

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:

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October 2018



This item has been digitally signed and sealed by

On the date adjacent to the seal

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EXECUTIVE SUMMARY

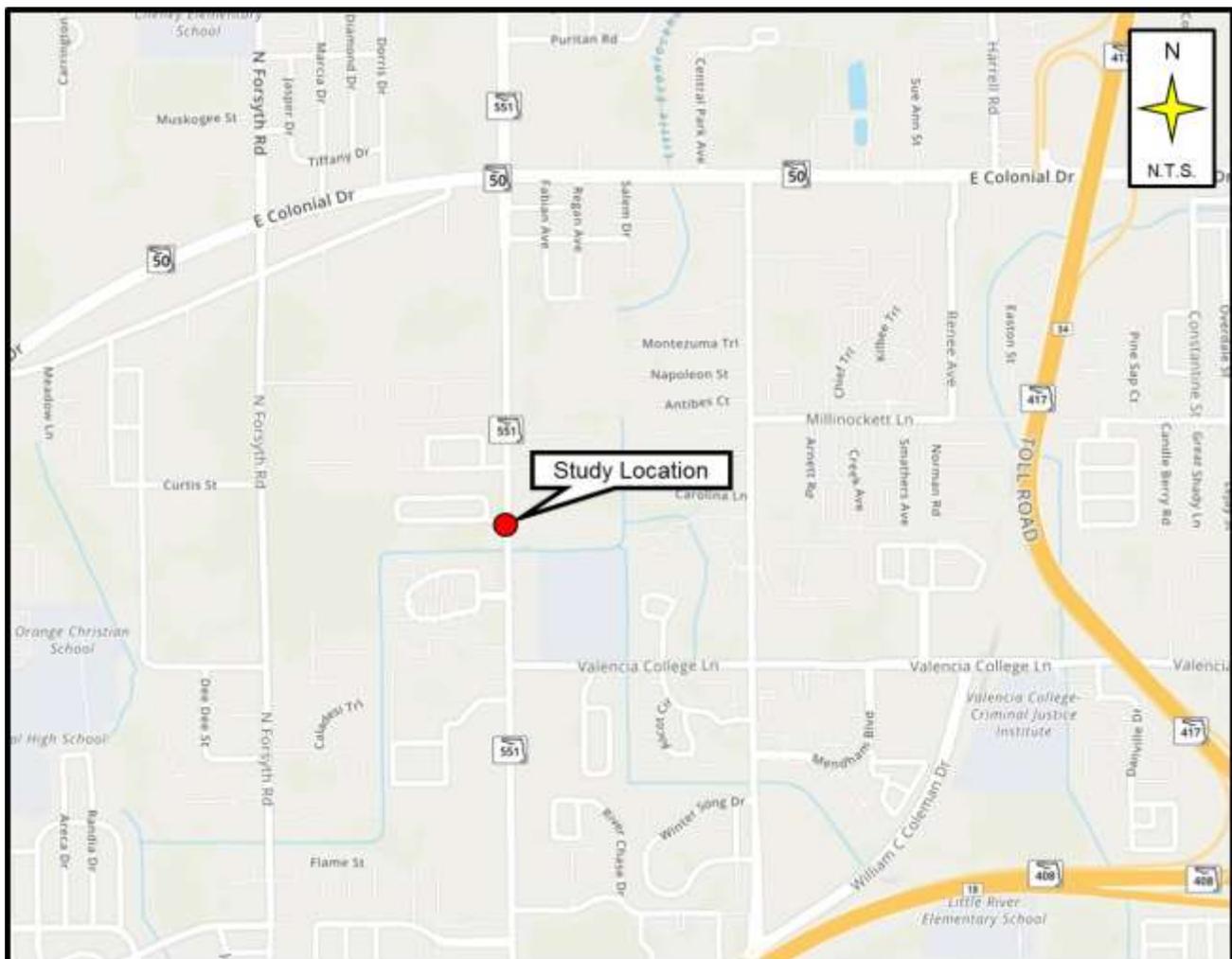
A Traffic Signal Warrant Study was conducted for the intersection of State Road (S.R.) 551 at Azalea Cove Circle located in Orlando (Orange County), Florida to determine if a traffic signal should be installed. Based on the data collected, signal warrant analysis, field observations and engineering judgment, **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.

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**.

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

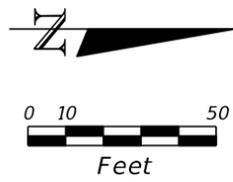


Source: Google Earth

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



RESIDENTIAL

RESIDENTIAL

ISLAMIC SOCIETY OF CENTRAL FLORIDA

ISLAMIC SOCIETY OF CENTRAL FLORIDA

S.R. 551

S.R. 551

STOP
AZALEA COVE CIRCLE
130' RIGHT TURN LANE

SPEED LIMIT 25

STOP

STOP

SCHOOL ENTRANCE

SCHOOL ENTRANCE

STOP

CENTER LANE ONLY

13.5' 12' 14' 12' 13.5'

13.5' 12' 14' 12' 13.5'

10' R

10' R

45' R

35' R

SECTION 75200 -- MP 5.731
SR 551 AT AZALEA COVE CIRCLE
ORANGE COUNTY - FLORIDA

- Symbols:
- ◆ Utility Pole
 - ⊙ Signal Pole
 - ⊠ Traffic Controller Cabinet
 - ⬮ Pedestrian Signal Pole
 - Luminaire
 - ⊞ Ditch Bottom Inlet
 - ▭ Mitered End Section

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DEPARTMENT OF TRANSPORTATION

FIGURE 3
EXISTING CONDITION DIAGRAM

PAGE NO.
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**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

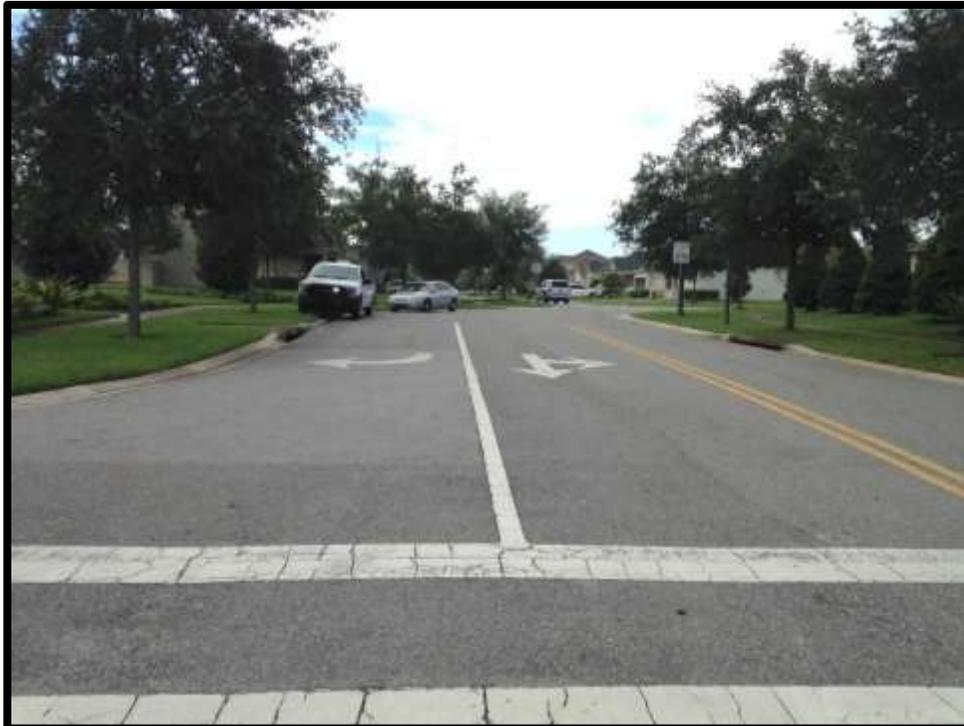


Looking North Away From Intersection

**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

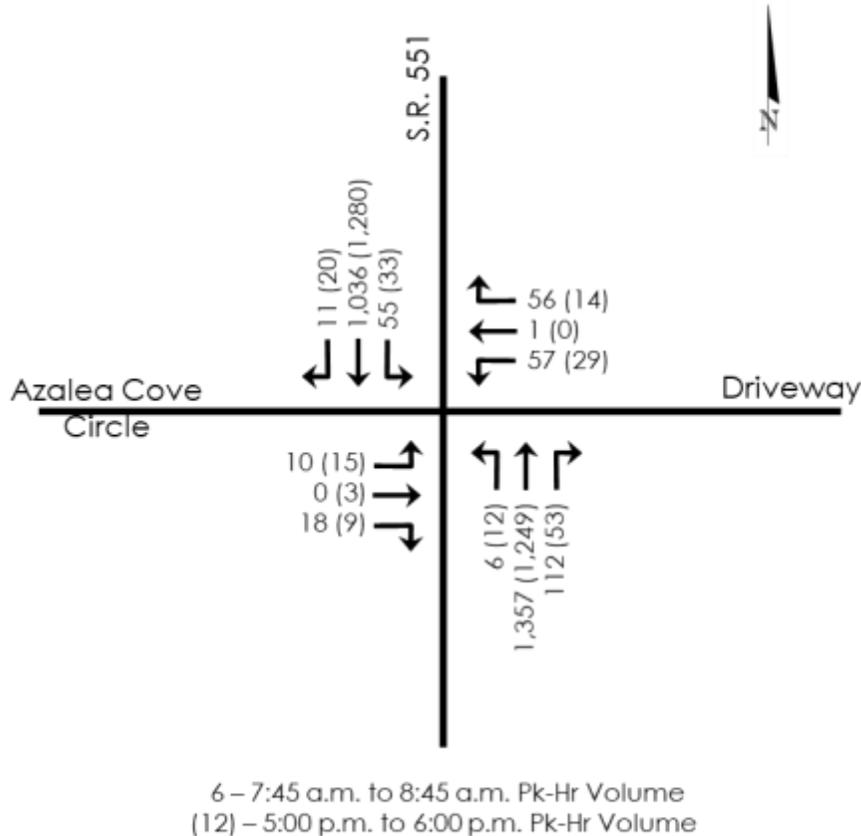
Traffic Volumes

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:

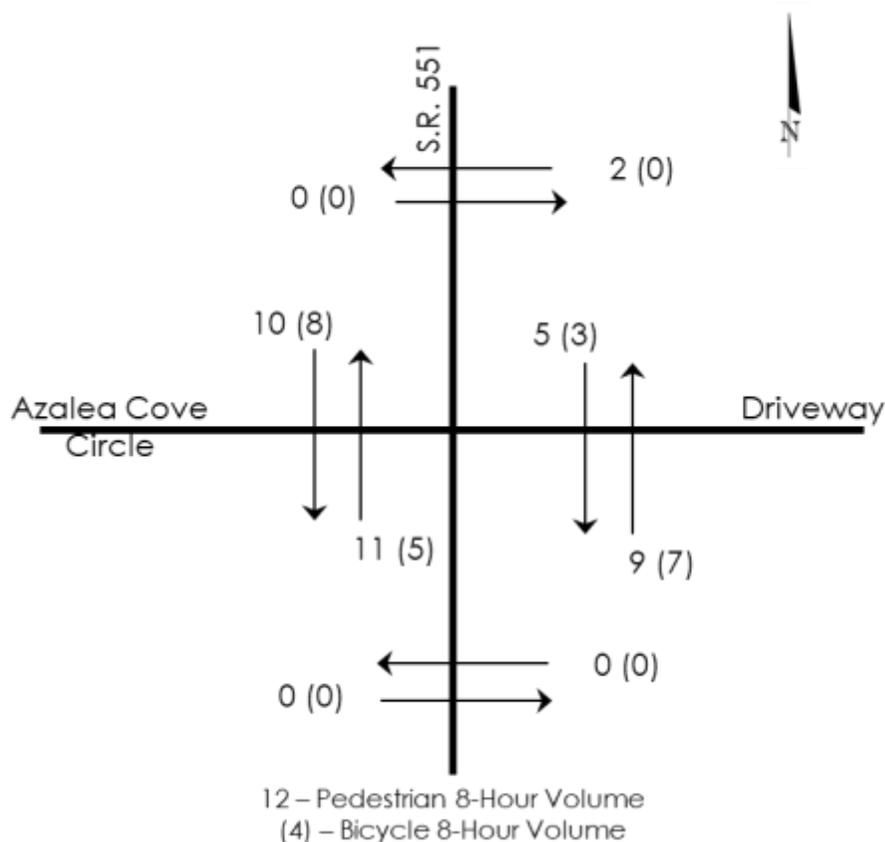
Figure 4
Summary of Peak-Hour Turning Movements
S.R. 551 at Azalea Cove Circle



- 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



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:

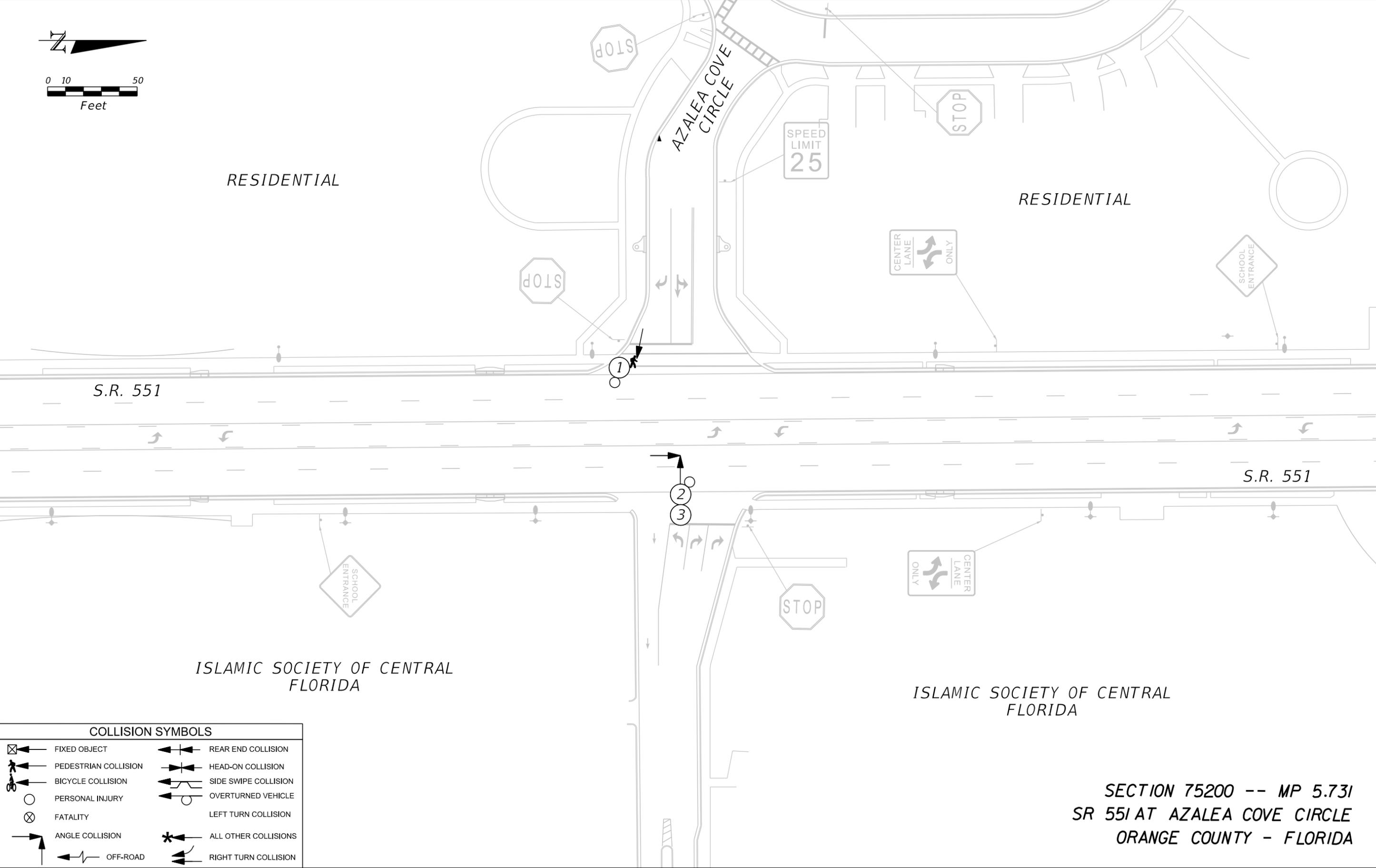
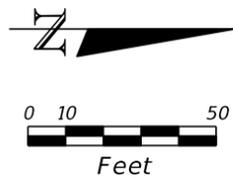
- Two (2) angle; and
 - One (1) pedestrian
-
- The crashes resulted in zero (0) fatalities, two (2) injuries, and \$29,000 in estimated property damage.
 - All three (3) crashes occurred during the day.
 - All three (3) of the crashes occurred under dry pavement conditions.
 - Two (2) angle crashes occurred 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**

FLORIDA DEPARTMENT OF TRANSPORTATION												
COLLISION SUMMARY												
Section: 75200			State Road: S.R. 551				County: Orange					
Intersecting route: Azalea Cove Circle			Milepost: 5.731				Data by: TSH					
Study period: 4/1/2017 to 3/31/2018			Date: 8/27/2018									
NO.	DATE	DAY	TIME	FATAL	INJURY	INJURY SEVERITY	PROPERTY DAMAGE	HARMFUL EVENT	DUI	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE
1	04/27/17	Thursday	13:00	0	1	2-Possible	\$0	Pedestrian	N	Day	Dry	FTYRW
2	02/02/18	Friday	14:02	0	1	2-Possible	\$15,000	Angle	N	Day	Dry	FTYRW
3	02/27/18	Tuesday	15:30	0	0	1-None	\$14,000	Angle	N	Day	Dry	FTYRW
TOTAL				0	2		\$29,000					
TOTAL NO.	Fatal	Injury	Property Damage Only	Off Road	Left-Turn	Rear-End	Pedestrian	Other	Angle	Side-Swipe	Fixed-Object	
3	0	2	1	0	0	0	1	0	2	0	0	
Percent	0%	67%	33%	0%	0%	0%	33%	0%	67%	0%	0%	
CONTRIB-CAUSE	Day	Night	Pavement Condition			FTYRW	Improper Lane Change	Medical	Careless Driving	DUI	Disregarded Traffic Control	Improper Turn
			Wet	Dry	?							
Total	3	0	0	3	0	3	0	0	0	0	0	
Percent	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	

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



COLLISION SYMBOLS			
	FIXED OBJECT		REAR END COLLISION
	PEDESTRIAN COLLISION		HEAD-ON COLLISION
	BICYCLE COLLISION		SIDE SWIPE COLLISION
	PERSONAL INJURY		OVERTURNED VEHICLE
	FATALITY		LEFT TURN COLLISION
	ANGLE COLLISION		ALL OTHER COLLISIONS
	OFF-ROAD		RIGHT TURN COLLISION

SECTION 75200 -- MP 5.731
 SR 551 AT AZALEA COVE CIRCLE
 ORANGE COUNTY - FLORIDA

Symbols:			
	Utility Pole		Signal Pole
	Traffic Sign		Pedestrian Signal Pole
	Luminaire		Traffic Controller Cabinet
			Ditch Bottom Inlet
			Mitered End Section

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FIGURE 5
 COLLISION DIAGRAM
 (04/01/17 TO 03/31/18)

Intersection Delay

Intersection delay studies were performed for the westbound approach for the Islamic Society of Central Florida driveway. Procedures from the Manual on Uniform Traffic Studies (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)
Westbound Left Turn	8:00 - 9:00 AM	4	44.0	63	2,769	0.78
	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 Manual on Uniform Traffic Control Devices (MUTCD 2009) and Manual on Uniform Traffic Studies (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.

TRAFFIC SIGNAL WARRANT SUMMARY

City: Orlando
 County: Orange

Engineer: TSH
 Date: September 6, 2018

Major Street: State Road 551
 Minor Street: Azalea Cove Circle

Lanes: 2 Critical Approach Speed: 45
 Lanes: 1

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 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable: Yes No
 Satisfied: Yes No

*Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.
 Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied.*

Condition A - Minimum Vehicular Volume

100% Satisfied: Yes No
 80% / 56% Satisfied: Yes No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours								
					1		2 or more		700	800	1300	1400	1500
	100%	70%	100%	70%									
Approach Lanes													
Volume Level													
Both Approaches on Major Street	500 (400)	350 (280)*	600 (480)	420 (336)*	2,334	2,430	2,146	2,214	2,358	2,444	2,647	2,364	
Highest Approach on Minor Street	150 (120)	105 (84)*	200 (160)	140 (112)*	9	62	10	9	57	16	29	16	

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

Applicable: Yes No
 Excessive Delay/Conflict: Yes No
 100% Satisfied: Yes No
 80% / 56% Satisfied: 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.

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets) {56% Shown in Brackets}				Eight Highest Hours								
					1		2 or more		700	800	1300	1400	1500
	100%	70%	100%	70%									
Approach Lanes													
Volume Level													
Both Approaches on Major Street	750 (600)	525 (420)*	900 (720)	630 (504)*	2,334	2,430	2,146	2,214	2,358	2,444	2,647	2,364	
Highest Approach on Minor Street	75 (60)	53 (42)*	100 (80)	70 (56)*	9	62	10	9	57	16	29	16	

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.*

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: Orlando
 County: Orange

Engineer: TSH
 Date: September 6, 2018

Major Street: State Road 551
 Minor Street: Azalea Cove Circle

Lanes: 2 Critical Approach Speed: 45
 Lanes: 1

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%

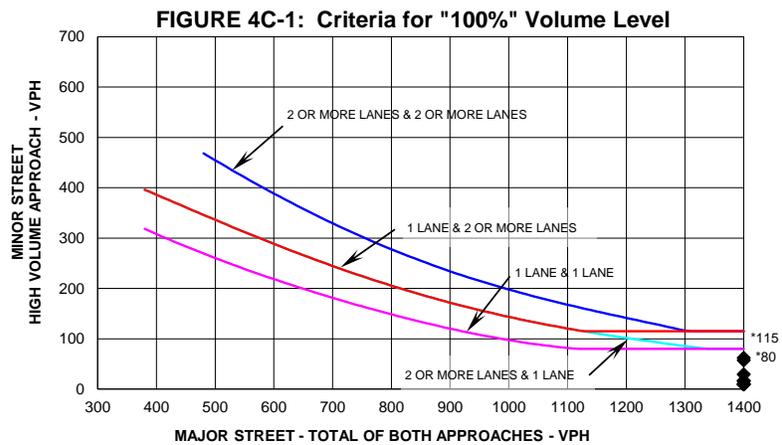
WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If any four points lie above the appropriate line, then the warrant is satisfied.

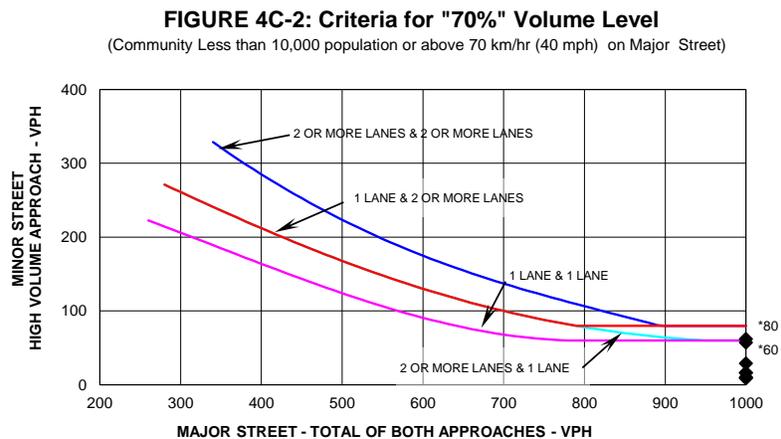
Applicable: Yes No
 Satisfied: Yes No

Plot four volume combinations on the applicable figure below.

Warranting Volumes			Met	
Hour	Major Street	Minor Street	100%	70%
700	2,334	9		
800	2,430	62		<input checked="" type="checkbox"/>
1300	2,146	10		
1400	2,214	9		
1500	2,358	57		
1600	2,444	16		
1700	2,647	29		
1800	2,364	16		



* Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.



* Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: Orlando
 County: Orange

Engineer: TSH
 Date: September 6, 2018

Major Street: State Road 551
 Minor Street: Azalea Cove Circle

Lanes: 2 Critical Approach Speed: 45
 Lanes: 1

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 3 - PEAK HOUR

If all three criteria are fulfilled or any of the plotted points lie above the appropriate line, then the warrant is satisfied.

Applicable: Yes No
 Satisfied: Yes No

Unusual condition justifying use of warrant:

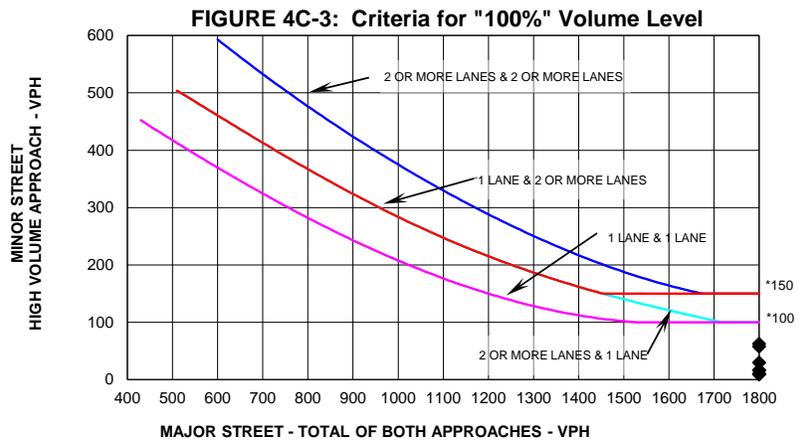
None

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

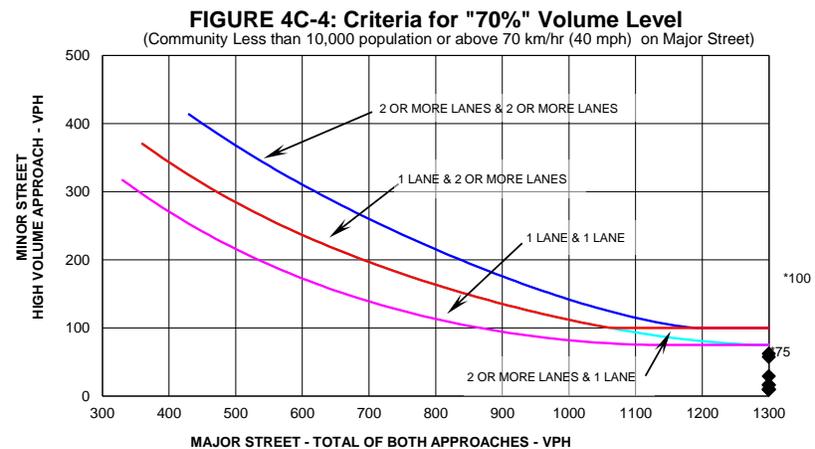
Warranting Volumes			100%	70%
700	2,334	9		
800	2,430	62		
1300	2,146	10		
1400	2,214	9		
1500	2,358	57		
1600	2,444	16		
1700	2,647	29		
1800	2,364	16		

1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.0	0.0
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	0	0
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*	0	0
Fulfilled?:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Plot volume combination on the applicable figure below.



* Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.



* Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: Orlando
County: Orange

Engineer: TSH
Date: September 6, 2018

Major Street: State Road 551
Minor Street: Azalea Cove Circle

Lanes: 2 Critical Approach Speed: 45
Lanes: 1

WARRANT 4 - PEDESTRIAN VOLUME

Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if condition 1 or 2 is fulfilled and condition 3 is fulfilled.

Applicable: Yes No
Satisfied: Yes No

Criteria	Hour	Pedestrian Volume	Pedestrian Gaps	Fulfilled?	
				Yes	No
1. Pedestrian volume crossing the major street is 100 ped/hr or more for each of any four hours <u>and</u> there are less than 60 gaps per hour in the major street traffic stream of adequate length.	700	2	0		
	800	0	0		<input checked="" type="checkbox"/>
	1500	0	0		
	1600	0	0		
2. Pedestrian volume crossing the major street is 190 ped/hr or more for any one hour <u>and</u> there are less than 60 gaps per hour in the major street traffic stream of adequate length.	700	2	0		<input checked="" type="checkbox"/>
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.				<input checked="" type="checkbox"/>	

WARRANT 5 - SCHOOL CROSSING

Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.

Applicable: Yes No
Satisfied: Yes No

Criteria			Fulfilled?	
	Yes	No	Yes	No
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students: 2	Hour: 700		<input checked="" type="checkbox"/>
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the crossing than the number of minutes in the same period.	Minutes: 0	Gaps: 0		<input checked="" type="checkbox"/>
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.			<input checked="" type="checkbox"/>	

WARRANT 6 - COORDINATED SIGNAL SYSTEM

Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft).

Applicable: Yes No
Satisfied: Yes No

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		<input checked="" type="checkbox"/>
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.	<input checked="" type="checkbox"/>	

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: Orlando
 County: Orange

Engineer: TSH
 Date: September 6, 2018

Major Street: State Road 551
 Minor Street: Azalea Cove Circle

Number of Minor Street Approach Lanes: 0
 Crossing RXR Tracks: 0
 Clear Storage Distance (D) feet: 0

Applicability Criteria

Is there a railroad grade crossing in the proximity of the intersection? Yes No

None of the conditions described in the other eight traffic signal warrants are met. Yes No

Adequate consideration has been given to other alternatives or a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing. Among the alternatives that were considered or tried are:

- A. Providing additional pavement that would enable vehicles to clear the track or that would provide space for an evasive maneuver, or Yes No
- B. Reassigning the stop controls at the intersection to make the approach across the track a non-stopping approach. Yes No

Warrant Applicable: Yes No

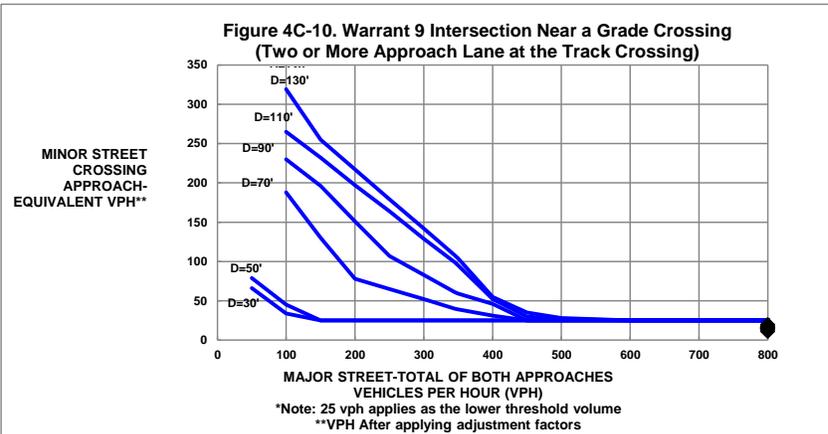
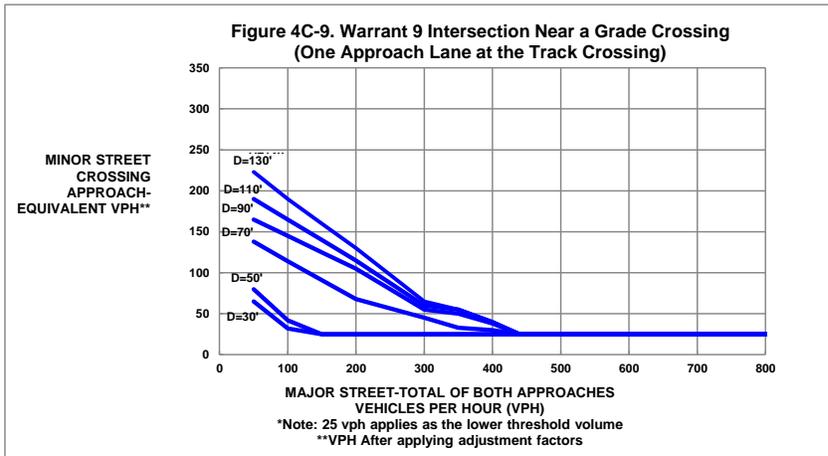
WARRANT 9 - INTERSECTION NEAR A GRADE CROSSING

If there is a railroad grade crossing on an approach controlled by a STOP or YIELD sign and the center of the track nearest the intersection is within 140 feet of the stop line or yield line on the approach, and any point lies above the appropriate line, then the warrant is satisfied.

Warrant Satisfied: Yes No

Warranting Volumes			Met	
Hour	Major Street	Minor St. Equiv.	1 LN	2 LN
800	2,217	11		
900	1,926	15		
1000	1,923	19		
1100	2,143	17		
1200	2,186	15		
1300	2,056	14		
1400	2,230	11		
1700	2,548	16		
Satisfied				

Adjustment Factor for Daily Frequency of Rail Traffic	0.67
Adjustment Factor for Percentage of High Occupancy Buses	1.00
Adjustment Factor for Percentage of Tractor-Trailer Trucks	0.50

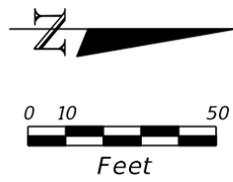


Source: 2009 MUTCD

RECOMMENDATIONS

Based on the data collected, signal warrant analysis, field observations and engineering judgment, **it is not 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.



RESIDENTIAL

RESIDENTIAL

AZALEA COVE
CIRCLE

SPEED
LIMIT
25

CENTER
LANE
ONLY

SCHOOL
ENTRANCE

S.R. 551

S.R. 551

ISLAMIC SOCIETY OF CENTRAL
FLORIDA

ISLAMIC SOCIETY OF CENTRAL
FLORIDA

CONSIDER REFRESHING THE
ARROW PAVEMENT MARKINGS

CONSIDER STRAIGHTENING
THE STOP SIGN ON EAST
APPROACH

SECTION 75200 -- MP 5.731
SR 551 AT AZALEA COVE CIRCLE
ORANGE COUNTY - FLORIDA

- ◆ Utility Pole
- Traffic Sign
- Luminaire

Symbols:

- ☒ Traffic Controller Cabinet
- ☐ Ditch Bottom Inlet

- ⊙ Signal Pole
- ⬮ Pedestrian Signal Pole
- ▭ Mitered End Section

COLLEEN T. JARRELL, P.E. PE No. 60128
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

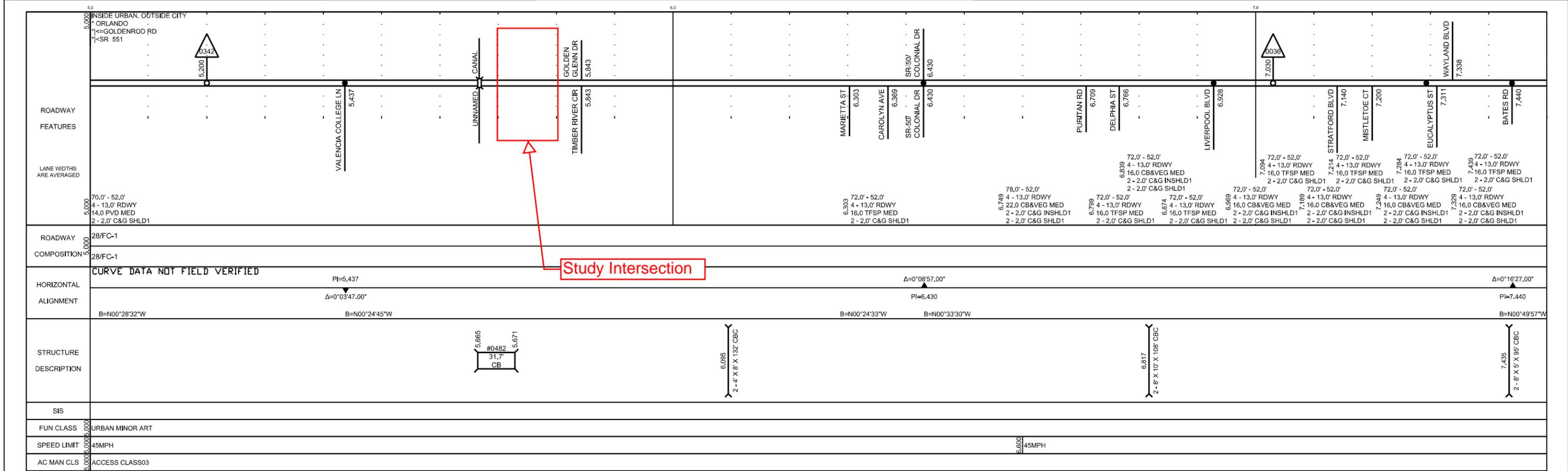
FIGURE 3
EXISTING CONDITION DIAGRAM

PAGE
NO.

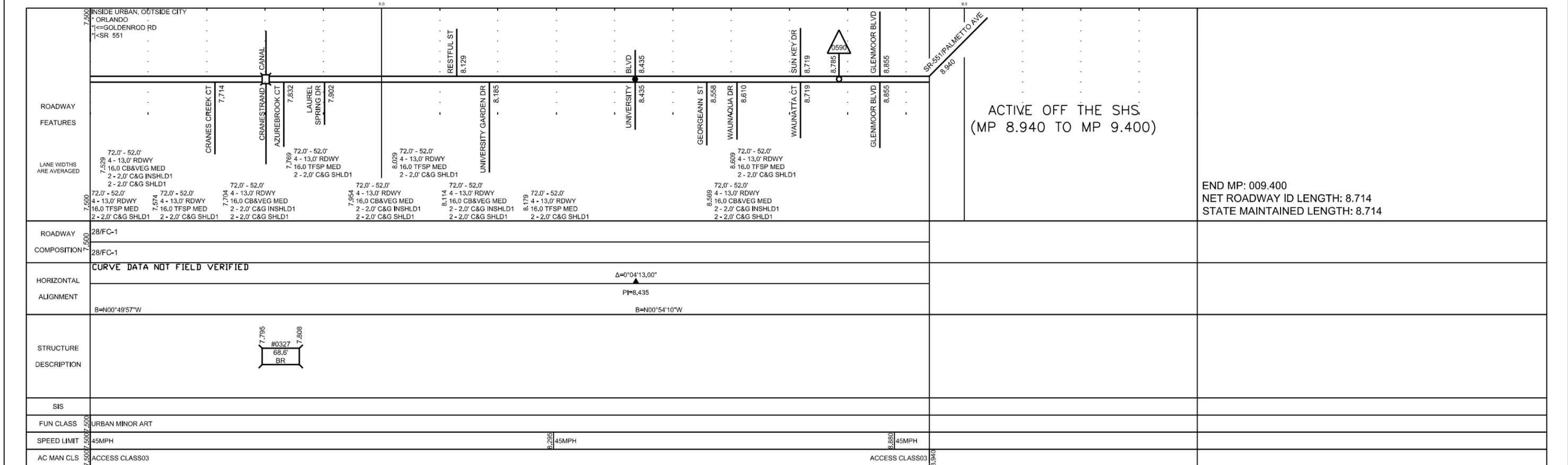
28

APPENDIX

**FLORIDA DEPARTMENT OF TRANSPORTATION
STRAIGHT LINE DIAGRAM OF ROAD INVENTORY**



Study Intersection



ACTIVE OFF THE SHS
(MP 8.940 TO MP 9.400)

END MP: 009.400
NET ROADWAY ID LENGTH: 8.714
STATE MAINTAINED LENGTH: 8.714

State Road 551 at Azalea Cove Circle

24 Hour Approach Counts (Hourly)

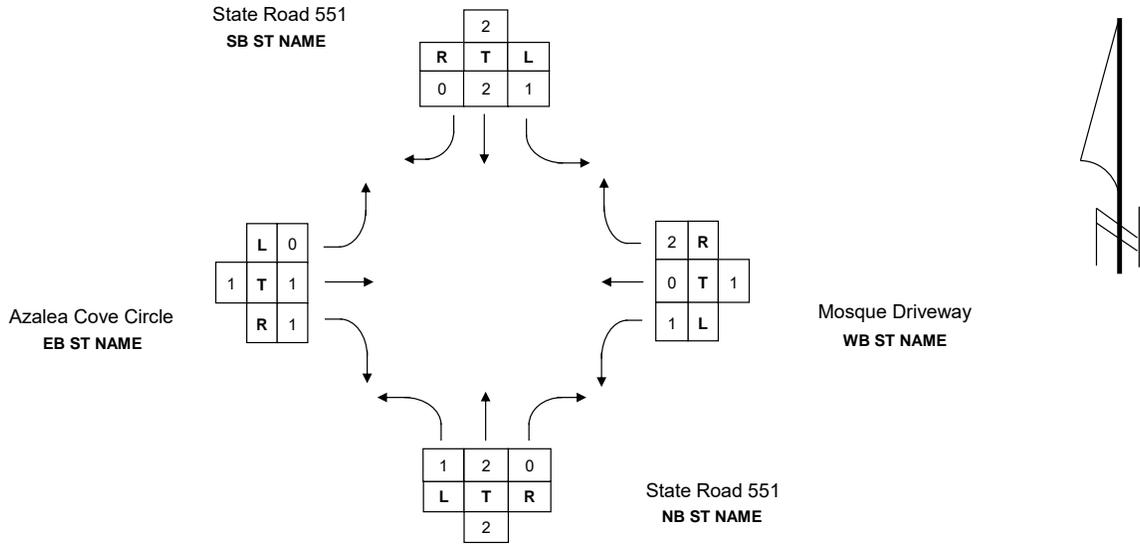
TIME	North	South	N/S TOTAL	East	West	E/W TOTAL	GRAND TOTAL
24 - 1	142	132	274	4	0	4	278
1 - 2	95	92	187	1	0	1	188
2 - 3	59	89	148	1	0	1	149
3 - 4	94	98	192	1	0	1	193
4 - 5	145	151	296	2	0	2	298
5 - 6	452	416	868	10	8	18	886
6 - 7	830	798	1628	20	32	52	1680
7 - 8	1210	1027	2237	50	39	89	2326
8 - 9	1297	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	NORTHBOUND					SOUTHBOUND					TOTAL	EASTBOUND					WESTBOUND					TOTAL
	BEGIN/END	L	T	R	U	TOT	L	T	R	U		TOT	N/S	L	T	R	U	TOT	L	T	R	
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	0	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 ROUTE Azalea Cove Circle
 OBSERVER TEDS DATE 8/28/2018

REMARKS _____

FORM COMPLETED BY TSH DATE 09/05/18

H O U R S	West side of			East side of			North side of			South side of			GRAND TOTAL
	State Road 551			State Road 551			Azalea Cove Circle			Azalea Cove Circle			
	NB	SB	TOTAL	NB	SB	TOTAL	EB	WB	TOTAL	EB	WB	TOTAL	
7:00 - 8:00	2	3	5	2	0	2	0	2	2	0	0	0	<u>9</u>
8:00 - 9:00	0	1	1	1	0	1	0	0	0	0	0	0	<u>2</u>
1:00 - 2:00	1	0	1	0	1	1	0	0	0	0	0	0	<u>2</u>
2:00 - 3:00	3	1	4	4	0	4	0	0	0	0	0	0	<u>8</u>
3:00 - 4:00	2	2	4	0	1	1	0	0	0	0	0	0	<u>5</u>
4:00 - 5:00	2	0	2	0	3	3	0	0	0	0	0	0	<u>5</u>
5:00 - 6:00	0	0	0	2	0	2	0	0	0	0	0	0	<u>2</u>
6:00 - 7:00	1	3	4	0	0	0	0	0	0	0	0	0	<u>4</u>
TOTAL	11	10	21	9	5	14	0	2	2	0	0	0	<u>37</u>



FLORIDA DEPARTMENT OF TRANSPORTATION

BICYCLE MOVEMENT SUMMARY

SECTION 75200 CITY Orlando COUNTY Orange
 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

H O U R S	West side of			East side of			North side of			South side of			GRAND TOTAL
	State Road 551			State Road 551			Azalea Cove Circle			Azalea Cove Circle			
	NB	SB	TOTAL	NB	SB	TOTAL	EB	WB	TOTAL	EB	WB	TOTAL	
7:00 - 8:00	1	2	3	0	2	2	0	0	0	0	0	0	5
8:00 - 9:00	0	1	1	3	0	3	0	0	0	0	0	0	4
1:00 - 2:00	0	1	1	0	0	0	0	0	0	0	0	0	1
2:00 - 3:00	1	1	2	0	0	0	0	0	0	0	0	0	2
3:00 - 4:00	1	1	2	2	0	2	0	0	0	0	0	0	4
4:00 - 5:00	1	1	2	2	0	2	0	0	0	0	0	0	4
5:00 - 6:00	0	1	1	0	0	0	0	0	0	0	0	0	1
6:00 - 7:00	1	0	1	0	1	1	0	0	0	0	0	0	2
TOTAL	5	8	13	7	3	10	0	0	0	0	0	0	23



Groups Printed- All Vehicles

Start Time	STATE ROAD 551 Northbound					STATE ROAD 551 Southbound					AZALEA COVE CIRCLE Eastbound					LEADERS PREPARATORY SCHOOL Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. 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
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 ***																					
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	0	248	0	267	6	1	274	5	0	1	0	6	4	1	7	0	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
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	0	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
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	0	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
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
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		2.2	96.4	1.2	0.2		47.3	2.7	50	0		49.4	0.7	49.4	0.5		
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	

Start Time	STATE ROAD 551 Northbound					STATE ROAD 551 Southbound					AZALEA COVE CIRCLE Eastbound					LEADERS PREPARATORY SCHOOL Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
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	0		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 Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM					07:30 AM					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	0.8	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 Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 01:00 PM

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	0	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 Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	01:00 PM					01:00 PM					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	0	262	3	0	0	0	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	0	267	6	1	274	5	0	1	0	6	4	1	7	0	12
Total Volume	13	1034	14	1	1062	14	1054	17	1	1086	11	1	9	0	21	9	1	12	0	22
% 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

Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

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	0	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 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	0		67.4	0	32.6	0		
PHF	.600	.916	.663	.250	.927	.688	.849	.833	.000	.854	.750	.375	.563	.000	.750	.403	.000	.700	.000	.489	.940

Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	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

Groups Printed- Heavy Trucks

Start Time	STATE ROAD 551 Northbound					STATE ROAD 551 Southbound					AZALEA COVE CIRCLE Eastbound					LEADERS PREPARATORY SCHOOL Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	6	0	0	6	0	6	0	0	6	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	0	13	0	0	13	0	32	0	2	34	0	0	0	0	0	0	0	0	0	0	47
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 PM	0	7	0	0	7	0	5	1	0	6	0	0	1	0	1	0	0	0	0	0	14
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
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	0	0	10	0	0	0	0	0	0	0	0	0	0	13
03:45 PM	0	6	0	0	6	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	15
Total	0	21	0	1	22	0	31	0	2	33	0	0	0	0	0	0	0	0	0	0	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	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	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	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
Grand Total	0	139	0	5	144	0	190	2	11	203	0	0	1	0	1	0	0	0	0	0	348
Apprch %	0	96.5	0	3.5		0	93.6	1	5.4		0	0	100	0		0	0	0	0		
Total %	0	39.9	0	1.4	41.4	0	54.6	0.6	3.2	58.3	0	0	0.3	0	0.3	0	0	0	0	0	

Groups Printed- UTurns

Start Time	STATE ROAD 551 Northbound					STATE ROAD 551 Southbound					AZALEA COVE CIRCLE Eastbound					LEADERS PREPARATORY SCHOOL Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. 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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
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	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Apprch %	100	0	0	0		0	0	0	0		100	0	0	0		0	0	0	0		
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	

Start Time	STATE ROAD 551 Northbound					STATE ROAD 551 Southbound					AZALEA COVE CIRCLE Eastbound					LEADERS PREPARATORY SCHOOL Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection 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	1
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	0	0	100	0	0	0	100	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 Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins 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	0	0	100	0	0	0	100	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 Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:15 PM

12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	

Start Time	STATE ROAD 551 Northbound					STATE ROAD 551 Southbound					AZALEA COVE CIRCLE Eastbound					LEADERS PREPARATORY SCHOOL Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins 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	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	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	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	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	0	0	0	0	0
% App. Total	100	0	0	0		0	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	.000	.000	.000	.000	.000

Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins 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	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	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	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	0	0	0	0	1
Total Volume	1	0	0	0	1	0	0	0	0	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		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	.000	.000	.000	.000	.250

Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	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	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	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	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	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	0	0	0	0	0
% App. Total	100	0	0	0		0	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	.000	.000	.000	.000	.000

File Name : DELAY 8-9AM
 Site Code : 00000000
 Start Date : 8/28/2018
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L n.	No.	Joined Queue	Released From Queue	Delay
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
2	18	8:17:03 AM	8:17:24 AM	21
2	19	8:18:02 AM	8:18:22 AM	20
2	20	8:21:57 AM	8:22:51 AM	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	8:34:34 AM	8:35:25 AM	51
2	40	8:35:06 AM	8:36:10 AM	64
2	41	8:35:18 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
2	61	8:54:36 AM	8:55:33 AM	57
2	62	8:56:10 AM	8:56:18 AM	8
2	63	8:59:13 AM	8:59:18 AM	5

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 n.	No.	Joined Queue	Released From Queue	Delay
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
2	58	3:55:27 PM	3:55:35 PM	8

File Name : DELAY 3-4PM
Site Code : 00000000
Start Date : 8/28/2018
Page No : 2

Summary Information:

3:00:00 PM - 3:56:00 PM	WB LEFT/THRU
Total Vehicle Count:	58
Delayed Vehicle Count:	58
Through Vehicle Count:	0
Average Stopped Time:	47.40
Maximum Stopped Time:	178
Min. Secs. for Delay:	0
Average Queue:	0.82
Queue Density:	2.44
Maximum Queue:	6
Delay in Vehicle Hour:	0.82
Total Delay:	2749

File Name : DELAY 5-6PM
 Site Code : 00000000
 Start Date : 8/28/2018
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L n.	No.	Joined Queue	Released From Queue	Delay
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