

TRAFFIC IMPACT STUDY FOR

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# SR 211 Mixed-Use Site Hall County, Georgia

**DATE:**

June 3, 2025

**LOCATION:**

Hall County, Georgia

**PREPARED FOR:**

CHI/Acquisitions, L.P.

**PREPARED BY:**

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## Executive Summary

A new mixed-use development is proposed for construction along the east side of SR 211 opposite Ridgemoor Drive. When completed, the development will consist of 1,719,640 square feet of warehousing, 350 townhomes, and 350 apartments. With limited frontage to SR 211, only one (1) access point is proposed onto the highway. The full-buildout of the site is expected by 2030.

Currently, SR 211 is a two-lane undivided roadway. The intersection of SR 211 with SR 347 experiences high delay during the PM peak period with signal timings favoring traffic along SR 211 despite there being several hundred vehicles approaching from SR 347 during that period. This delay is expected to be mitigated with two widening projects that are planned to be completed by the end of 2030. The widening projects will add multiple turn lanes to each approach at the intersection and additional northbound and southbound through lanes to improve traffic flow along SR 211.

The concept for PI 0007233 (widening of SR 211 from SR 347 to SR 53) shows a network of R-Cuts for the SR 211 corridor between SR 53 and Union Church Road. While the proposed site access would operate satisfactorily as an R-Cut, the addition of 936 heavy trucks per day to the highway from the development present a safety concern for slow-moving, U-turning trucks movement bound for I-85 along SR 211. Instead, a multilane roundabout would operate better at the proposed driveway allowing the large vehicles to safely exit the site while maintaining traffic flow along the highway. Since the widening project is still several years away, the multi-lane roundabout could be initially constructed as a single-lane roundabout until the GDOT project is completed.

Other than improvements at the proposed access to SR 211, no changes to the surrounding intersections are necessary to mitigate the impact of the proposed development.

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## A. Introduction

A new mixed-use is proposed for construction along the east side of SR 211 opposite Ridgemoor Drive in Hall County, Georgia. The proposed development will consist of 1,719,640 square feet of warehousing, 350 townhomes, and 350 apartments. The site is proposed to have a single access-point onto SR 211.

The traffic analyses in this report are for a single phase of construction – full build-out even though the development cycle will likely be divided between industrial and residential. The purpose of this report is to identify the traffic expected to be generated by new vehicular trips when the development is fully completed. This study includes analysis of the Existing, No-Build, and Build conditions at the following intersections for the year 2030:

1. SR 211 & SR 53
2. SR 211 & SR 347 / Bayberry Drive
3. SR 211 & Site Driveway

The report summarizes the analysis of existing, background and projected traffic at the study locations, analysis of traffic impacts including Levels of Service (LOS) and conclusions and recommendations from the analysis.

Figure 1 depicts the study area (vicinity map) in Hall County, Georgia. The study intersections listed above are depicted in Figure 2. A copy of the development concept plan is included in Appendix A.



Figure 1: Vicinity Map

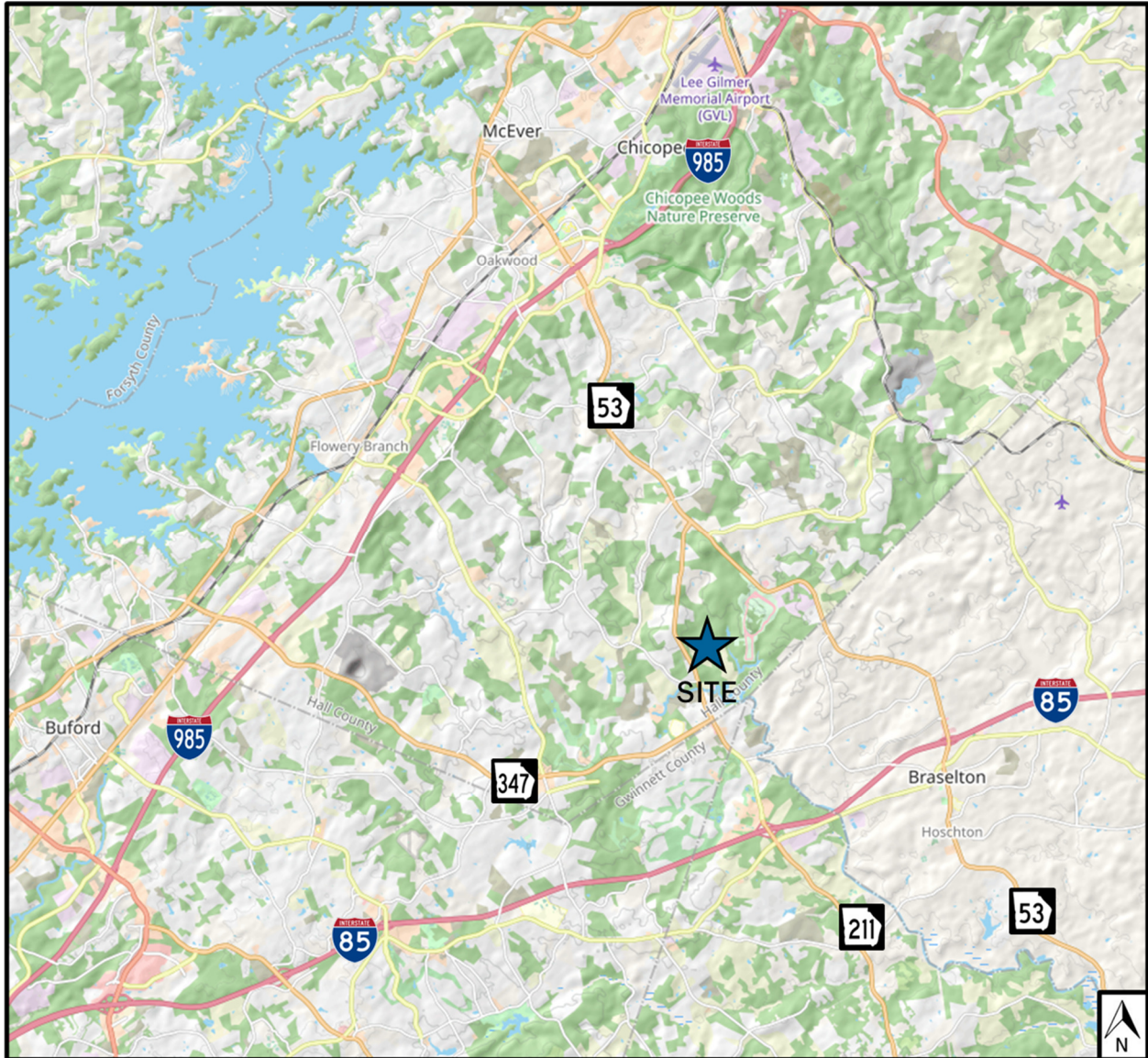
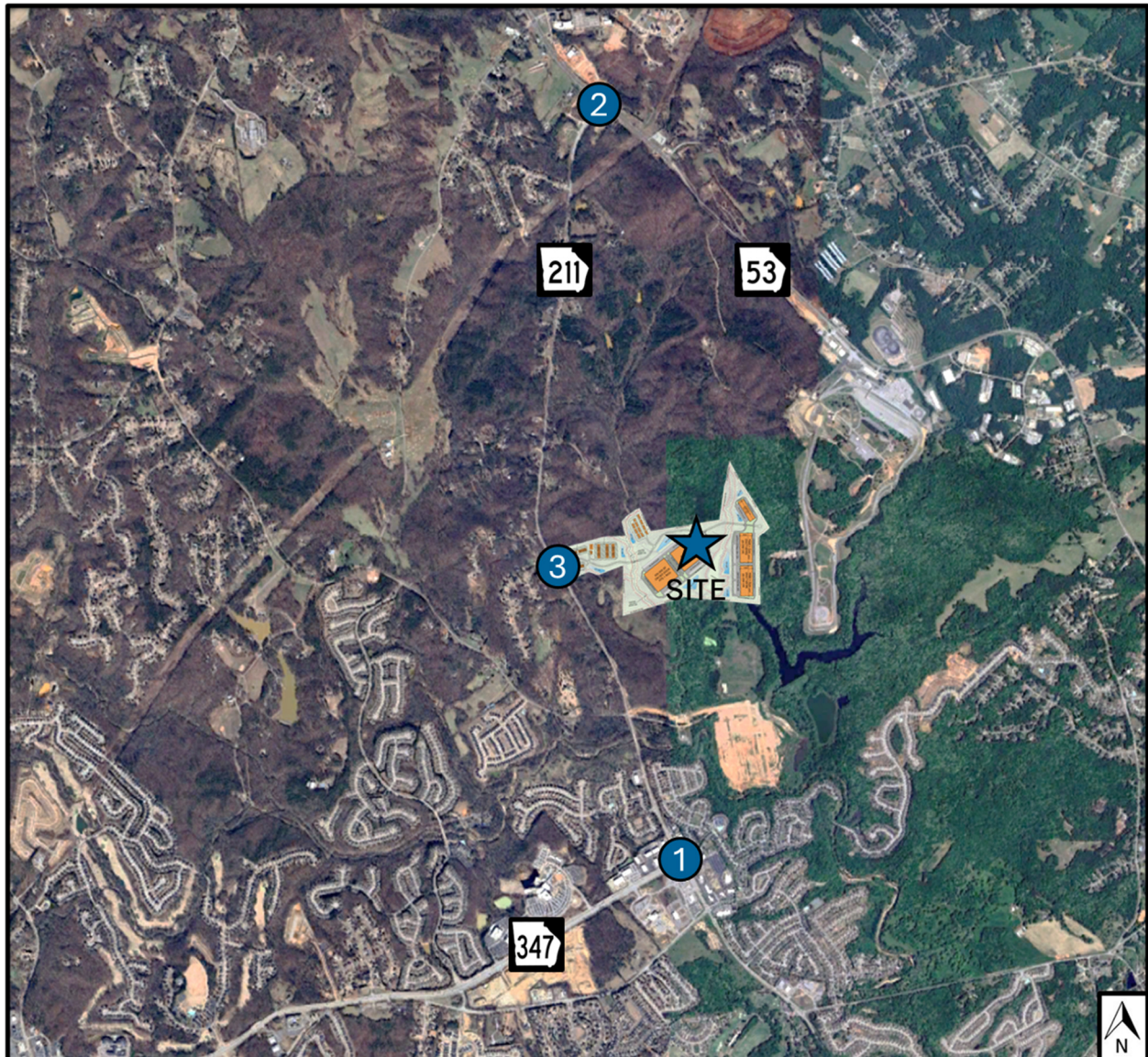




Figure 2: Site Location Aerial



1. SR 211 & SR 53
2. SR 211 & SR 347 / Bayberry Drive
3. SR 211 & Site Driveway / Ridgemoor Drive

## B. Existing Conditions

### B.1. Transportation Facilities

**SR 211** is currently a two-lane, undivided, minor arterial highway that has a north/south orientation for the purposes of this study. SR 211 runs south from its intersection with SR 53 towards Barrow County and I-85. The posted speed limit along SR 211 is 45 miles per hour (MPH) and land uses along the highway are primarily residential in the study area with commercial around its intersection with SR 347 / Bayberry Drive.

**SR 53** is a four-lane, divided highway classified as a principal arterial highway west of its intersection with SR 211 and a minor arterial highway east of the intersection as the highway narrows to a two-lane, undivided roadway. SR 53 has an east/west orientation, for the purposes of this study, and runs west towards Oakwood and I-985 and runs east towards Braselton and I-85. The posted speed limit along SR 53 in the study area is 45 MPH. Most of the land is undeveloped along the highway with some small commercial uses in the area as well as a Hall County fire station.

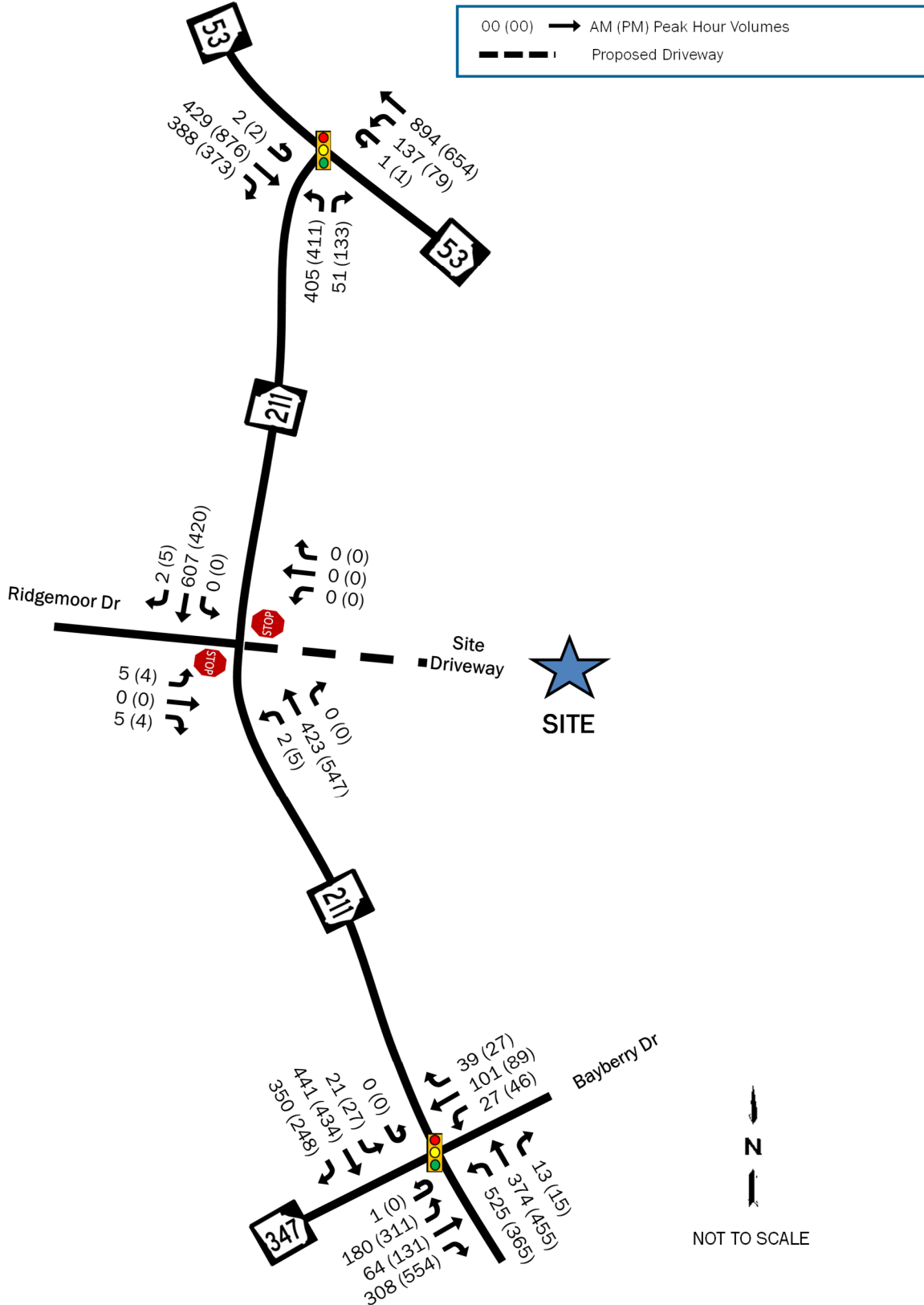
**SR 347 (Friendship Road)** is a six-lane, divided, minor arterial highway with an east-west orientation for the purposes of this study. SR 347 runs west from its intersection with SR 211 towards Buford and I-985. SR 53 shares an intersection at SR 211 with Bayberry Drive. The posted speed limit along SR 53 is 45 MPH and land uses along the highway are primarily commercial at the study intersection with residential west of the study area.

**Bayberry Drive** is a four-lane, divided, local roadway that runs east of its intersection with SR 211 into the Mulberry Park residential subdivision. Bayberry Drive also includes three access points for commercial developments located along SR 211. The posted speed limit along Bayberry Drive is 25 MPH.

### B.2. Traffic Counts

Weekday AM and PM peak period turning movement counts were collected at the study intersections on Tuesday, March 25, 2025. Average daily traffic counts were also collected on SR 211 in front of the proposed site. The average daily weekday traffic along SR 211 is approximately 12,500 vehicles per day near the project site. Counts were collected while schools were in session and are included in Appendix B. The counts collected in 2025 are shown in Figure 3 (2025 Existing Traffic Volumes).

Figure 3: 2025 Existing Traffic Volumes



## C. Future Conditions

### C.1. Background Growth

The growth rate used in the study area is based upon an analysis of historical traffic counts in study area according to Georgia DOT's Traffic Data Application. The project is expected to be completed in 2030. To account for ambient growth and other developments in the area, the existing traffic counts for this study were grown by a conservative rate of 2.4% per year for five (5) years. The expected volumes are shown in Figure 4, 2030 No-Build Volumes. The growth rate development worksheet is included in Appendix B.

### C.2. Planned Roadway Projects

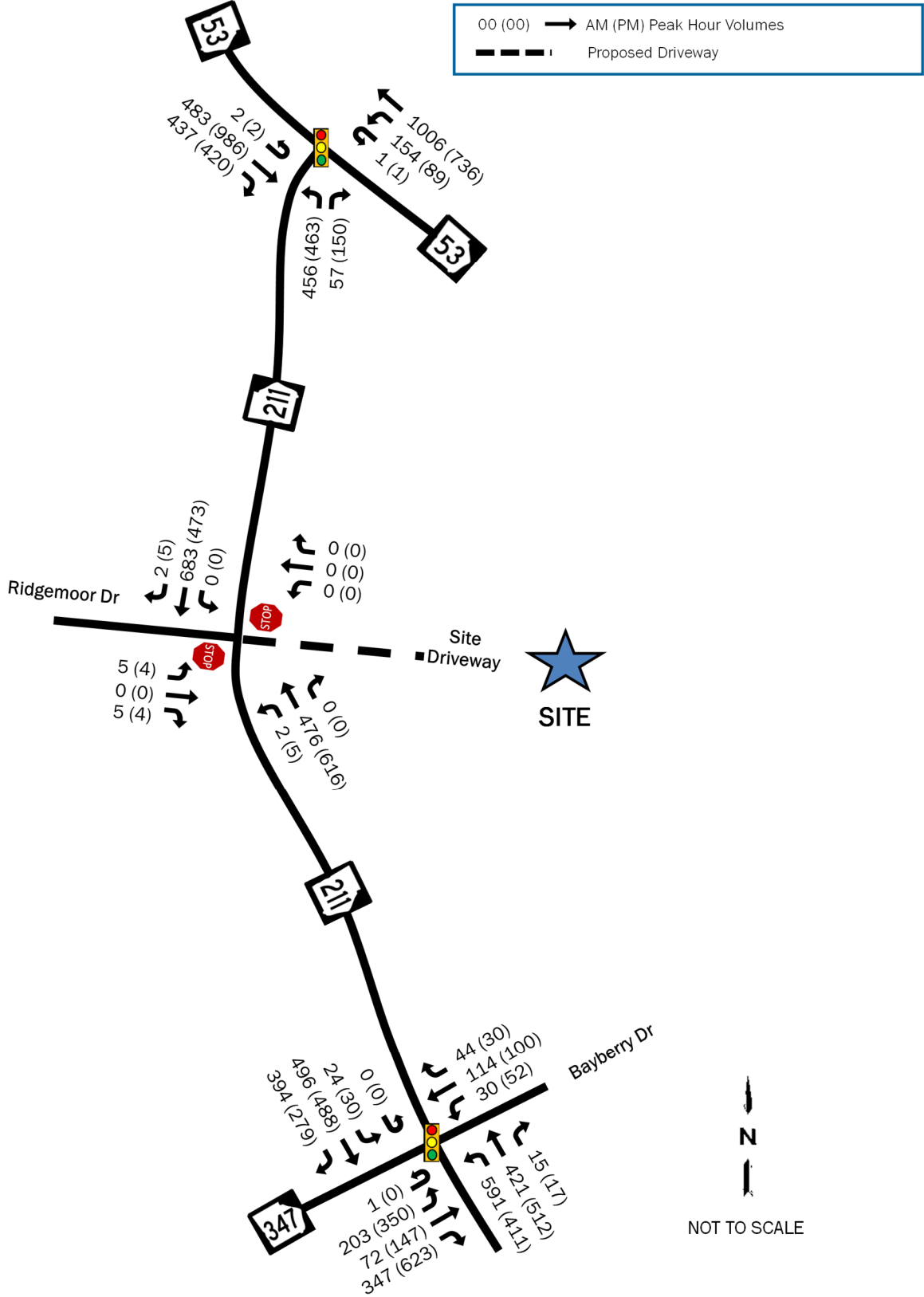
GDOT has two projects planned for SR 211 that are expected to impact the study area and be completed by the end of 2030. The first, PI 0016089, will widen SR 211 from Liberty Church Road to SR 347 / Bayberry Drive from two-lanes to a four-lane, divided highway. This project will add significant capacity improvements to the intersection of SR 211 with SR 347 including an additional eastbound left-turn lane, eastbound right-turn lane, northbound through-lane, northbound right-turn lane, and a westbound right-turn lane. Letting for this project is scheduled for 2025.

The second project, PI 0007233, will continue the widening north to SR 53 creating a series of R-cuts along the highway and a multilane roundabout at the intersection of SR 211 with Union Church Road. This project will add a second southbound through-lane to the intersection of SR 211 with SR 347, but not significantly impact the intersection of SR 211 with SR 53, other than extending the storage bay for northbound right-turns. Construction for this project is expected to be completed by the end of 2030.

The changes from these widening plans are expected to include signal timing improvements, so for the purposes of this study, signal timings for the future (No-build) analysis were optimized and the same timings were used for the future + project traffic (Build) analysis.



Figure 4: 2030 No-Build Traffic Volumes



### C.3. Project Trip Generation

Project trip generation was calculated using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition, 2021. According to ITE, trips for light industrial developments include both personal vehicles and trucks. Table 1 below shows the breakdown of the trips expected to be generated by the new mixed-use development.

**Table 1: Trip Generation**

Land Use Code	Variable	Trip Type	Daily	AM Peak Hour			PM Peak Hour		
				IN	OUT	TOTAL	IN	OUT	TOTAL
110 - Light Ind.	1,719,640 SF	Personal Vehicle	1,820	159	37	196	38	143	181
		Truck	936	18	16	34	27	25	52
215 - Townhomes	350 Units	Personal Vehicle	2,616	55	121	176	117	89	206
220 - Apts	350 Units	Personal Vehicle	2,318	31	100	131	108	63	171
<b>Total</b>			<b>7,690</b>	<b>263</b>	<b>273</b>	<b>537</b>	<b>290</b>	<b>320</b>	<b>610</b>

The development will generate a total of 537 new vehicle trips (263 entering and 273 exiting) during the AM peak hour, and a total of 610 new vehicle trips (290 entering and 320 exiting) during the PM peak hour.

### C.4. Trip Distribution and Assignment

The assignment and directional distribution of new project trips was based on the traffic patterns evidenced in the overall study area. Traffic counts at the nearest intersection to the north and south of the site suggest that approximately

- 30% of vehicles will travel to/from the northwest along SR 53
- 10% will travel to/from the northeast along SR 53
- 25% will travel to/from the southwest along SR 347
- 35% will travel to/from the south along SR 211.

The detailed personal vehicles trip distribution is shown in Figure 5. The personal vehicles trips generated from the development utilizing the trip distribution is depicted in Figure 6. Truck counts at the intersections suggest a different distribution pattern for heavy vehicles. The counts suggest that:

- 30% of trucks will travel to/from the northwest along SR 53,
- 25% will travel to/from the northeast along SR 53,
- 20% will travel to/from the southwest along SR 347, and
- 25% will travel to/from the south along SR 211.

The truck distribution is shown in Figure 7, and the resulting truck trips are shown in Figure 8. Figure 9 shows the total project trip generation. The No-Build plus project trips (Build Volumes) are depicted in Figure 10.

Figure 5: Personal Vehicle Trip Distribution

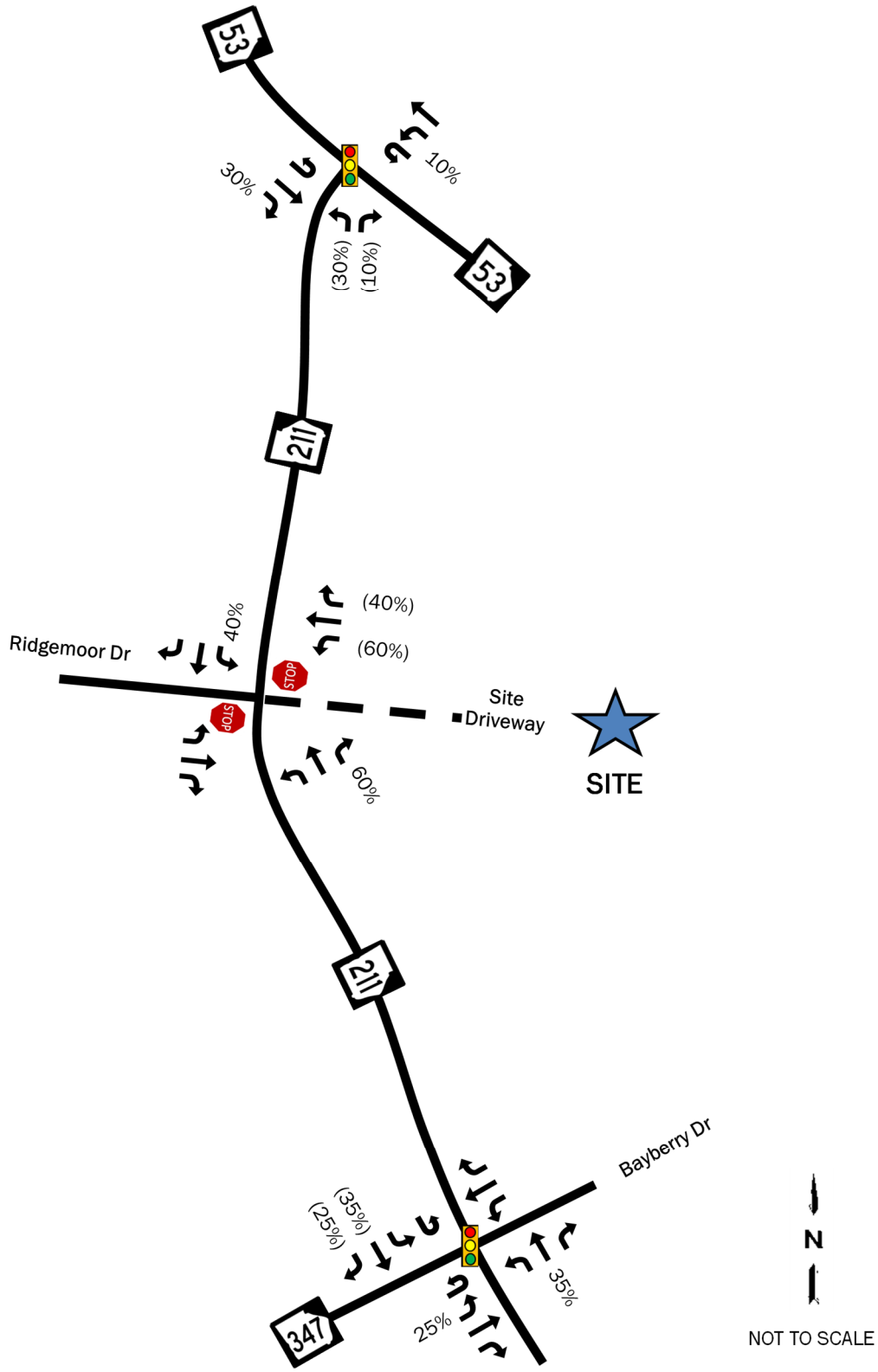




Figure 6: Personal Vehicle Development Trips

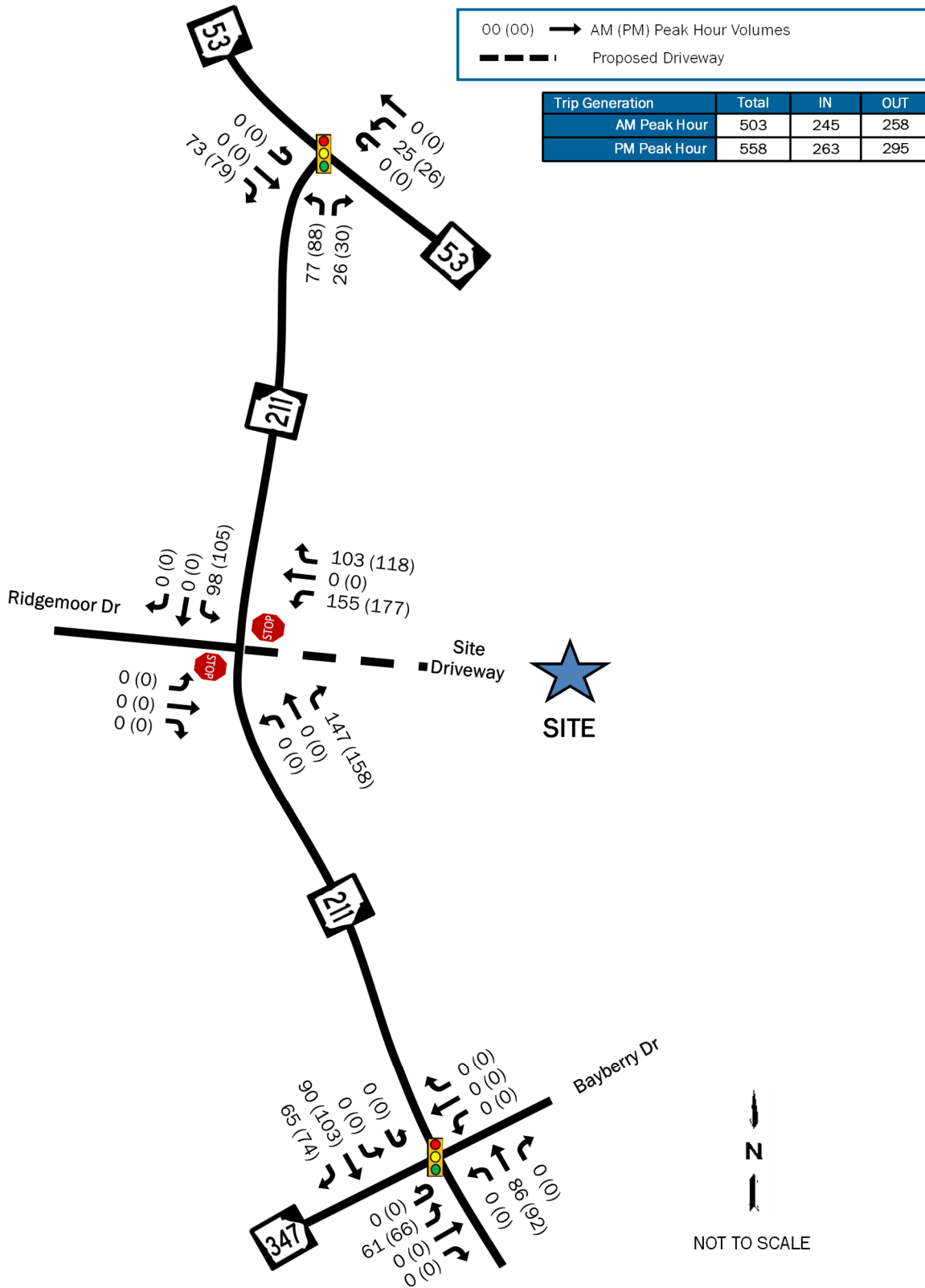


Figure 7: Truck Trip Distribution

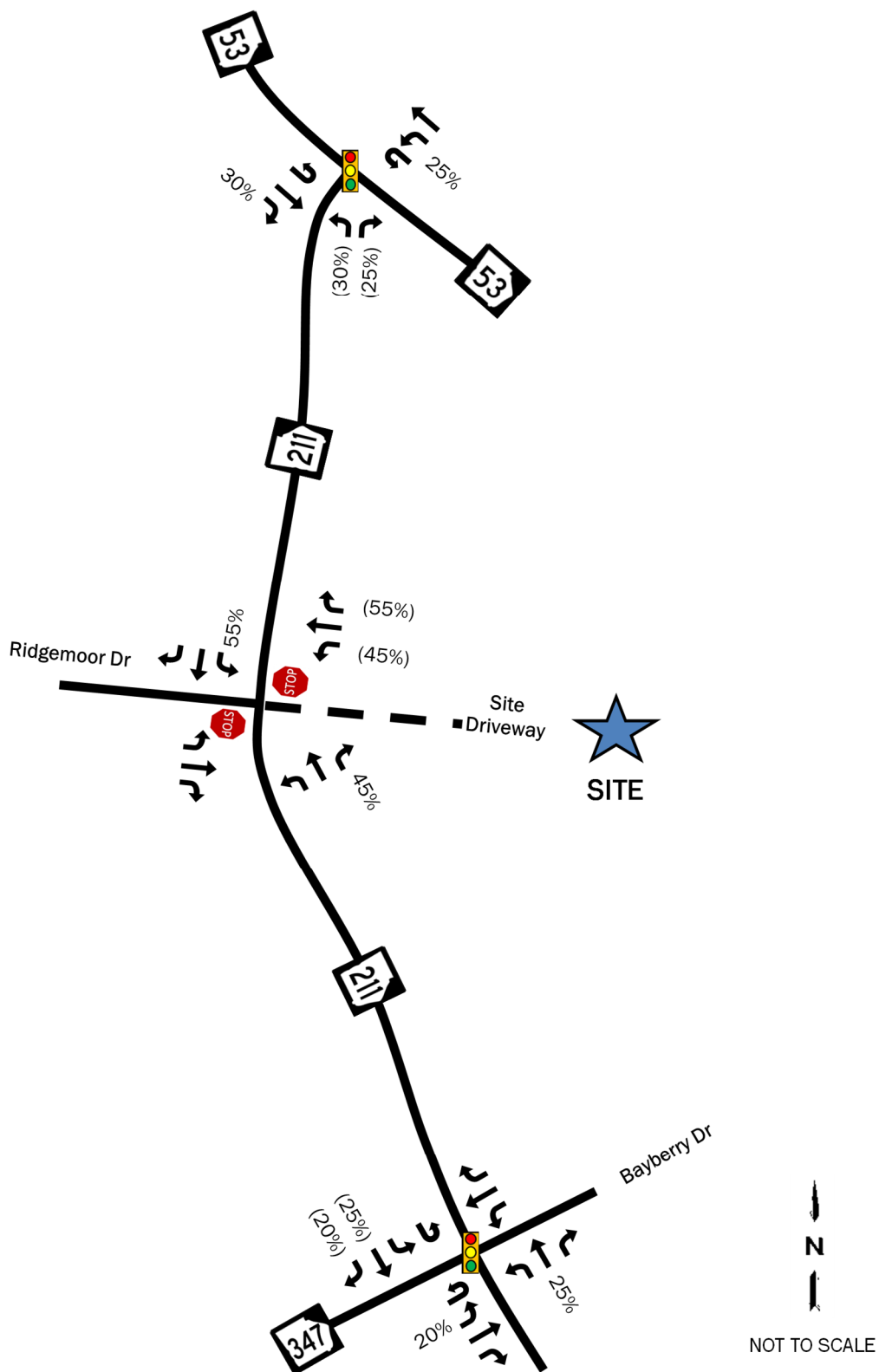


Figure 8: Truck Development Trips

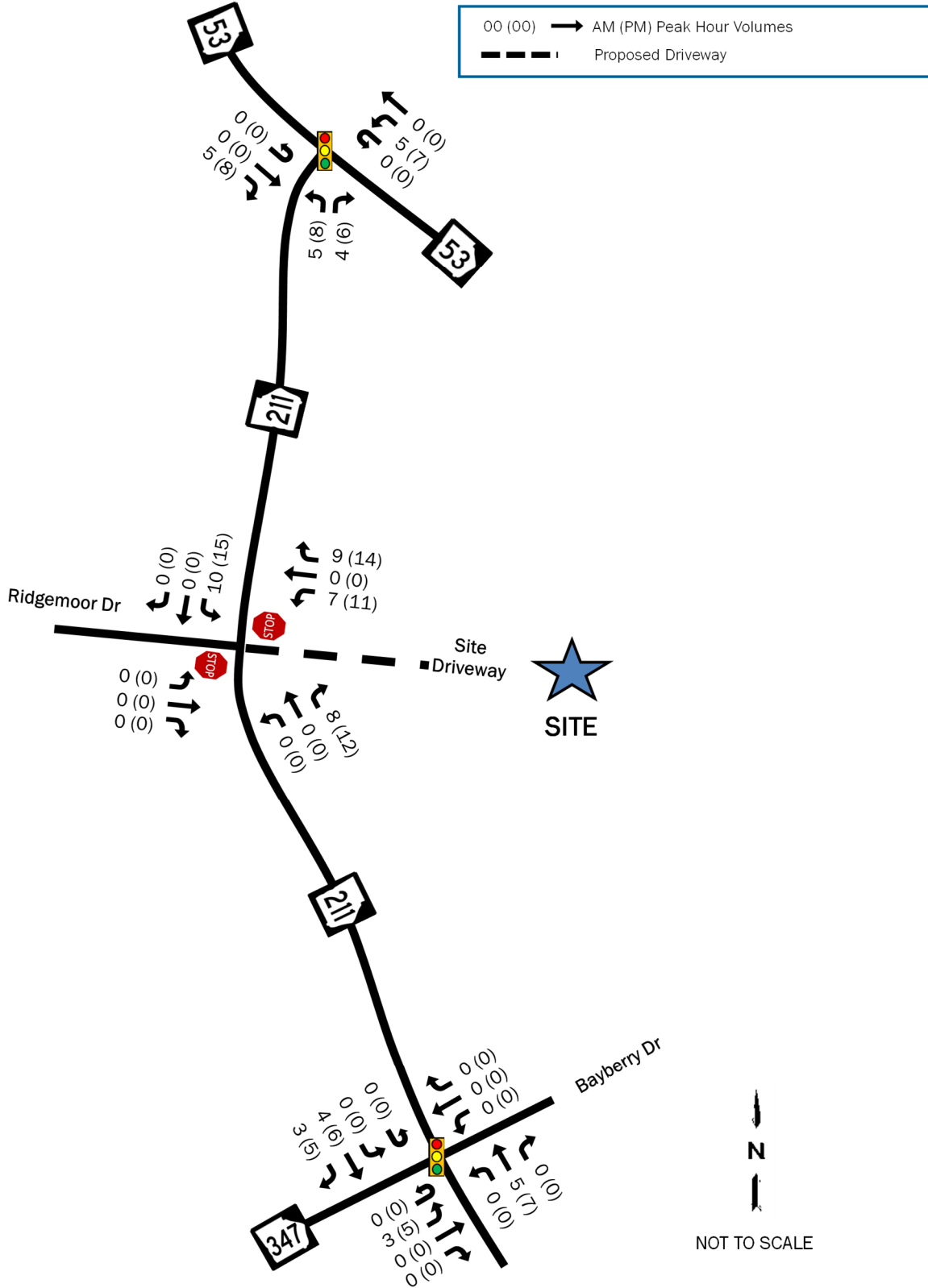


Figure 9: Total Development Trips

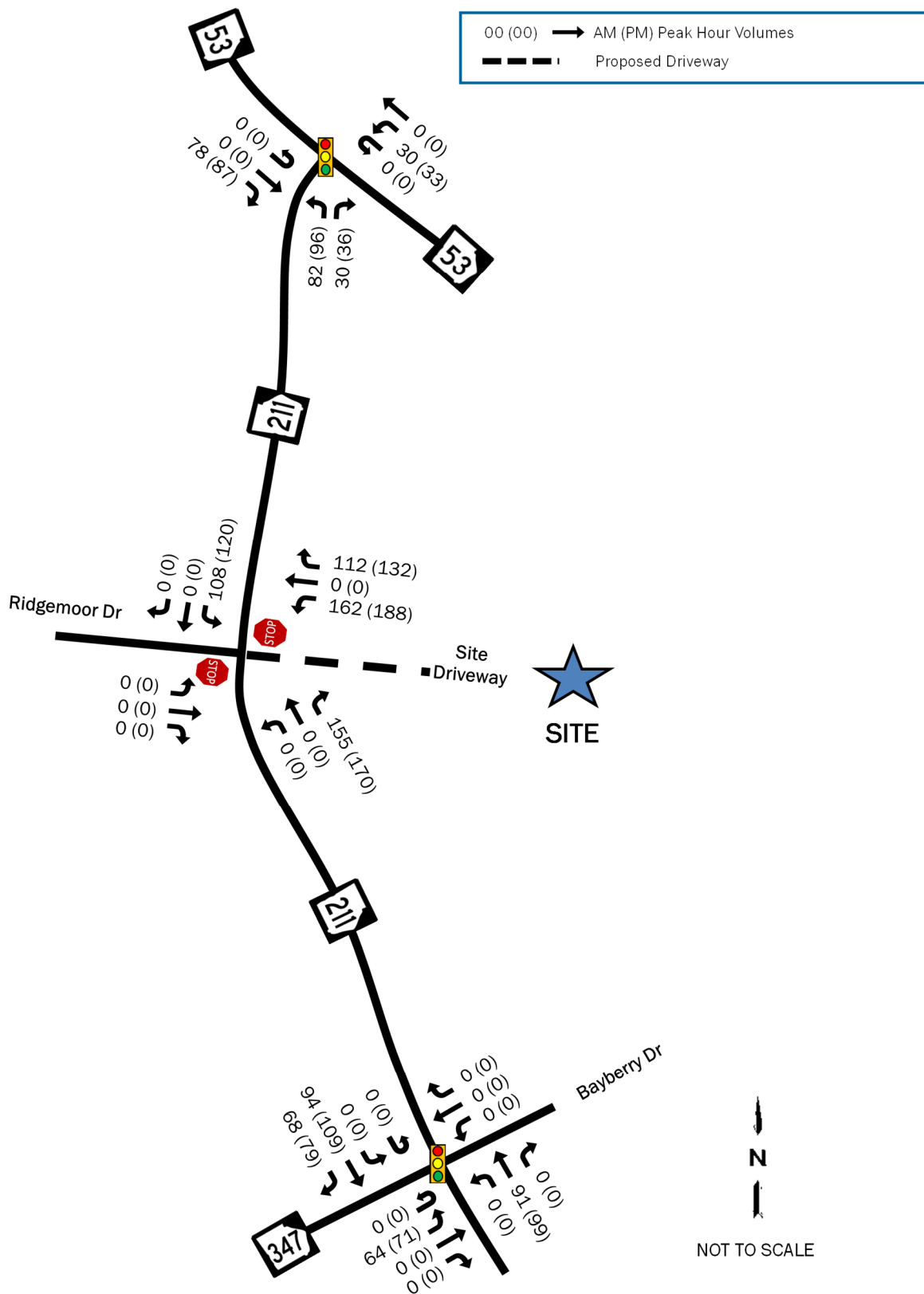
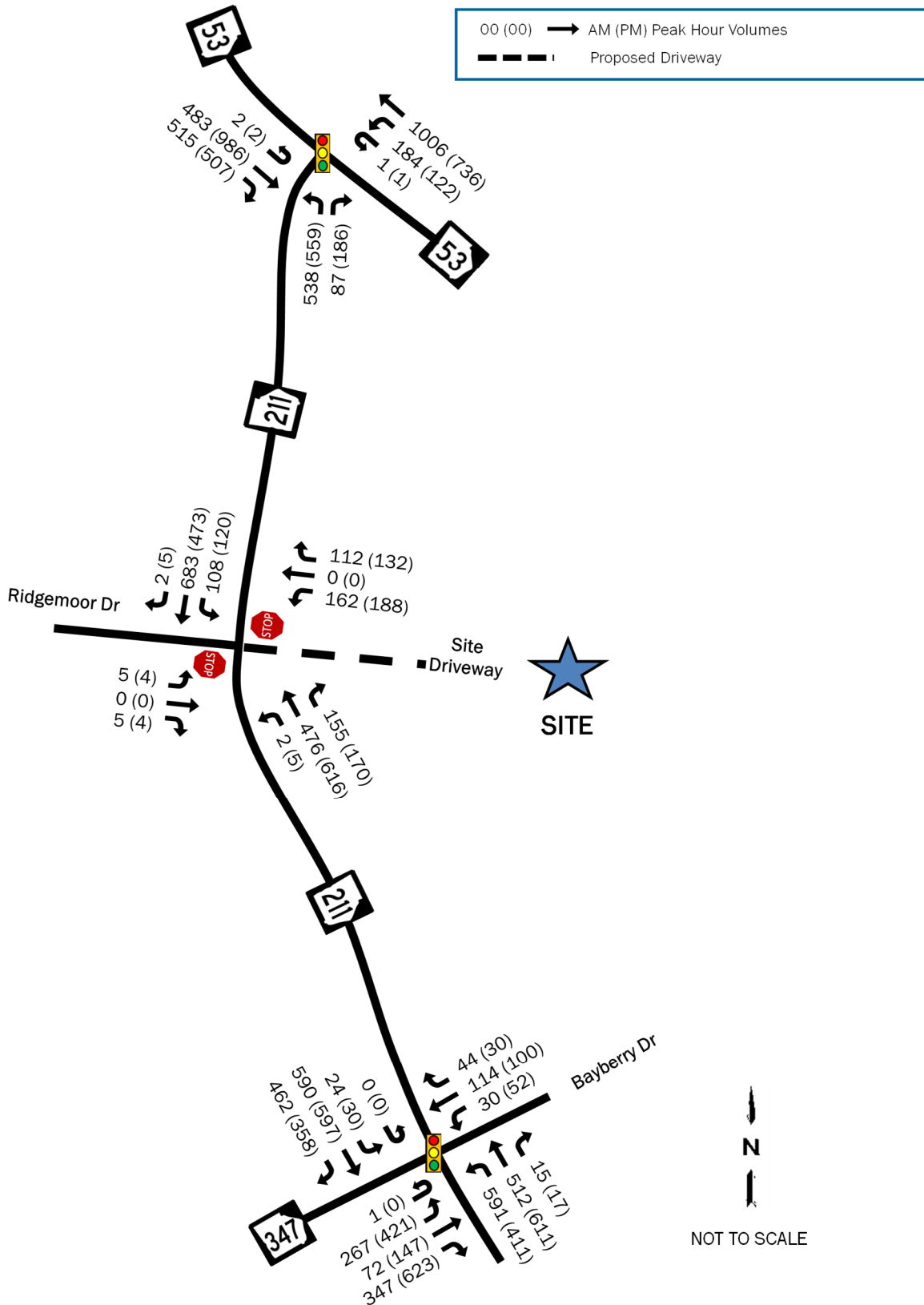


Figure 10: 2030 Build Traffic Volumes



## D. Traffic Impact Analyses

The analysis in each of the scenarios for the study was performed using the traffic analysis software Synchro® 12. Average vehicular delays are calculated and reported as Levels of Service (LOS) as defined by the Highway Capacity Manual (HCM 7th Edition). HCM uses a grading system A through F, where A is the best (little to no delay), and F is the worst (very heavy delay). HCM Levels of Service (LOS) standards and Synchro® output reports are included in Appendix C. Singal timing for the intersections SR 211 with SR 53 and with SR 347 / Bayberry Drive were taken from GDOT's Automated Traffic Signal Performance Measures application. Printouts of the timings are included with the Synchro® output reports in Appendix C. Since HCM does not analyze U-turns at signalized intersections, all U-turns were included as left-turns. The eastbound approach at the intersection of SR 211 with SR 53 had few U-turns that could not be accounted for as the intersection is a T-intersection, but there is an exclusive storage lane for these U-turns and the delay to make the U-turn is negligible to the rest of the intersection.

### D.1. 2025 Existing Conditions Analysis

The results of the 2025 Existing conditions capacity analysis are shown in Table 2 and include analysis of the traffic volumes presented in Figure 3.

**Table 2: 2025 Existing Conditions Capacity Analysis**

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	SR 211 & SR 347 / Bayberry Dr	Signal	<b>Overall</b>	<b>D</b>	<b>52.6</b>	<b>F</b>	<b>113.5</b>
			EB	E	71.0	F	192.5
			WB	F	90.6	F	135.7
			NB	D	42.5	D	45.6
			SB	D	37.4	D	38.6
2	SR 211 & SR 53	Signal	<b>Overall</b>	<b>A</b>	<b>8.9</b>	<b>A</b>	<b>9.3</b>
			EB	A	6.6	A	6.9
			WB	A	7.3	A	6.9
			NB	B	16.9	B	19.1
3	SR 211 & Ridgemoor Dr	Stop	EB	<b>C</b>	20.3	C	18.4
			NBL	A	8.9	A	8.3

As shown in Table 2, the intersection of SR 211 with SR 347 / Bayberry Drive currently experiences heavy delay along the two side-streets, especially during the PM peak period. Much of the delay is due to a high cycle length during the PM peak period of 160 seconds and very little time allocated to the side streets, despite having a high volume of traffic coming from SR 347.

## D.2. 2030 No-Build Conditions Capacity Analysis

The results of the 2030 No-Build conditions capacity analysis are shown in Table 3 for the operation of the study intersections with the traffic volumes presented in Figure 4. The analysis for 2030 assumes the improvements to SR 211 will be in place.

**Table 3: 2030 No-Build Capacity Analysis**

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	SR 211 & SR 347 / Bayberry Dr	Signal	<b>Overall</b>	<b>D</b>	<b>39.8</b>	<b>D</b>	<b>37.0</b>
			EB	D	38.3	D	35.6
			WB	E	69.2	E	59.1
			NB	D	44.4	D	37.7
			SB	C	29.5	C	31.9
2	SR 211 & SR 53	Signal	<b>Overall</b>	<b>A</b>	<b>9.9</b>	<b>B</b>	<b>10.7</b>
			EB	A	7.0	A	7.3
			WB	A	7.8	A	7.5
			NB	C	20.3	C	24.1
3	SR 211 & Ridgemoor Dr	Stop	EB	C	23.8	C	21.3
			NBL	A	9.2	A	8.5

As shown in Table 3, the major improvements to SR 211 and the intersection of SR 211 with SR 347 / Bayberry Drive is expected to greatly improve traffic operations at the intersection. The Bayberry Drive approach may still experience slightly high delay due to timings needing to favor the other approaches, but queues for this approach are expected to stay low.

### D.3. 2030 Build Conditions Capacity Analysis

The results of the 2030 Build conditions intersection capacity analysis are shown in Table 4 for No-Build plus project volumes as presented in Figure 10. As with the no-build analysis, the SR 211 widening is expected to be completed.

**Table 4: 2030 Build Capacity Analysis**

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	SR 211 & SR 347 / Bayberry Dr	Signal	<b>Overall</b>	<b>D</b>	<b>40.5</b>	<b>D</b>	<b>37.4</b>
			EB	D	38.8	D	35.9
			WB	E	69.6	E	59.1
			NB	D	42.6	D	36.7
			SB	D	34.2	C	34.9
2	SR 211 & SR 53	Signal	<b>Overall</b>	<b>B</b>	<b>12.1</b>	<b>B</b>	<b>13.4</b>
			EB	A	8.4	A	8.7
			WB	A	8.9	B	10.2
			NB	C	24.7	C	27.8
3	SR 211 & Site Driveway	Round- about	<b>Overall</b>	<b>A</b>	<b>7.1</b>	<b>A</b>	<b>8.0</b>
			EB	A	6.7	A	5.6
			WB	A	9.0	B	12.9
			NB	A	6.2	A	7.3
			SB	A	7.3	A	6.3

As shown in Table 4, the addition of traffic from the proposed mixed-use development is not expected to have a major impact on traffic operations at the nearby intersections. Delay is expected to increase slightly from the no-build volumes, but overall operations are expected to stay the same.

After conducting an Intersection Control Evaluation (See Section E.2) and weighing the industrial character of the site, the best intersection configuration for the proposed access is a multilane roundabout.



## E. Site Driveway Evaluation

### E.1. GDOT Turn-Lane Evaluations

The need for right and left-turn lanes at the proposed site driveway was analyzed using methodologies from GDOT. GDOT bases the warrants for turn lanes on the speed of the roadway, the average daily traffic along the roadway, and the number of lanes of the roadway. SR 211 is expected to be a four-lane divided roadway by the time the proposed site is completed. The speed limit of SR 211 is 45 MPH, and the average daily traffic is over 10,000 vehicles per day. Table 5 shows the results of the turn lane warrants for the two proposed driveways.

**Table 5: GDOT Turn Lane Warrants**

ID	Intersection	Movement / Turn Lane	Turn Volume	GDOT Criteria	GDOT Criteria met?
3	SR 211 & Ridgemoor Dr/ Site Driveway	SBL	1,608 LT/Day	250 LT/Day	YES
		NBR	2,237 RT/Day	75 RT/Day	YES
		NBL	58 LT/Day	250 LT/Day	No

As shown in Table 6, both a northbound right-turn deceleration lane and a southbound left-turn lane is warranted at the proposed site driveway. **It is noted that the turn lanes will only be applicable if a multilane roundabout is not constructed at the intersection.**

### E.2. Driveway Intersection Control Evaluation (ICE) and Other Considerations

The site driveway was analyzed for different intersection types to decide what would be best for the intersection configuration. With the amount of traffic expected from the development, a signal is likely warranted at the proposed access point. A traffic signal ranked first in the ICE analysis; however, the signal is likely only warranted after the site reaches full-build out, so it would not be a likely option as the site is developed over time.

The second ranked option was an R-Cut which is consistent with the current concept for the SR 211 widening plans. While a R-Cut, could work at the site driveway, the site is expected to generate many large trucks throughout the day which would have to make a U-turn to head towards I-85, which could be dangerous and impeded traffic on SR 211.

A multilane roundabout ranked third in the evaluation but performed the best in terms of capacity, while allowing the safest access onto SR 211 for the larger vehicles; thus, a multilane roundabout is recommended at the site driveway. Additionally, it is recommended that the site driveway align with Ridgemoor Drive on the west side of SR 211 to prevent conflicting turns. Ridgemoor Drive is a small, dead-end road that provides access to about 37 single-family homes, so very little traffic is expected from that approach. The ICE worksheets are included in Appendix E.

## F. Conclusions

A new mixed-use development is proposed for construction along the east side of SR 211 opposite Ridgemoor Drive. When completed, the development will consist of 1,719,640 square feet of warehousing, 350 townhomes, and 350 apartments. With limited frontage to SR 211, only one (1) access point is proposed onto the highway. The full-buildout of the site is expected by 2030.

Currently, SR 211 is a two-lane undivided roadway. The intersection of SR 211 with SR 347 experiences high delay during the PM peak period with signal timings favoring traffic along SR 211 despite there being several hundred vehicles approaching from SR 347 during that period. This delay is expected to be mitigated with two widening projects that are planned to be completed by the end of 2030. The widening projects will add multiple turn lanes to each approach at the intersection and additional northbound and southbound through lanes to improve traffic flow along SR 211.

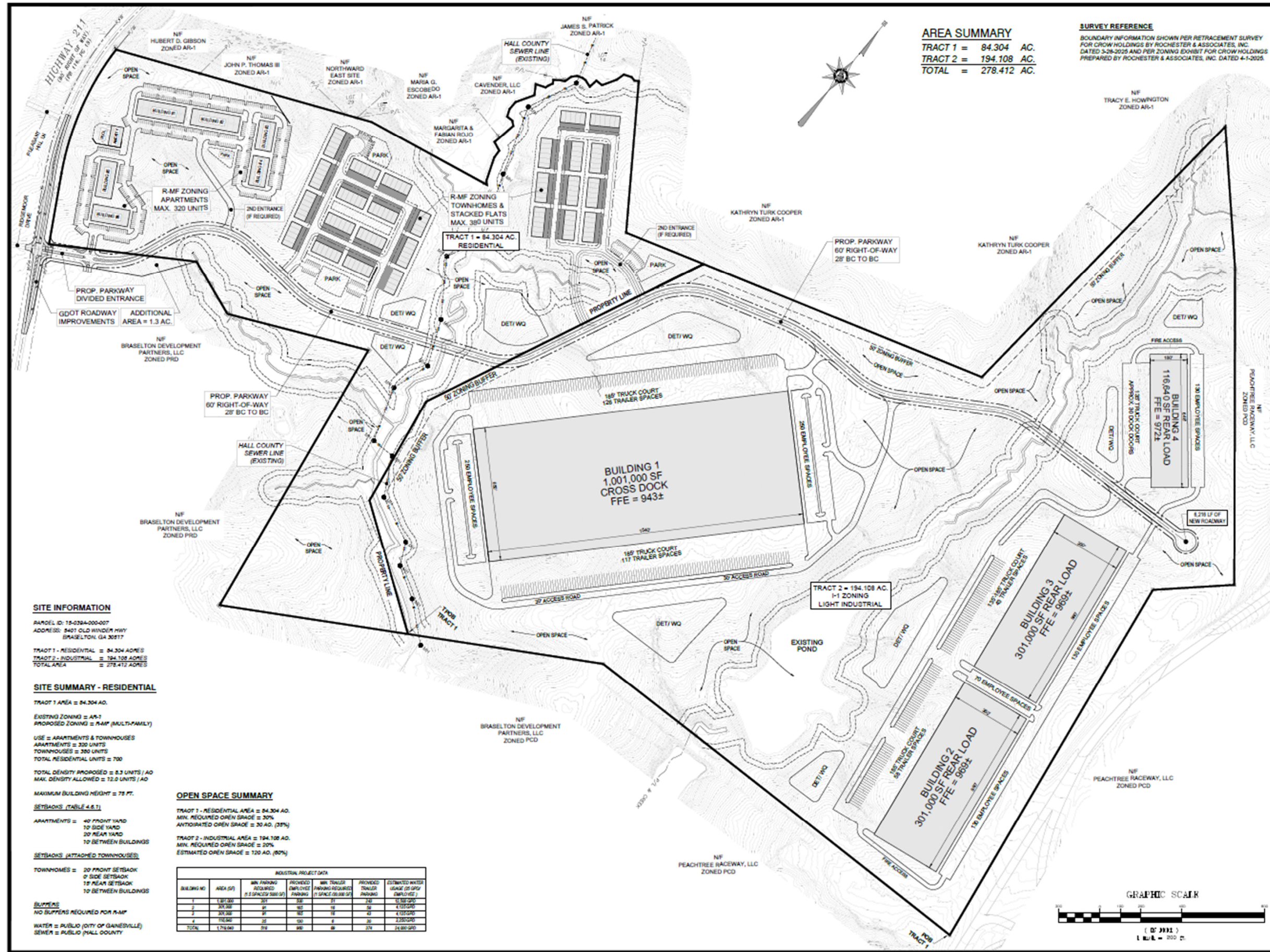
The widening of SR 211 and updated signal timings will yield satisfactory operations during both peak hours even with additional traffic growth in the area. The addition of traffic from the proposed mixed-use site is expected to increase delay only marginally at the two study intersections, allowing them to continue operating similarly to no-build conditions.

The concept for PI 0007233 (widening of SR 211 from SR 347 to SR 53) shows a network of R-Cuts for the SR 211 corridor between SR 53 and Union Church Road. While the proposed site access would operate satisfactorily as an R-Cut, the addition of 936 heavy trucks per day to the highway from the development present a safety concern for slow-moving, U-turning trucks movement bound for I-85 along SR 211. Instead, a multilane roundabout would operate better at the proposed driveway allowing the large vehicles to safely exit the site while maintaining traffic flow along the highway. Since the widening project is still several years away, the multi-lane roundabout could be initially constructed as a single-lane roundabout until the GDOT project is completed.

Other than improvements at the proposed access to SR 211, no changes to the surrounding intersections are necessary to mitigate the impact of the proposed development.

**APPENDIX A:  
DEVELOPMENT  
CONCEPT PLAN**





**AREA SUMMARY**  
 TRACT 1 = 84.304 AC.  
 TRACT 2 = 194.108 AC.  
 TOTAL = 278.412 AC.

**SURVEY REFERENCE**  
 BOUNDARY INFORMATION SHOWN PER RETRACEMENT SURVEY FOR CROW HOLDINGS BY ROCHESTER & ASSOCIATES, INC. DATED 3-28-2025 AND PER ZONING EXHIBIT FOR CROW HOLDINGS PREPARED BY ROCHESTER & ASSOCIATES, INC. DATED 4-1-2025.

**REED**  
 PLANNING & DESIGN  
 100 Old Dawson Village Rd  
 Suite 110  
 Dawsonville, GA 30534  
 Phone: 706-531-8428

© 2025  
 REED PLANNING & DESIGN, INC.  
 ALL RIGHTS RESERVED

**STAMP**

OSWCC LEVEL 2  
 CERTIFIED DESIGN  
 PROFESSIONAL  
 CERTIFICATION NO. 1639  
 EXPIRES 10/27/2026

**K2P, LLC**  
 MIXED USE DEVELOPMENT  
 5401 OLD WINDER HWY.

PARCEL	15-039A-00007
LAND LOT	-
DISTRICT	GMD-392
CITY	-
COUNTY	HALL
STATE	GEORGIA

**REZONING PLAN**

JOB NUMBER	25101	DATE	3-20-2025
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DATE	NO.	REVISION
4-26-2025	1	UPDATED LAYOUTS
5-30-2025	2	REVISE ENTRANCE

C-1.0

**SITE INFORMATION**  
 PARCEL ID: 15-039A-00007  
 ADDRESS: 5401 OLD WINDER HWY  
 BRASELTON, GA 30517  
 TRACT 1 - RESIDENTIAL = 84.304 ACRES  
 TRACT 2 - INDUSTRIAL = 194.108 ACRES  
 TOTAL AREA = 278.412 ACRES

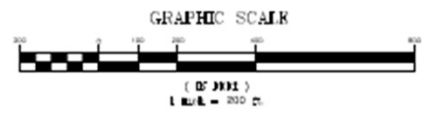
**SITE SUMMARY - RESIDENTIAL**  
 TRACT 1 AREA = 84.304 AC.  
 EXISTING ZONING = AR-1  
 PROPOSED ZONING = R-MF (MULTI-FAMILY)  
 USE = APARTMENTS & TOWNHOUSES  
 APARTMENTS = 320 UNITS  
 TOWNHOUSES = 380 UNITS  
 TOTAL RESIDENTIAL UNITS = 700  
 TOTAL DENSITY PROPOSED = 8.3 UNITS / AO  
 MAX. DENSITY ALLOWED = 12.0 UNITS / AO  
 MAXIMUM BUILDING HEIGHT = 75 FT.

**SETBACKS (TABLE 4.6.1)**  
 APARTMENTS = 40 FRONT YARD  
 10' SIDE YARD  
 20' REAR YARD  
 10' BETWEEN BUILDINGS  
**SETBACKS (ATTACHED TOWNHOUSES)**  
 TOWNHOUSES = 20' FRONT SETBACK  
 0' SIDE SETBACK  
 15' REAR SETBACK  
 10' BETWEEN BUILDINGS

**SUPPERS**  
 NO SUPPERS REQUIRED FOR R-MF  
 WATER = PUBLIC (CITY OF DANESVILLE)  
 SEWER = PUBLIC (HALL COUNTY)

**OPEN SPACE SUMMARY**  
 TRACT 1 - RESIDENTIAL AREA = 84.304 AC.  
 MIN. REQUIRED OPEN SPACE = 30%  
 ANTICIPATED OPEN SPACE = 30 AO. (35%)  
 TRACT 2 - INDUSTRIAL AREA = 194.108 AC.  
 MIN. REQUIRED OPEN SPACE = 20%  
 ESTIMATED OPEN SPACE = 120 AO. (60%)

BUILDING NO.	AREA (SQ)	MIN. PARKING REQUIRED (1.5 SPACES/500 SQ FT)	PROPOSED PARKING	MIN. TRUCKER PARKING REQUIREMENTS (1 SPACE/50 TRAILER SPACES)	PROPOSED TRUCKER PARKING	ESTIMATED WATER USAGE (5.0 GPD/EMPLOYEE)
1	1,001,000	300	350	31	32	5,000 GPD
2	301,000	90	100	10	10	1,500 GPD
3	301,000	90	100	10	10	1,500 GPD
4	116,640	35	40	3	3	450 GPD
TOTAL	1,719,640	515	590	54	55	8,450 GPD



**APPENDIX B:  
TRAFFIC COUNTS  
& GROWTH RATE  
DEVELOPMENT WORKSHEET**

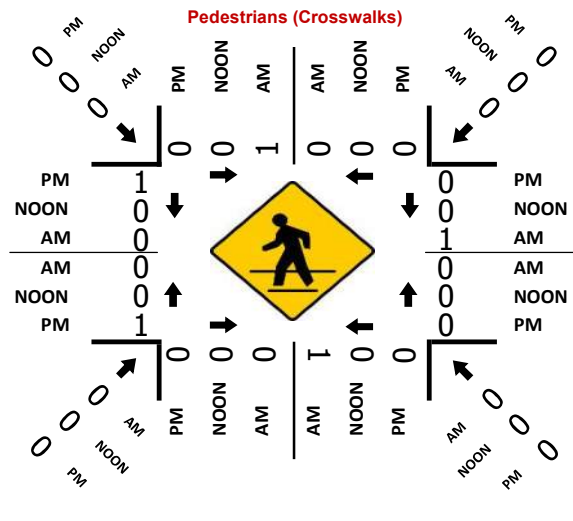
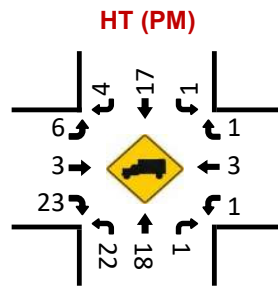
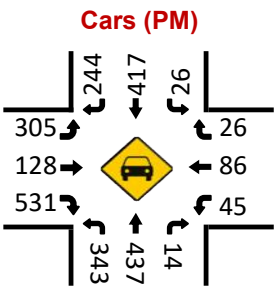
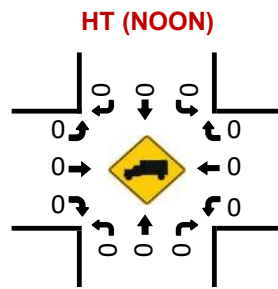
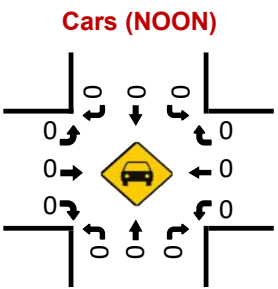
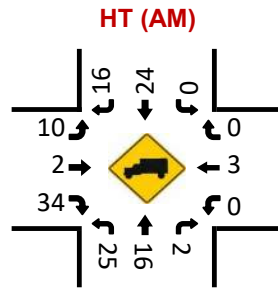
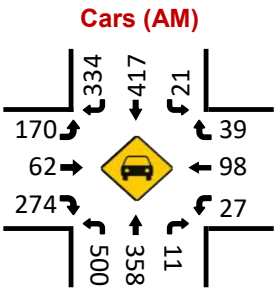
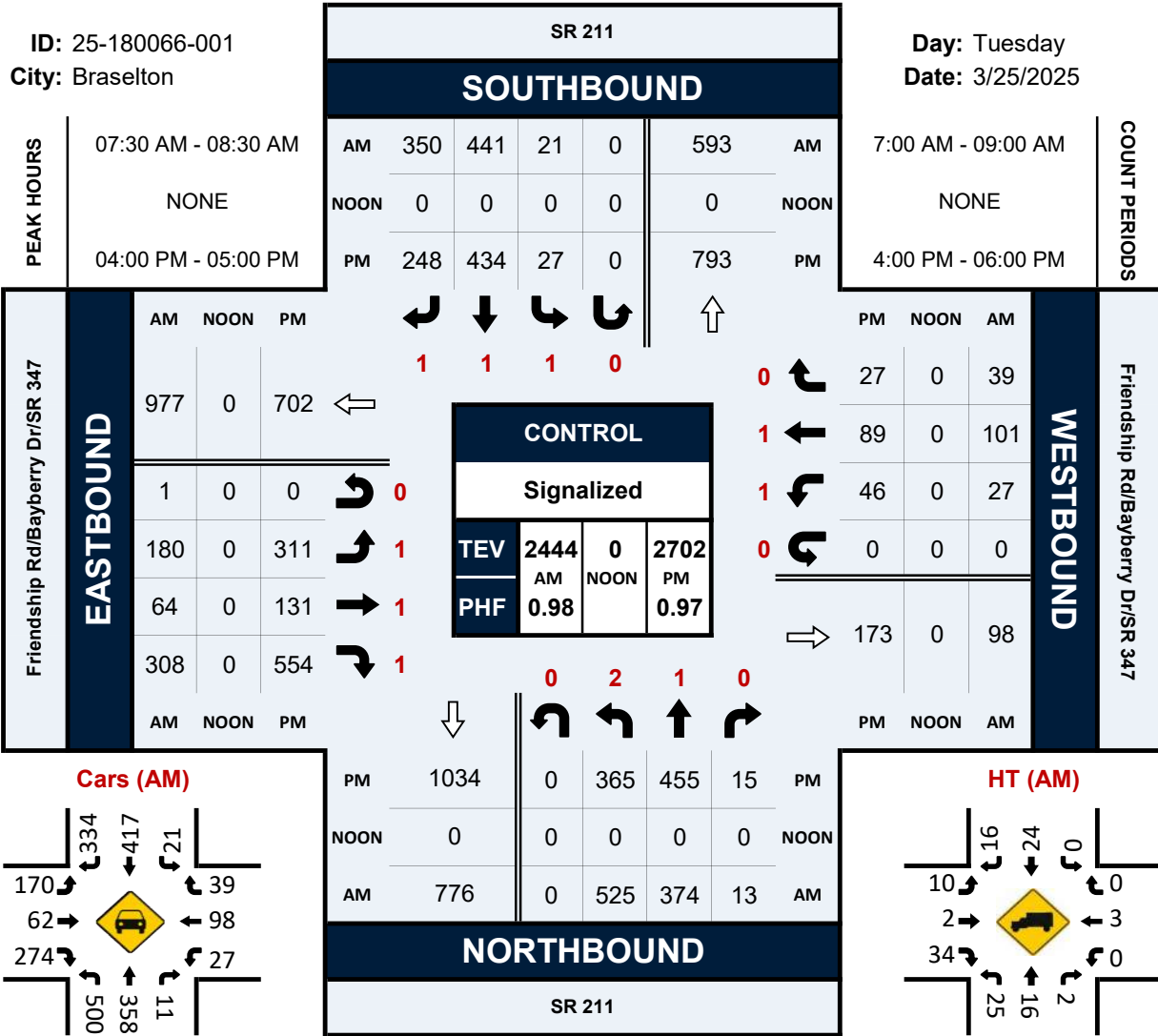


# SR 211 & Friendship Rd/Bayberry Dr/SR 347

## Peak Hour Turning Movement Count

ID: 25-180066-001  
City: Braselton

Day: Tuesday  
Date: 3/25/2025

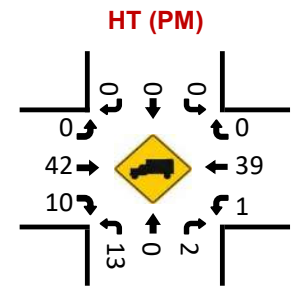
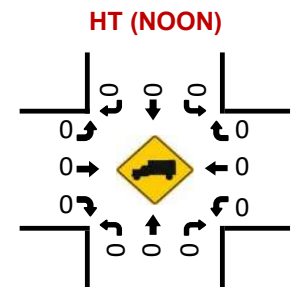
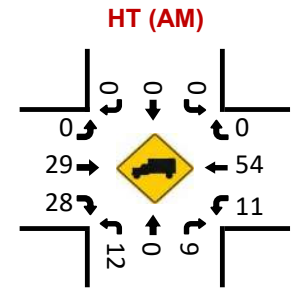
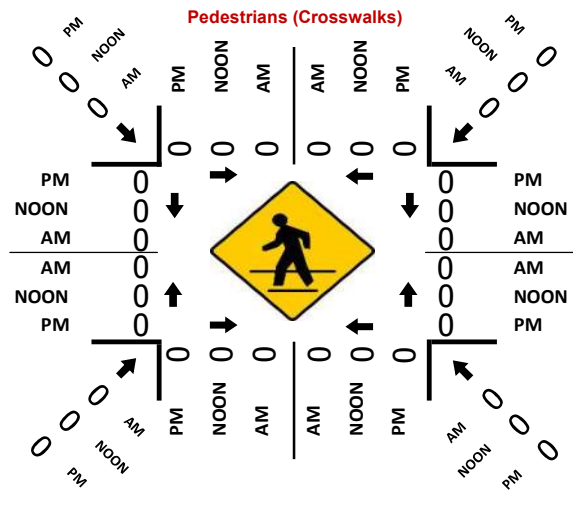
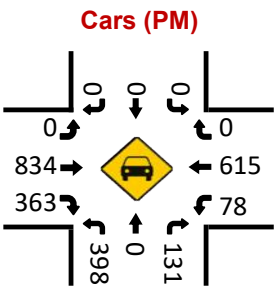
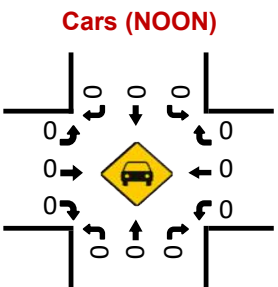
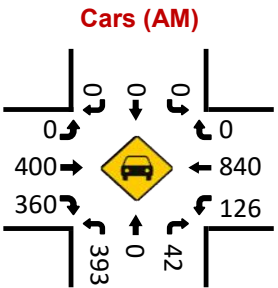
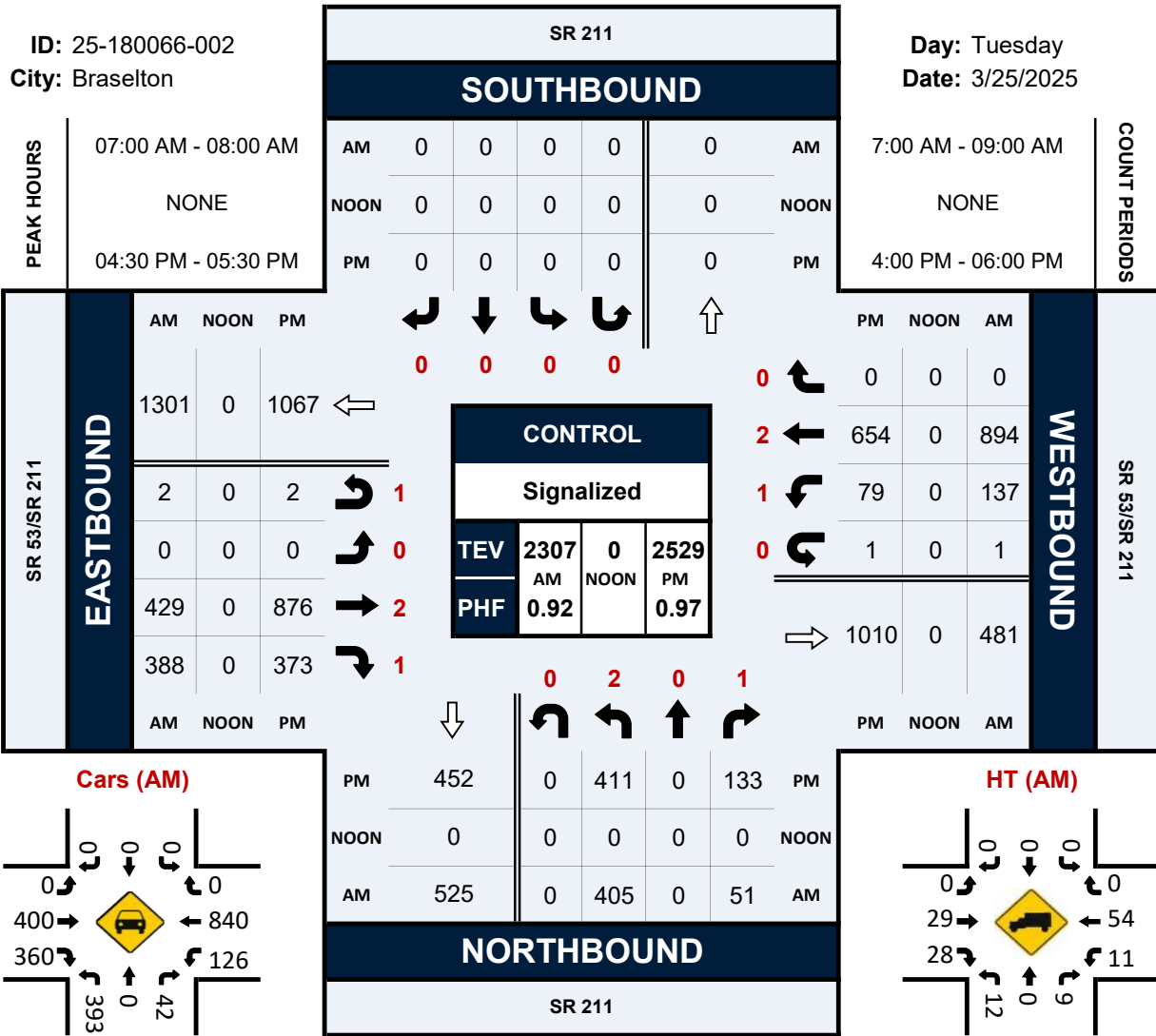


# SR 211 & SR 53/SR 211

## Peak Hour Turning Movement Count

ID: 25-180066-002  
City: Braselton

Day: Tuesday  
Date: 3/25/2025



### VOLUME

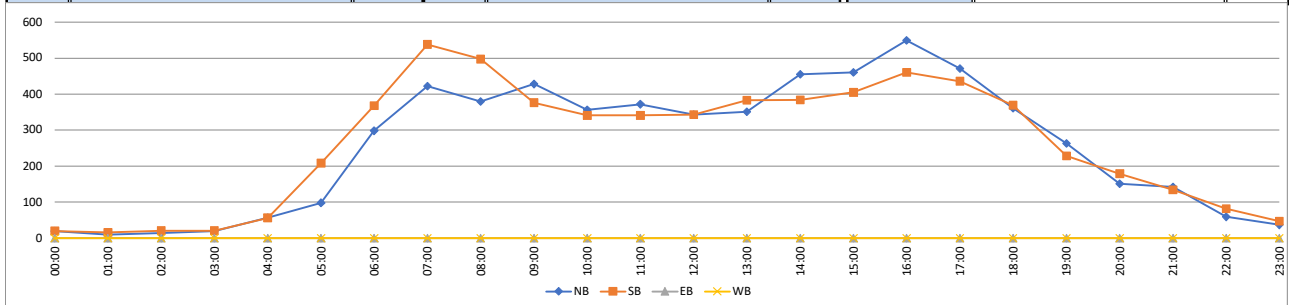
#### SR 211 Bet Ridgemoor Dr & Pleasant Hill Ln

Day: Tuesday  
Date: 3/25/2025

City: Braselton  
Project #: 25\_180067\_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS					
						6,114	6,253	0	0	12,367						

15-Minutes Interval						Hourly Intervals											
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	10	3			13	12:00	111	83			194	00:00	19	20			39
0:15	3	7			10	12:15	85	78			163	01:00	10	16			26
0:30	4	3			7	12:30	75	100			175	02:00	14	21			35
0:45	2	7			9	12:45	72	82			154	03:00	19	21			40
1:00	4	4			8	13:00	86	92			178	04:00	57	56			113
1:15	1	3			4	13:15	86	107			193	05:00	98	208			306
1:30	2	7			9	13:30	96	84			180	06:00	298	368			666
1:45	3	2			5	13:45	83	100			183	07:00	422	538			960
2:00	3	4			7	14:00	93	101			194	08:00	379	497			876
2:15	2	2			4	14:15	117	98			215	09:00	428	376			804
2:30	5	3			8	14:30	122	80			202	10:00	356	341			697
2:45	4	12			16	14:45	123	105			228	11:00	372	341			713
3:00	4	6			10	15:00	97	82			179	12:00	343	343			686
3:15	3	2			5	15:15	117	91			208	13:00	351	383			734
3:30	7	8			15	15:30	132	107			239	14:00	455	384			839
3:45	5	5			10	15:45	114	125			239	15:00	460	405			865
4:00	10	8			18	16:00	127	127			254	16:00	549	460			1009
4:15	10	7			17	16:15	126	129			255	17:00	471	436			907
4:30	19	13			32	16:30	155	92			247	18:00	361	369			730
4:45	18	28			46	16:45	141	112			253	19:00	263	228			491
5:00	14	25			39	17:00	138	91			229	20:00	151	179			330
5:15	24	42			66	17:15	114	125			239	21:00	142	134			276
5:30	27	60			87	17:30	113	102			215	22:00	59	82			141
5:45	33	81			114	17:45	106	118			224	23:00	37	47			84
6:00	57	56			113	18:00	112	94			206	STATISTICS					
6:15	58	108			166	18:15	86	97			183		NB	SB	EB	WB	TOTAL
6:30	90	112			202	18:30	86	93			179	Peak Period	00:00 to 12:00				
6:45	93	92			185	18:45	77	85			162	Volume	2472	2803			5275
7:00	93	104			197	19:00	69	65			134	Peak Hour	8:45	7:30			7:30
7:15	111	112			223	19:15	65	52			117	Peak Volume	446	602			1001
7:30	117	164			281	19:30	70	50			120	Peak Hour Factor	0.885	0.918			0.891
7:45	101	158			259	19:45	59	61			120	Peak Period	12:00 to 00:00				
8:00	85	152			237	20:00	38	47			85	Volume	3642	3450			7092
8:15	96	128			224	20:15	42	50			92	Peak Hour	16:15	15:30			16:00
8:30	98	115			213	20:30	36	41			77	Peak Volume	560	488			1009
8:45	100	102			202	20:45	35	41			76	Peak Hour Factor	0.903	0.946			0.989
9:00	117	91			208	21:00	46	36			82	Peak Period	07:00 to 09:00				
9:15	126	98			224	21:15	38	33			71	Volume	801	1035			1836
9:30	103	104			207	21:30	36	40			76	Peak Hour	7:00	7:30			7:30
9:45	82	83			165	21:45	22	25			47	Peak Volume	422	602			1001
10:00	66	88			154	22:00	16	23			39	Peak Hour Factor	0.902	0.918			0.891
10:15	99	82			181	22:15	15	18			33	Peak Period	16:00 to 18:00				
10:30	98	83			181	22:30	16	30			46	Volume	1020	896			1916
10:45	93	88			181	22:45	12	11			23	Peak Hour	16:15	16:00			16:00
11:00	83	81			164	23:00	12	11			23	Peak Volume	560	460			1009
11:15	96	85			181	23:15	7	18			25	Peak Hour Factor	0.903	0.891			0.989
11:30	88	86			174	23:30	11	10			21						
11:45	105	89			194	23:45	7	8			15						
<b>TOTALS</b>	<b>2472</b>	<b>2803</b>	<b>0</b>	<b>0</b>	<b>5275</b>	<b>TOTALS</b>	<b>3642</b>	<b>3450</b>	<b>0</b>	<b>0</b>	<b>7092</b>						
<b>SPLIT %</b>	<b>47%</b>	<b>53%</b>	<b>0%</b>	<b>0%</b>	<b>43%</b>	<b>SPLIT %</b>	<b>51%</b>	<b>49%</b>	<b>0%</b>	<b>0%</b>	<b>57%</b>						





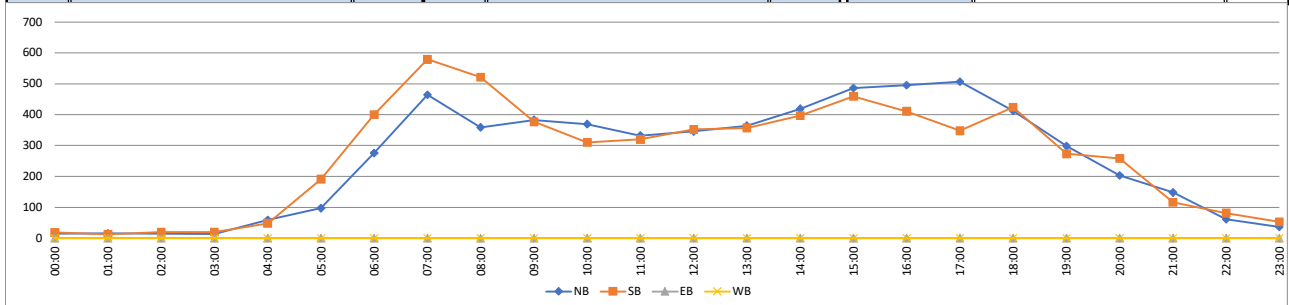
### VOLUME

#### SR 211 Bet Ridgemoor Dr & Pleasant Hill Ln

Day: Wednesday  
Date: 3/26/2025

City: Braselton  
Project #: 25\_180067\_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						6,171	6,344	0	0	12,515							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	5	5			10	12:00	80	78			158	00:00	01:00	14	18		32
0:15	4	6			10	12:15	83	79			162	01:00	02:00	15	12		27
0:30	4	3			7	12:30	100	95			195	02:00	03:00	14	19		33
0:45	1	4			5	12:45	83	100			183	03:00	04:00	13	20		33
1:00	5	4			9	13:00	83	76			159	04:00	05:00	59	48		107
1:15	5	3			8	13:15	104	89			193	05:00	06:00	97	191		288
1:30	4	1			5	13:30	95	94			189	06:00	07:00	276	400		676
1:45	1	4			5	13:45	82	98			180	07:00	08:00	464	579		1043
2:00	4	6			10	14:00	88	97			185	08:00	09:00	359	521		880
2:15	5	2			7	14:15	112	101			213	09:00	10:00	383	377		760
2:30	2	3			5	14:30	123	96			219	10:00	11:00	369	310		679
2:45	3	8			11	14:45	96	103			199	11:00	12:00	332	320		652
3:00	3	4			7	15:00	123	100			223	12:00	13:00	346	352		698
3:15	1	4			5	15:15	109	104			213	13:00	14:00	364	357		721
3:30	3	6			9	15:30	126	102			228	14:00	15:00	419	397		816
3:45	6	6			12	15:45	128	153			281	15:00	16:00	486	459		945
4:00	10	8			18	16:00	115	94			209	16:00	17:00	495	411		906
4:15	7	9			16	16:15	115	103			218	17:00	18:00	507	348		855
4:30	24	13			37	16:30	131	124			255	18:00	19:00	413	424		837
4:45	18	18			36	16:45	134	90			224	19:00	20:00	298	273		571
5:00	16	28			44	17:00	151	98			249	20:00	21:00	203	258		461
5:15	20	33			53	17:15	135	88			223	21:00	22:00	148	116		264
5:30	38	56			94	17:30	125	90			215	22:00	23:00	61	81		142
5:45	23	74			97	17:45	96	72			168	23:00	00:00	36	53		89
6:00	45	74			119	18:00	122	117			239	STATISTICS					
6:15	72	109			181	18:15	98	118			216		NB	SB	EB	WB	TOTAL
6:30	68	111			179	18:30	99	109			208	Peak Period	00:00	to	12:00		
6:45	91	106			197	18:45	94	80			174	Volume	2395	2815			5210
7:00	106	112			218	19:00	97	68			165	Peak Hour	7:00	7:15			7:15
7:15	106	138			244	19:15	74	75			149	Peak Volume	464	627			1058
7:30	139	157			296	19:30	63	59			122	Peak Hour Factor	0.835	0.911			0.894
7:45	113	172			285	19:45	64	71			135	Peak Period	12:00	to	00:00		
8:00	73	160			233	20:00	54	45			99	Volume	3776	3529			7305
8:15	84	123			207	20:15	59	90			149	Peak Hour	16:30	15:45			15:45
8:30	111	112			223	20:30	39	62			101	Peak Volume	551	474			963
8:45	91	126			217	20:45	51	61			112	Peak Hour Factor	0.912	0.775			0.857
9:00	88	83			171	21:00	45	29			74	Peak Period	07:00	to	09:00		
9:15	104	102			206	21:15	35	37			72	Volume	823	1100			1923
9:30	100	91			191	21:30	42	24			66	Peak Hour	7:00	7:15			7:15
9:45	91	101			192	21:45	26	26			52	Peak Volume	464	627			1058
10:00	108	86			194	22:00	20	21			41	Peak Hour Factor	0.835	0.911			0.894
10:15	87	72			159	22:15	13	25			38	Peak Period	16:00	to	18:00		
10:30	96	84			180	22:30	18	17			35	Volume	1002	759			1761
10:45	78	68			146	22:45	10	18			28	Peak Hour	16:30	16:15			16:30
11:00	86	78			164	23:00	10	13			23	Peak Volume	551	415			951
11:15	78	85			163	23:15	4	21			25	Peak Hour Factor	0.912	0.837			0.932
11:30	86	71			157	23:30	15	7			22						
11:45	82	86			168	23:45	7	12			19						
<b>TOTALS</b>	<b>2395</b>	<b>2815</b>	<b>0</b>	<b>0</b>	<b>5210</b>	<b>TOTALS</b>	<b>3776</b>	<b>3529</b>	<b>0</b>	<b>0</b>	<b>7305</b>						
<b>SPLIT %</b>	<b>46%</b>	<b>54%</b>	<b>0%</b>	<b>0%</b>	<b>42%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>58%</b>						



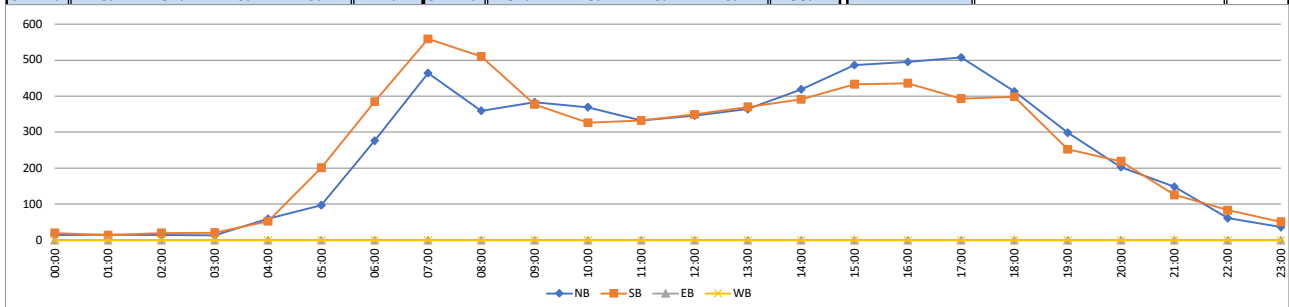
### VOLUME

#### SR 211 Bet Ridgemoor Dr & Pleasant Hill Ln

Day: Tuesday  
Date: 3/25/2025

City: Braselton  
Project #: 25\_180067\_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						6,166	6,318	0	0	12,484							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	8	4			12	12:00	96	81			177	00:00	18	20			38
0:15	4	7			11	12:15	84	79			163	01:00	13	14			27
0:30	4	3			7	12:30	88	98			186	02:00	16	20			36
0:45	2	6			8	12:45	78	91			169	03:00	17	21			38
1:00	5	4			9	13:00	85	84			169	04:00	59	52			111
1:15	3	3			6	13:15	95	98			193	05:00	98	201			299
1:30	3	4			7	13:30	96	89			185	06:00	287	385			672
1:45	2	3			5	13:45	83	99			182	07:00	444	559			1003
2:00	4	5			9	14:00	91	99			190	08:00	370	510			880
2:15	4	2			6	14:15	115	100			215	09:00	407	377			784
2:30	4	3			7	14:30	123	88			211	10:00	363	326			689
2:45	4	10			14	14:45	110	104			214	11:00	353	332			685
3:00	4	5			9	15:00	110	91			201	12:00	346	349			695
3:15	2	3			5	15:15	113	98			211	13:00	359	370			729
3:30	5	7			12	15:30	129	105			234	14:00	439	391			830
3:45	6	6			12	15:45	121	139			260	15:00	473	433			906
4:00	10	8			18	16:00	121	111			232	16:00	523	436			959
4:15	9	8			17	16:15	121	116			237	17:00	490	393			883
4:30	22	13			35	16:30	143	108			251	18:00	388	398			786
4:45	18	23			41	16:45	138	101			239	19:00	282	252			534
5:00	15	27			42	17:00	145	95			240	20:00	178	219			397
5:15	22	38			60	17:15	125	107			232	21:00	146	126			272
5:30	33	58			91	17:30	119	96			215	22:00	60	83			143
5:45	28	78			106	17:45	101	95			196	23:00	37	51			88
6:00	51	65			116	18:00	117	106			223	STATISTICS					
6:15	65	109			174	18:15	92	108			200		NB	SB	EB	WB	TOTAL
6:30	79	112			191	18:30	93	101			194	Peak Period	00:00	to	12:00		
6:45	92	99			191	18:45	86	83			169	Volume	2445	2817			5262
7:00	100	108			208	19:00	83	67			150	Peak Hour	7:00	7:30			7:15
7:15	109	125			234	19:15	70	64			134	Peak Volume	444	608			1030
7:30	128	161			289	19:30	67	55			122	Peak Hour Factor	0.867	0.921			0.891
7:45	107	165			272	19:45	62	66			128	Peak Period	12:00	to	00:00		
8:00	79	156			235	20:00	46	46			92	Volume	3721	3501			7222
8:15	90	126			216	20:15	51	70			121	Peak Hour	16:30	15:45			15:45
8:30	105	114			219	20:30	38	52			90	Peak Volume	551	474			980
8:45	96	114			210	20:45	43	51			94	Peak Hour Factor	0.950	0.853			0.942
9:00	103	87			190	21:00	46	33			79	Peak Period	07:00	to	09:00		
9:15	115	100			215	21:15	37	35			72	Volume	814	1069			1883
9:30	102	98			200	21:30	39	32			71	Peak Hour	7:00	7:30			7:15
9:45	87	92			179	21:45	24	26			50	Peak Volume	444	608			1030
10:00	87	87			174	22:00	18	22			40	Peak Hour Factor	0.867	0.921			0.891
10:15	93	77			170	22:15	14	22			36	Peak Period	16:00	to	18:00		
10:30	97	84			181	22:30	17	24			41	Volume	1013	829			1842
10:45	86	78			164	22:45	11	15			26	Peak Hour	16:30	16:00			16:15
11:00	85	80			165	23:00	11	12			23	Peak Volume	551	436			967
11:15	87	85			172	23:15	6	20			26	Peak Hour Factor	0.950	0.940			0.963
11:30	87	79			166	23:30	13	9			22						
11:45	94	88			182	23:45	7	10			17						
<b>TOTALS</b>	<b>2445</b>	<b>2817</b>	<b>0</b>	<b>0</b>	<b>5262</b>	<b>TOTALS</b>	<b>3721</b>	<b>3501</b>	<b>0</b>	<b>0</b>	<b>7222</b>						
<b>SPLIT %</b>	<b>46%</b>	<b>54%</b>	<b>0%</b>	<b>0%</b>	<b>42%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>58%</b>						



**0000139\_0292 - 139-0292**

- SRT 021100 R  
 County: Hall  
 Route number: 00005300  
 LRS section: 1391005300  
 Functional class: 4U - Minor Arterial (Urban)  
 Coordinates: 34.1665067600397,



**Site Data**



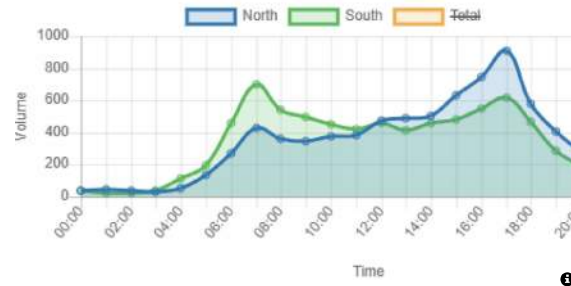
**Count History**

Year	Month	Count type	Duration	Count	ADT
2021	June	Class	48 hours	31,364	15,682
2019	August	Class	48 hours	31,959	15,979
2015	June	Class	48 hours	25,060	12,530
2013	June	Volume	48 hours	24,154	12,077
2011	September	Class	48 hours	21,149	10,574
2009	February	Class	48 hours	19,570	9,785

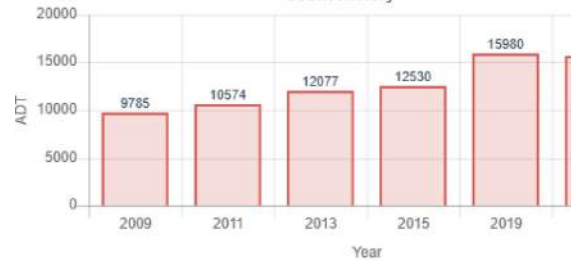
**Annual Statistics**

Data Item	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Statistics type	-	Actual	Estimated	Estimated	Estimated	Actual	Estimated	Actual	Estimated	Estimated
AAADT	11,200	11,500	11,800	11,900	11,800	14,700	13,300	14,400	14,700	14,800
K-Factor	0.090	0.112	0.112	-	-	0.110	0.110	0.114	0.114	0.114
D-Factor	0.600	0.600	0.600	-	-	0.620	0.620	0.590	0.590	0.590
Future AADT	-	-	13,700	15,300	20,000	23,200	23,200	23,700	23,500	24,200

**Average Hourly Volume**



**Count History**



**AAADT Trend**



**Vehicle Classification 2021**

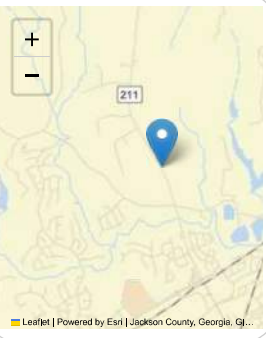
- Motorcycles** (2 axes, 2 or 3 wheels) - 0.37%
- Passenger cars** (2 axes. Can have 1- or 2-axle trailers) - 63.18%
- Pickups, panels, vans** (2-axle, 4-tire single units. Can have 1- or 2-axle trailers) - 25.55%
- Buses** (2- or 3-axle, full length) - 0.53%
- Single-unit trucks** (2-axle, 6-tire, (dual rear tires), single-unit trucks) - 4.61%
- Single-unit trucks** (3-axle, single-unit trucks) - 1.22%
- Single-unit trucks** (4 or more axle, single-unit trucks) - 0.04%
- Single-trailer trucks** (3- or 4-axle, single-trailer trucks) - 1.42%
- Single-trailer trucks** (5-axle, single-trailer trucks) - 2.89%
- Single-trailer trucks** (6 or more axle, single-trailer trucks) - 0.11%
- Multi-trailer trucks** (5 or less axle, multi-trailer trucks) - 0.02%
- Multi-trailer trucks** (6-axle, multi-trailer trucks) - 0.02%
- Multi-trailer trucks** (7 or more axle, multi-trailer trucks) - 0.03%

0000139\_0545 - 139-0545

- CRT 130000 L  
 County: Hall  
 Route number: 00021100  
 LRS section: 1391021100  
 Functional class: 4U - Minor Arterial (Urban)  
 Coordinates: 34.13548897, -83.83359503



Site Data



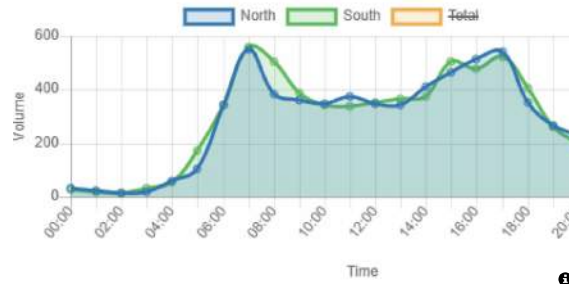
Count History

Year	Month	Count type	Duration	Count	ADT
2022	August	Class	48 hours	25,732	12,866
2019	December	Class	48 hours	28,337	14,169
2018	September	Class	48 hours	23,119	11,560
2016	July	Class	48 hours	21,231	10,616
2014	April	Volume	48 hours	17,564	8,782
2012	January	Volume	48 hours	14,627	7,314
2010	January	Class	48 hours	13,309	6,655

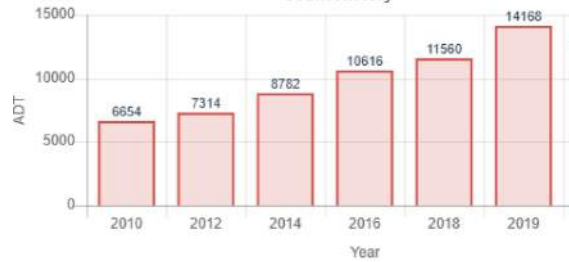
Annual Statistics

Data Item	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Statistics type	-	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated
AADT	8,420	8,700	9,950	10,000	10,600	10,700	12,800	13,700	11,800	11,900
K-Factor	0.099	0.099	0.112	-	0.094	0.094	0.111	0.111	0.095	0.095
D-Factor	0.500	0.500	0.600	-	0.550	0.550	0.570	0.570	0.530	0.530
Future AADT	-	-	16,400	21,800	20,600	20,300	20,300	23,200	21,700	19,900

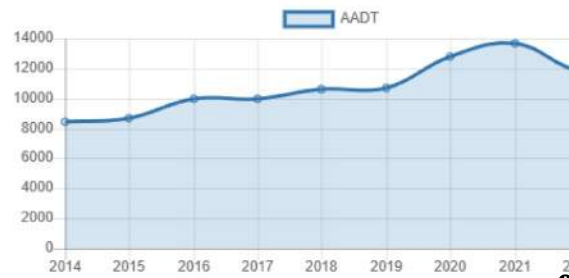
Average Hourly Volume



Count History



AADT Trend



Vehicle Classification 2022

<b>1. Motorcycles</b> 2 axles, 2 or 3 wheels.		<b>0.50%</b>
<b>2. Passenger cars</b> 2 axles. Can have 1- or 2-axle trailers.		<b>70.27%</b>
<b>3. Pickups, panels, vans</b> 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.		<b>21.97%</b>
<b>4. Buses</b> 2- or 3-axle, full length.		<b>0.56%</b>
<b>5. Single-unit trucks</b> 2-axle, 6-tire, (dual rear tires), single-unit trucks.		<b>4.17%</b>
<b>6. Single-unit trucks</b> 3-axle, single-unit trucks.		<b>0.83%</b>
<b>7. Single-unit trucks</b> 4 or more axle, single-unit trucks.		<b>0.07%</b>
<b>8. Single-trailer trucks</b> 3- or 4-axle, single-trailer trucks.		<b>0.84%</b>
<b>9. Single-trailer trucks</b> 5-axle, single-trailer trucks.		<b>0.72%</b>
<b>10. Single-trailer trucks</b> 6 or more axle, single-trailer trucks.		<b>0.07%</b>
<b>11. Multi-trailer trucks</b> 5 or less axle, multi-trailer trucks.		<b>0%</b>
<b>12. Multi-trailer trucks</b> 6-axle, multi-trailer trucks.		<b>0.01%</b>
<b>13. Multi-trailer trucks</b> 7 or more axle, multi-trailer trucks.		<b>0%</b>

# HISTORICAL TRAFFIC COUNTS

## Hall County, Georgia

Location	Counter ID									Forecast		Compounded Growth Rate	
		2015	2016	2017	2018	2019	2020	2021	2022	2025	2027	2025 - 2027	Percent
SR 211 n/o SR 347	139-0545		9,950		10,600		12,800		11,800	13,613	14,388	2.81%	24.37%
SR 53 e/o SR 211	139-0292	11,500				14,700		14,400		17,057	18,114	3.05%	30.68%
SR 53 w/o SR 211	139-0289		21,400		23,100		23,000		24,400	25,645	26,535	1.72%	44.95%
<b>Data Taken From GDOT's Traffic Analysis &amp; Data Application</b>										<b>56,315</b>	<b>59,037</b>	<b>2.4%</b>	<b>100.00%</b>

### Single-Family Attached Housing (215)

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

Project Land Use	Project Density	Project Trips			ITE Code	Variable	Equation Used <sup>1</sup>	In/Out		Average Rate
		Total	Inbound	Outbound				Distribution		
<b>Single-Family Attached Housing</b>	<b>37 DU</b>				215	Dwelling Units				
Daily		<b>232</b>	116	116			T = 7.62 * X - 50.48	50%	50%	7.20
AM Peak Hour (One Hour from 7-9)		<b>14</b>	4	10			T = 0.52 * X - 5.7	31%	69%	0.48
PM Peak Hour (One Hour from 4-6)		<b>18</b>	10	8			T = 0.6 * X - 3.93	57%	43%	0.57
Reductions for Pass-By Trips										
Daily		<b>0</b>	0	0						
AM Peak Hour		<b>0</b>	0	0						
PM Peak Hour		<b>0</b>	0	0						
<b>TOTAL PROJECT TRIPS</b>										
Daily		<b>232</b>	116	116						
AM Peak Hour		<b>14</b>	4	10						
PM Peak Hour		<b>18</b>	10	8						

Note:

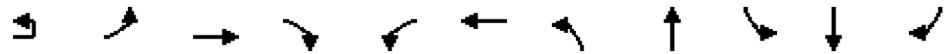
<sup>1</sup> Where: T = Trips; X = Density by Variable

# APPENDIX C: SYNCHRO REPORTS

Timings

1: SR 211 & SR 347/Bayberry Dr

06/03/2025

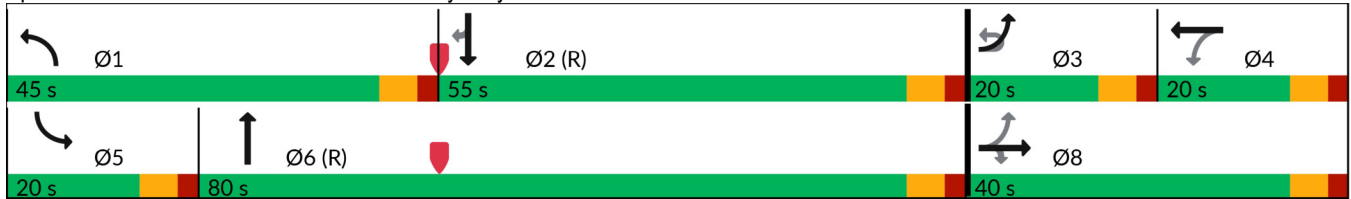


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	1	180	64	308	27	101	525	374	21	441	350
Future Volume (vph)	1	180	64	308	27	101	525	374	21	441	350
Turn Type	custom	pm+pt	NA	Perm	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		3	8			4	1	6	5	2	
Permitted Phases	3	8		8	4						2
Detector Phase	3	3	8	8	4	4	1	6	5	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	20.0	40.0	40.0	20.0	20.0	45.0	80.0	20.0	55.0	55.0
Total Split (%)	14.3%	14.3%	28.6%	28.6%	14.3%	14.3%	32.1%	57.1%	14.3%	39.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead			Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)		33.4	33.4	33.4	13.5	13.5	30.5	86.0	7.3	58.2	58.2
Actuated g/C Ratio		0.24	0.24	0.24	0.10	0.10	0.22	0.61	0.05	0.42	0.42
v/c Ratio		0.82	0.15	0.55	0.23	0.85	0.82	0.40	0.24	0.64	0.45
Control Delay (s/veh)		73.8	43.0	8.1	62.9	93.7	62.0	16.3	69.3	38.6	6.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		73.8	43.0	8.1	62.9	93.7	62.0	16.3	69.3	38.6	6.5
LOS		E	D	A	E	F	E	B	E	D	A
Approach Delay (s/veh)			33.6			88.7		42.6		25.6	
Approach LOS			C			F		D		C	

Intersection Summary

Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 38.2	Intersection LOS: D
Intersection Capacity Utilization 75.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR 211 & SR 347/Bayberry Dr

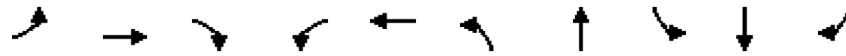




Queues

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	192	68	328	30	154	597	440	23	479	380
v/c Ratio	0.82	0.15	0.55	0.23	0.85	0.82	0.40	0.24	0.64	0.45
Control Delay (s/veh)	73.8	43.0	8.1	62.9	93.7	62.0	16.3	69.3	38.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.8	43.0	8.1	62.9	93.7	62.0	16.3	69.3	38.6	6.5
Queue Length 50th (ft)	150	49	0	26	130	269	214	21	345	21
Queue Length 95th (ft)	#236	92	82	60	#252	309	297	51	515	105
Internal Link Dist (ft)		1881			827		1407		3359	
Turn Bay Length (ft)						400		255		460
Base Capacity (vph)	234	448	601	135	188	929	1113	180	752	838
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	0.82	0.15	0.55	0.22	0.82	0.64	0.40	0.13	0.64	0.45

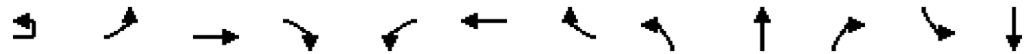
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM 7th Signalized Intersection Summary

## 1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	1	180	64	308	27	101	39	525	374	13	21	441
Future Volume (veh/h)	1	180	64	308	27	101	39	525	374	13	21	441
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln		1811	1856	1737	1900	1856	1900	1826	1841	1678	1900	1826
Adj Flow Rate, veh/h		191	68	328	30	111	43	597	425	0	23	479
Peak Hour Factor		0.94	0.94	0.94	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92
Percent Heavy Veh, %		6	3	11	0	3	0	5	4	15	0	5
Cap, veh/h		241	451	357	152	127	49	673	1126		31	784
Arrive On Green		0.10	0.24	0.24	0.10	0.10	0.10	0.20	0.61	0.00	0.02	0.43
Sat Flow, veh/h		1725	1856	1472	1004	1273	493	3374	1841	0	1810	1826
Grp Volume(v), veh/h		191	68	328	30	0	154	597	425	0	23	479
Grp Sat Flow(s),veh/h/ln		1725	1856	1472	1004	0	1767	1687	1841	0	1810	1826
Q Serve(g_s), s		13.7	4.0	30.4	3.9	0.0	12.0	24.1	16.3	0.0	1.8	28.4
Cycle Q Clear(g_c), s		13.7	4.0	30.4	3.9	0.0	12.0	24.1	16.3	0.0	1.8	28.4
Prop In Lane		1.00		1.00	1.00		0.28	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h		241	451	357	152	0	177	673	1126		31	784
V/C Ratio(X)		0.79	0.15	0.92	0.20	0.00	0.87	0.89	0.38		0.75	0.61
Avail Cap(c_a), veh/h		241	451	357	152	0	177	940	1126		181	784
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
Upstream Filter(I)		1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		49.4	41.7	51.6	58.4	0.0	62.1	54.5	13.7	0.0	68.5	30.9
Incr Delay (d2), s/veh		16.5	0.2	27.9	0.6	0.0	34.6	7.8	1.0	0.0	30.4	3.5
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
%ile BackOfQ(50%),veh/ln		6.9	1.8	13.7	1.0	0.0	7.2	10.7	6.7	0.0	1.1	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh		65.9	41.8	79.5	59.1	0.0	96.7	62.3	14.7	0.0	98.9	34.5
LnGrp LOS		E	D	E	E		F	E	B		F	C
Approach Vol, veh/h		587			184			1022			502	
Approach Delay, s/veh		70.7			90.6			42.5			37.4	
Approach LOS		E			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	33.9	66.1	20.0	20.0	8.4	91.6	40.0					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	39.0	49.0	14.0	14.0	14.0	74.0	34.0					
Max Q Clear Time (g_c+I1), s	26.1	30.4	15.7	14.0	3.8	18.3	32.4					
Green Ext Time (p_c), s	1.8	2.6	0.0	0.0	0.0	2.6	0.3					

### Intersection Summary

HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

### Notes

User approved ignoring U-Turning movement.  
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 7th Signalized Intersection Summary

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	350
Future Volume (veh/h)	350
Initial Q (Qb), veh	0
Lane Width Adj.	1.00
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1826
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.92
Percent Heavy Veh, %	5
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1547
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1547
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings

2: SR 211 & SR 53

06/03/2025

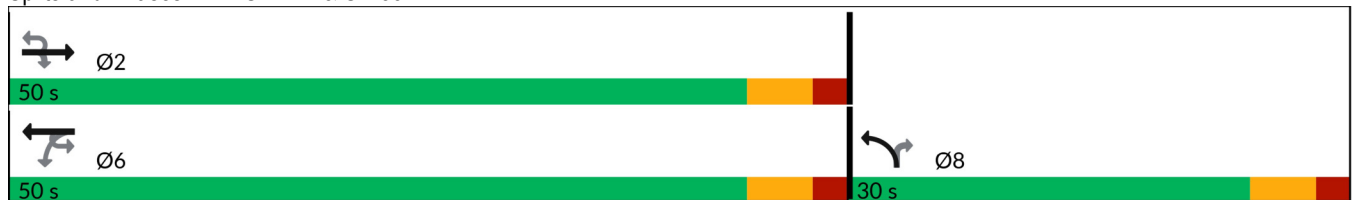


Lane Group	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↖	↗
Traffic Volume (vph)	2	429	388	1	137	894	405	51
Future Volume (vph)	2	429	388	1	137	894	405	51
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Prot	Perm
Protected Phases		2				6	8	
Permitted Phases	2		2	6	6			8
Detector Phase	2	2	2	6	6	6	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	30.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	None	None
Act Effct Green (s)	20.3	20.3	20.3		20.3	20.3	11.4	11.4
Actuated g/C Ratio	0.46	0.46	0.46		0.46	0.46	0.26	0.26
v/c Ratio	0.01	0.33	0.49		0.38	0.59	0.50	0.14
Control Delay (s/veh)	7.0	8.2	2.9		11.5	10.6	17.1	6.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.0	8.2	2.9		11.5	10.6	17.1	6.5
LOS	A	A	A		B	B	B	A
Approach Delay (s/veh)		5.7				10.8	15.9	
Approach LOS		A				B	B	

Intersection Summary

Cycle Length: 80	
Actuated Cycle Length: 44.2	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay (s/veh): 9.8	Intersection LOS: A
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SR 211 & SR 53



Queues

2: SR 211 & SR 53

06/03/2025



Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2	505	456	144	931	435	55
v/c Ratio	0.01	0.33	0.49	0.38	0.59	0.50	0.14
Control Delay (s/veh)	7.0	8.2	2.9	11.5	10.6	17.1	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.0	8.2	2.9	11.5	10.6	17.1	6.5
Queue Length 50th (ft)	0	37	0	21	80	46	0
Queue Length 95th (ft)	3	68	29	61	147	101	22
Internal Link Dist (ft)		2207			2068	4517	
Turn Bay Length (ft)	290		180	190		260	860
Base Capacity (vph)	469	3147	1438	765	3177	1920	797
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	0.00	0.16	0.32	0.19	0.29	0.23	0.07

Intersection Summary

# HCM 7th Signalized Intersection Summary

2: SR 211 & SR 53

06/03/2025



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	2	429	388	1	137	894	405	51
Future Volume (veh/h)	2	429	388	1	137	894	405	51
Initial Q (Qb), veh		0	0		0	0	0	0
Lane Width Adj.		1.00	1.00		1.00	1.00	1.00	1.00
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		1796	1796		1781	1811	1856	1633
Adj Flow Rate, veh/h		505	456		143	931	435	55
Peak Hour Factor		0.85	0.85		0.96	0.96	0.93	0.93
Percent Heavy Veh, %		7	7		8	6	3	18
Cap, veh/h		1796	801		413	1811	678	274
Arrive On Green		0.53	0.53		0.53	0.53	0.20	0.20
Sat Flow, veh/h		3503	1522		557	3532	3428	1384
Grp Volume(v), veh/h		505	456		143	931	435	55
Grp Sat Flow(s),veh/h/ln		1706	1522		557	1721	1714	1384
Q Serve(g_s), s		3.6	8.8		8.4	7.6	5.1	1.4
Cycle Q Clear(g_c), s		3.6	8.8		11.9	7.6	5.1	1.4
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1796	801		413	1811	678	274
V/C Ratio(X)		0.28	0.57		0.35	0.51	0.64	0.20
Avail Cap(c_a), veh/h		3454	1541		683	3483	1893	764
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		5.7	7.0		9.0	6.7	16.0	14.6
Incr Delay (d2), s/veh		0.1	0.6		0.5	0.2	1.0	0.4
Initial Q Delay(d3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.7	1.5		0.7	1.4	1.6	0.4
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh		5.8	7.6		9.5	6.9	17.0	14.9
LnGrp LOS		A	A		A	A	B	B
Approach Vol, veh/h		961				1074	490	
Approach Delay, s/veh		6.7				7.3	16.8	
Approach LOS		A				A	B	
Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		28.9				28.9		14.6
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		44.0				44.0		24.0
Max Q Clear Time (g_c+I1), s		10.8				13.9		7.1
Green Ext Time (p_c), s		5.2				8.9		1.6

## Intersection Summary

HCM 7th Control Delay, s/veh	8.9
HCM 7th LOS	A

## Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	↕
Traffic Vol, veh/h	5	0	5	0	0	0	2	423	0	0	607	2
Future Vol, veh/h	5	0	5	0	0	0	2	423	0	0	607	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	83	83	92	92	92
Heavy Vehicles, %	2	2	2	4	2	8	2	5	5	9	6	2
Mvmt Flow	5	0	5	0	0	0	2	510	0	0	660	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1174	1174	660	1174	1176	510	662	0	0	510	0	0
Stage 1	660	660	-	514	514	-	-	-	-	-	-	-
Stage 2	514	514	-	660	662	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.28	4.12	-	-	4.19	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.372	2.218	-	-	2.281	-	-
Pot Cap-1 Maneuver	169	192	463	167	191	552	927	-	-	1020	-	-
Stage 1	452	460	-	540	535	-	-	-	-	-	-	-
Stage 2	543	535	-	449	459	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	168	191	463	165	191	552	927	-	-	1020	-	-
Mov Cap-2 Maneuver	168	191	-	165	191	-	-	-	-	-	-	-
Stage 1	452	460	-	538	534	-	-	-	-	-	-	-
Stage 2	542	534	-	444	459	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	20.26		0		0.04		0	
HCM LOS	C		A					

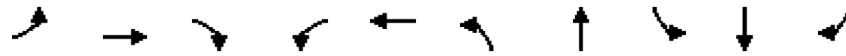
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	8	-	-	247	-	-	1020	-	-
HCM Lane V/C Ratio	0.002	-	-	0.044	-	-	-	-	-
HCM Ctrl Dly (s/v)	8.9	0	-	20.3	0	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0	-	-



Timings

1: SR 211 & SR 347/Bayberry Dr

06/03/2025

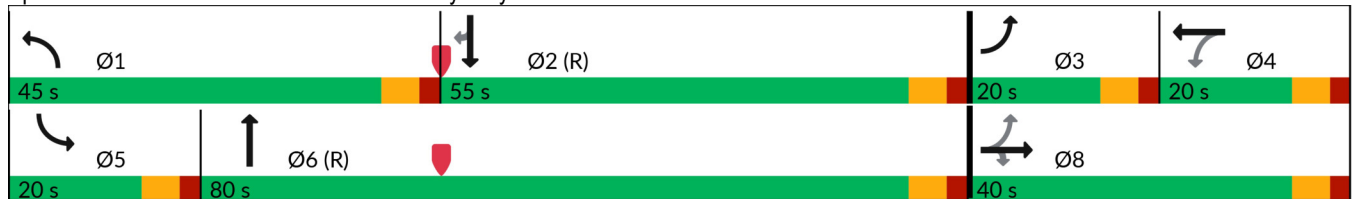


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	311	131	554	46	89	365	455	27	434	248
Future Volume (vph)	311	131	554	46	89	365	455	27	434	248
Turn Type	pm+pt	NA	Perm	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8			4	1	6	5	2	
Permitted Phases	8		8	4						2
Detector Phase	3	8	8	4	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	40.0	40.0	20.0	20.0	45.0	80.0	20.0	55.0	55.0
Total Split (%)	14.3%	28.6%	28.6%	14.3%	14.3%	32.1%	57.1%	14.3%	39.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	32.8	32.8	32.8	12.8	12.8	22.8	86.3	7.8	66.4	66.4
Actuated g/C Ratio	0.23	0.23	0.23	0.09	0.09	0.16	0.62	0.06	0.47	0.47
v/c Ratio	1.33	0.32	0.77	0.44	0.75	0.76	0.48	0.29	0.55	0.31
Control Delay (s/veh)	214.8	46.4	13.1	72.2	82.9	65.4	17.9	70.1	30.4	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	214.8	46.4	13.1	72.2	82.9	65.4	17.9	70.1	30.4	3.6
LOS	F	D	B	E	F	E	B	E	C	A
Approach Delay (s/veh)		80.5			79.9		38.7		22.5	
Approach LOS		F			E		D		C	

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay (s/veh): 51.9      Intersection LOS: D  
 Intersection Capacity Utilization 76.8%      ICU Level of Service D  
 Analysis Period (min) 15

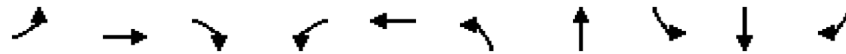
Splits and Phases: 1: SR 211 & SR 347/Bayberry Dr



Queues

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	331	139	589	51	128	415	534	29	472	270
v/c Ratio	1.33	0.32	0.77	0.44	0.75	0.76	0.48	0.29	0.55	0.31
Control Delay (s/veh)	214.8	46.4	13.1	72.2	82.9	65.4	17.9	70.1	30.4	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	214.8	46.4	13.1	72.2	82.9	65.4	17.9	70.1	30.4	3.6
Queue Length 50th (ft)	~306	104	28	44	106	188	281	26	305	0
Queue Length 95th (ft)	#501	167	176	90	#193	230	386	60	449	53
Internal Link Dist (ft)		1881			827		1407		3359	
Turn Bay Length (ft)						400		255		460
Base Capacity (vph)	248	448	769	126	187	929	1117	180	858	871
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	1.33	0.31	0.77	0.40	0.68	0.45	0.48	0.16	0.55	0.31

Intersection Summary

~ 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.

# HCM 7th Signalized Intersection Summary

## 1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	131	554	46	89	27	365	455	15	27	434	248
Future Volume (veh/h)	311	131	554	46	89	27	365	455	15	27	434	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1811	1856	1737	1900	1856	1900	1826	1841	1678	1900	1826	1826
Adj Flow Rate, veh/h	331	139	589	51	98	30	415	517	0	29	472	0
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	6	3	11	0	3	0	5	4	15	0	5	5
Cap, veh/h	261	451	357	125	136	42	486	1119		37	885	
Arrive On Green	0.10	0.24	0.24	0.10	0.10	0.10	0.14	0.61	0.00	0.02	0.48	0.00
Sat Flow, veh/h	1725	1856	1472	738	1363	417	3374	1841	0	1810	1826	1547
Grp Volume(v), veh/h	331	139	589	51	0	128	415	517	0	29	472	0
Grp Sat Flow(s),veh/h/ln	1725	1856	1472	738	0	1780	1687	1841	0	1810	1826	1547
Q Serve(g_s), s	14.0	8.6	34.0	9.3	0.0	9.8	16.8	21.4	0.0	2.2	25.2	0.0
Cycle Q Clear(g_c), s	14.0	8.6	34.0	9.3	0.0	9.8	16.8	21.4	0.0	2.2	25.2	0.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	451	357	125	0	178	486	1119		37	885	
V/C Ratio(X)	1.27	0.31	1.65	0.41	0.00	0.72	0.85	0.46		0.78	0.53	
Avail Cap(c_a), veh/h	261	451	357	125	0	178	940	1119		181	885	
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	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.5	43.4	53.0	60.9	0.0	61.1	58.5	15.0	0.0	68.2	25.1	0.0
Incr Delay (d2), s/veh	147.5	0.4	303.7	2.1	0.0	13.1	4.4	1.4	0.0	28.8	2.3	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	13.2	3.9	42.4	1.8	0.0	5.1	7.3	8.8	0.0	1.3	11.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	202.0	43.8	356.7	63.0	0.0	74.2	62.9	16.3	0.0	97.0	27.4	0.0
LnGrp LOS	F	D	F	E		E	E	B		F	C	
Approach Vol, veh/h		1059			179			932			501	
Approach Delay, s/veh		267.3			71.0			37.0			31.4	
Approach LOS		F			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	26.2	73.8	20.0	20.0	8.9	91.1		40.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	39.0	49.0	14.0	14.0	14.0	74.0		34.0				
Max Q Clear Time (g_c+I1), s	18.8	27.2	16.0	11.8	4.2	23.4		36.0				
Green Ext Time (p_c), s	1.4	2.6	0.0	0.2	0.0	3.3		0.0				

### Intersection Summary

HCM 7th Control Delay, s/veh	129.6
HCM 7th LOS	F

### Notes

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

Timings

2: SR 211 & SR 53

06/03/2025

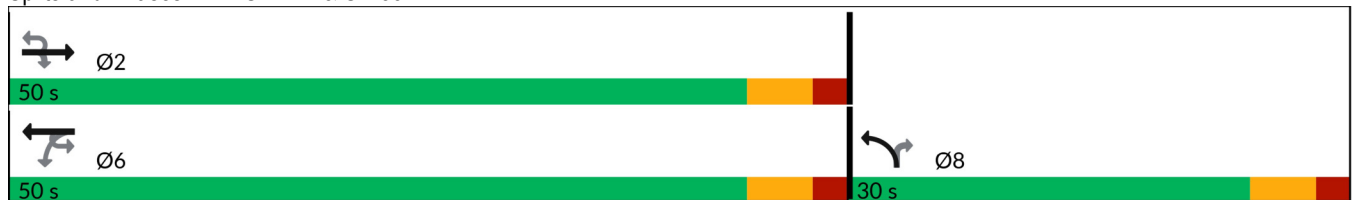


Lane Group	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↖	↗
Traffic Volume (vph)	2	876	373	1	79	654	411	133
Future Volume (vph)	2	876	373	1	79	654	411	133
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Prot	Perm
Protected Phases		2				6	8	
Permitted Phases	2		2	6	6			8
Detector Phase	2	2	2	6	6	6	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	30.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	None	None
Act Effct Green (s)	26.3	26.3	26.3		26.3	26.3	12.7	12.7
Actuated g/C Ratio	0.51	0.51	0.51		0.51	0.51	0.25	0.25
v/c Ratio	0.01	0.60	0.45		0.41	0.39	0.53	0.35
Control Delay (s/veh)	6.5	10.6	2.5		15.2	8.5	20.9	11.7
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.5	10.6	2.5		15.2	8.5	20.9	11.7
LOS	A	B	A		B	A	C	B
Approach Delay (s/veh)		8.2				9.2	18.6	
Approach LOS		A				A	B	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 51.7  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay (s/veh): 10.6  
 Intersection Capacity Utilization 55.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: SR 211 & SR 53



Queues

2: SR 211 & SR 53

06/03/2025



Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2	1031	439	83	681	442	143
v/c Ratio	0.01	0.60	0.45	0.41	0.39	0.53	0.35
Control Delay (s/veh)	6.5	10.6	2.5	15.2	8.5	20.9	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.5	10.6	2.5	15.2	8.5	20.9	11.7
Queue Length 50th (ft)	0	97	0	13	55	56	12
Queue Length 95th (ft)	3	172	27	52	111	129	62
Internal Link Dist (ft)		2207			2068	4517	
Turn Bay Length (ft)	290		180	190		260	860
Base Capacity (vph)	633	2876	1351	343	2903	1674	720
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	0.00	0.36	0.32	0.24	0.23	0.26	0.20

Intersection Summary

# HCM 7th Signalized Intersection Summary

## 2: SR 211 & SR 53

06/03/2025



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	2	876	373	1	79	654	411	133
Future Volume (veh/h)	2	876	373	1	79	654	411	133
Initial Q (Qb), veh		0	0		0	0	0	0
Lane Width Adj.		1.00	1.00		1.00	1.00	1.00	1.00
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		1796	1796		1781	1811	1856	1633
Adj Flow Rate, veh/h		1031	439		82	681	442	143
Peak Hour Factor		0.85	0.85		0.96	0.96	0.93	0.93
Percent Heavy Veh, %		7	7		8	6	3	18
Cap, veh/h		1902	848		273	1918	677	273
Arrive On Green		0.56	0.56		0.56	0.56	0.20	0.20
Sat Flow, veh/h		3503	1522		343	3532	3428	1384
Grp Volume(v), veh/h		1031	439		82	681	442	143
Grp Sat Flow(s),veh/h/ln		1706	1522		343	1721	1714	1384
Q Serve(g_s), s		9.4	8.8		9.7	5.3	5.8	4.5
Cycle Q Clear(g_c), s		9.4	8.8		19.1	5.3	5.8	4.5
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1902	848		273	1918	677	273
V/C Ratio(X)		0.54	0.52		0.30	0.36	0.65	0.52
Avail Cap(c_a), veh/h		3069	1369		390	3095	1682	679
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		6.9	6.7		12.9	6.0	18.1	17.6
Incr Delay (d2), s/veh		0.2	0.5		0.6	0.1	1.1	1.6
Initial Q Delay(d3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.9	1.6		0.6	1.1	2.0	1.3
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh		7.1	7.2		13.5	6.1	19.2	19.1
LnGrp LOS		A	A		B	A	B	B
Approach Vol, veh/h		1470				763	585	
Approach Delay, s/veh		7.1				6.9	19.2	
Approach LOS		A				A	B	
Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		33.3				33.3		15.7
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		44.0				44.0		24.0
Max Q Clear Time (g_c+I1), s		11.4				21.1		7.8
Green Ext Time (p_c), s		10.3				6.1		1.9

### Intersection Summary

HCM 7th Control Delay, s/veh	9.6
HCM 7th LOS	A

### Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	↕
Traffic Vol, veh/h	4	0	4	0	0	0	5	547	0	0	420	5
Future Vol, veh/h	4	0	4	0	0	0	5	547	0	0	420	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	83	83	92	92	92
Heavy Vehicles, %	2	2	2	4	2	8	2	5	5	9	6	2
Mvmt Flow	4	0	4	0	0	0	5	659	0	0	457	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1126	1126	457	1126	1132	659	462	0	0	659	0	0
Stage 1	457	457	-	670	670	-	-	-	-	-	-	-
Stage 2	670	670	-	457	462	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.28	4.12	-	-	4.19	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.372	2.218	-	-	2.281	-	-
Pot Cap-1 Maneuver	182	205	604	180	203	453	1099	-	-	897	-	-
Stage 1	584	568	-	443	455	-	-	-	-	-	-	-
Stage 2	447	455	-	580	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	180	203	604	178	202	453	1099	-	-	897	-	-
Mov Cap-2 Maneuver	180	203	-	178	202	-	-	-	-	-	-	-
Stage 1	584	568	-	440	452	-	-	-	-	-	-	-
Stage 2	443	452	-	576	565	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.37	0	0.07	0
HCM LOS	C	A		

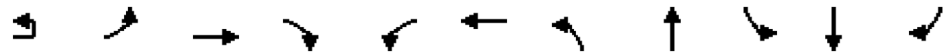
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	15	-	-	278	-	-	897	-	-
HCM Lane V/C Ratio	0.005	-	-	0.031	-	-	-	-	-
HCM Ctrl Dly (s/v)	8.3	0	-	18.4	0	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0	-	-



Timings

1: SR 211 & SR 347/Bayberry Dr

06/03/2025

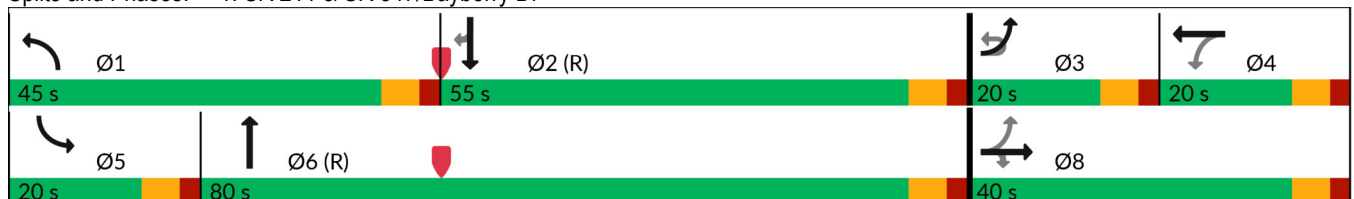


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	1	203	72	347	30	114	591	421	24	496	394
Future Volume (vph)	1	203	72	347	30	114	591	421	24	496	394
Turn Type	custom	pm+pt	NA	Perm	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		3	8			4	1	6	5	2	
Permitted Phases	3	8		8	4						2
Detector Phase	3	3	8	8	4	4	1	6	5	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	20.0	40.0	40.0	20.0	20.0	45.0	80.0	20.0	55.0	55.0
Total Split (%)	14.3%	14.3%	28.6%	28.6%	14.3%	14.3%	32.1%	57.1%	14.3%	39.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead			Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)		34.0	34.0	34.0	14.0	14.0	33.2	85.2	7.5	54.8	54.8
Actuated g/C Ratio		0.24	0.24	0.24	0.10	0.10	0.24	0.61	0.05	0.39	0.39
v/c Ratio		0.96	0.17	0.58	0.25	0.92	0.85	0.45	0.27	0.76	0.54
Control Delay (s/veh)		99.0	43.2	8.1	63.3	105.5	61.9	17.5	69.8	46.1	11.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		99.0	43.2	8.1	63.3	105.5	61.9	17.5	69.8	46.1	11.3
LOS		F	D	A	E	F	E	B	E	D	B
Approach Delay (s/veh)			42.0			98.7		43.0		31.7	
Approach LOS			D			F		D		C	

Intersection Summary

Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 42.9	Intersection LOS: D
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

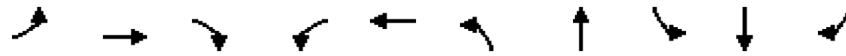
Splits and Phases: 1: SR 211 & SR 347/Bayberry Dr



Queues

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	217	77	369	33	173	672	495	26	539	428
v/c Ratio	0.96	0.17	0.58	0.25	0.92	0.85	0.45	0.27	0.76	0.54
Control Delay (s/veh)	99.0	43.2	8.1	63.3	105.5	61.9	17.5	69.8	46.1	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	99.0	43.2	8.1	63.3	105.5	61.9	17.5	69.8	46.1	11.3
Queue Length 50th (ft)	173	56	0	28	149	303	252	23	424	64
Queue Length 95th (ft)	#312	101	88	64	#296	346	346	55	#649	181
Internal Link Dist (ft)		1881			827		1407		3359	
Turn Bay Length (ft)						400		255		460
Base Capacity (vph)	225	448	632	134	188	929	1103	180	708	797
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	0.96	0.17	0.58	0.25	0.92	0.72	0.45	0.14	0.76	0.54

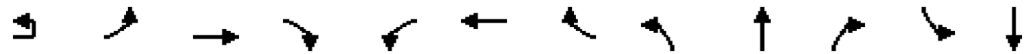
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM 7th Signalized Intersection Summary

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	1	203	72	347	30	114	44	591	421	15	24	496
Future Volume (veh/h)	1	203	72	347	30	114	44	591	421	15	24	496
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln		1811	1856	1737	1900	1856	1900	1826	1841	1678	1900	1826
Adj Flow Rate, veh/h		216	77	369	33	125	48	672	478	0	26	539
Peak Hour Factor		0.94	0.94	0.94	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92
Percent Heavy Veh, %		6	3	11	0	3	0	5	4	15	0	5
Cap, veh/h		227	451	357	147	128	49	747	1123		33	744
Arrive On Green		0.10	0.24	0.24	0.10	0.10	0.10	0.22	0.61	0.00	0.02	0.41
Sat Flow, veh/h		1725	1856	1472	959	1277	490	3374	1841	0	1810	1826
Grp Volume(v), veh/h		216	77	369	33	0	173	672	478	0	26	539
Grp Sat Flow(s),veh/h/ln		1725	1856	1472	959	0	1767	1687	1841	0	1810	1826
Q Serve(g_s), s		14.0	4.6	34.0	4.5	0.0	13.7	27.1	19.1	0.0	2.0	34.8
Cycle Q Clear(g_c), s		14.0	4.6	34.0	4.5	0.0	13.7	27.1	19.1	0.0	2.0	34.8
Prop In Lane		1.00		1.00	1.00		0.28	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h		227	451	357	147	0	177	747	1123		33	744
V/C Ratio(X)		0.95	0.17	1.03	0.22	0.00	0.98	0.90	0.43		0.79	0.72
Avail Cap(c_a), veh/h		227	451	357	147	0	177	940	1123		181	744
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
Upstream Filter(I)		1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		51.6	41.9	53.0	58.7	0.0	62.9	53.0	14.4	0.0	68.4	34.9
Incr Delay (d2), s/veh		46.6	0.2	56.1	0.8	0.0	61.3	9.9	1.2	0.0	32.4	6.1
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
%ile BackOfQ(50%),veh/ln		9.6	2.1	17.8	1.1	0.0	9.2	12.2	7.9	0.0	1.2	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh		98.2	42.0	109.1	59.5	0.0	124.1	62.9	15.5	0.0	100.9	41.0
LnGrp LOS		F	D	F	E		F	E	B		F	D
Approach Vol, veh/h		662			206			1150			565	
Approach Delay, s/veh		97.8			113.8			43.2			43.7	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	37.0	63.0	20.0	20.0	8.6	91.4	40.0					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	39.0	49.0	14.0	14.0	14.0	74.0	34.0					
Max Q Clear Time (g_c+I1), s	29.1	36.8	16.0	15.7	4.0	21.1	36.0					
Green Ext Time (p_c), s	1.9	2.5	0.0	0.0	0.0	3.0	0.0					

## Intersection Summary

HCM 7th Control Delay, s/veh	62.9
HCM 7th LOS	E

## Notes

User approved ignoring U-Turning movement.  
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 7th Signalized Intersection Summary

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	394
Future Volume (veh/h)	394
Initial Q (Qb), veh	0
Lane Width Adj.	1.00
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1826
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.92
Percent Heavy Veh, %	5
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1547
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1547
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings

2: SR 211 & SR 53

06/03/2025

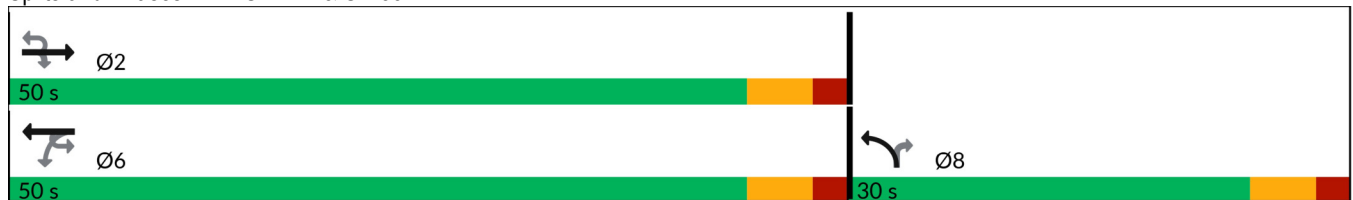


Lane Group	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↖	↗
Traffic Volume (vph)	2	483	437	1	154	1006	456	57
Future Volume (vph)	2	483	437	1	154	1006	456	57
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Prot	Perm
Protected Phases		2				6	8	
Permitted Phases	2		2	6	6			8
Detector Phase	2	2	2	6	6	6	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	30.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	None	None
Act Effct Green (s)	24.1	24.1	24.1		24.1	24.1	13.1	13.1
Actuated g/C Ratio	0.48	0.48	0.48		0.48	0.48	0.26	0.26
v/c Ratio	0.01	0.35	0.52		0.43	0.64	0.55	0.15
Control Delay (s/veh)	7.5	8.7	3.0		13.0	11.6	19.5	6.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.5	8.7	3.0		13.0	11.6	19.5	6.6
LOS	A	A	A		B	B	B	A
Approach Delay (s/veh)		6.0				11.8	18.1	
Approach LOS		A				B	B	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 49.8  
 Natural Cycle: 50  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay (s/veh): 10.8  
 Intersection Capacity Utilization 60.0%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: SR 211 & SR 53



Queues

2: SR 211 & SR 53

06/03/2025



Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2	568	514	161	1048	490	61
v/c Ratio	0.01	0.35	0.52	0.43	0.64	0.55	0.15
Control Delay (s/veh)	7.5	8.7	3.0	13.0	11.6	19.5	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.5	8.7	3.0	13.0	11.6	19.5	6.6
Queue Length 50th (ft)	0	46	0	26	102	60	0
Queue Length 95th (ft)	3	86	30	79	195	130	25
Internal Link Dist (ft)		2207			2068	4517	
Turn Bay Length (ft)	290		180	190		260	860
Base Capacity (vph)	357	2940	1381	673	2968	1725	724
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	0.01	0.19	0.37	0.24	0.35	0.28	0.08

Intersection Summary

# HCM 7th Signalized Intersection Summary

## 2: SR 211 & SR 53

06/03/2025



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	2	483	437	1	154	1006	456	57
Future Volume (veh/h)	2	483	437	1	154	1006	456	57
Initial Q (Qb), veh		0	0		0	0	0	0
Lane Width Adj.		1.00	1.00		1.00	1.00	1.00	1.00
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		1796	1796		1781	1811	1856	1633
Adj Flow Rate, veh/h		568	514		160	1048	490	61
Peak Hour Factor		0.85	0.85		0.96	0.96	0.93	0.93
Percent Heavy Veh, %		7	7		8	6	3	18
Cap, veh/h		1928	860		376	1944	700	283
Arrive On Green		0.57	0.57		0.57	0.57	0.20	0.20
Sat Flow, veh/h		3503	1522		497	3532	3428	1384
Grp Volume(v), veh/h		568	514		160	1048	490	61
Grp Sat Flow(s),veh/h/ln		1706	1522		497	1721	1714	1384
Q Serve(g_s), s		4.5	11.5		12.9	9.9	6.9	1.9
Cycle Q Clear(g_c), s		4.5	11.5		17.4	9.9	6.9	1.9
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1928	860		376	1944	700	283
V/C Ratio(X)		0.29	0.60		0.43	0.54	0.70	0.22
Avail Cap(c_a), veh/h		2888	1288		516	2912	1583	639
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		5.9	7.4		10.4	7.1	19.2	17.2
Incr Delay (d2), s/veh		0.1	0.7		0.8	0.2	1.3	0.4
Initial Q Delay(d3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.0	2.3		1.0	2.1	2.4	0.5
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh		6.0	8.1		11.2	7.3	20.5	17.6
LnGrp LOS		A	A		B	A	C	B
Approach Vol, veh/h		1082				1208	551	
Approach Delay, s/veh		7.0				7.8	20.2	
Approach LOS		A				A	C	
Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		35.4				35.4		16.6
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		44.0				44.0		24.0
Max Q Clear Time (g_c+I1), s		13.5				19.4		8.9
Green Ext Time (p_c), s		6.0				10.0		1.7

### Intersection Summary

HCM 7th Control Delay, s/veh	9.9
HCM 7th LOS	A

### Notes

User approved ignoring U-Turning movement.



Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	↕
Traffic Vol, veh/h	5	0	5	0	0	0	2	476	0	0	683	2
Future Vol, veh/h	5	0	5	0	0	0	2	476	0	0	683	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	83	83	92	92	92
Heavy Vehicles, %	2	2	2	4	2	8	2	5	5	9	6	2
Mvmt Flow	5	0	5	0	0	0	2	573	0	0	742	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1320	1320	742	1320	1322	573	745	0	0	573	0	0
Stage 1	742	742	-	578	578	-	-	-	-	-	-	-
Stage 2	578	578	-	742	745	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.28	4.12	-	-	4.19	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.372	2.218	-	-	2.281	-	-
Pot Cap-1 Maneuver	134	157	415	132	156	507	863	-	-	966	-	-
Stage 1	407	422	-	498	501	-	-	-	-	-	-	-
Stage 2	501	501	-	404	421	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	133	156	415	130	156	507	863	-	-	966	-	-
Mov Cap-2 Maneuver	133	156	-	130	156	-	-	-	-	-	-	-
Stage 1	407	422	-	496	499	-	-	-	-	-	-	-
Stage 2	500	499	-	399	421	-	-	-	-	-	-	-

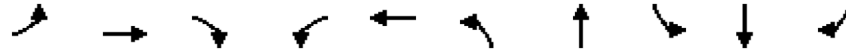
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.85	0	0.03	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	7	-	-	202	-	-	966	-	-
HCM Lane V/C Ratio	0.003	-	-	0.054	-	-	-	-	-
HCM Ctrl Dly (s/v)	9.2	0	-	23.8	0	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	-	-	0	-	-

Timings

1: SR 211 & SR 347/Bayberry Dr

06/03/2025

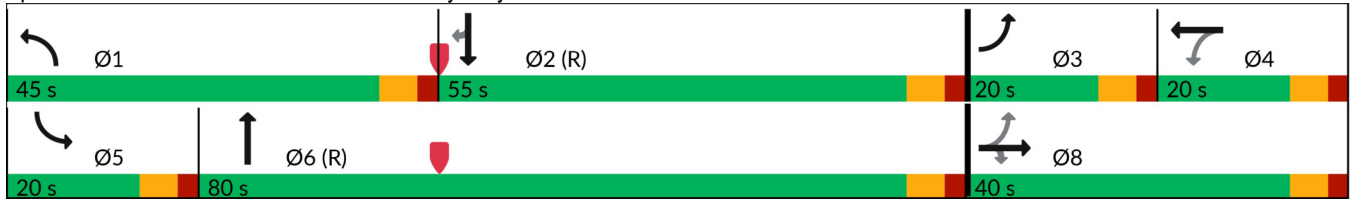


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	350	147	623	52	100	411	512	30	488	279
Future Volume (vph)	350	147	623	52	100	411	512	30	488	279
Turn Type	pm+pt	NA	Perm	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8			4	1	6	5	2	
Permitted Phases	8		8	4						2
Detector Phase	3	8	8	4	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	40.0	40.0	20.0	20.0	45.0	80.0	20.0	55.0	55.0
Total Split (%)	14.3%	28.6%	28.6%	14.3%	14.3%	32.1%	57.1%	14.3%	39.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	33.3	33.3	33.3	13.3	13.3	25.0	85.5	8.0	63.7	63.7
Actuated g/C Ratio	0.24	0.24	0.24	0.10	0.10	0.18	0.61	0.06	0.46	0.46
v/c Ratio	1.54	0.36	0.89	0.48	0.80	0.79	0.54	0.32	0.64	0.35
Control Delay (s/veh)	297.8	46.9	25.5	73.8	88.8	64.6	19.6	70.7	35.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	297.8	46.9	25.5	73.8	88.8	64.6	19.6	70.7	35.0	3.8
LOS	F	D	C	E	F	E	B	E	D	A
Approach Delay (s/veh)		113.3			84.5		39.3		25.5	
Approach LOS		F			F		D		C	

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.54  
 Intersection Signal Delay (s/veh): 64.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 83.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

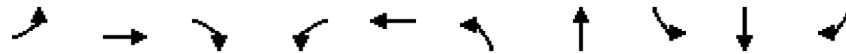
Splits and Phases: 1: SR 211 & SR 347/Bayberry Dr



Queues

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	372	156	663	57	143	467	601	33	530	303
v/c Ratio	1.54	0.36	0.89	0.48	0.80	0.79	0.54	0.32	0.64	0.35
Control Delay (s/veh)	297.8	46.9	25.5	73.8	88.8	64.6	19.6	70.7	35.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	297.8	46.9	25.5	73.8	88.8	64.6	19.6	70.7	35.0	3.8
Queue Length 50th (ft)	~400	118	132	50	121	211	336	29	369	0
Queue Length 95th (ft)	#603	186	#394	99	#230	253	457	65	541	57
Internal Link Dist (ft)		1881			827		1407		3359	
Turn Bay Length (ft)						400		255		460
Base Capacity (vph)	241	448	753	125	187	929	1108	180	824	865
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	1.54	0.35	0.88	0.46	0.76	0.50	0.54	0.18	0.64	0.35

Intersection Summary

~ 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.

HCM 7th Signalized Intersection Summary

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	147	623	52	100	30	411	512	17	30	488	279
Future Volume (veh/h)	350	147	623	52	100	30	411	512	17	30	488	279
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1811	1856	1737	1900	1856	1900	1826	1841	1678	1900	1826	1826
Adj Flow Rate, veh/h	372	156	663	57	110	33	467	582	0	33	530	0
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	6	3	11	0	3	0	5	4	15	0	5	5
Cap, veh/h	250	451	357	119	137	41	540	1114		43	855	
Arrive On Green	0.10	0.24	0.24	0.10	0.10	0.10	0.16	0.61	0.00	0.02	0.47	0.00
Sat Flow, veh/h	1725	1856	1472	678	1370	411	3374	1841	0	1810	1826	1547
Grp Volume(v), veh/h	372	156	663	57	0	143	467	582	0	33	530	0
Grp Sat Flow(s),veh/h/ln	1725	1856	1472	678	0	1782	1687	1841	0	1810	1826	1547
Q Serve(g_s), s	14.0	9.7	34.0	11.6	0.0	11.0	18.9	25.6	0.0	2.5	30.4	0.0
Cycle Q Clear(g_c), s	14.0	9.7	34.0	11.6	0.0	11.0	18.9	25.6	0.0	2.5	30.4	0.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	451	357	119	0	178	540	1114		43	855	
V/C Ratio(X)	1.49	0.35	1.85	0.48	0.00	0.80	0.86	0.52		0.77	0.62	
Avail Cap(c_a), veh/h	250	451	357	119	0	178	940	1114		181	855	
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	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.0	43.8	53.0	61.9	0.0	61.6	57.3	16.0	0.0	68.0	27.9	0.0
Incr Delay (d2), s/veh	240.3	0.5	395.2	2.9	0.0	22.6	4.3	1.8	0.0	25.1	3.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	4.5	51.5	2.1	0.0	6.1	8.2	10.6	0.0	1.5	13.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	294.2	44.3	448.2	64.9	0.0	84.3	61.6	17.7	0.0	93.0	31.2	0.0
LnGrp LOS	F	D	F	E		F	E	B		F	C	
Approach Vol, veh/h		1191			200			1049			563	
Approach Delay, s/veh		347.2			78.7			37.3			34.9	
Approach LOS		F			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	28.4	71.6	20.0	20.0	9.3	90.7		40.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	39.0	49.0	14.0	14.0	14.0	74.0		34.0				
Max Q Clear Time (g_c+I1), s	20.9	32.4	16.0	13.6	4.5	27.6		36.0				
Green Ext Time (p_c), s	1.5	2.8	0.0	0.1	0.0	3.9		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	162.5
HCM 7th LOS	F

Notes

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

Timings

2: SR 211 & SR 53

06/03/2025

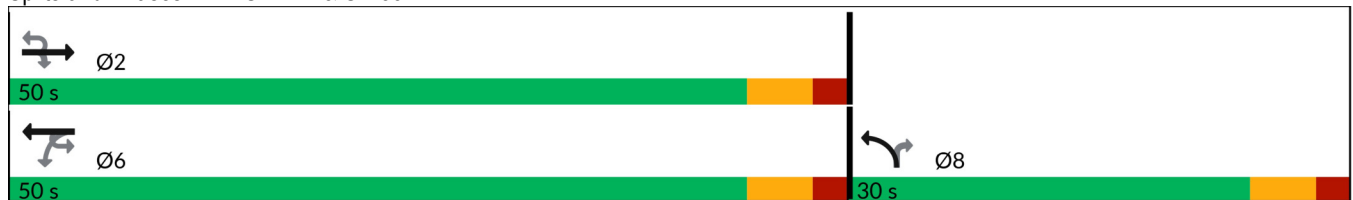


Lane Group	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↖	↗
Traffic Volume (vph)	2	986	420	1	89	736	463	150
Future Volume (vph)	2	986	420	1	89	736	463	150
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Prot	Perm
Protected Phases		2				6	8	
Permitted Phases	2		2	6	6			8
Detector Phase	2	2	2	6	6	6	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	30.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	None	None
Act Effct Green (s)	30.9	30.9	30.9		30.9	30.9	14.6	14.6
Actuated g/C Ratio	0.53	0.53	0.53		0.53	0.53	0.25	0.25
v/c Ratio	0.01	0.65	0.48		0.55	0.42	0.59	0.41
Control Delay (s/veh)	7.0	11.7	2.6		24.0	9.1	23.5	16.8
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.0	11.7	2.6		24.0	9.1	23.5	16.8
LOS	A	B	A		C	A	C	B
Approach Delay (s/veh)		9.0				10.7	21.9	
Approach LOS		A				B	C	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 58.2  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay (s/veh): 12.1  
 Intersection Capacity Utilization 60.5%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: SR 211 & SR 53



Queues

2: SR 211 & SR 53

06/03/2025



Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2	1160	494	94	767	498	161
v/c Ratio	0.01	0.65	0.48	0.55	0.42	0.59	0.41
Control Delay (s/veh)	7.0	11.7	2.6	24.0	9.1	23.5	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.0	11.7	2.6	24.0	9.1	23.5	16.8
Queue Length 50th (ft)	0	129	0	18	72	77	27
Queue Length 95th (ft)	3	214	29	80	135	150	87
Internal Link Dist (ft)		2207			2068	4517	
Turn Bay Length (ft)	290		180	190		260	860
Base Capacity (vph)	503	2621	1282	251	2646	1484	634
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	0.00	0.44	0.39	0.37	0.29	0.34	0.25

Intersection Summary

HCM 7th Signalized Intersection Summary

2: SR 211 & SR 53

06/03/2025



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	2	986	420	1	89	736	463	150
Future Volume (veh/h)	2	986	420	1	89	736	463	150
Initial Q (Qb), veh		0	0		0	0	0	0
Lane Width Adj.		1.00	1.00		1.00	1.00	1.00	1.00
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		1796	1796		1781	1811	1856	1633
Adj Flow Rate, veh/h		1160	494		93	767	498	161
Peak Hour Factor		0.85	0.85		0.96	0.96	0.93	0.93
Percent Heavy Veh, %		7	7		8	6	3	18
Cap, veh/h		2067	922		232	2085	688	278
Arrive On Green		0.61	0.61		0.61	0.61	0.20	0.20
Sat Flow, veh/h		3503	1522		287	3532	3428	1384
Grp Volume(v), veh/h		1160	494		93	767	498	161
Grp Sat Flow(s),veh/h/ln		1706	1522		287	1721	1714	1384
Q Serve(g_s), s		12.6	11.7		17.7	7.0	8.4	6.5
Cycle Q Clear(g_c), s		12.6	11.7		30.3	7.0	8.4	6.5
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2067	922		232	2085	688	278
V/C Ratio(X)		0.56	0.54		0.40	0.37	0.72	0.58
Avail Cap(c_a), veh/h		2424	1081		262	2444	1328	536
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		7.3	7.1		16.3	6.2	23.2	22.4
Incr Delay (d2), s/veh		0.2	0.5		1.1	0.1	1.5	1.9
Initial Q Delay(d3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.9	2.5		1.0	1.6	3.1	2.0
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh		7.5	7.6		17.5	6.3	24.6	24.3
LnGrp LOS		A	A		B	A	C	C
Approach Vol, veh/h		1654				860	659	
Approach Delay, s/veh		7.6				7.5	24.6	
Approach LOS		A				A	C	
Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		43.5				43.5		18.4
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		44.0				44.0		24.0
Max Q Clear Time (g_c+I1), s		14.6				32.3		10.4
Green Ext Time (p_c), s		11.8				5.2		2.0

Intersection Summary		
HCM 7th Control Delay, s/veh		11.1
HCM 7th LOS		B

Notes  
User approved ignoring U-Turning movement.



Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	↕
Traffic Vol, veh/h	4	0	4	0	0	0	5	616	0	0	473	5
Future Vol, veh/h	4	0	4	0	0	0	5	616	0	0	473	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	83	83	92	92	92
Heavy Vehicles, %	2	2	2	4	2	8	2	5	5	9	6	2
Mvmt Flow	4	0	4	0	0	0	5	742	0	0	514	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1267	1267	514	1267	1273	742	520	0	0	742	0	0
Stage 1	514	514	-	753	753	-	-	-	-	-	-	-
Stage 2	753	753	-	514	520	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.28	4.12	-	-	4.19	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.372	2.218	-	-	2.281	-	-
Pot Cap-1 Maneuver	146	169	560	144	167	406	1047	-	-	834	-	-
Stage 1	543	535	-	399	417	-	-	-	-	-	-	-
Stage 2	402	417	-	540	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	144	167	560	142	166	406	1047	-	-	834	-	-
Mov Cap-2 Maneuver	144	167	-	142	166	-	-	-	-	-	-	-
Stage 1	543	535	-	395	414	-	-	-	-	-	-	-
Stage 2	398	414	-	535	532	-	-	-	-	-	-	-

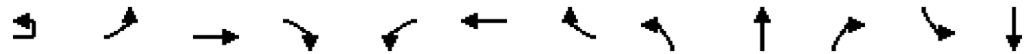
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	21.3	0	0.06	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	13	-	-	229	-	-	834	-	-
HCM Lane V/C Ratio	0.005	-	-	0.038	-	-	-	-	-
HCM Ctrl Dly (s/v)	8.5	0	-	21.3	0	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0	-	-

Timings

1: SR 211 & SR 347/Bayberry Dr

06/03/2025

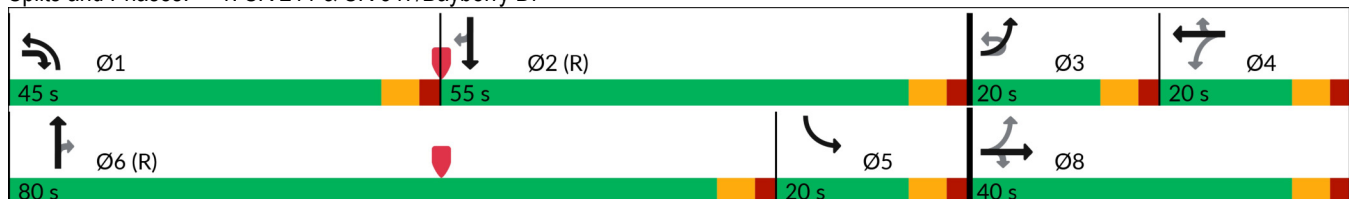


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↔↔	↑	↔↔	↔	↑	↔	↔↔	↑↑	↔	↔	↑↑
Traffic Volume (vph)	1	267	72	347	30	114	44	591	512	15	24	590
Future Volume (vph)	1	267	72	347	30	114	44	591	512	15	24	590
Turn Type	custom	pm+pt	NA	pm+ov	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		3	8	1		4		1	6		5	2
Permitted Phases	3	8		8	4		4			6		
Detector Phase	3	3	8	1	4	4	4	1	6	6	5	2
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	20.0	40.0	45.0	20.0	20.0	20.0	45.0	80.0	80.0	20.0	55.0
Total Split (%)	14.3%	14.3%	28.6%	32.1%	14.3%	14.3%	14.3%	32.1%	57.1%	57.1%	14.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	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)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead		Lead	Lag	Lag	Lag	Lead	Lead	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	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		32.4	32.4	72.2	12.9	12.9	12.9	33.7	83.6	83.6	10.8	55.8
Actuated g/C Ratio		0.23	0.23	0.52	0.09	0.09	0.09	0.24	0.60	0.60	0.08	0.40
v/c Ratio		0.60	0.18	0.26	0.27	0.74	0.16	0.84	0.28	0.02	0.19	0.47
Control Delay (s/veh)		50.5	43.7	9.6	64.3	86.7	1.2	60.2	15.7	0.1	61.7	33.7
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 (s/veh)		50.5	43.7	9.6	64.3	86.7	1.2	60.2	15.7	0.1	61.7	33.7
LOS		D	D	A	E	F	A	E	B	A	E	C
Approach Delay (s/veh)			29.1			63.2			39.1			27.7
Approach LOS			C			E			D			C

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay (s/veh): 34.4      Intersection LOS: C  
 Intersection Capacity Utilization 74.8%      ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: SR 211 & SR 347/Bayberry Dr



# Timings

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	SBR
Lane Configurations	7
Traffic Volume (vph)	462
Future Volume (vph)	462
Turn Type	Perm
Protected Phases	
Permitted Phases	2
Detector Phase	2
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	10.0
Total Split (s)	55.0
Total Split (%)	39.3%
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Max
Act Effct Green (s)	55.8
Actuated g/C Ratio	0.40
v/c Ratio	0.64
Control Delay (s/veh)	18.3
Queue Delay	0.0
Total Delay (s/veh)	18.3
LOS	B
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Queues

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	285	77	369	33	125	48	672	582	17	26	641	502
v/c Ratio	0.60	0.18	0.26	0.27	0.74	0.16	0.84	0.28	0.02	0.19	0.47	0.64
Control Delay (s/veh)	50.5	43.7	9.6	64.3	86.7	1.2	60.2	15.7	0.1	61.7	33.7	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.5	43.7	9.6	64.3	86.7	1.2	60.2	15.7	0.1	61.7	33.7	18.3
Queue Length 50th (ft)	111	56	51	28	112	0	300	153	0	22	231	153
Queue Length 95th (ft)	155	101	77	64	#196	0	346	188	0	54	306	301
Internal Link Dist (ft)		1881			827			1407			3359	
Turn Bay Length (ft)	360		390			100	610		330	590		405
Base Capacity (vph)	484	448	1491	134	184	309	929	2072	885	180	1371	790
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.17	0.25	0.25	0.68	0.16	0.72	0.28	0.02	0.14	0.47	0.64

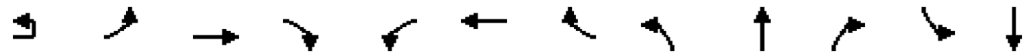
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM 7th Signalized Intersection Summary

## 1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖	↑↑
Traffic Volume (veh/h)	1	267	72	347	30	114	44	591	512	15	24	590
Future Volume (veh/h)	1	267	72	347	30	114	44	591	512	15	24	590
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach			No		No			No				No
Adj Sat Flow, veh/h/ln		1811	1856	1737	1900	1856	1900	1826	1841	1678	1900	1826
Adj Flow Rate, veh/h		284	77	369	33	125	48	672	582	0	26	641
Peak Hour Factor		0.94	0.94	0.94	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92
Percent Heavy Veh, %		6	3	11	0	3	0	5	4	15	0	5
Cap, veh/h		443	401	1133	130	153	132	747	1849		230	1507
Arrive On Green		0.09	0.22	0.22	0.08	0.08	0.08	0.22	0.53	0.00	0.13	0.43
Sat Flow, veh/h		3346	1856	2591	959	1856	1610	3374	3497	1422	1810	3469
Grp Volume(v), veh/h		284	77	369	33	125	48	672	582	0	26	641
Grp Sat Flow(s),veh/h/ln		1673	1856	1295	959	1856	1610	1687	1749	1422	1810	1735
Q Serve(g_s), s		10.6	4.8	13.1	4.6	9.3	3.0	27.1	13.2	0.0	1.8	18.0
Cycle Q Clear(g_c), s		10.6	4.8	13.1	4.6	9.3	3.0	27.1	13.2	0.0	1.8	18.0
Prop In Lane		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h		443	401	1133	130	153	132	747	1849		230	1507
V/C Ratio(X)		0.64	0.19	0.33	0.25	0.82	0.36	0.90	0.31		0.11	0.43
Avail Cap(c_a), veh/h		474	451	1203	147	186	161	940	1849		230	1507
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
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		51.0	44.9	25.9	61.1	63.2	35.9	53.0	18.7	0.0	54.1	27.5
Incr Delay (d2), s/veh		2.7	0.2	0.2	1.0	20.7	1.7	9.9	0.4	0.0	0.2	0.9
Initial Q Delay(d3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		4.5	2.2	4.0	1.2	5.3	1.6	12.2	5.3	0.0	0.8	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh		53.7	45.1	26.0	62.1	83.9	37.5	62.9	19.1	0.0	54.3	28.4
LnGrp LOS		D	D	C	E	F	D	E	B		D	C
Approach Vol, veh/h			730			206			1254			1169
Approach Delay, s/veh			38.8			69.6			42.6			34.2
Approach LOS			D			E			D			C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	66.8	18.7	17.5	23.8	80.0		36.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	39.0	49.0	14.0	14.0	14.0	74.0		34.0				
Max Q Clear Time (g_c+I1), s	29.1	40.0	12.6	11.3	3.8	15.2		15.1				
Green Ext Time (p_c), s	1.9	3.9	0.1	0.2	0.0	4.0		1.7				

### Intersection Summary

HCM 7th Control Delay, s/veh	40.5
HCM 7th LOS	D

### Notes

User approved ignoring U-Turning movement.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 7th Signalized Intersection Summary

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	462
Future Volume (veh/h)	462
Initial Q (Qb), veh	0
Lane Width Adj.	1.00
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1826
Adj Flow Rate, veh/h	502
Peak Hour Factor	0.92
Percent Heavy Veh, %	5
Cap, veh/h	672
Arrive On Green	0.43
Sat Flow, veh/h	1547
Grp Volume(v), veh/h	502
Grp Sat Flow(s),veh/h/ln	1547
Q Serve(g_s), s	38.0
Cycle Q Clear(g_c), s	38.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	672
V/C Ratio(X)	0.75
Avail Cap(c_a), veh/h	672
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	33.2
Incr Delay (d2), s/veh	7.4
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(50%),veh/ln	15.1
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	40.6
LnGrp LOS	D
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings

2: SR 211 & SR 53

06/03/2025

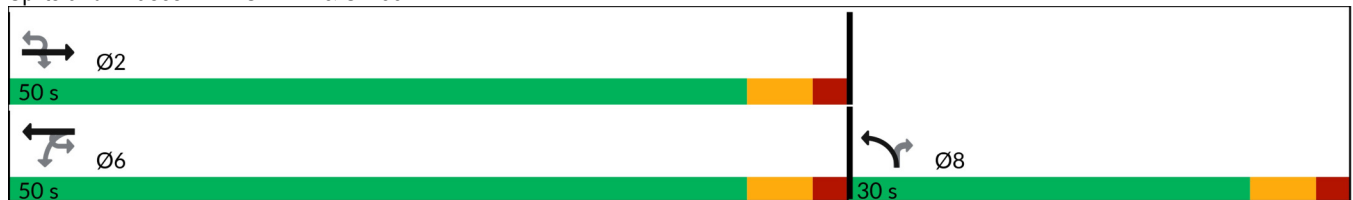


Lane Group	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↖	↗
Traffic Volume (vph)	2	483	515	1	184	1006	538	87
Future Volume (vph)	2	483	515	1	184	1006	538	87
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Prot	Perm
Protected Phases		2				6	8	
Permitted Phases	2		2	6	6			8
Detector Phase	2	2	2	6	6	6	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	30.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	None	None
Act Effct Green (s)	26.2	26.2	26.2		26.2	26.2	15.2	15.2
Actuated g/C Ratio	0.48	0.48	0.48		0.48	0.48	0.28	0.28
v/c Ratio	0.01	0.35	0.58		0.52	0.64	0.61	0.21
Control Delay (s/veh)	8.0	9.4	3.4		15.9	12.5	21.2	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	9.4	3.4		15.9	12.5	21.2	6.2
LOS	A	A	A		B	B	C	A
Approach Delay (s/veh)		6.3				13.0	19.1	
Approach LOS		A				B	B	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 54.2  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay (s/veh): 11.8  
 Intersection Capacity Utilization 62.3%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: SR 211 & SR 53



Queues

2: SR 211 & SR 53

06/03/2025



Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2	568	606	193	1048	578	94
v/c Ratio	0.01	0.35	0.58	0.52	0.64	0.61	0.21
Control Delay (s/veh)	8.0	9.4	3.4	15.9	12.5	21.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	9.4	3.4	15.9	12.5	21.2	6.2
Queue Length 50th (ft)	0	50	0	36	111	76	0
Queue Length 95th (ft)	3	97	32	109	219	171	32
Internal Link Dist (ft)		2207			2068	4517	
Turn Bay Length (ft)	290		180	190		260	
Base Capacity (vph)	330	2794	1353	640	2821	1607	696
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	0.01	0.20	0.45	0.30	0.37	0.36	0.14

Intersection Summary



# HCM 7th Signalized Intersection Summary

## 2: SR 211 & SR 53

06/03/2025



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	2	483	515	1	184	1006	538	87
Future Volume (veh/h)	2	483	515	1	184	1006	538	87
Initial Q (Qb), veh		0	0		0	0	0	0
Lane Width Adj.		1.00	1.00		1.00	1.00	1.00	1.00
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		1796	1796		1781	1811	1856	1633
Adj Flow Rate, veh/h		568	606		192	1048	578	94
Peak Hour Factor		0.85	0.85		0.96	0.96	0.93	0.93
Percent Heavy Veh, %		7	7		8	6	3	18
Cap, veh/h		2020	901		345	2036	755	305
Arrive On Green		0.59	0.59		0.59	0.59	0.22	0.22
Sat Flow, veh/h		3503	1522		455	3532	3428	1384
Grp Volume(v), veh/h		568	606		192	1048	578	94
Grp Sat Flow(s),veh/h/ln		1706	1522		455	1721	1714	1384
Q Serve(g_s), s		5.2	17.2		22.8	11.4	10.1	3.6
Cycle Q Clear(g_c), s		5.2	17.2		28.0	11.4	10.1	3.6
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2020	901		345	2036	755	305
V/C Ratio(X)		0.28	0.67		0.56	0.51	0.77	0.31
Avail Cap(c_a), veh/h		2351	1049		389	2370	1288	520
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		6.4	8.8		13.2	7.7	23.4	20.8
Incr Delay (d2), s/veh		0.1	1.4		1.4	0.2	1.7	0.6
Initial Q Delay(d3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.3	4.0		1.8	2.8	3.8	1.1
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh		6.5	10.2		14.7	7.9	25.0	21.4
LnGrp LOS		A	B		B	A	C	C
Approach Vol, veh/h		1174				1240	672	
Approach Delay, s/veh		8.4				8.9	24.5	
Approach LOS		A				A	C	
Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		43.8				43.8		20.1
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		44.0				44.0		24.0
Max Q Clear Time (g_c+I1), s		19.2				30.0		12.1
Green Ext Time (p_c), s		6.3				7.8		2.0
<b>Intersection Summary</b>								
HCM 7th Control Delay, s/veh			12.1					
HCM 7th LOS			B					

### Notes

User approved ignoring U-Turning movement.

Intersection						
Intersection Delay, s/veh	7.1					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	10	298	762		861	
Demand Flow Rate, veh/h	10	315	800		917	
Vehicles Circulating, veh/h	1098	609	133		185	
Vehicles Exiting, veh/h	4	324	975		739	
Ped Vol Crossing Leg, #/h	0					
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	6.7	9.0	6.2		7.3	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	L	LT	TR	LT	TR
Assumed Moves	LTR	L	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1420	1420	1350	1420	1350	1420
B (Slope)	8.501e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	10	315	376	424	431	486
Cap Entry Lane, veh/h	558	846	1194	1268	1139	1213
Entry HV Adj Factor	1.000	0.946	0.953	0.953	0.939	0.939
Flow Entry, veh/h	10	298	358	404	405	457
Cap Entry, veh/h	558	801	1138	1209	1070	1140
V/C Ratio	0.018	0.372	0.315	0.334	0.379	0.401
Control Delay, s/veh	6.7	9.0	6.2	6.1	7.3	7.3
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	2	1	1	2	2

Timings

1: SR 211 & SR 347/Bayberry Dr

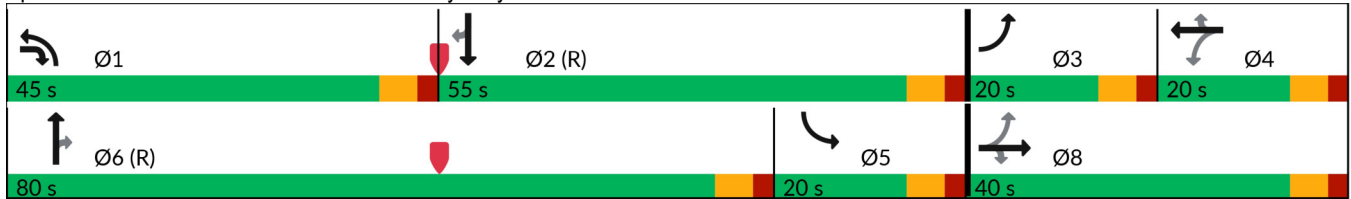
06/03/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	421	147	623	52	100	30	411	611	17	30	597	358
Future Volume (vph)	421	147	623	52	100	30	411	611	17	30	597	358
Turn Type	pm+pt	NA	pm+ov	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1		4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	3	8	1	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	40.0	45.0	20.0	20.0	20.0	45.0	80.0	80.0	20.0	55.0	55.0
Total Split (%)	14.3%	28.6%	32.1%	14.3%	14.3%	14.3%	32.1%	57.1%	57.1%	14.3%	39.3%	39.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	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-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	32.3	32.3	64.8	12.3	12.3	12.3	26.5	83.7	83.7	10.9	63.2	63.2
Actuated g/C Ratio	0.23	0.23	0.46	0.09	0.09	0.09	0.19	0.60	0.60	0.08	0.45	0.45
v/c Ratio	0.90	0.37	0.52	0.52	0.68	0.11	0.74	0.33	0.02	0.24	0.42	0.44
Control Delay (s/veh)	69.9	47.6	20.2	77.4	82.3	0.8	60.7	16.4	0.1	63.0	28.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.9	47.6	20.2	77.4	82.3	0.8	60.7	16.4	0.1	63.0	28.1	5.8
LOS	E	D	C	E	F	A	E	B	A	E	C	A
Approach Delay (s/veh)		41.2			67.5			33.6			21.1	
Approach LOS		D			E			C			C	

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay (s/veh): 34.4      Intersection LOS: C  
 Intersection Capacity Utilization 65.5%      ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: SR 211 & SR 347/Bayberry Dr



Queues

1: SR 211 & SR 347/Bayberry Dr

06/03/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	448	156	663	57	110	33	467	694	19	33	649	389
v/c Ratio	0.90	0.37	0.52	0.52	0.68	0.11	0.74	0.33	0.02	0.24	0.42	0.44
Control Delay (s/veh)	69.9	47.6	20.2	77.4	82.3	0.8	60.7	16.4	0.1	63.0	28.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.9	47.6	20.2	77.4	82.3	0.8	60.7	16.4	0.1	63.0	28.1	5.8
Queue Length 50th (ft)	186	119	174	50	98	0	208	188	0	28	211	20
Queue Length 95th (ft)	#269	186	211	99	163	0	247	229	0	64	290	99
Internal Link Dist (ft)		1881			827			1407			3359	
Turn Bay Length (ft)	360		390			100	610		330	590		405
Base Capacity (vph)	500	448	1488	125	184	309	929	2074	886	180	1552	886
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.35	0.45	0.46	0.60	0.11	0.50	0.33	0.02	0.18	0.42	0.44































Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM 7th Signalized Intersection Summary

1: SR 211 & SR 347/Bayberry Dr

06/03/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 		  				 	 			 	
Traffic Volume (veh/h)	421	147	623	52	100	30	411	611	17	30	597	358
Future Volume (veh/h)	421	147	623	52	100	30	411	611	17	30	597	358
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1811	1856	1737	1900	1856	1900	1826	1841	1678	1900	1826	1826
Adj Flow Rate, veh/h	448	156	663	57	110	33	467	694	0	33	649	389
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	6	3	11	0	3	0	5	4	15	0	5	5
Cap, veh/h	532	446	1037	117	181	157	540	1849		186	1634	729
Arrive On Green	0.10	0.24	0.24	0.10	0.10	0.10	0.16	0.53	0.00	0.10	0.47	0.47
Sat Flow, veh/h	3346	1856	2591	678	1856	1610	3374	3497	1422	1810	3469	1547
Grp Volume(v), veh/h	448	156	663	57	110	33	467	694	0	33	649	389
Grp Sat Flow(s),veh/h/ln	1673	1856	1295	678	1856	1610	1687	1749	1422	1810	1735	1547
Q Serve(g_s), s	14.0	9.8	28.9	11.6	8.0	2.1	18.9	16.3	0.0	2.3	17.0	24.9
Cycle Q Clear(g_c), s	14.0	9.8	28.9	11.6	8.0	2.1	18.9	16.3	0.0	2.3	17.0	24.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	532	446	1037	117	181	157	540	1849		186	1634	729
V/C Ratio(X)	0.84	0.35	0.64	0.49	0.61	0.21	0.86	0.38		0.18	0.40	0.53
Avail Cap(c_a), veh/h	532	451	1044	119	186	161	940	1849		186	1634	729
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	44.1	33.8	62.3	60.6	36.5	57.3	19.4	0.0	57.4	24.1	26.2
Incr Delay (d2), s/veh	11.6	0.5	1.3	3.1	5.4	0.7	4.3	0.6	0.0	0.5	0.7	2.8
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	2.2	4.5	9.0	2.1	4.1	1.1	8.2	6.5	0.0	1.1	7.0	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.1	44.6	35.1	65.3	66.1	37.1	61.6	20.0	0.0	57.9	24.8	29.0
LnGrp LOS	E	D	D	E	E	D	E	B		E	C	C
Approach Vol, veh/h		1267			200			1161			1071	
Approach Delay, s/veh		46.5			61.1			36.7			27.3	
Approach LOS		D			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	28.4	71.9	20.0	19.6	20.4	80.0		39.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	39.0	49.0	14.0	14.0	14.0	74.0		34.0				
Max Q Clear Time (g_c+I1), s	20.9	26.9	16.0	13.6	4.3	18.3		30.9				
Green Ext Time (p_c), s	1.5	5.6	0.0	0.0	0.0	5.0		1.2				
<b>Intersection Summary</b>												
HCM 7th Control Delay, s/veh			38.7									
HCM 7th LOS			D									
<b>Notes</b>												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Timings

2: SR 211 & SR 53

06/03/2025

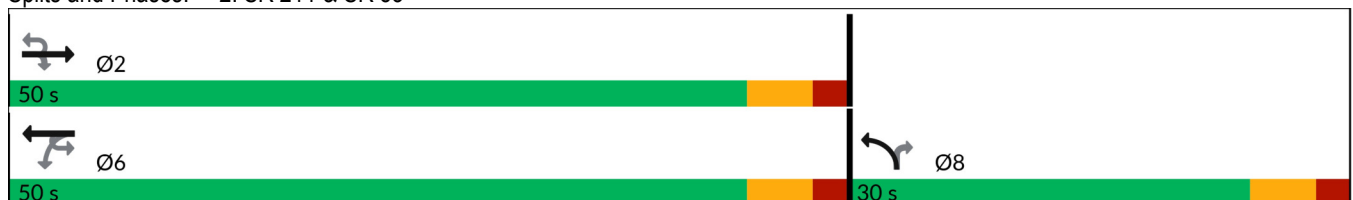


Lane Group	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↖↗	↗
Traffic Volume (vph)	2	986	507	1	122	736	559	186
Future Volume (vph)	2	986	507	1	122	736	559	186
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Prot	Perm
Protected Phases		2				6	8	
Permitted Phases	2		2	6	6			8
Detector Phase	2	2	2	6	6	6	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	30.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	None	None
Act Effct Green (s)	34.4	34.4	34.4		34.4	34.4	17.4	17.4
Actuated g/C Ratio	0.53	0.53	0.53		0.53	0.53	0.27	0.27
v/c Ratio	0.01	0.64	0.55		0.76	0.42	0.66	0.48
Control Delay (s/veh)	8.0	12.8	3.0		45.1	10.0	25.9	19.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	12.8	3.0		45.1	10.0	25.9	19.4
LOS	A	B	A		D	A	C	B
Approach Delay (s/veh)		9.5				15.0	24.3	
Approach LOS		A				B	C	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 64.5  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay (s/veh): 14.3  
 Intersection Capacity Utilization 65.0%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 2: SR 211 & SR 53



Queues

2: SR 211 & SR 53

06/03/2025



Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2	1160	596	128	767	601	200
v/c Ratio	0.01	0.64	0.55	0.76	0.42	0.66	0.48
Control Delay (s/veh)	8.0	12.8	3.0	45.1	10.0	25.9	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	12.8	3.0	45.1	10.0	25.9	19.4
Queue Length 50th (ft)	0	160	0	37	90	118	47
Queue Length 95th (ft)	3	234	32	#149	147	182	112
Internal Link Dist (ft)		2207			2068	4517	
Turn Bay Length (ft)	290		180	190		260	
Base Capacity (vph)	456	2418	1250	227	2441	1343	580
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	0.00	0.48	0.48	0.56	0.31	0.45	0.34

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM 7th Signalized Intersection Summary

## 2: SR 211 & SR 53

06/03/2025



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗		↖	↑↑	↙↘	↗
Traffic Volume (veh/h)	2	986	507	1	122	736	559	186
Future Volume (veh/h)	2	986	507	1	122	736	559	186
Initial Q (Qb), veh		0	0		0	0	0	0
Lane Width Adj.		1.00	1.00		1.00	1.00	1.00	1.00
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		1796	1796		1781	1811	1856	1633
Adj Flow Rate, veh/h		1160	596		127	767	601	200
Peak Hour Factor		0.85	0.85		0.96	0.96	0.93	0.93
Percent Heavy Veh, %		7	7		8	6	3	18
Cap, veh/h		2082	929		206	2099	766	309
Arrive On Green		0.61	0.61		0.61	0.61	0.22	0.22
Sat Flow, veh/h		3503	1522		260	3532	3428	1384
Grp Volume(v), veh/h		1160	596		127	767	601	200
Grp Sat Flow(s),veh/h/ln		1706	1522		260	1721	1714	1384
Q Serve(g_s), s		14.5	18.1		29.5	8.1	11.9	9.5
Cycle Q Clear(g_c), s		14.5	18.1		44.0	8.1	11.9	9.5
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2082	929		206	2099	766	309
V/C Ratio(X)		0.56	0.64		0.62	0.37	0.78	0.65
Avail Cap(c_a), veh/h		2082	929		206	2099	1141	461
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		8.3	9.0		23.7	7.1	26.4	25.4
Incr Delay (d2), s/veh		0.3	1.5		5.4	0.1	2.2	2.3
Initial Q Delay(d3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.8	4.6		2.4	2.1	4.6	3.0
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh		8.6	10.5		29.1	7.2	28.5	27.7
LnGrp LOS		A	B		C	A	C	C
Approach Vol, veh/h		1756				894	801	
Approach Delay, s/veh		9.3				10.3	28.3	
Approach LOS		A				B	C	
Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		50.0				50.0		22.1
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		44.0				44.0		24.0
Max Q Clear Time (g_c+I1), s		20.1				46.0		13.9
Green Ext Time (p_c), s		11.4				0.0		2.2

### Intersection Summary

HCM 7th Control Delay, s/veh	14.0
HCM 7th LOS	B

### Notes

User approved ignoring U-Turning movement.



Intersection						
Intersection Delay, s/veh	8.0					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	8	347	952		649	
Demand Flow Rate, veh/h	8	366	999		692	
Vehicles Circulating, veh/h	899	788	146		217	
Vehicles Exiting, veh/h	10	357	761		937	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	5.6	12.9	7.3		6.3	
Approach LOS	A	B	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	L	LT	TR	LT	TR
Assumed Moves	LTR	L	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1420	1420	1350	1420	1350	1420
B (Slope)	8.501e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	8	366	470	529	325	367
Cap Entry Lane, veh/h	661	727	1180	1254	1106	1181
Entry HV Adj Factor	1.000	0.948	0.952	0.954	0.939	0.937
Flow Entry, veh/h	8	347	447	505	305	344
Cap Entry, veh/h	661	689	1123	1196	1038	1107
V/C Ratio	0.012	0.504	0.398	0.422	0.294	0.311
Control Delay, s/veh	5.6	12.9	7.3	7.3	6.4	6.3
LOS	A	B	A	A	A	A
95th %tile Queue, veh	0	3	2	2	1	1

# APPENDIX D: TURN LANE EVALUATIONS

# GDOT Turn Lane Evaluations

ID	Intersection	Movement / Turn Lane	Turn Volume	GDOT Criteria	GDOT Criteria met?	Personal Vehicle Distribution	Truck Distribution	Volume	Threshold
3	SR 211 & Site Driveway	SBL	1608 LT/Day	250 LT/Day	YES	40%	55%	1,608	250
		NBR	2237 RT/Day	75 RT/Day	YES	60%	45%	2,237	75
		NBR	58 LT/Day	250 LT/Day	NO	50%	0%	58	250

	TOTAL	IN	OUT	
<b>Personal Vehicles</b>	<b>Daily</b>	<b>6,754</b>	<b>3,377</b>	<b>3,377</b>
	AM Peak Hour	503	245	258
	PM Peak Hour	558	263	295
<b>Trucks</b>	<b>Daily</b>	<b>936</b>	<b>468</b>	<b>468</b>
	AM Peak Hour	34	18	16
	PM Peak Hour	52	27	25

### 4.9.1.1 Minimum Requirements for Right Turn Deceleration Lanes

Right turn deceleration lanes must be constructed at no cost to the Department if the daily site generated Right Turn Volumes (RTV) based on ITE Trip Generation (assuming a reasonable distribution of entry volumes) meet or exceed the values shown in Table 4-6. Passing lane sections fall under the criteria for two or more lanes.

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6000	>=6000	<10000	>=10000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

**Table 4-6 Minimum Volumes Requiring Right Turn Lanes**

### Condition 1

LEFT TURN REQUIREMENTS-FULL CONSTRUCTION				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	<6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
>= 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

**APPENDIX E:  
INTERSECTION CONTROL  
EVALUATION (ICE)**

GDOT PI#:  Request By:

County:  GDOT District:

Major Road:  Road Class:  Speed Limit:

Crossing Road:  Road Class:  Speed Limit:

Major Rd Direction:  Area Type:

Intersection Control:  Project ID:

Prepared By:  Date:

Project Purpose:

### 2025 EXISTING YEAR VOLUMES

**APPROACH SPLITS:**  
SR 211: 99%  
Ridgemoor/Site: 1%

		609 (425) [12484]								
		(0)	(5)	(420)	(0)					
		0	2	607	0	<b>WB Ridgemoor/Site</b>				
		2025 Intersection Daily Entering Volume (est): 12,584				Peds				
10 (8) [200]	(4)					5	↔		↔	0 (0)
	(0)					0	→		←	0 (0)
	(4)					5	↔		↔	0 (0)
	(0)	0	←		↔	0 (0)				
		<b>EB Ridgemoor/Site</b>				<b>NB SR 211</b>				
		2	423	0	0					
		(5)	(547)	(0)	(0)					
		425 (552) [12484]								

### PEAK HR % TRUCKS:

EB	WB	NB	SB
1%	1%	5%	5%

### 2050 DESIGN YEAR VOLUMES

		1205 (884) [21900]								
		(0)	(5)	(759)	(120)					
		0	2	1,095	108	<b>WB Ridgemoor/Site</b>				
		2050 Intersection Daily Entering Volume (est): 26,395				Peds				
10 (8) [200]	(4)					5	↔		↔	112 (132)
	(0)					0	→		←	0 (0)
	(4)					5	↔		↔	162 (188)
	(0)	0	←		↔	0 (0)				
		<b>EB Ridgemoor/Site</b>				<b>NB SR 211</b>				
		2	763	155	0					
		(5)	(988)	(170)	(0)					
		920 (1163) [23000]								

### 2030 OPENING YEAR VOLUMES

		791 (598) [14600]								
		(0)	(5)	(473)	(120)					
		0	0	683	108	<b>WB Ridgemoor/Site</b>				
		2030 Intersection Daily Entering Volume (est): 19,045				Peds				
10 (10) [200]	(5)					5	↔		↔	112 (132)
	(0)					0	→		←	0 (0)
	(5)					5	↔		↔	162 (188)
	(0)	0	←		↔	0 (0)				
		<b>EB Ridgemoor/Site</b>				<b>NB SR 211</b>				
		0	476	155	0					
		(5)	(616)	(170)	(0)					
		631 (791) [15600]								

Existing Data Year:	2025
Project Opening Year:	2030
Project Design Year:	2050
Annual Growth Rate:	2.4%
K Factor*:	10%

\* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day

### LEGEND:

- 000 = AM Peak Approach Volume
- (000) = PM Peak Approach Volume
- [000] = ADT Volume (Estimate)

**Introduction:** In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

**Tool Goal:** The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

**Requirements:** An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "Waiver" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

**Two-Stage Process:** A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

**Stage 1: Screening Decision Record** Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

**Stage 2: Alternative Selection Decision Record** Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

**Documentation:** A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT PI #	N/A	<p><b>Note:</b> Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2</p> <p><i>1. Does alternative address the project need in a balanced manner and in scale with the project?</i>  <i>2. Does alternative improve safety performance in terms of reducing severe crashes?</i>  <i>3. Does alternative incorporate safety performance in operations (congestion, delay, reliability, etc.)?</i>  <i>4. Does alternative improve (or preserve) traffic characteristics, constraints &amp; location context?</i>  <i>5. Does alternative appear feasible given the site respect to other project factors?</i>  <i>6. Does alternative appear feasible with respect to other project factors?</i>  <i>7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</i></p>							
Project Location:	SR 211 @ Ridgemoor/Site								
Existing Control:	New Intersection or Other								
Prepared by:	NV5								
Date:	4/1/2025	<p>Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column</p>							
<p><b>Intersection Alternative</b> (see "Intersections" tab for detailed description of intersection/interchange type)</p>									
		<b>Screening Decision Justification:</b>							
Unsignalized Intersections	Conventional (Minor Stop)	Yes	No	No	No	No	Yes	Yes	Works with existing conditions, but future conditions propose a median
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Causes too much delay to SR 211
	Mini Roundabout	No	No	No	No	No	No	No	Not applicable to the widened highway
	Single Lane Roundabout	No	No	No	No	No	No	No	Not applicable to the widened highway
	Multilane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Safest for side street traffic; eliminates U-turns for trucks
	RCUT (stop control)	Yes	Yes	No	Yes	Yes	Yes	Yes	Currently proposed by PI 0007233
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Not significantly different from an RCUT
	High-T (unsignalized)	No	No	No	No	No	No	No	Out of scale of the project
	Offset-T Intersections	No	No	No	No	No	No	No	Not applicable
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Not an Interchange
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Not an Interchange
	No LT Lane Improvements	No	No	No	No	No	No	No	
	No RT Lane Improvements	No	No	No	No	No	No	No	
Other unsignalized (provide description):	No	No	No	No	No	No	No		
Signalized Intersections	Traffic Signal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Safest for trucks
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Out of scale of the project
	RCUT (signalized)	No	No	No	No	No	No	No	Not a significant improvement over unsignalized R-Cut
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Out of scale of the project
	Continuous Green-T	No	No	No	No	No	No	No	Many driveways on west side of the roadway impacted
	Jughandle	No	No	No	No	No	No	No	Out of scale of the project
	Quadrant Roadway	No	No	No	No	No	No	No	Out of scale of the project
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Not an Interchange
	Diverging Diamond	No	No	No	No	No	No	No	Not an Interchange
	Single Point Interchange	No	No	No	No	No	No	No	Not an Interchange
	No LT Lane Improvements	No	No	No	No	No	No	No	
	No RT Lane Improvements	No	No	No	No	No	No	No	
Other Signalized (provide description):	No	No	No	No	No	No	No		

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record



# GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.3 | Revised 11/13/2023

Project Location: SR 211 @ Ridgemoor/Site  
 Existing Intersection Control: New Intersection or Other  
 Type of Analysis: Conventional Non-Safety Funded Project

District: 1 - Gainesville      GDOT PI #: N/A  
 County: Hall                      Prepared by: NV5  
 Area: Suburb/Transit          Date: 4/1/2025

### Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2030 Opening Yr No-Build Peak Hr Intersection Delay	0.0 sec	0.0 sec
2030 Opening Yr No-Build Peak Hr Intersection V/C	0.00	0.00
2050 Design Yr No-Build Peak Hr Intersection Delay	0.0 sec	0.0 sec
2050 Design Yr No-Build Peak Hr Intersection V/C ratio	0.00	0.00

Complete Streets Warrants Met?

PEDESTRIANS

BICYCLES

TRANSIT

Crash Type	Crash Severity					Years:
	K*	A*	B*	C*	O	5
<i>Crash Data: Enter most recent 5 years of crash data</i>						
Angle	0	0	0	0	0	#DIV/0!
Head-On	0	0	0	0	0	#DIV/0!
Rear End	0	0	0	0	0	#DIV/0!
Sideswipe - same	0	0	0	0	0	#DIV/0!
Sideswipe - opposite	0	0	0	0	0	#DIV/0!
Not Collision w/Motor Veh	0	0	0	0	0	#DIV/0!
<b>TOTALS:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* Number of crashes resulting in injuries / fatalities, not number of persons

### Alternatives Analysis:

Proposed Control Type/Improvement:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Conventional (Minor Stop)	Multilane Roundabout	RCUT (stop control)	Traffic Signal	N/A	
<b>Project Cost: (From CostEst Worksheet)</b>	<i>Additional description here</i>	<i>Additional description here</i>	<i>Additional description here</i>	<i>Add LT bay(s) on major ST</i>	<i>Additional description here</i>
Construction Cost	\$0	\$1,770,000	\$693,000	\$283,000	
ROW Cost	\$0	\$0	\$0	\$0	
Environmental Cost	\$0	\$0	\$0	\$0	
Reimbursable Utility Cost	\$0	\$22,000	\$10,000	\$5,000	
Design & Contingency Cost	\$0	\$683,000	\$231,000	\$127,000	
Cost Adjustment (justification req'd)	0%	0%	0%	0%	
<b>Total Cost</b>	<b>\$0</b>	<b>\$2,475,000</b>	<b>\$934,000</b>	<b>\$415,000</b>	

*User Cost Override*

### Traffic Operations:

	Synchro		Synchro		Synchro		Synchro	
	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr
Traffic Analysis Software Used	Synchro		Synchro		Synchro		Synchro	
Analysis Period								
2050 Design Yr Build Intersection Delay	500.0 sec	500.0 sec	10.1 sec	10.5 sec	20.0 sec	30.8 sec	10.4 sec	11.9 sec
2050 Design Yr Build Intersection V/C	2.92	3.67	0.61	0.66	0.56	0.73	0.67	0.72

### Safety Analysis:

Predefined CRF: PDO	0%	0%	0%	0%
Predefined CRF: Fatal/Inj	0%	0%	0%	0%
Predefined CRF Source:	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO				
User Defined CRF: Fatal/Inj				
User Defined CRF Source (write in if applicable):				

### Environmental Impacts:<sup>1</sup>

Historic District/Property	None	None	None	None
Archaeology Resources	None	None	None	None
Graveyard	None	None	None	None
Stream	None	None	None	None
Underground Tank/Hazmat	None	None	None	None
Park Land	None	None	None	None
EJ Community	None	None	None	None
Wooded Area	None	None	None	None
Wetland	None	None	None	None

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet  
<sup>1</sup> Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

### Stakeholder Posture:

Local Community Support	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown

<b>Final ICE Stage 2 Score:</b>	<b>-4.6</b>	<b>3.4</b>	<b>4.5</b>	<b>5.3</b>
Rank of Control Type Alternatives:	4	3	2	1
Final Intersection Control Selection:	<b>3 - Multilane Roundabout</b>			

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The development is not expected to warrant a traffic signal until full-build out, so a signal may not be the best solution. A roundabout is considered safer for the expected heavy truck movements that are expected from the industrial portion of the development. It is noted that the developer will likely contribute right-of-way for the roundabout.



# GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.3| Revised 11/13/2023

## Waiver Request - Level 2 / 3

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection consists of a public roadway intersecting a divided, multilane roadway where the access will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
  - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
  - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
  - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
  - The proposed changes are not expected to adversely affect safety

If only one alternative is determined to be feasible from the ICE Stage 1, then a waiver may be submitted in lieu of completing ICE Stage 2. The waiver must clearly explain why there is no other feasible alternative. A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Office of Traffic Operations or District Engineer (depending on Waiver level). Questions regarding the waiver process should be routed to the State Traffic Engineer.

**Project Information:**      Location: SR 211 @ Ridgemoor/Site  
    County: Hall  
    GDOT District: 1 - Gainesville  
    Area Type: Suburb/Transition  
    Existing Intersection Control: New Intersection or Other

GDOT PI # (or N/A): N/A  
 Requested By: GDOT  
 Prepared By: NV5  
 Date: 4/1/2025  
 Waiver Request Type: Driveway Permit

### Traffic and Operations Data:<sup>1,2</sup>

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	12,484	
Existing Minor Street Avg Daily Traffic (ADT):	0	
Analysis Period:	AM Peak	PM Peak
2030 Opening Yr Peak Hour Intersection Delay:	7.1 sec	0.7 sec
2030 Opening Yr Peak Hour Intersection V/C:	0.40	0.47
2050 Design Yr Peak Hour Intersection Delay:	10.1 sec	10.5 sec
2050 Design Yr Peak Hour Intersection V/C:	0.61	0.66

Crash Data (Required): <sup>3</sup>						
Crash Type	Crash Severity					Years:
	K*	A*	B*	C*	O	5
Crash Data: Enter most recent 5 years of crash data						
Angle	0	0	0	0	0	#DIV/0!
Head-On	0	0	0	0	0	#DIV/0!
Rear End	0	0	0	0	0	#DIV/0!
Sideswipe - same	0	0	0	0	0	#DIV/0!
Sideswipe - opposite	0	0	0	0	0	#DIV/0!
Not Collision w/Motor Veh	0	0	0	0	0	#DIV/0!
<b>TOTALS:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* Number of crashes resulting in injuries / fatalities, not number of persons

<b>Description of Work / Justification for Waiver (Required):</b>	A mixed-use development consisting of just over 1.7M sq.ft. of warehousing, 350 townhomes, and 350 apartments is proposed on the east side of SR 211 north of Union Church Road. The addition of heavy trucks wanting to head south from the site towards I-85 presents a safety concern for the area, and a Multilane Roundabout would be the safest option to allow vehicles to move efficiently through the new intersection.
Proposed Intersection Control:	Multilane Roundabout

**REQUESTED BY:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Title: \_\_\_\_\_

**APPROVED BY:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Name: \_\_\_\_\_

District Engineer or (Approved Delegate)

<sup>1</sup> Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2  
<sup>2</sup> ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.  
<sup>3</sup> Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)