SIGNAL WARRANT STUDY

State Road 551 at Azalea Cove Circle

Section 75200 M.P. 5.731 Orange County

Prepared for:

FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 5 TRAFFIC OPERATIONS

719 South Woodland Boulevard, MS 3-562 DeLand, Florida 32720



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Prepared by:

Traffic Engineering Data Solutions, Inc.

Certificate of Authorization License Number: 27392 80 Spring Vista Drive DeBary, Florida 32713

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This item has been digitally signed and sealed by

On the date adjacent to the seal

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EXECUTIVE SUMMARY

A Traffic Signal Warrant Study was conducted for the intersection of State Road (S.R.) 551 at Azalea Cove Circle located in Orlando (Orange County), Florida to determine if a traffic signal should be installed. Based on the data collected, signal warrant analysis, field observations and engineering judgment, a traffic signal is not recommended at the intersection of the S.R. 551 and Azalea Cove Circle. It is recommended that the Islamic Society of Central Florida consider refreshing the arrow pavement markings and straightening the stop sign on the westbound approach.

INTRODUCTION

Traffic Engineering Data Solutions, Inc. (TEDS) was retained on behalf of the Florida Department of Transportation (FDOT) to conduct a Traffic Signal Warrant Study at the intersection of S.R. 551 at Azalea Cove Circle. The study intersection is located in Orlando (Orange County), Florida as shown below in *Figure 1*.

The study was initiated after a citizen expressed concern that a bi-directional median opening would not appropriately serve the intersection. The analysis methods used in completing this study are consistent with the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), FDOT Manual on Uniform Traffic Studies (MUTS), FDOT Traffic Engineering Manual (TEM), and engineering judgment. This report documents existing conditions, vehicle / pedestrian / bicycle counts, crash analysis, qualitative assessment, signal warrant analysis, and recommendations.

Puritan Rd 551 Tittany Dr N.T.S. 50 E Colonial Dr. 50 E Colonial Dr 50 Montezuma Tri ANTIDES CO Millinockett.Ln 551 Study Location Cursis St Valencia College Lri Valencia College Ln Valencia Collège Criminal Justice 417 Institute 551 408 Elementary School

Figure 1
General Location Map
S.R. 551 at Azalea Cove Circle

Source: Mapquest

EXISTING CONDITIONS

S.R. 551 (North Goldenrod Road) is a north-south arterial that extends approximately 9 miles north from S.R. 15 (Hoffner Avenue), through the study intersection, to Aloma Avenue. At the study intersection, S.R. 551 is an undivided five-lane arterial (curb and gutter) with two (2) northbound lanes, two (2) southbound lanes, one (1) continuous center two-way left-turn lane, and sidewalks on both sides of the roadway. West of the study intersection, Azalea Cove Circle is an undivided two-lane local road (curb and gutter) and serves the Azalea Cove residential community. East of the study intersection is the entrance/exit driveway to the Islamic Society of Central Florida Mosque and school. A location aerial is shown below in *Figure 2.*

Azalea Cove
Circle

S. R. 551

Goldenrod Road)

Of Central Florida

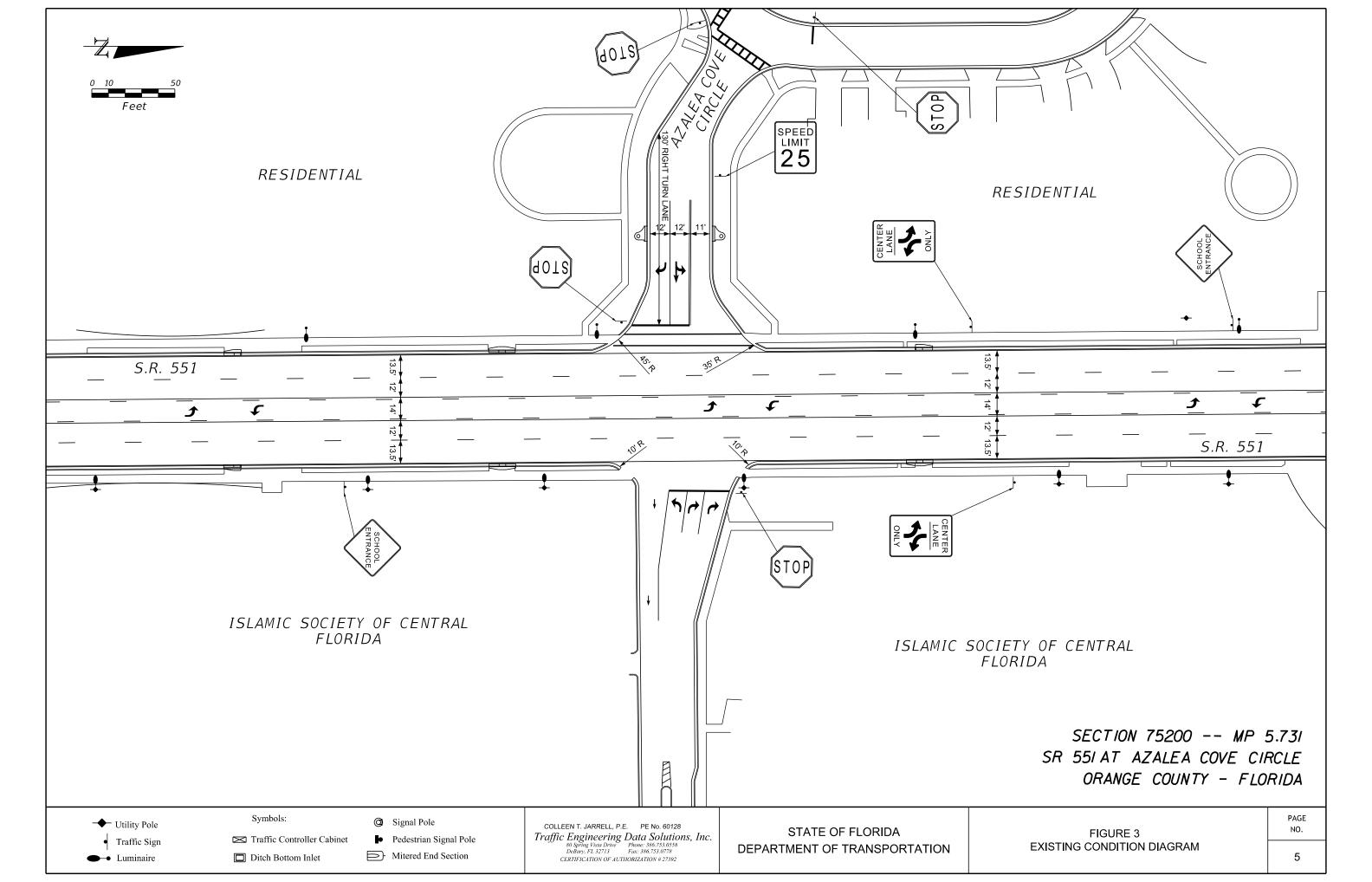
Figure 2
General Location Aerial
S.R. 551 at Azalea Cove Circle

Source: Google Earth

Table 1 on the following page summarizes the existing conditions for the study location. An existing condition diagram (*Figure 3*) and photographs of the study location are included within this study. A straight line diagram is also included in the *Appendix*.

Table 1 Existing Conditions S.R. 551 at Azalea Cove Circle

Feature	Description
Main Street	S.R. 551 (North Goldenrod Road)
Side Street	Azalea Cove Circle
Area Location	Orlando (Orange County), Florida
Adjacent Land Uses	 Northwest: Azalea Cove Residential Community Northeast: Islamic Society of Central Florida Southwest: Azalea Cove Residential Community Southeast: Islamic Society of Central Florida
Traffic Control	Two-way STOP-sign controlled with S.R. 551 having the right-of-way
Adjacent Signalized Intersections	 South: Valencia College Lane – 0.30 miles North: S.R. 50 (Colonial Drive) – 0.70 miles West: None East: None
S.R. 551	 Cross Section: Five (5) lane undivided arterial with curb and gutter Posted Speed Limit: 45 mph AADT: 36,000 vehicles per day (year 2017) Northbound Approach Lanes: Two (2) through lanes and one (1) center two-way left-turn lane Southbound Approach Lanes: Two (2) through lanes and one (1) center two-way left-turn lane Pedestrian Crossings: None Alignment: Tangent Sidewalks: Along both sides of the roadway Utilities: Along the east side of the roadway Street Lighting: Luminaires along both sides of the roadway
Azalea Cove Circle	 Cross Section: Two-lane undivided local road Posted Speed Limit: 25 mph AADT: N/A Eastbound Approach Lanes: One (1) shared left-turn/through lane and one (1) right-turn lane Pedestrian Crossings: North-to-south marked pedestrian crossing Sidewalks: Sidewalks along both sides of the roadway Utilities: None Street Lighting: One (1) residential luminaire on the north side of the roadway
Islamic Society of Central Florida Driveway	 <u>Cross Section:</u> Two-lane undivided driveway <u>Posted Speed Limit:</u> N/A <u>AADT:</u> N/A <u>Westbound Approach Lanes:</u> One (1) left-turn lane and two (2) right-turn lanes <u>Pedestrian Crossings:</u> North-to-south unmarked pedestrian crossing <u>Sidewalks:</u> None <u>Utilities:</u> None <u>Street Lighting:</u> Along both sides of the driveway



Northbound Approach Photographs S.R. 551 at Azalea Cove Circle



Looking North Towards Intersection



Looking South Away From Intersection

Southbound Approach Photographs S.R. 551 at Azalea Cove Circle



Looking South Towards Intersection



Looking North Away From Intersection

Eastbound Approach Photographs S.R. 551 at Azalea Cove Circle



Looking East Towards Intersection



Looking West Away From Intersection

Westbound Approach Photographs S.R. 551 at Azalea Cove Circle



Looking West Towards Intersection



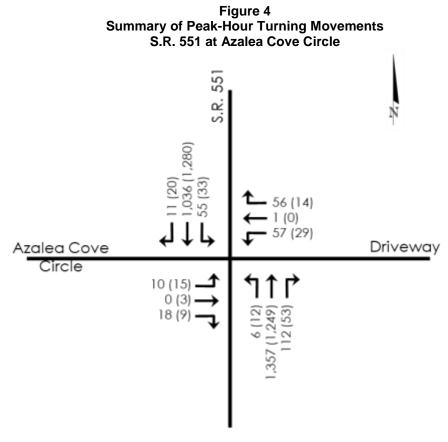
Looking East Away From Intersection

Traffic Volumes

Twenty-four hour approach counts were conducted at the study intersection on all four (4) approaches. According to these counts, the intersection had a daily traffic volume of 35,610 vehicles that entered the intersection consisting of 17,192 northbound vehicles; 16,953 southbound vehicles; 576 eastbound vehicles; and 889 westbound vehicles.

Based on a review of the twenty-four hour count data, eight (8) hours of manual turning movement counts were collected from 7:00 to 9:00 a.m. and 1:00 to 7:00 p.m. on a weekday.

• The intersection morning peak hour occurred from 7:45 to 8:45 a.m., while the afternoon peak hour occurred from 5:00 to 6:00 p.m. As summarized below in *Figure 4*, 2,719 and 2,717 vehicles were counted entering the intersection during the morning and afternoon peak hours, respectively, with the following characteristics:



6 – 7:45 a.m. to 8:45 a.m. Pk-Hr Volume (12) – 5:00 p.m. to 6:00 p.m. Pk-Hr Volume

- 37 pedestrians and 23 bicyclists were observed traversing the intersection during the manually collected turning movement counts (see *Figure 5*). A Pedestrian Movement Summary and a Bicycle Movement Summary are provided in the *Appendix*.
- During the eight (8) hours of manually collected turning movement counts, heavy trucks, which include single unit trucks such as delivery trucks (Class 5 to 7) and tractor-trailer trucks (Class 8 to 15), accounted for approximately 1.7% of the traffic passing through the intersection.

Summaries of vehicle, pedestrian, and bicycle movements; approach count data; and manually collected turning movement count data are provided in the *Appendix*.

Figure 5

Summary of Eight-Hour Pedestrian/Bicycle Volumes
S.R. 551 at Azalea Cove Circle

10 (8)

Azalea Cove
Circle

Driveway

0 (0)

12 - Pedestrian 8-Hour Volume

(4) - Bicycle 8-Hour Volume

Traffic Engineering Data Solutions, Inc.

Collision Analysis

Crash data for the study intersection for a 12-month period (April 1, 2017 to March 31, 2018) was obtained from FDOT's CAR database and the University of Florida's *Signal Four Analytics*. Within this 12-month period there were three (3) crashes reported consisting of the following crash types:

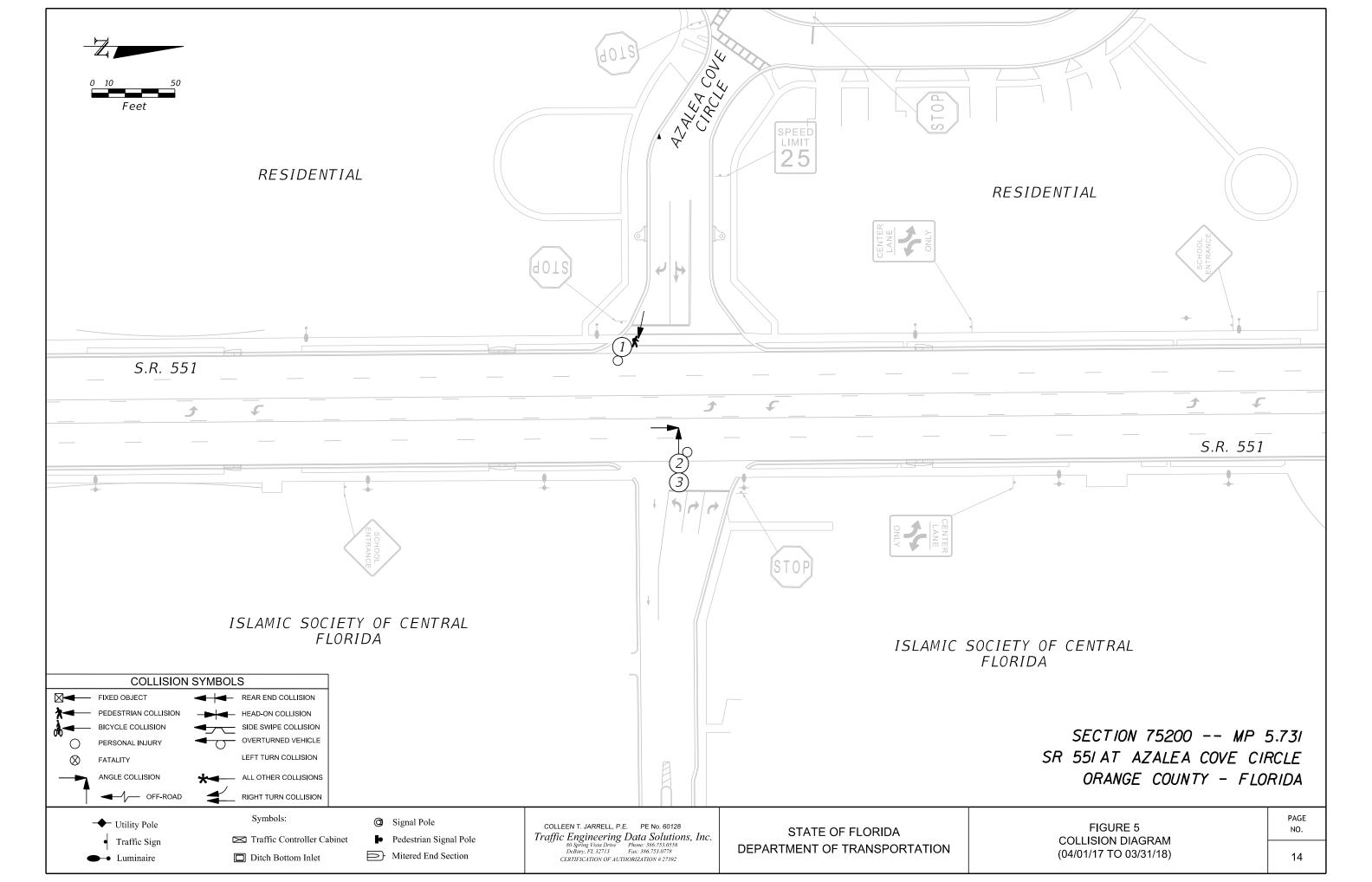
- Two (2) angle; and
- One (1) pedestrian
- The crashes resulted in zero (0) fatalities, two (2) injuries, and \$29,000 in estimated property damage.
- All three (3) crashes occurred during the day.
- All three (3) of the crashes occurred under dry pavement conditions.
- Two (2) angle crashes occurred when westbound vehicles exiting the Islamic Society of Central Florida were struck by northbound vehicles on S.R. 551. Both crashes noted the westbound left-turning drivers failed to yield the right-of-way of the northbound through drivers. The crashes resulted in one (1) possible injury.
- One (1) pedestrian crash occurred when a northbound pedestrian on a skateboard crashed into an eastbound right-turning vehicle. The non-motorist suffered possible injuries.

Two (2) crashes would be considered correctable with the installation of a traffic signal or median modifications as proposed. Crash data was reviewed for the time period from January 1, 2015 through July 31, 2018 and one (1) angle crash occurred in 2015. No additional angle or left-turn crashes have been reported at this intersection during this time period.

Table 2 Summary of Collision Data S.R. 551 at Azalea Cove Circle

		FL(ORI	DΑ	DEP	ARTN	AENT (OF TRA	NS	POI	RTA'	ΓΙΟΝ	
						COLLI	SION	SUMMAR	Y				
Section:	75200						State Road:	S.R. 551			County:	Orange	
Intersecting	route:	Azalea C	ove C	ircle			Milepost:	5.731			Data by:	TSH	
Study period	d:	4/1/2017	to	3/31/2	018						Date:	8/27/2018	
NO.	DATE	DAY	TIME	FATAL	INJURY	INJURY SEVERITY	PROPERTY DAMAGE	HARMFUL EVENT	DUI	DAY / NIGHT	WET / DRY	CONTRIBUT	ING CAUSE
1	04/27/17	Thursday	13:00	0	1	2-Possible	\$0	Pedestrian	N	Day	Dry	FTY	RW
2	02/02/18	Friday	14:02	0	1	2-Possible	\$15,000	Angle	N	Day	Dry	FTY	RW
3	02/27/18	Tuesday	15:30	0	0	1-None	\$14,000	Angle	N	Day	Dry	FTY	RW
TOTAL				0	2		\$29,000						
TOTAL NO.	Fatal	Injury		perty age Only	Off Road	Left-Turn	Rear-End	Pedestrian	C	ther	Angle	Side-Swipe	Fixed-Object
3	0	2		1	0	0	0	1		0	2	0	0
Percent	0%	67%	3	3%	0%	0%	0%	33%	1	0%	67%	0%	0%
CONTRIB- CAUSE	Day	Night	Pav Wet	ement Co	ondition ?	FTYRW	Improper Lane Change	Medical		reless riving	DUI	Disregarded Traffic Control	Improper Turn
Total	3	0	0	3	0	3	0	0		0	0	0	0
Percent	100%	0%	0%	100%	0%	100%	0%	0%	-	0%	0%	0%	0%

Source: Florida Department of Transportation CAR Database and University of Florida's Signal Four Analytics



Intersection Delay

Intersection delay studies were performed for the westbound approach for the Islamic Society of Central Florida driveway. Procedures from the <u>Manual on Uniform Traffic Studies</u> (MUTS) were applied to determine the summarized results presented in *Table 3*.

Table 3
Summary of Delay Studies
S.R. 551 at Azalea Cove Circle

Movement	Time	Maximum Queue (Veh)	Average Delay per Vehicle (Sec)	Volume (Veh/Hr)	Total Delay (Veh-Sec)	Total Delay (Veh-Hr)
VM/a atla a cua d	8:00 - 9:00 AM	4	44.0	63	2,769	0.78
Westbound Left Turn	3:00 - 4:00 PM	6	47.4	58	2,749	0.82
	5:00 - 6:00 PM	5	52.1	29	1,512	0.45

Generally, an average delay in excess of 60 seconds is considered excessive at an unsignalized intersection and what could typically be expected if the intersection were signalized. As shown in *Table 3*, the average delay for the westbound approach ranged from 44.0 seconds per vehicle to 52.1 seconds per vehicle. The maximum delay that was recorded for the westbound approach was 178 seconds. A total of 49 westbound approach vehicles experienced delay in excess of 60 seconds.

QUALITATIVE ASSESSMENT

The intersection of S.R. 551 and Azalea Cove Circle was observed during the peak hours by a registered Professional Engineer to assess existing operating conditions and to determine if installing a traffic signal would be potentially beneficial. The following conditions were observed:

Operations:

Observations: The following observations were made with respect to the operations of the study intersection:

General observations:

- S.R. 551 serves as a north/south arterial roadway while Azalea Cove Circle serves a
 residential neighborhood to the west and the driveway serves the Islamic Society of
 Central Florida Mosque and school (including Horizons Child Care and Leader's
 Preparatory School) to the east.
- S.R. 551 provides access to commercial businesses and local streets north and south of the study intersection.
- The nearest signalized intersections are located at Valencia College Lane (0.30 miles south) and S.R. 50 (0.70 miles north).
- Overall, sight distance is adequate for all motorists traveling in all directions. No issues were observed due to sight distance at the intersection.
- Northbound and southbound traffic on S.R. 551 traveled in well-defined platoons, with frequent concurrent gaps due to the adjacent signal spacing. Traffic queues from S.R. 50 were observed extended to just north of the study intersection, however did not block the intersections.
- SCHOOL ENTRANCE signs are mounted north and south of the study intersection.
- The northbound and southbound left-turning movements are low, averaging 11 and 26 vehicles per hour (vph) over the eight (8) hour count period for the northbound and southbound left-turns, respectively. A peak of over 40 southbound left-turns occurred during the school morning arrival (7:45 to 8:15 a.m.) and afternoon dismissal (3:00 to 3:15 p.m.) periods. A maximum queue of six (6) vehicles was observed during the morning arrival period and two (2) vehicles during the afternoon dismissal period. No conflicts were noted with the northbound and southbound left-turn movements.
- Westbound left-turn movements were typically completed in one movement while using the center two-way left-turn lane to accelerate and enter the southbound traffic stream. No issues or conflicts were noted with this merging action, however some drivers appeared to make their turn within small gaps in approaching northbound traffic. No evasive maneuvers were observed with this.
- The westbound left and right-turning movements were nearly similar, averaging 26 vph during the 8-hour count period. A peak of 61 westbound left-turns and 64 right-turns occurred during the school morning arrival (7:45 to 8:15 a.m.) and another peak of 57 westbound left-turns and 51 right-turns occurred during the afternoon dismissal (3:00 to 3:15 p.m.) period. The maximum observed queues for the westbound left-turn was six (6) vehicles in the morning peak and 11 vehicles during the afternoon peak. The maximum observed queues for the westbound right-turn

- lanes was four (4) vehicles during the morning peak and two (2) vehicles during the afternoon peak. Westbound queues dissipated quickly, within 15 minutes.
- There are two westbound right-turn lanes provided at the driveway. Most drivers were observed using the outside right-turn lane during the morning peak period and were equally distributed into both right-turn lanes during the afternoon peak period. No issues were observed with the dual right-turn lanes.
- Eastbound volumes were low, averaging 13 vph and 14 vph during the 8-hour count period for the left and right-turn movements, respectively. Delay was observed to be minimal. A maximum queue of two (2) vehicles was observed for the eastbound left-turn movement during both morning and afternoon peak periods.
- Eastbound right-turns were completed without conflict. There were two instances of an eastbound right-turning driver completing their turn, immediately making a U-turn at the driveway located approximately 200 feet south of the intersection and finally turning right (northbound) into the Islamic Society's driveway. This action was completed in lieu of an eastbound through movement at the study intersection. No conflicts were noted.
- Similar to the westbound left-turn movement, eastbound left-turn movements were completed in one movement, using the center two-way left-turn lane to accelerate and enter the northbound traffic stream. There were two instances observed during the morning peak hour where the eastbound left-turning driver did not wait for the southbound left-turning queues to clear and travelled northbound in the southbound travel lanes to access the center two-way left-turn lane. No conflicts were observed due to the lack of southbound approaching traffic at the time.
- While left-turn delays were occasionally observed to be in excess of 60 seconds, the majority of these delays occurred during short periods of the morning and afternoon peak hours (8:00 to 8:15 a.m. and 3:00 to 3:30 p.m.) and were attributed to the school arrival and dismissal periods.
- An elementary school bus stop is located on the northwest corner of the intersection.
 Approximately 10 kids and parents were observed on the corner waiting for the bus arrival at 8:05 a.m. No conflicts were observed with the bus stop location. Eastbound and westbound left-turning traffic experienced longer delays as the bus left the stop due to longer queues that had developed along S.R. 551. These queues dissipated quickly and drivers were able to find adequate gaps to complete their movements.
- Traffic was observed to generally travel at the 45-mph posted speed limit along S.R. 551.
- Observed pedestrian and bicycle activity was consistent with the 8-hour turning movement counts.

Safety:

The following observations were made with respect to the safety of the study intersection:

 No signs of skid marks, broken glass, plastic, or other indication of a crash were observed at the intersection.

Maintenance:

During the field reviews the condition of the study intersection's asphalt, striping, and signing were observed to be in good condition with the exception of the westbound approach. The stop sign is crooked and the arrow pavement markings are worn on the westbound approach. This driveway is private property and the Islamic Society of Central Florida should consider refreshing the arrow pavement markings and straightening the stop sign.

It should be noted there is a future roadway project (FPID 437634-1) for S.R. 551, from S.R. 408 to S.R. 50. This project will consist of milling and resurfacing, widening for bike lanes, construct a raised median, traffic signal upgrades, drainage improvements, lighting and landscaping. The current design plans include a two-way directional median opening being provided at the study intersection. This improvement can be expected to reduce the conflicts between eastbound/westbound left-turning traffic and northbound/southbound approaching vehicles. According to CFLRoads.com, the project is currently under design and scheduled for construction letting in April 2021.

SIGNAL WARRANT ANALYSIS

The traffic volumes, geometric conditions, and crash data at the intersection were analyzed, summarized, and then compared with the warrants for the installation of a traffic signal contained within the <u>Manual on Uniform Traffic Control Devices</u> (MUTCD 2009) and <u>Manual on Uniform Traffic Studies</u> (MUTS).

Upon conducting the Signal Warrant Analysis, the northbound and southbound approaches on S.R. 551 were used as the major street, and the westbound approach for the Islamic Society of Central Florida driveway was used as the minor street. For the purposes of the warrant analysis, the major street was treated as a two-lane approach. Because separate westbound right-turn lanes are provided and motorists experience relatively minimal delay at the intersection, the eastbound right-turn volumes were not included in the warrant analysis. Therefore, the minor street was treated as a one-lane approach. Finally, based on the critical speed of 45 mph on S.R. 551, the 70% volume criteria were applied to the analysis.

When considering crash history for the signal warrant analysis, during the 12-month period from April 1, 2017 to March 31, 2018 there were two (2) crashes susceptible to correction by the installation of a traffic signal. *Table 4* summarizes the results of the warrant analysis. The signal warrant analysis worksheets for the study intersection are also provided on the following pages.

Table 4
Signal Warrant Analysis Summary
S.R. 551 at Azalea Cove Circle

Warrant		Applicable	Satisfied	Comments
1A	Minimum Vehicular Volume	Yes	No	This warrant is not met as the volumes did not meet the threshold for any of the eight (8) hours
1B	Interruption of Continuous Traffic	No	N/A	This warrant is not applicable as the minor street does not experience excessive delay.
2	Four Hour Vehicular Volume	Yes	No	The traffic volumes did not meet the requirements of this warrant (must be met for any four (4) hours of an average day).
3A	Peak Hour Delay	No	N/A	This warrant is not applicable.
3B	Peak Hour Volume	No	N/A	This warrant is not applicable.
4	Pedestrian Volume	Yes	No	The pedestrian volumes do not satisfy this warrant.
5	School Crossing	Yes	No	This warrant was not met as the volume of students attempting to cross S.R. 551 does not meet the threshold. (Two students crossed, warrant requires 20.)
6	Coordinated Signal System	No	N/A	This warrant is not applicable as this intersection is not considered to be part of a coordinated network.
7	Crash Experience	Yes	No	Two (2) crashes occurred within a 12-month period that were potentially correctable by a traffic signal, which is below the threshold of five (5) potentially correctable crashes in a 12-month period.
8	Roadway Network	No	N/A	This warrant is not applicable as this intersection is not considered to be part of a coordinated network.
9	Railroad Crossing	No	N/A	This warrant is not applicable as there is no railroad crossing near the study intersection.

Based on the signal warrant analysis, no warrants are currently met for consideration of the installation of a traffic signal at the intersection of S.R. 551 at Azalea Cove Circle.

Street: State Road 551		rlando					En	gineer:		Com	TSF		•
Lanes: 1								Date:					
1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? 2. Is the intersection in a built-up area of isolated community of <10,000 population? Yes No	jor Street: State Road 55 nor Street: Azalea Cove	51 Circle								Critical	l Approa	ach Spe	ed: <u>45</u>
1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? 2. Is the intersection in a built-up area of isolated community of <10,000 population? Yes	ıme I evel Criteria												
RRANT 1 - EIGHT-HOUR VEHICULAR VOLUME Applicable:	1. Is the critical speed of											Yes	□ No
Applicable: Yes No No No No No No No N	2. Is the intersection in a	built-up	area of	f isolate	d comm	nunity of	f <10,00	0 popul	ation?			Yes	■ No
No Name N	f Question 1 or 2 above i	s answe	ered "Ye	es", ther	n use "7	0%" vol	ume lev	el el			•	70%	□ 100%
Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied. Yes No Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied. Yes No 80% / 56% Satisfied: Yes No 80% / 56	RRANT 1 - EIGHT-H	OUR V	'EHIC	JLAR	VOLU	ME			App	licable:		Yes	□ No
Condition A - Minimum Vehicular Volume													
No No No No No No No No	Warrant is also satisfied if bo	oth Condi	ition A ar	nd Cond	ition B ar	e "80%"	satisfied						
No No No No No No No No	Condition A - Minimum	Vohicul	ar Volu	ıma				1	00% Sc	aticfied:	п	Voc	■ No
Columes in veh/hr Columes	Solidition A - Willimum	Verneui	ai VOIU	IIIIC									
Minimum Requirements (80% Shown in Brackets)													
Volume Level 100% 70% 100% 70% 70% 2,334 2,430 2,146 2,214 2,358 2,444 2,647 2,364			_					Eig	ht High	nest Ho	urs	ı	
Approach Lanes	(valumas in vah/hr)												
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Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is (80%) / (56%)* satisfied if parenthetical volumes are met for eight hours. Condition B - Interruption of Continuous Traffic Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay or conflict. Minimum Requirements (80% Shown in Brackets) (volumes in veh/hr) (56%)* Shown in Brackets) Approach Lanes 1 2 or more Volume Level 100% 70% 100% 70% 100% 70% 100% 70% 100% 2,334 2,430 2,146 2,214 2,358 2,444 2,647 2,364 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Highest Approach	150		200	140	۵	62	10	a	57	16	20	16
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Condition B - Interruption of Continuous Traffic Applicable: Yes No Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay or conflict. Excessive Delay/Conflict: Yes No So heavy that traffic on the minor street suffers excessive delay or conflict. 100% Satisfied: Yes No Winimum Requirements (80% Shown in Brackets) Eight Highest Hours No No Volumes in veh/hr) {56% Shown in Brackets} Pe Pe </td <td></td>													
Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay or conflict. Excessive Delay/Conflict: ☐ Yes ■ No So heavy that traffic on the minor street suffers excessive delay or conflict. 100% Satisfied: ☐ Yes ■ No Winimum Requirements (80% Shown in Brackets) Eight Highest Hours ■ No (volumes in veh/hr) {56% Shown in Brackets} ■ No Approach Lanes 1 2 or more 0	minimum volumes are met fo	r eight h	ours. Co	ondition	is (80%) .	/ (56%)*	satisfied	if paren	thetical v	olumes :	are met	for eight	hours.
Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay or conflict. Excessive Delay/Conflict: ☐ Yes ■ No So heavy that traffic on the minor street suffers excessive delay or conflict. 100% Satisfied: ☐ Yes ■ No Winimum Requirements (80% Shown in Brackets) Eight Highest Hours ■ No (volumes in veh/hr) {56% Shown in Brackets} ■ No Approach Lanes 1 2 or more 0	Condition B - Interruption	on of Co	ontinuo	us Traf	ffic				App	licable:		Yes	■ No
Minimum Requirements (80% Shown in Brackets) (80% Shown in Brackets) (56% Shown in Brackets) Towns Town						is	Exc	essive				Yes	■ No
Minimum Requirements (80% Shown in Brackets) (56% Shown in Brackets) 456% Shown in Brackets) 456% Shown in Brackets 456% Shown in Brackets	so heavy that traffic on the n	ninor stre	et suffer	s excess	sive dela	y or conf	lict.	1	00% Sa	atisfied:		Yes	■ No
(volumes in veh/hr) (80% Shown in Brackets) 456% Shown in Brackets) 456% Shown in Brackets 456% Shown in Brackets </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>80% /</td> <td>56% Sa</td> <td>atisfied:</td> <td></td> <td>Yes</td> <td>■ No</td>								80% /	56% Sa	atisfied:		Yes	■ No
(volumes in veh/hr) (80% Shown in Brackets) 456% Shown in Brackets) 456% Shown in Brackets 456% Shown in Brackets </td <td></td> <td>Minir</td> <td>num R</td> <td>equirer</td> <td>nents</td> <td></td> <td></td> <td>Fig</td> <td>ht Hiah</td> <td>nest Ho</td> <td>urs</td> <td></td> <td></td>		Minir	num R	equirer	nents			Fig	ht Hiah	nest Ho	urs		
(volumes in veh/hr) {56% Shown in Brackets} Approach Lanes 1 2 or more 9 8 2 4 4 9 <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1001110</td> <td><u> </u></td> <td></td> <td></td>				-						1001110	<u> </u>		
Both Approaches on Major Street (600) 525 (600) (420)* (720) (504)* 2,334 2,430 2,146 2,214 2,358 2,444 2,647 2,364	(volumes in veh/hr)	•			•								
Both Approaches on Major Street (600) 525 (600) (420)* (720) (504)* 2,334 2,430 2,146 2,214 2,358 2,444 2,647 2,364	Approach Lanes	,	1	2 or	more		ا	00	00	00	8	8	00
on Major Street (600) (420)* (720) (504)* 2,334 2,430 2,146 2,214 2,358 2,444 2,647 2,364	Volume Level	100%	70%	100%	70%	70	80	13(14	15	16	17(18(
on Major Street (600) (420) (720) (504)	Roth Approaches				630	2.334	2.430	2.146	2.214	2.358	2.444	2.647	2.364
Highest Approach 75 60 400 70	Dolli Appidaciies	(600)	(420)*	(720)	(504)*	2,004	2,400	2,140	2,217	2,000	2,	2,047	2,004
Highest Approach 75 100 70 9 62 10 9 57 16 29 16	on Major Street	(000)							1				

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY Orlando **TSH** City: Engineer: Orange September 6, 2018 County: Date: Major Street: State Road 551 Lanes: Critical Approach Speed: 45 Minor Street: Azalea Cove Circle Lanes: Volume Level Criteria 1. Is the critical speed of major street traffic > 70 km/h (40 mph)? Yes □ No 2. Is the intersection in a built-up area of isolated community of <10,000 population? □ Yes No If Question 1 or 2 above is answered "Yes", then use "70%" volume level **■** 70% □ 100% WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME Applicable: Yes ☐ No If any four points lie above the appropriate line, then the warrant is satisfied. Satisfied: □ Yes ■ No Plot four volume combinations on the applicable figure below. FIGURE 4C-1: Criteria for "100%" Volume Level 700 Warranting Volumes Met Major Minor 600 MINOR STREET HIGH VOLUME APPROACH - VPH Street Street Hour 2 OR MORE LANES & 2 OR MORE LANES 500 700 2,334 9 400 800 2,430 62 300 1300 2,146 10 LANE & 1 LANE 200 1400 2,214 9 100 *115 *80 1500 2,358 57 400 300 500 600 700 800 900 1000 1100 1200 1300 1400 MAJOR STREET - TOTAL OF BOTH APPROACHES - VPH 1600 2,444 16 * Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 1700 2,647 29 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane. 1800 2,364 16 FIGURE 4C-2: Criteria for "70%" Volume Level (Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street) 400 MINOR STREET HIGH VOLUME APPROACH - VPH RE LANES & 2 OR MORE LANES 300 200 I LANE & 1 LANE 100 *80 *60 2 OR MORE LANES & 1 LANE 0 200 600 700 1000 300 400 500 MAJOR STREET - TOTAL OF BOTH APPROACHES - VPH * Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and

Source: Revised from NCHRP Report 457

60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

City:			c	rlar	ndo							Er	ngine	er:				7	гѕн			
County:			C		nge								Da	ite:			Sep	tem	ber 6	6, 201	8	
Major Street: Minor Street:					е						_		nes:		_	С	ritica	ıl Арр	oroac	h Sp	eed:	45
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VARRANT If all three continue then the war	riteria rrant i	are full s satisf	filled ed.		ny of th	e plotte	ed poin	ts lie a	bove to	•				n the	;	oplica Satis	fied:		Y			No No
Unusual co	ndition of war		ring				00	2	FIC	SUR	E 40	:-3:	Crite	eria f	or "	1009	%" V	olur/	ne L	evel		
							60						2	DD MOD	E I ANI	0000	DR MOD	E LANE				
,	Vone					Y-	50	0 -					2	DR MOR	E LAN	5 & 2 C	DR MOR	E LANE	S			
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			%				20											< 1	LANE &	LANE		
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,	444	16		-1					ii/ioon	O		O I AL	0. 5	J A		/AOI 12		•				
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1800 2,3	364	16		Ц			100 v	ph applie	es as th	e lowe	r thres	hold v	olume	thresh	old for	a min	or stre	et app	roach i	with one	e lane.	
4 Delevie	N/I:	. A	I-	_					FIC	SURI	E 4C	:-4: (Crite	ria fo	or "7	70%"	' Vo	lume	Lev	el		
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Approach Lan		1	2	7																		
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Delay*		0.0	0.0)		MINOR STREET HIGH VOLUME APPROACH - VPH			\	\downarrow												
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Fulfilled?:	Yes		No				100									+				/		4 75
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Volume Criter Volume*	ia	0	0	—		* 1/04	e: 100 v	nh annli	ac ac th	e lowe	r thron	hold v	nlumo	for a ~	ninor o	treet o	nnroo	ch with	two o	r moro	lanes s	and
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Source: Revised from NCHRP Report 457

City: Orlando	IAL WARRANT :			
County: Orange	Ĭ	neer: Date:	September 6,	2018
Major Street: State Road 551 Minor Street: Azalea Cove Circle	Lanes		itical Approach	
WARRANT 4 - PEDESTRIAN VOLUME Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfied and condition 3 is fulfilled.		Applica Satisf		
		Pedestrian	Pedestrian	Fulfilled?
Criteria	Hour	Volume	Gaps	Yes No
Pedestrian volume crossing the major street is	700	2	0	
100 ped/hr or more for each of any four hours	800	0	0	↓ ■
and there are less than 60 gaps per hour in the	1500	0	0	4
major street traffic stream of adequate length.	1600	0	0	
 Pedestrian volume crossing the major street is 190 ped/hr or more for any one hour and there are less than 60 gaps per hour in the major street traffic stream of adequate length. The nearest traffic signal along the major street is local. 	700 ated more than 90 m (300 ft) a	2 away, or the neare	0 est signal	•
varrant 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the corres		Applica Satisf	ble: ■ Ye	s 🗆 No
VARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfare fulfilled.	sponding volume or gap ied if all three of the criteria	Applica	ble: ■ Ye	s □ No s ■ No
VARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the corres frequency in the boxes provided. The warrant is satisf are fulfilled.	sponding volume or gap ied if all three of the criteria riteria	Applica Satisf	ble: ■ Ye	s No
VARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfare fulfilled.	sponding volume or gap ied if all three of the criteria riteria	Applica Satisf	ble: ■ Ye	s □ No s ■ No
VARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. CO 1. There are a minimum of 20 students crossing the major during the highest crossing hour.	sponding volume or gap ied if all three of the criteria riteria or street Studen	Applica Satisf	ble: ■ Ye:	s No
VARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. Continued to the satisfiare fulfilled to the satisfiare fulfilled. Continued to the satisfiare fulfilled to the satisfiare fulfilled. Continued to the satisfiare fulfilled to the satisfiare fulfilled. Continued to the satisfiare fulfilled to the satisfiare fulf	sponding volume or gap ied if all three of the criteria riteria or street Studen fic stream during the period ber of minutes in the same p	Applica Satisf sts: Hour: 2 Minutes eriod. 0	ble: Yesied: Yesied: Yesi	s No
NARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. C 1. There are a minimum of 20 students crossing the major during the highest crossing hour. 2. There are fewer adequate gaps in the major street traf	sponding volume or gap fied if all three of the criteria riteria or street Studen fic stream during the period ber of minutes in the same p sted more than 90 m (300 ft) is	Applica Satisf tts: Hour: 2 Minutes eriod. 0 away, or the neare	ble: Yesied: Yesied: Yesied: Yesi	s No
PARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. CO 1. There are a minimum of 20 students crossing the major during the highest crossing hour. 2. There are fewer adequate gaps in the major street traff when the children are using the crossing than the num 3. The nearest traffic signal along the major street is local is within 90 m (300 ft) but the proposed traffic signal was street in the correspondence of the co	riteria or street Studen fic stream during the period ober of minutes in the same pated more than 90 m (300 ft) a fill not restrict the progressive (STEM) d. The warrant is all three of the criteria	Applica Satisf tts: Hour: 2 Minutes eriod. 0 away, or the neare	ble: Yesied: Yesied	S No
PARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. CO 1. There are a minimum of 20 students crossing the major during the highest crossing hour. 2. There are fewer adequate gaps in the major street traff when the children are using the crossing than the num. 3. The nearest traffic signal along the major street is local is within 90 m (300 ft) but the proposed traffic signal warrant signal warrant if the criteria are fulfilled in the boxes provided satisfied if either criterion is fulfilled. This warrant sho resulting signal spacing would be less than 300 m (1,0).	riteria or street Studen fic stream during the period ober of minutes in the same pated more than 90 m (300 ft) a fill not restrict the progressive (STEM) d. The warrant is all three of the criteria	Applica Satisf Minutes eriod. 0 away, or the neare movement of traf	ble: Yesied: Yesied	S No
NARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. CO 1. There are a minimum of 20 students crossing the major during the highest crossing hour. 2. There are fewer adequate gaps in the major street traff when the children are using the crossing than the num. 3. The nearest traffic signal along the major street is local is within 90 m (300 ft) but the proposed traffic signal within 90 m (300 ft) but the proposed traffic signal within 90 m (300 ft). NARRANT 6 - COORDINATED SIGNAL SY Indicate if the criteria are fulfilled in the boxes provided satisfied if either criterion is fulfilled. This warrant show resulting signal spacing would be less than 300 m (1,0).	riteria Studen Studen Studen Studen Studen riteria riteria	Applica Satisf Minutes eriod. 0 away, or the neare movement of traf Applica Satisf	ble: ■ Yesied: □ Yesied: □ Yesied: □ Yesied: □ Yesied: ■ Yesied: ■ Yesied: □ Yesied:	S No
NARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. CO 1. There are a minimum of 20 students crossing the major during the highest crossing hour. 2. There are fewer adequate gaps in the major street traff when the children are using the crossing than the num. 3. The nearest traffic signal along the major street is local is within 90 m (300 ft) but the proposed traffic signal was within 90 m (300 ft). NARRANT 6 - COORDINATED SIGNAL SY Indicate if the criteria are fulfilled in the boxes provided satisfied if either criterion is fulfilled. This warrant show resulting signal spacing would be less than 300 m (1,0).	riteria or street Studen fic stream during the period ber of minutes in the same p ated more than 90 m (300 ft) a fill not restrict the progressive STEM of. The warrant is aud not be applied when the final poof ft). riteria inately in one direction, the a	Applica Satisf Minutes eriod. 0 away, or the neare movement of traf Applica Satisf	ble: ■ Yesied: □ Yesied: □ Yesied: □ Yesied: □ Yesied: ■ Yesied: ■ Yesied: □ Yesied:	s No No No No No No No No No S No No S No
NARRANT 5 - SCHOOL CROSSING Record hours where criteria are fulfilled and the correst frequency in the boxes provided. The warrant is satisfiare fulfilled. Color of the decoration of 20 students crossing the major during the highest crossing hour. 2. There are fewer adequate gaps in the major street traffies the criterian are using the crossing than the number of the children are using the major street is local is within 90 m (300 ft) but the proposed traffic signal was within 90 m (300 ft) but the proposed traffic signal was also field if either criteria are fulfilled in the boxes provided satisfied if either criterion is fulfilled. This warrant shown resulting signal spacing would be less than 300 m (1,0). Color of the criteria are fulfilled in the straffic predomination of the criterian are fulfilled. This warrant shown resulting signal spacing would be less than 300 m (1,0).	riteria Titeria Tit	Applica Satisf Hour: 2 Minutes eriod. 0 away, or the neare movement of traf Applica Satisf	ble: ■ Yesied: □ Yesied: □ Yesied: □ Yesied: □ Yesied: ■ Yesied: ■ Yesied: □ Yesied:	S No

Source: Revised from NCHRP Report 457

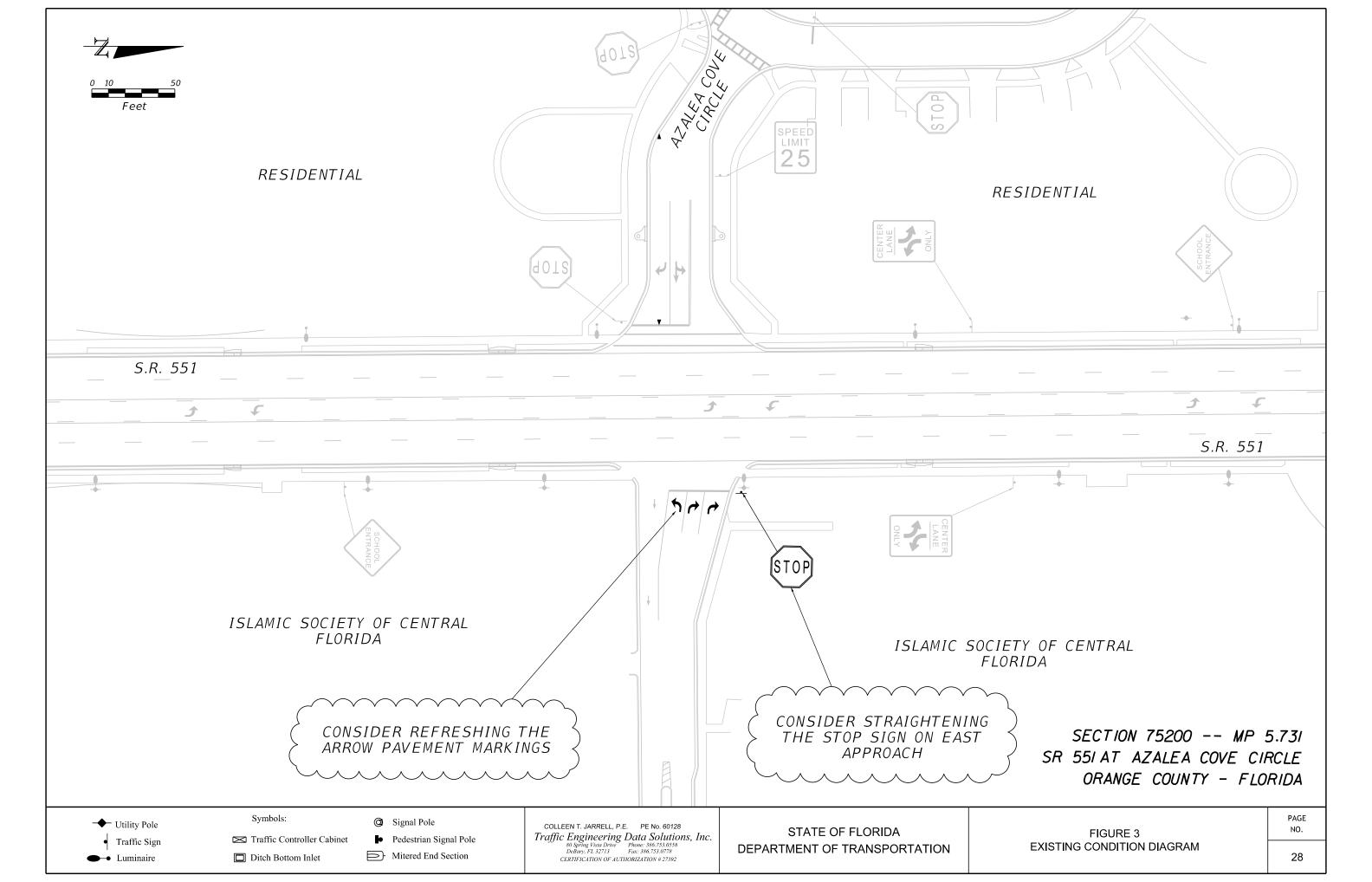
County:					Engine Da				TSH ber 6, 2	2018	
County:	Orange				Da		•	Septen	iber 6, A	2010	
	State Road 551 Azalea Cove Circle				Lanes: _ Lanes: _	1	Cri	tical Ap	proach	Speed:	45
Record hou	7 - CRASH EXPER rs where criteria are fulfille in the boxes provided. Th	ed, the correspo	-			A	Applical Satisfi		■ Yes		No No
			1			<u> </u>		Me	et?	Fulf	illed?
	Criteria			Hour		Vo	lume	Yes	No	Yes	No
1. One of the	Warrant 1, Condition A (8										
warrants	Warrant 1, Condition B (8										
to the right	Warrant 4, Pedestr			700			2				
is met.	at 80% of volume re	•	-	800		-	0	l			1
	80 ped/hr for four (152 ped/hr for one	,	-	1500 1600		-	0	l			1
2. Adequate tri	ial of other remedial meas		+					<u> </u>	<u> </u>		1
	reduce crash frequency.		Meas	ure tried:			None				
has failed to	. ,										<u> </u>
	e reported crashes, of type	es susceptible to	U	Niconala		1	10	L	2		
3. Five or more correction b VARRANT Record how information	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The dif all intersecting routes	TWORK ed, and the corrected warrant is said	eriod. esponding	y volume or o	the criter	P	Applical Satisfi	ble:	2 ☐ Yes		No No
3. Five or more correction b VARRANT Record how information	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The	TWORK ed, and the corrected warrant is said	eriod. esponding	y volume or o	other the criter	P	Applical	ble: ied:	☐ Ye	S I	
3. Five or more correction b VARRANT Record how information	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The	TWORK ed, and the corrected warrant is said	eriod. esponding	y volume or o	other the criter	P	Applical	ble: ied:	☐ Ye	S I	No
3. Five or more correction b VARRANT Record how information	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The	TWORK ed, and the correct warrant is said the have one or me Criteria	eriod. esponding tisfied if at ore of the	y volume or o	other the criter	fia	Applical Satisfi	ble: ied:	☐ Ye: ☐ Ye: ☐ Ye: ☐ Yo	s ∎ Fulf	No illed?
WARRANT Record hou information is fulfilled an	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The dif all intersecting routes a. Total entering volum during a typical week	TWORK ed, and the correct warrant is said shave one or me Criteria e of at least 1,0 kday peak hour.	esponding tisfied if at ore of the	g volume or o	other i the criterics listed.	ia Volume:	Applical Satisfi	ble: ied:	☐ Yes	s ∎ Fulf	No illed?
WARRANT Record hou information is fulfilled and the criteria to the right	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The nd if all intersecting routes a. Total entering volum during a typical week b. Five-year projected v	rwork ed, and the corn he warrant is said have one or me Criteria e of at least 1,0 kday peak hour. volumes that said	esponding tisfied if at ore of the	y volume or of t least one of characteristic Warrant:	ether i the criterics listed. Entering	Volume:	Applical Satisfi	ble: ied:	☐ Ye: ☐ Ye: ☐ Ye: ☐ Yo	s ∎ Fulf	No illed?
WARRANT Record hou information is fulfilled an 1. Both of the criteria to the right are met.	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. Tr and if all intersecting routes a. Total entering volum during a typical week b. Five-year projected v one or more of Warr.	rwork ed, and the corn he warrant is said have one or me Criteria e of at least 1,0 kday peak hour. volumes that said	esponding tisfied if at ore of the	g volume or o	other i the criterics listed.	ia Volume:	Applical Satisfi	ble: ied:	Ye:	s ∎ Fulf	No illed?
WARRANT Record hou. information is fulfilled an 1. Both of the criteria to the right are met. 2. Total enterir 1,000 veh/h	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The dif all intersecting routes a. Total entering volum during a typical week b. Five-year projected wone or more of Warrang ry volume at least r for each of any 5 hrs	rwork ed, and the corn he warrant is said have one or me Criteria e of at least 1,0 kday peak hour. volumes that said	esponding tisfied if at ore of the	y volume or of t least one of characteristic Warrant:	ether i the criterics listed. Entering	Volume:	Applical Satisfi	ble: ied:	Yes	s ∎ Fulf	No illed?
WARRANT Record hou. information is fulfilled an 1. Both of the criteria to the right are met. 2. Total enterir 1,000 veh/h	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The dif all intersecting routes a. Total entering volum during a typical week b. Five-year projected wone or more of Warrang ry volume at least r for each of any 5 hrs rmal business day	TWORK ed, and the correse have one or me Criteria e of at least 1,0 kday peak hour. volumes that satants 1, 2, or 3.	esponding tisfied if at ore of the	y volume or of the least one of characteristic warrant: Warrant: Satisfied?:	Entering NO	Volume:	Applical Satisfi	ble: ied: Me Yes	Yes	s ∎ Fulf	No illed?
VARRANT Record hou information is fulfilled and the criteria to the right are met. Total enterin 1,000 veh/h of a non-nor	8 - ROADWAY NET rs where criteria are fulfille in the boxes provided. The dif all intersecting routes a. Total entering volum during a typical week b. Five-year projected wone or more of Warrang ry volume at least r for each of any 5 hrs rmal business day	TWORK ed, and the correct warrant is said the	esponding tisfied if at ore of the 00 veh/hr tisfy N/A	wolume or of the least one of characteristic warrant: Satisfied?:	Entering 1 NO N/A	Volume:	Applical Satisfi	ble: ied: Mo Yes ← Hoi ← Vol	Yes	Fulf Yes	No illed? No
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	County:		Orang	е					Date	:		Se	ptembe	er 6, 20	υ18	
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Mino	or Street: Aza	lea Cove Cir	cle							ossing F				-4-		
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	bility Criteria				_											
Is there	a railroad g	rade crossin	g in tl	he pro	oximity of the inters	ection?								∃ Yes	;	■ No
None of	the condition	ons describe	d in tl	he oth	ner eight traffic sign	al warra	nts are i	met.						■ Yes		□ No
•			_		other alternatives or ade crossing. Amor								Э	- 100		_ 140
	vidina additi	onal naveme	ent th	at wo	uld enable vehicles	to clear	the trac	sk or t	hat wo	uld pro	vide					
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War	ranting Volu	mes	Me	et I		F	Figure 40		arrant		sectio	on Nea	ar a Gra			■ No
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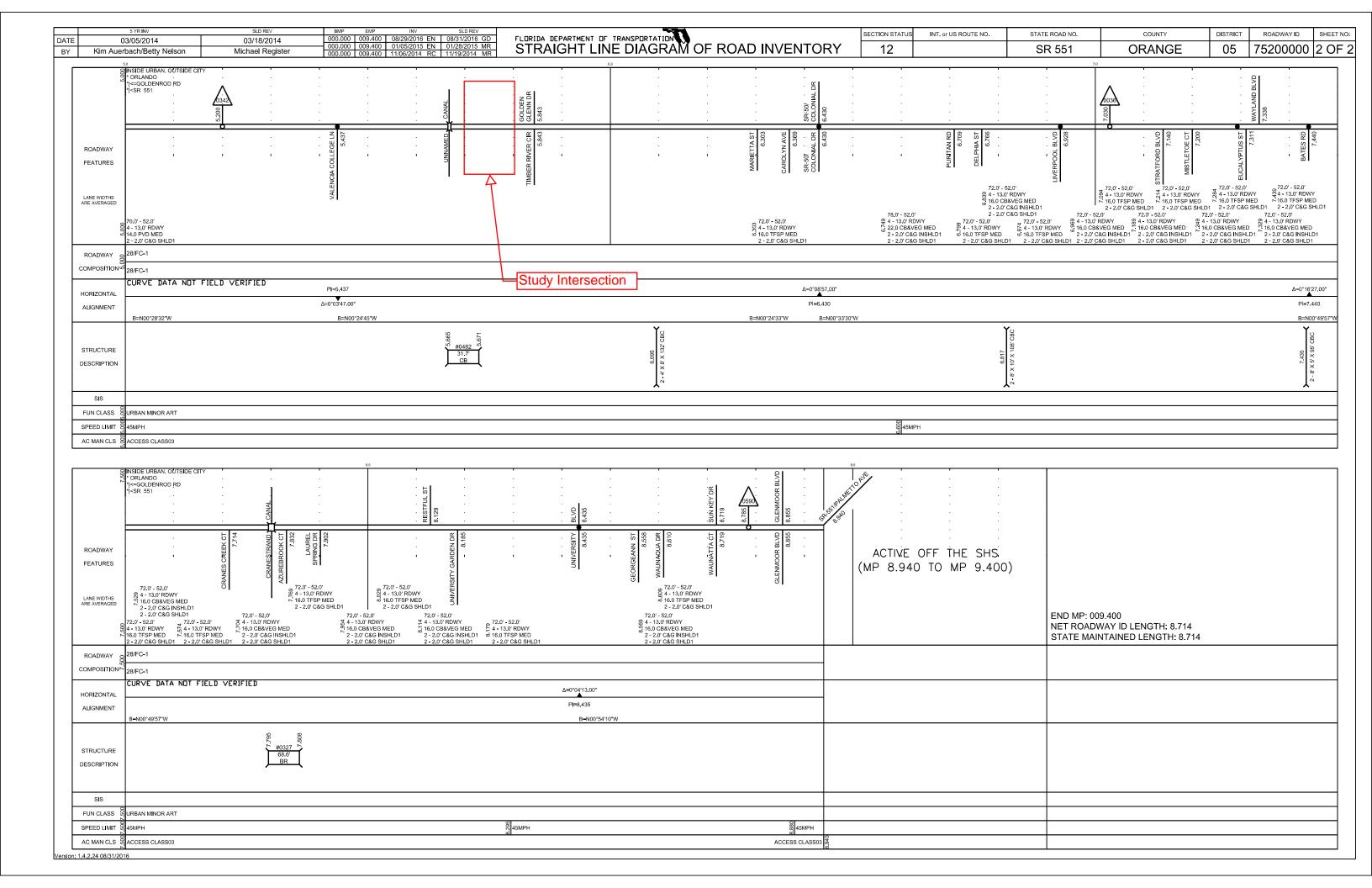
RECOMMENDATIONS

Based on the data collected, signal warrant analysis, field observations and engineering judgment, it is <u>not</u> recommended that a traffic signal be installed at the intersection of S.R. 551 and Azalea Cove Circle. The following improvements, as shown in *Figure 7*, are recommended for the S.R. 551 at Azalea Cove Circle intersection located in Orlando (Orange County), Florida:

 It is recommended the Islamic Society of Central Florida consider refreshing the arrow pavement markings and straightening the stop sign on the westbound approach.



APPENDIX



State Road 551 at Azalea Cove Circle

24 Hour Approach Counts (Hourly)

TIME	North	South	N/S TOTAL	East	West	E/W TOTAL	GRAND TOTAL
24 - 1	142	132	274	4	0	4	278
1 - 2	95	92	187	1	0	1	188
2-3	59	89	148	1	0	1	149
3 - 4	94	98	192	1	0	1	193
4 - 5	145	151	296	2	0	2	298
5 - 6	452		868	10	8	18	886
		416			32		
6 - 7	830	798	1628	20		52	1680
7 - 8	1210	1027	2237	50	39	89	2326
8 - 9	1297	954	2251	43	156	199	2450
9 - 10	1019	795	1814	26	20	46	1860
10 - 11	904	784	1688	38	13	51	1739
11 - 12	924	918	1842	27	17	44	1886
12 - 13	991	1002	1993	26	15	41	2034
13 - 14	1030	1002	2032	33	35	68	2100
14 - 15	1040	1131	2171	43	30	73	2244
15 - 16	1057	1145	2202	49	154	203	2405
16 - 17	1133	1238	2371	28	42	70	2441
17 - 18	1264	1247	2511	35	86	121	2632
18 - 19	1070	1123	2193	23	69	92	2285
19 - 20	789	807	1596	27	65	92	1688
20 - 21	594	749	1343	21	64	85	1428
21 - 22	494	609	1103	19	44	63	1166
22 - 23	349	418	767	47	0	47	814
23 - 24	210	228	438	2	0	2	440
	17,192	16,953	34,145	576	889	1,465	35,610

FLORIDA DEPARTMENT OF TRANSPORTATION

SUMMARY OF VEHICLE MOVEMENTS

SECTION 75200 CITY Orlando COUNTY Orange

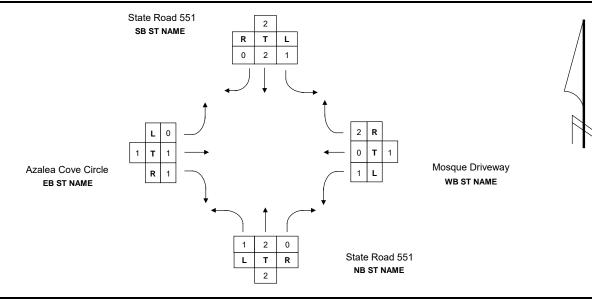
STATE ROUTE State Road 551 INTERSECTING ROUTE Azalea Cove Circle

OBSERVER TEDS DATE 8/28/2018 MILEPOST 5.731

WEATHER Sunny ROAD CONDITION Good

REMARKS

FORM COMPLETED BY TSH DATE 09/05/18



TIME		NOI	ктнвоі	JND			so	UTHBOL	JND		TOTAL		EA	STBOU	ND			WE	STBOU	ND		TOTAL
BEGIN/END	L	Т	R	U	тот	L	т	R	U	тот	N/S	L	Т	R	U	тот	L	Т	R	U	тот	E/W
7:00 - 8:00	2	1231	23	0	1256	25	1049	4	0	1078	2334	23	1	24	0	48	8	1	8	0	17	65
8:00 - 9:00	7	1277	97	0	1381	44	993	12	0	1049	2430	14	0	19	1	34	61	1	64	0	126	160
1:00 - 2:00	12	1034	14	1	1061	14	1054	17	0	1085	2146	11	1	9	0	21	9	1	12	0	22	43
2:00 - 3:00	4	1072	13	0	1089	13	1105	7	0	1125	2214	15	0	19	0	34	9	n	17	0	26	60
3:00 - 4:00	10	1049	47	0	1106	40	1198	14	0	1252	2358	12	1	10	0	23	57	0	51	0	108	131
4:00 - 5:00	17	1168	16	1	1202	15	1215	12	0	1242	2444	7	0	13	0	20	16	0	21	0	37	57
5:00 - 6:00	12	1249	53	0	1314	33	1280	20	0	1333	2647	15	3	9	0	27	29	0	14	0	43	70
6:00 - 7:00	22	1085	27	0	1134	20	1183	27	0	1230	2364	6	0	7	0	13	16	0	18	0	34	47
TOTAL	86	9165	290	2	9543	204	9077	113	0	9394	18937	103	6	110	1	220	205	3	205	0	413	633

FLORIDA DEPARTMENT OF TRANSPORTATION

PEDESTRIAN MOVEMENT SUMMARY

SECTION 75200 CITY Orlando COUNTY Orange

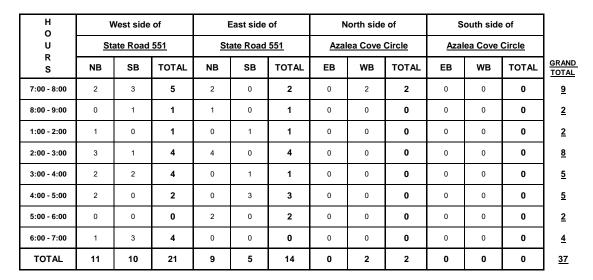
STATE ROUTE State Road 551 INTERSECTING
OBSERVER TEDS

INTERSECTING ROUTE Azalea Cove Circle
DATE 8/28/2018

REMARKS

FORM COMPLETED BY TSH

DATE 09/05/18





FLORIDA DEPARTMENT OF TRANSPORTATION

BICYCLE MOVEMENT SUMMARY

CITY Orlando SECTION **COUNTY** Orange 75200

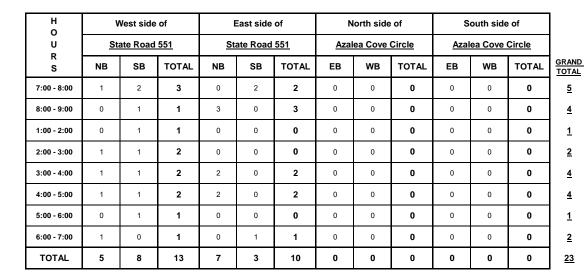
STATE ROUTE State Road 551 INTERSECTING ROUTE Azalea Cove Circle OBSERVER TEDS

DATE 8/28/2018

REMARKS

FORM COMPLETED BY TSH

DATE 09/05/18





File Name: Not Named 1

Site Code : 00000000 Start Date : 8/28/2018

Page No : 1

Grouns	Drintad	All Vehicles	
GLOUDS	Printeu-	All venicles	

		Groups									- All Ve	nicies									
		STAT	ΓE ROA	D 551			STAT	E ROA	D 551		/	ZALE	A COVI	E CIRCL	E.	LE			PARATO	DRY	
			orthbol					uthbou					astbou		_			SCHOO			
																		/estbo			
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right		App. Total	Int. Total
07:00 AM	0	250	4	0	254	1	261	0	0	262	5	0	6	0	11	1	0	1	0	2	529
07:15 AM	0	284	0	2	286	2	264	0	2	268	4	0	7	0	11	1	0	5	0	6	571
07:30 AM	0	340	3	0	343	7	254	1	1	263	10	1	7	0	18	0	1	1	0	2	626
07:45 AM	2	357	16_	0	375	15	270	3	2	290	4	0	4	0	8	6	0	1_	2	9	682
Total	2	1231	23	2	1258	25	1049	4	5	1083	23	1	24	0	48	8	1	8	2	19	2408
						ı															
08:00 AM	1	342	33	1	377	11	257	4	0	272	1	0	4	0	5	11	0	7	0	18	672
08:15 AM	1	324	46	0	371	25	267	1	0	293	2	0	3	0	5	17	1	19	0	37	706
08:30 AM	2	334	17	0	353	4	242	3	0	249	3	0	7	0	10	23	0	29	0	52	664
08:45 AM	3	277	1_	0	281	4	227	4	1_	236	9	0	5	0	14	10	0	9	0	19	550
Total	7	1277	97	1	1382	44	993	12	1	1050	15	0	19	0	34	61	1	64	0	126	2592
*** BREAK ***	k																				
01:00 PM	5	267	1	0	273	2	279	5	0	286	3	0	4	0	7	2	0	3	0	5	571
01:15 PM	1	260	4	1	266	3	254	5	0	262	3	0	0	0	3	1	0	1	Ō	2	533
01:30 PM	3	266	6	0	275	9	254	1	0	264	0	1	4	0	5	2	0	1	0	3	547
01:45 PM	4	241	3	Ö	248	0	267	6	1	274	5	Ö	1	Ō	6	4	1	7	Ō	12	540
Total	13	1034	14	1	1062	14	1054	17	1	1086	11	1	9	0	21	9	1	12	0	22	2191
,																					
02:00 PM	1	232	1	0	234	2	255	1	1	259	3	0	5	0	8	3	0	7	0	10	511
02:15 PM	1	280	2	2	285	2	289	1	0	292	4	0	6	0	10	1	0	2	0	3	590
02:30 PM	1	269	3	2	275	2	276	3	3	284	2	0	4	0	6	2	0	5	0	7	572
02:45 PM	1	291	7	0	299	7	285	2	0	294	6	0	4	0	10	3	0	3	0	6	609
Total	4	1072	13	4	1093	13	1105	7	4	1129	15	0	19	0	34	9	0	17	0	26	2282
						1															
03:00 PM	3	244	18	1	266	19	339	5	1	364	3	0	4	0	7	1	0	0	0	1	638
03:15 PM	1	272	16	0	289	15	323	1	2	341	0	0	1	0	1	28	0	37	0	65	696
03:30 PM	3	256	8	0	267	3	296	8	1	308	3	1	4	0	8	21	0	9	0	30	613
03:45 PM	3	277	5	0	285	3	240	0	0	243	6	0	1_	0	7	7	0	5	0	12	547
Total	10	1049	47	1	1107	40	1198	14	4	1256	12	1	10	0	23	57	0	51	0	108	2494
04:00 PM	6	274	4	0	284	1	292	4	1	298	2	0	4	0	6	5	0	9	0	14	602
04:15 PM	3	279	4	0	286	5	335	3	0	343	0	0	4	0	4	3	0	2	0	5	638
04:30 PM	7	310	1	3	321	4	275	3	0	282	5	0	3	0	8	3	0	5	0	8	619
04:45 PM	2	305	7	0	314	5	313	2	1	321	Ö	0	2	0	2	5	0	5	0	10	647
Total	18	1168	16	3	1205	15	1215	12	2	1244	7	0	13	0	20	16	0	21	0	37	2506
				Ü	.200				_		'	Ŭ		ŭ	20		Ü		Ü	0,	2000
05:00 PM	5	300	15	0	320	8	377	5	0	390	4	1	4	0	9	2	0	2	0	4	723
05:15 PM	4	278	20	0	302	12	280	6	0	298	5	2	2	0	9	6	0	5	Ö	11	620
05:30 PM	1	341	13	0	355	8	309	4	0	321	3	0	1	0	4	3	0	3	0	6	686
05:45 PM	2	330	5	2	339	5	314	5	0	324	3	0	2	0	5	18	0	4	0	22	690
Total	12	1249	53	2	1316	33	1280	20	0	1333	15	3	9	0	27	29	0	14	0	43	2719
rotar	12	,	55	_	1310	00	.200	20	O	1333	1 13	3	,	O	21	2,	O	17	O	45	2/1/
06:00 PM	2	281	9	0	292	12	330	8	0	350	0	0	1	0	1	2	0	8	0	10	653
06:15 PM	7	268	8	0	283	5	322	10	1	338	1	0	2	0	3	5	0	2	0	7	631
06:30 PM	5	278	4	0	287	1	260	5	1	267	1	0	4	0	5	4	0	2	0	6	565
06:45 PM	8	258	6	0	272	2	271	4	2	279	4	0	0	0	4	5	0	6	0	11	566
Total	22	1085	27	0	1134	20	1183	27	4	1234	6	0	7	0	13	16	0	18	0	34	2415
C ! T ! ! !	00	01/5	200	1 4	0557	204	0077	110	21	0415	104	,	110	^	222	205	2	205	2	115	10/07
Grand Total	88	9165	290	14	9557	204	9077	113	21	9415	104	6	110	0	220	205	3	205	2	415	19607
Apprch %	0.9	95.9	3	0.1	40.7	2.2	96.4	1.2	0.2	40	47.3	2.7	50	0	4.4	49.4	0.7	49.4	0.5	2.1	
Total %	0.4	46.7	1.5	0.1	48.7	1	46.3	0.6	0.1	48	0.5	0	0.6	0	1.1	1	0	1	0	2.1	

File Name : Not Named 1 Site Code : 00000000

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	STATE ROAD 551 Northbound Left Thru Right Peds App. Total						ΓΕ ROA			,		A COV astboo	E CIRC	LE	LE		S PREP SCHOO)L	ORY		
Start Time	Left	Thru	Right	Peds	Ann Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour An								rugiii	1 003	Арр. готаг	LCIT	11111 G	rugut	i cus	Арр. готаг	Lore	11111 G	rugin	1 cus	Арр. готаг	III. Total
Peak Hour for	,																				
07:45 AM	2	357	16	0	375	15	270	3	2	290	4	0	4	0	8	6	0	1	2	9	682
08:00 AM	1	342	33	1	377	11	257	4	0	272	1	0	4	0	5	11	0	7	0	18	672
08:15 AM	1	324	46	0	371	25	267	1	0	293	2	0	3	0	5	17	1	19	0	37	706
08:30 AM	2	334	17	0	353	4	242	3	0	249	3	0	7	0	10	23	0	29	0	52	664
Total Volume	6	1357	112	1	1476	55	1036	11	2	1104	10	0	18	0	28	57	1	56	2	116	2724
% App. Total	0.4	91.9	7.6	0.1		5	93.8	1	0.2		35.7	0	64.3	Ö	20	49.1	0.9	48.3	1.7		
PHF	.750	.950	.609	.250	.979	.550	.959	.688	.250	.942	.625	.000	.643	.000	.700	.620	.250	.483	.250	.558	.965
Peak Hour An Peak Hour for					:45 AM	- Peak 1	1 of 1														
	07:45 AN					07:30 AN	1				07:00 AM					08:00 AM					
+0 mins.	2	357	16	0	375	7	254	1	1	263	5	0	6	0	11	11	0	7	0	18	
+15 mins.	1	342	33	1	377	15	270	3	2	290	4	0	7	0	11	17	1	19	0	37	
+30 mins.	1	324	46	0	371	11	257	4	0	272	10	1	7	0	18	23	0	29	0	52	
+45 mins.	2	334	17	0	353	25	267	1	0	293	4	0	4	0	8	10	0	9	0	19	
Total Volume	6	1357	112	1	1476	58	1048	9	3	1118	23	1	24	0	48	61	1	64	0	126	
% App. Total	0.4	91.9	7.6	0.1		5.2	93.7	0.8	0.3		47.9	2.1	50	0		48.4	8.0	50.8	0		
PHF	.750	.950	.609	.250	.979	.580	.970	.563	.375	.954	.575	.250	.857	.000	.667	.663	.250	.552	.000	.606	
Peak Hour An									-				-		-			-			
Peak Hour for	,																				
01:00 PM	5	267	1	0	273	2	279	5	0	286	3	0	4	0	7	2	0	3	0	5	571
01:15 PM	1	260	4	1	266	3	254	5	0	262	3	0	0	0	3	1	0	1	0	2	533
01:30 PM	3	266	6	0	275	9	254	1	0	264	0	1	4	0	5	2	0	1	0	3	547
01:45 PM	4	241	3	Ö	248	0	267	6	1	274	5	0	1	0	6	4	1	7	0	12	540
Total Volume	13	1034	14	1	1062	14	1054	17	1	1086	11	1	9	0	21	9	1	12	0	22	2191
% App. Total	1.2	97.4	1.3	0.1		1.3	97.1	1.6	0.1		52.4	4.8	42.9	0		40.9	4.5	54.5	0		
PHF	.650	.968	.583	.250	.965	.389	.944	.708	.250	.949	.550	.250	.563	.000	.750	.563	.250	.429	.000	.458	.959
Peak Hour An Peak Hour for	,	Approa			:45 PM ·	Peak 1					01:00 PM					01:00 PM					
+0 mins.	5	267	1	0	273	2	279	5	0	286	3	0	4	0	7	2	0	3	0	5	
+15 mins.	1	260	4	1	266	3	254	5	Ö	262	3	0	0	Ö	3	1	0	1	0	2	
+30 mins.	3	266	6	0	275	9	254	1	0	264	0	1	4	0	5	2	0	1	0	3	
+45 mins.	4	241	3	0	248	Ó	267	6	1	274	5	0	1	0	6	4	1	7	0	12	
Total Volume	13	1034	14	<u>J</u>	1062	14	1054	<u></u>	<u> </u>	1086	11	1	9	0	21	9	1	12	0	22	
% App. Total	1.2	97.4	1.3	0.1	.002	1.3	97.1	1.6	0.1		52.4	4.8	42.9	0		40.9	4.5	54.5	0		
PHF	.650	.968	.583	.250	.965	.389	.944	.708	.250	.949	.550	.250	.563	.000	.750	.563	.250	.429	.000	.458	
Peak Hour An								00		.,,,	,	50			55						•
Peak Hour for																					
05:00 PM	5	300	15	0	320	8	377	5	0	390	4	1	4	0	9	2	0	2	0	4	723
05:15 PM	4	278	20	Ō	302	12	280	6	0	298	5	2	2	Ō	9	6	0	5	0	11	620
05:30 PM	1	341	13	Ö	355	8	309	4	Ö	321	3	0	1	Ö	4	3	0	3	0	6	686
05:45 PM	2	330	5	2	339	5	314	5	0	324	3	0	2	Ō	5	18	0	4	0	22	690
Total Volume	12	1249	53	2	1316	33	1280	20	0	1333	15	3	9	0	27	29	0	14	0	43	2719
% App. Total	0.9	94.9	4	0.2		2.5	96	1.5	0		55.6	11.1	33.3	Ō		67.4	0	32.6	0		
PHF	.600	.916	.663	.250	.927	.688	.849	.833	.000	.854		.375	.563	.000	.750	.403	.000	.700	.000	.489	.940
Peak Hour An Peak Hour for	Each A	Approa			:45 PM -																1
.	05:00 PM			_		04:15 PM		_	_		02:00 PM	_	_	_	_	03:15 PM			_		
+0 mins.	5	300	15	0	320	5	335	3	0	343	3	0	5	0	8	28	0	37	0	65	
+15 mins.	4	278	20	0	302	4	275	3	0	282	4	0	6	0	10	21	0	9	0	30	
+30 mins.	1	341	13	0	355	5	313	2	1	321	2	0	4	0	6	7	0	5	0	12	
+45 mins.	2	330	5_	2_	339	8	377	5	0	390	6	0	4	0	10	5	0	9	0	14	
Total Volume	12	1249	53	2	1316	22	1300	13	1	1336	15	0	19	0	34	61	0	60	0	121	
% App. Total	0.9	94.9	4	0.2		1.6	97.3	1	0.1		44.1	0	55.9	0		50.4	0	49.6	0		
PHF	.600	.916	.663	.250	.927	.688	.862	.650	.250	.856	.625	.000	.792	.000	.850	.545	.000	.405	.000	.465	

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Groups Printed- Heavy Trucks

		Groups								rintea-	неаvу	Truck	S				40500			001	l
		STAT	TE ROA	D 551			STAT	E ROA	D 551		ŀ	AZALE	A COVE	CIRCL	.E	LE		SCHOO	PARAT	ORY	
		No	rthbo	und			So	uthbou	und			Ea	astbou	ınd				schoc 'estboi			
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right		App. Total	Int. Total
07:00 AM	0	6	0	0	<u>Арр. тогат</u>	0	6	0	0	Арр. Тотат	0	0	0	0	Арр. готаг	0	0	0	0	0	12
07:00 AM	0	2	0	0	2	0	5	0	2	7	0	0	0	0	0	0	0	0	0	0	9
07:13 AM	0	3	0	0	3	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	13
07:45 AM	0	2	0	0	2	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	13
Total	0	13	0	0	13	0	32	0	2	34	0	0	0	0	0	0		0	0	0	47
rotar _l	O	13	O	O	13	, 0	52	O	_	5+	O	O	O	O	0	O	O	O	O	0	77
08:00 AM	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	9
08:15 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
08:30 AM	0	4	0	0	4	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	12
08:45 AM	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	9
Total	0	16	0	0	16	0	21	1	0	22	0	0	0	0	0	0	0	0	0	0	38
*** BREAK ***	•																				
01:00 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	9
01:15 PM	0	8	0	1	9	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	14
01:30 PM	0	2	0	0	2	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	10
01:45 PM	0	9	0	0	9	0	5	0	1	6	0	0	0	0	0	0	0	0	0	0	15_
Total	0	19	0	1	20	0	27	0	1	28	0	0	0	0	0	0	0	0	0	0	48
02:00 DM	0	7	0	^	7		г	1	^	, 1	^	0	1	0	1	0	0	0	0	0	1.4
02:00 PM 02:15 PM	0	7 7	0	0	7 7	0	5 7	1 0	0	6 7	0	0	1 0	0	1 0	0	0	0	0	0	14 14
02:15 PM	0	3	0	0	3	0	17	0	3	20	0	0	0	0	0	0	0	0	0	0	23
02:30 PM	0	4	0	0	4	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	23 17
Total	0	21	0	0	21	0	42	1	3	46	0	0	1	0	1	0	0	0	0	0	68
	_							•				_	•	_		_	_	_	_	·	
03:00 PM	0	8	0	1	9	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	16
03:15 PM	0	4	0	0	4	0	5	0	2	7	0	0	0	0	0	0	0	0	0	0	11
03:30 PM	0	3	0	0	3	0	10 9	0	0	10	0	0	0	0	0	0	0	0	0	0	13
03:45 PM Total	0	6 21	0	<u>0</u> 1	6 22	0	<u>9</u> 31	0	0 2	33	0	0	0	0	0	0	0	0	0	0	<u>15</u> 55
TOTAL	U	21	U		22		31	U	2	JJ	U	U	U	U	0	U	U	U	U	U	. 55
04:00 PM	0	5	0	0	5	0	6	0	1	7	0	0	0	0	0	0	0	0	0	0	12
04:15 PM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	6
04:30 PM	0	8	0	3	11	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	14
04:45 PM	0	5	0	0	5	0	7	0	1_	8	0	0	0	0	0	0	0	0	0	0	13_
Total	0	19	0	3	22	0	21	0	2	23	0	0	0	0	0	0	0	0	0	0	45
05:00 PM	0	5	0	0	5	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	8
05:15 PM	Ö	3	Ö	Ö	3	Ö	2	Ö	Ö	2	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	0	5
05:30 PM	0	6	0	0	6	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	8
05:45 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
Total	0	18	0	0	18	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	29
06:00 PM	0	2	0	0	2	l 0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
06:15 PM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
06:30 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
06:45 PM	0	5	0	0	5	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	6
Total	0	12	0	0	12	0	5	0	1	6	0	0	0	0	0	0	0	0	0	0	18
O 1- 1 1	^	120	^	_	1 4 4	1 0	100	2	11	202	^	^	4	0	ا م	^	^	0	0	<u></u>	240
Grand Total	0	139	0	5 3.5	144	0	190 93.6	2 1	11 5.4	203	0	0	1 100	0	1	0	0	0	0	0	348
Apprch % Total %	0	96.5 39.9	0	3.5 1.4	41.4	0	93.6 54.6	0.6	3.2	58.3	0	0	0.3	0	0.3	0	0	0	0	0	
10(a) 70	U	37.7	U	1.4	41.4	1 0	54.0	0.0	3.2	50.5	U	U	0.3	U	0.5	U	U	U	U	U	

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		STATE ROAD 551 STATE ROAD Southbo								A COV astbou	E CIRCI	_E	LE		S PREP SCHOO)L	ORY				
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Riaht	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right		App. Total	Int. Total
Peak Hour An								<u> </u>			20.1					20.0		<u> </u>			
Peak Hour for																					
07:00 AM	0	6	0	0	6	0	6	0	0	6	l 0	0	0	0	0	0	0	0	0	0	12
07:15 AM	0	2	0	0	2	0	5	0	2	7	0	0	0	0	0	0	0	0	0	0	9
07:30 AM	0	3	0	0	3	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	13
07:45 AM	0	2	0	0	2	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	13
Total Volume	0	13	0	0	13	0	32	0	2	34	0	0	0	0	0	0	0	0	0	0	47
% App. Total	0	100	0	0		0	94.1	0	5.9		0	0	0	0		0	0	0	0		
PHF	.000	.542	.000	.000	.542	.000	.727	.000	.250	.773	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.904
Peak Hour An Peak Hour for	Each A	Approa			:45 AM -						l										
Omina	08:00 AN		0	0	4	07:00 AM		0	0	4	07:00 AN		0	0	0	07:00 AM		0	0	0	
+0 mins.	0	4 4	0	0	4	0	6 5	0	0	6 7	0	0	0	0	0	0	0	0	0	0	
+15 mins.	_		0	0	4	_		0	2		0	0			0	0	0	0	0	-	
+30 mins.	0	4	0	0	4	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	
+45 mins. Total Volume	0	16	0	0	16	0	11 32	0	0	11 34	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	100	0	0	10	0	32 94.1	0	5.9	34	0	0	0	0	U	0	0	0	0	U	
PHF	.000	1.000	.000	.000	1.000	.000	.727	.000	.250	.773	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
Peak Hour An								.000	.230	.113	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
Peak Hour for							1 01 1														
01:00 PM	0	0	0	Degins 0	at 0 1.00	0	9	0	0	9	о	0	0	0	0	0	0	0	0	0	9
01:00 PM	0	8	0	1	9	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	14
01:30 PM	0	2	0	0	2	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	10
01:45 PM	0	9	0	0	9	0	5	0	1	6	0	0	0	0	0	0	0	0	0	0	15
Total Volume	0	19	0	1	20	0	27	0	<u>-</u>	28	0	0	0	0	0	0	0	0	0	0	48
% App. Total	0	95	0	5	20	0	96.4	0	3.6	20	0	0	0	0	U	0	0	0	0	U	40
PHF	.000	.528	.000	.250	.556	.000	.750	.000	.250	.778	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.800
Peak Hour An Peak Hour for		Approa			:45 PM -	01:00 PM					10:00 AM	ı				10:00 AM					
+0 mins.	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	8	0	1	9	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	2	0	0	2	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	9	0	0	9	0	5	0	1_	6	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	19	0	1	20	0	27	0	1	28	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	95	0	5		0	96.4	0	3.6		0	0	0	0		0	0	0	0		
PHF Dook House Ass	000.	.528	.000	.250	.556	.000	.750	.000	.250	.778	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
Peak Hour An Peak Hour for	,						01 1														
02:15 PM	0	7	0	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
02:30 PM	0	3	0	0	3	0	17	0	3	20	0	0	0	0	0	0	0	0	0	0	23
02:45 PM	0	4	0	0	4	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	17
03:00 PM	0	8	0	1	9	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	16
Total Volume	0	22	0	1	23	0	44	0	3	47	0	0	0	0	0	0	0	0	0	0	70
% App. Total	0	95.7	0	4.3		0	93.6	0	6.4		0	0	0	0		0	0	0	0		
PHF	.000	.688	.000	.250	.639	.000	.647	.000	.250	.588	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.761
Peak Hour An Peak Hour for	,				:45 PM -	Peak 1	of 1														
	04:30 PM					02:15 PM					02:00 PM					02:00 PM					
+0 mins.	0	8	0	3	11	0	7	0	0	7	0	0	1	0	1	0	0	0	0	0	
+15 mins.	0	5	0	0	5	0	17	0	3	20	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	5	0	0	5	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	3	0	0	3	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	21	0	3	24	0	44	0	3	47	0	0	1	0	1	0	0	0	0	0	
% App. Total	0	87.5	0	12.5		0	93.6	0	6.4		0	0	100	0		0	0	0	0		
PHF	.000	.656	.000	.250	.545	.000	.647	.000	.250	.588	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	

.000

.250

Site Code : 00000000 Start Date : 8/28/2018

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Crou	ne Drin	+~4 11	Turne
Groui	ps Prin	ilea- U	Turns

			E ROA					E ROA	ND 551 und		,		A COVI astbou	E CIRCL and	.E	LE		S PREP SCHOO estbou)L	DRY	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1_
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
01:00 PM *** BREAK ***	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
04:30 PM *** BREAK ***	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total Apprch %	2 100	0	0 0	0	2	0 0	0 0	0	0 0	0	1 100	0	0	0 0	1	0	0	0	0 0	0	3
Total %	66.7	0	0	0	66.7	0	0	0	0	0	33.3	0	0	0	33.3	0	0	0	0	0	

			E ROA	ND 551 und			STATE ROAD 551 Southbound Left Thru Right Peds App. Total						A COVI astbou	E CIRCI Ind	_E	LE		S PREP SCHOO estboo)L	ORY	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour An	alysis F	rom 0	7:00 Al	M to 09	9:45 AM -	Peak 1	1 of 1														
Peak Hour for	Entire	Interse	ection	Begins	at 08:00	AM															
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	11_
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% App. Total	0	0	0	0		0	0	0	0		100	0	0	0		0	0	0	0		1
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

.000 .000 .000

PHF | .250

Peak Hour for	Each F	approa	cn Begi	ns at:																
	07:00 AM					07:00 AM					08:00 AM					07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		100	0	0	0		0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000
Peak Hour An	alvsis F	rom 1	0:00 AI	M to 01:	45 PM -	Peak 1	of 1													

Peak Hour for Entire Intersection Begins at 12:15 PM 12:15 PM 12:30 PM 12:45 PM 01:00 PM Total Volume % App. Total

.250 .000 .000 .000 .000

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Site Code : 00000000 Start Date : 8/28/2018

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			E ROA	ND 551 und				E ROA	ND 551 und		1		A COVI astbou	E CIRCL	.E	LE		S PREP SCHOO estbou	-	DRY	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour An	alysis F	rom 10	1A 00:C	M to 01:	:45 PM -	Peak 1	of 1														
Peak Hour for	Each A	Approad	ch Begi	ins at:																	_
	12:15 PM					10:00 AM					10:00 AM					10:00 AM					
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
Peak Hour An	alysis F	rom 02	2:00 PI	VI to 06:	45 PM -	Peak 1	of 1														
Peak Hour for	Entire	Interse	ection	Begins a	at 03:45	PM															
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11_
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250
Peak Hour An Peak Hour for	Each A				45 PM -		of 1														1
	03:45 PM		_	_		02:00 PM	_	_	_		02:00 PM		_	_		02:00 PM	_	_			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	1	0	0	0	1_	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

File Name: DELAY 8-9AM

Site Code : 00000000 Start Date : 8/28/2018

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L	No.	Joined Queue	Released From Queue	Delay
n. 2	1	8:00:01 AM	8:00:31 AM	30
2	2	8:01:15 AM	8:02:03 AM	48
2	3	8:02:31 AM	8:02:57 AM	26
2	4	8:02:34 AM	8:03:17 AM	43
2	5	8:03:12 AM	8:03:23 AM	11
2	6	8:04:50 AM	8:05:13 AM	23
2	7	8:07:35 AM	8:07:49 AM	14
2	8	8:09:47 AM	8:11:00 AM	73
2	9	8:10:55 AM	8:11:16 AM	21
2	10	8:13:21 AM	8:13:27 AM	6
2	11	8:13:46 AM	8:14:26 AM	40
2	12	8:13:58 AM	8:14:49 AM	51
2	13	8:14:14 AM	8:14:51 AM	37
2	14	8:14:27 AM	8:16:21 AM	114
2	15	8:16:14 AM	8:16:33 AM	19
2	16	8:16:19 AM	8:16:36 AM	17
2	17	8:16:31 AM	8:16:46 AM	15
<u>2</u> 2	18	8:17:03 AM 8:18:02 AM	8:17:24 AM 8:18:22 AM	21
<u>2</u> 2	19 20	8:18:02 AM 8:21:57 AM	8:18:22 AM 8:22:51 AM	20 54
2	21	8:22:11 AM	8:23:00 AM	49
2	22	8:23:34 AM	8:24:56 AM	82
2	23	8:24:07 AM	8:25:16 AM	69
2	24	8:24:52 AM	8:25:31 AM	39
2	25	8:26:07 AM	8:26:23 AM	16
2	26	8:26:18 AM	8:27:48 AM	90
2	27	8:26:24 AM	8:28:53 AM	149
2	28	8:27:25 AM	8:29:00 AM	95
2	29	8:27:43 AM	8:29:05 AM	82
2	30	8:28:50 AM	8:29:09 AM	19
2	31	8:29:02 AM	8:30:36 AM	94
2	32	8:29:13 AM	8:30:43 AM	90
2	33	8:30:00 AM	8:30:50 AM	50
2	34	8:30:52 AM	8:31:10 AM	18
2	35	8:31:12 AM	8:31:23 AM	11
2	36	8:31:56 AM	8:33:13 AM	77
2	37	8:32:47 AM	8:33:17 AM	30
2	38	8:33:52 AM	8:34:46 AM	54
2	39 40	8:34:34 AM	8:35:25 AM	51 64
2	41	8:35:06 AM 8:35:18 AM	8:36:10 AM 8:36:16 AM	58
2	42	8:35:26 AM	8:36:32 AM	66
2	43	8:35:37 AM	8:37:03 AM	86
2	44	8:36:54 AM	8:37:09 AM	15
2	45	8:37:27 AM	8:38:33 AM	66
2	46	8:37:41 AM	8:38:57 AM	76
2	47	8:38:09 AM	8:39:03 AM	54
2	48	8:39:22 AM	8:40:12 AM	50
2	49	8:40:06 AM	8:40:20 AM	14
2	50	8:40:36 AM	8:41:06 AM	30
2	51	8:41:08 AM	8:41:16 AM	8
2	52	8:41:11 AM	8:41:43 AM	32
2	53	8:41:37 AM	8:41:48 AM	11
2	54	8:44:35 AM	8:45:30 AM	55
2	55	8:44:53 AM	8:45:36 AM	43
2	56	8:46:05 AM	8:47:24 AM	79
2	57	8:47:47 AM	8:48:02 AM	15
2	58	8:51:18 AM	8:51:29 AM	11
2	59	8:53:06 AM	8:53:18 AM	12
2	60	8:53:38 AM	8:53:44 AM	6 57
<u>2</u> 2	61	8:54:36 AM 8:56:10 AM	8:55:33 AM 8:56:18 AM	8
_	UZ	0.50. TO AIVI	0.50. TO AIVI	U

File Name: DELAY 8-9AM

Site Code : 00000000 Start Date : 8/28/2018

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Summary Information:

8:00:00 AM - 9:00:00 AM	WB LEFT/THRU
Total Vehicle Count:	63
Delayed Vehicle Count:	63
Through Vehicle Count:	0
Average Stopped Time:	43.95
Maximum Stopped Time:	149
Min. Secs. for Delay:	0
Average Queue:	0.78
Queue Density:	1.60
Maximum Queue:	4
Delay in Vehicle Hour:	0.78
Total Delay:	2769

File Name: DELAY 3-4PM

Site Code : 00000000 Start Date : 8/28/2018

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L	No.	Joined Queue	Released From Queue	Delay
n.				,
2	1	3:00:00 PM	3:00:05 PM	5
2	2	3:10:45 PM	3:10:52 PM	7
2	3	3:19:05 PM	3:19:40 PM	35
2	4	3:20:33 PM	3:20:44 PM	11
2	5	3:20:37 PM	3:21:47 PM	70
2	6	3:20:42 PM	3:21:53 PM	71
2	7	3:21:26 PM	3:22:00 PM	34
2	8	3:21:44 PM	3:22:02 PM	18
2	9	3:21:51 PM	3:22:09 PM	18
2	10	3:21:57 PM	3:22:13 PM	16
2	11	3:22:01 PM	3:22:28 PM	27
2	12	3:22:33 PM	3:22:41 PM	8
2	13	3:22:48 PM	3:22:56 PM	8
2	14	3:23:09 PM	3:23:23 PM	14
2	15	3:23:11 PM	3:24:46 PM	95
2	16	3:23:40 PM	3:24:52 PM	72
2	17	3:23:47 PM	3:25:47 PM	120
2	18	3:23:59 PM	3:25:50 PM	111
2	19	3:24:07 PM	3:26:02 PM	115
2	20	3:24:48 PM	3:27:46 PM	178
2	21	3:24:54 PM	3:27:50 PM	176
2	22	3:25:19 PM	3:27:53 PM	154
2	23	3:26:23 PM	3:27:59 PM	96
2	24	3:26:27 PM	3:28:11 PM	104
2	25	3:27:01 PM	3:28:21 PM	80
2	26	3:28:31 PM	3:28:40 PM	9
2	27	3:28:36 PM	3:29:54 PM	78
2	28	3:28:47 PM	3:29:59 PM	72
2	29	3:28:52 PM	3:30:02 PM	70
2	30	3:29:14 PM	3:30:05 PM	51
2	31	3:30:21 PM	3:30:36 PM	15
2	32	3:30:24 PM	3:30:44 PM	20
2	33	3:30:27 PM	3:30:50 PM	23
2	34	3:30:34 PM	3:30:56 PM	22
2	35	3:31:42 PM	3:32:13 PM	31
2	36	3:32:07 PM	3:33:44 PM	97
2	37	3:33:21 PM	3:33:52 PM	31
2	38	3:33:42 PM	3:33:57 PM	15
2	39	3:33:56 PM	3:34:07 PM	11
2	40	3:33:59 PM	3:34:10 PM	11
2	41	3:34:17 PM	3:34:35 PM	18
2	42	3:34:23 PM	3:34:41 PM	18
2	43	3:34:50 PM	3:34:58 PM	8
2	44	3:34:56 PM	3:36:27 PM	91
2	45	3:35:29 PM	3:36:36 PM	67
2	46	3:35:35 PM	3:36:44 PM	69
2	47	3:36:37 PM	3:36:48 PM	11
2	48	3:39:20 PM	3:39:36 PM	16
2	49	3:39:32 PM	3:39:41 PM	9
2	50	3:39:42 PM	3:39:51 PM	9
2	51	3:42:07 PM	3:42:33 PM	26
2	52	3:50:11 PM	3:50:31 PM	20
2	53	3:51:33 PM	3:51:48 PM	15
2	54	3:52:28 PM	3:52:40 PM	12
2	55	3:53:36 PM	3:54:15 PM	39
2	56	3:53:47 PM	3:55:22 PM	95
2	57	3:55:06 PM	3:55:25 PM	19
_	0,			

File Name: DELAY 3-4PM

Site Code : 00000000 Start Date : 8/28/2018

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Summary Information:

WB LEFT/THRU
58
58
0
47.40
178
0
0.82
2.44
6
0.82
2749

File Name: DELAY 5-6PM

Site Code : 00000000 Start Date : 8/28/2018

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L	No.	Joined Queue	Released From Queue	Delay
n.				
2	1	5:02:00 PM	5:03:20 PM	80
2	2	5:06:48 PM	5:07:06 PM	18
2	3	5:13:45 PM	5:15:17 PM	92
2	4	5:20:11 PM	5:21:20 PM	69
2	5	5:20:39 PM	5:21:24 PM	45
2	6	5:23:04 PM	5:23:39 PM	35
2	7	5:25:32 PM	5:27:47 PM	135
2	8	5:26:13 PM	5:27:51 PM	98
2	9	5:37:50 PM	5:39:26 PM	96
2	10	5:39:58 PM	5:40:20 PM	22
2	11	5:40:50 PM	5:41:36 PM	46
2	12	5:43:57 PM	5:46:05 PM	128
2	13	5:44:29 PM	5:46:07 PM	98
2	14	5:45:13 PM	5:46:09 PM	56
2	15	5:45:23 PM	5:46:25 PM	62
2	16	5:45:46 PM	5:46:28 PM	42
2	17	5:46:23 PM	5:46:37 PM	14
2	18	5:46:32 PM	5:46:42 PM	10
2	19	5:47:19 PM	5:47:29 PM	10
2	20	5:49:02 PM	5:49:17 PM	15
2	21	5:49:18 PM	5:49:30 PM	12
2	22	5:49:41 PM	5:50:16 PM	35
2	23	5:50:26 PM	5:51:45 PM	79
2	24	5:52:51 PM	5:54:12 PM	81
2	25	5:54:07 PM	5:54:26 PM	19
2	26	5:55:19 PM	5:55:32 PM	13
2	27	5:55:44 PM	5:56:32 PM	48
2	28	5:57:23 PM	5:57:41 PM	18
2	29	5:57:49 PM	5:58:25 PM	36

Summary Information:

5:02:00 PM - 5:59:00 PM	WB LEFT/THRU
Total Vehicle Count:	29
Delayed Vehicle Count:	29
Through Vehicle Count:	0
Average Stopped Time:	52.14
Maximum Stopped Time:	135
Min. Secs. for Delay:	0
Average Queue:	0.45
Queue Density:	1.34
Maximum Queue:	5
Delay in Vehicle Hour:	0.45
Total Delay:	1512