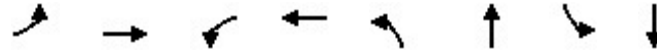
Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings

8: Tucker Norcross Rd & Britt Rd

01/26/2021

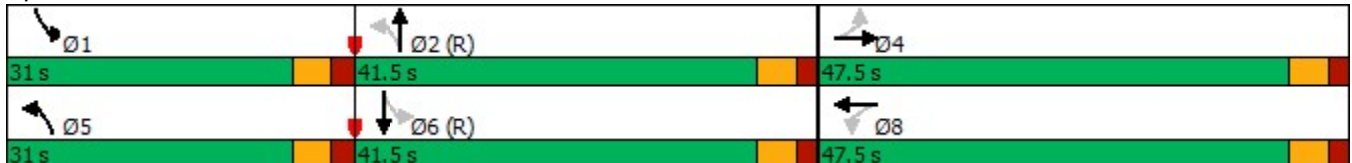


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗	↖	↗	↖	↕	↕
Traffic Volume (vph)	58	40	284	6	4	998	366	1029
Future Volume (vph)	58	40	284	6	4	998	366	1029
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	47.5	47.5	47.5	47.5	31.0	41.5	31.0	41.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	25.8%	34.6%	25.8%	34.6%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		33.9	33.9	33.9	48.8	43.1	75.1	72.8
Actuated g/C Ratio		0.28	0.28	0.28	0.41	0.36	0.63	0.61
v/c Ratio		0.34	0.86	0.40	0.02	1.33	0.89	0.53
Control Delay		45.2	95.0	7.6	13.0	76.7	125.5	11.6
Queue Delay		0.0	0.0	0.0	0.0	16.6	0.0	0.4
Total Delay		45.2	95.0	7.6	13.0	93.3	125.5	12.0
LOS		D	F	A	B	F	F	B
Approach Delay		45.2		56.1		93.1		41.5
Approach LOS		D		E		F		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.33
 Intersection Signal Delay: 66.0
 Intersection LOS: E
 Intersection Capacity Utilization 104.2%
 ICU Level of Service G
 Analysis Period (min) 15

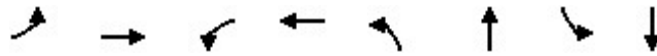
Splits and Phases: 8: Tucker Norcross Rd & Britt Rd



Phasings

8: Tucker Norcross Rd & Britt Rd

01/26/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.5	23.5	31.5	31.5	15.0	26.5	15.0	23.5
Total Split (s)	47.5	47.5	47.5	47.5	31.0	41.5	31.0	41.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	25.8%	34.6%	25.8%	34.6%
Maximum Green (s)	42.0	42.0	42.0	42.0	25.5	36.0	25.5	36.0
Yellow Time (s)	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
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	5.0	3.0	5.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)			7.0	7.0		7.0		7.0
Flash Dont Walk (s)			19.0	19.0		14.0		11.0
Pedestrian Calls (#/hr)			0	0		0		0
90th %ile Green (s)	42.0	42.0	42.0	42.0	6.0	36.0	25.5	55.5
90th %ile Term Code	Hold	Hold	Max	Max	Gap	Coord	Max	Coord
70th %ile Green (s)	39.4	39.4	39.4	39.4	0.0	36.0	28.1	69.6
70th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Max	Coord
50th %ile Green (s)	35.1	35.1	35.1	35.1	0.0	38.1	30.3	73.9
50th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
30th %ile Green (s)	29.8	29.8	29.8	29.8	0.0	46.7	27.0	79.2
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord
10th %ile Green (s)	23.0	23.0	23.0	23.0	0.0	58.8	21.7	86.0
10th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120




















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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary

8: Tucker Norcross Rd & Britt Rd

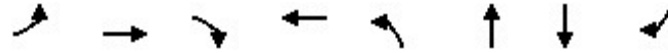
01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	40	1	284	6	221	4	998	528	366	1029	12
Future Volume (veh/h)	58	40	1	284	6	221	4	998	528	366	1029	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	44	1	312	7	243	4	1097	580	402	1131	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	107	2	405	13	448	250	839	424	427	2044	23
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.01	0.73	0.73	0.21	0.57	0.57
Sat Flow, veh/h	430	370	7	1361	45	1547	1781	2286	1154	1781	3598	41
Grp Volume(v), veh/h	109	0	0	312	0	250	4	841	836	402	558	586
Grp Sat Flow(s),veh/h/ln	807	0	0	1361	0	1592	1781	1777	1663	1781	1777	1863
Q Serve(g_s), s	6.8	0.0	0.0	8.3	0.0	15.9	0.2	44.1	44.1	22.6	23.8	23.8
Cycle Q Clear(g_c), s	22.7	0.0	0.0	30.9	0.0	15.9	0.2	44.1	44.1	22.6	23.8	23.8
Prop In Lane	0.59		0.01	1.00		0.97	1.00		0.69	1.00		0.02
Lane Grp Cap(c), veh/h	281	0	0	405	0	461	250	653	611	427	1009	1058
V/C Ratio(X)	0.39	0.00	0.00	0.77	0.00	0.54	0.02	1.29	1.37	0.94	0.55	0.55
Avail Cap(c_a), veh/h	363	0	0	488	0	557	619	653	611	439	1009	1058
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.78	0.78	0.78	0.70	0.70	0.70
Uniform Delay (d), s/veh	41.8	0.0	0.0	41.9	0.0	35.9	23.6	15.9	15.9	37.8	16.3	16.3
Incr Delay (d2), s/veh	0.9	0.0	0.0	6.1	0.0	1.0	0.0	139.1	174.0	22.5	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	9.5	0.0	6.2	0.1	31.0	34.9	14.1	9.4	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.0	0.0	48.1	0.0	36.9	23.6	155.0	190.0	60.2	17.9	17.8
LnGrp LOS	D	A	A	D	A	D	C	F	F	E	B	B
Approach Vol, veh/h		109			562			1681			1546	
Approach Delay, s/veh		42.6			43.1			172.1			28.9	
Approach LOS		D			D			F			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.2	49.6		40.2	6.1	73.6		40.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	25.5	36.0		42.0	25.5	36.0		42.0				
Max Q Clear Time (g_c+I), s	24.6	46.1		24.7	2.2	25.8		32.9				
Green Ext Time (p_c), s	0.1	0.0		0.5	0.0	7.3		1.8				
Intersection Summary												
HCM 6th Ctrl Delay				93.1								
HCM 6th LOS				F								

Timings

9: Chamblee Tucker Rd & Tucker Norcross Rd

01/26/2021

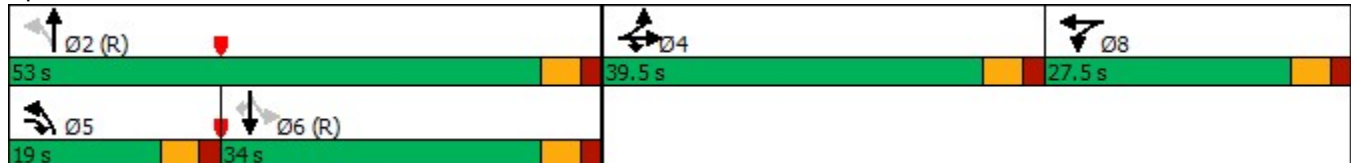


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↗	↕	↖	↗	↗	↗
Traffic Volume (vph)	854	1	432	0	256	804	705	320
Future Volume (vph)	854	1	432	0	256	804	705	320
Turn Type	Split	NA	pt+ov	NA	pm+pt	NA	NA	Perm
Protected Phases	4	4	4 5	8	5	2	6	
Permitted Phases					2			6
Detector Phase	4	4	4 5	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0		6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	35.5	35.5		23.5	15.0	25.5	29.5	29.5
Total Split (s)	39.5	39.5		27.5	19.0	53.0	34.0	34.0
Total Split (%)	32.9%	32.9%		22.9%	15.8%	44.2%	28.3%	28.3%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None		None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	34.0	34.0	60.6	6.0	72.7	72.7	45.0	45.0
Actuated g/C Ratio	0.28	0.28	0.50	0.05	0.61	0.61	0.38	0.38
v/c Ratio	0.95	0.96	0.58	0.01	0.57	0.40	0.57	0.44
Control Delay	74.1	74.5	21.7	0.0	17.6	13.5	25.9	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	74.1	74.5	21.7	0.0	17.6	13.9	25.9	4.5
LOS	E	E	C	A	B	B	C	A
Approach Delay		56.6				14.8	19.2	
Approach LOS		E				B	B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 32.1
 Intersection LOS: C
 Intersection Capacity Utilization 78.8%
 ICU Level of Service D
 Analysis Period (min) 15

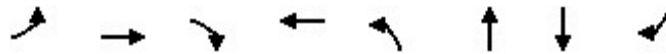
Splits and Phases: 9: Chamblee Tucker Rd & Tucker Norcross Rd



Phasings

9: Chamblee Tucker Rd & Tucker Norcross Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Protected Phases	4	4	4 5	8	5	2	6	
Permitted Phases					2			6
Minimum Initial (s)	6.0	6.0		6.0	5.0	15.0	15.0	15.0
Minimum Split (s)	35.5	35.5		23.5	15.0	25.5	29.5	29.5
Total Split (s)	39.5	39.5		27.5	19.0	53.0	34.0	34.0
Total Split (%)	32.9%	32.9%		22.9%	15.8%	44.2%	28.3%	28.3%
Maximum Green (s)	34.0	34.0		22.0	13.5	47.5	28.5	28.5
Yellow Time (s)	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
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	5.0	5.0	5.0
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None		None	None	C-Min	C-Min	C-Min
Walk Time (s)	7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)	23.0	23.0				13.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0				0	0	0
90th %ile Green (s)	34.0	34.0		6.0	26.7	63.5	31.3	31.3
90th %ile Term Code	Max	Max		Min	Gap	Coord	Coord	Coord
70th %ile Green (s)	34.0	34.0		0.0	22.5	75.0	47.0	47.0
70th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
50th %ile Green (s)	34.0	34.0		0.0	20.4	75.0	49.1	49.1
50th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
30th %ile Green (s)	34.0	34.0		0.0	19.8	75.0	49.7	49.7
30th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord
10th %ile Green (s)	34.0	34.0		0.0	21.7	75.0	47.8	47.8
10th %ile Term Code	Max	Max		Skip	Gap	Coord	Coord	Coord

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary
 9: Chamblee Tucker Rd & Tucker Norcross Rd

01/26/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	854	1	432	0	0	1	256	804	0	0	705	320
Future Volume (veh/h)	854	1	432	0	0	1	256	804	0	0	705	320
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	910	0	460	0	0	1	272	855	0	0	750	0
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	993	0	598	0	0	3	515	2069	0	60	1556	
Arrive On Green	0.28	0.00	0.28	0.00	0.00	0.00	0.10	0.58	0.00	0.00	0.88	0.00
Sat Flow, veh/h	3563	0	1585	0	0	1585	1781	3647	0	646	3554	1585
Grp Volume(v), veh/h	910	0	460	0	0	1	272	855	0	0	750	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	1777	0	646	1777	1585
Q Serve(g_s), s	29.7	0.0	30.6	0.0	0.0	0.1	9.7	15.9	0.0	0.0	5.4	0.0
Cycle Q Clear(g_c), s	29.7	0.0	30.6	0.0	0.0	0.1	9.7	15.9	0.0	0.0	5.4	0.0
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	993	0	598	0	0	3	515	2069	0	60	1556	
V/C Ratio(X)	0.92	0.00	0.77	0.00	0.00	0.38	0.53	0.41	0.00	0.00	0.48	
Avail Cap(c_a), veh/h	1009	0	605	0	0	291	540	2069	0	60	1556	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.76	0.00
Uniform Delay (d), s/veh	41.9	0.0	32.8	0.0	0.0	59.8	14.5	13.8	0.0	0.0	4.5	0.0
Incr Delay (d2), s/veh	12.6	0.0	5.9	0.0	0.0	73.9	0.9	0.6	0.0	0.0	0.8	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	4.4	0.0	12.7	0.0	0.0	0.1	3.8	6.1	0.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	0.0	38.7	0.0	0.0	133.8	15.4	14.4	0.0	0.0	5.3	0.0
LnGrp LOS	D	A	D	A	A	F	B	B	A	A	A	
Approach Vol, veh/h		1370			1			1127			750	A
Approach Delay, s/veh		49.3			133.8			14.6			5.3	
Approach LOS		D			F			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		75.4		38.9	17.3	58.1		5.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		47.5		34.0	13.5	28.5		22.0				
Max Q Clear Time (g_c+l1), s		17.9		32.6	11.7	7.4		2.1				
Green Ext Time (p_c), s		11.8		0.9	0.2	8.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay 27.1
 HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	855	72	55	371	42	32
Future Vol, veh/h	855	72	55	371	42	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	100	160	-	0	-
Veh in Median Storage0#	-	-	-	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	929	78	60	403	46	35

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1007
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-2.218	-3.518
Pot Cap-1 Maneuver	-	-	688
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	688
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	41.6
HCM LOS			E

Minor Lane/Major MvmNBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	176	-	-	688
HCM Lane V/C Ratio	0.457	-	-	0.087
HCM Control Delay (s)	41.6	-	-	10.7
HCM Lane LOS	E	-	-	B
HCM 95th %tile Q(veh)	2.1	-	-	0.3

Intersection

Int Delay, s/veh 2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	852	35	76	406	20	44
Future Vol, veh/h	852	35	76	406	20	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	-	120	160	-	0	-
Veh in Median Storage0#	-	-	-	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	926	38	83	441	22	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	964
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	714
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	714
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	31.3
HCM LOS			D

Minor Lane/Major MvmNBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	205	-	-	714
HCM Lane V/C Ratio	0.339	-	-	0.116
HCM Control Delay (s)	31.3	-	-	10.7
HCM Lane LOS	D	-	-	B
HCM 95th %tile Q(veh)	1.4	-	-	0.4

Intersection

Int Delay, s/veh 0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑		↑
Traffic Vol, veh/h	833	8	0	502	0	6
Future Vol, veh/h	833	8	0	502	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	150	-	-	-	0
Veh in Median Storage0#	-	-	-	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	905	9	0	546	0	7

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

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16
HCM LOS			C

Minor Lane/Major Mvm	NBLn1	EBT	WBT
Capacity (veh/h)	335	-	-
HCM Lane V/C Ratio	0.019	-	-
HCM Control Delay (s)	16	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	814	24	11	487	15	7
Future Vol, veh/h	814	24	11	487	15	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	-	150	-	-	0	-
Veh in Median Storage0#	-		-	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	885	26	12	529	16	8

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	911	0	1438	885
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	553	-
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	-	-	748	-	147	344
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	748	-	144	344
Mov Cap-2 Maneuver	-	-	-	-	144	-
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	563	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	28.5
HCM LOS			D

Minor Lane/Major MvmNBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	177	-	-	748
HCM Lane V/C Ratio	0.135	-	-	0.016
HCM Control Delay (s)	28.5	-	-	9.9
HCM Lane LOS	D	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	0

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	T	R
Traffic Vol, veh/h	5	9	365	3	6	475
Future Vol, veh/h	5	9	365	3	6	475
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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	10	397	3	7	516

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	929	399	0
Stage 1	399	-	-
Stage 2	530	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuve	297	651	-
Stage 1	678	-	-
Stage 2	590	-	-
Platoon blocked, %			
Mov Cap-1 Maneuve	295	651	-
Mov Cap-2 Maneuve	295	-	-
Stage 1	678	-	-
Stage 2	585	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT
Capacity (veh/h)	-	-	455	1159
HCM Lane V/C Ratio	-	-	0.033	0.006
HCM Control Delay (s)	-	-	13.2	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↑	↘	↑
Traffic Vol, veh/h	6	25	346	10	42	430
Future Vol, veh/h	6	25	346	10	42	430
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	-	-	100	160	-
Veh in Median Storage#	-	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	27	376	11	46	467

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	935	376	0
Stage 1	376	-	-
Stage 2	559	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuve	295	670	-
Stage 1	694	-	-
Stage 2	572	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuve	283	670	-
Mov Cap-2 Maneuve	283	-	-
Stage 1	694	-	-
Stage 2	550	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	SBLn1	SBL	SBT
Capacity (veh/h)	-	-	530	1171	-
HCM Lane V/C Ratio	-	-	0.064	0.039	-
HCM Control Delay (s)	-	-	12.3	8.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Timings

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↔	↑	↗	↖	↑	↗	↖	↑	↗	↖
Traffic Volume (vph)	72	458	154	89	295	95	169	202	111	186
Future Volume (vph)	72	458	154	89	295	95	169	202	111	186
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	6	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	63.0	63.0	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
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	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 Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	81.9	81.9	81.9	81.9	81.9	81.9	27.1	27.1	27.1	27.1
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.23	0.23	0.23	0.23
v/c Ratio	0.10	0.37	0.14	0.16	0.24	0.09	1.01	0.72	0.92	0.58
Control Delay	6.7	9.1	3.7	7.0	6.1	2.2	116.0	48.4	83.5	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	9.1	3.7	7.0	6.1	2.2	116.0	48.4	83.5	34.0
LOS	A	A	A	A	A	A	F	D	F	C
Approach Delay		7.6			5.5			73.1		49.9
Approach LOS		A			A			E		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 116 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 29.8

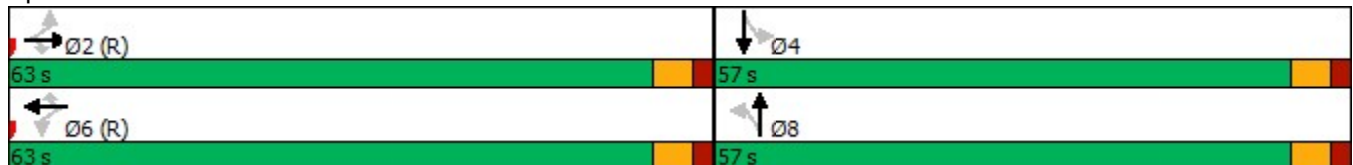
Intersection LOS: C

Intersection Capacity Utilization 77.2%

ICU Level of Service D

Analysis Period (min) 15

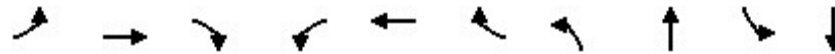
Splits and Phases: 1: Old Norcross Tucker Rd & Britt Rd



Phasings

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases		2			6			8		4
Permitted Phases	2		2	6		6	8		4	
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	41.5	41.5	41.5	34.5	34.5	34.5	34.5	34.5	49.5	49.5
Total Split (s)	63.0	63.0	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Maximum Green (s)	57.5	57.5	57.5	57.5	57.5	57.5	51.5	51.5	51.5	51.5
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
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	69.8	69.8	69.8	69.8	69.8	69.8	39.2	39.2	39.2	39.2
90th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	77.1	77.1	77.1	77.1	77.1	77.1	31.9	31.9	31.9	31.9
70th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	82.6	82.6	82.6	82.6	82.6	82.6	26.4	26.4	26.4	26.4
50th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	87.3	87.3	87.3	87.3	87.3	87.3	21.7	21.7	21.7	21.7
30th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold
10th %ile Green (s)	92.8	92.8	92.8	92.8	92.8	92.8	16.2	16.2	16.2	16.2
10th %ile Term Code	Coord	Coord	Coord	Coord	Coord	Coord	Gap	Gap	Hold	Hold

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

























Offset: 116 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

HCM 6th Signalized Intersection Summary

1: Old Norcross Tucker Rd & Britt Rd

01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	458	154	89	295	95	169	202	90	111	186	47
Future Volume (veh/h)	72	458	154	89	295	95	169	202	90	111	186	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	472	159	92	304	98	174	208	93	114	192	48
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	593	1153	977	447	1153	977	269	357	160	218	422	105
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	983	1870	1585	796	1870	1585	1140	1224	547	1078	1444	361
Grp Volume(v), veh/h	74	472	159	92	304	98	174	0	301	114	0	240
Grp Sat Flow(s),veh/h/ln	983	1870	1585	796	1870	1585	1140	0	1772	1078	0	1805
Q Serve(g_s), s	4.5	15.5	5.1	8.1	8.9	3.0	17.7	0.0	17.4	12.1	0.0	13.0
Cycle Q Clear(g_c), s	13.4	15.5	5.1	23.6	8.9	3.0	30.7	0.0	17.4	29.5	0.0	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.20
Lane Grp Cap(c), veh/h	593	1153	977	447	1153	977	269	0	517	218	0	527
V/C Ratio(X)	0.12	0.41	0.16	0.21	0.26	0.10	0.65	0.00	0.58	0.52	0.00	0.46
Avail Cap(c_a), veh/h	593	1153	977	447	1153	977	426	0	760	367	0	775
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	11.8	9.8	17.9	10.5	9.4	47.2	0.0	36.2	48.8	0.0	34.7
Incr Delay (d2), s/veh	0.4	1.1	0.4	1.0	0.6	0.2	2.6	0.0	1.0	1.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.5	1.8	1.6	3.6	1.0	5.1	0.0	7.6	3.3	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	12.9	10.2	18.9	11.1	9.6	49.8	0.0	37.3	50.7	0.0	35.3
LnGrp LOS	B	B	B	B	B	A	D	A	D	D	A	D
Approach Vol, veh/h		705			494			475			354	
Approach Delay, s/veh		12.4			12.3			41.9			40.3	
Approach LOS		B			B			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.5		40.5		79.5		40.5				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		57.5		51.5		57.5		51.5				
Max Q Clear Time (g_c+l1), s		17.5		31.5		25.6		32.7				
Green Ext Time (p_c), s		9.2		1.8		5.7		2.4				
Intersection Summary												
HCM 6th Ctrl Delay				24.1								
HCM 6th LOS				C								

Timings

3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021

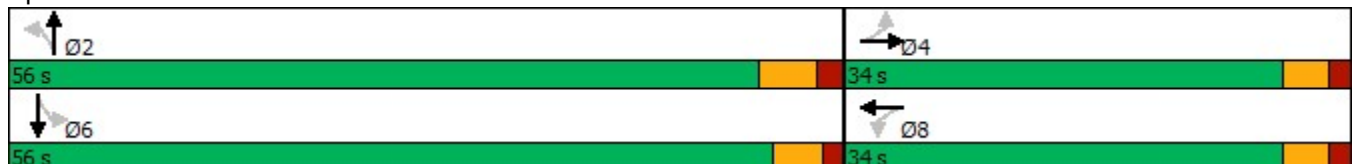


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↕		↕		↕	↗	↘
Traffic Volume (vph)	0	48	0	1	261	140	401
Future Volume (vph)	0	48	0	1	261	140	401
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6
Permitted Phases		8		2		6	
Detector Phase	4	8	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.1	23.1	23.1	23.9	23.9	23.3	23.3
Total Split (s)	34.0	34.0	34.0	56.0	56.0	56.0	56.0
Total Split (%)	37.8%	37.8%	37.8%	62.2%	62.2%	62.2%	62.2%
Yellow Time (s)	3.1	3.1	3.1	3.9	3.9	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.9	1.9	1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.7		4.7		5.8	4.8	4.8
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	7.4		7.4		18.8	19.8	19.8
Actuated g/C Ratio	0.20		0.20		0.51	0.54	0.54
v/c Ratio	0.00		0.52		0.35	0.23	0.44
Control Delay	0.0		9.7		6.5	5.7	6.9
Queue Delay	0.0		0.0		0.0	0.0	0.0
Total Delay	0.0		9.7		6.5	5.7	6.9
LOS	A		A		A	A	A
Approach Delay			9.7		6.5		6.6
Approach LOS			A		A		A

Intersection Summary

Cycle Length: 90	
Actuated Cycle Length: 37	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Old Norcross Tucker Rd & Cherokee Dr



Phasings

3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021





















Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	4		8		2		6
Permitted Phases		8		2		6	
Minimum Initial (s)	6.0	6.0	6.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.1	23.1	23.1	23.9	23.9	23.3	23.3
Total Split (s)	34.0	34.0	34.0	56.0	56.0	56.0	56.0
Total Split (%)	37.8%	37.8%	37.8%	62.2%	62.2%	62.2%	62.2%
Maximum Green (s)	29.3	29.3	29.3	50.2	50.2	51.2	51.2
Yellow Time (s)	3.1	3.1	3.1	3.9	3.9	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.9	1.9	1.5	1.5
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	6.0	6.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	Min	Min
Walk Time (s)	7.0						
Flash Dont Walk (s)	10.0						
Pedestrian Calls (#/hr)	0						
90th %ile Green (s)	11.6	11.6	11.6	28.8	28.8	29.8	29.8
90th %ile Term Code	Hold	Gap	Gap	Hold	Hold	Gap	Gap
70th %ile Green (s)	7.7	7.7	7.7	20.4	20.4	21.4	21.4
70th %ile Term Code	Hold	Gap	Gap	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.0	6.0	6.0	17.2	17.2	18.2	18.2
50th %ile Term Code	Hold	Min	Min	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.0	6.0	6.0	13.9	13.9	14.9	14.9
30th %ile Term Code	Hold	Min	Min	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.0	6.0	6.0	14.9	14.9	15.9	15.9
10th %ile Term Code	Hold	Min	Min	Dwell	Dwell	Dwell	Dwell

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 37
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 50.9
70th %ile Actuated Cycle: 38.6
50th %ile Actuated Cycle: 33.7
30th %ile Actuated Cycle: 30.4
10th %ile Actuated Cycle: 31.4

HCM 6th Signalized Intersection Summary 3: Old Norcross Tucker Rd & Cherokee Dr

01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	1	48	0	168	1	261	41	140	401	0
Future Volume (veh/h)	0	0	1	48	0	168	1	261	41	140	401	0
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	0	0	1	52	0	183	1	284	45	152	436	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	0	320	173	21	247	102	792	125	805	941	0
Arrive On Green	0.00	0.00	0.20	0.20	0.00	0.20	0.50	0.50	0.50	0.50	0.50	0.00
Sat Flow, veh/h	0	0	1585	243	105	1224	1	1575	249	1051	1870	0
Grp Volume(v), veh/h	0	0	1	235	0	0	330	0	0	152	436	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1572	0	0	1825	0	0	1051	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.9	0.0	0.0	3.9	0.0	0.0	1.7	5.4	0.0
Prop In Lane	0.00		1.00	0.22		0.78	0.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	320	441	0	0	1019	0	0	805	941	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.32	0.00	0.00	0.19	0.46	0.00
Avail Cap(c_a), veh/h	0	0	1306	1402	0	0	2673	0	0	1790	2693	0
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(l)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	11.3	13.3	0.0	0.0	5.4	0.0	0.0	4.8	5.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.7	0.0	0.0	0.4	1.3	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	0.0	0.0	0.0	1.5	0.0	0.0	0.9	0.0	0.0	0.4	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	11.3	13.6	0.0	0.0	6.0	0.0	0.0	5.2	7.0	0.0
LnGrp LOS	A	A	B	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		1			235			330			588	
Approach Delay, s/veh		11.3			13.6			6.0			6.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.7		11.9		23.7		11.9				
Change Period (Y+Rc), s		* 5.8		* 4.7		* 5.8		* 4.7				
Max Green Setting (Gmax), s		* 50		* 29		* 51		* 29				
Max Q Clear Time (g_c+l1), s		5.9		2.0		7.4		6.9				
Green Ext Time (p_c), s		5.7		0.0		10.5		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				7.9								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Traffic Volume Worksheets

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

1. Britt @ Old Norcross

A.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				Britt Road Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	99	185	84	368	77	198	54	329	8	111	38	157	90	651	88	829
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	101	189	86	376	79	202	55	336	8	113	39	160	92	664	90	846
No-Build 2025 Volumes:	105	197	89	391	82	210	57	349	8	118	41	167	96	691	94	881
Total New Trips:	55	19	8	82	3	7	14	24	44	41	57	142	3	27	7	37
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	160	216	97	473	85	217	71	373	52	159	98	309	99	718	101	918

P.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				Britt Road Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	46	180	35	261	128	245	22	395	81	576	57	714	59	224	132	415
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	47	184	36	267	131	250	22	403	83	588	58	729	60	229	135	424
No-Build 2025 Volumes:	49	191	37	277	136	260	23	419	86	612	60	758	62	238	140	440
Total New Trips:	79	14	5	98	7	19	48	74	28	43	68	139	10	47	5	62

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	128	205	42	375	143	279	71	493	114	655	128	897	72	285	145	502

School Dismissal Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				Britt Road Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	40	128	43	211	97	121	19	237	44	387	46	477	45	244	83	372
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	65	47	37	149	0	38	0	38	0	0	54	54	31	0	0	31
Adjusted / Projected 2021 Volumes:	107	181	82	370	102	165	20	287	46	406	102	554	78	256	87	421
No-Build 2025 Volumes:	111	188	85	384	106	172	21	299	48	422	106	576	81	266	91	438
Total New Trips:	58	14	5	77	5	14	26	45	24	36	48	108	8	29	4	41
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	169	202	90	461	111	186	47	344	72	458	154	684	89	295	95	479

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

School Exit Covid-19 Factor: 5%

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

2. Old Norcross @ Rocky Shoals

A.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				Rocky Shoals Court Eastbound				Site Drwy 6 (East Multifamily) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	4	243	0	247	0	245	5	250	6	0	7	13	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	4	370	0	374	0	328	5	333	6	0	7	13	0	0	0	0
No-Build 2025 Volumes:	4	385	0	389	0	341	5	346	6	0	7	13	0	0	0	0
Total New Trips:	0	57	5	62	8	58	0	66	0	0	0	0	14	0	23	37
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	4	442	5	451	8	399	5	412	6	0	7	13	14	0	23	37

P.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				Rocky Shoals Court Eastbound				Site Drwy 6 (East Multifamily) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	9	236	0	245	0	320	4	324	6	0	10	16	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	9	261	0	270	0	364	4	368	6	0	11	17	0	0	0	0
No-Build 2025 Volumes:	9	272	0	281	0	379	4	383	6	0	11	17	0	0	0	0
Total New Trips:	0	75	15	90	24	73	0	97	0	0	0	0	9	0	15	24

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	9	347	15	371	24	452	4	480	6	0	11	17	9	0	15	24

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1
 AM Covid-19 Factor: 7% (for existing turning movement counts)
 PM Covid-19 Factor: 5% (for existing turning movement counts)

Note: Existing through volumes on Old Norcross Tucker Rd (NBT, SBT) are calculated from intersection #1 (Britt Rd @ Old Norcross Tucker Rd)

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	276	24	300	76	359	1	436	0	0	0	0	20	0	80	100

School Dismissal Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				Private Drwy Eastbound				Cherokee Drive Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	1	208	8	217	12	184	0	196	0	0	1	1	9	0	10	19
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	31	31	122	0	0	122	0	0	0	0	37	0	150	187
Adjusted / Projected 2021 Volumes:	1	209	39	249	135	345	0	480	0	0	1	1	46	0	161	207
No-Build 2025 Volumes:	1	217	41	259	140	359	0	499	0	0	1	1	48	0	168	216
Total New Trips:	0	44	0	44	0	42	0	42	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
Future 2025 Traffic Volumes:	1	261	41	303	140	401	0	541	0	0	1	1	48	0	168	216

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1
 AM Covid-19 Factor: 7% (for existing turning movement counts, which do not contain Nesbit Elementary School traffic)
 PM Covid-19 Factor: 5% (for existing turning movement counts, which do not contain Nesbit Elementary School traffic)
 School Exit Covid-19 Factor: 5%

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

4. SR 8 @ Old Norcross

A.M. Peak Hour

Condition	-				Old Norcross Road				SR 8 (Lawrenceville Highway)				SR 8 (Lawrenceville Highway)			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	28	0	185	213	133	474	0	607	0	1504	31	1535
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	29	0	193	222	138	493	0	631	0	1565	32	1597
No-Build 2025 Volumes:	0	0	0	0	30	0	201	231	144	513	0	657	0	1629	33	1662
Total New Trips:	0	0	0	0	27	0	41	68	13	0	0	13	0	0	9	9
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	57	0	242	299	157	513	0	670	0	1629	42	1671

P.M. Peak Hour

Condition	-				Old Norcross Road				SR 8 (Lawrenceville Highway)				SR 8 (Lawrenceville Highway)			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	99	0	232	331	180	1452	0	1632	0	879	64	943
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	103	0	241	344	187	1511	0	1698	0	915	67	982
No-Build 2025 Volumes:	0	0	0	0	107	0	251	358	195	1572	0	1767	0	952	70	1022
Total New Trips:	0	0	0	0	18	0	29	47	45	0	0	45	0	0	30	30

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	125	0	280	405	240	1572	0	1812	0	952	100	1052

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

5. Jimmy Carter @ Britt

A.M. Peak Hour

Condition	Jimmy Carter Boulevard Northbound				Jimmy Carter Boulevard Southbound				Britt Road Eastbound				Williams Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	280	900	60	1240	27	539	143	709	47	100	119	266	73	347	49	469
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	286	918	61	1265	28	550	146	724	48	102	121	271	74	354	50	478
No-Build 2025 Volumes:	298	955	63	1316	29	572	152	753	50	106	126	282	77	368	52	497
Total New Trips:	4	0	0	4	0	0	9	9	27	10	14	51	0	3	0	3
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	302	955	63	1320	29	572	161	762	77	116	140	333	77	371	52	500

P.M. Peak Hour

Condition	Jimmy Carter Boulevard Northbound				Jimmy Carter Boulevard Southbound				Britt Road Eastbound				Williams Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	137	760	168	1065	100	1175	133	1408	113	293	170	576	86	125	51	262
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	140	775	171	1086	102	1199	136	1437	115	299	173	587	88	128	52	268
No-Build 2025 Volumes:	146	806	178	1130	106	1248	142	1496	120	311	180	611	92	133	54	279
Total New Trips:	15	0	0	15	0	0	30	30	18	7	10	35	0	11	0	11

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Future 2025 Traffic Volumes:	161	806	178	1145	106	1248	172	1526	138	318	190	646	92	144	54	290

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

6. S. Norcross @ Old Norcross

A.M. Peak Hour

Condition	S. Norcross Tucker Road Northbound				S. Norcross Tucker Road Southbound				Legacy Commons Apts Drwy Eastbound				Old Norcross Tucker Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	1	348	54	403	142	499	46	687	0	0	0	0	68	11	164	243
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	1	372	58	431	152	534	49	735	0	0	0	0	73	12	175	260
No-Build 2025 Volumes:	1	387	60	448	158	556	51	765	0	0	0	0	76	12	182	270
Total New Trips:	0	0	6	6	18	0	0	18	0	0	0	0	18	0	52	70
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	1	387	66	454	176	556	51	783	0	0	0	0	94	12	234	340

P.M. Peak Hour

Condition	S. Norcross Tucker Road Northbound				S. Norcross Tucker Road Southbound				Legacy Commons Apts Drwy Eastbound				Old Norcross Tucker Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	4	1016	106	1126	274	586	39	899	0	0	0	0	64	18	272	354
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	4	1067	111	1182	288	615	41	944	0	0	0	0	67	19	286	372
No-Build 2025 Volumes:	4	1110	116	1230	300	640	43	983	0	0	0	0	70	20	298	388
Total New Trips:	0	0	20	20	57	0	0	57	0	0	0	0	12	0	35	47

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Future 2025 Traffic Volumes:	4	1110	136	1250	357	640	43	1040	0	0	0	0	82	20	333	435

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1
 AM Covid-19 Factor: 7%
 PM Covid-19 Factor: 5%

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

7. Pleasantdale @ Tucker Ncross

A.M. Peak Hour

Condition	Tucker Norcross Road Northbound				Pleasantdale Road Southbound				Shopping Complex Drwy Eastbound				Tucker Norcross Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	426	147	573	113	254	2	369	0	0	1	1	377	2	411	790
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	456	157	613	121	272	2	395	0	0	1	1	403	2	440	845
No-Build 2025 Volumes:	0	475	163	638	126	283	2	411	0	0	1	1	419	2	458	879
Total New Trips:	0	52	18	70	0	18	0	18	0	0	0	0	6	0	0	6
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	527	181	708	126	301	2	429	0	0	1	1	425	2	458	885

P.M. Peak Hour

Condition	Tucker Norcross Road Northbound				Pleasantdale Road Southbound				Shopping Complex Drwy Eastbound				Tucker Norcross Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	6	682	624	1312	464	1000	16	1480	7	15	3	25	309	18	232	559
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	6	716	655	1377	487	1050	17	1554	7	16	3	26	324	19	244	587
No-Build 2025 Volumes:	6	745	682	1433	507	1093	18	1618	7	17	3	27	337	20	254	611
Total New Trips:	0	35	12	47	0	57	0	57	0	0	0	0	20	0	0	20

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Future 2025 Traffic Volumes:	6	780	694	1480	507	1150	18	1675	7	17	3	27	357	20	254	631

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1
 AM Covid-19 Factor: 7%
 PM Covid-19 Factor: 5%

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
 January 2021

8. Tucker Norcross @ Britt

A.M. Peak Hour

Condition	Tucker Norcross Road Northbound				Tucker Norcross Road Southbound				Waffle House Drwy Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	4	393	74	471	68	531	14	613	32	5	1	38	306	1	188	495
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	4	421	79	504	73	568	15	656	34	5	1	40	327	1	201	529
No-Build 2025 Volumes:	4	438	82	524	76	591	16	683	35	5	1	41	340	1	209	550
Total New Trips:	0	0	29	29	23	0	0	23	0	0	0	0	87	0	70	157
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	4	438	111	553	99	591	16	706	35	5	1	41	427	1	279	707

P.M. Peak Hour

Condition	Tucker Norcross Road Northbound				Tucker Norcross Road Southbound				Waffle House Drwy Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	4	913	396	1313	267	942	11	1220	53	36	1	90	207	6	160	373
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	4	959	416	1379	280	989	12	1281	56	38	1	95	217	6	168	391
No-Build 2025 Volumes:	4	998	433	1435	291	1029	12	1332	58	40	1	99	226	6	175	407
Total New Trips:	0	0	95	95	75	0	0	75	0	0	0	0	58	0	46	104

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	4	998	528	1530	366	1029	12	1407	58	40	1	99	284	6	221	511

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1
 AM Covid-19 Factor: 7%
 PM Covid-19 Factor: 5%

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

9. Chamblee @ Tucker Norcross

A.M. Peak Hour

Condition	Chamblee Tucker Road Northbound				Tucker Norcross Road Southbound				Chamblee Tucker Road Eastbound				Randie's Service Center Drwy Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	233	334	0	567	0	247	454	701	125	1	60	186	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	249	357	0	606	0	264	486	750	134	1	64	199	0	0	0	0
No-Build 2025 Volumes:	259	371	0	630	0	275	506	781	139	1	67	207	0	0	0	0
Total New Trips:	0	18	0	18	0	52	34	86	12	0	0	12	0	0	0	0
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	259	389	0	648	0	327	540	867	151	1	67	219	0	0	0	0

P.M. Peak Hour

Condition	Chamblee Tucker Road Northbound				Tucker Norcross Road Southbound				Chamblee Tucker Road Eastbound				Randie's Service Center Drwy Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	234	684	0	918	0	613	271	884	748	1	395	1144	0	0	1	1
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	246	718	0	964	0	644	285	929	785	1	415	1201	0	0	1	1
No-Build 2025 Volumes:	256	747	0	1003	0	670	297	967	817	1	432	1250	0	0	1	1
Total New Trips:	0	57	0	57	0	35	23	58	37	0	0	37	0	0	0	0

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	256	804	0	1060	0	705	320	1025	854	1	432	1287	0	0	1	1

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1
 AM Covid-19 Factor: 7%
 PM Covid-19 Factor: 5%

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

10. Britt @ Drwy 1 (W. SF)

A.M. Peak Hour

Condition	Site Drwy 1 (West Single-Family)				-				Britt Road				Britt Road			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	160	0	160	0	820	0	820
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	166	0	166	0	853	0	853
Total New Trips:	64	0	49	113	0	0	0	0	0	30	21	51	16	91	0	107
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	64	0	49	113	0	0	0	0	0	196	21	217	16	944	0	960

P.M. Peak Hour

Condition	Site Drwy 1 (West Single-Family)				-				Britt Road				Britt Road			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	729	0	729	0	298	0	298
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	759	0	759	0	310	0	310
Total New Trips:	42	0	32	74	0	0	0	0	0	96	72	168	55	61	0	116

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	42	0	32	74	0	0	0	0	0	855	72	927	55	371	0	426

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

11. Britt @ Drwy 2 (W. SF-TH)

A.M. Peak Hour

Condition	Site Drwy 2 (West Single-Family & Northbound				-				Britt Road Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	160	0	160	0	820	0	820
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	166	0	166	0	853	0	853
Total New Trips:	34	0	70	104	0	0	0	0	0	69	10	79	22	73	0	95
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	34	0	70	104	0	0	0	0	0	235	10	245	22	926	0	948

P.M. Peak Hour

Condition	Site Drwy 2 (West Single-Family & Northbound				-				Britt Road Eastbound				Britt Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	729	0	729	0	298	0	298
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	759	0	759	0	310	0	310

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Total New Trips:	20	0	44	64	0	0	0	0	0	93	35	128	76	96	0	172
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	20	0	44	64	0	0	0	0	0	852	35	887	76	406	0	482

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
 January 2021

12. Britt @ Drwy 3 (Ret. RIRO)

A.M. Peak Hour

Condition	Site Drwy 3 (East Retail RIRO)				-				Britt Road Eastbound				Britt Road Westbound			
	Northbound				Southbound											
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	278	0	278	0	846	0	846
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	289	0	289	0	880	0	880
Total New Trips:	0	0	0	0	0	0	0	0	0	49	2	51	0	37	0	37
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	0	0	0	0	0	338	2	340	0	917	0	917

P.M. Peak Hour

Condition	Site Drwy 3 (East Retail RIRO)				-				Britt Road Eastbound				Britt Road Westbound			
	Northbound				Southbound											
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	755	0	755	0	424	0	424
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	786	0	786	0	441	0	441
Total New Trips:	0	0	2	2	0	0	0	0	0	50	5	55	0	61	0	61

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	4	4	0	0	0	0	0	-3	3	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	6	6	0	0	0	0	0	833	8	841	0	502	0	502

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
 January 2021

13. Britt @ Drwy 4 (E. MF)

A.M. Peak Hour

Condition	Site Drwy 4 (East Multifamily)				-				Britt Road				Britt Road			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	278	0	278	0	846	0	846
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	289	0	289	0	880	0	880
Total New Trips:	23	0	11	34	0	0	0	0	0	41	8	49	4	14	0	18
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	23	0	11	34	0	0	0	0	0	330	8	338	4	894	0	898

P.M. Peak Hour

Condition	Site Drwy 4 (East Multifamily)				-				Britt Road				Britt Road			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	0	0	0	0	0	0	0	0	755	0	755	0	424	0	424
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	786	0	786	0	441	0	441
Total New Trips:	15	0	7	22	0	0	0	0	0	28	24	52	11	46	0	57

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	15	0	7	22	0	0	0	0	0	814	24	838	11	487	0	498

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

14. Old Norcross @ Drwy 5 (Ret)

A.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				- Eastbound				Site Drwy 5 (East Retail) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	376	0	376	0	333	0	333	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	391	0	391	0	347	0	347	0	0	0	0	0	0	0	0
Total New Trips:	0	79	1	80	1	65	0	66	0	0	0	0	1	0	2	3
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	470	1	471	1	412	0	413	0	0	0	0	1	0	2	3

P.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				- Eastbound				Site Drwy 5 (East Retail) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	267	0	267	0	368	0	368	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	278	0	278	0	383	0	383	0	0	0	0	0	0	0	0
Total New Trips:	0	88	2	90	4	94	0	98	0	0	0	0	3	0	8	11

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	-1	1	0	2	-2	0	0	0	0	0	0	0	2	0	1	3
Future 2025 Traffic Volumes:	0	365	3	368	6	475	0	481	0	0	0	0	5	0	9	14	

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

15. Old Norcross @ Drwy 7 (S)

A.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				- Eastbound				Site Drwy 7 (East Townhomes) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	374	0	374	0	335	0	335	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	389	0	389	0	349	0	349	0	0	0	0	0	0	0	0
Total New Trips:	0	20	3	23	13	59	0	72	0	0	0	0	11	0	42	53
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	409	3	412	13	408	0	421	0	0	0	0	11	0	42	53

P.M. Peak Hour

Condition	Old Norcross Tucker Road Northbound				Old Norcross Tucker Road Southbound				- Eastbound				Site Drwy 7 (East Townhomes) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
2017 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Traffic Counts during Covid-19:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
Nesbit Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted / Projected 2021 Volumes:	0	270	0	270	0	375	0	375	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	281	0	281	0	390	0	390	0	0	0	0	0	0	0	0
Total New Trips:	0	65	10	75	42	40	0	82	0	0	0	0	6	0	25	31

20-073 Heritage on the Lake DRI
Traffic Volumes

A&R Engineering
January 2021

Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Future 2025 Traffic Volumes:	0	346	10	356	42	430	0	472	0	0	0	0	6	0	25	31

Number of Years = 4 (from 2017 to 2021)
 Number of Years = 2 (from 2019 to 2021)
 Number of Years = 4 (from 2021 to 2025)
 Growth Factor (%) = 1