Traffic Impact Analysis

Dalton Learning Academy

City of Port St Lucie, Florida

Prepared For:

Dalton Learning Center and Academy

July 2025

Prepared By:

TRANS
Hazley Transportation Group

Professional Engineering Certification

I hereby certify that I am a registered professional engineer in the State of Florida, practicing with Hazley and Associates, Inc, a corporation authorized to operate as an engineering business, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby reported for:

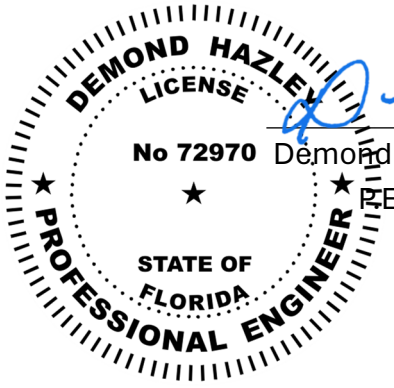
Project: Dalton Learning Academy

Location: City of Port St Lucie, FL

Client: Dalton Learning Center dba Port St Lucie Christian Academy

Project Number: 25013.01

I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.



Demond Hazley, P.E.
P.E. No: 72970
7/8/25

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Introduction

Hazley Transportation Group (H-Trans) has been retained by Dalton Learning Academy to prepare a Traffic Impact Analysis (TIA). The purpose of this study is to fulfill the requirements set forth by the City of Port St Lucie, Florida. The analysis quantifies both the existing traffic conditions along the area roadways surrounding the site, the projected future traffic conditions expected for the Build condition, and the driveway and school internal circulation. This document provides a detailed description of the study analysis and key findings.

Project Description

The project site is located at 10011 S Federal Highway (US-1), within the Town Center MUPD, approximately 1.4 miles north of SE Port St. Lucie Boulevard in the City of Port St. Lucie, Florida. **Figure 1** illustrates the site's location, and the site plan is provided in **Appendix A**. Identified by Parcel ID: 4401-701-0001-000-2, the property currently includes the City Church of the Treasure Coast (14,168 sq. ft.) and a private K–12 school (I Am Academy), which currently serves approximately 20 students. Both uses operate within a 45,000 sq. ft. building. The proposed project involves replacing the existing K–12 school with a new private K–8 school, Dalton Learning Academy, which will serve up to 200 students. Access to the site is provided via a right-in/right-out driveway on US-1. Cross-access is provided to the Port St. Lucie Town Centre located south of the project site. **Figure 2** shows an aerial view of the existing right-in / right-out driveway, which includes a dedicated 240-foot right-turn lane, and the cross access to the Town Centre.

Project buildout is anticipated in 2025, with no major construction required, as the new school will operate within the existing building footprint.

Study Procedures

Standard engineering and planning procedures were used to determine the impact of the proposed project. Reference data was obtained from the Florida Department of Transportation (FDOT), the City of Port St Lucie, Saint Lucie County, Institute of Transportation Engineers (ITE), and the Saint Lucie Transportation Planning Organization (TPO).

Figure 1 – Site Location Map

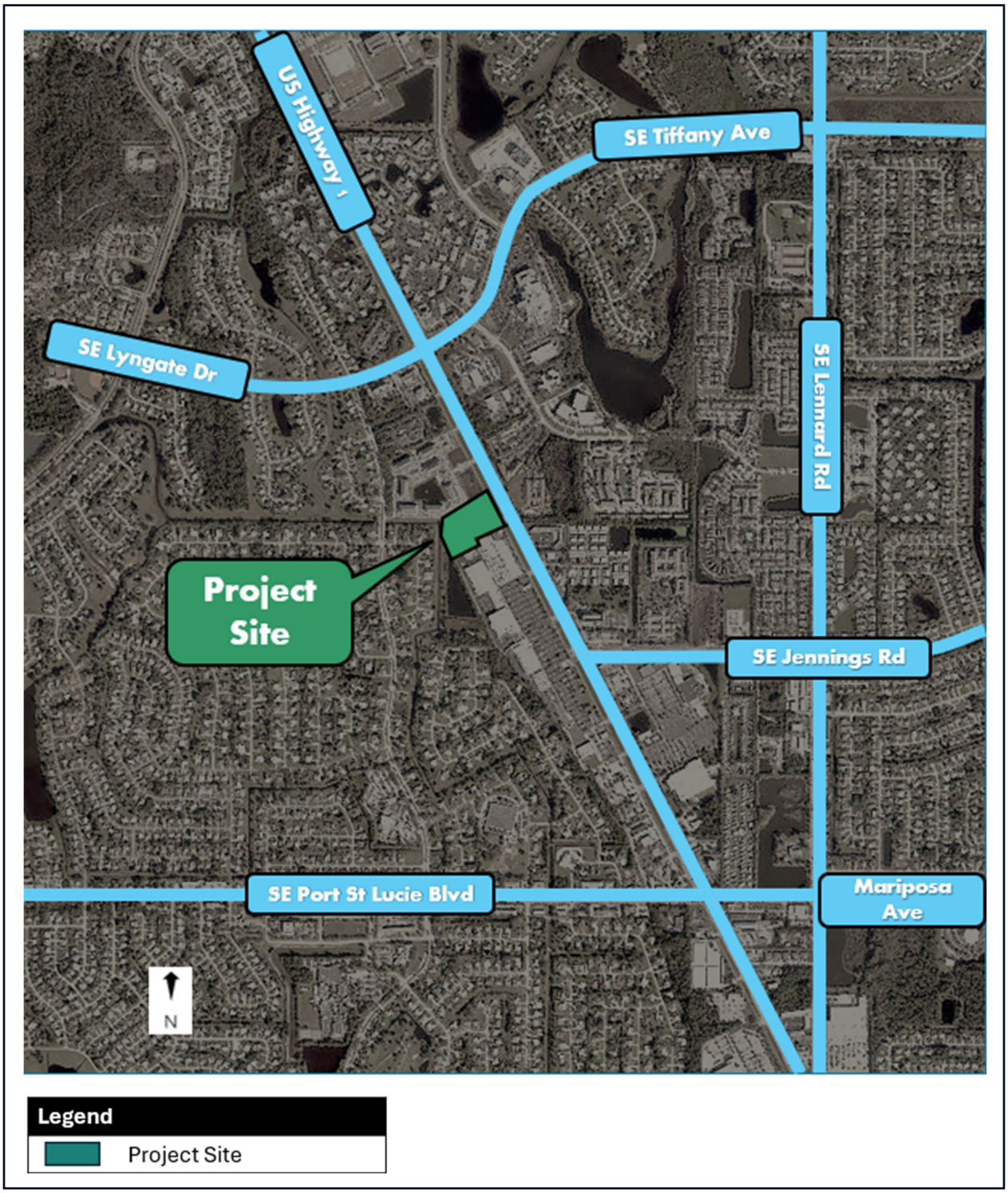


Figure 2 – Project Access

Trip Generation

The daily and peak hour trips were calculated based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. As shown in **Table 1**, ITE Land Use Codes 560 (Church), 532 (Private School K-12) and 530 (Private School K-8), were deemed the most appropriate for the existing and proposed development. The existing uses are estimated to generate 158 daily external trips, 21 (13 in, 8 out) AM peak hour external trips, and 18 (8 in, 10 out) PM peak hour external trips. The proposed uses are estimated to generate 930 daily external trips, 207 (116 in, 91 out) AM peak hour external trips, and 127 (59 in, 68 out) PM peak hour external trip for the build out conditions. The proposed changes are estimated to generate 772 new daily external trips, 186 (103 in, 83 out) new AM peak hour external trips, and 109 (51 in, 58 out) new PM peak hour external trip for the build out conditions.

Table 1 – Trip Generation Summary

ITE				Daily			AM Peak Hour (1)			PM Peak Hour (1)		
Code	Land Use	Size	Unit	Total	In	Out	Total	In	Out	Total	In	Out
Existing Uses												
532	Private School (K-12)	20	Students	50	25	25	16	10	6	11	5	6
560	Church	14,168	SF	108	54	54	5	3	2	7	3	4
Total Existing Trips				**158**	**79**	**79**	**21**	**13**	**8**	**18**	**8**	**10**
Proposed Uses												
530	Private School (K-8)	200	Students	822	411	411	202	113	89	120	56	64
560	Church	14,168	SF	108	54	54	5	3	2	7	3	4
Total Proposed Trips				**930**	**465**	**465**	**207**	**116**	**91**	**127**	**59**	**68**
Net New Trips				**772**	**386**	**386**	**186**	**103**	**83**	**109**	**51**	**58**

(1) Trip generation rates for the AM and PM peak hour of generator were used for ITE Land Use Codes 530 and 532 to provide a conservative analysis

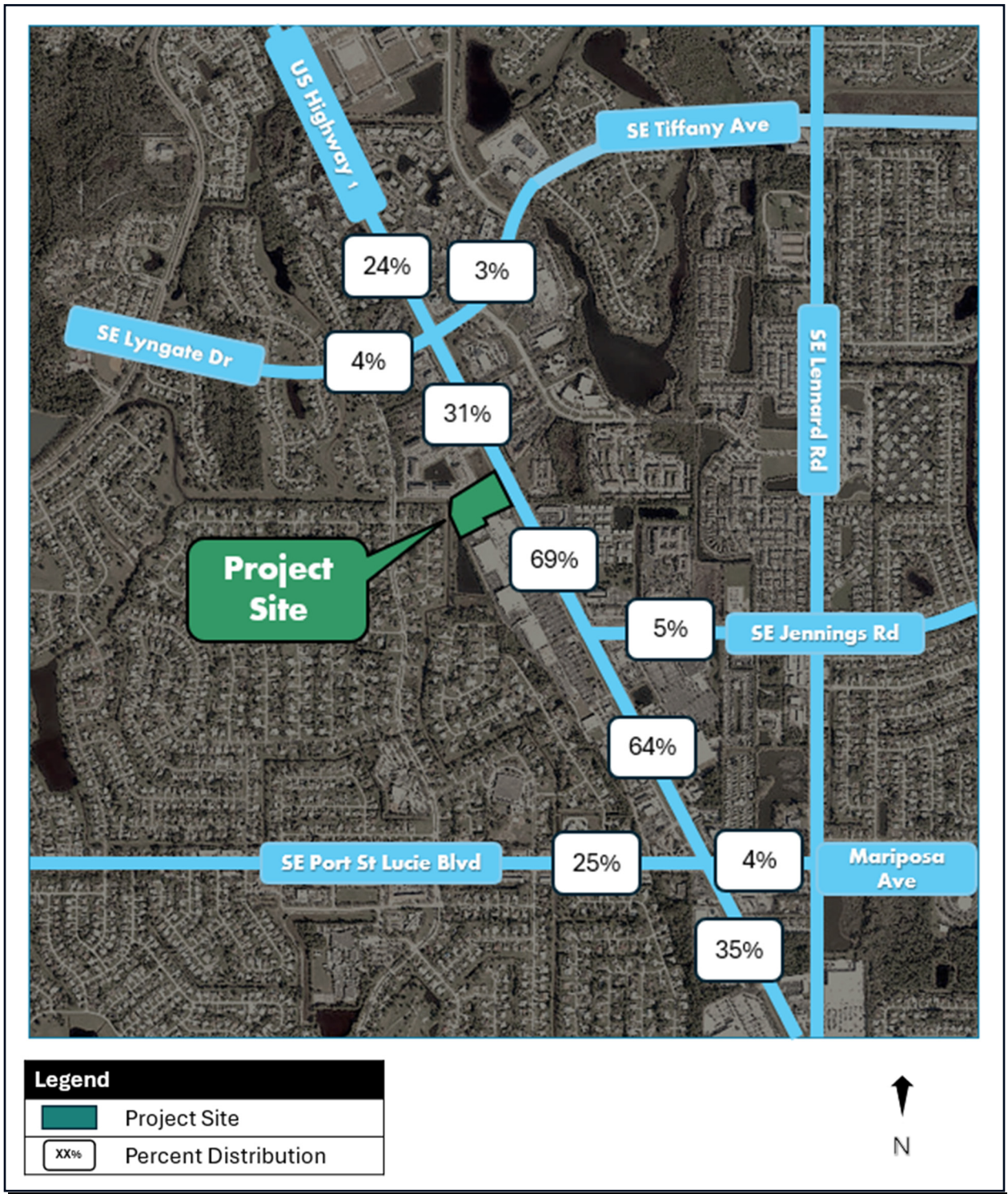
Source: ITE Trip Generation Manual, 11th Edition

The corresponding ITE Trip Generation summaries can be found in **Appendix B.**

Project Traffic Distribution

The project's trip distribution pattern was based on existing daily traffic volumes for major roadways within a mile radius and the location of the site with respect to surrounding residential neighborhoods, generators, and attractions. The project distribution is illustrated in **Figure 3.**

Figure 3 – Project Distribution Map



Access and Internal Traffic Circulation

The primary access for the project site is a right-in/right-out driveway located on US-1, which also functions as the northern access point for the adjacent Port St. Lucie Town Centre. Ingress and egress traffic to/from the project site will utilize existing U-turn locations along US-1. These U-turns are accommodated at designated locations both north and south of the site, where exclusive U-turn lanes with adequate storage capacity are currently in place.

To reduce the need for U-turn maneuvers on US 1 and enhance overall traffic safety and operational efficiency, the following strategies will be implemented:

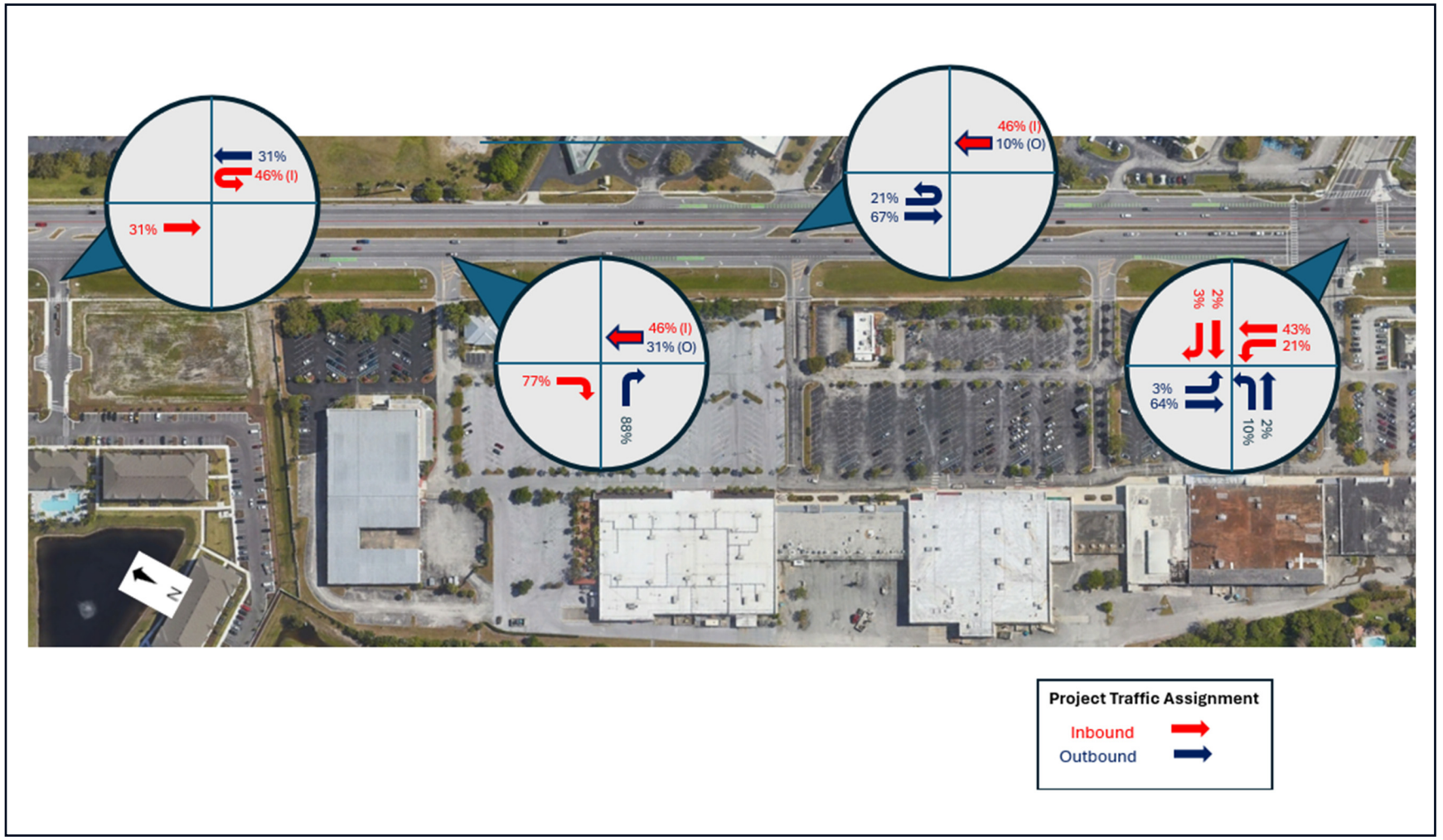
- Directional signage will be posted at both the school and church property exit to inform drivers that US 1 northbound can be accessed either via the designated turnaround point south of the school or through the signalized intersection at Jennings Road.
- Parent communication will emphasize using the designated turnaround point north of the school for safe U-turns, if necessary, and alternate routes for accessing US 1 from side streets.

This controlled flow helps prevent congestion and ensures a safe and efficient dismissal process. Additional details for the above-mentioned strategies can be found in the Operational Management Plan included in Appendix C.

Project Traffic Assignment

The projected site-generated traffic volumes were assigned to the surrounding roadway network based on the established directional distribution. Most of the site traffic will enter and exit via the right-in/right-out driveway from southbound US-1 (77% inbound/88% outbound). Approximately two-thirds of motorists traveling to the north exiting the site are expected to utilize the designated U-turn location south of the project (21% outbound). However, as outlined in the previous section, outbound drivers with a destination to the north will be encouraged to use the signalized intersection at Jennings Road (10% outbound), helping to reduce volumes at the site's primary access point. Similarly, approximately two-thirds of the vehicles approaching from the south are anticipated to use the U-turn located north of the site to access the project driveway (46% inbound). A smaller portion of these motorists (23% inbound) may utilize the Jennings Road intersection and the Port St. Lucie Town Centre network to arrive to the site. The resulting traffic assignment is illustrated in **Figure 4**.

Figure 4 – Project Traffic Assignment



Study Area

Based on the St Lucie Transportation Planning Organization (TPO) Standardized Traffic Impact Studies (TIS) Methodology and Procedures, the area of influence is defined as either:

- Any Road Segment to which development traffic makes its first connection to the Major Road Network, provided the development traffic consumes one percent or more of the existing or committed two-way peak-hour service capacity, or.
- Major Road Segment on which the two-way peak-hour project traffic consumes 5 (five) percent or more of the existing or committed two-way peak-hour service capacity.

As shown in **Table 2**, the development-generated traffic accounts for less than 5% of the two-way peak hour capacity on the directly accessed segment of US 1, between Jennings Road and Tiffany Avenue. Therefore, no additional roadway segments are included in the study area.

Table 2 – Study Roadway Segments

Station ID	Segment	Functional Classification	Lanes	LOS Std	Two Way Peak Hour Capacity	Project Traffic			Significant Impact?
						Dist %	Volume	Significance	
US 1									
945070	Jennings Rd to Tiffany Ave	Principal Arterial Other	6	E	4,870	100%	207	4.3%	N

Note: LOS standard obtained from the City of Port St. Lucie Transportation Element

Existing Roadway Capacity Analysis

Roadway traffic volumes were obtained from turning movement counts collected on June 19, 2025 during the AM (7:00-9:00AM) and PM (4:00-6:00PM) peak period at the intersections of US 1 with the right-in / right-out project driveway and US 1 at S Jennings Road. These counts were adjusted using their corresponding peak seasonal factor (1.20) to reflect peak season average conditions. A copy of the data collected and seasonal factors from FDOT Florida Traffic Online reports are found in **Appendix D**.

An assessment was conducted to determine the existing level of service of the study roadways. The level of service (LOS) of a given roadway is related to prevailing traffic volumes and to capacity, which is defined as the maximum number of vehicles that can pass through

a roadway section during a specified period. The capacity of a roadway is determined by several factors including composition of traffic (cars, buses, and trucks); roadway alignment; width and number of lanes; posted travel speeds and other variables.

The LOS and remaining capacity for the study roadway was determined based on the 2023 QLOS General Service Volumes. The existing roadway capacity analysis was performed for US 1 from Jennings Road to Tyffany Avenue as shown in **Table 3**. In summary, the study roadway operates at an acceptable LOS in the existing conditions during both the AM peak and PM peak periods.

Table 3 – Year 2025 Existing Roadway Capacity Analysis – Two Way Peak Hour

Station ID	Segment	Lanes	LOS Std	Peak Hour Capacity	AM Peak			PM Peak		
					Volume	LOS	Remain.	Volume	LOS	Remain.
US 1										
945070	Jennings Rd to Tiffany Ave	6	E	4,870	2,962	C	1,908	4,054	C	816

Existing Intersection Capacity Analysis

The existing intersections were evaluated using the methodology outlined in the Highway Capacity Manual (HCM) and using the Synchro 12.0 software. The HCM 2000 methodology was utilized for the signalized intersection of US 1 at Jennings Road because HCM 7th Edition methodology does not support turning movements with shared and exclusive lanes. A peak seasonal factor of (1.20) was applied to the existing counts. The intersection traffic volume derivation can be found in **Appendix E**. The results of the intersection capacity analysis for the AM and PM peak hours are shown in **Table 4**. The existing HCM intersection report printouts are provided in **Appendix F**. As seen in **Table 4,** both study intersections operate at an acceptable overall LOS with no v/c movements exceeding 1.0 in the existing conditions.

Table 4 – Existing Year 2025 Intersection Capacity Analysis

Intersection	Type	Approach	Approach Delay (s/veh)		Level of Service	
			AM	PM	AM	PM
US 1 at Project Entrance	Unsignalized (TWSC)	EB	23.4	21.1	C	C
		NB	0.0	0.0	-	-
		SB	0.0	0.0	-	-
		Overall	**0.1**	**0.1**	**-**	**-**
US 1 at SE Jennings Rd/Plaza Entrance	Signalized	EB	72.0	74.6	E	E
		WB	67.0	73.5	E	E
		NB	26.8	42.6	C	D
		SB	21.6	30.6	C	C
		Overall	**29.4**	**41.7**	**C**	**D**

Note: All intersection movements are anticipated to operate with a v/c < 1.0

Future Conditions

The proposed development program changes are anticipated to be completed in the year 2025. However, consistent with the St. Lucie TPO Standardized TIS Methodology and Procedures, future condition analysis was performed for a buildout year 2028 (minimum of three years from existing conditions). The future background traffic was developed based on growth rates derived from historic AADTs with a minimum of 2.5%.

Additionally, the anticipated number of trips generated from the development were calculated based on the trip generation rates/equations obtained from the ITE Trip Generation Manual, 11th Edition and distributed to the roadways and intersections based on site layout and trip distribution. The intersection volume derivation is documented in **Appendix E**. Historical trend analysis data is included in **Appendix G**.

2028 Future Roadway Capacity Analysis

The future capacity analysis for the study area roadway for the project build out can be found in Table 5 for the AM and PM peak hour conditions. The analysis shows that the study roadway will continue to operate with an acceptable LOS in the year 2028 build out condition.

Table 5 – Future Year 2028 Roadway Capacity Analysis

US 1 from Jennings Rd to Tiffany Ave

Peak Period	Lanes	LOS Std	Peak Hour Capacity	Existing Peak Hr Volume	Growth Rate	YR 2028 Background Peak Hr Volume	Project Traffic		YR 2028 Total Traffic		
							Dist %	Volume	Volume	LOS	Remain. Cap
AM Peak Hour	6	E	4,870	2,962	2.5%	3,184	100%	207	3,391	C	1,479
PM Peak Hour	6	E	4,870	4,054	2.5%	4,358	100%	127	4,485	D	385

Future Intersection Capacity Analysis

To determine the operational conditions at the study area intersections, intersections were evaluated for the AM peak hour and PM peak hour conditions using Synchro 12 software (HCM methodology). The HCM 2000 methodology was utilized for the signalized intersection of US 1 at Jennings Road because HCM 7th Edition methodology does not support turning movements with shared and exclusive lanes. The future intersection volumes can be seen in **Appendix E**.

2028 Future Background Capacity Analysis

The results of the future background intersection capacity analysis are shown in **Table 6**. The future HCM reports are provided in **Appendix F**. As **Table 6** indicates, both intersections operate at an acceptable overall LOS with all individual movement v/c ratios lower than 1.0 in the future background conditions.

Table 6 – Future Background Year 2028 Intersection Capacity Analysis

Intersection	Type	Approach	Approach Delay (s/veh)		Level of Service[1]	
			AM	PM	AM	PM
US 1 at Project Entrance	Unsignalized (TWSC)	EB	26.0	23.2	D	C
		NB	0.0	0.0	-	-
		SB	0.0	0.0	-	-
		Overall	**0.1**	**0.1**	**-**	**-**
US 1 at SE Jennings Rd/Plaza Entrance	Signalized	EB	72.5	74.4	E	E
		WB	67.2	75.4	E	E
		NB	29.6	46.7	C	D
		SB	23.0	35.0	C	C
		Overall	**31.0**	**45.6**	**C**	**D**

Note: All intersection movements are anticipated to operate with a v/c < 1.0

2028 Future Buildout Capacity Analysis

The results of the future buildout intersection capacity analysis are shown in **Table 7**. The future HCM reports are provided in **Appendix F**. As **Table 7** indicates, both intersections

operate at an acceptable overall LOS with all individual movement v/c ratios lower than 1.0 in the future buildout conditions.

Table 7 – Future Buildout Year 2028 Intersection Capacity Analysis

Intersection	Type	Approach	Approach Delay (s/veh)		Level of Service[1]	
			AM	PM	AM	PM
US 1 at Project Entrance	Unsignalized (TWSC)	EB	45.5	31.3	E	D
		NB	0.0	0.0	-	-
		SB	0.0	0.0	-	-
		Overall	**1.2**	**0.5**	**-**	**-**
US 1 at SE Jennings Rd/Plaza Entrance	Signalized	EB	68.6	74.8	E	E
		WB	67.4	76.5	E	E
		NB	32.5	47.9	C	D
		SB	27.2	37.2	C	D
		Overall	**34.2**	**47.2**	**C**	**D**

Note: All intersection movements are anticipated to operate with a v/c < 1.0

Gap Analysis

A vehicle gap size study was conducted to determine the size and number of acceptable gaps in the southbound traffic stream on US 1 required for vehicles making a right turn from a right-in/right-out driveway, crossing three lanes of through traffic, and entering a median opening to perform a U-turn and travel north. The study was conducted during the AM and PM peak periods.

For vehicles to safely complete this maneuver—turning right from the side street, crossing multiple lanes, and reaching the U-turn location—a sufficient gap in the major roadway traffic stream must be present. According to the AASHTO Green Book, the typical critical gap time for a passenger vehicle turning right from a stop is approximately 6.5 seconds. To account for the additional time needed to traverse multiple lanes, the analyst assumed an extra 1.0 second per lane crossed. Therefore, for a vehicle to cross three lanes and reach the median opening, a minimum acceptable gap of 9.5 seconds is required.

As shown in **Table 8**, the results of the gap size study indicate that during both the AM and PM peak hours, the number and size of available gaps are sufficient to accommodate this maneuver under normal traffic flow conditions. The gap study forms can be found in **Appendix H**.

Table 8 – Vehicle Gap Size Summary – US 1 Southbound

US 1 at RI/RO Entrance	8:00 AM – 9:00 AM	4:45 PM – 5:45 PM
Number of Gaps ≥ 9.5	79	81
SB to NB U-Tuns	19	14

Drop Off / Pick Up Operations

The school will implement a structured daily schedule to ensure efficient and safe drop-off and pick-up operations. Morning drop-off begins with the before-care program from 7:00 to 8:00 AM, followed by the general drop-off period for all grades between 8:00 and 8:30 AM. Afternoon dismissal is staggered from 2:45 to 3:30 PM to help manage traffic flow, with after-care services continuing until 5:30 PM.

Student transportation will be divided among three main modes. Approximately 50% of students, or 100 in total, will arrive by bus or shuttle. Another 15% (30 students) will be dropped off by parents using the before- or after-care program, while the remaining 35% (70 students) will use the general car line for daily drop-off and pick-up.

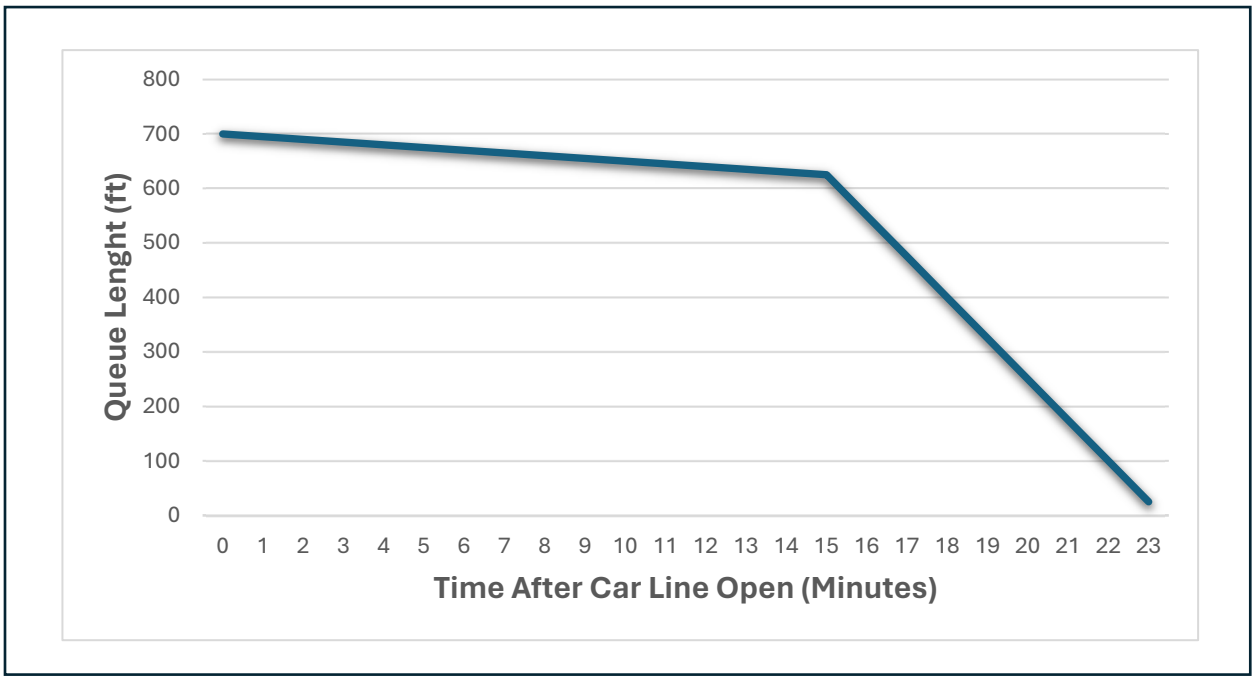
To support these operations, the site provides approximately 1,315 feet of internal vehicle queue storage, with 655 feet around the school building and an additional 660 feet within the northern parking area. This layout is designed to efficiently manage vehicle queues during peak traffic periods.

Drop-off and pick-up operations are based on several key assumptions. Parents using before- or after-care services are expected to park and walk their children into or out of school. For general drop-off and pick-up, 70 vehicles—each carrying one student—are anticipated. Of these, 40% (28 vehicles) are expected to arrive early, forming a queue approximately 700 feet long (25 feet per vehicle). The remaining 60% (42 vehicles) are expected to arrive within the next 15 minutes at a rate of 2.8 vehicles per minute. The

designated drop-off zone measures 60 feet in length, accommodates two vehicles at a time, and operates at a clearance rate of three vehicles per minute (40 seconds per vehicle).

As illustrated in **Figure 5**, the longest vehicle queue will occur before the car line opens, peaking at 28 vehicles or 700 feet. This queue is projected to fully clear within 23 minutes.

Figure 5 – Queue Build Up During Pick-Up / Drop Off



In conclusion, with a total queue storage capacity of 1,315 feet, the site is well-equipped to handle this peak volume without causing any spillback onto US-1. Additional details on the pick up/drop off operations can be seen in the OMP included in **Appendix C**.

Conclusions

This traffic analysis has been prepared based on the requirements set forth by the City of Port St Lucie in support of the proposed Dalton Learning Academy located at 10011 S Federal Highway (US-1), Port St. Lucie, Florida. The following are the key findings of the analysis:

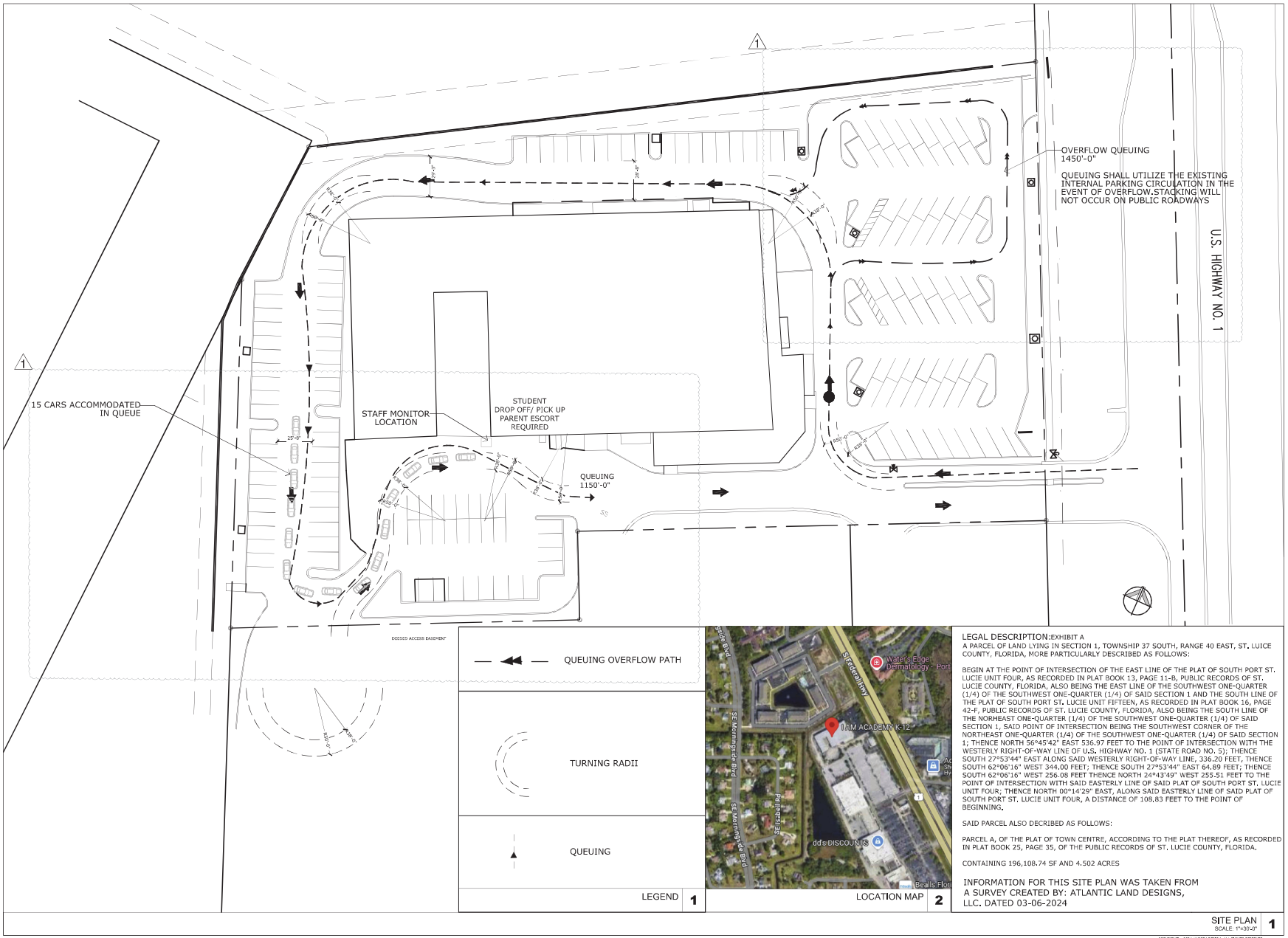
- The existing roadway analysis shows all study roadways operate at an acceptable LOS.

- The existing intersection capacity analysis shows both study intersections operate at acceptable LOS and v/c in the existing conditions.
- The 2028 future conditions analysis shows that all study roadways will continue to operate with an acceptable LOS in the build out condition.
- The 2028 future intersection capacity analysis shows that all intersections will continue to operate at acceptable LOS and v/c in the build out conditions.
- During both the AM and PM peak hours, the number and size of available gaps along US 1 (southbound) are sufficient to accommodate right turns out of the site that want to make a U-Turn to travel north under normal traffic-flow conditions.
- With a total queue storage capacity of 1,315 feet, the site is well-equipped to handle a maximum queue of 700 feet during the drop-off/ pick up operations without causing any spillback onto US-1.

Based on the analysis provided within this report, the Applicant respectfully requests transportation concurrency approval for the proposed development.

Appendix “A”

Site Plan



LEGAL DESCRIPTION:EXHIBIT A

A PARCEL OF LAND LYING IN SECTION 1, TOWNSHIP 37 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE POINT OF INTERSECTION OF THE EAST LINE OF THE PLAT OF SOUTH PORT ST. LUCIE UNIT FOUR, AS RECORDED IN PLAT BOOK 13, PAGE 11-B, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, ALSO BEING THE EAST LINE OF THE SOUTHWEST ONE-QUARTER (1/4) OF THE SOUTHWEST ONE-QUARTER (1/4) OF SAID SECTION 1 AND THE SOUTH LINE OF THE PLAT OF SOUTH PORT ST. LUCIE UNIT FIFTEEN, AS RECORDED IN PLAT BOOK 16, PAGE 42-F, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, ALSO BEING THE SOUTH LINE OF THE NORHEAST ONE-QUARTER (1/4) OF THE SOUTHWEST ONE-QUARTER (1/4) OF SAID SECTION 1, SAID POINT OF INTERSECTION BEING THE SOUTHWEST CORNER OF THE NORTHEAST ONE-QUARTER (1/4) OF THE SOUTHWEST ONE-QUARTER (1/4) OF SAID SECTION 1; THENCE NORTH 56°45'42" EAST 536.97 FEET TO THE POINT OF INTERSECTION WITH THE WESTERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 1 (STATE ROAD NO. 5); THENCE SOUTH 27°53'44" EAST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, 336.20 FEET, THENCE SOUTH 62°06'16" WEST 344.00 FEET; THENCE SOUTH 27°53'44" EAST 64.89 FEET; THENCE SOUTH 62°06'16" WEST 256.08 FEET THENCE NORTH 24°43'49" WEST 255.51 FEET TO THE POINT OF INTERSECTION WITH SAID EASTERLY LINE OF SAID PLAT OF SOUTH PORT ST. LUCIE UNIT FOUR; THENCE NORTH 00°14'29" EAST, ALONG SAID EASTERLY LINE OF SAID PLAT OF SOUTH PORT ST. LUCIE UNIT FOUR, A DISTANCE OF 108.83 FEET TO THE POINT OF BEGINNING.

SAID PARCEL ALSO DECRIBED AS FOLLOWS:

PARCEL A, OF THE PLAT OF TOWN CENTRE, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 25, PAGE 35, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 196,108.74 SF AND 4.502 ACRES

INFORMATION FOR THIS SITE PLAN WAS TAKEN FROM A SURVEY CREATED BY: ATLANTIC LAND DESIGNS, LLC. DATED 03-06-2024

SITE PLAN 1
SCALE: 1"=30'-0"

MADSEN DESIGN
- Architects
- Planners
- Interior Design

220 NE 11th St.
Boca Raton FL 33432
P: 561-353-8046

416 SE 5th St.
Delray Beach FL 33483
P: 561-713-0761

GREG MADSEN - AR92411

DALTON LEARNING CENTER

10011 S. US HWY
Port Saint Lucie, FL 34952

SUBMITTALS:

	COMMENT RESPONSE	06-04-2025

QUEUING AND RADII SITE PLAN

SP1

PROJECT NUMBER: 25-009

Appendix “B”

ITE Trip Generation Summaries

Private School (K-8)
(530)

Vehicle Trip Ends vs: **Students**
On a: **Weekday**

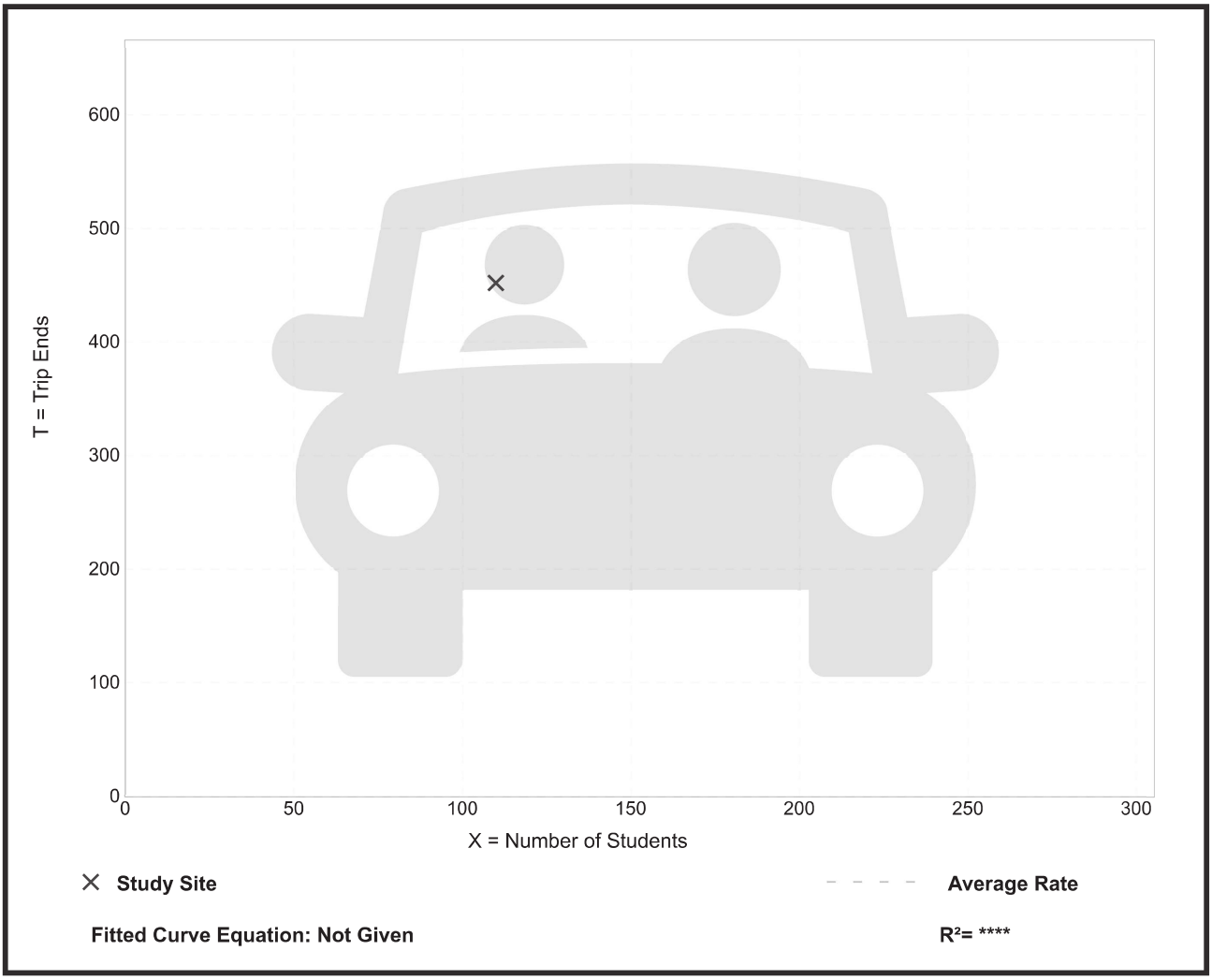
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Students: 110
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
4.11	4.11 - 4.11	*

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Private School (K-8)
(530)

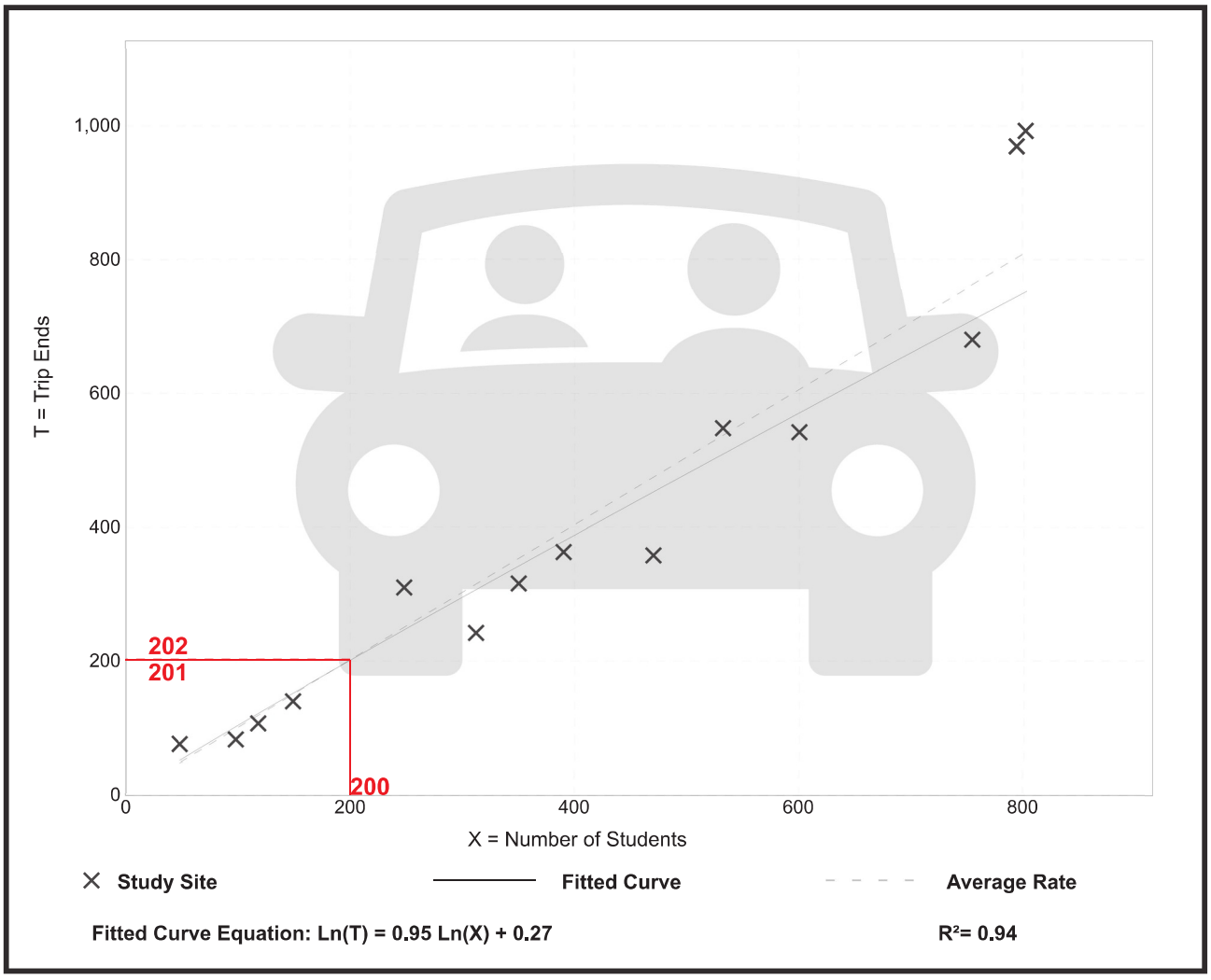
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 14
Avg. Num. of Students: 405
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
1.01	0.76 - 1.58	0.18

Data Plot and Equation



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Private School (K-8)
(530)

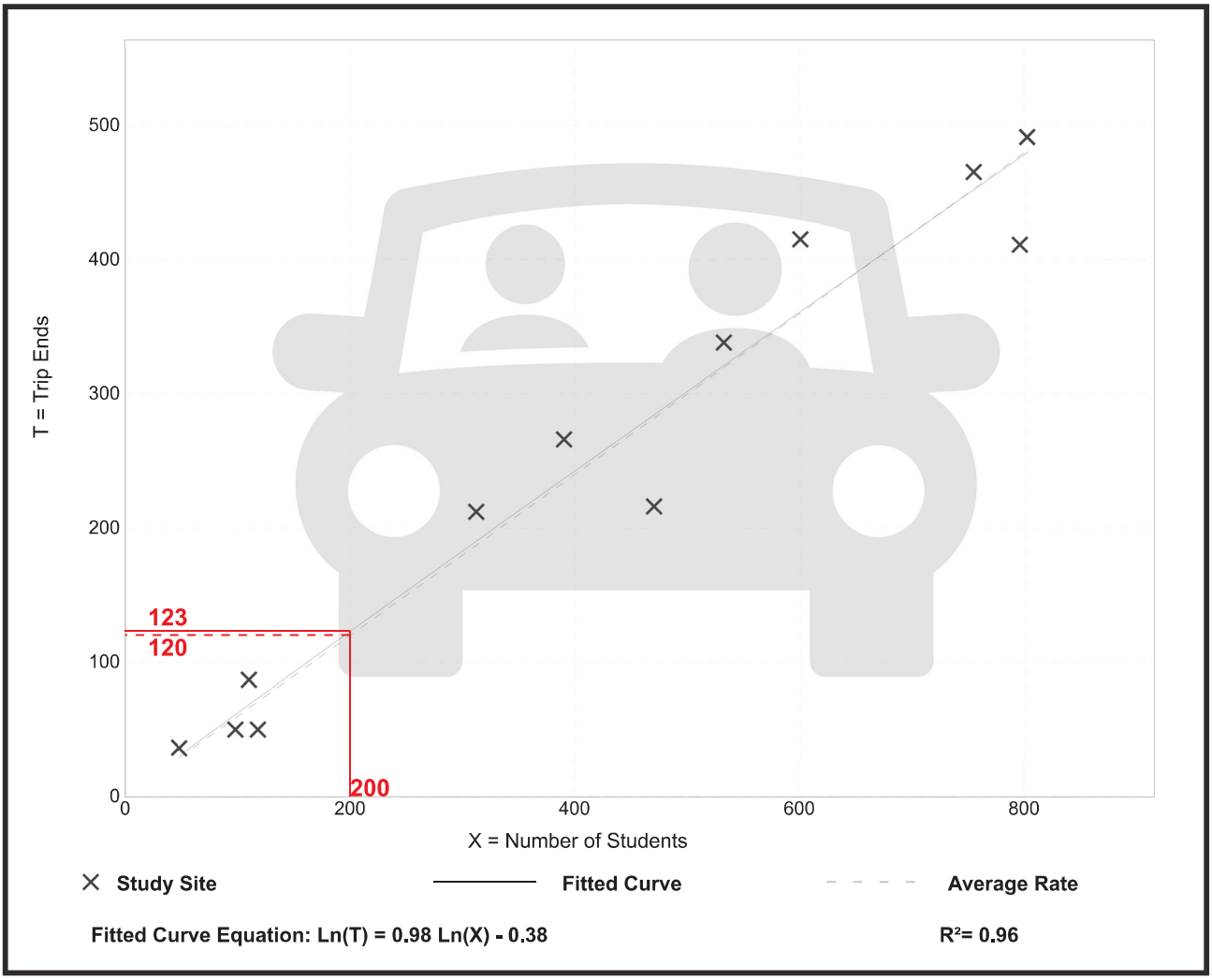
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Students: 419
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.60	0.42 - 0.79	0.09

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Private School (K-12)
(532)

Vehicle Trip Ends vs: **Students**
On a: **Weekday**

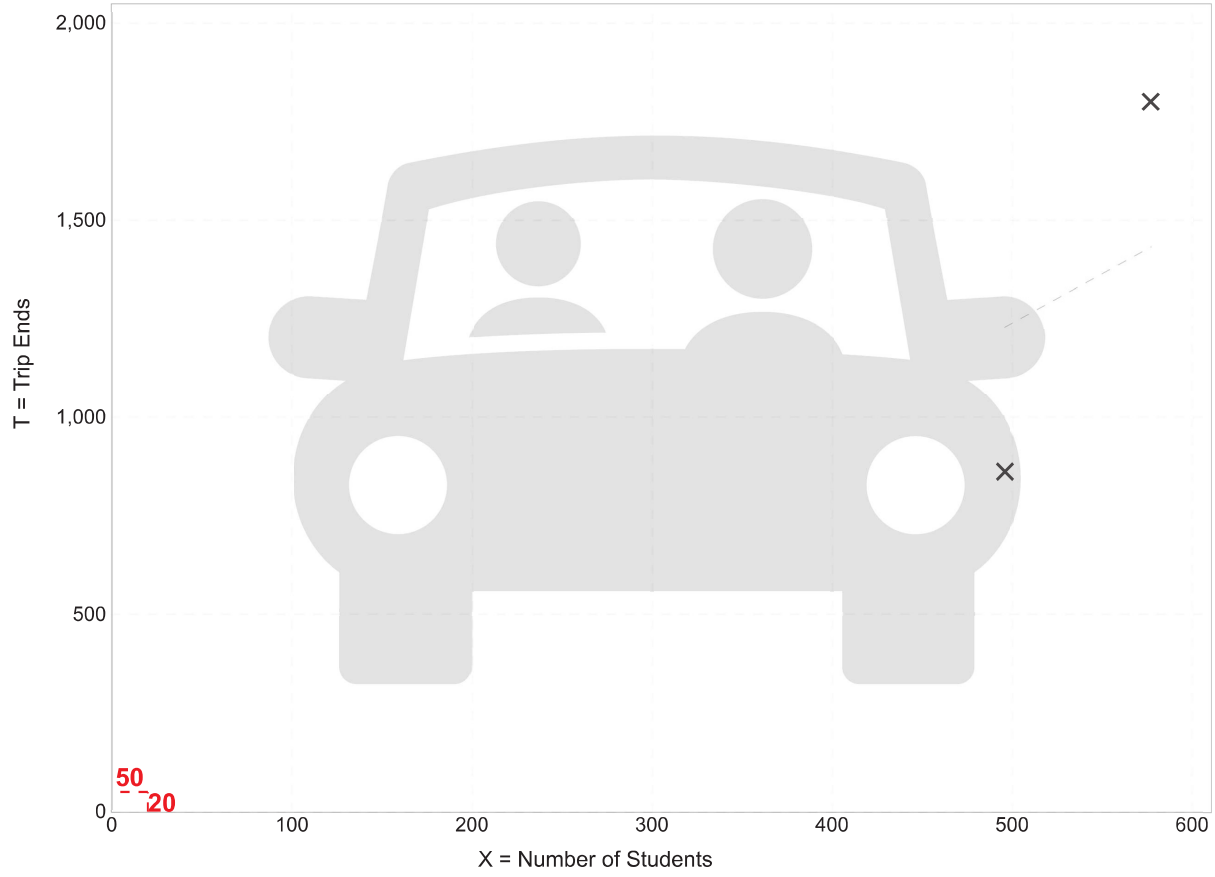
Setting/Location: **General Urban/Suburban**
Number of Studies: 2
Avg. Num. of Students: 537
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.48	1.74 - 3.12	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Private School (K-12)
(532)

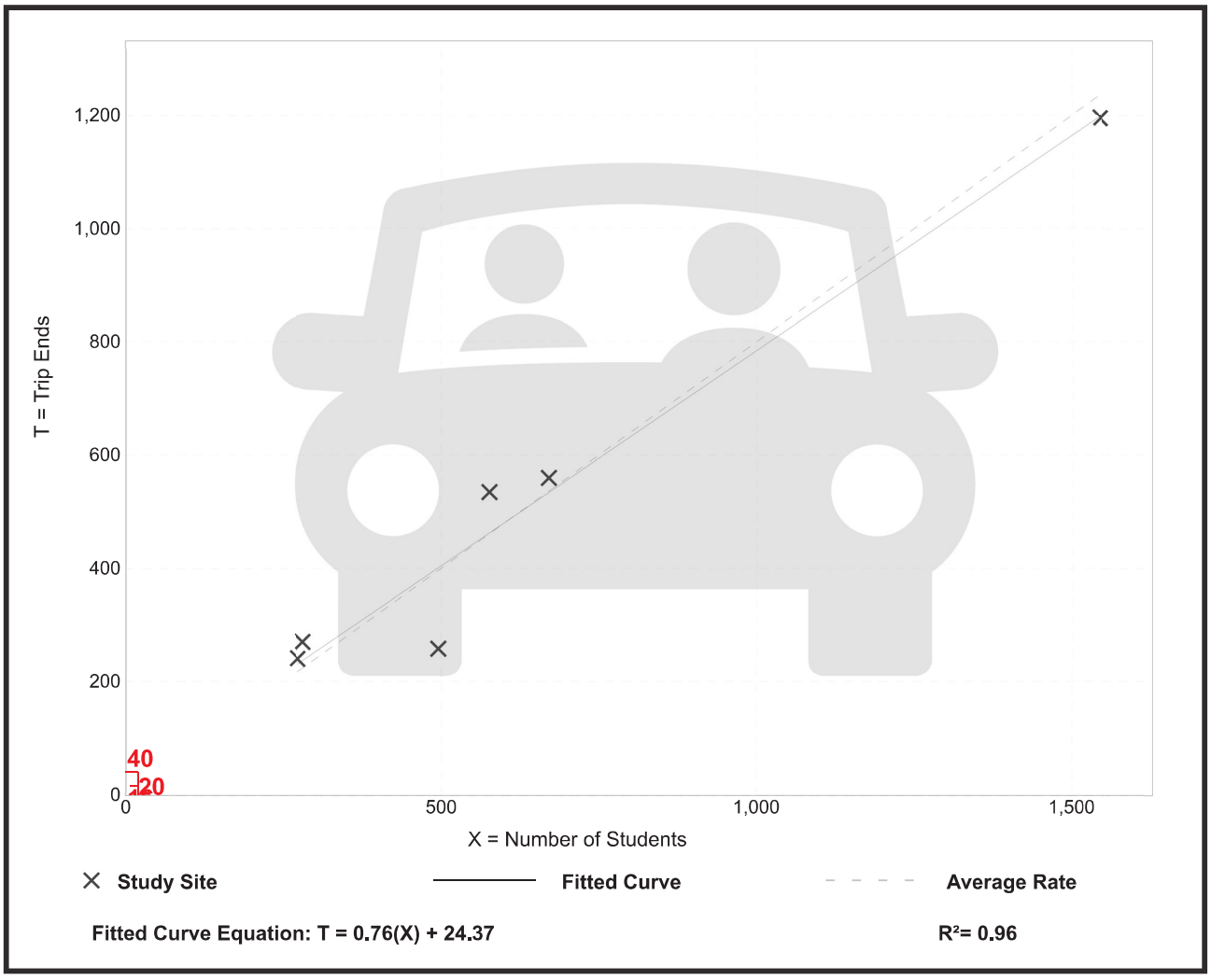
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Students: 641
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.80	0.52 - 0.96	0.14

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Private School (K-12)
(532)

Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
PM Peak Hour of Generator

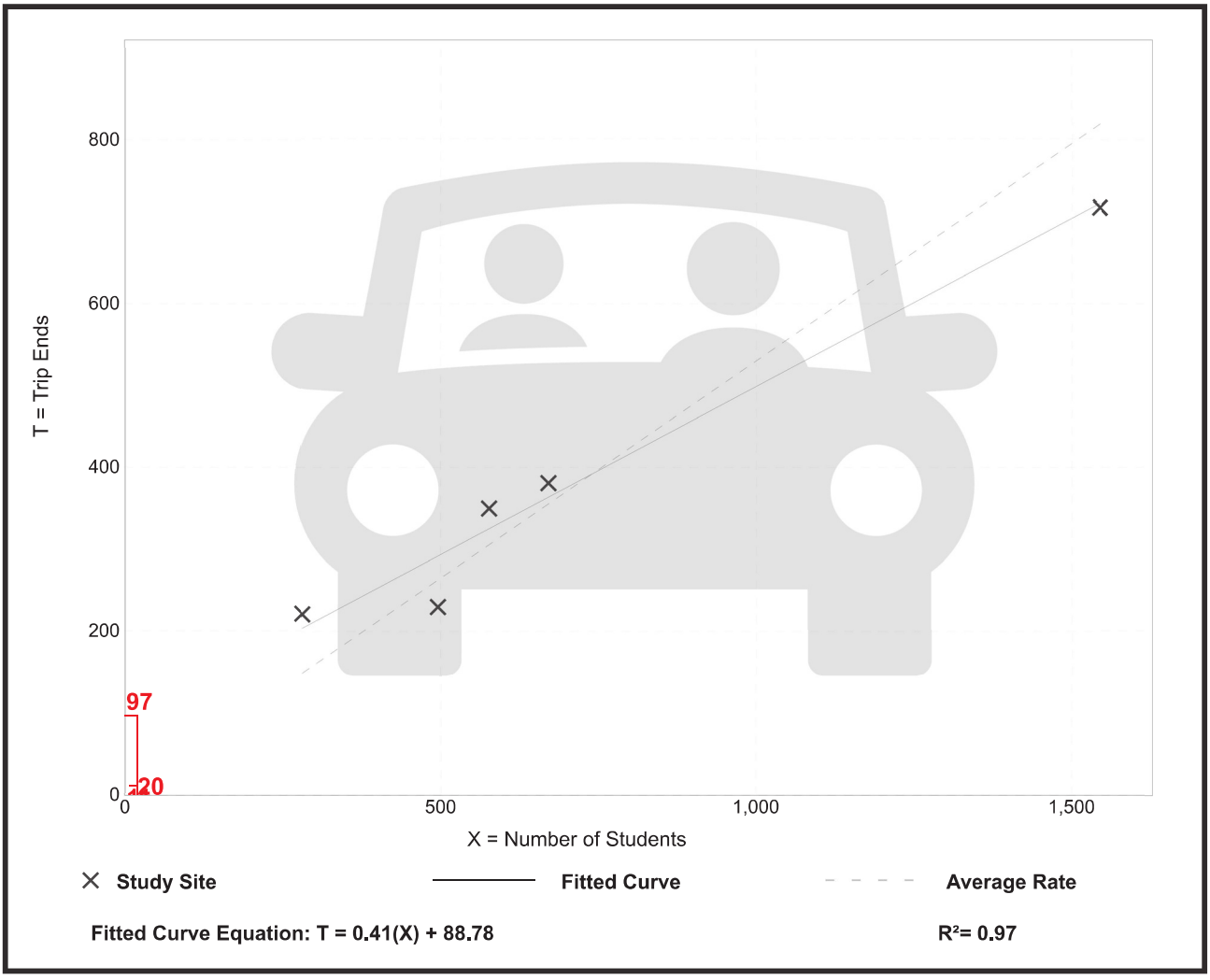
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Students: 714
Directional Distribution: 42% entering, 58% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.53	0.46 - 0.79	0.11

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Church
(560)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

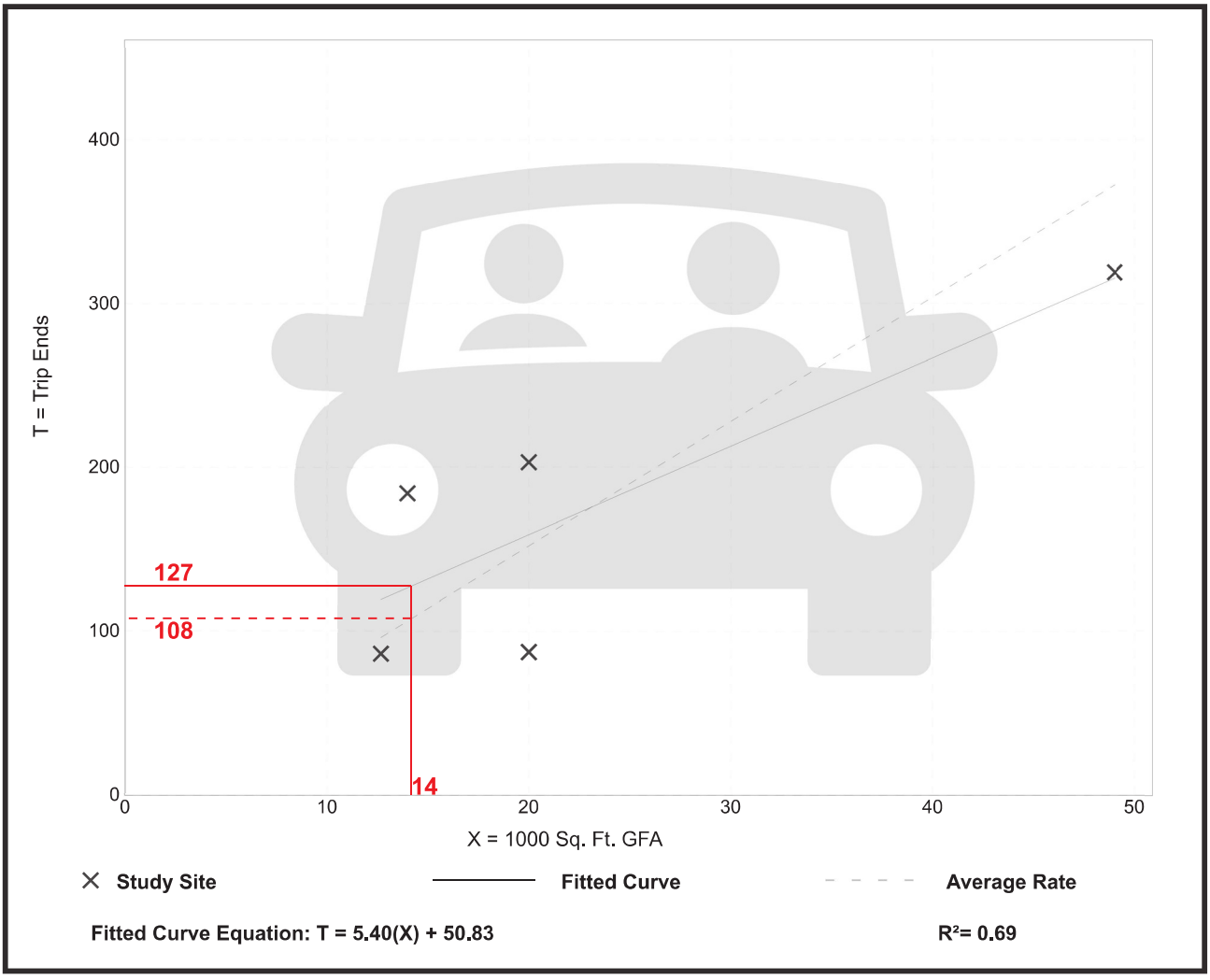
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 23
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.60	4.35 - 13.14	3.01

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

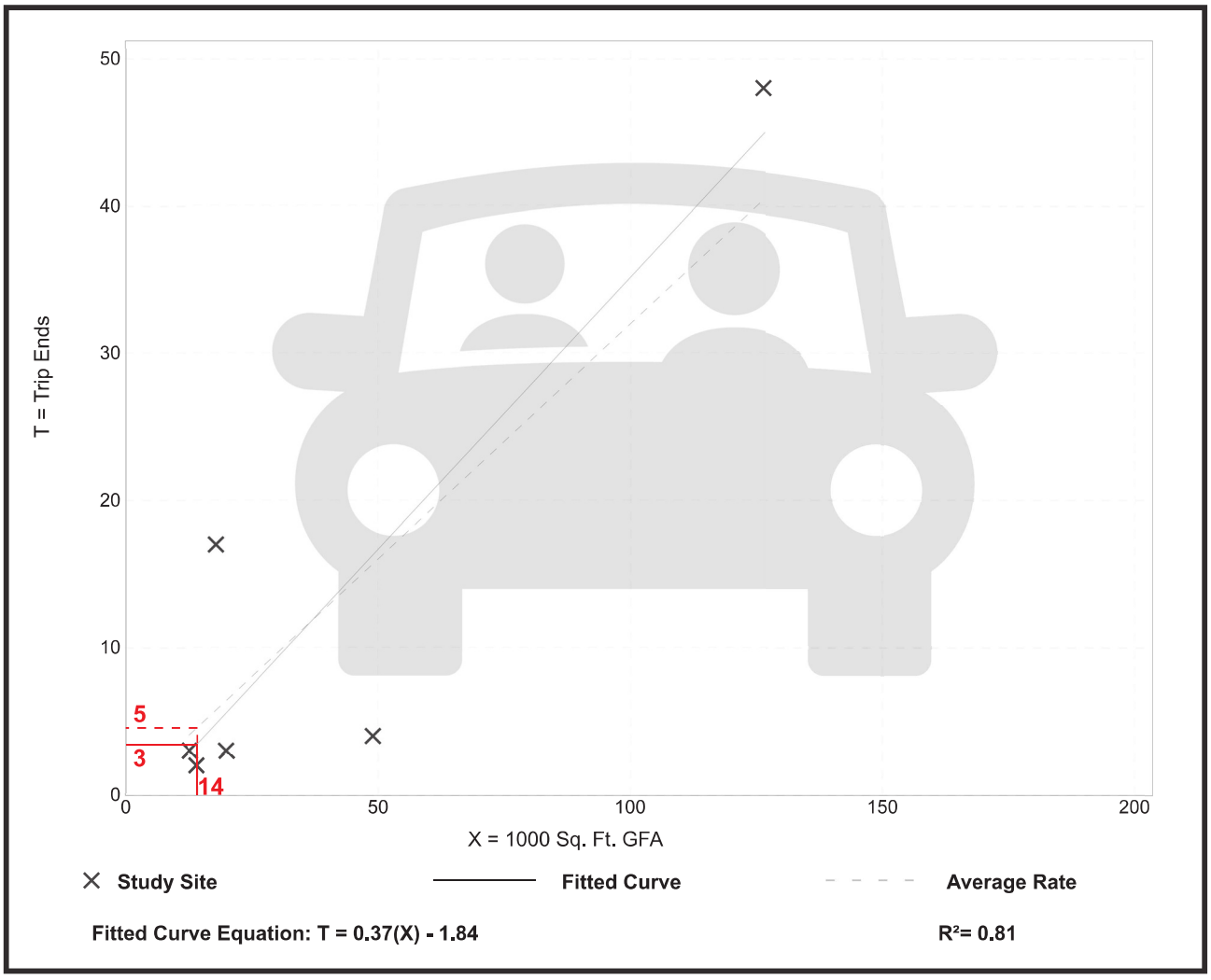
Church
(560)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 40
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.32	0.08 - 0.94	0.24

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

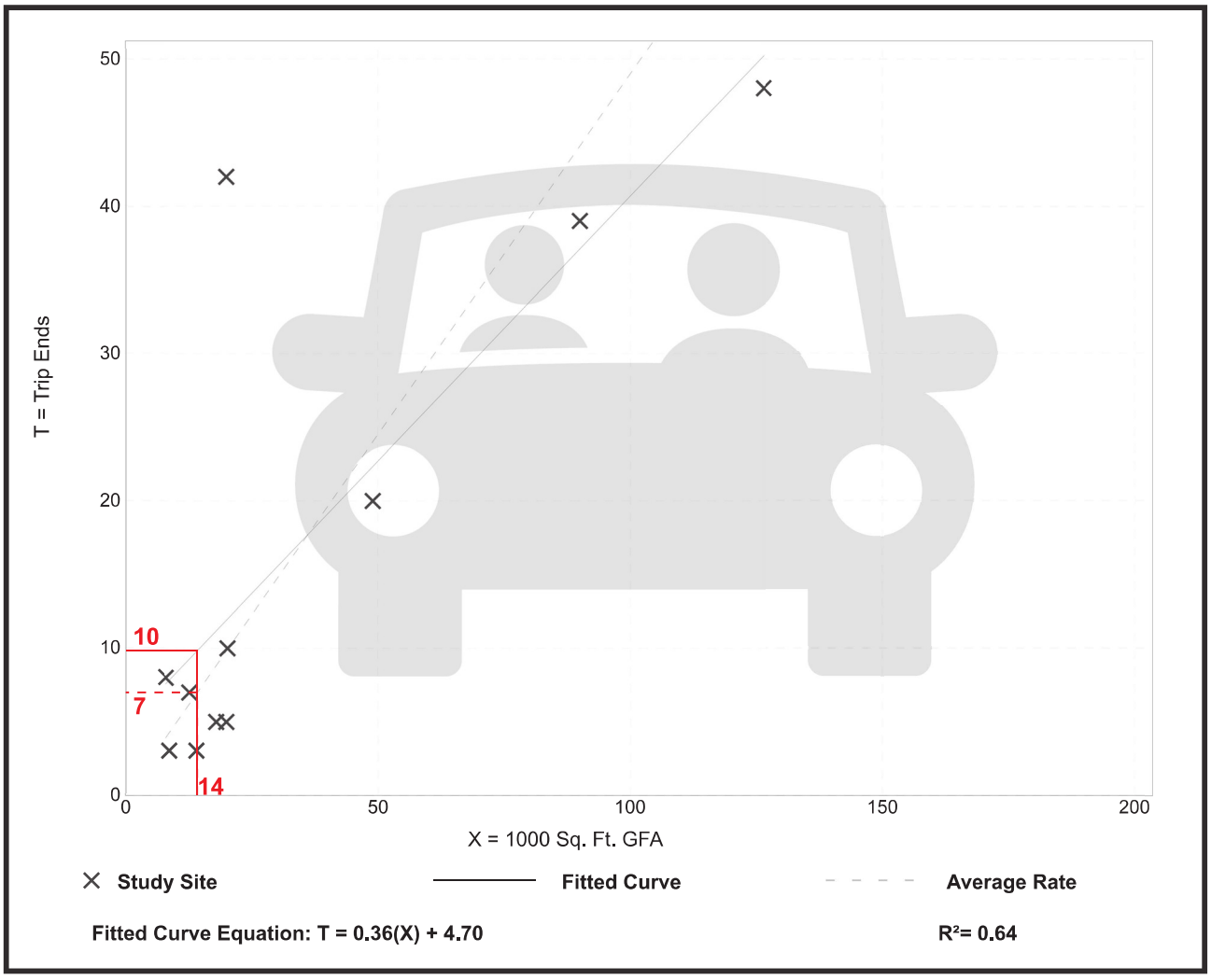
Church
(560)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 11
Avg. 1000 Sq. Ft. GFA: 35
Directional Distribution: 44% entering, 56% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.49	0.21 - 2.10	0.41

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Appendix “C”

Operational Management Plan

OPERATIONAL MANAGEMENT PLAN

Dalton Learning Academy
Port St. Lucie, Florida

P25-041
PSLUSD Project# 11-211-00

Austin Dingwall, AIA
FL License# AR95675

Dingwall Architecture 1701 Highway A1A, Suite 105, Vero Beach, FL 32963 (772) 742-3003

Table of Contents

Appendices

1.0 Introduction

This operational management plan is supplemental to the Traffic Impact Study submitted by Hazley Transportation Group. It further highlights the plan to allow for traffic to the school to move smoothly and avoid queuing back into Route 1.

2.0 Percent of Students Expected in After-School Care or Bus Transportation

Dalton Learning Academy can have a maximum enrollment of **200 students** for the 2025–2026 school year. Of the 200 students, approximately **100 students (50%)** are anticipated to utilize **bus or shuttle transportation**, reducing the number of car riders at dismissal.

Additionally, an estimated **30 students (15%)** of remaining students participate in after-school care, further minimizing peak dismissal traffic. Therefore, **35% of students (approximately 70 students)** are expected to be picked up by individual vehicles at peak dismissal time.

Based on the statistics provided by the City's traffic consultant during the meeting held on 6/10/25, up to 40% of the remaining car riders arrive during the period prior to the afternoon dismissal. Therefore, it is expected that 28 vehicles (70*40%) are expected to arrive before dismissal. This would result in a queue of approximately 700 feet (28 veh * 25 feet/veh).

To prevent the possibility of the traffic queuing back onto Route 1, part of our planned operations is to start utilizing the parking aisles on the north side of the property once there are more than 28 vehicles in the queue. There are 660 feet (26 vehicles) that can be in queue by utilizing the parking aisles in the norther section of the property.

Please see **Appendix A** for illustration.

3.0 Plan to Minimize U-Turns on US 1

To reduce the need for U-turn maneuvers on US 1 and enhance overall traffic safety and operational efficiency, the following strategies will be implemented:

- **Directional signage** will be posted at both the school and church property exit to inform drivers that US 1 northbound can be accessed either via the designated turnaround point south of the school or through the signalized intersection at Jennings Road.
- **Parent communication** will emphasize using the designated turnaround point north of the school for safe U-turns, if necessary, and alternate routes for accessing US 1 from side streets.

This controlled flow helps prevent congestion and ensures a safe and efficient dismissal process.

Please see **Appendix B** for Illustration

4.0 Afternoon Pickup Process: Efficient Operations for Random Arrival Order

Dalton Learning Academy will implement an **organized placard system**:

- Parents will be provided with **color-coded dashboard placards** displaying their child's name.
- As cars enter the **parent pickup lane**, staff positioned midway through the queue will **read placards** and **relay names via walkie-talkie** to staff at the front of the building. Only vehicles with the appropriate color placard will be allowed to queue during their assigned dismissal window.
- Students will be grouped and staged according to grade level and real-time arrival of their parent's vehicle.
- This eliminates the need to stop vehicles at entry points and avoids backups onto US 1.
- The pick-up/drop-off safe zone will be 60 feet long and will accommodate 2 cars at a time for pick-up or drop-off. The traffic engineer has an estimated 40 seconds for each car in the safe zone. In 15 minutes 45 vehicles can be cleared from the queue.
- Staff maintain **walkie-talkie communication** between mid-queue, entry, and pickup zone for coordinated student delivery. Verbal and visual announcements will be made on-site to signal the start of dismissal window.
- A detailed **Parent Orientation Open House** (in person and via Zoom) will be held prior to the start of school to walk families through the new procedures. A **slideshow and instructional video** will be provided during orientation, clearly demonstrating morning drop-off and afternoon pick-up routines. Parents will receive a contract to sign and return acknowledging that they received, understand and will abide by the requirements presented by the school.

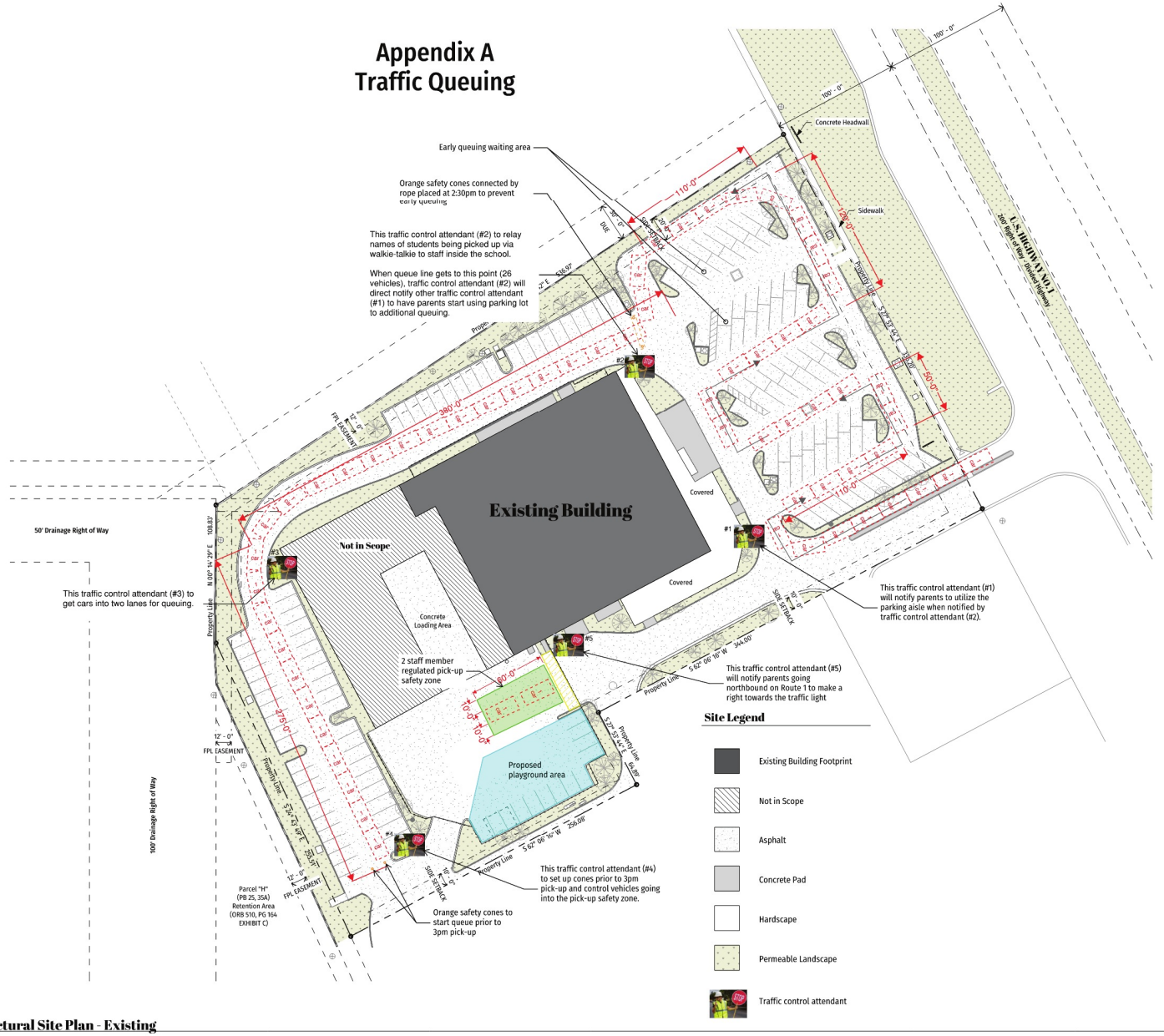
5.0 Number of Students Transported by Bus

A total of **100 students** (50% enrollment) will be served by:

- **One large school bus (60 student capacity)**
- **One small shuttle bus (40 student capacity)**

Bus and shuttle students are dismissed **promptly at 2:45 PM**, ahead of the 3:00 PM primary car rider traffic. Buses will shuttle students to the original Dalton Learning Center location for students with younger siblings at the preschool or for parents who would to prefer to pick their children up from that location because it is more convenient for them. The school will also provide a door-to-door pick-up and drop-off service to the student's home for an additional fee.

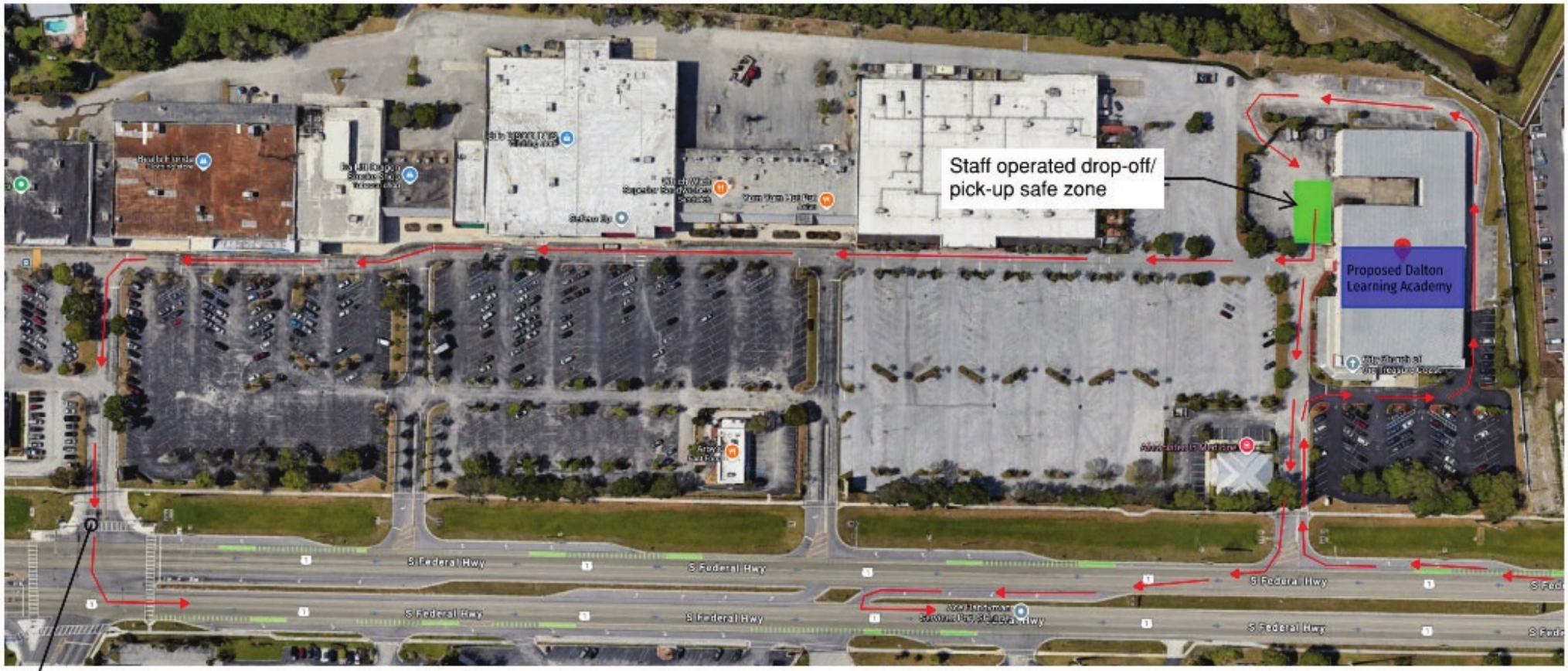
Appendix A
Traffic Queuing



IA Architectural Site Plan - Existing
G01 Scale: 1" = 40'-0"

Appendix B

Northbound Headed Traffic Exit Route



Traffic light to get onto northbound Route 1

SKETCH
SK2

Dalton Learning Academy
10011 S US Highway 1, Port St. Lucie, Florida
02/27/25

P25-041
PSLUSD Project # 11-211-00

Dingwall Architecture
License No. AR 95675

Appendix “D”

Traffic Data

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 9400 EAST-A1A TO US1

MOCF: 0.89

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.04	1.17
2	01/07/2024 - 01/13/2024	1.00	1.12
3	01/14/2024 - 01/20/2024	0.95	1.07
* 4	01/21/2024 - 01/27/2024	0.93	1.04
* 5	01/28/2024 - 02/03/2024	0.91	1.02
* 6	02/04/2024 - 02/10/2024	0.89	1.00
* 7	02/11/2024 - 02/17/2024	0.87	0.98
* 8	02/18/2024 - 02/24/2024	0.87	0.98
* 9	02/25/2024 - 03/02/2024	0.86	0.97
*10	03/03/2024 - 03/09/2024	0.86	0.97
*11	03/10/2024 - 03/16/2024	0.85	0.96
*12	03/17/2024 - 03/23/2024	0.87	0.98
*13	03/24/2024 - 03/30/2024	0.88	0.99
*14	03/31/2024 - 04/06/2024	0.89	1.00
*15	04/07/2024 - 04/13/2024	0.91	1.02
*16	04/14/2024 - 04/20/2024	0.92	1.03
17	04/21/2024 - 04/27/2024	0.94	1.06
18	04/28/2024 - 05/04/2024	0.97	1.09
19	05/05/2024 - 05/11/2024	0.99	1.11
20	05/12/2024 - 05/18/2024	1.02	1.15
21	05/19/2024 - 05/25/2024	1.03	1.16
22	05/26/2024 - 06/01/2024	1.04	1.17
23	06/02/2024 - 06/08/2024	1.05	1.18
24	06/09/2024 - 06/15/2024	1.06	1.19
25	06/16/2024 - 06/22/2024	1.07	1.20
26	06/23/2024 - 06/29/2024	1.07	1.20
27	06/30/2024 - 07/06/2024	1.07	1.20
28	07/07/2024 - 07/13/2024	1.08	1.21
29	07/14/2024 - 07/20/2024	1.08	1.21
30	07/21/2024 - 07/27/2024	1.09	1.22
31	07/28/2024 - 08/03/2024	1.09	1.22
32	08/04/2024 - 08/10/2024	1.10	1.24
33	08/11/2024 - 08/17/2024	1.10	1.24
34	08/18/2024 - 08/24/2024	1.11	1.25
35	08/25/2024 - 08/31/2024	1.11	1.25
36	09/01/2024 - 09/07/2024	1.11	1.25
37	09/08/2024 - 09/14/2024	1.12	1.26
38	09/15/2024 - 09/21/2024	1.12	1.26
39	09/22/2024 - 09/28/2024	1.12	1.26
40	09/29/2024 - 10/05/2024	1.11	1.25
41	10/06/2024 - 10/12/2024	1.11	1.25
42	10/13/2024 - 10/19/2024	1.11	1.25
43	10/20/2024 - 10/26/2024	1.09	1.22
44	10/27/2024 - 11/02/2024	1.08	1.21
45	11/03/2024 - 11/09/2024	1.06	1.19
46	11/10/2024 - 11/16/2024	1.05	1.18
47	11/17/2024 - 11/23/2024	1.05	1.18
48	11/24/2024 - 11/30/2024	1.04	1.17
49	12/01/2024 - 12/07/2024	1.04	1.17
50	12/08/2024 - 12/14/2024	1.04	1.17
51	12/15/2024 - 12/21/2024	1.04	1.17
52	12/22/2024 - 12/28/2024	1.00	1.12
53	12/29/2024 - 12/31/2024	0.95	1.07

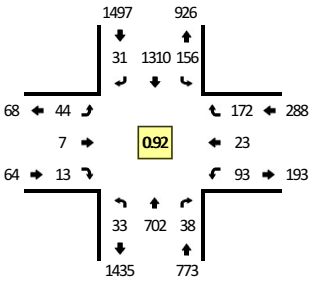
* PEAK SEASON

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

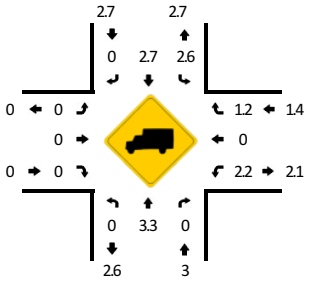
LOCATION: US 1 -- Jennings Rd
CITY/STATE: Port St. Lucie, FL

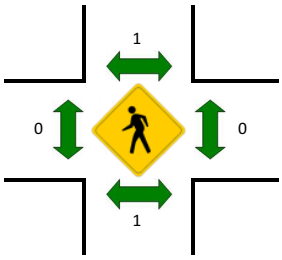
QC JOB #: 17130801
DATE: Thu, Jun 19 2025

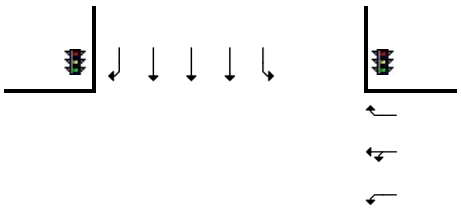
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

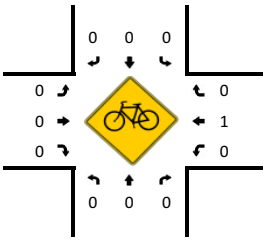


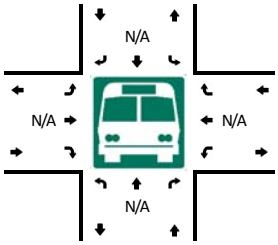
TRUE DATA TO IMPROVE MOBILITY

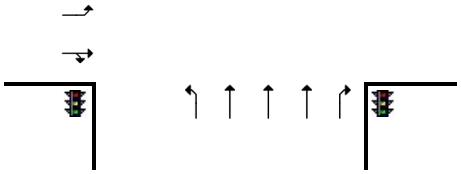


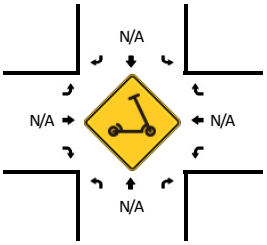












15-Min Count Period Beginning At	US 1 (Northbound)				US 1 (Southbound)				Jennings Rd (Eastbound)				Jennings Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	164	11	2	30	330	4	0	2	0	2	0	15	3	32	0	598	
7:15 AM	1	146	5	1	28	345	5	0	7	3	2	0	16	4	38	0	601	
7:30 AM	4	176	10	4	31	356	10	0	5	1	1	0	18	0	54	0	670	
7:45 AM	2	153	5	4	49	352	6	1	3	3	1	0	29	1	30	0	639	2508
8:00 AM	4	152	4	4	39	307	5	2	8	0	1	0	26	3	44	0	599	2509
8:15 AM	1	173	11	2	35	305	8	1	9	4	5	0	19	3	37	0	613	2521
8:30 AM	3	183	12	3	33	349	10	3	13	0	5	0	28	8	47	0	697	2548
8:45 AM	6	194	11	10	41	349	8	2	14	3	2	0	20	9	44	0	713	2622

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	776	44	40	164	1396	32	8	56	12	8	0	80	36	176	0	2852
Heavy Trucks	0	20	0		8	44	0		0	0	0		4	0	4		80
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

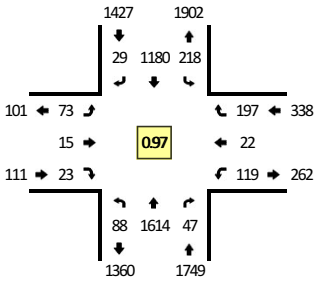
Report generated on 6/20/2025 1:34 PM

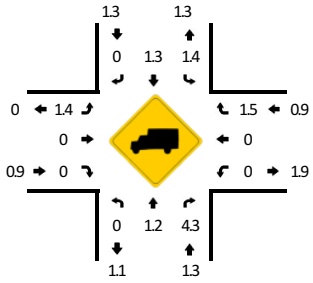
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

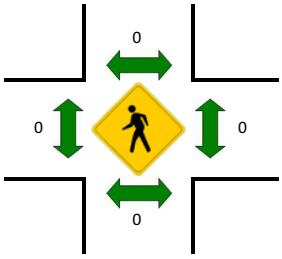
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

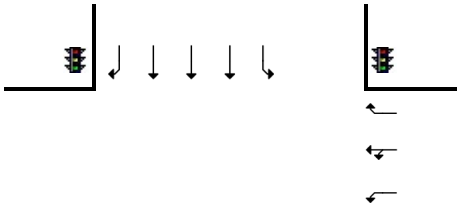
LOCATION: US 1 -- Jennings Rd | **QC JOB #:** 17130802
CITY/STATE: Port St. Lucie, FL | **DATE:** Thu, Jun 19 2025

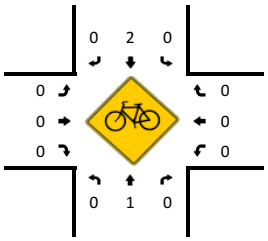
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

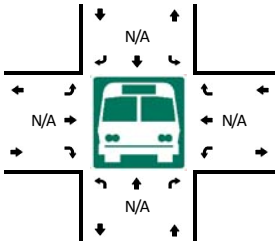


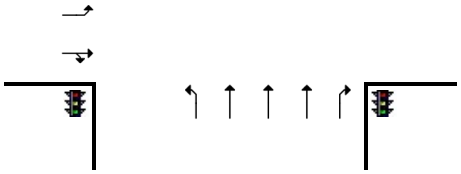


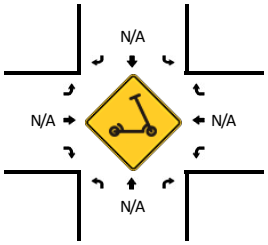












15-Min Count Period Beginning At	US 1 (Northbound)				US 1 (Southbound)				Jennings Rd (Eastbound)				Jennings Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	347	11	4	38	265	8	5	21	8	9	0	32	9	43	0	807	
4:15 PM	7	394	11	8	49	275	5	4	10	4	12	0	16	5	42	0	842	
4:30 PM	9	372	8	4	50	335	8	5	21	7	6	1	18	9	41	0	894	
4:45 PM	16	401	12	8	43	293	4	4	19	0	8	0	32	2	47	0	889	3432
5:00 PM	10	452	16	11	57	283	7	3	14	5	5	0	28	4	42	0	937	3562
5:15 PM	12	347	12	11	51	303	9	9	23	6	7	0	31	7	52	0	880	3600
5:30 PM	12	414	7	8	49	301	9	2	17	4	3	0	28	9	56	0	919	3625
5:45 PM	6	371	8	4	47	286	7	5	16	6	9	0	18	10	48	0	841	3577

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	1808	64	44	228	1132	28	12	56	20	20	0	112	16	168	0	3748
Heavy Trucks	0	16	0		12	16	0		0	0	0		0	0	0		44
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 6/20/2025 1:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

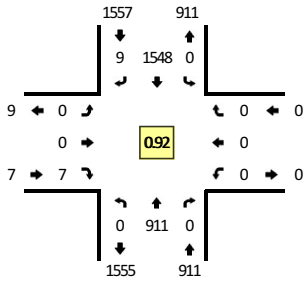
Type of peak hour being reported: Intersection Peak

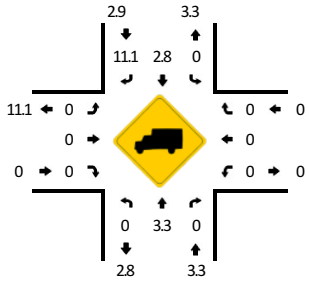
Method for determining peak hour: Total Entering Volume

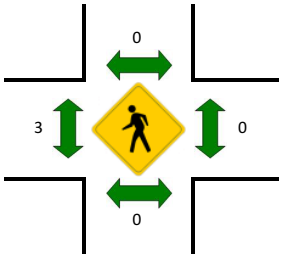
LOCATION: US 1 -- Right In/ Right Out
CITY/STATE: Port St. Lucie, FL

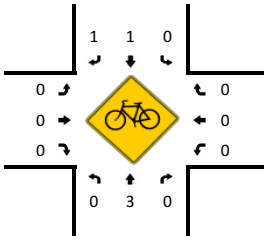
QC JOB #: 17130803
DATE: Thu, Jun 19 2025

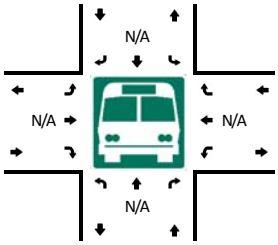
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

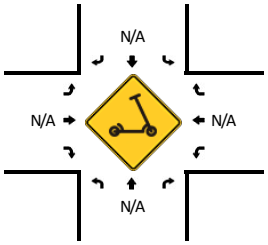












15-Min Count Period Beginning At	US 1 (Northbound)				US 1 (Southbound)				Right In/ Right Out (Eastbound)				Right In/ Right Out (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	188	0	0	0	367	0	0	0	0	0	0	0	0	0	0	555	
7:15 AM	0	201	0	0	0	386	1	0	0	0	1	0	0	0	0	0	589	
7:30 AM	0	211	0	0	0	411	0	0	0	0	1	0	0	0	0	0	623	
7:45 AM	0	196	0	0	0	427	0	0	0	0	0	0	0	0	0	0	623	2390
8:00 AM	0	204	0	0	0	359	5	0	0	0	2	0	0	0	0	0	570	2405
8:15 AM	0	212	0	0	0	356	2	0	0	0	0	0	0	0	0	0	570	2386
8:30 AM	0	257	0	0	0	413	2	0	0	0	2	0	0	0	0	0	674	2437
8:45 AM	0	238	0	0	0	420	0	0	0	0	3	0	0	0	0	0	661	2475

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1028	0	0	0	1652	8	0	0	0	8	0	0	0	0	0	2696
Heavy Trucks	0	32	0		0	60	0		0	0	0		0	0	0		92
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scooters																	

Comments:

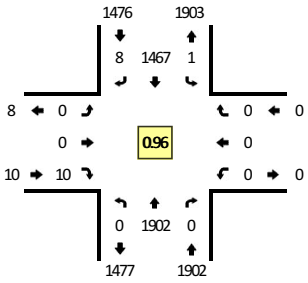
Report generated on 6/20/2025 1:34 PM

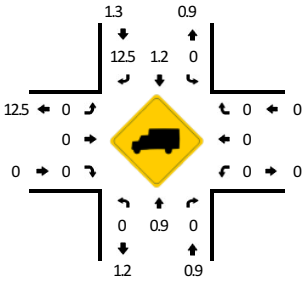
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

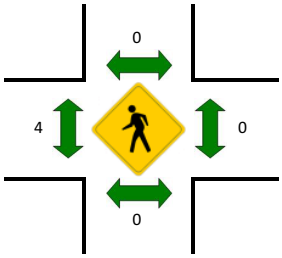
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

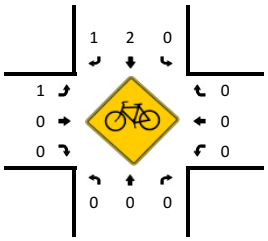
LOCATION: US 1 -- Right In/ Right Out | **QC JOB #:** 17130804
CITY/STATE: Port St. Lucie, FL | **DATE:** Thu, Jun 19 2025

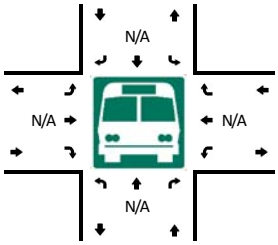
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

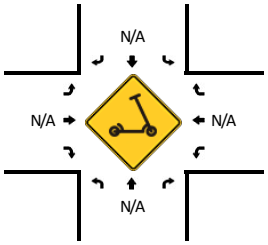












15-Min Count Period Beginning At	US 1 (Northbound)				US 1 (Southbound)				Right In/ Right Out (Eastbound)				Right In/ Right Out (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	421	0	0	0	363	1	0	0	0	2	0	0	0	0	0	787	
4:15 PM	0	440	0	0	0	318	0	0	0	0	1	0	0	0	0	0	759	
4:30 PM	0	448	0	0	0	396	4	0	0	0	3	0	0	0	0	0	851	
4:45 PM	0	464	0	0	0	367	2	0	0	0	1	0	0	0	0	0	834	3231
5:00 PM	0	505	0	0	0	331	0	0	0	0	3	0	0	0	0	0	839	3283
5:15 PM	0	446	0	0	0	377	3	1	0	0	3	0	0	0	0	0	830	3354
5:30 PM	0	487	0	0	0	392	3	0	0	0	3	0	0	0	0	0	885	3388
5:45 PM	0	412	0	0	0	334	1	0	0	0	8	0	0	0	0	0	755	3309

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1948	0	0	0	1568	12	0	0	0	12	0	0	0	0	0	3540
Heavy Trucks	0	24	0		0	20	0		0	0	0		0	0	0		44
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	8	0		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 6/20/2025 1:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix “E”

Intersection Volume Derivation

Project Traffic Assignment

Inbound

Outbound

Project Traffic Assignment

Existing	**2025**
Buildout	**2028**
years	**3.00**
S.F.	**1.20**

Dalton Learning Academy
Intersection Traffic Derivation (YR 2028 AM Peak Hour)

US 1 at Project Entrance

					Project			Future
	Existing	Adjusted	Growth	Future	In / Out	Dist.	Traffic	Total
EB								
Left	0	0	2.50%	0			0	0
Thru	0	0	2.50%	0			0	0
Right	7	8	2.50%	9	O	88%	80	89
WB								
Left	0	0	2.50%	0			0	0
Thru	0	0	2.50%	0			0	0
Right	0	0	2.50%	0			0	0
NB								
Left	0	0	2.50%	0			0	0
Thru	911	1,093	2.50%	1,177	I/O	46% (I)/31%(O)	82	1,259
Right	0	0	2.50%	0			0	0
SB								
Left	0	0	2.50%	0			0	0
Thru	1548	1,858	2.50%	2,001			0	2,001
Right	9	11	2.50%	12	I	77%	89	101

US 1 at SE Jennings Rd/Plaza Entrance

					Project			Future
	Existing	Adjusted	Growth	Future	In / Out	Dist.	Traffic	Total
EB								
Left	44	53	2.50%	57	O	10%	9	66
Thru	7	8	2.50%	9	O	2%	2	11
Right	13	16	2.50%	17			0	17
WB								
Left	93	112	2.50%	121			0	121
Thru	23	28	2.50%	30	I	2%	2	32
Right	172	206	2.50%	222	I	3%	3	225
NB								
Left	33	40	2.50%	43	I	21%	24	67
Thru	702	842	2.50%	907	I	43%	50	957
Right	38	46	2.50%	50			0	50
SB								
Left	156	187	2.50%	201	O	3%	3	204
Thru	1310	1,572	2.50%	1,693	O	64%	58	1,751
Right	31	37	2.50%	40			0	40

Dalton Learning Academy
Intersection Traffic Derivation (YR 2028 PM Peak Hour)

US 1 at Project Entrance

					Project			Future
	Existing	Adjusted	Growth	Future	In / Out	Dist.	Traffic	Total
EB								
Left	0	0	2.50%	0			0	0
Thru	0	0	2.50%	0			0	0
Right	10	12	2.50%	13	O	88%	60	73
WB								
Left	0	0	2.50%	0			0	0
Thru	0	0	2.50%	0			0	0
Right	0	0	2.50%	0			0	0
NB								
Left	0	0	2.50%	0			0	0
Thru	1902	2,282	2.50%	2,457	I/O	46% (I)/31%(O)	48	2,505
Right	0	0	2.50%	0			0	0
SB								
Left	0	0	2.50%	0			0	0
Thru	1467	1,760	2.50%	1,895			0	1,895
Right	8	10	2.50%	11	I	77%	45	56

US 1 at SE Jennings Rd/Plaza Entrance

					Project			Future
	Existing	Adjusted	Growth	Future	In / Out	Dist.	Traffic	Total
EB								
Left	73	88	2.50%	95	O	10%	7	102
Thru	15	18	2.50%	19	O	2%	1	20
Right	23	28	2.50%	30			0	30
WB								
Left	119	143	2.50%	154			0	154
Thru	22	26	2.50%	28	I	2%	1	29
Right	197	236	2.50%	254	I	3%	2	256
NB								
Left	88	106	2.50%	114	I	21%	12	126
Thru	1614	1,937	2.50%	2,086	I	43%	25	2,111
Right	47	56	2.50%	60			0	60
SB								
Left	218	262	2.50%	282	O	3%	2	284
Thru	1180	1,416	2.50%	1,525	O	64%	44	1,569
Right	29	35	2.50%	38			0	38

Appendix “F”

Synchro Output Reports

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	1093	1858	11
Future Vol, veh/h	0	8	0	1093	1858	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	3	3	11
Mvmt Flow	0	9	0	1188	2020	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1010	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	204	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	204	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	23.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	204	-	-
HCM Lane V/C Ratio	-	0.043	-	-
HCM Ctrl Dly (s/v)	-	23.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	8	16	112	28	206	40	842	46	187	1572	37
Future Volume (vph)	53	8	16	112	28	206	40	842	46	187	1572	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1680		1681	1718	1583	1770	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1680		1681	1718	1583	1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	9	17	122	30	224	43	915	50	203	1709	40
RTOR Reduction (vph)	0	16	0	0	0	206	0	0	26	0	0	15
Lane Group Flow (vph)	58	10	0	76	76	18	43	915	24	203	1709	25
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	9.0	9.0		12.3	12.3	12.3	7.9	72.3	72.3	28.0	92.4	92.4
Effective Green, g (s)	9.0	9.0		12.3	12.3	12.3	7.9	72.3	72.3	28.0	92.4	92.4
Actuated g/C Ratio	0.06	0.06		0.08	0.08	0.08	0.05	0.48	0.48	0.19	0.62	0.62
Clearance Time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	106	100		137	140	129	93	2450	763	330	3132	975
v/s Ratio Prot	c0.03	0.01		c0.05	0.04		0.02	0.18		c0.11	c0.34	
v/s Ratio Perm						0.01			0.02			0.02
v/c Ratio	0.55	0.10		0.55	0.54	0.14	0.46	0.37	0.03	0.62	0.55	0.03
Uniform Delay, d1	68.5	66.7		66.2	66.1	64.0	69.0	24.5	20.4	56.0	16.7	11.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.7	0.4		4.8	4.2	0.5	3.6	0.4	0.1	3.4	0.7	0.0
Delay (s)	74.2	67.1		71.0	70.4	64.5	72.6	25.0	20.5	59.4	17.3	11.3
Level of Service	E	E		E	E	E	E	C	C	E	B	B
Approach Delay (s/veh)		72.0			67.0			26.8			21.6	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.4
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	2282	1760	10
Future Vol, veh/h	0	12	0	2282	1760	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	1	13
Mvmt Flow	0	13	0	2377	1833	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	917	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	236	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	236	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	21.13	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	236	-	-
HCM Lane V/C Ratio	-	0.053	-	-
HCM Ctrl Dly (s/v)	-	21.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	18	28	143	26	236	106	1937	56	262	1416	35
Future Volume (vph)	88	18	28	143	26	236	106	1937	56	262	1416	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1694		1681	1711	1583	1770	5085	1553	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1694		1681	1711	1583	1770	5085	1553	1770	5085	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	91	19	29	147	27	243	109	1997	58	270	1460	36
RTOR Reduction (vph)	0	27	0	0	0	199	0	0	31	0	0	16
Lane Group Flow (vph)	91	21	0	87	87	44	109	1997	27	270	1460	20
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	13.5	13.5		13.6	13.6	13.6	14.5	74.9	74.9	29.6	90.0	90.0
Effective Green, g (s)	13.5	13.5		13.6	13.6	13.6	14.5	74.9	74.9	29.6	90.0	90.0
Actuated g/C Ratio	0.08	0.08		0.09	0.09	0.09	0.09	0.47	0.47	0.19	0.56	0.56
Clearance Time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	149	142		142	145	134	160	2380	726	327	2860	890
v/s Ratio Prot	c0.05	0.01		c0.05	0.05		0.06	c0.39		c0.15	0.29	
v/s Ratio Perm						0.03			0.02			0.01
v/c Ratio	0.61	0.15		0.61	0.60	0.33	0.68	0.84	0.04	0.83	0.51	0.02
Uniform Delay, d1	70.7	67.9		70.7	70.6	68.9	70.5	37.3	23.0	62.7	21.5	15.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.2	0.5		7.6	6.8	1.5	11.3	3.7	0.1	15.5	0.7	0.0
Delay (s)	77.9	68.4		78.3	77.4	70.4	81.8	41.0	23.1	78.2	22.1	15.6
Level of Service	E	E		E	E	E	F	D	C	E	C	B
Approach Delay (s/veh)		74.6			73.5			42.6			30.6	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.4
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	1177	2001	12
Future Vol, veh/h	0	9	0	1177	2001	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	3	3	11
Mvmt Flow	0	10	0	1279	2175	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1088	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	181	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	181	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	25.99	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	181	-	-
HCM Lane V/C Ratio	-	0.054	-	-
HCM Ctrl Dly (s/v)	-	26	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	9	17	121	30	222	43	907	50	201	1693	40
Future Volume (vph)	57	9	17	121	30	222	43	907	50	201	1693	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1683		1681	1718	1583	1770	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1683		1681	1718	1583	1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	10	18	132	33	241	47	986	54	218	1840	43
RTOR Reduction (vph)	0	17	0	0	0	196	0	0	29	0	0	17
Lane Group Flow (vph)	62	11	0	82	83	45	47	986	25	218	1840	26
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	9.3	9.3		13.3	13.3	13.3	8.2	68.7	68.7	30.3	90.8	90.8
Effective Green, g (s)	9.3	9.3		13.3	13.3	13.3	8.2	68.7	68.7	30.3	90.8	90.8
Actuated g/C Ratio	0.06	0.06		0.09	0.09	0.09	0.05	0.46	0.46	0.20	0.61	0.61
Clearance Time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	109	104		149	152	140	96	2328	725	357	3078	958
v/s Ratio Prot	c0.04	0.01		c0.05	0.05		0.03	0.19		c0.12	c0.36	
v/s Ratio Perm						0.03			0.02			0.02
v/c Ratio	0.57	0.11		0.55	0.55	0.32	0.49	0.42	0.03	0.61	0.60	0.03
Uniform Delay, d1	68.4	66.4		65.5	65.5	64.1	68.9	27.3	22.4	54.5	18.3	11.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.7	0.5		4.3	4.0	1.3	3.9	0.6	0.1	3.1	0.9	0.1
Delay (s)	75.1	66.9		69.8	69.4	65.5	72.8	27.9	22.5	57.6	19.2	11.9
Level of Service	E	E		E	E	E	E	C	C	E	B	B
Approach Delay (s/veh)		72.5			67.2			29.6			23.0	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.4
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	0	2457	1895	11
Future Vol, veh/h	0	13	0	2457	1895	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	1	13
Mvmt Flow	0	14	0	2559	1974	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	987	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	212	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	212	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	23.17	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	212	-	-
HCM Lane V/C Ratio	-	0.064	-	-
HCM Ctrl Dly (s/v)	-	23.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	19	30	154	28	254	114	2086	60	282	1525	38
Future Volume (vph)	95	19	30	154	28	254	114	2086	60	282	1525	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1693		1681	1710	1583	1770	5085	1553	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1693		1681	1710	1583	1770	5085	1553	1770	5085	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	98	20	31	159	29	262	118	2151	62	291	1572	39
RTOR Reduction (vph)	0	28	0	0	0	192	0	0	33	0	0	18
Lane Group Flow (vph)	98	23	0	94	94	70	118	2151	29	291	1572	21
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	14.2	14.2		14.0	14.0	14.0	15.2	74.9	74.9	28.5	88.2	88.2
Effective Green, g (s)	14.2	14.2		14.0	14.0	14.0	15.2	74.9	74.9	28.5	88.2	88.2
Actuated g/C Ratio	0.09	0.09		0.09	0.09	0.09	0.10	0.47	0.47	0.18	0.55	0.55
Clearance Time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	157	150		147	149	138	168	2380	726	315	2803	872
v/s Ratio Prot	c0.06	0.01		c0.06	0.05		0.07	c0.42		c0.16	0.31	
v/s Ratio Perm						0.04			0.02			0.01
v/c Ratio	0.62	0.15		0.64	0.63	0.51	0.70	0.90	0.04	0.92	0.56	0.02
Uniform Delay, d1	70.3	67.3		70.6	70.5	69.7	70.2	39.2	23.1	64.7	23.3	16.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	0.5		8.8	8.4	2.9	12.5	6.2	0.1	31.5	0.8	0.1
Delay (s)	77.8	67.8		79.4	78.9	72.7	82.7	45.4	23.2	96.2	24.1	16.4
Level of Service	E	E		E	E	E	F	D	C	F	C	B
Approach Delay (s/veh)		74.4			75.4			46.7			35.0	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.4
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	89	0	1259	2001	101
Future Vol, veh/h	0	89	0	1259	2001	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	3	3	11
Mvmt Flow	0	97	0	1368	2175	110

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1088	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	181	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	181	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	45.54	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	181	-	-
HCM Lane V/C Ratio	-	0.534	-	-
HCM Ctrl Dly (s/v)	-	45.5	-	-
HCM Lane LOS	-	E	-	-
HCM 95th %tile Q(veh)	-	2.7	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	11	17	121	32	225	67	957	50	204	1751	40
Future Volume (vph)	66	11	17	121	32	225	67	957	50	204	1751	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1695		1681	1719	1583	1770	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1695		1681	1719	1583	1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	12	18	132	35	245	73	1040	54	222	1903	43
RTOR Reduction (vph)	0	17	0	0	0	184	0	0	30	0	0	19
Lane Group Flow (vph)	72	13	0	83	84	61	73	1040	24	222	1903	24
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	11.6	11.6		13.7	13.7	13.7	11.5	66.1	66.1	30.2	84.8	84.8
Effective Green, g (s)	11.6	11.6		13.7	13.7	13.7	11.5	66.1	66.1	30.2	84.8	84.8
Actuated g/C Ratio	0.08	0.08		0.09	0.09	0.09	0.08	0.44	0.44	0.20	0.57	0.57
Clearance Time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	136	131		153	157	144	135	2240	697	356	2874	894
v/s Ratio Prot	c0.04	0.01		c0.05	0.05		0.04	0.20		c0.13	c0.37	
v/s Ratio Perm						0.04			0.02			0.02
v/c Ratio	0.53	0.10		0.54	0.54	0.43	0.54	0.46	0.03	0.62	0.66	0.03
Uniform Delay, d1	66.6	64.4		65.2	65.1	64.4	66.7	29.5	23.8	54.7	22.6	14.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	0.3		3.9	3.5	2.0	4.4	0.7	0.1	3.4	1.2	0.1
Delay (s)	70.3	64.7		69.0	68.6	66.5	71.1	30.2	23.9	58.1	23.9	14.4
Level of Service	E	E		E	E	E	E	C	C	E	C	B
Approach Delay (s/veh)		68.6			67.4			32.5			27.2	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.4
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	73	0	2505	1895	56
Future Vol, veh/h	0	73	0	2505	1895	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	1	13
Mvmt Flow	0	76	0	2609	1974	58

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	987	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	212	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	212	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	31.26	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	212	-	-
HCM Lane V/C Ratio	-	0.359	-	-
HCM Ctrl Dly (s/v)	-	31.3	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	1.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	20	30	154	29	256	126	2111	60	284	1569	38
Future Volume (vph)	102	20	30	154	29	256	126	2111	60	284	1569	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1696		1681	1711	1583	1770	5085	1553	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1696		1681	1711	1583	1770	5085	1553	1770	5085	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	105	21	31	159	30	264	130	2176	62	293	1618	39
RTOR Reduction (vph)	0	28	0	0	0	187	0	0	33	0	0	18
Lane Group Flow (vph)	105	24	0	94	95	77	130	2176	29	293	1618	21
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	14.8	14.8		14.1	14.1	14.1	16.0	74.9	74.9	27.8	86.7	86.7
Effective Green, g (s)	14.8	14.8		14.1	14.1	14.1	16.0	74.9	74.9	27.8	86.7	86.7
Actuated g/C Ratio	0.09	0.09		0.09	0.09	0.09	0.10	0.47	0.47	0.17	0.54	0.54
Clearance Time (s)	7.1	7.1		7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	163	156		148	150	139	177	2380	726	307	2755	857
v/s Ratio Prot	c0.06	0.01		c0.06	0.06		0.07	c0.43		c0.17	0.32	
v/s Ratio Perm						0.05			0.02			0.01
v/c Ratio	0.64	0.15		0.64	0.63	0.55	0.73	0.91	0.04	0.95	0.59	0.02
Uniform Delay, d1	70.1	66.8		70.5	70.5	69.9	69.9	39.6	23.1	65.5	24.6	17.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.4	0.5		8.6	8.4	4.7	14.6	6.9	0.1	39.0	0.9	0.1
Delay (s)	78.5	67.3		79.1	78.9	74.7	84.5	46.4	23.2	104.4	25.6	17.1
Level of Service	E	E		E	E	E	F	D	C	F	C	B
Approach Delay (s/veh)		74.8			76.5			47.9			37.2	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	47.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.4
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Appendix “G”

Historical Trend Analysis

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2024 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 5070 - SR 5 / US 1 - S OF TIFFANY AVE - N OF SR 716 (COUNTY 5070)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2024	35500 C	N 18500	S 17000	9.00	52.60	6.90
2023	43500 C	N 21500	S 22000	9.00	52.30	7.90
2022	41000 C	N 20500	S 20500	9.00	52.30	7.90
2021	42000 C	N 20500	S 21500	9.00	51.80	7.90
2020	30000 F	N 14500	S 15500	9.00	52.60	3.90
2019	31000 C	N 15000	S 16000	9.00	52.50	3.90
2018	31500 C	N 15000	S 16500	9.00	52.40	3.90
2017	41500 C	N 21000	S 20500	9.00	52.00	5.00
2016	32000 C	N 14000	S 18000	9.00	52.30	5.00
2015	35000 C	N 17000	S 18000	9.00	52.70	5.00
2014	31000 C	N 14500	S 16500	9.00	52.50	6.30
2013	33000 C	N 16000	S 17000	9.00	55.90	7.90
2012	38500 C	N 19500	S 19000	9.00	55.80	4.20
2011	35000 C	N 17500	S 17500	9.00	56.20	4.20
2010	37000 C	N 18500	S 18500	11.16	56.34	4.20
2009	34500 C	N 17000	S 17500	11.51	56.49	4.10

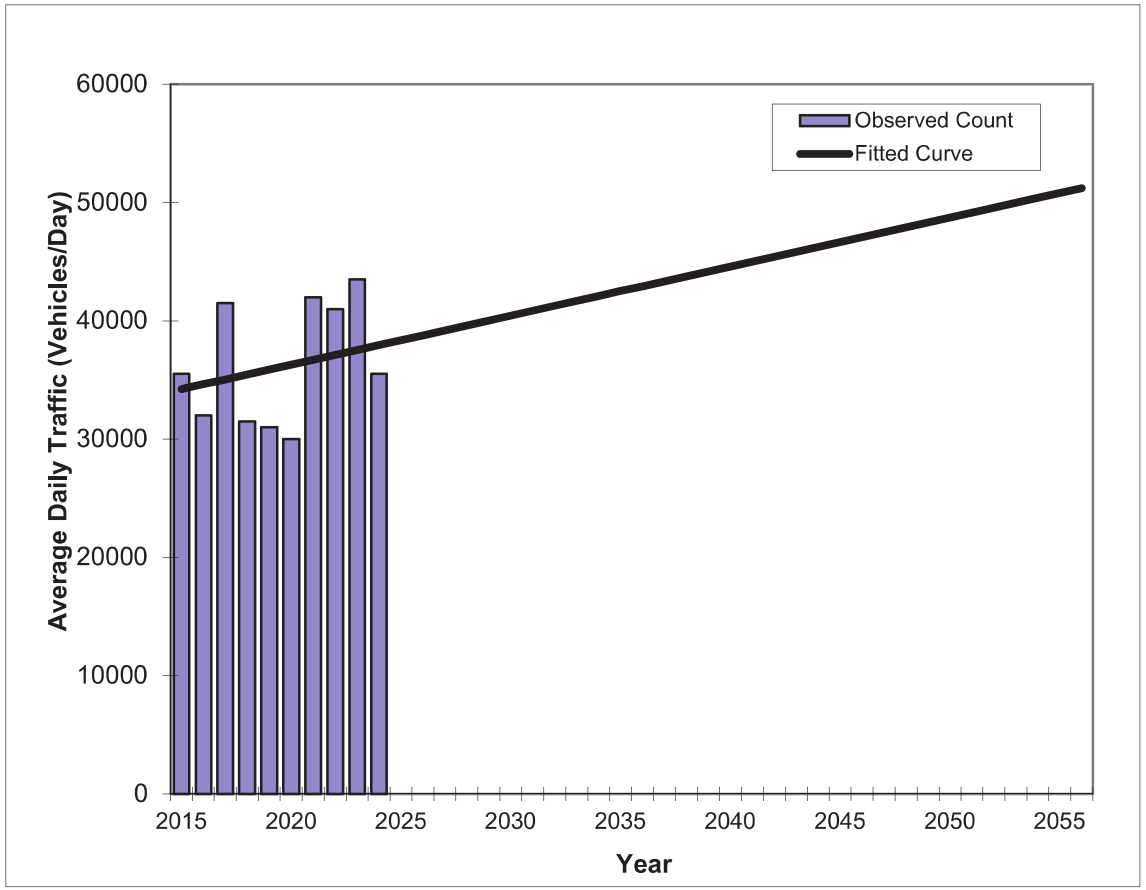
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2023

SR 5/ US 1 - S. of Tiffany Ave

FM #	
Location	1

County:	St Lucie
Station #:	945070
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2015	35,500	34,210
2016	32,000	34,630
2017	41,500	35,040
2018	31,500	35,460
2019	31,000	35,870
2020	30,000	36,290
2021	42,000	36,700
2022	41,000	37,120
2023	43,500	37,530
2024	35,500	37,950
2026 Opening Year Trend		
2026	N/A	38,770
2027 Interim Year Trend		
2027	N/A	39,190
2028 Design Year Trend		
2028	N/A	39,600
FSUTMS Forecasts/Trends		

*Axle-Adjusted

Annual Trend Increase:	415
Trend R-squared:	18.40%
Trend Annual Historic Growth Rate:	1.21%
Trend Growth Rate (2024 to Design Year)	1.09%
Printed:	6/25/2025

Linear Growth Option

Appendix “H”

Gap Study

TRUE DATA TO IMPROVE MOBILITY

Site Code: 17130805 & 06
Location: US 1 & Right In/ Right Out
Date: 6/19/2025
Time: 7:00 AM - 9:00 AM & 4:00 PM - 6:00 PM

Southbound Gap Analysis - AM																	
Time	Volume	< 2.0 s	2.0 - 3.9 s	4.0 - 5.9 s	6.0 - 7.9 s	8.0 - 9.9 s	10.0 - 11.9 s	12.0 - 13.9 s	14.0 - 15.9 s	16.0 - 17.9 s	18.0 - 19.9 s	20.0 - 21.9 s	22.0 - 23.9 s	24.0 - 25.9 s	26.0 - 27.9 s	28.0 - 29.9 s	> 30.0 s
7:00 AM	366	242	68	22	7	7	4	3	2	3	2	1	2	0	0	1	2
7:15 AM	383	263	72	14	11	3	6	2	1	3	1	0	0	0	2	0	5
7:30 AM	410	299	72	10	4	4	4	5	1	3	1	0	1	0	3	0	3
7:45 AM	425	309	67	14	8	10	6	0	1	2	0	2	0	1	1	0	4
8:00 AM	358	239	68	20	8	4	1	3	0	2	2	2	0	0	2	2	5
8:15 AM	356	242	65	17	9	4	2	3	1	1	1	0	2	1	3	1	4
8:30 AM	416	277	82	21	10	6	4	2	6	3	2	0	1	1	0	0	1
8:45 AM	417	297	72	14	9	4	7	2	5	1	2	0	0	0	0	1	3
Total	**3131**	**2168**	**566**	**132**	**66**	**42**	**34**	**20**	**17**	**18**	**11**	**5**	**6**	**3**	**11**	**5**	**27**

Southbound Gap Analysis - PM																	
Time	Volume	< 2.0 s	2.0 - 3.9 s	4.0 - 5.9 s	6.0 - 7.9 s	8.0 - 9.9 s	10.0 - 11.9 s	12.0 - 13.9 s	14.0 - 15.9 s	16.0 - 17.9 s	18.0 - 19.9 s	20.0 - 21.9 s	22.0 - 23.9 s	24.0 - 25.9 s	26.0 - 27.9 s	28.0 - 29.9 s	> 30.0 s
4:00 PM	361	232	86	9	10	8	2	4	0	1	1	1	1	1	0	0	5
4:15 PM	319	192	71	18	10	7	2	4	2	2	5	1	2	0	0	0	3
4:30 PM	398	282	66	14	12	6	2	2	4	3	1	1	0	0	1	0	4
4:45 PM	366	253	70	18	5	0	2	3	2	0	4	0	0	3	1	0	5
5:00 PM	330	199	78	19	7	6	4	4	1	1	0	3	1	0	2	1	4
5:15 PM	373	226	81	26	12	8	7	3	1	1	2	2	2	1	0	1	0
5:30 PM	392	265	74	20	10	3	2	7	1	1	2	1	2	0	0	0	4
5:45 PM	332	210	75	11	9	8	1	5	2	1	3	0	0	0	1	0	6
Total	**2871**	**1859**	**601**	**135**	**75**	**46**	**22**	**32**	**13**	**10**	**18**	**9**	**8**	**5**	**5**	**2**	**31**