

TO: Lee Thompson, H&T Consultants

FROM: Scott Israelson

DATE: 22 October 2021

RE: Minor Traffic Review - REVISED
Discount Tire
464069 SR 200
Yulee, FL

Introduction

A Discount Tire store is proposed to be developed in Yulee, Florida. The site is located on the north side of SR 200 west of Blackrock Road. The 11.74-acre parcel houses a church campus and the development proposes rezoning, land use amendment, and a lot split 1.7 acres for the tire store. The parcel has access through an existing right-in/right-out driveway to SR 200 and a connection to Cessna Drive. The development proposes to construct a 7,020 SF tire store. Figure 1 shows the most recent site plan. Figure 2 shows the vicinity map.

This REVISED Traffic Study incorporates comments received from Nassau County during review.

Trip Generation

This Traffic Impact Statement uses the *ITE Trip Generation Manual 10th Edition* to estimate the projected trips by this development. Table 1 contains the summary of the trip generation estimate.

Table 1 - ITE Trip Generation							
Average Weekday Driveway Volumes				AM Peak Hour		PM Peak Hour	
Land Use	ITE Code	Size		Daily Trips	Enter	Exit	
Tire Store	848	7.02	Th.Sq.Ft. GLA	200	12	7	12 16

The development is estimated to generate 200 daily trips.

Trip Distribution

Trips from the proposed development were assigned to the surrounding roadways based on existing traffic volumes and engineering judgment. This includes 40% to/from the east on SR 200; 40% to/from the west on SR 200; 5% to/from the north on Chester Rd; 5% to/from Blackrock Road; 5% to/from the south on Arrigo Road; and 5% to/from the south on Amelia Concourse.

Roadway Segment Analysis

The revised analysis Table 2 shows existing peak hour volumes, estimated new project trips, and Full Build volumes.

Roadway	From	To	Lanes	Cap	2021 Existing Pk Hr Vol	Develop Pk Hr Volumes	2022 Full Build Pk Hr Vol	Avail Cap	LOS
SR 200	Chester Rd	O'Neill Scott Rd	6	4590	3689	11	3700	890	C
Arrigo Blvd	SR 200	Nassau Lakes	2	1015	704	2	706	309	C
Cessna Rd	SR 200	Access	2	1015	8	15	23	992	C
Blackrock Rd	Heron Isle	SR 200	2	1152	512	2	514	638	C

Analysis shows that the roadway segments in the study area projected to continue to operate acceptably.

Intersection Capacity Analysis

Nassau County requested peak hour intersection capacity analysis as part of this study.

Traffic data for the study was collected on September 29 and October 5, 2021. Existing traffic volumes are shown in Figure 2. Full Build 2022 volumes are shown in Figure 3.

It should be noted that SR 200 is under construction and will be a six-lane divided roadway with lane geometry improvements to intersections. This improvement is included in the analysis.



SR 200 & Chester Road/Amelia Concourse

Table 3 - Intersection LOS, Delay, and Queue by Movement - 2021 Existing

Table 3 - Intersection LOS, Delay, and Queue by Movement - 2021 Existing								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Chester Rd/ Amelia Concourse	EB	LT	D	43.5	70'	D	52.1	150'
		TH	C	27.9	321'	C	24.5	277'
		RT	A	4.2	54'	A	6.2	104'
	WB	LT	D	40.7	39'	D	51.9	95'
		TH	C	26.4	213'	D	35.5	421'
		RT	A	0.1	-	A	0.2	-
	NB	LT	D	43.4	194'	D	53.3	197'
		TH	C	28.2	49'	D	38.3	99'
		RT	A	2.0	9'	A	4.3	24'
	SB	LT	D	45.0	68'	D	50.0	86'
		TH	D	37.5	52'	D	45.9	93'
		RT	A	2.3	-	A	8.1	35'
	OVERALL			C (27.4)			C (32.3)	

Table 4 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build

Table 4 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Chester Rd/ Amelia Concourse	EB	LT	D	43.5	70'	D	52.1	150'
		TH	C	28.0	323'	C	24.6	278'
		RT	A	4.2	54'	A	6.2	105'
	WB	LT	D	40.7	39'	D	52.0	96'
		TH	C	26.5	214'	D	35.6	423'
		RT	A	0.1	-	A	0.2	-
	NB	LT	D	43.4	194'	D	53.4	197'
		TH	C	28.2	49'	D	38.4	99'
		RT	A	2.0	10'	A	4.4	24'
	SB	LT	D	45.5	70'	D	50.1	87'
		TH	D	37.5	52'	D	45.9	93'
		RT	A	2.3	-	A	8.1	35'
	OVERALL			C (27.5)			C (32.3)	

Analysis shows that the intersection is projected to continue to operate at LOS C overall in the Full Build scenario. The development has a negligible impact to the intersection.

SR 200 & Arrigo Boulevard

Table 5 - Intersection LOS, Delay, and Queue by Movement - 2021 Existing

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Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Arrigo Blvd	EB	LT	D	40.4	39'	D	48.9	61'
		TH	C	21.8	325'	C	25.0	301'
		RT	A	0.2	-	A	0.3	-
	WB	LT	D	41.7	55'	D	47.3	102'
		TH	B	14.2	186'	C	21.0	375'
		RT	A	0	-	A	0	-
	NB	LT	D	43.4	68'	D	46.4	121'
		TH	A	0.0	-	A	0.0	-
		RT	A	2.2	15'	A	7.5	60'
	SB	LT	C	27.1	14'	A	0.7	-
		TH						
		RT						
OVERALL			B (19.9)			C (24.5)		

Table 6 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build

Table 6 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Arrigo Blvd	EB	LT	D	40.5	39'	D	48.9	61'
		TH	C	21.9	327'	C	25.0	303'
		RT	A	0.2	-	A	0.3	-
	WB	LT	D	41.9	57'	D	47.4	103'
		TH	B	14.2	186'	C	21.1	378'
		RT	A	0	-	A	0	-
	NB	LT	D	43.4	68'	D	46.4	121'
		TH	A	0.0	-	A	0.0	-
		RT	A	2.3	15'	A	7.6	60'
	SB	LT	C	27.1	14'	A	0.7	-
		TH						
		RT						
OVERALL			B (19.9)			C (24.6)		

Analysis shows that the intersection is projected to continue to operate at LOS B overall in the AM peak and LOS C overall in the PM peak. The development has a negligible impact to the intersection.

SR 200 & Cessna Road

Table 7 - Intersection LOS, Delay, and Queue by Movement - 2021 Existing								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Cessna Road	EB	TH	Free					
	WB	TH	Free					
		RT						
	SB	RT	B	14.3	-	C	23.6	-

Table 8 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Cessna Road	EB	TH	Free					
	WB	TH	Free					
		RT						
	SB	RT	B	14.5	-	C	24.6	-

Analysis shows that Cessna Road is expected to continue to operate acceptably under Full Build conditions.

SR 200 & Access

Table 9 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Access	EB	TH	Free					
	WB	TH	Free					
		RT						
	SB	RT	B	14.4	-	C	24.2	-

Analysis shows that the site access is projected to operate acceptably under Full Build conditions.

SR 200 & Blackrock Road/3rd Mount Zion Circle

Table 10 - Intersection LOS, Delay, and Queue by Movement - 2021 Existing

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Intersection	Approach	Movement	AM			PM			
			LOS	Delay	Queue	LOS	Delay	Queue	
SR 200 & Blackrock Rd/3rd Mt Zion Cir	EB	LT	D	43.8	86'	D	52.4	116'	
		TH	C	21.0	338'	B	12.9	285'	
		RT	A	-	-	A	0.0	-	
	WB	LT	D	39.8	36'	D	43.4	18'	
		TH	C	23.8	234'	C	24.8	428'	
		RT	A	0.5	-	A	4.3	45'	
	NB	LT	D	36.4	26'	D	42.0	30'	
		TH	C	20.5	19'	C	23.5	19'	
		RT							
	SB	LT	C	27.5	171'	C	34.7	125'	
		TH	A	7.3	36'	A	8.3	39'	
		RT							
	OVERALL			C (22.0)			C (20.0)		

Table 11 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build

Table 11 - Intersection LOS, Delay, and Queue by Movement - 2022 Full Build								
Intersection	Approach	Movement	AM			PM		
			LOS	Delay	Queue	LOS	Delay	Queue
SR 200 & Blackrock Rd/3rd Mt Zion Cir	EB	LT	D	45.0	93'	E	56.3	125'
		TH	C	21.0	339'	B	12.5	287'
		RT	A	-	-	A	0.0	-
	WB	LT	D	39.9	36'	D	43.6	18'
		TH	C	23.9	235'	C	26.2	430'
		RT	A	0.5	-	A	4.3	45'
	NB	LT	D	36.5	26'	D	42.2	30'
		TH	C	20.5	19'	C	23.5	19'
		RT						
	SB	LT	C	27.6	171'	D	35.8	125'
		TH	A	7.3	36'	A	8.3	40'
		RT						
OVERALL			C (22.2)			C (20.8)		

Analysis shows that the intersection is projected to continue to operate at LOS C overall in the Full Build scenario. The development has a negligible impact to the intersection.

Turn Lane Analysis

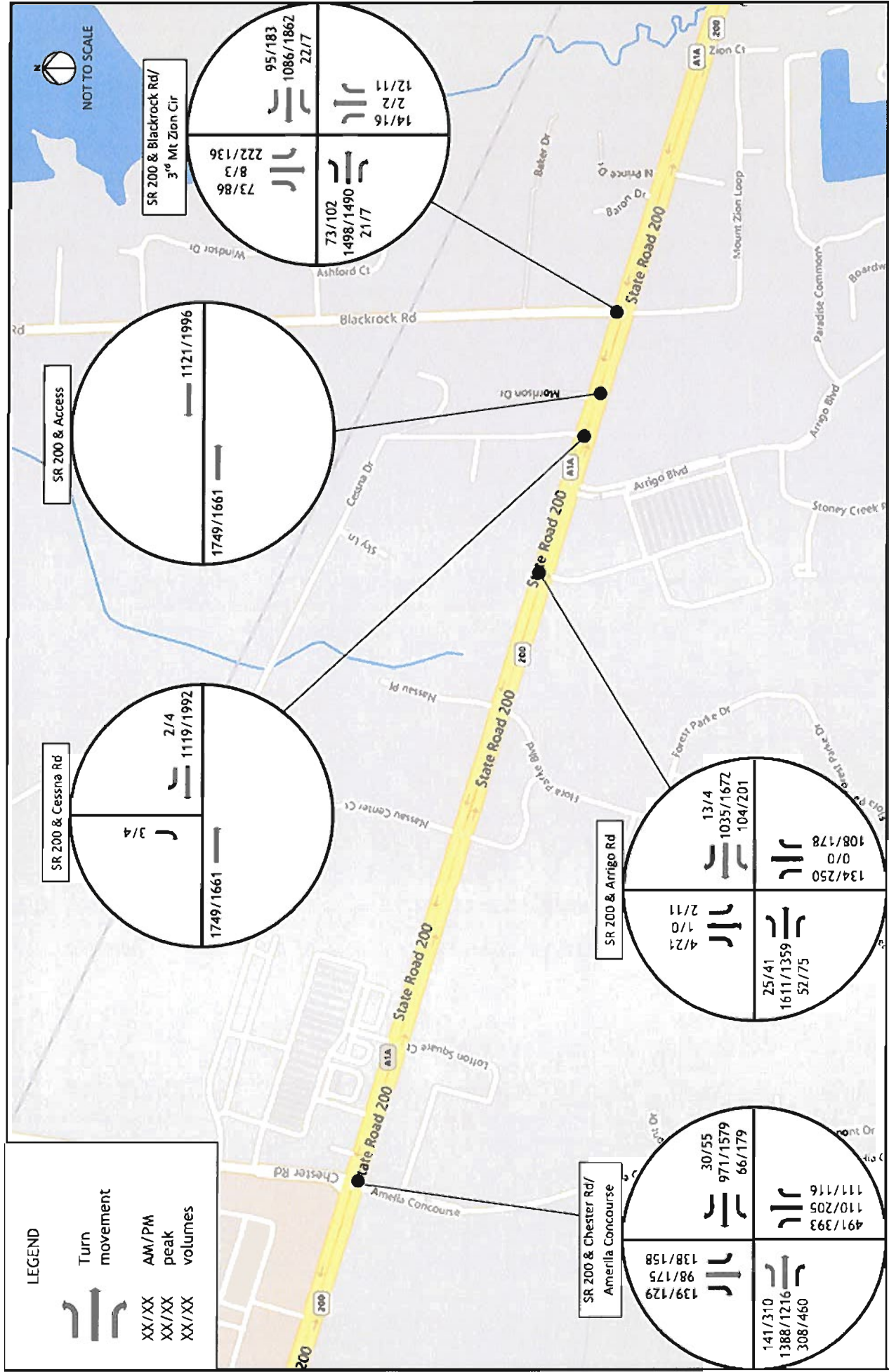
The FDOT Driveway Handbook states that a right-turn lane is recommended for driveways that see 35 to 55 turns per hour on roadways with a posted speed limit greater than 45 mph.

Analysis shows that both accesses are expected to see fewer than 35 right-turning vehicles per hour. This is below FDOT thresholds for right-turn lanes.

Nassau County guidelines for turn lanes on major or minor collectors are based on the posted speed limit. For collector roads with posted speed limits of 35 mph or greater, a right-turn lane is needed for a development that will generate 250 vehicles per day. Since the site has two access connections, both driveways are projected to see 125 vehicles per day each, which is below County thresholds for a turn lane.

No improvements are recommended.

Please contact me at scott@traffic-impact.com or by phone at 407.607.6985 with any questions.

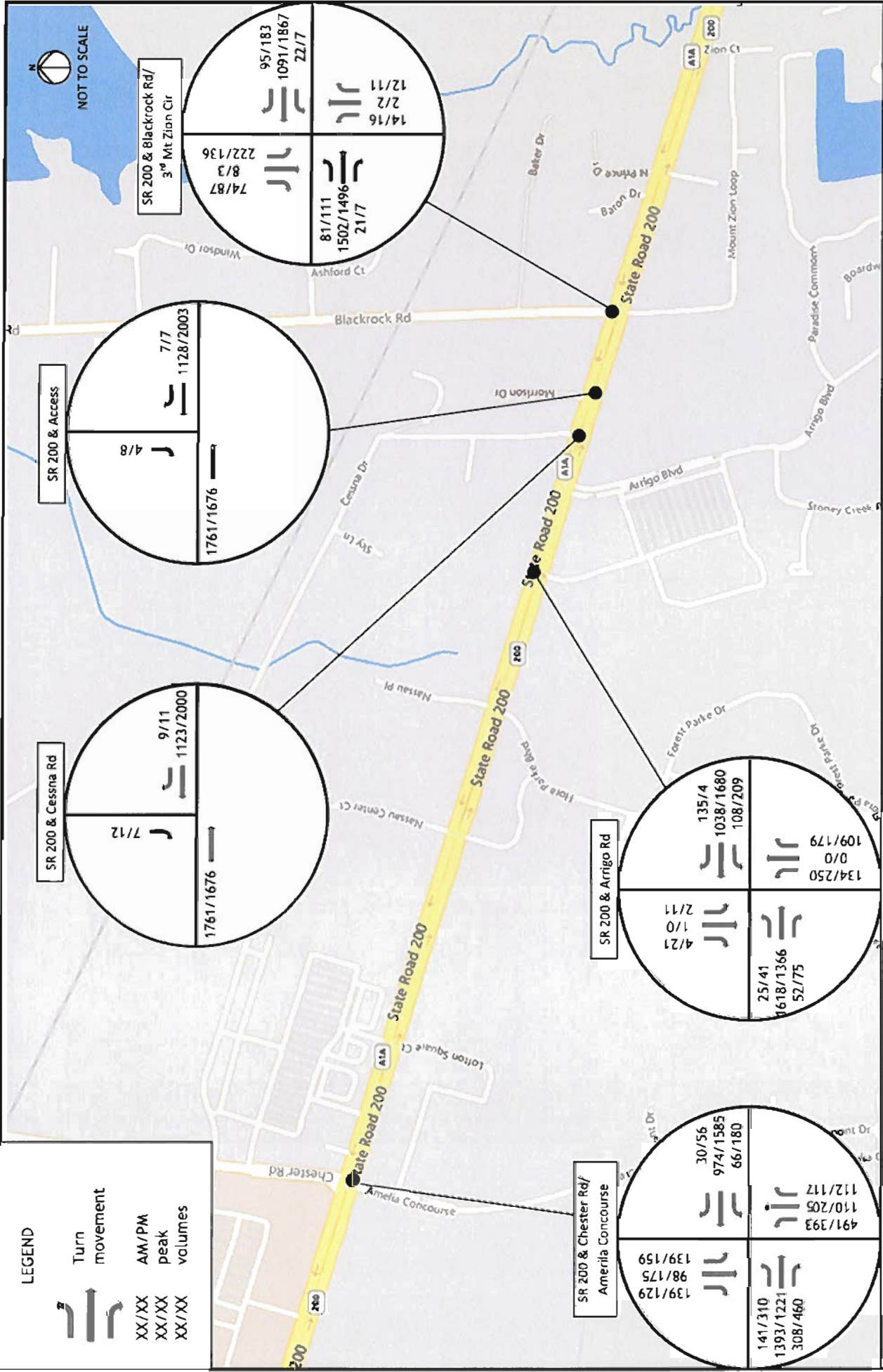


Existing Traffic Volumes

Figure 2

Discount Tire - Yulee

Date: 11 October 2021



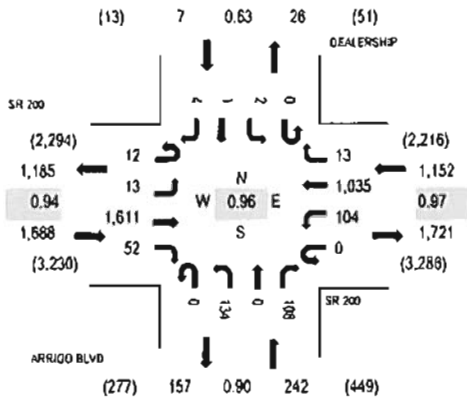
Full Build Conditions

Figure 3

Discount Tire - Yulee

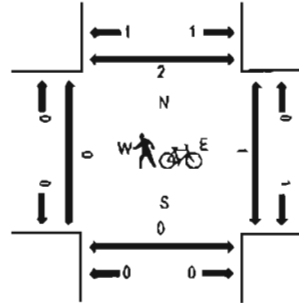
Date: 20 October 2021

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles In Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	SR 200 Eastbound				SR 200 Westbound				ARRIGO BLVD Northbound				DEALERSHIP Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	2	318	5	0	20	227	1	0	26	1	23	0	0	0	0	624	2,923	0	0	0	1
7:15 AM	1	1	405	4	0	16	228	3	0	30	0	13	0	1	0	0	702	3,072	0	0	0	0
7:30 AM	0	2	444	15	0	16	268	2	0	34	0	20	0	0	0	0	801	3,089	0	0	0	0
7:45 AM	1	1	426	17	0	30	259	0	0	37	0	23	0	1	0	1	796	3,081	0	0	0	0
8:00 AM	3	5	406	8	0	24	258	7	0	28	0	33	0	0	1	0	773	2,985	0	1	0	1
8:15 AM	8	5	335	12	0	34	250	4	0	35	0	32	0	1	0	3	719		0	0	0	0
8:30 AM	5	5	418	8	0	27	273	1	0	26	0	27	0	0	0	3	793		0	0	0	1
8:45 AM	13	2	339	15	0	25	234	9	0	40	0	21	0	0	0	2	700		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	61	0	0	0	73	0	0	0	0	0	0	0	0	0	134
Lights	12	13	1,487	51	0	102	928	12	0	132	0	105	0	2	1	3	2,848
Mediums	0	0	63	1	0	2	34	1	0	2	0	3	0	0	0	1	107
Total	12	13	1,611	52	0	104	1,035	13	0	134	0	108	0	2	1	4	3,089

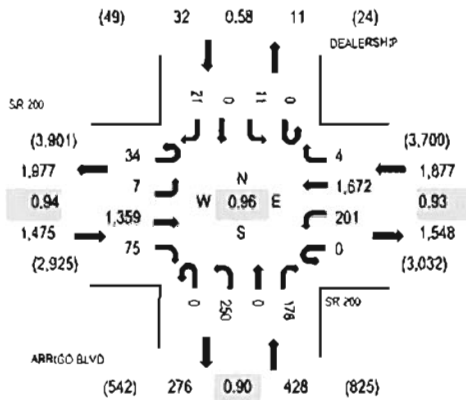
Location: 4 ARRIGO BLVD & SR 200 PM

Date: Tuesday, October 5, 2021

Peak Hour: 04:30 PM - 05:30 PM

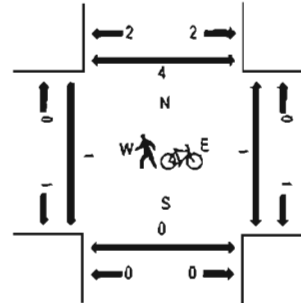
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles In Crosswalk



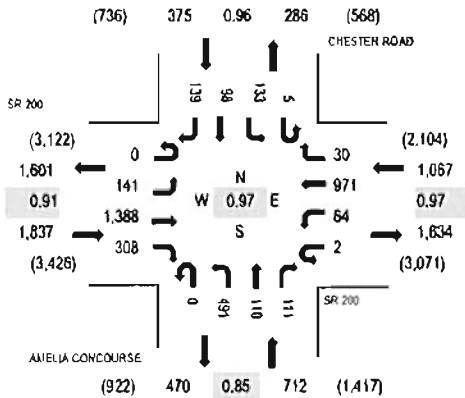
Traffic Counts - Motorized Vehicles

Interval Start Time	SR 200 Eastbound				SR 200 Westbound				ARRIGO BLVD Northbound				DEALERSHIP Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	8	1	339	17	0	52	469	3	0	77	0	28	0	0	0	2	996	3,762	0	0	0	0
4:15 PM	8	2	353	32	0	37	400	1	0	55	0	41	0	1	1	2	933	3,750	0	1	0	0
4:30 PM	7	2	331	19	0	57	413	2	0	62	0	42	0	4	0	3	942	3,812	0	0	0	1
4:45 PM	9	2	327	14	0	43	365	2	0	72	0	48	0	3	0	6	891	3,760	0	1	0	0
5:00 PM	8	2	360	15	0	47	442	0	0	48	0	47	0	4	0	11	984	3,737	0	0	0	0
5:15 PM	10	1	341	27	0	54	452	0	0	68	0	41	0	0	0	1	995		0	0	0	1
5:30 PM	8	2	312	17	0	50	387	2	1	66	0	40	0	3	0	2	890		0	0	0	1
5:45 PM	6	2	329	14	0	45	377	0	0	52	0	37	0	1	0	5	868		0	0	0	1

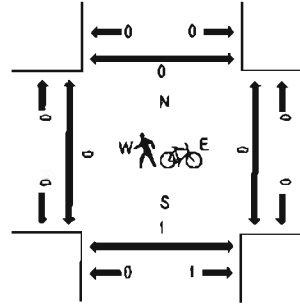
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	1	0	29	2	0	0	35	0	0	2	0	0	0	0	0	0	69
Lights	32	7	1,319	73	0	200	1,613	4	0	245	0	178	0	11	0	21	3,703
Mediums	1	0	11	0	0	1	24	0	0	3	0	0	0	0	0	0	40
Total	34	7	1,359	75	0	201	1,672	4	0	250	0	178	0	11	0	21	3,812

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



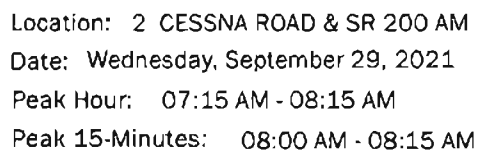
Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

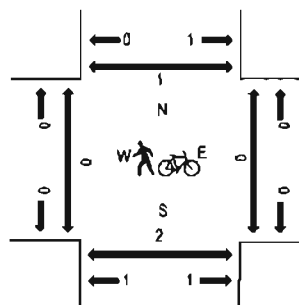
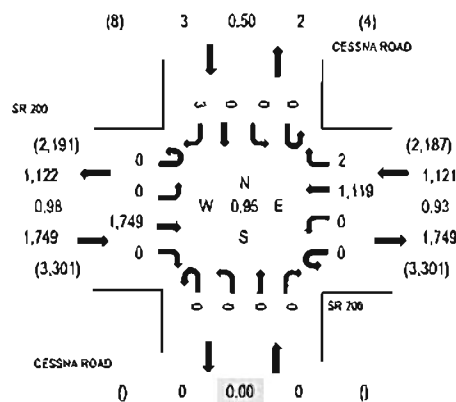
Interval Start Time	SR 200 Eastbound				SR 200 Westbound				AMELIA CONCOURSE Northbound				CHESTER ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	15	259	35	0	11	197	4	0	144	40	41	0	23	9	49	827	3,814	0	0	0	0
7:15 AM	0	30	326	54	2	14	224	11	0	146	47	23	0	27	11	48	963	3,991	0	0	0	0
7:30 AM	0	44	333	93	0	8	248	5	0	118	23	26	1	46	30	24	999	3,921	0	0	1	0
7:45 AM	0	34	383	89	0	22	244	6	0	107	21	30	2	28	29	30	1,025	3,901	0	0	0	0
8:00 AM	0	33	346	72	0	20	255	8	0	120	19	32	2	32	28	37	1,004	3,869	0	0	0	0
8:15 AM	0	26	234	44	2	26	250	7	0	130	47	27	0	41	16	43	893		0	0	0	0
8:30 AM	0	46	331	91	1	33	246	10	0	100	16	24	1	32	16	32	979		0	0	0	0
8:45 AM	0	46	347	115	1	24	212	13	1	92	11	32	0	42	31	26	993		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	3	65	4	0	0	59	1	0	0	1	0	0	1	0	2	136
Lights	0	131	1,262	278	2	61	891	28	0	482	109	108	5	126	92	136	3,711
Mediums	0	7	61	26	0	3	21	1	0	9	0	3	0	6	6	1	144
Total	0	141	1,388	308	2	64	971	30	0	491	110	111	5	133	98	139	3,991



Peak Hour - Pedestrians/Bicycles in Crosswalk



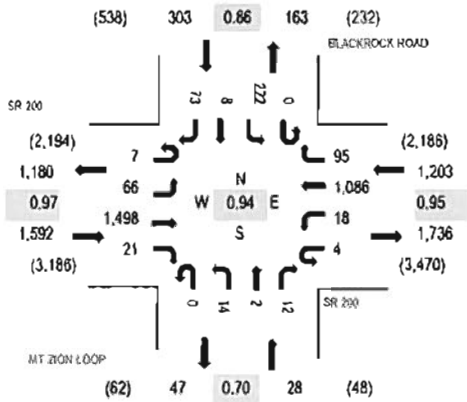
Traffic Counts - Motorized Vehicles

Interval Start Time	SR 200 Eastbound				SR 200 Westbound				CESSNA ROAD Northbound				CESSNA ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
7:00 AM	0	0	343	0	0	0	218	0	0	0	0	0	0	0	0	0	1	562	2,680	0	0	0	3
7:15 AM	0	0	428	0	0	0	251	0	0	0	0	0	0	0	0	0	2	681	2,873	0	0	1	0
7:30 AM	0	0	447	0	0	0	277	1	0	0	0	0	0	0	0	0	1	726	2,835	0	0	0	0
7:45 AM	0	0	434	0	0	0	277	0	0	0	0	0	0	0	0	0	0	711	2,837	0	0	0	1
8:00 AM	0	0	440	0	0	0	314	1	0	0	0	0	0	0	0	0	0	755	2,816	0	0	0	0
8:15 AM	0	0	352	0	0	0	289	0	0	0	0	0	0	0	0	0	2	643		0	0	0	0
8:30 AM	0	0	432	0	0	0	294	1	0	0	0	0	0	0	0	0	1	728		0	0	0	1
8:45 AM	0	0	425	0	0	0	263	1	0	0	0	0	0	0	0	0	1	690		0	0	1	0

Peak Rolling Hour Flow Rates

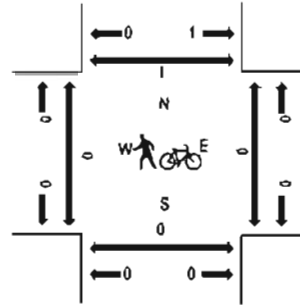
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	69	0	0	0	63	0	0	0	0	0	0	0	0	0	132
Lights	0	0	1,619	0	0	0	1,030	2	0	0	0	0	0	0	0	3	2,654
Mediums	0	0	61	0	0	0	26	0	0	0	0	0	0	0	0	0	87
Total	0	0	1,749	0	0	0	1,119	2	0	0	0	0	0	0	0	3	2,873

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



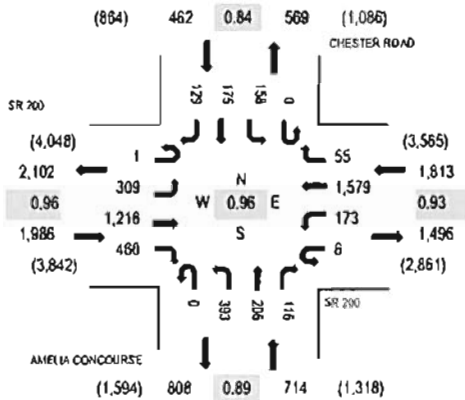
Traffic Counts - Motorized Vehicles

Interval Start Time	SR 200 Eastbound				SR 200 Westbound				MT ZION LOOP Northbound				BLACKROCK ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	8	335	1	1	2	199	6	0	7	1	4	0	40	0	14	618	2,878	0	0	0	3
7:15 AM	0	6	405	2	2	0	232	9	0	3	0	0	0	53	2	15	729	3,068	0	0	1	0
7:30 AM	0	11	417	3	0	0	267	3	0	3	0	0	0	49	0	15	768	3,067	0	0	0	0
7:45 AM	1	8	399	2	2	4	262	8	0	3	0	2	0	60	0	12	763	3,126	0	0	0	1
8:00 AM	2	22	392	8	0	4	290	21	0	4	0	2	0	41	1	21	808	3,080	0	0	0	0
8:15 AM	2	18	312	6	1	5	262	32	0	5	1	4	0	54	2	24	728		0	0	0	0
8:30 AM	2	18	395	5	1	5	272	34	0	2	1	4	0	67	5	16	827		0	0	0	0
8:45 AM	1	13	389	3	0	0	250	12	0	1	0	1	0	38	2	7	717		0	0	0	0

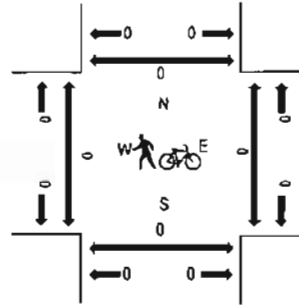
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	66	0	0	0	55	0	0	0	0	0	0	2	0	0	123
Lights	7	62	1,373	20	4	18	1,003	91	0	13	2	12	0	218	8	72	2,903
Mediums	0	4	59	1	0	0	28	4	0	1	0	0	0	2	0	1	100
Total	7	66	1,498	21	4	18	1,086	95	0	14	2	12	0	222	8	73	3,126

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

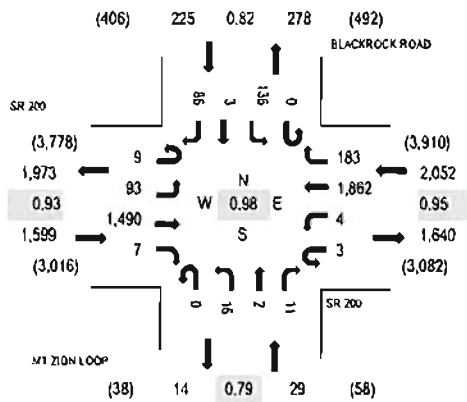
Traffic Counts - Motorized Vehicles

Interval Start Time	SR 200 Eastbound				SR 200 Westbound				AMELIA CONCOURSE Northbound				CHESTER ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	97	352	120	0	48	378	14	0	82	34	26	0	27	35	35	1,248	4,860	0	0	0	0
4:15 PM	0	76	268	84	1	54	425	22	0	98	40	17	0	32	50	21	1,186	4,912	0	0	0	0
4:30 PM	0	73	269	112	1	42	390	13	0	96	42	36	0	43	42	52	1,211	4,975	0	0	0	0
4:45 PM	0	71	329	125	0	36	392	15	0	81	46	25	0	32	41	22	1,215	4,972	0	0	0	0
5:00 PM	0	87	297	122	4	46	408	18	0	113	61	26	0	43	52	23	1,300	4,729	0	0	0	0
5:15 PM	1	78	321	101	1	49	389	9	0	103	56	29	0	40	40	32	1,249		0	0	0	0
5:30 PM	0	63	295	122	2	62	394	17	0	92	38	19	0	30	47	27	1,208		0	0	1	0
5:45 PM	0	70	225	84	4	39	285	7	0	86	39	35	0	32	41	25	972		0	0	0	0

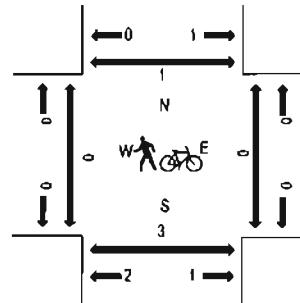
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	1	2	44	1	0	0	44	0	0	4	0	0	0	0	0	0	97
Lights	0	306	1,157	453	6	172	1,509	53	0	371	204	115	0	155	174	126	4,801
Mediums	0	1	15	6	0	1	26	2	0	18	1	1	0	3	1	2	77
Total	1	309	1,216	460	6	173	1,579	55	0	393	205	116	0	158	175	129	4,975

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SR 200				SR 200				MT ZION LOOP				BLACKROCK ROAD				Total	Rolling Hour	Pedestrian Crossings				
	Eastbound				Westbound				Northbound				Southbound						West	East	South		North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right							
4:00 PM	0	20	301	3	0	1	469	41	0	6	1	1	0	28	2	18	891	3,732	0	1	2	0	
4:15 PM	3	19	347	4	0	0	469	33	0	2	0	0	0	18	2	14	911	3,839	0	0	0	0	
4:30 PM	1	19	368	1	0	1	484	45	0	3	0	1	0	34	0	21	978	3,905	0	0	0	1	
4:45 PM	2	24	366	2	2	0	430	51	0	4	0	2	0	44	1	24	952	3,849	0	0	1	0	
5:00 PM	1	21	408	1	1	1	450	49	0	5	1	4	0	24	1	31	998	3,658	0	0	0	0	
5:15 PM	5	29	348	3	0	2	498	38	0	4	1	4	0	34	1	10	977		0	0	1	0	
5:30 PM	2	20	359	5	0	2	430	39	0	8	1	3	0	32	2	19	922		0	0	0	0	
5:45 PM	1	11	320	2	0	1	345	28	0	4	1	2	0	31	0	15	761		0	0	0	0	

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	1	0	41	0	0	0	42	0	0	0	0	0	0	0	0	0	84
Lights	8	92	1,428	7	3	4	1,789	181	0	15	2	11	0	136	3	84	3,763
Mediums	0	1	21	0	0	0	31	2	0	1	0	0	0	0	0	2	58
Total	9	93	1,490	7	3	4	1,862	183	0	16	2	11	0	136	3	86	3,805

Discount Tire - Yulee

Vistro File: C:\...yulee vistro.vistro
Report File: C:\...vistro am.pdf

Scenario 1 AM
10/07/2021

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	SR 200 & Chester Rd	Final Base	491	110	111	138	98	139	141	1388	308	66	971	30	3991
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	1	1	0	0	0	5	0	0	3	0	10
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	491	110	112	139	98	139	141	1393	308	66	974	30	4001

ID	Intersection Name	Volume Type	Southbound	Eastbound	Westbound		Total Volume
			Right	Thru	Thru	Right	
2	SR 200 & Cassina Dr	Final Base	3	1749	1119	2	2873
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	4	12	4	7	27
		Other	0	0	0	0	0
		Future Total	7	1761	1123	9	2900

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound				Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	SR 200 & Arrigo Blvd	Final Base	134	0	108	2	1	4	25	1611	52	0	104	1035	135	3211
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	1	0	0	0	0	7	0	4	0	3	0	15
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	134	0	109	2	1	4	25	1618	52	4	104	1038	135	3226

ID	Intersection Name	Volume Type	Southbound	Eastbound	Westbound		Total Volume
			Right	Thru	Thru	Right	
4	SR 200 & Access	Final Base	0	1749	1121	0	2870
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	4	12	7	7	30
		Other	0	0	0	0	0
		Future Total	4	1761	1128	7	2900

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound				Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	Left	Thru	Right	
5	SR 200 & Blackrock Rd	Final Base	14	2	12	222	8	73	7	66	1498	21	22	1086	95	3126
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	1	8	0	4	0	0	5	0	18
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	14	2	12	222	8	74	15	66	1502	21	22	1091	95	3144

Discount Tire - Yulee

Vistro File: C:\...yulee vistro.vistro
Report File: C:\...vistro pm.pdf

Scenario 2 PM
10/07/2021

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	SR 200 & Chester Rd	Final Base	393	205	116	158	175	129	310	1216	460	179	1579	55	4975
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	1	1	0	0	0	5	0	1	6	1	15
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	393	205	117	159	175	129	310	1221	460	180	1585	56	4990

ID	Intersection Name	Volume Type	Southbound	Eastbound	Westbound		Total Volume
			Right	Thru	Thru	Right	
2	SR 200 & Cessna Dr	Final Base	4	1661	1992	4	3661
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	8	15	8	7	38
		Other	0	0	0	0	0
		Future Total	12	1676	2000	11	3699

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound				Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	SR 200 & Arrigo Blvd	Final Base	250	0	178	11	0	21	41	1359	75	0	201	1672	4	3812
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	1	0	0	0	0	7	0	7	1	8	0	24
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	250	0	179	11	0	21	41	1366	75	7	202	1680	4	3836

ID	Intersection Name	Volume Type	Southbound	Eastbound	Westbound		Total Volume
			Right	Thru	Thru	Right	
4	SR 200 & Access	Final Base	0	1661	1996	0	3657
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	8	15	7	7	37
		Other	0	0	0	0	0
		Future Total	8	1676	2003	7	3694

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound				Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	Left	Thru	Right	
5	SR 200 & Blackrock Rd	Final Base	16	2	11	136	3	86	9	93	1490	7	7	1862	183	3905
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	1	8	1	6	0	0	5	0	21
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	16	2	11	136	3	87	17	94	1496	7	7	1867	183	3926

Intersection

Int Delay, s/veh 0

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations ↑↑↑ ↑↑↑ ↑

Traffic Vol, veh/h 0 1749 1119 2 0 3

Future Vol, veh/h 0 1749 1119 2 0 3

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - - 0

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 0 0 - 0 -

Peak Hour Factor 95 95 95 95 95 95

Heavy Vehicles, % 0 3 6 0 0 0

Mvmt Flow 0 1841 1178 2 0 3

Major/Minor Major1 Major2 Minor2

Conflicting Flow All - 0 - 0 - 590

Stage 1 - - - - -

Stage 2 - - - - -

Critical Hdwy - - - - - 7.1

Critical Hdwy Stg 1 - - - - -

Critical Hdwy Stg 2 - - - - -

Follow-up Hdwy - - - - - 3.9

Pot Cap-1 Maneuver 0 - - - 0 390

Stage 1 0 - - - 0 -

Stage 2 0 - - - 0 -

Platoon blocked, % - - -

Mov Cap-1 Maneuver - - - - - 390

Mov Cap-2 Maneuver - - - - -

Stage 1 - - - - -

Stage 2 - - - - -

Approach EB WB SB

HCM Control Delay, s 0 0 14.3

HCM LOS B

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h) - - - 390

HCM Lane V/C Ratio - - - 0.008

HCM Control Delay (s) - - - 14.3

HCM Lane LOS - - - B

HCM 95th %tile Q(veh) - - - 0

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1661	1992	4	0	4
Future Vol, veh/h	0	1661	1992	4	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	3	2	0	0	0
Mvmt Flow	0	1730	2075	4	0	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1040
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 7.1
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.9
Pot Cap-1 Maneuver	0	-	- 0 198
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - 198
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	198
HCM Lane V/C Ratio	-	-	-	0.021
HCM Control Delay (s)	-	-	-	23.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Discount Tire - Yulee
3: Amelia Concourse/Chester Rd & SR 200

Existing AM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	1388	308	66	971	30	491	110	111	133	98	139
Future Volume (vph)	141	1388	308	66	971	30	491	110	111	133	98	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	300		200	300		500	300		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	3400	5085	1615	3502	4940	1615	3502	3574	1615	3467	3610	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5085	1615	3502	4940	1615	3502	3574	1615	3467	3610	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			318			255			182			255
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1334			4814			384			276	
Travel Time (s)		20.2			72.9			8.7			6.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	0%	0%	5%	0%	0%	1%	0%	1%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	1431	318	68	1001	31	506	113	114	137	101	143
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	13.0	16.0	16.0
Total Split (s)	14.0	37.0	37.0	13.0	36.0	36.0	23.0	27.0	27.0	13.0	17.0	17.0
Total Split (%)	15.6%	41.1%	41.1%	14.4%	40.0%	40.0%	25.6%	30.0%	30.0%	14.4%	18.9%	18.9%
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	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.8	31.6	31.6	7.0	27.8	27.8	15.8	18.8	18.8	7.0	10.1	10.1
Actuated g/C Ratio	0.09	0.37	0.37	0.08	0.32	0.32	0.18	0.22	0.22	0.08	0.12	0.12
v/c Ratio	0.47	0.76	0.40	0.24	0.62	0.04	0.79	0.14	0.23	0.48	0.24	0.35
Control Delay	43.5	27.9	4.2	40.7	26.4	0.1	43.4	28.2	2.0	45.0	37.5	2.3
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	43.5	27.9	4.2	40.7	26.4	0.1	43.4	28.2	2.0	45.0	37.5	2.3
LOS	D	C	A	D	C	A	D	C	A	D	D	A
Approach Delay		25.1			26.6			34.6			27.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	40	263	0	19	169	0	139	26	0	38	27	0
Queue Length 95th (ft)	70	321	54	39	213	0	194	49	9	68	52	0
Internal Link Dist (ft)		1254			4734			304			196	
Turn Bay Length (ft)	300		200	300		200	300		500	300		300
Base Capacity (vph)	319	1879	797	288	1741	734	699	881	535	284	466	426

Discount Tire - Yulee
3: Amelia Concourse/Chester Rd & SR 200

Existing AM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.45	0.76	0.40	0.24	0.57	0.04	0.72	0.13	0.21	0.48	0.22	0.34

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 85.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 68.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Amelia Concourse/Chester Rd & SR 200

 Ø1	 Ø2	 Ø3	 Ø4
13 s	27 s	13 s	37 s
 Ø5	 Ø6	 Ø7	 Ø8
23 s	17 s	14 s	35 s

Discount Tire - Yulee
6: 3rd Mt Zion Cir/Blackrock Rd & SR 200

Existing AM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1498	21	22	1086	95	14	2	12	222	8	73
Future Volume (vph)	73	1498	21	22	1086	95	14	2	12	222	8	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		200	200		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1805	5036	1615	1805	4893	1615	1805	1653	0	1787	1645	0
Flt Permitted	0.950			0.950			0.701			0.474		
Satd. Flow (perm)	1805	5036	1615	1805	4893	1615	1332	1653	0	892	1645	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182		13			78	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		580			716			226			222	
Travel Time (s)		8.8			10.8			5.1			5.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	6%	0%	0%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1594	22	23	1155	101	15	15	0	236	87	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	16.0	16.0		11.0	16.0	
Total Split (s)	15.0	42.0	42.0	13.0	40.0	40.0	17.0	17.0		18.0	35.0	
Total Split (%)	16.7%	46.7%	46.7%	14.4%	44.4%	44.4%	18.9%	18.9%		20.0%	38.9%	
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	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Act Effct Green (s)	8.3	35.4	35.4	7.2	29.0	29.0	10.2	10.2		27.5	27.5	
Actuated g/C Ratio	0.10	0.44	0.44	0.09	0.36	0.36	0.13	0.13		0.34	0.34	
v/c Ratio	0.41	0.71	0.03	0.14	0.65	0.14	0.09	0.07		0.55	0.14	
Control Delay	43.8	21.0	0.0	39.8	23.8	0.5	36.4	20.5		27.5	7.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	43.8	21.0	0.0	39.8	23.8	0.5	36.4	20.5		27.5	7.3	
LOS	D	C	A	D	C	A	D	C		C	A	
Approach Delay		21.8			22.2			28.5			22.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	39	202	0	11	188	0	7	1		93	3	
Queue Length 95th (ft)	86	338	0	36	234	1	26	19		171	36	
Internal Link Dist (ft)		500			636			146			142	
Turn Bay Length (ft)	200		200	200		200	200					
Base Capacity (vph)	208	2436	875	161	2130	805	187	244		444	659	

Discount Tire - Yulee
6: 3rd Mt Zion Cir/Blackrock Rd & SR 200

Existing AM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.38	0.65	0.03	0.14	0.54	0.13	0.08	0.06		0.53	0.13	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 79.8

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 22.0

Intersection LOS: C

Intersection Capacity Utilization 68.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: 3rd Mt Zion Cir/Blackrock Rd & SR 200



Discount Tire - Yulee
9: Arrigo Blvd/driveway & SR 200

Existing AM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1611	52	104	1035	13	134	0	108	2	1	4
Future Volume (vph)	25	1611	52	104	1035	13	134	0	108	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	0		200	200		200	0		0
Storage Lanes	1		1	2		1	2		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1805	5036	1615	3502	4848	1615	3502	1900	1615	0	1729	0
Flt Permitted	0.950			0.950			0.950				0.932	
Satd. Flow (perm)	1805	5036	1615	3502	4848	1615	3502	1900	1615	0	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182			167			4
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		4814			338			213			134	
Travel Time (s)		72.9			5.1			4.8			3.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	1678	54	108	1078	14	140	0	113	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot		Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4			8			2	6		
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	16.0	16.0	
Total Split (s)	13.0	46.0	46.0	13.0	46.0	46.0	13.0	31.0	31.0	18.0	18.0	
Total Split (%)	14.4%	51.1%	51.1%	14.4%	51.1%	51.1%	14.4%	34.4%	34.4%	20.0%	20.0%	
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	Lag	Lag	Lead	Lag	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	Min	Min	Min	Min	
Act Effct Green (s)	7.2	36.2	36.2	7.2	41.2	41.2	7.2		23.5		10.2	
Actuated g/C Ratio	0.09	0.44	0.44	0.09	0.50	0.50	0.09		0.29		0.12	
v/c Ratio	0.16	0.75	0.07	0.35	0.44	0.02	0.46		0.19		0.03	
Control Delay	40.4	21.8	0.2	41.7	14.2	0.0	43.4		2.2		27.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	
Total Delay	40.4	21.8	0.2	41.7	14.2	0.0	43.4		2.2		27.1	
LOS	D	C	A	D	B	A	D		A		C	
Approach Delay		21.4			16.5			25.0			27.1	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	14	268	0	29	102	0	39		0		2	
Queue Length 95th (ft)	39	325	0	55	186	0	68		15		14	
Internal Link Dist (ft)		4734			258			133			54	
Turn Bay Length (ft)	300		200			200	200		200			
Base Capacity (vph)	158	2519	898	306	2679	974	306		619		248	

Discount Tire - Yulee
9: Arrigo Blvd/driveway & SR 200

Existing AM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0		0		0	
Spillback Cap Reductn	0	0	0	0	0	0	0		0		0	
Storage Cap Reductn	0	0	0	0	0	0	0		0		0	
Reduced v/c Ratio	0.16	0.67	0.06	0.35	0.40	0.01	0.46		0.18		0.03	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 81.8

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 19.9

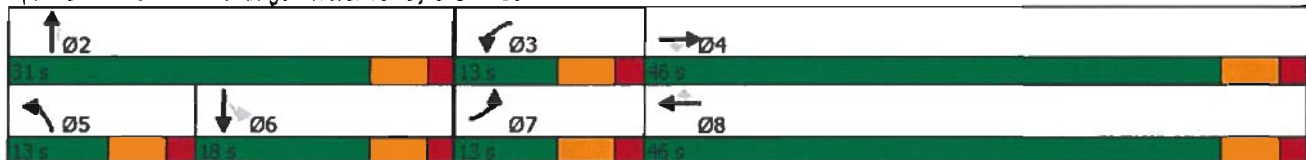
Intersection LOS: B

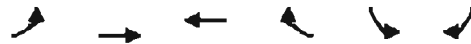
Intersection Capacity Utilization 62.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: Arrigo Blvd/driveway & SR 200

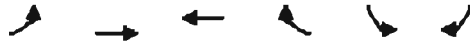




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Volume (vph)	0	1749	1119	2	0	3
Future Volume (vph)	0	1749	1119	2	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	5036	4894	0	0	1644
Flt Permitted						
Satd. Flow (perm)	0	5036	4894	0	0	1644
Link Speed (mph)		45	45		30	
Link Distance (ft)		338	243		124	
Travel Time (s)		5.1	3.7		2.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	3%	6%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1841	1180	0	0	3
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 37.1% ICU Level of Service A
Analysis Period (min) 15



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↗
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	5187	4893	0	0	1900
Fit Permitted						
Satd. Flow (perm)	0	5187	4893	0	0	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		243	580		109	
Travel Time (s)		3.7	8.8		2.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 0.0% ICU Level of Service A
Analysis Period (min) 15

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	1216	460	179	1579	55	393	205	116	158	175	129
Future Volume (vph)	310	1216	460	179	1579	55	393	205	116	158	175	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	300		200	300		500	300		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	3467	4988	1615	3502	5036	1615	3467	3610	1615	3502	3610	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3467	4988	1615	3502	5036	1615	3467	3610	1615	3502	3610	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			407			164			164			164
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1334			4814			384			276	
Travel Time (s)		20.2			72.9			8.7			6.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	4%	0%	0%	3%	0%	1%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	323	1267	479	186	1645	57	409	214	121	165	182	134
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	13.0	16.0	16.0
Total Split (s)	19.0	47.0	47.0	15.0	43.0	43.0	21.0	23.0	23.0	15.0	17.0	17.0
Total Split (%)	19.0%	47.0%	47.0%	15.0%	43.0%	43.0%	21.0%	23.0%	23.0%	15.0%	17.0%	17.0%
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	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.4	40.1	40.1	8.7	36.3	36.3	14.4	16.3	16.3	8.6	10.5	10.5
Actuated g/C Ratio	0.13	0.41	0.41	0.09	0.37	0.37	0.15	0.17	0.17	0.09	0.11	0.11
v/c Ratio	0.73	0.62	0.53	0.60	0.88	0.08	0.80	0.35	0.30	0.54	0.47	0.42
Control Delay	52.1	24.5	6.2	51.9	35.5	0.2	53.3	38.3	4.3	50.0	45.9	8.1
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	52.1	24.5	6.2	51.9	35.5	0.2	53.3	38.3	4.3	50.0	45.9	8.1
LOS	D	C	A	D	D	A	D	D	A	D	D	A
Approach Delay		24.6			36.0			41.1			36.8	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	102	226	27	59	350	0	129	64	0	52	58	0
Queue Length 95th (ft)	150	277	104	95	421	0	#197	99	24	86	93	35
Internal Link Dist (ft)		1254			4734			304			196	
Turn Bay Length (ft)	300		200	300		200	300		500	300		300
Base Capacity (vph)	461	2097	914	323	1910	714	533	629	416	323	407	325

Discount Tire - Yulee
3: Amelia Concourse/Chester Rd & SR 200

Existing PM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.70	0.60	0.52	0.58	0.86	0.08	0.77	0.34	0.29	0.51	0.45	0.41

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 97.7

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 32.3

Intersection LOS: C

Intersection Capacity Utilization 78.9%

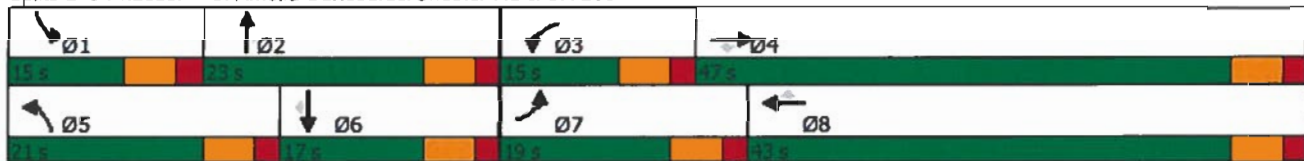
ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Amelia Concourse/Chester Rd & SR 200



Discount Tire - Yulee
6: 3rd Mt Zion Cir/Blackrock Rd & SR 200

Existing PM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	1490	7	7	1862	183	16	2	11	136	3	86
Future Volume (vph)	102	1490	7	7	1862	183	16	2	11	136	3	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		200	200		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1787	5036	1615	1805	5085	1615	1805	1659	0	1805	1624	0
Flt Permitted	0.950			0.950			0.698			0.473		
Satd. Flow (perm)	1787	5036	1615	1805	5085	1615	1326	1659	0	899	1624	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164		11			88	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		580			716			226			222	
Travel Time (s)		8.8			10.8			5.1			5.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	1520	7	7	1900	187	16	13	0	139	91	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	16.0	16.0		11.0	16.0	
Total Split (s)	17.0	55.0	55.0	13.0	51.0	51.0	18.0	18.0		14.0	32.0	
Total Split (%)	17.0%	55.0%	55.0%	13.0%	51.0%	51.0%	18.0%	18.0%		14.0%	32.0%	
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	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Act Effct Green (s)	9.8	52.6	52.6	7.2	42.6	42.6	10.2	10.2		24.2	24.2	
Actuated g/C Ratio	0.11	0.57	0.57	0.08	0.47	0.47	0.11	0.11		0.26	0.26	
v/c Ratio	0.54	0.53	0.01	0.05	0.80	0.22	0.11	0.07		0.44	0.18	
Control Delay	52.4	12.9	0.0	43.4	24.8	4.3	42.0	23.5		34.7	8.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	52.4	12.9	0.0	43.4	24.8	4.3	42.0	23.5		34.7	8.3	
LOS	D	B	A	D	C	A	D	C		C	A	
Approach Delay		15.4			23.0			33.7			24.3	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	62	166	0	4	363	8	9	1		71	1	
Queue Length 95th (ft)	116	285	0	18	428	45	30	19		125	39	
Internal Link Dist (ft)		500			636			146			142	
Turn Bay Length (ft)	200		200	200		200	200					
Base Capacity (vph)	219	3143	1069	141	2557	893	177	231		319	534	

Discount Tire - Yulee
6: 3rd Mt Zion Cir/Blackrock Rd & SR 200

Existing PM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.47	0.48	0.01	0.05	0.74	0.21	0.09	0.06		0.44	0.17	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 91.5

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 20.0

Intersection LOS: C

Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: 3rd Mt Zion Cir/Blackrock Rd & SR 200



Discount Tire - Yulee
9: Arrigo Blvd/driveway & SR 200

Existing PM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	1359	75	201	1672	4	250	0	178	11	0	21
Future Volume (vph)	41	1359	75	201	1672	4	250	0	178	11	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	0		200	200		200	0		0
Storage Lanes	1		1	2		1	2		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1805	5036	1583	3502	5085	1615	3467	1900	1615	0	1701	0
Flt Permitted	0.950			0.950			0.950				0.898	
Satd. Flow (perm)	1805	5036	1583	3502	5085	1615	3467	1900	1615	0	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			165			164
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		4814			338			213			134	
Travel Time (s)		72.9			5.1			4.8			3.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	2%	0%	2%	0%	1%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	1416	78	209	1742	4	260	0	185	0	33	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot		Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4			8			2	6		
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	16.0	16.0	
Total Split (s)	13.0	48.0	48.0	16.0	51.0	51.0	18.0	36.0	36.0	18.0	18.0	
Total Split (%)	13.0%	48.0%	48.0%	16.0%	51.0%	51.0%	18.0%	36.0%	36.0%	18.0%	18.0%	
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	Lag	Lag	Lead	Lag	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	Min	Min	Min	Min	
Act Effct Green (s)	7.1	36.1	36.1	9.4	44.3	44.3	10.9		27.1		10.1	
Actuated g/C Ratio	0.08	0.40	0.40	0.10	0.49	0.49	0.12		0.30		0.11	
v/c Ratio	0.31	0.71	0.11	0.58	0.70	0.00	0.62		0.31		0.10	
Control Delay	48.9	25.0	0.3	47.3	21.0	0.0	46.4		7.5		0.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	
Total Delay	48.9	25.0	0.3	47.3	21.0	0.0	46.4		7.5		0.7	
LOS	D	C	A	D	C	A	D		A		A	
Approach Delay		24.4			23.8			30.2			0.7	
Approach LOS		C			C			C			A	
Queue Length 50th (ft)	26	250	0	65	317	0	80		9		0	
Queue Length 95th (ft)	61	301	0	102	375	0	121		60		0	
Internal Link Dist (ft)		4734			258			133			54	
Turn Bay Length (ft)	300		200			200	200		200			
Base Capacity (vph)	140	2355	827	390	2571	897	463		649		349	

Discount Tire - Yulee
9: Arrigo Blvd/driveway & SR 200

Existing PM
10/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0		0		0	
Spillback Cap Reductn	0	0	0	0	0	0	0		0		0	
Storage Cap Reductn	0	0	0	0	0	0	0		0		0	
Reduced v/c Ratio	0.31	0.60	0.09	0.54	0.68	0.00	0.56		0.29		0.09	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 90.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 24.5

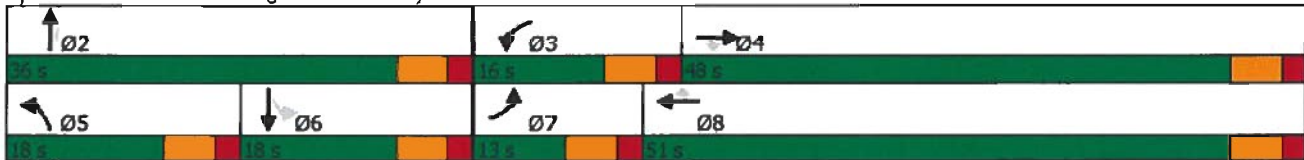
Intersection LOS: C

Intersection Capacity Utilization 66.9%

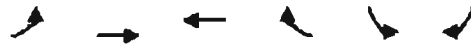
ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Arrigo Blvd/driveway & SR 200



						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Volume (vph)	0	1661	1992	4	0	4
Future Volume (vph)	0	1661	1992	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	5036	5085	0	0	1644
Flt Permitted						
Satd. Flow (perm)	0	5036	5085	0	0	1644
Link Speed (mph)		45	45		30	
Link Distance (ft)		338	243		124	
Travel Time (s)		5.1	3.7		2.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	2%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1730	2079	0	0	4
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.6%			ICU Level of Service A		
Analysis Period (min)	15					



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	5187	5085	0	0	1900
Flt Permitted						
Satd. Flow (perm)	0	5187	5085	0	0	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		243	580		109	
Travel Time (s)		3.7	8.8		2.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
ICU Level of Service	A
Analysis Period (min)	15

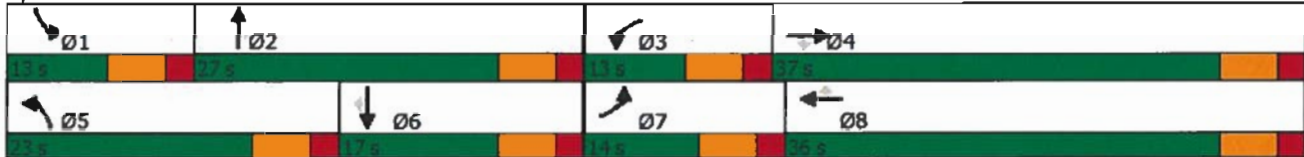
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	1393	308	66	974	30	491	110	112	139	98	139
Future Volume (vph)	141	1393	308	66	974	30	491	110	112	139	98	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	300		200	300		500	300		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	3400	5085	1615	3502	4940	1615	3502	3574	1615	3467	3610	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5085	1615	3502	4940	1615	3502	3574	1615	3467	3610	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			318			255			182			255
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1334			4814			384			276	
Travel Time (s)		20.2			72.9			8.7			6.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	0%	0%	5%	0%	0%	1%	0%	1%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	1436	318	68	1004	31	506	113	115	143	101	143
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	13.0	16.0	16.0
Total Split (s)	14.0	37.0	37.0	13.0	36.0	36.0	23.0	27.0	27.0	13.0	17.0	17.0
Total Split (%)	15.6%	41.1%	41.1%	14.4%	40.0%	40.0%	25.6%	30.0%	30.0%	14.4%	18.9%	18.9%
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	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.8	31.6	31.6	7.0	27.8	27.8	15.8	18.8	18.8	7.0	10.1	10.1
Actuated g/C Ratio	0.09	0.37	0.37	0.08	0.32	0.32	0.18	0.22	0.22	0.08	0.12	0.12
v/c Ratio	0.47	0.76	0.40	0.24	0.63	0.04	0.79	0.14	0.23	0.50	0.24	0.35
Control Delay	43.5	28.0	4.2	40.7	26.5	0.1	43.4	28.2	2.0	45.5	37.5	2.3
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	43.5	28.0	4.2	40.7	26.5	0.1	43.4	28.2	2.0	45.5	37.5	2.3
LOS	D	C	A	D	C	A	D	C	A	D	D	A
Approach Delay		25.2			26.6			34.6			27.5	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	40	265	0	19	169	0	139	26	0	40	27	0
Queue Length 95th (ft)	70	323	54	39	214	0	194	49	10	70	52	0
Internal Link Dist (ft)		1254			4734			304			196	
Turn Bay Length (ft)	300		200	300		200	300		500	300		300
Base Capacity (vph)	319	1879	797	288	1741	734	699	881	535	284	466	426

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.45	0.76	0.40	0.24	0.58	0.04	0.72	0.13	0.21	0.50	0.22	0.34

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 85.6
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 27.5
 Intersection LOS: C
 Intersection Capacity Utilization 68.4%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 3: Amelia Concourse/Chester Rd & SR 200



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	1502	21	22	1091	95	14	2	12	222	8	74
Future Volume (vph)	81	1502	21	22	1091	95	14	2	12	222	8	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		200	200		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1805	5036	1615	1805	4893	1615	1805	1653	0	1787	1644	0
Flt Permitted	0.950			0.950			0.700			0.474		
Satd. Flow (perm)	1805	5036	1615	1805	4893	1615	1330	1653	0	892	1644	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182		13			79	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		580			716			226			222	
Travel Time (s)		8.8			10.8			5.1			5.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	6%	0%	0%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1598	22	23	1161	101	15	15	0	236	88	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	16.0	16.0		11.0	16.0	
Total Split (s)	15.0	42.0	42.0	13.0	40.0	40.0	17.0	17.0		18.0	35.0	
Total Split (%)	16.7%	46.7%	46.7%	14.4%	44.4%	44.4%	18.9%	18.9%		20.0%	38.9%	
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	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Act Effct Green (s)	8.4	35.5	35.5	7.1	29.1	29.1	10.2	10.2		27.5	27.5	
Actuated g/C Ratio	0.11	0.44	0.44	0.09	0.36	0.36	0.13	0.13		0.34	0.34	
v/c Ratio	0.45	0.71	0.03	0.14	0.65	0.14	0.09	0.07		0.55	0.14	
Control Delay	45.0	21.0	0.0	39.9	23.9	0.5	36.5	20.5		27.6	7.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	45.0	21.0	0.0	39.9	23.9	0.5	36.5	20.5		27.6	7.3	
LOS	D	C	A	D	C	A	D	C		C	A	
Approach Delay		22.0			22.3			28.5			22.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	43	202	0	11	190	0	7	1		93	3	
Queue Length 95th (ft)	93	339	0	36	235	1	26	19		171	36	
Internal Link Dist (ft)		500			636			146			142	
Turn Bay Length (ft)	200		200	200		200	200					
Base Capacity (vph)	207	2439	876	161	2126	804	187	243		443	658	

Discount Tire - Yulee
6: 3rd Mt Zion Cir/Blackrock Rd & SR 200

Full Build AM
10/08/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.42	0.66	0.03	0.14	0.55	0.13	0.08	0.06		0.53	0.13	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 79.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 22.2

Intersection LOS: C

Intersection Capacity Utilization 68.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: 3rd Mt Zion Cir/Blackrock Rd & SR 200



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1618	52	108	1038	13	134	0	109	2	1	4
Future Volume (vph)	25	1618	52	108	1038	13	134	0	109	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	0		200	200		200	0		0
Storage Lanes	1		1	2		1	2		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1805	5036	1615	3502	4848	1615	3502	1900	1615	0	1729	0
Flt Permitted	0.950			0.950			0.950				0.932	
Satd. Flow (perm)	1805	5036	1615	3502	4848	1615	3502	1900	1615	0	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182			167			4
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		4814			338			213			134	
Travel Time (s)		72.9			5.1			4.8			3.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	1685	54	113	1081	14	140	0	114	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot		Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4			8			2	6		
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	16.0	16.0	
Total Split (s)	13.0	46.0	46.0	13.0	46.0	46.0	13.0	31.0	31.0	18.0	18.0	
Total Split (%)	14.4%	51.1%	51.1%	14.4%	51.1%	51.1%	14.4%	34.4%	34.4%	20.0%	20.0%	
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	Lag	Lag	Lead	Lag	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	Min	Min	Min	Min	
Act Effct Green (s)	7.2	36.3	36.3	7.2	41.2	41.2	7.2		23.5		10.2	
Actuated g/C Ratio	0.09	0.44	0.44	0.09	0.50	0.50	0.09		0.29		0.12	
v/c Ratio	0.17	0.75	0.07	0.37	0.44	0.02	0.46		0.20		0.03	
Control Delay	40.5	21.9	0.2	41.9	14.2	0.0	43.4		2.3		27.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	
Total Delay	40.5	21.9	0.2	41.9	14.2	0.0	43.4		2.3		27.1	
LOS	D	C	A	D	B	A	D		A		C	
Approach Delay		21.5			16.6			24.9			27.1	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	14	270	0	31	102	0	39		0		2	
Queue Length 95th (ft)	39	327	0	57	186	0	68		15		14	
Internal Link Dist (ft)		4734			258			133			54	
Turn Bay Length (ft)	300		200			200	200		200			
Base Capacity (vph)	157	2517	898	306	2679	974	306		619		248	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0		0		0	
Spillback Cap Reductn	0	0	0	0	0	0	0		0		0	
Storage Cap Reductn	0	0	0	0	0	0	0		0		0	
Reduced v/c Ratio	0.17	0.67	0.06	0.37	0.40	0.01	0.46		0.18		0.03	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 81.8

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 19.9

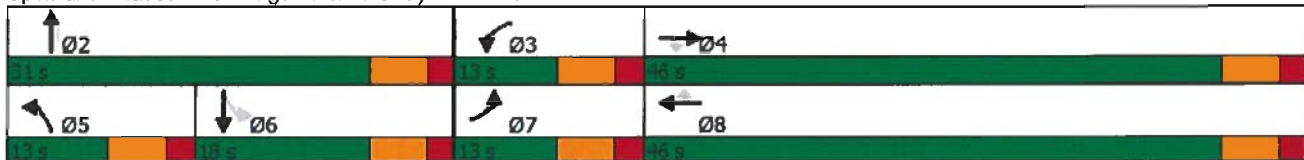
Intersection LOS: B

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: Arrigo Blvd/driveway & SR 200



Intersection

Int Delay, s/veh 0

Movement

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1761	1123	9	0	7
Future Vol, veh/h	0	1761	1123	9	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	3	6	0	0	0
Mvmt Flow	0	1854	1182	9	0	7

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	7.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.9
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	387
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt

	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	387
HCM Lane V/C Ratio	-	-	-	0.019
HCM Control Delay (s)	-	-	-	14.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1761	1128	7	0	4
Future Vol, veh/h	0	1761	1128	7	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	6	0	0	0
Mvmt Flow	0	1854	1187	7	0	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	7.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.9
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	386
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	386
HCM Lane V/C Ratio	-	-	-	0.011
HCM Control Delay (s)	-	-	-	14.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

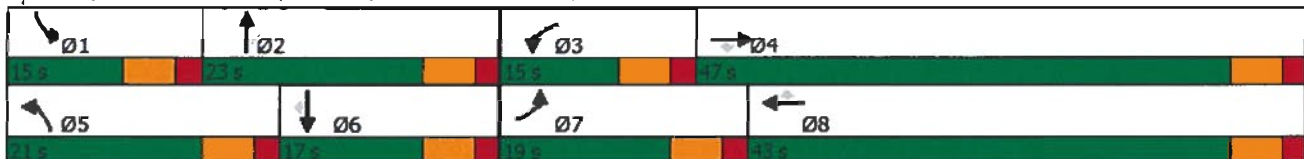
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	1221	460	180	1585	56	393	205	117	159	175	129
Future Volume (vph)	310	1221	460	180	1585	56	393	205	117	159	175	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	300		200	300		500	300		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	3467	4988	1615	3502	5036	1615	3467	3610	1615	3502	3610	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3467	4988	1615	3502	5036	1615	3467	3610	1615	3502	3610	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			406			164			164			164
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1334			4814			384			276	
Travel Time (s)		20.2			72.9			8.7			6.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	4%	0%	0%	3%	0%	1%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	323	1272	479	188	1651	58	409	214	122	166	182	134
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	13.0	16.0	16.0
Total Split (s)	19.0	47.0	47.0	15.0	43.0	43.0	21.0	23.0	23.0	15.0	17.0	17.0
Total Split (%)	19.0%	47.0%	47.0%	15.0%	43.0%	43.0%	21.0%	23.0%	23.0%	15.0%	17.0%	17.0%
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	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.4	40.1	40.1	8.7	36.4	36.4	14.4	16.3	16.3	8.6	10.5	10.5
Actuated g/C Ratio	0.13	0.41	0.41	0.09	0.37	0.37	0.15	0.17	0.17	0.09	0.11	0.11
v/c Ratio	0.73	0.62	0.53	0.60	0.88	0.08	0.80	0.36	0.30	0.54	0.47	0.42
Control Delay	52.1	24.6	6.2	52.0	35.6	0.2	53.4	38.4	4.4	50.1	45.9	8.1
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	52.1	24.6	6.2	52.0	35.6	0.2	53.4	38.4	4.4	50.1	45.9	8.1
LOS	D	C	A	D	D	A	D	D	A	D	D	A
Approach Delay		24.6			36.2			41.0			36.8	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	102	227	28	59	351	0	129	64	0	52	58	0
Queue Length 95th (ft)	150	278	105	96	423	0	#197	99	24	87	93	35
Internal Link Dist (ft)		1254			4734			304			196	
Turn Bay Length (ft)	300		200	300		200	300		500	300		300
Base Capacity (vph)	461	2096	914	323	1909	713	533	628	416	323	407	325

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.70	0.61	0.52	0.58	0.86	0.08	0.77	0.34	0.29	0.51	0.45	0.41

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 97.7
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 32.3
 Intersection LOS: C
 Intersection Capacity Utilization 79.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Amelia Concourse/Chester Rd & SR 200



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	1496	7	7	1867	183	16	2	11	136	3	87
Future Volume (vph)	111	1496	7	7	1867	183	16	2	11	136	3	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		200	200		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1787	5036	1615	1805	5085	1615	1805	1659	0	1805	1624	0
Flt Permitted	0.950			0.950			0.697			0.468		
Satd. Flow (perm)	1787	5036	1615	1805	5085	1615	1324	1659	0	889	1624	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164		11			89	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		580			716			226			222	
Travel Time (s)		8.8			10.8			5.1			5.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	1527	7	7	1905	187	16	13	0	139	92	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	16.0	16.0		11.0	16.0	
Total Split (s)	17.0	55.0	55.0	13.0	51.0	51.0	18.0	18.0		14.0	32.0	
Total Split (%)	17.0%	55.0%	55.0%	13.0%	51.0%	51.0%	18.0%	18.0%		14.0%	32.0%	
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	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Act Effct Green (s)	9.9	57.0	57.0	7.0	43.6	43.6	10.0	10.0		23.9	23.9	
Actuated g/C Ratio	0.10	0.60	0.60	0.07	0.46	0.46	0.10	0.10		0.25	0.25	
v/c Ratio	0.61	0.51	0.01	0.05	0.82	0.23	0.12	0.07		0.47	0.19	
Control Delay	56.3	12.5	0.0	43.6	26.2	4.3	42.2	23.5		35.8	8.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	56.3	12.5	0.0	43.6	26.2	4.3	42.2	23.5		35.8	8.3	
LOS	E	B	A	D	C	A	D	C		D	A	
Approach Delay		15.4			24.3			33.9			24.8	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	68	167	0	4	364	8	9	1		71	1	
Queue Length 95th (ft)	125	287	0	18	430	45	30	19		125	40	
Internal Link Dist (ft)		500			636			146			142	
Turn Bay Length (ft)	200		200	200		200	200					
Base Capacity (vph)	206	3006	1030	132	2402	849	167	218		299	508	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.55	0.51	0.01	0.05	0.79	0.22	0.10	0.06		0.46	0.18	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 95.4

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 20.8

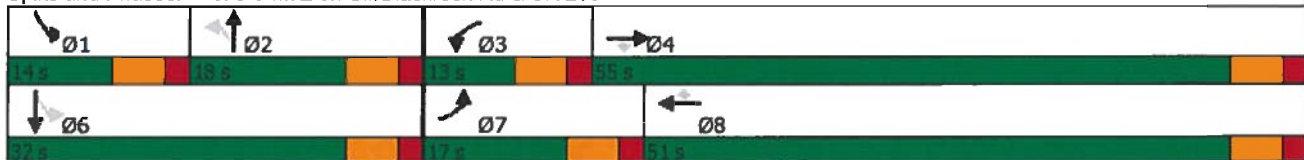
Intersection LOS: C

Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: 3rd Mt Zion Cir/Blackrock Rd & SR 200



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	1366	75	202	1680	4	250	0	179	11	0	21
Future Volume (vph)	41	1366	75	202	1680	4	250	0	179	11	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		200	0		200	200		200	0		0
Storage Lanes	1		1	2		1	2		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1805	5036	1583	3502	5085	1615	3467	1900	1615	0	1701	0
Flt Permitted	0.950			0.950			0.950				0.898	
Satd. Flow (perm)	1805	5036	1583	3502	5085	1615	3467	1900	1615	0	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			165			164
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		4814			338			213			134	
Travel Time (s)		72.9			5.1			4.8			3.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	2%	0%	2%	0%	1%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	1423	78	210	1750	4	260	0	186	0	33	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot		Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4			8			2	6		
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	13.0	26.0	26.0	13.0	26.0	26.0	13.0	16.0	16.0	16.0	16.0	
Total Split (s)	13.0	48.0	48.0	16.0	51.0	51.0	18.0	36.0	36.0	18.0	18.0	
Total Split (%)	13.0%	48.0%	48.0%	16.0%	51.0%	51.0%	18.0%	36.0%	36.0%	18.0%	18.0%	
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	Lag	Lag	Lead	Lag	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	Min	Min	Min	Min	
Act Effct Green (s)	7.1	36.2	36.2	9.4	44.4	44.4	10.9		27.1		10.1	
Actuated g/C Ratio	0.08	0.40	0.40	0.10	0.49	0.49	0.12		0.30		0.11	
v/c Ratio	0.31	0.71	0.11	0.58	0.70	0.00	0.62		0.31		0.10	
Control Delay	48.9	25.0	0.3	47.4	21.1	0.0	46.4		7.6		0.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	
Total Delay	48.9	25.0	0.3	47.4	21.1	0.0	46.4		7.6		0.7	
LOS	D	C	A	D	C	A	D		A		A	
Approach Delay		24.5			23.8			30.2			0.7	
Approach LOS		C			C			C			A	
Queue Length 50th (ft)	26	252	0	65	319	0	80		9		0	
Queue Length 95th (ft)	61	303	0	103	378	0	121		60		0	
Internal Link Dist (ft)		4734			258			133			54	
Turn Bay Length (ft)	300		200			200	200		200			
Base Capacity (vph)	140	2353	827	389	2570	897	462		648		349	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0		0		0	
Spillback Cap Reductn	0	0	0	0	0	0	0		0		0	
Storage Cap Reductn	0	0	0	0	0	0	0		0		0	
Reduced v/c Ratio	0.31	0.60	0.09	0.54	0.68	0.00	0.56		0.29		0.09	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 90.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 24.6

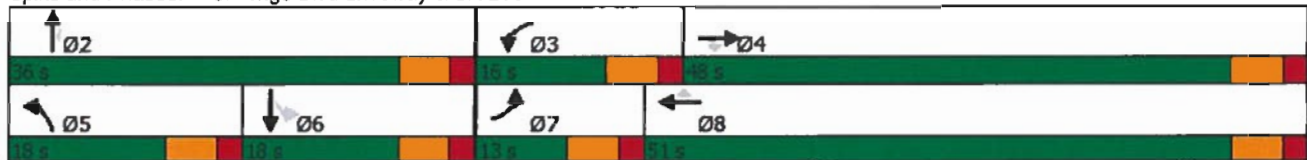
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Arrigo Blvd/driveway & SR 200



Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1676	2000	11	0	12
Future Vol, veh/h	0	1676	2000	11	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	3	2	0	0	0
Mvmt Flow	0	1746	2083	11	0	13

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	196
HCM Lane V/C Ratio	-	-	-	0.064
HCM Control Delay (s)	-	-	-	24.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1676	2003	7	0	8
Future Vol, veh/h	0	1676	2003	7	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	0	1746	2086	7	0	8

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	7.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.9
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	196
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	196
HCM Lane V/C Ratio	-	-	-	0.043
HCM Control Delay (s)	-	-	-	24.2
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1